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Physics Abstracts

Science Abstracts Series A
January–June 1983

Subject Index (A - L)

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CONTENTS

Title page i

Abbreviations and acronyms iii

Subject index S1

SIX-MONTHLY INDEXES TO SCIENCE ABSTRACTS

Cumulative indexes to Science Abstracts are published twice a year covering the period January-June and July-December. They comprise author and subject indexes and some specialised or 'small' indexes. For Physics Abstracts and Electrical & Electronics Abstracts the Author Index and Subject Index are published as separate volumes. In this case the Small Indexes are included in the Author Index volume.

Cumulative author and subject indexes for preceding years are also available. For details please see inside back cover.

Subject Index

The Subject index provides an alphabetical subject key to the articles included in the abstracts journal. Some general guidance on its use is given below:

1. Look in the index for the name of the specific subject in which you are interested. In most cases this name will be a heading in the index and you will find relevant articles listed under it. The majority of the subject headings fall into the following catagories: property, phenomena, substance or named objects, instrument, device, theory, method, process, application, event.

2. Occasionally you will be directed from the subject heading chosen to a different heading under which the relevant or additional articles are listed.

3. If you do not find the subject heading you first chose, try a more general heading.

4. Each entry under the heading relates to an article appearing in the abstracts journal and gives the serial number of that article in the journal preceded by the last digit of the current year, e.g. 3-12345; i.e. Abstract number 12345 in the abstracts journal for 1983.

The language of the article, if it is not in English, is also indicated. e.g. C fibre-reinforced Al, viscosity in glass graining process (Japanese) 3-58078.

Each entry starts with a Keyword or Keyphrase considered to be most relevant to the heading. On sorting these Keywords, the qualifying prefixes are usuallly ignored. (e.g. α-brass, 5-sulphosalicylic, 31 Cygni, n-Ge are sorted under brass, sulphosalicylic, Cygni, Ge respectively).

There are three main Keyword lists; alphabetical A-Z, elementary particles, and chemical symbols (organic substances are written and not given as chemical formula). More than one Keyword list may be present under each subject heading.

For document on, say, 'photoemission of germanium' at least two access points 'photoemission' and germanium' are provided. Under the heading 'photoemission' the Keyword will be 'Ge' and under 'germanium' the Keyword will be 'photoemission'.

In a case like this, it is advisable and quicker to use the heading 'photoemission' and go straight to the chemical symbol list for 'Ge'.

Intermetallic compounds are indexed under the appropriate alloy headings. The chemical formula is used as Keyword. However, it is important to realise in searching the chemical symbol list that, at present, alloys and intermetallic compounds are sorted separately. For example FeCo is sorted at the end of the Fe- list e.g. Fe-Al, ... Fe-Co, ... Fe-Si, ... Fe-Si-B,... FeCo, ... FeSi and so on in this order.

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INSPEC
The Institution of Electrical Engineers

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Abbreviations and Acronyms

Abbreviations and acronyms are used in the modifiers in all INSPEC Cumulative Subject Indexes. Individual terms should be readily understood in the context of the subject headings. **Inorganic substances** are usually given by their chemical formulae. Iron and aluminium garnets appear in the formulae lists as MIG and MAG (where M is metal element, e.g. YIG and YAG); $(Pb,La)(Zr,Ti)O_3$, $Pb(Zr,Ti)O_3$ and $Ce_2Mg_3(NO_3)_{12}$ appear as PLZT, PZT and CMN respectively. **Organic substances** including **liquid crystals** are not given as formulae but common abbreviations are used.

ABS resin	acrylonitrile-butadiene-styrene
AC	alternating current
ACV	air cushion vehicle
A/D	analogue-to-digital
ADC	analogue digital conversion
ADP	administrative data processing
AE	acoustic emission
AEC	atomic electron correlation(s)
AES	Auger electron spectra(oscopy)
AF	audio frequency
AFC	automatic frequency control
AFL	abstract family of languages
AFMR	antiferromagnetic resonance
AGC	automatic gain control
AGR	advanced gas-cooled reactor
ALARA	as low as reasonably achievable
ALU	arithmetic logic unit
AM	amplitude modulation
APACHE	accelerator for physics andchemistry of heavy elements
APR	acoustic paramagnetic resonance
APS	appearance potential spectra(oscopy)
APW	augmented plane wave
ARMA	autoregressive moving average
ASCII	American standard code for information exchange
ATC	air traffic control
ATE	automatic test equipment
ATM	Axilrod-Teller-Moto
ATR	attenuated total reflection
ATWS	anticipated transients without scram
AVC	automatic volume control
BARITT	barrier injection transit time
BBEA	4-butoxybenzal-4′-ethylaniline
BBGKY	Bogoliubov-Born-Green-Kirkwood-Yvon
BCC	body centred cubic
BCD	binary-code decimal
BCS	Bardeen-Cooper-Schrieffer
BFL	buffered FET logic
BFO	beat-frequency oscillator
BH	buried heterostructure
BWO	backward wave oscillator
BWR	boiling water reactor
BWT	backward wave tube
C^3L	complementary constant current logic
CAD	computer aided design
CANDU	Canadian deuterium uranium
CAE	computer aided engineering
CAI	computer assisted instruction
CAM	computer aided manufacturing
CARS	coherent antiStokes Raman scattering (spectra)
CATV	community antenna TV
CB	citizen band
CBI	computer based instruction
CBOOA	cyanobenzylidene octyloxyaniline
CCBA	coupled channel Born approximation
C-CD	charge-coupled device
CCL	capacitor-coupled logic
CDFR	commercial demonstration fast reactor
CDI	collector diffusion isolation
CDM	code division multiplexing
CDW	charge-density wave
CEM	channel electron multiplier
CEPA	coupled electron pair approximation
CERN	Conseil Européen pour la Recherche Nucléaire
CESR	conduction electron spin resonance
CGTO	contracted Gaussian-type orbital
CHF	coupled Hartree-Fock
CI	configuration interaction
CIDEP	chemically induced dynamical electron polarisation
CIDNP	chemically induced dynamical nuclear polarisation
CIEH	charge iterated extended Huckel
CIHY	configuration interaction Hylleras
CIM	constituent interchange model
CMI	computer managed instruction
CML	current-mode logic
CMOS	complementary metal-oxide-semiconductor
CNC	computerised numerical control
CNDO	complete neglect of differential overlap
COC	cholesteryl oleyl carbonate
COM	computer output to microform (fiche or film)
COOB	4,4′-cyano-octyloxy-biphenyl
CP	charge, parity
CPA	coherent potential approximation
CPA	critical path analysis
CPM	critical path method
CPSK	coherent phase shift keying
CPT	charge, parity, time
CPU	central processing unit
CRO	cathode ray oscilloscope
CRSR	coherent resonant Stokes rotation
CRT	cathode ray tube
CS	coupled states
CSL	current-sinking logic
CSL	current-sourcing logic
CSM	continuous slowing down models
CSRS	coherent Stokes-Raman spectra(oscopy)
CT	computerised tomography
CTL	complementary-transistor logic
CTR	controlled thermonuclear reactor
CVD	chemical vapour deposition
CW	continuous wave
D/A	digital-to-analogue

DAC	digital analogue conversion
DBMS	database management system
DBR	distributed Bragg reflector
DC	direct current
DCFL	direct-coupled FET logic
DCTL	direct-coupled transistor logic
DDC	direct digital control
DDL	diode-diode logic
DECENT	distribution of exact classical energy transfer
DESY	Deutsches Electron Synchrotron
DF	Dirac-Fock
DFB	distributed feedback
DH	double heterostructure
DIL	dual-in-line
DIP	dual in-line package
DITE	divertor in torus experiment
DLTS	deep level transient spectra(oscopy)
DM	delta modulation
DMA	direct memory access
DMM	digital multimeter
DMOS	double diffused metal-oxide-semiconductor
DMSO	dimethylsulphoxide
DNA	deoxyribonucleic acid
DNMR	double nuclear magnetic resonance
DOBAMBC	p-decyloxybenzylidene p'-amino 2-methyl butyl cinnamate
DOD	different orbitals for different spins
DORIS	Dopple-ring-Speicher
DOS	disc operating system
DOVETT	double velocity transit time
DP	data processing
DPCM	differential pulse code modulation
DPPH	diphenylpicrylhydrazyl
DPSK	differential phase shift keying
DSAM	Doppler shift attenuation method
DSC	differential scanning calorimetry
DTA	differential thermal analysis
DTL	diode transistor logic
DTU	dual topological unitarisation
DVM	digital voltmeter
DV-$X\alpha$	discrete variational $X\alpha$ method
DWBA	distorted wave Born approximation
DWIA	distorted wave impulse approximation
E1,E2	electric dipole, quadrupole
E^{2}PROM	electronically erasable read-only-memory
EAROM	electronically alterable read-only-memory
EAS	extensive air shower
EB	exponential Born
EBBA	4-ethoxybenzylidene-4'n-butylaniline
EBIC	electron beam induced current(s)
EBR	experimental breeder reactor
EBT	Elmo Bumpy Torus
ECCM	electronic counter-counter measures
ECCS	emergency core cooling system
ECELR	epithermal critical experiment laboratory reactor
ECG	electrocardiography (-gram)
ECL	emitter coupled logic
ECM	electronic countermeasures

EDA	ethylene diamine
EDP	electronic data processing
EDTA	ethylene diamine tetra-acetic acid
EEBAC	ethyl-4-(4'ethoxy-benzylidene-amino) cinnamate
EEG	electroencephalography (-gram)
EELS	electron energy loss spectra(oscopy)
EEPROM	electrically erasable programmable read-only-memory
EFL	emitter-follower logic
EFL	emitter-function logic
EFM	extended Flygare method
EFT	electronic funds transfer
EHD	electrohydrodynamics
EHF	extremely high frequency
EHP	electron-hole potential method
EHT	extended Huckel theory
EHV	extra high voltage
ELDOR	electron electron double resonance
ELF	extremely low frequency
EM	electromagnetic
EMC	electromagnetic compatibility
EMF	electromotive force
EMG	electromyography (-gram)
EMI	electromagnetic interference
EMP	electromagnetic pulse
ENDOR	electron nuclear double resonance
ENG	electronic newsgathering
EOF	end of file
EPEN	empirical potential energy function based on interactions of electrons and nuclei
EPMA	electron probe microanalysis
EPR	electron paramagnetic resonance
EPRI	Electric Power Research Institute
EPROM	erasable programmable read-only-memory
ERG	electroretinography (-gram)
ESCA	electron spectroscopy for chemical analysis
ESCAR	experimental superconducting accelerating ring
ESFI	epitaxial silicon film on insulator
ESS	electronic switching system
EUV	extreme ultraviolet
EW	electronic warfare
EXAFS	extended X-ray absorption fine structure
EX-OR	exclusive-OR (logic)
FAMOS	floating gate avalanche metal-oxide-semiconductor
FBR	fast breeder reactor
FCC	face centred cubic
FDM	frequency division multiplex(ing)
FDNC	frequency dependent negative conductance
FDNR	frequency dependent negative resistance
FECL	feedback ECL
FEM	field emission microscopy
FET	field effect transistor
FFHR	fusion-fission hybrid reactor
FFT	fast Fourier transform

FFTF	fast flux test facilities
FHNC	Fermi hypernetted chain
FIM	field ion microscopy
FIMOS	floating gate ionisation injection metal-oxide-semiconductor
FIR	finite impulse response
FM	frequency modulation
FMIT	fission materials irradiation test facility
FMR	ferromagnetic resonance
FMSR	fast mixed spectrum reactor
FPT	finite perturbation theory
FPLA	field programmable logic array
FSK	frequency-shift keying
FSGO	floating spherical Gaussian orbitals
FTR	fast test reactor
GAMBIT	gate modulated bipolar transistor
GANIL	grand accelerateur national a ions Lourds
GCFR	gas-cooled fast breeder reactor
GCM	generator coordinate method
GDR	giant dipole resonance
GHF-NO-CI	generalised Hartree-Fock/natural orbital/configuration interactions
GIAO	gauge-invariant atomic orbitals
GMR	giant monopole resonance
GO	Gaussian orbitals
GOO	generalised Overhauser orbitals
GPM	ground potential model
GQR	giant quadrupole resonance
GRIN	graded (gradient) refractive index
GSPC	gas scintillation proportional chamber (or counter)
GTO	Gaussian-type orbitals
GUT	grand unified theory
GVB	generalised valence bond
HAM	hydrogenic atoms in molecules
HBAB	hexyloxybenzylidene-p′-aminobenzonitrile
HBT	N-(p-hexyloxybenzylidene)-p-toluidene
HCDA	hypothetical core disruptive accident
HCP	hexagonal close packed
HEED	high energy electron diffraction
HEMP	high altitude electromagnetic pulse
HEMT	high electron mobility transistor
HF	high frequency or Hartree-Fock
HFB	Hartree-Fock-Bogoliubov
HFEF	hot fuel examination facility
HFIR	high flux isotope reactor
HFO	Hartree-Fock-Overhauser
HFS	hyperfine structure
HGMS	high gradient magnetic separation
HIXE	heavy ion induced X-ray emission
HJFET	heterojunction field effect transistor
HLW	high level waste (radioactive)
HMO	Huckel molecular orbitals
HMTSeF	hexamethylenetetraselenafulvalene(-inium)
HMTTF	hexamethyltetrathiofulvalene(-inium)
HOAB	heptyloxyazoxybenzene
HOBHA	p-n-heptyloxy-benzylidene-p-n-heptylaniline
HOMO	highest occupied molecular orbitals
HTGR	high temperature gas-cooled reactor
HV	high voltage
HVDC	high voltage direct current
HVEM	high voltage electron microscopy
HWR	heavy water reactor
IAEA	International Atomic Energy Authority Agency
IAR	isobaric analogue resonance
IAS	isobaric analogue state
IBA	interacting boson approximation
IBFA	interacting boson-fermion approximation
IBM	interacting boson model
IBPBAC	isobutyl-4-(4′-phenylbenzylideneamino) cinnamate
IC	integrated circuit
ICDF	intermediate coupling Dirac-Fock
ICF	inertial confinement fusion
IDT	interdigital transducer
IEPA	independent electron pair approximation
IETS	inelastic electron tunnelling spectra(oscopy)
IF	intermediate frequency
IFA	ionisation front accelerator
IGFET	insulated gate field effect transistor
IIR	infinite impulse response
IKO	Institute v. Kernph Ouder Amsterdam
I^2L	integrated injection logic
I^3L	isoplanar I^2L
ILS	instrument landing system
IMPATT	impact avalanche transit time
INDO	intermediate neglect of differential overlap
INDOR	internuclear double resonance
ING	intense neutron generator
INO	iterative natural orbital
INTELSAT	international telecommunications satellite consortium
I/O	input/output
IOC-ω	inclusion of the overlap charges in the omega
IPSS	international packet switching service
IR	infrared
IRDO	intermediate retention of differential overlap
IREB	intense relativistic electron beam
IRED	infrared emitting diode
IRS	information retrieval system
ISABELLE	intersecting storage and acceleration
ISDN	integrated services digital network
ISFET	ion-sensitive field effect transistor
ISL	integrated Schottky logic
ISR	intersecting storage ring
ISX	impurity study experiment
ITC	ionic thermocurrents
ITEP	Institute of Theoretical and Experimental Physics
ITR	ignition test reactor
IU	Indiana University

IVO	improved virtual orbitals
JAERI	Japan Atomic Energy Research Institute
JET	Joint European torus
JFET	junction field effect transistor
JINR	Joint Institute for Nuclear Research
KdV	Korteweg-de Vries
KEK	Japan National Laboratory for High Energy Physics
KKR	Korringa-Kohn-Rostoker
LAMPF	Los Alamos meson physics facility
LC	inductance-capacitance
LCAO	linear combination of atomic orbitals
LCBO	linear combinations of (semi-localised) band orbitals
LCD	liquid crystal display/device
LCGO	linear combination of Gaussian orbitals
LCP	large coil program
LCRO	linear combination of Rydberg orbitals
LEC	liquid encapsulated Czochralski
LED	light emitting diode
LEED	low energy electron diffraction
LEP	large electron positron
LET	linear energy transfer
LF	low frequency
LMC	Large Magellanic Cloud
LMFBR	liquid metal fast breeder reactor
LMTO	linear combination of muffin tin orbitals
LNG	liquified natural gas
LOCA	loss of coolant accident
LOCE	loss of coolant experiment
LOCOS	local oxidation of silicon
LOFT	loss of flow test facility
LPE	liquid phase epitaxy
LPFL	low pinchoff-voltage FET logic
LSA	limited space charge accumulation
LSD	local spin density
LSI	large-scale integration
LTE	local thermodynamic equilibrium
LUMO	lowest unoccupied molecular orbitals
LV	low voltage
LWBR	light water breeder reactor
LWR	light water reactor
MADO	Mulliken approximation for differential overlap
M1,M2	magnetic dipole, quadrupole
MBBA	4-methoxybenzylidene-4′-n-butyl-aniline
MBE	molecular beam epitaxy
MBPT	many body perturbation theory
MCD	magnetic circular dichroism
MCP	microchannel plate
MCSCF	multiconfiguration self-consistent-field
MCPESCF	multiconfiguration paired excitation SCF
MCZDO	multi-centre zero differential overlap
MCXα	multiconfiguration Xα
MEC	molecular electron correlation(s)
MEDO	multipole expansion of diatomic overlap
MESFET	metal-semiconductor field effect transistor
MF	medium frequency
MFP	mean free path
MHD	magnetohydrodynamics
MIC	microwave integrated circuit
MID	magnetically insulated diode
MIDP	microwave induced delayed phosphorescence
MIEHM	modified iterative extended Huckel method
MIM	metal-insulator-metal
MIMD	multiple input multiple data
MIS	metal-insulator-semiconductor or management information system
MIT	Massachusetts Institute of Technology
MM	millimetre
MMF	magnetomotive force
MMIC	monolithic microwave integrated circuit
MNOS	metal-nitride-oxide-semiconductor
MO	molecular orbitals
MOCIC	molecular orbital constraint of interaction coordinates
MOCVD	metal-organic chemical vapour deposition
MODPOT	model potential
MOS	metal-oxide-semiconductor
MOSFET	metal-oxide-semiconductor field effect transistor
MOST	metal-oxide-semiconductor transistor
MRD	multi-reference double excitation
MRINDO	modified Rydberg INDO
MS	management science
MSI	medium scale integration
MSK	minimum shift keying
MSR	molten salt reactor
MSU	Michigan State University
MSW	magnetostatic waves
MTBF	mean-time between failures
MTF	modulation transfer function
MTL	merged-transistor logic
MTXα	muffin-tin Xα
MUF	maximum usable frequency
MWPC	multiwire proportional chamber
NAL	National Accelerator Laboratory
NAND	not-and(logic)
NC	numerical control
NCMET	non-closed shell many electron theory
NDDO	neglect of diatomic differential overlap
NDT	nondestructive testing
NEMO	non-empirical molecular orbitals
NEVE	non-empirical valence-electron
NHS	National Health Service
NIC	negative impedance convertor
NMOS	N-channel metal-oxide-semiconductor
NMR	nuclear magnetic resonance
NMR-ON	NMR on oriented nuclei
NNNDO	neglect of non-neighbour differential overlap
NOR	not-or(logic)

NQR	nuclear quadrupole resonance
NRC	nuclear regulatory committee
NRM	natural remanent magnetisation
NSSS	nuclear steam supply system
NTL	nonthreshold logic
NTO	natural transition orbitals

OCR	optical character recognition
ODMR	optical detection of magnetic resonance
OEM	original equipment manufacture
OER	oxygen enhancement ratio
OPHF	orbital polarised Hartree-Fock
OPW	orthogonal plane wave
OR	operations research
ORELA	Oak Ridge electron linear accelerator
ORNL	Oak Ridge National Laboratory
OS	operating system
OTEC	ocean thermal energy conversion
OTF	optical transfer function

PAA	paraazoxyanisole
PABX	private automatic branch exchange
PAC	perturbed angular correlation
PAHR	post accident heat removal
PAM	pulse amplitude modulation
PAP	paraazoxyphenetole
PBF	power bursts facility
PBR	pebble bed reactor
PBT	permeable base transistor
PBX	private branch exchange
PC	printed circuit
PCAC	partially conserved axial currents
PCB	printed circuit board
PCES	phase change energy storage
PCGVB	pairwise correlated generalised valence bond
PCILOCC	perturbative configuration interaction using localised orbitals for crystal calculation
PCM	pulse code modulation
PCRV	prestressed concrete reactor vessel
PCX	plasma confinement experiment
PDX	poloidal divertor experiment
PEM	photoelectromagnetic
PEP	positron electron proton
PET	polyethylene terephthalate
PETRA	positron electron tandem ringbeschleuniger anlage
PF	power factor
PFM	pulse frequency modulation
PFR	prototype fast reactor
PHWR	pressurised heavy water reactor
PID(PI,PD)	proportional+integral+differential (derivative)
PIXE	proton induced X-ray emission
PLA	phase locked arrays or programmable logic array
PLBR	prototype large breeder reactor
PLC	programmable logic control
PLL	phase locked loops
PLT	Princeton Large Torus
PM	pulse modulation
PMMA	polymethylmethacrylate
PMDR	phosphorescence microwave double resonance
PMOS	P-channel metal-oxide-semiconductor
PMR	proton magnetic resonance
PNDO	partial neglect of differential overlap
PNO-CI	pair natural orbital configuration interaction
POL	pair orthogonalised Lowdin
POPAE	protons on protons and electrons
POPOP	phenyl-oxazolyl-phenyl-oxazolyl-phenyl
POS	point of sale
PPDP/S	Pariser-Parr-Del Bene-Pople/Segal calculations
PPI	plan position indicator
PPM	pulse position modulation or parts per million
PPP	Pariser-Parr-Pople
PRDDO	partial retention of diatomic differential overlap
PRF	pulse recurrence (repetition) frequency
PROM	programmable read-only-memory or Pockels readout optical modulator
PS	proton synchrotron (CERN)
PSK	phase shift keying
PTFE	polytetrafluoroethylene
PTM	pulse time modulation
PVC	polyvinyl chloride
PWA	partial wave analysis
PWB	printed wiring board
PWBA	plane wave Born approximation
PWIA	plane wave impulse approximation
PWM	pulse width modulation
PWR	pressurised water reactor

QAM	quadrature amplitude modulation
QCD	quantum chromodynamics
QDMBPT	quasi-degenerate many-body perturbation theory
QED	quantum electrodynamics
QPM	quark-parton model
QPSK	quaternary phase shift keying

RAM	random access memory
RBE	relative biological effectiveness
RC	resistance-capacitance
RCNDO	Rydberg CNDO
RCS	rapid cycling synchrotron
RCTL	resistor-capacitor-transistor logic
R & D	research and development
RF	radio frequency
RFI	radio frequency interference
RG	renormalisation group
RHEED	reflection high energy electron diffraction
RHF	restricted Hartree-Fock
RINDO	Rydberg INDO
RKKY	Rudermann-Kittel Kasuya-Yosida
RLC	resistance-inductance-capacitance
RMS	root-mean-square
RNA	ribonucleic acid
ROM	read-only memory
RPA	random phase approximation

RPAE	random phase approximation with exchange
RPM	relaxation potential model or revolutions per minute
RPV	reactor pressure vessel
RTG	radioisotope thermoelectric generators
RTL	resistor-transistor logic

SACCI	symmetry adapted cluster configuration interaction
SAMO	simulated ab initio molecular orbitals
SAR	synthetic aperture radar
SAW	surface acoustic waves
SCC	stress corrosion cracking
SCF	self consistent field
SCFL	source-coupled FET logic
SCL	space charge limited
SCPT	self consistent perturbation theory
SCR	silicon controlled rectifier
SDFL	Schottky-diode FET logic
SDM	space division multiplexing
SDO	shielded diatomic orbitals
SED	stochastic electrodynamics
SEHF	spin extended Hartree-Fock
SEM	scanning electron microscopy
SFE	solar-flare effect
SFL	substrate fed logic
SGEMP	system generated electromagnetic pulse
SGHWR	steam generating heavy water reactor
SHF	superhigh frequency
SHG	second harmonic generation
SICOS	sidewall base contact structure
SIMOS	stacked-gate injection metal-oxide-semiconductor
SIMS	secondary ion mass spectra(oscopy)
SIN	Swiss Institute of Nuclear Research
SINDO	scaled INDO
SIS	semiconductor-insulator-semiconductor
SISAM	spectrometer with interference selective amplitude modulation
SIT	static induction transistor
SMC	Small Magellanic Cloud
S/N	signal-to-noise
SOG	strongly orthogonal geminal
SOS	silicon on sapphire
SPA	separated pair approximation
SPC	stored program control
SPEAR	Stanford positron electron asymmetric ring
SPHF	spin polarised Hartree-Fock
SPIN-CIPSI	spin symmetry adapted generalisation of CIPSI
SPS	super proton synchrotron (CERN)
SREMP	source region electromagnetic pulse
SQUID	superconducting quantum interference device
SRMCASE	symmetry-restricted-multiconfiguration annihilation of single excitations
SSB	single sideband
SSBW	surface skimming bulk wave
SSC	sudden storm commencement
SSFL	Schottky-barrier coupled Schottky-barrier gate FET logic
SSI	small scale integration
SST	supersonic transport
STD	salinity-temperature-depth or subscriber trunk dialling
STEC	solar thermal energy conversion
STEM	scanning transmission electron microscopy
STL	Schottky transistor logic
STO	Slater-type orbitals
STOL	short take-off and landing
STP	Slater-transfer Preuss
SUSY GUT	supersymmetric grand unified theory
SW	short wave
SWR	standing wave ratio
SXAPS	soft X-ray appearance potential spectrum

TASI	time assignment speech interpolation
TBBA	terephthal-butylaniline
TCNE	tetracyanoethylene
TCNQ	tetracyanoquinodimethane
TCR	temperature coefficient of resistance
TDHF	time dependent Hartree-Fock
TDM	time division multiplex(ing)
TDMA	time division multiple access
TDMF	time dependent mean field theory
TDPAC	time differential perturbed angular correlation
TDS	thermal desorption spectra(oscopy)
TE	transverse electric
TEA	transversely excited atmosphere
TEGFET	two-dimensional electron gas field effect transistor
TEM	transverse electromagnetic or transmission electron microscopy
TEXT	Texas Experimental Tokamak
TFTR	Tokamak fusion test reactor
TGA	thermogravimetric analysis
TGFB	triglycine fluoroberyllate
TGS	triglycine sulphate
TGSe	triglycine selenate
TJS	transverse junction stripe
TLD	thermoluminescent dosimeter(-ry)
TM	transverse magnetic
TMI	Three Mile Island
TMMC	tetramethylammonium manganese chloride
TMTSeF	tetramethyltetraselenafulvalene(-inium)
TMTTF	tetramethyltetrathiofulvalene
TOP	transient overpower accident
TNS	The Next Step
TPC	time projection chamber
TRAPATT	trapped plasma avalanche triggered transit
TREAT	transient reactor test facility
TRM	thermoremanent magnetisation
TSC	thermally stimulated currents
TSEE	thermally stimulated exo-electron emission
TSeF	tetraselenafulvalinium
TSeT	tetraselenatetracene
TTF	tetrathiofulvalinium

TTL	transistor transistor logic
TTT	tetrathiotetracene
TUCA	transient undercooling accident
TV	television
TW	travelling wave
TWT	travelling wave tube
UART	universal asynchronous receiver/transmitter
UCHF	uncoupled Hartree-Fock
UCN	ultra cold neutrons
UHF	ultra high frequency or unrestricted Hartree-Fock
UHPS	underground hydroelectric pumped storage
UHV	ultra high voltage
UKAEA	United Kingdom Atomic Energy Authority
ULA	uncommitted logic array
ULF	ultra low frequency
UMD	unitised microwave devices
UPS	ultraviolet photoelectron spectra
US	ultrasonic
UV	ultraviolet
VAD	vapour phase axial deposition
VB	valence bond
VCR	video cassette recorder
VDM	vector dominance model
VDU	visual display unit
VHF	very high frequency
VHSIC	very high speed integrated circuit
VLBI	very long base line interferometry
VLF	very low frequency
VLSI	very large scale integration
VMOS	vertical channel metal-oxide-semiconductor
VOR	VHF omnidirectional range
VPE	vapour phase epitaxy
VRC	visual record computer
VRDDO	variable retention of diatomic differential
VS	virtual storage
VSB	vestigial sideband
VSEPR	valence shell electron pair repulsion
VSWR	voltage standing wave ratio
VTOL	vertical take-off and landing
VTR	voltage transformation ratio or video tape recorder
VUV	vacuum ultraviolet
VVER	water moderated water cooled reactors
WARC	World Administrative Radio Conference
WDM	wavelength division multiplex(ing)
WKB	Wentzel-Kramers-Brillouin
WP	word processing
WWER	water moderated water cooled reactors
XPS	X-ray photoelectron spectra
ZEBRA	zero energy breeder reactor assembly
ZGS	zero gradient synchrotron
ZPPR	zero power plutonium reactor

Subject Index

1/f noise *see random noise*

A-centres
  alkali halides, F- and F_A-centres, HF cluster calculation 3—3116
  diamond, electron irradiated, A-2 and A-3 ESR centres form., self di-interstitial complexes 3—43436
  α-quartz, A(Ti-Li) centre, nucl. hyperfine and quadrupole coupling, electron spin echo obs. 3—57775
  C, transition range, EPR line intensity 3—23800
  CaF_2:O^{2-}, disturbed colour centres after X-ray irrad., optical studies 3—27937
  KBr:Li, X-irradiated, optical absorption and thermolum. studies of F_A-centres 3—34157
  KCl, Na(Li)-$(F_2{}^+)_A$ laser, continuously tunable from 1.67 to 2.46 μm 3—27061
  Si, dislocation effect on radiation defect annealing process 3—27993
  Si:Au, electric field enhanced electron emission from acceptor level and A-centre 3—43073
  p-Si:Sn, electron irrad., A-centre and divacancy form. 3—13250

A/D conversion *see analogue-digital conversion*

ab initio calculations
  acetaldehyde, ^{13}C nuclear mag. shielding tensor, ab initio HF calcs. 3—55863
  acetamide, mol. geometry, low temp. neutron diffr. and ab initio investig. 3—1229
  acetone, pot. energy surface determ., nonrigidity effects 3—56018
  acetone-Na$^+$ interaction, mol. pot. ab initio PCILO and CNDO/Z calcs. 3—11690
  acetylene dication, struct. and stability ab initio MO theory 3—31925
  acetylenes, monosubstituted, acidity of anions and neutral mols., ab initio calcs. 3—55791
  acid+base reactions at O, N and C, silyl and methyl group effects 3—45811
  actinide metals, energy band struct., spin-orbit coupling effect, relativistic corrections to at. vols. 3—28259
  active O complex model of catalase, struct., ab initio SCF calcs. 3—1233
  addition reaction, HCl to $C\equiv N$ triple bond, ab initio calcs. 3—31908
  aliphatic thiocarbonyls, thioketone-enethiol tautomerism, ab initio SCF-MO calcs. 3—55823
  alkali cyanides, density functional theory 3—2497
  alkali metal halides, repulsive energy and Gruneisen coeff., ab initio and Thomas Fermi calc. 3—38018
  alkali metal oxides, change in ground state symmetry ab initio CI calcs. 3—6541
  alkaline-earth metal clusters, struct., bonding, ab. initio pseudopotential CI calcs. 3—6821
  n-alkanes, π-nonbonded and through-bonded interactions, ab initio study 3—31930
  n-alkyl radicals, π-nonbonded and through-bonded interactions, ab initio study 3—31930
  amidine, protonated, neutral and deprotonated forms, conformations, ab initio SCF MO calcs. 3—6530
  2-aminoethanol, IR induced photorotamerisation in low temp. matrices, ab initio optimised geometries calcs. 3—24518
  aminophosphinidene, structs. and stability, at initio and CI calcs. 3—45867
  approximate MO LCAO calcs., Politzer's relationship appl. 3—11671
  aramids, conformations, MO pot. energy surfaces calcs. 3—12022
  atomic charges from IR intensities, comparison with ab initio values 3—55795
  atomic collisions, molecular model, ab initio quantum chemistry 3—36642
  aza-arenes, topological effect on MO energies, ab initio HMO calcs. 3—45862
  azabenzenes, π-fluoro and π-chloro effects in ^{15}N NMR 3—1388
  azirene, struct., vibr. spectra, ab initio obs. 3—55808
  azobenzene, pot. energy curves along isomerisation paths, ab initio and CI calcs., photochemical props. 3—1277
  benzene, delocalised mag. currents, ab initio calcs. 3—55817
  benzene-HF H-bonded complex, ab initio SCF MO calcs. 3—26624
  benzoic acid dimer, H$^+$ transfer, ab initio calc. 3—11661
  bridged dialuminium compounds, electronic struct., ab initio calcs. 3—6520
  trans-butadiene, π Hamiltonian, ab initio electron correl. calcs. 3—36692
  n-butane, C-C and C-O bonds intrinsic torsional barrier, PCILO and ab initio calcs. 3—45855
  calicene, optimum geometry, ab initio STO calcs. 3—55822
  capped annulene rings aromaticity, geometry and stability, orbital compatibility theory 3—6521
  carbonyl groups, substituted, electron density anal., ab initio LCAO-SCF-MO calc. 3—6540
  2-chloroethanol, IR photorotamerisation, ab initio calcs. 3—45808
  conjugated dienes, hetero-atom. substituted, bond lengths, force consts., ab initio study 3—36662
  cubane, mol. struct. and spectra, ab initio SCF calcs. 3—11657
  cyanamide, spectroscopic param., ab initio MO study 3—26626
  cyanopolyynes, ab initio SCF calc. of mol. props. 3—21638
  cyclic hydrocarbons, mol. struct., strain energies, ab initio calcs. 3—6529
  cyclobutadiene, aza-derivatives, struct., Hartree-Fock calcs. 3—36685
  cyclobutane and derivatives, 1;3 interactions, ab initio MO study 3—17352
  1,3-cyclobutanedione, and tetramethyl derivative, nonbonding orbital interactions, ab initio study 3—17212
  cyclobutene cation radical$\rightarrow$1,3-butadine cation radical, nonelectrocyclic path, MINDO and ab initio calc. 3—34618
  1,2-cyclohexadiene, equilib. geometry, ab initio MCSCF calc. 3—50539
  cyclopentanone, $n\rightarrow\pi^*$ absorpt., vibronic contrib., ab initio SCF-RPA calcs. 3—17201

ab initio calculations continued
  2-cyclopropylpropene, mol. struct., ab initio calcs., gas phase electron diffr. obs. 3—50518
  cytosine tautomers, ab initio and semiempirical calcs. 3—55790
  diamond, local density of states at defects calc. 3—47293
  diazomethane, and isomers, relative stabilities, ab initio SCF calcs. 3—55861
  1,3-diethylbicyclobutane-exo,exo-2,4-dicarboxylic acid, charge density distribs. 3—37889
  1,2-difluoroethane, trans- and gauche-, electrostatic solvation, ab initio SCF calcs. 3—41514
  1,2-diformyl hydrazine, mol. geometry, low temp. neutron diffr. and ab initio investig. 3—1229
  1,3-dihydro-1,3-diazine, struct., Hartree-Fock calcs. 3—36686
  diimines, ionisation pots., photoelectron spectra, comparison of semiempirical methods 3—17221
  dimer cation, electronic and mol. struct., ab initio CI calcs. 3—55856
  dimethyl sulphate, mol. struct., ab initio MO calcs. 3—45805
  1,3-dioxin, struct., Hartree-Fock calcs. 3—36686
  1,3-dithiin, struct., Hartree-Fock calcs. 3—36686
  economical basis set, 6-31G^{++}, for correlated wavefunction calc. 3—31929
  electronic ab initio quantum defect theory 3—31933
  electrostatically solvated mols., ab initio SCF calcs. using deformable cavity model 3—41514
  energy gradients efficient algorithm using s,p Cartesian Gaussians 3—1218
  equilib. struct., force field refinement, rot. spectra 3—45930
  equilibrium geometries and transition structs. optimisation method 3—1198
  ethane, excited states, pot. energy surface, photochemistry, ab initio HF CI calcs. 3—31957
  ethane, rot. barriers, bond-orbital anal., polarisation and delocalisation effect 3—1259
  ethane, vibr. struct. in electronic spectrum, excited states and photochem. ab initio CI calc. 3—41506
  ethylene, gaseous, ozonolysis, free radical detect., microreactor-matrix ESR spectrosc. 3—45985
  ethylene, ionisation energies of bent and twisted double bonds 3—11670
  ethylene dimer, ab initio intermol. pot. computed using exchange perturbation theory 3—11913
  ethylidene, singlet-triplet energy separation, ab initio CI study 3—11702
  first and second-row bases, complexes with H$^+$, Li$^+$ and Na$^+$, ab initio MO calcs. 3—9316
  five membered ring systems, intramol. H bonding, ab initio calcs. 3—45810
  1-fluoro-1-chloroethane, ^{13}C nuclear mag. shielding tensor, ab initio HF calcs. 3—55863
  fluoroacetamide, mol. geometry, low temp. neutron diffr. and ab initio investig. 3—1229
  fluorobenzenes, mol. struct., ab initio, calcs. 3—21626
  2-fluoroethanol, IR photorotamerisation, ab initio calcs. 3—45808
  fluoromethane radical cation, structs. and relative energies 3—21650
  fluoromethane radical cation isomers, structs. and relative energies 3—21650
  formaldehyde, electron density anal., ab initio LCAO-SCF-MO calc. 3—6540
  formaldehyde-HNO H bonded complex struct., prepared by methyl nitrite photolysis 3—1210
  formamide, ^{13}C nuclear mag. shielding tensor, ab initio HF calcs. 3—55863
  formamide oxime, mol. geometry, low temp. neutron diffr. and ab initio investig. 3—1229
  formyl ions (HCO$^+$), IR intensities, ab initio calcs. 3—1238
  four-membered ring systems, intramol. H bonding, ab initio calcs. 3—45810
  Huckel 4n heterocycles, struct., vibr. spectra, ab initio obs. 3—55808
  hydrazine, N-N spin-spin coupling consts., ab initio calcs. 3—17309
  hydrazinecarbothioamide, basic and N-protonated, MO calcs. and NMR investig. 3—21782
  hydrazines, protonated, N-N spin-spin coupling consts., ab initio calcs. 3—17309
  hydrogen bonds, ab initio mol. orbital calc. using flexible atomic orbital basis set 3—36646
  4-hydroxy-2-pyridinone, tautomerism, ab initio MO calcs. 3—17209
  hydroxypyridines, tautomers, interaction of H_2O, SCF-MO-LCAO-ab initio calcs. 3—31937
  imidazole, trimer, ^{14}N and ^{2}H quadrupole coupling tensors, ab initio SCF MO calcs. 3—41593
  imines, ionisation pots., photoelectron spectra, comparison of semiempirical methods 3—17221
  1-imino-deca-2,4,6,8-tetranenes, polyenic Schiff bases, struct. changes induced by hydrogenation ab initio calcs. 3—4265
  inversion vibr. freqs., ab initio calcs. *(French)* 3—45807
  isocyanamide, spectroscopic param., ab initio MO study 3—26626
  beta-lactam, struct., ab initio calcs. using model cpds. 3—45806
  LCAO-MO-ab initio calcs., direct SCF method 3—21628
  linear combination of Gaussian-type orbitals, ab initio LCAO SCF MO program calcs. *(Chinese)* 3—41490
  localised biradicals, singlet-triplet energy gap. ab initio electronic struct. theory 3—55777
  magnetism at surfaces and interfaces 3—52324
  methane, elastic electron scatt., rot. excitation, ab initio interaction pots. 3—41681
  methanol, dimer, dissoc. and ionisation energies, PES and ab initio SCF MO calcs. 3—41618

ab initio calculations continued
methanol cation, electronically excited, unimol. reaction paths, cation prod., isolated state decomp. 3—14854
methoxybenzene, methoxy group rot., pot. curves, ab initio SCF calcs. 3—17200
methoxyethene, methoxy group rot., pot. curves, ab initio SCF calcs. 3—17200
methyl acetate, mol. struct., ab initio force relax. calcs. 3—17196
methyl alanate, mol. struct., ab initio force relax. calcs. 3—17196
methyl amines, struct. and acid-base props., ab initio SCF study 3—31936
methyl ammonium cation 3—55801
methyl anion, inversion pot. and rot. inversion energy levels 3—6603
methyl compounds, Koopman's theorem ionisation pot., ab initio SCF calcs. 3—55819
methyl ethyl ether, C-C and C-O bonds intrinsic torsional barrier, PCILO and ab initio calcs. 3—45855
N-methyl formamide, E- and Z-, electrostatic solvation, ab initio SCF calcs. 3—41514
methyl formate, mol. struct., ab initio force relax. calcs. 3—17196
methyl phosphines, struct. and acid-base props., ab initio SCF study 3—31936
methyl radical, struct. and props., ab initio calcs. 3—55816
methyl vinylether, gas-phase mol. struct., electron diffr. IR Raman and microwave obs. 3—50520
methylamine force field, ab initio MO calc. 3—41552
methylene amidogen radical, electronic struct., vertical excitation spectrum, ab initio calcs. 3—50293
methylene cation, vibr. rot. energy level calc. 3—6524
methylenefluoronium radical cation, structs. and relative energies 3—21650
MO interactions, preferred geometry ab initio SCF calcs. 3—11653
molecular anions, electron propagator of Green's function method calcs. 3—36652
molecular collisions, internal energy transfer, pot. energy surfaces, close coupled eqns. 3—32173
molecular complex formation, electron density redistrib. anal. 3—14855
molecular SCF, dynamical damping factor calc. method 3—26628
naphthalene, triplet-triplet absorpt., ab initio CI calcs. 3—6550
naphthalene(-d_8) anions, reson. Raman spectra in tetrahydrofuran 3—45950
p-nitroaniline, N1s(NO_2) core-hole states, photoelectron spectrum, CI calcs. 3—6719
nitrobenzaldehyde anion radicals, formyl group restricted rot., EPR study 3—50544
nitroxides spin density, alkyl substitution effect, ab initio UHF calc. 3—55824
n-nonane, struct. and transferability of electronic effects, ab initio calcs. 3—1225
norbornane, gas phase mol. struct., electron diffr., microwave, Raman and IR study 3—56074
norbornane, gas-phase mol. struct., electron diffr. IR Raman and microwave obs. 3—50520
nucleotide base stacks, energy band struct., hydration effect 3—13720
olefins, electrophilic addition, substituent effects, ab initio MO calcs. 3—55803
open-shell systems, struct. predictions from ab initio MO procedures, comparative assessment 3—50301
organic cpds., symmetrical bridging H bonds, ab initio STO-39 and MINDO/3 calcs. 3—55787
oxirene, struct., vibr. spectra, ab initio obs. 3—55808
peroxyformic acid, microwave spectrum, dipole moment and substitution spectra 3—55807
3-phenylthiophene, liq. cryst. solns., struct., internal rot., NMR obs. 3—55967
phosphenzene, structs. and stability, at initio and CI calcs. 3—45867
phosphinonitrene, structs. and stability, at initio and CI calcs. 3—45867
piezoelectric materials, anisotropic, acoustic wave generation, numerical anal. 3—50889
planar molecules, containing C-OH, N-OH and O-OH groups, bond length and stretching force consts., ab initio calc. 3—31927
poly-(p-phenylene) chains, electronic struct., ab initio HF study 3—23239
polyacetylene, CNDO/S3 cryst. orbital model, definition and appl. 3—12018
polyatomic molecules, determ. of complete set of electrooptical parameters by quantum-mech. calcs. 3—32124
polyatomic mols., structs. and transition states, ab initio effective core pot. and all-electron calcs. 3—1231
polymers, ground state props., ab initio calcs. 3—17389
polymers, simulated ab initio MO methods 3—36888
polymethylene radicals, π-nonbonded and through-bonded interactions, ab initio study 3—31930
potential energy surface fitting, Akima's bivariate interpolation method utility to dynamical studies 3—21614
propadienone, struct., ab initio MO calcs., electron correl. effect, rot. consts. 3—1253
pseudopotential SCF MO and ab initio effective pot. calcs. 3—31911
pseudopotentials, first-principle, analytic representation from ab initio calcs. 3—38276
pyridones, tautomers 3—31937
quantum chemistry literature data base bibliography 3—20595
second row-hydride mols., Rydberg states, electronic struct. 3—6523
semiempirical orbital energies rel. to total energy of mol., Ruedenberg type formula 3—55851
serine depeptide, struct., bonding, ab initio MO theory 3—17197
2-silaallenes, electeronic states and intrnal rot. barriers, ab initio MO calcs. 3—31931
silaethylene isomers, F and Li substitution effects, ab initio calcs. 3—1213
silaethyne, energy surfaces, singlet and triplet, ab initio calcs. 3—45815
silyl amines, struct. and acid-base props., ab initio SCF study 3—31936
silyl compounds, Koopman's theorem ionisation pot., ab initio SCF calcs. 3—55819
silyl phosphines, struct. and acid-base props., ab initio SCF study 3—31936
six-membered ring systems, intramol. H bonding, ab initio calcs. 3—45810
small molecules, conformational anal. with PCILO methods 3—31946
substilisation, protonation, environmental effects, MO anal. 3—14842
sulphide borons, electronic props., struct., ab initio SCF calcs. 3—11650
tetracyanoethylene, equilib. geometry and in-plane vibr. spectra ab initio and semiempirical calcs. 3—26630
1,3,5,7-tetranitro-1,3,5,7-tetrazine, ab initio MODPOT/VRDDO/MERGE calcs. 3—36650

ab initio calculations continued
thermochemical data, ab initio calcs. of SCF energies for augmented basis sets and HF limit energies 3—1221
thermochemical data, ab initio calcs. of total correl. energies, Schrodinger energies and heats of form. 3—1222
thiirane-HCl, H-bonds, ab initio SCF MO calcs., well depths, Mulliken population indices and one-electron props. 3—1207
thiirane-HF, H-bonds, ab initio SCF MO calcs., well depths, Mulliken population indices and one-electron props. 3—1207
thiirene, struct., vibr. spectra, ab initio obs. 3—55808
thiocarbonyls, electronic props., struct., ab initio SCF calcs. 3—11651
threonine dipeptide, struct., bonding ab initio MO theory 3—17198
thymine radicals and anion, ab initio MO calcs. 3—11680
topological effects on MO energies 3—1219
transition matrix elements, ab initio configuration interaction calc. 3—36690
transition metal compounds, Koopman's theorem nonvalidity, semiempirical MO calc. 3—11701
transition metal monoxides, cohesive props., heat of form., ab initio calc. 3—7958
tricyanovinyl alcoholate anion, equilib. geometry and in-plane vibr. spectra ab initio and semiempirical calcs. 3—26630
trifluoromethyl compounds, mag. shielding consts., ab initio quantum-mechanical calcs. 3—6555
trifluoromethyl radical, quantum yields, pot. energy surface, visible and UV obs. 3—45955
1,3-trinitro-1,3,5-triazine, ab initio MODPOT/VRDDO/MERGE calcs. 3—36650
urea crystal with H-bonded mol. units, nonlinear optical props. 3—1689
vinyl chloride metabolites, mol. props., ab initio SCF-MO calcs. 3—31920
X-ray spectra classification in laser prod. plasmas of atoms from Tm to Pt in 6-9 Å range 3—46751
Al dilute binary alloys, defect induced distortion fields, neutron scatt. study and ab initio calc. 3—13215
Al^{3+}/CO system, equilib. geometry, ab initio calcs., NMR chem. shielding tensors 3—17205
AlH, excited states, ab initio propagator calcs. 3—45840
AlH^+, low lying states, ab initio calcs. 3—1237
AlO, $X^2\Sigma^+$ and $B^2\Sigma^+$ states, dipole moments, SCF and CI calcs. 3—31953
AsF_6^- octahedral anion, charge distrib., ab initio SCF calc. 3—6535
As_4S_3, electronic struct. and UPS spectra, ab initio SCF calc. 3—41491
BF, ground state, IR transition rates, ab initio SCF calcs. 3—11656
BF^+, ground state, IR transition rates, ab initio SCF calcs. 3—11656
BH, mag. susceptibility, screening const., ab initio calcs. 3—50310
BH^+, low lying states, ab initio calcs. 3—1237
BH_2^+, ab initio pot. energy surfaces 3—55799
Be, electron scatt., ab initio adiabatic polarisation pots., matrix HF calc. 3—6789
Be slabs, electronic struct., ab initio LCAO HF calc. 3—23259
$BeAl_2F_8$ complex, ab initio MO studies of struct. and stability 3—36647
BeF_2, crystalline, electronic struct., ab initio cluster calcs. 3—43019
BeH^-, mag. susceptibility, screening const., ab initio calcs. 3—50310
BeS, perturbations in $A^1\Pi$-$X^1\Sigma^+$ system, the $a^3\Pi_i$ state 3—31924
C_2, ab initio spin-orbit coupling constants for potential interstellar molecule 3—48974
C_2, interstellar mol., radiative processes, photodissociation, pot. energy curves, CI and SCF calcs. 3—41635
CF_2-CO(NF)(SO)(CF_2), combination products, ab initio SCF calcs. 3—17199
CH^+, $b^3\Sigma^-$ state, ab initio pot. curve calcs. 3—41504
CH^+, mag. susceptibility, screening const., ab initio calcs. 3—50310
$CH_2NH_3^+$, equilib. struct., ab initio UHF calcs. 3—36660
$C_2H_3O^+$ ions, gas phase, struct. and stabilities, ab initio MO calcs. 3—55806
$CH_3OSO_3^-$, mol. struct., ab initio MO calcs. 3—45805
CO, coordinated, hydride nucleophilic attack, ab initio SCF pot. energy surfaces 3—11682
CO, ESCA peak intensities in DA and GSA calcs., using Fourier transformed GTOs 3—50292
CO, IR intensities, ab initio calcs. 3—1238
CO^+, $X^2\Sigma^+$ and $A^2\Pi$ electronic states, radiative transition probabilities, ab initio calcs., dipole moment 3—6533
CO-CO(NF)(SO)(CF_2), combination products, ab initio SCF calcs. 3—17199
CO_2^+, $C^2\Sigma_g^+$ state, geometrical struct., ab initio calcs., vibr. struct., photoelectron spectrum, predissoc. reaction paths 3—14839
Ca^{2+}-formate ion, chelation complex binding, ab initio STO-3G calcs. 3—17195
CaO, dissoc. energy, ab initio STO calcs. 3—36656
CdI, $5s^2$ $^1S_0$-5s5p $^{1,3}P_1$ transitions, oscillator strength calcs. 3—21648
CdO, ab initio energy bands 3—43018
Cl_2 crystal struct., Cl_2-Cl_2 pair pot. anisotropy, intermol. bonding and lone pair effects 3—27915
Cu_2, bond length, ab initio SCF CI calcs. 3—26644
Cu_2, dissoc. energy, ionisation pot. ab initio MRD CI calcs. 3—11712
Cu_2, electronic struct., localised d hole, ab initio SCF calcs. 3—41712
Cu_3, electronic struct., localised d hole, ab initio SCF calcs. 3—41712
$CuInSe_2$, band struct. calcs. 3—3027
CuO, low energy electronic states, MC SCF and valence CI calcs. 3—21653
D_2, high orbital angular momentum states, ab initio calcs. 3—26629
DyZn, indirect multipolar interactions, ab initio calc. 3—52099
F+ethylene reaction, ab initio MO calcs., equilib. geom., transition struct. and vibr. freqs. 3—48059
F+ethylene reaction, ab initio MO calcs., heats of reaction, barrier heights and bond dissoc. energies 3—48060
FeCl, sextet state interactions 3—21685
GaAs:Al, local lattice dynamical force const. variations caused by isoelectronic impurities 3—47071
Ge, lattice dynamics, ab initio pseudopot. theory 3—2707
Ge, pressure induced phase transition, cryst. stability 3—23035
H^+ transfers, electron correl. effects, ab initio MO calcs. 3—58399
H+ethylene reaction, ab initio MO calcs., equilib. geom., transition struct. and vibr. freqs. 3—48059
H+ethylene reaction, ab initio MO calcs., heats of reaction, barrier heights and bond dissoc. energies 3—48060
H_2, doubly excited autoionising states, ab initio. pot. curve calc. 3—36703
H_2, doubly excited autoionising states, ab initio calcs. 3—41629
H_2, high orbital angular momentum states, ab initio calcs. 3—26629

ab initio calculations continued
H_2 photoionisation spectrum, low-resolution, electronic ab initio quantum defect theory 3—31933
H_2-H_2, thermodynamic props. from ab initio pot. surface calcs. 3—11723
H_3 Rydberg states, pot. surfaces calcs. 3—1449
HCCC radical, ab initio spin-orbit coupling constants for potential interstellar molecule 3—48974
HCN, C-state, intramolecular energy transfer and predissociation 3—36827
HCN, IR intensities, ab initio calcs. 3—1238
HCN isoelectronic series 3—1238
$H_2C_2N_2$ isomers, electronic and geometric struct., ab initio SCF calcs. 3—45828
HCl, photodissoc. processes 3—1440
HF+methyl cation, condensation reaction, ab initio MO calcs. 3—45820
HNC, IR intensities, ab initio calcs. 3—1238
$(H_3NHOH_2)^+$, proton transfer, energetics and electronic rearrangements 3—58400
H_2Ne, vibr.-rot. spectrum, ab initio calcs., close-coupling approach 3—17260
H_2O, MO interactions, preferred geometry ab initio SCF calcs. 3—11653
H_2O molecule, mech. anharmonic spectroscopic problem soln. 3—17264
$H_2O \rightarrow OH+H$, minimum energy path, ab initio calcs. 3—39353
H_2O polarisable electropole model, comparison to quantum calcs. 3—46092
H_2O, semirigid bender model 3—6525
H_2O^+, unimolecular reactions, electronic state interaction, ab initio SCF CI calcs. 3—41503
H_2O+methyl cation, condensation reaction, ab initio MO calcs. 3—45820
H_2O_2, enantiomeric mols., parity-violating energy difference, STO calcs. 3—36653
H_3O^+, inversion pot. and rot. inversion energy levels 3—6603
HOC^+, IR intensities, ab initio calcs. 3—1238
HONO, electronic spectrum and photofragmentation, ab initio and CI calcs. 3—11904
H_2S, MO interactions, preferred geometry ab initio SCF calcs. 3—11653
H_2S-HF, equilib. struct., ab initio calcs., role of d functions 3—36671
H_2S+methyl cation, condensation reaction, ab initio MO calcs. 3—45820
H_2SCl radical, three electron bond ab initio MO calcs. 3—6532
H_2SClH^+, radical, three electron bond ab initio MO calcs. 3—6532
H_2SO_4, mol. struct., ab initio MO calcs. 3—45805
H_2SSH radical, three electron bond ab initio MO calcs. 3—6532
N(4)-hydroxycytosine tautomers, ab initio and semiempirical calcs. 3—55790
I_2, pseudopotential SCF MO and ab initio effective pot. calcs. 3—31911
IF, pseudopotential SCF MO and ab initio effective pot. calcs. 3—31911
IF_5, pseudopotential SCF MO and ab initio effective pot. calcs. 3—31911
In II, $5s^2\ {}^1S_0$-$5s5p\ {}^{1,3}P_1$ transitions, oscillator strength calcs. 3—21648
KCN, vibr.-rot. spectrum, ab initio calcs., close-coupling approach 3—17260
Li core-excited spectroscopy overview 3—11647
Li^+-CO, ^7Li, ^{13}C, ^{17}O NMR shielding tensors and ab initio calc. of equilib. geom. 3—55800
$Li+FH \rightarrow LiF+H$ reaction, ab initio pot. energy surface, initial orientation effect 3—29295
Li_2 self-broadened reson. line, triplet satellite band 3—21772
Li_3 cluster, binding energies, ionisation pot., ab initio SCF and MRD CI calcs. 3—26890
$LiOH.H_2O$, theoretical electron density 3—7968
Mg cluster, absorbed H, ab initio HF SCF MO study 3—36900
MgO, dissoc. energy, ab initio CI calcs., electron affinity and ionisation pot. 3—17229
$Mg(^3P_J)+H_2(D_2)$ quenching, temp. depend., endoergic chem. reaction as rate limiting 3—14853
MnF_2, d orbital theory for Mn^{2+} ions 3—13777
N_2, crystal, lattice dynamics, ab initio intermol. pot. and hindered rotator model 3—13354
N_2, electron impact vibr. excitation at intermediate energies 3—46081
N_2, multielectron transitions in K-shell electron energy loss spectrum, ab initio calcs. 3—1490
α-N_2, solid, lattice dynamics, ab initio intermol. pot., anharmonic librations 3—42719
N_2+H_2O, intermol. pot. function from ab. initio MO calcs. 3—1226
$(N_2)_2$ van der Waals mol: quantum dynamics, ab initio treatment 3—21619
NF-CO(NF)(SO)(CF_2), combination products, ab initio SCF calcs. 3—17199
NH_2, pot. curves, transition moments and photodissoc. cross sections 3—36837
NH_3 adsorbed on Fe and Ni, binding and valence photoemission *(German)* 3—38231
NH_3 heterodimers and homodimers, proton transfers, ab initio MO calcs. 3—17210
NH_3, inversion vibr. freqs., ab initio calcs. *(French)* 3—45807
NH_3, MO interactions, preferred geometry ab initio SCF calcs. 3—11653
NH_3+methyl cation, condensation reaction, ab initio MO calcs. 3—45820
NH_4 radical, Rydberg ground state, dissoc., ab initio MO study 3—36659
NH_4^+, hydration energies, ab initio MO calc., solvation effect 3—55801
$NH_2CH_3^+$, equilib. struct., ab initio UHF calcs. 3—36660
NH_2CN, inversion transitions, ab initio calcs. 3—11655
NH_2OH, first two bands in PES, ab initio MO study 3—1428
NO^+, $X^1\Sigma^+$ ground state, ab initio calc. of radiative transition probabilities 3—41624
Na^+-CO, ^{23}Na, ^{13}C, ^{17}O NMR shielding tensors and ab initio calc. of equilib. geom. 3—55800
$Nb_3S_4(Se_4)(Te_4)$, quasi-one-dimensional, electronic struct. calc. 3—47249
Ne, struct. calc., symm. adapted pair function appl., third order correl. energy 3—11683
$NiMn_{0.05}Fe_{1.95}O_4$, magnetostriction contrib. of Mn^{3+} and Mn^{4+} ions 3—23778
$Ni(NH_3)(NO_2)_2$, spin and charge distribs., polarised neutron, X-ray diffr., ab initio calcs. 3—57320
OH_2 heterodimers and homodimers, proton transfers, ab initio MO calcs. 3—17210
PF_6^- octahedral anion, charge distrib., ab initio SCF calc. 3—6535
P_4S_3, electronic struct. and UPS spectra, ab initio SCF calc. 3—41491
Re_2, bonding study by ab initio calcs. 3—45868
$Re_2Cl_8^{2-}$, quadruply bonded species, electronic states, ab initio wave functions 3—45824
S_2, $X^3\Sigma_g^-$ and $B^3\Pi_{g,i}$ states, zero-field splitting computed using MRD CI wavefunctions 3—1254

ab initio calculations continued
SCl, vibr. freq., CEPA calcs. on open-shell mols. 3—45926
SF, vibr. freq., CEPA calcs. on open-shell mols. 3—45926
$(SN)_x$ electronic struct. and bonding, ab initio MO calcs. 3—55793
S_4N_2, electronic spectrum and struct., ab initio CI calc. 3—41508
S_4N_2, mol. and electronic struct., ab initio MO calcs., photoelectron spectra 3—1236
S_4N_4, UV photoelectron spectrum assignment, ab initio configuration interaction calcs. 3—55996
$S_4N_4^{2+}$, electronic struct., ab initio HF-Slater MO calcs., UV and visible spectra 3—11654
S_5N_6, electronic struct. and bonding, ab initio Hartree-Fock-Slater MO calcs. 3—17206
SO-CO(NF)(SO)(CF_2), combination products, ab initio SCF calcs. 3—17199
SbF_6^- octahedral anion, charge distrib., ab initio SCF calc. 3—6535
Si, average stress tensor, ab initio pseudopot. calc. 3—47020
Si, band struct. calcs. 3—3027
Si, deep level impurities, finite mol. cluster calcs. 3—47290
Si, lattice dynamics, ab initio pseudopot. theory 3—2707
Si, local density of states at defects calc. 3—47293
Si, neutral-vacancy defect, embedded cluster theory, ab initio calc. 3—8448
Si, pressure induced phase transition, cryst. stability 3—23035
Si:H, amorphous, three-centre bond model calcs. 3—37789
Si_2, low-lying electronic states, pot. energy curves and transition moments 3—17227
SiC, ab initio spin-orbit coupling constants for potential interstellar molecule 3—48974
SiH_2N_2, and isomers, relative stabilities, ab initio SCF calcs. 3—55861
SiO, $X^1\Sigma^+$ state, pot. energy functions, dipole moments, radiative lifetimes, ab initio SCF calcs. 3—36661
SiO^+, $X^2\Sigma^+$ and $A^2\Pi$ states, pot. energy functions, dipole moments, radiative lifetimes, ab initio SCF calcs. 3—36661
SmS, electronic struct., relativistic KKR calcs. 3—47262
TiC (111) polar surface, electronic struct., DV-Xα calcs. 3—57399
U V, $5f^2$ state, spin dependent interactions 3—45831
V_3Si, Fermi surface and band struct., positron annihilation and LMTO studies 3—57261
Xe VI, level energies and lifetimes calcs. 3—21649
Xe VII, $5s^2\ {}^1S_0$-$5s5p\ {}^{1,3}P_1$ transitions, oscillator strength calcs. 3—21648
ZnS, band struct. calcs. 3—3027

abacs *see nomograms*

aberrations
aberrations in optics and particle optics only
see also lenses; optical instrument testing; particle optics
achromatic object positions in optical systems 3—1741
achromatising lens, modified, for optometry 3—19848
adaptive intracavity compensation of quadratic phase aberrations 3—12272
Aldis equation development for aberration anal. via exact surface contribs. 3—6888
anastigmatic lenses, areas of occurrence and use in objective design *(Russian)* 3—32433
aplanatic telescopic system consisting of two lenses, design parameters *(Czech)* 3—41959
apochromat, three-lens, three-colour, calc. using graphical method 3—27197
apochromat chromatic correction, information reliability analysis 3—37164
apochromat objectives, three-lens cemented, calc. method 3—32438
astigmatic lenses with planar electrodes, electron-optical props. 3—17430
astigmatic one-step rainbow holography, imaging anal. *(Chinese)* 3—41788
astigmatism, unwanted, in lenses with concentric variation in sagittal power, ophthalmic appl. 3—35023
astronomical faint-object spectrograph design 3—20247
biplanar lens, symmetric single-section, aberration props. 3—41751
cameras for ultra-high speed cinematography, kinematic aberrations and constructional parameters 3—5904
catadioptric systems, aberration anal. *(Korean)* 3—1740
cellulose acetate buterate contact lenses, flexure and residual astigmatism on toric corneas 3—19844
charged-particle energy analyzers, transmission function determination, analytical treatment 3—1120
chromatic aberration dependence on construction elements of optical systems 3—26969
circular aperture, partially space coherent diffr., optimally balanced fifth order spherical aberration 3—6879
coherent apodised optical system, image contrast 3—46165
combined electric-magnetic focusing-deflection system, relativistic aberration formulae 3—46148
conventional transmission electron microscope objective lens spherical aberration correction using foil lens 3—1541
correctors, Ritchey-Chretien and Cassegrain, Seidel coeff. derivatives *(Japanese)* 3—48821
crossed Babinet compensator, theoretical fringe profiles in testing concave aspheric surfaces 3—17433
crossed lenses, electrode shape effect on electron-optics props. 3—17429
deflectors, electrooptic, gradient-type, resolving power, comparative anal. 3—22191
distributed-index planar micro-lens, ray tracing 3—1811
dodecapole lens, elec. and mag., design and test for electron-optical aberration correction 3—17426
electron beam microrecording with minimum coma *(German)* 3—6862
electron beam system, combined scanning, dynamic aberration correction 3—1543
electron energy analyser using chromatic aberration of single-field condenser objective 3—26929
electron Fourier holography reconstruction conditions and resolution 3—25993
electron lens asymptotic aberration coefficient depend. on magnification 3—1540
electron lenses, third order aberration coeffs., depend. on object position *(German)* 3—17427
electron microscope, spherical aberration, approx. third order calc. using relativity theory 3—54816
electron microscope automatic focusing and astigmatism correction system for the SEM and CTEM 3—473
electron spectrometer CAD for STEM, with high resolution and large acceptance angle 3—49511

aberrations continued
electron-optical systems, aberration coefficients in relativistic case, derivation, ALGOL program 3—32292
electrostatic sytems with plane of symmetry, aberrations 3—32262
elliptical object imagery in presence of primary astigmatism 3—6890
eye, spherical aberration of the crystalline lens 3—24708
fast aplanatic IR objective design using high refr.-index materials aberration correction 3—41949
field emission optical system, spherical and chromatic aberration addition for electron lens pair 3—46151
Fourier transform optimal setup 3—21999
Fresnel optical systems used in laser radiation and reception *(Rumanian)* 3—12277
Fresnel systems, ray tracing 3—46154
geodesic lenses, design modification and aberration error analysis 3—56352
graded index curved media, ray-trace aberrations 3—36945
gradient index lens endoscope, chromatic aberration correction 3—39701
gradient-index eyepiece design, third-order aberrations, colour and distortion 3—37152
gradient-index rod lenses, spherical aberration 3—36946
gratings, concave, aberration-corrected, mechanically ruled, for flat-field grazing-incidence spectrograph 3—45252
grazing incidence reflector properties and performance 3—7116
grazing incidence systems, aberration reduction or toleration 3—7115
holographic aberration compensation with partially coherent light 3—32328
holographic laser scanners using generalised zone plates, POS scanner appls. 3—32324
holographic lens design, aberration-free, efficient, in presence of construction/reconstruction wavelength shift 3—6926
holographic lenses, higher order aberrations 3—32326
holographic memories, optical element aberration requirements and location accuracy *(Russian)* 3—50629
holographic optical elements, flat, aspheric, optimum phase transfer function 3—36963
holographic screen beam and chromatic aberration characteristics *(Russian)* 3—1600
holographic toroidal diffr. grating using divergent illum. at grazing incidence for X-ray and XUV spectroscopy 3—54779
image quality of elliptical objects, influence of primary coma 3—22000
intracavity adaptive optics, half-symm. unstable resonator with intracavity axicon performance 3—12185
ion beam focusing, edge of field effects and aberrations *(Japanese)* 3—36931
IR imaging, air-spaced doublet achromat design, aberration theory 3—41954
large-aperture spectrograph employing a concave holographic diffr. grating 3—30936
lens interference pattern aberration function computation 3—46175
lenses, automatic design methods, recent advances *(Japanese)* 3—12274
lenses, corrected doublet CAD, Casio FX-602 P program 3—56296
Lie algebraic theory, geometrical optics, comment on similarity to known results in electron optics 3—32305
line image deformation in presence of distortion, wide-angle optical systems 3—32322
magnetic spectrometer, optics investigation using α-particle source 3—1122
magnifying magnetic optical achromat 3—26523
Michelson scanning interferometer, aberrations effect evaluation 3—377
micro-optics *(Japanese)* 3—12085
microwave cavity lens primary (second-order) aberration calc., computer-aided methods 3—26928
mirror, concave, spherical aberration meas. by scatter plate interferometry *(Korean)* 3—37161
monochromator based on double Wadsworth scheme, dispersion doubling 3—27222
monochromators with concave diffr. gratings, aberration props. of optical systems 3—27223
multi-focal plane holographic disc scanner, optical element chromatic aberration minimisation 3—6934
objectives, infintely thin three-lens, fundamental parametes formulas 3—32439
ocular crystalline lens, split laser technique for optical study 3—9789
off-axis system, field curvature calculation by plate diagram method 3—26966
optical aberration functions, chromatic aberrations and derivatives with respect to refr. indices for symm. systems 3—17447
optical microscopes, quality resting by spot-grating plate *(Chinese)* 3—40681
optical system aberration function in generalised coords., basic props. 3—32316
passive optical system with aberrations, apodisation 3—32436
phase aberrations, intracavity adaptive optic compensation, passive and active cavity for large N_{eq} resonator 3—50680
phase retrieval and diversity in adaptive optics 3—6900
photographic lens, Tessar type, OTF, effects of aperture modulation *(Korean)* 3—6895
planar microlens, distributed-index, three-dimens. ray optics 3—32430
plane grating monochromator with off-axis parabolical mirrors 3—27221
point-spread function calc. for optical systems with residual aberrations and non-uniform transmission pupil 3—46170
polarising microscope performance with crossed polarisers, optimum balanced spherical aberrations and coma effect 3—5849
polychromatic image quality evaluation by means of transfer function 3—26964
primary aberrations, Strehl ratio, analytical results for circular and annular pupils 3—6891
pyrometers errors analysis due to aberrations 3—49379
rainbow holographic aberrations and the bandwidth requirements 3—26973
reflectors, axisymmetric, of the stepped spherical type, high conc. solar collector appls. 3—27189
scanning electron beam system, dynamic aberration corrections *(Chinese)* 3—41747
semiconductor narrow-stripe grain-guided lasers with $\cosh^{-2}(x)$ gain profile, astigmatism 3—17497
spectrograph, miniature, with concave holographic gratings, aberrations and spread function 3—30938
STEM, corrected, optimum resolution 3—10970

aberrations continued
telescope objective, optical aberration correction by aspherization *(Korean)* 3—37160
thermal lens, thermo-optical distortion investigation for a given random radial heat source distrib. *(Russian)* 3—46270
toroidal mirror-toroidal grating combinations, visible UV optical design 3—7117
two-lens compound objective, chromatic aberrations in visible and ultraviolet *(Russian)* 3—26959
uniform magnetic field spectrometers, second and third order aperture aberrations 3—5917
US NDE using focused US waves under oblique incidence, aberrations 3—56406
visual instrument assessment, contrast sensitivity, correction of astigmatism and field curvature 3—1734
waveguides, graded-index, beam aberration in phase conjugation by degenerate four-wave mixing 3—37129
zoom lens design and aberration theory advances *(Japanese)* 3—10933
Ga coupling for deep interior plane acoustic microscopy 3—4257
Hg coupling for deep interior plane acoustic microscopy 3—4257
Ta_2O_5 Luneberg lens development 3—17641

aberrations (visual) *see vision defects*

abrasion
see also hardness; wear
diamond, abrasive properties analysis, cluster anal. appl. 3—24371
diamond, natural and synthetic, abrasion resist. during conventional polishing 3—19427
elastomeric O-ring materials, empirical eqn. for abrasive wear 3—19428
hard materials, future potential developments, mech. props. rel. to appl. 3—3981
materials, wear resist. meas. using semifixed abrasive 3—58335
metal, pure, abrasion resistance rel. to speed of abrasion *(French)* 3—29193
metals, pure, resistance to low stress abrasive wear 3—19430
multiphase solids, abrasive wears resist., Khruschov's rule 3—34489
optical fibres, abrasion susceptibility, primary coating nature and thickness effect, degree of protection characterisation method 3—42045
resistant materials, coatings and inserts, overview 3—58260
rubber, natural-butadiene blend, abrasion, SEM study 3—39255
steel, abrasion resistance rel. to speed of abrasion *(French)* 3—29193
steel, fatigue crack propagation in Mode III, rubbing fracture surface influence 3—34435
steel, Ni-Cr, electrochem. honing, condition of surface *(Russian)* 3—53275
superhard abrasive grains, wear against hard ceramics, SEM obs. *(Japanese)* 3—4151
wear mechanisms of Co-base powder metallurgy alloys, diamond and Al_2O_3 scratch tests 3—4145
Al-Al_2O_3(SiC), composites, abrasive wear 3—9195
Al-si-Mg-ZrO_2, particulate composite, abrasive wear 3—34486
α-Al_2O_3, corundum, abrasion-resistant ceramic development for drawing microwires 3—24193
Fe-TiC magnetoabrasive powder, struct. effect on service life in metal polishing 3—24370
$In_{2-x}Sn_xO_{3-y}$ coatings to prevent spacecraft charging 3—39999
SiC, tribological props. in metal removal process 3—34488
SiO_2 fibres, large flaw strength and fatigue 3—42046
TiN ion plated coating on plasma nitrided tool steel, abrasive wear 3—14747
W-C coating, wear resistant, controlled nucleation thermochemically deposited, microstruct. evaluation 3—3014
ZrO_2, modified abradable seal coating for high temp. gas turbine appls. 3—4210

abrasive wear *see abrasion*

absolute gravity *see gravity*

absolute pressure measurement *see pressure measurement*

absolute temperature *see temperature*

absorption
for absorption of substances see sorption
see also acoustic wave absorption; electromagnetic wave absorption
polyacetylene, doped, discrete Drude absorption by conducting charged soliton 3—18694

absorption coefficients (optical) *see optical constants*

absorption spectra *see spectra*

absorption wavemeters *see wavemeters*

abundance ratio *see element relative abundance; isotope relative abundance*

acceleration
see also acceleration measurement; accelerometers
constant power equations of motion 3—25727
interstellar H_2 clouds, acceleration through radiative dissociation of H_2 3—54475
plate, flat, optimum explosive charges for accel. 3—51155

acceleration measurement
biomechanics, kinematic variables derived from accelerometer and photographic meas., combination 3—4709
data processing of sets of meas., reliability and accuracy improvement 3—49336
digital accelerometer with current-digit convertor, vibration errors analysis 3—49347
gravitation transportable absolute gravimeter design 3—15649
gravitational, portable apparatus for absolute gravity meas. 3—15650
harmonic linear accelerations reproduction, use of rotating platform with controlled direction 3—49335
linear liquid accelerometers checking, using double centrifuge, error analysis 3—49355
measuring linear acceleration in fast processes 3—40593
optical fibre transducers, appls. *(Swedish)* 3—30845
piezoelectric three-component transducer for linear accelerations 3—49346
standard means of accelerations reproduction, Soviet development 3—49353
three-axes electromagnetic accelerometer, low-cost high accuracy design 3—30850
transducers for acceleration, vibration and shock *(French)* 3—16349
vibrating beam accelerometer, strapdown inertial systems applications 3—30849

accelerators (particle) *see particle accelerators*

accelerometers
see also acceleration measurement
calibration, testbed operation analysis 3—298

accelerometers continued
calibration of accelerameters for calibration and standards. Vibration and shock measurement 3—45119
digital, with current-digit convertor, vibration errors analysis 3—49347
electrocapillary transducer, oscillatory motion acceleration measurement *(Polish)* 3—35986
energy expenditure of humans, estimation using an accelerometer device 3—9810
fibre Fabry-Perot sensor based accelerometer 3—56334
force-measuring electromagnet suspension of accelerometer, accuracy increase 3—49348
gravity gradiometer system, development experience 3—35326
harmonic linear accelerations reproduction, use of rotating platform with controlled direction 3—49335
linear accelerometer with electromagnetic suspension for the sensing element 3—49334
linear liquid accelerometers checking, using double centrifuge, error analysis 3—49355
magnetoelastic transducer use in vibr. parameter meas. systems 3—40589
piezoelectric, reference apparatus for checking impact acceleration meas. 3—45120
piezoelectric three-component transducer for linear accelerations 3—49346
quartz cantilever-beamed SAW accelerometers 3—49337
seismic transducers, principles and techniques for shock and vibr. meas. *(Italian)* 3—35282
seismic transducers for shock and vibr. meas., errors *(Italian)* 3—44561
seismic transductors, characts. *(Italian)* 3—39922
spacecraft gravity gradiometer using supersensitive accelerometer 3—30106
superconducting L band dual cavity accelerometer for LSU grav. rad. detector 3—10726
testing, second-class standard rotating platforms improvement 3—49354
three-axis electromagnetic, low-cost high accuracy design 3—30850
transducers for acceleration, vibration and shock *(French)* 3—16349
vibrating beam, strapdown inertial systems applications 3—30849
ZnO piezoelectric thin film accelerometer sensor 3—49338

acceptor levels *see impurity electron states*

accidents
see also electric shocks; explosions; safety
AD-MARC, atmospheric dispersion module for assessing radiological consequences of accidental releases 3—34754
Arkansas Nuclear One Unit 2, transient tests for use in comlputer code compilations 3—50024
BWR LOCA, refill-reflood research programme test facility 3—41283
BWR LOCA conditions, pipe whip tests, report 3—21492
CANDU power reactors, thermohydraulic behaviour during LOCA using FIREBIRD-III program, report 3—31515
computerised emergency assessment and response system, field implementation 3—55370
CRBRP, heterogeneous, HCDA energetics in core 3—55517
emergency reference levels of dose for controlling accidental exposure 3—17089
FBR, post-HCDA pressurisation 3—55509
FBR core during hypothetical accidents, changes in chemical constitution 3—55508
FBR safety research and development in United Kingdom 3—31694
fission reactor core meltdown accident, fission product releases and containment structure interactions *(German)* 3—16965
fission reactor fuel, stainless steel-clad, for use in current design LWRs, evaluation under accident conditions 3—55146
flammable limit of H_2-air-steam mixtures, water fog effects 3—45654
fossil and nuclear power plants, two phase flow modelling using modular modelling system 3—55252
fuel behaviour, effective energy deposition, power burst expt. in NSRR 3—1000
fusion reactor safety, environmental aspects, radiological protection, waste disposal 3—11510
gamma-ray exposure rate due to inert gases released during a reactor accident, spectral composition 3—6411
high consequence-low probability nucl. accidents, close limitation 3—17090
HLW solution discharge accident, radionuclide migration in water saturated soil 3—41162
INTOR/NET, safety and environmental studies 3—55652
issues of nuclear power safety 3—55367
LMFBR, 1000 MW(e) pool type, risk contribs. from accident initiators, comparison with LWR 3—55385
LMFBR, fuel motion modeling in hypothetical core disruptive accidents 3—6410
LMFBR, HCDA anal., disruption stages w.r.t. fuel behaviour 3—55515
LMFBR, TOP and LOF-driven TOP accidents, material movement in bundle region 3—55462
LMFBR accidents, aerosol production and behaviour, characterisation techniques 3—11474
LMFBR reprocessing plant design, optimisation by risk assessment 3—55211
LMFBR SNR-300, accident anal. using computer code SSC-L 3—55397
LMFBR subassembly, boiling and clad movements in loss of flow accidents 3—55461
LWR core, cross flow characts. in rod bundles, report 3—21454
LWR fuel behaviour under accident simulating conditions *(Czech)* 3—50019
LWR LOCA, fluid-structure interaction studies, computer codes STEALTH and WHAMSE 3—45652
LWR rod bundles under accident conditions, BUSH computer code for heat transfer calc. 3—6302
major core damage accidents, lessons learned 3—36548
NET/INTOR first wall and blanket safety anal. 3—55651
nuclear fuel rods simulation by electrically heated rods 3—894
nuclear installations, accidental radioisotopes release, guidance for protection of the public 3—34988
nuclear power plant accident, doses received while crossing plume of radioactive material 3—4653
nuclear power stations, LWR-type, technical developments over last 20 years *(German)* 3—31780
nuclear reactor accident, multicomponent radioactive aerosol, condensation, coagulation and deposition 3—997
population exposure limits to ionising radiation, adverse event probability, nuclear facilities emissions 3—58821

accidents continued
PWR, ECC injection rate and duration, effects on reflood phase during LOCA 3—1001
PWR, interface between structural and system anal. 3—16976
PWR boilers, tube hydrodynamic loads in LOCA, CEFLASH computer code 3—45657
PWR core melt probability, vessel rupture contrib. 3—16971
PWR degraded core anal., accident risk study for proposed UK system 3—31779
PWR LOCA, decay heat removal experiments in U-tube boiler two-loop test facility 3—50021
PWR systems, transient anal., reactor safety perspective 3—55399
PWR test facility, 1/30 scale, momentary loss-of-coolant, effects on a developing natural circulation 3—41282
radiation-hardened accelerometer preamplifier for nucl. power plants 3—41204
radioactive accident generated aerosols, assessment methodology 3—24649
reactor coolant systems, nonchemical decontamination methods for post-accident use, evaluation 3—45649
risk of oil shale 3—4356
small break LOCA, reflux condensate flow phenomena 3—50025
SNR, early recriticalities for ULOF accidents, parametric anal. with SAS 3D code 3—55513
SUPER-PHENIX, source term studies relative to HCDA 3—55510
Three Mile Island accident analytical study by mixed convection over zircaloy plate 3—27514
TMI-2 mechanical component examination, information collection, recording and interpretation 3—50022
TMI-2 reactor coolant system, contamination characterisation 3—45656
Zircaloy fuel sheaths, deform. and failure under LOCA conditions 3—45660
^{85}Kr purge at Three Mile Island in 1980, risks of local and global public health effects 3—29646
Na fire aerosols, physical and chemical behaviour, Na-cooled breeder reactor accidents 3—11473
Na, liquid, accident hazard protection and first aid 3—11475

accommodation coefficient *see sorption*

accretion disks *see circumstellar shells*

accumulation layers
Langmuir-Blodgett film MIS structures on narrow band-gap semiconductors 3—38487
MIS structures, high-frequency capacitance, degeneration and nonparabolicity effects, theory 3—23495
SOSMOS accumulation layers, intersubband resonances, Fourier transform spectroscopy study 3—43293
two-dimensional electron systems, correl. induced phase transitions 3—33769
PbTe films, cond., photocond., thermoelectric, Hall and photothermoelectric meas. 3—8596
Si (100) surface, hole-accumulation layers, Raman study 3—14308
Si, narrow accumulation layers, two-to-one-dimensional cond. transition 3—23489

accumulators *see secondary cells*

acidity *see pH*

acids, organic *see organic compounds*

acoustic analysis
impulse response of an acoustic radiation system, synthesis by nonlinear optimisation *(Japanese)* 3—1828
liquid, boiling, acoustic probing by active location method 3—12472
liquid, gas bubbles, nonlinear acoustical spectroscopy 3—12473
musical starting transients, measurement and analysis system 3—22286
pipe, acoustic props., acoustic finite element derivation 3—22277

acoustic applications
see also ultrasonic applications
fatigue crack closure effect on acoustic detection probability 3—39335
inspection by shadow method with immersion, object surface roughness effect on recorded signals amplitude fluctuation 3—29273
porosity parameters determination using acoustical method, pore distrib., function influence 3—29275
stress analysis, analytical mechanics, use in defining acoustic test methodology 3—48030
temperature meas., remote, using acoustic probe 3—10842
traffic signal, acousitc, for blind pedestrians 3—1924
vibro-acoustic diagnostics of circulating coolant pumps, in primary cycle of nuclear reactor *(Czech)* 3—49999
Si_3N_4, acoustic method of crack detection 3—44032

acoustic arrays
acoustic imaging, digital system, synthetic aperture, sidelobe level reduction 3—50848
adaptive array beam-forming algorithm 3—7318
adaptive array processing, introduction and survey 3—50843
adaptive array processing using predicted coefficients as constrained conditions 3—17715
adaptive space-time processor implementation by unconstrained multichannel lattice 3—7326
ARMA techniques for the location of multiple sources from linear array data 3—7324
B-scan echography linear array, acoustic field, two dimensional model 3—50870
circular, horizontal directivity 3—7271
computerised US tomography by ring array electronic scanning and steering 3—4602
cross-coupling compensation by lateral deconvolution 3—50869
dark-field scanning acoustic microscope with transducer on front of lens 3—1903
digital beamsteering with recursive multichannel filters 3—7327
direct adaptive motion compensation for towed arrays 3—7328
dominant mode power spectrum estimation 3—7320
dynamic focussing and ultrasonic imaging 3—17724
electroacoustic transducers, resonant, in acoustic array, directivity pattern calc. 3—50881
fractional beamwidth resolution using paired beamformers 3—17727
generalised Burg algorithm for beamforming in correlated multipath field 3—17717
imaging, 10th International Symposium, Cannes, France (Oct. 1980) 3—29
imaging by coherent reception of spatially coloured transmission 3—1869
imaging system, annular array for contact B-scan appls. 3—27335

acoustic arrays continued
- imaging transducer radiation patterns and reduction of parasitic coupling 3—1919
- in-line tube banks, acoustic resonances, theory 3—22293
- lateral pharyngeal wall position meas. and detection using computerized linear US array 3—48357
- linear, aperture apodization to reduce pulsed-mode directivity function off-axis intensity 3—1830
- linear, dynamic focusing and compound scanning 3—4587
- linear, focusing 3—50867
- maximum signal-to-noise array processor, formulation in beam space 3—12439
- medical image reconstruction from US array data, statistical estimation approach 3—4589
- medical linear phased array US imaging system 3—4588
- mode and time delay estimation of NDE systems 3—9302
- multimode phased array, Golay codes 3—50849
- multiple signal classification methods, array processing technique 3—17716
- narrowband source detect. by passive array 3—50844
- noise suppression using data-adaptive polarization filters, infrasonic array data appl. 3—17711
- optimum array processing in presence of randomly distorted wavefronts 3—7319
- optimum signal processing of vertical mode-selective array in shallow water 3—17721
- orthogonal beamforming sensitivity 3—7323
- parametric acoustic source with endfire primary projection 3—7365
- parametric modelling for antenna array processing by multichannel ARMA models 3—7325
- passive linear sensor array, range estimation 3—17725
- polyvinylidene fluoride film piezoelec. transducers, single-element and array, for acoustic imaging 3—50894
- pulsed acoustic phased arrays, matched Gaussian apodisation 3—1920
- quantisation degradation in superdirective processing of underwater acoustic arrays 3—17719
- random line arrays with constrained element separations 3—17713
- real-time constant-depth scanning with phased acoustic arrays 3—4584
- real-time synthetic-aperture digital US imaging system 3—4255
- receiving array, noise-immune, wideband 3—27341
- shallow water, interfering point source, suppression using mode-selective array 3—22274
- sonar, mobile parametric receivers, design and self-noise sources 3—17756
- sonar array, parametric method for simultaneous bearing and range meas. 3—7322
- STARPAK, standard Fortran subroutines, simulation for testing array response 3—17720
- stochastic gradient descent adaptive beamforming using sonar data 3—50846
- time domain adaptive processor, performance in broadband environment 3—50845
- towed array performance and data quality assessment, use of towship 3—7285
- underwater sound, surface reverberation, measured covariance for horizontal and vertical arrays 3—32572
- US array beam pattern simulator for parasitic lobe suppression 3—4586
- US field reconstruction from electrostatic transducer array 3—1865
- US imaging by carrier-frequency-independent complex envelope processing 3—1866
- US phased-array imaging with multifreq. and nonuniformly spaced arrays, grating lobe amplitude, computer simulation 3—22297
- velocity estimation from short-time temporal and spatial frequency estimates 3—7317
- virtual beams from an FFT beamformer and their use to assess the quality of a towed-array system 3—7329
- wave front separation by rectification of the Choleski factor of their cross spectral matrix *(French)* 3—17709
- waveguide array, prismatic, optimum attenuation of low freq. noise by proper tuning 3—37289
- $PbTiO_3$ US linear array probe, 7.5 MHz 3—50872
- $PbTiO_3$-Ca-Pb$(CoW)_{1/2}O_3$ US array transducer 3—50896

acoustic delay lines
- *see also ultrasonic delay lines*
- electrostatic voltage sensor using surface acoustic waves 3—49406
- quartz SAW device, elec. twinning 3—43502
- SAW delay time, Pd coated, H_2 sensor 3—49351
- SAW oscillator aging, propag. loss effects 3—50887
- SAW reflection by thin metal dots 3—47207
- shallow bulk acoustic wave oscillator, high Q, single mode S-band 3—50888
- GaAs acoustic charge transport device, monolithic 3—46381
- Ni film, SAW delay line interaction, freq. depend. 3—51914

acoustic detectors *see acoustic transducers*

acoustic devices
- *see also acoustic delay lines; acoustic generators; acoustic microscopes; acoustic microwave devices; acoustic parametric devices; acoustic radiators; acoustic receivers; acoustic resonators; acoustic transducers; bells; surface acoustic wave devices; ultrasonic devices*
- differential transducers of pressure pulsations, acoustic RC low-pass filter design 3—40584
- digital acoustic flaw detector, fluoropolymer products testing appl. 3—4241
- Doppler intrusive flowmeters, common questions 3—27621
- flaw detector, low frequency AD-60S 3—22296
- impedance tube expts. in the acoustics laboratory 3—25722
- lens, quasi-parallel-sided 3—50868
- line acoustic wave devices, progress 3—42102
- piezoelectric film, reactive ion etching for acoustic wave devices 3—53257
- piezoelectric vibrator for azimuth-radial acoustic logging, theory 3—30064
- standards calibration at physics division of National Research Council of Canada 3—1882
- Tandem tight-coupled active noise attenuator in duct 3—27306

acoustic dispersion
- *see also ultrasonic dispersion*
- diatomic gas, Boltzmann eqn. asymptotic soln. 3—42349
- gas in cylindrical tube, nonequilib. mol. processes effects on attenuation and dispersion, theory 3—12808
- laminates, US attenuation, cut-off freq. 3—51715
- metals, amorphous, saturation of relaxational absorpt., at very high acoustic powers 3—2689

acoustic dispersion continued
- sound beam dispersion 3—12407
- transparent media, stimulated Brillouin scatt., soliton solns. 3—32410
- CO_2-N_2 gas in cylindrical tube, nonequilib. mol. processes effects on attenuation and dispersion, theory 3—12808
- $Fe_{65}Ni_{35}$, sound velocity dispersion and volume magnetostriction *(Russian)* 3—51716

acoustic echoes *see echo*

acoustic emission
- *see also ultrasonic materials testing*
- amplitude distrib. charact. during fatigue crack nucleation and propag. 3—48014
- brass, subcritical crack growth due to SCC or H_2 embrittlement, AE obs. 3—14767
- ceramics, non-destructive testing during firing process *(Czech)* 3—14822
- ceramics, strength under mech. and thermal loading, acoustic emission studies 3—44018
- ceramics, thermal shock resistance determination, acoustic emission signal system appl. 3—44000
- concrete, waveform anal. and theory for source location 3—50834
- coordinates determination of acoustic emission system, computer-free method 3—9271
- crack detection in electroslag welds by acoustic emission, using computerised monitoring system 3—24480
- cylindrical cylinder, radiation from oscillating screw dislocation 3—27939
- cylindrical shells, coaxial, sound radiation 3—27300
- dislocations emerging to cryst. surface, acoustic emission 3—13224
- dispersion hardened alloy, acoustic emission during yielding, computer simulation 3—29141
- duct flow, pure acoustic tone generation by vortex shedding, expt. study 3—12776
- elastic wave invariants calc. 3—7289
- elementary emission events, appl. of statistical characts. to meas. time rate 3—46371
- epoxy cracks and bond failures, heat generation 3—9144
- fiber reinforced polymers, acoustic emission, appl. to material evaluation, review 3—48009
- fission product induced in liquids 3—47051
- gaseous disperse systems, acoustic emission during laser breakdown 3—37605
- glass fibre reinforced plastics, flawed, AE under accelerated weathering and falling weight impact tests *(Japanese)* 3—19402
- graphite fibre reinforced epoxy, charact. of stability mechanisms, NDT 3—39329
- graphite fibre reinforced epoxy parts, acceptance testing using AE monitoring 3—24457
- ice, polycrystalline, viscoelastic body, fracture kinetics, acoustic emission obs. 3—56507
- imaging techniques, and instruments, review *(Japanese)* 3—12471
- inspection of equipment of gas processing plant, possible variants 3—24469
- instrument research for nuclear and acoustic emission measurements *(Hungarian)* 3—11407
- inverse problem, explicit determ. of source time-functions 3—39343
- leak detection, acoustic, sensitivity in pneumatic tightness tests 3—45152
- leak noise in fluids, leak detection method 3—46542
- linear pulse holography 3—56386
- metal, quantitative acoustic emission for source characterisation 3—39347
- NDT tool, technique development and appls., standards need 3—34557
- piezoelectric materials, anisotropic, acoustic wave generation, numerical anal. 3—50889
- pipelines, buried, acoustic emission monitoring 3—58382
- plate, fluid loaded, beam stiffened, vibrs. and sound radiation 3—12574
- plates, transient Rayleigh-Lamb waves, complex freq. spectra calc. 3—32534
- PMMA, glassy, fracture processes, appl. of acoustic emission technique *(Japanese)* 3—58264
- porcelain, struct. depend. of thermally induced microcracking, AE study 3—9152
- quantitative measurement methods, NBS developments 3—39346
- quantitative methods development for materials processing 3—39345
- quartz containing porcelain subjected to low rate thermal changes, acoustic activity 3—53085
- quartz glass, slow propagation cracks, acoustic emission and fracture mechanics studies 3—34444
- refractories, acoustic emission under compression 3—29258
- refractories, heat resistance, invest. using acoustic emission 3—34581
- rocks, acoustic emissions of gneiss 3—25020
- rolling contact fatigue, new acoustic emission source locating system 3—4249
- sapphire, crystal growth from melt at high temps., acoustic-emission flaw detection technique 3—28982
- signal source location in three coordinates, instantaneous determ. 3—29260
- signal treatment and classification, sensitivity of pattern classifiers 3—39344
- source determ. in three dimensional space 3—27342
- steel, A516, detection of general yielding by acoustic emission 3—14795
- steel, crack jumps determination, acoustic emission appl. 3—9276
- steel, damage assessment during thermal cycling, appl. of AE 3—39311
- steel, electron pulse beam generated acoustic signal, effect of thermophys. props. 3—28060
- steel, mild, fatigue crack propag., AE detection 3—53348
- steel, mild, subcritical crack growth due to SCC or H_2 embrittlement, AE obs. 3—14767
- steel, Mn-Mo-Ni, low alloy, temper and H embrittled, acoustic emission, indentation loading studies 3—24348
- steel, stainless and mild, defects produced by fusion welding, AE eval. 3—4243
- steel, structural, AE correl. with fracture mech. during fatigue 3—19405
- steel 22k acoustic emission amplitude distrib. charact. during fatigue crack nucleation and propag. 3—48014
- steel type 20KhN3A, flake growth kinetics, acoustic emission study *(Russian)* 3—34432
- strength testing of materials, consolidated AE system 3—9270
- structural element fatigue life, cracks, acoustic emission appl. 3—44019
- testing of large fabrications 3—44020
- thermoelastic instability meas., improved signal processing instruments 3—22291

acoustic emission continued
transition radiation of sound from a thermooptical source created by a scanning laser beam 3—27348
turbogenerator rotor endwinding retaining rings of austenitic steel, SCC monitoring by acoustic emission 3—34603
US wave generation by axisymmetrical transducer under cavitation conditions 3—27349
water-bubble boundary layer as a hydrodynamic sound source 3—12413
Al alloy, acoustic emission during plastic deform. and crack growth in 2024 and 2124 specimens 3—39348
Al alloy 7179 T651, subcritical crack growth due to SCC or H_2 embrittlement, AE obs. 3—14767
Al film, ion-beam corrosion and acoustic emission 3—51673
Al-Cu-Mg alloys, acoustic emission during plastic deform. 3—34391
Al-Zn-Mg alloy, quantitative acoustic emission for source characterisation 3—39347
B fibre-organic fibre reinforced plastics, deform., fibre fracture effect 3—34409
$CaNi_5$, absorption of H_2, disintegration, acoustic emission and exoelectron emission 3—47935
Cu-Zn-Al, martensitic transform., acoustic emission 3—43817
Cu-Zn-Al, thermal treatment effect on martensitic transform. 3—43831
Fe, desorbing H, acoustic emission 3—22980
Fe-Si, fatigue limit, effect of low-intensity ultrasound 3—14725
$LaNi_4Fe$, absorption of H_2, disintegration, acoustic emission and exoelectron emission 3—47935
Mg-Al (7 wt.%), subcritical crack growth due to SCC or H_2 embrittlement, AE obs. 3—14767
Ni, desorbing H, acoustic emission 3—22980
Pt desorbing H, acoustic emission 3—22980
SiC refractories, deform. and fracture study by acoustic emission method under three-point bending *(Japanese)* 3—39252
SiO_2 glass, spectral density of AE signals, crack detection appl. 3—58364
Sn-Pb, acoustic wave emission during superplastic deform. *(Russian)* 3—24295
α-Ti, acoustic emission during plastic deform. and microcracking *(Chinese)* 3—4077
Ti, fracture mechanics of oxide layers, SEM and AE obs. 3—14788
Ti-Al-V (6, 4 wt.%), stable crack growth during fracture toughness testing *(Japanese)* 3—29164
YAG, crystal growth from melt at high temps., acoustic-emission flaw detection technique 3—28982
Zn-Al, acoustic wave emission during superplastic deform. *(Russian)* 3—24295
Zr-Nb (2.5 at.%), H isotope solubility in stressed hydride forming alloy 3—53211

acoustic equipment
see also acoustic arrays; acoustic wave interferometers; ultrasonic equipment
atmospheric acoustic/radioacoustic sounding system for boundary layer studies *(Russian)* 3—20149
liquid, gas bubbles, nonlinear acoustical spectroscopy 3—12473
oceanographic current meter error model, laboratory verification 3—4990
octave-band filters for laboratory and demonstration expts. in acoustics 3—5565
polarimeter, NDE appls. 3—50874
pop-up ocean bottom seismometer, acoustic release cotrol *(Japanese)* 3—25216
sampling digital acoustic energy meter using VLSI circuits 3—17755

acoustic field
acoustic emission transducers, absolute calibration 3—1909
acoustic radiator, cavitation zone, wave field struct. characts. 3—12402
aircraft fuselage, sound transmission loss meas. using acoustic intensity approach 3—56391
annular radiator in absorbing media, sound field struct. calc. 3—29274
asymmetric radiator, in infinite baffle, sound radiation calc. 3—7268
B-scan echography linear array, acoustic field, two dimensional model 3—50870
backscattering by bodies new disturbed surface, coherent effects 3—27288
baffled circular plate, radiated transient waveform 3—32537
building, sound radiation from large aperture, computer calc. and scale model expt. 3—12436
building elements, sound radiation field, calc. and model expt. 3—12437
circular duct, boundary layer effects on acoustic field, numerical anal. 3—17655
duct, nonuniform, acoustically lined, sound press. levels, expt. and numerical calc. 3—22270
flow-excited resonances in covered cavities 3—37469
focusing source, acoustic field calc. 3—7267
hearing tests using orthostereophonic system with dummy head microphone *(Japanese)* 3—37307
heterophase media, periodic phase transitions in sound field 3—13409
imaging pressure field calc. applying time-space impulse responses 3—1826
liquid, acoustic field near flat surface of bar in which transverse US pulse is propagating 3—12412
liquids, acoustic field recording by vol. light scattering 3—50864
loudspeaker dimensioning for idealised radiation conditions 3—46419
loudspeaker energy sphere transformations 3—42099
Monte Carlo ray tracing computer program for sound field distributions calc. 3—17702
near field directivity meas. using two microphone intensity meas. technique 3—27331
ocean, sound propag. theory 3—15484
piston radiator, circular, US fields numerical calc., and contour lines representation 3—1823
planar radiators, Rayleigh integral, numerical evaluation using FFT 3—32526
plane waveguide, sound field, Malyuzhinet's diffusion approx. 3—50817
prolate body of revolution, sound radiation calc. 3—50816
ray tracing, digital, in two-dimensional refractive field 3—17649
reinforcement methods for increaisng reverberation time 3—46376
reverberant sound field complexity *(Japanese)* 3—17658
reverberation room, diffuse sound field, statistical props., experimental investig. 3—12420
rooms, low, acoustic field calc. 3—50840
semi-enclosed spaces, reverberation field 3—42067
sound fields, calc. and optimisation using SCHALL2 and OPT2 computer programs *(German)* 3—46366
sound radiation model for finite length duct of arbitrary shape 3—32518

acoustic field continued
sound reinforcement system performance 3—32519
travelling wave, low freq., in confined vol., technique for modelling 3—12389
turbulent medium, low freq. sound attenuation 3—27295
underwater acoustic propagation in upper sound channel 3—20023
underwater waveguides, sound field calc. at low freq., asymptotic method 3—50833
US field reconstruction from electrostatic transducer array 3—1865
vibrating piston acoustic source, near acoustic field, parabolic approx. *(French)* 3—17695
vocal tract, evolving normal modes, basic relations and adiabatic invariance 3—44257
water channel, shallow, acoustic field, Pedersen-Gordon normal mode theory, branch-line integrals role 3—32524
water layer, acoustic measurement using interference field 3—50863

acoustic generators
see also earphones; loudspeakers; photoacoustic effect
drivers, transient signal generation algorithm 3—17761
electroacoustic generator active surface vibrs., holographic and speckle interferometric obs. 3—1905
focusing source, acoustic field calc. 3—7267
harmonic oscillations, audio and subaudio freqs., precision generator 3—42098
hydraulic underwater sound generator 3—27299
SAW ring acoustoelectric generator, steady-state spectra meas. 3—22300
signal transmitter coupling system selection *(Polish)* 3—7355
sonar signal generators, variable waveform *(Chinese)* 3—42092
US wave, optical generation and amplification by electrostriction *(German)* 3—50599
US whistle, modulated, as acoustic source for modelling 3—37310
As_2S_3, amorphous, injected CdS acoustic domain effects, optical transmission and X-ray diffr. 3—2682
$LiNbO_3$-Ge, acoustoelectric oscillator, SAW single mode generation 3—50882
$PbTiO_3$ planar transducer for short-pulse US generation 3—46427

acoustic holography
acoustic emission linear pulse holography 3—56386
bubble-containing medium, sound beam wavefront inversion and other nonlinear effects 3—12398
complex elastic moduli meas. method, ultrasonic frequency range holography appl. *(Japanese)* 3—56510
continuous scanning of water level relief, principle and appl. *(Czech)* 3—50850
flaw detection and imaging by high-resolution synthetic pulse holography 3—4253
Fresnel holograms, complex amplitude, decision method for conditions of construction *(Japanese)* 3—1872
image reconstruction computer simulation 3—46384
imaging, complex holographic function, digital reconstruction without conjugate image 3—17729
lens image field computation methods 3—1875
lens image quality and diffraction efficiency, theory and expt. 3—1876
liquids, weak absorptions, optoelastic constants and acoustic attenuation, dynamic holographic approach 3—27318
multifrequency US holography, ARMA modelling 3—7330
numerical reconstruction systems using backward propagation method 3—1871
optical reconstruction of wideband Fourier and Fresnel acoustic holograms 3—50853
phase conjugation obs. at liquid surface 3—17682
pseudo-holographic US imaging with nematic liquid crystal convertor 3—1873
sonar 3D underwater US imaging using thinned-out image reconstruction 3—1870
ultrasonics, inverse source and scatt. problems 3—56367
US holography, localisation and reconstruction accuracy *(German)* 3—50852
US imaging system, holographic, for nondestructive evaluation of industrial materials 3—39312
vibrating surface analysis 3—1874
water level relief scanning, expt. results *(Czech)* 3—50851
Ar ion laser, liq. surface acoustic holography appl. *(Chinese)* 3—22106

acoustic imaging
see also acoustic holography
10th International Symposium, Cannes, France (Oct. 1980) 3—29
acoustic arrays, cross-coupling compensation by lateral deconvolution 3—50869
acoustic arrays, linear, focusing 3—50867
acoustic microscope, subsurface defect characterization, fringe pattern recognition and contrast enhancement by digital colour encoding 3—46416
air unsteady velocity field meas. by fast US imaging system 3—2158
annular array for contact B-scan appls. 3—27335
array, linear, aperture apodization to reduce pulsed-mode directivity function off-axis intensity 3—1830
array transducer, sound field 3—1912
B-mode ultrasonogram processing parameters affecting texture 3—4595
B-scan echography linear array, acoustic field, two dimensional model 3—50870
B-scan image tomographic reconstruction by integration or convolution 3—4599
B-scan spherical focusing apertures, pulsed echographic response theory 3—4605
blood US backscatter coeff. determ. from A-mode echography 3—4597
bone, US transmission imaging, digital enhancement 3—48354
bounded pulse propagation in US imaging of tissues 3—4604
coherent reception of spatially coloured transmission 3—1869
composite material, flaw growth imaging by computerised US scanning system 3—19505
computational procedure for imaging by numerical modelling and quadratic optimisation 3—12441
computerised US tomography by ring array electronic scanning and steering 3—4602
contour plotting by sonic PLL 3—1900
diffusion bonded specimens, images from flaws using phased array system 3—48039
digital system, synthetic aperture, sidelobe level reduction 3—50848
dynamic focussing and ultrasonic imaging 3—17724

acoustic imaging continued
- echographic real-time system, acoustic beam visualization and quantization 3—27315
- fast-frame-rate B-mode US imaging with SAW transducers 3—4585
- graphite-epoxy composite laminate, fatigue and impact damage, US characterization 3—58385
- graphite-epoxy composite laminates, ply orientations, 2D US imaging using polar backscatt. 3—58386
- high-resolution imaging for systems with small apertures, theory 3—32573
- holographic imaging, complex holographic function, digital reconstruction without conjugate image 3—17729
- holographic sonar 3D underwater ultrasonic imaging using thinned-out image reconstruction 3—1870
- interferometric acoustic imaging, joint representation and image deconvolution 3—17718
- linear transducer array, dynamic focusing and compound scanning 3—4587
- mammary tissue component characteristic US echostructures 3—4596
- medical acoustic imaging, appls. of computerised control 3—7314
- medical image reconstruction from US array data, statistical estimation approach 3—4589
- medical linear phased array US imaging system 3—4588
- medical US imaging piezoelectric transducer optimisation criteria 3—4607
- microelectronic ccts., acoustic microscopy techniques 3—1904
- microscopy, differential phase contrast imaging, dichromatic 3—27334
- optoacoustic transducer resolution, effect of photoconductive layer 3—1921
- polyvinylidene fluoride film piezoelec. transducers, single-element and array, for acoustic imaging 3—50894
- pressure field calc. applying time-space impulse responses 3—1826
- pulsed acoustic phased arrays, matched Gaussian apodisation 3—1920
- PVF_2 sensitivity and performance in optically-scanned US imaging piezoelec. transducer 3—1923
- pyroelectric thermal diffusion microscope 3—32571
- quantitative US scatt. imaging 3—24830
- quantitative volume backscatter imaging 3—44308
- real time synthetic aperture acoustic images, quantitive eval. 3—48037
- real-time constant-depth scanning with phased acoustic arrays 3—4584
- real-time NDE of flaws using a digital acoustic imaging system 3—29243
- real-time synthetic-aperture digital US imaging system 3—4255
- reconstructive US tomography based on time-of-flight projections 3—4601
- scanning acoustic microscopy, recent developments 3—7361
- seismic migration, imaging of acoustic energy by wave field extrapolation, book 3—35787
- stratified absorbent media, extension of Jones' US impediography 3—4594
- synthetic aperture tomography imaging systems 3—15177
- synthetic focus acoustic imaging system, anal. 3—37306
- system calibration by falling spherical target 3—1901
- techniques and instruments, review *(Japanese)* 3—12471
- tomography, vel. and attenuation, ray refr. correction, perturbation approach 3—1834
- transducer radiation patterns and reduction of parasitic coupling 3—1919
- two-dimensional arrays 3—48038
- two-dimensional image field generation from one-dimensional scans 3—4600
- ultrasonic imaging system, depth resolution *(Russian)* 3—12461
- ultrasonics, inverse source and scatt. problems 3—56367
- ultrasound images, real-time histogram specification 3—46379
- ultrasound visualisation in gases, image localisation 3—32574
- underwater focused acoustic imaging system 3—1833
- US array beam pattern simulator for parasitic lobe suppression 3—4586
- US axicon for nondestructive testing 3—14832
- US B-scan speckle meas. and analysis 3—4592
- US diagnosis, freq. compounding for speckle contrast reduction in phased array images 3—4583
- US digital images, Moire undersampling artifacts 3—24819
- US echo tomography, image quality improvements 3—4603
- US echographic signal online deconvolution algorithm 3—4598
- US fields visualisation in air, using cholesteric liquid crystal film 3—17747
- US flaw image evaluation for synthetic aperture focusing technique, nuclear reactor appl. 3—19504
- US image processing to reduce speckle 3—46387
- US image speckle model and computer simulation 3—4590
- US images, compound, blurring reduction by image realignment 3—46386
- US images, synthesis in real-time, new digital approach 3—24827
- US images enhancement, de-integration approach 3—17714
- US imaging, nonlinear focusing effects 3—46388
- US imaging by carrier-frequency-independent complex envelope processing 3—1866
- US imaging system using interdigital transducer 3—46385
- US impediogram accuracy improvement by process identification convolution 3—4593
- US interdigital transducer for acoustic imaging 3—1911
- US phased-array imaging with multifreq. and nonuniformly spaced arrays, grating lobe amplitude, computer simulation 3—22297
- US pulse-echo imaging, interpolation scan conversion 3—24818
- US pulse-echo imaging, phase-insensitive detection for speckle reduction 3—24820
- US real-time imaging system for nuclear reactor nondestructive evaluation 3—11447
- US reconstructive imaging, ARMA processing 3—46382
- US tomography, multipath artifact corrections 3—4582
- US transducer, phased-array, miniature, modelling and design 3—50892
- US transmission imaging, coherence and noise 3—4591
- wave field extrapolation, data acquisition methods 3—1868
- wave field extrapolation, theory 3—1867
- $LiNbO_3$ on SAW device, high resolution photoacoustic microscopy study 3—27328
- $LiNbO_3$ sensitivity and performance in optically-scanned US imaging piezoelec. transducer 3—1923
- PZT sensitivity and performance in optically-scanned US imaging piezoelec. transducer 3—1923
- $PbTiO_3$ US linear array probe, 7.5 MHz 3—50872
- Si_3N_4 flaw detection, 50 MHz US three-dimensional synthetic focus system 3—4254

acoustic impedance
- *see also acoustic wave velocity*
- acoustic microscopy, coherent, approx. materials characterisation 3—27333
- air near ground surface, additional damping *(German)* 3—27292

acoustic impedance continued
- auditory impedance meter for stapedius metering and tympanometry 3—58759
- box beam, input and transfer admittances 3—12416
- brass instruments, acoustic energy losses 3—7346
- circular duct, boundary layer effects on acoustic field, numerical anal. 3—17655
- correlated rough surfaces, sound refl. and scatt. 3—37272
- 4-cyano-4′-noheptylbiphenyl, US shear and capillary viscosity study in nematic and isotropic states 3—33479
- duct-nozzle system, acoustic radiation impedance 3—50810
- ear, acoustic impedance meas. using impedance measuring tube and digital signal processing *(Japanese)* 3—37302
- ear, tympanogram freq. characts., human 3—9605
- ear canals, human, area function determ. by sound press. meas. 3—39651
- eardrum impedance of human ears, meas. method 3—39752
- fibreglass acoustic material, specific impedance, layer struct. influence 3—37275
- gas flow in duct, acoustic amplitude-phase response, expt. study 3—51233
- heterogeneous fluid, acoustic impedance concept *(French)* 3—17667
- hole in wall separating moving medium from nomoving medium 3—27296
- inhomogeneous slab, probing of acoustic impedance profiles in time domain, optimisation technique 3—7266
- jet flow-pipe-acoustic wave interaction, small Strouhal number anal. 3—50831
- moving layered inhomogeneous medium, sound propag. theory 3—12397
- moving medium, acoustic impedance 3—7273
- noise barrier insertion loss in presence of ground, atm. turbulence effects 3—37288
- nonuniform acoustic impedance, sound attenuation in ducts with lined walls *(Japanese)* 3—46367
- nozzle, pressure transfer function due to acoustic and convected entropy fluctuations 3—32782
- porous material sound absorbers, resonant, theory 3—32525
- propagation over impedance jumps and screens, theory 3—17654
- pulse method to measure the impedance of semi-natural soils 3—12454
- Runge's theorem, impedance boundaries in acoustic wave propagation 3—16157
- shell, cylindrical, reinforced, vibrating, input mech. impedance meas. 3—56373
- stratified absorbent media, extension of Jones' US impediography 3—4594
- US impediogram accuracy improvement by process identification convolution 3—4593
- US loaded amplitude transformer, anal. by Mobius transform. 3—7362
- woodwind finger holes, acoustical theory 3—12453
- ^3He, superfluid, A-phase, collective mode spectrum, acoustic impedance method 3—38155
- ^3He; superfluid, B-phase, collective mode spectrum, squashing mode 3—23129

acoustic insulating materials *see noise abatement*

acoustic intensity
- *see also acoustic noise; loudness*
- acoustic microstreaming by pulsed radiators 3—46368
- air, pressure level in wet gases, cepstrum anal. 3—42088
- aircraft fuselage, sound transmission loss meas. using acoustic intensity approach 3—56391
- axial-flow fans, sound power level and noise generation mechanism, expt. study 3—32542
- ear canals, human, area function determ. by sound press. meas. 3—39651
- ferroelectric layers, ultrasonic intensity near critical angle for total internal reflection 3—51721
- gaseous disperse systems, acoustic emission during laser breakdown 3—37605
- human head and torso, sound press. distrib. 3—39652
- insonification, CW, using broad-band transducer with intensity control system 3—27345
- propagation losses over Dickins Seamount in Northeast Pacific Ocean 3—39850
- quartz, synthetic, US attenuation, strongly temp. depend. 3—57033
- underwater intensity corrections in a random medium in the neighbourhood of a caustic, theory 3—12409
- underwater sources, localization in constant-velocity waveguide, receiver arrays *(Chinese)* 3—27298

acoustic intensity measurement
- automated measuring system for sound power measurement 3—12455
- Barkhausen-phon, noise and loudness meas. *(German)* 3—56389
- diesel engines, noise source identification, acoustic intensity method 3—1855
- digital filter based system 3—17752
- digital filter system appl. 3—12469
- engine noise, two-microphone acoustic intensity measurements 3—12468
- equivalent sound press. level determination 3—46404
- gas density measurement by an acoustic method *(German)* 3—49330
- immersed elastic cylinder, backscattered press. meas. with automatic correction *(French)* 3—17751
- instrumentation and applications 3—32569
- LED peak VU meter 3—7360
- near field directivity meas. using two microphone intensity meas. technique 3—27331
- radiation force balance, portable, for sound power meas. 3—12475
- random vibroacoustic pulse processes, amplitude meas., sample-and-hold peak detector, noise immunity 3—42087
- reference sound source method, limitations 3—17748
- sampling digital acoustic energy meter using VLSI circuits 3—17755
- sound level meter, probability distribution of output response, simulation technique investigation 3—1881
- sound level meter microphones, freq. response, casing shape and operator effects *(German)* 3—22287
- sound level meters subjected to type approval test, characteristics meas. *(Japanese)* 3—17745
- sound level precision meter, automated measurement system *(Japanese)* 3—17743
- sound pressure measurements, microphones frequency response, stands and mountings effects *(German)* 3—22288
- sound pressure standard realisation, by closed-coupler reciprocity technique 3—12466
- structure-borne sound transmission meas. using impulsive sources 3—1861
- theoretical principles 3—17739
- US intensity distribution meas. using thermistor probes 3—50866

acoustic intensity measurement continued
  US power meter using radiation force meas. 3—12462
  vibrating panel, acoustic vel., surface vel. and acoustic radiation efficiency meas. by two-microphone technique 3—56398
acoustic magnetic resonance
  see also acoustic nuclear magnetic resonance; acoustic paramagnetic resonance
  No entries
acoustic measurements *see acoustic variables measurement*
acoustic microscopes
  Bell Laboratories, development 3—37300
  coherent, approx. materials characterisation 3—27333
  cryogenic acoustic microscopy, ultrahigh resolution 3—1896
  dark-field scanning acoustic microscope with transducer on front of lens 3—1903
  differential phase contrast imaging, dichromatic 3—27334
  directional microscope for elastic anisotropy obs. 3—46397
  elastic constants meas. 3—46417
  flaw charact., quantitative, by means of scanning laser acoustic microscope 3—48036
  imaging, 10th International Symposium, Cannes, France (Oct. 1980) 3—29
  imaging techniques, and instruments, review *(Japanese)* 3—12471
  integrated circuit inspection via acoustic microscopy 3—42084
  lens, planar, development 3—46412
  mechanically scanned acoustic microscope, for acoustic vel. meas. 3—1886
  microelectronic ccts., acoustic microscopy techniques 3—1904
  NDT scanning acoustic microscope model and propagation eqn. 3—4256
  nonscanning reflection system, V(z) curves meas. by acoustic line-focus beam 3—46413
  Olympus scanning acoustic microscope 3—50862
  photoacoustic microscopy, physical basis and capability *(Korean)* 3—7359
  pyroelectric thermal diffusion microscope 3—32571
  Rayleigh wave velocity perturbations, prcision meas. technique using acoustic microscope 3—27329
  SAW, leaky broadband pulses 3—46411
  SAW attenuation measurement in acoustic microscope 3—12460
  SAW microscopy, confocal, for nondestructive testing 3—46396
  SAW velocity meas., 50 MHz, using acoustic microscope 3—46410
  scanning acoustic laser microscope, acoustic rel. meas. 3—46415
  scanning acoustic microscope with transducer swing along beam axis 3—46414
  scanning acoustic microscopy, biology and non-destructive evaluation appls. 3—42086
  scanning acoustic microscopy, recent developments 3—7361
  scanning laser acoustic microscope for defects and discontinuities obs. 3—22290
  schlieren visualisation of defects 3—46402
  simultaneous scanning optical and acoustic microscopy 3—45198
  subsurface acoustic microscopy using pulse compression techniques 3—56405
  subsurface defect characterization, fringe pattern recognition and contrast enhancement by digital colour encoding 3—46416
  subsurface flaw obs. with scanning acoustic microscope 3—2939
  subsurface structure, acoustic microscope visualization 3—42090
  surface profile meas., contour mapping using focused acoustic probe 3—56394
  tendon fibers, rat tail, axial US phase vel., 100 MHz, US microscopy 3—48317
  Ga coupling for deep interior plane acoustic microscopy 3—4257
  Hg coupling for deep interior plane acoustic microscopy 3—4257
  Si_3N_4 ceramic test bars, scanning photoacoustic microscopy for NDT, comparison with scanning laser acoustic microscopy 3—48029
acoustic microwave devices
  see also acoustic transducers; surface acoustic wave devices
  No entries
acoustic mode of crystals *see lattice dynamics*
acoustic noise
  acoustic pulses due to corona discharge on a metallic protrusion 3—42476
  acoustic receiving array, noise-immune, wideband 3—27341
  aerodynamic sound radiation from a double layer jet 3—37284
  aircraft, propeller driven light aircraft, in-flight exterior noise on fuselage meas. 3—12429
  aircraft and ground vehicle noise, community annoyance, survey data anal. 3—12425
  aircraft and ground vehicle noise, community annoyance, survey data anal. 3—12426
  aircraft and ground vehicle noise, community annoyance effects 3—58575
  aircraft equivalent noise level as a function of itinerary 3—46372
  aircraft noise, community annoyance, survey data anal. 3—12427
  atmospheric noise spectra shaped by atmospheric attenuation, finite bandwidth corrections 3—17684
  automatic sound contour tracing, acoustie simulation *(French)* 3—17697
  axial-flow fans, sound power level and noise generation mechanism, expt. study 3—32542
  barrier insertion loss in presence of ground, atm. turbulence effects 3—37288
  beam-forming system input, signal quantization effects on noise immunity of receiving section 3—50847
  behavioural awakening from noise in the home 3—15113
  building equipment, noise problems *(Japanese)* 3—44182
  building facades in hot climates, courtyards, acoustic performance 3—42066
  cavitation noise monitoring and correl. to erosion capability 3—51177
  coaxial jet noise, excitation effect 3—56590
  conference on hearing and hearing prophylaxis, Oslo, Norway (May 82) 3—35772
  continuous traffic noise effects on deep sleep, waking and sleep latency 3—39563
  Coral Sea, acoustic noise levels in deep-sea (generated at surface) 3—39855
  diesel engine noise reduction 3—46374
  duct flow, pure acoustic tone generation by vortex shedding, expt. study 3—12776
  effective masking bandwidths at low frequencies 3—53689
  engine noise, two-microphone acoustic intensity measurements 3—12468
  European regulations, rel. to computer installations 3—24652
  excited jets, sound generation, length and time scales. 3—46609
  exponentially distributed vehicles model *(Japanese)* 3—17701
  exposure, daily, personal reaction 3—9522
acoustic noise continued
  exposure, temporary threshold shift and time pattern 3—15025
  exposure survey in nuclear generating station 3—15024
  fan noise, axial, aerodynamic vel. parameter for correlation 3—7297
  fan noise suppression in two-dimensional duct, mode scatterer design 3—12428
  Fiji Basin, acoustic noise levels in deep-sea (generated at surface) 3—39855
  gas moving in channel of variable cross sections, acoustic, entropy and vorticity perturbations propag. 3—2121
  generation mechanisms in electrical machines *(French)* 3—17698
  hearing, monaural and binaural auditory frequency resolution measured using bandlimited noise and notched-noise masking 3—58670
  hearing, noise-induced temporary threshold shifts due to low freq. noise 3—58673
  hearing, repeated tone burst detection with repeated noise masking 3—58676
  hearing, simultaneous masking and unmasking with bandlimited noise 3—58671
  hearing impairment for high level impulse noise, theoretical anal. *(French)* 3—9604
  hearing levels, gunfire exposure effects meas. 3—9619
  hearing loss, noise induced, age effects, scalp-recorded response obs. 3—19754
  hearing loss, noise-induced, rel. to acoustic reflex threshold 3—53700
  hearing loss in rural schoolchildren, noise-induced 3—29626
  hearing protector attenuation depend. on noise level, psychophysical evaluation 3—39724
  helicopter rotor, model, noise due to ingestion of isotropic turbulence 3—32540
  helicopter rotor noise, high speed, non-linear effect 3—32539
  HF sound radiation out of jet pipe 3—7571
  highway noise barriers, field assessment 3—44184
  houses, noise induced vibrations and human perception 3—15028
  human head and torso, sound press. distrib. 3—39652
  impact noise due to impact excitation of struct., theory and expt. 3—37290
  impact sound, repeated, subjective loudness anal. 3—32543
  impulse noise, spectral analysis for hearing damage tests 3—27307
  impulse noise and auditory hazard, workshop results 3—15149
  incompressible potential corner and flap flow, vortices, aerosound 3—56547
  induction motor module system induction motors designed for low level aerodynamic noise 3—27309
  induction motor transient operation, acoustic noise production and its sources 3—32544
  induction motors, noise production from no-load to full-load, practical and theoretical considerations 3—27308
  industrial noise pollution control for classified installations, legislation anal. *(French)* 3—7292
  industrial occupational noise, noise-induced hearing losses, role of audiometric monitoring 3—19645
  industrial occupational noise, survey 3—19644
  industrial plants, noise niusance anal. of national standards 3—15023
  industrial plants, open-air, CONCAWE model and expt. study 3—15021
  jet, heated asymmetric jet, shear layer, interaction with acoustic pulse, numerical simulation 3—37532
  jet noise, source coherence effects 3—51182
  LF sound insulation, statistical energy anal. improvement 3—1860
  LF sound radiation out of jet pipe 3—7572
  low frequency, annoyance 3—15026
  masking, suppression at 8 kHz, freq. ratio and sound press. level depend. *(German)* 3—42076
  masking of continuous pure tones by rectangularly-global broadband noise *(German)* 3—44253
  mass-produced machines, labelling of noise characteristics, statistical checking *(French)* 3—7293
  monaural and binaural hearing systems, tonal masking and freq. selectivity 3—39658
  narrow band, amplitude modulation threshold *(German)* 3—12422
  noise limitation, various factors anal. *(Croatian)* 3—7295
  nozzle, pressure transfer function due to acoustic and convected entropy fluctuations 3—32782
  deep ocean, wind-generated noise modelling 3—39856
  NE Pacific, underwater acoustic noise characts. including ship noise 3—54052
  parallel noise barriers on highway, field performance 3—1852
  perceived noisiness of repetitive impulses *(Japanese)* 3—37292
  personal noise exposure patterns in daily life *(Japanese)* 3—4540
  pitch of pure and complex tones, noise-induced shifts 3—58680
  power transmission and distribution networks *(French)* 3—56380
  propagation between buildings, mathematical model 3—19643
  psychophysical tuning curve, suppression role 3—19717
  pulses, strong, with complex envelopes, transformation, theory 3—50839
  rail traffic noise from Shinkansen Super Express railway, human effects,survey 3—19642
  railway noise, survey of response in residential areas in Britain 3—24653
  railway noise calcs., rel. to obs. and noise standards 3—34756
  random excitation of linear system, output response peak distrib. function, statistical theory 3—22280
  random line arrays with constrained element separations 3—17713
  reverberation room, diffuse sound field, statistical props., experimental investig. 3—12420
  road traffic, noise, generalisation of discrete and continuous type prob. expressions 3—9521
  road traffic noise, random, peak distribution function meas. for linear system 3—22280
  road traffic noise, sleep disturbance effects after attenuation in apartment building 3—58574
  road traffic noise exposure, comparisons of noise indices, response scales, and effects of noise level changes 3—1853
  road traffic noise in rural areas of France, prospect for year 2000 *(French)* 3—7291
  road traffic noise level prediction method *(Japanese)* 3—58576
  rotating blades, tip noise calc. 3—37291
  screech suppression in underexpanded supersonic jets 3—56591
  ships, distant, noise characteristics, propagation conditions effects calc. *(French)* 3—19646
  simultaneous masking additivity in pyschoacoustics 3—39655
  sinusoidal signal masked by interaurally delayed white noise, detection and interaural time discrimination 3—19724

acoustic noise continued
  social survey data on noise effects, reliability anal. 3—12424
  sonar, mobile parametric receivers, design and self-noise sources 3—17756
  sound power meas., reference sound source method, limitations 3—17748
  sound propagation over grassland and over earth barrier 3—32541
  sound source radiation in two dimens. shear flow 3—56599
  sound volume judgements, broadband noise, perceived extensity 3—19723
  sources constituting environment, identification and quantification, appl. of short-term L_{eq} 3—1849
  speech, continuous, freq. distributed band-limited noise, threshold of degradation 3—17733
  speech perception by children and handicapped individuals, effects of noise 3—44256
  standby engines and generating sets, noise suppression 3—46373
  suppression using data-adaptive polarization filters, infrasonic array data appl. 3—17711
  suppressor, nozzle configuration with central tailcone, aeroacoustical characts. 3—12433
  Tandem tight-coupled active noise attenuator in duct 3—27306
  Tasman Sea, acoustic noise levels in deep-sea (generated at surface) 3—39855
  time of day noise adjustments 3—50836
  time varying sources, estimation off noise component variance 3—42064
  tone-excited jet, noise and flow struct. 3—32774
  traffic noise, modelling of traffic flow as line of stationary point sources, Doppler effects 3—24654
  traffic noise, sleep disturbance effects meas. 3—15150
  traffic noise environmental system, state estimation trial, semi-experimental 3—7298
  traffic noise level rel. to traffic composition and form planning 3—44181
  traffic noise reduction by surface wave exclusion above parallel grooves in roadside 3—1848
  transformer noise prediction and solution 3—1858
  transmission into semicylindrical enclosures through discretely stiffened curved panels, theory 3—17700
  turbulent wall pressure rel. to nonlinear sources in planar and cylindrical flow 3—7570
  underwater acoustic signals, statistical characterisation 3—17726
  uniform mean flow ducts, liner sound attenuation eigensolutions 3—56611
  urban impulsive noise, statistical character *(Japanese)* 3—58573
  urban traffic noise, time variations, case study in Akron, Ohio 3—44183
  US transmission imaging, coherence and noise 3—4591
  US whistle, modulated, as acoustic source for modelling 3—37310
  water supply noise, trends in studies *(Japanese)* 3—42065
  waveguide array, prismatic, optimum attenuation of low freq. noise by proper tuning 3—37289
  weapons impulse hazards 3—50837
  word discrimination in noise, predictive value of directional sensitivity diagrams of hearing aids 3—53701
  $Ge_{15}Te_{81}S_2Sb_2$ chalcogenide films, switching and memory phenomena, thermophonic investigation 3—12476
  n-InSb, multitransit amplification of sound, acoustooptical study 3—18749
acoustic noise measurement
  airplanes in airport region, noise reducing operational measures *(Hungarian)* 3—58577
  Barkhausen-phon, noise and loudness meas. *(German)* 3—56389
  bilsometer noise meas., appl. to hearing loss evaluation 3—46401
  device calibration *(Hungarian)* 3—56400
  diesel engines, source identification, acoustic intensity method 3—1855
  dosimeters, impulsive noise and the OSHA Hearing Conservation Amendment 3—56390
  equivalent A-level vs. human reaction, discussion 3—46400
  equivalent sound press. level determination 3—46404
  hearing loss prevention methods in locksmiths' workshops *(Hungarian)* 3—29559
  insulation evolution by sonometry using controlled spectrum shaper *(French)* 3—50859
  intensity measurement, digital filter system appl. 3—12469
  low flying aircraft, detection and bearing angle estimation by acoustic sensors 3—17754
  microcomputer controlled noise measuring station 3—39568
  miniature statistical noise analyser 3—17750
  piping systems and mufflers with flow, time averaging transient testing method 3—56395
  power transmission and distribution networks *(French)* 3—56380
  railway coaches acoustic comfort measurement and testing *(French)* 3—42089
  random environmental noise, representative statistics estimation by on-line method 3—19641
  rooms, sound insulated, background noise measurement techniques 3—22292
  ship noise, periodical modulations detection in background noise, performance prediction 3—7354
  traffic noise measurement and analysis in Jeddah 3—27305
  variable-amplitude sound-level measurement errors *(German)* 3—17753
  ventilation system, noise regeneration, data acquisition by decaying flow technique 3—56379
acoustic nuclear magnetic resonance
  NaCl, acoustic saturation of ^{23}Na nucl. quadrupole transitions by travelling US waves 3—28714
  $NaClO_3$, NQR and acoustic dynamic polarisation studies 3—23835
  Re, nucl. quadrupole interaction and Knight shift, nucl. acoustic reson. study 3—28709
acoustic paramagnetic resonance
  CaO:Cr, APR study, dynamic Jahn-Teller effect 3—8721
  GaAs:Cr, APR study, dynamic Jahn-Teller effect 3—8721
  GaAs:Fe^{2+}, photons and phonons stimulated emission study 3—52809
  InP:Fe, APR study, dynamic Jahn-Teller effect 3—8721
  MgO:Mn^{3+}, APR study, dynamic Jahn-Teller effect 3—8721
acoustic parametric amplifiers
  $LiNbO_3$ parametric phase-conjugation acoustic amplifier 3—32581
acoustic parametric devices
  see also acoustic parametric amplifiers; acoustic parametric oscillators
  parametric acoustic source with endfire primary projection 3—7365
  radiator with bubble layer 3—27293
  sonar, mobile parametric receivers, design and self-noise sources 3—17756
  spatial switching device using surface acoustic wave parametric oscillation 3—7368
acoustic parametric oscillators
  Si on $LiNbO_3$, SAW parametric oscill. 3—2949
acoustic radiators
  see also acoustic generators; Doppler effect
  annular radiator in absorbing media, sound field struct. calc. 3—29274
  antennas on cylindrical screen, synthesis, numerical soln. of mixed problem 3—17764
  asymmetric radiator, in infinite baffle, sound radiation calc. 3—7268
  cavitation zone, wave field struct. characts. 3—12402
  composite slow waveguides as end-fire radiators, sound wave propagation 3—50813
  multimode waveguide, noise field suppression by adaptive radiator system 3—50838
  parametric acoustic radiator with a bubble layer 3—27293
  planar radiators, Rayleigh integral, numerical evaluation using FFT 3—32526
  plate, vibrating, driven by distributed forces,low freq. acoustic radiation emission 3—56376
  prolate body of revolution, sound radiation calc. 3—50816
  pulse-rate ultrasonic transmitters, design, biomedical appls. *(Hungarian)* 3—29677
  pulsed, acoustic microstreaming 3—46368
  shear bulk acoustic waves, generation by pair of electrodes on piezoelec. surface 3—37314
  solid-fluid interface, transmitted acoustic source radiation, numerical Fourier-Bessel transformation *(French)* 3—17672
  US fields of circular piston and contour lines representation, numerical calcs. 3—1823
  US loaded amplitude transformer, anal. by Mobius transform. 3—7362
  US transducer, elastic half-space, transient radiation pattern 3—50891
  US wave generation by axisymmetrical transducer under cavitation conditions 3—27349
  vibrating panel, acoustic vel., surface vel. and acoustic radiation efficiency meas. by two-microphone technique 3—56398
  virating piston acoustic source, near acoustic field, parabolic approx. *(French)* 3—17695
acoustic reactance *see acoustic impedance*
acoustic receivers
  see also microphones
  array, noise-immune, wideband 3—27341
  beam-forming system input, signal quantization effects on noise immunity of receiving section 3—50847
  polymer membrane receiver, pulsed US meas. 3—50871
  sonar, mobile parametric receivers, design and self-noise sources 3—17756
  underwater acoustic sensor arrays with arrival diversity angle counteracting fading multipath medium 3—50832
  underwater sources, localization in constant-velocity waveguide, receiver arrays *(Chinese)* 3—27298
  US, miniature, calibration using planar scanning technique 3—17760
  US computerised tomography, attenuation imaging, energy ratio methods 3—48346
  $Pb(Zr,Fi)O_3$ hollow spherical piezoelectric elements operating at large static pressure 3—27339
acoustic resistance *see acoustic impedance*
acoustic resonators
  filter, transmission or insertion loss estimation 3—1880
  lung simulation as acoustic model, reson. freqs. calc. *(Japanese)* 3—19747
  spurious resonances, 3D model 3—46426
  thin film acoustic resonators and filters 3—46422
  three dimensional cavity resonator, theoretical anal. 3—17657
  tuning fork resonator using shear mode piezoelectric ceramic 3—1914
  US resonator, differential, for studies in lipid bilayer membranes 3—4472
  US transducer, travelling wave, coupled mode 3—46428
  US velocity and absorption meas. device, 0.5-10 MHz 3—12467
  $Pb(Zr, Ti (Mn_{1/3}Sb_{2/3}))O_3$ piezoelec. ceramics, used for thickness shear mode and appls. 3—1891
  ZnO film, C-axis inclined, sputtered, for shear wave resonator 3—46424
  ZnO piezoelectric sputtered film, c-axis inclined, ZnO/Si composite shear wave resonator fabrication 3—47605
  ZnO thin film resonator on Si, two dimensional theory 3—46425
  ZnO-Si layered medium, SAW resonators 3—46399
acoustic signal processing
  acoustic emission and source mechanisms, waveform anal. in concrete 3—50834
  acoustic imaging, digital system, synthetic aperture, sidelobe level reduction 3—50848
  acoustic imaging by wave field extrapolation, theory 3—1867
  acoustic multimode phased array, Golay codes 3—50849
  acoustic spectroscopy 3—7358
  adaptive array processing using predicted coefficients as constrained conditions 3—17715
  adaptive space-time processor implementation by unconstrained multichannel lattice 3—7326
  annular transducer with a nonelectronically achieved depth of focus ranging from 20 mm to 140 mm 3—50893
  ARMA techniques for the location of multiple sources from linear array data 3—7324
  array signal processing by composite complex sinusoidal modeling, computer simulation 3—32547
  asthma diagnosis, breath sounds digital analysis 3—15171
  auditory spectral anal. model, chirp z-transform appl. 3—48297
  B-mode ultrasonogram processing parameters affecting texture 3—4595
  B-scan image tomographic reconstruction by integration or convolution 3—4599
  beam-forming system input, signal quantization effects on noise immunity of receiving section 3—50847
  beamformer, digital, intrinsic noise 3—17712
  circular target, US echo flaw size determ., cepstral domain zero point anal. 3—9290
  coarse grained materials, US testing, S/N ratio improvement by digital RF signal averaging 3—58383
  digital beamsteering with recursive multichannel filters 3—7327
  digital filter system for acoustic intensity meas. 3—12469
  digital signal processing for acoustic impedance meas. of human ear *(Japanese)* 3—37302
  direct adaptive motion compensation for towed arrays 3—7328
  dominant mode power spectrum estimation 3—7320
  dual channel analysis, numerical treatment *(French)* 3—32546
  dyadic conversations, data acquisition device for computer analysis 3—32549
  dynamic focussing and ultrasonic imaging 3—17724

acoustic signal processing continued
  electrode transducers of SAW in piezoelectrics, self-consistent calcs. 3−42101
  fast-frame-rate B-mode US imaging with SAW transducers 3−4585
  FFT principles and application to audio signal processing 3−22283
  generalised Burg algorithm for beamforming in correlated multipath field 3−17717
  hybrid adaptive filtration for seismic event location 3−39933
  imaging by coherent reception of spatially coloured transmission 3−1869
  imaging by wave field extrapolation, methods 3−1868
  impulse response for the one-dimensional inhomogeneous medium with an approximation for attenuation and dispersion 3−7311
  interferometric acoustic imaging, joint representation and image deconvolution 3−17718
  inverse acoustic scatt., analytical and numerical aspects 3−12392
  inverse problem of acoustic emission, explicit determ. of source time-functions 3−39343
  line acoustic wave devices, progress 3−42102
  linear sweep synthesis 3−17710
  maximum signal-to-noise array processor, formulation in beam space 3−12439
  measurement of sound intensity theoretical principles 3−17739
  medical acoustic imaging, appls. of computerised control 3−7314
  medical image reconstruction from US array data, statistical estimation approach 3−4589
  metal to metal adhesive bond, feasibility study of NDT, US pulse echo approach 3−53297
  mining, brokenness of rock masses, seismic investigation using microcomputer 3−20142
  modulation in shallow water using normal-mode model 3−7308
  multichannel FFT analyser for signal processing 3−12470
  multifrequency US holography, ARMA modelling 3−7330
  multipath coherence function for uncorrelated underwater channels 3−7277
  multiple signal classification methods, array processing technique 3−17716
  musical sound anal. 3−7352
  narrowband source detect. by passive array 3−50844
  noise, hearing damage due to impulse noise, spectral analysis 3−27307
  noise suppression using data-adaptive polarization filters, infrasonic array data appl. 3−17711
  non-stationary stochastic realization for vibrating structure identification 3−7313
  nonstationary 2-D recursive filter for speckle reduction 3−17465
  numerical anal. *(French)* 3−1862
  optimum array processing in presence of randomly distorted wavefronts 3−7319
  optimum signal processing of vertical mode-selective array in shallow water 3−17721
  orthogonal beamforming sensitivity 3−7323
  parametric modelling for antenna array processing by multichannel ARMA models 3−7325
  passive acoustic surveillance, undersea problem, carrier-mean-freq.-selective convolution 3−7306
  passive linear sensor array, range estimation 3−17725
  passive listening, source detection test 3−7321
  pattern classifier sensitivity for sorting acoustic emission signals 3−39344
  phased array imaging system, homomorphic signal dereverberation 3−7312
  phonocardiogram, automatic classification by distance measure 3−58755
  pulse method to measure the impedance of semi-natural soils 3−12454
  quantisation degradation in superdirective processing of underwater acoustic arrays 3−17719
  random line arrays with constrained element separations 3−17713
  real-time acoustic processing by coherent optical techniques 3−27314
  real-time synthetic-aperture digital US imaging system 3−4255
  reconstructive US tomography based on time-of-flight projections 3−4601
  resource allocation in sonar target tracking 3−7305
  robotic range sensing and object pattern recognition by acoustic scanning 3−56407
  SAW convolver array, coherent signal processing 3−46380
  sea flow, US obs. system over long distance, signal processing system 3−1864
  sedimentation, acoustic measuring system, multichannel 3−54175
  shallow water, interfering point source, suppression using mode-selective array 3−22274
  signal to interference ratio expressions for doubly spread target 3−7303
  sonar, adpative data processing techniques 3−17728
  sonar, space-time signal procesing methods and beamforming *(Polish)* 3−12440
  sonar array, parametric method for simultaneous bearing and range meas. 3−7322
  sonar target classification using coherent echo processing 3−7316
  sonar transducer motion effects on echo integration techniques 3−7281
  spectrograph, conversion system for oscilloscope 3−1883
  speech, acoustics and signal processing, conf., Paris, France (May 1982) 3−5497
  STARPAK, standard Fortran subroutines, simulation for testing array response 3−17720
  stochastic gradient descent adaptive beamforming using sonar data 3−50846
  submarine acoustics, long-distance, communication in fluctuating channel models and use of explicit or implicit diversity 3−7310
  submerged targets, acoustic classification by broadband signal processing 3−7315
  thermoelastic instability meas., acoustic emission signal processing instrument 3−22291
  timbre of complex tone bursts with time varying spectral envelope 3−19730
  time domain adaptive processor, performance in broadband environment 3−50845
  time-periodic variance fluctuations detection, clipping degradation effects 3−27316
  triangulation ranging, time-delay meas. errors, β-type density function 3−27317
  two channels random acoustics simulation and multichannel data acquisition 3−17722
  two-dimensional image field generation from one-dimensional scans 3−4600
  ultrasound images, real-time histogram specification 3−46379
  underwater acoustic signals, statistical characterisation 3−17726

acoustic signal processing continued
  underwater acoustic wave propagation, corrected match for coherent part of time-variant channel 3−7309
  underwater propagation and scattering, computer model using transmission line matrix 3−46369
  underwater sound, surface reverberation, measured covariance for horizontal and vertical arrays 3−32572
  US computed tomography, reduction of multipath propag. effects 3−7304
  US echo tomography, image quality improvements 3−4603
  US echographic signal online deconvolution algorithm 3−4598
  US field reconstruction from electrostatic transducer array 3−1865
  US image speckle model and computer simulation 3−4590
  US images enhancement, de-integration approach 3−17714
  US imaging by carrier-frequency-independent complex envelope processing 3−1866
  US impediogram accuracy improvement by process identification convolution 3−4593
  US pulse-echo system, optimal input signal generation 3−56404
  US signal digital preshaping, equipment and appls. 3−46383
  velocity estimation from short-time temporal and spatial frequency estimates 3−7317
  venous gas emboli, detection and size meas. by Doppler US flowmeter 3−48347
  virtual beams from an FFT beamformer and their use to assess the quality of a towed-array system 3−7329
  GaAs acoustic charge transport device, monolithic 3−46381
  Si_3N_4 flaw detection, 50 MHz US three-dimensional synthetic focus system 3−4254

acoustic streaming
  bubble-containing medium, acoustic streaming 3−12399
  microstreaming by pulsed radiators 3−46368
  nondissipative medium, acoustic streaming 3−12405
  particle velocity and wave intensity in US diffracting systems 3−1829
  review of current status 3−12406
  swirling flow, acoustic streaming and Ranque-Hilsch effect 3−22272
  viscous fluid, vel. field near two spherical dipoles oscillating in phase and in parallel 3−50825

acoustic superradiance
  No entries

acoustic surface wave devices *see surface acoustic wave devices*

acoustic surface waves *see surface acoustic waves*

acoustic transducers
  see also acoustoelectric transducers; ultrasonic transducers
  acoustic radiator, cavitation zone, wave field struct. characts. 3−12402
  acoustic-magnetic coupler for telephone receiver, aid for hearing impaired users 3−35031
  aircraft, sound detection, work of R. Baillaud, 1915-22 *(French)* 3−5579
  annular transducer with a nonelectronically achieved depth of focus ranging from 20 mm to 140 mm 3−50893
  conical transducer for generation of acoustic waves in fluids 3−56408
  corrugation-grating bulk-to-surface acoustic wave transducers, theory 3−50879
  dispersive overlay waveguides with wideband transducers 3−27351
  emission transducers, absolute calibration 3−1909
  equivalent circuit representations 3−7367
  imaging, 10th International Symposium, Cannes, France (Oct. 1980) 3−29
  impulse response, Feynman diagram anal. 3−50876
  impulse response of echo on rigid sphere from planar transducer system, theory *(French)* 3−17663
  insonification, CW, using broad-band transducer with intensity control system 3−27345
  interdigital transducers, wave-scattering properties, different approach 3−42097
  interferometric fibre-optic sensors for air-acoustic signal detect. 3−1787
  linear radiation, nearfield investigation 3−7366
  magnetofluid transducer, performance characts. 3−27350
  magnetomechanical coupling in transducers 3−1906
  membrane, porous, oscillating 2nd sound superleak transducer, chem. pot. continuity 3−13570
  optoacoustic transducer, modified equivalent circuit 3−27347
  optoacoustic transducer resolution, effect of photoconductive layer 3−1921
  piezoelectric, membrane type, flexural mode, characts. 3−12484
  polyvinylidene fluoride film piezoelec. transducers, single-element and array, for acoustic imaging 3−50894
  pressure gradient transducers, diffr. const. calc. 3−12480
  properties using multimode stepped-index optical fibres 3−37315
  SAW continuously variable delay device with two unidirectional transducers 3−1915
  SAW convolvers using focused interdigital transducers 3−42095
  SAW diffraction and other second order effects, compensation, universal methods 3−42058
  SAW filter, group-type unidirectional, using distance weighting techniques 3−1916
  SAW interdigital transducers with harmonic responses insensitive to variations in finger widths 3−42096
  SAW transducer, 4-phase unidirectional, with broadband feeding 3−50885
  scanning acoustic microscope with transducer swing along beam axis 3−46414
  spherical target, acoustic impulse response distribs. *(French)* 3−42055
  traveling wave heat engine, gain and efficiency calc. 3−29445
  US wave generation by axisymmetrical transducer under cavitation conditions 3−27349
  ^4He, superfluid, superleak second-sound transducers 3−38145
  $Li_2B_4O_7$, SAW device appls. assessment 3−42103
  SAW IDT on Si substrates, optimal design 3−27344
  ZnO film, oriented, for microwave shear mode transducer 3−46423

acoustic variables control
  see also noise abatement
  insonification, CW, using broad-band transducer with intensity control system 3−27345

acoustic variables measurement
  see also acoustic intensity measurement; acoustic noise measurement; acoustic wave velocity measurement; Q-factor measurement; ultrasonic measurement
  acoustic transducer linear radiation, nearfield investigation 3−7366
  anechoic chambers, wideband, testing, FM-CW reflectivity measuring technique *(Dutch)* 3−37305
  architectural acoustics meas. digital technique appl. *(Japanese)* 3−42073

acoustic variables measurement continued
brass instruments, acoustic energy losses 3−7346
calibrations appl. of optimal Cu spheres in acoustic backscatt. measurements 3−56399
coherence coeff. meas. system and appl. to acoustic meas. 3−42082
computer assisted measurements *(Japanese)* 3−17740
computer subroutine program for converting data to decibels 3−17744
directionality meas. using reson. spatial phase of vibr. body 3−12465
electroacoustical coordinate measurement error correction for air movement influence *(Slovak)* 3−22289
field evaluation using orthostereophonic system with dummy head microphone *(Japanese)* 3−37307
impedance of human ear meas. using impedance measuring tube and digital signal processing *(Japanese)* 3−37302
inspection by shadow method with immersion, object surface roughness effect on recorded signals amplitude fluctuation 3−29273
liquids, acoustic field recording by vol. light scattering 3−50864
loudspeaker systems sound output 3−12464
mechanical vibrational mode shape meas., suitability of probe microphones *(German)* 3−7353
microcomputer controlled system *(Japanese)* 3−17742
minicomputer system *(Japanese)* 3−17741
musical starting transients, measurement and analysis system 3−22286
piping systems and mufflers with flow, time averaging transient testing method 3−56395
polyurethane, open cell highly porous foam, acoustical structure 3−8144
psychoacoustic measurement, microcomputer controlled system *(Japanese)* 3−19849
pulse method to measure the impedance of semi-natural soils 3−12454
pulse mode meas. system for VHF and UHF ranges 3−27336
Raman-Nath parameter meas. by acousto-optic diffr. 3−1899
reverberation and freq. response of circular pipe resonator, meas. technique 3−32528
reverberation meter, design and testing 3−12463
second-sound attenuation determ., meas. superfluid transition in ^{4}He 3−33531
standard of sound pressure realisation, by closed-coupler reciprocity technique 3−12466
standards calibration at physics division of National Research Council of Canada 3−1882
thermal-elastic interactions meas. with acoustic waves 3−46409
tomography for oceanographic remote sensing, resolution and variance calc. 3−35292
vowel vocalic configurations, French, study from acoustical meas. *(French)* 3−58683
water layer, acoustic measurement using interference field 3−50863
waveguide modes, cross convolution in elastic convolvers measured in frequency domain 3−56364
Cu, grain size prediction using acoustic attenuation measurements 3−58384

acoustic velocity *see acoustic wave velocity*

acoustic wave absorption
see also noise abatement; ultrasonic absorption
anharmonic cryst., isotopically disordered, thermal cond. and sound attenuation 3−51874
antiferromagnet, sound attenuation at low temps., effect of dislocation interaction *(Russian)* 3−28671
carboxylic acids, liquid, sound attenuation, Brillouin scatt. study 3−47050
coating, vibration absorbing, on cylindrical shell, effectiveness rating 3−12432
composite materials, Kramers-Kronig relations and wave propagation 3−46363
cubic crystal, acoustic plane wave attenuation in mag. field 3−13346
dielectric glasses, dynamic behaviour at low temps. in acoustic and electric fields 3−18405
duct, randomly lined, sound attenuation calc. 3−50812
ferromagnet, many-domain, acoustic props., theory 3−3501
finite amplitude N- and repeated sawtooth waves, nonlinear attenuation 3−50824
flexible polyurethane foam, flow resistance effects 3−1850
gas in cylindrical tube, nonequilib. mol. processes effects on attenuation and dispersion, theory 3−12808
gassy sediments, acoustic wave propagation model 3−50805
glass, nonreson. absorption of acoustic and EM radiation 3−18404
glycine, aqueous soln., ultrafast proton-transfer reaction kinetics, acoustic spectroscopy 3−29294
hall absorption level estimation, ring research *(German)* 3−56385
hall tone absorpt. level, systematic deviation from measured value, causes and prevention *(German)* 3−56384
hearing protector attenuation depend. on noise level, psychophysical evaluation 3−39724
internal friction, static and dynamic dislocation hysteresis 3−18388
laboratories, acoustic absorption coeffs. variability meas. 3−56396
liquid sphere, sound wave focusing 3−27291
marine sediments, natural gas hydrates occurrence and acoustic props. 3−19981
materials for noise and vibration control 3−12435
metals, amorphous, saturation of relaxational absorpt., at very high acoustic powers 3−2689
monopole active attenuators with non-ideal loudspeakers 3−1851
nematic liquid crystals, orientational relax. at high temp. and press. 3−2674
nonequilibrium stationary states, modified Navier-Stokes model, sound absorpt., Brillouin Rayleigh spectra 3−2019
NE Pacific Ocean, attenuation of LF sound 3−9929
panel, sound absorption variation caused by modifications to a standard mounting 3−17699
paramagnetic solid, acoustic pulse propagation in strong alternating mag. field 3−52205
piezoelectric semiconductor, SAW absorption at intermediate freq. 3−47206
polymethylsiloxane, short chain polymer, viscoelastic props. *(Russian)* 3−39187
porous material double layer, sound absorpt. coeff. 3−12393
porous material sound absorbers, resonant, theory 3−32525
porous materials, acoustic absorpt. curves at normal incidence, parametric anal. *(French)* 3−50804
porous materials, acoustical properties, with several gas media, dissipative silencers 3−42715

acoustic wave absorption continued
rooms, sound decay curves and absorpt. distribution, room shape effects, theory and expt. 3−17705
sandstones, effect of pore-filling material and form. conditions on elastic waves vel. and absorpt. 3−9913
sea, sound attenuation for high-freq. beams by wind-generated bubble layer, theory 3−56370
seawater, sound absorption eqn., H_3BO_3 contribution 3−35174
semiconductor and insulator crystals, He temps., 'residual' loss mechanism 3−8146
shallow water acoustic propagation, seabottom attenuation profile 3−54045
spin glasses, sound attenuation and relax. dynamics 3−47508
tunnel, sound transmission characteristics meas. *(Japanese)* 3−37263
turbulent medium, low freq. sound attenuation 3−27295
underwater transmission loss models, comparison with measured data 3−17687
uniform mean flow ducts, liner sound attenuation eigensolutions 3−56611
vortex, sound scattering and absorpt. 3−56369
Ar, bulk viscosity near triple point, acoustic attenuation meas. 3−57118
CO_2-N_2 gas in cylindrical tube, nonequilib. mol. processes effects on attenuation and dispersion, theory 3−12808
$Cu_{60}Zr_{40}$, supercond. disordered metal, low temp. elastic props., acoustic meas. 3−47052
InSb, acoustoelectronic interaction and electron-hole plasma 3−28391
Kr, bulk viscosity near triple point, acoustic attenuation meas. 3−57118
Nb, nonlinear acoustic parameter and damping const. near supercond. transition 3−47053
β-NbH_x ($x=0.83$, 0.91, 0.94), sound attenuation and elastic modulus dispersion 3−33360
Sn, nonlinear acoustic parameter and damping const. near supercond. transition 3−47053
TeO_2, slow acoustic wave propag., acoustooptical studies 3−28059
Xe, bulk viscosity near triple point, acoustic attenuation meas. 3−57118
$(Y_{1-x}Lu_x)_3Al_5O_{12}$ solid soln., annealing effects on acoustic wave absorption 3−13349
ZrF_4-BaF_2-AlF_3-NaF glass, low temp. acoustic props., glass transition temp., two-level systems model 3−28053
ZrF_4-ThF_4-LaF_3 glass, low temp. acoustic props., glass transition temp., two-level systems model 3−28053

acoustic wave amplification
see also acoustoelectric effects
combustion, thermoacoustics, acoustic wave generation and amplification 3−27297
flowfield and far field acoustic amplification props. of heated and unheated jets 3−12727
semiconductors, electronic absorption and sound amplification in alternating elec. and mag. fields 3−38001
US loaded amplitude transformer, anal. by Mobius transform. 3−7362
US wave, optical generation and amplification by electrostriction *(German)* 3−50599
n-GaAs piezoelectric film, total-reflection-mode SAW amplification, theory 3−51907
SiO_x dielec. sublayer on $LiNbO_3$ substrate, SAW amplification, deposition conditions effects 3−33553

acoustic wave attenuation *see acoustic dispersion; acoustic wave absorption; acoustic wave scattering; acoustic wave transmission; ultrasonic absorption*

acoustic wave diffraction
see also ultrasonic diffraction
anisotropic media, fast computation of diffraction by use of geometrical theory of diffraction 3−56409
backscatter, Kirchhoff assumption failure 3−17650
boundary-value anal. of acoustic wave diffr. by plate near a plane 3−22273
double diffraction impulse studies, discrete Huygen interpretation 3−7259
edge diffraction, line integral representation 3−32520
elastic solids with unknown anisotropy, inverse ray tracing 3−50807
elastodynamic waves scattering by rigid plane strip on plane crack, theoretical investigation 3−7264
grating with periodicity defects, theory *(French)* 3−17660
HF sound radiation out of jet pipe 3−7571
holographic lens image quality and diffraction efficiency, theory and expt. 3−1876
imaging, 10th International Symposium, Cannes, France (Oct. 1980) 3−29
impulse response computation of acoustically reflecting targets *(French)* 3−17675
LF sound radiation out of jet pipe 3−7572
noise barrier insertion loss in presence of ground, atm. turbulence effects 3−37288
plane wave diffr. by bodies which mixed boundary conditions, Green's function method 3−27289
plane wave diffraction by infinite set of soft/hard parallel half planes, theory 3−6837
SAW diffraction and other second order effects, compensation, universal methods 3−42058
Schefer-Bergmann diffraction pattern origin, new interpretation 3−56362
spherical impulsive wave, diffr. by elastic sphere surrounded by air, theory *(French)* 3−17680
waveguide array, prismatic, optimum attenuation of low freq. noise by proper tuning 3−37289
$LiNbO_3$, transversely limited SAW beams, nonlinear propagation, second-harmonic diff. field, theory and expt. 3−37283

acoustic wave diffusion *see acoustic wave scattering*

acoustic wave effects
see also acoustic magnetic resonance; acousto-optical effects; acoustoelectric effects; biological effects of acoustic radiation; sonoluminescence; ultrasonic effects
cavitation, review 3−42277
crystallisation nuclei in liq. in a sound field 3−51525
gas cavity in liquid, linear and nonlinear acoustical excitation 3−12391
gas mixtures, separation in acoustic wave field 3−17693
impedance tube expts. in the acoustics laboratory 3−25722
inviscid fluid, local theory of thermo-acoustic phenomena 3−37340
liquid, bubbling, large-amplitude pulse resonant interaction 3−13344
receptivity, flow instability coupling with incident sound 3−7546
turbulence, acoustic generated, measurements in resonance tube 3−51070

acoustic wave interference
see also acoustic wave interferometers; acoustic wave interferometry
air near ground surface, additional damping *(German)* 3−27292

acoustic wave interference continued
- group velocity meas. technique in dispersive media with multipath interference 3—27337
- seismic SH waves intensity, influence of variable layer thickness *(Russian)* 3—39824
- shallow water, interfering point source, suppression using mode-selective array 3—22274
- water layer, acoustic measurement using interference field 3—50863
- Al, internal stress distrib., acoustic interferometry method 3—4232

acoustic wave interferometers
- *see also acoustic wave interferometry*
- No entries

acoustic wave interferometry
- *see also acoustic wave interferometers*
- biological liquid samples, interferometric meas. method of ultrasonic attenuation 3—58876
- ethylene, ideal-gas state, sound vel. and specific heat 3—51268
- imaging, joint representation and image deconvolution 3—17718
- internal stress distrib. meas. in solids 3—4232
- pattern storage using corona charged thermoplastic device 3—1895
- ultrasonic pulse-echo interferometer technique for vel. meas. in solids and liqs. 3—7357

acoustic wave propagation
- *see also acoustic dispersion; atmospheric acoustics; Doppler effect; liquid helium sound propagation; seismic waves; shock waves; surface acoustic waves; ultrasonic propagation; underwater sound*
- acoustoelastic effects, perturbation theory 3—27286
- aerodynamically generated sound, multiple scales method 3—12656
- air, pressure level in wet gases, cepstrum anal. 3—42088
- air near ground surface, additional damping *(German)* 3—27292
- bubble-containing medium, acoustic waves, nonlinearity 3—12401
- cascades, flat plate, acoustic resonances, frequency ratios calc. 3—50811
- chiral smectic liq. cryst., EM and sound wave propag. 3—51490
- composite materials, Kramers-Kronig relations and wave propagation 3—46363
- conference, Le Havre, France (Oct. 1982) *(French)* 3—16081
- crystals, piezo-acoustic rotation 3—50806
- cylindrical duct with periodically varying cross-section, acoustic wave propag. 3—37278
- double wall, sound propag., sound bridge eccentricity effect 3—27285
- duct, nonuniform, acoustically lined, sound press. levels, expt. and numerical calc. 3—22270
- duct, steady-state solns., time dependent difference calc. 3—22271
- duct flow, four-pole parameters, finite element anal. 3—12777
- elastic solid, ordering principle of elastic wave propagation velocities 3—46364
- ethylene, ideal-gas state, sound vel. and specific heat 3—51268
- ferroelectric semiconductors, nonlinear-theory of acoustic instability *(Russian)* 3—23444
- finite impedance ground, scale model 3—50803
- gas cavity in liquid, linear and nonlinear acoustical excitation 3—12391
- gassy sediments, acoustic wave propagation model 3—50805
- ground effects, surface wave and layer potential representations 3—12383
- group radiators, directional characts. 3—17674
- heterogeneous fluid, acoustic impedance concept *(French)* 3—17667
- horns, finite, cutoff freq. definition *(French)* 3—17659
- hydroacoustics appls. in ocean engineering *(Polish)* 3—12410
- imaging by wave field extrapolation, data acquisition methods 3—1868
- imaging by wave field extrapolation, theory 3—1867
- impedance jumps and screens, theory 3—17654
- impedence boundary value problem, Runge's theorem 3—16157
- impulse response for the one-dimensional inhomogeneous medium with an approximation for attenuation and dispersion 3—7311
- inhomogeneous isotropic elastic body, weak and short waves 3—50821
- irregular surface, sound propag., theory 3—7269
- isotropic media, linear transverse acoustic wave propag., relaxation effects, special cases appl. 3—22342
- laminated solid-fluid periodic elastoacoustic medium, wave propagation, theory 3—42056
- liquid, bubble containing, acoustic wave propag., model nonlinear eqns. 3—12403
- liquid, bubble-containing, nonlinear acoustic waves 3—12404
- liquid, bubble-containing, wave processes induced by explosions and shocks 3—13304
- liquid, sound propagation from pulsed thermooptical source, nonlinear acoustical effects 3—13343
- loudspeaker-cone as structure of spatial fibre-network, sound propagation mechanism *(Hungarian)* 3—27287
- moving layered inhomogeneous medium, sound propag. theory 3—12397
- multilayer structure with spherical symm., elastic wave propag., theory *(French)* 3—17862
- multilayered medium, propag. losses, wave eqn. soln. 3—37274
- nozzle, pressure transfer function due to acoustic and convected entropy fluctuations 3—32782
- numerical analysis of acoustic wave propag. along azimuthal direction in cylindrically layered waveguide 3—50820
- ocean, sound propag. theory 3—15484
- ocean acoustic waves, signal fluctuation estimation method, sea medium model 3—48710
- one-dimensional inhomogeneous body with memory, weak and short waves 3—50822
- one-dimensional longitudinal wave, time-varying, evolution in weakly singular hereditary medium 3—10598
- paramagnetic solid, acoustic pulse propagation in strong alternating mag. field 3—52205
- periodically stratified media, acoustic wave propag., propagator matrix method 3—37273
- perturbed stratified media, self-adjoint operator spectrum *(French)* 3—37998
- piping systems and mufflers with flow, time averaging transient testing method 3—56395
- PKIKP waves, travel times *(French)* 3—4777
- polymer gels, saturated porous media, sound propagation *(French)* 3—17661
- porous media, fluid saturated, acoustic wave propag. 3—51722
- porous media, saturated, sound propagation *(French)* 3—17661
- power and radiation efficiency of circular plate 3—1835
- random layered media, acoustic propag. 3—37267
- resonant absorbing medium, pulses with random phase modulation *(Russian)* 3—7270

acoustic wave propagation continued
- rigid ducts blockage effects 3—7265
- saturation in a turbulent medium 3—32531
- SAW oscillator aging, propag. loss effects 3—50887
- SAW waveguide with edge corrugations, wave scatt. 3—1827
- seismic SH waves intensity, influence of variable layer thickness *(Russian)* 3—39824
- shallow water, low-error bearing estimation 3—1832
- shallow water acoustic propagation, seabottom attenuation profile 3—54045
- shells, piezoceramic, partially shielded, sound radiation 3—22278
- shock wave, time invariant, acoustic, propag. in ray ducts 3—12417
- slow-waveguide antenna, guided sound propag. 3—56360
- soil, water saturated, wave processes induced by explosions and shocks 3—13304
- sound propagation through a variable area duct: experiment and theory 3—12379
- sound speed inhomogeneities determ. using inverse scatt. theory 3—32527
- stratified atmosphere, sound wave propag. *(Japanese)* 3—42059
- structure-borne sound propagation through junctions with blocking-masses, numerical study 3—50814
- transparent media, acoustic pulse propag., photographic recording 3—13350
- tunnel, sound transmission characteristics meas. *(Japanese)* 3—37263
- underwater acoustic propagation in upper sound channel 3—20023
- underwater acoustic wave propagation, corrected match for coherent part of time-variant channel 3—7309
- underwater propagation and scattering, computer model using transmission line matrix 3—46369
- underwater sound channel, normal mode wave numbers, cutoff freqs. and number of trapped modes 3—12408
- variable area duct, plane wave sound propag. 3—56361
- warm-core eddies, acoustic propagation modelling 3—54046
- water channel, shallow, acoustic field, Pedersen-Gordon normal mode theory, branch-line integrals role 3—32524
- $Ba_2NaNb_5O_{15}$, SAW propag. 3—42906
- KCl, acoustic pulse propag., photographic recording 3—13350
- $RbNiCl_3$, linear antiferromag., sound propag. and elastic moduli 3—57030
- TeO_2, slow acoustic wave propag., acoustooptical studies 3—28059
- ZnO film, sputtered, SAW propag. loss 3—51912

acoustic wave reflection
- *see also echo; reverberation; ultrasonic reflection*
- acoustic microscope, nonscanning reflection system, V(z) curves meas. by acoustic line-focus beam 3—46413
- air near ground surface, additional damping *(German)* 3—27292
- boundary layer reflection calc. for flowing medium 3—17656
- bubble-containing medium, acoustic waves, nonlinearity 3—12401
- correlated rough surfaces, sound refl. and scatt. 3—37272
- ferromagnet, many-domain, acoustic props., theory 3—3501
- heterogeneous fluid, acoustic impedance concept *(French)* 3—17667
- impulse response computation of acoustically reflecting targets *(French)* 3—17675
- jet flow-pipe-acoustic wave interaction, small Strouhal number anal. 3—50831
- LF sound radiation out of jet pipe 3—7572
- monostatic and bistatic indices meas. for various objects *(French)* 3—17671
- multiple reflection between rigid curved panels, theory 3—50815
- multiple reflections between rigid plane panels, theory 3—7302
- mutual energies law, appl. to room acoustic wave theory *(German)* 3—42054
- ocean bottom sediments, sound reflection props. meas. 3—58991
- periodically stratified acoustic half-space, rel. to Biot fluid 3—37270
- propagation losses over Dickins Seamount in Northeast Pacific Ocean 3—39850
- right-angle reflection of SAW from an array of conducting strips 3—56363
- rough ocean surface, reflection loss, Kirchhoff formula 3—54050
- SAW reflection by thin metal dots 3—47207
- scattering by spherical elastic layers, exact soln. and interpretation for scalar field 3—37265
- structure-borne sound propagation through junctions with blocking-masses, numerical study 3—50814
- transients reflection from fibrous absorptive surface, mode calc. 3—12384
- transversely isotropic consolidated sediments, acoustic reflection 3—54049
- tunnel, sound transmission characteristics meas. *(Japanese)* 3—37263
- variable area duct, plane wave sound propag. 3—56361
- velocity and density profiles, construction from refl. coeff. ang. depend. 3—37266
- Si_3N_4, longitudinal wavelength meas. of surface cracks, SAW reflection 3—44028

acoustic wave refraction
- *see also acoustic dispersion; ultrasonic refraction*
- fluid-fluid interface, refraction of narrow acoustic beam in two-dimens., analytic and numerical calc. *(French)* 3—17668
- glass fused beads, water-saturated, tortuosity and acoustic slow waves 3—28055
- holographic lens image field computation methods 3—1875
- ray tracing, digital, in two-dimensional refractive field 3—17649
- scattering by spherical elastic layers, exact soln. and interpretation for scalar field 3—37265
- shock waves, weak, self-refraction 3—27302
- US images, compound, blurring reduction by image realignment 3—46386
- vortex, sound scattering and absorpt. 3—56369

acoustic wave scattering
- *see also ultrasonic scattering*
- atmospheric turbulence, Doppler sodar appl. *(French)* 3—20107
- backscattering by anisotropic sound vel. fluctuations 3—12396
- backscattering by bodies new disturbed surface, coherent effects 3—27288
- bubble-containing medium, sound beam wavefront inversion and other nonlinear effects 3—12398
- circular disk, T-matrix for acoustic and EM wave scatt. 3—17651
- coherent scatt. form rough interface between arbitrary fluids 3—7283
- computational procedure for imaging by numerical modelling and quadratic optimisation 3—12441
- conference, Le Havre, France (Oct. 1982) *(French)* 3—16081
- correlated rough surfaces, sound refl. and scatt. 3—37272
- corrugated surface scatt., facet-ensemble method, Helmholtz-Kirchoff theory 3—39853

acoustic wave scattering continued
- cylindrical rigid objects with sharp corners, acoustic wave scatt., theory and expt. 3−32523
- diffraction backscatter, Kirchhoff assumption failure 3−17650
- double diffraction impulse studies, discrete Huygen interpretation 3−7259
- echoes, monostatic and bistatic, from elastic sphere, reson. scatt. theory anal. 3−37264
- elastodynamic waves scattering by rigid plane strip on plane crack, theoretical investigation 3−7264
- fan noise suppression in two-dimensional duct, mode scatterer design 3−12428
- finite cylindrical cavity in elastodynamics, exterior problem 3−37393
- immersed cylindrical tubes, resonances obs. *(French)* 3−17681
- immersed elastic cylinder, backscattered press. meas. with automatic correction *(French)* 3−17751
- immersed elastic hollow cylinder, surface waves and resonances, theory *(French)* 3−17679
- immersed metal cylinders, acoustic wave scatt. *(French)* 3−17690
- impulse response of reflecting target, numerical data *(French)* 3−17664
- infinite elastic elliptic cylinders, sound scattering numerical results 3−7263
- interdigital transducers, wave-scattering properties, different approach 3−42097
- inverse acoustic scatt., analytical and numerical aspects 3−12392
- inverse problem in three dimens., optimal soln. approx. 3−17653
- inverse source and scattering problems, nonuniqueness, comments and replies 3−12381
- inverse source and scattering problems, nonuniqueness 3−12380
- K-distributions, multiscale surface scattering model 3−12052
- liquid, gas bubbles, nonlinear acoustical spectroscopy 3−12473
- liquid bubble sheet, nonlinear sound scatt. 3−12400
- liquids, absorbing, acoustic beams self-action, stimulated scattering and thermal self-focusing *(Russian)* 3−1831
- liquids, stimulated thermal acoustic scattering, theory 3−51714
- monolayers, correlated, multiple scatt. of sound 3−37271
- multiple coherent scatt. from rough surface, numerical consts. 3−7284
- multiple scattering by rough surface, eqns. for statistical characts. 3−12395
- null-field method for acoustic scatt. and radiation problems 3−1825
- ocean, scatterer motion determ. from acoustic correl. meas. with high frequency echo-sounder 3−48568
- ocean bottom, acoustic backscattering meas. 3−17686
- ocean fine structure models 3−7275
- open baffle, wave scatt. characts. 3−32529
- physical optics inverse scattering identity, survey 3−12042
- porosity parameters determination using acoustical method, pore distrib., function influence 3−29275
- random layered media, acoustic propag. 3−37267
- Runge's theorem, impedance boundaries in acoustic wave propagation 3−16157
- SAW conversion into bulk waves at surface discontinuity 3−42907
- SAW pulses, resonance scattering theory 3−7260
- SAW waveguide with edge corrugations, wave scatt. 3−1827
- shells, spherical, coated, resons. in the sonar cross sections 3−22275
- slender bodies of revolution, acoustic scattering, theory 3−32522
- sphere, sound scatt., mixed boundary conditions 3−12390
- spheres, acoustic backscatt., calibrations appl. of optimal Cu spheres 3−56399
- spherical elastic layers, exact soln. and interpretation for scalar field 3−37265
- spherical impulsive wave, diffr. by elastic sphere surrounded by air, theory *(French)* 3−17680
- spherical target, acoustic impulse response distribs. *(French)* 3−42055
- suspensions, scattering and attenuation theory with marine appls. 3−7282
- synthesis problem, general, exact closed-form analytical soln. 3−6823
- thermally stratified water, wake scatt. meas. 3−54051
- time-domain problems, least-square iterative technique 3−32521
- transfer function of target and classification by active sonar *(French)* 3−17666
- turbulent medium, low freq. sound attenuation 3−27295
- underwater acoustic propagation in upper sound channel 3−20023
- underwater propagation and scattering, computer model using transmission line matrix 3−46369
- variable area duct, plane wave sound propag. 3−56361
- vortex, sound scattering and absorpt. 3−56369
- zooplankton, acoustical and physical props. 3−29621

acoustic wave transmission
- *see also ultrasonic transmission*
- aircraft fuselage, sound transmission loss meas. using acoustic intensity approach 3−56391
- building acoustics, flanking transmission using statistical energy anal. 3−27310
- dense thin films, acoustic transmission, time domain anal. 3−5558
- duct flow, acoustic transmission finite element anal. 3−12767
- duct system, rectangular, sound transmission in sidebranch, mode coupling theory and expt. study 3−22269
- filter, transmission or insertion loss estimation 3−1880
- gypsum board walls, steel studded, sound transmission variations 3−12434
- hearing aid, acoustical transmission props., opened ear-mold influence *(German)* 3−15281
- motion-picture screens, perforated, sound transmission through screens 3−37277
- periodically stratified acoustic half-space, rel. to Biot fluid 3−37270
- solid-fluid interface, transmitted acoustic source radiation, numerical Fourier-Bessel transformation *(French)* 3−17672
- sound insulation, LF, statistical energy anal. improvement 3−1860
- sound insulation system application 3−22279
- structure-borne sound transmission meas. using impulsive sources 3−1861
- twin plates, sound wave transmission 3−17652
- windows, lab. meas. of sound transmission, single and double glazing 3−7300

acoustic wave velocity
- *see also acoustic dispersion; liquid helium sound propagation; shock waves; ultrasonic velocity*
- acoustic microscopy, coherent, approx. materials characterisation 3−27333
- acoustic waves, signal fluctuation estimation method, sea medium model 3−48710
- alkali chlorides, molten, hypersonic velocities, Brillouin spectra study 3−33363

acoustic wave velocity continued
- n-alkanes, eqn. of state based on relative dielec. permittivity meas. 3−28076
- backscattering by anisotropic sound vel. fluctuations 3−12396
- bubble-containing medium, acoustic waves, nonlinearity 3−12401
- bubbly medium, thermodynamic correction to vel. 3−7286
- critical binary mixtures, sound vel. meas. 3−2676
- elastic solid, ordering principle of elastic wave propagation velocities 3−46364
- fluids thermophysical props. calc., interactive FORTRAN program, report 3−46679
- gassy sediments, acoustic wave propagation model 3−50805
- glass fused beads, water-saturated, tortuosity and acoustic slow waves 3−28055
- graphite-PVC composite for loudspeaker diaphragm *(Japanese)* 3−37313
- gravity effect in gases 3−5556
- 2,4-hexadiynylene-bis(p-toluenesulphonate), monomer and polymer, elastic consts. and phase transitions 3−42770
- liquids, transport props., depend. on sound vel. and density 3−42826
- marine sediments, natural gas hydrates occurrence and acoustic props. 3−19981
- marine sediments, sound velocity and porosity meas. 3−35175
- moving stratified medium, caustic curve location 3−46365
- multilayered medium, propag. losses, wave eqn. soln. 3−37274
- one-dimensional inhomogeneous body with memory, weak and short waves 3−50822
- P, black, lattice dynamics, force const. model 3−8157
- paramagnet, tetragonal J=1, transverse sound velocity and magnetoelastic interactions *(German)* 3−38668
- piezoelectric three-layer struct., pure transverse acoustic wave propagation 3−51910
- poly(propylene oxide) polyurethane, gels, hypersonic props., Brillouin scatt. 3−34120
- polymer blends, miscible, charact. techniques, review 3−38089
- polymethylsiloxane, short chain polymer, viscoelastic props. *(Russian)* 3−39187
- porosity parameters determination using acoustical method, pore distrib., function influence 3−29275
- pulmonary parenchyma, sound vel. in excised horse lobes 3−58718
- reflection coeff. ang. depend., wave vel. and density profiles construction 3−37266
- sandstones, effect of pore-filling material and form. conditions on elastic waves vel. and absorpt. 3−9913
- SAW velocity meas., 50 MHz, using acoustic microscope 3−46410
- scanning acoustic microscope with transducer swing along beam axis 3−46414
- spin glasses, sound attenuation and relax. dynamics 3−47508
- transversely isotropic consolidated sediments, acoustic reflection 3−54049
- water, sp. ht., speed of sound, Joule-Thomson and fugacity coeff., and melting curves 3−42798
- Ag_3AsS_3, proustite, phase transition, permittivity and acoustic wave vel. studies 3−28096
- AgTlSe, optical elastic and acousto-optical props. 3−52767
- $CdCl_2$, molten, hypersonic vel. and compressibility 3−18394
- Cu-Zr glasses, struct. and vibr. spectra 3−27853
- $Cu_{60}Zr_{40}$, supercond. disordered metal, low temp. elastic props., acoustic meas. 3−47052
- n-D_2, solid acoustic velocity angular dependence, Brillouin scatt. study using diamond anvil cell 3−38838
- $Fe_{65}Ni_{35}$, sound velocity dispersion and volume magnetostriction *(Russian)* 3−51716
- ^4He liq., third sound velocity and elementary excitation spectrum 3−13567
- $InPS_4$, elastic, optical and nonlinear optical props. 3−37114
- KNO_3-$Ca(NO_3)_2$, glass, elastic props., Brillouin scatt. study 3−47664
- $SrTiO_3$, SAW determ. of D_{4h} symmetry surface layer, ferroelec. transition region 3−51909

acoustic wave velocity measurement
- *see also ultrasonic velocity measurement*
- acoustic method for measurement of the average air temperature in a beam guiding line 3−22294
- acoustic microscopy, leaky SAW broadband pulses 3−46411
- ceramics, hot isostatic pressing effect on porosity, sound velocity meas. eval. 3−9293
- ethylene, ideal-gas state, sound vel. and specific heat 3−51268
- mechanically scanned acoustic microscope, for acoustic vel. meas. 3−1886
- Rayleigh wave velocity perturbations, prcision meas. technique using acoustic microscope 3−27329
- SAW velocity meas., 50 MHz, using acoustic microscope 3−46410
- scanning acoustic laser microscope, acoustic rel. meas. 3−46415
- vibrating panel, acoustic vel., surface vel. and acoustic radiation efficiency meas. by two-microphone technique 3−56398
- well logging, velocity estimation from short-time temporal and spatial frequency estimates 3−7317
- Al_2O_3, hot isostatic pressing effect on porosity, sound velocity meas. eval. 3−9293

acoustic waveguides
- array, prismatic, optimum attenuation of low freq. noise by proper tuning 3−37289
- broad refractive waveguide, wave field near boundary 3−17673
- composite slow waveguides, sound wave propagation 3−50813
- curved waveguides, natural modes calc. 3−56366
- dispersive overlay waveguides with wideband transducers 3−27351
- layered, normal mode amplitude calc. 3−12387
- limacon shaped waveguides, frequencies calc. 3−19736
- multimode waveguide, noise field suppression by adaptive radiator system 3−50838
- numerical analysis of acoustic wave propag. along azimuthal direction in cylindrically layered waveguides 3−50820
- open waveguide with rough boundaries, charact. waves 3−12385
- periodic septate waveguides, longitudinal waves dispersion 3−56365
- piezoelectric three-layer struct., pure transverse acoustic wave propagation 3−51910
- piezoelectric waveguide convolver, linear and nonlinear anal. 3−56402
- piezoelectrically active, normal modes, dispersion relations, numerical anal. 3−27290
- plane waveguide, sound field, Malyuzhinet's diffusion approx. 3−50817
- SAW waveguide with edge corrugations, wave scatt. 3−1827
- signals modulation in shallow water using normal-mode model 3−7308
- slow-waveguide antenna, guided sound propag. 3−56360

acoustic waveguides continued
statistically rough walled, correl. characts. 3—37276
thin film, Rayleigh wave radiation and Love wave propag. 3—12386
thin-film and topographic waveguides for SAW, finite element anal. using approx. anal. solns. 3—1824
underwater sources, localization in constant-velocity waveguide, receiver arrays *(Chinese)* 3—27298
underwater waveguides, sound field calc. at low freq., asymptotic method 3—50833
vibration isolator for arbitrarily polarized flexural modes 3—27301
LiNbO$_3$ with Al guide, piezoelectric waveguide convolver, linear and nonlinear anal. 3—56402

acoustic waves
see also acoustic emission; magnetoacoustic effects; shock waves; surface acoustic waves; ultrasonic waves
cylindrical cylinder, radiation from oscillating screw dislocation 3—27939
elastic strip, variable thickness, longitudinal-shear normal modes 3—12388
fibre-optic noncontacting sensors for acoustic waves 3—50873
metal rod, electromagnetic-acoustic induction of elastic traveling waves 3—23442
mutual energies law, appl. to room acoustic wave theory *(German)* 3—42054
nonlinear self-excited acoustic oscillations within fixed boundaries 3—12657
nonuniform acoustic impedance, sound attenuation in ducts with lined walls *(Japanese)* 3—46367
Rochelle salt, degenerate convolution of surface and bulk acoustic waves near phase transition 3—8314
shear bulk acoustic waves, generation by pair of electrodes on piezoelec. surface 3—37314
Skylab I, anomalous infrasound 3—50830
solar atmosphere, cut-off freq. of acoustic modes rel. to He abundance determ. 3—54323
solids, acoustic soliton study 3—38002
Space Shuttle II, anomalous infrasound 3—50830
in supernova remnants, acoustic waves prod. and effects 3—10418
suspension of elastic particles, acoustic perturbations *(French)* 3—22984
travelling wave, low freq., in confined vol., technique for modelling 3—12389
W single crystal, reciprocal conversion of sound and electromagnetic waves under conditions of Doppler-shifted cyclotron resonance 3—3540

acoustical laboratories
see also anechoic chambers; reverberation chambers
absorption coeffs. variability meas. 3—56396

acoustics
see also acoustic applications; acoustic devices; acoustic equipment; acoustic noise; anechoic chambers; architectural acoustics; atmospheric acoustics; audio acoustics; hearing; musical acoustics; photoacoustic effect; sound reproduction; ultrasonics; underwater sound; vibrations
Acoustical Soc. Amer. 104th meeting, Orlando, FL, USA, Nov., 1982 3—5485
acousto-elastodynamics, variational theorem 3—12414
elastic solids with unknown anisotropy, inverse ray tracing 3—50807
frequency, time and memory, Gabor's pioneering work 3—5581
general synthesis problem, exact closed-form analytical soln. 3—6823
induced mass of a 3-concave-sided cylinder model rel. to polyurethane foam acoustics 3—1925
linear stationary random multidegree-of-freedom system, response spectral density calc. 3—12382
synthesis, interdisciplinary aspects 3—1547
synthesis methods for optics, quasi-optics, acoustics and electromagnetics, conf., San Diego, CA, USA (Aug. 1981) 3—11

acousto-optical devices
see also acousto-optical effects
acoustic waves, fibre-optic noncontacting sensors 3—50873
adaptive optical processor 3—17608
bistable, noisy bifurcations, numerical anal. 3—12285
bistable, oscillations 3—56272
Bragg angle measurement of laser beam diffracted by acousto-optic modulator, crystal props. 3—50683
convolver using integrated optics elements 3—1812
correlators, time integrating, fine delay estimation 3—12079
double-path device with extremely high contrast ratio 3—56307
fibre optic acoustic sensor advances 3—22238
fibre optic hydrophone, multimode, based on photoelastic effect 3—1776
fibre optic technology, proposed symbolic representation/ for optoelectronic components 3—42010
fibre-optic hydroacoustic vibr. detector sensitivity 3—22249
gas laser mode-locking using an external acoustooptic modulator with pot. appl. to passive ring gyroscopes 3—17547
heterodyne receiver on Si, exercise in integration 3—17642
integrated acousto-optics: the technology and the competition 3—27270
interferometric fibre-optic sensors for air-acoustic signal detect. 3—1787
laser beam deflector, reprographic quality high speed solid-state 3—7148
laser stress wave probe, 0.2 Å sensitivity, 20 MHz bandwidth 3—50693
laser tuning, in-resonator acoustooptic deflector 3—22137
light modulations, freq. charact. 3—7164
modulator as freq. shift device for laser Doppler velocimeter *(Chinese)* 3—37589
modulators, multiple integrated, for 180 mega-pixel per second optical image recording 3—7217
modulators for CO$_2$ heterodyne laser systems 3—56249
multichannel acoustooptical modulators, information capacity anal. 3—50749
multilayer directional coupler using acousto-optic effects by SAWs, optical switching characts. 3—50797
multilayer thin film optical tunable separators/couplers, switching using SAWs 3—42040
nematic liquid crystal acousto-optic conversion cell 3—1902
optical couplers, multilayered, tunable filtering using SAW 3—22190
oscillator using quartz resonator 3—50751
planar waveguides, acousto-optic meas. of effective refractive indices of guided modes 3—56348
polymeric materials for underwater optoacoustic sensors, environmental effects 3—50860
pseudo-holographic US imaging with nematic liquid crystal convertor 3—1873
PVF$_2$ sensitivity and performance in optically-scanned US imaging piezoelec. transducer 3—1923
real-time acoustic processing by coherent optical techniques 3—27314

acousto-optical devices continued
resolution, effect of injection laser coherence 3—17605
scanners, analogue compensation for scanned laser beam intensity 3—7051
spectrometer, stable, for millimetre radio astronomy, design and operation 3—15844
strobe recording technique 3—7163
transducers for freq. multiplexed and pipelined iterative optical systolic array processors 3—26950
US transducer characterization by light interferometry 3—49441
waveguide and channel at axis of hollow laser beam 3—22211
Bi$_{12}$GeO$_{20}$ substrate, holographic interferometric monitoring of polished surface planarity 3—45106
CdS tunable filter, resolution enhancement using birefr. dispersion 3—12297
LiNbO$_3$ sensitivity and performance in optically-scanned US imaging piezoelec. transducer 3—1923
LiNbO$_3$:Ti waveguide, Ti-diffused, two-coord. acousto-optic integrated optics deflector 3—12300
PZT sensitivity and performance in optically-scanned US imaging piezoelec. transducer 3—1923
Tl$_3$AsSe$_3$, IR acousto-optic tunable filters, design and fabrication 3—17610

acousto-optical effects
see also acousto-optical devices
Bragg diffraction by US, angular dependence, fine struct. calc. 3—6875
diffraction of light by SAW in LiNbO$_3$ 3—34070
diffraction of light from surface acoustic waves in an isotropic medium 3—50611
fibre suspensions, US inspection 3—19472
four-wave acoustooptic effects in nonlinear media with noncollinear geometry 3—28832
Fresnel diffraction, acoustically modified, by slit and periodic object, periodic partial coherence 3—6878
gyrotropic absorbing crystals, light diffr. by ultrasound 3—34068
laser, distributed feedback, travelling, produced by sound pulse in active medium 3—17475
light diffraction by 2 adjacent US beams of freq. ratio 1:1 3—1553
light modulation by US progressive wave associated with optical amplitude grating, irradiance, Fourier series 3—56139
liquid crystal, acoustooptical effects in mag. field 3—14251
liquids, acoustic field recording by vol. light scattering 3—50864
multiple phase-coherent laser pulses in optical spectroscopy, tech. and appls. 3—54777
nematic liquid cryst., orientation variations induced by US wave, optical detection 3—51484
nonlinear Bragg diffraction from US wave and US wave optical generation *(German)* 3—50599
optical fields in optoacoustic interaction, correl. anal. 3—50628
periodic optical coherence function form. using acoustically phase-modulated coherent light, double-slit imaging appls. 3—32303
Raman-Nath parameter meas. by acousto-optic diffr. 3—1899
Schefer-Bergmann diffraction pattern origin, new interpretation 3—56362
semiconductor laser, acoustical control, deform. mech. 3—12205
semiconductors, surface sound excitation by light absorpt. modulation 3—43512
UHF US rel. and absorption, meas. by high resolution Bragg reflection technique *(Japanese)* 3—1898
US two-beam light diffr. obs. for symmetrically incident beams 3—12064
US wave diffraction grating, high-order Bragg refl. 3—34069
AgTlSe, optical elastic and acousto-optical props. 3—52767
BiVO$_4$, single crysts., acousto-optical props. 3—34071
CdS crysts., acoustoinjection luminesc. 3—47716
GaAs-ZnO composite struct., guided wave acoustooptic interactions 3—43513
H$_2$, solid, hexagonal-phase, IR spectroscopy of phonons 3—14297
n-InSb, multitransit amplification of sound, acoustooptical study 3—18749
LiNbO$_3$, collinear acousto-optical interaction parameters calc. *(Dutch)* 3—52766
LiNbO$_3$ optical waveguide, crossed channel, acoustooptic diffr., integrated optic module 3—41981
LiNbO$_3$:Fe photorefractive grating, electroacoustic and acoustooptic interactions 3—38797
Nd:YAG mode-locked pulsed laser, acousto-optic stabilisation 3—27106
Te, optically active, acousto-optic deflection of CO$_2$ laser beam 3—47620
TeO$_2$, slow acoustic wave propag., acoustooptical studies 3—28059

acoustoelasticity *see elasticity*

acoustoelectric devices
see also acoustoelectric transducers
SAW ring acoustoelectric generator, steady-state spectra meas. 3—22300
CdSe/LiNbO$_3$ acoustoelectronic memory, convolution signal storage 3—18750
GaAs acoustic charge transport device, monolithic 3—46381
LiNbO$_3$-Ge, acoustoelectric oscillator, SAW single mode generation 3—50882

acoustoelectric effects
electroacoustical coordinate measurement error correction for air movement influence *(Slovak)* 3—22289
electrolyte, elec. cond., acoustic disturbances influence 3—13505
ferroelectric semiconductors, nonlinear-theory of acoustic instability *(Russian)* 3—23444
forced acoustic activity, theory 3—28393
four-wave acoustoelectronic interactions, RF electronic signal processing appl. 3—23443
gas-liquid suspension, containing electrolyte, elec. cond., acoustic disturbances influence 3—13505
metal rod, electromagnetic-acoustic induction of elastic traveling waves 3—23442
optical waveguide, acoustoelectronic parametric amplification of IR and visible-range EM waves 3—41980
photoconductor-ferroelec. Fabry-Perot interferometer layer struct., US propag. 3—28392
piezoelectric powder, convolution by means of electroacoustic echoes *(French)* 3—42057
piezoelectric powders, electroacoustic echoes at resonance, theory *(French)* 3—19069
piezoelectric semiconductor, reverse second harmonic acoustic wave generation 3—3259
piezoelectric semiconductors, nonlinear parametric interaction with plasma drift 3—33751
α-quartz, electroelastic effect, US velocity study 3—34035

acoustoelectric effects continued
- SAW acousto-electronic absorption in piezodielectric-semiconductor struct. electron trapping effects on surface states 3—8312
- semiconductor, heavily doped n-type, longitudinally magnetized, laser beam parametric decay to US-helicon waves 3—28374
- semiconductor structure, hypersound ultrashort pulse excitation by alternating elec. field, theory 3—13865
- semiconductor superlattices, EM generation of high freq. acoustic waves due to periodic space charge layers 3—33764
- semiconductor-piezoelectric layered struct., alternating carrier drift, acoustoelectric effect 3—33765
- semiconductors, longitudinal sound excitation by parameteric cyclotron pumping 3—47393
- surface electrostatic pot., acoustoelectronic meas. 3—8556
- $Bi_{12}GeO_{20}$, electroacoustic echo and NQR 3—43238
- CdS, acoustoconcentration effect due to bulk acoustic waves 3—18748
- CdS, ultrasonic amplification under uniaxial deformation, electron-phonon interaction 3—8538
- CdS, wavevector-reversed phonon echoes due to acoustoelec. interaction 3—13863
- n-CdSe, electro-acoustic effects 3—52204
- $Ge_{15}Te_{81}S_2Sb_2$ amorphous thick films, switching and memory phenomena, thermophonic investigation 3—38441
- InSb, acoustoelectronic interaction and electron-hole plasma 3—28391
- n-InSb, multitransit amplification of sound, acoustooptical study 3—18749
- InSb, nonlinear acoustoelectronic amplification at high electron drift speeds 3—13864
- $LiNbO_3$, acoustoelectric injection due to surface waves *(Russian)* 3—47394
- $LiNbO_3$, piezoelectric, SAW propagation in biasing elec. field 3—33548
- $LiNbO_3$:Fe photorefractive grating, electroacoustic and acoustooptic interactions 3—38797
- $LiNbO_3$-MgF_2 film system, electro-acoustic storage of SAW's 3—33555
- $LiTaO_3$, piezoelectric, SAW propagation in biasing elec. field 3—33548
- $PbTiO_3$, piezoelectric, SAW propagation in biasing elec. field 3—33548
- Si, many-valley semiconductors, acoustic wave interaction with oscillator 3—47392
- Si, surface characterisation using transverse acoustoelec. voltage meas. 3—43237
- p-Si:P, implanted profile, nondestructive transverse acoustoelec. voltage vs. voltage technique 3—42642
- $SrTiO_3$, ultrasonic amplification under uniaxial deformation, electron-phonon interaction 3—8538

acoustoelectric transducers
- *see also earphones; headphones; hydrophones; loudspeakers; microphones*
- array of resonant electroacoustic transducers, directivity pattern calc. 3—50881
- EM acoustic transducer for steam generator tubing inspection 3—50012
- harmonic oscillations, audio and subaudio freqs., precision generator 3—42098
- liquid acoustoelectric transducers 3—12485
- polymer film dielectrics, conduction/displ. current meas. in plane-parallel capacitor, electro-acoustic transducer 3—10863
- spectrophone for opto-acoustic detection of absorption in a wide temperature range 3—12457
- $LiNbO_3$ parametric phase-conjugation acoustic amplifier 3—32581
- $Pb_{1-x}R_xTi_{1-y}Mn_yO_3$ ceramics, R=rare earth, electromech. props. and transducer appl. 3—14217

acoustomagnetic effects *see magnetoacoustic effects*

acoustooptics *see acousto-optical effects*

actinide alloys
- *see also actinide compounds; neptunium alloys; plutonium alloys; thorium alloys; uranium alloys*
- conference, Durham, England (March 1982) 3—16077
- magnetic and supercond. props., review 3—18861
- specimen prep. and cryst. growth 3—19304

actinide compounds
- *see also compounds of individual actinides, e.g. uranium compounds*
- *see also actinide alloys*
- complexes, electronic struct.; relativistic self-consistent calcs. 3—17234
- conference, Durham, England (March 1982) 3—16077
- hydrides, energy storage, thermodynamic and kinetic props., review of alloy groups 3—39539
- magnetic and supercond. props., review 3—18861
- magnetic excitation behaviour, neutron scatt. studies 3—52435
- magnetism studies, role of neutron scatt. 3—52411
- specimen prep. and cryst. growth 3—19304

actinide metal compounds *see actinide compounds*

actinide metals *see actinides*

actinides
- *see also individual actinides, e.g. uranium*
- astrophysical r-process and Galaxy age 3—40030
- cohesion and electronic struct. 3—23255
- conference, Durham, England (March 1982) 3—16077
- electrical resistivity, theoretical study 3—47333
- electronic struct. calcs. 3—18607
- energy band struct., spin-orbit coupling effect, relativistic corrections to at. vols. 3—28259
- magnetic and supercond. props., review 3—18861
- magnetism in transuranics 3—28519
- solution chemistry 3—26358
- specimen prep. and cryst. growth 3—19304
- transition, $5d^{10}$-$5d^95f$, Hartree-Fock-Pauli approx., effect of collapse of 5f electron 3—31994
- transuranics in-situ anal., state-of-the-art 3—9384
- transuranium elements 3—50535

actinium
- *see also nuclei with ......*
- No entries

actinium compounds
- nitrides, electronic struct., lattice parameters 3—18613

actinometers *see radiometers*

actinometry *see radiometry*

activation analysis *see chemical analysis by nuclear reactions and scattering*

active circuits *see active networks*

active filters
- CCD transversal filter for nucl. pulse shaping system 3—50218

active filters continued
- notch, bi-FET and bi-MOS IC devices with high input impedance, cct. appls. 3—16374
- octave-band filters for laboratory and demonstration expts. in acoustics 3—5565

active networks
- *see also active filters*
- negative inductance simulation, meas. of small variations of inductance *(Polish)* 3—5807

active nitrogen *see nitrogen*

active oxygen *see oxygen*

activity (thermodynamics) *see thermodynamic properties*

adaptive antenna arrays *see antenna phased arrays*

adaptive control
- *see also model reference adaptive control systems*
- artificial heart, adaptive control system 3—15287

adaptive optics
- *see also optical phase conjugation*
- bimorph piezoelectric flexible mirror, graphical soln. and comparison with expt. 3—32435
- Bragg cell delay lines, optically tapped, general adaptive linear prediction algorithm implementation appls. 3—17608
- conference on advanced technology optical instruments at Tuscon, Arizona (March 1982) 3—25679
- ferroelectric micro-displacement transducers *(Japanese)* 3—25849
- filter, adaptive, in residue no. system, optical waveguide circuit design 3—1810
- filter with time-domain implementation using correl. cancellation loops 3—41964
- filters for background clutter suppression and target detect. 3—27212
- image compensation in presence of thermal blooming 3—36942
- image enhancement, adaptive algorithms for parallel correction of distorted wavefronts *(Russian)* 3—41767
- intracavity adaptive optic compensation of phase aberrations, passive and active cavity for large N_{eq} resonator 3—50680
- intracavity adaptive optics, half-symm. unstable resonator with intracavity axicon performance 3—12185
- intracavity compensation of quadratic phase aberrations 3—12272
- laser beam thermal defocusing compensation by means of phase conjugate adaptive systems 3—22143
- laser interferometers, adaptive optics methods appls., wavefront distortion and atm. turbulence influence 3—30925
- laser phase correction using supersonic gas jets 3—12195
- multilayered deformable mirror using PVDF films 3—7107
- phase retrieval and diversity in adaptive optics 3—6900
- resolved targets illuminated through turbulence adaptive optical system referencing 3—17439
- wavefront correction quality in adaptive transmitting systems 3—26946

adding machines *see calculating apparatus*

adherence *see adhesion*

adhesion
- capillary systems, static solid-liquid friction, one-parameter model 3—12775
- chromate conversion coatings, struct. and surface comp., XPS and SEM obs. 3—19460
- clutch, frictional adhesion, dynamic criteria 3—34604
- composite, bonded plane, elastic plane equilib. *(French)* 3—42196
- continuum mechanics theory of adhesion of solids *(French)* 3—32595
- dental amalgam, tensile and shear adhesion to tooth struct. in selective interfacial amalgamation 3—53886
- detonation deposition of coatings, optimum parameters determination 3—24123
- elastic structure, equilib., variational formulation *(French)* 3—46504
- fabrication condition effects on adhesion strength of powder convering a substrate 3—4168
- fibre reinforced composite, adhesive strength estimation and struct. inhomogeneity effect 3—58389
- fibre reinforced composites, components compatibility, quantitative assessment 3—39076
- fibroplastics, living, adhesion to electrically charged Zn surface 3—4475
- glue specific heat capacity meas., in 4.2 to 18K range 3—45145
- graphite fibre reinforced epoxy laminate, damaged, bonded repair anal. with B fibre reinforced epoxy or Ti 3—14834
- ISS/SIMS surface analysis, bonding failure detection appl. 3—4226
- material interfaces, crack propag., expt. on mode interaction 3—7519
- metal to metal adhesive bond, feasibility study of NDT, US pulse echo approach 3—53297
- metallic thin film adhesion measurements, using direct pull-off and scratch methods 3—39349
- metallised layers formation during shock-wave application of powders to monolithic substrates 3—24412
- metalloceramic plasma sputtered coatings on Al alloy AK4, adhesion, glow discharge appl. *(Russian)* 3—4188
- mirrors, thin glass, fabrication on Alnico magnets, bonding method 3—7228
- NDT of adhesive bonds, SV wave refl. from thin liq. layers 3—29289
- optical polymerising cement, transparent in UV 3—37255
- optical thin films, stress, adherence, hardness and density 3—13685
- parylene adhesion, methane (O_2)(Ar) glow discharge treatment of substrate effect 3—24379
- plasma sprayed coatings, bonding mechanism, temp. influence 3—4172
- poly-N-vinylcarbazole-ZnO photoreceptor layer with polyester addition, electrophotographic props. 3—3247
- polyethylene-terephthalate monofilaments in liq. media, friction and adhesion determ. 3—29192
- polyimide films, tribological props. and thermal stability 3—14742
- PVC coatings, filled, struct. and mech. props. *(German)* 3—13128
- Rubber to brass bonding mechanism studied by electron microanalysis techniques 3—53356
- sheet, structural adhesive joints, bond efficiency, US scanning and spectrum analysis 3—58359
- space environment expts., review 3—4258
- steel, martensitic stainless, plasma-spray-quenched coatings, microstruct., adhesion and microhardness 3—3950
- thermoplastic polymers, effect of temp. on adhesion to Al 3—19506
- thin adhesive layers in bonded joints, dynamic effective Young's modulus 3—9109
- thin film formation and behaviour, atomic level, technology appls. 3—47234

adhesion continued
  US piezoceramic probes fabrication technology effects, medical diagnostics appl. *(Czech)* 3—24815
  Ag film on TlBr-TlI, adhesion failure, atmosphere induced, AES and electron microscopy study *(Russian)* 3—19507
  Ag-Cu(Al) film, vacuum deposited, elec. and mechanical props. 3—14495
  Al, adhesion on Si wafers 3—28245
  Al-Mg alloy pretreatment for electrodeposition by immersion Zn and electroless Ni 3—19459
  Al-Sn-Pb antifriction alloys, contact zone, structure and adhesion strength meas. *(Russian)* 3—4141
  Au, ion plated film on Ni and Fe substrates tribological props. and XPS studies 3—14746
  Be foil and polyethylenephthalate film combination, sealing material for X-ray apparatus 3—16463
  C coating, arc conditioned, on Cu electrode, metallurgical characterization 3—3015
  C_{ZZ} 3—21526
  Cr on steel ball, model rough surfaces in elastohydrodynamic lubrication 3—14745
  Cu layer formation, shock-wave appl. of powder on C steel 3—24412
  Cu-Al film, vacuum deposited, elec. and mechanical props. 3—14495
  ^{164}Dy metal target bonding for ^{163}Ho prod. 3—41374
  Fe layer formation, shock-wave appl. of powder on C steel 3—24412
  Fe-metal contacts, interfacial adhesion energy, segregation effects, rel. to thin film lubrication expts. 3—53355
  $In_{2-x}Sn_xO_{3-y}$ coatings to prevent spacecraft charging 3—39999
  MgF_2, vacuum-deposited thin films, internal stress, Young's modulus, strain energy and adhesion 3—8382
  Mo layer formation, shock-wave appl. of powder on C steel 3—24412
  $MoSi_2$, plasma-sprayed coatings for MO and Mo alloys *(German)* 3—28985
  Ni layer formation, shock-wave appl. of powder on C steel 3—24412
  Pb, between clean surfaces, 77 to 300K *(Russian)* 3—58390
  SiC fibre reinforced epoxy composites, wetting and adhesion 3—29059
  SiC, tribological props. in metal removal process 3—34488
  Si_3N_4 wear resistant coatings RF sputtered on stainless steel 3—14781
  Ti layer formation, shock-wave appl. of powder on C steel 3—24412
  TiC CVD coating on steel, scratch test adhesion 3—14836
  TiC ion plated coatings, microhardness and adhesion 3—58243
  TiC sputter deposited film, adhesion to steel substrate, interfacial chem. effects 3—13646
  TiC(N) low-Z coatings for JT-60, thermal shock testing 3—21525
  TiC(N) low-Z coatings for Tokamak reactor, thermal fatigue testing 3—21526
  TiN ion plated coatings, microhardness and adhesion 3—58243
  TiO_2 film to improve photoresist adhesion 3—8973
adiabatic compression, plasma *see plasma heating*
adiabatic demagnetisation *see magnetic cooling*
adion *see adsorption*
administrative data processing
  see also financial data processing; manufacturing data processing; medical administrative data processing; word processing
  low-level waste management data base system 3—921
  radioactive materials transport in US, radiological risk anal. 3—926
  RAWSYM, computer program, radioactive waste management system model 3—919
admittance *see electric admittance*
admittance measurement *see electric admittance measurement*
ADP *see administrative data processing*
ADP (ammonium dihydrogen phosphate) *see ammonium compounds*
adsorbed layers
  see also monolayers
  acetylene, adsorbed on Pt (111), absolute coverage, XPS and LEED study 3—57221
  acetylene chemisorbed on Al_2O_3 supported Pd particles, IETS study 3—42914
  adatom mass variation effect investigation in scatt. by an absorbed layer *(Russian)* 3—18567
  adsorbate solid, dislocation interaction free energy near commensurate-incommensurate transition 3—8049
  AES, chemical information for surfaces and adsorbed species 3—39421
  aminophenyltrimethoxysilane, on plasma grown Al_2O_3, effects of high humidity 3—38226
  atom-surface scatt., quantum theory for incommensurate and fluid phases 3—14424
  azulene, monolayer on Pt(111), struct. energy, force field calcs. 3—8319
  n-butane, adsorbed monolayers on graphite, lattice vibrs., neutron spectrum 3—8316
  butylidyne, on Pt (111) and Rh (111), monolayer packing energy, force field calc. 3—23173
  cetylpyridinium halides, sub-monolayer coverage on Au and Ag sols., surface enhanced Raman scatt. 3—52782
  cetylquinolinium halides, sub-monolayer coverage on Au and Ag sols, surface enhanced Raman scatt. 3—52782
  chemisorbed atoms, inner electron binding energies 3—2961
  commensurate-incommensurate transition and melting 3—51953
  critical phenomena in two dimensions, theoretical models and phys. realisations 3—38028
  Debye-Waller factor for molecule-surface scatt. 3—42908
  diamond with adsorbed He, ^{4}He atom beam probe study 3—51936
  dielectric sphere two-dimens. array, enhanced Raman scatt. 3—3722
  diffraction measurements on physisorbed films 3—51996
  diffusion on finite size surfaces, Mossbauer spectrum 3—23849
  domain kinetics in two dimens., temp. depend., Monte Carlo simulation 3—33567
  dye adsorbates on hydrophobic silica gels, phosphoresc. quenching by oxygen dissolved in water 3—53431
  electron stimulated desorption ion ang. distribs., local neutralisation effects 3—43679
  electronic photoexcitation and discharging of deep traps in dielec. substrate 3—3228
  electronic props., photoemission investig. spectrosc. 3—43703
  electronic states on metal surface, Green's function calc. 3—33771
  ethylene, adsorbed on Pt (111), absolute coverage, XPS and LEED study 3—57221
  fluid adsorbates, atom-surface scatt. investigation 3—58022
  gas-surface adsorption system, pot. energy function determ. method 3—51930
adsorbed layers continued
  gas-surface interactions, dynamics, International School, Erice, Italy (July 1981) 3—32
  halide ions, on colliodal Ag, surface enhanced Raman spectra 3—57933
  halide ions, on colloidal Ag, surface enhanced Raman spectroscopy 3—57932
  hexagonal crystal, with and without adlayer, elastic interaction of point defects with surface and with other defects *(French)* 3—13618
  inhomogeneous surface dynamics, elastic props. *(French)* 3—13641
  ion impact enhanced surface diffusion during impurity induced sputter cone formation 3—38986
  IR photothermal deflection spectroscopy for surface studies 3—10923
  isopropanol-d_6 adsorpt. on Al_2O_3 surface, IR spectra study *(French)* 3—19115
  isotopic species adsorbed on solid surface, laser excitation, quantum model 3—19229
  laser-generated electron emission, pulse shape effects, theory 3—43664
  lattice gas models with competing interactions, phase diagrams 3—51943
  local frequency distribution function of a crystal with adsorbed atoms 3—57201
  metals with adsorbed electric field sensitive phase separation 3—18557
  metals with adsorbed molecule, Raman scatt. 3—19137
  methane, adsorbed mols. on zeolites, NMR study 3—47557
  methane, on graphite, electrodynamic screening of van der Waals interaction 3—42927
  methane adsorbed monolayers on graphite, dynamics, NMR study 3—13628
  methanol, oxidation on Cu(100), IR spectroscopy study 3—24530
  methylacetylene, on Pt (111) and Rh (111), monolayer packing energy, force field calc. 3—23173
  microcluster struct., effect of three-body forces 3—18540
  molecular adfilms, low-energy electron interaction, Frenkel exciton role 3—3888
  molecule, on metal sphere, orientation determ. from surface Raman EM enhancement factors 3—43544
  molecule, on polarisable sphere, enhanced Raman scatt., EM aspects 3—19122
  molecules on metallic grating 3—23949
  monolayer, adsorbed, 2D phase transitions, mean field approx. 3—18555
  monolayers, multilayer build-up by adsorpt., comparison with Langmuir-Blodgett technique 3—38229
  multilayer films, phase transitions, lattice gas models 3—51951
  multiphonon relax. of vibr. excited adatom, general formulation 3—57202
  naphthalene, adsorbed on Al_2O_3, photochem. processes, laser fluoresc. study 3—48075
  p-nitrobenzoate adsorbed on Ag island films, enhanced IR absorpt. ATR study 3—14269
  O, on Si, characteristic EELS spectra 3—28944
  O(N) model in two dimens., crit. point and crit. indices 3—49289
  one-dimensional lattice gas and the universality of the Devil's staircase 3—45084
  order-disorder transition effects on work function 3—18565
  ordered overlayer on Ni(111), sensitivity of EELS 3—57215
  organic adsorbed layer role in friction, shear props. of partial monolayers 3—51960
  overlayer disregistry, transform simulations of LEED patterns 3—38210
  overlayer islands with positional correl., ang. distrib. of diffr. intensity 3—23183
  paramagnetic species on surfaces, ESR line shapes due to surface polaritons 3—47541
  photoelectron diffraction calcs. for adsorbate systems 3—3926
  physisorbed monolayers, static props. in solid phases 3—51941
  physisorbed overlayers, at. beam scatt. study 3—52888
  polarized molecular condensates, electric domains obs. at low temp. 3—43261
  polymers on steel, chelating, effects on corrosion 3—43987
  polyvinylpyrrolidone, sub-monolayer coverage on Au and Ag sols, surface enhanced Raman scatt. 3—52782
  potential electrostatic charge energy near metal surface 3—13884
  2-propanol adsorbed on ZnSe, IR absorpt. spectral study using reflectometric spectroscopy 3—45222
  propylidene, on Pt (111) and Rh (111), monolayer packing energy, force field calc. 3—23173
  pyrene, adsorbed on Al_2O_3, photochem. processes, laser fluoresc. study 3—48075
  pyridine, adsorbed in β-PdH electrodes, surface enhanced Raman spectrosc. obs. 3—57905
  pyridine, adsorbed on Ag island film, resonantly excited desorpt. by IR laser absorpt., SERS detection 3—8329
  pyridine, on Ag electrode, orientation determ. from surface Raman EM enhancement factors 3—43544
  pyridine adsorbed on Ag evaporated films, surface enhanced Raman scatt., roughness features and range of classical enhancement 3—14274
  pyridine adsorbed on Ag films, surface enhanced Raman scatt. study 3—23930
  pyridine adsorbed on Pd (111), angle-resolved UV photoemission 3—58029
  pyridine chemisorbed on θ-Al_2O_3, IR spectral study 3—8321
  pyridine on Ag electrode, SERS, electronic surface state contrib. 3—3728
  rare gas atoms adsorbed on metal surfaces, config. description 3—13625
  rare gas layers on graphite, melting of two-dimensional solids 3—2736
  rhodamine 6G, adsorbed on Ag island film, photochemistry 3—29332
  SEM, ultrahigh vac., for solid surface analysis 3—14906
  solvents and electrolytes coadsorbed on Pt (100) and (111), struct. and comp., LEED and AES study 3—13640
  statistical mechanics of adsorption, conf., Trieste, Italy (July 1982) 3—49083
  structure factors for adsorption model for two-dimensional surface, real-space renormalisation-group method 3—51933
  substrate-mediated dispersion interaction 3—38217
  surface atom binding energy, elec. field depend. 3—8318
  surface phase diagrams, wetting, drying, and roughening 3—51956
  surface phase transitions, Heisenberg model with cubic anisotropy 3—51944
  surfactant micelles adsorbed on polymer mol. in water, organisation, neutron scatt. study 3—2930
  tetrafluoromethane, on graphite, commensurate-incommensurate transitions and melting 3—38198
  tetrafluoromethane, on graphite, phase transitions, role of walls and dislocations 3—51952

adsorbed layers continued
tetrafluoromethane monolayer, physisorbed on graphite, orientational walls and complex phase diagram 3−13622
tetrafluoromethane monolayers adsorbed on graphite, synchrotron X-ray diffr. study 3−13637
tetramethyl tin adsorbed monolayers, melting, phase transitions and diagrams, Mossbauer study 3−23166
thickness determ. by AES 3−23171
thiophene adsorbed on H-montmorillonite, IR spectral study 3−26738
toluene, by microporous carbons, heat of immersion studies 3−23160
transition metals with adsorbed O_2, ionisation probability 3−51934
two-dimensional hard cyclic tetramer system, rot. phase transition and melting 3−57058
two-dimensional melting, computer simulation studies 3−51955
two-dimensional melting of dislocation vector systems 3−57217
two-dimensional systems, continuous phase transitions, symm. changes 3−51746
two-dimensional systems, phase boundaries and crit. props., Monte Carlo renormalisation group studies 3−51945
two-dimensionality deviations, statistical mechanical theory 3−23178
two-level adsorbate chemisorbed on transition metal surface, density of state calcs. 3−13879
water, on Ag at electrochem. double layer, surface enhanced Raman scatt. 3−23960
water, on mol. sieving C, adsorption equilib. coeffs. 3−33561
Ag (001) with adsorbed Cl, adsorption geometry from angle resolved photoemission 3−28217
Ag, adsorbed on Si (111), surface plasmon dispersion, angle resolved EELS study 3−52213
Ag electrode in aqueous Cl^- electrolytes, surface enhanced Raman scatt., evidence for adatoms 3−38829
Ag, on Si(111), surface plasmon dispersion, angle-resolved EELS study 3−43673
Ag on W, work function and field emission microscopy study 3−23186
Ag with adsorbed O_2 and N_2, electron energy loss study 3−14408
AgCl, on Ag electrode, surface-enhanced SHG during electrochem. cycling 3−56280
Ag_2SO_4, on Ag electrode, surface-enhanced SHG during electrochem. cycling 3−56280
Al, charge state distrib. of scattered fast ions, contaminating layers influence 3−19239
Al, on Si (111), stability of LEED fractional-order beam intensities and intralayer multiple scatt. 3−42898
Al-GaAs (110) interface structure on Al chemisorption, energy minimisation study 3−8328
Al_2O_3 with adsorbed Ar, cluster model 3−13633
Ar, on graphite, electrodynamic screening of van der Waals interaction 3−42927
Ar, on graphite, pot. energy function determ. 3−51930
Ar, on metal surfaces, excited states, EELS and UPS study 3−47399
Ar-Xe mixture physisorbed films on graphite, synchrotron X-ray diffr. study 3−51949
Au and Al particle arrays, surface-enhanced Raman scatt. 3−3708
$BaTiO_3$, adsorption of O_2, H_2 and methyl.alcohol, effect on polarisation processes 3−2983
Bi, on W (100), FEM study 3−13643
C, molecular sieve, N_2 adsorption equilib. coeffs. 3−33561
C, molecular sieve, O_2 adsorption equilib. coeffs. 3−33561
C on PbTe, Raman scatt., roughness induced 3−57928
CO, absorption edge reson., core-hole screening and orientation on Ni(100) 3−13631
CO, adsorbed on β-PdH electrodes, surface enhanced Raman spectrosc. obs. 3−57905
CO, adsorbed on Cu (110), satellite peaks in photoelectron spectrum 3−28960
CO adsorbed on Cu(111) surface, electronic struct., mol. cluster model anal. 3−13878
CO adsorption and decomposition on Fe (110), vibrating capacitor study 3−42913
CO chemisorbed layer on Ni (111), $2\pi^*$-derived states, UV bremsstrahlung spectra study 3−43253
CO, chemisorbed on Ni(111), empty orbitals, inverse UPS study 3−24042
CO, chemisorbed on Pt(111), angle-resolved photoemission study 3−58036
CO, chemisorbed on supported metals, errors and artifacts in IR bands 3−8838
CO migration on Pt (111), He-scatt. study 3−23165
CO, on Cu(111), band struct., multielectron excitations, photoelectron spectra 3−52217
CO on Ni surface, (111), He and Ne metastable atom impact, surface Penning ionisation study 3−58016
CO on Pd (110), electron spectroscopy by He atom impact 3−3908
CO on Pt single cryst. surface, surface core level shifts, photoemission study 3−14434
CO, on Pt{110}, electronic and geometric struct., UPS study 3−3924
CO, on Rh (111), interaction with coadsorbed species, EHT calc. 3−23179
CO, on Rh (111), surface struct. at different surface sites, LEED anal. 3−57212
CO, on Ru (001), intact emission in SIMS 3−14419
CO, on Ru (001), Ni (111), and Pd (111), static SIMS study 3−43694
CO, on transition metal surfaces, ionisation energies and work function, surface mol. approach 3−23182
CO on W, surface vibr. excitation cross section EELS study 3−3890
α-CO, on W (100), lowest excited states, electron stimulated desorption 3−38454
CO oxidation on Pt (111) surface, temp. programmed reaction of coadsorbed O and CO 3−39405
Cl, Cl_2 and HCl adsorbed on O covered Fe(100), bonding and reactions, ASED MO study 3−23161
Cl, on Cu {001}c(2×2), CC at. struct., overlayer model, LEED anal. and photoemission meas. 3−13638
Cl overlayer on Cu (001), geometry and electronic struct. 3−23144
Cl superstructure on Mo (110), LEED and AES study 3−2945
Co, on γ-Fe_2O_3, mag. and Mossbauer studies 3−57830
Co, on γ-Fe_2O_3 particles, ^{57}Co Mossbauer emission spectra 3−19030
Cs, adsorbed on Si, conduction band density of states, secondary electron emission study 3−24067
Cs on Mo(111), electronic struct., surface plasmons, EELS and UPS study 3−28404

adsorbed layers continued
Cu (001) with adsorbed O_2, surface struct. determ. 3−33573
Cu, charge state distrib. of scattered fast ions, contaminating layers influence 3−19239
Cu with adsorbed O_2 and N_2, electron energy loss study 3−14408
D, spin polarised, adsorbed on liq. He, dynamical stability 3−38163
D_2O adsorbed on oriented cellulose, ^{2}H NMR study 3−47568
F, adsorbed on Si surface, removal by ion bombard., SIMS study 3−38990
Fe (110), oxidation by O_2 and H_2O vapour, ion irrad. effects 3−29216
GaAs (100) with adsorbed Bi, surface atomic struct. determ. 3−2946
GaAs layers, anisotropy in growth rate 3−38252
Ge(111), adsorbed Ag surface diffusion, AES study 3−57206
H, c(2×2) struct. on Pd (100), vibr. excitations, EELS study 3−3886
H, detection using refl. EELS, review 3−14905
H, on BCC metal surface (100), pot. surface and diffusion 3−42910
H, on Rh (111), interaction with coadsorbed species, EHT calc. 3−23179
H on Si (001), monohydride and dihydride phases, electronic struct., EELS study 3−57405
H_2O, coadsorbed with $O_2(Br_2)$ on Cu (110), work function changes 3−43262
H_2O, cryodeposit instability, influence of fog sublayer formation 3−51920
He, liq. film on solid Ne, surface electrons and bubble electrons, stability 3−47181
^{3}He, adsorbed two-dimensional degenerate Fermi liq., spin diffraction 3−33534
^{3}He film, anomalous nucl. spin relax. 3−28186
^{3}He on ^{4}He liq. film, phase separation heat capacity study 3−8292
^{4}He film, on highly oriented pyrolytic graphite, third sound vel. meas. 3−2909
^{4}He film, superfluid, surface excitations, inelastic neutron scatt. study 3−51888
^{4}He film, superfluidity onset on particular cryst. facets and on disordered substrates 3−23116
I, $\sqrt{3}\times\sqrt{3}$-30° overlayer on Ag {111}, LEED struct. anal. 3−38213
I, on Ag(111), photoelectron diffr. calc. 3−3926
In adatoms, field induced surface transport on Si (111) surfaces 3−23109
Kr, on graphite, electrodynamic screening of van der Waals interaction 3−42927
Kr, on graphite, phase transitions, lattice gas models 3−51951
Li, on W (011), surface diffusion 3−2968
LiF(001) with adsorbed He, resonant energy transfer between and adsorbed atom and surface Rayleigh phonons 3−13632
Mo film with adsorbed ethylene, electron energy loss spectra 3−28945
N, on Fe (100), struct. arrangement, LEED study 3−38212
N_2, absorption edge reson., core-hole screening and orientation on Ni(100) 3−13631
N_2 adsorbed layer on metals, vibr. struct. of electron resonances 3−57214
N_2, by microporous carbons, heat of immersion studies 3−23160
N_2, physisorbed on graphite, struct. and orientational ordering, LEED study 3−51946
NCS^- ions adsorbed on Ag electrochem. electrode, surface enhanced Raman spectra 3−57934
NH_3 adsorbed on Fe and Ni, binding and valence photoemission *(German)* 3−38231
NO, absorption edge reson., core-hole screening and orientation on Ni(100) 3−13631
NO_2^- and NO_3^-, on oxygenated Ag powder, surface-enhanced Raman scatt. spectra 3−47629
NaCl layer on Ag (111), electron irrad. induced desorption, Auger and photoelec. studies 3−51918
Ne, on graphite, electrodynamic screening of van der Waals interaction 3−42927
Ni (111), adsorbed S, p(2×2) overlayer electronic struct. 3−3281
Ni, charge state distrib. of scattered fast ions, contaminating layers influence 3−19239
O adsorbed on Ag {110}, 1×2 struct., LEED intensity anal. 3−51924
O adsorbed on amorphous Si:H, behaviour during H effusion, XPS study 3−51921
O, chemisorbed on Al (111), electronic struct., iterative EHT calc. 3−38453
O, chemisorbed on Cr (100), LEED and photoemission obs. 3−23177
O, chemisorbed on Ni (100), SCF pseudopot. calc. 3−57211
O, chemisorbed on Ni (100), phase diagrams, LEED and AES study 3−57220
O, chemisorbed on Ni(111), empty orbitals, inverse UPS study 3−24042
O, on Al, surface extended energy loss fine structs. above K-edge 3−19235
O, on Cu (001), stability of LEED fractional-order beam intensities and intralayer multiple scatt. 3−42898
O, on Ni (100), unoccupied electronic states 3−38452
O, on Rh (111), interaction with coadsorbed species, EHT calc. 3−23179
O on W, surface vibr. excitation cross section EELS study 3−3890
O, p(2×2) struct. on Pd (100), vibr. excitations, EELS study 3−3886
O_2, adsorbed on graphite, X-ray diffr. study 3−57226
O_2 chemisorbed on Ni, sticking coeff. and saturation coverage meas. 3−42915
PF_3, on transition metal surfaces, ionisation energies and work function, surface mol. approach 3−23182
Pd adsorbed on Si(111), surface superstruct., LEED-AES and ion scatt. spectra 3−51922
Pd on Nb (110), electronic struct., photoemission study and APW calc. 3−47401
Pd on Nb(110), atomic and electronic struct., and commensurate-incommensurate transition 3−33773
Pd, on Si (111), surface struct., ion scatt. spectroscopy and LEED-AES study 3−33562
Pd with adsorbed H, electric field sensitive phase separation 3−18557
Pt film with adsorbed Ag, submonolayer adsorbed gas distrib. 3−33575
Ru complex, $Ru(bpy)_3Cl_2$ adsorbed on semicond. surfaces, luminesc. dynamics 3−47685
S on Ni, electronic struct., UPS and ion neutralisation spectroscopy studies 3−33774
S, surface segregation on Ni, quantitative anal. Auger electron spectroscopy *(French)* 3−33566
SF_6 adsorbed on Ag film, IR-laser photoacoustic spectroscopy and XPS 3−23164
Sb overlayer on GaAs(110), electron states, self consistent pseudopot. calc. 3−43252
SbSI, adsorption of O_2, H_2 and methyl-alcohol, effect on polarisation processes 3−2983

adsorbed layers continued

- Se on Ni, electronic struct., UPS and ion neutralisation spectroscopy studies 3—33774
- Si (111) with chemisorbed water, surface electronic states 3—28407
- Si (111)-(2*) surface, H adsorption, electron energy loss study 3—51935
- Si, surface (111), 7×7 reconstruction resolved in real space 3—33546
- Si with adsorbed O_2, binding struct. calcs. 3—23167
- SiO_2-methanol adsorption complexes on aerosil surfaces, struct. and field desorpt. 3—48091
- SiO_x adsorbed γ-Fe_2O_3 particles, high coercive force, ESCA study 3—23737
- Si(100) with adsorbed Ni, diffusion layer microstructure 3—13634
- Te, on Ni(001), photoelectron diffr. calc. 3—3926
- Te, on Ni(001), spin polarised LEED study 3—38179
- Ti with adsorbed, oxidised Cs layer, emission props. and thermal stability *(Russian)* 3—23187
- Tl chains on Cu (100), one-dimens. band struct., photoelectron spectra and LCAO calc. 3—39006
- W(011) with adsorbed Li, surface defects and collective diffusion *(Russian)* 3—8325
- Xe, adsorbed on graphite (0001), surface vibrs., H scatt. study 3—42917
- Xe, on graphite, electrodynamic screening of van der Waals interaction 3—42927
- Xe, on graphite, freezing transition, mol. dynamics study 3—51937
- Xe, on metal surfaces, excited states, EELS and UPS study 3—47399
- Xe, physisorbed on graphite and Cu (001), at. beam scatt. study 3—52888
- Xe-N_2-$H_2O(N_2)(CO)$-Ni(110) multilayers, physisorbed species electronic levels, dipoles influence, UPS study 3—8550
- Zn(0001) surface, interaction with adsorbing SO_2, RHEED, LEED, AES study 3—47217

adsorption

- *see also heat of adsorption*
- adsorbate-substrate hopping integrals, indirect interaction behaviour sensitivity 3—13624
- adsorption-desorption equilib., nonlinear diffusion-convection eqn. 3—28215
- Aerosils, chemically modified, N_2 absorpt. energy distrib., surface heterogeneity effects 3—18566
- alkali halides, of furan, IR spectra, adsorpt. pot. calc. 3—9354
- Ambersorb carbonaceous adsorbents, I species adsorption 3—45614
- aniline, adsorpt. on polycryst. and single-cryst. Sn electrodes 3—53422
- aniline adsorption on Bi single crystal faces 3—53420
- atom-surface scatt., sticking coeff. 3—24080
- atomic collisions, elastic scattering, surface adsorption 3—28957
- binary mixture in equilibrium with its vapour, surface adsorption isotherm, conditions of phase separation 3—38194
- catalysts, thin film, anomalous behaviour close to mag. phase transition, adsorpt. and desorpt. rates 3—19534
- ceramic, surface area and pore size meas. using flow adsorption method *(German, English)* 3—24421
- chemical vapour deposition modelling, appl. to GaAs epitaxy 3—33594
- chemical vapour deposition modelling 3—34240
- critical adsorption, renormalisation group approach 3—38199
- crystal growth from soln., impurity effects 3—37831
- crystalline nucleus, two-dimensional, size and shape, depend. of interfacial tension 3—47190
- density functional theory, perturbation approach 3—42926
- electrochemistry, electrode reactions study by ellipsometry and surface EM wave excitation *(French)* 3—24510
- electrolytes crystallising from aqueous soln., theory 3—27870
- fluid, binary, liq.-vapour interface, three-phase region and Cahn wetting transition 3—42889
- fluid, binary, liq.-vapour interface, two-phase region, struct. and surface tension 3—42888
- gas discharge chamber wall influence on mol. plasma opt. props., adsorption mechanism *(Russian)* 3—46803
- gas-surface adsorption system, pot. energy function determ. method 3—51930
- gas-surface interactions, dynamics, International School, Erice, Italy (July 1981) 3—32
- gas-surface interactions, laser enhanced, basic processes and appls. 3—4316
- graphite, basal plane surface, interaction with inert gases 3—58020
- graphite, of Ar, pot. energy function determ. 3—51930
- graphite, of CO_2, N_2O, and C_2N_2, phase diagrams 3—57219
- graphite, of N_2, LEED intensity isotherms, fluid to solid transition, multilayer condensation, phase diagram 3—18554
- graphite, of trimethylaluminium, rel. to OMVPE growth effects of $Al_xGa_{1-x}As$ 3—42966
- graphite with physisorbed N_2, uniaxial incommensurate phase obs. 3—13635
- heterogeneous solid surfaces, low press. adsorption of single gases 3—28219
- heterogeneous solids, physical adsorption of gases and liquids, review 3—51959
- high coverage adsorption on heterogeneous surfaces, limiting isotherm validity 3—51932
- high pressure gas adsorpt. on solid surface, temp. effect 3—28213
- II-VI compounds, defect formation kinetics 3—13210
- inert gas adsorption, structures and interactions 3—38233
- interfacial adsorption in planar Potts models 3—51919
- interfacial aspects of phase transformations, NATO Advanced Study Institute, Erice, Sicily (Aug.-Sept. 1981) 3—35777
- ion scattering, low energy, elastic and inelastic processes 3—28956
- limited solubility systems, thermodynamics of adsorption at grain boundaries *(Russian)* 3—33440
- liquid lens, equilib. conditions, thermodynamics 3—47193
- liquid phase multicomponent adsorpt. in fixed beds, numerical soln. 3—17966
- Mars, CO_2 adsorption rel. to regolith-atmosphere-polar cap system and climate change 3—5194
- measurement of water adsorption layers on metal surfaces 3—10979
- metal, corrosion fatigue, loss of strength action of aggressive media, physicochem. mechanism 3—58304
- metal surfaces, adsorption and desorption phenomena investigation using total current spectrometer *(Polish)* 3—25988
- metal surfaces, of H_2 and D_2, differences between d- and s-metals 3—9350

adsorption continued

- metal surfaces, scatt. of Ar, Kr and Xe low-energy atoms, energy and momentum transfer 3—38991
- metallic surfaces, subsurface bonding of H 3—23169
- metallic thin film flicker noise, gas absorpt. mechanism of flicker fluctuations of resist. 3—38447
- metals, adsorption, desorption, and surface diffusion dynamics of Ar, Xe, N_2, and NO 3—51954
- metals, gas-surface interactions as a localised dynamic perturbation 3—42921
- methylbiphenyls, mol. struct., gas adsorpt. chromatographic investig. 3—46098
- mobile monolayer adsorption of gases on homogeneous solid surface 3—42932
- monolayers, multilayer build-up by adsorpt., comparison with Langmuir-Blodgett technique 3—38229
- Monte Carlo simulation of atomic processes on the solid surfaces 3—18542
- multilayer adsorption phenomena on attractive substrates, systematics 3—13636
- multilayer adsorption with condensation, equivalent monolayer theory *(Spanish)* 3—38200
- multilayer solid adsorption, var. theory 3—8327
- nuclear power stations, charcoal adsorbers for radioiodine capture 3—19640
- packed-bed balance reactor for gas adsorption and gas-solid reactions under elevated pressures 3—4315
- phenol, adsorpt. on polycryst. and single-cryst. Sn electrodes 3—53422
- photographic emulsion constants, F-containing surface-active substances effect *(Russian)* 3—20944
- physisorption, Kramers's eqn., friction coeff. derivation 3—33570
- physisorption, single-atom holding pot. and lateral interactions 3—51950
- physisorption and chemisorption, nature of adatom-substrate bond 3—38232
- physisorption potentials, unification 3—47214
- polyethylene terephthalate, mech. characts. during deform., adsorption-active media effect *(Russian)* 3—47959
- polymer chain, limiting thickness, random flight model 3—51928
- polymer chain adsorpt., scaling and Monte Carlo anals. 3—28212
- polymers, glassy, mech. props., liq. organic media effects *(Russian)* 3—8128
- pyrene on oxide supports, surface modification effect on probe dispersion and mobility 3—39404
- relaxation processes at fluid interfaces 3—51893
- semiconductor surface, laser-stimulated adspecies interaction 3—47742
- silicon ethoxide, hydrolysis and gelling process, rel. to glass prep. 3—34654
- solid-binary fluid mixture interface model, adsorpt. and wetting transitions 3—57209
- solid-fluid interface, complete wetting, long ranged correls. 3—23162
- solid-gas interface, pairwise correls. and wetting transitions 3—57218
- statistical mechanics, conf., Trieste, Italy (July 1982) 3—49083
- steel, adsorption and desorption of zinc di-isopropyldithiophosphate 3—13619
- surface excitations, surface EXAFS obs. 3—43661
- Surface Science Index, 1956-77 3—20596
- surface thermodynamics 3—38187
- symposium on adsorption at gas-solid and liq.-solid interfaces, Aix-en-Provence, France (Sept. 1981) 3—25692
- Szyszkowski-Langmuir adsorption, alleged ideality 3—47189
- terphenyls, mol. struct., gas adsorpt. chromatographic investig. 3—46098
- thermodynamic equilib. in stressed systems, appl. to adsorption of gases 3—47222
- thin film formation and behaviour, atomic level, technology appls. 3—47234
- thiourea adsorption on Bi single crystal faces 3—53419
- transition metal surfaces, of mols. with lone pair orbitals, photoelectron spectrosc. obs. 3—3923
- vibrational spectra and structure, book 3—5513
- work function change caused by coadsorption, model 3—43260
- zeolite, enhanced thermionic emission of positive Cs ions 3—3910
- Ag (100) and (111), of Pd, LEED, AES, photoemission, and work function meas. 3—19246
- Ag (110), adsorption of acetylene on clean and O covered surface, EELS study 3—38975
- Ag (110), He interaction pot., absorption reson. and diffr. scatt. 3—52884
- Ag (111), of I, adatom-adatom interactions, XPS and LEED study 3—14439
- Ag coated Teflon spheres, of organic species, surface enhanced Raman scatt. 3—8815
- Ag colloidal particles, of dyes, surface enhanced Raman spectra 3—8826
- Ag electrochemical electrode, specific adsorption of $Br^-(Cl^-)(I^-)(NCS^-)(N_3^-)$ 3—57223
- Ag, electrodes, adsorpt. of H_2O and pyridine, surface morphology, voltammetry and SERS, laser beam effects 3—14873
- Ag electrodes, surface-enhanced Raman scatt., laser illumination effect during oxidation-reduction cycles 3—4297
- Ag, of organic sulphides, surface enhanced Raman study, facile cleavage of S-S and C-S bonds 3—8825
- Ag, of pyridine, charge transfer excitation shift, surface-enhanced Raman scatt. 3—57906
- Ag, of pyridine, surface enhanced Raman scatt., excitation profiles and temp. depend. 3—42918
- Ag, of water, Raman vibr. study 3—19136
- Ag surface, adsorbed ethylene, CT effects in surface enhanced Raman scatt. 3—19119
- Ag surface, adsorbed pyridine, normal Raman scatt. 3—47628
- Ag surfaces, adsorption of O_2 and N_2O, reaction kinetics, ellipsometry 3—23158
- Ag(110)-He interaction pot. determ. by selective adsorption 3—3902
- Al (111), of O, low-energy current image diffr. study 3—2963
- Al (111), of O, surface site determ., EELS spectra and lattice dynamical model 3—3884
- Al, corrosion rate rel. to surface coverge and tunnelling spectra of organic inhibitors 3—14765
- Al films and mechanically scraped surfaces, O adsorption, ESCA study 3—8941
- Al, physisorption of H_2, APFIM study 3—51939
- Al-Co mixed oxide spinel phase, surface texture, X-ray, DTA and N sorption obs. 3—47202
- Al_2O_3, hydrated, exoelectron emission studied by IR spectroscopy 3—8944

adsorption continued
Al_2O_3, of aminophenyltrimethoxy silane, effects of high humidity 3—38226
Al_2O_3-B_4C composite pellets, moisture adsorption, microstruct. 3—47221
As_2S_3, amorphous film, effect of moisture on elec. props. 3—23390
Au colloidal particles, of dyes, surface enhanced Raman spectra 3—8826
Au, of pyridine, surface enhanced Raman scatt., excitation profiles and temp. depend. 3—42918
Au, thermally stimulated exoelectron emission after low energy electron excitation 3—8945
BN, adsorption of Kr and Xe, dielec. and adsorption isotherms 3—23175
Ba surface, interaction with hydrocarbons, XPS study, appl. to electronic vac. devices 3—39014
Bi (0001), interaction with Cl_2, incipient $BiCl_3$ form. and decomp. 3—18563
Bi single crystal, aniline adsorpt. on faces 3—53420
Bi single crystal, thiourea adsorpt. on faces 3—53419
C, effective surface areas and supermicroporosity 3—33560
C, microporous, of N_2 and toluene, heat of immersion 3—23160
C, molecular sieve, adsorption equilib. coeffs. effects of adsorbed water 3—33561
$CaHPO_4.2H_2O$, powdery, changes in surface props. during thermal treatment *(Japanese)* 3—18536
CdO, of Kr, surface homogeneity and surface hydroxyl effects 3—2957
CdSe films, one-barrier residual cond., control by O_2 adsorption induced changes in surface state density 3—38507
$CeNi_{5-x}Cu_x$, H storage and desorption, hydride heat of form. 3—24641
Co, of O, AES, work function and UPS studies 3—38222
^{60}Co removal in BWRs in TiO_2 adsorbent 3—6361
$Cr_2O_3{:}^{119}Sb^{5+}$, adsorbed ions, emission Mossbauer obs. 3—52674
Cu (110), clean and O-covered, adsorption of water, UPS, LEED, EELS, and work function meas. 3—2969
Cu (110), diffr. and adsorption of He, electronic density profile study 3—38988
Cu (110), diffr. of He, coupled channels method anal. 3—38989
Cu (111), O-covered, adsorption and oxidation of HCN, AES, EELS, and thermal desorption study 3—23172
Cu (111), of I, adatom-adatom interactions, XPS and LEED study 3—14439
Cu montmorillonite, adsorpt. of p-dimethoxybenzene cation, Raman spectrosc. obs. 3—41580
Cu, of CO, N_2, Shockley surface states investig. 3—38188
Cu, of Co, on (100) surface, chemisorptive bond calcs. 3—8339
Cu, of He and H_2 3—23176
Cu, of pyridine, surface enhanced Raman scatt., excitation profiles and temp. depend. 3—42918
Cu, physisorption of H_2, APFIM study 3—51939
Cu stepped surfaces, of O, RHEED study 3—13639
Cu surface, trapping of H_2 via translational-rotational energy conversion, EELS meas. 3—38197
Cu surfaces, adsorption of O_2 and N_2O, reaction kinetics, ellipsometry 3—23158
Cu, thermally stimulated exoelectron emission after low energy electron excitation 3—8945
Cu-Ru surface, interaction with H, pairwise-additive model 3—23170
Cu(110), CO, dipole coupling and chem. shifts, IR refl. absorpt. spectra 3—38833
CxF$(MgF_2)_y$, intercalation compound, prep. at 20-350°C, ESCA and ^{19}F NMR 3—24168
Fe (100), diffusion of C following halocarbon adsorption, AES and XPS study 3—42924
Fe (110), H adsorption, lattice gas model 3—2944
Fe alloys, liq., diffusion of N, alloying elements influence 3—8238
Fe, corrosion behaviour, H evolution reaction in nonaqueous formic acid 3—19447
Fe, electron backscatt. and sticking coeff. anisotropy of gases 3—8915
Fe-Ce-Ni, of H_2O, superlattice form. 3—2942
Fe-Cr-Ni, of I_2, superlattice form. 3—2942
Fe-Cr-Ni, of O_2, superlattice form. 3—2942
Fe(II) phthalocyanine, crysts., dark and photo-cond., adsorbed gases effects 3—8528
FeO, clean and K-promoted, CO adsorption, UPS, AES and thermal desorption study 3—2976
α-$Fe_2O_3{:}^{119}Sb^{5+}$, adsorbed ions, emission Mossbauer obs. 3—52674
Fe_3O_4, aqueous suspensions of magnetite, behaviour of Co 3—18553
Fe(001) surface, reaction with H_2S, AES and LEED study 3—2955
Fe(110), of acetylene and ethylene, EELS study 3—3889
GaAs (100) and (111), MBE grown, interaction with H and H_2, photoemission spectroscopy study 3—42925
GaAs, of O, orientation depend., UPS and XPS study 3—24096
GaAs surface, adsorbed $Fe(CO)_5$, UV photolysis at 77K 3—44068
GaP surface single adsorbate, local density of states, local charges and adsorpt. energy calc. 3—3275
Ge (100), adsorption of O, thermal desorption, work function, AES and EELS studies 3—38224
Ge (100), adsorption of O on Na, K, Cs-covered surface, AES, EELS, thermal desorption and work function meas. 3—38225
Ge surface, spin centres, interaction with adsorbed mols., EPR study 3—38451
Ge, surface struct., changes due to metal ion adsorption, electron diffr. study 3—2937
H_2 high-pressure adsorption isotherms on activated charcoal, cryogenics appl. 3—33581
$H_3OSbO_5.0.5H_2O$, cryst. acid, adsorption of water vapour *(Russian)* 3—47224
^3H recovery, HTO vapour adsorption by molecular sieves, silica gel and activated alumina 3—1028
^3He surface, adsorption of spin-polarised at. H 3—13589
^4He film, adsorbing, relax. time after flash desorption 3—57171
InP, water adsorption, influence on Schottky barrier formation 3—3316
InSb (110), of O_2, UPS, EELS and ellipsometry study 3—2959
Ir field emitter, adsorption of O_2 studies using FEM 3—34202
Ir, of C, on (111) surface, submonolayer phase composition investig. 3—33577
Ir, of graphite islands, bond nature 3—33579
Li cluster surface (100), H adsorption, adiabatic approx. breakdown 3—2979
MgF_2 thin porous films, origin of adsorption stress 3—3003
MgO, of Kr, surface homogeneity and surface hydroxyl effects 3—2957
Mo (112), of La, struct., work function and stability, LEED study 3—33576

adsorption continued
Mo surface, (100), metal-oxide transition monitored by XPS of physisorbed Xe 3—24087
Na, liquid, Cs adsorption at container walls, linear response theory 3—33540
NaA zeolites, selective adsorption of O_2, 90-160K, air component separation 3—51926
NaF, two-dimens. condensation of water and alcohols 3—2964
Na_2O-B_2O_3-SiO_2, porous glass, adsorbate self-diffusion, NMR obs. 3—42923
Ne high-pressure adsorption isotherms on activated charcoal, cryogenics appl. 3—33581
Ni (001), of O_2, He atom scatt. study 3—18558
Ni (001)c(2×2)-CO, secondary ion emission, primary beam energy effect, classical dynamics calcs. and SIMS 3—24082
Ni (100), of Xe, LEED, UPS, thermal desorption, and work function meas. 3—2967
Ni (110), interaction with water, XPS study 3—8939
Ni (111), O_2 condensation, coadsorption of O_2 and H_2 study 3—42920
Ni film, of H_2, search for supercond. 3—47451
Ni, permeation of H, oscill. method *(Japanese)* 3—57136
Ni, polycryst., interaction with H_2, surface and bulk process parameters 3—33578
Ni, surface mass transport, effect of at. steps *(French)* 3—13605
Ni surfaces, adsorption of O_2 and N_2O, reaction kinetics, ellipsometry 3—23158
Ni(111), adsorption site for S, coverage depend., photoemission study 3—2962
Nr, of CO, N_2, Shockley surface states investig. 3—38188
OH groups on silica surfaces, IR spectra obs. 3—28854
$Pb_{0.8}Sn_{0.2}Te$, adsorbed surface states, form. and charging kinetics 3—3274
$Pb_{1-x}Sn_xTe$ photosensitive films, phase composition, struct. and O_2 adsorption effects 3—52193
Pd (111), adsorption and coadsorption of H_2 and CO 3—38209
Pd (111), of CO and Br, electronic excitations, angle-resolved EELS study 3—43678
Pd (111), stepped, adsorption of NO, desorption and reaction kinetics, LEED, TDMS and mol. beam meas. 3—38223
Pd film, on SiO_2, adsorption and dissociation of O_2 and H_2, surface and interface pot. meas. 3—38202
Pd ultrathin layers on W (110), adsorption of CO and O_2 3—38205
Pt (100), surface phase transform. induced by CO adsorption 3—8331
Pt (110), adsorbate-induced phase transitions 3—2970
Pt (111), C_1-C_4 alcohol adsorption and decomposition 3—2981
Pt (111), coadsorption of K and CO, thermal desorption, EELS and UPS study 3—8335
Pt (111), H_2O+O reaction, SIMS and thermal desorption study 3—24531
Pt (111), of CO, LEED, thermal desorption and EELS studies 3—38220
Pt (111), of DMSO, UPS, XPS, EELS, and IR spectra study 3—42928
Pt (111), of K, effect on O_2 adsorption, LEED, XPS, UPS, and work function meas. 3—18560
Pt (111), of O_2, thermal desorption, EELS and LEED study 3—38206
Pt (111), of SO_2 an interaction of coadsorbed O and S 3—23181
Pt (111) and vicinal surfaces, adsorption of CO, He scatt. and work function meas. 3—38214
Pt (111) surface, adsorption and reaction of H_2O, static SIMS study 3—18552
Pt (321) kinked surface, of O_2 and O, thermal desorption, EELS, and AES study 3—42929
Pt, catalytic oxidation of CO, transient study 3—4318
Pt film, of H_2, search for supercond. 3—47451
Pt, of CO and O, saturation coverages nucl. microanal. and LEED 3—18559
Pt, of CO on (110) surface, chemisorptive interactions calcs. 3—8340
Pt, of CO on (111) and (112) surface, chemisorptive interactions calcs. 3—8340
Pt(111), of NO_2, decomp. to NO and O 3—39407
Re, adsorption of D_2O, XPS study 3—51925
Re, Cc surface, (1010), Ba and O adsorption, work function and thermal stability study 3—51957
Re field emitter, Ag and Al coated adsorption studies, work function meas. 3—34201
Re, of Ag, field emission study 3—43715
Rh (111), of ethylene, (2×2)-C_2H_3 overlayer struct., LEED study 3—8336
Rh, coadsorption of CO, H_2, and NO 3—8332
Rh, of C, O and S, vibr. spectra anal. 3—19533
Rh-TiO_2, reversible H adsorption, TPD-NMR study 3—8333
Ru (001), coadsorption of NO and O, temperature programmed desorpt. and IR study 3—57222
Ru montmorillonite, adsorpt. of p-dimethoxybenzene cation, Raman spectrosc. obs. 3—41580
Ru surface (001), clean and O dosed, adsorption of water, desorption, AES and LEED studies 3—38221
Si (001)2×1, of H, angle-resolved EELS and elastic LEED study 3—38207
Si (100), reaction with N atoms, thermal desorption, AES and EELS studies 3—38219
Si (111), of H, surface struct. and cond. studies 3—51938
Si (111) cleaved surface, of O_2, AES study 3—14400
Si (111) of Ge, struct. and electronic props. 3—18539
Si, (111) surface, Ag atoms adsorpt., self-consistent HF calc. 3—13621
Si (111) surfaces, H adsorption, Auger study 3—14401
Si, surface, laser-stimulated adspecies interaction 3—47742
Si surface, spin centres, interaction with adsorbed mols., EPR study 3—38451
Si, surface struct., changes due to metal ion adsorption, electron diffr. study 3—2937
a-Si:H film, trapping props., effect of adsorbates, TSC meas. 3—23401
SiO_2, gel, platinised, exoelectron emission studied by IR spectroscopy 3—8944
Si(111), nitridation by N atoms, LEED, AES, EELS and thermal desorption studies 3—38218
Sn electrodes, polycryst. and single-cryst., adsorpt. of phenol and aniline 3—53422
SnO_2, of Kr, surface homogeneity and surface hydroxyl effects 3—2957
Ta (100) surface struct. and H adsorption, LEED and AES study 3—38177
TiO_2, of benzene, Raman spectroscopic study *(Spanish)* 3—3706

adsorption continued
  TiO_2, of methylsilanes and hexamethyldisilazane, IR absorpt. spectra 3—9355
  TiO_2 surface, hydrocarbon adsorption, IR spectroscopic study 3—2986
  TiO_2-electrolyte interface, surface and diffuse-layer charge 3—28410
  U extraction from seawater, adsorbents, cost assessment *(Japanese)* 3—11376
  V_2O_5:Fe^{3+}(Co^{3+})(Ni^{2+}), doping effects on texture change, N_2 adsorpt. meas. 3—56918
  W (100), of La-Li, work function and thermal stability 3—28218
  W (110), of S, AES, LEED, work function, and thermal desorption meas. 3—23180
  W (110), of Se, AES, LEED, work function and thermal desorption meas. 3—38216
  W (110) plane, single adsorbed W atom directional walk 3—33569
  W, electron backscatt. and sticking coeff. anisotropy of gases 3—8915
  W-Sc cathodes, field emission stability, effect of gas adsorption 3—52905
  W(100), of H, surface reconstruction, surface lattice dynamics approach 3—57191
  Y_2O_3, of O, effect of impurity and irrad. induced donor levels 3—13620
  Zn, thermally stimulated exoelectron emission after low energy electron excitation 3—8945
  ZnO, binding and decomp. of organic dye mols. 3—23184
  ZnO nonpolar, stepped, and polar surfaces, interaction with CO, CO_2, and O_2 3—18561
  ZnO, of Kr, surface homogeneity and surface hydroxyl effects 3—2957

aerials *see antennas*

aerodromes *see airports*

aerodynamics
  see also hypersonic flow; jets; shock waves; supersonic flow; transonic flow; turbulence; wind tunnels
  aerodynamic and aeroacoustic excitation in networks of pipes with sharply edged offtakes *(French)* 3—50829
  air flow separation structure over wind wave crests 3—12723
  air unsteady velocity field meas. by fast US imaging system 3—2158
  airfoil array, low frequency flow calc. 3—37517
  binary gas mixture, diffusion slipping at moderate density along flat surface 3—51166
  compliant coatings, flow-induced instabilities 3—32642
  cylindrical shells, clamped-clamped, ovalling oscillations in cross flow 3—12562
  developed turbulent-flow form. in a quadratic channel 3—7547
  drag of spheres in subsonic two-phase flows 3—46627
  flow around three cylinders in row at low pitch-to-diameter ratios 3—32739
  free molecular hypersonic flow over rotating bodies, aerodynamic characts. 3—7614
  gas combustion dynamics in spherical vessel 3—39388
  gas flows, compressible, nonideal, hydraulic analogy 3—46590
  gasdynamic variables of jet undergoing physical and chemical transformation, model for calc. probabilistic behav. 3—56594
  ideal fluid flow past wing, wake vortex sheet calcs. 3—7592
  implicit time discretisations for gas dynamics, stable boundary approxs. 3—27543
  induction motor module system induction motors designed for low level aerodynamic noise 3—27309
  inverted-V wings, aerodynamic charact. at subsonic flight vel. 3—7609
  levitation of laser-heated solids in gas jets 3—2101
  MHD swirl combustor, flow aerodynamics modeling 3—12788
  MHD swirl combustor flowfield calc. using pressure-velocity finite-difference computer code 3—24614
  near-wakes of centrally-ducted models, compact ballistic test stand 3—56569
  noise suppressor, nozzle configuration with central tailcone, aeroacoustical characts. 3—12433
  oscillating rig for the generation of sinusoidal flows 3—12692
  overexpanded axisymmetric nozzle, gas flow 3—56563
  Pioneer Venus probes testing, unsteady aerodynamics and motions obs. 3—15813
  plate acceleration to hypersonic velocities, explosive method, air-drag instability effects 3—47046
  radiant heat flow from jets, Monte Carlo calcs. 3—56596
  radiation flux of gasdynamic MHD power station 3—2134
  slender body with minimum drag, three-dimens. shape in hypersonic gas stress 3—7611
  sound radiation from a double layer jet 3—37284
  sound source radiation in two dimens. shear flow 3—56599
  sputtering and interaction of erosion laser flare, modelling of nonstationary processes 3—52871
  stationary shape of bodies ablating in hypersonic flow under the action of radiation heating 3—51158
  stepped diffuser, total pressure losses in stream mixing 3—27542
  straight vortex filament with power law vorticity distribution, two-dimensional disturbances, aeroacoustical use 3—7599
  supersonic airflow, parallel H_2 injection into const. area, high enthalpy jets 3—12709
  supersonic flow past bodies of star-shaped form, aerodynamic characts. 3—37519
  supersonic jet discharge from nozzle into axisymmetric channel 3—56568
  tethered wind energy conversion scheme, tether design, wind loading effects 3—24548
  transonic aerodynamics, computational design 3—12705
  transonic flow past boattail projectiles, axisymm. and nonaxisymm. 3—12695
  twisted flow in flat-flame injector torch diffuser, aerodynamic struct. 3—7607
  underexpanded jet produced by two nozzles, flow investig. 3—56595
  uniform gas flow, nonlinear thermal effects in intense light beam, transient behaviour 3—50718
  unsteady flow past a wing with jets simulation 3—37505
  unsteady transonic aerodynamics, linear/nonlinear behaviour, aeroelasticity 3—46591
  viscous gas flows, enhanced accuracy difference method for computing *(Russian)* 3—46605
  wind power generation using jet stream winds 3—54099

aeroelasticity *see elasticity*

aeronomy *see meteorology; terrestrial atmosphere; upper atmosphere*

Aerosils *see aerosols*

aerosols
  see also foams
  Abidjan region, cloud condensation nuclei conc. seasonal var., effect of rain 3—15533
  absorption coeff. of aerosols originating from soils, optoacoustical studies 3—40706
  Aerosils, chemically modified, N_2 absorpt. energy distrib., surface heterogeneity effects 3—18566
  aerosol and gas deposition on fully rough blade-shaped elements, filtration model 3—12724
  Aitken nuclei in Brazzaville—Congo, sources and physical characts. *(French)* 3—9516
  Arctic regions, aerosol light absorpt. and particulate C size segregated meas. 3—9512
  atmosphere, aerosol characts. at Po Valley, Italy 3—4436
  atmosphere, aerosol content influenced by climate *(Russian)* 3—35254
  atmosphere, aerosol deposition to ground, influence of humidity 3—20058
  atmosphere, aerosol extinction meas. at Cerro Tololo Inter-American Observatory 3—10065
  atmosphere, aerosol formation and development *(Russian)* 3—54089
  atmosphere, aerosol increase in early 1982 caused by unobserved volcano 3—4920
  atmosphere, aerosol influence on albedo of atm.-surface system *(Russian)* 3—35261
  atmosphere, aerosol turbulent diffusion in boundary layer (and surface deposition) 3—39867
  atmosphere, Antarctic sulphate aerosol originating from local volcanoes 3—10026
  atmosphere, Arctic aerosol radiative props. 3—39904
  atmosphere, Arctic summer aerosol obs. 3—59034
  atmosphere, Br/Pb determ. methods, pollutant appl. 3—48218
  atmosphere, deposition rate onto rough and smooth surfaces 3—54075
  atmosphere, dispersion in boundary layer turbulent flow, vertical vel. from Markov chain simulation 3—20068
  atmosphere, diurnal vars. and comp. of summer aerosol in New York subregion rel. to meteorological variables 3—4419
  atmosphere, effect of O_3 and aerosols on surface radiative cooling computations for model atmospheres 3—25204
  atmosphere, effect on fog microstruct. 3—54124
  atmosphere, effects of aerosol particles on radiation scheme for circulation and climate models 3—10052
  atmosphere, element comp. in N China rural area, pollutant contrib. 3—48216
  atmosphere, Hawaiian boundary layer aerosol of continental origin 3—15547
  atmosphere, Lidar method of remote sensing in presence of transparency fluctuations 3—44549
  atmosphere, light scatt. props. effect on O_3 conc. meas. by photometers *(Chinese)* 3—48717
  atmosphere, light scatt. props. of urban aerosols 3—10060
  atmosphere, local planetary albedo changes due to aerosols 3—4963
  atmosphere, marine, optical property prediction, Navy aerosol model 3—54123
  atmosphere, marine boundary layer, total optical depth and mixed-layer visibility 3—54122
  atmosphere, Mt. St. Helens eruption plume composition 3—20080
  atmosphere, new approach to particulate dispersion model evaluation 3—24648
  atmosphere, nitrate and sulphate particle size distrib. 3—25156
  atmosphere, nitrated polycyclic aromatic hydrocarbons in urban air particles 3—34751
  atmosphere, occurrence of near-zero Arctic aerosol conc. 3—29992
  atmosphere, optical properties comparison with models 3—48667
  atmosphere, particulate deposition vel. by box model 3—20059
  atmosphere, phys. and chem. props. of pollution aerosol 3—4438
  atmosphere, pollutant aerosol causing drop in climate temp. *(Russian)* 3—35257
  atmosphere, pollution washout by rain and snow 3—4947
  atmosphere, relations between chemical comp. of fine particles and visibility in Detroit metropolitan area 3—35260
  atmosphere, sea-salt aerosol production by bubble bursting 3—59033
  atmosphere, Si content of urban aerosol, Rabat, Morocco *(French)* 3—54098
  atmosphere, spectral absorpt. of aerosol from Georgia, USSR *(Russian)* 3—10058
  atmosphere, stratospheric evolution of Mt. St. Helens, aerosol 3—20079
  atmosphere, submicron marine aerosol sizes and processes *(Russian)* 3—9995
  atmosphere, sulphate aerosol of Los Angeles basin 3—20055
  atmosphere, Sun photometry method for suspended matter determin. 3—59001
  atmosphere, volcanic dust stratosphere after El Chichon eruption (Mexico) 3—48616
  atmosphere (marine), factors affecting 1 μm particle number density 3—54104
  atmosphere aerosol meas. using Sinclair nucleus counters 3—19649
  atmosphere aerosol of Amazon Basin, preliminary data on comp. and particle size distribs. 3—4905
  atmosphere aerosols remote sensing over water, marine sediment tolerances 3—25203
  atmosphere at Beer-Sheva, Israel, chem. composition and origin of particulates 3—59035
  atmosphere electrode effect over snow, theory for turbulent and nonturbulent cases 3—4924
  atmosphere multicomponent aerosol pollutants extinction coeff., role of different chem. species 3—9508
  atmosphere of Arctic and Atlantic, acidity of aerosols and precipitation 3—59032
  atmosphere of Helwan, Egypt, total direct solar radiation depletion due to anthropogenic dust content 3—9507
  atmosphere of Norway, seasalt scavenging by rain 3—20060
  atmosphere of polar regions, aerosol optical depth obs. 3—15563
  atmosphere of Yaounde, Cameroon *(French)* 3—25159
  atmospheric, chem. element comparison of individual particle and bulk analysis methods 3—15032
  atmospheric, O_3 and aerosol profile determ. using NASA multipurpose airborne DIAL system 3—48680

aerosols continued
atmospheric aerosol particles, S, C, N characterisation by ESCA and EGA 3—9517 .
atmospheric aerosols with Junge particle size distrib., normalised scatt. diagram 3—12071
atmospheric effects on radiation propagation, Electro-Optical Systems Atmospheric Effects Library 3—10056
attenuation in 8-13 μm range *(Chinese)* 3—59111
benzene, condensation by homogeneous nucleation in shock tube 3—53450
bipolar-charged, soliton propagation 3—17994
breathing patterns infuence on aerosol deposition sites in excised dog lungs 3—24758
British Isles coastal boundary layer, Aitken nuclei conc. 3—35235
carbon tetrachloride, condensation by homogeneous nucleation in shock tube 3—53450
Chicago, Illinois, USA, atmos. suspended particulates 3—53601
clearing under conditions of thermal self-defocusing, efficiency estimation 3—12255
combustion processes in EM field 3—53396
condensation nuclei counters, supersaturation and expansion ratios 3—35822
distribution patterns in atmosphere, horizontal wind vectors, scanning lidar obs. 3—30022
Etna, 1980, reevaluation of particulate emissions *(French)* 3—48525
filtration, diffusion collection efficiency of fibres 3—7685
fluidised bed aerosol generator for dry, stable, high conc. aerosol production 3—39416
freon-11, condensation by homogeneous nucleation in shock tube 3—53450
Germany, North Sea coast boundary layer, natural and artificial aerosols, tidal obs. 3—39892
giant salt nuclei over Xin An Jiang basin, China *(Chinese)* 3—59093
growth by condensation of small particles 3—4322
Helwan Industrial Area, Egypt, pollutant dust deposition and anal. 3—48209
human upper airways, aerosol deposition and clearance, review 3—9644
hygroscopic radioactive aerosols for inhalation studies, apparatus for generating 3—53857
inhomogeneity sounding, correlation anal. applicability *(Russian)* 3—44557
ion inductive interaction with a dielectric, thermal motion effect 3—48099
labelled, optimization of diagnostic use in pulmonary pathology *(French)* 3—19824
LMFBR, source term anal., rel. to nuclear aerosols 3—55482
LMFBR accidents, aerosol production and behaviour, characterisation techniques 3—11474
lung, small airways, settling and diffusion of aerosol particles during breath holding 3—9643
marine atmospheric boundary layer, meteorological model for optical props. 3—10064
marine particulate matter, hydrosols, lidar sensing, scatt. matrix element determ. 3—10072
metal body in aerosol flow with solid disperse phase, electrification in presence of corona discharge 3—56114
meteoritic debris, radiochemical search in atmospheric aerosols 3—30309
microjets, high speed, optical investig. 3—39414
mixing of finely dispersed vaporising particles with deflecting gas stream 3—56604
Mount St Helens 1980 eruption, air-fall ash layers, grain size distrib./secondary thickening 3—35239
multicomponent radioactive, condensation, coagulation and deposition 3—997
natural radioactive aerosols, effect of polydispersiveness of tracheobronchial deposition 3—19876
optical depth rel. to Linke turbidity factor 3—30083
optical particle counters: response, resolution and counting efficiency 3—36140
optically anisotropic spheres, radiative props., climatic implications 3—10063
opticoelectronic aerosol spectrometer, counting vol. as measure of resolving power 3—45213
particle deposition in wake of charged spheres 3—39415
particle thermal diffusion, Lagrangian autocorrel. calcs. 3—39417
photon-counting lidar meas. *(Russian)* 3—39916
photophoretic force on spherical aerosol particles in free-mol. regime 3—9361
polar atmospheric aerosols, X-ray spectrometry 3—48589
pollutant dispersion parameters from smoke puff's photographic density meas. 3—48217
pollutants, energy dispersive X-ray fluoresc. spectrometer appl. 3—15031
radioactive accident generated aerosols, assessment methodology 3—24649
radioactive effluent retention in nuclear facilities, cost-benefit analysis for ^{3}H, ^{14}C, ^{85}Kl, ^{129}I and aerosols 3—11394
remote sensing data, analytic inversion 3—4970
respirable aerosols, electrostatically enhanced collection, granular bed filters 3—39557
respiratory tract, human, inhaled particle deposition meas. 3—39678
samplers, efficiency for large wind-borne particles 3—53614
Seney National Wildlife Range, Michigan, clean air mass, aerosol characts. 3—9509
single aerosol particle IR spectrum by photothermal modulation of struct. reson. 3—20906
size distrib., meas. using differential mobility analyser and inversion 3—35963
small particulates deposition onto grass 3—20057
smoke from diesel fuel combustion, 10 μm IR studies 3—58568
spherical particles, photophoretic force for low Knudsen no. 3—29335
stratosphere, conductivity profiles during non-volcanic period rel. to aerosol concs. 3—30028
stratosphere, effect on Earth-atm. radiative balance 3—44550
stratosphere, lidar obs. of aerosol increase caused by Sierra Negra volcanic eruption 3—4925
stratosphere aerosol layer, twilight IR brightening over India due to eruption of El Chichon, Mexico 3—30053
stratosphere aerosols from Indonesian volcano eruptions, climatic impact 3—25057
stratospheric light polarization, El Chichon volcanic cloud effects 3—59000
stratospheric volcanic aerosols from El Chichon over Fukuoka, Japan 3—59037
submicron aerosols rapid coagulation into filamentary three dimens. structs., electron microscopy study 3—32791
sulphate aerosol dynamics in atmospheric plumes, model 3—4422

aerosols continued
sulphate in London and S England atm., effect on 1962-79 visibility trends 3—44546
surface and cloud base CCN spectra in Montana 3—30017
S Sweden atmosphere, background aerosol comp. rel. to particle size 3—44491
Tel-Aviv, Israel, dust physical props. and chem. content 3—25196
Telford equation, generalisation, appl. for radioactive releases 3—6408
thoracic airways, human, charting by aerosols 3—44358
Titan, visible photometry and polarimetry, implications for aerosol props. 3—5211
United States, eastern, visibility and aerosols anal. 3—9510
Uranus atmosphere, evidence for optically thin aerosol layer from methane band imaging 3—5222
urban areas, suspended particulate matter, levels and trends 3—9514
Venus, aerosol comp. determ. 3—48843
Venus atmosphere, aerosol elemental comp. method 3—48842
Venus atmosphere, props. of aerosols below clouds from Venera landers obs. 3—15864
Venus cloud layer, new data on aerosol from study by (Venera 14) *(Russian)* 3—35493
Washington DC smog problem, effect of O_3 depletion, natural hydrocarbons and precipitation 3—48203
water-haze aerosol model, anomalous diffr. approx. inversion for variable complex refr. index 3—4955
water-soluble material on aerosols collected within volcanic eruption clouds 3—15555
H_2O, condensation by homogeneous nucleation in shock tube 3—53450
Na fire aerosols, physical and chemical behaviour, Na-cooled breeder reactor accidents 3—11473
Na, handling safety in LMFBRs, conf., Ispra, Italy (Nov. 1980) 3—10523
$^{239}PuO_2$ aerosols, inhalation exposure of Syrian hamsters 3—29653
SO_4^{2-} particles in stratosphere, nucleation mechanisms 3—39897

aerospace
see also aerospace computing; aerospace control; aerospace instrumentation; aerospace propulsion; aerospace simulation; aerospace test facilities; aircraft; space research; space vehicles; terrestrial atmosphere
aircraft in atmosphere of Venus, possible scheme 3—15809
Australian Astronautics Convention (Perth, Aug. 1979) 3—40322
ESA programme 3—44641
space, mankind's fourth environment, conference, Rome, Italy (1981 September 7 to 12) 3—16065

aerospace applications of computers *see aerospace computing*

aerospace biophysics
bone, mineral content, rel. to strength characts., hypodynamic conditions 3—34992
contractile proteins, change in composition and props. after space flight, white rate obs. 3—39726
DFVLR Institute for Aerospace Medicine, new facilities 3—39727
near zero gravity experiments on living systems 3—4659
right ventricular pressure response to $+G_z$ acceleration stress in miniature swine 3—24894
zero-g simulation for ground based studies in human physiology, emphasis on cardiovascular and body fluid systems, conf., Toulouse, France (Mar. 82) 3—10515

aerospace computer control
see also aerospace computing
Solar Mesosphere Explorer, microcomputer based satellite examining ozone layer 3—25161

aerospace computing
see also aerospace computer control
geostationary satellites in orbit, ORBIT-1 program for optimal allocation *(Japanese)* 3—40004
plasma propagation simulation near an electrically propelled spacecraft 3—12965
SIRE (Space Infrared Experiment) contamination potential, preliminary assessment 3—10183
structural design, nonlinear analysis 3—17836

aerospace control
see also air traffic control; attitude control
aircraft flight control, use of wind global model for 0-150 km altitude 3—48607
IRAS, spacecraft system 3—35407
nonlinear systems, observability anal. and identification of observable components 3—15808
re-entry Shuttle vehicle active flight control system with laser anemometry 3—35402
spacecraft guidance and control, radiation hardened star scanner 3—40032
spacecraft with constant radial accel. motion and trajectories 3—35405

aerospace engines
HF sound radiation out of jet pipe 3—7571
ion thruster charge-exchange plasma flow 3—42375
noise suppressor, nozzle configuration with central tailcone, aeroacoustical characts. 3—12433

aerospace ground equipment *see ground support equipment*

aerospace instrumentation
see also aircraft instrumentation; Langmuir probes
MOST dosimeter using PMOS device in space radiation environment, error estimation and reduction 3—36577
radiation effects on microelectronic components, soft upsets, latchups 3—54216
satellite-borne microelectronics, natural radiation environment effects 3—40003
SEM and particle analyser design for space applic. 3—15815
spacecraft gravity gradiometer using supersensitive accelerometer 3—30106
spacecraft guidance and control, radiation hardened star scanner 3—40032
thermosphere, spectroscopic imaging from Space Shuttle 3—20124
X-ray mirrors flown on Ariel-6 satellite, soft X-ray reflectivity meas. 3—59214

aerospace propulsion
see also aerospace engines
plasma propagation simulation near an electrically propelled spacecraft 3—12965
rocket, microwave plasma generation of H atoms 3—42417

aerospace propulsion continued
  supersonic airflow, parallel H_2 injection into const. area, high enthalpy jets 3—12709
  Si deep-space solar cell performance at low illumination and temp. 3—39477

aerospace simulation
  see also aerospace test facilities
  contamination simulation facility with in situ IR analysis capability 3—10184
  hypersonic flow, simulation on high press. aerodynamic installations 3—32757
  plasma propagation simulation near an electrically propelled spacecraft 3—12965

aerospace test facilities
  see also wind tunnels
  hypersonic flow, simulation on high press. aerodynamic installations 3—32757
  IRAS telescope focal-plane array test facility, at NASA Ames Research Centre 3—30180
  Pioneer Venus probes testing, unsteady aerodynamics and motions obs. 3—15813
  thermovacuum conditions simulation, ultrahigh vacuum systems 3—5801

a.f. amplifiers *see audio-frequency amplifiers*

AFMR *see antiferromagnetic resonance*

afterglows
  alkaline earth sulphides:Bi, luminescence characteristics 3—43581
  Balmer series H level population in electron beam, ion+mol. reaction role 3—14865
  electronic density and losses of plasma wave stabilisation and decay *(Spanish)* 3—42382
  flow reactors, venturi inlets diagnostics studies 3—9321
  interactions between afterglow prods. of microwave induced plasmas and solids 3—7751
  secondary luminesc. classification, afterglow duration 3—38865
  X-ray intensifying phosphor screens, long-term persistency 3—49519
  Ar afterglow plasma, electron energy distrib., stepwise excitation effect 3—2185
  Bi vapour laser, decay of Bi atom $6p^3$ $^2D^0_{3/2}$ metastable levels in interpulse period 3—6956
  CaF_2:Mn crystals, mag. quenching of tunnelling-recombinational afterglow and ESR spectra 3—3529
  Cu halide vapour lasers, output parameters, influence of electron heating during Cu recomb. 3—32352
  Hg light source linewidth effect on meas. of metastable decay time const. in afterglow 3—41706
  Hg vapour flow, axial course of electron conc. in afterglow discharge 3—2311
  Hg-Ar mixture, positive column of low press. discharge under pulse current modulation, electrokinetic parameters *(Russian)* 3—46802
  KCl:Tl crystals, mag. quenching of tunnelling-recombinational afterglow and ESR spectra 3—3529
  N^++CO, flowing afterglow, prod. state distrib. laser induced fluoresc. study 3—39386
  NaCl:Ag crystals, mag. quenching of tunnelling-recombinational afterglow and ESR spectra 3—3529
  Ne, $^3P_2$ and $^3P_1$ excited state quenching at 150, 300 and 400K in afterglow plasma 3—46057
  Ne, $2p^5 4p$ config. level population, rel. to dissoc. recomb. of Ne_2^+ 3—50331
  Ne, deexcitation rate coeffs. for neutral atom and electron collisions, absorpt. and fluorescence study 3—21886
  Ne_2^+ dissociative recombination in Ne afterglow plasma, spectral line analysis 3—11884
  O^-+HF, flowing afterglow, prod. state distrib. laser induced fluoresc. study 3—39386

age (Earth) *see geochronology*

age determination, radioactive *see radioactive dating*

age hardening *see precipitation hardening*

ageing
  see also precipitation hardening; strain ageing
  alloys, cluster form. in two-dimensional square lattice, computer simulations *(Japanese)* 3—47865
  alloys, struct. unstable ageing, strain diagram construction 3—37987
  black chrome solar selective coatings, electro-deposited, thermal stability optimisation for high temp. applications 3—29450
  creep kernels in ageing materials 3—42153
  elastomers as thermal solar collectors, mech. props. evaluation 3—53578
  Elinvar, magnetic anisotropy, uniaxial 3—33885
  FCC alloys, dislocation interactions with ordered cylindrical precipitates 3—22932
  fibre-optic connector, low cost, low insertion loss, ageing tests 3—46330
  force transducer using amorphous mag. ribbon material, AC appls. 3—25868
  glass fibre reinforced epoxy, accelerated ageing in water 3—34334
  glass fibre reinforced epoxy composites, modelling of hydrothermal ageing 3—4062
  graphite fibre reinforced polymers, hydrothermal ageing, fibre surface effect 3—19365
  Inconel 718, relationship between struct. and mech. props. *(French)* 3—47822
  intermetallic compound growth and solderability 3—24409
  Invar, heat treatment influence on C distrib. and microinhomogeneity 3—58141
  metals, stretching, cogging and drawing with heating, energetic forces estimation *(Russian)* 3—19351
  mirror reflective films natural climatic ageing determ. using electrical methods 3—9395
  nonuniformly ageing body with variable boundary, creep theory 3—42704
  nuclear waste glass, hydration ageing 3—6320
  photographic layers on AlH_3 substrates, thermostat ageing *(Russian)* 3—20935
  piezoelectric PZT ceramics, tetragonal structure, ageing phenomena *(French)* 3—43491
  polyester fabric, PVC coated, boiling water treatment, 6 weeks, stake and socket fractures 3—39231
  polyester foil, aged by partial discharges and UV irrad., static polarisation meas. 3—23867
  polyethylene, elec. ageing, mech. load influence *(Russian)* 3—43482

ageing continued
  polyethylene, stabilisation and influence of physical parameters, on natural ageing 3—18242
  polyethylene, struct. and mech. props., effect of elastomeric microgels *(Bulgarian)* 3—7925
  polyethylene films, light ageing, IR spectra study *(Bulgarian)* 3—9075
  polymeric materials, tress chemiluminesc., appls. to ageing process 3—53309
  polypropylene films, biaxially oriented, morphology and dielec. props., effect of thermal aging 3—19050
  polyvinylidene fluoride, isothermal ageing of piezoelectricity 3—19067
  PVC, struct. and mech. props., effect of elastomeric microgels *(Bulgarian)* 3—7925
  rubber, accelerated ageing tests in hot air, air change rate effect 3—24266
  rubber, accelerated ageing tests in hot air, air change rate effect on different cmpds. 3—24267
  rubber, natural, compressed cylinders, dynamic mech. relax. 3—4067
  SAW oscillator aging, propag. loss effects 3—50887
  steatite ceramics, microstruct. and deterioration 3—53254
  steel, 10B20, coarsening of cementite particles in ferrite matrix 3—24236
  steel, 316 stainless, cyclic hardening under complex loading histories *(French)* 3—47901
  steel, AF1410, stress corrosion resistance, effect of ageing at 510°C 3—14768
  steel, austenitic, 13Kh18N10G352M2, precipitation of excess phases during ageing *(Russian)* 3—24233
  steel, austenitic, high-C, metastable, stress-thermal treatment *(Russian)* 3—58134
  steel, austenitic, stress relaxation of thermomechanically hardened crystals, expt. study *(Russian)* 3—34381
  steel, austenitic Cr-Ni, hot embrittlement in heat affected zone of welded joints *(German)* 3—53097
  steel, austenitic stainless, creep behaviour, pre-ageing effect 3—47927
  steel, austenitic stainless, high N, struct. and mech. props., effect of V 3—53093
  steel, austenitic stainless, Ti and Nb stabilised 3—53062
  steel, C, aged, strain hardening, prior deform. effect 3—34356
  steel, C type, 20k, brittle fracture susceptibility eval., nondestructive magnetomech. method, hot rolling and ageing effects 3—48017
  steel, Cr-Mn-Si-Ni, temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
  steel, Cr-Mo, temper embrittlement, compositional effects 3—14728
  steel, dual-phase, low C, mech. corps. and ageing, effect of Mn content *(Korean)* 3—53089
  steel, ferritic stainless, mechanical twinning, plastic deform. modes 3—29134
  steel, high-Ni carbon type, thermal stabilisation of retained austenite 3—39148
  steel, HSLA, hot rolled, ageing, precipitation hardening 3—39183
  steel, low C alloy, cold rolled, splitting, effect of ageing *(Korean)* 3—39181
  steel, low C alloy, cold-rolled, microstruct. and strength, effect of ageing *(Korean)* 3—39180
  steel, low-alloy, structural, brittle fracture susceptibility, prolonged ageing effect 3—34470
  steel, maraging, ageing, hardening, precipitate size and distrib. *(Japanese)* 3—58139
  steel, maraging, ultrahigh strength, delayed failure *(Japanese)* 3—24338
  steel, maraging stainless, martensitic-austenitic transform., mech. props., TEM and X-ray diffr. studies *(Chinese)* 3—34298
  steel, martensite, ageing initial stages, temp. depend. of rate sensitivity parameter, stress/strain diagrams exam. 3—39182
  steel, martensite, Fe-Ni-C and Fe-Mn-C, ageing, clustering and precip. obs. 3—39157
  steel, Mn(-Mo), temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
  steel, Mn-Si, retained and epitaxial ferrite, ageing susceptibility 3—24274
  steel, Nb, low-pearlite structural, separation behaviour, coiling temp,. infuence 3—47838
  steel, Si, low C, carbide precip., TEM study 3—53069
  steel, stainless, duplex 329, corrosion resistance, effect of heat treatment between 400 to 700°C 3—39276
  steel, stainless martensitic, cast, notch toughness at −196 and −253°C 3—34405
  steel, steel, maraging, age hardening, 773K, microstruct., TEM and electron diffr. obs. *(Japanese)* 3—39165
  steel, struct. unstable ageing, strain diagram construction 3—37987
  thermal ageing anal. for safety related nuclear power equipment 3—31742
  Ag film, ageing characts., effect of electrode annealing, elec. resist. meas. 3—18796
  Ag film on TlBr-TlI, adhesion failure, atmosphere induced, AES and electron microscopy study *(Russian)* 3—19507
  $AgI-Ag_2O-B_2O_3$ glassy electrolytes, struct. and glass transition 3—22783
  (Al,Ga)As/GaAs DH lasers, ageing-induced degradation (or lifetime) vars. statistical anal. 3—56259
  Al alloy, stress corrosion reinstant, high strength, type 7075, microstruct. study, TEM obs. 3—9096
  Al alloy 2219, precipitation hardening, US study 3—43846
  Al alloy D16, clad thin sheet, structural strength, low temp. thermomech. treatment 3—47871
  Al alloy D16, mech. props. control by eddy current method rel. to ageing kinetics 3—53214
  Al film, ageing characts., effect of electrode annealing, elec. resist. meas. 3—18796
  Al ohmic contacts on $BaTiO_3$, laser annealing and stability 3—57423
  Al-Cu, elastic consts., effect of solute content and heat treatment *(Japanese)* 3—58152
  Al-Cu-Mg, Cu/Mg ratio effect on precipitation *(Korean)* 3—4042
  Al-Cu-Mg-Mn (4.42, 0.27, 0.46 wt.%), strengthening rel to thermomechanical treatment 3—43851
  Al-Cu-Mg-Si, corrosion resist., improvement by ageing 3—34542
  Al-Cu-Mn, large slabs, struct. and mech. props. 3—34404
  Al-Cu-Mu-Zr-Fe-Si, struct. and props., Fe and Si additions influence 3—39248
  Al-Li, yield charact. after solution treatment and ageing 3—9102
  Al-Mg, struct., plastic deformation and corrosion resistance *(Russian)* 3—24292
  Al-Mg (90, 10 wt.%), recovery heat treatment after natural ageing 3—34366
  Al-Mg-Si, quenched and aged, electron density of states, soft X-ray emission study 3—3029

ageing continued
Al-Mg-Zn, cast, struct. changes during ageing 3–9103
Al-Zn, initial precipitation hardening, mechanism *(Japanese)* 3–9080
Al-Zn-Mg, ageing embrittlement after stress corrosion treatment *(Japanese)* 3–47986
Al-Zn-Mg, clustering processes after direct quenching to agency temp. 3–34368
Al-Zn-Mg (4.5, 2 at.%), Guinier-Preston zone reversion, pre-ageing conditions depend. 3–9069
Al-Zn-Mg (4.5, 2.0 wt.%), precipitation size and density, hardness 3–29088
Al-Zn-Mg (91, 8, 1 and 83, 15, 2 wt.%), struct. precip., kinetic study *(French)* 3–29086
Al-Zn-Mg alloys, SCC, influence of cold rolling *(German)* 3–4213
Al-Zn-Mg alloys, struct. of precipitation free zone after heat treatment 3–43872
Al-Zn-Mg-Cu, ageing conditions and impurity content influence on struct. and fracture 3–34541
Al-Zn-Mg-Cu, pressed semifinished products, softening schedules for ageing 3–34365
Al-Zn-Mg-Cu alloy, 7075, fatigue crack growth near threshold rel. to microstructure 3–34479
Au/a-Se/Al struct., aging effect of capacitance and photoelec. characts. 3–33802
CS_2:Te plasma-polymerised film for laser recording, stability 3–22175
CaF MIM structs., AC, DC and ionic thermocurrent conduction, dielec. breakdown 3–13923
CdS electrophotographic binder layers, degradation process 3–16435
CdSe, aged electrodeposited photoelectrodes in liq. junction solar cell, hot electron luminesc. obs. 3–29394
CdSe film, polymorphism, production by evaporation 3–28235
Co ferrite, prep. by ageing and precipitation 3–39022
Co-Cr-Mo, cast, heat treatment, corrosion resist. and fatigue, tensile props., orthopaedic appl. 3–39294
Cr-Ni (30 at.%), σ-phase form., X-ray obs. 3–53033
Cu base alloys, shape memory stability, grain size refinement, optical refl. obs. 3–43836
Cu film, ageing characts., effect of electrode annealing, elec. resist. meas. 3–18796
Cu-Al_2O_3-Cr, diffusion saturated, precipitation, struct. changes, elec. resist. and plastic deformation study *(Russian)* 3–34324
Cu-Be-Co (2.1, 0.2 wt.%), ageing, influence of rapid solidification 3–29095
Cu-Co-Si, internal oxid. effect on mech. props. 3–9121
Cu-Ni-Cr (30, 3.2 wt.%), spinodally decomposing alloys, high cycle fatigue strength rel. to ageing 3–53237
Cu-Sn shape memory effect, ageing effects 3–14617
Cu-Ti (4 at.%), spinodally decomposing alloys, high cycle fatigue strength rel. to ageing 3–53237
Cu-Zn-Al, martensite stabilisation after ageing 3–43869
Cu-Zn-Al, thermal treatment effect on martensitic transform. 3–43831
Cu-Zn-Al martensite, ageing effects 3–43868
Fe-Cr (19 wt.%), precip. hardening, tensile testing and TEM study 3–24244
Fe-Cr-Co permanent mag. alloy, high temp. X-ray diffr. study, effect of ageing *(Chinese)* 3–27892
Fe-Cr-Mo magnet alloys, semi-hard, glass sealable, for remanent reed contacts 3–33936
Fe-Mo alloys, microstruct. changes near coherent spinodal line *(Japanese)* 3–9100
Fe-Ni-Cr base superalloy, precip. strengthening mechanism 3–14601
Fe-Ni-Cr-Ti austenitic alloy for cryogenic use, Ti and ageing effects on strength and ductility *(Japanese)* 3–9161
Fe-Ni-Si-Co, aging of martensite, Co influence *(Russian)* 3–53087
Fe-Ni-Ti (-Co) austenitic alloys, martensitic transformation and strength, mag. ordering effects *(Russian)* 3–53048
Fe-Pd-Ag, coercive force, residual flux density, Ag conc. depend. 3–57706
Fe-Si-C alloys, carbide precip., TEM study *(Chinese)* 3–34323
$Fe_{78}B_{13}Si_9$ metallic glass, accelerated ageing, 60 Hz appl. 3–29109
n-GaAs, Au-Ge-based ohmic contacts, characts., Auger and SEM anal., ageing effects 3–52250
p-GaP photoelectrode, interfacial chemistry 3–4292
In film, ageing characts., effect of electrode annealing, elec. resist. meas. 3–18796
In-Pb (12 to 14 wt.%), phase diagram, phase changes during ageing *(Japanese)* 3–9029
In-Pb (30 to 40 at.%), phase changes during ageing *(Japanese)* 3–47866
InGaAsP/InP DH LEDs, dark defects, TEM obs. 3–43632
InGaAsP/InP DH lasers, dark defects under accelerated aging 3–50663
InGaAsP/InP laser diodes, V-grooved-substrate buried heterostruct., etching, ageing 3–41869
KBr:Eu^{2+} single cryst., precipitated phases, optical absorpt. and fluoresc. 3–3807
KCl surface, disturbed layer depth and optical strength, processing and ageing influence 3–56293
Mg-Y-Zn-Nd-Zr alloys, creep resist., ageing, strength 3–47926
MgO:Fe, magnesioferrite form., mag. resonance and electron diffr. 3–8726
Mo, origin of Mo_2C precipitate morphology, metallographic anal. 3–53064
NaCl:Ca, Eu, precipitation of Ca, Eu^{2+} fluorescence studies 3–51806
Nb-Nb_3Sn multifilamentary superconductor formed by low temp. liquid infiltration method 3–57445
Nb-NbO_x-Pb Josephson tunnel junctions, current density distrib., ageing dependence 3–33834
Nb-Si system, silicide phase form. and dissociation, field electron microscopy study *(Russian)* 3–23043
NbTi/Cu multifilament supercond. composite, optimum crit. current density *(Chinese)* 3–13979
Ni ohmic contacts on $BaTiO_3$, laser annealing and stability 3–57423
Ni, superalloy MAR-M247, Co effect on microstruct. 3–14618
Ni-Al (14.4 at.%) with coherent precipitates, fatigue crack evolution 3–47942
Ni-Al-Co (35.2, 1wt.%) martensite, reordering and new ordered phase after ageing 3–43870
Ni-base alloy, heat resistant, fatigue resist., 873-1073K, struct. effect 3–43953
Ni-Cr-Ti-Mn, precip.-hardening, struct. transforms. 3–34341
Pb-Cd, flux vortex and dislocation pinning *(Russian)* 3–13976
Pb-Ni solid solution, Ni precip. kinetics 3–43842

ageing continued
n-$Pb_{0.8}Sn_{0.2}Te$ epitaxial films, H_2 effects in stabilising elec. props. 3–47436
$PbTiO_3$-$La(Zn_{2/3}Nb_{1/3})O_3$ ceramics, high-voltage photovoltaic effect, MnO_2 doping influence 3–33755
$Pb(Zr,Ti)O_3$ ceramics, ageing *(French)* 3–52739
Si-SiO_2 interface, fixed oxide charges and interface trapped charges, under temp. stress ageing 3–47409
Sm-Co permanent magnets, coercivity mechanisms, production processes and aging behaviour *(German)* 3–43404
Sm-Co-Cu-Fe-Zr magnets, sintered, phase comp. and struct. 3–4043
Sm(Co, Fe, Ni) system, mag. props. 3–14024
β-Sn film, thermoelec. power, size and temp. effects 3–52274
$Sr_{0.5}Ba_{0.5}Nb_2O_6$:Cu ceramics, ageing study, photovoltaic meas. 3–8524
Ti alloy, $\alpha+\beta$ type, $\alpha'' \rightleftarrows \beta$ transform. during low. temp. ageing 3–14590
Ti alloy, $\alpha+\beta$ type, heat hardening variables 3–14603
β-Ti alloys, unstable, transform., step ageing influence 3–19337
Ti-Al, alloy VT3-1, heat treatment influence on phase and struct. transform. *(Russian)* 3–34296
Ti-Al (4-8 wt.%), fatigue crack growth, role of deform. 3–58252
Ti-Al-Cr-Mo-V, VT22, β solid soln. precipitation, initial struct. effect *(Russian)* 3–29081
β-Ti-Al-Mo-Cr, heat treated, polygonised struct. influence on props. 3–19356
$\alpha+\beta$Ti-Al-Mo-Fe-Cr-Mn, hardened, embrittlement and spontaneous cracking during ageing 3–19422
β-Ti-Al-V-Cr-Mo-Zr (75, 3, 8, 6, 4, 4 wt.%), thermomech. props., and stress corrosion 3–24277
Ti-Al-V-Sn (86, 6, 6, 2 wt.%), annealing behaviour and strengthening 3–24278
$\alpha+\beta$ Ti-Al-V-(Mo), welded joints, heat hardening 3–14625
Ti-Al-Zr-Mo-Si, heat treatment effect on microstruct. and props 3–24281
β-Ti-Mo-V-Fe-Al, metastable, direct ageing for optimum mech. props. 3–19355
β-Ti-Mo-Zr-Al, recrystn., Al effect 3–24264
Ti-Mo-Zr-Sn (11.5, 6, 4.5 wt.%), β-III sheets, microstruct. and props. 3–14628
Ti-Mo-Zr-Sn alloy, VT30, precipitation of second phases *(Russian)* 3–24232
β-Ti-Mo-Zr-(Al), ageing characts. 3–19354
Ti-Mo(V)(Nb), β-stabilised, martensite form. and decomp. 3–19339
Ti-Nb-Ta-Zr multifilamentary superconductor, precipitation, time-of-flight neutron small-angle scatt. 3–19342
Ti-Ni, low-temp. annealing influence on martensitic transition *(Russian)* 3–39118
Ti-Ni alloy, deform. and transform. temp., effect of heat treatment 3–39220
Ti-V alloys, isothermal transformations α-phase and ω-phase formation 3–39155
β-Ti-Zr-Mo-Sn, heat treated, polygonised struct. influence on props. 3–19356
TiNi, ageing, effect on martensitic transform. start temp. 3–53053
U-Nb (5.2 wt.%), shape memory effect degradation rel. to plastic deform. and heating rate 3–43837
U-Nb (5.3, 6.8 wt.%), tensile testing, effect of Ni-plating 3–58163
ZrO_2-MgO, subeutectoid aged alloys, microstructural development 3–39156
ZrO_2-Si_2O_3 (8 mol.%), annealing, microstruct., β-phase content 3–58138
aggregates (materials) *see composite materials*
aging *see ageing*
agriculture
see also farming
artificial satellite orbital dynamics and obs. strategies for agriculture 3–10188
India, rainfall statistics for dry farming tract 3–20091
photoacoustic spectroscopy for plant productivity assessment 3–15295
solar cell module balance-of-system costs impact on photovoltaic electric power systems in rural India 3–58503
water pumping for agriculture using solar cells *(French)* 3–39447
wind energy in agriculture 3–34667
N depth distrib. in single seeds of wheat using $^{14}N(d,p_0)^{15}N$ 3–29790
Aharonov-Bohm effect *see quantum theory*
air
see also terrestrial atmosphere
air-H_2O annular two-phase flow in horizontal tube, film thickness circumferential distrib. 3–37551
air-water, two-phase turbulent flow is noncircular channels 3–22516
air-water flows, void fractions meas., X-ray CT scanner appl. 3–56630
air-water two-phase stream in vertical tube, local characts. meas. by thermoanemometer *(Russian)* 3–42332
axial discharge, anode voltage drop, probe meas. 3–2321
Benard convection, transition to turbulence in layer of air bounded by rigid conducting wall 3–2055
breakdown by 9 55 μm laser radiation 3–32845
breakdown voltage characteristics in a narrow gap 3–18160
cave airflow, effect of visitors on microclimate 3–35265
component separation by selective adsorption of NaA zeolites 3–51926
conductivity relevant to source region EMP 3–37719
convection from hot surface, vel. meas. in vortex model 3–37483
corona discharge study, electrostatic precipitators positive polarity operation 3–27784
coronas, medium press., low energy ion extraction and mass spectroscopic anal. 3–7833
cosmic ray hadron attenuation length *(Chinese)* 3–44629
discharge current, plasma param. in longitudinal mag. fields 3–37720
double plates, vibration damping due to air or liquid layers *(German)* 3–7470
effectiveness of breakdown of negative ions in sheath of avalanche corona discharge 3–7816
electric strength at high temp. 3–42354
electron beam energy branching, appl. to gas lasers *(French)* 3–22567
flow over flat plate, turbulent Prandtl no. in inner boundary layer 3–46536
ground air temp. forecasting, cloud obs. appl. 3–48644
group refractive index meas. by two-wavelength interferometry 3–22572
ionisation, continuous columnar, modified ion balance eqn. 3–17993
ionization behind strong shocks, probe meas. 3–12973
laboratory, wind-blown positive corona development in point-plane gap 3–27790
large sphere-gaps, particulate matter influence on DC breakdown 3–7841

air continued
- laser spark formed by train of picosecond laser pulses, shadowgraph graph 3—22742
- long air sparks, leader discharge ignition criterion *(German)* 3—37725
- low pressure diode, role of avalanching 3—37718
- moist atmospheric, ion content, electrical conduct. meas. 3—46681
- positive corona current, DC and pulse components, interacting needles-to-plane discharge 3—7834
- pressure level in wet gases, cepstrum anal. 3—42088
- pressurised spark gaps, electric strength recovery after breakdown 3—7849
- scintillators as reference light source 3—41947
- solar air heater, double-flow, non-porous, theory and anal. 3—19597
- specific heat, nonadiabatic relax., freq. depend. 3—56640
- steamer-to-spark transition, crit. charge value meas. 3—51420
- streamer-to-spark transition in short point-to-plane gaps 3—7829
- supersonic flow over cavities, heat transfer coeffs. 3—22448
- surface discharge along dielec., spectroscopic measurements 3—33011
- Townsend breakdown, photoionization as secondary mechanism 3—27789
- transport props. low density, 50 to 3000K 3—42350
- unsteady velocity field meas. by fast US imaging system 3—2158
- water-steam-air inhomogeneous two-phase two-component flow, crit. equilib. 3—22510
- He-air mixture, gas viscosity meas. with Fleisch pneumotachograph 3—19858
- N_2-air, axial discharge, EM fields meas., props. of plasma column and electrode regions 3—13003
- SF_6-air mixture, ionisation and attachment coeffs. meas. 3—22732
- SF_6-air-mixtures breakdown voltage measurement, AC and impulse voltage stress *(German)* 3—42353

air bases *see airports*

air bubbles *see bubbles*

air clutches *see clutches*

air compressors *see compressors*

air conditioning
- *see also ventilation*
- commercial buildings, heating and cooling, heat pump appl. 3—58542
- domestic space and water heating in New Zealand, heat pumps appls. 3—58546
- electric dehumidifiers principles for reducing household dampness 3—29447
- electroplating plant heat pump utilisation for energy savings *(German)* 3—29437
- energy conservation in tropical air conditioning: environmental variables 3—34674
- heat pump for drying/dehumidification system experimental assessment 3—39507
- heat pumps for drying/dehumidification systems, experimental assessment 3—39506
- heat pumps for drying/dehumidification systems, potential 3—39505
- heat recovery and central air conditioning in single family house *(German)* 3—29443
- multivalent heat supply for a shopping centre 3—14988
- office buildings, heat transfer from hot to cold areas, heat pump appl. 3—58544
- open-cycle, solar powered, regenerating type solar collector performance simulation 3—34726
- photovoltaic air conditioning system for Barbados 3—39471
- photovoltaic cold storage system 3—39533
- psychrometric chart plotting program, eqns. and procedures 3—35272
- solar absorption cooling systems parasitic power and operational control criteria 3—34721
- space heating solar installations for the production of low-temperature heat 3—14998
- US Chemical Heat Pump Program—an overview 3—24620

air permeability *see permeability*

air pollution
- *see also air pollution detection and control; smoke*
- acid fog chem. comp. in Los Angeles Basin, USA 3—30042
- acid precipitation, controversy over policy options 3—29479
- acid production (H_2SO_4, HNO_3) in warm front 3—54073
- acid rain production models 3—54076
- acidity of rain over Ireland 3—19635
- acidity trend of rain in United States 3—29472
- AD-MARC, atmospheric dispersion module for assessing radiological consequences of accidental releases 3—34754
- advection, time dependent, numerical treatment 3—9506
- aerosol (anthropogenic) effect on local planetary albedo 3—4963
- aerosol composition in remote atmospheres of the northern and southern hemispheres 3—9518
- aerosol content causing change in climate *(Russian)* 3—35257
- aerosol light scatt. rel. to humidity of atmos. 3—10060
- aerosol of urban areas, size, shape and elemental associations 3—4438
- aerosol particles, S, C, N characterisation by ESCA and EGA 3—9517
- aerosol turbulent diffusion in boundary layer (and surface deposition) 3—39867
- aerosols, coagulation in plume from cross-wind line source 3—4423
- aerosols, new approach to particulate dispersion model evaluation 3—24648
- aerosols, nitrated polycyclic aromatic hydrocarbons in urban air particles 3—34751
- air pollution, Pb, Cb, Zn concs. in urban NW England 3—19634
- Aitken nuclei in Brazzaville—Congo, sources and physical characts. *(French)* 3—9516
- Arctic aerosol radiative props. 3—39904
- Arctic air pollution and haze 3—19639
- Arctic haze, hydrocarbons and gaseous tracers (May 1982) 3—58570
- Arctic haze in Alaska, central Eurasian source area 3—15019
- Arctic regions, aerosol light absorpt. and particulate C size segregated meas. 3—9512
- Arctic summer aerosol obs. 3—59034
- asbestos fibre diffusion rates 3—39873
- Bavaria, air pollution regional distrib. 3—4437
- Beer-Sheva, Israel, dust origin and chem. composition 3—59035
- S Bengal, statistical analysis of data from five stations 3—4427
- Bombay region, India, H_2O_2 concs. and photochemical form. mechanism 3—44171
- boundary layer, pollution characts. in land and sea breeze presence, numerical simulation 3—44169
- boundary layer dense gas cloud dispersion 3—48588

air pollution continued
- Brisbane, Australia, O_3 and TSP conc. predicted by Larsen's model 3—20054
- British Isles coastal boundary layer, Aitken nuclei conc. 3—35235
- buoyant plumes in turbulent stratified atm., numerical modelling 3—9505
- California, USA, photochemical pollution model 3—53600
- Caracas Valley, Venezuela, pollution sources and dispersal 3—4428
- carbon tetrachloride, atmos. conc. at Harwell, England 3—19633
- carcinogens, suspected, in ambient air, concs., variabilities and diurnal behaviours 3—34752
- Cerro Tololo Inter-American Observatory, effects of air pollution on atmospheric extinction 3—10065
- Chicago, Illinois, USA, atmos. suspended particulates 3—53601
- N China, rural area, aerosol element comp., pollutant contrib. 3—48216
- climate model, effect of cloud albedo changes 3—15613
- CO_2, atmospheric concentration, energy supply and demand implications 3—58569
- coal technology for MHD power generation 3—29418
- conference, May 1982, Paris, France 3—28
- cooling tower plumes, convective knock-down 3—48204
- Curacao (Caribbean island), pollution sources and dispersal 3—4428
- Detroit metropolitan area, relations between chemical comp. of fine particles and visibility 3—35260
- diesel exhaust emission odor and irritants, review 3—53603
- diesel fuel combustion products, 10 μm IR studies 3—58568
- diesel smoke, optical characts. 3—54121
- diffusion equation theory 3—20053
- diffusion from short duration source 3—39547
- diffusion model for chem. reactive species in boundary layer 3—54072
- diffusion of material instantaneously released into boundary layer 3—39548
- dispersal by tornadic thunderstorm, numerical model 3—4944
- dispersal from finite line source, theory 3—20052
- dispersal in neutral boundary layer, diffusion model 3—54069
- dispersal of pollutants from elevated source, theory 3—25165
- dispersal of pollutants in convective boundary layer 3—54070
- dispersion and turbulent diffusion during calm wind conditions 3—4431
- dispersion in boundary layer, results of 4th European Community Campaign 3—30058
- dispersion of smoke plumes in turbulent boundary layer 3—4432
- dust deposition rate onto rough and smooth surfaces 3—54075
- elemental composition of submicrometre particles from coal combustion 3—9533
- EPRI Sulphate Regional Experiment (SURE), database format and composition 3—29478
- W Europe rain acidity trends 3—44492
- fallout from 16 Oct. 1980 Chinese H-bomb 3—15017
- fluorescein particles, 18.6 μm, comparison of obs. and predicted air concs., radioisotope deposition appl. 3—9515
- forecasting of daily air pollution for Belgium 3—4942
- gamma-ray exposures near a finite Gaussian plume 3—29748
- gaseous organic mutagens in ambient air, concs., variabilities and diurnal behaviours 3—34752
- Germany, North Sea coast, boundary layer dispersion processes from aerosol lidar obs. 3—39892
- Germany, North Sea coast, pollutants dispersion meas., use of tetroons in PUKK 3—39920
- Germany, pollution transport study 3—4941
- ground level point source at Worcester, Massachusetts, short range dispersion 3—48208
- ground pollution source surface layer diffusion, similarity forms 3—15015
- ground-level max. concs. downwind of elevated point source model 3—44172
- Guayana, Venezuela, pollution sources and dispersal 3—4428
- heat island (nighttime) above Al smelter in Australia 3—4911
- Helwan, Egypt, dust content effect on total direct solar radiation depletion 3—9507
- Helwan industrial area, Egypt, dust pollution 3—53602
- Helwan Industrial Area, Egypt, pollutant dust deposition and anal. 3—48209
- industrial pollution, injurious gaseous impurity conc. calc. *(Hungarian)* 3—44168
- Japan, radioactive fallout due to 26th Chinese nuclear explosion test 3—29476
- Jerusalem, O_3 conc. obs. in 1977-1981 period 3—4429
- Lacq industrial area, SW France, cloud condensation nuclei obs. *(French)* 3—25160
- light element analysis methods for atmospheric aerosols 3—9532
- London and S England 1962-79 visibility trends due to sulphate aerosols conc. 3—44546
- long-range dispersion expt. using ^{85}Kr tracer 3—39866
- long-range transport and horizontal wind vectors 3—30022
- long-range transport by 3-D model 3—54068
- long-range transport by trajectory models 3—44173
- long-range transport depend. on emission height 3—4945
- long-range transport model with boundary layer chem. 3—44523
- Los Angeles, California, USA, nitrogenous pollutants 3—48214
- Los Angeles Basin, USA, nighttime pollution vertical struct. 3—4946
- Los Angeles basin, USA, origin of aerosol sulphur size distrib. 3—20055
- mesoscale air pollution dispersion, Eulerian GRID model 3—48206
- mesoscale air pollution dispersion, Lagrangian PUFF model 3—48207
- mesoscale dispersion models 3—44522
- methane, atmos. conc. from Greenland ice core obs. 3—29989
- methane, biosphere production increase following global temp. rise 3—59029
- methane increase effect on O_3 content of atm. 3—20082
- methanol as boiler fuel for electric power generation, combustion test and economics 3—29372
- methyl sulphide, photooxidation processes 3—25155
- methyltin species in atmosphere, aeolian transport rel. to concentrations and fluxes in seawater 3—29951
- Milan, Italy, mathematic model for air pollution forecast and alarm in urban area 3—4418
- Milford Haven SO_2 pollution dispersion 3—44170
- Minnesota, rain near power plant, pH and chem. props. 3—48210
- multicomponent aerosol pollutants, extinction coeff., role of different chem. species 3—9508
- multiple point source dispersion model 3—44170
- National Observatory of Athens, Greece, air pollution anal., use of wind and smoke tracer 3—44186

air pollution continued
New York subregion, diurnal vars. and comp. of summer aerosol rel. to meteorological variables 3—4419
Nord-Pas-de-Calais area of France, forecasting of air pollution 3—4943
North America, chem. composition of precipitation 3—48610
nuclear plant liquid and airborne releases, Weather Information and Display emergency response system 3—41333
nuclear plants, offsite dose assessment, simple lake breeze front position technique 3—21578
nuclear power plant accident, doses received while crossing plume of radioactive material 3—4653
nuclear power plant wake region, diffusion of radioactive pollutants 3—44175
numerical dispersion model for accidental releases 3—4433
Obra, India, elec. power plant impact on local vegetation and soils 3—39554
Paris, France, sulphate pollution rel. to meteorological conditions 3—4948
particle composition determ. from ambient samples 3—9519
particle fallout during plume rise 3—39546
particle light element anal. by gamma ray emission anal. 3—9531
particulate deposition to ground, influence of humidity 3—20058
particulate deposition vel. by box model 3—20059
buoyant plume behaviour in neutral and stable condition 3—20048
plume dispersal model describing conc. fluctuations 3—20051
plume dispersal model incorporating decay of pollutants 3—44176
plume growth rate models involving change of atmos. stability 3—15576
plume rise, effective stratification determ. method 3—48681
plume rise and dispersal from multiple stack source 3—4426
plume rise behaviour including stack tip downwash 3—20050
plume rise meas. of Turbigo, Italy 3—20049
plume trajectories from mechanical-draught cooling towers at Plant Gaston, obs. and modellng 3—4420
Po Valley, Italy, aerosol characteristics 3—4436
prediction of accidental spillage hazard to populated areas 3—4434
Qinghai Province, China, surface water and precipitation acidity 3—48211
quality modelling documentation for the EPRI Sulfate Regional Experiment in USA 3—29477
Quebec, Canada, acid and heavy metal long-range transport 3—54084
radar reflecting chaff plume dispersal in boundary layer 3—44177
radiation scheme for circulation and climate models, effects of aerosol particles and gaseous polutants 3—10052
radioactive accident generated aerosols, assessment methodology 3—24649
radioactive plumes from nuclear power plants, wind field simulation in complex terrain 3—24650
radioactive pollution dispersal downwind of nucl. power plant, wind-tunnel expts. 3—44174
radioactive waste disposal, atmospheric transport from burial sites 3—44179
radioactivity contamination during 1980 in European Community 3—9520
radioisotope deposition-resuspension process, estimation of airborne and surface contamination 3—4424
rain acidity data, review of questions 3—4439
roadway pollutants dispersion, comparison of models using Texas data 3—34750
rocket exhaust emissions from TITAN III and ATLAS/Centaur launches 3—15574
rocket exhaust generated cloud condensation nuclei 3—15573
satellite solar power systems, corridor effect in atmosphere resulting from launching 3—48213
satellite solar power systems, environmental impact of launching vehicles on middle atmosphere 3—48212
Saudi Arabia, location of monitoring network sites 3—4430
Saudi Arabia, pollution dispersal model 3—4430
Savannah River Plant, South Carolina, USA, atm. tritiated water release, environmental monitoring 3—58571
Seney National Wildlife Range, Michigan, clean air mass, aerosol characts. 3—9509
small particulates deposition onto grass 3—20057
soot formation in combustion of homogeneous hexane-air mixture at high press. 3—53395
South Pole snow, atmospheric trace metals (1928 to 1977) deposited 3—9511
Southampton Water neighborhood, England, SO_2 inventory correl. with wind data 3—9513
St. Louis region, Missouri, surface and upper air winds, pollution implications 3—35215
Sudbury, Ontario, Canada, metal fallout from nearby smelters 3—39542
sulphate aerosol dynamics in atmospheric plumes, model 3—4422
sulphate and nitrate aerosol evolution in plumes 3—4435
sulphate deposition in precipitation from different cloud types 3—59066
sulphate deposition onto pine plantation 3—39871
sulphate production in clouds due to SO_2 oxidation 3—20056
S Sweden background aerosol, comp. rel. to particle size 3—44491
Sydney, Australia, atmospheric cones of non-methane hydrocarbons 3—19637
Sydney, Australia, Meteorology of O_3 and other pollutants 3—54074
systems analysis appl., conf., Rome, Italy (Sept. 1981) 3—44898
transfer of pollutants in upland regions, role of occult precip. from clouds 3—53606
transport, dispersion and elimination from point source 3—48205
transport, mesoscale var. of average airflow rel. to time integrated conc. Gaussian models 3—4903
transport, vertical struct. of eddy diffusion coefficient in planetary boundary layer 3—4904
transport in atmospheric boundary layer, numerical model 3—15604
trichlorofluoromethane, atmos. conc. at Harwell, England 3—19633
Trino Vercellese meteorological obs. in R.Po valley, Italy 3—54133
troposphere dispersal and transport of impurity cloud 3—48637
turbidity of polar region atmos. 3—15563
two dimensional trajectory model 3—29474
two-layer model for mixing between surface layer and air aloft 3—44490
United States, eastern, visibility and aerosols anal. 3—9510
urban air pollution concentration model 3—53600
vapour dispersion, role of mol. props. 3—58572
Venezuela, acid rain over rain forest, natural or pollution? 3—59036
wake downstream from industrial site, turbulent thermal and kinematic props. 3—54105
Washington, USA, acid rain and lake susceptibility 3—24646
Washington DC smog problem, effect of O_3 depletion, natural hydrocarbons and precipitation 3—48203
washout of aerosol pollutants by rain and snow 3—4947

air pollution continued
water vapour plume model 3—59059
Windscale, Cumbria, radioactivity meas. against nucl. weapon fallout 3—9500
Br/Pb ratio in airborne particles, determ. method 3—48218
CO, in troposphere, mixing ratio meas. by space shuttle 3—30043
CO, model of global zonally averaged distrib. *(Russian)* 3—54087
CO pollution conc. in air of Yerevan, Armenia, USSR *(Russian)* 3—34753
CO_2 concentration increases, effect on climatic multi-layer energy balance model 3—59100
CO_2 pollution of air, effects on climate 3—4954
NH_3 concentrations in urban and rural atm. 3—9951
NHO_3 concentrations in urban and rural atm. 3—9951
NO_x secondary pollutant formation processes 3—4940
Na air and ground concentrations from LMFBR, model and observed data comparison 3—24651
O_3 air pollution due to photochem. of oil refinery emissions 3—54067
O_3, daily max. conc. forecasting in NE United States 3—44524
O_3 episodes in SW Ontario, Canada, assoc. meteorological conditions 3—4421
O_3, in boundary layer, chemistry and transport model 3—54071
O_3, long-range transport model with boundary layer chem. 3—44523
Pb in air of Rio de Janeiro, Brazil 3—19636
Pb pollution levels and sources in Baghdad, Iraq 3—39541
Rn levels in houses, review of sources 3—53604
^{222}Rn, airborne, in a Rn laboratory, obs. 3—34990
SF_6, transport and dispersion by land breeze-sea breeze system 3—4417
SO_2, air pollutant absorpt. by droplets, and chem. reactions 3—39872
SO_2, Gent, Belgium, statistical distrib. of daily concs. 3—39549
SO_2 mass flow measurement, Ghent industrial area, 5th CEC campaign on remote sensing 3—34755
SO_2 pollutant oxidation processes and sulphate deposition 3—54066
SO_2 pollution of Scandinavia, non-photochem. oxidation 3—39870
SO_2 seasonal conc. model *(Italian)* 3—53598
Se in lakes near smelters at Sudbury, Ontario 3—29473
Sn species in atmosphere, aeolian transport rel. to concentrations and fluxes in seawater 3—29951
Sr isotope fallout from Chinese weapons tests 3—15016

air pollution detection and control
aerosol meas. using Sinclair nucleus counters 3—19649
aerosol samplers, efficiency for large wind-borne particles 3—53614
atmospheric dust, fission products and radionuclide conc. 3—44178
coal-fired power stations, dust and noise emissions prevention *(German)* 3—39550
diesel engine exhaust, C soot, electrostatic precipitation 3—39562
diesel exhaust emission odor and irritants, review 3—53603
diesel exhaust stream particle mass conc. anal. by optical techniques 3—19540
dispersion parameters from smoke puffs photographic density meas. 3—48217
dose limitation system appl. in radiation protection monitoring programme of nucl. power plant 3—17085
electrochemical O_2 partial pressure analyser with automatic temp. compensation 3—9367
energy dispersive X-ray fluoresc. spectrometer appl. to air pollution study 3—15031
engine emission checking, using inertia collection system 3—29486
ethylene, optoacoustic spectroscopy at 9- and 10-μm $C^{12}O_2$ laser wavelengths 3—16428
ethylene mass flow measurement with an automatic CO_2 laser long-path absorption system 3—29480
ethylene monitoring by CO_2 laser technique 3—24655
fabric dust collectors, surface electrostatic fields, reduction of flow resistance and penetration 3—39559
fabric filter, electrostatically augmented, dust movement between electrodes 3—39560
fibrous and nonfibrous airborne particles, discrimination by light scatt. technique 3—19653
flue gas from coal combustion, electron beam treatment, electrostatic precipitator development 3—39561
Fourier transform IR emission spectra of CO under nonequilib. vibr. excitation 3—6628
Fourier transform IR remote detection of trace gases in localised cloud, detection limit 3—9525
gas density, conc. and temp., laser beam meas. *(German)* 3—34762
gas pollutant conc. determ. by laser comparative absorpt. 3—29484
gas sensor, solid state, calibration 3—16347
gas sensor for air pollution detection, homogeneous semiconductor device design 3—10820
gas turbine combustion modelling, pollutant emission calcs. 3—53612
gaseous contaminants detect. by spectroscopic means, optimum spectral ranges 3—48222
gaseous pollutants, meas. using mobile Fourier transform IR system 3—9527
Harwell 3230 beta-in-air monitor surveillance, alarm and record system 3—31851
hot gas, quantitative emission and absorpt. spectrometry from moderate resolution spectra 3—9526
industrial fugitive dust control with electrostatically charged fog devices 3—39556
inhalable particle control using electrostatically charged fog generator 3—39555
laser absorption diagnosis of atmospheric pollutants 3—4425
laser transmissometer for long-path extinction meas. 3—4457
lidar, pulsed differential absorpt. CO_2, for atm. species remote sensing, heterodyne and direct detect. 3—54135
meteorological tower of Trino Vercellese Environmental Laboratory, Italy 3—54133
Milan, Italy, mathematic model for air pollution forecast and alarm in urban area 3—4418
monitoring using potential gradients and point discharge currents 3—29483
nuclear power stations, charcoal adsorbers for radioiodine capture 3—19640
organic lead pollutants in air meas. 3—29485
particles collected by Andersen sampler, ^{57}Fe Mossbauer spectra 3—4443
particulate dispersion model evaluation, new approach using receptor models 3—24648

air pollution detection and control continued
  particulate matter, chem. element comparison of individual particle and bulk analysis methods 3—15032
  particulate removal, electrostatically augmented gas cleanup devices 3—39558
  particulates meas., calibration of smoke shade methods 3—19647
  passive IR remote sensing, advanced signal processing 3—58579
  passive remote sensing, zenith skylight optical path length 3—48219
  pine needles as detectors, neutron activation anal. 3—34757
  prediction of accidental spillage hazard to populated areas 3—4434
  radiation monitoring experience in the vicinity of nuclear power stations 3—48215
  radioisotopes, comparison of collection props. of passive samplers and high-vol. air samplers 3—19652
  rain acidity measurement, analytical techniques rel. to questions regarding acidity data 3—4439
  realtime air assay of radionuclides by cryogenics 3—9535
  remote sensing, CO meas. in troposphere by space shuttle 3—30043
  respirable aerosols, electrostatically enhanced collection, granular bed filters 3—39557
  RETADD II: modeling long-range atmospheric transport of radionuclides 3—911
  roadway pollutants dispersion, comparison of models using Texas data 3—34750
  sampling and analysis technique using release of chemicals and electron capture gas chromatography 3—24656
  Saudi Arabia, location of monitoring network sites 3—4430
  SODAR, appl. in pollutant meas. and related obs. from nucl. power plants 3—58582
  solid particles mass conc. meas. using transversally vibr. filter bands *(German)* 3—34761
  steam power station continuous emission measurements eval. *(German)* 3—39551
  suspended particulate measurement, intercomparison of 6 instruments 3—4455
  Tehran municipal solid waste incineration for energy recovery, air pollution effects 3—34664
  thermal power plants, large capacity protection against excessive environmental and air pollution *(Slovenian)* 3—53605
  trace matter in troposphere and stratosphere, anal. problems 3—48102
  tropospheric effects of satellite power systems 3—15018
  urban areas, suspended particulate matter and SO_2, levels and trends 3—9514
  visibility impairment by pollution, multiwavelength telephotometer instrument 3—19648
  visual range determination by photographic technique 3—4456
  CO conc. meas. over long path using pulsed injection laser 3—4444
  CO tropospheric mixing ratio inference from gas filter radiometer data 3—53599
  H_2 trace concentration detect. using coherent active Raman spectroscopy 3—58580
  HCl atmospheric trace meas. using photoacoustic system 3—48224
  HTO vapour, exchange with water surface 3—41182
  $La_{1-x}Me_xMnO_3$, Me=K, Na, reduction products, car engine exhaust gas control appl. *(Italian)* 3—53443
  NH_3 vapour reversible optical waveguide sensor 3—34759
  NO_2, determ. in atm. using microphotodiode array in dispersive spectrosc. *(French)* 3—58457
  NO_x emission controls and secondary pollutant formation 3—4940
  N_2O, determ. of content in air using IR gas analyser in hospital environ. *(Hungarian)* 3—39432
  N0 concentration monitoring using UV laser differential-absorpt. techniques 3—15030
  ^{13}N, pharmacokinetic studies in inorganic nitrogenous air pollutants 3—4310
  O_3 content meas. by Umkehr method, 32-46 km altitude 3—59061
  O_3 precursor monitor, automated operation 3—4441
  Pb in air, detection with radioisotope excited X-ray fluorescence unit 3—58458
  SO_2 level measurement using SO_2-air mixture calibration standards 3—39570
  SO_2 pollutant in atm., conc. meas. with portable direct reading instrument 3—44185
  SO_2 sensor using solid-sulfate electrolytes 3—15029
air pumps *see compressors*
air terminals *see airports*
air tightness detection *see leak detection*
air traffic
  noise effects, social survey data, reliability anal. 3—12424
air-traffic control
  see also aircraft
  meteorological and clear-air phenomena, detection with air-traffic control radar 3—25251
  weather radar research and development program from Federal Aviation Administration 3—25198
aircraft
  see also aerospace control; aerospace instrumentation; air-traffic control; helicopters
  Astroplane, aircraft for operating IR-submillimetre telescope 3—30193
  detection and bearing angle estimation by acoustic sensors 3—17754
  EM scattering from aircraft, transmission-line modelling, computer solution 3—12051
  equivalent noise level as a function of itinerary 3—46372
  fuselage, sound transmission loss meas. using acoustic intensity approach 3—56391
  noise, community annoyance, survey data anal. 3—12425
  noise, community annoyance, survey data anal. 3—12426
  noise, community annoyance, survey data anal. 3—12427
  noise, community annoyance effects 3—58575
  noise reducing operational measures, airplanes in airport region *(Hungarian)* 3—58577
  propeller driven light aircraft, in-flight exterior noise on fuselage meas. 3—12429
  transonic aerodynamics, computational design 3—12705
  turbulent wall pressure fluctuations at large Reynolds numbers, field characts. 3—27500
  Venus atmosphere, possible scheme for aerostatic aircraft 3—15809
aircraft instrumentation
  displays, diffractive optical elements appl. 3—6937
  gradiometers, real time gravity filtering *(Japanese)* 3—39940
airfields *see airports*
airglow
  see also atmospheric spectra; aurora; nightglow; sky brightness; twilight
  dayglow, remote sensing using satellite-borne limb-scanning UV spectrometer 3—15806
  dynamic processes scanning using airglow emission photometric system 3—48790
  equatorial plasma depletions, study of airglow emission 3—10114
  ground-based observations of airglow emissions and thermospheric dynamics at Calgary, Alberta, results from automatic observatory 3—54179
  polar cap arc optical emissions and electron precipitation 3—54180
  polar cap O I 5577 Å emission temporal var. and stratospheric warming 3—5008
  satellite airglow data, two-dimens. inversion technique 3—10109
  spacecraft-atmosphere interaction, induced optical glow 3—59146
  temperature deduced from OH radical airglow emissions 3—15622
  thermosphere, spectroscopic imaging from Space Shuttle 3—20124
  UV spectrum of airglow and zodiacal light, rocket obs. 3—30297
  Mg^+ morphology of F-region from airglow obs. 3—30114
  N airglow from ^2D state downwind from production region 3—20161
  N^+ dayglow intensity at 2143 angstrom used for NO conc. estimation 3—5007
  O I 630 nm emission from polar aurorae 3—35334
  O I 630 nm emission intensity rel. to W-E waves 3—5003
  O I 6300 Å emission rel. to solar activity 3—10110
  O I 989- and 7990 angstrom emission spectra 3—10111
  O I dayglow at 1304 and 989 angstrom 3—10112
  OH Meinel band system and space vehicle surface glow 3—59147
airports
  Minsk, forecasting radiation and radiation-advective fogs 3—48646
  noise reducing operational measures, airplanes in airport region *(Hungarian)* 3—58577
  radiation fog forecasting, statistical method for Rhein-Main-Airport *(German)* 3—15652
alarm systems
  personnel-exposure meter, wide-range integrating, with alarm thresholds 3—58842
  PWRs, 1300 MW, in France, improved control room design 3—31648
albedo
  P/ Comet Encke (1980 XI), 10 μm feature and dust albedo, IR obs. 3—35540
  P/ Comet Stephan-Oterma (1980 X), 10 μm feature and dust albedo, IR obs. 3—35540
  P/ Comet Tuttle (1980 XIII), 10 μm feature and dust albedo, IR obs. 3—35540
  Earth, aerosol influence on albedo of atm.-surface system *(Russian)* 3—35261
  Earth, planetary albedo for clear sky conditions 3—15619
  Earth, satellite albedo meas. rel. to cloud amounts around globe in belt from 54°N to 45°S 3—10043
  Earth, sunlight effect on LAGEOS orbit 3—39984
  Earth albedo, model-generated atmospheric radiation fields compared with satellite meas. 3—10053
  Earth surface, reflected radiances rel. to space shuttle feature identification and location expt. 3—30147
  global insolation parameterized model under partially cloudy skies 3—25187
  ice surface albedo, vars. due to melting and effect on climatic response of Earth to orbital vars. 3—4952
  Moon, albedo correlation with polarisation props. 3—20271
  Moon, surface albedo rel. to polarization, digital image processing appl. 3—44680
  natural waters, average irradiance attenuation coeff. determ., math. procedure 3—48547
  Pacific Ocean, tropical, surface press., albedo and outgoing IR radiation 3—59011
  planetary albedo spectral variability use in surface type anal. 3—39938
  planetary atmospheres, diffuse refl. and transmission of radiation for Rayleigh phase function 3—59199
  Pluto, diameter and albedo from IR obs. 3—25379
  Pluto, photometry during 1982 opposition, light curve var. and albedo effect 3—59261
  stratosphere aerosol layer effect on albedo 3—44550
  thermal neutron albedo determination in pulse experiments *(Russian)* 3—41069
  Triton, diameter and albedo from IR obs. 3—25379
  Uranus, visible obs. 3—54284
alclad *see aluminium alloys*
Alfven waves *see magnetohydrodynamic waves; solid-state plasma*
algebra
  see also Boolean algebra; linear algebra; matrix algebra
  associative, of functionals containing $\delta(x)$ and r^n 3—54613
  CAR algebra, extensions of quasi-free derivations 3—30587
  colour algebra, properties of quarks and leptons 3—40847
  commutativity of adjoint operator algebras 3—30589
  commutativity of products for adjoint operators 3—30588
  derivations commuting with abelian gauge actions on lattice systems 3—30977
  Lie algebra, restricted, 3-dimens., reducible representations *(Russian)* 3—36170
  noncommutative probability, open problems 3—16110
  operator algebra approach to optics 3—1554
  quasilinear and Gaussian transformations on Gaussian measure spaces 3—35831
  Shirokov algebras of generalised functions 3—35886
algebraic manipulation *see symbol manipulation*
algorithms (computer listings) *see subroutines*
aliphatic compounds *see organic compounds*
alkali metal alloys
  see also caesium alloys; lithium alloys; potassium alloys; rubidium alloys; sodium alloys
  X-ray edge behaviour, universal sequence of lineshape 3—38956
alkali metal compounds
  see also alkali metal alloys; alkali metal halides; caesium compounds; francium compounds; lithium compounds; potassium compounds; rubidium compounds; sodium compounds
  acetylacetonate, anion triplet state perturbation by cations 3—43598
  alkali metal oxide-Nd_2O_3-P_2O_5-H_2O system, phase formation, hydrothermal synthesis 3—47086

alkali metal compounds continued
aluminosilicate glasses, heat capacity and Gruneisen parameters 3−2840
aluminosilicate glasses, leaching, effect of Al_2O_3 additions 3−2822
chalcogenides, cohesive props., interionic pots. anal. 3−22820
cyanides, density functional theory 3−2497
cyanides, optical absorption spectra of triplet mol. excitons 3−19156
dimer ions, pot. curves calc. using semi-empirical pseudopot. method 3−31948
elastic const. correls. with other ionic crysts. of rocksalt struct. 3−42695
fluorides+C ions, multiple ionisation, electron transfer, K X-ray emission spectra 3−32186
graphite intercalation cpd., double-axis and triple-axis X-ray spectrometer results comparison 3−42491
halide crystals indentation, transparent, microscopic obs., indentation testers design 3−24436
intercalation compounds with graphite, electronic interlayer states, linearised APW calc. 3−52006
intercalation compounds with graphite, higher stage, relaxed incommensurate struct. of intercalant layer 3−22858
intercalation materials susceptible to reduction in non-aqueous media, electrochemical reversibility and structure 3−58431
methanesulphonate salts, inelastic neutron scatt. and methyl rot. barriers 3−21764
mixed metal trimers, struct., diatomics-in-molecules approx. 3−17377
molten, hypersonic velocities, Brillouin spectra study 3−33363
muonic Coulomb capture 3−8751
nitrates, cryst. and molten, anharmonicity of nitrate ion vibrs., effect of temp. and phase state 3−52789
nitrates, molten, IR line widths, fundamental tones, interparticle interaction effects *(Russian)* 3−3739
oxide-WO_3 systems, rapidly quenched glasses prep. and characteris. 3−29054
oxides, change in ground state symmetry ab initio CI calcs. 3−6541
perchlorates, structural phase transitions, acoustical investig. 3−51777
salt solns. in liquid alkali metals, elec. resist. and solvation enthalpy 3−2857
silicate glass, AES on fractured surfaces, comp. obs. 3−14903
silicate glass, inert pair chem., Tl^{2+} ESR study 3−33977
sulphate-$ZnSO_4$ glasses, elec. cond., mixed alkali effect 3−13533
TCNQ salts, lattice instability and spin-Peierls phase transition 3−23007
MoS_2, alkali metal intercalates, ESR spectra and NMR Knight shift 3−14130
$Sn(MPO_4)_2.xH_2O$ (M=alkali metal or H), double phosphate prep. and characts., phase transforms. *(Russian)* 3−47104
ZrS_2 (Se_2), alkali metal intercalates, ESR spectra and NMR Knight shift 3−14130

alkali metal halides
see also compounds of individual alkali metals, e.g. sodium compounds
adiabatic second-order elastic consts. in high-temp. region, temp. depend. 3−2642
adsorption of furan on alkali halides, IR spectra, adsorpt. pot. calc. 3−9354
alkali halide: $In^+(Tl^+)(Sn^{2+})$, at. photoionisation cross section, determ. from intracentre luminesc. quantum efficiency change 3−26718
alkali halide:$Ga^+(Ge^{2+})(In^+)(Sn^{2+})(Tl^+)(Pb^{2+})$, impurity excited state struct., polarised luminesc. study 3−38871
in aqueous salt solutions, conc., partial molar volumes *(French)* 3−53441
band gap and dielec. const., plasma oscill. theory calc. 3−38304
Bloch states of positronium in alkali halides 3−14381
chlorides, molten, co-ordination of heterovalent and cation impurities 3−2375
chlorides, quantum yield spectra of photoelectron emission in XUV region 3−34195
core-hole induced relax. processes and photon stimulated desorption 3−57232
cross slip processes 3−18374
cryst. defect form. mechanisms 3−56876
crystal two-dimens. nucleation temporal development on KCl 3−13143
crystals, Anderson-Gruneisen parameter 3−47074
crystals, ion-electron emission theory 3−52889
Czochralski growth, crystal morphology studies by bubble method 3−22808
deformable lattice, electron, hole and exciton instabilities 3−57047
dielectric const., polarisability and anharmonic behaviour 3−38747
direct gap crystals, nonlinear adsorpt. 3−7058
elastic consts. and thermal expansion 3−22960
electrolytes, aq., enthalpies of mixing, 373.15K 3−33451
electrolytic aq. soln., McMillan-Mayer ion-ion pot., Coulombic contrib. correction 3−22753
excited F-centre ionisation, evidence for lattice tunnelling 3−28301
$F_2{}^+$-centre spectrum, comparison with $H_2{}^+$ using one-electron model 3−13762
F- and F_A-centres, HF cluster calculation 3−3116
F-centre absorption energy, temp. and press. depend. 3−23319
F-centre form. and excitons, time and temp. depend. 3−56893
F-H pair production by UV laser irrad., absorption spectra studies 3−56895
fluorides, electron transfer to L-shell following double K-shell ionisation of F, X-ray spectra 3−52870
free energy in solid phase, based on $H_2{}^0{}_{98}$ 3−38101
interionic forces, quantum mechanical theory 3−2464
iodides, ion form. from solid by fast dust particle impact 3−34191
iodides, luminescence from free and self trapped excitons 3−57975
ion pair pots., appls. to liq. struct. and point defect props. 3−33181
IR absorption of surface phonon modes in small crystals *(Japanese)* 3−3736
lattice dynamics, self-consistent and quasiharmonic approxs., eqn. of state and high temp. lattice instability 3−42744
lens press forging for IR optical systems 3−7226
light scatt. from dislocations, elasto-optic contribs. 3−57944
magnetic susceptibility, separation into diamagnetic and paramagnetic components 3−8645
melting, interatomic pot. approach 3−23020
mixed, F-band position in absorpt. spectrum, Mollwo-Ivey relations 3−43569
mixed crysts., rocksalt struct., elastic consts. 3−22959
molecules, potential energy function calcs. 3−46047
monatomic ions, charge clouds, density difference functions 3−45812
phosphors, U activated, synthesis and luminescent props., matrix prop. effects 3−52838

alkali metal halides continued
photoionisation, of like ions, excitation in A and C absorpt. bands 3−47705
photon stimulated desorption, three-step model 3−57230
radiation-induced processes, cation impurities role, review 3−2600
recombination induced defect form., conf., Urbana-Champaign, USA (June 1982) 3−54573
recombination induced F-H pair prod., cascade spectroscopy studies 3−56894
repulsive energy and Gruneisen coeff., ab initio and Thomas Fermi calc. 3−38018
self-diffusion, cation migration, theory of rate processes *(French)* 3−42831
self-trapped excitons and F+H pair form. 3−57291
single crystal, surface phonon dispersion curves by He atom time-of-flight spectrosc. 3−18548
soft X-ray photocathode characterisation 3−45764
solutions, IR absorpt. line freq. and half-width, temp. depend. *(Russian)* 3−3740
thermal expansion and lattice dynamics, variational approach 3−42743
Tosi-Fumi ionic radii, optimisation 3−33182
valence p-states, spin-orbit splitting 3−33689
$VO_4{}^{3-}.Sb^{3+}$, $VO_4{}^{3-}.Al^{3+}$ and $SiO_4.Th^{4+}$ mol. impurity complexes, IR absorpt. study 3−23985
$AsO_2{}^-$ impurity centres in alkali halide crystals, optical spectra study 3−23981
NaCl stratified solar pond gradient zone constraints 3−39518

alkali metals
see also caesium; francium; lithium; potassium; rubidium; sodium
alkali halide monatomic ions, charge clouds, density difference functions 3−45812
alkali metal+halogen ions, mutual neutralisation and ter mol. recombination in burnt flame gases 3−41665
alkali metal-graphite intercalation compounds, phase diagrams 3−23015
alkali metals+H, reaction rate meas. method 3−48066
alkali-He self-oscillating magnetometer 3−30908
atomic isotopes, selectively ionised, extraction form laser-induced plasma 3−2288
atoms, ground state hyperfine transition line shifts, hyperfine-interaction noncontact term contrib. 3−21722
atoms, highly excited states, radiative and spectrosc. props. *(French)* 3−31969
atoms, inner shell electron photoionisation, outer shell environment effects 3−41540
atoms, NMR line shape in linearly polarized RF field, weak-pumping approx. 3−21683
atoms, optically pumped, RF multiple-quantum transitions 3−17251
atoms, photoabsorpt. cross sections near zero-field ionisation threshold, Stark effect 3−11739
atoms, photoionisation of outermost closed shell 3−21735
atoms+hexafluorobenzene, collisional ionisation 3−1465
atoms (diatoms), core-valence correl. effects inclusion in pseudopot. calcs. 3−1255
band struct., role of electron-electron interactions 3−28262
cations, local density approx., self-interaction correction 3−41479
clusters, struct., binding energy, diatomics in molecules approx. 3−17398
coatings, plasma impurity, influx, fusion reactor appl. 3−18073
elemental distrib. in IRDP basalts from E Iceland 3−19957
energy transfer in collisions between excited atoms, review 3−41657
graphite-alkali metal intercalation cpds., chemisorpt. of H_2, ESR and elec. resist. investig. 3−51927
heavy, effective ion-ion interaction 3−18638
heavy, pseudopot. calc., nonlocality and d-level effects on struct. stability 3−38332
impurity excitation effects 3−3775
interference in flame emission spectrometry, theoretical model 3−19545
ion source, based on surface ionisation, for ion-photon emission 3−49499
ions, effects on viscosity of conc. kappa-carrageenan and agarose gels 3−7536
liquid, DC transport coeff. calc. by derivatives of time correl. functions 3−28330
liquid, ion-ion effect potential at melting point 3−37769
liquid metal vaporisation from rectangular channels, startup conditions 3−50906
liquid phase, entropy calc. from consideration of ionic atm. 3−2842
mean-square displacement and Lindeman's criterion for melting 3−42742
phonon drag quenching in elec. resist. 3−23356
phonon spectra, local model pseudopotential calc. 3−13377
point-contact electron phonon spectral functions and coupling parameters 3−8159
pseudopotential theory 3−51726
PVT diagram determ. setup, up to 2000-2500°C 3−36139
Rydberg atomic state radiation and polarisation characts. 3−21671
spin susceptibility, pseudopot. theory 3−28509
thermal expansion coeffs., pseudopot. method *(Russian)* 3−23062
vapour lamps, spectral characts. of radiation *(Chinese)* 3−22180
X-ray edge behaviour, universal sequence of lineshape 3−38956
MgO:alkali metal, ion implanted, precipitation and defects 3−2827

alkaline earth alloys
see also barium alloys; beryllium alloys; calcium alloys; magnesium alloys; strontium alloys
No entries

alkaline earth compounds
see also barium compounds; beryllium compounds; calcium compounds; magnesium compounds; radium compounds; strontium compounds
chalcide crystals, third-order elastic const. determ. from Gaussian pot. model 3−8117
elastic const. correls. with other ionic crysts. of rocksalt struct. 3−42695
fluorides: $Er^{3+}(Ho^{2+})$, spin transfer, ^{19}F NMR shift 3−33995
fluorides, defect struct. and defect-defect interactions, Gd^{3+} EPR study 3−38691
fluorides, electron transfer to L-shell following double K-shell ionisation of F, X-ray spectra 3−52870
fluorides, void lattice form., radiation effects 3−37971
fluorides+C ions, multiple ionisation, electron transfer, K X-ray emission spectra 3−32186
Group II monohalide radicals, pot. energy curves calcs. 3−1453
hexaferrites, Fe^{3+} ion low-spin state in trigonal bipyramid *(Russian)* 3−3418
magnetic rotation spectroscopy with synchrotron radiation 3−26761

alkaline earth compounds continued
monohalides, rot. spectra, hyperfine struct., microwave absorpt. and MODOR spectra 3−6613
oxides, Debye-Waller factors and mean square displacements 3−38019
oxides, lattice dynamics 3−22992
oxides, $Li^+(Na^+)$ ion implantation defects, EPR, luminesc. and optical absorpt. study 3−2584
oxides, muonic Coulomb capture 3−8751
sulphides:Bi, luminescence characteristics 3−43581
sulphides, electronic struct., X-ray spectra calcs. 3−11822
Ag halides, cryst. binding and Gruneisen parameter 3−13157
MF_2:Mn^{2+}, superionic, high temp., EPR studies 3−57763
alkaline earth metals
see also barium; beryllium; calcium; magnesium; radium; strontium
atoms, atomic and ionic core binding energies from XPS and DF calcs. 3−1214
atoms, multistep excitation to autoionising states 3−11753
atoms+halogen cpds., chemiluminescence and reaction kinetics 3−53411
atoms+hexafluorobenzene, collisional ionisation 3−1465
atoms (diatoms), core-valence correl. effects inclusion in pseudopot. calcs. 3−1255
electron pair correlations, review 3−41507
elemental distrib. in IRDP basalts from E Iceland 3−19957
structural phase transitions, cryst. struct. sequences 3−28094
LaF_3, pure and alkaline earth doped, elec. props. 3−23078
alkalinity *see pH*
allotropism *see polymorphism*
alloy steel
see also tool steel
acoustic emission, detection of general yielding 3−14795
active impurity effect on mechanical strength and low-cycle fatigue 3−14720
annealing response, analytic predictions for RPV A533-B steel welds 3−43861
antifraction bearing, surface fatigue, study of nonmetallic inclusions, microcracks and pitting 3−29145
austenitic, Cr-(Ni)-Mn, fatiguq fracture in liq. N_2 3−34474
bearing, cementite dissolution during austenisation, hydroextrusion effects *(Russian)* 3−24271
cast, low C, high Mn, for cryogenic use, struct. and props. 3−24343
constructional, corrosion and low-cycle corrosion fatigue resist., boric regulation influence 3−58305
constructional, corrosion crack resist. rating 3−58300
corrosion fatigue crack growth in simulated weld HAZ 3−39309
corrosion fatigue crack propag. testing, using Krak-Gage 3−58326
creep rupture life, effect of notches and cracks 3−58318
dilatometric effects during tempering of 10N28 alloy subjected to thermomechanical treatment *(Russian)* 3−39177
dual phase, deform. and fracture, metallographic study 3−14667
dual phase, ductility, influence of martensitic transform. strain 3−53121
dual phase, fracture and necking rel. to nonferritic phase comp. 3−53179
dual phase, stress-strain behaviour in forward and reverse straining, effect of heat treatment 3−14680
dual-phase, extrinsic transform. accommodation hardening 3−53075
dual-phase, initial yielding, role of internal stress 3−47910
dual-phase, low C, mech. props. and ageing, effect of Mn content *(Korean)* 3−53089
dual-phase, mech. strength rel. to dislocation density and martensite volume fraction 3−34411
dual-phase, V-containing, deform.-induced retained austenite transform., direct obs. in TEM 3−47833
embrittlement, impurity-induced, effect of thermal history and alloying elements 3−4096
eutectic morphology, carbide and sulphide 3−24205
fatigue crack propag., plastic work, calorimetric meas. 3−34456
fatigue crack propagation in Mode III, effect of friction and high torque 3−34459
fatigue crack propagation in Mode III, rubbing fracture surface influence 3−34435
ferritic, Cr-Mo, creep rupture design eqns., fusion reactor structural material assessment 3−6439
ferritic, creep resistant, creep and elongation, low cycle fatigue tests *(German)* 3−4095
ferritic, with deform. twinning tendency, fatigue crack propag. 3−58240
fracture initiation and fracture opening under light water reactor conditions for type 22 NiMoCr 3 7 3−24353
fracture kinetics at final deform. stage 3−19412
friction surface layers, AES and X-ray microanal. study 3−4147
G-V, AISI 6150 alloy, isothermal transformation, austenitizing temp. effect 3−53045
grain boundary segregation of P, intergranular embrittlement, alloying element effect 3−58247
graphitising element alloyed, damping and mech. props. 3−4072
hardness test methods, microindentation, comparison using Cu, 52100 steel and amorphous Pd-Cu-Si alloy 3−48000
heat treated pressure vessel type, elongation and stress controlled low cycle fatigue *(German)* 3−4136
heat-resistance, delayed fracture under nonsteady loading 3−19417
heat-resistant, fatigue crack growth laws, effect of test temp. 3−19416
heat-resistant, permeation of H and T up to 950°C 3−33513
heat-resistant, props. rel. to struct. 3−29130
high strength, ductility and impact energy, effect of vol. fraction and shape of sulphide inclusions 3−34396
high-strength, quenched and tempered, low-temp. behaviour 3−47887
hot rolled strip, strain age hardening control by Ti additions 3−43864
HSLA, commercial, strength and ductility, effect of low temps. 3−43911
HSLA, Cr plated, low cycle fatigue rel. to cooling conditions 3−43952
HSLA, hot rolled, ageing, precipitation hardening 3−39183
HSLA, hot-rolled, ferrite grain refinement 3−43877
HSLA, solidification, thermodynamic model for predicting precip. behaviour 3−43801
HSLA, submerged arc welds, acicular ferrite nucleation rel. to inclusion comp. 3−53015
HSLA, Ti bearing, dynamic recystn., effect of Mn 3−47853
HSLA, weld metals, struct. and props., effect of inclusions 3−43959
HSLA fatigue crack length distribs. *(Japanese)* 3−58224
HSLA tempered martensitic, adiabatic shear bands, projectile impact loading, electron microscopy 3−34375
hydrogen induced delayed plasticity and cracking, SEM obs. of type 4340 3−53265
alloy steel continued
irradiation damage, electron, heavy-ion and fast neutron, correl. 3−27976
low alloy, caustic cracking and local corrosion, thermodynamics 3−29217
low alloy, cyclic creep resist., alternating low-cycle loading 3−43899
low alloy, fatigue, determ. of threshold stress intensities 3−4109
low alloy, growth of creep cavities 3−14664
low alloy, hardenability, sulphide stress cracking resist., fracture toughness, suitability for oil pipes 3−53268
low alloy, heat treated, quantitative anal. of fatigue fractographs 3−34483
low alloy, high strength, dynamic strain ageing charats. 3−14619
low alloy, high strength, friction layers, wear resistance 3−9194
low alloy, high strength, plastic zone and residual stress near notch and fatigue crack 3−24307
low alloy, high strength, reheating behaviour, quantitative metallographic techniques 3−24449
low alloy, high strength, V-containing microstruct. and retained austenite, influence of cooling rate 3−24245
low alloy, low C, lath martensite, morphology and crystallography, TEM study 3−42796
low alloy, low C, optical revelation of fine martensite islands in bainite *(German, English)* 3−24462
low alloy, mixed mode plane stress ductile fracture 3−29156
low alloy, powder-forged, fracture, effect of inclusions 3−53207
low alloy, sea water corrosion behaviour *(German)* 3−53294
low alloy, tempering, comparative study 3−47867
low alloy, type 03G4AF, rupture strength rel. to struct. 3−47957
low alloy, welded joints, fatigue crack propag. and stress intensity factors 3−4110
low alloy pressure vessel type A533B, stress relaxation prediction under multiaxial stresses 3−53103
low alloy type 25Kh1MF, fastener blanks, magnetic inspection of hardness 3−48019
low C, weld metal, role of O rich inclusions rel. to microstruct. 3−22906
low-alloy, containing V and B, struct. and failure resist. 3−4128
low-alloy, crack resist., temp. depend., fracture features, 20 to −80°C 3−19414
low-alloy, dual phase sheet, development 3−39175
low-alloy, graphitised, quench hardness and transform. during tempering, alloying effect 3−34364
low-alloy, heat treated, fracture toughness, mech. props. correlations 3−34423
low-alloy, structural, brittle fracture susceptibility, prolonged ageing effect 3−34470
low-alloy, structural, struct. and props. after deform. in intercrit. temp. range 3−34363
low-alloy, sulphide cracking tendency rel. to mech. props., alloying elements influence 3−58301
low-alloy, texture after controlled rolling 3−39173
low-alloy, type 20KhML, cyclic strain at high temps. *(Russian)* 3−58201
low-alloy structural, γ-α transform., hot working and austenticity conditions influence 3−9060
low-alloy thermally improved, thermal embrittlement tendency 3−19352
lower strength, fatigue crack propag., near threshold and higher growth rates, environmentally influenced 3−24350
magnetisation props. in weak and moderate fields, analytical description of 40KhN2MA type steels *(Russian)* 3−28608
maraging, 15% Ni, age-hardening, effects of Co, Mo and Ti contents 3−43847
maraging, cleaned, 3.5 GPa grade, fatigue strength *(Japanese)* 3−24337
maraging, ductility characts., struct. sensitivity in age hardening 3−29139
maraging, high strength, thickness effect on fatigue crack propag. 3−14690
maraging, Ni, lath martensite formed from deformed austenite, morphology 3−43887
maraging, precipitation hardening, positron annihilation study 3−4049
maraging, ultrahigh strength, delayed failure *(Japanese)* 3−24338
maraging, ultrahigh strength, H_2 embrittlement, effect of ion-plated Al coating *(Japanese)* 3−29210
maraging N18K9M5T, stress relax. and plastic deform. *(Russian)* 3−53127
maraging VNS-2, temp. relationship of retarded fracture process, mobile H content 3−58236
martensitic, tempered, struct. strength 3−53198
mechanical properties, effects of thermal cycling *(Korean)* 3−29170
medium alloy low-C high strength, resist. to cold cracking estimation, implant welding appl. *(Russian)* 3−19471
medium C, ultrahigh strength, heat treatment, fracture props. rel. to comp. 3−53240
melt spun ultra high strength, microstruct. study 3−9097
metastable austenitic TRIP steel, isothermal martensitic transform., stress-assisted 3−24229
Mn-Mo-Ni, low alloy, temper and H embrittled, acoustic emission, indentation loading studies 3−24348
neutron irradiation in VAK reactor, tensile strength, fracture toughness of type 22 NiMoCr 3 7 3−22942
normalised, C-Mn, mech. prop. anisotropy, effect of sulphide inclusion morphology and pearlite bonding 3−53197
nuclear pressure vessel, tensile props. and fracture mode, combined effects of neutron irrad. and H absorpt. 3−18353
oxidation-reduction processing using SIMS of types 2Kh13, 48TS, 22K 3−24410
oxide inclusions formation during diffusion of O_2 3−38138
peritectic, primary struct., alloying effect 3−39107
phase transformations, IT and CCT curves, additivity rule inversion 3−14553
pipeline, X-65, fatigue cracking in air and NaCl soln., quantitative fractography 3−24351
plane strain-crack growth resistance J_I-R curve determ., tentative procedure for type HY 130 3−29234
plane strain-crack growth resistance J_I-R curve determ., tentative procedure eval. by round robin tests on type HY 130 3−29235
quenched and tempered, plate, X-ray meas. of residual stresses using surface removal 3−17904
quenching and tempering effect on mag., elec., and mech. props. in type 38KhGNM 3−58142
radiation embrittlement annealing for RPV low alloy steel 3−43862
radiation sensitivity, effects of P, S and Cu content on type A302-B 3−43871
ring-Babbitt pin sliding system, spherical wear particle formation 3−29195

alloy steel continued
- SCC and hydrogen induced blister cracking in H_2S environment, alloy additions effect 3—58273
- secondary hardening, embrittlement and debrittlement, role of carbide-forming elements *(Russian)* 3—39233
- stainless, austenitic, electron irrad., low-temp. ductility, irrad. effect on martensitic transform. 3—19384
- steel, carburizing, fracture toughness, temp. depend. 3—53193
- strength and ductility, improvement by controlled rolling 3—58147
- stress-rupture strength at high temp. and H_2 press., prediction using chem. comp. 3—58237
- structural, fracture toughness, temp. and loading rate influence *(German)* 3—4099
- structural fatigue crack propag., overload effect 3—53228
- surface crack growth rate calcs. 3—9181
- tempered, remanent magnetism, induction under alternating mag. field in types 40Kh and 30KhN2MFA 3—58143
- tempering process, effect of Ni *(Chinese)* 3—53084
- texture effect on H embrittlement, impact, SEM study, dislocation model *(Chinese)* 3—34419
- ultrahigh strength, medium C, B addition effect on P grain boundary segregation and fracture 3—53070
- welded and low-annealed condition, strength and fracture behaviour, plate thickness effect *(German)* 3—4134
- Al, highly-coercive, electron microscope study 3—34328
- Al-Cu-Mg-Mn(-Ti) steel fibre reinforced composite, mech. props. evaluation by bend tests *(Slovak)* 3—58174
- B, coarsening of cementite particles in ferrite matrix 3—24236
- B-treated deep-drawing, recrystn. texture, ODF anal. 3—34354
- C-Mn, cleaning fracture surfaces 3—39314
- Co, magnetic diffusion equation, one-dimensional, incl. hysteresis, complex permeability approach 3—52447
- Co-Mo-Ni, maraging, age hardening, 773K, microstruct., TEM and electron diffr. obs. *(Japanese)* 3—39165
- Cr, anodic behaviour in organic soln. of H_2SO_4 3—9215
- Cr, high C bearing, mech. props. and substruct. *(Korean)* 3—53090
- Cr, low alloy, hardened, tempered, radiation embrittlement rel. to struct. 3—43951
- Cr, microstructure, microhardness, austenite form., laser treatment, SEM and TEM studies 3—24342
- Cr, quenched, internal friction meas., hardness and tensile props., effect of tempering at 1100°C 3—43912
- Cr, rapidly cooled from liq. state, struct. and electrophys. props. 3—8472
- Cr, structural, optimisation for improved strength and toughness 3—34462
- Cr-Al, ferritic, heat resistance, strength and embrittlement increase by thermal stress 3—47861
- Cr-Mn-Si-Ni, surface deform. induced by SCC *(Chinese)* 3—53259
- Cr-Mn-Si-Ni, temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
- Cr-Mo, creep cavitation and fracture, segregation effects 3—14717
- Cr-Mo, dynamic fracture toughness evaluation at impact loading *(Czech)* 3—14808
- Cr-Mo, fatigue crack growth characts. *(Japanese)* 3—58215
- Cr-Mo, fracture testing in high temp. and press. H_2-H_2S environment, test chamber system 3—29238
- Cr-Mo, grain boundary segregation of P, role of carbides 3—34331
- Cr-Mo, high strength, neutron irrad., evaluation of thermal fatigue damage 3—19418
- Cr-Mo, temper embrittlement, compositional effects 3—14728
- Cr-Mo (2.25, 1 wt.%), mech. relax. response rel. to heat treatment 3—53114
- Cr-Mo steel, for fusion reactor first wall and blank, review 3—26461
- Cr-Mo-V, creep ductility, effect of P and S 3—34390
- Cr-Mo-V, cyclic creep under push-pull loading with different mean stresses *(German)* 3—9142
- Cr-Mo-V, fatigue crack initiation and growth rate in superheated steam environment *(Japanese)* 3—9176
- Cr-Mo-V, ferritic creep crack growth tests 3—4135
- Cr-Mo-V, low alloy, cyclic response 3—4108
- Cr-Mo-V, low-alloy, structs. identification and morphology after hear treatment 3—39176
- Cr-Mo-V, strength and longevity under creep, appl. of modified Lepin model 3—19385
- Cr-Mo-V, stress relief cracking 3—39245
- Cr-Mo-Zr low alloy, fatigue strength for cyclic load, degree of purity and surface condition influence *(German)* 3—53218
- Cr-Ni, creep strength, effect of Co and Mo *(Japanese)* 3—53129
- Cr-Ni, IN744, superplastic, stress-strain rate relations, strain rate effect 3—53158
- Cr-Ni-Mn, stress corrosion cracking near lower temper martensite embrittlement range in 0.5 N NaCl soln. 3—4179
- Cr-Ni-Mn unstable, damping power, vibr. fatigue strength 3—19420
- Cr-Ni-Mo, SCC, plastic zone at crack tip, subcritical growth 3—53293
- Cr-Ni-Mo-Nb, maraging stainless, martensitic-austenitic transform., mech. props., TEM and X-ray diffr. studies *(Chinese)* 3—34298
- Cr-Ni-Mo-V, structural, crit. brittleness temp., alloying comp. influence 3—34469
- Cr-Ni-Mo-V medium alloys, hot cracks within welding process affected zones *(Czech)* 3—58140
- Cr-Ni-Si, ferritic-austenitic, heat resistance, strength and embrittlement increase by thermal stress 3—47861
- Cu-Cr, weather resist., stress rupture behaviour 3—47961
- Fe-Ni based, influence of alloying elements on recrystallisation *(Russian)* 3—34343
- H penetration, pressure effects of type KhN40B 3—23099
- Mn, fatigue crack growth rate *(Chinese)* 3—53177
- Mn, high strength, development 3—58128
- Mn, hydrogen absorption and evolution in acidified NaCl soln. 3—53266
- Mn, low C, quenched and tempered, strength and toughness 3—43962
- Mn-(Cr, Mo, Nb), low C acicular ferrite, fracture mechanism rel. to microstruct. *(Italian)* 3—4137
- Mn-(Nb), yield and impact strength, plate gauge depend., cooling rate effect 3—43914
- Mn-Al, high-alloy, struct. and mech. props., room and cryogenic temps. 3—39244
- Mn-Ni-Mo-Cu, dark facet fracture, AlN and Ti precip., SEM study *(Chinese)* 3—34420
- Mn-Si, dual phase sheet, development 3—39175
- Mn-Si, high strength, retained austenite and mech. props. *(Korean)* 3—39214

alloy steel continued
- Mn-Si, hot rolling, effect of processing variables on resultant microstruct. and props. 3—53092
- Mn-Si, retained and epitaxial ferrite, ageing susceptibility 3—24274
- Mn-V-N, lamellar tearing susceptibility *(Chinese)* 3—53182
- Mn(-Mo), temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
- Mn(-Nb-V), low C, cold-rolled, microstruct. and strength, effect of ageing *(Korean)* 3—39180
- Mn(-V-Nb), low C, cold rolled, splitting, effect of ageing *(Korean)* 3—39181
- Mo, influence of dislocations on the secondary hardening mechanism *(Russian)* 3—34338
- Mo-Nb-V, microalloyed, recrystn. and precip., influence of Mo conc. *(French)* 3—53076
- Mu-Si-C, solubility of S in austenite and S precip. on cooling *(French)* 3—29087
- N-ion implanted, wear rel. to surface hardening 3—53245
- Nb, low-pearlite structural, separation behaviour, coiling temp,. infuence 3—47838
- Nb microalloyed 3—29080
- Nb-based, microalloyed, high temp. recovery, recrystn. and precip., effect of V and Mo additions 3—47846
- Nb-Mo, pressure vessel, creep rupture strength rel. to Mo addition 3—47962
- Ni, cryogenic, QLT-treated, fracture toughness, effect of microstruct. states 3—34362
- Ni, fatigue, low temp., low cycle, microfractographic features of crack development 3—29189
- Ni, high temp. grade, US attenuation rel. to ductile-brittle transition temp. *(Czech)* 3—34451
- Ni, martensitic transform. by mag. field, struct. peculiarities 3—43808
- Ni, quenched, martensite precipitation, first stage *(Russian)* 3—24234
- Ni type, thermal hold at nitriding temp. influence on fatigue resist. 3—58238
- Ni-Co-Mo, maraging, ageing, hardening, precipitate size and distrib. *(Japanese)* 3—58139
- Ni-Cr, Charpy impact toughness, effect of heat treatment *(Korean)* 3—53192
- Ni-Cr, electrochem. honing, condition of surface *(Russian)* 3—53275
- Ni-Cr, embrittlement, role of N 3—24346
- Ni-Cr, fatigue failure, fracture toughness and critical crack length 3—53221
- Ni-Cr, grain boundary segregation, sources of variability 3—39151
- Ni-Cr, high strength, notched fatigue strength, improvement by partial unloading *(Japanese)* 3—58216
- Ni-Cr, P doped, temper embrittlement diagrams 3—34460
- Ni-Cr steel, high purity 37KhN3 and 37Kh2N4, influence of high temp. thermomechanical treatment on props. *(Russian)* 3—34361
- Ni-Cr-Mn, carburised, hardenability, effect of austenitising above and below Ac_3 3—29113
- Ni-Cr-Mo, crack initiation, propag. and branching in delayed failure, effect of biaxial load *(Japanese)* 3—4115
- Ni-Cr-Mo, Cu, rare earth metal treated, impact energy, effect of sulphide inclusion shape control *(Korean)* 3—29169
- Ni-Cr-Mo, high strength, corrosion fatigue crack propag. mechanism 3—34429
- Ni-Cr-Mo, spall fracture comparison with tensile fracture 3—53223
- Ni-Cr-Mo type 4340, thermomech. treatment effect on notch toughness 3—53098
- Ni-Cr-Mo-V, fatigue crack propag., near-threshold, influence of H_2 environment 3—4127
- Ni-Cr-Mo-V, rotor, fatigue crack propagation under polymodal loading 3—58199
- Ni-Cr-Mo-V, tempered, Mn effect on P segregation kinetics 3—9067
- Ni-V-N low alloy, fatigue strength for cyclic load, degree of purity and surface condition influence *(German)* 3—53218
- NiCrMoV, SCC at 100°C, effect of potential and caustic conc. 3—53264
- Ni0-Cr-Mn-Si, temper brittleness, influence of initial microstruct. 3—47945
- P-containing, microstruct., effect of C additions 3—29033
- Si (3 wt%), thin laminations, eddy current losses associated with rotating mag. fields calc. 3—38642
- Si, grain oriented, high permeability, 0.23 mm thick 3—34350
- Si, grain oriented, laser irradiated, characts. 3—34174
- Si, grain oriented, secondary recrystn., effect of second stage cold reduction *(Korean)* 3—39172
- Si, low C, carbide precip., TEM study 3—53069
- Si, transformer, nitrided, intercryst. precip. 3—34329
- Si-Al-N-Mn-S, grain oriented, N role 3—34349
- Si-Mn, bainitic, high and low cycle fatigue fracture, dislocation cells 3—53232
- Ti, microalloyed, yield points 3—43930
- V, dual phase sheet, development 3—39175
- V, microalloyed, dynamic recrystn. during transient deform. 3—53077
- V, processing, microstruct. and mech. props. 3—34367
- V, strength and microstruct. parameters, new statistical relation 3—14662

alloying additions
- Alnico 5 permanent magnets, non-metallic inclusions and mag. props. modification rel. to Mn content 3—52549
- α-brass, dealloying in aq. electrolytes, As addition effects 3—9229
- Dilex process—surface alloying in a lead medium 3—4047
- graphite, grown from Ni-C melts, morphology, effect of doping elements 3—22805
- HSLA, Ti bearing, dynamic recrystn., effect of Mn 3—47853
- maraging steel based on Fe-Ni, influence of alloying elements on recrystallisation *(Russian)* 3—34343
- steel, alloy, impurity-induced embrittlement, effects of thermal history and alloying elements 3—4096
- steel, alloy, SCC and hydrogen induced blister cracking in H_2S environment, alloy additions effect 3—58273
- steel, austenitic stainless, Cr-Ni-Mo-Ti, shaped castings, intermetallic phases struct. and props. 3—29114
- steel, austenitic stainless, high N, struct. and mech. props., effect of V 3—53093
- steel, austenitic stainless, Ni-free, low temp. mech. props., effect of N *(Korean)* 3—39242
- steel, austenitic stainless, Ti and Nb stabilised 3—53062
- steel, austenitic stainless, welds, solidification modes, effect of Mn and N 3—34291

alloying additions continued
steel, C, austenite-pearlite transform. Co addition effect 3−34295
steel, CC Nb-Mo, pressure vessel, creep rupture strength rel. to Mo addition 3−47962
steel, Cr-Ni, creep strength, effect of Co and Mo *(Japanese)* 3−53129
steel, hot ductility invest. by tensile testing of in situ solidified samples 3−58158
steel, hot rolled strip, strain age hardening control by Ti additions 3−43864
steel, low-alloy, graphitised, quench hardness and transform. during tempering, alloying effect 3−34364
steel, low-alloy, sulphide cracking tendency rel. to mech. props., alloying elements influence 3−58301
steel, maraging, 15% Ni, age-hardening, effects of Co, Mo and Ti contents 3−43847
steel, Mn-Al, high-alloy, struct. and mech. props., room and cryogenic temps. 3−39244
steel, Nb-based, microalloyed, high temp. recovery, recrystn. and precip., effect of V and Mo additions 3−47846
steel, Ni-Cr-Mo, Ca, rare earth metal treated, impact energy, effect of sulphide inclusion shape control *(Korean)* 3−29169
steel, Ni-Cr-Mo-V, tempered, Mn effect on P segregation kinetics 3−9067
steel, nitrided case, N solubility and thermodynamic activity, alloying elements effect 3−34544
steel, peritectic, primary struct., alloying effect 3−39107
steel, stainless, corrosion resist. and mech. props., effect of Cr substitution 3−24402
steel, temper brittle, thermodynamics of interactive co-segregation of P and alloying additions 3−14596
steel, tempering process, effect of Ni *(Chinese)* 3−53084
steel, tool, high strength structural, mechanical behaviour, effect of substituting W for Mo *(Korean)* 3−29168
steel, type A302-B 3−43871
steel, ultrahigh strength, medium C, B addition effect on P grain boundary segregation and fracture 3−53070
steel welds, type A533-B, annealing response, analytic predictions for RPV 3−43861
steels, resistant to H_2S cracking, influence of Si alloying additions 3−29183
β_1-Ag Zn, alloying addition effect on elastic behaviour rel. to phase transform. *(Japanese)* 3−47830
Ag-Zn, internal oxidation of alloys containing additional elements 3−4212
Al alloy design, fundamentals of strengthening, review 3−58127
Al foil, effect of small additions of Fe, Cu and Mg on recrystallisation *(Polish)* 3−47844
Al-Cu-Co, sintered, struct. and mech. props., effect of rapid cooling on crystn. 3−34259
Al-Cu-Mn-Mg-Si, heat-resist., struct. and mech. props., Si effect 3−34403
Al-Cu-Mu-Zr-Fe-Si, struct. and props., Fe and Si additions influence 3−39248
Al-Mg (2.6 wt.%), mech. strength, corrosion resist. optimisation, Cr and Si additions effect 3−43998
Al-Mg-Si-Mn(Cr), quench sensitivity, effect of Mn or Cr additions 3−39164
Al-Ni, eutectic alloy, hardened by dispersion of fine intermetallic particles, influence of alloying elements *(French)* 3−24290
Al-Si-P(Na), hypereutectic alloy, cost struct., strengthening and refinement *(Japanese)* 3−29171
Al-Si(-Ge), eutectic, modification of Si phase *(Chinese)* 3−53024
Al-Zn-Cu-Mg, dendritic segregation, effect of Cu and Mg *(Polish)* 3−4040
Al-Zn-Mg, Mg effect on formation and reversion of Guinier-Preston zones 3−9064
Al-Zn-Mg-Cu-Zr plates, Zr effect on mech. and corrosion props. 3−34402
Au-Cd-Ag-Cu, Ag and Cu additions, order and quenched-in defect effects on martensitic transform. 3−43832
$Bi_{0.88}Sb_{0.12}$:Fe(Co)(Ni), Fe Co or Ni effect 3−38413
Co-Ni films, sputter deposited, struct. and high coercivity props., additional elements effects 3−23744
$Co_{3n+5}Sm_{n+1}B_{2n}$, permanent magnets, substitution of Fe for Co, effect on mag. props. 3−47500
Cu-Al-Ni-Ti, shape memory alloy, grain refinement rel. to Ti addition, transform. hysteresis 3−47832
Cu-Al-Zn-V, shape memory alloys, β-grain size and mech. props. rel. to V addition 3−43888
Cu-Cr alloys, high temp. creep and fatigue rel. to microstruct., Mg and Zr addition effects 3−47928
Cu-Fe-Sn(Si)(Be), precip. processes, influence of addition of third element 3−47845
Cu-Ni-Fe, influence of mag. field on transition temp. to superferromagnetic state *(Russian)* 3−33890
Cu-Ni-Zn-Mn alloys, heat treated, B effect on order-disorder transform. 3−24221
Cu-Zn-Al-Ni, Ni and Al content effect on martensitic start temp., M_s 3−43823
Fe alloys, sintered, plain-mixed, detrimental effect of Mo on ductility 3−19368
Fe, cast, nodular, alloyed with Cu, Ni, and Mo, investment cast method *(French)* 3−43800
Fe, cast, spheroidal graphite, Si effect on low-cycle fatigue life *(Japanese)* 3−29178
Fe, Cast, tensile strength, effects of Al and Cu additions *(Korean)* 3−39161
Fe, thermodynamics of interactive co-segregation of P and alloying additions 3−14596
Fe-B-Si amorphous ribbon, mag. props., Al and S additions effect 3−28648
Fe-C alloys, atomised, decarburisation on annealing, alloying elements effect, thermodynamic anal. 3−39070
Fe-C-Cr-Mn, Mn addition and solidification rate effects during directional solidification, on eutectic interphase distance and tensile strength *(Polish)* 3−47828
Fe-C-Cr-Ti, eutectics, struct. and mech. props., effect of Ti addition and solidification *(Polish)* 3−4023
Fe-Ni-Cr-Ti austenitic alloy for cryogenic use, Ti and ageing effects on strength and ductility *(Japanese)* 3−9161
Fe-Si-P, P solubility, AES study 3−42788

alloying additions continued
Fe-V-Si-C, phase equilibria and solubility product of VC in austenite, effect of Si 3−53027
Lab_6-Ni powder, hot pressing, densification kinetics rel. to Ni additon 3−47812
Mn-Ge(-Fe)(Co)(Ni), Vocoloy, antiferromag., influence of Fe, Co and Ni *(Japanese)* 3−9197
Mo-Ta-C, solid solubility limit of C, influence of Ta *(German)* 3−24239
Ni, superalloy MAR-M247, Co effect on microstruct. 3−14618
Ni superalloy MAR-M247, Co effect on tensile and stress rupture props. 3−14713
Ni-based alloys, dispersion strengthening, solid-solution strengthening, TaC and TiC additions 3−29092
Ni-Ce-Y-C, graphite morphology and microdistrib. of Ce and Y modifying agents 3−39108
Ni-Cr-(Sb, Zr) alloy, creep fracture, Sb and Zr traces effect 3−47964
NiAl, bond energy and long-range order, alloying influence 3−37843
Pb based solid solutions, equilibrium and metastable, supercond. transition temp., alloying additions effect 3−23529
Pb-Sn-Te(As), microstruct. and mech. props., effect of small addition of Te and As *(Japanese)* 3−29166
Pd-Si-H(D), amorphous, supercond. transition temp., effect of noble metal addition 3−43308
Si-Ti-Cr-V, plasma-deposited coatings, oxidation and struct., V effect 3−39307
Ti alloy, high-temp. strength improvement methods 3−24251
Ti alloy, two-phase $\alpha+\beta$, high-strength, development trends 3−24247
Ti and alloys, surface segregation of impurities or alloying elements, AES 3−14785
Ti-Al-V (6, 4 wt.%), enhanced superplasticity in modified alloys 3−53160
Ti-Al-V alloy, VT5L, rare earth additions effect on mech. props. and thermal stability 3−24367
Ti-Al-Zr, creep resist. and thermal stability in air and vac., Si additions influence 3−24322
Ti-Al-Zr solid solns., interaction between alloying elements, nature and mechanism 3−14574
Ti-Cr-Mo-C, sintered, struct. and phase transforms. during friction, Mo effect 3−39257
Ti-Cr(Mo)(Nb) alloys, alloying and annealing temp. effect on struct. state, internal friction obs. 3−14647
Ti-Fe(Cr)(Al)(Si), corrosion and electrochem. props., alloying effects 3−9257
Ti-Mo-V-Cr-Al metastable β system, deep hardenable alloy synthesis, design and props. 3−24250
β-Ti-Mo-Zr-Al, recrystn., Al effect 3−24264
$TiBe_{2-x}Ga_x$, Laves phase, expansion by Ga addition 3−33189
V, stress-rupture strength, solid soln. hardening influence 3−58239
W-Cu-Si(Zr) pseudoalloy, fractographic study, Si and Zr effects 3−24358
W-Ti(Zr)(HF)(V)(Nb)(Ta)(Cr)(Mo), creep, alloying element influence *(Russian)* 3−19373
Y_9Co_7, magnetism and supercond., influence of impurities 3−57696

alloys
alloys such as Au-Cu, Au-Cu-Zn are indexed under components of the named elements i.e. gold alloys; copper alloys; zinc alloys in these examples
see also actinide alloys; alkali metal alloys; alkaline earth alloys; alloying additions; aluminium alloys; antimony alloys; arsenic alloys; bismuth alloys; boron alloys; cadmium alloys; dilute alloys; eutectic alloys; gallium alloys; germanium alloys; indium alloys; lead alloys; liquid alloys; mercury alloys; rare earth alloys; selenium alloys; silicon alloys; solid solutions; superalloys; tellurium alloys; thallium alloys; tin alloys; transition metal alloys; zinc alloys
ageing, struct. unstable, strain diagram construction 3−37987
amorphous, Auger spectra, effect of electron correlations in filled narrow bands 3−38969
amorphous, mol. cluster constituents in bond equilibrium theory 3−37785
amorphous, saturation of relaxational absorpt., at very high acoustic powers 3−2689
amorphous, struct. changes during crystallisation, interatomic binding *(Russian)* 3−51493
amorphous alloys, atomic and mag. order, review *(Polish)* 3−43350
amorphous and liquid, charge transfer, tight-binding calc. 3−3042
antiferromagnets and weak ferromagnets, spin fluctuations, self-consistent renormalisation theory 3−57620
B19 structure, solubility of interstitial impurities and correl. parameters 3−23048
band struct. and transport props., average lattice method *(Rumanian)* 3−13702
BCC, solute clusters effect on screw dislocations, strengthening and weakening model 3−37923
BCC lattice, ordered structures of interstitial solutes 3−56849
binary, alloys, prediction of glass-forming ability using temp.-comp. map 3−34282
binary, cellular solidification, config. parameters prediction 3−14585
binary, directional solidification with mushy zone, analytical soln. 3−53039
binary, rel. between Portevin-Le Chatelier effect and solid solubility 3−53119
binary, with long- and short-range order, vacancy-wind effect, Monte Carlo simulation 3−2875
binary, with long-range order, tracer diffusion, Monte Carlo simulation 3−2874
binary alloy, high temp. expansions in statistical theory of at. ordering 3−42749
binary alloy solidification parabolic eqn. moving boundary problem 3−24217
binary alloys, resistivity and thermopower calc. during clustering *(French)* 3−3166
binary alloys, struct. stability, role of electrons per atom ratio 3−37840
binary FCC alloys, electronic struct. and local density of states, Husimi model 3−23258
binary metallic systems, miscibility gap, two-solid or two-liquid, calc. using bisection technique 3−33395
binary mixtures, solidification problem soln. 3−13416
bonds, cohesion and decohesion 3−23304
cluster form. in two-dimensional square lattice, computer simulations *(Japanese)* 3−47865
coherent composition modulated alloys, electronic struct. rel. to supermodulus effect 3−3047
collision cascades *(Russian)* 3−27982

alloys continued
collision cascades *(Russian)* 3—42689
compositionally-modulated metallic mixture; wavelength depend. of electronic excess energy 3—43046
constructional component, cyclic strength in biharmonic loading 3—19487
covalent amorphous, random and nonrandom bonding, Ising lattice study 3—37786
creep, cyclic, dislocation models *(Czech)* 3—34388
creeping, intergranular cavitation, fracture 3—47952
crystallisation reactions, systematics and nomenclature 3—33103
cyclic creep, phenomenological models *(Czech)* 3—13322
deconvolution of partial pair correlation function using n diffr. expts. 3—46807
defect struct. and mech. props., computer-controlled X-ray diffr. study 3—37734
density of states calc., modified CPA calcs. 3—18597
density of states calc. and localisation Monte Carlo method 3—13697
diffusion-limited form. of multicomponent cpd. at defects *(Russian)* 3—23072
directional solidification, numerical modelling 3—9051
dislocation behaviour near free surface, solid soln. hardening changes, Schmid's law violation 3—37908
dislocation creep, solute drag influence 3—2555
disordered, electronic props., single site approxs. 3—23231
disordered chain, local density of vibr. states 3—47073
elastic consts., lattice energy function, model anal. 3—51687
electrodeposition coating techniques, review 3—3974
electron microscopy application 3—14796
equilibrium vacancy numbers in precipitates *(Russian)* 3—37901
excitations in disordered systems, NATO Advanced Study Institute, East Lansing, MI, USA (Sept. 1981) 3—1
FCC, solution hardening by chem. interaction between solute atom and dislocation 3—43853
Fermi surface construction from positron annihilations meas. 3—13705
five-component, phases distrib. on flat cross-sections 3—4008
flexible strip, strength and ductility, influence of electrochem. treatment *(Russian)* 3—53274
Friauf-Laves phase alloy, hydrides struct. and phase relations, neutron diffr. studies 3—33197
grain boundary at. struct. and intergranular diffusion 3—46957
hard, coercive force meas. of standard samples 3—45169
heat of formation, struct. information from Miedema's theory 3—44067
heat-resistant, cyclic creep in multicycle loading 3—43908
Heusler alloys, mag. props., spin-polarised energy band calc. 3—52341
high performance, localised corrosion resistance, accelerated laboratory tests comparison 3—53304
HV electron microscopy, alloy microstruct. determ. *(Japanese)* 3—51463
hydrides, AB_5-type, cryst. struct., rel. to press.-composition isotherms plateau length 3—33199
hydrides, rechargeable, metallurgy, reviews 3—9499
hydriding alloys, reversible, hydriding cycling response in H_2-CO atmosphere 3—47219
intermetallic compounds, A_6B_{23}-type, occupied interstices in hydrides and deuterides 3—8046
interstitial impurity solubility in alloys with $B8_1$ and B31 structs. *(Russian)* 3—27929
ion implanted with He, investigs. using monoenergetic positrons 3—24046
ion irrad., subsurface composition changes at high temp. 3—2621
ion irrad.-induced segregation, surface modification 3—2825
long-term strength estimation using method of analogy 3—14674
low stacking fault energy, stacking fault stengthening 3—51632
magnetic alloys, binary, electrodeposition, review 3—4207
mechanical strength, conf., Melbourne, Australia (Aug. 1982) 3—35778
metal hydride surface studies, electrons as H probes, review 3—47199
metal hydrides, H diffusion, NMR studies 3—38711
metallic simple alloys, charge transfer 3—37839
metastable surface alloys produced by ion implantation, laser and electron beam treatment, review 3—27961
modulated struct. form., statistical theory *(Russian)* 3—51799
multiphase, fracture, microstruct. and mechanisms 3—58248
nonmagnetic d-electron amorphous, elect. resistivity, press. and temp. depend. 3—23353
nontransition metals and alloys, phonon spectrum parameters and Hall coeffs. *(Chinese)* 3—28465
NPA organic alloys, rheology and stircasting 3—32700
one-dimensional alloys, partially disordered, electronic spectrum, renormalisation group treatment 3—57254
ordered AB alloys, cellular theory, heat and volume of formation 3—18471
phase segregation kinetics, computer simulations, review 3—38074
phase transformation lines determination 3—4009
phase transformations, massive, nucleation, correl. between transform. temp. and cooling rate 3—39110
plastic characteristics determination, local strain development tendency 3—14819
positron annihilation in nondestructive testing, fatigue damage and defect distrib. 3—48027
powder, rapid solidification 3—9052
pulse melted, metallurgy and microstructure 3—58116
random, cluster expansions and density of states, projection technique 3—23236
random, conc. waves and Fermi surfaces 3—38288
random binary, charge fluctuations, CPA perturbation theory 3—3130
rapid solidification, review 3—2750
rapidly melt-quenched crystalline alloys, review 3—9020
recrystallization following mech. deform. 3—38031
self-cooling materials, based on pseudoalloys, methods of calc. 3—13496
shape memory, model, stress-strain curve simulation 3—34315
small angle neutron scattering study by double cryst. device 3—7879
solid solutions, unidirectional solidification, space expts. at Grenoble, review 3—4027
sputtering, magnetron/plasmatron systems use 3—39028
stress relaxation, effect of temp. 3—53115
superconducting, quenching by ion bombard., laser and electron irrad. 3—57459
superconductivity rel. to phase equilibrium 3—47443
superplastic, anelastic effects 3—53113
surface anal. *(French)* 3—47201
surface comp. from Auger electron intensities 3—8310
surface tension isotherm calc. *(Russian)* 3—28210
ternary alloys, vacancy swelling under irrad. *(Russian)* 3—13268

alloys continued
ternary ordering, interstitial at. diffusion, method of average energies *(Russian)* 3—28144
texture form. in technological treatments, phase transition effects *(Russian)* 3—53079
thermodynamic properties, estimation by Monte Carlo method, comparison of usual statistical approximations 3—13490
thermodynamic quantities, exptl. methods for determ., review 3—13484
thermodynamics and defect structure of intermetallic phases with the B2 (CsCl) structure 3—23060
thermoelectrode materials, nondestructive mag. testing 3—9273
two-phase alloys, quantitative analysis based on lattice parameters meas. of solid solns. *(Czech)* 3—58096
ultrafine grain structures by recrystallisation annealing 3—34355
X-ray measurements of long-range strains 3—53354
yield-stress anomaly at low-temp. 3—29132
Cr-Al, paramag. electronic density of states rel. to antiferromag., sp. ht. meas. 3—57599
H-metal systems, equilib. incoherent phase diagrams 3—47824
Ti-Nb-Ta-Zr multifilamentary superconductor, precipitation, time-of-flight neutron small-angle scatt. 3—19342

alnico alloys *see iron alloys*

Al_2O_3 *see alumina*

Al_2O_3-α *see corundum*

α-Al_2O_3 *see corundum*

alpha-decay
see also alpha-decay theory; alpha-particle spectra
alpha particle pick-up reactions, general features 3—21291
CANDU fuel cycles, heat from alpha-decay, WAD program, beta-chains 3—45616
^{227}Ac α-decay, ^{223}Fr γ-transitions 3—31330
^{A}At, A=204, 206, 208, 210, α-decay spectra and fractions 3—31354
^{A}At, A=204, 206, 208, 210, α-decay diagrams, α-transition classification 3—36366
^{209}Bi(^{59}Fe,X), one correl. α-decay obs. 3—31445
^{152}Er, alpha-decay branching ratio 3—54995
^{212}Fr α-decay diagrams, α-transition classification 3—36366
^{212}Fr, α-decay spectra and fractions 3—31354
^{162}Hf, α-decay spectra, half-life and decay energy meas. after ^{147}Sm(^{20}Ne, 5n) 3—40998
^{152}Ho, alpha-decay branching ratio 3—54995
^{152}Ho, α-decay probability and width 3—36367
^{A}Lu, A=157,158, α-decay spectra, half-life and decay energy meas. after ^{144}Sm(^{19}F,X) 3—40998
^{160}Lu α-decay probability and width 3—36367
^{144}Nd, average α-widths, cross sections, statistical model test from ^{143}Nd(n,α) 3—736
^{20}Ne, irregular α_0 decay width of 1^+, 1 state, from ^{19}F($\vec{p}$, α_0) 3—41015
^{210}Pb, pp-, nn-, and α-cluster form., effect on α-decay 3—40980
^{210}Po, pp-, nn-, and α-cluster form., effect on α-decay 3—40980
^{199}Rn^{m}, alpha-decay props. meas. 3—31356
^{148}Sm, average α-widths, cross sections, statistical model test from ^{147}Sm(n,α) 3—736
^{218}Th, low lying Yrast states, and α-decay from ^{206}Pb(^{16}O,4n) 3—11216
^{229}Th α-decay, ^{225}Ra level scheme, transitions 3—31355
^{156}Tm, alpha-decay branching ratio 3—54995
^{156}Tm, α-decay probability and width 3—36367
^{235}U, energy level structure of ^{231}Th excited states, γ-ray spectroscopy *(Korean)* 3—36330
^{156}Yb, mass-separated, decay study 3—54995

alpha-decay theory
see also alpha decay
Fermi liquid model of alpha decay 3—21265
^{212}Pb$\rightarrow$^{208}Pb+α, TDHF anal. of zero point oscillations using ^{208}Pb(α,x) 3—49818

alpha-particle absorption
No entries

alpha-particle angular distribution
see also alpha-particle spectra
spherical wave scatt. of α in ternary fission, partial wave anal. 3—49834
^{143}Nd(n, α), 12.3-18.2 MeV, α energies and ang. distribs., cluster model anal. 3—41024
^{150}nd(^{20}ne,α), α ang. distrib. with respect to spin direction of residual nuclei from fusion 3—26265

alpha-particle attenuation *see alpha-particle absorption*

alpha-particle detection and measurement
see also alpha-particle spectrometers; radioactivity measurement
14 MeV neutron fluence monitoring by α-particle counting 3—1163
cellulose nitrat track detector, optimum etching time 3—26595
CR39 solid state track detectors, bulk-etch rates and track-etch rates study 3—26579
CR-39, plastic film detector, characteristics, using chemical-electrochemical etching 3—50135
CR-39 and Lexan plastic detectors irradiated by α-particles, UV radiation effects 3—26576
CR-39 track detector, detect. of 10 Mev protons, 70 MeV ^{3}He ions and 52 MeV ^{4}He ions 3—26594
Geiger-Muller counters, appl. to low-level counting system *(Rumanian)* 3—6507
ionisation chamber, Westinghouse postaccident type, sensitivity, γ-ray energy effect 3—41443
jumping spark counter, development, operation, alpha particle activity meas. 3—26596
low background, high efficiency proportional α-detector for (n,α) reaction 3—41442
particle damage trails, electrochemically etched, amplification in nucl. track detectors 3—31879
phoswich counter, detection of charged particles, p, d, t, α 3—55756
proportional counters, gas gain depend. on incident angle of α-particles 3—26592
radiation soft dynamic RAM, appl. as particle detector 3—50171
semiconductor counter, instrumental spectrum analysis with account of low energy part of response function 3—1158
thermoluminescence dose response curves, interpretation using track struct. theory 3—11511
time-of-flight telescope for mass identification of heavy ions, time resolution 3—17165
transuranium radionuclide α spectra anal. 3—11599
HgI_2, coupled to scintillator, detection of γ-rays, α-particles 3—50153

alpha-particle detection and measurement continued
^{222}Rn, detection in water, for monitoring near nuclear power plants 3−53609
Si, epitaxial ΔE detector 3−41439
n-Si pn junction diode, ion implanted, α-detector system 3−31875
Si(Li) detectors for charged-particle spectrometry over wide energy range 3−41438
^{235}U-^{239}Pu binary mixture, alpha and fission track densities anal. 3−26611
ZnS:Ag scintillators, superlinear effects and sensitivity to α-particles and γ-rays 3−55755

alpha-particle effects
air, continuous columnar ionisation, modified ion balance eqn. 3−17993
cells, malignant transformation by α-particle irrad., morphology 3−15168
diploid yeast radiosensitive mutants, Saccharomyces cerevisiae, rapid repair after γ and α-irrad. *(Russian)* 3−19762
dose assessment, occupational and domestic exposure to potential alpha energy 3−48426
lung, inhalation exposure of Syrian hamsters to ^{239}PuO$_2$ aerosols 3−29653
MOS capacitors, enhanced charge collection via funnelling 3−38463
mutagenicity of α particles from ^{238}Pu, rel. to X-rays, hamster cell expts. 3−29663
nuclear waste ceramics, α-irrad. damage 3−36464
nucleic acid content, biosynthesis in rat spleen, ^{239}Pu and external γ-irrad. combined effect *(Russian)* 3−19664
nucleon α-particles, stopping power of Ni, Ag, Au and Pb 3−57006
solid waste forms, radiation effects, review 3−41163
SYNROC, leaching, ^{4}He$^+$ and ^{84}Kr$^+$ beam effects 3−41167
target backings, blister formation avoidance during α-particle bombardment 3−26528
Ag, alpha-irrad. radiation damage, oxygen stabilised 3−42681
AgIn, alpha-irrad. radiation damage, oxygen stabilised 3−42681
Al alloys, irradiation by He ions, surface blistering temp. depend. 3−45690
Al alloys, radiation blistering from He$^+$ and D$^+$ simultaneous irradiation 3−45691
Be, alpha irradiated, impurity element behaviour 3−22943
GaAs films, α-irrad., defect migration, hall effect study 3−47167
GaAs films, α-irrad. defect migration, elec. study 3−47168
MgO porous layers, controlled secondary electron emission due to α-particle irrad. 3−38982
Nb-Si-Nb Josephson junctions, alpha induced upset rate, bias current depend. 3−38544
Nb$_3$Sn, point defect configuration mol. dynamics method and pseudopot. calc. 3−18296
Ni, α-particle irrad., grain boundary deformation 3−43895
Si p$^+$-n and n$^+$-p junctions, enhanced charge collection via funnelling 3−38463
UO$_2$ crystals, α-irradiated thermal recovery of lattice defects 3−56996
W, He implantation effects 3−41309
Xe, liquid, high press., fluorescence excitation meas. for electron, α-particle and fission fragment irrad. 3−24023

alpha-particle interactions *see alpha particle-nucleus reactions*

alpha-particle model *see nuclear cluster model*

alpha particle-nucleus reactions
for inelastic alpha particle-nucleus scattering, see "alpha particle-nucleus scattering"
nonlocal optical potential, imaginary local potential 3−16745
very high energies, cross-sections, multiplicities, calc. 3−55038
(α,γ), A=204-214, α-clustering levels, spectroscopic factors from optical anal. *(Russian)* 3−31260
$(\alpha$,n), 3.6-10 MeV, thick target yields for reactor and radwaste materials 3−31419
(α, π^+), A=27-238, 0.25-1.05 GeV/N, inclusive cross section, charged particle multiplicity 3−31437
$(\alpha$,X), projectile fragment anomalous mean free path, comment and reply 3−21327
$(\alpha$,x) on KCl, 977 MeV/nucleon, relativistic collisions, compression effects 3−11335
^{27}Al(α,^{3}He), 64.5 MeV, ^{28} Al high spin particle-hole states, spectroscopic strengths, EFR-DWBA anal. 3−26181
^{27}Al(α,t), 64.5 MeV, ^{28}Si high spin particle-hole states, spectroscopic strengths, EFR-DWBA anal. 3−26181
As(α, pxn), 44 MeV, ^{76,77,82}Br yield for high isotropic purity 3−11328
Au(^{4}He,X), 5 GeV, spectator residues, statistical breakup model 3−49831
^{197}Au(α,f), 5 GeV, peripheral collisions, momentum transfer to target, fission fragment correlations 3−26284
^{197}Au(α,p), 25, 43 MeV/u, proton emission energy depend., moving source parametrisation 3−31433
^{11}B(α,n), 8.0, 8.8 MeV, ^{14}N 5.106 and 5.834 MeV levels, mean lives 3−16733
^{11}B(α,t), direct and exchange process cross sections, bound state wave function depend. 3−36425
^{9}Be(α,2α), 18 MeV, quasifree scatt. mech., clustering prob. and momentum distrib. *(Chinese)* 3−55051
^{9}Be(α,d)^{11}B, CC ^{11}B study at high excitations 3−6239
^{209}Bi(α,α), elastic and inelastic scatt. study 3−45555
^{12}C(α,2α), 18 MeV, quasifree scatt. mech., clustering prob. and momentum distrib. *(Chinese)* 3−55051
^{12}C(α,2α), 65 MeV, deformation parameters, coupled channel calcs. on rotator model 3−36317
^{14}C(α,γ)^{18}O, single-particle collective-quadrupole and mol. dipole degrees of freedom coexistence in ^{18}O 3−36307
^{40}Ca(α, X), optical pot. theory 3−21324
^{42}Ca(α, p), 4.75-10.50 MeV, absolute cross sections 3−26251
^{42}Ca(α,^{3}He), 36 MeV, ^{43}Ca single particle strength fragmentation two-step process, DWBA anal. 3−26182
^{42}Ca(α,n)^{45}Ti, ground state and stellar reaction rates 3−30167
^{42}Ca(α,p)^{45}Sc, ground state reaction rates and stellar reaction rates 3−30167
^{44}Ca(α, pγ), ^{47}Sc recoil lifetime meas. 3−21254
^{48}Ca(α,t), 26-30 MeV, normalisation constant meas. 3−11325
C(α,X), 4.2 GeV/N, peripheral and central collisions, cross sect. 3−49865
C(α,X)^{11}C, 0.64-2.8 GeV, absolute cross section 3−31423
^{59}Co(α,x), 28,32 MeV, inclusive prod. of nucleons and α-particles, differential cross section 3−6244
^{133}Cs(α,4n), 50, 70 MeV, ^{133}La high spin states, J$^\pi$, transitions, negative and positive parity bands 3−26178

alpha particle-nucleus reactions continued
^{63}Cu(α,pγ), 16.7 MeV, ^{66}Zn state lifetimes and transitions from Doppler shift reduction 3−31334
^{A}Er(α,$\alpha'\gamma$), A=162, 164, 166, 168, 170, 12.5 MeV, quadrupole moment and decay branching ratio of 2$^{+'}$ states 3−45433
Ge(α,2nγ), 25-33 MeV, ^{76,78}Se band struct., J$^\pi$, transitions, IBM calcs. 3−16681
^{2}H(^{4}He, ^{6}Li), 6 MeV, resonance capture cross section 3−11324
^{2}H(α, nα)^{1}H, reaction kinematics for ang. correl. expts. with large area detector 3−26224
^{2}H(α,αp), 13-18 MeV, cross sections, three-body model anal. 3−16783
^{2}H(d, pn)^{2}H, reaction kinematics for ang. correl. expts. with large area detector 3−26224
^{3}He(^{4}He,γ)^{7}Be, cross section activation meas. 3−49877
^{3}He(α,γ), 897 keV, cross sections and S-factor for stellar evolution 3−31424
^{4}He(α,X), review on interactions in CERN-ISR 3−21322
^{4}He(α,X), TDHF central collision, prompt particle emission, nucleonic jet density 3−41047
^{4}He(α,p), 37-43 MeV, differential cross sections for ^{7}Li and ^{7}Li* prod. 3−799
^{177}Hf(α,n), ^{180}W^M MS isomer, γ-decay, half-life 3−36346
^{179}Hf(α,t), 62.2 MeV, ^{180}Ta bands, isomers, diff. cross sections, DWBA, Nilsson anal. 3−31271
Ir(α,xn), 40-63 MeV, ^{190,192,194}Au high spin states, bands, J$^\pi$, T$_{1/2}$, transitions 3−16678
^{39}K(α, p), 4.75-10.50 MeV, absolute cross sections 3−26251
^{39}K(α,p)^{42}Ca, ground state reaction rates and stellar reaction rates 3−30167
^{A}Kr(α, 2nγ)Sr, A=78, 80, 28.7 MeV, ^{80,82}Sr level struct., gamma-ray spectra, IBA anal. 3−31294
^{78}Kr(α,^{6}He), ^{76}Kr mass meas. mass formulae comparison, Kr and Rb isotope shape differences 3−16692
^{78}Kr(α,^{8}He), ^{74}Kr mass meas. mass formulae comparison, Kr and Rb isotope shape differences 3−16692
^{6}Li(α, 2α), quasi-free scatt. effect of α-α final state interaction *(Chinese)* 3−49875
^{6}Li(α,2α), quasi-free scatt., diffraction model appl. *(Chinese)* 3−49873
^{6}Li(α,d), direct and exchange process cross sections, bound state wave function depend. 3−36425
^{24}Mg(α,γ), 4.3-14.0 MeV, ^{28}Si giant quadrupole resonance 3−49827
^{92}Mo(α,t), 26-30 MeV, normalisation constant meas. 3−11325
^{23}Na(α,n), 3.5, 26 MeV, ^{26}Al^{m,g} production cross sections 3−16682
^{93}Nb (α, xnyp), 16-171 MeV, excitation functions, cross sections, residual activities 3−21323
^{20}Ne(γ,^{8}He), 129 MeV, ^{16}Ne mass, isobaric multiplet mass eqn. coeffs. 3−31277
^{22}Ne (α,n) reaction as neutron source in s-process nucleosynthesis 3−40014
^{58}Ni(α,$\alpha'\alpha$), 140 MeV, ang. distrib., coincident spectra *(German)* 3−36428
^{58}Ni(α,α'p), 140 MeV, ang. distrib., coincident spectra *(German)* 3−36428
^{58}Ni(α,p), 25, 43 MeV/u, proton emission energy depend., moving source parametrisation 3−31433
^{60}Ni(α,x), 28,32 MeV, inclusive prod. of nucleons and α-particles, differential cross section 3−6244
^{16}O(α,X), local internucleus pot., resonating group method 3−41040
^{16}O(α,2α), 90, 140 MeV, cross sections from cluster model and PWIA *(Chinese)* 3−49874
^{16}O(α,γ), 8 MeV, ^{20}Ne 1$^+$T=1 state as parity forbidden reson. 3−36388
^{16}O(α,x), X=αd, αt, α^3He, 139.2 MeV, cross sections, spectroscopic factors from DWIA calcs. shell model comparison 3−6210
^{A}Pb(α,xn), A=207, 208, E=24, 35 MeV, ^{209,210}Pb high spin isomers, elec. quadrupole moment meas. 3−36321
^{208}Pb(α,^{6}He), 218 MeV, ^{206}Pb two neutron hole states, high spin states, J$^\pi$ 3−6136
^{208}Pb(α,d), D-state effects, J depend. 3−26252
^{208}Pb(α,x), compound nucleus oscillations, TDHF anal., α-decay interpretation 3−49818
Pb(α,xn)Po, X-ray emission, residual nucleus neutron number depend. 3−50337
^{A}Pt(α,4n)^{A}Hg A=192,194,196, Hg isomeric state decay, meas. from electron conversion spectra 3−54976
^{A}Se(α,n) A=76, 78, 10-18 MeV, ^{79}Kr and ^{81}Kr high-spin states 3−49725
^{76}Se(α,2nγ), 27 MeV ^{78}Kr excited state lifetimes and γ-ray energies 3−36350
^{78}Se(α,3n), 45 MeV, excitation functions, tray angular distributions, γ-γ coincidences, determination of ^{79}Kr high-spin states 3−6139
Se(α, xn), 44 MeV, ^{76,77,82}Br yield for high isotropic purity 3−11328
^{116}Sn(α,^{6}He), 218 MeV, ^{114}Sn two neutron hole states, high spin states, J$^\pi$ 3−6136
^{180}Ta(γ,n), ^{183}Re^M MS isomer, γ-decay, half-life 3−36346
^{181}Ta (Ga, xnyp), 16-171 MeV, excitation functions, cross sections, residual activities 3−21323
Ta(α,X), 4.2 GeV/N, peripheral and central collisions, cross sect. 3−49865
^{48}Ti(α,p), 24 MeV, spectra and ang. distribs. statistical description 3−36426
U(^{4}He,X), nonrelativistic collisions, linear momentum transfer 3−6254
^{233}U(α, x), fusion reactions, critical distance 3−11354

alpha particle-nucleus scattering
optical model analysis with Woods-Saxon geometries, neutron shell effects, scattering on A=50 to 93 nuclei at 25 MeV 3−6242
very high energies, cross-sections, multiplicities, calc. 3−55038
(α,α), A=204-214, α-clustering levels, spectroscopic factors from optical anal. *(Russian)* 3−31260
(α,α) on nuclei with A$\geq$120, giant octupole reson. 3−26226
^{16}(α,α), 20-60 MeV, surface waves in short wavelength approx., diff. cross section 3−6241
^{40}(α,α), 4.4-9.12 MeV, quasi molecular reson., compound nucleus excitation effects 3−36427
^{12}C (α, α), 94, 173 MeV/N, total cross sections, nucleon-nucleon interaction dominance 3−6245
^{12}C (α,α), 5, 6 MeV, elastic scatt., differential cross section meas. 3−11323
^{12}C α-particle interaction at 5 and 6 MeV 3−11322
^{12}C(α,α'), 65 MeV, deformation parameters, coupled channel calcs. on rotator model 3−36317

alpha particle-nucleus scattering continued
^{12}C(α,α) 4-10 MeV, application of second order monopole deformation, angular distrib. from coupled channel calcs. 3−6174
^{40}Ca(α,α), 20-60 MeV, elastic scatt., surface wave theory, report 3−16787
^{40}Ca(α,α), 20-60 MeV, surface waves in short wavelength approx., diff. cross section 3−6241
Ca(α,α), 104 MeV, density from max. entropy determ., folding model 3−11236
^{A}Cr(α, α'), 27.2 MeV, A=52, 54, diff., inelastic and total cross sections, ang. distribs. 3−41038
^{52}Cr(α,α), elastic and inelastic, 104 MeV, isoscalar octupole transition rates, model-independent anal. 3−31420
Cu(α, α), 13, 14 MeV, ang. distribs. and total cross sections, modified SOD method 3−21321
^{1}H(α,α), 88, 125 GeV, differential cross sections, inelastic shadowing 3−11326
^{2}H(α, α), kinematics for ang. correl. expts. with large area detectors 3−26224
^{2}H(α,α), Chandler-Gibson equations, including identical particle symmetries 3−16786
^{3}He(α,α), intercluster antisymmetrization, nucleon-exchange terms, cross-section angular-distribution 3−16785
^{4}He(α,α), 88, 125 GeV, differential cross sections, inelastic shadowing 3−11326
^{4}He(α,α), excited 1p-1h α effects, rot. states, phase shifts, transmission coeffs. 3−26254
^{4}He(α,α), review on interactions in CERN-ISR 3−21322
^{6}Li(α,α), blocking influence on core-exchange effects 3−49876
^{7}Li (α,α), 5, 6 MeV, elastic scatt., differential cross section meas. 3−11323
^{7}Li α-particle interaction at 5 and 6 MeV 3−11322
^{A}Mg(α,α), 18.1 MeV, A=24-26, backward angle anomaly, isotopic effect, optical anal. *(Chinese)* 3−49872
^{24}Mg, isoscaler giant quadrupole resonance fragments from (α,α') anal. 3−11298
^{24}Mg(α,α'), 120 MeV, β-band excitation in collective model, coupled channel effects, form factors 3−11297
^{25}Mg (α,α), 12.5 MeV, elastic and inelastic, statistical, optical and coupled channel anals. 3−16780
^{A}Ni(α,α'), 28.5 MeV, A=60, 62, levels, J^{π}, deformation parameters, optical and DWBA anals. 3−21198
^{16}O(α,α), ^{20}Ne states, resonating group method calcs with oscillator freq. 3−36390
^{16}O(α,α), 20-60 MeV, elastic scatt., surface wave theory, report 3−16787
^{16}O(α,α), intercluster antisymmetrization, nucleon-exchange terms, cross-section angular-distribution 3−16785
^{208}Pb(α, α'), $(60\text{-}85)/A^{1/3}$ MeV, giant reson. strengths, DWBA and form factor calcs. 3−31372
^{208}Pb(α,α), elastic and inelastic, 104 MeV, isoscalar octupole transition rates, model-independent anal. 3−31420
^{28}Si $(\alpha, \alpha'\gamma)$, 24-27.5 MeV, α-γ correlations, transitions, statistical and direct anals. 3−26211
^{28}Si(α,α), 20-60 MeV, elastic scatt., surface wave theory, report 3−16787
^{28}Si(α,α), 20-60 MeV, surface waves in short wavelength approx., diff. cross section 3−6241
^{48}Ti(α,α), 24 MeV, spectra and ang. distribs. statistical description 3−36426
^{50}Ti(α,α), elastic and inelastic, 104 MeV, isoscalar octupole transition rates, model-independent anal. 3−31420
^{238}U$(\alpha,\alpha'f)$, 120 meV, fission decay of isoscalar giant monopole reson. 3−21358
^{238}U$(\alpha,\alpha'f)$, 172 MeV, isoscalar giant reson., fission decay 3−26253
^{90}Zr(α, α'), $(60\text{-}85)/A^{1/3}$ MeV, giant reson. strengths, DWBA and form factor calcs. 3−31372

alpha-particle scattering *see alpha particle-nucleus scattering*

alpha-particle spectra
see also alpha-particle angular distribution
energy spectrum application to thin films thickness measurement 3−47997
ionisation chamber, electronegative impurity analyser for liq. Ar, Conc. meas. using α-particle pulse amplitude distrib. 3−11607
semiconductor counter, instrumental spectrum analysis with account of low energy part of response function 3−1158
transuranium radionuclide α spectra anal. 3−11599
^{A}C$(^{28}$Si$,\alpha)$, 75-102 MeV, selective population of states 3−811
^{12}C$(^{16}$O$,\alpha)^{24}$Mg, 112-191 MeV, excitation energies, alpha particle spectra 3−31436
^{242}Cm, half-life, α-spectrometry 3−26222
^{144}Nd one and two phonon states, α-transition rates anal. from ^{147}Sm(n,α) 3−782
^{145}Nd(n,α), thermal and resonant, interference effect on α-channel 3−783
^{239}Pu(n,α), thermal n, cross sections, alpha spectra 3−784
^{A}Rn A=220, 222, method for exhalation rates determ. using α-spectroscopy 3−19651
^{232}Th(n,α), thermal n, cross sections, alpha spectra 3−784
^{A}U(n,α), a=233, 235, 238, thermal n, cross sections, alpha spectra 3−784
^{238}U$(\alpha,\alpha'f)$, 172 MeV, isoscalar giant reson., fission decay 3−26253

alpha-particle spectrometers
see also alpha-particle spectra
semiconductor counter, instrumental spectrum analysis with account of low energy part of response function 3−1158
time-of-flight, using microchannel plates 3−11596

alpha-particles
see also cosmic ray alpha-particles and helium nuclei
heavy ion stripping reactions as source of fast α-particles 3−36392
toroidal plasma, close to ignition, α-particle dynamics 3−31819

alpha-radiation *see alpha-particles*

alpha-rays *see alpha-particles*

alpha-rhythm *see bioelectric potentials*

alpha-rhythm measurement *see electroencephalography*

alternators
permanent-magnet, wind-driven, steady-state optimum resistive load control during electrical resistance heating 3−19558

altitude measurement *see height measurement*

alumina
see also corundum
additive in reaction bonded Si_3N_4 prep., influence on vitrification of grain boundary phases 3−29040
adsorption of aminophenyltrimethoxy silane, effects of high humidity 3−38226
$3Al_2O_3.2SiO_2$-Mo, mullite based composite, high temp. creep, diffusion-viscous flow 3−9118
β''-Al_2O_3-Na_2O-Li_2O-ZrO_2, transform. toughening by ZrO_2 addition 3−34438
ALON spinel, advanced opt. material fabrication 3−7089
β-alumina, stoichiometric, X-irrad., ENDOR and EPR of defects 3−34009
antireflective coatings for solar cells, low cost and high performance 3−17587
based sulphide catalysts, ESR study 3−57766
bend specimens, slow crack growth, increase of crack resist. 3−34442
biaxial tension strength testing 3−44002
ceramic, single crystal, rhombohedral twinning, compressive deform., 625-1373K 3−43886
ceramic, temp. depend. of strength ionisation, relationship with structure *(Russian)* 3−14706
ceramic preparation, Li-stabilised β''-Al_2O_3 starting material and prep. method effect on characts. 3−29043
ceramic systems containing Al_2O_3, temp. limit evaluation for subsolidus state *(Ukrainian)* 3−24215
ceramics, intergranular phases, SEM, TEM and EPMA study 3−14552
cermet with Cr(Pt), thermal-shock-resistant insulator prep. and characteris. 3−24198
cluster model of Ar adsorption 3−13633
coated mirror facets for (GaAl)As laser diode, reflectivities 3−37076
coating on glass, effect on strength 3−24384
colloidal particle deposition in monolayers and multilayers 3−38265
corrosion protection of Fe-Cr-Al alloys, in sulphidising environments 3−4196
crack extension from inherent flaws, dye penetrant, SEM 3−58343
CVD, film struct., reactant gas partial press. efect 3−13680
dielectric layer, appl. in elec. hygrometer 3−45148
diffusion bonding to stainless steel using Al interlayers 3−24396
disc, crack branching, biaxial flexure 3−43942
double layer system, β-Al_2O_3 single cryst. and Au blocking electrodes, AC impedance of surface layers 3−23457
electrophoretic deposition from aq. suspensions on graphite substrate 3−34252
evaporation thermodynamics, study by Knudsen effusion method 3−18431
F^+-centres and F-centres, review 3−56898
film, preparation and optical props. 3−14490
film, sputter deposited, internal stress 3−18592
films, bulk polarization and surface charging distinctions, expt. method 3−13939
fine and coarse pressed powder mixtures, density and strength *(Japanese)* 3−19301
fracture toughness, depend. on grain size and test technique 3−29161
fracture toughness, loading rate depend., high temp., second phase effect, J concept appl. 3−53188
fusion reactor wall coating, low-Z, D trapping and re-emission during ion bombardment 3−17040
grain boundary struct., TEM and diffr. studies, review 3−46956
hot isostatic pressing, deform. maps, practical appl. 3−52991
hot isostatic pressing effect on porosity, sound velocity meas. eval. 3−9293
hot isostatically pressed, fabrication and fracture toughness for prosthetic use 3−29049
hydrated, exoelectron emission studied by IR spectroscopy 3−8944
insulator surface flashover, predischarge current and surface field meas. 3−7842
IR, Raman and neutron scatt. studies of β- and β''-phases, static and dynamic struct. anal. 3−43547
Jahn-Teller effect under uniaxial stress, Raman spectra 3−52095
liquid phase sintered, grain boundary microstruct., TEM study 3−46966
multilevel NMR system, coherence transfer and level shift effects 3−57800
plasma deposited coating, elec. strength at 300-1400K 3−14215
plasma sprayed coating, interlamellar contact, TEM study 3−24417
plasma-deposited, high temp. elec. insulating characts. 3−14479
porous anodic thin film incorporating 3−38510
porous catalyst, Voronoi cell model for interpreting small angle X-ray scatt. 3−37733
powder processing and crystallisation of β-phase 3−53000
powders, surface low temp. muonium interactions 3−3626
pressed powders, dielectric function, finite wavelength effects 3−23299
prosthetics application, joint and tooth replacement, bone remodelling 3−58868
protective scales on Ni-Cr-Fe-Si-B self-fluxing coatings for stationary gas turbines 3−4211
rare earth oxide-Al_2O_3, solidification points for cmpds. in the system *(Japanese)* 3−4034
reactive sputtering, angular distrib., sputtering yield, 40 keV Ar ion bombardment 3−38994
recombination luminescence and energy transfer 3−52842
reflective films, natural climatic aging mirror 3−9395
residual surface stress, caused by grinding, X-ray diffr. determ. 3−51903
short wave luminesc., excitation by nanosecond electron beam probe *(Russian)* 3−57979
sintered, powder compacts, porosity effect on compressive strength 3−58061
solubility in MgO *(Japanese)* 3−38081
solubilization and coulomb complexing in halide melts 3−47117
strengthening by heat treatment 3−43855
supported Pd particles, chemisorbed acetylene, IETS study 3−42914
supported Pt catalysts, ESR signals, oxidation and reduction effects 3−53445
surface, isopropanol-d_6 adsorpt., IR spectra study *(French)* 3−19115
thin film, plasma enhanced beam deposition and elec. props. 3−39044
translucent, polycrystalline, sintering, prod. conditions for capacitor appl. *(Japanese)* 3−58081
wall coatings for JET, deuteron trapping meas., report 3−11487
wear in fine grinding hard metals, metal transfer 3−34492
whiskers, sintering prep., growth morphology and mechanism 3−42986

alumina continued
α-Al_2O_3, from alum-derived γ-Al_2O_3 3−7936
$Al/Al_2O_3/ZnO/Pb$ junction, inelastic electron tunnelling spectra 3−38490
Al-(Al_2O_3/SiO_2)-Si struct., double dielec. layer form by DC plasma anodization 3−13918
Al-Al_2O_3, powder metallurgy, prep. and props. 3−34260
Al-Al_2O_3-$Ag_{2-x}Se_{1+x}$, thin film structure, transition from S- to N-type differential negative resist. obs. 3−23494
Al-Al_2O_3-Al thin-film diode array 3−16415
Al-Al_2O_3-Al-Al_2O_3-Al structures, EM oscill. generation 3−38489
Al-Al_2O_3-Au electroformed struct., SEM and XPS studies 3−2991
Al-Al_2O_3-Au/MgF_2 tunnel diode on holographic grating, light emission 3−12263
Al-Al_2O_3-benzoic acid-P6 junctions, IETS study, effect of junction roughness 3−38488
Al-Al_2O_3(SiC), composites, abrasive wear 3−9195
AlN-Al_2O_3-phosphate binder composites, physicochem. processes on heating 3−39085
θAl_2O_3, chemisorbed pyridine, IR spectral study 3−8321
γ-Al_2O_3, hydrargillite, IR spectra, OH stretching bands investig. 3−19126
β-Al_2O_3, polycrystalline, hot pressed or sintered, fracture toughness, temp. depend. *(Japanese)* 3−58219
β-Al_2O_3, single cryst. struct. and ^{27}Al NMR spectra 3−57807
γ-Al_2O_3 supported NiO, charact. and activity 3−29333
Al_2O_3 target, laser irrad., O VIII level population inversion obs. 3−36732
α-Al_2O_3, traps, thermally stimulated electron emission and annealing curves 3−18649
Al_2O_3, VUV luminescence 3−24001
$Al_2O_3:Cr^{3+}$, Cr^{3+} axial symmetry sites, ESR spectra 3−47544
Al_2O_3:Cr(Zr), ion implanted, surface struct. and props., annealing effects 3−2948
α-Al_2O_3:Cr(Zr)(Ti), ion implantation and thermal annealing, channelling, EPR and microhardness study 3−46972
β-Al_2O_3:Fe, electronic cond. meas. 3−8541
Al_2O_3:Fe,Ti, Nabarro-Herring diffusional creep, dopant conc. depend. 3−53136
α-Al_2O_3:Mg, point defects, elec. cond., optical absorption and ESR studies 3−56884
Al_2O_3:MgO fibres, doped and undoped, exaggerated grain growth, microscopy study *(Japanese)* 3−51815
Al_2O_3:Mn, Ti, polycryst., diffusional creep, enhancement by simultaneous doping 3−9122
$Al_2O_3:V^{4+}$, Cr^{3+}, Raman scatt. of high freq. phonons by spin states 3−34101
Al_2O_3/Cr system, Fe^+ ion irrad. prep. of ceramic alloys, mech. props. 3−4000
Al_2O_3/graphite mixture, microstructure development during carbothermic reduction 3−39079
α-Al_2O_3/quartz (cristobalite), sintering rel. to mullite form. 3−53002
Al_2O_3/Zr system, Fe^+ ion irrad. prep. of ceramic alloys, mech. props. 3−4000
β-Al_2O_3-Ag_2O, translational diffusion coeffs., neutron scatt. study 3−42832
β-Al_2O_3-Ag_2O(Na_2O), phase transition, dielectric const. temp. depend. 3−8186
Al_2O_3-Al_2TiO_5 refractory composites, sintering, struct. and props. 3−29052
Al_2O_3-AlN-Si_3N_4, sialon structure, obtained by nitridation of kaolin 3−13181
Al_2O_3-B_4C composite ceramics, sintering, densification, microstruct. development 3−47807
Al_2O_3-B_4C composite pellets, moisture adsorption, microstruct. 3−47221
Al_2O_3-CaO, evaporation thermodynamics, study by Knudsen effusion method 3−18431
Al_2O_3-Cr_2O_3, dynamic Zeeman effect at microwave freq. 3−34077
β″-Al_2O_3-K_2O-MgO powder, spray-frozen and freeze-dried, thermal stability meas. 3−2879
β-Al_2O_3-$Li_20.nH_20$, cryst. struct., neutron diffr., IR absorpt. and Raman scatt. 3−14282
β-Al_2O_3-LiO_2, hydration reaction, IR meas. 3−14858
Al_2O_3-metal-Al_2O_3-R type sputter-deposited multilayer selective absorber coatings, thermal stability 3−8384
Al_2O_3-MgO spinel based refractory, prep. and props. 3−29041
β-Al_2O_3-N_2O polycryst. ceramic, dielec. loss 3−57859
β″-Al_2O_3-NH_4^+-$H^+(H_2O)_n$, proton mag. relax. and ionic cond. 3−18505
Al_2O_3-NO^+, β- and β″-phases, Raman scatt. study 3−43548
β-Al_2O_3-Na_2O, AC cond., temp. depend. 3−23086
β″-Al_2O_3-Na_2O, activation enthalpy, Gibbs free energy, and entropy for cond. 3−23085
β-Al_2O_3-Na_2O, far IR absorption, rel. to struct. and ionic cond. 3−19121
β-Al_2O_3-Na_2O, NMR study of low-lying excitations 3−14159
β-Al_2O_3-Na_2O, non-stoichiometric, struct. and transport 3−18498
β-Al_2O_3-Na_2O, translational diffusion coeffs., neutron scatt. study 3−42832
β-Al_2O_3-Na_2O, use in galvanic cell, as Na vapour press. sensor 3−10832
β″-Al_2O_3-Na_2O (Ag_2O), ionic conductor, crack propag. under electrolytic conditions 3−58206
β″-Al_2O_3-Na_2O ceramics, Li_2O stabilised membrane, for Na-S cell, sintering process 3−14538
β-Al_2O_3-Na_2O-Ag_2O, ionic cond. props., mixed alkali effect 3−42843
β″-Al_2O_3-Na_2O-CoO(NiO), (CuO), (ZnO), dopant effects on H_2O sorption, TGA and DTA study 3−8324
Al_2O_3-Na_2O-La_2O_3(Nd_2O_3), cryst. struct., ESR and visible spectra 3−46914
β-Al_2O_3-Na_2O(K_2O)(Li_2O)(Ag_2O)(PbO), electron beam writing on 20 Å scale 3−46998
β″-Al_2O_3-Na_2O(MgO)(CaO)(SrO)(BaO)(ZnO)(CdO)(PbO)(HgO), solid electrolyte for divalent cations 3−42833
β-Al_2O_3-$Na_2O.nH_2O$, cryst. struct., neutron diffr., IR absorpt. and Raman scatt. 3−14282
Al_2O_3-SiO_2, mullite fibres, Ni coated, mag. orientation 3−47814
Al_2O_3-SiO_2 mullite bodies, low thermal expansion ceramics 3−8230
Al_2O_3-SiO_2-ZrO_2, dispersion ceramic, twin boundaries in ZrO_2 particles, TEM 3−51614
Al_2O_3-talc, fine and coarse, pressed powder mixtures, density and strength *(Japanese)* 3−19301
Al_2O_3-Y_2O_3 tunnel junctions, interaction of Nb counter electrodes 3−38477
Al_2O_3-ZrO_2, slow growth of microcracks, evidence for ZrO_2 toughening 3−29162

alumina continued
Al_2O_3-ZrO_2, ZrO_2 tetragonal particles in ceramic matrices, stability 3−39120
Al_2O_3-ZrO_2 composites, critical microstruct. for microcracking 3−39240
Al_2O_3-ZrO_2 composites, K_{Ic} values, comparison of notched-beam and indentation strength technique 3−53313
α-Al_2O_3, struct. characts. and ionic mobility, neutron diffr. study 3−7985
BN-Al_2O_3, cutting tool, wear resist. rel. to binder composition, EPMA obs. *(Japanese)* 3−39256
B_2O_3-P_2O_5-Al_2O_3, glass, struct., IR spectra and X-ray diffr. study 3−13113
Ba-0.6Al_2O_3, transmission ELS for STEM microanalysis 3−8916
BaO-B_2O_3-Al_2O_3 glass, EPR and kinetic study of H centres 3−14129
CaO-Al_2O_3-P_2O_5, glass, ^{27}Al NMR study of struct. 3−46863
CaO-B_2O_3-Al_2O_3-Fe_2O_3 glass, IR spectra, annealing effects 3−43529
Co-Al_2O_3 cermet film, electron beam coevaporated, dielec. function meas. 3−8895
Cr_2O_4-Al_2O_3 composites, fused refractories, struct. and props. 3−19317
Cu-Al_2O_3, <001> single crystal, high temp. deform. *(Japanese)* 3−47894
Cu-Al_2O_3, cold rolled, deform. struct., effect of dispersed phase 3−47914
Cu-Al_2O_3 polycrystals, dispersion hardened, strengthening mechanisms 3−43850
Cu-Al_2O_3-Cr, diffusion saturated, precipitation, struct. changes, elec. resist. and plastic deformation study *(Russian)* 3−34324
$Fe_{82}B_{18}$-Al_2O_3 amorphous granular film, Mossbauer study 3−43466
α-Fe_2O_3-Al_2O_3, solid soln. form., Mossbauer and DTA study 3−8745
Fe_3O_4-Al_2O_3, powder mixture, dry grinding effect on γ-Fe_2O_3-α-Fe_2O_3 transformation 3−53003
p-$Hg_{1-x}Cd_xTe$-Al_2O_3-Pb, tunnel cond. oscills. in mag. field 3−3330
β-$In_{2.47}Al_{22}O_{34}$, cryst. struct. and thermal stability, X-ray study 3−2504
K_2O-Al_2O_3-B_2O_3-Fe_2O_3 glass, Fe aggregation on heat treatment, optical and mag. study 3−13467
K_2O-Al_2O_3-CaO-SiO_2, liq.-liq. immiscibility and phase separation, STEM study 3−51805
Li stabilised β″-Al_2O_3, transform. strengthening with tetragonal ZrO_2 3−58124
LiBr.H_2O-Al_2O_3 system, cond. enhancement by Al_2O_3 particles 3−13535
LiBr.xH_2O-Al_2O_3 system, composite pellet, fast Li ion transport 3−13536
Li_2O-Al_2O_3 system, T diffusivity 3−55630
MgO-Al_2O_3 spinel, faceting of twin boundaries 3−33271
MgO-M_2O_3-silicate system (M=Al,Cr,Fe in binary mixture), solid solubility in periclase phase 3−34290
MgO.Al_2O_3, VPE on Si 3−24153
Mo-Al_2O_3 cermet photothermal absorber coatings, surface roughness and thermal stability 3−8385
Mo-Al_2O_3 cermet photothermal absorbers, roughened graded-index, with very high absorptivities 3−19604
β″-NaO-Al_2O_3-CoO(NiO)(CuO)(ZnO)(Li_2O), ionic cond., doping effects 3−42834
β″-Na_2O-Al_2O_3 solid electrolyte, sensor appls. 3−13521
β″-Na_2O-Al_2O_3 superionic conductor, complex admittance plots 3−42835
Na_2O-Al_2O_3 system, β″ to β transform. kinetics 3−58109
β″-Na_2O-$Al_2O_3:Mn^{2+}$, ESR study 3−8719
Na_2O-Al_2O_3-CaO-SiO_2, liq.-liq. immiscibility and phase separation, STEM study 3−51805
Na_2O-Al_2O_3-SiO_2-H_2O, VSZ-3 zeolite crystal, hydrothermal synthesis and charact. 3−8951
Ni coated Al_2O_3 particles, orientation in mag. field 3−47814
NiO-Al_2O_3 catalysts, magneto-chemistry 3−38598
Pb-Al_2O_3, powder metallurgical composites, consolidation and technical props. 3−52996
Pb-Al_2O_3 particulated composite, prep. by powder metallurgy techniques, high temp. creep 3−34264
PbO-B_2O_3-Al_2O_3-Fe_2O_3-Y_2O_3 glass-ceramics, mag. props. 3−57833
Pt/Al_2O_3 porous catalyst, Voronoi cell model for interpreting small angle X-ray scatt. 3−37733
Pt-Al_2O_3 cermet photothermal absorber coatings, surface roughness and thermal stability 3−8385
Si-Al_2O_3 interface, depth profiles, AES electron beam excited plasmon-loss features 3−8345
Si-MgO.Al_2O_3-Si struct., VPE 3−24153
Si_3N_4-Al_2O_3-phosphate binder composites, physicochem. processes on heating 3−39085
Si_3N_4-Y_2O_3-Al_2O_3, pressureless sintering using high N_2 press., effect of Al_2O_3 3−24191
Si_3N_4-Y_2O_3-Al_2O_3, hot pressed, microstruct., grain boundary comp., electron microscopy 3−43782
Si_3N_4-Y_2O_3-Al_2O_3-Mg-O, sintered compacts, hot isostatic pressing, density, flexural strength *(Japanese)* 3−58083
SiO_2-Al_2O_3 integral solar cell cover fabrication by plasma-activated source 3−14500
SiO_2-Al_2O_3 refractory fibres, recrystn. study *(French)* 3−34357
SiO_2-Al_2O_3 system, cryst. and glossy, struct. and vibr. spectra 3−42527
SiO_2-Ce_2O_3-Al_2O_3 glass, luminescence and IR absorption spectra 3−14353
SiO_2-TiO_2-Al_2O_3 liquid phase, appl. in zircon sintering *(Japanese)* 3−3995
W:Al_2O_3, K_2O, SiO_2, wire, tensile strength and creep behaviour, short-term, up to 1100°C 3−9117
ZrO_2 toughened Al_2O_3, X-ray microanal. and electron microscopy of ZrO_2 particles 3−39160
ZrO_2-Al_2O_3-Y_2O_3(Yb_2O_3), high cond., Al_2O_3 as sintering aid, microstruct. anal. 3−14534

aluminium
see also nuclei with ......
(100) surface, current image diffr. patterns 3−42493
(100) surface band struct. 3−43006
(111) surface geometery, intense elec. field effects 3−18551
acoustic anisotropy, polarised US wave birefr. study 3−2688
adhesion, of thermoplastic polymers, effects of temp. 3−19506
adsorbed Ar and Xe on (111) surface, excited states, EELS and UPS study 3−47399
adsorbed layer on Si (111), stability of LEED fractional-order beam intensities and intralayer multiple scatt. 3−42898
adsorbed O, surface extended energy loss fine structs. above K-edge 3−19235
adsorption of O, surface site determ., EELS spectra and lattice dynamical model 3−3884

aluminium continued
adsorption of O on (111) surface, low-energy current image diffr. study 3–2963
alkali halides, VO$_4^{3-}$.Sb^{3+}, VO$_4^{3-}$.Al^{3+} and SiO$_4$.Th^{4+} mol. impurity complexes, IR absorpt. study 3–23985
anode coating in magnetically-insulated diode, plasma production, heavy ion accel. *(Russian)* 3–22658
anodic barrier films on Al for RBS studies, prep. 3–14779
anodic film, TEM film thickness meas. 3–38259
atom, ^{2}D absorption spectrum, multichannel quantum defect theory anal. *(Chinese)* 3–41528
atom, Compton profile, stopping power, X-ray scatt., HF wavefunctions 3–6581
atom, electronic stopping powers, shell corrections calcs. 3–26635
atoms, slow-electron excitation, cross section calc. by strong-coupling method 3–11986
Auger electrons, escape depth, elastic scatt. effect, Monte Carlo calcs. 3–38971
Auger linewidths for L$_{\mathrm{I}}$L$_{\mathrm{II,III}}$V processes 3–19231
B fibre reinforced Al, unidirectional, damage, math. modelling 3–56472
backscatter of diagnostic X-rays from metals 3–53850
backscattering of low energy light atoms, ang. and energy correls. 3–26452
band struct., photoemission study 3–43006
bar, round, tensile deform., localised neck initiation delay 3–4080
biaxial creep test at high temp., stationary flow pot. identification *(French)* 3–24313
bicrystals, formed using ⟨100⟩, ⟨111⟩ and single glide crystals, plastic deform. 3–57016
cast, grain refining efficiency of PM122 wire inoculant 3–52995
cast alloys partially dispersed with uncoated C microballoons, wear resist. 3–19424
castings, scatter imaging using X-ray fan beam and pinhole camera 3–9289
cathode arc spot movement, random walk anal., crater form., erosion rate determ. 3–27779
cathodes, vacuum arcs, vel. and erosion in mag. field 3–18151
chemisorption of O on (111) surface, electronic struct., iterative EHT calc. 3–38453
coated optical fibre for use in radiation environment 3–41987
coated Re field emitter, adsorption studies, work function meas. 3–34201
coatings, heat-resistant, cracking conditions 3–58310
cold pressure bonding of single crystals in ultra-high vacuum interface deform. influence *(Japanese)* 3–9234
cold rolled, microstruct. and deform. mechanisms in polycryst. samples 3–43929
cold rolled, pure, microhardness and yield stress at very high deform. 3–53145
cold rolled, substruct. strengthening 3–43866
composites, B fibre reinforced, mech. props. anisotropy 3–24316
corrosion in saturated Ca(OH)$_2$ soln. containing NaCl *(Japanese)* 3–58297
corrosion inhibition by naturally occurring substances, aqueous extracts of leaves and fruit peel in acids 3–14770
corrosion rate rel. to surface coverge and tunnelling spectra of organic inhibitors 3–14765
crack tips, dislocation emission, TEM obs. 3–19394
crack tips, stress intensity factors, acoustoelastic meas. using acoustic wave birefringence 3–53346
creep, anomalous and const. substruct. transients 3–47923
creep, constitutive eqn., internal variable, dip test 3–47918
creep behaviour, influence of fatigue stress 3–47885
cryogenic materials, thermal radiative properties 3–8234
crystal, dynamic loading, strain-rate history affects and microstruct. aspects 3–33345
cyclic hardening and grain boundary crack in high purity specimens *(Chinese)* 3–53078
cyclically loaded, dislocations, X-ray diffr. intensity study 3–37910
deformed by cyclic bending to fracture, polygonalisation study *(Russian)* 3–34433
diffusion in Au, low temp., grain boundary migration and recrystn. 3–38141
diffusion in Cu, low temp., grain boundary migration and recrystn. 3–38141
diffusion of H, lattice relax. effects calc. 3–2886
disk circular, hydraulic bulging into axisymmetric dies, numerical anal. 3–1972
dislocation motion in single cryst., flow stress and cell size, HVEM study 3–13228
dislocation-point defect interaction, in bias stress system, string model 3–33294
dust cloud, flame propagation in zero gravity, burning velocity, thickness, radiation heat loss 3–24537
dust clouds, ignition energy and flame quenching meas., quenching distance formula 3–24536
dynamic deformation, strain rate history effects and dislocation substruct. obs. 3–43892
elastic consts., determ. from elastic moduli of polycryst. samples *(Russian)* 3–51686
electrochemical behaviour in 1M H$_2$SO$_4$/water and 1 M H$_2$SO$_4$/dimethylformamide 3–43982
electron beam induced heat flow transients, heat diffusion eqn. calc. 3–42670
electron irrad., low-energy electron energy loss and range distribs. 3–41457
electron stopping power, 11-127 keV 3–13297
electronic relax. rates, anomalous surface impedance study 3–23365
electronic struct. of vacancies and H-trapped vacancies rel. to positron lifetime calc. 3–28296
electrophoretic coatings on steel 3–24413
energy loss meas., low-velocity ion effective charge 3–14418
epitaxial films on GaAs(100), cryst. orientation and surface morphology 3–33595
erosion and deposition in EBT fusion device 3–18049
ESR linewidth and g-anisotropy, temp. and freq. depend. 3–52628
etching and product detection in plasma beam under ultrahigh vacuum 3–4157
etching in tetrachloromethane plasma, polymer film form. 3–24394
excited atom emission, ion bombard. 3–38993
fatigue, low cycle, effect of strain-amplitude charge on pure samples at 77K *(Japanese)* 3–58212

aluminium continued
fatigue failure in air and vacuum, X-ray diffr. study *(Japanese)* 3–58217
fatigue testing at elevated temp., reverse bending machine design and expt. results 3–53332
Fermi surface props. from phase shift parametrisation 3–13703
film, ageing characts., effect of electrode annealing, elec. resist. meas. 3–18796
film, electron backscatt. coeff. using double layers 3–58010
film, H$^+$ implantation and blistering, density distrib. profile 3–46983
film, He ion irrad., He bubble form. 3–22949
film, implantation induced He bubble press. and density determ. 3–8381
film, initial growth on GaAs (001), temp. and reconstruction depend. 3–18585
film, interaction and localisation effects above supercond. transition temp., cond. and magnetoresist. meas. 3–33804
film, interaction with O$_2$ at low press. 3–9352
film, ion-beam corrosion and acoustic emission 3–51673
film, ion-irradiated, defect production, residual resist. 3–33312
film, microwave enhancement of order parameter, supercurrent depend. 3–38537
film, MOCVD on quartz substrate 3–43748
film, obliquely evaporated, optical props. 3–14374
film, oxidation, ellipsometric meas. 3–9353
film, reflectance and transmittance simultaneous meas. using optical thickness monitor 3–374
film, stress distrib. in dynamic mixed state *(Russian)* 3–47460
film, surface energy and work function 3–52224
film form. in aq. soln., Rutherford backscattering spectroscopy study 3–9219
film growth on Si surfaces, LEED and AES study 3–33606
film on Ti substrate, reactions and diffusion 3–33584
films, evaporated, struct., elec. cond. and optical density meas. 3–24140
films, reactive ion etching by gas plasmas *(Japanese)* 3–39301
films and mechanically scraped surfaces, ESCA study 3–8941
first-wall model for INTOR reactor, thermomech. behaviour, finite element calcs. 3–26438
foil, effect of small additions of Fe, Cu and Mg on recrystallisation *(Polish)* 3–47844
foil, electron energy loss calc. 3–26605
foil, electronic stopping power for 50-230 keV D$^+$ and He$^+$ 3–28019
foil, household, tensile deform., texture and thickness effects 3–43918
foil, laser irrad., Al XI and Al X 2d-3d multiplet space resolved spectra 3–12844
foil, point defect nature determ. from dislocation loops *(Russian)* 3–37902
foil+^{238}U ions, thermal neutron activation anal., stopping power values 3–8920
foil in NaCl solutions, pitting corrosion effect investigation *(Polish)* 3–47990
foil thickness measurement in TEM, rapid in situ meas. method 3–470
glass fibre reinforced Al, produced by powder metallurgy, mech. props. 3–43925
grain boundaries, asymmetrical tilt boundary struct. 3–46964
grain boundaries, Stoneley waves 3–42905
grain boundaries, symmetrical tilt boundary struct. 3–46963
grain size form. as a result of dynamic recrystn. under US loading *(Russian)* 3–22978
granular, Hall effect meas. near metal-insulator transition 3–3163
granular, negative magnetoresistance near metal-insulator transition 3–3162
graphite fibre reinforced Al, creep anal. 3–9127
graphite fibre reinforced Al, residual stress meas. 3–53352
graphite fibre reinforced Al, room temp. tensile strength, function of annealing temp. and time 3–47960
graphite fibre reinforced epoxy laminates, with Al embedded particles, moisture detection by X-ray diffr. 3–14806
guides on LiNbO$_3$, piezoelectric waveguide convolver, linear and nonlinear anal. 3–56402
high purity, creep behaviour, effect of stress and subgrain size 3–53120
high purity crystals, expt. assessment of X-ray diffr. theory 3–2339
high purity single crystals, X-ray integrated intensity, effect of microstruct. 3–24260
hot rolling, sandwich type with Ti, layer flow obs. in plastic deform. zone 3–14624
impurity in spark-discharge plasma, meas. of density of electrode material 3–33021
impurity ion accel., rel. to H plasma expansion, simulation *(Russian)* 3–27649
infiltrated graphite, elec.-discharge sintering 3–24200
inhomogeneous deform. at high temp., subgrain misorientation 3–47924
interlayers, use in diffusion binding stainless steel to Al$_2$O$_3$ 3–24396
internal stress distrib., acoustic interferometry method 3–4232
ion, implanted, heavy ion distrib. 3–42640
ion beams, ^{4}He$^+$, ^{12}C$^+$, ^{16}O$^+$, projected range distributions, low-intermediate-high energy, Al target 3–51676
ion implantation by MeV He$^+$ ions, uniform depth distrib. using absorber tilting 3–46978
ion implanted and pure, laser irrad., impurity profiles and heat flow 3–27990
ion implanted with He, bubble density and press. 3–21510
ion induced electron emission, effect of oxidation 3–3905
ion plated protective coatings for silvered glass mirrors 3–17602
ions, ionisation rate coeff. in theta-pinch discharge 3–32918
laser annealed, containing Ni precipitates, vacancy loops obs. 3–56959
laser bombardment, dynamic response, surface roughness effect 3–13272
laser irrad., corrosion and electrochemical behaviour 3–29215
laser irrad., pure and Sb implanted, AlSb precip. nucleation, lattice defects, TEM, ion beam anal. 3–56960
laser irradiated foils, plastic deform. study *(Russian)* 3–37983
laser-induced periodic surface struct. 3–42897
laser-plasma, X-ray emission and temp., time-resolved meas. 3–42455
lattice vibrs. and thermophysical props. 3–47063
light impurity energy profile codes 3–43093
liquid, pair pot. calcs. from Born-Green integral eqn. 3–46832
liquid, struct. meas. by neutron scatt., Placzek correction 3–56806
liquid alloy layers formed by reaction with Fe alloys 3–29060
local partial Al density of states, linear KKR study 3–38279
low energy electron reflectance spectra and band struct. 3–23257
magnetoresistance, low-field, anisotropic relax. time effect 3–13802
magnetron sputter deposition, substrate heat flux anal. 3–14489

aluminium continued
magnetron sputtered film, optical reflectance, elec. resist., effect of gas purity 3—38947
many-body effects on $L_{23}VV$ Auger spectra 3—34180
melts, inclusions precip. mechanism on active filter granules 3—7653
metallised polyester film, struct. and O_2 barrier props. 3—33597
meteorite (Estacado), cosmogenic ^{26}Al distrib. 3—15886
mirror, ultraprecision machining of optics at Los Alamos 3—7232
modelling steady state and transient deform. at high temp. 3—33350
molten, dissolution of ferrous alloys 3—29222
molten, quality control, US meas. 3—9281
monolayers, on GaAs (001)c(2×8), interdiffusion and nucleation, AES study 3—13626
muon diffusion const. at low temps. 3—51855
negative ions, excited states lying above ground state of neutral atom 3—21647
neutron irrad., interstitial clustering, diffuse X-ray scatt. study 3—33307
nuclear Gruneisen parameter for eqn. of state, vol. variation 3—28074
ohmic contacts on $BaTiO_3$, laser annealing and stability 3—57423
optical film, stress, adherence, hardness and density 3—13685
optical properties in IR and far IR 3—57868
optics diamond turning machine, hemispherical Al test part cutting 3—7236
oxidation, TEM study 3—29223
oxidation by water, evidence for mol. intermediate, X-ray and UV photoelectron spectroscopy 3—19452
oxide films, barrier type, AC impedance meas. 3—52247
oxide growth rate on newly generated surfaces 3—24392
oxide layer, spectral emissivity *(Japanese)* 3—42822
oxidised, thermal emission spectra, struct. 3—1936
photoemission sources, energy level distribution changes due to scratching 3—39017
photons multiple backscattering, saturation depth Z-dependence 3—47577
physisorption of H_2, APFIM study 3—51939
plasma, continuous absorpt. spectra 3—22588
plasma etching mechanism; plasma beam studies 3—4164
plastic deform. near superconducting T_c 3—28032
plastic deformation, calorimetric meas. of polycryst. samples 3—39196
plastic strain rate change test, elimination of machine transient effects 3—53334
plastic stress-strain relationships, tested in biaxial tension 3—47913
plastically deformed, positron trap non-uniform distrib. 3—3857
plate, aperture form. by mod. energy density radiation, dispersion of ejected products 3—53091
polycrystalline, γ-ray Compton profile meas. using ^{241}Am Compton spectrometer 3—19222
polycrystalline, cyclic deform., dislocation substructure rel. to saturation stress 3—53162
polycrystalline, thermal softening during hydrostatic extrusion 3—24258
positron surface states on clean and oxidized surfaces and in surface vacancies 3—38353
powder compact, hot extrusion, flow pattern *(Japanese)* 3—58065
powder metallurgy grade development, wear props. 3—3987
pure, quenched-in vacancy clusters, characteristics 3—42604
pure ultrafine-grained, Luders deform. 3—24305
quartz:Al, smoky, colour centre models 3—18298
quartz growth with high Al conc. 3—14458
reactive ion etching in tetrachloromethane-N_2 mixture, effect of added N_2 3—24393
reactive-sputtering, angular distrib., sputtering yield, 40 keV Ar ion bombardment 3—38994
recovery and work hardening, 623-848K, high temp. deform. mechanism *(Japanese)* 3—39170
recovery-annealed, dislocation density, X-ray diffr. line broadening, Warren-Averbach mean-squared strains anal. 3—56902
recrystallisation, homogeneous nucleation, generated grain number, reaction time, computer simulation *(Japanese)* 3—39171
residual stress meas. using US vel. temp. depend. 3—58378
seawater and river water spectrochem. anal. method 3—44582
secondary electron emission after ion bombardment *(German)* 3—38995
secondary electron emission under ion bombardment, 100-800 keV *(German)* 3—58024
secondary polyatomic ion formation *(French)* 3—38980
self-interstitials, energy 3—51737
SEM, electron currents in specimen chamber analysis 3—49506
sheet, structural adhesive joints, bond efficiency, US scanning and spectrum analysis 3—58359
shock deformation, thermal trapping calc. 3—22975
single crystal, deformation behaviour during compression *(Japanese)* 3—29128
small spherical clusters, surface plasmon resonance, ELS study 3—8439
solid solubility, extent 3—33452
spalling fracture resistance 3—53302
sphere clusters, surface plasmon coupling, electron inelastic scatt. study 3—8432
sputtered, step coverage, influence of bias sputtering and wafer preheating 3—13676
sputtered Al in EBT-S, density and vel. distrib., laser-induced fluoresc. obs. 3—18035
sputtered film, deposited in d.c. and r.f. magnetron systems 3—43733
steady state creep under press. *(Russian)* 3—33349
steel, stainless 316L, Al, Ti and Sc ion implantation effect on resist. to crevice corrosion 3—58312
steel fibre reinforced Al, interphase interaction, influence of protective coatings on fibres 3—58266
stopping power calc. of mag. monopoles 3—17183
strain hardening at high strains 3—39166
stress meas., internal and effective, dislocations study 3—24288
strips on GaAs, surface EM wave propag. 3—47726
substrate for Pb film, pulsed laser treatment, chemical interdiffusion, Rutherford backscatt. study 3—27991
superconducting film, electron inelastic scatt. time in presence of fluctuations, magnetoresist. 3—38538
superconducting strip, crit. pair breaking current far below T_c 3—3392
supercooled liquid, struct. determ. by computer modelling 3—7901
surface, (110), multilayer relax., LEED meas. 3—13600
surface, adsorbed arachidate monolayers, IR refl.-absorpt. spectra 3—50399
surface, charge state distrib. of scattered fast ions, contaminating layers influence 3—19239
surface, heavy ion and electron collisions, Auger line shape 3—43689

aluminium continued
surface, interaction with O, electron irrad. effect, AES study 3—18562
surface, K^+ bombardment, secondary emission particle excitation 3—28953
surface binding energy shifts, photoelectron spectra 3—3922
surface oxide films, chemical comp., photoelectron and secondary ion mass spectroscopy 3—34523
surface stress measurement using Rayleigh waves 3—58380
target, H^+ collision, secondary electron emission, Compton profile 3—34187
texture formation during plastic deformation 3—9089
texture specimen prep., X-ray diffr. study 3—58324
thermal cond. under neutron irrad. 3—3155
thermal diffusivity measurements for solid sample utilizing the photoacoustic effect *(Korean)* 3—8470
thermometric fixed points for Pt resistance thermometry 3—35992
thin film, enhanced Raman scatt. 3—3731
thin film, microwave transmission coeff. phase meas. 3—28935
thin film, N_2^+ and Ar^+ ion bombarded, elec. cond. 3—28457
thin film, reentrant supercond. under high mag. field 3—57448
thin film deposition, computer-controlled electron beam techniques; Al and Al alloy sources 3—29000
thin films, adhesion on Si wafers 3—28245
transition radiation, interband contrib., emission spectra studies 3—14377
unidirectionally solidified, H distrib. and diffusivity 3—53044
US attenuation in transverse mag. field, OPW calcs., Fermi surface study 3—13707
US birefringence, hysteresis effect 3—2687
US bulk and surface wave scattering from surface breaking cracks 3—44022
vacancy form. and migration energies, pair pot. calc. 3—42598
wire, anodization for UHV EM coils 3—4191
X-ray K absorption edge and singularity at Fermi level 3—28929
Al and Au particle arrays, surface-enhanced Raman scatt. 3—3708
Al I, II, III segmented plasma recomb. lasers employing foil electrodes 3—12125
Al I, nsnp(n+1)p configurations 3—1292
Al VI-X, C foil excited ions, lifetimes, charge state distrib., far-UV obs. *(French)* 3—32180
Al X 2p-3d-multiplet space resolved spectra emitted from laser irrad. thin foils 3—12844
Al XI 2p-3d-multiplet space resolved spectra emitted from laser irrad. thin foils 3—12844
Al XI laser plasma of Li-like ions, emission spectra, spectral line breadth *(French)* 3—42438
Al^{2+}, electron impact inner-shell ionisation cross sections 3—11988
Al:He, diffusion during deform. at low temp. 3—28161
Al:N, 700-800 keV $^{15}N_2^+$ implantation, AlN layers formed, charact. 3—2582
Al:V(Mn)(Fe), impurity density of states, cluster phase shifts and virtual bond states 3—52070
Al/Ag multilayer films, ion beam mixing, conc. depth profiles, He backscatt. study 3—2625
$Al/AlO_x/Pb$ junctions, inelastic electron tunneling, barrier prep. effects 3—23502
Al/GaAs Schottky barriers, evaluation using Norde's modified current-voltage anal. 3—38455
Al/lead phthalocyanine/$In_{2-x}Sn_xO_{3-y}$ MIS struct., rectifying and photovoltaic props. 3—52254
Al/Nb normal-supercond. bilayers, Cooper-limit-like behaviour at crit. fields 3—13970
Al/polycrystalline Si composite metallisation, electromigration induced shallow junction leakage 3—51871
Al/Sb layers, ion beam mixing, backscattering spectra study 3—2626
Al/Sb multilayer films, ion beam mixing, conc. depth profiles, He backscatt. study 3—2625
$Al/TiSi_2/Si$ contact system, thermal stability and elec. meas. 3—47227
$Al/V/GdSi_2/Si$ Schottky contacts, V diffusion barrier, backscatt., X-ray and elec. study 3—8588
Al^{3+}/CO system, equilib. geometry, ab initio calcs., NMR chem. shielding tensors 3—17205
$Al-(Al_2O_3/SiO_2)-Si$ struct., double dielec. layer form by DC plasma anodization 3—13918
$Al-Al_2O_3-Ag_{2-x}Se_{1+x}$, thin film structure, transition from S- to N-type differential negative resist. obs. 3—23494
$Al-Al_2O_3-Al$ thin-film diode array 3—16415
$Al-Al_2O_3-Al-Al_2O_3-Al$ structures, EM oscill. generation 3—38489
$Al-Al_2O_3-Au$ electroformed struct., SEM and XPS studies 3—2991
$Al-Al_2O_3-Au/MgF_2$ tunnel diode on holographic grating, light emission 3—12263
$Al-Al_2O_3$-benzoic acid-P6 junctions, IETS study, effect of junction roughness 3—38488
Al-Au, dose enhancement factor meas. by ^{60}Co gamma-rays 3—36575
Al-epoxy composite, ultrasonic wave propagation and dispersion, $\omega=0.1$-2.5 MHz *(French)* 3—38000
Al-GaAs (001), MBE grown, band bending, angle-resolved UPS study 3—52252
Al-GaAs (110) interface structure on Al chemisorption, energy minimisation study 3—8328
Al-GaAs structures, anodic oxidation for prep. of dielectric passivation layers *(Slovak)* 3—47226
Al-InP evaporated systems, plasma anodisation, MISFET appl. 3—29200
Al-InP interface, cryst. and electronic struct. 3—23189
Al-insulator-Au tunnel sandwich, rear light emission by inelastic tunnelling 3—19197
Al-like ions, oscillator strengths, transition probabilities, data tables 3—25702
Al-Ni tunnel junctions, spin states resolution, cond. meas. 3—8628
$Al-Pd_2Si-Si$ junctions, material reactions, phase stability 3—23104
$Al-Pd_2Si-Si$ junctions, material reactions, kinetic rates 3—23105
Al-polymer-Al, thin film form. by plasma polymerisation, elec. property meas. 3—13921
Al-Si interface, chem. interdiffusion, AES study 3—33520
Al-si interface struct., γ-irradiation effects *(Russian)* 3—47229
Al-Si metallisation small area contacts to n-Si, resist. increase 3—52248
Al-Si polycrystalline film, solid phase reaction with overlapping Al film obs. 3—33515
Al-Si thermocouples, thermopile fabrication using semicond. planar technology 3—54731
Al-Si:As Schottky barrier diode, barrier height enhancement by ion implantation 3—52223

aluminium continued
  Al-SiC interface, AES and EELS study 3—33582
  Al-SiO$_2$ interface, Auger depth profiling 3—28940
  Al-SiO$_2$-Si, MOS struct., dielectric impurities, elec. durability, SIMS 3—28449
  Al-SiO$_2$-Si electron injector structs., surface plasmon polariton mediated luminesc. 3—52854
  Al-SiO$_2$-Si MIS contacts for inversion layer solar cells, dark I-V curves, effect of Si$_3$N$_4$ plasma deposition 3—57436
  Al-SiO$_2$-Si MIS tunnel diode solar cell struct., surface barrier heights meas. using photoelectric method 3—14950
  Al-SiO$_2$-Si structure, mobile ion energy distrib., constant current transient technique *(Chinese)* 3—43284
  Al-SiO$_2$-Si(n), semiconductor-insulator interface, electronic processes, deep-level transient current spectroscopy 3—3321
  Al-SiO$_2$-n-Si peaked Schottky barrier model 3—38458
  Al-SiO$_2$-n-Si system, 1.3 MeV electron radiation effects obs. *(Chinese)* 3—38481
  Al-SiO$_x$-Si, solar cells, capacitance-voltage and conductivity-voltage characts. *(Slovak)* 3—39479
  Al-Zn-Mg alloys, struct. of precipitation free zone after heat treatment 3—43872
  Al-ZnO-SiO$_2$-Si struct. for SAW devices, elec. characts. 3—3323
  ^{26}Al, cosmogenic, in terrestrial and extraterrestrial matter, accelerator mass spectrometry meas. 3—48708
  ^{26}Al, nucleosynthetic, yield constraints from diffuse glactic γ-ray line emission 3—20403
  ^{27}Al, hyperfine struct. of 4s $^2S_{1/2}$ state, laser spectra study 3—1501
  As$_2$SeTe$_2$-Al contacts, conductivity control and photovoltaic effects 3—52246
  Au/a-Se/Al struct., aging effect of capacitance and photoelec. characts. 3—33802
  Au-Al thin film couple, intermetallic form. and grain boundary diffusion 3—8269
  B fibre reinforced Al, contact stresses and force parameters during rolling *(Russian)* 3—39207
  B fibre reinforced Al, room temp. tensile strength, function of annealing temp. and time 3—47960
  B fibre reinforced Al, tensile strength, room-temp., function of annealing temp. and time 3—34484
  BeO:Li, Al, near-UV luminescence excitation spectra, 3 to 7.5 eV *(Russian)* 3—57966
  Bi$_{12}$SiO$_{20}$:Al, electrooptic props., doping effects 3—23918
  C fibre reinforced, fabrication by plasma spraying and hot pressing, mech. props. *(Japanese)* 3—58077
  C fibre reinforced, fabrication, graining process, alloying effect on wettability *(Japanese)* 3—58078
  C fibre reinforced Al, chopped fibres, fabrication by graining process 3—52998
  C$^+$, energy straggling in Al and Ag, comparison Bethe-Livingston theory 3—51675
  CdCr$_2$Se$_4$:Al, dislocation patterns, rel. to elec. cond., hardness and doping 3—27947
  CdS:Al films, transport and optical props., dopant conc. effects 3—18804
  Cu/Al film system, short- and long-range ion-beam mixing, influence of interfacial oxide 3—37966
  Cu/Al system, B ion implantation, mechanical props. 3—2647
  Cu-Al composite wire, hot drawing sintering fabrication, elec. resist., diffusion zone growth 3—52999
  Cu-Al thin film couple, intermetallic form. and grain boundary diffusion 3—8269
  Cu-Al thin film couple, phase form., X-ray anal. 3—18589
  Fe-Al system, interdiffusion, aluminising 3—33519
  α-Fe$_2$O$_3$:Al^{3+}, aluminous hematite, Mossbauer study 3—34018
  Ga$_{1-x}$Al$_x$As, MBE grown, comp. anal. by atomic absorpt. spectroscopy and X-ray diffr. *(French)* 3—52954
  GaAs:Al, diffusion through surface layers, X-ray and photoluminescence study 3—8258
  GaAs:Al, local lattice dynamical force const. variations caused by isoelectronic impurities 3—47071
  GaAs:Al, spatial distrib. profile of Al form ^{27}Al(p,γ)^{28}Si resonant reaction 3—46975
  n-GaAs-Al, MIS-type Schottky barrier, electron traps in oxide layer, detrapping study 3—23499
  GaSe-Al Schottky diode struct., nonequilibrium band flattening 3—47406
  Ge:Al, laser multistage ionisation technique for Al impurity conc. determ. 3—58462
  Ge:Al, laser photoionisation impurity detect. 3—14891
  ^{2}H bombarded, deuterium depth profiles, using (^{3}He,p) 3—55577
  n-Hg$_{0.8}$Cd$_{0.2}$Te:Al$^+$, ion implanted, IR refl. study 3—18327
  Hg$_{1-x}$Cd$_x$Te-Al interface formation, local chem. comp. and Schottky barrier height, photoemission study 3—28220
  p-In$_{0.53}$Ga$_{0.47}$As-Al Schottky barrier, barrier height meas. 3—13883
  InP (100)-Al Schottky contact with etched or cleaned InP surfaces, Fermi level, XPS study 3—47419
  InP-Al rectifying contacts, Schottky carriers and MOS structures 3—13920
  Kr$^+$ beams stopping power meas., time of flight method, Al target 3—51677
  Li/Al electrode in molten LiCl-KCl, kinetics study using linear sweep voltammetry 3—34631
  MgO:Al, luminescence excitation, reflection spectra, 5-28 eV *(Russian)* 3—57965
  MgO:Al single crystal growth method, lowering of OH$^-$ and cation impurities *(Russian)* 3—58040
  MgO:Ca^{2+}, Al^{3+}, Sc^{3+}, migration energy of cation vacancies 3—13523
  Nb/Al-Al$_x$O$_y$-Nb(Al/Nb) refractory Josephson tunnel junctions, fabrication 3—47455
  Pt/Ni/Al films, interdiffusion at metal interfaces, electronegativity and surface pot., ambient effects 3—13558
  a-Se/Al contacts, energy barriers, photovoltaic effect study 3—47423
  Si:Al, enhanced interstitial migration, electronic struct. calc. 3—51859
  p-Si:Al, negatively charged vacancy, hyperfine interactions and ENDOR meas. 3—43459
  Si:Al, point defect recombination-induced migration 3—57141
  Si:Al, self-consistent electronic struct. for Al and Si interstitials, cluster extended Green's function technique 3—47294
  Si:Al, X-acceptors 3—28303
  Si:Al and SOS films, Al anal. by SIMS 3—24539
  Si:Co,B,Al,Ga, pairing reactions of interstitial Co and acceptors, Mossbauer study 3—42623

aluminium continued
  Si:Fe,B,Al,Ga, deep impurity levels, photocapacitance photocond. and Hall effect studies 3—43080
  Si:In, Al, photoluminesc., IR absorpt., photocond. and Hall effect meas. 3—34135
  n-Si/PtSi/(Ti-W)/Al Schottky contact, elec. degradation induced by heat treatment 3—18766
  Si-SiO$_2$-Al MOS capacitor, Na contaminated, scanning internal photoemission study 3—52256
  SiC:Al, sintered, microstruct. inclusions, comp., STEM, AES, X-ray analysis 3—39077
  α-SiC:Al$^+$, LED, ion implanted, radiative recomb., electrolum. study 3—57978
  SiO$_2$:Al, amorphous, photoluminescence studies *(Russian)* 3—14354
  SiO$_2$:Al, amorphous, photoluminesc. 3—47707
  SrTiO$_3$:Fe(Al)(Cr), acceptor-doped, high temp. defect struct. 3—8072
  ZnS:Al, impurity diffusion, two-sample luminescence study 3—18513
  ZnS:Ga,Al, ODMR of strongly coupled donor-acceptor pairs 3—3593
  ZnSe: Al, impurity diffusion and luminescence centres 3—23096
  ZnTe:Al, cryst., luminesc. under laser illumination 3—3784
  ZnTe-Al, laser-induced donor diffusion, photoluminesc. study 3—47158

aluminium alloys
  see also aluminium compounds
  ablation, steady-state, by CO$_2$ laser 3—4192
  AC impedance data, recording and anal., for corrosion studies 3—19469
  acoustic emission during plastic deform. and crack growth in 2024 and 2124 specimens 3—39348
  Alnico, sintered magnetically hard materials 3—3988
  Alnico 5 permanent magnets, non-metallic inclusions and mag. props. modification rel. to Mn content 3—52549
  Alnico magnet, fabrication of electroless Ni plated mirrors 3—7229
  Alnico magnets, fabrication of thin glass mirrors 3—7228
  antenna for detection of gravitational waves 3—10720
  beam, curved, neutron method for stress meas. in interior of solids 3—53351
  bolted structure, flaw detection using multisegment eddy current probe 3—39341
  bronze BrAZhNMts 9-4-4-1, superplastic deform. study *(Russian)* 3—39208
  cast alloys partially dispersed with uncoated C microballoons, wear resist. 3—19424
  cast with partially dispersed graphite, dispersive power and surface roughness rel. to wear 3—34519
  Chromel-Alumel thermocouple use under conditions of rapidly changing thermal processes from −196 to 900°C 3—16362
  clad thin sheet, structural strength, low temp. thermomech. treatment of type D16 3—47871
  coated with plasma sputtered metalloceramic, adhesion, glow discharge *(Russian)* 3—4188
  composites, B fibre reinforced, mech. props. anisotropy 3—24316
  corrosion characteristics in HNO$_3$ 3—9223
  corrosion rate and H evolution in reactor containment spray solutions 3—34526
  crack closure effects for real part-through fatigue cracks, US eval. in type 2024-T6 3—44025
  crack initiation life, notch shape effect on type A5083 3—4129
  creep characteristics and failure, kinetic eqns. *(Russian)* 3—43884
  cryogenic materials, thermal radiative properties 3—8234
  D16, cleavage fracture investig. 3—2663
  design, fundamentals of strengthening, review 3—58127
  dilute alloys, electric field gradient calcs. 3—52091
  dilute binary alloys, defect induced distortion fields, neutron scatt. study and ab initio calc. 3—13215
  disk, pulsed laser excitation of normal modes in type D16 3—58368
  fatigue, back stress variation along the hysteresis loop 3—53225
  fatigue and growth in tests on D16-T and V95-T1 alloys in NaCl solns. 3—58302
  fatigue crack front fragmentation 3—33353
  fatigue crack growth, mode II, initiation from precrack and machined slit *(Japanese)* 3—9168
  fatigue crack growth, near threshold region, in type x7090-T6 3—53226
  fatigue crack growth, near-threshold, microstruct. control in 7000 series alloys 3—9180
  fatigue crack growth behaviour in 2000 and 7000 series, influence of corrosion deposits 3—34463
  fatigue crack growth resistance *(Japanese)* 3—9169
  fatigue crack propagation kinetics in AK4-1, Al$_9$FeNi insoluble phase particles effect 3—34472
  fatigue cracks, gel electrode imaging, bending and torsional testing 3—34572
  fatigue damage, cumulative, anal. under different stress ratios, 2011-T3 alloy 3—24340
  fatigue life, statistical invest. by separating crack initiation and crack propag. lives *(Japanese)* 3—9173
  fatigue properties of semifinished products preliminary plastic deform. influence 3—19419
  fatigued and corrosion fatigued, X-ray measurements of long-range strains 3—53354
  fine grained, superplastic deform. effect on service props. of type 7475 3—58182
  fine grained, type 7475, microstruct. obs. of superplastic cavitation 3—14663
  fracture mechanics for short cracks of type 7075-T6 3—39253
  fracture parameters, variation during process of subcrit. crack growth 3—14697
  fracture studies using AES, review 3—14827
  fracture toughness, comparison of results from short bar and compact specimens 3—29229
  fracture toughness for plane stress system correl. with mech. props. 3—24334
  fracture toughness parameters, nonlinear, comparison of geometry depend. 3—14794
  high strength, factors influencing fracture toughness 3—53220
  high-strength V95 sheet, struct., fracture and mech. props. w.r.t. impurity content 3—58233
  hot rolling, sandwich type with Ti, layer flow obs. in plastic deform. zone 3—14624
  IMI 829, Ti-Al-Sn-Zr-Mo, fatigue crack initiation, caused by high temp. fretting 3—39238

aluminium alloys continued
- IN100, Ni-base superalloy, high temp. low-cycle fatigue rel. to strain rate, in air and vacuum 3—53236
- inelastic stress-responses in non-proportional deforms. at elevated temp. 3—9119
- irradiation by He ions, surface blistering, temp. depend. 3—45690
- laser-induced damage at 492 nm 3—18337
- lattice distortion at impurity atoms, EXAFS study *(German)* 3—13245
- long wavelength Rayleigh wave scattering from microscopic surface fatigue cracks 3—44029
- magnetron sputtered film, optical reflectance, elec. resist., effect of gas purity 3—38947
- mechanical props. control by eddy current method rel. to ageing kinetics 3—53214
- mechanical strength and elongation rel. to porosity 3—34377
- mechanical strength and elongation rel. to porosity 3—34378
- mechanical strength and elongation rel. to porosity in castings 3—34376
- microbial corrosion mechanism 3—39290
- nonmetallic macroinclusion morphology, nature and comp. *(Rumanian)* 3—19314
- oxide film rupture, reanodisation and stress corrosion cracking 3—43985
- oxide phase hardened, heat and corrosion resist. 3—34543
- particulates, rapid solidification, review 3—58062
- passivation by electrochemically sealed Al_2O_3 layer 3—9222
- Permag A-3290, Al-Ni-Co-Ti, thermomag. treatment for higher coercivity *(Czech)* 3—14615
- powder metallurgy alloys, fatigue crack propag., effect of Al_2O_3 particles and precipitate type 3—34482
- precipitation hardening, US study of type 2219 3—43846
- R-curves, numerical representation 3—27441
- radiation blistering from He^+ and D^+ simultaneous irradiation 3—45691
- rare earth alloy, RAl_2, elastic props., ultrasonic vel. study 3—18366
- rare earth alloy, RAl_2, electrical transport props., mag. scatt. contrib. influence 3—18696
- rare earth alloys, R_2Ni_2Al, mag. and crystallographic props. *(Russian)* 3—28503
- rare earth alloys, RAl_2, spin correlations, μSR study 3—52696
- rare earth alloys, RAl_2 (R=La, Ce, Pr, Nd, Sm, Gd, Tb, Dy, Ho), thermoelec. power 3—52117
- reinforced double cantilever beam specimen, ductile, fracture toughness determ. of type 2024-T3 3—4237
- residual stress relaxation during fatigue, microplastic deform. process 3—53242
- sheet, forming limit diagrams, effect of strain path changes, dislocation treatment 3—14661
- sheet, fracture toughness, plane stress state 3—58330
- spalling fracture resistance 3—53302
- steel, Si-Al-N-Mn-S, grain oriented, N role 3—34349
- strength and flow stress, temp. depend. 3—39163
- stress corrosion reinstant, high strength, type 7075, microstruct. study, TEM obs. 3—9096
- stress meas. calc., X-ray oscill. method *(Chinese)* 3—34561
- superplastic, thermomech. method of grain-refinement 3—4054
- superplastic forming, grain refinement and grain size control 3—9125
- Supral, superplastic alloy, cavity growth and failure 3—47947
- thermoforce creep surface under simple stress conditions, alloy AK4-1T 3—13324
- thin film deposition, computer-controlled electron beam techniques, Al and Al alloy sources 3—29000
- torsional fatigue, effect of relative humidity and coatings on type 2024-T351 3—9148
- transition metal aluminides, projected surface energy bands, Shockley surface states, stability and bonding 3—57398
- vacancy form. after irrad. and quenching, positron annihilation study 3—47732
- yield functions of anisotropic materials 3—43896
- Young's modulus temp. behaviour of Al-based alloys 3—19359
- Ag-Al film, vacuum deposited, elec. and mechanical props. 3—14495
- Ag-Al welded joints chemical analysis, proton beam excited X-rays characts. 3—39427
- $(Ag_{0.5}Cu_{0.5})_{1-x}Al_x$ amorphous films, electron transport props., extended Ziman theory 3—3150
- Al (99 wt.%), household foil, tensile deform., texture and thickness effects 3—43918
- Al alloy-ceramic feedthrough 3—36028
- β-Al brass, cyclically transformed, dislocation study, thermoelastic martensitic transform. 3—43833
- Al rich coating on stainless steel, high temp. corrosion under S_2/SO_2 atm. *(French)* 3—58299
- Al-Ag, dil., magnetoresist., low-field, anisotropic relax. time effect 3—13802
- Al-Al_2O_3, powder metallurgy, prep. and props. 3—34260
- Al-Al_2O_3(SiC), composites, abrasive wear 3—9195
- Al-Al_3Ni eutectic, strengthening by mech.-thermal treatment 3—43854
- Al-Ca, liq., mixing enthalphy, thermodynamic invest. *(German)* 3—47118
- Al-Ca eutectic composition alloy props. as superplastic selective coatings for solar absorber-convertors 3—29454
- Al-Co-Fe, heat treatment effect on piezomagnetic props. 3—23773
- Al-Cr-Mo, ion implanted metastable phase form by pulsed laser treatment 3—2604
- Al-Cr(Cu)(Mg)(Fe)(Mn)(Zn), thermoelec. power at high temps., temp. and conc. depend. 3—3165
- Al-Cu, 2021, fatigue crack growth, effect of environment 3—29149
- Al-Cu, elastic consts., effect of solute content and heat treatment *(Japanese)* 3—58152
- Al-Cu, etched and anodised, surface anal. 3—39302
- Al-Cu, fast H^+ energy loss and straggling, nuclear resonant reaction study 3—51680
- Al-Cu, fatigue, fracture of constituent particles 3—14708
- Al-Cu, flow stress, strain rate sensitivity, Portevin-Le Chatelier effect region, dislocation-precipitate interaction *(Japanese)* 3—39212
- Al-Cu, ion implanted, pulsed electron beam annealing and furnace annealing, RBS and channelling meas. 3—13257
- Al-Cu, moving dislocations, NMR and TEM obs., correls. with ageing induced structures 3—38718
- Al-Cu, precip. hardening, invest. by sound wave vel. and US attenuation 3—43845
- Al-Cu (0.5%) fine-grained evaporated thin films, pulsed current induced electromigration transport mobility 3—42859
- Al-Cu (0.5%) fine-line thin film conductors, electromigration induced failure by edge displacement 3—42858

aluminium alloys continued
- Al-Cu (4 wt.%), porosity and fracture development during superplastic flow *(Russian)* 3—39205
- Al-Cu (4.5 wt.%), powder, technique for obs. of rapid solidification and annealing in TEM 3—53042
- Al-Cu (6-10 wt.%), hypoeutectic, rheocast, microstruct. 3—24220
- Al-Cu (6%), flow stress, in warm working range 3—53124
- Al-Cu alloy, elastoplastic deform., prior residual deform. effect 3—43901
- Al-Cu alloy D16T sheets, temp. to which heated determ. from struct. and props. 3—24275
- Al-Cu alloys, phonon dispersion relations, Guinier-Preston zone form., neutron scatt. study 3—23000
- Al-Cu alloys, struct. of Guinier-Preston I zones 3—9071
- Al-Cu alloys, struct. of Guinier-Preston zones 3—9072
- Al-Cu directional eutectic alloy, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3—24424
- Al-Cu ion plated protective coatings for silvered glass mirrors 3—17602
- Al-Cu-Co, sintered, struct. and mech. props., effect of rapid cooling on crystn. 3—34259
- Al-Cu-Li-Mn-Cd, alloy 2020, ductility, influence of grain struct. 3—34397
- Al-Cu-Mg, AA2036, serrated flow, influence of thermomech. treatment 3—47899
- Al-Cu-Mg, Cu/Mg ratio effect on precipitation *(Korean)* 3—4042
- Al-Cu-Mg, fracture toughness rel. to struct. nonuniformity in AK4-1 alloy rolled plates 3—58331
- Al-Cu-Mg (4.45, 1.34 wt.%), melt spin alloy, tensile props. rel. to soaking times 3—39200
- Al-Cu-Mg alloys, acoustic emission during plastic deform. 3—34391
- Al-Cu-Mg-Mn, wrought, props., comp. and struct. influence 3—34471
- Al-Cu-Mg-Mn (4.42, 0.27, 0.46 wt.%), strengthening rel to thermomechanical treatment 3—43851
- Al-Cu-Mg-Si, corrosion resist., improvement by ageing 3—34542
- Al-Cu-Mn, large slabs, struct. and mech. props. 3—34404
- Al-Cu-Mn-Mg-Si, heat-resist., struct. and mech. props., Si effect 3—34403
- Al-Cu-Mu-Zr-Fe-Si, struct. and props., Fe and Si additions influence 3—39248
- Al-Cu-(Si), powder compaction and sintering, effect on props. 3—39066
- Al-$CuAl_2$ eutectic alloys, heat pipe solidification, microstruct., mech. props. 3—58162
- Al-Cu(Si), cast and extruded, cyclic behaviour, fatigue crack propag. 3—58193
- Al-Cu(Si), cast and extruded, cyclic behaviour, electron fractographic study 3—58194
- Al-Fe, dil., solute segregation and boundary struct. changes during grain growth 3—53057
- Al-Fe directional eutectic alloy, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3—24424
- Al-Fe laser induced surface melting, mass transfer 3—22938
- Al-Fe-Cr, rapidly solidified, struct., TEM and X-ray diffr. study 3—24219
- Al-Fe-Mn (2.0, 0.8 wt.%), fine-grained, tensile deform. 3—47911
- Al-Fe-Se (0.25, 0.2 wt.%), creep, high temp., flow law, role of strain history 3—24303
- Al-Fe-Si, amorphous alloy, rapid solidification, glass form., crystn. 3—56826
- Al-G, Al-Ni and Al-Ni-Cr multicomponent coatings on steel St3, comp., struct. and corrosion resist. in S 3—24406
- al-Ga, dil., magnetoresist., low-field, anisotropic relax. time effect 3—13802
- Al-Ge, dil., magnetoresist., low-field, anisotropic relax. time effect 3—13802
- Al-Ge, Ge precipitate amorphisation by electron bombardment, TEM study 3—56981
- Al-Ge (30.3 at.%), eutectic, rapidly solidified submicron powders, metastable phase form. 3—43788
- Al-Ge alloy, internal friction by second phase particles 3—57027
- Al-Ge dilute alloys, quenched in vacancies, positron annihilation study 3—56883
- Al-H, dil., impurity electronic struct., energy and metal-impurity interaction 3—43070
- Al-H, electronic struct. of H impurity, bandstruct. model 3—33673
- Al-H, vibr. spectrum of H, recursion method 3—42738
- Al-In alloys, solidification struct., monotectic *(Japanese)* 3—29070
- Al-Li, fusion reactor first wall material, sputtering props., surface comp. and segregation 3—21521
- Al-Li, yield charact. after solution treatment and ageing 3—9102
- Al-Li (2.5 at.%), phys. props., effect of Li loss 3—53108
- Al-Li-Cu (2.7, 2.3 wt.%), fracture behaviour and tensile props., effect of grain struct. 3—29182
- Al-Mg, dynamic tests by Kolsky method, comparison with num. results 3—19486
- Al-Mg, high temp. creep rate, unified anal. from point of view of recovery 3—58160
- Al-Mg, inhomogeneous deform. at high temp., subgrain misorientation 3—47924
- Al-Mg, solute segregation to dislocations, internal friction study 3—39152
- Al-Mg, struct., plastic deformation and corrosion resistance *(Russian)* 3—24292
- Al-Mg, torsional fatigue, effect of absorbed H_2 3—47954
- Al-Mg (0.5 to 7 wt.%), serrated yield at high temps. *(Japanese)* 3—58166
- Al-Mg (2.6 wt.%), mech. strength, corrosion resist. optimisation, Cr and Si additions effect 3—43998
- Al-Mg (3.3, 4.5 at.%), solid solns., creep, breakdown in viscous glide, at high stress levels 3—14652
- Al-Mg (4 wt.%), microstruct. development during forming, effect of strain rate and geometry 3—43933
- Al-Mg (5 at.%), high temp. deform. under combined high freq. stresses 3—29140
- Al-Mg (5 wt.%), serrated flow curves, stress drops 3—14650
- Al-Mg (5%), solidification, conc. changes in electromag. mould *(Czech)* 3—14584
- Al-Mg (90, 10 wt.%), recovery heat treatment after natural ageing 3—34366
- Al-Mg alloy AMg6, complete tensile diagrams plotting 3—14818
- Al-Mg alloy AMg6M, plane specimens, endurance prediction with combined forms of loading 3—47905
- Al-Mg alloy pretreatment for electrodeposition by immersion Zn and electroless Ni 3—19459
- Al-Mg-Pb(Sn), melt, temp. depend. of mixing enthalpy *(German)* 3—58100
- Al-Mg-Si, low cycle fatigue props., dispersoid effects 3—53229

aluminium alloys continued
Al-Mg-Si, plastic instability, investigation using torsion testing 3—43931
Al-Mg-Si, quenched and aged, electron density of states, soft X-ray emission study 3—3029
Al-Mg-Si, soft-X-ray emission anal., measurement temp., DTA study 3—3869
Al-Mg-Si alloy, crack extension micromechanisms, dispersoid effect 3—58205
Al-Mg-Si alloy, loaded in torsion, Portevin-Le Chatelier effect 3—14649
Al-Mg-Si alloys, ductile fracture toughness, effect of dispersoids 3—34452
Al-Mg-Si-Cu-Cr-Fe-Mn (0.98; 0.68, 0.26, 0.2, 0.09, 0.05 wt.%), barrier anodized coating characts. 3—3018
Al-Mg-Si-Mn(Cr), quench sensitivity, effect of Mn or Cr additions 3—39164
Al-Mg-Si-Sr, microstruct. after prolonged soln. treatment, quantitative metallography 3—24276
Al-Mg-Zn, cast, struct. changes during ageing 3—9103
Al-Mg-Zn-Cu, precip. hardening alloy, flow stress-grain size relationship 3—43923
Al-Mn, cold rolled, substruct. strengthening 3—43866
Al-Mn alloys, intergranular corrosion mechanism *(Japanese)* 3—9235
Al-Mn films, electron tunnelling search for bound states 3—38555
Al-Mn-Mg (1, 1 wt.%), strip-cast, thermomech. treatment, creep response 3—24301
Al-Ni, eutectic alloy, hardened by dispersion of fine intermetallic particles, influence of alloying elements *(French)* 3—24290
Al-Ni-Fe-Ti, oxide phase hardened, heat and corrosion resist. 3—34543
Al-Pb vapour deposited film, struct. and precipitation, electron diffr. and microscopy study 3—8368
Al-Pb-Sn-(Sb)-(Mg)-Cu, antifriction, produced by compensation of gravit. segregation by electromag. forces 3—34261
Al-Rh thin films, vapour deposited, solid soln. decomp., annealing, TEM and electron diffr. studies 3—28244
Al-Ru (10, 15 wt.%), vapour deposited, metastable phases 3—19324
Al-Sb ion implanted alloy, nonequilibrium segregation during pulsed laser treatment 3—28110
Al-Si, chill castings, supersaturation method influence on precip. hardening 3—29093
Al-Si, creep, constitutive laws, study using biaxial relax. tests 3—47896
Al-Si, dil., quenched, positron trapping, temp. depend. 3—24047
Al-Si, inhomogeneous deform. at high temp., subgrain misorientation 3—47924
Al-Si, rapidly cooled, negative magnetoresist. effect rel. to supercond. props. *(Chinese)* 3—28337
Al-Si (11.3 wt.%), fast quenched alloy, superconducting props. 3—3354
Al-Si (22 wt.%), subsurface damage during dry sliding wear 3—24369
Al-Si (22 wt.%), wear under dry sliding conditions 3—34495
Al-Si binary alloys, wear rates, role of transfer and back transfer of material 3—34487
Al-Si coconut shell char particulate composite, prep. and props. 3—3989
Al-Si dilute alloys, quenched in vacancies, positron annihilation study 3—56883
Al-Si-Cu alloy, dry sliding friction, test of rule of mixtures 3—4150
Al-Si-Ge system, phase diagram study *(Chinese)* 3—34278
Al-si-Mg-ZrO_2, particulate composite, abrasive wear 3—34486
Al-Si-P(Na), hypereutectic alloy, cost struct., strengthening and refinement *(Japanese)* 3—29171
Al-Si(-Ge), eutectic, modification of Si phase *(Chinese)* 3—53024
Al-Sn (0.06-0.5 wt.%), Mossbauer and positron annihilation study of ^{119}Sn 3—28745
Al-Sn-Pb antifriction alloys, contact zone, structure and adhesion strength meas. *(Russian)* 3—4141
Al-Sr, liq., mixing enthalphy, thermodynamic invest. *(German)* 3—47118
Al-Ti alloys, contrib. to nucleation and solidification *(German)* 3—58115
Al-Ti dilute alloys, elec. resist., Hall effect and magnetoresistance, clustering effects 3—43155
Al-Ti(Fe)(Co)(Ni)(V)(Cr)(Mn), solid soln. extended by rapid quenching from melt, lattice parameter vs. conc. prediction 3—53094
Al-U alloys, thermal stability 3—41134
Al-USiAl dispersion fuels, thermal stability 3—41134
Al-Zn, initial precipitation hardening, mechanism *(Japanese)* 3—9080
Al-Zn, phase equilibrium at elevated temp. *(Japanese)* 3—29062
Al-Zn (10-15 wt.%), metastable phases, size distrib. 3—14564
Al-Zn (2.1 at.%), steady-state creep rate, influence of prior creep deform. 3—14654
Al-Zn (45 wt.%), hot-dipped coating on low C steel strip, ductility, cracking, tensile testing 3—43917
Al-Zn alloys, cold working effect on damping charact. *(Japanese)* 3—9086
Al-Zn inhomogeneous alloys, isotropic resist. calc. 3—23360
Al-Zn-Cu-Mg, dendritic segregation, effect of Cu and Mg *(Polish)* 3—4040
Al-Zn-Mg, ageing embrittlement after stress corrosion treatment *(Japanese)* 3—47986
Al-Zn-Mg, clustering processes after direct quenching to agency temp. 3—34368
Al-Zn-Mg, high strength, H-induced cracking and SCC 3—19449
Al-Zn-Mg, M′ transition phase, X-ray crystallographic and TEM study *(French)* 3—18261
Al-Zn-Mg, Mg effect on formation and reversion of Guinier-Preston zones 3—9064
Al-Zn-Mg, quantitative acoustic emission for source characterisation 3—39347
Al-Zn-Mg, single crysts., environmentally assisted cracking 3—4105
Al-Zn-Mg (4.5, 2 at.%), Guinier-Preston zone reversion, pre-ageing conditions depend. 3—9069
Al-Zn-Mg (4.5, 2 at.%), struct. changes during continuous heating, DSC and small-angle X-ray scatt. study 3—19340
Al-Zn-Mg (4.5, 2.0 wt.%), precipitation size and density, hardness 3—29088
Al-Zn-Mg (5, 1 wt.%), GP zones, reversion, calorimetry and thermal anal. study 3—29089
Al-Zn-Mg (91, 8, 1 and 83, 15, 2 wt.%), struct. precip., kinetic study *(French)* 3—29086
Al-Zn-Mg alloy, weldable, solute segregation and white zone cracking 3—4044
Al-Zn-Mg alloys, SCC, influence of cold rolling *(German)* 3—4213
Al-Zn-Mg-Cu, 7075, fatigue crack growth near threshold rel. to microstructure, ageing treatment 3—34479
Al-Zn-Mg-Cu, 7075-T6, small fatigue crack growth rel. to localized microplasticity 3—29154

aluminium alloys continued
Al-Zn-Mg-Cu, ageing conditions and impurity content influence on struct. and fracture 3—34541
Al-Zn-Mg-Cu, alloy plate, comparison of engng. props. 3—58192
Al-Zn-Mg-Cu, ingot and powder processed, deform. and fracture at elevated temps. 3—53159
Al-Zn-Mg-Cu, metallurgical factor influence on fracture toughness *(French)* 3—24356
Al-Zn-Mg-Cu, pressed semifinished products, softening schedules for ageing 3—34365
Al-Zn-Mg-Cu alloy, design strength 3—43955
Al-Zn-Mg-Cu special purity high-strength alloy for forgings, props. 3—34401
Al-Zn-Mg-Cu-Zr plates, Zr effect on mech. and corrosion props. 3—34402
Al-Zn-Mg-Zr(-Cu), strength and stress corrosion resist. improvement, role of Zr 3—14622
Al-Zn-Mg-transition metal alloy billets, granulated, hot rolling 3—14620
Al-Zn-Si, bidirectional torsion and dynamic recovery 3—29123
Al-Zn(Si), resistivity and thermopower calc. during clustering *(French)* 3—3166
Al-Zr, ion implanted, struct. and mech. props. 3—4051
Al-Zr getters for CO and O_2 impurities control in H plasma 3—55615
Al-Zu, two-phase, strength, preliminary deform. effect 3—9135
Al-Zu-Mg-Cu, high-temp. thermomech. treatment 3—4065
Al_9Co_2 eutectic alloy fibres, elec. resist. 3—43154
AlCr, dilute, self-interstitial trapping at Cr atoms 3—13218
AlCu(Si) dilute alloys, ^{65}Zn diffusion coeffs., enhancement effects 3—47150
Al_6Fe eutectic alloy fibres, elec. resist. 3—43154
AlGaAs heterostructures, electroluminescence photon yield study 3—3823
AlH_x, bound state induced by interstitial H 3—38342
Al_3Ni eutectic alloy fibres, elec. resist. 3—43154
AlNiCo permanent magnet alloys, struct. and props. book contrib. 3—57708
AlSi, rapidly quenched from melt, structural inhomogeneities 3—9098
AlZnCu(Si) dilute alloys, ^{65}Zn diffusion coeffs., enhancement effects 3—47150
$AuAl_2$ alloys, struct., correlation with heat of form. *(German)* 3—22825
BaAl 48 alloy, intensively cooled, anomalous segregation anal. *(Polish)* 3—19333
C fibre reinforced Al alloys, chopped fibres, fabrication by graining process 3—52998
C fibre reinforced Al-Cu-Ti, fabrication, graining process, alloying effect on wettability *(Japanese)* 3—58078
Ca-Al metallic glasses, struct. relax., calorimetric invest. *(German)* 3—24289
$Ca_{100-x}Al_x$ metallic glass, atomic and electronic struct., MNR and mag. susceptibility studies 3—27850
Ce-La-Ni-Al-Co (Cr)(Cu)(Nb)(Ti)(V)(Zr), absorption and desorption of H_2 3—48090
Ce-La-Ni-Al-H, hydriding and dehydriding kinetics 3—48048
CeAl, resonant photoemission study 3—3916
$CeAl_2$, bound state between cryst. field excitation and phonon 3—23338
$CeAl_2$, electronic struct., photoemission study 3—43015
$CeAl_2$, Kondo alloy, elastic props., ultrasonic vel. study 3—18366
$CeAl_2$, mag. ordering, electronic struct., LMTO calcs. 3—57508
$CeAl_2$, transport phenomena 3—18683
$CeAl_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3—8233
$CeAl_3$ dense Kondo system resistivity and periodic Anderson model 3—52123
$CeAl_3$, magnetoresistivity meas. 3—52115
$Ce_{1-x}Al_x$, metallic glass, thermal conductivity study 3—18677
$Ce_{89}Al_{11}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
$Ce(Fe_{0.8}Al_{0.2})_2$, magnetisation meas., spin glass behaviour 3—33905
$(Ce_{0.55}La_{0.45})Ni_{4.5}Al_{0.5}D_3$, equilibrium and kinetic props. of hydriding and dehydriding 3—48049
Co $Ti_{1-x}Al_x$, NMR study of hyperfine coupling constants 3—57796
Co-Cr(-Al), low temp. hot corrosion, morphology of reaction product 3—14773
β'-CoAl, projected surface energy bands, Shockley surface states, stability and bonding 3—57398
CoAl, X-ray band spectra 3—38965
$Co_2MnAl_{0.98}Sn_{0.02}$, Mossbauer study of Sn hyperfine fields 3—28743
$CoTi_{1-x}Al_x$, coexistence of ferromagnetic and nonmagnetic Co 3—52468
Cr-Al, dil., mag. behaviour, US vel. meas. 3—52590
Cr-Al, dilute, spin density wave state, press. effects, neutron diffr. study 3—18853
Cr-Al, low temp. hot corrosion, morphology of reaction product 3—14773
Cu-Al, Bauschinger effect, internal stress meas. 3—43932
Cu-Al, cubic centred high conc. solid solns., creep and stacking fault energy 3—58177
Cu-Al, dil., Dingle temp. and Fermi surface changes, charge transfer effects 3—52009
Cu-Al, dil., low temp. lattice sp.ht., Green's function theory 3—13480
Cu-Al, dislocation etch pits on (111) surface, morphology 3—42616
Cu-Al, dislocation struct. of [321} crystals grown by Bridgman method 3—13230
Cu-Al, single cryst. solid soln., plastic deform., twinning *(French)* 3—53150
Cu-Al, solute segregation to dislocations, internal friction study 3—39152
Cu-Al, two-phase materials, strength/ductility-microstruct. relationship 3—43926
Cu-Al (10 at%) single cryst., role of conjugate slip in deform. 3—37914
Cu-Al (10 wt.%), quenched martensitic alloy, internal friction, tensile props., hardness, heat treatment effect 3—43920
Cu-Al (15 at.%), quenched, prop. changes due to development of short-range order state 3—9104
Cu-Al (15.1 wt.%), martensitic transform., room temp. 3—43819
Cu-Al (2 at.%), solid soln. and neutron irrad. hardening 3—34337
Cu-Al (3 to 8 wt.%), polycrystalline alloy, work hardening, room temp. deform., dislocation struct. 3—53082
Cu-Al (4.6 at.%), evidence of short-range order state using DTA, elec. resist. and electron microscopy 3—9105
Cu-Al (7 at.%), plastic deform., kinetics of stress jumps 3—14653
Cu-Al compacts, liq.-phase sintering, vol. changes 3—39073
Cu-Al film, vacuum deposited, elec. and mechanical props. 3—14495
Cu-Al martensitic alloys, single crystal, deform. behaviour 3—43824

aluminium alloys continued
Cu-Al-Be, ternary system, shape memory effect, elec. resist., internal friction, Young's Modulus, temp. depend. 3—43835
Cu-Al-Co alloys with noncoherent particles, mech. twinning and superelasticity *(Russian)* 3—53126
Cu-Al-Mn system, diffusion redistrib. of alloying elements, surface struct. during deform. by friction 3—24206
Cu-Al-Ni, (hhl) habit planes in martensite growth wave models 3—47835
β- Cu-Al-Ni, heat treated Bridgeman grown crystals, thermal diffuse scattering of X-rays 3—51544
β-Cu-Al-Ni, martensitic interface mobility kinetics 180-410K 3—34317
Cu-Al-Ni, shape memory alloy, matrix-martensite interface, TEM 3—34320
Cu-Al-Ni, shape memory alloy ribbons, melt spun, martensite transform., grain size 3—47831
Cu-Al-Ni, shape memory bicrystals, intergranular fracture 3—43946
Cu-Al-Ni, single crysts., US vel. near martensitic transform. temp. 3—43816
Cu-Al-Ni (14, 3.3 wt.%), shape memory alloy, two-way effect, high temp. appl. 3—58164
Cu-Al-Ni alloy, rel. between martensite morphology and shape memory effects *(Chinese)* 3—4037
Cu-Al-Ni shape memory alloys, polycryst., fatigue and fracture characts. 3—14727
Cu-Al-Ni-Fe (10, 5, 5wt.%), crystallography of martensite 3—43826
Cu-Al-Ni-Ti, shape memory alloy, grain refinement rel. to Ti addition, transform. hysteresis 3—47832
Cu-Al-O, ion implanted, mechanical and struct. props. 3—4051
Cu-Al-Si-Co, superplastic flow, role of grain boundary dislocations 3—53156
Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), superplastic, grain growth at low strain rates 3—34414
Cu-Al-Zn, martensitic transform. and physicochem. props., heat treatment effect *(Russian)* 3—24226
Cu-Al-Zn alloys, anharmonicity and martensitic phase transition, elastic consts. determ. 3—29076
Cu-Al-Zn-V, shape memory alloys, β-grain size and mech. props. rel. to V addition 3—43888
Cu-Al(Ga)(Si)(Sn), binary alloys, rapidly quenched, struct. and props. 3—19381
Cu-Mn-Al ternary system, Cu-$MnAl_6$ section of phase diagram *(French)* 3—47823
Cu-Ni-Al, shape memory alloy, melt spinning, transform. temp., DSC 3—43834
Cu-Zn-Al, bicrystal, transform. strain coherency at grain boundary, fracture 3—43839
Cu-Zn-Al, $\beta \rightleftharpoons 2H$ martensitic transform., enthalpy and acoustic emission meas. 3—43818
Cu-Zn-Al, faulted martensite, stacking fault form. 3—42620
Cu-Zn-Al, hexagonal transform. of single crystal to 2H martensite 3—43825
Cu-Zn-Al, internal friction of single and polyvariant martensites 3—43829
Cu-Zn-Al, martensite stabilisation after ageing 3—43869
Cu-Zn-Al, martensitic transform., acoustic emission 3—43817
Cu-Zn-Al, martensitic transform., internal friction meas. and thermodynamical anal. 3—43828
Cu-Zn-Al, martensitic transform., thermoelastic, effect of thermal cycling *(Chinese)* 3—53047
Cu-Zn-Al, premartensitic state, neutron diffr. meas. 3—43815
Cu-Zn-Al, rel. between surface, thin foil and bulk martensite 3—43813
Cu-Zn-Al, shape memory alloys, fatigue props. rel. to grain refinement and texture 3—43945
Cu-Zn-Al, shape memory alloy ribbons, melt spun, martensite transform., grain size 3—47831
Cu-Zn-Al, single-phase, annealing kinetics and vacancy conc. 3—4064
Cu-Zn-Al, thermal treatment effect on martensitic transform. 3—43831
Cu-Zn-Al, thermoelastic alloy, dynamic fatigue curves, —196 to 40°C 3—43944
Cu-Zn-Al (26, 4 wt.%), shape memory alloy, stress-strain response rel. grain size 3—43889
Cu-Zn-Al (29.8, 6.1 at.%) alloy, stress induced bainitic transform., habit plane obs. 3—43802
β-Cu-Zn-Al alloy, helical coil springs, force-displacement characts., temp. depend. 3—43890
Cu-Zn-Al martensite, ageing effects 3—43868
β'_1-Cu-Zn-Al martensite, lesser known planar defects 3—42621
Cu-Zn-Al martensitic alloys, damping charact. evolution with time and temp., peaking effect 3—43879
Cu-Zn-Al shape memory alloys, martensitic transform. cycling effects 3—34322
β-Cu-Zn-Al single crystal, stress dependency of latent heat of transform. 3—58120
Cu-Zn-Al-Ni, Ni and Al content effect on martensitic start temp., M_s 3—43823
β-Cu-Zn(-Al), surface martensite transform. and microstruct., electron microscopy study 3—43812
Cu-Zn(-Al), surface martensite, surface relax. as possible origin 3—43814
$Cu_{1-x}Al_x$, equation of state, pseudopot. calc. 3—13396
CuAlNi, pseudoelastic alloys, stress-induced martensite, thermal effects 3—43821
Cu_2MnAl amorphous films, disorder-induced spin glass state 3—38627
Cu_2MnAl, Heusler alloys, dynamic spin susceptibility calcs. 3—52415
Cu_2MnAl, optical absorpt. spectra from band struct. 3—28874
CuZnAl, pseudoelastic alloy, prototype heat engine using martensitic transform. in single cryst. rods 3—44137
CuZnAl shape memory alloys, austenite microstruct. effects on martensitic transform. 3—43830
$DyAl_2$, electron density of states at Fermi level 3—13704
$DyAl_2$, magnetisation and magnetocryst. anisotropy 3—3488
$Dy(Fe_{1-x}Al_x)_2$ Laves phases, mag. struct. and moments, neutron diffr. study 3—52375
$DyFe_5Al_7$, unusual ferrimagnetism, magnetisation and mag. hysteresis meas. 3—14073
$Dy_2Ni_{17-x}Al_x$, double demagnetisation and ferrimag. order-order transition 3—52535
$Dy_{1-x}Y_xAl_2$, Mossbauer study of mag. hyperfine fields 3—57820
α-Fe-Al, dil., interaction energy of Al and C atoms 3—13262
Fe-Al, elastic consts., determ. from elastic moduli of polycryst. samples *(Russian)* 3—51686
Fe-Al, electron and neutron irrad., defect production and recovery 3—42671

aluminium alloys continued
Fe-Al, ordered alloy, in situ plastic deformation in 200 kV electron microscope 3—53163
Fe-Al, self ion implanted, amorphisation and recrystallisation 3—2420
Fe-Al (39.8 at.%), B2 aluminide plastic flow props., elevated temps., influence of thermomech. processing 3—34393
Fe-Al (6.3-28.3 at.%), recovery of quenched-in vacancies, positron annihilation 3—9094
Fe-Al alloys, small magnetostriction coeff., anisotropy const. calc. 3—57732
Fe-Al system, antiphase boundary wetted by second phase, migration kinetics 3—47815
Fe-Al-O system, thermodynamics, 1073 to 1573K 3—58113
Fe-Al-P, ternary amorphous alloys, mech. props., thermal stability, Al content depend. 3—47937
α-Fe-Al-Si-Sn-V, dilute spin and charge density changes on substitution 3—52382
Fe-Al-(Cr), aqu. corrosion props. 3—39303
Fe-Cr-Al, sulphidation in H_2S, morphology of corrosion scales, rel. to non-equilibrium phenomena *(French)* 3—4181
Fe-Cr-Al alloys, corrosion protection in sulphidising environments by means of α-Al_2 3—4196
Fe-Cr-Al alloys, H permeation characts. 3—28155
Fe-Cr-Al-Ti-Y_2O_3, oxide dispersion strengthened, texture and microstruct. 3—34352
Fe-Cr-Al-Y (Y_2O_3), oxidation characts., 1073-1373K 3—34553
Fe-Cr-(Al), high temp. oxidation under tensile stress *(Japanese)* 3—58291
Fe-Ni-Al-Co high coercivity alloys, magnetisation curves and interaction domains *(Russian)* 3—28607
Fe-Ni-Al-Ti mag. alloy, semi-hard, struct. and mag. props. 3—58145
Fe-Si-Al, nonoriented sheet, mag. relax. process in commercially produced alloys 3—47528
Fe-Si-Al, soft mag. props., heat treatment effect 3—28613
Fe-Si-Al ordering alloys, phase separation *(Japanese)* 3—29061
Fe-Si-Al-Ni, super Sendust films, mag. props., recording appls. 3—33943
FeAl, electron irrad. amorphisation, high volt. electron microscopy study 3—47001
FeAl, local partial Al density of states, linear KKR study 3—38279
$Fe_{1-x}Al_x$, disordered, Mossbauer meas. of critical behaviour 3—14177
Fe_3Al alloy, neutron irradiated, struct. changes during subsequent phase transitions *(Russian)* 3—33304
Fe_3Al, neutron irrad., anomalous behaviour at order-disorder transformation, X-ray study 3—33309
Fe_3Al, neutron irrad., order-disorder transitions, X-ray diffr. study 3—2459
Fe_3Al order-disorder system, mag. props., magnetisation and susceptibility study 3—28561
$(Fe_{1-x}Al_x)_2A$, A=Y, Zr, U, onset of magnetism, magnetisation 3—23720
FeCrAlY, increased plasticity of alumina scale and formation mechanism of keying or pegging Y_2O_3 3—14775
$(Fe_{1-x}Mn_x)_{75}P_{16}B_6Al_3$ ribbon, spin glass, ESR absorpt. 3—3451
$(Fe_{1-x}Mn_x)_{75}P_{16}B_6Al_3$ amorphous ribbon, ferromagnet-spin glass transition, magnetisation study 3—28551
$FeNi_{45}Cr_{20}Al_5Y_{0.02}$, austenitic alloy, oxidation kinetics, influence of struct. parameters 3—34534
$Fe_{15}Ni_{60}P_{16}B_6Al_3$ amorphous alloy, para, ferro and spin glass regions, high field magnetisation study 3—28614
$(Fe_xNi_{1-x})_{75}P_{16}B_6Al_{13}$, spin glass, deviations from Curie-Weiss behaviour 3—57521
Gd-Al, amorphous spin glass, crit. region size and mag. susceptibility scaling 3—23645
$GdAl_2$, band struct. changes on mag. ordering, NMR anal. 3—28722
$GdAl_2$, electron density of states at Fermi level 3—13704
$GdAl_2$, ferromag. reson., exchange const. and surface anisotropy const. determ. 3—18992
$GdAl_2$, mag. form factors, polarised neutron study 3—52376
$GdAl_2$, quadrupole interaction, pulsed NMR study 3—28736
$GdAl_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3—8233
$Gd(Al_{1-x}Cu_x)_2$, thermoelec. power, exchange interaction, partial wave expansion 3—3164
$Gd(Co_xAl_{1-x})$, mag. susceptibility and EPR study 3—3424
$Gd(Co_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3—52421
$Gd_{0.5}Dy_{0.5}Al_2$, electron density of states at Fermi level 3—13704
$Gd(Fe_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3—52421
$Gd(Fe_yAl_{1-y})_3$, reciprocal susceptibility, saturation moment determ., EPR study 3—14019
GdMnAl, electron density of states at Fermi level 3—13704
$Gd_{1-x}R_xAl_2$, mag. susceptibility and elec. resist., random cryst. elec. field effect 3—38376
$HoAl_2$, ground state spin waves, inelastic neutron scatt. study 3—28538
$HoAl_2$, sp. ht., with external mag. field *(French)* 3—23640
$HoAl_2$, spin dynamics, inelastic neutron scatt. study 3—57528
La-Al-Nd(Tb)(Dy)(Ho)(Er), crystal field parameters from neutron spectra 3—13780
$LaAl_2$, thermal expansion coeff., 25 to 500°C 3—13491
$LaAl_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3—8233
$La_{1-x}Al_x$, metallic glasses, partial pair correlation functions 3—18223
$La_{80}Al_{20}$ amorphous supercond. alloy, elec. and mag. props. 3—23350
$La_{1-x}(Al_{0.5}Ga_{0.5})_x$, metallic glasses, partial pair correlation functions 3—18223
$LaCo_{5-x}Al_x$, hydriding property modification by partial substitution, X-ray study 3—2809
$La_{0.7}Er_{0.3}Al_2$, spin glass freezing dynamics, neutron scatt. study 3—38631
$La_{1-x}Gd_xAl_2$ spin glass, ESR resonance position shifts, internal field effects 3—57769
$La_{1-x}Pr_xAl_2$, γ-γ perturbed angular correlation study 3—52687
Li/metal/sulphide cells, pelletised, research review 3—19570
Li-Al electrode in fused salt electrolytes, morphological studies 3—48130
Li-Al/FeS battery cell, simulated negative electrodes, thermomech. behaviour meas. 3—9420
Li-Al/FeS cell, effective conductivities of positive electrode at different states of charge 3—48131
Li-Al/FeS cells, engineering-scale, self-discharge behaviour 3—48132
Li-Al/FeS compact cell, reference electrodes for long-term testing 3—44114
Li-Al/FeS_x battery, ceramic separators 3—9418
β-LiAl, fast ion cond., defects and disorder, neutron diffr. study 3—22823
β-LiAl, mech. behaviour, effect of defect struct., hardness and dislocation damping study 3—33266

aluminium alloys continued
- LiAl, ordering of vacancies, neutron diffr. meas. 3—46926
- LiAl/FeS cells, performance reproducibility, capacity retention and cycle life 3—44112
- Mg-Al (0.8 wt.%), grain boundary sliding at high temp. in torsional fatigue 3—29148
- Mg-Al (7 wt.%), subcritical crack growth due to SCC or H_2 embrittlement, AE obs. 3—14767
- Mg-Al-Cu, phase diagrams and cryst. struct. 3—4011
- Mg-Al-La(Nd), phase equilib., X-ray diffr. exam. 3—39097
- Mg-Li-Al, anode constitution and fabrication for use in primary batteries 3—29029
- Mn-Al based permanent magnets, production and mag. props. *(German)* 3—43406
- Mn-Al-C, domain struct. and magnetisation processes, TEM study 3—52514
- Mn-Al-C alloys contemporary state and development perspectives for producing permanent magnets *(Czech)* 3—33926
- Mn-Al(-C), domain struct. and magnetisation processes, effect of cryst. defects 3—52513
- MnAl evaporated films for magnetic recording media 3—18958
- Mn_2VAl, NMR satellite struct. and ferrimag. struct. 3—52370
- Mo-Al system, high temp. thermodynamic study 3—23056
- Nb_3Al, NQR studies of relax. process 3—23829
- Nb_3Al sputtered thin films on sapphire substrates, struct. and supercond. transition temp. meas. 3—8608
- Nb_3Al, supercond., sp. ht., effects of self-annealing and neutron irradiation 3—57472
- $Nb_3Al_{0.75}$ $Ge_{0.25}$, A15 struct., possible ordering struct. from X-ray struct. factors *(Chinese)* 3—33187
- $Nb_3Al_{1-x}B_x$, struct. and supercond. props. 3—2472
- Ni-Al, enhanced O diffusion during internal oxidation 3—28159
- Ni-Al, mag. susceptibility and elec. resistivity, 700 to 800°C 3—47473
- Ni-Al, phase diagrams, invest. using microprobe anal. 3—47821
- Ni-Al (0.55 to 4.10 wt.%), intergranular oxide development at high temp., high stress effect 3—53286
- Ni-Al (1 to 4 wt.%) alloys, internal oxides formation and development at high temp. 3—51858
- Ni-Al (14.1 at.%), continuous phase separation 3—14558
- Ni-Al (14.4 at.%) with coherent precipitates, fatigue crack evolution 3—47942
- Ni-Al (36.9wt.%), stress induced martensitic 3—43827
- Ni-Al (5 wt.%), internal oxidation zone, penetration depth of $NiAl_2O_4$ in two phase oxide $NiAl_2O_4+Al_2O_3$, X-ray energy dispersive anal. 3—4202
- Ni-Al martensite, electron diffr. pattern 3—43844
- Ni-Al system, struct., correlation with heat of form. *(German)* 3—22825
- Ni-Al-Co (35.2, 1wt.%) martensite, reordering and new ordered phase after ageing 3—43870
- Ni-Al-Mo, γ/γ'-α-Mo, directionally solidified eutectic superalloy, microstruct. and dimens. stability, effect of thermal cycling 3—24272
- Ni-Al-P, ternary amorphous alloys, mech. props., thermal stability, Al content depend. 3—47937
- Ni-Al-Ti, PE16 superalloy, small angle neutron scatt. studies 3—31575
- Ni-Al-Ti(-Ta), eutectic alloy, directionally solidified, tensile strength rel. to comp. and prep. *(Japanese)* 3—39213
- Ni-Co-Cr-Ti-Al superalloys, corrosion in sulphate melt, 1173K, $NaCrS_2$ phase identification 3—53288
- Ni-Cr-Al-Ti superalloy MA 6000E, oxide dispersion satrengthened, γ' effect on recrystallistion 3—14606
- Ni-Cr-Al-Y_2O_3, oxide dispersion strengthened, texture and microstruct. 3—34352
- Ni-Cr-W-Co-Mo-Ti-Al superalloy, investment cost, tensile props., stress-rupture, corrosion resist., rel. to B/C modification 3—58161
- Ni-Cr-W-Mo-Al-Ti-Nb, oxidation kinetics and mechanism in air 3—9237
- Ni-CrAl-Zr, Al_2O_3 scale form., ^{18}O tracer studies 3—4204
- Ni-W-Al, dispersion strengthened, prod. by mech. alloying, characteris. 3—58071
- Ni_3(Al,Hf), Al-rich phases, dislocation struct. study 3—51607
- Ni_3(Al,Ta), Al-rich phases, dislocation struct. study 3—51607
- Ni_3(Al,Ti), single cryst., 0.2% proof stress, orientation and temp. depend. 3—53144
- NiAl, bond energy and long-range order, alloying influence 3—37843
- NiAl, preferential sputtering, APFIM, SIMS, TEM, and XPS study 3—43693
- NiAl, recrystn. and grain growth 3—4056
- NiAl/Ni diffusion couples, Ni_3Al layer growth, early stages 3—23106
- Ni_3Al, antiphase domain boundary tubes, TEM obs. 3—27952
- Ni_3Al, magnetocrystalline anisotropy and Fermi surface 3—28548
- Ni_3Al, preferential sputtering, APFIM, SIMS, and XPS study 3—43692
- Ni_3Al, weak ferromagnet, mag. props., small angle neutron scatt. study 3—28537
- Ni_xAl_{1-x}, weak itinerant ferromagnetism, disorder effects, spin fluctuation theory 3—57625
- Ni_2MnAl, Heusler alloys, dynamic spin susceptibility calcs. 3—52415
- $NpAl_2$, magnetic props. under high press. 3—18850
- Pd-Al, phase equilibrium and structural study *(German)* 3—13408
- Pd_2MnAl, Heusler alloys, dynamic spin susceptibility calcs. 3—52415
- Pd_2Si-AlCuSi system, contact resist. behaviour rel. to VLSI technology 3—18784
- $PrAl_2$, magnetostriction and magnetoelastic consts., point charge model 3—43419
- $PrAl_2$, thermal conductivity, mag. contribution 3—52114
- $PrAl_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3—8233
- Pr(La, Y)Al_3, cryst. elec. field effects, inelastic neutron scatt. 3—23340
- $Pr_{0.25}Y_{0.75}Al_3$, effect of paramagnetic ion substitution on crystalline electric field *(Russian)* 3—52094
- Pt-Al system, struct., correlation with heat of form. *(German)* 3—22825
- $PuAl_2$, elec. resist., theoretical study 3—47333
- $PuAl_2$, electrical resist., amomalous behaviour and spin fluctuations 3—52113
- Si-Al-Fe, soft mag. alloys, phys. props. 3—3482
- SiC fibre reinforced Al alloys, fibre/matrix interaction, prep. and strength *(Japanese)* 3—47804
- SiC fibre reinforced Ti-Al-V 3—24345
- SiC reinforced Al alloy, fibre and particulate, microstruct. 3—47870
- SiC reinforced Al alloy whisker and particle reinforcement, corrosion fatigue in salt laden moist air 3—53256
- SiC whisker reinforced Al composite, hot rolling effect on microstruct. and tensile props. 3—53181

aluminium alloys continued
- $TbAl_2$, magnetostriction and magnetoelastic consts., point charge model 3—43419
- $TbFe_5Al_7$, unusual ferrimagnetism, magnetisation and mag. hysteresis meas. 3—14073
- $Tb_xGd_{1-x}Al_2$, ESR in ferromag. and paramag. phases 3—18986
- α-Ti-Al, age-hardened, ductility, grain size influence 3—24319
- Ti-Al, alloy VT3-1, heat treatment influence on phase and struct. transform. *(Russian)* 3—34296
- Ti-Al, comp. and struct. influence on fracture features 3—14735
- Ti-Al, corrosion and electrochem. props., alloying effects 3—9257
- Ti-Al, dil., deform. kinetics at low temp., strengthening mechanism 3—14682
- Ti-Al, low temp. thermocycling and plastic deformation, defect struct., TEM obs. 3—53086
- Ti-Al, recrystn. texture form. 3—24263
- Ti-Al, stacking fault energy and texture changes during polygonisation *(Russian)* 3—33273
- Ti-Al, textured, magnetic anisotropy 3—14042
- Ti-Al (25 at.%), splat-quenched, ordering kinetics 3—14586
- Ti-Al (4-8 wt.%), fatigue crack growth, role of deform. 3—58252
- Ti-Al (7 wt.%), corrosion mech. strength in 3.5% NaCl soln., external polarisation effect 3—9259
- Ti-Al (8 wt.%), cyclically deformed, dislocation struct., effect of comp. and temp. 3—58186
- Ti-Al phase diagram, α-($\alpha+\alpha_2$) phase boundary 3—34281
- Ti-Al system, α and γ phase equilib., mag. investigation of electronic bonding 3—14572
- Ti-Al-Cr-Mo-V, VT22, β solid soln. precipitation, initial struct. effect *(Russian)* 3—29081
- Ti-Al-Mo, fatigue fracture kinetics of VT3-1 alloy 3—29186
- Ti-Al-Mo, resistance to crack growth in air and sea water 3—9249
- Ti-Al-Mo, VT9, cyclic fracture toughness, effect of strain history 3—43956
- Ti-Al-Mo-Cr, CORONA 5, moderate strength, high fracture toughness alloy development 3—24365
- β-Ti-Al-Mo-Cr, heat treated, polygonised struct. influence on props. 3—19356
- $\alpha+\beta$Ti-Al-Mo-Fe-Cr-Mn, hardened, embrittlement and spontaneous cracking during ageing 3—19422
- Ti-Al-Mo-Si and Ti-Al-Mo-Cr-Fe, damping props. with layered metal coatings 3—14778
- Ti-Al-Mo-V, fatigue crack growth, effect of load ratio 3—14698
- Ti-Al-Mo-V, shot blast treated, residual stresses in surface layers 3—43995
- Ti-Al-Mo-V-Cr-Fe, internal struct. of α-phase crysts. 3—14598
- Ti-Al-Mo-V-Cr-Fe alloy, VT23, supercooled β-phase, precipitation *(Russian)* 3—34325
- Ti-Al-Mo-V(G), etching in acid soln., H_2 absorption 3—9261
- Ti-Al-Nb-Zr alloys, defect struct. evolution rel. to deform. parameters at 4.2K 3—24302
- Ti-Al-Ni, electrospark alloying of VT-18 with Ni, electrode surface layer struct., electron microscopy *(Russian)* 3—58279
- Ti-Al-Sn (5,2.5 wt.%), hydrogenated, internal friction and Snoek effect *(Chinese)* 3—2666
- Ti-Al-Sn-Mo-Si, $\alpha+\beta$ type, heat treatment variations effect on mech. props. 3—24363
- Ti-Al-Sn-Zr-Mo, fatigue cracks, short, effect of fracture surface roughness on growth 3—34468
- Ti-Al-Sn-Zr-Mo (6,2,4,6 wt.%), fracture mechanics for short cracks 3—39253
- Ti-Al-Sn-Zr-Mo-Si, hot forging, nonisothermal, occurrence of shear bands 3—34399
- Ti-Al-Sn-Zr-Nb (5.5, 3.5, 3, 1 wt.%), fretting fatigue strength, temp. depend. 3—58197
- Ti-Al-Sn(Mn) and Ti-Al-Cr(Zr)-Mo-Si, mech. props., laminated struct. influence 3—19389
- Ti-Al-V, annealed microstructures, fatigue failure 3—14736
- Ti-Al-V, cast, heat treatment processes and microstructures, mech. props. 3—24282
- Ti-Al-V, cast, weld repaired, high cycle fatigue 3—4123
- Ti-Al-V, crack propag. rel. to mech. props. 3—9192
- Ti-Al-V, fatigue crack propag., effect of microstruct. 3—9187
- Ti-Al-V, fracture toughness, microstruct. fracture appearance and specimen size 3—9184
- Ti-Al-V, impurities effect on working ability 3—24364
- Ti-Al-V, mean stress effect on fatigue behaviour 3—14733
- $\alpha+\beta$ Ti-Al-V, mech. props., heat treatment influence 3—24279
- Ti-Al-V, metallurgical structures influence on fatigue props. 3—24362
- $\alpha+\beta$-Ti-Al-V, nature of α/β interfacial layer, effect of heat treatment 3—14686
- Ti-Al-V, powder metallurgical, prod. and mech. props. 3—29035
- Ti-Al-V, residual stress following thermodiffusion saturation with Cr-Si mixtures 3—24419
- Ti-Al-V, SCC, hot salt *(Chinese)* 3—4180
- $\alpha+\beta$Ti-Al-V, texture and development 3—24261
- Ti-Al-V, VT5L, rare earth additions effect on mech. props. and thermal stability 3—24367
- Ti-Al-V, vacuum fatigue fracture 3—9193
- Ti-Al-V (6, 4 wt.%), enhanced superplasticity in modified alloys 3—53160
- Ti-Al-V (6, 4 wt.%), fatigue behaviour, surface layer 3—34466
- Ti-Al-V (6, 4 wt.%), quenched, fatigue and microstruct. props. 3—53195
- Ti-Al-V (6, 4 wt.%), single- and dual-ion irrad., radiation-induced precip. 3—28007
- Ti-Al-V (6, 4 wt.%), stable crack growth during fracture toughness testing *(Japanese)* 3—29164
- Ti-Al-V (6, 4 wt.%), textured, residual stress, US meas. 3—9286
- Ti-Al-V (6,4 wt.%), fatigue crack retardation behaviour, evaluation of overload models 3—29151
- Ti-Al-V (6,4 wt.%), hydrogenated, internal friction and Snoek effect *(Chinese)* 3—2666
- Ti-Al-V (6,4 wt.%), sintered, characterisation of fracture surface, pores and inclusions 3—24237
- Ti-Al-V (6,4 wt.%), solution-treated and quenched, fatigue behaviour 3—43947
- Ti-Al-V (6.4 wt.%), strain and concurrent grain growth effect on superplastic behaviour 3—39197
- Ti-Al-V (90, 6, 4 wt.%), fatigue strength, heat treatment effect 3—24280
- Ti-Al-V B implanted, cavitation erosion behaviour 3—58257
- Ti-Al-V matrix composites, B and SiC fibre reinforced, hot pressing and struct. 3—29038

aluminium alloys continued
β-Ti-Al-V-Cr-Mo-Zr (75, 3, 8, 6, 4, 4 wt.%), thermomech. props., and stress corrosion 3—24277
Ti-Al-V-Sn, slack quenching and tempering, microstruct. and mech. props. 3—14629
Ti-Al-V-Sn (86, 6, 6, 2 wt.%), annealing behaviour and strengthening 3—24278
Ti-Al-V-Sn-Zr, high-strength alloy development 3—24249
Ti-Al-V-Sn-Zr (2, 12, 2, 6 wt.%), microstruct. transform., heat treatment, tensile mech. props. 3—43849
$\alpha+\beta$ Ti-Al-V-(Mo), welded joints, heat hardening 3—14625
Ti-Al-V(Sn), fatigue crack propagation under polymodal loading 3—58199
Ti-Al-Y (8, 4 at.%), dispersion strengthened, laser surface melting, microstruct. EM obs. 3—43852
Ti-Al-Zr, creep resist. and thermal stability in air and vac., Si additions influence 3—24322
Ti-Al-Zr solid solns., interaction between alloying elements, nature and mechanism 3—14574
Ti-Al-Zr welded joints, high temp. thermomech. treatment 3—14626
Ti-Al-Zr-Mo (6, 5, 0.5 wt.%), NaCl induced accelerated oxidation 3—9260
Ti-Al-Zr-Mo-Si, heat treatment effect on microstruct. and props 3—24281
Ti-Al-Zr-Mo(W), rapidly cooled from liq. state, struct. and electrophys. props. 3—8472
Ti-Al-Zr-W system, phase equilib. investigation 3—14567
Ti-Al(Cr)-Mo-Zr, hot deform., TEM study of struct. changes 3—19357
Ti-Al(0-15 at.%), room temp. flow stress and strain 3—9141
Ti-Mo-V-Cr-Al metastable β system, deep hardenable alloy synthesis, design and props. 3—24250
β-Ti-Mo-V-Fe-Al, metastable, direct ageing for optimum mech. props. 3—19355
β-Ti-Mo-Zr-Al, ageing characts. 3—19354
β-Ti-Mo-Zr-Al, recrystn., Al effect 3—24264
α-Ti-Sn(Al), stacking fault energy, rel. to texture and strain mechanism 3—9091
Ti-V-Al, implanted He behaviour mech props., temp. depend. 3—26463
Ti-V-Al-Sn-Zr, Transage alloys, strain-induced transform. and plasticity 3—39132
Ti-V-Fe-Al (9.3, 1.8, 3.2 wt.%), stress-induced martensite, form. and reversion 3—14588
TiAl, ordered, brittleness, effect of temp. 3—14738
Ti_3Al-(Ti_3Sn), oxidation, structural and kinetic study, protection against high temp. gas corrosion 3—14787
$Ti_{74.6}Fe_{0.4}Al_{25}$, Mossbauer study *(Russian)* 3—38729
$TmAl_2$, cryst. field transitions, diffuse neutron scatt. 3—7875
$TmAl_2$, spin-lattice relax., ^{169}Tm Mossbauer spectroscopy study 3—19023
UAl_2, electronic struct. calcs. 3—18608
$U_{1-x}Gd_xAl_2$, spin-glass behaviour, susceptibility 3—18910
V-Al, struct. characts. rel. to elec. resist. anomalies, electron microscope study *(Russian)* 3—37850
Y-Al-Gd, amorphous, mag. interactions, AC susceptibility meas. 3—23620
$Y_{75}Al_{25}$, amorphous, elec. resist. meas., mag. interf. effect 3—43152
Y_2(Co, Al)$_{17}$, cryst. growth by Bridgman method 3—19263
Y_2MnAl, Heusler alloys, dynamic spin susceptibility calcs. 3—52415
$Y_2Ni_{17-x}Al_x$, double demagnetisation and ferrimag. order-order transition 3—52535
$YbAl_2$ mixed valence alloy, elastic props., ultrasonic vel. study 3—18366
Zn-Al, acoustic wave emission during superplastic deform. *(Russian)* 3—24295
Zn-Al, crit. grain size for transition to superplastic flow *(Russian)* 3—24296
Zn-Al, eutectoid, superplastic flow, interpretation in terms of threshold stress 3—39211
Zn-Al (0.4, 0.6 wt.%), superplastic, cyclic deform. 3—53154
Zn-Al (1.1 wt.%), superplastic, deform. texture *(Czech)* 3—14657
Zn-Al (1.1 wt.%) superplastic alloy, creep, strain rate sensitivity parameter *(Czech)* 3—58173
Zn-Al (22 wt.%), superplastic, steady state flow data 3—34392
Zn-Al (22 wt.%) alloy, creep, grain growth kinetic eqns. 3—47893
Zn-Al-Cu bearing alloys, creep behaviour 3—47907
Zr-Al, getter system for Tokamak, diffusivities of H and D 3—17048
Zr-Al solid solutions, short-range order hardening 3—34340
Zr-Nb-Al (7, 1 wt.%), martensites, crystallographic anal. 3—39130
Zr_4Al_3, superstruct., electron and X-ray diffr. study 3—18262
Zr(Fe,Al)$_2$, mag. ordering, H_2 absorption effects 3—28632
Zr($Fe_{1-x}Al_x$)$_2$, Mossbauer and proton NMR studies 3—57824
(ZrO_2-V_2O_3)/(Ni-Cr-Al-Y) coating, air-plasma sprayed, behaviour in HTGR He 3—960
(ZrO_2-Y_2O_3)/(Ni-Cr-Al-Zr) thermal barrier coating, failure mechanism at high temp. 3—3020

aluminium compounds
see also alumina; aluminium alloys
alkali metal aluminium silicates, leucite-type cpds., heat capacity and phase transition 3—8218
aluminofluorophosphate glasses, struct. with additions of groups I-III fluorides 3—22792
andalusite-kanonaite series, lattice and optical parameters 3—13178
bridged dialuminium compounds, electronic struct., ab initio calcs. 3—6520
$Ga_{1-x}Al_xAs$ superradiance diode, high-power low-divergence operation and coupling efficiency 3—1655
graphite intercalation compound, $C_{9.3}AlCl_{3.3}$, electrical cond., counter-EMF obs. during phase transition 3—23349
graphite-$AlCl_3$, intercalation compound, effects on lattice constants 3—22849
kaolins, detection of two Si environments by solid state ^{29}Si NMR 3—52641
methylammonium aluminium sulphate dodecahydrate, dielec. behaviour, pseudo-spin-lattice coupled-mode model 3—23889
mica, polytype structures, influence of stacking faults on spiral growth 3—33162
oxides, local at. arrangements from electron energy loss near edge struct. 3—14414
photographic layers on AlH_3 substrates, thermostat ageing *(Russian)* 3—20935
tetraphenylporphyrins, fluoresc. and low-temp. phosphoresc. 3—1421
zeolites, structural chem., X-ray and magic-angle-spinning NMR studies 3—37873
(Al, Ga)As DH lasers, cooling rate effect on short-time LPE growth of active layers 3—9005

aluminium compounds continued
(Al,Ga)As laser, single quantum well, visible CW operation 3—37020
(Al,Ga)As, luminesc. centre form. during pulsed laser irrad. 3—47699
(Al,Ga)As, Mg diffusion profiles alteration due to p-n junctions 3—13549
(Al,Ga)As:Mg, diffusion across p-n junction during LPE growth 3—23098
(Al,Ga)As/GaAs DH lasers, ageing-induced degradation (or lifetime) vars. statistical anal. 3—56259
Al/AlO_x/Pb junctions, inelastic electron tunneling, barrier prep. effects 3—23502
Al-Co mixed oxide spinel phase, surface texture, X-ray, DTA and N sorption obs. 3—47202
AlAs, antisite and vacancy electron states, local density of states 3—43096
AlAs, NMR spin-lattice relax. *(German)* 3—3567
AlAs-AlGaAs-GaAs quantum well heterostructures, induced disorder effects on luminescence 3—18519
AlAs-GaAs multilayer struct. for increasing solar cell efficiency 3—19591
AlAs-GaAs superlattice intermixing by Zn diffusion 3—18518
Al_2Br_6, polycryst. NQR, Zeeman effect 3—3585
AlCl, $A^1\Pi$-$X^1\Sigma^+$, $a^3\Pi$-$X^1\Sigma^+$, $b^3\Sigma^+$-$a^3\Pi$ rotational structure, dissociation energy calc. 3—26668
AlCl molecule, dissoc. energy 3—36875
$AlCl_3$ - based mixtures, room temperature molten salt electrolytes for photoelectrochemical applications 3—14963
$AlCl_3$, catalyst, struct. and activity in alkylation of phenols 3—48067
$AlCl_3$, ionic-mol. transitions near melting point, Raman scatt. study 3—57923
$AlCl_3$, vapour phase Fourier transform far IR spectra obs., 100 to 500°C 3—6635
$AlCl_3$-$SOCl_2$ soln., CC Nd^{3+} ions, absorpt. spectra, luminesc., lasing props. 3—22054
Al_2Cl_6, catalyst, struct. and activity in alkylation of phenols 3—48067
AlCl(OH)$_2$, catalyst, struct. and activity in alkylation of phenols 3—48067
AlF, $\Delta v=1$ band, IR diode laser spectra 3—6643
AlF mols., dissoc. energies calc. 3—36875
AlF_3, X-ray emission spectra, radiative Auger emission from KL double hole states 3—3871
AlF_3-ThF_4-BaF_2-RF_3 (R=rare earth), glass composition and transition temp. 3—23042
AlGaAs 0.8 μm lasers, distortion characts. 3—41842
AlGaAs CW DH lasers, longit. mode partition noise in gain spectrum shift and gain suppression 3—22068
AlGaAs CW high power single-mode laser diodes, review and comparison 3—22055
AlGaAs DH injection lasers, nonwaveguide mode operation 3—22116
AlGaAs DH laser, LPE growth in sapphire boat 3—37066
AlGaAs DH laser, room temp. CW operation, 680-700 nm 3—6966
(AlGa)As diode laser with deposited waveguide, monolithic-hybrid integration 3—41861
AlGaAs Gaussian channel substrate planar laser diodes, high performance, single mode 3—32379
AlGaAs graded-index waveguide separate-confinement heterostruct., lasers with proton-delineated stripe, LPE and MBE grown 3—56193
AlGaAs high power multiple-stripe injection lasers with channel guides 3—12149
AlGaAs injection heterolaser based optoelectronic readout 3—56155
AlGaAs injection lasers, theory and obs. of optical nonlinearities 3—22062
AlGaAs LPE heterostructures, luminesc. efficiency improvement by CW laser annealing 3—47700
AlGaAs laser, freq. stabilisation based on ^{85}Rb-D_2 line 3—1676
AlGaAs laser, picosecond single-mode pulse generation by injection locking 3—41890
AlGaAs laser amplifier, bias current reson., refr. index change 3—6963
AlGaAs laser amplifiers, Fabry-Perot and travelling-wave type, noise characts. 3—56265
AlGaAs laser diode coupled to single-mode fibre cavity, optical feedback effects on oscill. field spectrum 3—7046
AlGaAs laser diodes, high-power CW single-mode operation 3—27080
AlGaAs laser facets, contamination reduction by reactive outdiffusion 3—41880
AlGaAs laser preamplifier and linear repeater system, S/N and error rate performance 3—7008
AlGaAs lasers, AM and FM quantum noise, theoretical and expt. result comparison 3—32362
AlGaAs lasers, coherence props. of picosecond pulses 3—41839
AlGaAs, metalorganic CVD growth, review *(Japanese)* 3—29015
AlGaAs multi-purpose low-noise laser, shallow proton implant, appls. 3—7007
(AlGa)As multimoded laser for digital communication appl., functional life testing 3—1662
AlGaAs narrow stripe lasers using double current confinement, operation and appl. 3—12142
AlGaAs optical source masterslice, custom metallizations for lasers and LEDs 3—22112
AlGaAs semiconductor laser, injection locked, optical phase modulation 3—7038
AlGaAs single mode lasers for fibre-optic appls. 3—22060
AlGaAs single mode lasers for fibre-optic communications 3—50672
AlGaAs TJS single mode diode lasers, anomalous tuning 3—27115
AlGaAs window V-channelled substrate inner shape laser, high power visible CW operation 3—46207
AlGaAs:Ge, effect of Ge on liquidus and solidus in LPE domain 3—42956
(AlGa)As/GaAs DH laser, negative resistance effect at low temp. *(Chinese)* 3—12145
AlGaAs/GaAs heterointerface, compositional fine line patterning by Zn implantation 3—51637
AlGaAs/GaAs laser diode based monitoring amplifier, operating condition elec. diagnostics 3—56262
AlGaAs/GaAs multilayer graded-gap avalanche photodiodes for 0.8-1.8 μm wavelength region 3—49447
AlGaAs/GaAs multiple segmented stripe contact lasers, longit. vars. in current injection and carrier conc. 3—32361
AlGaAs/GaAs multiquantum-well lasers with ridge-waveguide, MBE 3—46237
AlGaAs/GaAs p-n junction solar cells, conversion efficiency 3—53516
AlGaAs/GaAs photodiode permanent damage effects due to total dose exposure 3—40688
AlGaAs/GaAs superlattice, graded band gap, channeling and staircase avalanche photodiodes: towards a solid-state photomultiplier 3—47418
AlGaAs/GaAs systems for integrated optical circuits 3—32507
AlGaAs/GaAs twin-channel substrate-mesa-guide injection lasers fabricated by OMVPE 3—46238

aluminium compounds continued
  AlGaAs-GaAs, VPE monolithic cascade solar cell 3–4383
  AlGaAs-GaAs cascade solar cell, MBE grown, conversion efficiency 3–19582
  (AlGa)As-GaAs DH, MBE grown, minority carrier props. effect of As species 3–41834
  AlGaAs-GaAs DH planar LED using junction current confinement, coupling to large core dia. fibres using lenses 3–12362
  AlGaAs-GaAs fibre coupler laser using front-mirror leaked light for feedback control *(Chinese)* 3–37061
  AlGaAs-GaAs single mode DH laser with channel-guide struct., theoretical anal. 3–27055
  AlGaAs-GaAs solar cells, high energy proton irrad. damage 3–53504
  $Al_{0.08}Ga_{0.92}As$ MBE-grown proton-bombarded, stripe laser based optical transmitter, 45 Mbit/s, characterisation, functional reliability 3–32363
  $Al_{0.22}Ga_{0.78}As$, laser induced recombination centers, photoluminesc. measurements 3–38857
  $Al_{0.25}Ga_{0.75}As$-GaAs modulation doped structs. grown by MBE, light sensitivity 3–52279
  $Al_{0.28}Ga_{0.72}As$, shallow acceptors, photoluminescence study 3–43590
  $Al_{0.3}Ga_{0.7}As$ LPE layer, grown-in deep level defects, thermal annealing effect 3–18799
  $Al_{0.5}Ga_{0.5}As$-$In_xGa_{1-x}As$ heterostructs. lattice mismatch effects on radiative recombination 3–38926
  p-$Al_{0.7}Ga_{0.3}As$-p-GaAs-n-GaAs, thick window concentrator solar cell 3–9429
  $Al_{1-x}Ga_xAs$ diode laser, freq. stabilisation using optogalvanic effect in Ar I 3–1675
  $Al_{1-x}Ga_xAs$, organometallic VPE layers, improved photoluminesc. using AsH_3 source gettering technique 3–34235
  $Al_{1-x}Ga_xAs$ solar convertors for solar concentrators, ohmic loss reduction 3–34700
  $Al_xGa_{1-x}As$, core exciton spectra studied with synchrotron radiation 3–18625
  $Al_xGa_{1-x}As$ DH picosec. lasers, optoelectric diode response rate meas. appls. *(Chinese)* 3–41829
  $Al_xGa_{1-x}As$ epitaxial layer on GaAs:Cr, elec. cond. and transfer doping effect 3–23509
  $Al_xGa_{1-x}As$ graded index heteroepitaxial waveguides, refractive index profile 3–12332
  $Al_xGa_{1-x}As$ graded-gap cryst., elec. cond., hydrostatic and uniaxial compression effects meas. 3–13817
  $Al_xGa_{1-x}As$, LPE grown, composition and minority carrier diffusion length meas. *(Chinese)* 3–38242
  $Al_xGa_{1-x}As$ lasers, optically integrated coherently coupled laser pair 3–41860
  $Al_xGa_{1-x}As$ layers, compositionally graded, electron drift vel. meas. by time resolved optical reflectivity 3–52285
  $Al_xGa_{1-x}As$, luminescence and minority carrier transport 3–28889
  $Al_xGa_{1-x}As$ MBE layers, Si doped, elec. props. 3–23512
  $Al_xGa_{1-x}As$, OMVPE growth, effects of trimethylaluminium interaction with graphite 3–42966
  $Al_xGa_{1-x}As$ organometallic VPE layer, electron traps, transient capacitance study 3–3340
  $Al_xGa_{1-x}As$, organometallic VPE growth, review of method, comparison with other growth techniques 3–19280
  $Al_xGa_{1-x}As$ planar stripe lasers with deep Zn diffusion, active layer injection carrier spatial distrib. anal. *(Chinese)* 3–41828
  $Al_xGa_{1-x}As$ variable-gap epitaxial films, exciton reflection and electroreflection spectra 3–14372
  $Al_xGa_{1-x}As$ variband layer strain gauge resistors, sensitivity and comp. depend. 3–5780
  $Al_xGa_{1-x}As$: Si, MBE growth, effect of H_2 on elec. and optical props. 3–51973
  $Al_xGa_{1-x}As$:Si, doped and undoped, MBE grown, elec. and optical props., effect of growth conditions and alloy comp. 3–43596
  $Al_xGa_{1-x}As$:Si, Si doping during MBE growth 3–24133
  $Al_xGa_{1-x}As$:Si epitaxial layer on GaAs; Hall effect and photocond., heterojunction phenomena 3–47438
  $Al_xGa_{1-x}As$:Si MBE layers, elec. props. and precipitation 3–38509
  $Al_xGa_{1-x}As$:Te, impurity states, electron mobility 3–33681
  $Al_xGa_{1-x}As/Al_yGa_{1-y}As$ visible lasers, contaminated, MOCVD grown, elec. and optical characts. 3–41871
  $Al_xGa_{1-x}As/Al_yGa_{1-y}As$ multiquantum wells, pulsed MBE grown, photoluminesc. spectra 3–52823
  $Al_xGa_{1-x}As$/GaAs, weak luminesc. spectra, meas. by photoemission technique 3–3787
  $Al_xGa_{1-x}As$/GaAs heterostruct., MBE grown, mobility enhancement using superlattice struct. 3–57413
  $Al_xGa_{1-x}As$/GaAs multiple quantum well junction laser, MBE grown, performance 3–17495
  $Al_xGa_{1-x}As$-GaAs heterostruct., MBE growth, minicomputer control system, software *(German)* 3–39053
  $Al_xGa_{1-x}As$-GaAs heterostructures, MBE growth conditions effect on elec. and optical props. 3–42965
  $Al_xGa_{1-x}As$-GaAs heterostructure, hopping cond. in Landau level tails between 10 mK and 1K 3–43274
  $Al_xGa_{1-x}As$-GaAs heterojunctions, plasticity and strength studies *(Russian)* 3–47035
  $Al_xGa_{1-x}As$-GaAs heterostructure, intersubband scatt. study 3–57418
  $Al_xGa_{1-x}As$-GaAs modulation doped heterostruct., current transport meas. at moderate fields 3–8562
  $Al_xGa_{1-x}As$-GaAs quantum well heterostruct. lasers and superlattices, high press. optical measurements 3–1631
  $Al_xGa_{1-x}As$-GaAs superlattice, impurity band tails calc. 3–57310
  $Al_yGa_{1-y}As$ solid soln., multistage solar cell with p-n heterojunctions 3–19589
  $Al_xGa_{1-x}As_{1-y}P_y$, LPE growth on $GaAs_{0.61}P_{0.39}$ (100) 3–39050
  AlGaAsSb long-wavelength (1.3 to 1.6 μm) photodetectors for fibre optical communications, review 3–12361
  AlGaAsSb, on GaSb, low temp. LPE growth conditions and props. 3–42955
  AlGaAsSb/GaSb p-n junction solar cells, conversion efficiency 3–53516
  $Al_xGa_{1-x}As_ySb_{1-y}$, spinodal decomp. and clustering 3–18466
  $(Al_{0.5}Ga_{0.5})_{0.48}In_{0.52}As$, MBE growth on InP substrate, Schottky diode and MESFET fabrication 3–8985
  $(Al_xGa_{1-x})_yIn_{1-y}As$, lattice matched to InP, MBE growth and elec. and optical props. 3–24132
  AlGaInP, VPE growth, thermodynamic anal. 3–33587
  $Al_xGa_yIn_{1-x-y}P(As)$, solid-phase miscibility gap and spinodal decomposition, theory 3–42780

aluminium compounds continued
  $Al_xGa_{1-x}N$ epitaxial film, photoluminescence and cathodoluminescence 3–28904
  $Al_xGa_{1-x}N$ MBE films, struct., elec. and optical props 3–8355
  $Al_xGa_{1-x}N$:Zn, photoluminescence and Raman scatt. 3–43625
  $Al_xGa_{1-x}P$ epitaxial layers, lattice consts., X-ray diffr. study 3–18588
  $Al_{0.3}Ga_{0.7}P_{0.01}As_{0.99}$ laser heterostruct., MBE growth 3–1666
  $Al_xGa_{1-x}P_yAs_{1-y}$, organometallic VPE growth, composition control 3–18576
  AlGaSb, on GaSb, low temp. LPE growth conditions and props. 3–42955
  $Al_xGa_{1-x}Sb$, OMVPE grown using trimethylarsenic and trimethylantimony, review 3–24145
  $Al_xGa_{1-x}Sb$ solid solns., production of heterostructures by LPE *(Russian)* 3–13662
  $Al_xGa_{1-x}Sb$-InAs heterostructure, LPE growth 3–38243
  AlH, excited states, ab initio propagator calcs. 3–45840
  AlH^+, low lying states, ab initio calcs. 3–1237
  AlH^+, spin splitting, core polarisation and interstellar chem. 3–41484
  $Al_2H_7^-$, hydrogen bond study by SCF calcs. 3–11659
  AlI_3, vapour phase Fourier transform far IR spectra obs., 100 to 500°C 3–6635
  $Al(IO_3)_3.2HIO_3.6H_2O$, cryst. struct., X-ray and neutron diffr. study 3–2527
  $Al_{0.5}In_{0.5}P$-$Ga_{0.5}In_{0.5}P$ DH lasers optically pumped at 90K, MO-CVD growth 3–46231
  $Al_{0.5}In_{0.5}P$-$Ga_{0.5}In_{0.5}P$ DH visible lasers, MOCVD growth and optical pumping at 90K 3–50657
  AlN, densification kinetics during hot pressing 3–9024
  AlN epitaxial film, cathodoluminescence after irrad. with fast electrons 3–14360
  AlN epitaxial layer on sapphire, orientation relationships, X-ray diffr. study 3–47231
  AlN, hot-pressed ceramics, high temp. fracture 3–39239
  AlN insulating films for CraAs-AlN MIS structures, reactive MBE growth 3–24142
  AlN layers formed by $^{15}N_2^+$ implantation into Al, charact. 3–2582
  AlN, piezoelec. film, prep. by sputtering and CVD 3–14485
  AlN piezoelectric. film, low temp. growth and optical and acoustical props. 3–3000
  AlN, powder, synthesis and characts. 3–58080
  AlN, precip. in cast steel, dark facet fracture, SEM study *(Chinese)* 3–34420
  AlN, reactions with liq. Ni alloys 3–24383
  AlN-(Al_2O_3)-phosphate binder composites, physicochem. processes on heating 3–39085
  AlN-SiO_2 ceramics, containing long-period polytypes, charact. by fracture toughness 3–39093
  AlO, $C^2\pi_r$-$A^2\pi_i$ electronic transition, high-freq. discharge study 3–45962
  AlO, $X^2\Sigma^+$ and $B^2\Sigma^+$ states, dipole moments, SCF and CI calcs. 3–31953
  AlO_x, sputtered film, deposited in d.c. and r.f. magnetron systems 3–43733
  Al_2O_3-Al_2TiO_5 refractory composites, sintering, struct. and props. 3–29052
  Al_2O_3-AlN-Si_3N_4, sialon structure, obtained by nitridation of kaolin 3–13181
  Al_2O_3-MgO-$MgCr_2O_4$ system, solid soln. formation, Cr transfer kinetics 3–8204
  $Al(OH)_3$ and other Al-O cpds., Auger and XPS data 3–24063
  γ-AlO(OH), boehmite, H position in cryst. lattice, IR investig. 3–18276
  $Al(PO_3)_3$-AlF_3-based glasses, form. and struct., X-ray, DTA and IR spectra studies 3–33124
  $Al_2(SO_4)_3$-$FeSO_4$-H_2O, mean ionic activity coeffs., double salt form. *(German)* 3–53381
  $Al_2(SO_4)_3.17H_2O$, phase transitions and thermodynamic props. 3–13478
  AlSb film, laser irrad., self-epitaxial growth, TEM and electron diffr. study 3–47236
  AlSb film on GaAs, MBE growth and elec. and struct. props. 3–58051
  AlSb substrate for GaSb film MBE growth, elec. and struct. props. 3–58051
  AlSb thin film form. by laser annealing of Al/Sb sandwich structs. 3–56977
  $Al_2SiO_5:Fe^{3+}$ broad-band traveling-wave maser for the range 40-46.5 GHz 3–56167
  $AlTiO_5$ glass-ceramic, heat resistant, low thermal expansion coeff. 3–51829
  Al_2TiO_5, pure and transition metal doped, luminesc. and optical absorption, rel. to solar energy appl. 3–52816
  θ-$Al_xV_2O_5$, metal-semicond. transition, elec. resist. and mag. susceptibility study 3–57392
  AlX_3, (X=F, Cl, Br, I), geometry optimisation EHT method, electrostatic correls. 3–45857
  Al_2X_6, (X=F, Cl, Br, I), geometry optimisation EHT method, electrostatic correls. 3–45857
  $BeAl_2F_8$ complex, ab initio MO studies of struct. and stability 3–36647
  $Be_3Al_2(SiO_3)^6:Cr^{3+}$ (emerald) tunable laser 3–12154
  $Be_3Al_2Si_6O_{18}$, beryl, blue and green, optical absorption and EPR studies 3–3518
  BeF_2-AlF_3-MgF_2-$BaF_2:Cr^{3+}$ glass, energy level splitting, effective g value, ESR study 3–33971
  BeF_2-AlF_3-MgF_2-$BaF_2:Co^{2+}$ glass, effective g value, chem. bonding, ESR study 3–33972
  CaF_2-AlF_3, phase diagram, median section, stability of Ca_2AlF_7 *(French)* 3–9044
  $Ca_{3.18}M_{2.20}(Ti_{0.43}Fe_{0.37}Al_{0.31})B_{4.04}(Si,Al)_4O_{22}$, M=transition metal, cryst. struct. determ. 3–33216
  Fe-Al-O system, thermodynamics, 1073 to 1573K 3–58113
  $\alpha(Fe_{1-c}Al_c)_2O_3$, Morin transition, Mossbauer study 3–52677
  α-$Fe_{1-x}Al_xOOH$, aluminous goethite, Mossbauer study and X-ray data 3–3613
  Ga-Al-P ternary system, low temp. phase diagram rel. to growth 3–14578
  (GaAl)As /GaAs DH lasers for optical communication systems *(Czech)* 3–6983
  (GaAl)As buried convex waveguide struct. injection lasers 3–7010
  GaAlAs buried optical guide laser, linewidth enhancement factor, theory and meas. 3–41825
  GaAlAs CW lasers, cavity length effects on 20 μm stripe laser waveguiding 3–22067
  GaAlAs CW room temp. laser *(Chinese)* 3–41864
  GaAlAs closely coupled twin stripe lasers, bistability obs. 3–22065

aluminium compounds continued
GaAlAs composite CW laser module 3—22119
GaAlAs DH injection laser amplifier, parameters determ. from superlum. characts. 3—27057
GaAlAs DH laser, long-lived, Cu identification by SEM, cathodolumінesc., EBIC and electron probe anal. 3—50661
GaAlAs DH laser, subnanosec., pulsed current driven 3—27047
GaAlAs DH lasers, effects of 140 Mbit/s operation on degradation 3—37028
GaAlAs diode laser, actively mode-locked, 7 Gbit/s coherent pulse generation 3—1677
GaAlAs diode laser, pulse-current pumped, ps light pulse obs. 3—12192
(GaAl)As dual wavelength lasers *(French)* 3—41876
(GaAl)As GHz bandwidth lasers and optical detectors for signal processing appls. 3—17494
GaAlAs gain-guided-stripe DH laser with high kink power grown by organometallic VPE 3—46239
GaAlAs heterojunction laser diodes, harmonic and intermodulation distortion 3—46214
(GaAl)As heterostructure laser, slider-induced convection simulation in horizontal LPE slider system 3—34249
GaAlAs heterostructure laser, operational life improvement 3—37043
GaAlAs injection lasers, commercial, high-freq. characts. 3—6978
GaAlAs injection locked lasers, locking bandwidth asymmetry 3—17496
p-GaAlAs, LPE growth on GaAs, Be and Zn diffusion obs. 3—52982
GaAlAs, LPE system for semicond. heterostructure laser growth, slider induced convection 3—24160
GaAlAs laser, direct pumping, high-speed source development 3—7004
(GaAl)As laser, gain guided diode, CW high power, Al_2O_3 coated mirror facets, reflectivity 3—37076
GaAlAs laser, phase locked arrays, optical output power 3—27042
GaAlAs laser diode, antireflection-coated, polarisation control by external optical feedback 3—41889
(GaAl)As laser diode phase-locked array emitting 2.6 W CW 3—46212
GaAlAs laser diodes, reliability improvements, review 3—6982
GaAlAs laser electronic difference freq. control 3—41877
GaAlAs laser freq. stabilisation using Doppler-free spectrum of Cs D_2-line 3—37037
GaAlAs laser frequency stability, effect of intensity noise reduction by electronic feedback 3—41892
GaAlAs lasers, correl. of low-freq. intensity and freq. fluctuations 3—12197
GaAlAs lasers, forward bias voltage characts. 3—22069
GaAlAs multiple quantum-well heterostruct. laser development and characterisation for optical communication appls. 3—56239
GaAlAs, organometallic VPE growth on large scale 3—43751
GaAlAs proton stripe geometry laser, MOCVD grown, characts. 3—22110
GaAlAs quantum well heterostructure laser uniformity 3—1625
GaAlAs, recombination enhanced defect processes and device degradation 3—56909
GaAlAs red ultra-high brightness 500 mcd LED, LPE, optical communication appls. 3—22257
GaAlAs, scintillator, with monolithically integrated photodiode, detector 3—50165
GaAlAs single mode injection laser diode performance, under conditions of fluid immersion and hydrostatic press. 3—22099
GaAlAs single mode semicond. laser, relax. resonance effects in field spectrum 3—41823
GaAlAs single-mode lasers, phase noise and spectral line shape 3—56195
GaAlAs TJS laser optical detector for detect. at Gbit/s rates 3—42030
(GaAl)As TS lasers with reduced facet reflectivities, noise and longit. mode characts. 3—56260
GaAlAs, VPE growth, use of low press. 3—42960
GaAlAs:H_2S(Se), doping relationships during MOCVD growth 3—42632
GaAlAs:Mg one-watt CW visible single-quantum-well lasers grown by OM-VPE 3—37026
(GaAl)As/GaAs channelled substrate injection laser prep. and props. 3—46232
GaAlAs/GaAs DH lasers, Sn doped and undoped, MBE grown, p-n junction positioning study 3—41835
GaAlAs/GaAs double heterostructure junction lasers, fine struct. of freq. spectrum *(Japanese)* 3—56253
GaAlAs/GaAs high power phase-locked laser array 3—46240
GaAlAs/GaAs laser, current injection induced acoustic signals 3—1632
GaAlAs-GaAs DH laser diodes for gain-switched picosecond pulse generation 3—22064
GaAlAs-GaAs heteroface solar cell, design optimisation, reflection loss effect 3—29386
GaAlAs-GaAs lateral surface superlattice, transport 3—57416
GaAlAs-GaAs oxide-stripe lasers, 880 nm, pulse-power perform. and stability 3—22061
GaAlAs-GaAs superlattice, third order nonlinear optical susceptibility 3—27129
GaAlAs-GaAs wavelength division solar cells, MOCVD growth 3—53515
p-$Ga_{0.2}Al_{0.8}As$/p-$Ga_{1-y}Al_yAs$/n-$Ga_{1-y}Al_yAs$ solar cells, conversion efficiency 3—53517
$Ga_{1-x}Al_xAs$, coherent off-axis epitaxial layers, X-ray multiple diffr. patterns 3—13665
$Ga_{1-x}Al_xAs$, electron irrad., electron trap optical ionisation cross-sections, DLTS meas. 3—43092
$Ga_{1-x}Al_xAs$; electron mobility and deformation pots, meas. in X-conduction band minima 3—18703
$Ga_{1-x}Al_xAs$, electron traps due to electron irrad. 3—33675
$Ga_{1-x}Al_xAs$ epitaxial films; band gap energy, photoacoustic method 3—51992
$Ga_{1-x}Al_xAs$ epitaxial layers, Al conc., Auger spectroscopy, ion microprobe anal., photoluminescence meas. 3—23993
$Ga_{1-x}Al_xAs$ epitaxial layer characterization by X-ray double diffr. *(French)* 3—28226
$Ga_{1-x}Al_xAs$ epitaxial multi-layer solar cell fabrication and testing, progress report 3—53545
$Ga_{1-x}Al_xAs$, exciton emission, luminescence study 3—52850
$Ga_{1-x}Al_xAs$ film, capillary liq. epitaxy 3—43776
$Ga_{1-x}Al_xAs$ heterojunction injection laser, monolithic-hybrid joining to As_2S_3 glass waveguide 3—22259
$Ga_{1-x}Al_xAs$ lasers, visible and IR, catastrophic degradation level meas. 3—27114
$Ga_{1-x}Al_xAs$ variable gap films, photoelectron spectra, electron diffusion length 3—14440
$Ga_{1-x}Al_xAs$ variable-gap structs., isothermal liq. epitaxy 3—28234

aluminium compounds continued
$Ga_{1-x}Al_xAs$ visible laser (740 nm), improved lifetime by reducing bonding stress 3—27076
$Ga_{1-x}Al_xAs$:N, ion-implanted, $x=0.2\text{-}0.8$, photoluminescence studies *(Chinese)* 3—34132
n-$Ga_{1-x}Al_xAs$:Se, elec. resist., Hall effect meas., impurity energy levels 3—23510
p-$Ga_{1-x}Al_xAs$:Zn, elec. resist., Hall effect meas., impurity energy levels 3—23510
$Ga_{1-x}Al_xAs$:Zn, LPE grown, shallow Zn diffusion obs. at 600°C 3—33499
$Ga_{1-x}Al_xAs$/GaAs heterojunctions, epilayer and interface, Raman scatt. meas. 3—14266
$Ga_{1-x}Al_xAs$-GaAs cascade solar cell using n-p-n struct. 3—19590
$Ga_{1-x}Al_xAs$-GaAs quantum well wires, MBE growth and cathodoluminesc. props. 3—3825
$Ga_{1-x}Al_xAs$-GaAs quantum well heterostructs., MOVPE growth 3—3965
$Ga_{1-x}Al_xAs$-GaAs solar cell, role of photoluminesc. in efficiency 3—58539
$Ga_xAl_{1-x}As$ layered stripline rib waveguide, mode selection 3—32470
$Ga_xAl_{1-x}As_yP_{1-y}$, vacancy and antisite defect deep levels, alloy composition effects 3—43097
GaAlAsSb, equilib. diagrams, influence of chemical disorder and epitaxial substrate *(French)* 3—42957
$Ga_{0.8}Al_{0.2}As_ySb_{1-y}$:Be implanted avalanche photodetectors, tunnelling in reverse dark current charact. 3—20895
$Ga_xAl_yIn_{1-x-y}As/Al_xIn_{1-x}As$ optically pumped double heterostructure laser, room temp. lasing action 3—41824
$Ga_{1-x}Al_xP$, homogeneous, temp. difference LPE growth and photo- and electro-luminesc. meas. 3—39051
$Ga_{1-x}Al_xP$/GaP p-n structures, cathodoluminescence from p and n regions 3—8890
$Ga_{1-x}Al_xSb$, electron and hole impact-ionisation coeffs. 3—13826
$Ga_{1-x}Al_xSb$, solid soln., LPE, liq. and solid phase comp. 3—39099
$Ga_{1-x}Al_xSb$-GaSb heterostructure, epitaxial layers, growth characts. 3—38244
$Ga_{1-x}Al_xSb_{1-y}As_y$/GaSb, LPE growth and phase diagram 3—3970
$Ga_{1-x}Al_xSb_{1-y}As_y$-GaSb, LPE, liquid phase composition stabilisation obs. 3—33610
GaAs/$Al_xGa_{1-x}As$ LPE grown heterojunctions, two dimens. electron gas 3—43278
GaAs/$Al_xGa_{1-x}As$ multilayer reflector for surface emitting laser diode 3—50679
GaAs/AlGaAs heterostructures, two-dimens. electron gas, magnetophonon reson. 3—23479
GaAs/AlGaAs multi-quantum-well laser diodes, polarisation depend. gain 3—46211
GaAs/AlGaAs/BeO constricted DH large optical cavity laser, LPE grown, multichannel optical recording appl. 3—27074
GaAs/$Ga_{1-x}Al_xAs$ multiple quantum well struct., room temp. optical absorpt. saturation spectra 3—7082
GaAs/GaAlAs DH narrow diffused stripe lasers for high speed integrated optical transmitters 3—22109
GaAs/GaAlAs GRIN-SCH very low threshold laser structs. grown by MOCVD 3—56238
GaAs/GaAlAs multi-quantum well struct., Rayleigh scatt. at exciton resonance 3—8843
In-GaAs/n-$Al_xGa_{1-x}As$ heterostructures, organometallic VPE grown, interface states study 3—28416
GaAs-$Al_{0.3}Ga_{0.7}As$, quantised Hall resist., fine struct. consts. 3—23411
GaAs-$Al_{1-x}Ga_xAs$ modulation doped heterostructure, high-mobility electrons, electric field induced heating obs. 3—28417
GaAs-$Al_xGa_{1-x}As$, electron probe microanalysis, improved spatial resolution 3—9369
GaAs-$Al_xGa_{1-x}As$ DH, photolum. spectra, anomalous bands 3—3816
GaAs-$Al_xGa_{1-x}As$ heterojunction layers, fast electron switching and storage effects 3—8563
GaAs-$Al_xGa_{1-x}As$ heterostructure, photo-EMF, forward current flow mechanism, electrolum. study 3—18774
GaAs-$Al_xGa_{1-x}As$ heterojunction, subband struct. and light scatt. spectra 3—28423
GaAs-$Al_xGa_{1-x}As$ heterojunction, low temp. mobility 3—28424
GaAs-$Al_xGa_{1-x}As$ heterostruct., MBE, minicomputer controlled substrate and effusion cell operation *(German)* 3—34234
GaAs-$Al_xGa_{1-x}As$ heterostructures, modulation doped, electron or γ-irrad., transport props. 3—38461
GaAs-$Al_xGa_{1-x}As$ heterostructure, selectively doped, two-dimens. electron gas mobility and conc. 3—52231
GaAs-$Al_xGa_{1-x}As$ n-n heterojunction, photovoltaic response *(Chinese)* 3—33782
GaAs-$Al_xGa_{1-x}As$ semicond. superlattice with tunable electronic props. 3—38462
GaAs-$Al_xGa_{2-x}As$ heterostructure, magneto-quantum transport at low temp. 3—3306
GaAs-AlAs heterostructures, modulation doped, mobility enhancement 3—3300
GaAs-AlAs interface, antisite and vacancy defects, electron states 3—43096
GaAs-AlAs superlattices, homopolar interface structural and electronic props. 3—23473
GaAs-AlGaAs, effusion processes, in MBE 3—28242
GaAs-AlGaAs DH laser, transverse mode selection, ambipolar excess carrier diffusion 3—46215
GaAs-AlGaAs heterojunctions and superlattices, electron transport *(Japanese)* 3—28426
GaAs-AlGaAs multi-quantum-well laser diode, dynamic behaviour 3—46213
GaAs-$Ga_{1-x}Al_xAs$ DH lasers, MBE growth at high substrate temp. 3—43740
GaAs-$Ga_{1-x}Al_xAs$ heterostructures, quantum well and modulation doped, MOVPE growth 3—43271
GaAs-$Ga_{1-x}Al_xAs$ laser, direct gain modulation by GaAs picosecond optoelectronic switch 3—27095
GaAs-$Ga_{1-x}Al_xAs$ quantum well structures, energy spectrum of donors 3—8447
GaAs-$Ga_{1-x}Al_xAs$ quantum wells, elec. field effect on luminescence 3—34143
GaAs-$Ga_{1-x}Al_xAs$ quantum well structs., Wannier exciton binding energies 3—47273
GaAs-$Ga_{1-x}Al_xAs$ quantum well structs., hydrogenic impurity state energy levels 3—47308
GaAs-GaAlAs, OM-VPE growth, effect of graphite baffles. 3—43768

aluminium compounds continued
GaAs-GaAlAs DH laser, high rate AM and FM characts. 3—22132
GaAs-GaAlAs graded barrier single quantum well lasers, CVD grown, threshold current densities 3—12143
GaAs-GaAlAs heterostructures, high-mobility selectively doped, grown by LP OM-VPE 3—28418
GaAs-GaAlAs laser, dielectric guiding due to inverted gain profile 3—1630
GaAs-GaAlAs p-n-p-n negative resistance laser with low threshold current density 3—22117
GaAs-GaAlAs quantum well laser structs., MOVPE growth 3—43767
GaAs-GaAlAs stripe geometry multiple quantum well lasers, CW high-power single-mode operation 3—37029
n-GaAs-p-GaAs-p-$Al_xGa_{1-x}As$ heterocells, design and test results in 200 W photovoltaic unit 3—9423
$Ga_{1-x-y}In_xAl_yAs$, LPE growth on GaAs and near IR optical props. 3—3973
GaInAs-AlInAs heterojunctions, quantum transport, intersubband scatt. effect 3—3305
GaInAs-AlInAs heterojunctions, enhanced electron g-factors, tilted field method 3—47416
$Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$ heterojunctions, electron mobility, spacer thickness and electron density effects 3—47412
$GdAl_3(BO_3)_4$, cryst. struct. determ. 3—8010
HfF_4-BaF_2-LaF_3-AlF_3 glass laser elements, hot pressing 3—7103
InAlAs, VPE growth, use of low press. 3—42960
InGaAlP DH laser diodes grown by MBE, 0.66 μm room-temp. operation 3—46210
$KAl(SO_4)_2.12H_2O$, phase transitions and thermodynamic props. 3—13478
$KAl(SO_4)_2.12H_2O$, growth from aq. soln., growth rates of (111), (100) and (110) faces 3—27883
$K_{1.6}Al_{1.6}Ti_{6.4}O_{16}$, one-dimens. superionic cond., Raman spectra study 3—23959
$K_2Mg_6Al_2Si_6O_{20}F_4/AlPO_4$-based materials, struct. changes and thermal stability 3—8185
$LaAlO_3$-$LaFe_3O_3$, solid solutions, crystal prep. by zone refining 3—14476
$LaNiAlD_{4.1}$, cryst. struct. determ. 3—18265
$LaNi_4AlD_{4.1}$, cryst. struct. determ. 3—8017
Li-Al-N ceramics in liq. Li, thermodynamic stability 3—55645
Li-Al-O ceramics in liq. Li, thermodynamic stability 3—55645
LiAl-FeS cells, pelletised, operating characteristics 3—19571
$LiAlSiO_4$, modulated structures, of phase transitions 3—47100
$LiAlSi_4O_{10}$, petalite, cryst. struct. and antiphase domains, neutron diffr. and SEM studies *(German)* 3—51574
$Li_6[Al_2(BO_3)_4]$, cryst. struct. determ. 3—2520
$MgAl\ _2(SO_4)_4\ 22H_2O$, spinel powders, prep. by thermal decomp. of freeze dried sulphate, charact. and sinterability *(Japanese)* 3—3994
$NH_4Al(SO_4)_2.12H_2O$, phase transitions and thermodynamic props. 3—13478
$NH_4Al(SO_4)_2.12H_2O/NH_4NO_3$ short term heat storage system, characts. 3—34739
$Na_{92}Al_{92}Si_{100}O_{348}$, cryst. struct., neutron profile refinement 3—8004
$Na_8Al_6Si_6O_{24}(OH)_2.2H_2O$ 3—46895
$Na_{12}Al_{12}Si_{12}O_{48}.27H_2O$, space group, comparison of X-ray and NMR data 3—13173
$Nd_xY_{1-x}Al_3(BO_3)_4$ crystal, nonlinear active medium, optical SHG 3—12243
$SbCl_3$-$AlCl_3$ molten mixtures, elect. conductivity 3—47133
$SbCl_3$-$AlCl_3$-NaCl molten mixtures, elect. conductivity 3—47133
$Si_{6-z}Al_zO_zN_{8-z}$, β-sialons, IR absorpt. spectra study 3—8820
SiC-AlN composites, thermal diffusivity and conductivity, effect of hot pressing temp. 3—57151
Si_3N_4-SiO_2-AlN β-sialons, mol. and cryst. struct., IR absorpt. spectra obs. 3—23929
$(V_{1-x}Al_x)_2O_3$, elec. resist., Seebeck coeff. and metal-insulator transition 3—13844
Y-Si-Al-O-N glass, crystn. and characterisation 3—27852
$Y_x(Si, Al)_{12}(N, O)_{16}$ α-sialon, struct. refinement from X-ray powder diffr. data 3—22847
$ZnAl_2O_4$, form. kinetics, effect of reactant dispersion in powder mixture *(Japanese)* 3—58086
ZrF_4-BaF_2-AlF_3-LaF_3-LiF optical glass, aqueous corrosion, IR and SEM study 3—1731
ZrF_4-BaF_2-AlF_3-LaF_3-EuF_3, glass, Eu(III) fluoresc. study 3—52818
ZrF_4-BaF_2-GdF_3-AlF_3 glass, Rayleigh scatt., melt cooling rate effects 3—38840
ZrF_4-BaF_2-LaF_3-AlF_3-LiF-BiF_3-PbF_2 glass, viscosity props. for fibre drawing 3—1786
ZrF_4-BaF_2-LaF_3-AlF_3 glass, low temp. sp. ht., transient pulse technique 3—51823

aluminosilicate glasses
alkali aluminosilicate glasses, heat capacity and Gruneisen parameters 3—2840
alkali aluminosilicate glasses, leaching, effect of Al_2O_3 additions 3—2822
basalt glass-ceramic, nucleation and crystallisation, small-angle neutron scatt. obs. 3—46859
diffusion processes and surface reaction, Rutherford backscatt. study 3—28168
ion implantation effects, microhardness and refr. index meas. 3—33133
optical VAD fibre fabrication, optical props. 3—50781
soda-lime, hydration and chemical interdiffusion 3—51869
Al_2O_3-P_2O_5-SiO_2 core composition optical fibres 3—56356
Al_2O_3-SiO_2 core composition optical fibres 3—56356
Al_2O_3-SiO_2-Li_2O-TiO_2-ZrO_2 glasses, phase decomp. 3—2819
Al_2O_3-SiO_2-Li_2O-ZnO glasses, β-eucryptite solid soln. form. during crystn. 3—2432
Al_2O_3-SiO_2-MgO (CaO) glass, Al ion co-ord. number and physical props. 3—33122
Al_2O_3-SiO_2-rare earth oxide form. 3—39087
B_2O_3-Al_2O_3-SiO_2 system, glass ceramic form. 3—34273
BaO-ZnO-Al_2O_3-B_2O_3-SiO_2 optical glass, spangle form. during melting 3—33132
CaO-MgO-Al_2O_3-SiO_2 glasses, cation distrib. 3—2433
CaO-Na_2O-MgO-B_2O_3-Al_2O_3-SiO_2, electrocond. glass fibre prep. by ion exchange and reduction method 3—14551
CaO(-ZnO)-Al_2O_3-SiO_2 glass, surface crystallised, high strength, characterisation by electron microscopy 3—4162
CoO-Al_2O_3-SiO_2 (20, 40 wt.%) glass, spin-glass, photomag. effects 3—38624

aluminosilicate glasses continued
Cu_2O-Al_2O_3-SiO_2-M_xO_y (M=Na, Ca, Fe, B, Ge, P) glass, thermal expansion, comp. depend. 3—42817
K_2O-Al_2O_3-SiO_2 glasses, leaching and dealuminising in HCl 3—2821
Li_2O-Al_2O_3-P_2O_5-SiO_2-TiO_2 system devitrified glasses, melt viscosity and crystn. 3—37798
Li_2O-Al_2O_3-SiO_2, crack deflection processes, expt. 3—50997
Li_2O-Al_2O_3-SiO_2 glass ceramics, microstruct. and grain growth 3—4003
Li_2O-Al_2O_3-SiO_2 glass ceramic, flaw growth, indentation-produced 3—19393
Li_2O-MgO-Al_2O_3-SiO_2, Fe_2O_3 doped, transparent glass ceramic, microstruct. and crystallisation 3—2423
Li_2O-Na_2O-Al_2O_3-SiO_2, mixed alkali glasses doped with Cu^{2+} 3—46864
MgO-Al_2O_3-SiO_2, Z 3—22793
MgO-Al_2O_3-SiO_2-TiO_2 glass, crystallisation and phase separation, thermal history effects 3—33125
MgO-FeO-Al_2O_3-SiO_2 glass-ceramics with coal stone as main raw material 3—34275
MgO-NiO-Al_2O_3-SiO_2 glasses and glass-ceramics, coordination of Ni^{II}, spectroscopic study 3—42528
Na_2O-Al_2O_3-B_2O_3-SiO_2 photochromic glasses, precipitation of Ag(Cl, Br), crystallite size 3—33130
$20Na_2O.Al_2O_3.(80\text{-}x)SiO_2$, Cu incorporation by Cu-Na ion exchange 3—33117
$20Na_2O.10CaO.xAl_2O_3.(70\text{-}x)SiO_2$, Cu incorporation by Cu-Na ion exchange 3—33117
SiO_2-Al_2O_3 glasses, struct. and vibr. spectra 3—42527
SiO_2-Al_2O_3-ZnO-ZrO_2 glass, crystallisation and phase separation, thermal history effects 3—33125
SiO_2-B_2O_3-Al_2O_3-ZrO_2-Li_2O-Na_2O glasses, uniform refractive index model, obtained by Li^+ for Na^+ ion exchange 3—23905
SiO_2-Ce_2O_3-$Al_2O_3(Na_2O)$ glass, luminescence and IR absorption spectra 3—14353
SiO_2-Li_2O-CaO-Al_2O_3:Pr^{3+}, optical dephasing meas. by spectral holeburning 3—50715
SiO_2-$Li_2O(Na_2O)$-Al_2O_3-P_2O_5-Sb_2O_3 glass, for ion-exchange strengthening 3—29053
SiO_2-Na_2O-Fe_2O_3-B_2O_3-TiO_2-CaO-MnO_2-Li_2O-Al_2O_3 glass surfaces, ion depletion during Auger anal. 3—14398
ZnO-Al_2O_3-SiO_2 glass-ceramic, particulate, indentation hardness 3—4111
a.m. (modulation) *see amplitude modulation*
ambient temperature *see temperature*
amblyopia *see vision defects*
americium
see also nuclei with ......
^{241}Au, leaching from borosilicate glass waste form, γ-ray effect 3—41171
conference on actinide recovery from waste and low grade sources, New York, USA (Aug. 1981) 3—49090
contaminated soil, Pu and Am removal at Rocky Flats 3—49953
recovery from nitric acid waste streams 3—49952
X-ray energies, natural widths and intensities meas. 3—11737
Am(III), extraction by bidentate organophosphorus extractant from radwaste 3—49956
^{241}Am pollution of West Cumbria soils from Irish Sea, Windscale origin 3—9501
^{241}Am, self-diffusion coeff. determ. in $Nd(ClO_4)_3$ soln. 3—2859
^{241}Am separation from Ca, Pb and other metallic impurities 3—49958
^{243}Am purification and separation from Al and other impurities in radwaste 3—49959
^{243}Am-Be, neutron energy spectra meas. using neutron time-of-flight spectrometer *(Chinese)* 3—50113
americium compounds
$Am(PO_3)_3$, Raman spectra 3—47646
$AmPO_4$, Raman spectra 3—47646
ammeters
DC current measurer, accurate wideband, for stabilisation of power supplies to charged particle storage devices 3—10854
microammeter, using voltmeter with 741 op. amp. 3—30888
picoammeter, bi-FET and bi-MOS IC devices with high input impedance, cct. appls. 3—16374
picoammeter for ion chambers without range switching 3—50055
ammonia
absolute IR intensities 3—36750
adsorbed on Fe and Ni, binding and valence photoemission *(German)* 3—38231
ambient measurement in coastal SE Virginia, USA 3—9950
Borsod chemical plant's utilisation of waste hydrogen *(Hungarian)* 3—44154
chemisorption, on Cr_2O_3, thermal desorpt. and IR absorpt. obs. 3—8320
coadsorbed on Pt (100) and (111) with other cpds., struct. and comp., LEED and AES study 3—13640
concentrations in urban and rural atom. 3—9951
crystal, metallic, total energy, pseudopot. calc. 3—18640
dark clouds dense cores, star form. and gravit. collapse evidence, NH_3 SHF 3—54469
Fabry-Perot resonator with NH_4 gas, critical slowing-down 3—17561
G35.2—0.74 molecular cloud rel. struct. from NH_3 SHF obs. 3—5438
G35.2-0.74, interstellar molecular cloud, CO, H_2O and NH_3 obs. 3—59442
ground state for IR spectrum, pure rotational transitions 3—41572
H-bonded clusters, assoc., intermol. pair pots. calcs. 3—1516
IC 342, spiral galaxy, NH_3 obs. rel. to temps. and sizescales of giant cloud complexes 3—5416
Jupiter, altitude profiles in troposphere from IR spectrum 3—20287
Jupiter, NH_3 gas and ice haze global props., iR obs. 3—35512
Jupiter, NH_3 ice particle clouds effect on outgoing thermal radiance 3—35513
Jupiter troposphere, abundances of CH_4, CH_3D, NH_3 and PH_3 from high-resolution 1100 to 1200 cm^{-1} spectra 3—10253
laser, buffer gas effects on output 3—12121
laser, CW far IR $^{15}NH_3$, $^{13}CO_2$ laser pumped, dispersion, laser pulling effects 3—12123
liquid metal-NH_3 solns., strongly decomposed, current instability, plasma waves 3—47376
liquid struct., IR and Raman spectroscopic inference 3—34089
metal-NH_3 solns., liq., strongly decomposed, current instability 3—28395
metastable line absorption in hot interstellar molecular cloud in Sagittarius B2 direction 3—20459
mixed dimers with H_2O, methanol and methylamine, empirical pot. study 3—6748

ammonia continued
molecular beams, IR spectra at high press., rot. energy distrib. 3−11789
molecule, $2\nu_2$ band, self-broadening and self-shifting 3−36821
molecule, (J,K)=(3,3) inversion spectral line under influence of strong reson. pumping field 3−46029
molecule, absolute IR intensities 3−36750
molecule, dipole moments, vibr., electro-optical parameter calcs. 3−11848
molecule, electron input ionisation, near threshold 3−56088
molecule, electronic props. by Green's function calcs. 3−6512
molecule, EM hyperpolarisability tensor from Verdet consts. 3−50448
molecule, full CI calcs. 3−50316
molecule, inversion vibr. freqs., ab initio calcs. *(French)* 3−45807
molecule, IR laser optogalvanic spectrosc. 3−55936
molecule, matrix isolated in CO at 10K, IR spectrum 3−17285
molecule, MO interactions, preferred geometry ab initio SCF calcs. 3−11653
molecule, optoacoustic laser Stark spectroscopy of ν_2 band 3−41598
molecule, Q-branch transitions of $a2\nu_2$-$s\nu_2$ band 3−6612
molecule, slow positron scatt., fixed-nuclei approx. calcs. 3−56078
molecules, dissociation by electron beam 3−36868
photochemistry in Jovian planetary atmospheres 3−35519
polyacetylene:I,NH_3, cis to trans conversion during doping, IR spectra study 3−42541
Raman laser gain meas. using tunable-diode-laser 3−32396
rot. transition, line shift by gas press. 3−36823
solar energy conversion to chemical by photoassisted processes, NH_3 production over TiO_2 catalysts 3−14959
solar energy conversion to chemical energy by photoassisted processes, NH_3 production over TiO_2 catalysts, influence of iron content 3−14960
solubility liq. Kr, heat of soln. 3−33445
thermochemical heat pump principles of energy storage and generation, economics 3−4399
turbulent flow in heated circular tubes in presence of catalytic dissoc. at walls 3−12636
vapour, reversible optical waveguide sensor 3−34759
$Cd.NH_3^*$ gas phase, emission kinetics 3−46017
K-NH_3 solns., elect. cond. and thermoelect. power 3−47373
ND_3, electron input ionisation, near threshold 3−56088
NH_3, irradiated targets, dynamic nucl. polarisation study 3−1105
NH_3^+ metastable ions and analogs fragmentation, tunnelling through a rot. barrier example 3−24487
$^{14,15}NH_3$, high-resolution of IR and microwave FT spectra of ν_4 and $2\nu_2$ bands 3−32056
NH_3-H_2O, binary clusters, mol. beam two-photon ionisation mass spectra 3−50562
NH_3-N_2 high-power laser, characts. with passive longit. mode locking 3−7040
NH_3-Na, liquid-liquid phase equilib., miscibility gap with upper or lower crit. point 3−47098
$NH_3+CO_2(N_2)(H_2)$, pot. transitions, cross sections, beam maser investig. 3−41653
NH_3+He collisions, microwave double reson. expt. interpretation using the m-dependent transitions selection rule 3−21855
NH_3+He microwave double reson. expts., anal., m-dependence effects 3−55978
NH_3+methyl cation, condensation reaction, ab initio MO calcs. 3−45820
NH_3+OH, vibr. energy transfer, EPR study 3−21863
$NH_3+OH_2(SH_2)$, protonation reactions, basis set depend. 3−31951
NH_3+polar gases, rot. transition cross sections, beam maser investig. 3−11952
$(NH_3)_n$ clusters, (n=1 to 10), electron impact ionisation, appearance pot. of ions, mass spectra 3−17395
$^{14}ND_3$, pure inversion spectrum in $\nu_2=1$ state 3−6619
$^{14}NH_3$ CW two-photon pumped laser lines 3−50651
$^{15}NH_3$ CW two-photon pumped and Raman FIR laser lines 3−50651
NbS_2-NH_3, intercalation cpds., NMR studies 3−47570
$Ti_{1+x}S_2.NH_3$, diffusion of NH_3, pulsed PMR study 3−18503

ammonia clocks *see atomic clocks*

ammonium compounds
acetate, aqueous soln., density and US vel., temp. dependence meas. 3−18393
halides, vapour phase dissociation, enthalpies of sublimation 3−34615
quaternary salts, thermal ionis. 3−55873
Rochelle salt, photoelastic study 3−3684
d-tartrate, ^1H and ^{13}C NMR studies 3−52642
A-zeolites, tetrahedrally coordinated Cu^{2+} ion, EPR and electron spin echo studies 3−38686
β''-Al_2O_3-NH_4^+-$H^+(H_2O)_n$, proton mag. relax. and ionic cond. 3−18505
CdTe-NH_4Br gas mixture, diffusion mass transfer, one-dimens. model 3−2161
$Co(NH_4)_2(SO_4)_2.6H_2O$, host lattice effects on EPR of VO^{2+} 3−57756
K_2SO_4-$(NH_4)_2SO_4$-H_2O system, crystallisation kinetics, solid phase comp. effect 3−27878
$LiNH_4SO_4$ and $LiND_4SO_4$, domain struct. revealed by liq. cryst. decoration 3−28802
$LiNH_4SO_4$, ionic thermocurrent studies 3−23869
$LiNH_4SO_4$:Co^{2+}, optical absorpt. spectrum 3−43570
$Mg(NH_4)_2(SO_4)_2.6H_2O$, host lattice effects on EPR of VO^{2+} 3−57756
ND_4^+, ionic solution, struct. and dynamics 3−51472
$(ND_4)_4Sb^{III}Sb^VBr_{12}$, ^{81}Br NQR obs. 3−3587
$ND_4UO_2PO_4.3D_2O$, cryst. struct. rel. to proton cond. 3−51552
NH_4^+, hydration energies, ab initio MO calc., solvation effect 3−55801
NH_4^+ tetrahedron in NH_4O, rot. dynamics 3−33148
$NH_4Al(SO_4)_2$:$Cr_2O_7^{2-}$, X-ray irrad. damage, optical absorption and ESR study 3−18344
$NH_4Al(SO_4)_2.12H_2O$, phase transitions and thermodynamic props. 3−13478
$NH_4Al(SO_4)_2.12H_2O/NH_4NO_3$ short term heat storage system, characts. 3−34739
NH_4Br, cryst. binding anal. 3−22817
NH_4Br, polycryst., struct. phase transitions, nucl. spin relax. times meas. 3−57808
NH_4Br, recomb. luminesc. study by simultaneous excitation 3−24000
NH_4Br:Tl, photoluminescence spectra after phase transition 3−14346
NH_4CNS, vapour phase dissociation, enthalpies of sublimation 3−34615
$(NH_4)_2Cd_2(SO_4)_3$, vibr. spectra and phase transitions 3−23940
$(NH_4)_2Cd_2(SO_4)_3$:Cu^{2+} single cryst., ESR and optical absorpt. obs 3−23790
NH_4Cl, cryst. binding anal. 3−22817
NH_4Cl crystals, Raman scatt. indicatrix asymm. 3−38823

ammonium compounds continued
NH_4Cl, rot. dynamics of NH_4^+ tetrahedron 3−33148
NH_4Cl single crystal, growth from vapour phase in vertical furnace 3−52908
NH_4Cl, thermal depolarisation meas. rel. to cryst. growth conditions 3−19041
NH_4Cl, thermal depolarisation meas., effect of NH_3 and HCl 3−19042
NH_4Cl-$NiCl_2$-H_2O system crystal growth, etching, optical and X-ray obs. 3−27882
$NH_4Cl_{1-x}Br_x$, specific heat, λ-anomaly 3−33462
NH_4ClO_4-$NaNO_3$ mixture, thermal decomposition and transformation to $NaClO_3$-NH_4NO_3 3−48061
$(NH_4)_2Cr_2O_7$, IR spectra, low temp. transitions 3−3695
$NH_4Fe(SO_4)_2.12H_2O$, dielec. behaviour, pseudo-spin-lattice coupled-mode model 3−23889
$NH_4H_2AsO_4$, local pseudo freeze out of impurity dynamics, EPR study 3−3527
NH_4HCO_3, vapour phase dissociation, enthalpies of sublimation 3−34615
$NH_4H_2PO_4$, aqueous soln., density and US vel., temp. dependence meas. 3−18393
$NH_4H_2PO_4$, deuterated, dielec. dispersion 3−47586
$NH_4H_2PO_4$, intracavity sum freq. mixing as tunable CW UV source 3−1698
$NH_4H_2PO_4$, $NH_4D_2PO_4$, SHG, electro-optical control of phase synchronism *(Russian)* 3−37116
$NH_4H_2PO_4$, refractive index, temp. depend. meas. 3−14240
$NH_4H_2PO_4$, SHG of 257 nm radiation in Ar ion laser 3−22157
$NH_4H_2PO_4$ single cryst., dislocation struct. and optical nonuniformity 3−51606
$(NH_4)HSO_4$, proton conduction, coulometric meas. 3−8251
$(NH_4)_3H(SO_4)_2$, proton cond., DC cond. and DTA study 3−2881
$(NH_4)_3H(SO_4)_2$:VO^{2+}, phase transitions, EPR study 3−52745
NH_4HSeO_4, ferroelec. phase transition, high-resolution NMR study 3−28794
NH_4HSeO_4, optical and electrooptical props. near ferroelectric transition 3−28831
$(NH_4)_3HfF_7$, quadrupole interaction and elec. field gradient, γ-ray study 3−13788
$NH_4(HgCl_2(SCN))$, cryst. struct. determ. *(French)* 3−51557
NH_4I, cryst. binding anal. 3−22817
NH_4IO_3, NQR studies of phase transition *(Russian)* 3−28801
NH_4LiSO_4, Brillouin scatt. intensity near ferroelec. phase transition point, anomalous temp. depend. 3−57942
$(NH_4)_6(Mo_7O_{24}).4H_2O$, polycryst., ferroelectricity, pyroelec. thermal anal. investig. 3−47611
NH_4NO_3, heteroionic vibr. coupling, Raman spectra 3−19120
NH_4NO_3 in non-aqs. media, molal compressibilities, ultrasonic study 3−8140
NH_4NO_3, orientational mobility of NH_4^+ ion, Raman study 3−43527
NH_4NO_3 phase III, cryst. struct., neutron diffr. study 3−2474
NH_4NO_3, vapour phase dissociation, enthalpies of sublimation 3−34615
NH_4NO_3+ZnO mixture, DTA, energy-dispersive X-ray diffr. study 3−58460
$(NH_4)_2PtCl_6$, tunnel splittings of reorienting NH_4^+ ions 3−42543
$(NH_4)_2PtCl_6$:Re^{4+}, EPR, $^4A_2$ ground state splitting 3−23796
$(NH_4)_2ReCl_6$, tunnel splittings of reorienting NH_4^+ ions 3−42543
$(NH_4)_2SO_2$ single cryst., dislocation struct., cryst. growth rate effects 3−42608
$(NH_4)_2SO_4$:CrO_4^{3-}, ferroelec. phase transition, SO_4^{2-} dynamics, ESR study 3−34042
$(NH_4)_2SO_4$:Pr^{3+}, complexes in soln., optical absorpt. spectra and fluoresc. obs. 3−8845
$(NH_4)_3Sb_2I_9$, NQR studies 3−23828
$(NH_4)_4Sb^{III}Sb^VBr_{12}$, ^{81}Br NQR obs. 3−3587
$(NH_4)_2SnBr_6$ crystal, struct. phase transitions, dilatometric studies 3−18437
$(NH_4)_2SnBr_6$, nucl. spin diffusion 3−8736
$(NH_4)_2SnCl_6$, NH_4 mol. rot. pot., neutron scatt. study 3−13132
$(NH_4)_2SnCl_6$, rot. potential 3−22987
$(NH_4)_2SnF_6$:Re^{3+}, linear polarised absorpt. spectra 3−57958
$NH_4Sn_2F_5$, F diffusion and proton motion, NMR study 3−43455
$(NH_4)_2TeCl_6$, tunnel splittings of reorienting NH_4^+ ions 3−42543
$NH_4Tl(CrO_4)_2O$, synthesis, crystallography and IR studies *(French)* 3−7975
$(NH_4)_3(UO_2F_5)$, quadratic pot. and compliance consts., vibr. mean amplitudes 3−6806
$(NH_4)_3VO_2F_4$, gamma-irrad., mol. dynamics and phase transition, EPR spectra 3−8717
$(NH_4)_2ZnBr_4$, ferroelectric transitions, dielec. const. and spontaneous polarisation study 3−19073
$(NH_4)_2ZnCl_4$, ferroelec. phase transition, permittivity meas. 3−38780
$(NH_4)_2ZnCl_4$, twinning by pseudomerohedry, cryst. struct. at room temp. 3−46899
$(NH_4)_2ZnCl_4$, weak ferroelectricity between ferro- and antiferro-elec. phases, dielec. study 3−19074
$(NH_4)_2[Er_2UMo_{12}O_{42}].22H_2O$, cryst. struct. determ. 3−8015
$Pt(NH_3)_4PtBr_2(NH_3)_4\ (HSO_4)_4$, cryst. struct. determ. 3−22834
$Zn(NH_4)_2(SO_4)_2.6H_2O$, homogeneity study 3−2829

amorphisation
binary alloys formation by ion mixing, struct. difference rule 3−28004
iron garnet films, epitaxial, ion implantation effect on surface struct. 3−8074
metal-metalloid amorphous cpd. formation by ion implantation, expt. study *(German)* 3−2585
metals, ion implantation by O or N cpd., phase form. 3−2581
metals, metalloid ion implantation, amorphisation, irrad. dose effect, crit. energy density model, TEM and electron diffr. studies 3−47002
new phase nucleation theory and amorphisation of metals 3−38027
polyethylene, linear, radiation induced destruction of crystallinity, mechanism 3−13263
quartz, neutron irrad., lattice const. changes, amorphous and X-ray scatt. studies. 3−33308
transition metal alloys, ion irrad. induced amorphisation or dislocation network form. 3−2631
Al-Ge, Ge precipitate amorphisation by electron bombardment, TEM study 3−56981
$Ca_2Nd_8(SiO_4)_6O_2$, apatite struct., radiation damage 3−27977
$Ca_5(PO_4)_3$, apatite, electron irrad. damage, TEM study 3−13285
Fe/W multilayer films, metastable state form. by Xe irrad. 3−2630
Fe-Al, self ion implanted, amorphisation and recrystallisation 3−2420

amorphisation continued
- FeAl, electron irrad. amorphisation, high volt. electron microscopy study 3—47001
- Fe_3B, electron irrad. amorphisation, TEM study 3—2417
- $Fe_{75}B_{25}$ ribbons and sputtered films, ion bombardment amorphisation and props. 3—2416
- GaAs, ion implanted, annealing characts., Rutherford backscattering-channelling study 3—33315
- Gd-Co powders, amorphised by milling, magnetisation props. meas. *(Russian)* 3—33928
- Ni-P electroless films, microstruct. evolution w.r.t. comp., cryst. to amorphous transform. 3—13672
- NiTi, electron irrad. induced amorphisation at dislocations 3—51663
- NiTi, self ion implanted, amorphisation and recrystallisation 3—2420
- $Pd_{1-x}Si_x$ ion implantation prep., amorphisation, elec. cond. and TEM study 3—2419
- $RbFeS_2$, amorphisation by melt quenching, DTA, X-ray diffr. and Mossbauer study 3—57069
- Si, amorphised ion implanted single cryst., laser annealing, explosive crystn. obs. 3—42655
- Si, amorphized by ion implantation, fast scanned electron and laser beam induced explosive crystn. 3—56821
- Si amorphized surface, struct. modifications following picosecond laser irradiation 3—56949
- Si, amorphous laser quenched from melt, prep. and charact. 3—56944
- Si, crystallisation and amorphisation from melt at interface rel. approaching 20 m/sec. 3—56943
- Si, damage, induced by picosecond laser pulse irradiation 3—56955
- Si film, polycryst., amorphisation by Si ion implantation, annealing behaviour 3—51982
- Si, ion implanted, form. energy of amorphous layer, calorimetric study 3—42683
- Si, melt-in, regrowth, and amorphisation vels. under pulsed laser irrad. 3—56931
- Si on sapphire (vitreous quartz), heavily doped, amorphisation and thermal regrowth, stress relief 3—51993
- Si:As, ion implantation damage, electron-induced conductivity study 3—8075
- Si:As, ion implanted and laser annealed, defect struct., X-ray and TEM studies 3—42650
- Si:$He^+(C^+)(N^+)(Ne^+)(Ar^+)(Kr^+)$, ion implantation, radiation damage accumulation kinetics 3—37945
- SiC:Cr, ion implanted, amorphous struct. and mechanical props. 3—4138
- Te, ion implantation amorphisation, Mossbauer study 3—2418

amorphous-crystalline transformations *see crystallisation*

amorphous magnetic materials *see magnetic properties of amorphous substances*

amorphous semiconductors
- *see also chalcogenide glasses; electrical conductivity of amorphous semiconductors and insulators; insulators*
- 2-D, electron localisation, renormalisation group study 3—38291
- alkali oxide-WO_3 systems, rapidly quenched glasses prep. and characteris. 3—29054
- continuous random network, microcrystallite and other structural models 3—13100
- covalent bonding and defects 3—33098
- dielectric relax. and delayed-collection field expts., dispersive transport anal. 3—43484
- electrical cond., field depend., rel. to electronic struct. 3—43186
- films, laser epitaxy, review 3—51989
- glassy semiconductors, model of electronic processes, correlation with structural features 3—57265
- IR Fourier transform spectra 3—5886
- laser processing, review 3—8099
- localised state density, field effect study 3—8391
- localised states, two freq. light induced absorpt. and energy density 3—38832
- magnetoresist. models, review 3—47369
- optical absorption coeff., configurational-coord. model 3—38795
- photoconductivity, transient and steady-state anal. 3—23440
- photoluminescence, trapped exciton model 3—14347
- photovoltaic band gap for amorphous solar cells 3—13712
- photovoltaic solar energy, conf. Stresa, Italy (May 1982) 3—54583
- physical properties and struct. of inorganic glasses *(Polish)* 3—2426
- physics and chemistry, review 3—33625
- poly-N-vinylcarbazole, trap-free drift mobility, transient photocurrent curves 3—52202
- poly-N-vinylcarbazole film, photocond., extrinsic carrier photogeneration, exciplex and charge transfer sensitisation 3—57384
- poly-N-vinylcarbazole/diazonium salt/TNF system photoreceptor design with charge-acceptance memory 3—52200
- research, review *(Japanese)* 3—44949
- review *(Japanese)* 3—46853
- solar cells, conf., Kyoto, Japan (May 1982) 3—49073
- tetracene, hopping mobility, temp. depend., photocurrent transient study 3—38388
- thin films, elec. transport props., cryostat design 3—25881
- time-resolved band tail luminesc. 3—24004
- transient electrical transport, IR divergence, Scher-Montroll model 3—3177
- transit pulse dispersion, localised state effects 3—52177
- As:Ni amorphous sputtered film, chemical modification, elec. props. 3—23518
- As-Te-Cd thin films, struct. and optical energy gap 3—34058
- Au/a-Se/Al struct., aging effect of capacitance and photoelec. characts. 3—33802
- C DC planar-magnetron sputtered film microstruct., Ar press. effect 3—3001
- C:H amorphous film, struct. optical props. and decomposition kinetics 3—18590
- a-C:H films, elec. cond., optical absorpt., dopant gas effects on props. 3—18705
- C:H sputtered solar selective surfaces, optical props., effect of Ar press. 3—53574
- $CdGeAs_2$, glass crystallisation, determ. of activation energy from thermal anal. 3—37795
- $Cd_{0.5}Mn_{0.5}Te$, semicond., effect of cryst. struct. on mag. props. 3—57723
- CdO-ZnO-P_2O_5 glasses, photocond. band gap, comp. depend. 3—28382
- CdP_2 amorphous layers, refr. index and extinction coeff. meas. 3—3845
- CdS amorphous films, photocond. 3—23428

amorphous semiconductors continued
- GaAs, amorphous, defects, elec. cond. and optical absorpt. studies 3—22778
- GaAs, amorphous, low temp. epitaxial regrowth by ion irradiation 3—38266
- GaAs, pulsed laser annealing, nonthermal effect, time-resolved refl. study 3—46997
- GaAs:H, amorphous, RF sputtered, microstructure, correlation with electronic props. 3—18572
- GaAs:H amorphous, mol. vibr., H bridges, IR spectra study 3—3719
- GaP amorphous thin film, crystallisation using laser beam annealing 3—37957
- GaP(Sb), amorphous, defects, elec. cond. and optical absorpt. studies 3—22778
- $(GaSb)_{1-x}Ge_x$ films, amorphous, Raman scatt. study 3—47725
- GaSe amorphous film, flash evaporated, spherulite growth during crystn. 3—51974
- Ge, AC and DC hopping cond., extended pair approx. 3—38386
- Ge, amorphised, epitaxial regrowth rate, effects of electrically active impurities 3—3011
- Ge, amorphous, melting during rapid heating, internal flaw effects 3—2757
- Ge, amorphous, Rayleigh waves, tunnelling defects 3—33551
- Ge, amorphous film, laser-stimulated cond. 3—38422
- Ge amorphous film, short pulsed laser irrad., crystn. mechanism 3—13688
- Ge, crystallisation processes in multipulse low power laser irradiation 3—57088
- α-Ge film, amorphous, low-power multi-pulse laser annealing 3—46992
- a-Ge film, transient effects in electron pulse annealing, time-resolved TEM 3—7910
- a-Ge, random network model 3—22776
- Ge, reactor neutron compensated, elec. cond., simulation of amorphous semicond. 3—43174
- Ge, single cryst. and amorphous, optical coeffs. meas. at elevated temp. and 6328 Å 3—28815
- a-Ge, thermodynamics of equilib. and non-equilib. crystn. 3—22775
- a-Ge, vibr. states, effective local environment model 3—8162
- a-Ge:H, B(P), ESR spectra and transport props. 3—43435
- Ge:H,B(P), amorphous, elec. cond. and thermoelectric power 3—23393
- Ge:O, amorphous, oxygenation effects on elec. props. 3—28350
- Ge-Si:H, amorphous RF sputtered vibr. props., IR absorpt. and Raman scatt. meas. 3—18420
- GeSe amorphous film, far IR absorption, composition depend. 3—8835
- Na_2O-FeO_n-B_2O_3-SiO_2 glass system, elec. resist., semicond. props. 3—33721
- P, amorphous, red, electronic struct., X-ray spectra study 3—8403
- P, amorphous, time resolved luminesc. study of recomb. and defects 3—3782
- Pd-Si:H magnetron sputtered Schottky barrier solar cell 3—8586
- Pt-Si:H magnetron sputtered Schottky barrier solar cell 3—8586
- $Sb_2S_3(SE_3)$, amorphous film, optical absorpt. rel. to condensation conditions 3—8897
- Sb_2Se_3 thin films, chem. deposition 3—19290
- Se, amorphous, atomic models and radial distrib. function, review 3—33097
- Se, amorphous, correlation model and short range order, X-ray diffr. study 3—33096
- Se, amorphous, with O impurity, viscosity, elec. field effect, quasimolecular defect theory 3—27846
- Se, amorphous film, crystn., bending contours, electron microscopy study 3—2412
- Se, amorphous film, vacuum growth on electron irrad. KI, film morphology, TEM study 3—23195
- Se, amorphous photoreceptors, light fatigue effect related to interfacial barrier layers and corona charging voltage 3—20915
- Se amorphous thick film, optical gap, heat treatment effects 3—52758
- Se amorphous thin film, crystallisation parameters, optical microscopy study *(French)* 3—42520
- Se based amorphous xerographic photoreceptors, charge transport, time of flight expts. 3—3245
- Se, electronic structure, cluster approach *(Russian)* 3—57263
- a-Se film, photodarkening phenomena 3—3674
- Se, highly disordered amorphous, changes in 4p bonding and 4s states on annealing, XPS study 3—33626
- a-Se, optical absorpt. in low freq. range 3—3714
- Se, optical properties in visible range *(Korean)* 3—57986
- Se, permittivity, reflectivity, absorption coeff. and electron energy loss spectra 3—8846
- Se, positron annihilation, evidence of voids *(French)* 3—24043
- Se, thin film, amorphous, vacuum evaporated, radial distrib. function anal., X-ray diffr. study 3—57235
- Se, UPS spectra in condensed phase 3—41620
- Se vitreous film, recrystallisation process, fast change of cond., temp. influence 3—42950
- Se, XPS study, comparison with monoclinic and trigonal forms 3—24093
- Se:Te, amorphous, density of gap states 3—28254
- a-Se/Al contacts, energy barriers, photovoltaic effect study 3—47423
- Se-Te, amorphous film, crystn., bending contours, electron microscopy study 3—2412
- Si, amorphised, epitaxial regrowth rate, effects of electrically active impurities 3—3011
- Si, amorphised ion implanted single cryst., laser annealing, explosive crystn. obs. 3—42655
- Si, amorphized by ion implantation, fast scanned electron and laser beam induced explosive crystn. 3—56821
- Si, amorphous, crystallization on glass substrate, uniform and directed 3—57247
- Si, amorphous, density of electronic states calc., model *(Chinese)* 3—33624
- Si, amorphous, density of states, SCLC meas. 3—3031
- Si, amorphous, electronic defects, laser and electron beam crystn. obs. 3—56956
- Si, amorphous, electronic struct. using reverse-recovery techniques 3—13711
- Si, amorphous, electronic struct. CNDO calcs. 3—52018
- Si, amorphous, gap-state density determ. problems 3—23251
- Si, amorphous, laser annealing, explosive crystn., implantation effects 3—42654
- Si, amorphous, laser irrad., melting temp. meas. for recrystn. process 3—33402
- Si, amorphous, mass transfer analyses of the plasma deposition process 3—51985

amorphous semiconductors continued
- Si, amorphous, melting during rapid heating, internal flaw effects 3—2757
- Si, amorphous, melting point and entropy 3—42755
- Si, amorphous, Schottky barrier solar cells, growth facilities and growth quality, plasma discharge 3—58511
- Si, amorphous, solar cells, thin film, review 3—44124
- Si, amorphous, solar cells for 2 kW photovoltaic power generating system 3—53529
- Si, amorphous, thin film deposition and solar cell fabrication review *(Hungarian)* 3—44125
- Si, amorphous, thin film solar cell, graded band gap, photovoltaic conversion efficiency improvement *(Japanese)* 3—39472
- Si, amorphous CVD films, elec. props. and ESR, plasma hydrogenation effects 3—52154
- Si, amorphous film, CW laser annealing effect on elec. props. *(Korean)* 3—8600
- Si amorphous film, CW laser annealing, solid phase epitaxy and random crystallisation 3—56948
- Si amorphous film, photovoltaic props. and solar cell characts. 3—52192
- Si, amorphous film, reactive laser-sputtering 3—58053
- Si amorphous film prep. from Ag-Si films 3—52929
- Si amorphous films, microwave plasma CVD system 3—52961
- Si, amorphous laser quenched from melt, prep. and charact. 3—56944
- Si amorphous layers, polycentre crystallisation in pulse annealing 3—18221
- Si amorphous photoreceptor design for electrophotography 3—57385
- Si amorphous pin solar cells, arc-discharge deposition and conversion efficiency 3—53531
- Si amorphous pin solar cells, photovoltaic props. 3—53535
- Si amorphous solar cell, electrode element distrib. near contacts and junction layers 3—53536
- Si amorphous solar cells, photovoltaic props. and separated reactor chamber prep. 3—53532
- Si amorphous solar cells, photocarrier collection, carrier transport model 3—53537
- Si amorphous sputtered films, deposition influence on props. 3—52934
- Si amorphous sputtered tunnelling barrier for Nb-Nb Josephson junction 3—43330
- Si, amorphous thin film, furnace and laser annealed, different crystallisation states, evidence 3—29075
- Si amorphous thin film technology and characterization *(Japanese)* 3—28233
- Si, amorphous thin films, prod. by ion beam sputtering, optical props. 3—47727
- Si, amorphous wafers, ion implanted, thermal recrystallisation annealing, transmission electron diffr., microscopy studies 3—56998
- Si, bibliography update of material published during 1981 3—49102
- Si CVD film, solid phase epitaxy on cryst. Si 3—8972
- Si, CVD films, struct. and electronic props. near crystn. temp. 3—23208
- Si, CVD grown, P doping and oxidation effects on grain growth, TEM study 3—51624
- Si, cond., thickness and temp. depend. *(Korean)* 3—38505
- Si, crystalline to amorphous boundary, laser induced solid phase epitaxy 3—57239
- Si DC planar-magnetron sputtered film microstruct., Ar press. effect 3—3001
- a-Si, defects, bipolaronic ground state 3—23329
- Si, evidence against reduced melting temp. 3—57071
- Si film, explosively crystallized on glass, optical, struct. and elec. characts. 3—57246
- Si film, film, defects, positron lifetime studies 3—42518
- Si, film, influence of deposition conditions on optical props. *(Korean)* 3—38792
- Si film, polycryst., amorphisation by Si ion implantation, annealing behaviour 3—51982
- a-Si films, electrical and optical props., influence of H_2 gas during RF sputtering 3—14371
- Si, ion implanted, explosive liq. phase crystallisation 3—18222
- Si, ion implanted, light absorpt. effects on Nd laser annealing 3—56951
- Si, ion implanted, picosecond laser annealed, recrystn., microprobe Raman anal. 3—51656
- Si MOS solar cells, fabrication by anodisation 3—53509
- Si, neutron displacement cascades structure 3—42673
- a-Si, random network model 3—22776
- a-Si, ranges of low energy light ions, SIMS study 3—57007
- a-Si solar cell structs., dielectric relax. contrib. to freq. dispersion of junction admittance 3—14951
- Si solar cells, amorphous thin films, characts. props. 3—9435
- a-Si solar cells, solar cells, state-of-the-art review 3—24589
- a-Si, static charge fluctuations; 2p core-level photoemission spectra 3—24091
- a-Si, struct. order parameters, Raman scatt. study 3—56820
- Si, substrate for MIS and SIS solar cells, future potential *(Slovak)* 3—34699
- Si, surface-photovoltage diffusion length, theory and expt. 3—43223
- a-Si, thermodynamics of equilib. and non-equilib. crystn. 3—22775
- Si, thin film formation by direct photochemical decomposition of Si_2H_6 3—43744
- Si, thin films, flash-lamp-induced crystal growth an amorphous substrates 3—33602
- a-Si, variable struct. order, Raman scatt. and optical absorpt. study 3—2413
- a-Si, vibr. states, effective local environment model 3—8162
- a-Si: H, glow discharge deposition from pure Si_2H_6 and pure SiH_4 3—52973
- Si:B amorphous solar cells, junction props. of nip and pin structs. 3—53530
- Si:B film, highly doped, deposited on Si(100) substrates, solid phase epitaxy 3—23198
- Si:Cl,H, amorphous film, preparation, elec. and optical props. 3—28988
- Si:F amorphous film, annealing behaviour of Si-F bonding struct., optical props. meas. 3—57988
- a-Si:F films, RF glow discharge prep., struct. props. 3—34243
- Si:F(H), amorphous, chemical bonding 3—22777
- Si:F(H)(H,F), amorphous, picosecond photocarrier trapping, photoinduced absorpt. study 3—57376
- Si:H, amorphous, ^{1}H NMR pulsed studies 3—3579
- Si:H, amorphous, annealed, adsorbed O behaviour during H effusion, XPS study 3—51921
- Si:H, amorphous, Auger line shape anal. of struct. 3—24065

amorphous semiconductors continued
- Si:H, amorphous, band tails, photomodulation spectroscopy studies 3—23248
- Si:H, amorphous, bulk and interface states, elec. props. 3—28256
- Si:H, amorphous, crystallisation and nucleation kinetics meas. 3—33094
- Si:H, amorphous, dangling bond defects, trapping parameters, photoconductivity study 3—28367
- Si:H, amorphous, dual-beam photocond. modulation spectroscopy study 3—18739
- Si:H, amorphous, electron-hole recombination lifetime distrib., light induced ESR and luminesc. 3—8510
- Si:H, amorphous, electronic struct. model 3—3043
- Si:H, amorphous, electronic struct., self-consistent pseudopot. calc. 3—28253
- Si:H, amorphous, electronic struct. CNDO calcs. 3—52018
- Si:H, amorphous, energy distrib. of traps, photoconductivity study 3—47314
- Si:H, amorphous, film growth, in situ study, rate and refr. index, dielec. const. spectrum *(French)* 3—28224
- Si:H, amorphous, gap state studies 3—23249
- Si:H, amorphous, light soaked state, transient photoconductivity 3—52188
- Si:H, amorphous, nonradiative recombination study 3—38894
- Si:H, amorphous, optical absorption edge and energy-band tails 3—28821
- Si:H, amorphous, p-type, Schottky barriers 3—28437
- Si:H, amorphous, photocond., reversible photoinduced changes at low temps. 3—13854
- Si:H, amorphous, photovoltaic band gap for solar cells 3—13712
- Si:H, amorphous, photovoltaic props., light-induced effects obs. 3—57377
- Si:H, amorphous, plasma deposited, elec. and optical props. 3—28462
- Si:H, amorphous, radiative recomb., ODMR study 3—19016
- Si:H, amorphous, radiative recomb., ODMR waveform meas. 3—19017
- Si:H, amorphous, recombination, spin depend., ODMR study 3—3594
- Si:H, amorphous, solar cells, carrier mobility, photocapacitance study 3—48147
- Si:H, amorphous, symm. relax. of vacancy 3—22888
- Si:H, amorphous, transient photoconductivity 3—13859
- Si:H, amorphous, vibr. props. study 3—2724
- Si:H, amorphous CVD film, electronic and optical props. meas. 3—29014
- Si:H, amorphous film, interface and surface states, optical absorpt. spectra, photothermal deflection spectroscopy study 3—34125
- Si:H, amorphous film, optical props. 3—24040
- Si:H, amorphous film, Penn model calcs. of electronic struct. 3—52014
- Si:H, amorphous film, permittivity, optical props. 3—23859
- Si:H, amorphous films, efficient visible photoluminesc. obs. 3—47682
- Si:H, amorphous films, role of H, deposition 3—24156
- Si:H, amorphous films, sputtered thin film growth 3—24127
- Si:H, amorphous films, valence electron number and H conc., calc. model 3—3041
- Si:H, amorphous glow discharge film, optically illuminated, picosecond carrier dynamics obs. 3—33735
- Si:H, amorphous hydrogenated, intrinsic surface phonons, theoretical study 3—33556
- Si:H, amorphous p-i-n^+ solar cell, thin n^+ window layers, elec. props. meas. 3—14942
- Si:H, amorphous solar cell, hot carrier diffusion influence on collection efficiency 3—44130
- Si:H, amorphous sputtered films., elec. props., morphological fluctuation 3—3339
- Si:H, amorphous sputtered films, influence of deposition conditions on props. 3—52935
- Si:H, amorphous thin films, prod. by ion beam sputtering, optical props. 3—47727
- Si:H, As amorphous film, RF sputtered, pulsed laser annealing 3—56970
- a-Si:H, As(Cl), ion implanted, IR absorpt. spectra 3—47681
- Si:H, B, amorphous, optical absorpt. spectra and struct. props. 3—52803
- a-Si:H, B, anomalous optical and struct. props. 3—34127
- a-Si:H, Cl, glow discharge prep., optical and elec. props. 3—23978
- Si:H, Cl amorphous film, photocond. meas. 3—43225
- a-Si:H, DC glow discharge produced, pseudogap state density by field effect meas. *(Korean)* 3—13696
- Si:H, determ. of metallic impurities by SIMS 3—37947
- a-Si:H, doping and Fermi energy, Mott 8-N rule 3—8456
- a-Si:H, elec. and optical props., effect of prolonged illum. 3—23441
- Si:H, F, amorphous, electronic struct. CNDO calcs. 3—52018
- a-Si:H, glow discharge deposited, initial growth region 3—42977
- a-Si:H, light-induced metastable effects 3—23392
- a-Si:H, low energy excitation of photolum., temp. and intensity effects 3—43622
- a-Si:H, luminesc. fatigue and light-induced ESR 3—24011
- Si:H, P amorphous film, transport props. and donor levels 3—23379
- a-Si:H, photocond. at 125K, photocarrier generation and recomb. 3—38435
- a-Si:H, plasma deposited, SiH_3Cl impurity effect on props. 3—18583
- a-Si:H, role of dangling bond defects in early recomb., IR absorption 3—47679
- a—Si:H, spin-depend. photocond., ESR study, illum. effects 3—3248
- Si:H, transport props., temp. depend. *(Korean)* 3—38412
- Si:H,B thick films, H evolution, film morphology 3—23217
- Si:H,B(F), amorphous, optical props. 3—23908
- Si:H,F, amorphous, majority carrier drift mobility 3—23407
- Si:H,F films, influence of deposition conditions on props. 3—52975
- a-Si:H,O, IR absorpt. spectra, structural interpretation 3—23987
- Si:H,P, amorphous, gap state profiles, photoacoustic spectroscopy studies 3—23250
- Si:H,P, amorphous film, photoconductivity study 3—28385
- Si:H,P(B), amorphous film, in situ doping during homogeneous CVD growth, charact. 3—52967
- Si:H amorphous, localised states, elec. cond. study 3—8457
- Si:H amorphous, low temp. anomalous magnetoresistance, Fermi level shift contrib. 3—3232
- Si:H amorphous, low temp. distant-pair photoluminescence 3—28890
- Si:H amorphous, non-geminate recombination, EPR and photoluminescence study 3—24008
- Si:H amorphous, photocond., I-V and C-V characts., field quenching 3—57387
- Si:H amorphous alloys, minority carrier diffusion length, photovoltaic device study 3—3220
- Si:H amorphous film, CVD by direct S_2H_6 photolysis and elec. and optical props. 3—52962
- Si:H amorphous film, cond. activation energy and downward cond. kink, prep. condition effect 3—18803

amorphous semiconductors continued
Si:H amorphous film, dangling bond correlation energy 3−8437
Si:H amorphous film, elec. and struct. props., capacitor photo-EMF spectra study 3−8535
Si:H amorphous film, elec. cond. in planar and sandwich configurations 3−38393
Si:H amorphous film, elec. props. and solar cell characts. 3−53539
Si:H amorphous film, H anal., mass spectrometry *(Japanese)* 3−23205
Si:H amorphous film, photoconductivity spectrum, temp. depend. 3−3252
Si:H amorphous film, reactively RF sputtered, microcrystalline form., X-ray scatt. study 3−42976
Si:H amorphous films, $0.2<x<0.5$, HOMOCVD prep., broadband visible photoluminesc. 3−8860
Si:H amorphous films, activation energy for conduction, annealing and thickness effects *(Chinese)* 3−43166
Si:H amorphous films, anodic oxidation 3−34504
Si:H amorphous films, ionized cluster beam deposition 3−52977
Si:H amorphous films, reactive sputtering, ion bombardment morphology control 3−28990
Si:H amorphous films, sputtering under reduced pumping speed, cond. and photocond. props. 3−58047
Si:H amorphous films, void supernetworks, TEM and SEM study 3−2995
Si:H amorphous glow-discharge coating on glass, CW laser crystallisation 3−18581
Si:H amorphous MOS struct., interface states 3−23455
Si:H amorphous oxidised film, characterisation using Auger and UPS methods 3−18578
Si:H amorphous pin solar cells, characts. in dark and under illumination 3−53534
Si:H amorphous Schottky solar cells, photogenerated carrier conduction mechanism 3−44132
Si:H amorphous solar cells, open circuit voltage difference between p-i-n and n-i-p cells 3−39467
Si:H amorphous solar cells on polymer film substrate, plasma deposition and photovoltaic props. 3−53533
Si:H amorphous thin film MIS solar cells, fabrication, elec. and optical behaviour 3−58512
a-Si:H and a-Si:H, P, gap-state profiles, below-gap optical absorpt. meas. 3−3844
a-Si:H and a-Si:H,F, struct. order parameters, Raman scatt. study 3−56820
a−Si:H and a−Si: H, N, localised state distrib. profiles, SCL current meas. 3−18711
Si:H and Si noncrystalline films, optical parameters and struct. meas. 3−3668
a-Si:H film, H conc. determ. by coincidence meas. of elastically scatt. 100 MeV $^3He^{2+}$ ions and recoil protons 3−2411
a-Si:H film, high rate plasma deposition, for electrophotographic photoreceptor 3−13657
a-Si:H film, trapping props., effect of adsorbates, TSC meas. 3−23401
a-Si:H films, deposition by glow discharge and reactive sputtering, H reactions 3−3951
a-Si:H films, disorder characts., optical transmission and photocond. study 3−38932
a-Si:H films, hydrogenated in theta-pinch plasma, photocond. and dark cond. 3−57386
a-Si:H films, optical props., annealing effect *(French)* 3−52862
a-Si:H films, RF sputtering prep., microstruct. and H bonding environment 3−51970
a-Si:H films, thickness depend. of elec. and optical props. and ESR 3−3199
a-Si:H films for photovoltaic appls., optical props. rel. to deposition conditions 3−57990
a-Si:H glow-discharge doped films, laser radiation effects on cond. and Schottky diode operation 3−8579
a-Si:H MIS Schottky structures, modelling using C-V and conductance-voltage meas. 3−47427
a-Si:H MOS photodiodes for large-area high spatial resolution photosensor arrays 3−49449
a-Si:H n^+-i-n^+ sandwiches, SCL currents under AC conditions 3−47357
a-Si:H n^+nn^+ films, SCL cond. 3−3209
a-Si:H n-i-p solar cells, characterisation and optimisation by variation of device geometry 3−53549
a-Si:H p-i-n diodes, photo-induced effects on elec. props. 3−14953
a-Si:H p-i-n solar cells, effect of SiC layer 3−39484
Si:H photoconductive alloys, reactive sputtering in the He-containing atm. *(Japanese)* 3−19267
a-Si:H Schokky solar cell, plasma deposited, band tail absorption *(Korean)* 3−9433
a-Si:H Schottky barrier structs., gap states, transient current spectroscopy study 3−57316
a-Si:H solar cells, optical behaviour computer simulation 3−58506
Si:H sputtered solar selective surfaces, optical props., effect of Ar press. 3−53574
a-Si:H tandem-type solar cells 3−58534
Si:H ultrafast relax. of photoinduced carriers 3−38836
a-Si:H/c-Si heterojunctions, space-charge limited currents 3−18769
Si:H/electrolyte amorphous contacts, band bending, photoresponse and surface reactions 3−8573
a-Si:H-SiO_2 interface, gap state density and interface states 3−52214
Si:$H^+(P^+)(Mn^+)(Ar^+)$ amorphous film, ion implantation doping, ESR and elec. cond. 3−37944
Si:H(H,B)(H,P), amorphous, H diffusion coeff., H_2 effusion expts. 3−33501
Si:H(H,P), amorphous, RF glow discharge deposited, photocond. and dark cond. meas. 3−38423
Si:N, amorphous CVD film, optical and electrical props. meas. 3−8484
Si:Se amorphous film, room-temp. resistivity and optical gap meas. 3−52129
Si:Se amorphous films, optical absorption coeff. and optical gap 3−34158
Si:Sn amorphous, dopant effects on elec., optical and Mossbauer spectra props. 3−18708
Si-Ge, amorphous, sputtered, XPS study 3−3913
Si-Pd_2Si, amorphous Si solid phase epitaxy, anal. of inert marker motion 3−33517
Si-Rh amorphous alloy formation by interfacial reaction between amorphous Si and cryst. RH 3−57147
Si-SiO_2-Si structure, field effect meas., positive mobile ion density determ. in SiO_2 3−43265
Si+D,H, amorphous, NMR study 3−28728

amorphous semiconductors continued
SiC:H, amorphous RF sputtered films, struct. and optical and elec. props. study 3−3711
SiC:H amorphous film, elec., optical and solar cell window material props. 3−52135
SiC:H amorphous window material for a-Si solar cells, characterisation 3−53538
$Si_{0.15}C_{0.85}$:H amorphous films, photoluminesc. decay curves and time-resolved luminesc. spectra 3−47703
$Si_{1-x}C_x$:H film, glow discharge deposited, photolum. study 3−14333
$Si_{1-x}C_x$:H amorphous film, defects, ESR, optical props. and photocond. 3−23199
Si_xC_{1-x}:H, amorphous, electroluminescence obs. 3−47711
Si_xC_{1-x}:H, amorphous film, optical props. 3−24040
Si_xC_{1-x}:H amorphous coatings, CVD gram, XPS and Raman spectroscopy studies 3−51988
SiGe:H amorphous film, elec. props. and solar cell characts. 3−53539
a-SiGe:H tandem-type solar cells 3−58534
$Si_{1-x}Ge_x$:H, amorphous, optical absorpt., photoconductivity meas., alloying effects 3−43510
Si_xGe_{1-x}:H amorphous film, cond. and photocond. props., solar cell appl. 3−33719
SiH, amorphous film, U trace distrib., using SSNTDs 3−56924
a-SiH_x photoreceptors, xerographic photodischarge characts., residual voltage 3−20925
$Si_{1-x}N_x$:H amorphous film, preparation by RF sputtering, defects, EPR 3−24128
Si_xN_{1-x}:H(P), amorphous films, substitutional doping study 3−51635
Si;H, amorphous, planar RF magnetron sputtering, H effects on deposition rate 3−39031
SnO_2 amorphous films, conductive and transparent, antireflection coatings appl. 3−47722
SnS_2, thin films, amorphous, recrystallisation, elec. and optical props., heating effect 3−28354
Te/a-Se contacts, energy barriers, photovoltaic effect study 3−47423
V_2O_5 thin films, amorphous, quenched, elec. and thermal props. 3−8599
V_2O_5-Bi, glass-metal particulate system, switching kinetics 3−52208
V_2O_5-TeO_2 glasses, amorphous semicond., DC cond. under annealing 3−8486
V_2O_5-TeO_2 glasses, elec. cond. and dielec. const., 0.1 to 100 kHz, 77 to 400K 3−57346
Zn_3P_2 film, amorphous and polycryst., elec. cond., temp. and thickness depend. 3−3341

amorphous state
see also electrical conductivity of amorphous metals and alloys; electrical conductivity of amorphous semiconductors and insulators; electron energy states of amorphous solids; magnetic properties of amorphous substances; vitreous state
activation energy spectra and relax. 3−33334
alloys, amorphous, atomic and mag. order, review *(Polish)* 3−43350
alloys, amorphous, thermopower enhancement, Eliashberg function 3−13803
alloys, nonmagnetic d-electron amorphous, elect. resistivity, press. and temp. depend. 3−23353
alloys, struct. changes during crystallisation, interatomic binding *(Russian)* 3−51493
atomic neighbours, soft sphere model 3−22774
disordered ferromagnet, spontaneous magnetisation study *(Russian)* 3−43400
hard-disk arrays, computer-generated, order and deterministic chaos, hexatic configs. 3−23014
ion irradiated, energetic ion scattering, Monte Carlo simulation 3−51671
matter, structure and props., book 3−40326
metal, local struct. fluctuations, glass transition 3−2801
metal, non-crystalline structures in a Lennard-Jones potential 3−2414
metallic amorphous films, diffusion, percolation theory *(Russian)* 3−33485
metals, amorphous, impurity hopping activation energies 3−51860
metals, amorphous, saturation of relaxational absorpt., at very high acoustic powers 3−2689
metals, supercooled liquid, struct. determ. by computer modelling 3−7901
minimum metallic cond. and Anderson localisation, scaling theory 3−52034
neutron diffraction studies of amorphous solids 3−51497
optical absorpt. edge tail, exponential shape 3−14242
recombination in amorphous materials as a continuous-time random-walk problem 3−54682
serrated flow in amorphous alloys, model mechanics 3−39193
solids, chemical bonding and defect form. 3−37783
structure modelling, free energy minimisation 3−42522
surface glazing using laser annealing *(Japanese)* 3−24380
theoretical model *(French)* 3−51492
transition metal oxide containing amorphous layers, vitrification range, light transmittance *(Japanese)* 3−57989
transition metal-metalloid alloys, amorphous, spatial resolution and dense random packing, X-ray diffr. anal. 3−18220
transition metals amorphous and liq., electronic states, hybridisation effects 3−52015
transition metals and metalloids, amorphous particles produced by spark erosion 3−3980
Al, supercooled liquid, struct. determ. by computer modelling 3−7901
Al-Fe-Si, amorphous alloy, rapid solidification, glass form., crystn. 3−56826
Al-Si (11.3 wt.%), fast quenched alloy, superconducting props. 3−3354
Au_4Mn, disordered, local ordering and mag. props. 3−52493
B amorphous film, polymorphism and substructure 3−18586
BN film, hard, ion beam sputter deposited, prep. and props. 3−13673
BaO-SiO_2 glass, phase-separated, positron annihilation 3−58111
BeD_2, neutron diffr. study 3−42523
$Be(H_{0.64}D_{0.32})$, neutron diffr. study 3−42523
C fibre as example of self-reinforced composite, amorphous-cryst. struct. 3−53073
C film, hard, ion beam sputter deposited, prep. and props. 3−13673
C, incompletely graphitised, Raman scattering model 3−34082
C, localised Compton scatt. using EELS 3−24041
C, Planck mean absorpt. efficiency, interstellar appl. 3−59193
$Ce_{1-x}Al_x$, metallic glass, thermal conductivity study 3−18677
Co-Gd amorphous film, long range order in struct. 3−2415
Co-Gd-Mo amorphous film, long range order in struct. 3−2415

amorphous state continued
Co-metalloid alloys, chemical bonding, mag. moments and local symm. 3−42564
Co-P films, amorphous, struct. and mag. props., effect of heat treatment and ion irrad. *(Russian)* 3−27843
Cr amorphous film, elec. cond., struct., mag. transition *(Russian)* 3−13927
Cr-W(Mo)(Fe), amorphous electrodeposited, corrosion resist. *(Japanese)* 3−24399
Cu-Te, amorphous film, crystn., bending contours, electron microscopy study 3−2412
Cu_3Mn, disordered, local ordering and mag. props. 3−52493
$Cu_{0.6}Zr_{0.4}$, amorphous and microcryst. powders, prep. by US gas atomisation 3−34258
$Cu_{1-x}Zr_x$ amorphous alloy, resistivity and thermopower 3−43151
$Cu_{60}Zr_{40}$, amorphous, acoustic low-temp. behaviour 3−3369
Cu_xZr_{100-x} amorphous alloys, ^{91}Zr and ^{63}Cu-NMR meas., short range order 3−3566
D_2O ice, amorphous, struct. characts., neutron diffr. study 3−42519
Fe, amorphous, atomic mag. moment study 3−47483
Fe, amorphous, vacancies and interstitials, density fluctuation stability 3−37904
Fe-Gd(Si) amorphous film, long range order in struct. 3−2415
Fe-metalloid alloys, chemical bonding, mag. moments and local symm. 3−42564
$Fe_{1-x}Al_x$, disordered, Mossbauer meas. of critical behaviour 3−14177
$Fe_{40}Ni_{40}B_{20}$, struct. anal. by X-ray diffraction *(Korean)* 3−37784
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous film, volume change on order-disorder transition *(Russian)* 3−38045
$Fe_{75}Si_{15}B_{10}$ amorphous spark eroded particles, atomic struct. 3−33099
GdFe amorphous films, calibration for quantitative Auger analysis 3−28241
$Ge_{1-x}S_x$ noncrystalline system, average energy gap, compositional depend. 3−52753
$La_{70}Cu_{30}$, amorphous, elec. and thermal cond., superconducting T_c 3−18680
Mo-Ru amorphous superconducting films formed by ion mixing 3−57446
MoS_3, defects, bipolaronic ground state 3−23329
Nb-Nb_2O_5 layered system, interface transitions and struct. *(Russian)* 3−23192
Nb_2O_5 amorphous film, vacuum annealing influence on props. 3−13661
$Nb_{50}Zr_{35}Si_{15}$ amorphous alloy, supercond. props., effect of cold rolling 3−33819
Ni-B film, electroless plating, amorphous, struct. rel. to B conc. *(Japanese)* 3−58055
Ni-metalloid alloys, chemical bonding, mag. moments and local symm. 3−42564
Ni-rare earth amorphous alloys, magnetoresistance 3−13801
P, amorphous, deep level luminesc., appl. of time resolved photolum. technique 3−20900
$PbO-V_2O_5$, equimolar system ESR study 3−18979
$PbTiO_3$, amorphous and cryst., sp. ht. at low temps. 3−38098
Pd-Si-Gd, amorphous, EPR, crystallisation studies 3−52619
$Pd_{80}Si_{20}$, amorphous, impurity hopping activation energies 3−51860
S, photoelectron spectroscopic studies *(Japanese)* 3−24088
Sb film, amorphous, on Ag film, crystn. 3−3013
Sb films, amorphous, deposition in ultrahigh vacuum, crystn., optical microscopy study 3−28236
Se, photoelectron spectroscopic studies *(Japanese)* 3−24088
Si:As, ion implanted, damage study 3−2616
Si:B(P)(Ar)(Ge)(As)(Bi), ion implanted, characterisation by ellipsometry and channelling 3−46977
Si_3N_4 amorphous powder, plasma CVD using hybrid plasma torch 3−46702
Si_3N_4, direct crystn. from amorphous to β-phase under high press. 3−14531
Si_3N_4, hot-pressed, electron microscopy obs. of microstruct., grain boundary struct. 3−51612
SiO_2, amorphous, atomic structural models 3−37788
SiO_2, amorphous, electron energy states calcs. 3−38292
SiO_2, amorphous, struct. changes after neutron irrad. 3−22941
SiO_2 amorphous substrate for Ge graphoepitaxy 3−2993
SiO_2:Al(Zr), amorphous, photoluminescence studies *(Russian)* 3−14354
$SiO_2:O^{2-}$, amorphous, defect study 3−38347
a-SiO_2:OH, X-irrad., damage processes, formyl radical form., ESR obs. 3−57774
SiO_x, amorphous, atomic structural models 3−37788
SiO_x amorphous, electronic struct. calcs. 3−38293
SiO_x amorphous thin films, phonon struct. 3−28067
Ta films, amorphous and β-phase, optical conductivity and struct. 3−34048
Te, photoelectron spectroscopic studies *(Japanese)* 3−24088
Ti-Cu hydrides, amorphous, proton NMR study of H diffusion and electronic struct. 3−34003
WO_3, defects, bipolaronic ground state 3−23329
WO_3 thin films, diffusion of H^+ 3−8380
Zr-Rh(Re)(Ru)(Cu) amorphous film, electronic density of states, superconducting props. 3−38281
$Zr_{70}Cu_{30}$, amorphous, elec. and thermal cond., superconducting T_c 3−18680
$Zr_{70}Cu_{30}$, amorphous, phonon thermal cond. 3−57152
$Zr_{1-x}Fe_x$(Co)(Ni)(Cu)(Pd), amorphous superconductor, upper critical fields 3−3393
$ZrNiH_x(D_x)$, amorphous, pulsed neutron scatt. study 3−8161

amorphous state structure *see noncrystalline state structure*

amplification
see also acoustic wave amplification; amplifiers
P, chemiluminescence flame, cool green, UV light amplification, stimulated emission 3−19525
P, chemiluminescence flame, cool green, UV light amplification, focussing phenomenon 3−24509

amplification measurement *see gain measurement*

amplifiers
see also amplification; audio-frequency amplifiers; d.c. amplifiers; differential amplifiers; high-frequency amplifiers; microwave amplifiers; operational amplifiers; preamplifiers; pulse amplifiers; ring lasers; wideband amplifiers
digital thermophysical devices, input units *(Russian)* 3−10840
EMG amplifier, gain compensation, equiv. elec. representation of sweat layer 3−48431

amplifiers continued
linear amplifiers, quantum limits on noise 3−5654
measuring, temperature meas. with thermocouples, appl., characts. linearisation *(German)* 3−311
semiconductor laser amplifier, resonant type, optical bistability and nonlinear resonance 3−56194
voltage and current amplifiers connection to piezoelectric receiver in US equip. 3−56401
$Nd^{3+}:POCl_3-SnCl_4$ liquid laser amplifier in phase conjugation arrangement 3−17532

amplifying *see amplification*

amplitude modulation
acoustic noise, narrow band, amplitude modulation threshold *(German)* 3−12422
frequency detector, AM for mag. meas. of ferromag. semicond. and dielec. 3−10867
GaAs-GaAlAs DH laser, high rate AM and FM characts. 3−22132

analogue computer applications *see analogue simulation*

analogue computer circuits
see also operational amplifiers
logic comparison circuit based on an integrated optical interferometer 3−32508

analogue computer methods *see analogue simulation*

analogue computers
see also analogue-digital conversion; analogue storage; differential analysers; digital-analogue conversion
digital emulation of analogue computer tech. for kinetic system soln. 3−58394

analogue differential analysers *see differential analysers*

analogue-digital conversion
see also digital-analogue conversion
accelerometer with current-digit convertor, vibration errors analysis 3−49347
acoustic beamformer, digital, intrinsic noise 3−17712
CAMAC interface module for data acquisition from multiple ADCs 3−45799
color texture reconstruction using a bidimensional Markov model 3−6912
contour-texture approach to picture coding 3−6911
controlled nuclear fusion, local-area networks for research 3−41321
digital image recording systems using positive and negative proceses, contour distortion visibility 3−438
digital thermophysical devices, input units *(Russian)* 3−10840
digital waveform memorizer, signal sampling and storage, operation, product trends and appls. 3−35982
drift chambers, readout with flash ADC system 3−45779
dyadic conversations, data acquisition device for computer analysis 3−32549
electrooptic guided-wave A/D convertor, 2-bit 1 Gsample/s 3−7219
fast multichannel analyser in CAMAC format 3−1166
film or TV annotation appl. 3−426
finite aperture sample-and-hold systems, freq. response 3−50215
fuzzy coarse coding, A/D converters upgrading for pulse height anal. 3−41452
galaxies digital surface photometry, appl. to 20 Virgo cluster galaxies rel. to quantitative classification 3−10463
image coding using a predictor controlled by image content 3−6910
image coding using vector quantization 3−6909
integrated electro-optic Mach-Zehnder interferometer for A/D conversion 3−27266
integrated optics four-digit A/D converter prototype 3−27267
landform analysis by SEASAT-SAR imagery, appl. of elevation models 3−20125
multichannel charge digitiser for hodoscopic recording system 3−11621
particle detector, analogue processing system 3−50162
physical field automated investig. system, CAMAL multichannel analogue input complex *(Russian)* 3−16340
pocket neutron REM meter 3−50060
quantisation degradation in superdirective processing of underwater acoustic arrays 3−17719
seismic data recording by sign-bit digitisation 3−30060
software controlled analogue signal input to Nairi K computer 3−49339
thermometer error correction *(Russian)* 3−25877
time-to-digital conversion, nanosecond resolution 3−50217
US signal digital preshaping, equipment and appls. 3−46383
wire spark chamber capacitive readout system with low leakage current 3−45758
GaAs MESFET A/D converter and memory IC for ultra high speed transient recording 3−50216

analogue memories *see analogue storage*

analogue simulation
Duffing oscillator, analog computer simulation and comparison with statistical linearisation 3−12556
human microvascular exchange system 3−9571
Josephson microbridge, nonideal behaviour, analogue simulation 3−28483
Josephson tunnel junction, resistively shunted self-reson., chaotic noise obs. 3−57489
neural network with inhibitory interconnections, role in kitten under abnormal visual experiences *(Japanese)* 3−19698
piezoelectric transducer transient behaviour, analogue electrical simulation 3−1922
polymers, contact electrification by intermittent metal contact, band bending effects, analogue computer study 3−52227
radionuclide dilution and clearance curves, analogue recording, error estimation 3−9703

analogue storage
see also sample and hold circuits
linear accelerator, analogue storage system for data acquisition 3−50224
multichannel time interval recorder using mag. drum analogue storage 3−10803

analysers, differential *see differential analysers*

analysing power *see polarisation in nuclear reactions and scattering*

analytical chemistry *see chemical analysis*

anaphoresis *see electrophoresis*

AND gates *see logic gates*

Anderson model
alloys, dil., low temp. thermoelec. power in asymm. Anderson model 3−33711

Anderson model continued
- amorphous solids, minimum metallic cond. and Anderson localisation, scaling theory 3−52034
- Anderson tight binding model for large disorder or low energy 3−49272
- Anderson transition, gauge invariance and multiplicative renormalisation group 3−33635
- conductivity in random systems, effective medium approx. 3−43147
- conference, Sanda-shi, Japan (November 1981) 3−40321
- dense Kondo system resistivity and periodic Anderson model 3−52123
- dilute systems, quantum percolation and Anderson transition 3−43118
- dirty superconductors, transition temp., diagrammatic theory, localisation effects 3−43317
- disorder and Coulomb interactions in Anderson localised states 3−43128
- disorder and electron correls. in Anderson-localised regime 3−43113
- disordered 1-D system, Anderson transition and Ioffe-Regel criterion 3−28272
- disordered media, one-dimensional wave eqns. 3−33682
- disordered system, density of states and screening near the mobility edge 3−23327
- disordered system, elec. cond. of three-dimens. Anderson model 3−43141
- disordered systems, electronic props., effect of Coulomb interactions 3−23330
- disordered systems, weakly interacting and weak disorder limits 3−43126
- excitonic insulators, indirect interaction of Anderson impurities 3−14046
- impurity scatt., nonlinear σ-model 3−43121
- interacting electrons system, orthogonality catastrophe 3−42990
- intraatomic interaction of impurity electrons, Anderson model study 3−43109
- Kondo regime, temperature-dependent susceptibility in the Anderson model and its universality 3−38584
- localisation, one parameter scaling theory and minimum metallic cond. 3−43110
- localisation problem, universality clones and magnetoresist. in two dimensions, numerical studies 3−28308
- localisation with off-diagonal disorder, local density of states 3−33627
- magnetic props. and magnetoresist. at zero temp. 3−14109
- metal-insulator transition, dielec. and optical anomalies 3−43032
- metal-insulator transition, dielec. const. anomalies 3−3068
- metal-insulator transition, nonlinear-σ-model 3−43031
- metal-insulator transition, screening of random pot. 3−3066
- metal-insulator transition, self-consistent diagrammatic theory 3−43122
- model with correlated site energies, localisation, Anderson transition 3−47312
- monolithium cryptate electride, expanded-metal cpds., electron-electron interactions and metal-nonmetal transition 3−33637
- Mott Anderson metal insulator transition in n orbital models 3−43020
- noninteracting electrons, localisation in random pot. 3−43120
- one-dimensional Anderson lattice, density of states, single-particle dispersions, perturbation expansions with Coulomb screening 3−52053
- one-dimensional Anderson model, phase randomness 3−43117
- one-dimensional systems, localisation and cond. 3−43124
- optical properties of Anderson-localized many-particle excitations 3−43584
- organic crystals, electronic energy transfer, incipient Anderson transition 3−23273
- periodic Anderson Hamiltonian, ground state, appl. to mixed valence systems 3−52013
- periodic one-dimensional Anderson Hamiltonian, ground state and low lying excitations 3−28247
- renormalization-group study of the Anderson-Hubbard model 3−13732
- semiconductor heterojunctions, energy band model 3−38466
- semiconductors, doped, electron cond. props., Anderson localisation theory 3−43184
- semiconductors, heavily doped, metal-nonmetal transition, HF pseudocluster calc. 3−43027
- superconductor, transition temp. rel. due to mixed valence impurities 3−38523
- superconductor-normal metal system, elec. field calc., effect of nonmag. transition metal impurities *(Russian)* 3−47456
- superconductors, d-band, crit. temp., effects of Anderson impurities 3−23525
- superconductors, two-dimensional, Anderson localisation and Ginzburg-Landau eqns. 3−18818
- symmetric, exact results 3−52001
- tetrakismethylaminelithium, expanded-metal cpds., electron-electron interactions and metal-nonmetal transition 3−33637
- thermodynamic observables and Anderson model 3−23325
- transition metal alloys, spin fluctuation of impurity, Hubbard-type model 3−52458
- two-band metals containing Anderson impurities, proximity effect tunnelling 3−57485
- two-dimensional disordered systems, DC cond., numerical study 3−43145
- two-dimensional disordered systems, interaction effects in weakly localised regime 3−43127
- two-dimensional localisation, self-consistent treatment in absence of time reversal symm. 3−43123
- two-dimensional systems, Anderson localisation and cond. 3−43125
- two-dimensional systems, Kondo effects and localisation 3−43146
- Ce, Kondo vol. collapse and γ to α transition 3−3413
- n-InSb, magnetoresist., temp. and mag. field depend., localisation effects 3−43211
- $Li(NH_3)_4$, expanded-metal cpds., electron-electron interactions and metal-nonmetal transition 3−33637
- Ni-Al, mag. susceptibility and elec. resistivity, 700 to 800°C 3−47473
- Si:P, disorder and Coulomb interactions in Anderson localised states, effect on mag. and elec. props. 3−43128
- Si:P, metal-nonmetal transition, Anderson localisation, sp. ht. and mag. props. 3−43026
- SmS, valence fluctuations, correlation effects 3−18665
- $TaS_2(1T)$, magnetoresist., interplay of disorder and Coulomb interactions in Anderson-localized states 3−43128

Anderson transition *see Anderson model; metal-insulator transition*

anechoic chambers
- performance evaluation techniques of anechoic chambers *(Chinese)* 3−42083
- wideband, testing, FM-CW reflectivity measuring technique *(Dutch)* 3−37305

anelastic relaxation
- *see also Bordoni effect; creep; elastic aftereffect; internal friction; Snoek effect; stress relaxation; Zener relaxation*
- Inconel MA 754, dispersion strengthened Ni alloy 3−53137
- isotropic media, linear transverse acoustic wave propag., relaxation effects, special cases appl. 3−22342
- mechanical processes, power-law behaviour in spectral response, comparison with dielec. relax. 3−28044
- polyethylene, high-density, α-process relax. *(Russian)* 3−47875
- polymer composite-water system, viscoelastic behaviour and relax. processes *(Russian)* 3−46460
- polyoctafluoroamyl methacrylate copolymer films, relax. props., photoelasticity, torsional pendulum method obs. *(Russian)* 3−9299
- power-law behaviour in spectral response, comparison with dielec. relax. 3−28044
- rubber, butadiene-styrene, filled and unfilled, relax. transitions *(German)* 3−39189
- superplastic metals and alloys, anelastic effects 3−53113
- Williams-Watts function inversion for large relax. times 3−52719
- AgZn, neutron irrad., self interstitials and vacancies, strain relax. study 3−2615
- $(Ca,K)NO_3$, short time struct. relax. process, glass transitions, expt. and computer simulation 3−38068
- $Cu_{60}Zr_{40}$ metallic glass, relax. under tensile stress, dilatometric meas. 3−53105
- Fe-Cr alloy, hydrogen-induced cold work peak of internal friction 3−14643
- β-NbH_x (x=0.83, 0.91, 0.94), sound attenuation and elastic modulus dispersion 3−33360
- Zn, dislocation behaviour during anelastic strain recovery under basal glide 3−33265

anelasticity
- *see also anelastic relaxation*
- cement-concrete, anelastic props., elastic-plastic constitutive eqns. 3−51710
- FCC metals, moving kink-mobile atoms anelastic interaction 3−42645
- hereditary structure of anelastic continuum, cyclic torsion and second order effect *(French)* 3−7437
- metal test piece, anelastic deform. rel. to H conc. *(German)* 3−58356
- metallic glasses, inelastic deform. and struct., props. 3−24299
- rubberlike mechanical behaviour, interface controlled deformation, nonlinear resonances and automodulations 3−29117
- Cu wire, grain boundary anelasticity, triple contacts and internal friction *(Russian)* 3−51709
- Mg reed, nonlinear anelastic oscillations automodulations 3−8137
- Nb-O(N)(Ti)-H, anelastic thermally activated H behaviour, nonclassical, 1.3 to 40K 3−37995

anemometers
- *see also laser velocimeters*
- aerosol microjets, high speed, optical investig. 3−39414
- bidirectional hot-wire anemometer 3−2157
- binary mist flow, heat transfer expt. study, incidence angle on a plate effect 3−27592
- buoy system for coastal wind and temp. meas., with satellite telemetry 3−48713
- calibration improvement of hot-wire anemometers 3−49310
- drag-force miniature anemometer 3−7671
- electrostatic precipitators, exptl. study of EHD flow 3−51244
- fibre optic Doppler anemometer for sperm motility meas., bovine fertility prediction appls. 3−44350
- helisonde, balloon-borne 3-D sounding instrumentation 3−30082
- high strain rate free surface boundary layer flows, laser Doppler anemometry study 3−51073
- hot-film, used in NaCl solutions, statistics interpretation 3−22553
- hot-film anemometer used for human blood vel. determ., patient safety unit 3−4668
- hot-wire, with conduction end losses, transfer functions 3−2148
- hot-wire anemometer readings, average flow temp. effect 3−35298
- ionic anemometer under stratospheric balloon, appl. and results 3−30081
- ionic high-resolution anemometer for boundary layer meas. 3−30080
- laser, long-range, for atmospheric wind velocity meas., review 3−35293
- laser Doppler anemometer, simultaneous backward-forward scatter meas., in open channel flow 3−51249
- laser Doppler anemometer for particle vel. and size distrib. meas., review 3−12799
- laser Doppler anemometer for surface texture assessment from signal visibility 3−40563
- laser Doppler anemometer with Bragg frequency shift, using polarisation-preserving fibre 3−12790
- laser Doppler anemometry, eventoscope (transient recorder) appl. *(German)* 3−37592
- laser Doppler anemometry apparatus for meas. on individual red blood cells 3−9795
- laser Doppler anemometry appl. to cryogenic fluid heat and mass transfer 3−40617
- laser transit anemometer oscillatory correlograms of turbine blade wakes 3−12797
- lser Doppler anemometer for flows with velocity grad., spectral anal. 3−7677
- open channel flows, turbulent stress and velocity distribution 3−46648
- piezoelectric transducer, distance and wind vel. meas. appls. 3−49352
- Pitot's tube anemometer, wind vel. meas., Mach number *(Japanese)* 3−4997
- pyroelectric anemometer probe with improved sensitivity 3−27615
- re-entry Shuttle vehicle active flight control system with laser anemometry 3−35402
- starting turbulent jet, hot-film anemometer meas. 3−56593
- subsonic rectangular jet development, Mach number effect 3−56588
- swirl growth in curved circular pipes 3−51136
- switched continuous-wave sonic anemometer for surface heat flux meas. 3−15621
- thermal anemometer sensors with sagging wires, deviation from cosine law 3−42337
- thermoanemometric system for air-water stream characts. meas. in vertical tube *(Russian)* 3−42332
- time-of-flight wind-speed laser meas. system, coincidence tracker appl. 3−15632
- transitional boundary layer, at a plate, intermittence and struct., laser anemometer meas. 3−42336

anemometers continued
  turbulent boundary layer separation, effects of periodic free stream unsteadiness 3—51075
  turbulent flow meas., using automatic data acquisition as educational tool 3—25860
  turbulent flow meas. in heated pipe, using laser Doppler and hot-wire anemometers 3—51250
  turbulent hydrodynamic characts., determ. of velocity flow using anemometry with hot films *(French)* 3—51064
  vane+cup anemometer rel. to orthogonally mounted propellor anemometers 3—39912
  wind direction estimation technique for anemometer application 3—59125
  WMG 200 anemometer, using revolving cup and direction indicator *(German)* 3—44562
angiography *see radiography*
angle measurement *see angular measurement*
angular correlation techniques
  cryogenic irradiation facility, positron annihilation, on-line, perturbed angular correlation techniques 3—30867
angular measurement
  see also angular velocity measurement
  accelerometer calibration, testbed operation analysis 3—298
  accelerometers testing, second-class standard rotating platforms improvement 3—49354
  Bragg angle measurement of laser beam diffracted by acousto-optic modulator, crystal props. 3—50683
  contactless contour tracking using sensing of dielec. props. *(German)* 3—30842
  errors determ. in trigonometric angle meas. 3—266
  flat-plate solar collector incident angle modifier meas. and calc. 3—39526
  fringe spacing measurement using moire-pattern technique 3—380
  interferometers classification, design and appl. *(Czech)* 3—25937
  laser beams angular fluctuations, using optoelectronic device 3—16397
  laser metrology system with microprocessor calibration *(French)* 3—30836
  level based on moire deflectometry 3—20830
  optical angle estimator operating through turbulent atm., accuracy 3—27204
  optical scanner angle meas. by interferometry 3—5843
  reflecting prism, simple method for testing 90° angle 3—27196
  sensors for analogue and digital angle and displacement meas. *(German)* 3—40549
  shadow-section method, subjective sighting error reducing 3—49317
  solid angle quantity, props. and status within SI units 3—54716
  transducer calibration using ring laser, systematic errors analysis 3—49318
  transducers for reproducing motion parameters, accuracy improvement, use of ring lasers 3—49349
angular momentum
  astronomical systems, ang., momenta rel. to cosmic turbulence 3—10488
  binary stars, ang. momentum loss rel. to origin and evolution of W Ursae Majoris type contact binaries 3—40199
  black holes accretion tori, viscous redistrib. of ang. momentum rel. to evolution of torus 3—59476
  colliding nuclei, macroscopic clutching model, angular momentum fraction 3—36372
  cosmic background radiation, ang. momentum 3—49059
  cosmic background radiation ang. momentum, reply to comment 3—49060
  electric charge interaction with magnetic dipole, field ang. momentum 3—5540
  Feynman's disk paradox [angular momentum] 3—49105
  fundamental frames of reference of momentum mechanics 3—54657
  general relativity, equations of motion for spinning fluids 3—16197
  gravito-dyon, unified form of angular momentum 3—556
  magnetic flux, angular momentum and statistics, comments 3—20698
  molecular diffusion, ang. momentum and orientational autocorrelation functions, operator theory 3—7890
  nuclear deformation as function of ang. momentum in $U(6)\supset SU(3)$ model 3—6146
  post collision interactions, angular momentum exchange 3—50505
  rotating black holes, vacuum polarisation of massive fields in Kerr space-time 3—59382
  spiral galaxies in Local Supercluster, directions of true ang. momentum vectors 3—44837
  two-dimensional ang. momentum in presence of long-range mag. flux 3—45001
  Er(Kr,X), deep inelastic, nucleon exchange effects on ang. momentum and energy transfer 3—26255
  ^{164}Er rotational bands, neutron rotation alignment from angular momentum projection 3—16689
  H angular momentum coherences, group-theoretical classification using $SU(2)\times SU(2)$ 3—36720
angular momentum theory
  see also quantum theory; Regge poles and trajectories
  atomic structure calcs., using Slater-integrals, computer packages 3—36644
  atoms, many electron, complex electronic configs., quasi-spin method for jj-coupling 3—11640
  coupled product operators, configuration trace calc., FORTRAN program generation 3—20653
  Desarguesian nature and Hilbert's constructions 3—35868
  Racah algebra, for groups with time reversal symm. 3—49190
  $SU(mn)\supset SU(m)\times SU(n)$, coeffs. of fractional parentage, symm. and applications 3—31087
  Trouton-Noble expt. anal. in continuum media and electrodynamics 3—20626
angular velocity measurement
  ring fibre interferometer, parameters optimisation for angular velocity determ. 3—7206
  space vehicles kinematic equations soln., accuracy, use of quasicoordinates 3—48808
anharmonic oscillators *see harmonic oscillators*
animal communication *see biocommunications*
anisotropy, magnetic *see magnetic anisotropy*
anisotropy, magnetocrystalline *see magnetic anisotropy*
annealing
  see also graphitising; laser beam annealing; magnetic annealing; recrystallisation annealing; solution annealing; stress relaxation
  acoustic emission methods development for materials processing 3—39345
  amorphous materials, activation energy spectra and relax. 3—33334
  amorphous ribbon, power loss, annealing conditions effect 3—28649

annealing continued
  austenite, P doped, condensation of vacancies, after low rate cooling *(French)* 3—22886
  α-brass, cold-worked, differential resistivity meas. for monitoring annealing 3—53324
  β-brass, defect study using positron annihilation 3—43859
  diamond:Si, cathodoluminescence, annealing temp. depend. 3—8891
  diamond, electron irradiated, A-2 and A-3 ESR centres form., self di-interstitial complexes 3—43436
  diamond, interstitial host atoms near divacancies, diffusion and annealing 3—37905
  disordered ferromagnet, spontaneous magnetisation study *(Russian)* 3—43400
  ductile fracture, uniaxial tension tests, annealing and prestrain effects *(Japanese)* 3—39229
  embrittled fission reactor vessels, thermal annealing, feasibility and methodology 3—11392
  embrittled reactor vessel, thermal annealing program 3—49950
  ethylene-methacrylic acid copolymer, Ca salt, annealing, ionic struct., DSC, Fourier transform IR spectra 3—51506
  fluorapatite, fission-damage induced colour centres, absorption spectroscopy study 3—56889
  garnet bubble layers, Fe, Ga, As implanted, annealing mechanism, FMR study 3—33982
  glass, quenched and annealed, struct. recovery 3—13107
  glass fibre, germania doped, radiation induced, colour centres photobleaching 3—41936
  graphite, ion implanted lattice damage and annealing, Raman spectra study 3—3746
  graphite, pyrolytic, implanted He retention, re-emission and thermal desorption 3—21509
  graphite, vacancies, positron studies 3—47733
  graphite fibre reinforced Al, room temp. tensile strength, function of annealing temp. and time 3—47960
  graphite fibre reinforced epoxy laminates, with Al embedded particles, moisture detection by X-ray diffr. 3—14806
  Inconel 600, mill-annealed, intergranular corrosion in PWR steam generator tubing 3—6365
  ion beam technology, usable limit of new materials *(Japanese)* 3—39047
  ion implantation damage not removable by annealing, identification method 3—33276
  Josephson junction, annealing and tunnelling current density modification using electron irrad. 3—18827
  laser and electron beam interactions with solids, conf., Boston, MA, USA (Nov. 1981) 3—54582
  D-mannose, storage and annealing effects on lyoluminescence and ESR 3—38916
  metallic glasses, free volume change meas. during annealing, thermal dilatation apparatus 3—1939
  metallic glasses, structural relax kinetics, model 3—51707
  metallic glasses research and new production techniques for application as alternative magnetic material *(Italian)* 3—43785
  metallic thin film, voids and gas bubbles, form. and growth 3—8375
  metals, cavity nucleation during post-irradiation creep, bubble sweeping model, appl. to stainless steel 3—33305
  metals, vacancy form. after irrad. and quenching, positron annihilation study 3—47732
  metastable material form. by ion implantation, conf., Boston, USA (Nov. 1981) 3—31
  modulation doped structs. using multi-step MBE and ion implantation 3—42630
  optical fibre, birefringence enhancement using borosilicate region, drawing with thermal anneal 3—46289
  optical fibre splicing using microflame fusion, optical and mech. characts. 3—42050
  oxide glass: Tl^{+}, stereochemistry and struct. model, ESR study 3—23798
  particulated composite, prep. by powder metallurgy techniques, high temp. creep 3—34264
  poly(propylene oxide), dielectric loss meas. during isothermal annealing, relax. rates determ. 3—14207
  polyalkylmethacrylates, isothermal annealing mol. motion, side chains effects 3—13126
  polyethylene, annealing under high press., recrystallisation *(Russian)* 3—13149
  polymethylene systems, annealing, diffusion, calorimetric and IR study 3—34103
  polypropylene, annealed film tapes, deformation behaviour 3—33346
  polypropylene films, isotactic, monaxially stretched and annealed under tension, deformation *(German)* 3—9133
  polypropylene films, region accessible for low-mol. substances, orientation and annealing influence *(Russian)* 3—7924
  polyvinylidene difluoride films, stretched, piezoelec. props., annealing effects 3—23879
  prism blanks, rectangular, precision annealing 3—14751
  PVC struct., plasticizer conc. and annealing effect 3—2443
  quartz, neutron irrad., lattice const. changes, amorphous and X-ray scatt. studies. 3—33308
  rare earth cpds., RNi_4B (R=Eu, Gd, Tb, Dy, Ho, Er, Tm, Kb, Lu), prep. and X-ray crystallography 3—56854
  semiconductor processing, transient heating with graphite heaters 3—57004
  semiconductors, amorphous, magnetoresist. models, annealing effects, review 3—47369
  semiconductors, nature of pulsed beam annealing, review 3—56937
  semiconductors and metals, ion implantation and laser treatment, conf., Bombay, India (Feb. 1981) 3—25686
  smectic A phase, confocal parabola lattice form. under shear *(French)* 3—27841
  SOS film, annealing using dual electron beam processing system 3—56992
  SOS film, implanted, furnace annealed, defect struct. 3—8376
  spin glass, $\pm J$ Ising model, anal. by real replica method 3—57686
  spin glasses, annealed and quenched states, free energy, variational approach 3—18917
  steel, alloy, welded and low-annealed condition, strength and fracture behaviour, plate thickness effect *(German)* 3—4134
  steel, austenitic stainless, Cr-Ni-TiN neutron irrad., microstruct. 3—28001
  steel, austenitic stainless, grain boundary energy and extrinsic grain boundary dislocations, spreading time and temp. 3—13239
  steel, austenitic stainless, short-range ordering kinetics, elec. resist. changes 3—23073

annealing continued
steel, austenitic stainless AISI 304, annealed and cold worked, notch effect on low-cycle fatigue 3—58246
steel, cold rolled thin strip, continuous NDT *(German)* 3—4252
steel, ion nitrided, struct. characterization 3—4209
steel, low alloy RPV, radiation embrittlement annealing 3—43862
steel, low C, dual phase, initial struct. effect on mech. props. *(Korean)* 3—4086
steel, low-alloy, containing V and B, struct. and failure resist. 3—4128
steel, maraging type N15K15V10, precipitation, composition study 3—9073
steel, nuclear pressure vessel, tensile props. and fracture mode, combined effects of neutron irrad. and H absorpt. 3—18353
steel, oxide inclusions formation during diffusion of O_2 3—38138
steel, stainless, structure and props. 3—34333
steel, stainless, type 304LN, He damaged, D retention and detrapping energy 3—17050
steel, surface deformed, internal stress relax. during annealing *(Russian)* 3—53088
steel, tool, tempered, annealing, Mossbauer effect 3—53246
steel welds, type A533-B, annealing response, analytic predictions for RPV 3—43861
$(TMTSF)_2ClO_4$, solid, supercond. props., cooling rate influence 3—13956
toluene-pyridine glasses, dielectric loss meas. during isothermal annealing, relax. rates determ. 3—14207
vacancies, quenching, isochronal curve anal. under hyperbolic heating rate 3—42600
zircaloy-2, annealed, fast neutron irradiated, growth strain breakaway, temp. depend. 3—34385
Ag, alpha-irrad. radiation damage, oxygen stabilised 3—42681
Ag evaporated films, surface enhanced Raman scatt., adsorbate and annealing effect on excitation spectra 3—14275
Ag, evaporated thin films, recovery and recrystn. 3—3016
Ag film, ageing characts., effect of electrode annealing, elec. resist. meas. 3—18796
Ag:$He^+(H^+)$ ion-implanted films, Frenkel-type radiation defects form. and annealing 3—13249
Ag-Ge amorphous film, struct., elec. and optical props., free electron model 3—37787
$Ag_7I_4AsO_4$ glass, ionic cond., nonArrhenius behaviour and temp. depend. 3—33494
AgIn, alpha-irrad. radiation damage, oxygen stabilised 3—42681
$AgInSe_2$-$AgSbSe_2$ ($AgBiSe_2$) systems, homogeneous quenchable high press. phases *(German)* 3—47087
Al, deformed by cyclic bending to fracture, polygonalisation study *(Russian)* 3—34433
Al, fast neutron irrad., interstitial clustering, diffuse X-ray scatt. study 3—33307
Al film, ageing characts., effect of electrode annealing, elec. resist. meas. 3—18796
Al, recovery-annealed, dislocation density, X-ray diffr. line broadening, Warren-Averbach mean-squared strains anal. 3—56902
Al, thermal oxide layers, chemical comp., photoelectron and secondary ion mass spectroscopy 3—34523
Al/$TiSi_2$/Si contact system, thermal stability and elec. meas. 3—47227
Al-Co-Fe, heat treatment effect on piezomagnetic props. 3—23773
Al-Cu, ion implanted, pulsed electron beam annealing and furnace annealing, RBS and channelling meas. 3—13257
Al-Cu (4.5 wt.%), powder, technique for obs. of rapid solidification and annealing in TEM 3—53042
Al-Fe, dil., solute segregation and boundary struct. changes during grain growth 3—53057
Al-Mg alloy pretreatment for electrodeposition by immersion Zn and electroless Ni 3—19459
Al-Pd_2Si-Si junctions, material reactions, phase stability 3—23104
Al-Rh thin films, vapour deposited, solid soln. decomp., annealing, TEM and electron diffr. studies 3—28244
Al-Si, dil., quenched, positron trapping, temp. depend. 3—24047
Al-Zn-Mg-Zr(-Cu), strength and stress corrosion resist. improvement, role of Zr 3—14622
Al-Zr, ion implanted, struct. and mech. props. 3—4051
Al-Zu, two-phase, strength, preliminary deform. effect 3—9135
AlAs-AlGaAs-GaAs quantum well heterostructures, induced disorder effects on luminescence 3—18519
$Al_{0.3}Ga_{0.7}As$ LPE layer, grown-in deep level defects, thermal annealing effect 3—18799
α-Al_2O_3, liquid phase sintered, grain boundary microstruct., TEM study 3—46966
α-Al_2O_3, traps, thermally stimulated electron emission and annealing curves 3—18649
Al_2O_3:Cr(Zr), ion implanted, surface struct. and props., annealing effects 3—2948
α-Al_2O_3:Cr(Zr)(Ti), ion implantation and thermal annealing, channelling, EPR and microhardness study 3—46972
Al_2O_3-MgO-$MgCr_2O_4$ system, solid soln. formation, Cr transfer kinetics 3—8204
As_2S_3, glassy, optical props. and microhardness, electron stimulated reversible changes 3—18352
Au particles in fused SiO_2 matrix, fault struct. form. during coalescence and growth 3—13234
Au/Ag epitaxial struct., metastable phase form. by pulsed beams and ion beam mixing 3—2627
Au/Si multilayer struct., metastable phase form. by ion mixing 3—2628
Au-Fe, longit. magnetoresist near percolation limit, spin glass and ferromag. props. 3—38372
Au-Ge amorphous film, struct., elec. and optical props., free electron model 3—37787
Au-Si(111) 7×7 interface growth, cryst. and electronic struct. 3—23190
Au-Sn metal film second sound detectors and their appl., exptl. study 3—42870
B fibre reinforced Al, room temp. tensile strength, function of annealing temp. and time 3—47960
B fibre reinforced Al, tensile strength, room-temp., function of annealing temp. and time 3—34484
B fibre reinforced Ti, room temp. tensile strength, function of annealing temp. and time 3—47960
B:C ion implantation form. of B_4C, TEM and electron diffr. study 3—27959
$Bi_{10}Ti_3O_{30}$, solid-phase form. in $Bi_4Ti_3O_{12}$-Bi_2WO_6 system, struct. 3—8205
C:B, ion implantation form. of B_4C, TEM and electron diffr. study 3—27959

annealing continued
CaF_2, radiation damaged, oscillating thermal annealing, neutron diffr. study 3—13266
$Ca(NO_3)_2$, γ-ray irrad., chem. radiation damage, annealing kinetics 3—2606
CaO-B_2O_3-Al_2O_3-Fe_2O_3 glass, IR spectra, annealing effects 3—43529
$Ca_{3-x}R_xSi_xP_{2-x}O_8$, (R=rare earth), sintered, phase composition and props. 3—8210
$CdGa_2S_4$, connection between emission centres and intrinsic defects, annealing effect 3—19194
$Cd_xHg_{1-x}Te$, elec. props., annealing effects 3—38384
$Cd(NO_3)_2$, hydration effect on annealing of chem. radiation damage 3—39368
n-CdS single cryst., high field DC elec. cond. 3—43189
CdS:Cu,Cl, quenched phosphor, isochronal annealing, photochem. meas. 3—52846
CdS:H(Zn)(In)-Cu_2S solar cell, role of impurities 3—44131
CdS(Se), photoluminescence and dielec. losses, vacuum annealing effects 3—52825
CdSe film, polymorphism, production by evaporation 3—28235
CdTe, bare and covered, decomposition during annealing in vacuum 3—51768
Co-Fe-Si-B, amorphous, short-range order, stability, and mag. props. *(Russian)* 3—37792
Co-Ni:N film, high coercivity and microstruct. 3—18947
$Co_{58}Fe_5Ni_{10}Si_{11}B_{16}$, amorphous ribbon, power loss, annealing conditions effect 3—28649
$(Co_{0.94}Fe_{0.06})_{74.5}Si_{13.5}B_{12}$, amorphous, hyperfine field of Fe in precipitated Co 3—57834
CoO:In, grain boundary segregation 3—24235
CoPd alloy films, equiatomic, struct. transitions *(Russian)* 3—33590
$Co_{75}Si_{15}B_{10}$ amorphous alloys, mag. after-effects of H 3—23742
Cr film, resistivity and TCR *(Russian)* 3—3338
Cr-Ni alloys Kh5N20, martensitic transition *(Russian)* 3—34299
Cr-Si resistive films, magnetoron-plasmatron sputtering prep. 3—13675
Cs colloids in additively coloured CsF, annealing, IR spectra, precip. and ripening obs. 3—28881
CsH_2AsO_4, gamma-ray irrad. and annealed, temp. depend. of dielec. props. 3—2607
CsI:He, diffusion during deform. at low temp. 3—28161
Cu, annealed, cyclic deform., dislocation dynamics anal. 3—4079
Cu, cold-worked, differential resistivity meas. for monitoring annealing 3—53324
Cu, fast neutron induced defects, dose depend. 3—42675
Cu film, ageing characts., effect of electrode annealing, elec. resist. meas. 3—18796
Cu, grain growth 3—4046
Cu, heavily deformed, microstruct. and mech. props. 3—47859
Cu, high purity, H uptake during heat treatment effect on yielding behaviour 3—29122
Cu, thermal and fast neutron irrad., isochronal recovery spectra 3—42674
Cu whiskers, stress-strain curve and lattice struct., influence of internal oxidation 3—29144
Cu, wire, second stage drawing texture, mech. props. *(Japanese)* 3—58132
Cu/Al system, B ion implantation, mechanical props. 3—2647
Cu-Al (4.6 at.%), evidence of short-range order state using DTA, elec. resist. and electron microscopy 3—9105
Cu-Al thin film couple, phase form., X-ray anal. 3—18589
Cu-Al-O, ion implanted, mechanical and struct. props. 3—4051
Cu-Au dilute alloy, thermal and fast neutron irrad., isochronal recovery spectra 3—42674
Cu-Au dilute alloys, fast neutron induced defects, dose depend. 3—42675
Cu-Fe, dil., solute segregation and boundary struct. changes during grain growth 3—53057
Cu-Ni system, ultrafine powders, diffusional homogenisation 3—58072
Cu-Si (8.01 at.%), extended dislocation width, Suzuki segregation to stacking fault, electron micrograph study 3—38078
Cu-SiO_2 single crystals, microstruct. study, annealing 3—9087
Cu-Ti, amorphous, elec. resist. and crystn. 3—3147
Cu-Ti(Cr)(Mu)(Fe)(Co)(Ni), grain boundary enrichment, thermoelec. study 3—39185
α-Cu-Zn, short-range ordering kinetics, heterogeneous microstruct., elec. resist. meas. 3—51814
Cu-Zn alloy, residual resist. and thermopower rel. to short range order 3—33707
Cu-Zr (45 at.%), glassy powder, technique for obs. of rapid solidification and annealing in TEM 3—53042
Cu-Zu-(Al), single-phase, annealing kinetics and vacancy conc. 3—4064
Cu_3Au alloy, crit. behaviour and scaling law in ordering process kinetics 3—34297
$CuInS_2$ films, prep. using mol. beam deposition and annealing two-stage process 3—24139
CuO-CaO-P_2O_5 glasses, effect on properties 3—39178
Cu_2O, Schottky solar cell, effects of electric annealing on photovoltaic props. *(Korean)* 3—39478
Cu_xS-CdS heterojunctions, evaporation and sputtering prep., solar cell characts. 3—53551
Fe, cast, ferritic spheroidal graphite, fracture mechanics, heat treatment effects *(French)* 3—43937
Fe, cast, white, mischmetal effect on microstructure and mech. props. 3—24327
Fe, fine electrolytic powders with organic coatings, reduction annealing, micropowder prep. 3—58066
Fe, high-purity, Si pollution during heat treatment in H_2 atm., resistivity obs. *(French)* 3—29116
Fe, liquid, surface bismuth after vibration *(French)* 3—42882
Fe, white cast powders, rapidly solidified, microstruct., annealing effect 3—39062
Fe:^{152}Sm, hyperfine mag. fields 3—3138
Fe:C, ion implanted form. of Fe_3C, TEM and electron diffr. study 3—27959
Fe/W multilayer films, metastable state form. by Xe irrad. 3—2630
Fe-Al, electron and neutron irrad., defect production and recovery 3—42671
Fe-Al, self ion implanted, amorphisation and recrystallisation 3—2420
Fe-Al (6.3-28.3 at.%), recovery of quenched-in vacancies, positron annihilation 3—9094
Fe-C alloys, atomised, decarburisation on annealing, alloying elements effect, thermodynamic anal. 3—39070
Fe-Co base alloys, γ-α transition, texture formation *(Russian)* 3—39167

annealing continued
- Fe-Co-Si ribbon, rapidly quenched, grain struct. and mag. props. 3—29110
- Fe-N-P, amorphous, Ni diffusion, radioisotope absorption-kinetic study *(Russian)* 3—47152
- Fe-Ni, rapidly quenched, mag. props. rel. to at. short-range order 3—52526
- Fe-Ni alloys, long- and short-range atomic order, neutron diffr. study *(Russian)* 3—51538
- Fe-Ni-Mn-Cr, α-γ phase equilib. 3—9033
- Fe-Ni-Mo-B metallic glass, struct. relax., elec. resist. study 3—33101
- Fe-Ni-P-B amorphous ribbons, electron and proton irrad. effects on mag. props. 3—28554
- Fe-Ni-Si (15, 12 wt.%), splat cooling to improve mech. workability and constancy of permeability 3—29111
- Fe-Pt (25.2 and 27.0 at.%), ordering, X-ray determ. *(Serbian)* 3—34294
- Fe-Si, single crysts., deformed and annealed, dislocations 3—22897
- Fe-Si (3 wt.%), high permeability grain oriented, texture changes during secondary recrystn. 3—29099
- Fe-Si (6.5 wt.%) ribbon, rapidly quenched, mag. props., thickness depend. 3—28656
- Fe-Si (<4 wt.%) ribbons, high flux density 3—28612
- Fe-Si cryst. ribbons, rapidly quenched, coercive force and mag. losses 3—52542
- Fe-Si-Al, nonoriented sheet, mag. relax. process in commercially produced alloys 3—47528
- Fe-Si-B, Metglas 2605S2 and S3, magnetomechanical coupling, ΔE and permeability 3—23768
- Fe-Si-B amorphous alloys, Mossbauer spectra, hyperfine fields and mag. props. 3—28740
- Fe_3Al alloy, neutron irradiated, struct. changes during subsequent phase transitions *(Russian)* 3—33304
- Fe_3Al, neutron irrad., order-disorder transitions, X-ray diffr. study 3—2459
- $Fe_{80}B_{20}$, metallic glass, electron irrad., point defects, positron lifetime and mag. aftereffect study 3—3860
- $Fe_{87}B_{11}Au_2$ amorphous ribbons, high mag.moments and magnetisation 3—28522
- $(Fe_yB_{1-y})_{1-2x}R_xLa_x$ alloys, amorphous, low field mag. props. 3—28545
- $Fe_{78}B_{13}Si_9$ amorphous ribbon, mag. props., toroid radius influence 3—28611
- $Fe_{78}B_{13}Si_9$, Metglas 2605 S2, magnetomechanical props. 3—23767
- $Fe_{79}B_{16}Si_5$, Metglas 2605S3, magnetomechanical props. 3—23767
- $Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glass, crystallisation, Mossbauer spectra study 3—56829
- $(Fe_6Co_{88}Ni_3V_3)_{75}Si_{10}B_{15}$, amorphous soft mag. material with extra low core loss at HF, mag. props. 3—28589
- FeCu dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
- FeMn dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
- $Fe_{40}Ni_{38}B_{18}Mo_4$, magnetomechanical coupling, ΔE and permeability 3—23768
- $Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, crystn., effects of pre-annealing, TEM study 3—42529
- $Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloys, stress relax. kinetics, effect of pre-annealing 3—24287
- $Fe_{40}Ni_{40}P_{14}B_6$, domain struct. and behaviour 3—28593
- $Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, electron irrad., point defects, positron lifetime and mag. aftereffect study 3—3860
- $Fe_{40}Ni_{40}P_{16}B_4$, metallic glass, crystn., effects of pre-annealing, TEM study 3—42529
- γ-Fe_2O_3, partial reduction to produce high coercivity particulate mag. media 3—28635
- γ-Fe_2O_3-Fe_3O_4 solid solutions, coercivity, effect of vacancies 3—38646
- Fe_3Pt, near stoichiometric and stoichiometric, martensitic transform. and shape memory effect, calorimetric obs. 3—39141
- $Fe_{78}Si_{10}B_{12}$ amorphous alloy, struct. relax., elec. and mag. study 3—27847
- FeTi dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
- Ga liquid-rare earth metal interface, interdiffusion, diffusion couple technique 3—13560
- GaAs, 0.8 eV luminesc. band, annealing behaviour, As_{Ga} antisite detect. 3—28884
- GaAs, annealed, 1.35 eV photoluminesc. emission centre, diffusion coeff. meas. 3—23997
- GaAs, annealing, material-process interactions, review 3—58146
- GaAs, antisite defect form. during plastic deform., EPR and photoluminescence study 3—2553
- GaAs, deep level point defects, annealing behaviour 3—43085
- GaAs, E3 trap annealing, DDLTS study 3—3117
- GaAs, electron bombarded and plastically deformed, intrinsic emission intensity 3—24102
- GaAs, electron irrad., optical props. thermal stability 3—43577
- GaAs, electron irrad.-induced defects, electron traps 3—42668
- GaAs, ion implantation damage annealing with graphite heaters 3—57004
- GaAs, ion implanted, annealing characts., Rutherford backscattering-channelling study 3—33315
- GaAs, ion implanted, non-planar solid phase epitaxial growth processes 3—3012
- GaAs, ion implanted, point defect segregation, dislocation struct., annealing 3—33317
- GaAs, ion implanted, radiation damage, IR absorption spectra and lattice deformation 3—2619
- GaAs LPE layer, grown-in deep level defects, thermal annealing effect 3—18799
- GaAs, lattice defects in quenched and irradiated single crysts. 3—2613
- GaAs layers irradiated by H^+ ions, elec. props. study 3—23517
- GaAs MBE layer, capless and Si_3N_4 encapsulated annealing, photoluminescence and DLTS study 3—8441
- GaAs, oxyfluoride layer, plasma deposited, props. 3—8604
- GaAs, proton bombard. and annealed, dislocation and void form. 3—47005
- GaAs, proton bombarded, extended cryst. defects, annealing, TEM study 3—57000
- GaAs, reactive ion beam etching damage, annealing behavior 3—2617
- GaAs, Schottky-barrier diodes, γ-ray irrad., thermal annealing of E3 centres, elec. field effects 3—18657
- GaAs, VPE and LPE grown, electron traps, DLTS and C-V meas. 3—43069

annealing continued
- GaAs, VPE grown, deep-level defects vs. growth param., electron traps meas. 3—33670
- GaAs:Al, diffusion through surface layers, X-ray and photoluminescence study 3—8258
- GaAs:Cr, ion implanted, Cr redistribution at surface, elec. fields effects, thermodynamic model 3—46979
- GaAs:Cr, Se, ion implanted, damage annealing, Rutherford backscatt. and TEM studies 3—33311
- GaAs:Mg, carrier profile, correlation with Mg atomic profiles, SIMS and Hall effect study 3—3218
- GaAs:Se, defect struct. after Se implantation through Si_3N_4 encapsulant layer 3—18322
- GaAs:Se, Sn, semi-insulating, AlN capped annealing 3—37940
- GaAs:Si, Cr, multiply scanned electron beam annealing 3—56991
- GaAs:Si, ion implanted, IR rapid thermal annealing, MESFET appl. 3—8071
- GaAs:Si, post-implantation annealing, capless technique, carrier conc. and mobility 3—53096
- GaAsP, electron beam annealing of defects during SEM meas. 3—42669
- GaAs;Si, implanted, high temp. thermal and laser annealing, luminesc. data *(Russian)* 3—38888
- GaInAsP/InP DH laser, current blocking layer made by Be implantation 3—12147
- GaP, ion implanted, diagnosis by Raman scatt. and photoluminescence techniques 3—42628
- GaP, ion implanted, highly disordered layers, dangling bonds, ESR study 3—52624
- GaP, native defect conc., vapour press. dependence meas. 3—37903
- GaP:Fe, electron irrad., radiation defects, ESR study 3—14123
- GaP:H(He), ion implanted, photoelectrochemical meas. 3—42627
- $(GaSb)_{1-x}Ge_x$, metastable, RF sputtering deposition ion-beam mixing effects 3—3955
- Ge, amorphised, epitaxial regrowth rate, effects of electrically active impurities 3—3011
- Ge, carrier recombination heat treatment and dislocation density effects 3—38401
- a-Ge film, transient effects in electron pulse annealing, time-resolved TEM 3—7910
- Ge, ion implanted, annealing behaviour 3—37939
- Ge, neutron transmutation doped, elec. props., annealing effects 3—46971
- Ge, ultra-pure, shallow acceptor levels, nature and interconversion 3—43084
- Ge:O(Sb), annealed, photoluminescence at thermal defects 3—3810
- Ge:Pb(Sn), γ-ray irrad., deep level defects, DLTS study 3—13764
- Ge-Si alloy, electron and X-ray irrad.-induced acceptors, elec. cond. study 3—18653
- Ge-Te amorphous film, transient effects in electron pulse annealing, time-resolved TEM 3—7910
- GeSe amorphous film, local struct., XPS and UPS studies 3—33111
- $GeSe_2$ amorphous film, low temp. AC conductivity 3—47349
- GeTe, amorphous film, local struct., crystn. and thermal annealing effects, UPS and XPS study 3—14438
- GeTe, characteristics of $\alpha \rightarrow \gamma$ phase transform. 3—9056
- Hg-Ar system, metal-nonmetal transition and annealing effects on elec. cond. 3—43240
- n-$Hg_{0.8}Cd_{0.2}Te$:$Al^+(Ga^+)$, ion implanted, IR refl. study 3—18327
- n-$Hg_{0.8}Cd_{0.2}Te$:$Mg^+(Zn^+)(Cd^+)$, ion implantation, effect on elec. props., IR refl. 3—8073
- $Hg_{0.8}Cd_{0.2}Te$:P, P incorporation during Hg vapour anneal, elec. characterisation 3—51636
- p-$Hg_{1-x}Cd_xTe$, electron irrad., effect on carrier props., isochronal annealing study 3—33303
- $Hg_{1-x}Cd_xTe$:B^+, implantation damage, thermal pulse annealing, expt. study 3—8070
- $HgCr_2Se_4$, magnetic semiconductor, magnetocryst. anisotropy 3—18886
- $Hg_{1-x}Zn_xCr_2Se_4$ single cryst., mag. phase transition temp., heat treatment effect 3—57597
- In film, ageing characts., effect of electrode annealing, elec. resist. meas. 3—18796
- $In_{0.53}Ga_{0.47}As$ high-purity LPE layers, postgrowth heat treatment effects on elec. characts. 3—52278
- In_2O_3:Sn film, deposited by RF sputtering, struct. and props. 3—51983
- InP, anodic oxidation and InP/oxide interface elec. props. 3—33798
- n-InP, electron irrad. defects, positron annihilation and Hall effect study 3—24045
- InP ion implanted amorphised layers, epitaxial regrowth, RHEED, TEM, backscatt. and X-ray studies 3—2994
- InP:Fe, defect state induced by ion irrad. or annealing, optical transient current spectroscopy study 3—43090
- InP:Fe(Cr), ion implant depth profile after annealing, SIMS study 3—8083
- InP:Se^+, ion implanted, multiply scanned electron beam annealing, elec. props., RBS study 3—8102
- InP-metal system during annealing, mass spectrometric investigation 3—38238
- InSb, ion implanted, point defect segregation, dislocation struct., annealing 3—33317
- InSb:Ge(Cd)(Zn), H ion irrad., conduction type inversion by isochronous annealing 3—43180
- $In_x(Si_{0.1}Se_{0.9})_{1-x}$-$In_{2-x}Sn_xO_{3-y}$ solar cells, effects of photo-induced microcrystn. 3—53511
- $In_{2-x}Sn_xO_{3-y}$ electrodes, sheet resistance 3—28356
- KBr:Eu^{2+} single cryst., precipitated phases, optical absorpt. and fluoresc. 3—3807
- KBr:Li, X-irradiated, optical absorption and thermolum. studies of F_A-centres 3—34157
- KBr:Li, X-ray irrad., V-bands and thermoluminescence, annealing effects 3—18299
- KCl monocrystals, knife edge/plane contact, high temp. deformation, dislocation mechanism, optical microscopy 3—47034
- KCl surface, disturbed layer depth and optical strength, processing and ageing influence 3—56293
- KCl:Pb^{2+}, pure and doped, positron annihilation at vacancies 3—34162
- KCl_xBr_{1-x}:Ca^{2+}, X-irrad., Z_1- and F-centres, thermoluminesc. and optical absorpt. studies 3—19212
- $La_{70}Cu_{30}$, amorphous, elec. and thermal cond., superconducting T_c 3—18680
- LiF, thermoluminescence sensitisation factors, post-annealing temp. effects 3—19213
- LiF:He, diffusion during deform. at low temp. 3—28161

annealing continued
LiF(Mg, Cu, P); TLD phosphor, annealing and reusability characts. 3—31836
$LiNbO_3$ waveguides, proton-exchanged, independent index and profile control 3—41976
$LiNbO_3$:Fe(Cr)(Ni), mag. susceptibility, 100-400K, effects of annealing *(Korean)* 3—38602
Li_2SO_4, monoclinic, ionic cond., prep. condition effects 3—42836
$Li_{2+2x}Zn_{1-x}GeO_4$, LISICON solid solns., ionic cond., 25 to 300°C 3—18500
$Li_3Zn_{0.5}GeO_4$, LISICON, thin films, RF sputtering prep. and elec. cond. 3—42842
Mg-Fe-Ni olivines, synthetic, cation distrib. study 3—13176
$MgAl_2O_4$-LiF, polycryst. spinel densified with LiF additions, morphological changes in intergranular thin film 3—14613
MgO single cryst., DC elec. cond. and thermal hysteresis effects 3—52142
MgO:$Li^+(Na^+)(K^+)(Rb^+)(Fe^+)(In^+)(Au^+)$, ion implanted, precipitation and defects 3—2827
Mn-Ge(-Fe)(Co)(Ni), Vocoloy, antiferromag., influence of Fe, Co and Ni *(Japanese)* 3—9197
Mn-Zn ferrite, polycryst. high B, hot isostatic press prep., mag. props. 3—14550
MnZn ferrites, high-temp. strain props., heat pretreatment influence *(Russian)* 3—19306
Mo alloys, homologous recrystallisation temp., annealing and fracture 3—34369
Mo single cryst., bending deformation, recrystallisation and annealing *(Russian)* 3—24291
$(Mo_{0.6}Ru_{0.4})_{82}B_{18}$ metallic glass, annealing effect on struct. 3—37790
$MoSi_2$, magnetron cosputtered from elemental targets, props. 3—28243
$MoSi_2$-Si interface, self-aligned silicide formation by ion implanation through metal film technique 3—51864
NaCl, deformed under dynamic recrystn. conditions, struct. and props. 3—2657
NaCl, single cryst., opt. strength improvement using temp. cycling technique 3—8090
NaCl:Ca, Eu, precipitation of Ca, Eu^{2+} fluorescence studies 3—51806
NaCl:He, diffusion during deform. at low temp. 3—28161
NaCl:OH^-, γ-ray and UV light irrad., hydrogen evolution on annealing 3—29324
NaCl:Sr, Eu^{2+}, Sr precipitation, optical absorption and photoluminescence study 3—2814
Na_2O-CaO microslide glass detector, thermal stability of fission tracks 3—6502
Nb and alloys, fabrication, deform. parameters 3—4081
Nb, H Cottrell cloud form. at dislocations 3—51655
Nb-O, quenched, amorphous phase crystallisation and phase transitions 3—7909
Nb_3Al, supercond., sp. ht., effects of self-annealing and neutron irradiation 3—57472
$Nb_3Al_{1-x}B_x$, struct. and supercond. props. 3—2472
NbC powders, plasmachemical formation process *(Russian)* 3—39061
Nb_2O_5 amorphous film, vacuum annealing influence on props. 3—13661
Nb_2O_5-WO_3 microstruct., crystallographic shear phase, on annealing at 1173K 3—8062
Ni (001), O_2 adsorption kinetics, He atom scatt. study 3—18558
Ni (110), ion bombardment induced surface damage, prod. and annealing 3—24078
Ni base superalloy IN-100, powder consolidated, microstruct. changes during superplastic determ. 3—9131
Ni electron beam evaporated coating on Si(111), oriented growth of Ni and Ni_2Sn 3—42973
Ni thin film on Si, laser annealing, electron beam annealing, silicide form. 3—56963
Ni:^{152}Sm, hyperfine mag. fields 3—3138
Ni/Si layers, pulsed ion beam annealing, silicide phase form. 3—2632
Ni/Si struct., metastable phase form. by pulsed beams and ion beam mixing 3—2627
Ni-Cr-Al-Ti superalloy MA 6000E, oxide dispersion satrengthened, γ′ effect on recrystallistion 3—14606
Ni-Ti diffusion welds, pore collapse in monaxially compressed solid 3—51589
NiAl, recrystn. and grain growth 3—4056
$Ni_xCu_{100-x}(Nb_{100-x})(Ti_{100-x})$, laser irrad., positron annihilation *(Russian)* 3—24049
Ni_3Fe, electron irrad. and cold worked, mag. disaccommodation 3—23743
Ni_3Fe, slip-induced mag. anisotropy annealing effects near T_c 3—57586
Ni_4Mo alloy emitters, thermal faceting, FIM study 3—7960
$Ni_{60}Nb_{40}$ metallic glass, crystallisation, DSC, elec. resist., X-ray diffr., TEM 3—53016
NiPt, atomic ordering influence on plasticity, strength and fracture *(Russian)* 3—39204
NiPt, deformed, ordering kinetics and struct. changes during annealing *(Russian)* 3—28091
$NiSi_2$ epitaxial films, electronic and atomic struct., LEED, Auger and photoemission studies 3—33630
NiTi, self ion implanted, amorphisation and recrystallisation 3—2420
Pb, solubility in PbO, isothermal dependences 3—13458
PbTe:Ag_xTe dopant effects on thermoelectric props. 3—14983
PbTe-Bi_2Te_3, kinetic parameter dependence on impurity level, annealing effects 3—8515
$PbTiO_3$ amorphous sputtered thin films, struct. and elec. cond. 3—33811
Pd, H Cottrell cloud form. at dislocations 3—51655
Pd-Mn(Fe), longit. magnetoresist near percolation limit, spin glass and ferromag. props. 3—38372
$Pd_{1-x}B_x$, ion implantation prep., amorphisation, elec. props., and supercond. 3—3154
$Pd_{77.5}Cu_6Si_{16.5}$, amorphous alloys, stress relax. kinetics, effect of preannealing 3—24287
Pd_2Si, epitaxial growth on Si substrate, electron beam annealing 3—56988
Pd_2Si films, epitaxial growth by scanning electron beam annealing 3—8346
Pd_2Si-AlCuSi system, contact resist. behaviour rel. to VLSI technology 3—18784
Pt, neutron irrad. and annealed, recovery spectra, resistivity method 3—42676
Pt, neutron irradiated, activation energy, correlated recovery with three dimens. diffusion 3—42677
Pt-Au dilute alloys, neutron irrad. and annealed, recovery spectra, resistivity method 3—42676

annealing continued
Pt-Cu dilute alloy, neutron irrad. and annealed, recovery spectra, resistivity method 3—42676
Pt_2Si_3 amorphous films, struct., crystallisation and diffusion 3—8352
$RbMgF_3$:Mn^{2+}, electron beam irrad. damage, annealing and luminescence studies 3—56984
Re films, ion-irrad., residual resist., supercond., transition temp. and struct. disorder 3—8610
Sb_2O_3 glass, thermal props. 3—13479
Sc film, resistivity and TCR *(Russian)* 3—3338
Se, highly disordered amorphous, changes in 4p bonding and 4s states on annealing, XPS study 3—33626
Si, amorphised, epitaxial regrowth rate, effects of electrically active impurities 3—3011
Si, amorphous, electronic defects, laser and electron beam crystn. obs. 3—56956
Si, amorphous CVD film, solid phase epitaxy on cryst. Si 3—8972
Si, amorphous CVD films, elec. props. and ESR, plasma hydrogenation effects 3—52154
Si amorphous layers, polycentre crystallisation in pulse annealing 3—18221
Si, amorphous thin film, furnace and laser annealed, different crystallisation states, evidence 3—29075
Si, annealed, bulk material dislocation-free, O and C precipitation study *(Chinese)* 3—33439
Si crystal, Czochralski growth, defect formation, annealing effect 3—43722
Si, Czochralski grain, bulk defects, impact of high temp. processing 3—46925
Si, dislocation effect on radiation defect annealing process 3—27993
Si, electron beam annealed, minority carrier diffusion length, solar cell appls. 3—57365
Si, electron beam annealing by focused beam, temp. profiles calc. 3—51664
Si film, plasma enhanced CVD, deposited from 525 to 725°C, props. 3—8357
Si film, plasma enhanced CVD, doped during deposition, props. 3—8358
Si film, polycryst., amorphisation by Si ion implantation, annealing behaviour 3—51982
Si, interstitial host atoms near divacancies, diffusion and annealing 3—37905
Si, ion implant damage, rapid annealing using thermal radiation 3—2590
Si, ion implantation and pulsed annealing, appl. to solar cell fabrication 3—27960
Si, ion implantation by 11 MeV As ions 3—8076
Si, ion implantation damage annealing with graphite heaters 3—57004
Si, ion implanted, annealing behaviour 3—37939
Si, ion implanted, annealing using incoherent light 3—56928
Si, ion implanted, annealing using dual electron beam processing system 3—56992
Si, ion implanted, discharge annealing, optical reflectivity study 3—56993
Si, ion implanted, halogen lamp annealing *(Japanese)* 3—46986
Si, ion implanted, short time annealing methods, review 3—51638
Si, ion implanted, solid state annealing by incoherent light pulses and multiscan electron beam 3—27997
Si, neutron displacement cascades structure 3—42673
Si, neutron irrad., annealing kinetics of defects, elec. cond. study 3—13290
Si, neutron irrad., minority carrier lifetime study 3—23403
Si, neutron transmission doped, radiation damage, IR absorpt. study 3—46974
Si, neutron transmutation doped, radiation damage, EPR study 3—46973
Si, p^+ implanted, defect annealing, DLTS *(Chinese)* 3—43060
Si p-n shallow junctions, ion implanted, gettering effects on leakage currents, MOS VLSI appl. 3—52230
Si, plastic deformation, positron study 3—57014
Si ribbon, edge-defined film-fed growth, electron irrad. effects 3—42665
Si solar cells, self-annealed ion implanted, fabrication and props. 3—14938
Si solar cells fabricated by ion implantation and short time furnace processing 3—53501
Si, stacking faults, oxidation induced, shrinkage, doping depend. 3—8065
Si, thermal donor electronic struct., Hall effect and IR study *(Chinese)* 3—43059
Si, trap centres in wafers containing A-swirl defects, annealing behaviour, DLTS study 3—13760
Si wafer, Czochralski grown, multistep repeated annealing, O and induced defect behaviour 3—4060
Si wafers, backside laser irrad., microcracks, thermal annealing 3—27984
Si:^{75}As, implanted, isothermal annealing study 3—13253
Si:As, B, ion implanted and incoherent light annealed, characterisation 3—56922
Si:As, electron beam annealing of ion implantation damage 3—42664
Si:As, ion implanted, annealing meas. by optical spectrometry *(Chinese)* 3—13247
Si:As, ion implanted, damage study 3—2616
Si:As, ion implanted, flash-lamp annealing, TEM, elec. resist. and Rutherford backscatt. study 3—27979
Si:As, ion implanted polycryst. low press. CVD film, As lateral diffusivity meas. 3—38125
Si:As, pulsed X-ray annealing 3—56979
Si:As^+ wafers, rapid annealing with scanning Hg arc lamp 3—13264
Si:$As^+(As^+)$, ion implanted, self-interstitial atom interactions 3—2586
Si:As(B), ion implantation damage, flame annealing, TEM and Van der Pauw studies 3—46970
Si:As(Sb), ion implanted, comparison of solubility limits and elec. activities 3—2583
Si:As(Sb)(In)(Pb)(Tl)(Bi), ion implanted, metastable solid soln. form., backscatt. and channelling study 3—2588
Si:B, ion implant damage and annealing, EPR studies 3—14132
Si:B, ion implantation damage annealing, etching and ellipsometry study, I^2L gate appl. 3—22927
Si:B, ion implanted, elec. activation of B ions during solid phase epitaxy 3—2579
Si:B,P, ion implantation, diffusion, annealing 3—27962
Si:B(P)(As), ion implanted, activation and process characts. of IR rapid isothermal and furnace annealing 3—51652
Si:C, O, suppression of O precipitation by C for two-step thermal anneal 3—13454
Si:F amorphous film, annealing behaviour of Si-F bonding struct., optical props. meas. 3—57988

annealing continued
Si:Ga, ion implanted, dopant distrib., elec. activity and damage annealing 3—27970
Si:H, amorphous, annealed, adsorbed O behaviour during H effusion, XPS study 3—51921
Si:H, amorphous film, DC and RF glow discharge decomp. prep., elec. cond. meas. 3—43179
Si:H, amorphous film, optical props. 3—24040
a-Si:H, As(Cl), ion implanted, IR absorpt. spectra 3—47681
Si:H amorphous film, H anal., mass spectrometry *(Japanese)* 3—23205
Si:H amorphous films, activation energy for conduction, annealing and thickness effects *(Chinese)* 3—43166
a-Si:H films, optical props., annealing effect *(French)* 3—52862
Si:$H^+(P^+)(Mn^+)(Ar^+)$ amorphous film, ion implantation doping, ESR and elec. cond. 3—37944
Si:In, ion implant damage recovery, recrystallisation and elec. props. 3—56920
Si:In, ion implanted, thermal annealing, In migration obs. 3—56917
Si:In, recoil implanted, electric quadrupole interaction, ^{111}Cd TDPAC study 3—43473
Si:Ni, point defects, Ni diffusion and annealing studies 3—42602
Si:O, C, Czochralski grown, C and O nucleation during annealing, O-C complexes obs. 3—33287
Si:O, Czochralski grown, as-grown, oxide micro-precipitates study 3—33443
Si:O, ion implanted, buried oxide layer, thermal annealing, ion channeling and Rutherford backscatt. study 3—27955
Si:O, pre-annealed, electron radiation defects accumulation obs. 3—2610
Si:P, ion implanted, enhanced dopant diffusion 3—13548
Si:P, ion implanted, impurity redistrib. by annealing under hydrostatic press. 3—38139
Si:P, ion implanted, light scanning annealing, elec. and defect props. 3—27980
Si:P, ion implanted, pulsed electron beam annealing, SEM and TEM studies and computer simulation 3—51665
Si:P, polycrystalline, in Si:P-$TaSi_2$ double layered struct., P out diffusion, SIMS and resist. study 3—51849
Si:P, pulse electron beam annealing 3—56985
Si:P,O, thermal O donors, elec. cond. study 3—3100
Si:P CVD coatings, incoherent light annealing, elec. cond. study 3—42646
Si:P(As), polycrystalline film, ion implanted, pulsed incoherent light annealing 3—22933
Si:Sb, ion implanted, annealing with incoherent halogen lamp irrad. 3—2601
Si:Sb, ion implanted, rapid annealing using radiant light source 3—56929
Si/Cr struct., silicide form. by ion irrad. backscatt. and X-ray study 3—2629
Si/Ni struct. silicide form. by ion irrad. backscatt. and X-ray study 3—2629
Si/Pd_2Si(NiSi) parallel Schottky contacts, barrier heights, internal photoemission study 3—47421
Si/Pt Schottky contacts, barrier heights, internal photoemission study 3—47421
Si/Pt struct., silicide form. by ion irrad. backscatt. and X-ray study 3—2629
Si-^{57}Co, supersaturated soln., annealing and precipitation, Mossbauer study 3—43474
Si-Fe ribbon, mag. props., toroid radius influence 3—28611
Si-SiO_2, electron irrad., interface defects, XPS study 3—51962
Si-SiO_2, interface states, generation annealing kinetics activated by photohole injection 3—33797
Si-SiO_2 interfaces in MNOS structs., electronic props., effect of Si_3N_4 films 3—33794
Si-SiO_2 MOS structure, B implanted, incoherent light pulse annealing 3—23496
Si-SiO_2 system, $SiCl_4$ annealing, SIMS study 3—47746
Si-SiO_2-Al MOC capacitor, surface space charge layer, electron irrad., compensated donor generation 3—52255
Si-SiO_2-Al MOS capacitor, Na contaminated, scanning internal photoemission study 3—52256
Si-$TiSi_2$ interface, electronic struct., low temp. annealing effects *(Russian)* 3—47425
Si-Wsi_2 bilayers, behaviour of B and As impurities 3—23103
SiC, reactively sintered, processing factor influence on struct. and elec. characts. 3—24196
β-SiC synthesis characts. by C ion implantation into Si 3—3993
Si_xC_{1-x}:H, amorphous film, optical props. 3—24040
Si_3N_4 film patterns, fabricated on Si wafer, defect eliminating method 3—22885
Si_3N_4 films, reactively ion beam sputtered, passivation appl. 3—19268
Si_3N_4, plasma deposited coating, struct. and elec. props. 3—8605
SiO_2, electron traps, annealing in NH_3 effects 3—3221
SiO_2 films on Si, viscoelasticity, X-ray topography study 3—22967
SiO_2, high density thermal, low oxidation temps., viscous flow model 3—24378
SiO_2, vitreous, annealing of small plates 3—39184
$Sm_2(Co,Fe,Cu,Zr,Cr)_{14.8}$ permanent mag., ferromag. coercivity 3—33937
SnO_2 films, elec. resist., high temp. annealing effects, X-ray and electron diffr. studies 3—28459
$SnSe_2$ evaporated thin films, elec. resist. study, heat treatment and doping effects *(French)* 3—29010
Ta, plastically deformed, migration of interstitials to immobile vacancies and dislocations 3—56878
TaC powders, plasmachemical formation process *(Russian)* 3—39061
Ta_2O_5-WO_3 microstruct., crystallographic shear phase, on annealing at 1173K 3—8062
Ti alloy VT6S, hot rolled, texture form. in recrystn. 3—39174
Ti alloys, physicomech. props., influence of high temp. Ar-vacuum annealing 3—29187
Ti alloys, welded structures, nonoxidative zonal induction heat treatment 3—14627
Ti alloys AT-3 and AT-6, corrosion resistance and mech. props., prolonged oxidation effect 3—9256
Ti, corrosion, power plant appls. 3—29224
Ti, dispersion hardening 3—29098
Ti thin film on Si, laser annealing, electron beam annealing, silicide form. 3—56963
Ti ultrathin film on Si, solid state nucl. study 3—33598
Ti-Al, recrystn. texture form. 3—24263
Ti-Al-V (6.4 wt.%), strain and concurrent grain growth effect on superplastic behaviour 3—39197

annealing continued
Ti-Al-V alloy, annealed microstructures, fatigue failure 3—14736
Ti-Al-V alloy, metallurgical structures influence on fatigue props. 3—24362
Ti-Al(Sn), stacking fault energy and texture changes during polygonisation *(Russian)* 3—33273
Ti-Cr(Mo)(Nb) alloys, alloying and annealing temp. effect on struct. state, internal friction obs. 3—14647
β-Ti-Mo-Zr-Su, dispersion hardening 3—29098
Ti-Ni, low-temp. annealing influence on martensitic transition *(Russian)* 3—39118
$Ti_{74.6}Fe_{0.4}Al_{25}$, Mossbauer study *(Russian)* 3—38729
$Ti_{1-x}Nb_xC_{0.5}N_{0.5}$, sintered, grain growth, annealing conditions effect 3—39075
TiNi, ageing, effect on martensitic transform. start temp. 3—53053
$TiSi_2$ films, formation and elec. cond. 3—42979
(U,Pu)C and (U,Pu)(C,O), fuels for fast breeder reactor, fracture surface energy, fracture toughness 3—55140
U, β-quenched, thermal expansion props., plate geometry effect 3—4061
UO_2 crystals, α-irradiated thermal recovery of lattice defects 3—56996
UO_2, surface damage due to mech. polishing and ion bombardment, channelling meas. of thermal recovery 3—34510
V metastable surface alloys by Ga, Se, Bi and In ion implantation 3—42636
V_2O_5-TeO_2 glasses, amorphous semicond., DC cond. under annealing 3—8486
W alloys, homologous recrystallisation temp., annealing and fracture 3—34369
W wires, K-Al-Si doped, plastic instability in torsion 3—9136
WC-Co, microstructure, processing effects 3—29050
WSi_2, magnetron cosputtered from elemental targets, props. 3—28243
YIG crystals, floating zone growth and IR transparency meas., magneto-optical device appl. 3—24120
$(Y_{3-x}La_x)(Fe_{5-y}Ga_y)O_{12}$ irradiated garnet film, annealing, mag. props. 3—33946
$(Y_{1-x}Lu_x)_3Al_5O_{12}$ solid soln., annealing effects on acoustic wave absorption 3—13349
n-$Zn_xCd_{1-x}S$/p-Si heterojunction solar cells, form. and behaviour optimisation under various heat treatments 3—9440
ZnO anodic films on Zn, surface barrier props., annealing behaviour 3—38476
ZnS:In, ion implanted, struct. transitions, luminescence and electroreflection study 3—2780
ZnSe, N^+ implanted, radiation damage wrt dosage and annealing 3—33314
$Zr_{70}Cu_{30}$, amorphous, elec. and thermal cond., superconducting T_c 3—18680
ZrO_2-Si_2O_3 (8 mol.%), annealing, microstruct., β-phase content 3—58138
annealing, magnetic *see magnetic annealing*
anodes
multi-anode microchannel array detector systems for astronomy 3—30208
plasma anode layer near Cs diode electrodes 3—51431
SPS, electrostatic septa, high voltage, spark mechanism 3—17157
vacuum arc, discharge modes at anode 3—27791
vacuum arcs, multi-cathode-spot, anode melting 3—27792
vacuum breakdown, thermal instability of anode in prebreakdown stage 3—18155
vacuum gap breakdown, anode and cathode material combination effect 3—18166
X-ray rotating anodes, 3-D anal. of temp., displacements and stresses 3—490
Cu vacuum arcs, high-current, time resolved charact. of erosion products 3—27793
Mg-Li and Mg-Li-Al alloy, anode constitution and fabrication for use in primary batteries 3—29029
Ru oxide anodes for oxygen evaluation by water decomposition 3—15007
TiO_2 photoanodes for photoelectrochemical cells, prep. and characterisation 3—48072
TiO_2 thick film anodes prep. for photoelectrochemical solar cells 3—29391
anodes, electrochemical *see electrochemical electrodes*
anodisation
plasma/surface reactions, real time study by interferometry and ellipsometry *(French)* 3—29198
steel, Cr, anodic behaviour in organic soln. of H_2SO_4 3—9215
steel, low-alloy, anodic deposits prep. without sampling for X-ray phase analysis 3—58284
steel, mild, anodic dissolution in HCl soln. containing thio-ureas 3—39283
steel, mild, anodic protection in HNO_3 3—53263
Al alloys, oxide film rupture, reanodisation and stress corrosion cracking 3—43985
Al alloys, passivation by electrochemically sealed Al_2O_3 layer 3—9222
Al barrier type oxide films, AC impedance meas. 3—52247
Al, electrochemical behaviour in 1M H_2SO_4/water and 1 M H_2SO_4/dimethylformamide 3—43982
Al wire, anodization for UHV EM coils 3—4191
Al-(Al_2O_3/SiO_2)-Si struct., double dielec. layer form by DC plasma anodization 3—13918
Al-Cu, etched and anodised, surface anal. 3—39302
Al-GaAs structures, anodic oxidation for prep. of dielectric passivation layers *(Slovak)* 3—47226
Al-InP evaporated systems, plasma anodisation, MISFET appl. 3—29200
Cu-Ni, accelerated corrosion in sulphide polluted seawater 3—43980
Fe, anodic oxide film form. in neutral phosphate soln., comp. and struct. 3—34531
Fe, anodic oxide film form. in neutral $Na_2B_4O_7$-H_3BO_3 soln., effect of Cl^- ion 3—34532
Fe, salt film form. during passivation in acid solns. 3—24389
Fe-Mo, anodic behaviour inorganic solvents, water effects 3—9214
GaAs, oxidation, anal. of oxide films of XPS *(Japanese)* 3—3915
GaAs, struct., formation and props. of dielec. films, book 3—49101
GaAs, surface and redox reactions in various electrolytes 3—52245
InP, anodic oxidation and InP/oxide interface elec. props. 3—33798
InSb, AES evaluation of cleaning and etching methods 3—43667
n-InSb anodised layers, MIS struct. formation and characts. 3—34518
Nb/Al-Al_xO_y-Nb(Al/Nb) refractory Josephson tunnel junctions, fabrication 3—47455
Ni-Cr, Alloy 600, anodic behaviour and pitting corrosion, SO_2 and pH effects 3—9232
Pd-Ir-P amorphous alloys, anodic characts. in hot NaCl soln. 3—53277
p-Si, anodic oxidation in methanol compared to glycol 3—43970

anodisation continued
- Si MOS photodiodes, polycryst., for large-area high spatial resolution photosensor arrays 3—49449
- Si MOS solar cells, polycryst. and amorphous, fabrication by anodisation 3—53509
- Si, plasma anodization, low temp., short range O migration and O exchange through thin ZrO_2 films 3—9209
- Si, polycrystalline, Bridgman growth, crystallographic anal., photovoltaic appls. 3—22807
- a-Si:H MOS photodiodes for large-area high spatial resolution photosensor arrays 3—49449
- Ti, Z 3—39287
- Zr, anodically formed ZrO films, dissolution kinetics in HCl soln., revealed by impedance and potential meas. 3—39279

anodised coatings *see anodised layers*

anodised layers
- Al, TEM film thickness meas. 3—38259
- barrier films on Al for RBS studies, prep. 3—14779
- passive films, impedance response, point defect model 3—9224
- steel, stainless, anodic passive films, impedance response, point defect model 3—9224
- Al alloy 2024-T351, torsional fatigue, effect of relative humidity and coatings 3—9148
- Al-Mg-Si-Cu-Cr-Fe-Mn (0.98, 0.68, 0.26, 0.2, 0.09, 0.05 wt.%), barrier anodized coating characts. 3—3018
- Al_2O_3, porous anodic thin film incorporating Ag ions within pores, elec. props. 3—38510
- CuO anodised films, IR spectral absorptance and emittance, solar absorber appl. 3—53581
- Fe, passive film, TEM study 3—9230
- InGaAsP-oxide interface, comp. profiles, AES ESCA and ion sputtering studies *(Chinese)* 3—38237
- InSb-anodic oxide structures, electrophysical props. 3—33801
- Ni, anodic passive films, impedance response, point defect model 3—9224
- SiO_2 films, plasma anodised, interface and neutral traps, ESR study, IC fabrication appl. 3—38337
- Sn, anodic passivation, optical reflectivity study 3—9225
- Ta_2O_5 anodic films, high field ionic cond., open-circuit transient method 3—23076
- Ta_2O_5 anodic films, high field ionic cond., stepped current method 3—23077
- Ta_2O_5 anodic oxide films on Ta, thickness meas., spectrophotometric and ellipsometric methods compared 3—52864
- $Ti/TiO_2/Au$ anodised layers, current-voltage characts., Schottky effect and types of breakdown 3—47408
- Ti/TiO_2/electrolyte anodised layers, current-voltage characts., Schottky effect and types of breakdown 3—47408
- TiO_2 anodic films formed in acid medium, breakdown voltage *(French)* 3—3647
- ZnO anodic films on Zn, surface barrier props., annealing behaviour 3—38476
- Zr, anodic oxide film growth, ^{18}O nucl. microanal. and ionic cond. study 3—9227
- Zr, anodic oxide film growth mechanism, ^{18}O tracer study 3—9228
- ZrO on Zr, dissolution kinetics in HCl soln., revealed by impedance and potential meas. 3—39279
- ZrO_2 film covered Si, plasma anodization, low temp., short range O migration and O exchange 3—9209

anodised thin films *see anodised layers*

anolytes *see electrolytes*

anomalous skin effect
- conductor, surface impedance in mag. field, nonlinear effects *(Russian)* 3—3288
- electromagnetic response of bulk solids, wavevector sum rules 3—57375
- Ag-Ge coated, IR surface plasmon attenuation coeffs. 3—34059
- Al, electronic relax. rates, anomalous surface impedance study 3—23365
- Cu, electronic relax. rates, anomalous surface impedance study 3—23365
- K, electronic relax. rates, anomalous surface impedance study 3—23365

antenna arrays
- *see also antenna phased arrays; directional couplers*
- adaptive space-time processor implementation by unconstrained multichannel lattice 3—7326
- HF skywave channel, time-variant properties design and performance implications 3—48767
- parametric modelling for antenna array processing by multichannel ARMA models 3—7325
- passive linear sensor array, range estimation 3—17725
- phase centres of geodetic satellite radio-Doppler system antennas 3—25236
- wave front separation by rectification of the Choleski factor of their cross spectral matrix *(French)* 3—17709

antenna lobe patterns *see antenna radiation patterns*

antenna patterns *see antenna radiation patterns*

antenna phased arrays
- adaptive array beam-forming algorithm 3—7318
- adaptive array processing, introduction and survey 3—50843
- adaptive array processing using predicted coefficients as constrained conditions 3—17715
- medical linear phased array US imaging system 3—4588
- multiple signal classification methods, array processing technique 3—17716
- narrowband source detect. by passive array 3—50844
- pulsed acoustic phased arrays, matched Gaussian apodisation 3—1920
- real-time constant-depth scanning with phased acoustic arrays 3—4584
- slow-wave heating of plasma in radiofrequency confinement device using array of phased antennae 3—12906
- stochastic gradient descent adaptive beamforming using sonar data 3—50846
- time domain adaptive processor, performance in broadband environment 3—50845
- two-dimensionally periodic waveguide arrays and dielec. rod, diffr. of EM wave at seam 3—12044
- US imaging by carrier-frequency-independent complex envelope processing 3—1866

antenna radiation patterns
- adaptive array beam-forming algorithm 3—7318
- coupled parallel-plate waveguides, radiation pattern from ray-optical anal. and exptl. results 3—6839

antenna radiation patterns continued
- horizontal circular loop antenna near planar interface, anal. for transmitting and receiving antennas 3—10029
- horizontal magnetic dipole antenna on two-layer medium, EM waves asymptotic approximation 3—6841
- human body, effect on antenna radiation patterns 3—58719
- radiation resistance of a loop antenna in two-component warm plasma 3—12891
- US array beam pattern simulator for parasitic lobe suppression 3—4586

antenna theory
- acoustic antennas on cylindrical screen, synthesis, numerical soln. of mixed problem 3—17764
- adaptive array processing, introduction and survey 3—50843
- Beijing-Guangzhou gravitational wave experiment Al alloy antennae, progress report 3—10720
- calculable RF and microwave field standard with broad beamwidth experimental results 3—17406
- circular loop, small, in dissipative medium, EM near field and parameters *(Russian)* 3—6832
- double-turn loop antenna, interturn capacity effect on calculated magnetic field 3—353
- gravitational radiation antennae, background thermal fluctuations, space time curvature meas. 3—10716
- gravitational radiation antennae, excess noise, non-linear excitation explanation, Weber bar results 3—10719
- horizontal circular loop antenna near planar interface, anal. for transmitting and receiving antennas 3—10029
- horizontal magnetic dipole antenna on two-layer medium, EM waves asymptotic approximation 3—6841
- hybrid method analysis which combines moment methods and asymptotic techniques 3—41731
- ion cyclotron reson. heating antenna anal. 3—22645
- linear field problems, variational theory, electrostatic appl. 3—99
- phase centres of geodetic satellite radio-Doppler system antennas 3—25236
- radiation resistance of a loop antenna in two-component warm plasma 3—12891
- thin wire antennas, study of methods for EM field calc. using thin wire integral equations 3—46126
- tubular cylinder, perfectly conducting, of finite length, double series expansion of Green's function 3—46138
- two-dimensionally periodic waveguide arrays and dielec. rod, diffr. of EM wave at seam 3—12044

antennas
- *see also antenna radiation patterns; dipole antennas; microwave antennas; mobile antennas; radar antennas; reflector antennas*
- acoustic slow-waveguide antenna, guided sound propag. 3—56360
- glossary of space terms 3—35785
- horizontal magnetic dipole antenna on two-layer medium, EM waves asymptotic approximation 3—6841
- plasma heating, quadrupole and wraparound antennas comparison 3—18090
- plasma sheath EM wave propagation *(Chinese)* 3—51328
- power line used as VLF antenna, electrical characts. 3—10030
- Tokamak, TCA, Alfven wave excitation study 3—32894

anti-transmit-receive tubes *see gas-discharge tubes; radar equipment*

antibaryons *see baryons*

anticorrosion coatings *see corrosion protective coatings*

anticrossing spectroscopy *see energy level crossing*

antiferrimagnetism
- No entries

antiferroelectric materials
- *see also antiferroelectricity; ferroelectric materials*
- betaine phosphate, single crystal anal., antiferroelectricity 3—34043
- lead phthalocyanine, monoclinic modification, quasi-one-dimensional, metal with charact. order of mol. dipoles 3—8028
- perovskite phases, vibrational spectroscopy, evidence of ferro and antiferroelectric directions *(French)* 3—8776
- squaric acid, layered antiferroelec., proton spin-lattice relax. time near phase transition 3—43453
- squaric acid crystal, statistical theory of phase transition 3—38776
- $Ba(H_2PO_4)_2$, sp. ht. meas., 100 to 373K, antiferroelec. phase transition 3—42806
- $NH_4H_2AsO_4$, local pseudo freeze out of impurity dynamics, EPR study 3—3527
- $NH_4H_2PO_4$, refractive index, temp. depend. meas. 3—14240
- $(NH_4)_3H(SO_4)_2:VO^{2+}$, phase transitions, EPR study 3—52745
- $(NH_4)_2ZnCl_4$, weak ferroelectricity between ferro- and antiferro-elec. phases, dielec. study 3—19074
- $NaNO_2$, incommensurate antiferroelectric, phase transition, Brillouin scatt. study 3—19147
- Na_3NO_3, low-temp. forms, Guinier photographic obs. *(German)* 3—33224
- $NaNbO_3$ antiferroelec. cryst., real domain struct. 3—43500
- $Pb(Fe_{1/2}Nb_{1/2})O_3$-$xPb(Mg_{1/2}W_{1/2})$ O_3 solid soln., diffuse antiferroelec.-paraelec. phase transition 3—23886
- $PbZrO_3$, antiferroelectric, cryst. struct., X-ray and neutron powder diffr. profile anal. 3—18266
- $PbZrO_3$, dipole interactions in antiferroelec. phase 3—52742
- $PbZrO_3$, ferroelectric, space group, electron diffr. study *(Japanese)* 3—46878
- $PbZrO_3$, permittivity and ferroelec. transitions, defect conc. effect 3—38779
- $Pb(Zr_{0.965}Ti_{0.035})O_3$ solid soln., ferroelec. transitions, calorimetric and dilatometric study *(French)* 3—3652
- $Pb(Zr_{1-x}Ti_x)O_3$:Nb, 95/5 PZT ceramics, cryst. and domain struct., TEM study 3—23894

antiferroelectricity
- *see also antiferroelectric materials*
- electric field induced tricritical points in antiferroelec. phase transitions 3—38774
- electrostrictive effect in antiferroelectrics, review *(Japanese)* 3—3649
- ferroelectric-antiferroelec. H-bonded systems, spin glass phase 3—3452
- smectic C liq. cryst., nonchiral, with optically active additives, ferroelectricity 3—14225
- TCNQ salts, complex one-dimens. transport props., domain wall propag. in antiferroelec. donor chains 3—47332

antiferromagnetic Curie temperature *see Curie temperature*

antiferromagnetic-ferromagnetic transitions *see ferromagnetic-antiferromagnetic transitions*

antiferromagnetic-paramagnetic transitions *see paramagnetic-antiferromagnetic transitions*

antiferromagnetic properties of substances
  see also antiferromagnetism; magnetic semiconductors
  bis-ethylammonium copper tetrachloride, antiferromag. transitions, press. effects 3—57613
  bis-ethylammonium copper tetrachloride, parallel pumping of Brillouin zone boundary magnons 3—57570
  bis-ethylammonium iron tetrachloride, mag. and elastic props. 3—57559
  bis-methyl ammonium iron tetrachloride, mag. and elastic props. 3—57559
  butanediammonium tetrabromocuprate, two-halide superexchange, susceptibility meas. 3—14039
  C $CoBr_2.6(0.48D_2O, 0.52H_2O)$, spin flop system with coupled order parameters, intermediate phase, crit. neutron scatt. 3—14050
  catena-hexane-dionebis (thiosemicarbon copper (II)), spin-Peierls transition, magnetisation and susceptibility meas. 3—23630
  4-chloroanilinium manganese chloride, phase transitions, ^{35}Cl NQR and mag. susceptibility study 3—47571
  cobalt formate.$2H_2O$, antiferromag., staggered mode, dynamical critical phenomena 3—57632
  $CoFe_xAl_{2-x}O_4$, solid solution, Mossbauer and high field magnetisation studies 3—34019
  copper formate tetrahydrate, 2-D Heisenberg antiferromag., zeropoint spin reduction 3—57636
  copper formate tetrahydrate, exchange and anisotropy parameters, antiferromag. resonance studies 3—57576
  copper formate-2-urea dihydrate, exchange and anisotropy parameters, antiferromag. resonance studies 3—57576
  dimethylammonium manganese chloride, soliton-phonon scatt., thermal cond. meas. 3—14029
  1,2-ethanediamine copper tetrachloride, layered antiferromag., microwave instability at 1 μW holding power 3—28705
  graphite-$FeCl_3$ low stage intercalation cpd., mag. props., AC susceptibility meas. 3—3426
  Heusler alloys, mag. props., spin-polarised energy band calc. 3—52341
  iron oxalate dihydrate, Mossbauer study below Neel temp. 3—3596
  magnetic struct. and spin waves, neutron diffr. study 3—14002
  manganese formate dihydrate, antiferromag. 2D X-Y behaviour induced by mag. field 3—47503
  manganese formate dihydrate, quasi-two-dimensional isotropic antiferromag., mag. phase boundary 3—47502
  micas, biotite and lepidomelane, paramag. props. and antiferromag. transition 3—47470
  one-dimensional conductor, mag. susceptibility studies, review 3—8659
  phyllosilicates, 2:1 layer minerals mag. props. 3—33860
  poly[bis(2,6-pyridinediylmethylidenenitrilohexamethylenenitrilomethylidene) iron sulphate], metamag. behaviour 3—33896
  propanediammonium tetrabromocuprate, two-halide superexchange, susceptibility meas. 3—14039
  quasi-one-dimensional hexagonal ABX_3 cpds., magnetism and spin frustration, review *(Japanese)* 3—28578
  rare earth alloys, R_5In_3 (R=Gd, Tb, Dy, Ho, Er, Tm, Y), mag. susceptibility, Neel temp. and Curie temp. 3—33865
  rare earth alloys, RCo_2Si_2 (R=Pr, Nd, Tb, Ho, Er), collinear antiferromag. ordering, neutron diffr. study 3—43351
  rare earth alloys, RMn_2Ge_2, single cryst., mag. props., magnetisation, elec. resist. and NMR studies 3—52477
  rare earth compounds, $R_3Ni_7B_2$, mag. and struct. characts., magnetisation and Mossbauer studies 3—33934
  rare earth compounds, $RCoSi_2$, antiferromag. and paramag. props., susceptibility study 3—23604
  rare earth compounds, RFe_2O_4, low temp. mag. transitions 3—57606
  rare earth compounds, valence instabilities and mag. ordering 3—18664
  rare earth ternary compounds, mag. ordered superconds., exptl. studies review 3—57451
  rare earth ternary silicides, RRh_3Si_5, superconductivity, mag. props. and cryst. struct. 3—3350
  rare earth-Pt alloys, R_2Pt, mag. props. 3—57616
  rare earth-transition metal Laves phase alloys, magnetovolume effects 3—57730
  rutile-type cryst., antiferromag. spin struct., statistical theory 3—57538
  silicate minerals, magnetic ordering props. meas. 3—28527
  spin-reorientation, magnon light scatt. study 3—23924
  sulphospinels, magnetic semiconductors, book contrib. 3—57551
  tanol suberate, antiferromag. struct., neutron scatt. study 3—57536
  TCNQ salt, $(NMP)_x(Phen)_{1-x}TCNQ$, solitons, mag., elec., and X-ray scatt. meas. 3—3168
  TMMC, 1-D antiferromagnet, excitation spectrum, multispin wave contribs. 3—38607
  TMMC, EPR spectrum studies 3—52608
  TMMC, linear antiferromag., heat capacity due to solitons 3—14057
  TMMC, proton spin relax. study, magnon scatt. 3—52659
  TMMC, solitons, inelastic neutron scatt. studies 3—57572
  TMMC, sp. ht. anomaly due to mag. solitons 3—57638
  TMMC, sp. ht. contrib. from mag. solitons 3—57640
  TMMS, soliton-phonon scatt., thermal cond. meas. 3—14029
  $(TMTSF)_2X$, dipole-dipole spin anisotropy energy for SDW 3—38611
  $(TMTSF)_2X$, itinerant antiferromag. and supercond., mag. reson. study 3—57790
  $(TMTTF)_2Br$, antiferromag. semicond. ground state, AFMR study 3—23810
  $(TMTTF)_2SCN$, antiferromag. and struct. instabilities 3—23636
  $(TMTTF)_2X$ salts, $X=PF_6$, ClO_4, SCN, Br, mag. susceptibility meas., anisotropy 3—52455
  transition metal halides, Raman scatt. from electronic and mag. excitations, book contrib. 3—3743
  transition metals, 3d, itinerant magnetism, phase transition and paramag. phase props. 3—18847
  transition metals, disordered local moments and thermodynamic props. of Hubbard model 3—33854
  trimethylammonium cobalt manganese chloride, ESR studies 3—52609
  trimethylammonium cobalt trichloride, AC susceptibility as mag. probe 3—23599
  TTF-$AuS_4C_4(CF_3)_4$, spin-Peierls transition, field depend. sp. ht. study 3—23655
  β-AuMn, intermetallic phase, antiferromagnetism 3—3428

antiferromagnetic properties of substances continued
  $BaCaFe_4O_8$, mag. struct., neutron diffr. anal. 3—23588
  $BaFe_{12}O_{19}$, order-order mag. transition, neutron diffr. study 3—47498
  Ba_2LaRuO_6, mag. props. and cryst. struct., neutron diffr. studies 3—46912
  $BaMnF_4$ 2-D antiferromag., interlayer exchange interactions 3—57575
  $BaMnF_4$, 2-D antiferromag. system, EPR and spin dynamics 3—57761
  $BaMnF_4$, low dimensional antiferromags., EPR study *(Russian)* 3—3515
  $BaMnF_4$, pyroelectric antiferromagnet, exciton and magnon-sideband absorption 3—57970
  $BaMnF_4$, two-dimensional antiferromag., absorption and luminesc. spectra 3—57953
  $BaSrFe_4O_8$, antiferromag. struct. and Neel temp., neutron diffr. study 3—38585
  CaF_2, nucl. dipolar antiferromag., field-entropy phase diagram 3—3449
  $CaFeO_3$, Mossbauer spectroscopic studies 3—14186
  $Ca_2Fe_2O_5$, weak ferromagnetism 3—14084
  $Ca_{1-x}La_xFeO_3$, preparation, crystallographic and mag. characterization 3—13775
  Ca_2LaRuO_6, mag. props. and cryst. struct., neutron diffr. studies 3—46912
  $Cd_{14-x}Mn_xTe$, semimagnetic semicond., mag. excitations, Raman scatt. study 3—23936
  $Cd_{1-x}Mn_xTe$, paramagnet-antiferromag. transition, cluster model 3—28564
  $Cd_{1-x}Mn_xTe$, semimag. semicond., two-magnon Raman scatt. 3—28852
  $CeAl_2$, bound state between cryst. field excitation and phonon 3—23338
  $CeAl_2$, mag. ordering, electronic struct., LMTO calcs. 3—57508
  CeAs, mag. props., neutron scatt. studies 3—52379
  CeB_6 and alloys, dense Kondo behaviour 3—52361
  CeB_6, antiferromag. phase, ^{11}B NMR spin echo study 3—52665
  CeB_6, mag. form factor meas., polarised neutron diffr. study 3—57543
  CeBi, crit. neutron scatt. near antiferromag. ordering temp. 3—18909
  $CeIn_3$, mag. form factor, neutron studies 3—52380
  $Ce_{1-x}La_xB_6$, elec. resist. meas., scatt. mechanisms 3—52122
  CeMg(Zn), Neel temp., press. depend. 3—57617
  CeP, mag. props., neutron scatt. studies 3—52379
  CeTe, mag. form factors, polarised neutron diffr. study 3—57542
  $Ce_{1-y}Y_yB_6$, elec. resist. meas., scatt. mechanisms 3—52122
  $CoBr_2$, trigonal layered antiferromag., mag. excitations 3—57565
  $CoCO_3$, antiferromagnet, Mandelstam-Brillouin scatt. from magnons and phonons 3—28870
  $CoCO_3$, thermal cond., phonon-magnon scatt. 3—51877
  $CoCl_2$, trigonal layered antiferromag., mag. excitations 3—57565
  $CoCl_2$:Fe, localised mag. modes, far IR absorpt. spectra 3—3770
  $Co_yFe_{1-y}5$, metastable coexistence of high and low-temp. states, Mossbauer study 3—3611
  $(Co_{1-x}Mn_x)_2P$, Curie temp., press. depend., AC susceptibility meas. 3—43364
  $Co_2Mo_3O_8$, spontaneous magnetisation meas., mag. anisotropy 3—52367
  $(CoO)_x(2B_2O_3.K_2O)_{1-x}$ glasses, mag. props. 3—23577
  $CoTiO_3$, magnetic anisotropy 3—14045
  $Co_{1-x}Zn_xF_2$, antiferromagnet, dilute, mag. susceptibility and transition temp. 3—57557
  Cr amorphous film, elec. cond., struct., mag. transition *(Russian)* 3—13927
  Cr, antiferromag. and paramag. phases, phase transition effects on Fermi surface 3—38615
  Cr, band struct. in paramag. and antiferromag. phases, press. influence 3—3052
  Cr, magnetic anomaly at Neel temp., spin density waves *(Russian)* 3—43374
  Cr, spin density wave excitation, inelastic neutron scatt. study 3—14026
  Cr, spin fluctuations, NMR study 3—57626
  Cr, surface mag. order below bulk Neel temp. 3—57531
  Cr-Al, dil., mag. behaviour, US vel. meas. 3—52590
  Cr-Al(Be), paramag. electronic density of states rel. to antiferromag., sp. ht. meas. 3—57599
  Cr-Al(Si)(Mn)(Fe)(Co), dilute, spin density wave state, press. effects, neutron diffr. study 3—18853
  Cr-Co, dil., magnetoelastic behaviour, thermal expansion and elastic consts. meas. 3—52581
  Cr-Co, dil., magnetoelastic behaviour, thermal expansion and elastic consts. meas. 3—57726
  Cr-Fe, dil., relax. Mossbauer spectra and phase transitions *(Russian)* 3—38728
  Cr-Fe alloys, antiferromag., close to crit. conc. evolution of mag. order 3—38589
  Cr-Fe alloys, high field mag. susceptibility meas. 3—14017
  Cr-Ga(Ge), dil., mag. phase diagram, neutron diffr. study 3—57598
  Cr-Ge (0.5 at.%), spin density wave state, press. effects, neutron diffr. study 3—18854
  Cr-Ge dilute alloys, mag. phase diagram, mag. susceptibility study 3—14020
  Cr-Os, mag. transition, anomalous physical props. near triple point 3—3447
  Cr-Ru, T-P-C state diagram, mag. transitions *(Russian)* 3—52488
  $CrAs_{0.47}Sb_{0.53}$, electronic struct. mag. and structural phase transitions, press. study 3—18896
  $Cr_2(CH_3)_8{}^{4-}$, Cr-Cr multiple bonding, INDO calcs. 3—50313
  $Cr_2Cl_8{}^{4-}$, Cr-Cr multiple bonding, INDO calcs. 3—50313
  $(Cr_{1-x}Pd_x)_2As$, mag. props. study 3—52474
  $Cr_{0.98}V_{0.02}$, spin fluctuations, NMR study 3—57626
  $Cr_{1-x}V_x$, antiferromag., spin fluctuations, NMR study 3—43449
  $CsCOBr_3(Cl_3)$ quasi-1-D Ising antiferromag., spin wave response, neutron scatt. study 3—38606
  $CsCoBr_3$, Raman scatt. from magnons and excitons 3—28853
  $CsCoBr_3(Cl_3)$, solitons, inelastic neutron scatt. studies 3—57572
  $CsCoCl_3$, one-dimensional magnet, mag. excitations, ESR study 3—57752
  Cs_2CoCl_4, one-dimensional XY antiferromag. chains with spin frustration, neutron scatt. study 3—57534
  $CsCo_{1-x}Mg_xCl_3$, quasi-one-dimens. Ising diluted antiferromag., short- and long-range order 3—43383
  $Cs_2CrCl_5.4H_2O$, mag. susceptibility, exchange and cryst. field effects 3—52426
  $CsFeCl_3.2D_2O$, Ising chain systems, mag. struct. and relax. phenomena, neutron diffr. studies 3—57537
  $Cs_2FeF_5.H_2O$, hydrothermal synthesis, cryst. struct., mag. props. 3—33220
  $Cs_3Gd_2Br_9$, mag. behaviour of Gd^{3+}-Gd^{3+} pair *(French)* 3—23703
  $CsMnCl_3$ crystals, antiferromag., exciton migration, luminesc. and excitation spectra *(Russian)* 3—3073

antiferromagnetic properties of substances continued
$CsMnCl_3.2H_2O$, 1-D antiferromag. system, EPR and spin dynamics 3−57761
$CsMnCl_3.2H_2O$, low dimensional antiferromags., EPR study *(Russian)* 3−3515
$CsMnF_3$, octahedral Mn^{2+} complex, d-d transitions absorpt. spectra meas. 3−3766
$CsMnFeF_6$, ^{57}Fe Mossbauer spectra 3−3618
$CsMnFeF_6$, frustration effects, neutron study 3−28518
$Cs_2NaHoCl_6$, enhanced nuclear spin system, antiferromag. state 3−52390
$CsNiCl_3$, low temp. magnetostriction studies 3−47538
$CsNiFeF_6$, ^{57}Fe Mossbauer spectra 3−3618
$CsVCl_3(Br_3)(I_3)$, magnetic ordering, 1D→3D, inelastic neutron scatt. investig. 3−57535
Cu complex, $Cu(2,2'\text{-bipyridene})(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3−8656
Cu complexes, linear Heisenberg chains with alternating exchange, susceptibility and magnetisation study 3−23600
$CuCl_2$, quadratic antiferromag., mag. sp. ht. 3−23660
$CuCl_2.2H_2O(D_2O)$ antiferromag. single cryst., diagram of corresponding states 3−57610
$Cu_{2x}Cr_{2x}Sn_{2-2x}S_4$, spin-glass behaviours, antiferromagnetic frustrated lattice 3−43378
$Cu(NO_3)_2.2.5\ H_2O$, atlernating linear-chain antiferromag., specific heat and mag. props. meas. 3−33917
$CuO\text{-}PbO\text{-}TeO_2$ glasses, mag. props. and EPR spectra 3−23603
$CuSO_4.5H_2O$ and $CuSeO_4.5H_2O$, proton relax. and spin dynamics 3−14069
$Cu_xZn_{1-x}Cr_2Se_4$ $(0 \leq x \leq 0.1)$, mag. props., phase transition, mag. struct., neutron powder diffr. study 3−38596
Dy, magnetic susceptibility, temp. modulation and temp. hysteresis studies 3−52425
Dy, monocrystalline, mag. props. near Neel point 3−28533
Dy, Neel transition, second-order character 3−52464
Dy, thermomagnetic energy conversion 3−34731
$Dy_3Al_5O_{12}$ antiferromagnetic refrigerants, characts. below 20K calc. and comparison with expts. 3−33898
$DyCo_2Si_2$, antiferromag. struct. and Neel temp., neutron diffr. and Mossbauer studies 3−38594
$DyCu_2$, Neel temp., magnetisation and RKKY model 3−52481
$DyCu_2Si_2$, antiferromag. struct. and Neel temp., neutron diffr. and Mossbauer studies 3−38594
$DyFe_{1-x}Mn_xO_3$, x=0.05-0.335, mag. props. and spin reorientation transitions, Mn^{3+} Jahn-Teller ion effect 3−43371
$DyFeO_3$, mag. field induced transitions at low temp. 3−57607
$DyFeO_3$ orthoferrite, spin-reorientation, magnon light scatt. study 3−23924
$Dy_2O_2SO_4$, mag. phase diagram, mag. susceptibility study 3−14051
$Dy_2Ti_2O_7$ antiferromagnetic refrigerants, characts. below 20K calc. and comparison with expts. 3−33898
$DyVO_4$, antiferromagnetic phases, NMR study 3−3442
$DyVO_4$, antiferromagnetic, ^{51}V NMR 3−52664
$Dy_xY_{1-x}Cu_2$, Neel temp., magnetisation and RKKY model 3−52481
Er, mag. excitations in spin struct., inelastic neutron scatt. 3−8660
$ErCo_2Ge_2$, mag. props., magnetisation and neutron diffr. meas. 3−43352
$ErCo_2Si_2$, antiferromag. struct., neutron diffr. study 3−52368
$ErCrO_3$, magnetisation induced by optical pumping, expt. study 3−23727
$ErCu_2$, Neel temp., magnetisation and RKKY model 3−52481
$ErFe_{1-x}Mn_xO_3$, x=0.07-0.33, mag. props. and spin reorientation transitions, Mn^{3+} Jahn-Teller ion effect 3−43371
$ErFeO_3$, orthoferrites, weak antiferromag., neutron diffr. study 3−14008
$ErGa_2$, metamagnetism, magnetisation and neutron diffr. study 3−23631
$Er_6Mn_{23}D_{23}$, antiferromag., powder neutron diffr. study 3−14004
$ErRh_4B_4$, BCT phase, supercond. and mag. order 3−57496
$Er(Rh_{1-x}Co_x)_4B_4$, supercond. and magnetism 3−57495
ErSb, anisotropic exchange and antiferromag. transition, neutron diffr. study 3−38609
$EuAs_3$, mag. ordering, neutron diffr. study 3−18857
EuC_6, intercalation cpd., electronic and mag. props. 3−33690
$Eu(Pd_{1-x}Au_x)_2Si_2$, valence and mag. ordering instabilities, global phase diagram 3−28566
$EuSe_{1-x}S_x$, $x \leq 0.03$, mag. phases, AC susceptibility, ^{153}Eu NMR studies 3−52483
$EuSe_{1-x}S_x(Te_x)$ and $Eu_{1-x}Sr_xSe$, magnetic phases, ^{153}Eu NMR and differential susceptibility study 3−18899
$EuSySe_{1-y}$ and EuSe, mag. phase diagram under hydrostatic press. 3−18890
EuTe, antiferromag., spin assisted Raman scatt. 3−57919
EuTe, antiferromagnetic semicond., electronic excitation spectrum calc. 3−8407
EuTe, antiferromagnetic semiconductor, optical absorpt. edge shift, s-f model 3−8844
EuTe, microscopic mech. of Raman scatt. 3−57910
Fe complex, $Fe(2,2'\text{-bipyridene})(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3−8656
Fe-Cr, ferromagnetism, antiferromagnetism and spin glass states 3−52465
Fe-Cr, Invar anomalies, magnetisation and thermal expansion meas. 3−57727
Fe-Pd Invar alloys, thermal expansion and magnetisation anomalies 3−52587
$\beta\text{-}Fe_{1.67}$ Ge, spin struct., Mossbauer study 3−19018
Fe_3Al order-disorder system, mag. props., magnetisation and susceptibility study 3−28561
$\alpha(Fe_{1-c}Al_c)_2O_3$, Morin transition, Mossbauer study 3−52677
$FeBO_3$, antiferromagnet, Mandelstam-Brillouin scatt. from magnons and phonons 3−28870
$FeBO_3$ film, domain wall motion at high freqs., induced oscill. method 3−43417
$FeBO_3$, high freq. spin wave branch and uniform precession mode, Brillouin scatt. study 3−28536
$FeCl_2$, specific heat and random-field effects 3−28581
$FeCl_2$:Co, localised mag. modes, far IR absorpt. spectra 3−3770
$Fe_{1-x}Co_xCl_2$, random mixture with competing spin anisotropy, phase diagram 3−28567
$Fe_{1-x}Co_xCl_2.2H_2O$, random mixture with orthogonal spin anisotropies, Mossbauer study 3−43468
$Fe_xCo_{1-x}TiO_3$, random mixture, competing spin anisotropies, Mossbauer and neutron scatt. studies 3−14170
FeF_2, antiferromagnet, anisotropic, critical behaviour 3−57671
FeF_2, Raman scatt. from magnon pair excitations 3−57913

antiferromagnetic properties of substances continued
FeF_2, resonant magnon-phonon interaction in strong mag. field, neutron and Raman spectra interpretation 3−52438
FeF_2, spin flop field, temp. depend. 3−57608
FeF_2:Mn, giant Raman scatt. by local magnon modes 3−3715
FeF_2:Mn, local magnon mode dynamics, effect of S_zx-nonconserving interactions 3−52440
$FeF_2:Mn^{2+}$, local magnon modes, Green's function theory 3−52442
$FeF_2:Mn^{2+}$, spin-lattice relax. determ. 3−57809
$FeGe_2$, magnetic transition, magnetisation *(Russian)* 3−38612
$Fe_2Ge_xSi_{1-x}O_4$, mag. props., struct. depend. 3−52414
$Fe_{1-x}Mg_xCl_2$, specific heat and random-field effects 3−28581
$Fe_2Mo_3O_8$, spontaneous magnetisation meas., mag. anisotropy 3−52367
$\alpha\text{-}Fe_2O_3$, antiferromagnetic vector rotation in transition 3−43373
$\alpha\text{-}Fe_2O_3$, haematite, single cryst., magnetoresist. near Morin transition 3−18728
Fe_2O_3, haematite, transverse quadratic galvanomag. effect near Morin temp. *(Russian)* 3−52181
$\alpha\text{-}Fe_2O_3$, hematite, effective third-order elastic moduli 3−28027
$\alpha\text{-}Fe_2O_3$, Morin transition, sensitivity to imperfections 3−18888
$\alpha-Fe_2O_3$ spherical particles, Morin temp. affected by mag. fields and strain 3−43363
$\beta\text{-}FeO(OH)$, thermal decomp. intermediate product, mag. props. 3−14089
FeP, mag. struct., Mossbauer study 3−28517
$FeRh_2Se_4$, cryst. struct., mag. susceptibility and Mossbauer spectra 3−8008
FeS, cryst. struct. and ferrimag.-antiferromag. transition 3−51559
$Fe_{1-x}S_{1-y}Se_y$, real struct. and mag. props. interrelation 3−52487
$\alpha\text{-}Fe_2SiO_4$, mag. props., neutron diffr. study 3−57540
$Fe_7Si_8O_{22}(OH)_2$, grunerite, mag. behaviour from Mossbauer spectroscopy 3−52686
$FeTiO_3$, coexistence of Ising- and XY-like magnons 3−52437
$FeTiO_3$, collinear antiferromag., obliqueness of easy axis, neutron diffr. study 3−47478
Fe_xVS_2, cryst. struct., mag. and elec. props. 3−7997
$Fe_xZn_{1-x}F_2$, randomly diluted, H-T phase diagram 3−57609
Gd-Y, mag. struct. neutron diffr. study 3−52372
Gd-Y, onset of helimagnetism, transport props. 3−18894
$GdAlO_3:Cr^{3+}$, magnetic Franck-Condon effect 3−34142
Gd_3Co, zero gravity solidification expts. and mag. props. 3−38033
$GdCu_{1-x}Ga_x$, cryst. struct. transforms. and mag. ordering phenomena 3−38595
Gd_2CuO_4 semicond., antiferromag. ordering, mag., X-ray and EPR studies 3−38601
$Gd_3Ga_5O_{12}$ antiferromagnetic refrigerants, characts. below 20K calc. and comparison with expts. 3−33898
$GdIn_xAg_{1-x}$, cryst. struct. and mag. props. 3−28530
$GdPd_2Si_2$, magnetic susceptibility meas. 3−8648
$GdVO_4$, antiferromagnetic phases, NMR study 3−3442
$GdVO_4$, antiferromagnetic, ^{51}V NMR 3−52664
^3He, solid, spin wave theory, pseudo-six-dimensional spin method 3−8293
^3He, solid, thermometer using polarised neutrons, nucl. mag. order 3−57173
Ho, commensurate turn angle effects, Neel temp. 3−18911
$HoCo_2Ge_2$, magnetic structure, neutron diffr. study 3−14003
$HoCo_2Si_2$, mag. ordering, neutron diffr. study 3−43353
$HoCrO_3$, field induced spin reorientation, IR absorption study 3−23665
$HoCu_2$, Neel temp., magnetisation and RKKY model 3−52481
$Ho(Ir_{0.7}Rh_{0.3})_4B_4$, occurrence of supercond. below antiferromag. transition 3−57450
HoS, antiferromag., kinetic coeffs. in region of mag. ordering temp. 3−43356
$HoVO_4$, nucl. antiferromag., many-body nucl. Hamiltonian 3−43344
$KCoF_3$ Heisenberg antiferromagnet, 3D, linear birefringence, crit. behaviour 3−8798
$KFeBr_3$, cryst. and mag. struct. 3−22829
K_2FeF_4-type antiferromagnets, spin waves and AFMR freq. 3−23614
K_2FeF_5, soliton broadening in Mossbauer spectra 3−57825
$KFeS_2$, antiferrromag. transition, mag. susceptibility and heat capacity meas. 3−3445
$KMnF_3$:Mg, antiferromag. ordering, ^{19}F NMR study 3−23824
K_2MnF_4, mag. phase diagram 3−28559
K_2MnF_4, nucl. relax. arising from radiative relax. process at low temp. 3−43452
K_2MnF_4:Fe, antiferromag., EPR linewidth and spin-lattice relax. 3−57762
K_2MnF_4:Ni antiferromagnets, impurity spin autocorrelations, NMR study 3−57595
$K_2Mn_{1-x}Fe_xF_4$, random mixture with competing spin anisotropy, phase diagram 3−28567
$KNiF_3$, antiferromagnet, isotropic, induced linear birefringence, critical behaviour 3−57886
$KNiF_3$ Heisenberg antiferromagnet, 3D, linear birefringence, crit. behaviour 3−8798
K_2NiF_4, nucl. relax. arising from radiative relax. process at low temp. 3−43452
K_2NiF_4:Mn antiferromagnets, impurity spin autocorrelations, NMR study 3−57595
K_2NiF_4:Mn antiferromag., local magnetisation on Mn impurities, NMR study 3−57596
K_2NiF_4-type oxides, cryst. and mag. struct., antiferromag. props. 3−7993
$(La_{0.8}Ca_{0.2})MnO_{3+y}$, ferromag.-antiferromag. transition temp., press effects 3−57605
$LaCrO_3$, Neel point, press. effect 3−14054
$La_2Fe_xMn_{2-x}S_5$, mag. props. meas. 3−28543
$LaFeO_3$, mag. hyperfine interactions calc. with model covalency parameter 3−43133
$La_{1-x}Na_xFeO_{3-\delta}$ defect perovskite system, Mossbauer effect and mag. props. 3−14187
Li_2VSe_2, cryst. struct. and mag. props. 3−22862
Mg-Zn-Gd, amorphous, mag. interactions, AC susceptibility meas. 3−23620
γ-Mn, antiferromag., anisotropy energy calc. 3−57579
α,β-Mn, band theory of mag. struct. 3−52339
γ-Mn-Cu, antiferromagnetic, single-domain FCT, magnetic struct. and spin waves, neutron diffr. study 3−14002
γ-Mn-Cu, magnons, 100 to 520K, inelastic neutron scatt. study 3−52431
Mn-Ge(-Fe)(Co)(Ni), Vocoloy, antiferromag., influence of Fe, Co and Ni *(Japanese)* 3−9197
Mn_2 antiferromag. mol., ground-state exchange energy 3−11658
$MnAs_{0.88}P_{0.12}$, struct. and mag. props., neutron diffr. and magnetisation meas. 3−14006

antiferromagnetic properties of substances continued
$Mn(Br_{1-x}Cl_x)_2.4H_2O$, antiferromag., mag. phase diagram 3−18889
$MnCO_3$, absorpt. mechanism at antiferromagnetic resonance 3−28707
$MnCO_3$, thermal cond., phonon-magnon scatt. 3−51877
$MnCl_2.4H_2O$ Ising antiferromag., critical behaviour crossover in transverse field 3−57670
$Mn_{1.88}Cr_{0.12}Sb$, mag. phase transition 3−47497
γ-$Mn_{0.82}Cu_{0.18}$, mag. excitations, inelastic neutron scatt. study 3−52430
MnF_2, antiferromag. spin struct., statistical theory 3−57538
MnF_2, antiferromagnet, anisotropic, critical behaviour 3−57671
MnF_2, dynamic recovery of magnetism in collision cascades after ion implantation, PAD study 3−57667
MnF_2, SAW propagation study 3−23152
MnF_2, spin flopping in tilted mag. field, optical spectroscopy study 3−57900
$MnF_2:Fe^{2+}$, local magnon modes, Green's function theory 3−52442
$Mn_{1-x}Fe_xO$, mag. susceptibility meas., 77-300K 3−14022
Mn_3GaC, metamagnetic phase transition, temp.-induced, mol. field approx. 3−23634
α-$MnGa_2Se_4$, antiferromagnet, mag. props. meas. 3−23602
ζ-$Mn_{2.6}Ge$, mag. transitions, X-ray diffr. study 3−52460
ζ-$Mn_{2.6}Ge$, mag. transitions and magnetisation 3−52467
$Mn_{1-x}Mg_xO$, mag. susceptibility meas., 77-300K 3−14022
γ-MnNi, neutron polarisation anal. of static and dynamic props., crosscorrelation techniques 3−51454
Mn_3NiN, spin wave spectrum, group theoretical anal. *(Russian)* 3−52427
$MnPS_3$ intercalate, weak ferromagnetism 3−23605
γ-MnPd, mag. and nuclear diffuse scatt. 3−52385
α-MnS, mag. struct., Mossbauer study and cryst. field model 3−38588
α-MnS, nature of mag. transitions 3−47496
MnSe, mag. struct., Mossbauer study and cryst. field model 3−38588
$MnTe_2$, mag. props. study by thermal expansion, Mossbauer effect and X-ray diffr. *(Japanese)* 3−33861
$Mn_{1-n}Zn_nF_2$ and $Mn_nCo_nF_2$, mag. susceptibility and sublattice magnetisation 3−18864
$Mn_{1-x}Zn_xF_2$, antiferromagnet, dilute, mag. susceptibility and transition temp. 3−57557
$Mn_xZn_{1-x}F_2$, random field effects, spin waves 3−23609
$Mn_{1-x}Zn_xO$, mag. susceptibility meas., 77-300K 3−14022
$Na_xCr_xTi_{1-x}S_2$, ferro-antiferromagnet transition study 3−43370
β-$NaFeO_2$, Neel temp. determ. 3−33889
Nd, magnetic excitation and acoustic phonon spectra 3−23612
Nd, magnetic excitations, inelastic neutron scatt. study 3−18876
Nd, magnetic struct. near Neel temp., magnetoelastic contribs. 3−28515
Nd metal, mag. sublattice susceptibilities from polarised neutron diffraction 3−33868
NdB_6, low temp. elec. cond. near Neel temp. 3−28351
NdB_6; thermoelec. power, 2 to 20K 3−57337
$NdCo_2Ge_2$, mag. props., magnetisation and neutron diffr. meas. 3−43352
Nd_2CuO_4 semicond., antiferromag. ordering, mag., X-ray and EPR studies 3−38601
$Nd(OH)_3$, mag. ordering study 3−28514
NdS, antiferromagnetic phase transition, specific heat study 3−28568
$NdVO_4$, mag. susceptibility and sp. ht. meas. 3−43355
Ni complex, $Ni(2,2'\text{-bipyridene})(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3−8656
$Ni_3B_7O_{13}I$, dielec., mag., and magnetoelec. props. *(Russian)* 3−38782
$NiBr_{2-x}Cl_x$, incommensurate mag. phase, neutron diffr. and magneto-optical study 3−14010
$Ni(NO_3)_2.2H_2O$, phase diagram press. depend. 3−28556
NiO, antiferromagnetic, defects, domain boundaries obs. 3−22899
NiO, antiferromagnetic, one-magnon formalism for inelastic electron scattering 3−33879
NiO-Al_2O_3 catalysts, magneto-chemistry 3−38598
$Ni(S_{1-x}Se_x)_2$, insulator-metal and mag. transitions under high press. 3−57600
$NiS_{2-x}Se_x$, mag. props., neutron diffr. and magnetisation meas. 3−52378
$Ni_{1-x}Zn_xF_2$, antiferromagnet, dilute, mag. susceptibility and transition temp. 3−57557
NpAs, metamagnetic transitions and magnetisation 3−52478
$NpAs_2$, mag. props., 4.2 to 300K 3−28565
$NpAs_2$, magnetic behaviour, Mossbauer study 3−23843
$NpAs_2$, magnetic ordering, neutron diffr. study 3−23590
Pd_2MnSn Heusler alloy, plastically deformed, mag. moment distrib. 3−33966
$(Pd_xPt_{1-x})_3Fe$, Hall effect, 13 to 400K, effect of mixed exchange interaction *(Russian)* 3−28338
Pr, magnetic susceptibility, 4 to 50K, antiferromag. ordering 3−28529
Pr-Nd alloy, excitations of Nd ions, inelastic neutron scatt. study 3−57526
Pr-Y, mag. ordering, elec. and mag. meas. 3−18866
PrAg, mag. props. and quadrupolar interactions 3−8653
PrB_6, low temp. elec. cond. near Neel temp. 3−28351
PrB_6, thermoelec. power, 2 to 20K 3−57337
$Pr_{1-x}Ca_xMnO_3$, struct. and mag. props. 3−33202
PrCd single crysts., elec. and thermal transport props., phase transitions 3−52112
Pr_2CuO_4 semicond., antiferromag. ordering, mag., X-ray and EPR studies 3−38601
PrF_3, magnetic props. 3−52348
$PrFe_2Ge_2$, mag. props., magnetisation and neutron diffr. meas. 3−43352
$Pr_{1-x}U_xSF$ (x=0, 0.1), magnetic props. 3−52348
PtMn spin glass, low-temp. props. 3−3458
Rb_2CoF_4, uniaxial antiferromag., magnon side band under high mag. field 3−57890
$Rb_2Co_cMg_{1-c}F_4$, mag. susceptibility and random-field effects 3−33864
$RbFeCl_3$, singlet ground state system, mag. props., theoretical study 3−57512
$RbFeCl_3$, triangular antiferromagnet, incommensurate structures and conical-point instabilities due to dipole-dipole interactions 3−18903
$RbFeCl_3$, triangular XY-like antiferromagnet, ^{35}Cl pulsed NMR 3−52669
$RbFeCl_3.2D_2O$, Ising chain systems, mag. struct. and relax. phenomena, neutron diffr. studies 3−57537
$RbMnCl_3$, ^{87}Rb NMR, hyperfine, quadrupole and dipole-dipole interactions 3−28716
$RbMnCl_3$ crystals, antiferromag., exciton migration, luminesc. and excitation spectra *(Russian)* 3−3073
$RbMnF_3$, antiferromagnet, isotropic, induced linear birefringence, critical behaviour 3−57886
$RbMnF_3$ Heisenberg antiferromagnet, 3D, linear birefringence, crit. behaviour 3−8798

antiferromagnetic properties of substances continued
$RbMnF_3$, magnetization process and principal mag. susceptibilities 3−18939
$RbMnF_3(Cl_3)$, octahedral Mn^{2+} complex, d-d transitions absorpt. spectra meas. 3−3766
$RbNiCl_3$, antiferromag., intrinsic magneto-optical effect obs. 3−57893
$RbNiCl_3$, linear antiferromag., sound propag. and elastic moduli 3−57030
$RbNiF_3$, two-magnon Raman spectra, Green's function calc. *(Chinese)* 3−43519
$RbVCl_3(Br_3)$, magnetic ordering, 1D→3D, inelastic neutron scatt. investig. 3−57535
Si (111) unreconstructed surface, disordered mag. moments 3−14110
$SmRh_4B_4$, mag. supercond., NMR study 3−57476
$SrFe_{1-x}Co_xO_3$, ferromagnetism and helical spin configurations, neutron diffr. study 3−57603
$SrFeO_3$, cubic perovskite type, exchange interactions 3−14040
$SrFeO_3$, magnetic polarization of O ions 3−14015
$SrMnO_3$, cubic perovskite type, exchange interactions 3−14040
Tb, critical fields and commensurate turn angle effects 3−52534
Tb, Neel transition, second-order character 3−52464
Tb, paramagnetic susceptibility, anomalous temp. depend. 3−18849
$TbAgCu_4$, mag. susceptibility and magnetisation meas. 3−57552
TbAuCu, mag. susceptibility and magnetisation meas. 3−57552
TbB_4, struct. and mag. props., neutron diffr. study 3−14007
$TbCo_2Ge_2$, magnetic structure, neutron diffr. study 3−14003
$TbCo_2Si_2$, mag. ordering, neutron diffr. study 3−43353
$TbMn_2$, Laves phase, mag. characts. 3−47480
Tb_3Ni, magnetisation and mag. susceptibility meas., metamagnetic transitions, antiferromag. struct. 3−14074
$TbNi_2Si_2$, mag. ordering, neutron diffr. study 3−43353
TbP, first-order phase transition field depend. 3−43366
$TbPd_2Si_2$, magnetic susceptibility meas. 3−8648
$Tb_xY_{1-x}Cu_2$, magnetisation and susceptibility meas. at low temps. 3−3486
Tm_2Fe_{17}, polycryst. magnetostriction and thermal expansion 3−57735
$TmFe_{1-x}Mn_xO_3$, mag. phase transition, magnetisation and neutron diffr. study 3−43368
$TmFe_{1-x}Mn_xO_3$, mag. struct. and spin reorientation transitions 3−18856
$TmFeO_3$ orthoferrite, spin structure, NMR study 3−23594
$TmRh_4B_4$, supercond., mag. ordering, neutron diffr. study 3−52407
TmS, neutron diffr., mag. susceptibility, sp.ht. meas. 3−52381
TmSe, intermediate valence cpd., elastic consts., energy gap 3−52080
TmTe, intermediate valence and mag. ordering, susceptibility and lattice parameter meas. 3−43362
UAs(N)(Sb), magnetic excitations and crit. behaviour, neutron inelastic scatt. study 3−14056
UAs(P), two-ion anisotropic interaction from band of electron hybridisation 3−28497
UAs_xSe_{1-x}, mag. phase diagram 3−18895
UF_x (x=3, 4), magnetic props. 3−52348
UN, neutron fission damage, mag. disorder and mag. transition temp. 3−52480
UN, spin correls. near Neel temp., neutron scatt. study 3−23663
UN(100), photoemission study of electronic states 3−18614
U_xPt_y, magnetisation, mag. susceptibility and sp. ht. studies 3−52424
$U_xY_{1-x}As$, collinear to noncollinear mag. struct. transitions and anisotropic exchange 3−52479
V_2O_3, phonons, neutron scatt. study 3−13370
V_6O_{13}, microscopic mag. props., ^{51}V NMR study 3−52654
V_nO_{2n-1}, Magneli phases, theory of phase transitions 3−38618
$Y_{1-x}Ca_xMnO_3$, struct. and mag. props. 3−33202
$YCrO_3$ orthochromite, spin structure, NMR study 3−23594
$Y_6(Fe_{0.4}Mn_{0.6})_{23}$, magnetic short range order, neutron scatt. study 3−52374
$YFeO_3$ film, domain wall motion at high freqs., induced oscill. method 3−43417
$YFeO_3$ orthoferrite, spin structure, NMR study 3−23594
$YFeO_3$, orthoferrites, weak antiferromag., neutron diffr. study 3−14008
YFe_2O_4, stoichiometric, elec. cond. and sp. ht. anomalies at Verwey transition 3−13868
YMn_2, mag. props. and thermal expansion anomaly 3−52588
$YbFeO_3$, orthoferrites, weak antiferromag., neutron diffr. study 3−14008
Zr-based alloys, mag. ordering, H_2 absorption effects 3−28632

antiferromagnetic resonance
antiferromagnets, magnetic resonance electrical excitation and hypersound scatt. by spin waves 3−57785
copper formate tetrahydrate, exchange and anisotropy parameters, antiferromag. resonance studies 3−57576
copper formate-2-urea dihydrate, exchange and anisotropy parameters, antiferromag. resonance studies 3−57576
ferro- and antiferromagnets, resonant freq. shifts in anisotropic exchange 3−57787
intermediate state, features of antiferromagnetic resonance 3−57781
magnetoelastic gap, isotropic, in spin wave spectrum *(Russian)* 3−47487
magnon scatt. by dislocations, AFMR line broadening *(Russian)* 3−28534
secondary wave resonant excitation in magnon gas 3−18994
TMMC, EPR spectrum studies 3−52608
$(TMTSF)_2X$, itinerant antiferromag. and supercond., mag. reson. study 3−57790
$(TMTTF)_2Br$, antiferromag. semicond. ground state, AFMR study 3−23810
$BaMnF_4$ 2-D antiferromag., interlayer exchange interactions 3−57575
$FeBO_3$, antiferromagnet, Mandelstam-Brillouin scatt. from magnons and phonons 3−28870
FeF_2, AFMR, determ. of mag. polaritons group velocity 3−57788
K_2FeF_4-type antiferromagnets, spin waves and AFMR freq. 3−23614
Mn^{2+} compounds, quasi-one-dimensional 3−57789
$MnCO_3$, absorpt. mechanism at antiferromagnetic resonance 3−28707

antiferromagnetism
see also antiferromagnetic properties of substances; exchange interactions (electron); metamagnetism
amorphous, phase transitions, statistical model 3−57688
anisotropic spin chains, momentum shell recursion relations 3−14031
antiferromagnetic superconductors, upper critical field 3−23532
chain, bound states, pair of complex wave numbers, excitation spectra 3−33877
coupled chains, antiferromag. ordering, Hartree-Fock approx. calc. 3−57503
cubic antiferromagnet, magnetoacoustic resonance of 90° domain walls 3−14104

antiferromagnetism continued
- dilute antiferromagnets, mixed ferro/antiferromag. interactions, thermodynamic props. 3—23632
- domain boundaries, slow-down of mag. solitons *(Russian)* 3—18930
- easy plane type antiferromagnet, paramag. impurities, spin-spin relaxation rate 3—3581
- first-order transition, ground state in inclined field 3—43372
- fluctuation theory with collective-state electrons *(Russian)* 3—33862
- Heisenberg antiferromagnet, one-dimensional, continuum dynamics, identification with O(3) nonlinear sigma model 3—43347
- Heisenberg antiferromagnet, semi-infinite, surface nucl. spin waves 3—3429
- Heisenberg antiferromagnet, theory of electron scatt., surface and bulk effects 3—57571
- Heisenberg antiferromagnet with nearest-neighbour interactions, dynamics 3—28575
- Heisenberg antiferromagnetic alternating chairs in mag. field, mag. susceptibility and sp. ht. 3—23686
- Heisenberg antiferromagnetic chain, $s={}^1/_2$, proton relax. and spin dynamics 3—14069
- Heisenberg spin Peierls system, incommensurate states 3—57690
- Heisenberg-Ising chain, spin-1, ground state props. 3—38575
- high temp. spin wave dynamics of unaxial antiferromagnets 3—28539
- Hubbard model, antiferromagnetic and incommensurable mag. solns., Hartree-Fock approx. 3—23575
- Hubbard model, ground state phase diagram 3—18846
- Hubbard model, ground state solns., two sublattice formalism 3—52342
- Hubbard model, ground-state solns., two-lattice formalism 3—38579
- Hubbard model in Roth scheme, antiferromagnetism 3—13996
- insulators of easy axis type, magnetoacoustic resonance in weak mag. field 3—52580
- insulators of easy axis type, magnetoelastic equations 3—52579
- intermediate state, features of antiferromagnetic resonance 3—57781
- intermediate valence, s-f interaction role 3—8460
- ions in insulators, indirect exchange interaction theory 3—3437
- Ising antiferromagnet, layered, phase transitions *(Russian)* 3—47517
- Ising antiferromagnet, many neighboured, ground state degeneracy in max. critical field 3—8684
- Ising antiferromagnet, phase diagram 3—28582
- Ising chain, one-dimensional, with competing interactions, residual entropy 3—23562
- Ising cubic lattices with four-spin interactions, mag. ground states 3—52333
- Ising dilute model on triangular lattice, spin-glass transition 3—8687
- Ising model, A-B site-bond correlated percolation, Bethe cluster approx. 3—28490
- Ising random spin systems, mag. props., high temp. series expansion 3—38637
- Ising sytems, three-dimens. tricrit. behaviour, Monte Carlo simulation 3—23673
- Ising triangular lattice, mag. phase diagram, cluster variation method 3—28583
- Ising zero temperature triangular antiferromagnet, roughening transitions 3—8682
- Ising-type chains, mag. field effects in spin dynamics 3—8689
- isotropic Heisenberg chain with arbitrary spins, thermodynamics 3—43388
- itinerant antiferromagnet, charge oscills. in SDW model *(Russian)* 3—47486
- itinerant model, dynamic matrix theory 3—52340
- kinetics of interacting quasiparticles in strong external fields, review 3—33752
- lattice gas, site-bond correlated percolation, Bethe cluster approx. 3—30801
- light scattering, two magnon difference contributions 3—23896
- linear spin system, exact ground states 3—3400
- local magnon modes, Green's function theory 3—52442
- magnetic resonance electrical excitation and hypersound scatt. by spin waves 3—57785
- magnetoelastic resonance in domain walls 3—57728
- magnon scatt. by dislocations, AFMR line broadening *(Russian)* 3—28534
- metals and alloys, spin fluctuations, self-consistent renormalisation theory 3—57620
- metamagnets, dil., phase transitions, field induced 3—52485
- monoclinic antiferromagnet, thermal rotation of easy magnetisation axis, theory 3—23639
- monoclinic ferro- and antiferromagnets, mag. props. 3—57593
- multicritical phenomena in case of weak spin anisotropy, renormalised field theory 3—57637
- narrow-band magnetic semiconds., Hubbard and s-f models, effective spin Hamiltonian and phase separation 3—38580
- NMR relaxation 3—52660
- noncollinear antiferromagnet, nonlinear mag. dynamics, soliton solns. *(Russian)* 3—47485
- nonlinear dynamic effects in antiferromagnets 3—18915
- nuclear spin waves, parametric excitation, dipole-dipole interactions effects, theory 3—23617
- one-dimensional magnets, dil., sp. ht. and inelastic neutron scatt., spin wave theory 3—47490
- one-dimensional magnets, solitons, survey of expt. studies 3—23607
- one-dimensional spin-${}^1/_2$ Ising antiferromagnet, spin-wave dispersion 3—47489
- orthorhombic and rhombohedral, form. of long period struct. in applied fields 3—47479
- phase diagram with ferromag. integral of intersublattice exchange 3—3446
- phonon sp. ht., magnetoelastic effects in spin reorientation region 3—8679
- Potts antiferromagnet in mag. field, Ising transition into order with extensive entropy at T=0 3—52505
- Potts model, 3-state antiferromagnetic, phase equilibrium 3—8685
- Potts model, antiferromag., phase transitions study 3—43387
- Potts model, arbitrary q-state, Monte Carlo simulation 3—20777
- Potts model, dil., phase transitions and Potts glasses 3—57676
- Potts model, ferromag. and antiferromag., on Bethe lattices 3—45079
- Potts model, ground-state props. 3—43343
- Potts model, three-state mag. and antiferromag., susceptibility and mag. transition 3—57675
- quasi-1-D Heisenberg-Ising antiferromagnet, excitation spectrum and T=0 dynamics 3—38572
- quasi-one-dimensional antiferromagnet, magnetoelastic soliton excitation 3—38670
- random magnetic systems, frustration and spin-glass freezing 3—3474
- resonant freq. shifts in anisotropic exchange 3—57787

antiferromagnetism continued
- semiconductor, optical absorpt. edge shift, s-f model 3—8844
- semiconductors, magnetic, Hubbard and s-f model, spin Hamiltonian and phase separation instability 3—8643
- sound attenuation at low temps., effect of dislocation interaction *(Russian)* 3—28671
- spin 1/2 chain, singlet bound states, excitation spectra 3—33852
- spin glasses, diffuse mag. scatt. meas. using polarised neutrons 3—52391
- spin glasses, static susceptibility and sp. ht. of Ising FCC antiferromagnet 3—18901
- spin-flip transitions and symmetry in antiferromag. crystals *(Russian)* 3—3441
- spin-Peierls systems, high press. and high mag. field effects 3—23635
- spin-wave theory for Heisenberg magnets, Hubbard operators, single-ion anisotropy 3—14037
- square lattice Ising model with first and second neighbour interactions, phase diagram 3—43382
- student expts. in paramagnetism and antiferromagnetism 3—5569
- superconductor, antiferromag. order, spin struct., and ferromag. transition 3—18811
- superconductor, magnetocaloric effect and spin waves 3—23638
- superconductor, one-dimens., homogeneous mag. field effect 3—33827
- superconductors, mag. susceptibility in one-dimensional model 3—43321
- superconductors, one-dimensional, interplay between homogeneous mag. and antiferromag. fields 3—43314
- superexchange, correlation with superconductivity 3—3365
- surfaces, low energy electron exchange scattering studies *(Japanese)* 3—28946
- susceptibility maximum temp., external field depend., for systems with broad phase transition 3—28077
- three state Potts model, critical fan 3—3459
- three state square lattice Potts antiferromagnet, interface method 3—8681
- transition metals, magnetic elec. struct., real space calcs. 3—52338
- triangular antiferromagnet, incommensurate structures and conical-point instabilities due to dipole-dipole interactions 3—18903
- two magnon Raman spectra of antiferromags., effect of two magnon two phonon interactions 3—57918
- type I, statistical theory on FCC lattice, AB alloy superlattice theory 3—28489
- unmagnetised state, polarisation during neutron scatt. 3—52393
- weak ferromagnetism, polarised neutron diffr. studies 3—52405

antihyperons *see hyperons*

antimony
- *see also nuclei with ......*
- alkali halides, $VO_4{}^{3-}.Sb^{3+}$, $VO_4{}^{3-}.Al^{3+}$ and $SiO_4.Th^{4+}$ mol. impurity complexes, IR absorpt. study 3—23985
- block structure, twinning angles, zone recrystallisation 3—13236
- film, amorphous, on Ag film, crystn. 3—3013
- film, magnetoresist. corrections due to electron localisation *(Russian)* 3—38500
- films, amorphous, deposition in ultrahigh vacuum, crystn., optical microscopy study 3—28236
- magnetostriction detection in static fields by capacitance technique *(Japanese)* 3—28678
- microclusters, fragmentation from electron bombardment 3—3880
- overlayer on GaAs(110), electron states, self consistent pseudopot. calc. 3—43252
- phase transition into BCC struct. at high press., X-ray diffr. study 3—42559
- ruby:Sb glasses, short range order and optical absorption edges 3—33121
- thin film, dislocations with Burgers vector a/2 (110) TEM study *(French)* 3—8052
- thin film nucleation and growth, Auger-electron spectroscopy 3—13670
- Al/Sb layers, ion beam mixing, backscattering spectra study 3—2626
- Cr_2O_3:${}^{119}Sb^{5+}$, adsorbed ions, emission Mossbauer obs. 3—52674
- Fe-Sb interface, magnetism study by Mossbauer spectroscopy 3—57828
- α-Fe_2O_3:${}^{119}Sb^{5+}$, adsorbed ions, emission Mossbauer obs. 3—52674
- GaAs:In, Sb, isovalent impurity interaction with system of point defects 3—37950
- GaAs:Sb, Czochralski grown, doping effect on struct. perfection 3—33281
- GaAs:Sb epitaxial films, elec. props. and acceptor centres 3—57441
- Ge:Au,Sb, impurity photoconductivity spectra oscills. 3—13860
- Ge:Sb, annealed, photoluminescence at thermal defects 3—3810
- Ge:Sb, Czochralski growth, uniform dopant distrib., Faraday effect study 3—2593
- Ge:Sb, electron irrad., hole trapping defects, DLTS study 3—43083
- Ge:Sb, impurity photoexcitation spectra, gamma-bombard. fine struct. 3—38436
- Ge:Sb, impurity state ionisation, connection with L- and X-valleys 3—38344
- Ge:Sb, P, shallow donors, photoexcitation line quenching by γ-irrad. 3—8454
- GeSi:Sb solid solns., γ-irrad., carrier mobility and magnetoresist. 3—38410
- LiH:Sb^{3+}, photoluminescence of S^2 configuration ions 3—47690
- $Pb_{1-x}Ge_xTe$:Sb injection lasers, stimulated emission delays, temp. depend. 3—37040
- PbO_2 reduction to $PbSO_4$ in H_2SO_4 electrolyte, effects of antimony doping, application to secondary cells 3—58422
- $Pb_{1-x}Sn_xTe$:Sb, diffused surface morphology in vapour phase growth *(Chinese)* 3—42940
- $Pb_{1-x}Sn_xTe$:Sb p-n homojunction lasers, stimulated emission time delay 3—1634
- Sb_4, 3d levels, binding energies, XPES 3—17334
- Si: Sb, ion implanted, doping profiles meas. by 200 keV α-particle backscattering 3—24077
- Si:P,Sb, O ion bombardment-induced diffusion, conc. profiles 3—13551
- Si:Sb, deformation pot. of shallow donors, Hall effect meas. 3—8453
- Si:Sb, implanted, solute segregation and solid phase crystallisation dynamics 3—56950
- Si:Sb, impurity activation by laser irrad., Hall effect and Rutherford backscatt. study 3—18339
- Si:Sb, ion implanted, annealing with incoherent halogen lamp irrad. 3—2601
- Si:Sb, ion implanted, defects and solid solubility, solid phase epitaxial growth 3—2826
- Si:Sb, ion implanted, metastable solid soln. form., backscatt. and channelling study 3—2588
- Si:Sb, ion implanted, morphological instability and cell form. during pulsed laser annealing 3—8093

antimony continued
- Si:Sb, ion implanted, rapid annealing using radiant light source 3—56929
- Si:Sb, ion implanted, solubility limits and elec. activities 3—2583
- Si:Sb, oxidation effects on diffusion, dual vacancy-interstitial mechanism 3—8259
- Si:Sb, oxidation-enhanced and oxidation-retarded diffusion obs. 3—47157
- Si:Sb, polycryst., intergranular diffusion *(French)* 3—23093
- Si:Sb, spin-on source diffusion characts. 3—51857
- Si:Sb, substitutional defect pairs, electronic energy levels 3—3115
- Si:Sb (100), ion implanted, metastable Sb doping, channelling study 3—33277
- Si:Sb epitaxial layer, impurity distrib. and diffusion 3—51648
- Si:Sb epitaxial layers, autodoping study 3—42638
- Si:Sb supersaturated laser annealed ion-doped layers, decompostion, elec. cond. study 3—42786
- SnO_2:Sb, conduction band density of states, UPS, XPS and EELS study 3—23237
- SnO_2:Sb, doped and undoped, surface props., XPS, UPS and EELS studies 3—39013
- SnO_2:Sb film, RF magnetron sputtered, struct., elec. and optical props. 3—13934
- YIG:Sb, near IR magnetooptical effects 3—57896

antimony alloys
- *see also antimony compounds*
- graphite fibre reinforced Sn-Sb-Cu alloy, Babbitt pin-steel ring sliding system, spherical wear particle formation 3—29195
- melting mechanisms and surface structures in crystals, impurity depend. 3—33409
- Al-Pb-Sn-Sb-Mg-Cu, antifriction, produced by compensation of gravit. segregation by electromag. forces 3—34261
- Al-Sb ion implanted alloy, nonequilibrium segregation during pulsed laser treatment 3—28110
- $Au_{55}Pb_{22.5}Sb_{22.5}$, surface phase separation, SEM study 3—28197
- $(Bi, Sb)_2(Te, Se)_3$ high-performance thermocouple alloy prep. and props. 3—14528
- Bi-Sb, block structure, twinning angles, zone recrystallisation 3—13236
- Bi-Sb, electron spectrum parameters from high temp. magnetoresist. oscills. *(Russian)* 3—38405
- Bi-Sb, high temp. internal friction and elastic moduli 3—28046
- Bi-Sb, Shubnikov-de Haas oscillation amplitude enhancement obs. in high mag. field 3—13837
- Bi-Sb film thermoelectric figure-of-merit characterisation by Harman method 3—14978
- $Bi_{1-x}Sb$, electron probe microanalysis, extrapolation method 3—9368
- $Bi_{1-x}Sb_x$, lattice parameters, X-ray study 3—13163
- n-$Bi_{1-x}Sb_x$ semicond. alloys, impact ionisation and carrier recombination in mag. field 3—3215
- p-$Bi_{1-x}Sb_x$, thermoelec. and magnetothermoelec. efficiency 3—28373
- $Bi_{1-x}Sb_x$, valence band study 3—28268
- p-$Bi_{1-x}Sb_x$, x=0.12-0.14, thermoelec. power, elec. resist. meas., interband scatt. study 3—43217
- $Bi_{91.5}Sb_{8.5}$ semicond. alloy, carrier statistics and thermoelectric power 3—13845
- CeSb, thermodynamic props., invest. by vapour press meas. 3—19321
- Cs-Sb, liq. alloys, showing metal non-metal transition, NMR studies 3—3583
- Cs-Sb liq. alloys, metal-nonmetal transition and bonding changes, NMR study 3—28723
- Cs-Sb liquid alloy, struct., neutron diffr. expt. 3—56809
- Cu-Sb, dilute, secondary recrystallisation kinetics meas. *(Russian)* 3—34345
- Cu-Sb, limited solubility system, adsorption thermodynamics at grain boundaries *(Russian)* 3—33440
- Cu-Sb (0.5 at.%), bicrystals, segregation, obs. of fracture surface chem. 3—34332
- Cu-Sb solid soln., slip band growth and crack form. *(Russian)* 3—24294
- ErSb, anisotropic exchange and antiferromag. transition, neutron diffr. study 3—38609
- $Fe_{80}B_{20}Sb_x$ amorphous alloy, Sb impurity hyperfine field, Mossbauer study 3—14168
- InSb-NiSb eutectic, direct solidification in space *(German)* 3—4035
- $Mn_{1-x}Cr_xSb$, Curie temp. and compressibility, high press. effects *(Russian)* 3—52462
- $Mn_{1-x}Fe_x(Co_x)Sb$, thin films, mag. props., ferromag. and spin wave resonance studies 3—43440
- MnSb, mag. polarisation of anions 3—52384
- $Mn_{1.09}Sb$, interstitial site occupancy and electronic struct., neutron diffr. study 3—51590
- Mn_xSb_{1-x}, spin polarisation from tunnelling electrons 3—57437
- $MnSb_{1-x}In_x$ films, mag. props., ferromag. resonance study 3—23808
- $Mn_{1+x}Sb_{1+x}Sn_x$ alloys, mag. props., struct. and Mossbauer spectra, temp. effects 3—18938
- Nb_3Sb, E_g optical phonon damping by interband electronic excitations, Raman scatt. study 3—57926
- Nb_3Sb, NQR studies of relax. process 3—23829
- $Nb_3Sn_{1-x}SB_x$, A-15 pseudobinary alloy, tetragonal-tetragonal transition theory 3—18443
- $Nb_3Sn_{1-x}Sb_x$ A15 pseudobinary alloy, tetragonal-to-tetragonal phase transition 3—38055
- Ni-Cr-(Sb, Zr) alloy, creep fracture, Sb and Zr traces effect 3—47964
- NiTe(Sb), resonant valence band satellites and polar fluctuations 3—14437
- $NpSb_2$, mag. and elec. props. 3—18937
- Pb-Bi-Sb, ternary system with binary eutectic, contact melting 3—39096
- Pb-Sb eutectic, twin roll solidification, rolling charact. *(Japanese)* 3—9050
- Pb-Sb eutectic alloy, twin-roll rapid solidification process, cooling characts. *(Japanese)* 3—24218
- Pb-Sb-As, chill cast, plasticity, monotonic and cyclic loading, hysteresis 3—58171
- Pb-Sn-Sb alloys, fatigue, grain boundary reaction *(Japanese)* 3—29165
- PtFeSb, Heusler alloy, struct., mag. and magneto-optical props. and ^{57}Fe Mossbauer spectra 3—57898
- PtMnSb, high magneto-optical Kerr effect obs. 3—38801
- $PtMn_xSb$, exchange striction and press. effect on Curie temp. 3—52470
- Sb-Bi alloy coated Ta substrated for large grain CdTe film growth, solar cell appl. 3—24580
- Sb-Pt/Si p-n junction form. by laser processing 3—57421
- Sb-Sn, dil., Fermi surface characts. rel. to impurity conc. *(Russian)* 3—38286

antimony alloys continued
- Sb-Te, dil., Fermi surface characts. rel. to impurity conc. *(Russian)* 3—38286
- $SbMn_x$ magnetisation, effect of superimposed stress waves 3—23719
- $Sb-^{181}Ta$, quadrupole interaction, temp. depend., TDPAC study 3—3604
- Sn-Sb-Cu, Babbitt pin, sliding with steel ring, spherical wear particle formation 3—29195
- Ti_3SbH_x, supercond. transition temp., effect of interstitially dissolved H 3—43311
- Zn-Sb, liquid, elec. resist. and thermoelec. power 3—33699

antimony compounds
- *see also antimony alloys*
- graphite intercalation cpd., $C_{24}SbCl_5$, magnetostriction detection in static fields by capacitance technique *(Japanese)* 3—28678
- trihalides, cryst. struct. and polymorphic transitions 3—7986
- $(Ag_{x/2}Ge_{1-x}Sb_{x/2})Te$, ferroelec. phase transition, elec. cond. and optical absorption studies 3—43496
- Ag_2S-Sb_2S_3 system, molten thermodynamic quantities, meas. using thermal anal. *(Japanese)* 3—29069
- As-Sb-Se glass system, struct. and elec. props. 3—22788
- $(As_{13}Te_{24}Si_{27}Sb_{18})_{1-x}Fe_x$ RF sputtered films, struct., elec., and optical props. 3—13649
- Bi-Sb:Ge, electrophys. props., n-type thermoelec. alloy 3—3235
- $Bi_{0.88}Sb_{0.12}$:Fe(Co)(Ni), Fe Co or Ni effect 3—38413
- $Bi_xSb_{1-x}SI$, soft mode behaviour, microwave dielec. spectra 3—43497
- $Bi_xSb_{2-x}Sn_2S_5$, cryst. struct. determ. 3—27903
- $Bi_{2-x}Sb_xTe_{3-y}Se_y$, constant energy surface anisotropy 3—3056
- Bi_2Te_3-Sb_2Te_3, doping effects and impurity elec. activity 3—13251
- Bi_2Te_3-Sb_2Te_3-Sb_2Se_3 thermoelectric ingot preparation and characterisation 3—14475
- Bi_2Te_3-Sb_2Te_3-Sb_2Se_3 thin film thermoelectric generator design and fabrication 3—14967
- $C_{7.3}SbF_6$, intercalate, composition, IR spectra 3—23954
- $Cs_3Sb_2I_9$, NQR studies 3—23828
- EuS-Sb_2S_3 system, phase diagrams, and struct. props., X-ray and DTA study 3—8166
- $GaAs_{1-y}Sb_y$, OMVPE grown using trimethylarsenic and trimethylantimony, review 3—24145
- GeO_2-Sb_2O_3 glass optical fibres for 2 to 3 μm fabricaed by vapour phase axial deposition 3—46295
- $Ge_kSb_mS_n$, non-crystalline, optical gaps from 'mean' bond energy 3—3669
- $Ge_{15}Te_{81}S_2Sb_2$ amorphous thick films, switching and memory phenomena, thermophonic investigation 3—38441
- $Ge_{15}Te_{81}S_2Sb_2$ chalcogenide films, switching and memory phenomena, thermophonic investigation 3—12476
- $H_3OSbO_5.0.5H_2O$, cryst. acid, adsorption of water vapour *(Russian)* 3—47224
- $(H_3O)_2Sb_2(SO_4)_4$, cryst. struct. 3—51547
- $H_2Sb_4O_{11}.nH_2O$, proton cond., Grotthus mechanism, NMR study 3—43454
- In_2Te_3-Sb_2Te_3, elec. and photoelectric props. 3—28358
- $(NH_4)_3Sb_2I_9$, NQR studies 3—23828
- $Sb_{1.5}Bi_{0.5}Te_3$-Bi_2Se_3 solid soln. single cryst., elec. and thermal conductivities 3—57345
- $Sb_{2-x}Bi_xTe_3$:Se, elec. cond. and forbidden-band width 3—3186
- $Sb_{2-x}Bi_xTe_{3-y}Se_y$:Pb solid soln., thermoelec. props. 3—57372
- SbBr, $b0^+ \rightarrow X_10^+, X_21$ IR emissions and vibr. freq. 3—26740
- $\alpha,\beta SbBr_3$, polycrystalline samples, volume thermal expansion coeff. derivation from NQR data 3—19010
- $SbBr_3+O_2$, chemiluminesc. reaction, SbBr $b0^+ \rightarrow X_10^+$, X_21 IR emission prod. 3—26740
- SbCl-graphite intercalation cpd., thermal transport props., commensurate-incommensurate transition 3—2904
- $SbCl_3$, polycrystalline samples, volume thermal expansion coeff. derivation from NQR data 3—19010
- $SbCl_3$-$AlCl_3$ molten mixtures, elect. conductivity 3—47133
- $SbCl_3$-$AlCl_3$-NaCl molten mixtures, elect. conductivity 3—47133
- $SbCl_5$ complexes, NQR and Zeeman obs. 3—3586
- $SbCl_5$ intercalated graphite, commensurate-incommensurate transition, TEM and elec. resist. meas. 3—13437
- $SbCl_5$, vapour, mol. struct. and pseudorot., electron diffr. obs. 3—36857
- $SbCl_5$-graphite intercalate, c axis elec. resistivity 3—52156
- $SbCl_6^-$, intra-molecular force fields and ionic constants 3—2697
- SbF_5-graphite intercalate, ^{19}F NMR study 3—23817
- SbF_5-graphite stage one intercalation cpd., order-disorder transform. study 3—8182
- SbF_6^-, intra-molecular force fields and ionic constants 3—2697
- SbF_6^- octahedral anion, charge distrib., ab initio SCF calc. 3—6535
- SbLi, atomisation energies determ. by Knudsen effusion mass spectrometry 3—17379
- Sb_2Li, atomisation energies determ. by Knudsen effusion mass spectrometry 3—17379
- Sb_2Li_2, atomisation energies determ. by Knudsen effusion mass spectrometry 3—17379
- Sb_3Li, atomisation energies determ. by Knudsen effusion mass spectrometry 3—17379
- Sb_2MoO_6, cryst. struct., X-ray powder and neutron diffr. studies 3—37870
- SbO, B-X system rot. anal. 3—21744
- SbO_x, suboxide thin films, refractive index and absorpt. coeff., thermal changes, optical storage appl. 3—38933
- Sb_2O_3 film in MOM struct., current-voltage characts. 3—3332
- Sb_2O_3 films, dielec. props. meas. 3—52705
- Sb_2O_3 glass, thermal props. 3—13479
- Sb_2O_3-V_2O_5, glass formation by splat cooling, ESR and thermal analyses *(French)* 3—13111
- Sb_2S_3 thin films, elec., photoelec., and optical props. 3—52286
- SbSBr, Raman spectra, ferroelectric transitions 3—3716
- SbSI, adsorption of O_2, H_2 and methyl-alcohol, effect on polarisation processes 3—2983
- SbSI, ferroelec. phase transition and permittivity, microwave field effects 3—19085
- SbSI, ferroelec. semicond., Barkhausen effect and switching processes 3—23862
- SbSI ferroelec. semicond., single-domain state stability, Barkhausen and electron microscopy study 3—23893
- SbSI, single crystal, elec. and optical props. *(Korean)* 3—3653
- SbSI, specific heat and ferroelec. transitions 3—57103
- $SbSI_xBr_{1-x}$, pressure-temp.-conc. phase diagram, Landau-Devonshire model 3—8780

- **antimony compounds** continued
  - $Sb_2S_3(SE_3)$, amorphous film, optical absorpt. rel. to condensation conditions 3−8897
  - $SbS_{0.7}Se_{0.3}I$, ferroelec. phase transition, MM reson. dielec. dispersion 3−57864
  - Sb_2Se_3 thin films, chem. deposition 3−19290
  - $SbSe_{0.4}S_{0.6}I$, diffuse ferroelec. transition, pyroelec. and polarisation study 3−19080
  - $SbSe_{0.5}S_{0.5}I$, pyroelec. effect in applied DC elec. field 3−52738
  - $SbSe_xS_{1-x}I$, tricritical point, pyroelec. current and dielec. const. meas. 3−19079
  - $Sb_2Se_3(Te_3)$ films, optical recording material for video discs 3−50722
  - SbSi ferroelec. thin films, laser pulse prep., struct. and composition 3−3968
  - Sb_2Te_3, Ag doped and undoped, elec. props., reflectivity, nature of Ag impurity 3−23381
  - Sb_2Te_3, binding energies, valence bond density of states, photoemission 3−8930
  - Sb_2Te_3, coupled plasmon-LO-phonon modes, anisotropy and dispersion 3−28065
  - Sb_2Te_3-Te eutectic system, hardness and elec. cond. interrelations 3−52138
  - Sb_2Te_2Se, binding energies, valence bond density of states, photoemission 3−8930
  - SiO_2-$Li_2O(Na_2O)$-Al_2O_3-P_2O_5-Sb_2O_3 glass, for ion-exchange strengthening 3−29053
  - Sn-Sb-O system, microstruct., high resolution electron microscopy study 3−18474
  - $SnO_2{:}Sb_2O_3$, elec. cond. and defect struct. 3−23376
  - SnSe-Sb_2Se_3 system, X-ray studies, lattice parameters, space group densities determ. 3−7978
  - Te-Ge-Sb glasses, photocond. decay 3−3250
  - $TlSbF_4$, NQR studies 3−23828
  - $TlSb_2F_5(F_7)$, NQR studies 3−23828
- **antineutrinos** *see neutrinos*
- **antineutrons** *see neutrons*
- **antinucleons** *see nucleons*
- **antiphase boundaries**
  - β-brass, quenched, defect characts., TEM study 3−56901
  - carbides, M_7C_3, microstructure and planar defects, electron diffr. and microscopy study *(French)* 3−38093
  - FCC alloys, dislocation interactions with ordered cylindrical precipitates 3−22932
  - olivine to spinel phase transform. mechanism, structs. rel. to spinel and β-phase 3−7954
  - steel, stainless, stacking faults, twin boundaries, electron microdiffraction study 3−56915
  - Au_4Zn, one- and two-dimensional long-period antiphase boundaries, high-resolution electron microscopy studies 3−56912
  - Cu_2NiZn, $L1_2$ ordered struct., superlattice dislocations and stacking faults 3−46944
  - Fe-Al system, antiphase boundary wetted by second phase, migration kinetics 3−47815
  - Fe-Ni-Cr base superalloy, precip. strengthening mechanism 3−14601
  - Fe_3O_4, electronic superstruct. and cryst. struct. 3−13734
  - Fe_3O_4, low-temp. phase, anti-phase struct. 3−56911
  - $GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundary geometry 3−8784
  - $GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundaries, translation vector 3−8785
  - $K_{1-x}Li_xTaO_3$, elastic const. discontinuity, Brillouin spectra 3−3752
  - Ni_3Al, antiphase domain boundary tubes, TEM obs. 3−27952
  - Ni_3Fe, slip-induced mag. anisotropy annealing effects near T_c 3−57586
  - Ni_4Mo, antiphase boundary struct., asymm. contrast characts. *(Russian)* 3−27951
  - NiPt, deformed, ordering kinetics and struct. changes during annealing *(Russian)* 3−28091
  - $Ti_{50}Ni_{47}F_3$, martensitic transform., electron microscopy study 3−39125
  - $Ti_{50}Ni_{47}Fe_3$, martensitic transformation, electron microscopy study 3−47834
- **antiphase domains**
  - *see also antiphase boundaries*
  - surface structural defects, LEED anal. 3−8311
  - $Au_{2+x}Cd_{1-x}$, two-dimensional antiphase-domain struct., modulated struct. anal. 3−38092
  - CeD_{2+x}, FCC solid soln., hydrogen ordering and superlattice struct., neutron diffr. study 3−33217
  - α-Cu-Ni-Zn, ternary phase diagram, invest. with elec. resist. meas. 3−14562
  - Fe-Al system, antiphase boundary wetted by second phase, migration kinetics 3−47815
  - LaD_{2+x}, FCC solid soln., hydrogen ordering and superlattice struct., neutron diffr. study 3−33217
  - $LiAlSi_4O_{10}$, petalite, cryst. struct. and antiphase domains, neutron diffr. and SEM studies *(German)* 3−51574
  - PrD_{2+x}, FCC solid soln., hydrogen ordering and superlattice struct., neutron diffr. study 3−33217
  - Rh (111), adsorbed CO, surface struct. at different surface sites, LEED anal. 3−57212
  - $Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, elec. resist. meas., TEM and electron diffr. studies 3−38053
  - $Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, microstructural changes, CDW, electron diffr. study 3−38054
- **antiprotons** *see protons*
- **antireflection coatings**
  - achromatic antireflection coatings, universal constructions 3−27202
  - automatic design of thin-film systems, merit function and numerical optimisation 3−12279
  - dielectric-metal-dielectric coatings optical props. for application as antireflection coatings on solar cells 3−4391
  - diode laser amplifier, performance of antireflection coating 3−17498
  - graded-index antireflective films on phase separated substrate borosilicate glass, microstruct. 3−42949
  - gradient index, damage threshold increase by pulsed laser irrad. 3−7045
  - interference coating synthesis 3−32443
  - interference layers calc. using TI-59 calculator *(Czech)* 3−1753
  - metal oxide high quality optical coating prep. by activated reactive evaporation 3−12369
  - multilayer dielectric antireflection coatings for veiling glare reduction 3−27176
- **antireflection coatings** continued
  - oxide antireflective coatings for solar cells, low cost and high performance 3−17587
  - simulated solar absorptance measurements of flat/curved solar selective surfaces 3−29449
  - solar materials, durable innovative, optical coating types 3−19599
  - C, amorphous diamond-like film, glow discharge bias sputtering, props. and appls. 3−47769
  - C thin films, diamondlike, deposited by ion activated techniques 3−14506
  - GaAs solar cells, antireflection coatings, design optimisation technique 3−34696
  - InGaAsP 10 kHz linewidth 1.5 μm external cavity laser with 55 nm tuning range 3−37030
  - $In_{2-x}Sn_xO_{3-y}$ transparent antireflection and conduction coating for IR photodetection 3−38946
  - $LiNbO_3$ antireflection-coated surface selective and uniform laser-induced failure 3−56930
  - MgF_2-coated $In_{2-x}Sn_xO_{3-y}$ transparent heat-reflecting films, colour props. 3−49425
  - Sc_2O_3 laser coating damage threshold at 248 nm KrF laser wavelength 3−7043
  - Si solar cells, cast, low cost process sequence using thick film technology 3−53557
  - Si solar cells, polycryst., integral screen printing technique 3−53558
  - a-Si:H solar cells, optical behaviour computer simulation 3−58506
  - Si_3N_4 film, antireflection coating for solar cell efficiency improvement 3−53508
  - SiO_2-Ta_2O_5 AR coatings, laser-damage threshold at 1064 nm, deposition parameter influence 3−8089
  - SnO_2 amorphous films, conductive and transparent, antireflection coatings appl. 3−47722
  - TiO_2 antireflective coatings for Si solar cells 3−53524
- **APD** *see avalanche photodiodes*
- **aperture cards** *see microforms*
- **API gravity** *see density*
- **apodisation** *see acoustic imaging; optical images*
- **apparatus** *see instrumentation; instruments*
- **apparent porosity** *see porosity*
- **appearance potential** *see ionisation potential*
- **appearance potential spectra**
  - Kovar alloy, Fe-Ni-Co, SXAPS materials testing *(Chinese)* 3−20960
  - SXAPS spectrometer, electro-vacuum technology appl. *(Chinese)* 3−20960
  - Al, plasma etching mechanism; plasma beam studies 3−4164
  - Ce, $N_{4,5}$ appearance potential spectra interpretation *(Russian)* 3−34171
  - Er, $N_{4,5}$ appearance potential spectra interpretation *(Russian)* 3−34171
  - Gd, $N_{4,5}$ appearance potential spectra interpretation *(Russian)* 3−34171
  - La, $N_{4,5}$ appearance potential spectra interpretation *(Russian)* 3−34171
  - Nd, $N_{4,5}$ appearance potential spectra interpretation *(Russian)* 3−34171
  - Pr, $N_{4,5}$ appearance potential spectra interpretation *(Russian)* 3−34171
  - Si, plasma etching mechanism; plasma beam studies 3−4164
  - Sm, $N_{4,5}$ appearance potential spectra interpretation *(Russian)* 3−34171
  - V_2O_5, transition ot V_6O_{13}, APS and XPS study 3−58030
- **appearance potential spectroscopy**
  - Auger electron appearance potential spectroscopy *(Japanese)* 3−16450
  - ferrocene, photoionisation efficiency curves, spin-orbit splitting and thermochemistry 3−11898
  - inert gas ions formed by field ionisation, mass spectrometry and appearance spectroscopy 3−6591
  - H ions formed by field ionisation, mass spectrometry and appearance spectroscopy 3−6591
- **Appleton layer** *see ionosphere*
- **applied mechanics** *see mechanics*
- **approximation theory**
  - *see also function approximation; interpolation; least squares approximations*
  - atmospheric motion, existence of Hadley convective regimes 3−44681
  - celestial mechanics, matrix formulation of Picard method for parallel computation 3−48830
  - constraint vectors, in P_1 and P_2 approx. *(French)* 3−42123
  - convection in porous medium *(French)* 3−32794
  - crack, near-surface, diffr. of plane SH waves soln. 3−37429
  - crack characterisation by combined use of time-domain and freq. domain scatt. data 3−37428
  - digital EM thickness gauge, calibration with account of correction function 3−25906
  - elastic wave scattering theory, Born series and matrix variational Pade approximant method 3−25764
  - elastic wave scattering theory, Eikonal approx. weak scatt. approx. 3−25765
  - elastic wave scattering theory, multiple scatt. formalism and appl. to scatt. by two spheres 3−25769
  - Fourier-Chebychev approx., astronomical ephemerides appl. *(Japanese)* 3−48801
  - Fourier-Chebyshev approximation for many term time series, celestial mechanics/lunar ephemerides appl. 3−30157
  - gas dynamics, stable boundary approxs. for implicit time discretisation 3−27543
  - Helmholtz equation in exterior domain, approximation method 3−16154
  - homogenisation of linear elasticity equations 3−7408
  - hydrodynamics, particle methods 3−25752
  - limit problem in domain with cylindrical symmetry, approx. *(French)* 3−20634
  - long waves in shallow water, numerical anal. of problem *(French)* 3−42249
  - model convection-diffusion eqn., discrete weighted mean approx. 3−27505
  - Navier-Stokes eqns., higher order accurate fully discrete Galerkin approx. 3−22413
  - nonlinear shell anal., soln. of finite element eqns. 3−27380
  - oscillations, nonlinear, averaging and successive approach methods appl. 3−5594
  - plane Couette flow for high Reynolds no., stability 3−42244
  - plasma MHD stability, operator spectrum approx. 3−22601
  - stationary Navier-Stokes eqns., Galerkin-Lagrange Multiplier method 3−17914
  - Stefan problem, multidimensional two-phase, error estimates 3−22303
  - subsonic potential flow past a circle and the transonic controversy 3−42255
  - US scattering data, inverse Born approx. appl. 3−29290

APR *see acoustic paramagnetic resonance*

APS *see appearance potential spectra; appearance potential spectroscopy*

APW calculations
- alkali graphite intercalation cpds., electronic interlayer states, linearised APW calc. 3—52006
- graphite, electronic interlayer states, linearised APW calc. 3—52006
- graphite monolayer, total energy calc. method 3—13756
- monolayers, total energy calc. method 3—13756
- $Bi_2Sr(Eu)$, band struct. and superconductivity 3—13726
- CeB_6, self-consistent APW band calcs. 3—52022
- CeBi(Sb), mag. props., cryst. field splittings, mixing mechanism 3—52326
- $CeIn_3(Sn_3)(Rh_3)$, self-consistent APW band calcs. 3—52022
- CoAl, X-ray band spectra 3—38965
- Cs monolayer, total energy calc. method 3—13756
- Cu, conduction electron scatt. by stacking fault 3—33716
- Cu, conduction spin density, Knight shift and Fermi surface, MAPW formalism 3—38707
- Cu, momentum density and Compton profile, band struct. calc. 3—3050
- DyZn, indirect multipolar interactions, ab initio calc. 3—52099
- $FeTiH_x$ $(x=1, 2)$, electronic props. 3—38294
- Fe(001) film, surface magnetism, self-consistent FLAPW determ. 3—57712
- Ge, band struct., self consistent APW calc. 3—47259
- LaH_2, electronic energy bands and optical props., APW calc. 3—43011
- LaSb, de Haas-van Alphen effects, band struct. calcs. 3—52011
- $LiTiS_2$, intercalate, band struct., interlayer interactions 3—13725
- Lu, electronic struct. calcs. 3—28260
- MnSi, antisymm. exchange interaction, APW band calc. 3—52450
- Nb:Ta(Cr)(Fe)(Co)(Ni), effective valence for electromigration 3—42860
- NdH_2, electronic energy bands and optical props., APW calc. 3—43011
- Ni (001) surface and thin films, spin-polarised electronic struct. 3—3277
- Ni, metal-insulator transition at 34 TPa, APW calc. 3—8420
- Pd monolayer on Nb (110), electronic struct., photoemission study and APW calc. 3—47401
- Si, band struct., self consistent APW calc. 3—47259
- TiS_2, band struct., interlayer interactions 3—13725
- Zr-Nb-Mo-Re, electronic Gruneisen const. 3—23253
- $Zr(V_xCo_{1-x})_2$:H, Laves phase, H interstitials study 3—38340

arbiters (computers) *see computer interfaces*

arc discharges *see arcs (electric)*

arc furnaces
- carbothermic reduction furnace for production of solar-grade Si from SiO_2 3—34254
- N transferred arc plasma, operating characts. and energy distribution 3—51333

arc heaters *see arc furnaces*

arc lamps
- UV light-arc current stabilisation 3—13008
- Dy-Tl iodide lamp, silica transport obs. 3—42471
- Sc-Na iodide lamp, silica transport obs. 3—42471
- Xe short arc lamps for film projection 3—56299

arc welding
- *see also welding equipment*
- IR/UV radiation protection during arc welding, visual training aids *(French)* 3—54603
- optical fibre connector instrument design 3—37214
- steel, stainless, weld joints, corrosion damage in seawater 3—58309
- steel rectangular plate, welding stress analysis, computational aspects 3—12538

archaeoastronomy *see astroarchaeology*

archaeology
- *see also astroarchaeology*
- ceramics, beta dosimetry for thermoluminescence dating 3—4972
- excavations at astronomical sites, interpretation problems 3—35464
- glass archaeological specimen, bulk elemental anal. using γ-rays from neutron inelastic scatt. 3—4326
- Isernia La Pineta, early Lower Palaeolithic site in Central Italy, reversed mag. polarity 3—19900
- nuclear waste repository marking, archaeological perspective 3—932
- pottery shards thin sample prop. for PIXE anal. 3—16454
- quartz thermoluminescence, Z 3—34156
- E Sahara Desert, subsurface valleys and geoarchaeology revealed by shuttle radar 3—35158
- Santorini volcano, Greece, volcanic remission between Minoan remains *(French)* 3—9879

archaeomagnetism *see palaeomagnetism*

archeomagnetism *see palaeomagnetism*

architectural acoustics
- *see also anechoic chambers; echo; noise abatement; reverberation*
- airborne-sound insulation design in buildings *(Japanese)* 3—42071
- auditoria, multi-purpose, technical problems of acoustical design *(Japanese)* 3—42069
- auditoria, speech transmission index appls. 3—7331
- auditoria testing, sampling digital acoustic energy meter using VLSI circuits 3—17755
- auditoriums, floor slope problems, computer program *(Chinese)* 3—22281
- auditoriums of common type, refinement of acoustic defects *(Chinese)* 3—22282
- balconies, noise reducing properties 3—44180
- building elements, sound radiation field, calc. and model expt. 3—12437
- building facades in hot climates, courtyards, acoustic performance 3—42066
- Byzantine churches of Thessoloniki, reverberation time calc. 3—17703
- concert hall stages, acoustical criteria 3—1859
- digital technique appl. to architectural acoustics meas. *(Japanese)* 3—42073
- double wall, sound propag., sound bridge eccentricity effect 3—27285
- equalisation and its effects 3—50841
- flanking transmission in buildings using energy methods 3—27310
- flat response and room gain anal. 3—50842
- floor impact sound in buildings *(Japanese)* 3—42072
- hall absorption level estimation, ring research *(German)* 3—56385
- hall tone absorpt. level, systematic deviation from measured value, causes and prevention *(German)* 3—56384
- houses, noise induced vibrations and human perception 3—15028
- insulating systems, output fluctuation probabilistic evaluation, stat. energy anal. *(Japanese)* 3—1854
- insulation evolution by sonometry using controlled spectrum shaper *(French)* 3—50859

architectural acoustics continued
- laboratories, acoustic absorption coeffs. variability meas. 3—56396
- lateral sound energy meas. in hall and room models *(German)* 3—27311
- LF sound insulation, statistical energy anal. improvement 3—1860
- listening evaluation of auditoriums compared with electronic meas. 3—17707
- multiple reflections between rigid plane panels, theory 3—7302
- mutual energies law, appl. to room acoustic wave theory *(German)* 3—42054
- noise problems of building equipment *(Japanese)* 3—44182
- norms and standards in the field of building acoustics *(Japanese)* 3—42074
- orchestral music studio, acoustic scale modelling 3—17708
- panel, sound absorption variation caused by modifications to a standard mounting 3—17699
- radiation field from large aperture in building, computer calc. and scale model expt. 3—12436
- railway coaches acoustic comfort measurement and testing *(French)* 3—42089
- Rapid Speech Transmission Index, auditoria evaluation method 3—17706
- room acoustic configuration of the multi-purpose halls in the Gera House of Culture *(German)* 3—46377
- room acoustics, evaluation by signal generator using CMOS microprocessor *(Japanese)* 3—17749
- room acoustics, technical problem on evaluation *(Japanese)* 3—42070
- rooms, low, acoustic field calc. 3—50840
- rooms, partially reverberant, sound decays, nonlinearity meas. 3—27313
- rooms, reverberation and freq. response meas. technique 3—32528
- rooms, sound decay curves and absorpt. distribution, room shape effects, theory and expt. 3—17705
- rooms, sound insulated, background noise measurement techniques 3—22292
- semi-enclosed spaces, reverberation field 3—42067
- sinusoidal signals in reverberant rooms, phase statistics and phase correlation 3—7301
- sound equipment for Great Hall of Gera House of Culture *(German)* 3—46378
- sound field distribution calc. using Monte Carlo ray tracing computer program 3—17702
- sound fields, reinforcement methods for increasing reverberation time 3—46376
- sound transmission through isolation layers in staircase systems 3—27312
- spatial/structural acoustics, reverb. and press. maxima calcs., low-power computer appl. *(German)* 3—12438
- structure-borne sound propagation through junctions with blocking-masses, numerical study 3—50814
- structure-borne sound transmission meas. using impulsive sources 3—1861
- technologies in architectural acoustics *(Japanese)* 3—42068
- traffic noise environmental system, state estimation trial, semi-experimental 3—7298
- walls, stepped or staggered, of plastered masonry, sound insulation props. meas. and theory 3—17704
- windows, lab. meas. of sound transmission, single and double glazing 3—7300

architectural CAD
- sound radiation from large aperture in building, computer calc. and scale model expt. 3—12436
- steel structures behaviour at elevated temperatures 3—17808

architectural computer aided design *see architectural CAD*

architecture
- *see also building; civil engineering*
- comfort in dwellings with part passive solar heating 3—58555
- meteorology and thermal design of buildings in Saudi Arabia 3—29967
- school with passive solar heating, thermal comfort and user control, effects on design 3—58556

arcing *see arcs (electric)*

arcing, switches *see circuit-breaking arcs*

arcs (electric)
- *see also arc furnaces; arc lamps; arc welding; circuit-breaking arcs*
- AC arc column and external electric circuit, coupling effects *(Chinese)* 3—18145
- anode spot in a high-current vacuum arc, pinch effect 3—7823
- arc plasma filament, heating of ceramic and silicate material surfaces 3—39267
- atmospheric impulse arcs study using two-wavelength laser interferometry 3—27756
- cathode region erosion processes 3—22738
- cathodes containing inclusions of emission-active phase, arc erosion 3—19457
- cross field injection and trapping of K plasma beam in magnetic mirror 3—42431
- current distribution measurements on the cathode of a transient plasma column 3—2294
- DC, spatial density distrib. of traces, theoretical model 3—19546
- DC, spatial density distrib. of traces, theory and expt. 3—19547
- electroerosion processes in the presence of plasma streams emanating from diaphragmed arc support spots 3—7826
- electron cooling in magnetic multipole arc discharges 3—2331
- electron flow through transverse magnetic fields in magnetic multipole arc discharges 3—2330
- emission radiation, 124 to 300 nm calibration 3—42478
- Faraday MHD convertor equivalent cct. and out-of-channel fault model 3—51396
- high temperature air, Cu contaminated, elec. and thermal cond., enthalpy 3—27755
- hollow cathode in vacuum, electroenergetic characts. *(Russian)* 3—18149
- hybrid thermionic converters, arc voltage losses reduction 3—29432
- initial section, in gas flow, struct. and heating, review 3—13004
- ion source, single-ring mag. cusp 3—16447
- ion source, transistorised power supply 3—45246
- magnetised cylindrical arc, pressure balance and plasma transport 3—56655
- metal vapour arc, low-current, cathode spots, analytical model 3—51418
- molten alloy electrode, sustained high-current arcs during vacuum consumable arc remelting 3—18182
- neutron tube, high voltage discharge breakdown 3—17155
- perturbation in turbulent N_2 gas flow 3—37713
- plasma arc gap, electric stability recovery in inhomogeneous plasma *(Russian)* 3—37715

arcs (electric) continued
plasma column, magnetically stabilised, high current, for fast current-reversal and penetration studies 3—32863
plasma-induced arc, EMF and dissipation 3—37712
plasma-wall contact, arcing initiation, impurity prod. 3—18080
plasmagenerator volt-ampere depend., calc. method 3—2242
polymer sheet, dielectric surface arcs vel., optical meas. 3—38761
positive column theory in nonsteady electric arc in channel containing a gas stream 3—33014
process for metal deposition *(Russian)* 3—19288
quenching by shock compression using explosives 3—2327
recovery electric strength voltage, homogeneous plasma in discharge gap, gap breakdown voltages *(Russian)* 3—7814
refractory metal films fabrication, by ultrahigh vacuum arc method 3—43741
RINGBOOG II toroidal discharges, expt. obs. 3—7787
SF$_6$ thermophysical properties: engineering approach 3—12807
spot motion, explanation by magnetoplasmadynamic forces 3—18175
spots, thermal runaway prevention 3—18177
stabilised DC arc, current/voltage characts. determ., calc. and obs. 3—51426
stability, finite electrode thickness effects 3—2323
steady state, mild nozzle-wall ablation, computation 3—56764
surface flashover across divided insulator in vacuum, high speed photography study 3—27747
Teflon, electron-beam-charged, barriers to flashover discharge arcs 3—38762
tetrafluoromethane, arc discharges, enhanced photoemission phenomenon, spectroscopic study 3—7837
thermionic cathodes, doped refractory metal, cathode processes and effects of various parameters 3—51413
Tokamak, mini-torus, unipolar arcing study 3—18079
Tokamak, TM 1, surface condition influence or unipolar arcs 3—22647
Tokamak, TV-1, arcing, current meas. between limiters 3—22646
unipolar arc current, short circuiting geomag., heat balance effect 3—51412
UV light-arc current stabilisation 3—13008
vacuum, model steady state current distrib. in axially flowing conducting medium 3—27797
vacuum arc, anode spot formation conditions 3—56767
vacuum arc, bouncing expansion of cathodic plasma along transverse appl. mag. field 3—27798
vacuum arc, cathode spot, transverse forces and motions 3—18174
vacuum arc, discharge modes at anode 3—27791
vacuum arc, high-current, in axial mag. field, plasma parameters, spectroscopic study 3—42473
vacuum arc, multi-cathode-spot, model 3—27794
vacuum arc, retrograde vel. in mag. field, temp. depend. 3—18176
vacuum arc, uniform multi-cathode-spot, anode region model 3—46801
vacuum arc discharge, neutral particle distrib. rel. to ion distrib. 3—2333
vacuum arc interaction with transverse mag. field, appl. to current limitation 3—27778
vacuum arc ion currents, interaction with axial mag. fields 3—27796
vacuum arc phenomena and transition to atm. press. arcs, review 3—27776
vacuum arcs, cathode erosion rate in transverse mag. field 3—18150
vacuum arcs, multi-cathode-spot, anode melting 3—27792
vacuum arcs, subjected to mag. field parallel to positive columns, basic characts. 3—27799
vacuum arcs, vel. and erosion in mag. field 3—18151
vacuum arcs, zero current passage during rapid commutation 3—27800
Ar arc, free-burning, high-intensity, model and spectroscopic studies 3—51415
Ar arc discharge with small addition of mol. gas, nonequilib. plasma computerised spectroscopy *(Russian)* 3—51423
Ar arc plasma, multitemperature, particle conc. determ., theory 3—32854
Ar arc plasma, temp. distrib., off-axis peak radiation intensity meas. technique *(Chinese)* 3—42464
Ar I, Stark broadening of 430.01 nm line *(French)* 3—36721
C coating, arc conditioned, on Cu electrode, metallurgical characterization 3—3015
C, metastable atom fluoresc. study by UV laser diagnostics 3—22736
Cd cathode arc spot movement, random walk anal., crater form., erosion rate determ. 3—27779
Cd vapour arc, CW recombination laser action 3—41807
Cu cathode arc spot movement, random walk anal., crater form., erosion rate determ. 3—27779
Cu vacuum arcs, high-current, time resolved charact. of erosion products 3—27793
Cu vacuum arcs, macroparticles vel., in situ determ. 3—27795
Cu vapour arc, low-current, cathode spots, analytical model 3—51418
He, DC hollow cathode discharges using Al cathode, glow-to-arc transition, report 3—46804
He, liq., arc extinction voltage between Cu electrodes, appl. to supercond. magnet cooling 3—43489
He-C arc plasma, lifetimes and Stark widths of C II, plasma diagnostics 3—6572
Hg arcs with easily ionised additives, axial convection velocity profile determ. 3—51283
Kr-He mixture, DC hollow cathode discharges using Al cathode, glow-to-arc transition, report 3—46804
Mo plasma, vacuum arc, ion energy distrib. shaping mechanism 3—2183
N transferred arc plasma, operating characts. and energy distribution 3—51333
N$_2$ arc plasma, multitemperature, particle conc. determ., theory 3—32854
SF$_6$ gas, arc discharges, enhanced photoemission phenomenon, spectroscopic study 3—7837
SF$_6$, metal fluoride powder product form. 3—14522

area measurement
ceramic, surface area and pore size meas. using flow adsorption method *(German, English)* 3—24421
halftone dot area meas. errors 3—45108
ion beam irrad. area meas. using surface etching technique 3—20829
mercury porosimetry, intrusion data anal. 3—48006
microcomputer-based image analysis system for quantitative area measurements 3—49325
planimeter, digital, computer-controlled 3—271

argon
see also nuclei with ......
adsorbed on Al$_2$O$_3$, cluster model 3—13633

argon continued
adsorbed on graphite, electrodynamic screening of van der Waals interaction 3—42927
adsorbed on graphite, pot. energy function determ. 3—51930
adsorbed on metal surfaces, excited states, EELS and UPS study 3—47399
adsorption, desorption, and surface diffusion dynamics on metal surfaces 3—51954
afterglow plasma, electron energy distrib., stepwise excitation effect 3—2185
Ar$^+$, metastable ion beam fractions measured for different ion sources 3—40717
Ar-Ne mixture, breakdown voltage characteristics in a narrow gap 3—18160
arc, free-burning, high-intensity, model and spectroscopic studies 3—51415
arc discharge with hollow cathode in vacuum, electroenergetic characts. *(Russian)* 3—18149
arc discharge with small addition of mol. gas, nonequilib. plasma computerised spectroscopy *(Russian)* 3—51423
arc plasma, multitemperature, particle conc. determ., theory 3—32854
arc plasma, temp. distrib., off-axis peak radiation intensity meas. technique *(Chinese)* 3—42464
atom, collisional broadening and spectral line shift 3—1305
atom, elastic electron scatt., reson. investigation 3—1481
atom, elastic electron scatt. cross sections, dipole polarisability 3—32201
atom, electron beam excitation from Ar$_2^+$ dissoc. recombination 3—50527
atom, electron impact, characteristic X-ray prod., 4 to 10 keV 3—26687
atom, electron impact ionisation of 3p orbital, absolute triple differential cross section 3—26862
atom, electronic stopping powers, shell corrections calcs. 3—26635
atom, Kβ region multivacancy process, threshold region obs. 3—50338
atom, L$_1$-L$_{23}$M Coster-Kronig spectrum 3—21659
atom, L$_{23}$-MM Auger spectra, satellite struct. 3—1326
atom, LMM Auger spectra, line sharpening effects due to post-collision interaction 3—21739
atom, optogalvanic spectra using *(Japanese)* 3—10925
atom, Penning ionisation by He(2^{3}S) and excitation transfer from Ar(^{1,3}P) to N$_2$ meas. 3—11956
atom, Rydberg state creation *(French)* 3—26670
atomic beam, direct inelastic scatt. from Pt(111), time of flight distrib. meas. 3—47747
atoms, dynamic dipole polarisabilities, density-functional calc. 3—55828
atoms, inner-shell threshold excitation with synchrotron radiation 3—41510
atoms, optogalvanic spectrum in glow discharge lamps 3—17244
atoms, two-photon excitation 3—11767
atoms, X-ray emission spectra, multivacancy effect 3—41519
closed cycle, high interaction, fully ionized seed concept feasibility confirming anal. 3—34706
clusters, form. in compressed gas, mol. dynamics study 3—6820
cosmic ray prod. nuclids in Fe meteorites, exposure ages and meteoroid sizes 3—48867
crystal, isochoric thermal cond., heat transfer by vacancies *(Russian)* 3—18523
crystals, stimulated emission at 126 nm 3—14322
dense fluid, Lennard-Jones representation, thermal cond. 3—242
diffusion in oriented polyethylene films *(Russian)* 3—53152
discontinuous film, atom mean-square displacements, sample size effect 3—8365
electron impact, low energy, free-free emission 3—56085
evaporation in horizontal tube, fouling by CO$_2$ solidification *(German)* 3—42761
flow boiling, fouling phenomena obs. 3—32590
fluid, bulk viscosity near triple point, acoustic attenuation meas. 3—57118
furan-Ar, struct., rot. consts., microwave obs. 3—11787
gas, DC magnetron discharge, spectroscopic study 3—56751
gas, nonresonant freq. tripling, tunable XUV generation 3—37117
gas, pair pot. determ. from thermodynamic props. 3—12806
gas, photoacoustic effect thermodynamics 3—49461
gas, third harmonic conversion with a focused beam 3—12234
gas laser commercial, air-cooled laser, reliability 3—17523
gas viscosity meas. with Fleisch pneumotachograph 3—19858
gaseous plasma, ion sampling study using quadrupole mass filter 3—51376
glow discharge, metastable atom density, theoretical model 3—33009
induction-coupled plasma torch operational characteristics rel. to gas flow rate 3—51386
inductively coupled plasma, electron number density meas. 3—27733
inductively coupled plasma, nonequilibr. electron conc. and temp., diffusion model evaluation *(German)* 3—42371
inductively coupled plasma, rate model of emission spectra 3—42358
inductively coupled plasma, temp., electron density and ionisation 3—18006
ion laser, detachable, pulsed *(Chinese)* 3—41866
ion laser, liq. surface acoustic holography appl. *(Chinese)* 3—22106
ion laser, SHG of 257 nm radiation in external ring cavity 3—22157
ion laser pumped dye laser emission to 9500 Å 3—22052
ion laser with narrow emission line 3—7019
ion scatt from Cu surface, semichannel focusing energy 3—28954
ion-Cu atom interaction potential, semichannel focusing energy calc. 3—3901
isoelectronic sequence calc., extended Thomas-Fermi-Dirac theory 3—50309
isoelectronic series, electron impact ionis. cross-section, distorted wave calcs. 3—26867
laser, active synchronisation mode stabilisation 3—46245
laser light effects on optical props. of As$_2$S$_3$ film *(Chinese)* 3—24034
liquid, at. motions from line width studies of scatt. functions 3—57117
liquid, breakdown characts. and mechanisms 3—43490
liquid, ionisation chamber, electronegative impurity conc. meas. instrument 3—11607
liquid, short-wavelength sound modes, dynamic struct. factor from Rayleigh, Brillouin lines 3—57049
liquid, surface tension calc. 3—23135
liquids, limited miscibility at high press. 3—18462
metal-SiO$_2$:Ar$^+$-semiconductor structure, charge trapping and storage 3—28450
microclusters, supersonic expansion form. size distrib. anal. 3—36898
molecular beam, pulsed molecular supersonic nozzle beam from EM valve 3—36879
molecule, excited states vibr., VUV luminesc. obs. 3—1377

argon continued
molecule, refractive index meas., polarisabilities, eigenergies, oscillator strengths, Rayleigh scatt. and force consts. 3−7696
muon Coulomb capture in Ne-Ar-Kr mixtures, conc. depend. 3−32250
N_2-Ar solid mixture, orientational ordering, NMR study 3−18999
negative ions, excited states lying above ground state of neutral atom 3−21647
Penning ionisation, energy and ang. distribs. of ejected electrons *(French)* 3−11955
physisorption of ^{3}He, mean field theory, desorption kinetics 3−13630
plasma, electron beam generated, low-energy electron energy distrib. calc. 3−18087
plasma, organic compounds attachment coeff meas 3−37612
pressurised spark gaps, electric strength recovery after breakdown 3−7849
process gases, on line spectral anal. method for carbon and water vapour determ. 3−9366
proton and α-particle stopping power, mean excitation energies and Barkas effect parameters 3−41456
proton stopping power meas. 3−41455
pulsed discharge, radical prod. from trace H_2O, photoabsorpt. spectrum 3−51405
solid, lattice expansion calcs. 3−47130
solid, plastic deformation during creep, subboundary migration, etching study 3−13319
solid, thermal expansion, effect of N_2 impurity mol. rot. motion *(Russian)* 3−28124
solid, vacancy-induced thermal cond. 3−42867
solid and liquid, hot electron relax. calc. 3−13823
stetrazine-Ar_n Van der Waals complex, vibr. predissoc. 3−36831
thermal discharge, partial local thermodynamic equilib., spectroscopically measured electron temp., theory 3−51419
thermophysical props. calc., interactive FORTRAN program, report 3−46679
triple-point appl. to pressure meas. 3−54711
Ar, electronic props. by Green's function calcs. 3−6512
Ar I, photoelectron spectroscopy, capillary discharge tube for the production of intense VUV resonance radiation 3−27180
Ar I, Stark broadening of 430.01 nm line *(French)* 3−36721
Ar II branching ratios for spectral intensity calibration 3−11741
Ar II excited states, radiative lifetime meas. for 4d′, 4d, 5d, 6d, 7d 3−26694
Ar VI-VIII, spectroscopy and lifetime *(French)* 3−21868
Ar VIII 3s-3p beam-foil decay curve synthesisation 3−21883
Ar^+ CW laser amplifying medium, phase-conjugate refl. by four-wave mixing 3−41933
Ar^+, electron capture, energy and width of Ar ($3s3p^6nl$) series 3−41688
Ar^+ ions bombarded NaCl crystals, electron emission and point defects 3−8048
Ar^+ laser, loss, gain and saturation parameters meas. at 4880, 5145 Å *(Chinese)* 3−36994
Ar^+ laser, passive mode locked, to pump double mode locked rhodamine 6G laser 3−22136
Ar^+, spin-orbit splitting direct obs. with diode laser 3−45885
Ar^+ tunable frequency stabilised laser 3−12175
Ar^{14+} dielectronic recomb. rate coeff. calcs. 3−56072
Ar^{15+}, electron impact excitation, reson. effect, collision strengths calc. 3−6793
Ar^{2+}, intense field reson. Raman scatt., coupled eqns. formalism 3−11799
Ar^{3+}, electron impact ionisation absolute cross section meas. 3−46076
Ar:^{57}Fe, impurity-host to host-host coupling force const. ratio 3−22988
Ar:$O_2(N_2)$ alloys, single cryst., elastic const. determ. by Brillouin scatt. 3−13309
Ar/CH_4 scintillating drift chambers, emission process nature 3−11603
Ar/metal ion sources on the basis of a discharge contracted in crossed E×H fields 3−16446
Ar-Ar mol. system, total scatt. cross sections beyond glory region, direct inversion 3−32162
Ar-BCl_3, van der Waals complex, vibr. predissociation, Monte Carlo RRKM study 3−41634
Ar-Br cpds. mixtures, discharged, Br emission spectra 3−45890
Ar-CO liq. mixtures, thermodynamics, direct calorimetry meas. 3−18463
Ar-CO_2 filled wire chambers, large saturated pulse obs. 3−26583
Ar-CO_2 mixture, glow discharge, particle excitation mechanism, relax. studies 3−2320
Ar-ethane gas mixture, laser induced ionisation meas. 3−2170
Ar-H, thermal plasma, potential interactions influence on transport processes *(French)* 3−37623
Ar-H_2 dimers, vibr. predissoc., spectrosc. obs. 3−50486
Ar-He, heat of mixing meas. 3−42784
Ar-methane, diffusion coeffs. and thermal diffusion factors 3−7682
Ar-methane (ethane) (CO_2) with or without methylal, single electron longit. diffusion meas. with MWPC 3−41425
Ar-methane solid solutions, thermodynamics and phase separation 3−57109
Ar-N_2 inductively coupled plasma, electron number density meas. 3−27733
Ar-N_2 mixtures, laser irrad., breakdown threshold 3−56769
Ar-N_2 solid mixture, frozen-in orientational disorder, neutron scatt. meas. 3−18243
Ar-N_2O, diffusion coeff. and viscosity meas. 3−7681
Ar-N_2(CO)(NO)(CO_2), intermolecular short-range forces, differential scatt. study 3−11917
Ar-N_2(2%) gas scintillation drift chamber with 14 cm drift path 3−36618
Ar-Ne mxiture, transient diffusion in tube connecting end volumes 3−12803
Ar-SF_6, scatt. cross sections, intermolecular pots. 3−21850
Ar-SF_6 mixture, space discharge form. by UV radiation *(Russian)* 3−27758
Ar-Xe, elastic scatt. cross sections, empirical interatomic pots. 3−21849
Ar-Xe, fission pumped IR laser, expt. study 3−1670
Ar-Xe interactions, intermol. pots. 3−56021
Ar-Xe mixture, electron-beam pumped, lasing at 1.73 μm 3−32348
Ar-Xe mixture, mol. and at. excited states, collisions, kinetic anal., VUV emission 3−6671
Ar-Xe mixture physisorbed films on graphite, synchrotron X-ray diffr. study 3−51949
Ar-Xe powerful electroionisation laser on Xe IR atomic transitions 3−36997
Ar-Xe(Kr)(N_2)(methane)(CO_2) gas scintillation proportional counters, emission spectra 3−41432

argon continued
Ar-xylene, glow discharge preparation of thin polymer films, plasma density and temp. 3−14504
Ar+Ar, total scatt. cross section calc. in glory region 3−20691
Ar+ArKr, atom exchange and dissoc. reaction mechanisms calcs. 3−29304
Ar+Ar(Kr)(Xe), glory undulations for total cross section 3−26812
Ar+Ar(Kr)(Xe), total collision cross sections in glory region 3−11941
Ar+Br_2 reactions, nonequilibrium effects in the energy distribution function 3−58420
Ar+C_3, vibr. relax of $C_3(\tilde{X}^1\Sigma_g{}^+)$, time-resolved and laser induced fluoresc. spectra 3−17362
Ar+CO, vibr. relax. following shock heating 3−41650
Ar+CdH ($A^2\Pi$), rot. energy transfer, collision cross sections 3−6767
Ar+Cl^{16+}, quasimol. X-ray prod. probability, interference effects 3−31995
Ar+D_2, D_2 vibr. population relax. 3−1460
Ar+fluoromethane-d_3, IR luminesc. and vibr. relax. at low temps. 3−17367
Ar+$H^-(D^-)$, detachment collisions, electrostatic vs. dynamical coupling 3−56033
Ar+H^+, angular distribution of ejected L-shell electrons 3−26831
Ar+H^+, electron capture from the K and L shell, probability depend. on scatt. angle 3−1474
Ar+H^+, ionisation, differential cross section calcs. 3−56069
Ar+$H^+(H_2{}^+)(He^+)(Ne^{3+})(Ne^{10+})$ high energy collisions, electrons and X-rays angular distrib. 3−41646
Ar+HF(H_2), rot. energy transfer, pot. energy surface, trajectory calcs. 3−41656
Ar+He mixture, collision induced absorpt. spectra 3−26674
Ar+$He^+(C^{5+})(Li^{2+})(O^{7+})$, electron loss from fast one-electron ions 3−1471
Ar+$He^+(H_2{}^+)$ collision, electron ang. distrib. in electron spectra 3−56034
Ar+$He^+(Ne^+)$, rearrangement collisions, VUV emission spectra 3−26832
Ar+He^{2+}, electron capture, cross section binary encounter approx. 3−32194
Ar+He^{2+}, electron capture from gas target atoms, 0.7-4.5 keV 3−46064
Ar+He*, crossed beam time of flight study, vel., resolved total integral cross sections 3−11936
Ar+I, $\gamma\gamma$ ang. correl. on-line acquisition, charge exchange cross section 3−50511
Ar+Kr, glory undulations for total cross section 3−26812
Ar+Kr interactions, intermol. pots., HFD-C type 3−56022
Ar+Kr(Xe)(Pb)(U) ions, X-ray and Auger transitions *(German)* 3−11761
Ar+Li^+, total cross section meas., pot. determ. 3−17355
Ar+methane (SO_2), vibr. relax. times, linear matrix rule 3−41652
Ar+Na, population transfer, time-resolved laser fluoresc. 3−6773
Ar+Na, Rydberg d states, collisional ang. momentum mixing meas. using selective field ionisation 3−6757
Ar+$O_2(N_2)$(NO), total collision cross section in glory region 3−21858
Ar+OH, quasiclassical trajectory state-to-state cross sections for energy transfer 3−17361
Ar+S^{13+}, electron capture, projectile X-ray yield, reson. processes 3−11969
Ar+S^{13+}, resonant transfer and excitation processes 3−56068
Ar+trifluoromethane, radical form., UV and visible spectra 3−45954
Ar+trifluoromethane, radical form., UV emission obs. 3−45963
Ar+W(110), effective pot., semiclassical theory 3−45882
Ar+Zn, excited state quenching; fluoresc. study 3−17359
Ar^++Cl_2, adiabatic charge transfer 3−32191
Ar^++F^-, mutual neutralisation, Landau-Zener approx. 3−41673
Ar^++He(Ne), rearrangement collisions, VUV emission spectra 3−26832
Ar^++I_2, double scatt. simulation 3−11944
Ar^{2+}+Ar, symm. reson. charge transfer 3−11964
Ar^{5+}+Ne, K_α X-ray satellites and hypersatellites 3−50336
Ar_2 ions, electron beam dissoc. 3−1494
$Ar_2{}^+$, dissociation recombination in electron beam excitation at high press. 3−50527
$Ar_2{}^+$, electron impact three-body dissociative recombination *(Chinese)* 3−41684
$Ar_2{}^+$, strong field depolarisation in reson. Raman scatt., coupled eqns. study 3−36746
Ar_2+Kr(Xe), atom exchange and dissoc. reaction mechanisms calcs. 3−29304
Ar_3 clusters, RRKM behaviour, exponentially divergent trajectories 3−17393
^{37}Ar, retention and release from human bone samples 3−58583
^{40}Ar/^{39}Ar dating of pyrite from Geco ore body, Ontario, Canada 3−9875
Ar.O_3 van der Waals complex, mol. beam spectrosc. obs. 3−50373
Ar.SO_2 van der Waals complex, mol. beam spectrosc. obs. 3−50373
Cs-Ar, inhomogeneous discharge struct. in MHD generator simulation 3−12982
H II regions, Ar II/Ar III and S III/S IV IR line ratios rel. to excitation conditions 3−44818
H_2-O_2-Ar flat flames, temp. meas. by two-line laser saturated OH fluoresc. 3−9319
H_2+Ar, collision induced emission in fundamental vibr. rot. band 3−26732
Hg-Ar discharge, low-press., air or CO_2 impurity effects, fluorescent lamp appl. 3−42461
Hg-Ar mixture, positive column of low press. discharge under pulse current modulation, electrokinetic parameters *(Russian)* 3−46802
Hg-Ar positive column plasma, unipolar currents and electrostatic probe characteristics 3−51285
Hg-Ar system, metal-nonmetal transition and annealing effects on elec. cond. 3−43240
N_2-Ar solid mixtures, specific heat and $\alpha\rightarrow\beta$ transition 3−38100
N_2-He (Ne)(Ar)(Kr)(Xe) binary systems, diffusion coeffs. and thermal diffusion factors 3−12805
N_2+Ar* collisions, electronic excitation transfer 3−21887
NH_3 laser output, buffer gas effects 3−12121
Na_2O-SiO_2:Ar glass, ion implanted, XPS, charge correction method 3−43707
Ne:Ar, solid, electron-induced erosion meas. 3−13280
O_2-Ar, electron beam energy branching, appl. to gas lasers *(French)* 3−22567
Si:Ar, ion implanted, characterisation by ellipsometry and channelling 3−46977

argon continued
- Si:Ar, ion implanted, surface states, positron annihilation study 3–19225
- Si:Ar, ion implanted, XPS, charge correction method 3–43707
- Si:Ar^+, ion implantation, radiation damage accumulation kinetics 3–37945
- Si:Ar^+ amorphous film, ion implantation doping, ESR and elec. cond. 3–37944
- SiO_2:Ar, ion implanted, XPS, charge correction method 3–43707

argon compounds
- ArF excimer laser at 193 nm, UV preionisation effect *(Chinese)* 3–37063
- ArF excimer laser gas mixture cryogenic purification and lifetime extension 3–56230
- ArF excimer laser with high spectral brightness working in the regenerative amplifier regime 3–56229
- ArF(ArCl), excimer, electronic struct. of ground and excited states, variational cellular model 3–45833
- ArF*, electron beam pumped kinetics, radiation quenching, fluoresc. yield 3–55986
- ArF* excimer laser, tunable, nonlinear optical applications 3–27073
- ArHF van der Waals mol. rot. Zeeman effect, microwave spectrometric obs. 3–6689
- ArKr, photoionisation and bond dissoc. energies 3–11899
- ArKr+Ar, atom exchange and dissoc. reaction mechanisms calcs. 3–29304
- ArO^+, test of ground state pots. by ion mobility data 3–6563
- ArXe, photoionisation and bond dissoc. energies 3–11899
- $(ArXe)^+$ heteronuclear ion, fluoresc. study in electron beam excited Ar-Xe mixture 3–46012
- Ar.HD van der Waals complex, rot. predissoc., space-fixed complex coord. coupled-channel calc. 3–41632

arithmetic (digital) *see digital arithmetic*

Armco iron *see iron*

armouring (cables) *see cable sheathing*

aromatic compounds *see organic compounds*

ARPES *see photoemission*

arrays (antenna) *see antenna arrays*

arsenic
- *see also nuclei with ......*
- active-passive transition in Ti, As effects 3–39287
- atom, highly ionised, mag. dipole transitions in Texas Exptl. Tokamak 3–55882
- atomisation mechanisms in at. absorpt. spectrosc. 3–19548
- graphite:As, ion implanted, lattice damage and implant distrib., SEM, STEM and AES study 3–2597
- implanted bubble garnet layers, annealing mechanism, FMR study 3–33982
- impurities in Si-WSi_2 bilayers, diffusion, rel. to B doping additions 3–23103
- pollutant elements in wastewater, anal. by DC Ar plasma emission spectroscopy 3–48220
- thermopower meas. 2 to 300K 3–33747
- yellow, molecular, vacuum deposited film, struct. phase transitions, ESR study 3–33969
- Ar-Hg gas mixture, ionisation waves, modulation phenomena obs. 3–12855
- As:Ni amorphous sputtered film, chemical modification, elec. props. 3–23518
- As_2Te_3-$Tl_5As_2Te_3$-As system, phase diagram anal. 3–58104
- ^{73}As, diffusion in Si, laser pulse processing 3–56921
- ^{75}As, muonic, 2s-2p and 3d-2p transitions HFS splitting meas. 3–32251
- CdP_2:As, impurity effect on elec. cond. type *(Russian)* 3–47350
- Ge:As, electron irrad., hole trapping defects, DLTS study 3–43083
- Ge:As, metal-nonmetal transition under $\langle 111 \rangle$ stress, NMR study 3–57283
- Ge:As heavily doped solid soln., Frenkel pair form. in initial stage of precipitation 3–33247
- Ge:As; laser processed, ^{73}Ge Mossbauer effect 3–57839
- Pd-Si:As interface, Pd_2Si formation, As redistribution, elec. study 3–47169
- Se:As(As,Cl), amorphous xerographic photoreceptors, charge transport, time of flight expts. 3–3245
- Si: As, ion implanted, doping profiles meas. by 200 keV α-particle backscattering 3–24077
- Si:^{75}As, implanted, isothermal annealing study 3–13253
- Si:^{75}As, thin film, thermal stability, effects of ion implantation and laser annealing 3–57249
- Si:As, As ion doping during MBE growth 3–52950
- Si:As, B, ion implanted and incoherent light annealed, characterisation 3–56922
- Si:As, doping by laser diffusion from spin-on arsenic glass 3–42848
- Si:As, doping profiles determ. by electrical meas. and anodic stripping 3–49403
- Si:As, electron beam annealing of ion implantation damage 3–42664
- Si:As, Ge, laser processed, ^{73}Ge Mossbauer effect 3–57839
- Si:As, heavily doped, grain boundary segregation 3–23047
- Si:As, heavily doped, low minority carrier mobility and diffusivity meas. 3–38398
- Si:As, impurity activation by laser irrad., Hall effect and Rutherford backscatt. study 3–18339
- Si:As, influence of laser beam homogeneity on regrowth 3–56954
- Si:As, ion implantation damage, electron-induced conductivity study 3–8075
- Si:As, ion implantation damage, flame annealing, TEM and Van der Pauw studies 3–46970
- Si:As, ion implantation through mask window, impurity distrib. study 3–51640
- Si:As, ion implanted, annealing meas. by optical spectrometry *(Chinese)* 3–13247
- Si:As, ion implanted, characterisation by ellipsometry and channelling 3–46977
- Si:As, ion implanted, damage study 3–2616
- Si:As, ion implanted, ellipsometric spectrum and optical props. 3–28880
- Si:As, ion implanted, flash-lamp annealing, TEM, elec. resist. and Rutherford backscatt. study 3–27979
- Si:As, ion implanted, metastable solid soln. form., backscatt. and channelling study 3–2588
- Si:As, ion implanted, solubility limits and elec. activities 3–2583
- Si:As, ion implanted and laser annealed, defect struct., X-ray and TEM studies 3–42650

arsenic continued
- Si:As, ion implanted polycryst. low press. CVD film, As lateral diffusivity meas. 3–38125
- Si:As, laser annealed, surface electron props. 3–57408
- Si:As, oxidation effects on diffusion, dual vacancy-interstitial mechanism 3–8259
- Si:As, polycrystalline film, ion implanted, pulsed incoherent light annealing 3–22933
- Si:As, pulsed X-ray annealing 3–56979
- Si:As, substitutional defect pairs, electronic energy levels 3–3115
- Si:As CVD film, reduced press. deposited, diffusion source for Si-SiO_2 interface heavy doping 3–51852
- Si:As epitaxial layer, impurity distrib. and diffusion 3–51648
- Si:As epitaxial layers, autodoping study 3–42638
- Si:As polycrystalline films, ion implanted, regrowth due to oxidation drive-in 3–23207
- Si:As-Al Schottky barrier diode, barrier height enhancement by ion implantation 3–52223
- Si:As^+ wafers, rapid annealing with scanning Hg arc lamp 3–13264
- Si:$As^+(As^+)$, ion implanted, self-interstitial atom interactions 3–2586
- Si:As.Pt struct., As redistrib. during Pd_2Si form., ion channelling and backscatt. study 3–8267
- Si:B, As, ion implanted and CW laser annealed, Fe-related defect centres 3–47304
- Si:B,As, CW laser annealing, quenched-in defects 3–57313
- a-Si:H, As, ion implanted, IR absorpt. spectra 3–47681
- Si:H, As amorphous film, RF sputtered, pulsed laser annealing 3–56970
- a-SiH:$Cl^-(As^{n+})$, bond stability, IR absorpt. spectrosc. obs. 3–38809
- SiO_2:As, ion implanted, electron traps microscopic location, avalanche injection study 3–43061
- Si;As, pulse laser induced solid-phase annealing 3–8094

arsenic alloys
- *see also arsenic compounds*
- α-brass, dealloying in aq. electrolytes, As addition effects 3–9229
- α-Ag-As, thermodynamic activity from quasiisopiestic meas. 3–47818
- AlGaAs heterostructures, electroluminescence photon yield study 3–3823
- As-Ge-Se chalcogenide glasses, controlled crystallisation in nucleated system 3–33123
- As-Se, amorphous, mol., cluster constituents in bond equilibrium theory 3–37785
- α-Cu-As, thermodynamic activity from quasiisopiestic meas. 3–47818
- MnAs, high-field magnetisation, spin fluctuations 3–52533
- MnAs, mag. polarisation of anions 3–52384
- Pb-Sb-As, chill cast, plasticity, monotonic and cyclic loading, hysteresis 3–58171
- Pb-Sn-Te(As), microstruct. and mech. props., effect of small addition of Te and As *(Japanese)* 3–29166
- UAs, two-ion anisotropic interaction from band of electron hybridisation 3–28497

arsenic compounds
- *see also arsenic alloys*
- chalcogenide glasses, photoinduced struct. changes, IR absorpt., Urbach tail features 3–52804
- chalcogenides; amorphous and cryst., photoluminescence total light decay, excitation energy depend. 3–38892
- polyacetylene:AsF_5, cryst. struct., neutron diffr. study 3–7926
- trihalides, cryst. struct. and polymorphic transitions 3–7986
- Ag-As_2S_3 system, electroluminescence excitation of Ag diffusion 3–28169
- Ag_3AsS_3, permittivity, phase transitions *(Russian)* 3–23860
- As-S amorphous semiconductors, X-ray stimulated struct. transforms. 3–13276
- As-S films, vitreous chalcogenide semicond., photostimulated dissolution 3–8379
- As-S(-Se) glasses, heat of soln. in alkaline solns. 3–33450
- As-Sb-Se glass system, struct. and elec. props. 3–22788
- As-Se, amorphous, second-order vibration spectrum, IR absorpt. study 3–23934
- As-Se amorphous semiconductors, X-ray stimulated struct. transforms. 3–13276
- As-Se glasses, heat of soln. in alkaline solns. 3–33450
- As-Se-Tl, vitreous semiconductor, temp. dependence of dielectric constant 3–23858
- As-Te film, amorphous, fabrication, comp. and physicochem. props. 3–8995
- As-Te-Cd thin films, struct. and optical energy gap 3–34058
- $AsCl_3$ reactor for VPE growth of GaAs 3–19276
- $AsCl_6^{2-}$, intra-molecular force fields and ionic constants 3–2697
- AsF_5-graphite intercalation cpds., charge transfer, optical refl. study, 10 to 300K 3–57956
- AsF_6^- octahedral anion, charge distrib., ab initio SCF calc. 3–6535
- AsF_6^{2-}, intra-molecular force fields and ionic constants 3–2697
- $AsGeSe_x$ vitreous chalcogenide film, electron induced cond. meas. 3–28460
- $As_{15}Ge_{30}Se_{55}$ glass IR optical fibres for 2 to 11 μm band 3–41984
- $As_{10}Ge_{15}T_{75}$:Ag glassy alloy, dielec. relax. and dispersion using polarisability plots 3–52713
- AsO_2^- impurity centres in alkali halide crystals, optical spectra study 3–23981
- $(AsO_4)_2H_2(UO_2)_2.8H_2O$, troegerite, ferroelasticity in phase II 3–8121
- AsP, $X^1\Sigma^+$ ground state, dissoc. energy, pot. functions 3–6564
- AsS, dissoc. energy from equilib. meas. 3–33415
- AsS, reactions, equilib. consts., thermodynamic data 3–5510
- As_2S_3, amorphous, injected CdS acoustic domain effects, optical transmission and X-ray diffr. 3–2682
- As_2S_3, amorphous, local struct., lowest unoccupied MO approach 3–22794
- As_2S_3, amorphous, picosec. radiative and nonradiative recomb. 3–38914
- As_2S_3, amorphous, thermal expansion, 0.2 to 10K 3–8232
- As_2S_3, amorphous film, effect of moisture on elec. props. 3–23390
- As_2S_3, amorphous state, vaporisation, high temp. mass spectrometry 3–33415
- As_2S_3 amorphous thin films, contact reactions with metal films, electron diffr. studies 3–23223
- As_2S_3 chalcogenide glass film, refractive index, press. and wavelength depend. *(Chinese)* 3–43646
- As_2S_3, electric-field-modulated spectra 3–3686
- As_2S_3 fibre characterisation for 10.6 μm transmittance 3–46296
- As_2S_3 film, optical props. var., Ar^+ laser light effects *(Chinese)* 3–24034
- As_2S_3 glass, atomic tunnelling spectrum, optically induced gap 3–14445

arsenic compounds continued
As_2S_3 glass, photoluminescence and competing nonradiative processes 3−14348
As_2S_3, glass, vibr. props., IR and Raman spectra and struct. model 3−23942
As_2S_3 glass waveguide, monolithic-hybrid joining to $Ga_{1-x}Al_xAs$ heterojunction injection laser 3−22259
As_2S_3, glassy, optical props. and microhardness, electron stimulated reversible changes 3−18352
As_2S_3, glassy estimate of minimum optical losses 3−7104
As_2S_3, IR window material, multiwavelength laser rate calorimetry 3−7096
As_2S_3, reactions, equilib. consts., thermodynamic data 3−5510
As_2S_3 thin film, press. effect on optical absorpt. edge *(Chinese)* 3−43645
As_2S_3, vitreous, surface potential dark decay meas. 3−23460
As_2S_3:Ag amorphous film, Ag photodoping sensitivity, optical and elec. resist. study 3−46851
As_2S_3:Au glass, structural, optical and electrical props. *(Japanese)* 3−56822
As_2S_3-Ag, photochemical reactions *(Russian)* 3−24522
As_2S_3-Ag semiconductor-metal system, behaviour during discontinuous light irradiation *(Russian)* 3−20940
As_2S_3-Ag_2S glasses, elec. cond. and diffusion 3−23087
As_2S_x, $2.8 \leq x \leq 3.3$, glassy system, Raman spectra, As-As bond conc. 3−47627
$As_{40}S_{60}$, thin films, sputtered, optical energy gap and refr. index meas. 3−8979
As_4S_3, electronic struct. and UPS spectra, ab initio SCF calc. 3−41491
As_4S_4, reactions, equilib. consts., thermodynamic data 3−5510
$(As_2S_3)_x(GeS_2)_{1-x}$ system, refractive index variation *(Russian)* 3−19102
$AsSSe_xTe_{1-x}$ chalcogenide glass film, saturated optical absorption under laser irrad. 3−32423
AsSe-Ag_2Se glasses, elec. cond. and diffusion 3−23087
As_2Se_3, amorphous, localised states, SCL currents activation energy 3−57354
As_2Se_3, amorphous, spectral distrib. of steady-state photocond. 3−43231
As_2Se_3 chalcogenide glass, charged impurity conc., MIS CV charact. study 3−28447
As_2Se_3, cryst. and glassy, photoluminescence, excitation energy depend. 3−38893
As_2Se_3, electric-field-modulated spectra 3−3686
As_2Se_3 fibre characterisation for 10.6 μm transmittance 3−46296
a-As_2Se_3 films, time-of-flight and photocond. studies 3−43230
As_2Se_3 glass IR fibre prep., drawing technique 3−46356
As_2Se_3, glassy, crystallized vol. fraction determ. at different cooling rates 3−56823
As_2Se_3, glassy, estimate of minimum optical losses 3−7104
As_2Se_3, glassy, nonequilib. hole diffusion and drift length, photoconductivity study 3−13831
As_2Se_3, glassy, photostimulated processes, configurational model and transmission spectra 3−19158
As_2Se_3, glassy, site inequivalence limit, XPS study 3−42532
As_2Se_3, glassy, with optical absorpt. of 60 dB/km 3−28826
As_2Se_3, glassy and cryst., X-ray irrad., ESR signals due to metastable centres and impurities 3−23801
As_2Se_3 intreous films, chem. modification of elec., photoelec., and optical props. 3−23391
As_2Se_3, photothermal recording, spatial-frequency transfer 3−32323
As_2Se_3:Ge glasses, transport props. 3−38425
As_2SeTe_2-Mg(Al)(Zn) contacts, conductivity control and photovoltaic effects 3−52246
As_2Te_3, amorphous, in Si/As_2Te_3 interface, I-V and C-V characteristics and photovoltaic effects 3−52233
As_2Te_3-$Tl_5As_2Te_3$-As system, phase diagram anal. 3−58104
As_xTe_{1-x} glasses, crystallisation and local order, X-ray, Mossbauer and DSC study 3−13114
As_xTe_{100-x}, glassy, refr. index, 82 to 300K 3−23907
$(As_{13}Te_{24}Si_{27}Sb_{18})_{1-x}Fe_x$ RF sputtered films, struct., elec., and optical props. 3−13649
Au-$As_{30}Te_{48}Ge_{10}Si_{12}$-Au struct., thermal switching at electrode-amorphous semicond. interface 3−8542
$C_{8.4}AsF_6$, intercalate, composition, IR spectra 3−23954
$Cu_x(As_{0.4}Se_{0.6})_{100-x}$, amorphous, bonding of Cu impurity, EXAFS study 3−24055
$Ga_{12}Ge_{6.5}Si_{6.5}As_{25}Te_{50}$, amorphous-crystalline magnetodiodes, threshold switching effects 3−13895
Ge-As-S-Se evaporated films, giant photocontraction, mol. models 3−3004
$Hg_{3-\delta}AsF_6$, long-wavelength excitations 3−13368
$Hg_{3-\delta}AsF_6$, magnetoresistance calcs. *(Russian)* 3−8513
In-As-O system, condensed phase diagram 3−4021
KH_2AsO_4:AsO_4^{4-}, electron spin-lattice relax. at ferroelec. transition 3−23791
Te-As_2Te_3-$Tl_5As_2Te_3$ system, phase diagram anal. 3−58103
Tl_3AsS_4, Raman study of small symm. distortions 3−3732
UAs_xSe_{1-x}, mag. phase diagram 3−18895

articulation (speech) *see speech*

artificial hearts *see artificial organs*

artificial intelligence
see also automata theory; biocybernetics; brain models; learning systems; neural nets; self-adjusting systems
brain, dynamic model, neuronal oscillators in cerebral cortex, chaotic behaviour 3−9537
computer vision, book 3−6908
EEGs quantitative analysis, artificial intelligence methods 3−34999
underground geology, LITHO expert system *(French)* 3−39849
visual perception, distance determination to visible body points, parallax effect 3−19712
visual perception by machine, machine perception, book 3−15098

artificial kidneys *see artificial organs*

artificial limbs
above-knee amputees, computer simulation for stump loading prediction, prosthesis fitting appl. 3−53714
above-knee prosthesis, improved, with functional versatility 3−35030
history and development of artificial limbs 3−10549
knee with controllable resistance moment, curved surface design *(Chinese)* 3−48447
myoelectrically controlled hand, man-prostheses interactive system 3−9787

artificial organs
see also prosthetics
adaptive control system for the artificial heart 3−15287
alaryngeal speech, electroacoustic anal. and enhancement, book 3−10526
cardiac bypass through subphrenic pumping device implantation *(German)* 3−24912
conference, Sheffield, England (Sep. 82) 3−40310
conference on health care engng., Philadelphia, USA (Sept. 1982) 3−10517
copulsating left heart assist system 3−4687
electrohydraulic left heart assist system 3−4686
heart, total, elec. motor driven 3−15285
heart system, development 3−53887
Jarvik artificial heart, peripheral instrumentation 3−15286
kidney, laboratory exercise for medical students 3−5551
sinus artificial heart control system 3−4679
ultrafiltration monitor for haemodialysis research 3−48448
ventricular kinetics of a magnetically actuated artificial heart 3−4688

artificial satellites
1963-27A, orbit analysis giving upper atm. density near 400 km 3−5005
1965-11D spin drag data used for upper atm. density determ. 3−44600
1974-70A, inclination used to determine lumped coeffs., near 15th order orbital reson. 3−10190
1974-70A, orbital anal. and drag coeff. 3−5087
AE-E, surface glow, OH Meinel band system possibility 3−59147
American photographic observation satellites *(French)* 3−39985
ANS satellite, mean daily motion anal. rel. to upper atmosphere density 3−59136
anti-satellite weapons, arms control prospects 3−15827
Ariel-6 satellite, meas. of soft X-ray reflectivity of paraboloidal mirrors 3−59214
arms control verification, international satellite monitoring agency proposal 3−15825
Atmosphere Explorers, visible glow induced by spacecraft-environment interaction 3−59146
ATS-1 and PEACESAT, educational satellite application for Australia 3−40339
AUOS-S, X-ray photometer FH, proportional counter construction and operation *(Polish)* 3−45258
BASIC program to predict satellite positions 3−39987
charging environment, worst case estimation 3−15814
Coastal Zone Colour Scanner on Nimbus 7, failure of active calibration 3−5092
constraint problem of three bodies in noninertial reference system, math. model 3−71
contamination simulation facility with in situ IR analysis capability 3−10184
COS-B mission, gamma-ray astron. obs. appl. 3−5086
crisis monitoring appls. 3−15824
despin through unity inertia ratio 3−48794
dielectric materials for satellites, exposed to electrons, charging and discharging characts. 3−40002
Disco, solar interior and heliospheric structure observatory 3−39990
dosimeter with PMOS transistor detectors, characts. 3−54235
Dynamic Explorer, design and construction of etalon for Fabry-Perot interferometer 3−15804
Dynamics Explorer, performance of etalon for Fabry-Perot interferometer 3−15805
Dynamics Explorer satellites mission 3−15737
Earth flux radiation balance meas., using self-calibrating cavity radiometers 3−5090
Earth observation satellite, control using momentum wheel and offset thrusters 3−15811
Earth pole position biases computation from Navy Navigation Satellites, gravity field effects 3−29819
earth-observation satellites, datastream and data interpretation *(Dutch)* 3−39942
Earth-observation satellites, instrumentation aspects, optical, thermal-IR and microwave obs. *(Dutch)* 3−39941
Earth-pointing structures with hybrid control system, dynamics 3−48796
electric charging of geostationary satellite in eclipse 3−44639
electric reference pot. established by nearly passive technique 3−15812
ESA programmes under development and operations 3−39995
geostationary satellite orbital geometry and coverage area variations due to the attitude control errors 3−54214
geosynchronous environment for severe spacecraft charging 3−59178
glossary of space terms 3−35785
gravitation waves searches in cosmic laboratory, systems of artificial satellites *(German)* 3−35430
gravitational constant determination in cosmic laboratory, systems of artificial satellites *(German)* 3−35430
gravity gradient compensators for orbital expts., rel. to existence theorem for absolute geodetic singularities 3−39770
Heat Capacity Mapping Mission for thermal inertia mapping 3−39926
Heat Capactiy Mapping mIssion for thermal inertia mapping 3−39926
high altitude gravity gradient satellite, parametric excitation of attitude motion by solar radiation press. 3−48792
Himawari 2, geostationary meteorological satellite, specifications *(Japanese)* 3−10185
Himawari remote sensing data processing system *(Japanese)* 3−44553
ice sheet topography meas. technique using satellite laser altimetry 3−25237
induction from interaction with ionospheric plasma 3−15810
Infrared Space Observatory, cooled telescope with photometric and spectroscopic instruments 3−40033
Infrared Space Observatory, cryogenically cooled telescope and instrumentation 3−30148
Intercosmos-Bulgaria 1300 satellite, meas. equipment for electric and mag. fields in ionosphere and magnetosphere 3−20197
Interkosmos, data obtained from orbit anal. 3−10181
Interkosmos 18 and Magion, comparison of trajectories of mother and daughter satellites 3−20198
IR astronomy satellite focal plane assembly, electrically insulated thermal joint 3−40006
IRAS, description and prospects 3−54215
IRAS, spacecraft system 3−35407
Kapton breakdown, dielectric discharges, RF characts. 3−38760
kinematic equations, solution error eqns. derivation using quaternions, 3−35413
LAGEOS orbit, effect of Earth refl. sunlight 3−39984

artificial satellites continued
Landsat data, reception by ground station in Australia 3—44594
Landsat-D, upgrading of Earthnet stations for multispectral scanning and thermatic mapping data 3—39989
laser beam ranging *(Japanese)* 3—25245
laser ranging using finder at Metsahovi Space Geodetic Station of Finnish Geodetic Institute 3—35409
Magellan, far- and extreme-UV spectrographic observatory with real-time observer interaction 3—39992
Magion and Interkosmos 18, comparison of trajectories of daughter and mother satellites 3—20198
magnetic control systems for Space Telescope 3—48795
main problem, Asknes' intermediary 3—25274
Mapsat, automated mapping satellite system description 3—10186
Mapsat, detectors tracking and description 3—10187
'Meteor' satellites, test results for methods of determining water surface temp. 3—9933
meteorological satellite data for operational forecasting 3—44642
military applications, book 3—10525
military space technology and its implications 3—15820
monitoring, image anal., sensor technology 3—15663
Mylar, satellite dielectrics, ionisation induced breakdown and cond. 3—44637
Mylar breakdown, dielectric discharges, RF characts. 3—38760
NASA's Space Telescope project, collaboration of ACEC *(French)* 3—44667
national and international space programmes, conf., Rome, Italy (March 1982) 3—25
natural radiation environment inside spacecraft 3—40003
navigation satellite systems, characts., potential, military appls. 3—15818
nodal period of artificial satellites, perturbations caused by terrestrial IR radiation press. 3—35403
Ondrejov laser radar for satellite dist. determ., digital controlled time gate 3—10219
optical alignment measurements at Goddard Space Flight Centre 3—15803
orbit intersection points with planet conical shadow 3—20199
ORBIT-1 program for optimal allocation of geostationary satellites in orbit *(Japanese)* 3—40004
orbital ballistic missile defence, international manning for arms control 3—15821
orbital dynamics and obs. strategies for agriculture 3—10188
orbital inclination, effect of rotating oblate atmosphere 3—48799
orbital motion, effect of oblate rotating atmosphere with symm. diurnal effect 3—5085
orbital perturbations due to solar radiation pressure 3—44636
orbits, air drag perturbation of satellite in orbit with small eccentricity *(Chinese)* 3—39986
POINTS astrometric satellite used to test gravit. theories 3—10714
positive dielectric/negative metal configurations, enhanced electron emission 3—39997
Prognoz 5 satellite, multi-temperature anal. of solar flare hard X-ray spectra 3—59288
RADARSAT—Canada's program for operational remote sensing 3—5088
radioaltimeter accuracies due to atmospheric propag. effects 3—25275
reconnaissance satellites, military implications 3—15816
remote sensing, microprocessor signal processing *(Spanish)* 3—39939
remote sensing by synthetic aperture radar, quality assessment procedures 3—25220
remote sensing optical sensors and techniques, conf., May 1982, Arlington, USA 3—40312
remote sensing using total-power radiometers, calibration and sensitivity 3—25221
resonance rotation, appl. of elliptical restricted three-body problem 3—20211
rosette constellations of satellites, comments 3—35406
rotational motion of satellite with electrified shield, secular var. 3—48793
second-generation nuclear weapons, orbital use 3—15823
SIRIO-1 time synchronisation expt. 3—25854
solar array, charging and discharging characts. during geomagnetic substorm 3—39474
solar power satelite microwave beam impact on ionosphere 3—39946
solar power satellite, simulation of D and E-region high-power microwave heating using HF ionospheric modification expts. 3—10137
solar power systems, corridor effect in atmosphere resulting from launching 3—48213
solar power systems, environmental impact of launching vehicles on middle atmosphere 3—48212
Soviet space programme, military components identification 3—15817
Space Shuttle X-ray polarimeter for solar flares obs. 3—20244
Space Telescope design and capabilities 3—59218
spacecraft gravity gradiometer using supersensitive accelerometer 3—30106
spacecraft in LEO, surface charging using system-oriented computer code 3—39996
spinning satellite gravitational orientation, dissipative mag. moment effect 3—35404
SPOT, optimum spectral bands selection 3—10189
submillimetre-IR orbiting observatory, telescope and accessories 3—30195
synchronous satellites, quasistationary stable circular orbits 3—15807
synthetic battery cycling techniques application in space vehicles 3—48140
Teflon, satellite dielectrics, ionisation induced breakdown and cond. 3—44637
two-body problem, classical case with drag, analytical soln 3—30156
weather satellites, next generation microwave sounder 3—30104
X-80, satellite for X-ray astronomy, description and mission 3—39993
Li cells and energy storage state-of-art, applications in interplanetary probes *(French)* 3—48141
$Ni-H_2$ batteries development for space vehicles 3—48137
$Ni-H_2$ bipolar battery systems for space vehicles 3—48138
$Ni-H_2$ high energy density battery system for communication satellites 3—48139

asbestos
atmospheric diffusion rates for long crocidolite and chrysotile fibres 3—39873
fibre, Fourier-transformed IR photoacoustic spectroscopy 3—13345
fibres, mag. props., basis for airborne conc. anal. 3—39759

asdic *see sonar*

aspherical lenses
see also aberrations
Cassegrain system, view field aspherical plate corrector, design and characts. *(Chinese)* 3—59217
computer holograms for optical testing 3—6924
conical lens, complex amplitude distrib. using transmission function 3—22186
deep aspheric wavefront testing using electron-beam written computer-generated holograms 3—6925
diamond machining of IR refractors utilising two-axis machine tool technology 3—7231
diamond turning, single point process, of IR optics 3—7234
diamond turning impact in optics industry 3—7235
diffraction lenses in $LiNbO_3$ waveguides, fabrication and performance 3—17592
Fresnel optical systems used in laser radiation and reception *(Rumanian)* 3—12277
Fresnel systems, ray tracing 3—46154
geodesic lenses, design modification and aberration error analysis 3—56352
grating demultiplexers with printed geodesic lenses in glass 3—42033
high resolution optics obtained by appl. of phase correction patterns to surface 3—42043
holographic optical elements, flat, aspheric, optimum phase transfer function 3—36963
laser beams, high power, singlet aspheric lens for precision multi-wavelength focusing 3—50728
optical systems consisting of large axisymm. lenses with aspherical surfaces, design and calc. 3—1742
refractive surface replication using UV curing cements 3—50799
solar concentrators, symm., ideal and Lambertian 3—7109
testing diamond turned aspheric optics using computer-generated holographic interferometry 3—7111
testing using Talbot interferometer with computer generated gratings 3—36077
Ta_2O_5 Luneberg lens development 3—17641

association
see also association of liquids; associative ionisation
acetaldehyde, hydroboration reaction paths, MNDO calcs. 3—1248
acetone, hydroboration reaction paths, MNDO calcs. 3—1248
acetone, liq., mol. interactions, reorientational motion, ^{17}O NMR chem. shifts and linewidths studies 3—45969
acridine, excited state, red edge excitation and proton assoc. 3—11815
acrylonitrile-styrene copolymers, modification by 1,3-dipolar cycloaddition 3—19520
acrylonitrile-vinylidene chloride copolymers, modification by 1,3-dipolar cycloaddition 3—19520
2-aminopyridine, dimer formation energy, PMR study *(Japanese)* 3—36680
aromatic intramolecular exciplexes formation, electronic structures 3—4282
1-azacarbazole-7-azaindole heterodimers, excited-state double H^+ transfer 3—24493
4-bromobutyric acid solns., pre-micellar association, IR and Raman spectra 3—1352
$C\ O_2^+ + 2O_2$, three-body assoc. reaction, temp. depend. study 3—24498
carbonyl bases, protonation energies, geom., basis set and correl. energy depend. 3—39355
cellulose diacetate in 2-butanone, light scatt. meas., theta temp., solubility, association, virial coeff. 3—3748
chemical species stabilisation energies 3—39403
[2.2.2] (1, 2, 4)-cyclophane and methylated derivatives, complexation with π-acceptors 3—53378
α,ω-diamino acids, protonation energies, through-space electrostatic field effect 3—48055
electrolytes, symmetrical, vol. change on ion-pairing 3—48069
gas recombination, catalytic device with self-limiting behaviour *(German)* 3—24572
graphite, polycrystalline, macrostructural charact. by electroconductivity and magnetoresist. 3—43205
Hector's base series, model cpds., adduct form., isomerism, MNDO calcs. 3—17220
1-imino-deca-2,4,6,8-tetranenes, polyenic Schiff bases, struct. changes induced by hydrogenation ab initio calcs. 3—4265
1-isoquinolone, lowest excited singlet state, prototropic equilib., fluorescence study 3—53364
liquids, chemical reactions; dipolar nucl. spin relax. 3—45981
methyl+methyl, pot. energy hypersurface, force consts., SCF theory 3—53367
mixed dimers, association, H bonds, empirical pot. study 3—6748
molecular complex formation, electron density redistrib. anal. 3—14855
molecular complexes, assoc. const., shift, NMR chem. shift meas. 3—50432
nickel lactate complex form., kinetics, conductance correl. anal. 3—53368
nickel trichloroacetate+aromatic amines, attachment products, X-ray cryst. struct. obs. 3—22877
olefins, electrophilic addition, substituent effects, ab initio MO calcs. 3—55803
oxides, solubilization and coulomb complexing in halide melts 3—47117
phenol antioxidant, affinity for reagents in hydrocarbon media, low temp. dielectric relaxation study 3—4283
phthalocyanines, protonated, struct., IR spectroscopy study 3—48068
polyacetylene, doping by reaction with HF, elec. cond. and IR spectra study 3—18325
proteins, folding and association 3—9545
recombination processes in atomic and molecular physics 3—32166
Schiff base, nonionised, complexes Zn^{2+}, Cd^{2+} and Hg^{2+} cpds., synthesis, osc. obs. 3—6647
stimulated recombination of atoms in beams 3—1313
trimethyl-4,5,6 pyrimidone, crysts. and solns., IR and Raman spectra, k halides complexation study *(French)* 3—52796
trimethyl-4,5,6 pyrimidone chlorohydrate, crysts. and solns., IR and Raman spectra, k halides complexation study *(French)* 3—52796
trimethylphosphine oxide interaction with proton donor, quantum-chem. study of H bond 3—45835
Van der Waals potentialities, spatial distrib. *(French)* 3—46045
$Al_2(SO_4)_3-FeSO_4-H_2O$, mean ionic activity coeffs., double salt form. *(German)* 3—53381

association continued
$C^+ + Cn \rightarrow C_{n+1}^+$, n-depend. of reaction rate in interstellar space 3–30443
CO, coordinated, hydride nucleophilic attack, ab initio SCF pot. energy surfaces 3–11682
$COH^+ + CO \rightarrow (CO)_2H^+$, 3-body ion assoc. reactions, chaperone participation 3–44043
CS_2 in Ar matrix, photolysis, S_2 form., fluoresc. and recombination emission spectra 3–1408
$Cl^- + Cl_2 \rightleftarrows Cl_3^{-*}$, dynamics, quasiclassical trajectories calcs. 3–58412
Cu II porphyrins, adduct form. reactions, ESR spectrosc. obs. 3–3517
$Cu_{0.9}Zn_{0.1}SiF_6.6H_2O$, phase transition, effects of heating *(Russian)* 3–18454
$F^- + Ar^+(Ne^+)$, mutual neutralisation, Landau-Zener approx. 3–41673
$F^- + H(D)$, associative detachment reactions, product vibr. state distrib. 3–44051
H, recombination rate after electron impact dissoc. 3–6799
HCN, precursors in oligomerisation, $(HCN)_2$ isomers 3–45828
HF+methyl cation, condensation reaction, ab initio MO calcs. 3–45820
H_2O vapour, total emissivity, dimerisation effect on IR absorpt. 3–55934
H_2O+methyl cation, condensation reaction, ab initio MO calcs. 3–45820
$(H_2O)_n$ clusters, gas-phase, struct. investig. 3–17394
H_2S+methyl cation, condensation reaction, ab initio MO calcs. 3–45820
$LaFeO_3$ crystals, hydrothermal synthesis *(Japanese)* 3–39024
methaniminyl ion+N_2 clustering, appl. to Titan atm. 3–24503
$N_2 + N_2H^+ \rightarrow (N_2)_2H^+$, 3-body ion assoc. reactions, chaperone participation 3–44043
$N_2^+ + 2N_2$, reaction rate consts., ion mobilities temp. depend ion drift tubes study 3–39367
$N_2^+ + 2N_2$, three-body assoc. reaction, temp. depend. study 3–24498
NH_3+methyl cation, condensation reaction, ab initio MO calcs. 3–45820
Na_2^+ form. and dissoc. by ruby laser radiation, in Na at. beam 3–48074
$Ne^* + CO$, $CO^+(A^2\Pi_i)$ form. 3–58415
Ni/metal thin film couples, room temp. interactions 3–23108
$O + CS_2$, form. of OCS_2, pot. energy surface, reaction mechanism 3–6542
$O_2^+ + 2O_2$, reaction rate consts., ion mobilities temp. depend ion drift tubes study 3–39367
O_3 production from O_2, non-mass-dependent isotope effect 3–39391
Rb, excited and resonant states, Penning and associative ionisation 3–6775
SiO_2, hydroxyl coated, struct. study by IR and mass spectroscopy 3–48092
$Si(OC_2H_5)_4$-H_2O-C_2H_5OH solutions, viscosity charge and spinnability on hydrolysis 3–38113
Sn chalcogenides, mechanochemical synthesis, Mossbauer effect study 3–43464
TaS_2-2H intercalates, hyperfine spectroscopy, charge transfer, reaction kinetics 3–23342
$WV_2O_{7.5}(W_{0.2}V_{2.8}O_7)$ positive electrochem. electrodes, Li insertion reactions study 3–44115

association factor (liquids) *see association of liquids*

association of gases *see association*

association of liquids
see also colloids
acetic acid, liq. struct., neutron diffr. study 3–27817
alloys, binary, free enthalpy of mixing, association and vol. contraction 3–51807
amphiphilic copolymers in aq. solns., fluoresc. quenching, kinetic model for Stern-Volmer-type plot 3–3777
associated, linear and circular dichroism in soln. 3–1401
tert-butyl hydroperoxide, solvent prop. effects on OH band shift in IR spectrum 3–52788
3-butyn-2-ol and 2-butyn-1-ol, dielec. dispersion in dil. soln. 3–47598
chlorophyll, associated, linear and circular dichroism in soln. 3–1401
N,N-dimethylformamide in benzene, dioxane and CCl_4 solns., dielec. relax. and dipole moment, microwave absorpt. study 3–19045
glass-forming systems, phase diagrams calc., regular associated soln. theory 3–23019
isopropanol-d_6-Lewis acids coordination, IR spectra study *(French)* 3–19510
nitrobenzaldehyde anion radicals, formyl group restricted rot., EPR study 3–50544
nitrobenzene, dil. soln. in benzene, dipolar, assoc., dielec. obs. 3–44038
PMMA, syndiotactic, dil. soln., NMR spectroscopic, osmometric and viscometric study of association 3–2373
poly(2-naphthyl methacrylate) soln., excimer form., fluoresc. study 3–28885
propargyl alcohol (bromide), dielec. dispersion in dil. soln. 3–47598
protein solution, dynamics and time-averaged chem. pot., role in oligomer assoc. 3–9544
surfactant micelles adsorbed on polymer mol. in water, organisation, neutron scatt. study 3–2930
TCNQ-acetonitriles soln., association equilibria 3–24489
vapour-liquid equilib. calc. by eqn. of states, for associated systems 3–18429
$CaCl_2$, aq. soln., ionisation consts. assoc., behaviour and elec. cond. 3–33474
Cd-Te binary system, regular associated soln. model 3–7896
Hg-Te binary system, regular associated soln. model 3–7896
I, atom recombination in liq. state, diffusion theory 3–44049
In-Te, elec., mag., optical, thermodynamic, and struct. props. 3–56805
$MgCl_2$, aq. soln., ionisation consts. assoc. behaviour and elec. cond. 3–33474
$Mg(NO_3)_2$ aq. solns., polarised Raman spectra, Fourier transform. and band component anal. 3–14286
$NH_3(ND_2H)$ liquid struct., IR and Raman spectroscopic inference 3–34089

associative ionisation
radiatively excited atoms, polaris.-depend. assoc. ionis. 3–26818
semiclassical theory of collisional ionization 3–56037

associative storage *see content-addressable storage*

astatine
see also nuclei with ......
No entries

astatine compounds
No entries

ASTERISK spectroscopy *see Raman spectroscopy*

asteroid satellites *see planetary satellites*

asteroids
9 Metis, no evidence for satellite from direct visual obs., (1982 September 21 to October 1) 3–10249
1982 RA, fast-moving asteroid, improved orbital elements and ephemeris, (1982 November 27 to 1983 May 26) 3–20279
1982 RB, identification, improved elements and ephemeris 3–10250
1982 RB, precise posns., elements and ephemeris (1982 Sept.-Dec.) 3–5199
1982 TA, fast-moving asteroid, UBV photometry, improved orbital elements and ephemeris 3–10248
1982 TA, fast-moving asteroidal object, discovery, precise positions, orbital elements and ephemeris 3–5200
1982 XB, fast-moving asteroid, precise positions (1982 December 17 to 20) 3–30289
1982 XB, fast-moving asteroid, UBV photometry, precise positions, orbital elements and ephemeris 3–30291
1982 XB, fast-moving asteroidal object, discovery, precise positions, orbital elements and ephemeris 3–25365
1982 XB, fast-moving asteroidal object, precise positions, improved orbital elements and ephemeris 3–30287
1982 YA, fast-moving asteroid, precise positions, orbital element and ephemeris 3–30290
1982 YA, fast-moving asteroidal object, discovery and approximate positions, (1982 December 21 to 23) 3–30288
1983 Ephemerides of Minor Planets *(Russian, English)* 3–16101
330 Adalberta, nonexistence, mistaken obs. of two galactic stars 3–35501
angular momentum/mass relation 3–59182
Apollo asteroids, contrib. to impact cratering of planetary surfaces 3–29922
136 Austria, rot. period and light curve from UBV photometry 3–40064
bibliography 3–54601
catastrophic collisions between asteroids, effects on struct. and rot. 3–59247
CCD scanning of Apollo-type objects 3–25368
Ceres, brightness temp., SHF flux densities and positions 3–30285
2060 Chiron, orbital perturbations rel. to masses of Saturn and Uranus *(German)* 3–54275
CMEU-type asteroids, unusual rotational props. rel. to struct. and origin 3–5196
comet close approach predictions, calc. technique 3–30223
Earth-crossing asteroids, orbits nature 3–25367
electrostatic charging of small and intermediate-sized bodies in solar system, implications for asteroids 3–15838
Eos family, model of complete fragmentation of parent body 3–59248
433 Eros parallax from 1930-1 programme, errors 3–5201
Eucrite Parent Body, implications of partitioning of P between metal and silicate phases 3–48514
families classification 3–25361
1689 Floris-Jan, CME or U asteroid, rot. period from UBV obs. 3–25360
19 Fortuna, occultation of AGK3+11°201, 1983 February 3, time and duration meas. 3–48800
77 Frigga, light curve obs. 3–20282
1620 Geographos, ephemeris, (1983 March 29 to October 13) 3–54268
1620 Geographos, new orbital elements and ephemeris, (1983 February 25 to March 29) 3–44697
944 Hidalgo, orbital perturbations rel. to masses of Saturn and Uranus *(German)* 3–54275
Hilda-type bodies proper inclination and eccentricities, use of four-body problem 3–25362
Hilda-type orbits, characteristic parameters 3–10246
238 Hypatia, rot. period and light curve from UBV photometry 3–40064
1566 Icarus, perihelion precession, deviation from Einstein prediction due to Sun quadrupole moment meas. 3–49249
impact hypothesis for Cretaceous-Tertiary boundary, implications of clay mineralogy of boundary clay 3–58971
inclinations, mean and median, variation with increase in sample 3–10247
Jupiter encounter, effects on orbit 3–25374
22 Kalliope, pole coords, visible obs. 3–40063
22 Kalliope, UBV photometry of M-type asteroid 3–30293
Kirkwood gaps in asteroid belt, nature and origin 3–35500
Koronis family, model of complete fragmentation of parent body 3–59248
125 Liberatrix, CMEU asteroid, photometric obs. rel. to rot. period and lightcurve amplitude 3–5196
light curve depend. on shape and orientation, model 3–20281
lost minor planets, search for twins 3–44699
M-type asteroids, unusual rotational props. rel. to struct. and origin 3–5196
9 Metis, no evidence for satellite from direct visual obs. 3–25364
9 Metis, no evidence for satellite from photographic obs., (October 1982) 3–35498
93 Minerva, occultation of BD+29°579, 1982 November 22, time and duration meas. from Pic du Midi 3–25363
Minor Planet Circulars 7279-7394, precise posns., elements, ephemerides, and new nos. 3–15867
minor Planet Circulars 7395-7514, precise posns., elements, ephemerides, new nos. and names 3–25366
minor Planet Circulars 7515-7628, precise posns., elements, ephemerides, new nos. and names 3–54269
Minor Planet Circulars 7629-7724, precise posns., elements, ephemerides and new nos. 3–54270
Minor Planet Circulars 7725-7790, precise positions, elements, ephemerides, new nos. and names 3–59249
occultations of stars fainter than AGK/SAO catalogues limits at 1983 apparitions 3–59245
orbit resonances use for determining masses 3–25369
orbital eccentricities of minor planets, freq. distrib. 3–30286
orbits, effect of planetary perturbations and minor planets in cometary like orbits *(Polish)* 3–48846
orbits, stabilising and destabilising factors 3–20213
Pallas, brightness temp., SHF flux densities and positions 3–30285
33 Polyhymnia, rot. periods, amplitudes and multiple scatt. factor, UBV obs. 3–35497
positional observations, meas. during August and September 1981 with GPO telescope at ESO, Chile 3–5197
positional observations, results obtained at Cerro Calan Observatory (1978 to 1980) 3–40066
positions of 23 asteroids (1978-1979) from ESO, La Silla, Chile 3–25358
positions of selected minor planets (1980 to 1981) 3–5198

asteroids continued
- positions of seven asteroids (April 1979) from ESO, La Silla, Chile 3−25359
- positions of small asteroids, meas. during September 1978 with ESO Schmidt telescope 3−44696
- positions used for catalogue corrections, correl. with FK5 equator/equinox, determ. as FK4 corrections 3−5147
- precise positions, obs, during (1981) 3−40065
- precise positions in 1981 from Sydney Observatory obs. 3−44698
- 16 Psyche, UBV photometry of M-type asteroid 3−30293
- radiometric scale calibration, use of occultation diameters and IR photometry 3−35452
- rotation, phase relations and opposition effects *(Polish)* 3−48845
- rotation of asteroids, appl. of planetary axial rot. theory 3−35499
- rotational properties of 42, 48, 93, 105, 145 and 245, obs. 3−15866
- S- and C- type objects, distrib. of average motions 3−30292
- 386 Siegena, rot. periods, amplitudes and multiple scatt. factor, UBV obs. 3−35497
- spectral reflectance determination for faint asteroids, use of eight-colour photometric system 3−30219
- statistical analysis of complete set of 3886 asteroids 3−20283
- Themis family, model of complete fragmentation of parent body 3−59248
- 88 Thisbe diameter from occultation of SAO 187124, visible obs. 3−59244
- triaxial bodies, internal stresses 3−35495
- Trojans, orbit anal. 3−20284
- 375 Ursula, occultation of BD+38°542, visible obs. 3−20278
- variable asteroids, visible obs. *(Chinese)* 3−59246
- VJHK colorimetry of remote comets, asteroids and satellites, implications for surface materials 3−59266
- 690 Wratislavia, occultation of BD+24°522, 1982 November 14, timings from Alberta, Canada November 14 3−20280

astigmatism *see vision defects*

astroarchaeology
- archaeological implications of megalithic sites 3−35469
- astronomical site interpretation, archaeological problems 3−35464
- Barbrook stone circles, survey of astronomical alignments 3−35471
- Callanish complex, more lunar lines studied 3−35473
- Cerberus Slab of Hatra, representation of astronomical events 3−54263
- central Europe, Neolithic sites, orientations 3−35476
- Fajda Butteu, New Mexico, lunar markings at solar site 3−35480
- SW Ireland, stone alignments tested 3−35474
- Kintraw site, midwinter solstice sightline disputed 3−35472
- Mayan archaeoastronomy 3−35478
- Mayan Venus studies at Bonampak, S Mexico 3−35479
- megalithic astronomy, statistical method and tests, requirements 3−35463
- megalithic sightlines, site similarity suggestions 3−35467
- New World archaeoastronomy, conf. 3−30566
- Old World archaeoastronomy, conf. 3−30565
- N Poland, alignments search at three stone rings 3−35475
- site examination in British Isles, methodology 3−35470
- standing stones, astron., significance and solar calendar 3−35466
- statistical approach to data 3−35465
- stone circle geometries, information theory appl. 3−35477
- Stonehenge, alignment confidences 3−35468

astrobiology *see extraterrestrial life*

astroblemes *see meteorite craters*

astrometry
- 1665 MHz and 1667 MHz OH masers, relative positions and mag. fields, UHF obs. 3−25631
- 1982 RB, identification, improved elements and ephemeris 3−10250
- 1982 RB, precise posns., elements and ephemeris (1982 Sept.-Dec.) 3−5199
- 1982 TA, fast-moving asteroidal object, precise positions, (1982 October 11 to 13) 3−5200
- 1982 XB, fast-moving asteroid, precise positions, 1982 December 19 to (1983 January 6) 3−30291
- 1982 XB, fast-moving asteroid, precise positions (1982 December 17 to 20) 3−30289
- 1982 XB, fast-moving asteroidal object, discovery and precise positions, (1982 December 14 to 15) 3−25365
- 1982 XB, fast-moving asteroidal object, precise positions, 1982 December 16 and 17, orbital elements and ephemeris 3−30287
- 1982 YA, fast-moving asteroid, precise positions, 1982 December 21 to 23, orbital elements and ephemeris 3−30290
- Σ2367 AB, evolved binary system, orbital elements from visual and spectroscopic obs. 3−20435
- ADS 11060, G1 V triple star, visual-spectroscopic binary orbit 3−10401
- ADS 1360 and 3082, visual binaries, ephemerides (1980 to 2000), orbits and masses *(French)* 3−59389
- ADS 3230, visual binary star, two possible solns. for orbital elements *(French)* 3−5343
- ADS 4236, ADS 5515, visual binary stars, astrometric obs. and orbits *(French)* 3−5344
- ADS 7780 (β Leonis Minoris), visual-spectroscopic binary orbit 3−10401
- AGK3 catalogue rel. to SAOC catalogue 3−35458
- 94 Aquarii A, spectroscopic binary, visual orbit determ. from speckle interferometry 3−20434
- asteroid positions (1978-1979) from ESO, La Silla, Chile 3−25358
- asteroid positions (April 1979) from ESO, La Silla, Chile 3−25359
- small asteroids, positions, meas. during September 1978 with ESO Schmidt telescope 3−44696
- asteroids, positions obtained during August and September 1981 with GPO telescope at ESO, Chile 3−5197
- asteroids, positions of selected minor planets (1980 to 1981) 3−5198
- asteroids, precise positions during (1981) 3−40065
- asteroids, precise positions in 1981 from Sydney Observatory obs. 3−44698
- astrolab, photoelectric, automatic data acquisition *(French)* 3−25324
- Astrolabe of Santiago observations, (1977 to 1980) 3−44643
- atmospheric refraction, three-dimensional problem 3−25278
- atmospheric structure and astrometric refraction, 3-dimens. data from lidar probing 3−25254
- atmospheric turbulence and its effects on direction measurements 3−25208
- Besancon Observatory, fourth meridian catalogue of 670 F-type stars *(French)* 3−15855
- binary star, suspected, in Cygnus, precise positions, position angle and separation 3−35665
- binary stars, speckle interferometric meas. 3−5347

astrometry continued
- blue objects near north galactic pole, absolute proper motions *(German)* 3−35588
- 3C 395, Q50, milli-arc second struct. at 5 GHz 3−49050
- R Canis Majoris, short period Algol-type binary, distance, space motions and absolute parameters 3−48945
- Celestial Ephemeris Pole definition 3−24956
- Ceres, brightness temp., SHF flux densities and positions 3−30285
- CG 195+04 field, possible radio counterparts search and obs. 3−10482
- Coma open cluster, proper motions determ. 3−54464
- Comet 1983a, discovery and precise positions of possible comet (1983 January 5 to 9) 3−35542
- Comet Bowell-Skiff (1983c), discovery and precise positions, (1983 February 11 and 15) 3−44706
- P/Comet Bowell-Skiff (1983c), precise positions, 1983 February 15 to 20, orbital elements and ephemeris 3−44708
- P/Comet Bowell-Skiff (1983c), precise positions, (1983 February 20 and 21) 3−44709
- P/Comet Halley (1982i), confirmation of recovery, posns. and mag. 3−10268
- P/Comet Halley (1982i), precise geocentric positions (1982 October 16 to November 16) 3−25383
- P/Comet Halley (1982i), precise position, 1982 December 10, and approximate V-magnitude 3−30303
- P/Comet Halley (1982i), precise position and apparent visual magnitude (1983 January 14) 3−44704
- P/Comet Halley (1982i), precise position and V-magnitude, (1982 December 13) 3−48859
- P/Comet Halley (1982i), recovery, semi-accurate positions and magnitude, (1982 October 16) 3−5235
- P/Comet Pons-Winnecke (1983b), recovery, precise and semi-accurate positions (1983 January 12 to 20) 3−35544
- P/Comet Schorr (1918 III), improved orbital elements and search ephemeris 3−10263
- P/ Comet Shajn-Schaldach (1979 I), positions meas. during September 1978 with ESO Schmidt telescope 3−44696
- double stars, separation obs. (1980.0 to 1982.4) 3−59392
- extragalactic emission-line objects, accurate optical positions for University of Michigan lists I-IV 3−44845
- extragalactic reference frame connection with HIPPARCOS star catalogue 3−25344
- FK4 reference frame corrections from lunar occultations of stars 3−20205
- FK4 right ascensions, magnitude eqns. for southern stars 3−59232
- FK4/FK4Sup, fundamental data 3−5159
- FK5 approximate positions and proper motions from transform. from FK4 data 3−20204
- FK5 equator/equinox, determ. as FK4 corrections, correl. with catalogue corrections from mirror planet obs. 3−5147
- flare star in Pisces at $23^{h}29^{m}$, $-03°01'$, revised precise position 3−54384
- gamma-ray burst source, 1978 November 19, magnitudes and precise position for new optical candidate 3−25656
- glass circles, experiences at US Naval Observatory 3−10207
- gravitational theory testing, use of Viking mission and POINTS satellite 3−10714
- Greenwich Obs. Time and Latitude Service, Time Report (April to June 1982) 3−59183
- Greenwich Obs. Time and Latitude Service, Time Report (January-March 1982) 3−30150
- Greenwich Obs. Time and Latitude Service, Time Report (October-December 1981) 3−15831
- Hyd−21°64352, precise position rel. to revised prediction for occultation by Uranus II (Umbriel), (1983 March 25) 3−54286
- EX Hydrae, cataclysmic variable, precise X-ray position from Einstein Observatory obs. 3−40151
- hypersensitisation techniques on Kodak IIIa-J plates, for astrometry at Goethe Link Observatory 3−35447
- JPL ephemerides, DE200/LE200, orientation to dynamical equinox of J2000 3−15829
- Jupiter and Galilean satellites, astrometric positions (April 1979) from ESO, La Silla, Chile 3−25370
- latitude variations, periodogram of nearly diurnal vars. at Gor'kii 3−44382
- M15, globular cluster, positions, magnitudes and colours of stars 3−40206
- M82, knots accurate optical positions 3−10455
- Mark III VLBI for astrometry, geodesy and aperture synthesis 3−54258
- Markarian galaxies 1303 to 1399, accurate optical positions 3−10448
- meridian circle catalogues, effects of different sources of var. of latit. data 3−5093
- millisecond pulsar (1937+214), optical identification, precise position and magnitude 3−30408
- millisecond pulsar in 4C 21.53, discovery, precise position, period and period derivative, and dispersion measure 3−15936
- millisecond pulsar in 4C 21.53, precise radio position 3−30407
- Minor Planet Circulars 7279-7394, precise posns. for asteroids and six comets 3−15867
- minor Planet Circulars 7395-7514, precise posns. for asteroids and six comets 3−25366
- minor Planet Circulars 7515-7628, precise posns. for asteroids and 16 comets 3−54269
- Minor Planet Circulars 7629-7724, precise posns. for asteroids and six comets 3−54270
- Minor Planet Circulars 7725-7790, precise positions for asteroids and 16 comets 3−59249
- minor planets, positions obtained at Cerro Calan Observatory (1978 to 1980) 3−40066
- Miranda, orbit anal. from astrometric obs. 3−48854
- NGC 2244, young open cluster, membership from proper motion anal. and differential extinction 3−30436
- NGC 6087, open cluster membership from proper motion anal. 3−44809
- NGC 6334N, 1665 MHz and 1667 MHz OH masers, relative positions and mag. fields, UHF obs. 3−25631
- NGC 6494, open cluster, mass determ. from relative proper motion anal. 3−48966
- NGC 6709, open cluster, membership and proper motion dispersion 3−59411
- Non Aquilae 1982, precise position 3−35623
- Nova Muscae 1983, precise position 3−35630
- Nova Sagittarii 1982, precise positions and visual magnitudes, (1982 October 14 to 18) 3−5314
- Nova Sagittarii 1982, UV spectrum obs. and precise position 3−15926

astrometry continued
Nova Serpentis 1983, precise position and visual magnitude estimates, (1983 March 5 to 13) 3—59361
Pallas, brightness temp., SHF flux densities and positions 3—30285
Paris Observatory astrolabe time and latitude obs. (1981 January to December) *(French)* 3—15830
Phoebe, comparison between obs. and ephemeris *(French)* 3—35521
photographic positional observations of major planets, effect of photographic irradiation 3—44674
RR Pictoris (Nova 1925), precise positiona 3—35623
planetary systems, extrasolar, detect. via astrometric techniques 3—30416
Pluto, astrometric positions (1980 to 1982) from Torino Astronomical Observatory,Italy, ephemerides improvement 3—59262
polar motion and time data, immediate access to data files 3—4756
Praesepe, proper motion membership probabilities for 282 stars, colours and magnitudes 3—59410
protostellar OH masers, astrometry and spectral feature positions and mag. fields 3—5279
CP Puppis (Nova 1942), precise position 3—35623
T Pyxidis (Nova 1967), recurrent nova, precise position 3—35623
QSO 0836 714, milli-arc second struct. at 5 GHz 3—49050
radio source reference stars, precise positions in FK4 system 3—10404
radio sources, flat-spectrum, precise radio positions and optical identification 3—49041
radio sources, precise optical positions in FK-4 system and comparison of optical-radio reference frame 3—10472
radio sources from 5 GHz surveys, magnitudes and precise positions of optical counterparts 3—40277
radioastrometry using interferometers with ultralong baselines 3—40009
radiosources, astrometric observations from three observatories 3—30520
radiosources, optical posns. of benchmark sources 3—44863
radiosources, positions from Shanghai-Effelsberg VLBI experiment *(Chinese)* 3—59225
new red variable star in Aquila, precise position and light curve 3—30384
site selection 3—25321
SMC stars, 1975 equatorial coordinates for photoelectric UBVRI sequences in bar of SMC 3—5420
solar diameter studies, detect. of individual normal modes of oscill. in period range 2 hr to 10 min 3—54316
solar parallax from 433 Eros obs. 1930-1 programme, errors 3—5201
southern hemisphere radio/optical astrometric sources, precise optical positions 3—59491
star images measurement on pixel array, photometric and astrometric accuracy 3—59229
star positions, errors propagation 3—59185
stars, orbits and radial velocities from astrometric anal. 3—20206
stars, trigonometric parallax, systematic effects, comparison with spectroscopic and cluster parallaxes 3—30151
stellar parallaxes and proper motions, determs. from asterometric obs. 3—48887
steroid positions used for catalogue corrections, correl. with FK5 equator/equinox, determ. as FK4 corrections 3—5147
supernova in anonymous galaxy in Triangulum, discovery, precise position and photographic magnitude 3—20405
supernova in ESO 323-G25, discovery, precise position and photographic magnitude, (1983 January 13) 3—35642
supernova in NGC 1187, precise position 3—20405
supernova in NGC 5485, precise position 3—30398
time and latitude determ. and group corrections, effect of systematic errors *(Chinese)* 3—40008
Tokyo Astronomical Obs., Time and Latitude Bulletins (April to June 1982) 3—25277
Tokyo Astronomical Obs., Time and Latitude Bulletins (July to September 1982) 3—48802
new variable star in Orion, discovery, magnitude estimates and precise position 3—35628
vectorial astrometry (book) 3—54598
visual binary stars, astrometric obs., and orbits of three binary stars *(French)* 3—5344
visual binary stars, orbital elements and ephemerides (1980 to 2000) of 11 stars *(French)* 3—59391
visual binary stars observations, method of apodisation of telescope 3—44668
visual double stars, photographic measures, (January to December 1981) 3—40179
visual double stars in southern hemisphere, measures in 1981 3—5345
W3, OH masers 6 cm emission, origin and positron, SHF obs. 3—35689
white dwarfs, known and suspected, parallaxes and relative proper motions from astrometric studies 3—48946
Wor 19, visual binary star, astrometric obs. and orbit *(French)* 3—5344
X0459+034, type 1.5 Seyfert galaxy, X-ray, optical, radio props. and position 3—30527
X-ray sources, galactic, radio detections and optical counterparts, UHF obs. 3—35742
Hα emission line stars in galactic dark clouds 3—44675
OH masers and assoc. ultracompact continuum sources, UHF obs. 3—25582

astronautics *see space research*

astronomical catalogues
see also astrometry
Abell clusters of galaxies, complete X-ray survey by HEAO 1 satellite 3—54541
AGK3 catalogue rel. to SAOC catalogue 3—35458
Am stars, lists of photometric candidates obtained from Geneva m parameter 3—44676
B-type stars spectral line equivalent widths *(French)* 3—15856
Besancon Observatory, fourth meridian catalogue of 670 F-type stars *(French)* 3—15855
bibliographical card-catalogue of the IAP library 3—5150
Bibliographical Star Index 3—49
Case low-dispersion northern sky survey 3—48839
Coma cluster field, 6724 galaxies, magnitudes, colours, ellipticities and position angle 3—30241
cometary orbits, fourth edition 3—16098
double star catalogues, progress 3—5154
extragalactic emission-line objects, accurate optical positions for University of Michigan lists I-IV 3—44845
FK4 right ascensions, magnitude eqns. for southern stars 3—59232
FK4/FK4Sup, fundamental data 3—5159

astronomical catalogues continued
FK5 equator/equinox, determ. as FK4 corrections, correl. with catalogue corrections from mirror planet obs. 3—5147
flare stars in Orion, new discoveries from photographic obs. 3—25349
galaxies, Abastumani catalogue 3—5157
nearby galaxies, catalogue of IR magnitudes and H I vel. widths 3—44846
dwarf galaxies in M81/M82 group, catalogue and new photometric data 3—35717
HEAO A-2 soft X-ray source catalog 3—48838
HIPPARCOS star catalogue connection with extragalactic reference frame 3—25344
interstellar CO radial velocities towards galactic H II regions, catalogue 3—5148
IR data base and catalogue of IR obs. 3—5149
Kapteyn Selected Area 28, UV excess galaxies 3—35459
KONUS sources positions rel. to Venera 11/12 spacecraft position 3—35460
LMC stars, photoelectric UBV photometry *(German)* 3—5274
LMC WR stars 3—59233
meridian circle catalogues, effects of different sources of var. of latit. data 3—5093
Metacatalogue of galaxies, data retrieval 3—5156
nearby stars, data compilation for third catalogue 3—5158
nomenclature dictionary *(French)* 3—5167
North Galactic Pole A/F-type stars, designations and positions 3—35462
O-type stars, machine readable catalogue rel. to initial mass function for massive stars 3—30239
open star cluster-data cataloguing 3—5160
planetary nebulae and nuclei 3—5163
quasar candidates near A1139, A1775 and 1633+33, positions and magnitudes from CFHT blue grens obs. 3—59235
radio sources, extragalactic, source list and radio spectra from fast-scan survey at 4.755 GHz 3—48837
radio sources, provisional catalogue of radio positions rel. to comparison of optical-radio reference frame 3—10472
Revised Shapley-Ames Catalogue, luminosity classification of galaxies 3—20499
Shane-Wirtanen catalogue of galaxies, filamentary struct. in galaxy distrib. 3—35714
Skay Catalogue 2000.0, volume 1, stars to mag=8.0 3—16097
SMC star members, catalogue of 1975 positions, UBV photometry and spectral types 3—35461
Southern Reference System (SRS) catalogue, list of variable stars 3—30240
Soviet Center of Astronomical Data 3—5164
star catalogue file, optimized data retrieval 3—5134
stars, faint stars for fundamental catalogue extension using faint objects 3—20258
stellar data retrieval for satellite attitude determ. 3—5138
stellar designations, standard list 3—5364
stellar groups, progress report 3—5153
stellar identifications 3—5151
stellar radial vels., bibliographic catalogue *(French)* 3—5161
stellar visible spectrophotometry, catalogues comparison and reduction functions to single system 3—40116
Sun, sunspot groups at heliographic latitude ≥40° (1874-1976) 3—10231
supergiant stars, late type, in LMC, detect. and BVR photometry 3—44677
UK 1.2 m Schmidt Telescope plate catalogue, problems 3—5152
UV stellar objects 3—30242
X-ray galaxy clusters, catalogue from HEAO 1 survey of complete Abell catalogue 3—54541
C stars at galactic centre and anticentre, spectral obs. 3—54407
H II regions, new catalogue of optical regions 3—5162
H II regions in barred spiral galaxy NGC 1313, catalogue rel. to ionised gas morphology 3—44678
H II regions in spiral galaxy NGC 1566, obs. 3—10458
Hα emission line stars in galactic dark clouds 3—44675
Hα emission objects within area centered on λ Orionis OB association 3—5367

astronomical ephemerides
1982 RA, fast-moving asteroid, improved orbital elements and ephemeris, (1982 November 27 to 1983 May 26) 3—20279
1982 RB, identification, improved elements and ephemeris 3—10250
1982 RB, precise posns., elements and ephemeris (1982 Sept.-Dec.) 3—5199
1982 TA, fast-moving asteroid, improved orbital elements and ephemeris (1982 October 18 to December 7) 3—10248
1982 TA, fast-moving asteroidal object, orbital elements and ephemeris, (1982 October 8 to November 7) 3—5200
1982 XB, fast-moving asteroid, orbital elements and ephemeris, (1983 January 6 to March 27) 3—30291
1982 XB, fast-moving asteroidal object, improved orbital elements and ephemeris (1982 December 23 to 1983 January 10) 3—30287
1982 XB, fast-moving asteroidal object, orbital elements and ephemeris, (1982 December 17 to 27) 3—25365
1982 YA, fast-moving asteroid, orbital elements and ephemeris, (1982 December 7 to January 16) 3—30290
1983, ephemerides and event calendar for Belgium *(French)* 3—30567
1983 Astronomical Almanac 3—41
1983 Ephemerides of Minor Planets *(Russian, English)* 3—16101
1983 observer's handbook, RAS Canada 3—16099
ADS 1360 and 3082, visual binaries, ephemerides (1980 to 2000), orbits and masses *(French)* 3—59389
VY Aquarii, recurrent nova, recurrence period and prediction of outburst in (1984) 3—25448
V1343 Aquilae (SS 433), ephemeris for short-period components in relativistic radial vels. 3—54375
AD Bootis, eclipsing binary, new orbital period and ephemeris for primary minimum 3—54435
TU Camelopardalis, β Lyrae star, eclipse times and ephemeris rel. to noncircular orbit 3—35662
AZ Camelopardalis, eclipsing binary star, new light elements from photoelectric obs. 3—48955
Y Canum Venaticorum, semiregular variable C star, minimum light times and light elements 3—44753
Celestial Ephemeris Pole definition 3—24956
Comet Austin (1982g), elliptical orbital elements and ephemeris (1982 September 28 to 1983 March 7) 3—5232

astronomical ephemerides continued
- P/Comet Bowell-Skiff (1983c), precise positions, orbital elements and ephemeris, (1983 February 15 to April 16) 3−44708
- P/Comet Churyumov-Gerasimenko (1982f), ephemeris (1982 Nov.-1982 Feb.) 3−35538
- P/Comet Churyumov-Gerasimenko (1982f), improved orbital elements and non-gravitational parameters 3−15875
- P/Comet Churyumov-Gerasimenko (1982f), orbital elements and ephemeris (1982 September 28 to 1983 February 15) 3−5233
- P/Comet Kopff (1982k), ephemeris (1983 March 27 to November 22) 3−48860
- P/Comet Schorr (1918 III), improved orbital elements and search ephemeris 3−10263
- P/Comet Tempel 1 (1982j), ephemeris, (1983 March 37 to September 3) 3−44707
- Earth nutation, axis choice, referral to ang. momentum axis *(Russian)* 3−48464
- Fourier-Chebychev approx. appl. *(Japanese)* 3−48801
- Fourier-Chebyshev approximation for many term time series, appl. to ELP 3−30157
- 1620 Geographos, ephemeris, (1983 March 29 to October 13) 3−54268
- 1620 Geographos, new orbital elements and ephemeris, (1983 February 25 to March 29) 3−44697
- W Gruis, southern Algol-type binary, new minimum light times and improved light elements 3−59395
- HD 174403, newly-discovered eclipsing binary, preliminary ephemeris from photometric obs. 3−35664
- HD 200925, short-period pulsating variable, period determ. from UBV photometry 3−10349
- HR 7578, possible late-type eclipsing binary and/or BY Draconis variable, ephemeris for eclipses 3−30423
- ST Indi, W Ursae Majoris star, light elements from photoelectric UBV photometry 3−5351
- JPL ephemerides, DE200/LE200, orientation to dynamical equinox of J2000 3−15829
- Minor Planet Circulars 7279-7394, ephemerides for 56 asteroids and three comets 3−15867
- minor Planet Circulars 7395-7514, ephemerides for 113 asteroids 3−25366
- minor Planet Circulars 7515-7628, ephemerides for ZZ asteroids 3−54269
- Minor Planet Circulars 7629-7724, ephemerides for 332 asteroids and six comets 3−54270
- Minor Planet Circulars 7725-7790, ephemerides for 13 asteroids and one comet 3−59249
- Moon, ephemerides SALE and ELP, comparison with numerical integration 3−30259
- Moon, relativistic perturbations in ELP 2000 calcs. 3−25353
- Moon ELP-2000 comparison with JPL numerical integration 3−30260
- BR Muscae, new early-type contact binary, new ephemeris from photoelectric UBV photometry 3−5342
- Neptune satellites, occultations of stars, predictions (1983-1985) 3−35526
- New Moon, earliest global visibility (1981 to 1985) 3−48840
- P/Comet Bowell-Skiff (1983c), ephemeris continuation (1983 April 16 to July 5) 3−59268
- Phoebe, numerical integration of orbit rel. to comparison between obs. and ephemeris *(French)* 3−35521
- planets, theory for motion of all planets and VSOP82 solution *(French)* 3−15832
- Pluto, astrometric positions (1980 to 1982) from Torino Astronomical Observatory,Italy, ephemerides improvement 3−59262
- Pluto, possible occultation of BD+6 2851 on 1983 April 4, ephemeris 3−54285
- UZ Puppis, eclipsing binary, ephemerides from photoelectric epochs of min. light 3−15944
- solar total eclipse, 1983 June 11, local circumstances in Java 3−59184
- V711 Tauri (HR 1099), RS CVn star, multi-colour photometry rel. to light curves and ephemeris 3−5353
- Uranus II (Umbriel), revised prediction for occultation of Hyd−21°64352, (1983 March 25) 3−54286
- Uranus satellites, occultations of stars, predictions (1983-1985) 3−35526
- visual binary stars, orbital elements and ephemerides (1980 to 2000) of 11 stars *(French)* 3−59391

astronomical instruments
- *see also astronomical observations; astronomical techniques; astronomical telescopes; planetaria; radiotelescopes*
- 4.2 m Herschel telescope on La Palma, design, instrumentation and observatory 3−30185
- 200-channel spectrometer of the Crimean Astrophysical Observatory, for stellar spectra obs. 3−30205
- acousto-optical spectrometer, stable for millimetre radio astronomy 3−15844
- astrolab, photoelectric, automatic data acquisition *(French)* 3−25324
- Astroplane, aircraft for operating IR-submillimetre telescope 3−30193
- automatic data acquisition system at Maipu Radio Astronomy Observatory *(Spanish)* 3−54257
- balloon borne equipment for submillimetre brightness temp. of Sun 3−30196
- C-CD imagers for astronomical obs. 3−5115
- Canada-France-Hawaii telescope, assoc. equipment 3−30183
- Cassegrain spectrograph, multi-order formats 3−30201
- channel electron multiplier arrays overcoated with CsI photocathode, quantum efficiency in VUV 3−30145
- Cologne 3 m millimetre and submillimetre telescope and accessories 3−30192
- comet dust collection and chem. anal. instrumentation for spacecraft 3−48820
- computer controlled area scanner for visual close binary stars, one-dimens. intensity profiles 3−40188
- cosmic ray electron spectrometer, appl. to Prognoz-4 meas. in 7 to 40 MeV range 3−15788
- Culgoora radioheliograph obs. of solar radiosources at four freq. 3−59219
- DAX on IRAS 3−35408
- electron photomultipliers, microchannel plate, X-ray photon counting 3−54231
- electronographic camera at prime focus of CFH 3.6 m telescope 3−30212
- electronographic image convertor for spectroscopy with 2.6 m reflector 3−30211
- Fabry-Perot interferometer and grating spectrometer for balloon-borne far IR studies 3−48819

astronomical instruments continued
- Fabry-Perot interferometers, astronomical applications *(Spanish)* 3−40052
- faint-object spectrograph design 3−20247
- far infrared cryogenic spectrometers 3−30213
- far-UV spectrograph, Astronomy Survey Committee recommendations 3−30177
- Fourier transform spectrometers, appl. to IR spectroscopy on planetary missions 3−10182
- gamma ray spectrometer GG-2M on Kosmos 856 and 914, anal. 3−35443
- glass circles, experiences at US Naval Observatory 3−10207
- gravitational radiation antenna, capacitive reson. transducer type 3−54247
- gravitational radiation detector, low temp., resonant mass, appl. to gravit. waves obs. 3−5117
- heterodyne spectrometer for 10 microns working in the Cassegrain focus of astronomical telescopes 3−30214
- high resolution Fourier transform spectrometer for Canada-France-Hawaii telescope 3−30207
- high speed photoelectric photometric system, computer-controlled, appl. to occultation of 57 Orionis by Moon *(German)* 3−35411
- image sensors for astronomical spectroscopy 3−15847
- imaging X-ray spectrometer, virtual phase CCD evaluation 3−40739
- Infrared Space Observatory, cryogenically cooled telescope and instrumentation 3−30148
- instrumentation in astronomy, conference, Tucson, Arizona, (1982 March 8 to 10) 3−35769
- Integral Field Spectrograph for large telescopes 3−30202
- IR Fabry-Perot spectrometer *(Japanese)* 3−30197
- IRAS extrinsic IR detectors, radiation effects 3−44672
- iris diaphragm photometers practical use in astronomy 3−20245
- Kitt Peak National Observatory echelle spectrograph, equivalent width calibration 3−54245
- Kodak films used by Sacramento Peak Observatory for solar photography 3−20241
- large optical telescopes and instrumentation, conf. at Zelenchukskaya, USSR (September 1981) 3−25693
- magnetograph, spectrally scanning, appl. to mag. field meas. is solar prominences 3−15890
- meridian circles, effect of different sources of latit. var. data on astrometric catalogues 3−5093
- microphotometer, direct intensity, appl. to recording of photographic spectra 3−59221
- modular Fabry-Perot interferometry system for H II regions imagery and spectrometry 3−25338
- MOS dosimeter for artificial satellite use, characts. 3−54235
- multi-anode microchannel array detector systems for astronomy 3−30208
- multi-purpose scanning Fabry-Perot interferometer system 3−25336
- Night Sky Photometer of UK Schmidt Telescope, calibration based on comparative UBV photometry 3−25339
- Ondrejov laser radar for satellite dist. determ., digital controlled time gate 3−10219
- Onsala Observatory, Sweden, instruments and radioastronomy *(Swedish)* 3−59234
- photoelastic-modulator polarimeters in astronomy 3−10223
- photoelectric meridian circle, division corrections derivation 3−15845
- photoelectric photometer for Tokyo Astron. Obs. 30 cm reflector *(Japanese)* 3−48826
- photoelectric radial-velocity spectrometer on the 1.2-m telescope of the Dominion Astrophysical Observatory 3−54244
- photometer, microcomputer controlled, for astronomical use, hardware and software 3−10218
- photometers, ulatra-low-drift DC amplifier for use with photomultipliers 3−54246
- photon-counting Reticons for astronomical spectroscopy 3−30237
- plane aspherised grating spectrographs, optical designs 3−30203
- polarimeter of solar coude telescope at Okayama Astrophysical Observatory, polarisation 3−25337
- pulse shape discrimination technique in NaI(Yl)-CsI(Na) detectors for X-ray astronomy 3−17179
- quantum optical spectrometer with ns time resolution 3−30217
- RCA 8857, image intensifier in Ondrejov Observatory 2 m telescope spectrograph, geom. and photometric distortion investig. 3−44670
- SEM and particle analyser design for space applic. 3−15815
- solar astronomy, new system for observing solar oscills. at Mount Wilson Observatory 3−54241
- solar differential IR photometer, appl. to obs. of global 160-minute var. 3−54310
- solar flare X-ray polarimeter for Space Shuttle 3−20244
- Solar Maximum Mission, X-ray crystal spectrometers for X-ray spectroscopy of flares 3−30319
- solar vector magnetograph, MSFC system 3−5112
- solar X-ray photometers in Vertical 8 rocket *(Polish)* 3−40034
- Space Telescope, first generation instruments rel. to obs. of Uranus 3−5114
- speckle camera for use with BTA 6 m telescope, description and use 3−30206
- spectrograph collimator with long slit *(Japanese)* 3−48825
- spectrograph efficiency at high dispersions, improvement by collimated beam width reduction 3−48824
- spectrophotometer for stellar seismology 3−30204
- spectroscopic equipment for Space Telescope 3−15848
- spectrum scanning magnetograph for solar prominence magnetic fieid meas. 3−30333
- stellar magnetograph, polarization effects *(Japanese)* 3−48822
- submillimetre astronomy, conf. at Noordwijkerhout, Netherlands (May 1982) 3−25694
- submillimetre-IR orbiting observatory, telescope and accessories 3−30195
- TAURUS: a wide-field imaging Fabry-Perot spectrometer for astronomy 3−15846
- tuning fork antenna with collective mass, gravitational radiation detection from Vela pulsar *(Chinese)* 3−30215
- vel. subtraction device, appl. to study of vel. oscills. in solar photosphere 3−54327
- Venera 14, instrument for study of aerosol in cloud layer of Venus *(Russian)* 3−35493
- visual photometer for solar coronal line intensity meas. *(Japanese)* 3−48823
- Voyager 2, scientific expts. rel. to encounter with Uranus, (January 1986) 3−5227
- wide-band acoustooptical spectral analyzer for radioastronomy 3−30200
- X-ray imaging microchannel plate detectors, CsI deposition photocathodes use for detect. efficiency improvement 3−25334

astronomical instruments continued
X-ray imaging proportional counter with Xe-methane and Xe-C mixtures, charge cloud diffusion 3—50149
X-ray mirrors flown on Ariel-6 satellite, soft X-ray reflectivity meas. 3—59214
X-ray photometer FH in satellite AUOS-S, proportional counter construction and design *(Polish)* 3—45258
X-ray/EUV detector incorporating wedge-strip anode with microchannel plates and proportional counters 3—54234
Zelenchuk 6 m telescope and assoc. equipment 3—30181
GaAs:Sb heterojunction photodiode for solar corona Fe XIII 10747 Å line 3—20240
In-Sn film filters for EUV instrumentation, long term variability of transmission 3—1751
Si array detectors in RGO coude spectrograph 3—30209
Sn-C film filters for EUV instrumentation, long term variability of transmission 3—1751

astronomical observations
see also gamma-ray astronomical observations; infrared astronomical observations; radioastronomical observations; ultraviolet astronomical observations; visible astronomical observations; X-ray astronomical observations
1704+6077, 1408+020, X-ray selected BL Lacertae candidates, X-ray, optical and radio obs. 3—5417
TT Arietis, nova-like variable, spectroscopic and photometric obs., (October and November 1982) 3—20392
ϵ Aurigae, IUE and IR photometry during eclipse ingress (April 1982 to January 1983) 3—35667
B, A and F-type stars, spectral energy distribs. from optical spectrophotometry 3—54345
GG Carinae, eclipsing binary, photoelectric UBVRI photometry 3—59405
VW Cephei, W Ursae Majoris star, UBVRI photometry 3—10391
Cerro Tololo Inter-American Observatory, effects of air pollution on atmospheric extinction 3—10065
cosmic ray electron spectra in 7 to 40 MeV range, results from Prognoz-4 meas. 3—15788
galaxies in Virgo cluster, digital surface photometry rel. to quantitative classification 3—10463
gravitational waves, obs. with low temp. reson. mass gravit. radiation detector 3—5117
Hyades, cluster main sequence and distance modulus from photometric obs. 3—44808
interplanetary flare-generated collisionless shock waves propag., experimental study 3—10176
interplanetary medium, Helios-2 obs. of flare-generated shock waves near Sun 3—10175
interplanetary shock waves, flare-generated, struct. and evolution 3—10174
nearby galaxies with Seyfert-like nuclei, optical, X-ray and radio obs. 3—54512
NGC 3532, open cluster, UBVRI photometry 3—10407
NGC 3660, barred spiral galaxy, nature of activity in nucleus from radio, optical, UV and X-ray obs. 3—54525
O-type and Wolf-Rayet stars, emission strength rel. to evolutionary state and mass loss rate 3—25348
photographic photometry with United Kingdom Schmidt Telescope, colour eqns. determ. 3—10215
PS 74, new SU Ursae Majoris star with high orbital inclination, discovery 3—15921
HM Sagittae, symbiotic star, spectrum and continuous emission and binary star model 3—25470
Saturn, evidence for long lived particulate or gaseous struct. in outer magnetosphere 3—54282
secondary standard stars for absolute spectrophotometry, flux meas. from 3080 to 12000 Å 3—54344
slow monopoles and quarks search 3—15790
SMC stars, photoelectric UBVRI sequences in bar of SMC 3—5420
solar flare particles propagation in September to November 1973, effects of struct. of interplanetary medium 3—15785
solar flare relativistic protons, possible evidence for rigidity-dependent release from solar corona 3—10164
solar low energy electrons and ions, obs. during long-lived particle event 3—10163
solar neutrons, direct. obs. following flare (0118 UT on 1980 June 21) 3—35389
solar oscillations, obs. in total irradiance by Solar Maximum Mission 3—54314
solar proton flares with weak impulsive phases, X-ray and microwave fluxes 3—35571
stellar photometry, UBVRI photoelectric sequences for fields of M83 and (NGC 5128) 3—20438
supernova in NGC 1187, spectroscopic and photometric obs. (1982 October 25 to 27) 3—10375
symbiotic stars, conference, Observatoire de Haute Provence, France (1981 August 26 to 28) 3—20579
V711 Tauri, RS Canum Venaticorum star, photometric obs. in October 1981 and January 1982 3—54436
V711 Tauri (HR 1099), RS CVn star, multi-colour photometry rel. to light curves and ephemeris 3—5353
Vela star cloud, photometric obs. of early-type stars and long-period Cepheids near Vela pulsar 3—44807
Venus, ionopause ions and solar wind interaction 3—20277
Venus, study by Venera 13 and 14 missions *(Russian)* 3—40060
Venus cloud layer, new data on aerosol from study by (Venera 14) *(Russian)* 3—35493
W92, fast-rotating late-type star in NGC 2264, UBVRI photometry and spectrum 3—59340
Wolf-Rayet and O-type stars, emission strength rel. to evolutionary state and mass loss rate 3—25348
3 C 433, pecular radio galaxy, radio, optical and X-ray obs. 3—49011

astronomical observatories
4.2 m Herschel telescope on La Palma, design, instrumentation and observatory 3—30185
astrometric site selection 3—25321
Canada-France-Hawaii telescope and observatory, general concepts and technical data 3—30183
Castlehill Observatory, Aberdeen 3—55
Cerro Tololo Inter-American Observatory, atmospheric extinction meas. 3—10065

astronomical observatories continued
P/Comet Churyumov-Gerasimenko (1982f), total visual magnitude estimates and ephemeris (1983 February 15 to May 26) 3—44705
Las Campanas Observatory, Chile, optical testing and figuring process for Dupont 2.6-m telescope 3—25323
Mount Wilson Observatory, new system for observing solar oscills. 3—54241
Nobeyama Radio Observatory, 45 m telescope *(Japanese)* 3—25330
Nobeyama Radio Observatory facilities *(Japanese)* 3—25329
Onsala Observatory, Sweden, instruments and radioastronomy *(Swedish)* 3—59234
Owens Valley Radio Observatory, stable acousto-optical spectrometer for millimetre radio astronomy 3—15844
Padova-Asiago observatory plate archives, information retrieval 3—5143
South Pole, meteorological parameters rel. to meas. of long-period solar oscills. 3—54312
synthesis telescope, 10 m, 5 element *(Japanese)* 3—25331
Tokyo Astronomical Observatory, 10 m antennas for 5-element telescope *(Japanese)* 3—25332
University of Texas 7.6 m telescope, mounting, building and optical system 3—30184

astronomical spectra
see also atmospheric spectra; stellar spectra
060+67, 5 GHz radio source, optical-IR spectral index of optical counterpart 3—40277
136+5.1°, large high excitation planetary nebula discovery, struct. and spectral obs. 3—20454
1107+036, unusual QSO-galaxy pair, spectral indices of radio source and optical QSO 3—49038
1665 MHz and 1667 MHz OH masers, relative positions and mag. fields, UHF obs. 3—25631
1704+6077, 1408+020, X-ray selected BL Lacertae candidates, X-ray, optical and radio obs. 3—5417
Abell 30 and 78, H depleted planetary nebulae, characts. and visible obs. 3—54468
Abell 400, 576, 1767, 2124, X-ray galaxy clusters, vel. dispersion-X-ray luminosity relation 3—35732
active extragalactic objects, visible and UV spectra *(Polish)* 3—49033
active galactic nuclei, H I velocities, UHF obs. 3—25590
active galactic nuclei, origin of broad emission lines in Seyfert galaxies and featureless spectra in BL Lacertae objects 3—54509
active galactic nuclei reddening from visible obs. 3—30496
active galaxies, broad emission-line regions, dust heating sources 3—25588
active galaxies, X-ray and gamma-ray spectra rel. to contrib. to diffuse γ-ray background 3—54551
active galaxies and related objects 3—35721
active galaxies narrow-line regions, reddening from intrinsic Balmer decrement 3—54252
adiabatic SNRs, nonequilib. ionization models, X-ray spectra 3—48990
AO 0235+164, BL Lacertae object, UV obs. 3—20490
Arakelian 120, Seyfert 1 galaxy, anal. of $H\beta$ emission line profile vars. 3—10439
Astronomical Image Display and Analysis system at Tubingen for IUE images, echelle orders width 3—20248
Barnard 361, dark cloud, vel. gradient and spectral obs. of formaldehyde and OH, radio obs. 3—25539
BB 1, halo planetary nebula, abundances, obs. rel. to theory 3—54499
BD+30°3639, planetary nebulae, CNONe abundances from UV spectra 3—54497
blue objects in Kapteyn Selected Area 28, obs. 3—54353
BN object, dust grains, 3 micron ice band 3—40224
Bo 158, X-ray globular cluster in M31, optical and UV obs. 3—10444
3C 196, quasar, discovery of 21 cm H I absorpt. at z=0.437 against extended radio struct. 3—30523
3C 58, Crab-like supernova remnant, H I absorption profile obs. rel. to distance 3—5400
Cassiopeia A, obs. of foreground formaldehyde absorpt. rel. to interstellar cloud sizes and H_2 densities 3—54488
Cassiopeia A direction, search for low-freq. excited C radio lines *(Russian)* 3—35701
catadioptric cameras for spectroscopy with image tubes 3—30191
Centaurus A, H I absorpt. spatial struct., nucleus nature, UHF obs. 3—35734
Cepheus A, assoc. mol. flows, vibr. excited H_2 2 μm line emission anal. 3—25574
CG 195+04 field, possible radio counterparts search and obs. 3—10482
Chamaeleon dark cloud complex, 2 μm survey, obs. 3—20466
Circinus galaxy, obs. of intense nuclear H_2O maser emission 3—5426
Cohen-Schwartz star, nearby diffuse UV source, radiation emission nature, Herbig-Haro object similarities 3—25552
Comet Austin (1982g), fine-error-sensor magnitude and UV spectrum from IUE obs. 3—15875
Comet Bowell (1981b) grain nature from visible/IR obs. 3—35534
Comet Bradfield (1980 XV), spectrum line identifications and anal., obs. 3—20294
P/ Comet Chernykh (1978 IV) IR obs. 3—35540
P/Comet Churyumov-Gerasimenko (1982f), fine-error-sensor magnitude and UV spectrum from IUE obs. 3—15875
P/ Comet d'Arrest (1976 XI), H prod. rates from Lyman α obs. 3—48856
P/ Comet Encke (1980 XI), 10 μm feature and dust albedo, IR obs. 3—35540
P/ Comet Halley, theoretical IR spectra and detectable molecules 3—35541
comet ice composition, UV spectra anal. 3—54289
P/ Comet Kearns-Kwee (1981 h) IR obs. 3—35540
Comet Panther (1981 II), grain nature from visible/IR obs. 3—35534
P/ Comet Stephan-Oterma (1980 X), 10 μm feature and dust albedo, IR obs. 3—35540
P/Comet Stephan-Oterma (1980 X), grain nature from visible/IR obs. 3—35534
P/Comet Tempel 1 (1982j), recovery, semi-accurate and approximate positions, and spectrum 3—30301
P/ Comet Tuttle (1980 XIII), 10 μm feature and dust albedo, IR obs. 3—35540
Comet West (1976 VI), H prod. rates from Lyman α obs. 3—48856
comets, O I forbidden lines, visible obs. 3—54287
comets ultraviolet spectroscopy 3—25385
compact nuclear radiosources, spectra, SHF obs. 3—5436

astronomical spectra continued
companion galaxies with discordant red shifts, spectral peculiarities 3—25589
N1016 Cygni, bipolar nebula detect., mass flows and visible obs. 3—54380
Cygnus A, nucleus continuum and underlying galaxy absorpt. lines 3—54534
Cygnus Loop, filaments spectrophotometry and shock wave models 3—15970
Cygnus Loop, monochromatic photographs and isophotes in Hα and forbidden O III and N II lines *(Russian)* 3—35700
dark clouds, formaldehyde 6 cm line obs. 3—48983
dark clouds dense cores, star form. and gravit. collapse evidence, NH_3 SHF 3—54469
diffuse galactic γ-ray line emission due to radionuclides decay nucleosynthetic 3—20403
diffuse interstellar features in stellar spectra, obs. of anomalous diffuse features in dust-embedded stars 3—59443
disc and rings, brightness temp., IR spectral obs. 3—35523
disc galaxies, luminosity-vel. dispersion ($L\propto\sigma^n$) for bulge components from vel. dispersion meas. 3—49002
disc galaxies nuclei with emission lines not excited by stellar photoionisation, spectra anal. 3—15991
30 Doradus B (N175B), supernova remnant, velocity and optical spectrum 3—48992
elliptical galaxies of high luminosity, H I UHF obs. 3—35709
elliptical like galaxies with dust lanes, stellar and gaseous rot. axes 3—30499
emission line spectra, effects of atmospheric differential refr. on spectrophotometry 3—10225
ethynyl radical (CCH), laboratory and astronomical meas. of millimetre wave spectrum 3—35421
Europe, IR and UV spectra rel. to liq. water layer and active resurfacing 3—35518
field disc galaxies, nuclei spectroscopic surveys 3—44844
flat spectrum radiosources, optical identification 3—40274
formaldehyde towards interstellar OH maser sources and assoc. ultracompact H II regions 3—10428
G116.9+0.2 (CTB 1), supernova remnant, 21 cm continuum and H I emission obs. 3—10420
G35.2—0.74 molecular cloud rel. struct. from NH_3 SHF obs. 3—5438
G35.2-0.74, interstellar molecular cloud, J=2-1 CO obs. and H_2O maser obs. 3—59442
G45.13+0.14A, H II region, 2-4 μm spectral obs. 3—10475
G78.2+2.1, supernova remnant, CO obs. 3—48980
galactic H I absorption towards 3C 123, VLA synthesis 3—10412
galactic halo gas structure towards globular cluster M13, star Barnard 29, obs. 3—40208
galactic haloes, N V and O VI prod. by photons emitted by massive photinos 3—44825
galactic star formation regions and SNRs, ^{14}CO $J=1\rightarrow0$ line obs. 3—30519
galaxies, 21-cm line obs. of 59 lenticular and spiral galaxies 3—44842
nearby galaxies, catalogue of IR magnitudes and H I vel. widths 3—44846
bright galaxies, corrected spectral energy distribs. from intermediate band filter spectrophotometry 3—35718
galaxies, H I 21 cm line width as extragalactic distance indicator 3—44835
galaxies, H I 21 cm line widths rel. to Hubble sequence of masses 3—44836
nearby galaxies, integrated radio spectra of irregular and blue compact galaxies 3—40256
galaxies, interacting and isolated, physical conditions from visible obs. 3—59454
galaxies, IR absolute magnitude-H I rel. width-surface brightness relation rel. to cosmological expansion *(Russian)* 3—35724
galaxies, long slit spectra and velocity dispersion determ. methods 3—40040
galaxies, photoionisation and shock heating models for low ionisation nuclear emission-line regions 3—30491
spherical galaxies, spectral line profiles for models with anisotropic rel. dispersions 3—54504
galaxies active nuclei, optical spectra of X-ray selected nuclei 3—10441
galaxies in distant clusters 3—30477
Galaxy central region structure and dynamics from 21 cm line obs. 3—10453
galaxy cluster near NGC 2639, spectroscopic obs. rel. to quasars in galaxy superclusters 3—54545
gamma-ray bursts, Coulomb bremsstrahlung and cyclotron emissivity in hot magnetized plasmas rel. to cyclotron lines form. 3—44791
gamma-ray diffuse flux in energy range 4 to 100 MeV, spark chamber meas. 3—10485
gamma-ray sources, integrated spectrum rel. to gamma-ray colour of Milky Way 3—49027
GB/GB2 radiosources with normal/flat spectra, UHF obs. and optical identifications 3—59488
GC-IRS 7, IR source, interstellar grains IR spectrum anal. 3—20450
giant planets, line positions and strengths in H_2 quadrupole spectrum 3—30166
GL 961, assoc. mol. flows, vibr. excited H_2 2 μm line emission anal. 3—25574
GL 961, molecular outflow nature from IR/EHF obs. 3—5374
globular clusters in Sculptor group galaxy NGC 55, spectra and photometry 3—10443
Gould's Belt, related H I, profiles anal. 3—54495
GX 1+4, pulse period meas. and phase-var. Fe line emission 3—15955
H0323+022, galactic X-ray/radio source, nature speculation, obs. 3—35741
H1340 No.10, high-redshift QSO with very narrow emission lines, spectroscopic obs. 3—59502
half-space, non-coherent transfer Cauchy integral eqn. 3—10200
HD 138403, low excitation planetary nebula struct. from UV spectral obs. 3—25549
HD 5980 in SMC, line of sight vel. struct. and absorpt., UV obs. 3—59417
Herbig-Haro object 2H, UV spectrum 3—20464
Herbig-Haro objects 46 and 47, radial vel. meas. and spectrophotometry rel. to bipolar ejection from young star 3—35692
HF spectrometer for weak spectral lines detection 3—20246
HGC 7027, planetary nebula, absolute Hβ flux 3—5379

astronomical spectra continued
HGC 7538 (IRS1), VLBI aperture synthesis obs. of 1720 MHz OH maser 3—5441
HH 2, HH 1, Herbig-Haro objects, UV continuous and emission-line spectra 3—10416
HH 32C associated with T Tau star AS 353A, assoc. nature, visible obs. 3—48986
Hu 1-2, plantary nebula, internal motions and geometry from O III, H I and N II radial vel. fields 3—40233
HVC 287.5+22.5+240, 271+11+258, 273+9.5+258, positive high velocity clouds, obs. of fine struct. in ang. distrib. and vel. profiles 3—40234
Hydra A, cD radiogalaxy, radio and optical struct./kinematics, UHF/visible obs. 3—40244
hydrides in interstellar space, far-IR and submillimetre astronomy 3—30469
I 289, planetary nebula, internal motions and geometry from O III, H I and N II radial vel. fields 3—40233
IC 1470, image-tube spectrograms, nebular line ratios 3—48973
IC 2165, planetary nebula, obs. of 8 to 13 μm spectrum 3—59444
IC 342, spiral galaxy, NH_3 obs. rel. to temps. and sizescales of giant cloud complexes 3—5416
IC 3568 planetary nebula abundances and spectra anal. 3—40214
interacting adiogalaxies, H I emission survey 3—59449
intergalactic absorption lines, possibility of detecting very hot gas via X-ray absorpt. studies 3—30445
interplanetary, scintillation, temporal spectra with allowance for solar wind vel. distrib. 3—15799
interstellar 4430 Å line, determination of early type stars contamination, use of computer controlled intensity determ. method 3—5121
interstellar 9.7 μm feature, SiO origin 3—20452
interstellar absorption in HD 14633 direction 3—48976
interstellar absorption lines, possibility of detecting very hot gas via X-ray absorpt. studies 3—30445
interstellar CO integrated 2.6 mm intensity conversion to H column density 3—15972
interstellar dense clouds, EHF emission lines polarisation 3—59419
interstellar diffuse 443 nm feature and far-UV extinction 3—59434
interstellar diffuse clouds, electron and gas densities from Ca I absorption 3—48975
interstellar diffuse far-UV emission lines and plasma components 3—54490
interstellar diffuse spectral features due to $MgO:Cr^{3+}$ and $MgO:Mn^{4+}$ 3—40220
interstellar diffuse visible lines towards stars with low column densities of H_2 3—48987
interstellar dust grains, mol. comp. of grain mantles rel. to IR spectra 3—15973
interstellar extinction, wavelength depend. of peculiar UV extinction 3—54480
interstellar extinction in SMC, obs. of galactic type UV extinction curve for (Sk 143) 3—10423
interstellar formaldehyde in W3, Westerbork obs. of 6 cm absorpt. 3—5398
interstellar formaldehyde towards Cassiopeia A, absorpt. lines obs. rel. to cloud sizes and H_2 densities 3—54488
interstellar formyl ion-^{17}O ($HC^{17}O^+$) detect. (Sagittarius B2) 3—35693
interstellar graphite/amorphous C, Planck mean absorpt. efficiency and extinction curve 3—59193
interstellar H_2O masers near Herbig-Haro objects 3—40216
interstellar H I, anal. of emission profiles at positive latits. rel. to warm component of interstellar medium 3—44821
interstellar hydrous silicate minerals mid and far IR extinction coeffs. 3—35422
interstellar ice mixtures, 3 microns band laboratory anal. 3—57901
interstellar lines widths, effects of vel. fluctuations of interstellar medium due to gravit. interaction with system of stars 3—54485
interstellar molecular clouds assoc. with supernova remnants W44 and W28, line profiles rel. to shock processing 3—30448
interstellar molecular UV emission bands in HD 44179 direction 3—48978
interstellar N and O, abundance implications for grain models 3—48988
interstellar RF lines polarisation/mag. field direction in collapsing/expanding sources 3—59420
interstellar UV extinction by carbonaceous composite, responsibility for 220 nm hump 3—40240
Io, hot spot emission spectrum, volcanic flow model and thermostatic mechanism 3—35507
Io, SO_2 near-UV absorpt. spectrum implications 3—35491
Io Na cloud, reson. scatt. of sunlight in Na I D-lines rel. to east-west asymmetries 3—35502
Io plasma torus, O III deficiency, obs. 3—30294
ionised nebulae dust albedo at Hα, effect on extinction determ. 3—59418
IR spectra of hot-centred interstellar clouds, dirty silicate dust grain models 3—5397
IUE high resolution spectra, interactive procedure for background subtraction problems, appl. to image SWP 4616 3—25341
Jupiter, Copernicus meas. of Lyman-alpha emission intensity and aeronomical significance 3—10252
Jupiter, emerging thermal radiation spectra 3—48847
Jupiter, H_2O abundance from Voyager IRIS data at 5 μm 3—59251
Jupiter, H I Lyman α emission, vars. in 1979-82 period 3—35503
Jupiter, high-resolution 1100 to 1200 cm^{-1} spectra rel. to tropospheric abundances of CH_4, CH_3D, NH_3 and PH_3 3—10253
Jupiter, IR spectrum of NEB, tropospheric gas comp. and D/H ratio 3—20287
Jupiter, NH_3 gas and ice haze global props., iR obs. 3—35512
Jupiter, organic compounds mixing ratios from UV refl. spectrum anal. 3—54271
K1-2, planetary nebula and variable central star, parameters from visible obs. 3—5395
Kazarian 26, struct. and characts. of galaxy from visible obs. 3—59453
Kleinmann-Low nebula, 70-90 GHz obs. of SO_2 3—30450
Kleinmann-Low Nebula, CO J=16 to 15 transition detect. and OH obs. 3—40239
BL Lacertae objects, radio spectral indices and arc second radio structure 3—54501
BL Lacertae objects, steep X-ray spectra rel. to absence of broad emission lines 3—54509
BL Lacertae objects and assoc. galaxies, evidence for synchrotron radiation model 3—25617

astronomical spectra continued

- LDN 1551 and central object IRS 5, CO movements and outflow 3−25550
- line intensity profiles from photographic spectrograms, computer controlled method 3−5121
- line profile fitting, statistical uncertainties 3−10220
- LMC PN 279-38°1 discovery, position and spectral obs. 3−25605
- LMC SNRs, Balmer dominated, optical identification and spectra obs./anal. 3−5407
- lunar microwave brightness temperature spectrum, effects of subsurface volume scatt. 3−59238
- Lyman-alpha emission-line profiles in high-redshift QSOs 3−16029
- Lynds 673, dark cloud, HCN J=1-0 hyperfine anomalies 3−48982
- M16-HH1, H II region Herbig-Haro object, visible and UV continuum 3−20453
- M17 and M42, H II regions interacting with mol. clouds, fine struct. IR lines 3−25563
- M1-67, wind blown bubble around WR star 209 BAC, vel. and nature 3−25548
- M31, H I line data rel. to warping of H I disc 3−10466
- M33 nucleus, Sc galaxy, X-ray emission origin and star form. rate anal. 3−59448
- M33 nucleus, struct. and stellar population, visible/IR obs. 3−25592
- M42, obs. in forbidden O III 52 and 88 μm lines and forbidden O I 63 μm and N III 57 μm lines 3−48991
- M51, optical spectrophotometry of central region rel. to activity in galactic nucleus 3−54515
- M51 spiral galaxy, molecular gas distrib. from CO mapping, EHF obs. 3−40249
- M82, radiogalaxy filamentary struct. spectral obs. 3−44833
- M87, elliptical galaxy, hot plasma halo radiative accretion 3−16021
- M87 (NGC 4486), heavy element abundances, temp. anal. and mass infall, X-ray obs. 3−15989
- M87 jet, IR obs. rel. to power law spectrum and synchrotron emission model 3−54505
- M8 nebula H II regions, emission lines and electron densities, visible obs. 3−25538
- M-type giants and supergiants, circumstellar dust shell, IR emission and raditive transfer 3−40128
- Magellan, far- and extreme-UV spectrographic observatory with real-time observer interaction 3−39992
- Markarian 1040 and 1044, Seyfert 1 galaxies, dust content, visible/IR obs. 3−40255
- Markarian 10 and 79, extranuclear emission lines in Seyfert galaxies 3−20485
- Markarian 297, struct. and interstellar matter anal. from visible spectral obs. 3−16007
- Markarian 309, emission-line galaxy, discovery of Wolf-Rayet features in spectrum of nucleus 3−10442
- Markarian 3 and 6, Seyfert galaxies, intrinsic reddening and nonstellar continuum 3−40245
- Markarian 914 is Herbig Ae star LkHα 233, radial vel. obs. 3−10339
- Markarian radiogalaxies, spectra construction 3−59455
- MCG 6-2-22A (Cartwheel galaxy), elliptical comparison mass estimate 3−20497
- methanol interstellar masers, lines radiative transfer and statistical equilib. eqns. *(Russian)* 3−44826
- molecular absorption, just overlapping line approximation 3−5104
- molecular cloud IR sources, appl. of ice optical consts. and sublimation temp. 3−40022
- molecular clouds physical props., implications of EHF/THF line obs. for techniques 3−30472
- molecular clouds with high vel. gas, clumpy outflow evidence CO EHF obs. 3−54470
- Moon, high resolution spectroscopic obs. rel. to thermoluminesc. of lunar surface 3−35485
- MR 2251−1178, QSO in Seyfert galaxy nucleus, surrounding giant H II cloud nature 3−30524
- N185, SNR radial vel. field and interior stars photoionising props., obs. 3−20455
- nearby galaxies with Seyfert-like nuclei, emission line intensities and line widths 3−54512
- nebulae surrounding Wolf-Rayet stars, near search using narrow-band emission-line imagery 3−35702
- NGC 1079, low-visibility H I rich spiral galaxy, optical photometry and spectrum 3−49014
- NGC 1275, high-vel. H I Lyman α absorption, IUE spectrophotometry 3−25603
- NGC 1275 (3C 84), H I absorpt. spectrum time variations 3−15992
- NGC 1501, NGC 6905, planetary nebulae, Hα and forbidden O III expansion velocity fields meas. 3−5393
- NGC 1977 bright rim, C detect. from 492 GHz obs. 3−25585
- NGC 2071, assoc. mol. flows, vibr. excited H_2 2 μm line emission anal. 3−25574
- NGC 2071, reflection nebula, CO outflow and CS motion assoc. with IR sources 3−5383
- NGC 2071, star form. region, H I 21 cm line detect., assoc. with IR star cluster 3−48989
- NGC 2346, bipolar nebula, nature and form. from hot subdwarf binary mass loss 3−30457
- NGC 2359, H II region driven by WR star HD 56925, kinematics, visible obs. 3−40223
- NGC 2371-2, planetary nebula, three-dimensional spatial-kinematic model from echelle spectrograms 3−35697
- NGC 315, active galaxy nucleus, H I detect., struct. and vel. 3−54530
- NGC 3660, barred spiral galaxy, nature of activity in nucleus from radio, optical, UV and X-ray obs. 3−54525
- NGC 3783, Seyfert 1 galaxy, UV spectral var. 3−40260
- NGC 3783, Seyfert galaxy, spectroscopic changes obs. 3−59478
- NGC 3893, spiral galaxy, mass, rot. excitation and luminosity, visible obs. *(French)* 3−59465
- NGC 3998, active lenticular galaxy, spectroscopic obs. rel. to vel. field and physical conditions 3−49025
- NGC 4593, Seyfert 1 galaxy, broad line emitting region, conditions/UV spectrum variability 3−30501
- NGC 4594, 3031, 5194 and 4258 spiral galaxy nuclei, population anal. 3−5423
- NGC 5189 and 6826, planetary nebulae, ansae and central stars precision, visible obs. 3−40221
- NGC 5204, extragalactic H II region, UV spectrum from IUE obs. 3−54519

astronomical spectra continued

- NGC 5430 (Markarian 799), barred spiral galaxy, obs. of Wolf-Rayet stars in extraordinary star-forming region 3−20500
- NGC 5813, elliptical galaxy rot. curve and vel. dispersion profile from visible obs. 3−20493
- NGC 6334N, 1665 MHz and 1667 MHz OH masers, relative positions and mag. fields, UHF obs. 3−25631
- NGC 6572 and 5315, planetary nebulae, CNONe abundances from UV spectra 3−54497
- NGC 6720, NGC 7662, planetary nebulae, CCD spectra and two-dimensional photometry 3−54482
- NGC 6764, emission-line galaxy, discovery of Wolf-Rayet features in spectrum of nucleus 3−10442
- NGC 7023, reflection nebula of HD 20075, dust grain scatt. props. 3−5378
- NGC 7027, 10 μm spectral features, spatial studies of planetary nebula 3−48997
- NGC 7027, compact planetary nebula, high-resolution near-IR and millimetre-wave spectroscopy 3−35686
- NGC 7354, planetary nebula, internal motions and geometry from O III, H I and N II radial vel. fields 3−40233
- NGC 7662, high-dispersion UV spectra of planetary nebula 3−15981
- NGC 7662, planetary nebulae, CNONe abundances from UV spectral obs. 3−54498
- non-LTE resonance line polarization with partial redistribution effects 3−20226
- OH 26.5+0.6, radiative transfer model rel. to IR spectrum and interstellar grain comp. 3−49053
- OMC-1, C abundance upper limit from 492 GHz obs. 3−25584
- OMC-1, CO, ^{13}CO and HCN mol. emission maps 3−25583
- ON-1 CO cloud complex struct. and star form. onset, EHF obs. 3−25643
- ρ Ophiuchi cloud, Ca abundance, visible obs. 3−48985
- Orion A, origin of forbidden C I IR emission in H II or H I region 3−10422
- Orion Molecular Cloud, bipolar CO outflow detect., obs. 3−10431
- Orion Molecular Cloud, detect. of 2(1,1)-2(1,2) rot. emission line of HDO 3−5399
- Orion Molecular Cloud, excited H_2 line profiles interpretation 3−25568
- Orion molecular cloud, H_2 IR emission obs. rel. to extinction and excitation temp. 3−30449
- Orion Molecular Cloud 1, small rot. clouds of stellar mass, NH_3 spectral obs. 3−48984
- Orion Nebula, 145.5 μm O I forbidden emission line obs. from aircraft 3−35694
- Orion Nebula, dust distrib. and temp. and ionisation struct. 3−40218
- orion-KL region, CO and HCO^+ obs. rel. to extended anisotropic high-vel. gas flows 3−10424
- outer Solar System, real line stength distrib. in IR spectra, random band models 3−35487
- paired quasars near NGC 2639, spectroscopic obs. rel. to quasars in galaxy superclusters 3−54545
- peculiar galaxies in clusters of galaxies, H I spectra and kinematics 3−10449
- Perseus supercluster, south west extension from galaxies redshift survey 3−5431
- PHL 5200, broad absorpt.-line QSO, optical depth/vel. and column density 3−40284
- PHL 957, quasar, line of sight absorpt. features intergalactic clouds, temp. and nature 3−59496
- PKS 0119-046, quasar, infalling absorpt. line systems origin 3−59498
- PKS 0548−322, BL Lacertae object, UV and X-ray spectrophotometry 3−10436
- PKS 0812+02, QSO in cluster galaxy nucleus, optical/radio struct. 3−40283
- planetary nebulae, compact, line fluxes from photometric survey 3−35685
- planetary nebulae, rot. from spectral line anal. 3−40242
- planetary nebulae chem. comp. determ. methods 3−59436
- planetary nebulae of medium and high excitation, anal. of O III/O II problem 3−44814
- planets, results of Fourier IR spectroscopy on planetary missions including Voyager 3−10182
- plasma in planetary nebulae, atomic collision processes, spectroscopic diagnostics 3−35436
- Puppis A, rocket-borne soft X-ray filter spectroscopy of SNR 3−20458
- Puppis A, X-ray spectroscopy and imagery 3−30465
- Q 0028+003/Q 0029+003, QSO pair, spectroscopic obs. 3−5444
- QSO 0015+162, quasar in rich distant cluster of galaxies, spectrum and redshift 3−35740
- QSO 0351+026 in interacting galaxy pair, nature from UHF/visible obs. 3−35737
- QSO asymmetric emission line region with out-flowing mass and $Z_{ab}\gtrsim Z_{em}$ systems 3−25649
- QSO candidates in Coma galaxy cluster field and in nearby field, spectral obs. 3−25645
- QSO spectra, emission and absorption, local object theory 3−25648
- QSOs, quantitative measures of slitless spectra 3−10477
- QSOs at large redshift, continua and line spectra 3−16031
- QSOs in NGC 5334 field, spectroscopic obs. 3−10480
- QSOs of high redshift, IR/visible energy distrib. 3−40272
- QSOs of high redshift, spectra and redshift distrib. obs. 3−5443
- QSOs of low luminosity, nebulosity as underlying galaxies, visible spectral obs. 3−25646
- QSOs with broad absorption lines, spherically symm. wind models and spectra anal. 3−5447
- quasar absorption regions, non-spherically symm. model 3−40285
- quasar associated fuzz, spectroscopy of four objects 3−35739
- quasar candidates near A1139, A1775 and 1633+33, positions and magnitudes from CFHT blue grens obs. 3−59235
- quasar emission line regions, profiles, curve of growth effects 3−40282
- quasar emission-line regions, radial motion evidence from varying redshifts of emission line regions 3−25647
- quasars, appl. of C IV emission as luminosity indicator 3−49052
- quasars, broad emission line region, thermal wind model 3−20524
- quasars, kinematics of broad-line emission gas rel. to emission line profiles 3−10437
- quasars, Lyman-alpha absorption lines clustering, rel. to galaxies in proto-superclusters 3−5445
- quasars, narrow line absorption systems and hot galactic gas 3−15983
- quasars, surrounding gas, optically thick radiatively driven shocks, spectra implications 3−59499

astronomical spectra continued
quasars absorption line spectra, implications of dynamics of galactic fountains 3−15986
quasars of high red shift, CO lines anal. 3−44868
radio galaxies, optical emission lines polarisation position angle rel. to radio source axis 3−5428
radio galaxies, search for H I emission and absorpt. 3−54521
radio galaxies at high redshifts, optical spectral energy distrib. and radio luminosity function 3−25619
radio galaxies in Coma and Perseus superclusters, 408 MHz obs. and average spectral index 3−44858
radio sources, extragalactic, source list and radio spectra from fast-scan survey at 4.755 GHz 3−48837
radio sources, flat-spectrum, optical identifications and radio-optical spectral indices 3−49041
radio sources, projection angles rel. to apparent size-redshift and linear size-line width relations 3−10473
radiogalaxies, H I emission survey 3−59449
radiogalaxies in southern hemisphere, optical spectra and red shifts 3−40262
radiosources, extragalactic, found in metre-wave surveys, spectral index-flux density relation 3−5437
very red objects towards galactic centre, near-IR spectroscopic obs. 3−49013
red star clusters in Magellanic Clouds, anal. of integrated spectra 3−10445
reflection nebula surrounding Be star HD 87643, spectrum rel. to non-uniform atmosphere of central star 3−40232
resonance lines, net radiative bracket, escape probabilities and mean scatt. numbers, QSO appl. 3−10197
S0 galaxies, rot. vels. and central vel. dispersions meas. 3−49004
S106, bipolar nebula, emission line profiles rel. to kinematic struct. 3−5387
S235, H II region, CO spectra of IR sources and implications for line excess problems 3−54477
S235, H II region, IR spectroscopy, of IR sources and implications for line excess problems 3−54477
S 128, H II region, formaldehyde absorpt. obs. rel. to galactic location and star form. 3−5388
Sagittariu A West, formaldehyde distrib. and vel., SHF obs. 3−30459
Sagittarius B2, formyl ion at 89.5 GHz and laboratory transition meas. 3−35426
Sagittarius B2, methyl cyanide J=1→0 transition detect., SHF obs. 3−59435
Sagittarius B2, temp. and density determ. from methyl cyanide lines anal. 3−25644
Sagittarius B2 molecular cloud, kinetic temp. + density from methyl cyanide EHF obs. 3−54471
Saturn, spectrophotometric obs. rel. to cloud height differences between equator and South Equatorial Belt 3−59258
Sb galaxies, rot. props. from visible spectra 3−5404
Seyfert 1 galaxies, composite UV emission spectrum 3−54524
Seyfert 1 galaxies, profiles and intensities of C IV and Lyman-α emission lines 3−10438
Seyfert 1 galaxies, time var. of broad emission-line profiles 3−10439
Seyfert candidate galaxies, identification, UBV photometry and spectral obs. 3−30500
Seyfert galaxies, broad forbidden lines rel. to radio structs. 3−25612
Seyfert galaxies, discovery, obs. 3−35708
Seyfert galaxies, emission line regions, profiles, curve of growth effects 3−40282
Seyfert galaxies, flat X-ray spectra rel. to presence of broad emission lies 3−54509
Seyfert galaxies, H I emission survey 3−59449
Seyfert galaxies, type 1, prominent UV emission lines obs. 3−54502
Seyfert galaxy nuclei, kinematics of broad-line emission gas rel. to emission line profiles 3−10437
Seyfert X-ray galaxies, flux distrib. from UV spectral obs. 3−59475
Sh 2-269, H II region-molecular cloud complex, optical and millimetre wave study 3−5386
Shapley-Ames galaxies nuclear regions Na-rich interstellar matter, obs. 3−5414
Sharpless 101, radial vel. survey of H II region 3−25540
Sharpless 106 IRS 9 discovery, IR spectral obs. 3−25551
Sharpless 235B, HCN mapping and column density 3−25580
Sharpless 235B molecular cloud, HCN J=1-0 hyperfine anomalies 3−48982
Sharpless 54 and 142, vel. struct. from visible obs. 3−20449
Simeis 147, supernova remnant, chem. and physical conditions 3−40235
sky background UV spectrum at different galactic latitudes 3−30530
Small Magellanic Cloud, H I regions, line profiles and Gaussian anal. 3−5429
SNRs in M31, interference filter photography and spectrophotometry 3−30463
southern compact bright-nucleus galaxies, redshifts, characts. and spatial distrib. 3−59472
southern galactic plane star form. regions with H_2O masers, CO J=2→1 line obs. 3−30456
southern galaxies, H I redshifts and line profiles 3−35719
spiral galaxies, integrated 21 cm line profiles 3−5419
spiral galaxies in clusters, relations between morphological types and H I vel. width 3−20501
spiral galaxies nuclei, luminosities and stellar population estimation, spectroscopic method 3−25340
star forming molecular cloud cores, high vel. CO line wings and dynamics 3−25573
young supernova remnants, non-ionisation-equilib. models abundances from X-ray spectra 3−10417
supernova remnants, X-ray spectroscopy and imagery 3−30465
supernova remnants line anal. giving galactic N and S abundance gradient 3−25597
synchrotron radiosources, spectra correl. with self-Compton spectra *(Chinese)* 3−59490
Taurus dark cloud complex, CN abundance and N=1-0 emission 3−40209
Taurus Molecular Cloud 1, dense mol. gas struct. from cyanopropyne transitions obs. 3−59423
Titan, 8 to 14 μm thermal emission rel. to atmospheric methane-d_1 abundance 3−59257
Titan, model atmosphere and comp., IR/microwave obs. 3−35522
TMC-1, methyl cyanide J=1→0 transition detect., SHF obs. 3−59435

astronomical spectra continued
transient X-ray sources from Ariel 5 Experiment C, spectra and props. 3−40294
Trapezium Nebula dust IR spectra rel. to organo-siliceous biomolecules IR props. 3−5385
UGC 6081, peculiar galaxy, H I absorpt. and visible obs. 3−59462
Uranus, albedo and visible spectra 3−54284
Uranus, detect. of auroral H Lyman-alpha emission by IUE 3−35527
Uranus, Lyman α from Uranus, intense emission, possible aurora 3−5216
Uranus, spectrographic obs. rel. to rot. period 3−5220
Uranus, UV to radio spectrum rel. to atmospheric struct. and comp. 3−5221
Uranus satellites, visual and near IR photometry and spectra 3−5224
Vela X, rocket-borne soft X-ray filter spectroscopy of SNR 3−20458
Venus, SO_2 near-UV absorpt. spectrum implication 3−35491
Venus atmosphere, CO_2 6-8 μm bands transmission 3−35490
Venus atmosphere, H altitude profile from H I Lyman α obs. 3−44683
Virgo cluster galaxies, optical emission line fluxes rel. to constraints on galaxy-intergalactic medium interactions 3−30509
VRO 42.05.01, supernova remnant, discovery of two-component radio source with nonthermal spectra 3−5389
W28, supernova remnant, spectral index of extended nonthermal radio source 3−54481
W33 region, molecular gas, ^{13}CO and ^{12}CO line maps 3−48972
W3, H I movements and distrib. UHF obs. 3−40275
W3, OH masers 6 cm emission, origin and positron, SHF obs. 3−35689
W50 SNR, optical filaments kinematics, V1343 Aql as excitation source 3−40211
W51 IRS-2, star form. region, 2.95-10 μm obs. anal. 3−30453
WDHS 1, giant PN, dimensions and nature and central star characts. 3−40213
Weaver's jet region, high velocity H I cloud, preliminary search for 2.6 mm ^{12}CO emission 3−10433
wide-band acoustooptical spectral analyzer for radioastronomy 3−30200
X0459+034, type 1.5 Seyfert galaxy, X-ray, optical, radio props. and position 3−30527
X-80, satellite for X-ray astronomy, description and mission 3−39993
X-ray background, spatial distrib. and spectral characts. of diffuse soft X-ray emission 3−40295
X-ray background above 0.8 keV, spectrum 3−10486
X-ray sources physical processes and source types 3−25657
zodiacal light, UV spectroscopy 3−30297
V Zw 311, dynamical equilib. and frictional lifetime calcs., visible obs. 3−25625
^{12}C ^{13}C, Fourier spectroscopy of Phillips system 3−44648
^{13} C_2, Fourier spectroscopy of Phillips system 3−44648
AlH^+, spin splitting, core polarisation and interstellar chem. 3−41484
3 C 433, pecular radio galaxy, optical spectrum 3−49011
C I in interstellar sources, 610 μm fine struct. transition anal. 3−30471
C II 157 μm forbidden line emission for NGC 2024, H II region 3−35683
C_3 in diffuse interstellar clouds, column density limits 3−15980
CH radical, interstellar gas clouds, rot. transitions, microwave obs. 3−45995
CO emission in directions of some millimeter wavelength continuum sources 3−48970
CO in outer Galaxy (longitudes 50° to 72°), UHF obs. 3−59431
CO RF obs. of isolated dark globules, origin and structure 3−20443
CO, two lowest rot. transitions, anal. curves, large vel. gradient radiative transfer model 3−59204
$^{13}CH^+$, $A^1\Pi$-$X^1\Sigma$ emission bands 3−50419
CaO molecule, r-centroids and Franck-Condon factors calc. 3−55998
Fe II, electron impact excitation cross-section meas. 3−44665
Fe VII forbidden lines excitation under gaseous nebula conditions, transition probabilities and collision strengths 3−1279
FeO indentification in astrophysical sources 3−6711
H I absorption line survey from Effelsberg-Green Bank, anal. 3−25544
H I distribution beyond solar circle in Galaxy, UHF obs. anal. 3−25593
H I/H II regions in line of sight to λ Scorpii, UV line anal. 3−30451
H II regions, abundances from IR forbidden lines 3−15968
H II regions, Ar II/Ar III and S III/S IV IR line ratios rel. to excitation conditions 3−44818
H II regions, emission-line spectra, metal abundance dependencies 3−44817
H II regions, S III abundance from IR fine struct. lines 3−15969
H II regions assoc. with OH masers, formaldehyde obs. 3−25581
H II regions in galaxies, history and present status of Hα surveys 3−10419
H II regions in Galaxy, Magellanic Clouds and POX 4 galaxy, S abundance 3−48981
H II regions line profiles obs. with modular Fabry-Perot interferometry system 3−25338
H II regions of low density, electron temp. galactic gradient, SHF obs. 3−54506
H_2 emission in IR from molecular clouds and Herbig-Haro objects 3−48979
HCO^+ line profiles in W3, NGC 2071 and Cepheus MC-1 mol. clouds 3−25575
H_2O variable maser sources in star form. regions, line profiles and struct., SHF obs. 3−44830
He I isoelectronic sequence, line ratio systematics 3−20221
NH_3 in hot molecular cloud toward Sgr B2, SHF obs. 3−20459
NaOH detection towards galactic centre source Sagittarius B2(OH) 3−5392
O II, oscillator strengths and collision strengths for electron impact excitation 3−35420
O III, oscillator strengths and collision strengths for electron impact excitation 3−35420
O IV semiforbidden 1401 Å multiplet appl. to electron density determ. 3−20250
OD identification in astrophysical sources 3−6682
OH, interstellar, IR line overlaps and collisional excitation by H_2 rel. to OH masers pumping 3−16025
S II emission from Jupiter, Voyager obs. of hot plasma torus 3−20286
S III 18.71 microns forbidden line towards Sagittarius A West 3−59432
SO emission zone kinematics in Orion A, EHF obs. of 2_3-1_2 transition 3−48996
SO_2, near UV absorpt. spectrum, appl. to Venus and Io spectra 3−35491

astronomical spectroscopy *see astronomical spectra; spectroscopy*

astronomical techniques
see also astrometry; radioastronomical techniques
abundance determinations for metal-poor stars, systematic effects, conference, Patras, Greece (August 1982) 3—54570
accelerator mass spectrometry, appl. to meas. of cosmogenic ^{26}Al in terrestrial and extraterrestrial matter 3—48708
accretion discs in close binary systems, hydrodynamics calcs. method 3—15905
active galaxies narrow-line regions, reddening from intrinsic Balmer decrement 3—54252
apodisation of telescopes, method and appl. to obs. of visual binary stars 3—44668
asteroid radiometric scale calibration, use of occultation diameters and IR photometry 3—35452
astrometry, expt. study of effect of photographic irradiation in positional obs. of major planets 3—44674
Astronomical Image Display and Analysis system at Tubingen for IUE images, echelle orders width 3—20248
close binary stars, evaluation of Roche dimensions of rotating gaseous discs 3—15959
close binary stars of short period, classification using light curve descriptor 3—15960
celestial mechanics, general precompiler for algebraic manipulation of Poisson series in FORTRAN IV 3—48806
celestial mechanics, matrix formulation of Picard method for parallel computation 3—48830
comet dust collection and chem. anal. instrumentation for spacecraft 3—48820
comet-asteroid close approach predictions, calc. technique 3—30223
computer simulation of star form. in dwarf galaxies, three-dimensional models 3—54516
cool M and C stars identification technique, appl. to 47 Tucanae 3—35445
data storage new developments 3—5132
deceleration parameter measurement from gravit. lens obs. 3—20537
differential speckle interferometry for stellar studies 3—30236
digital filter design, new definition and variational soln. of extended Whittaker problem *(Chinese)* 3—40043
discrete Fourier transforms of nonuniformly space data, deconvolution techniques 3—30220
Earth polar motion determination from three lunar laser ranging sources 3—30234
Earth polar motion from 1980 MERIT campaign, data comparison 3—30235
Earth rotation, combination of parameters determined by various techniques in 1980 3—30229
Earth rotation, connected element interferometer method, comparison with lunar laser ranging 3—30232
Earth rotation, lunar laser ranging method comparison with traditional techniques 3—30231
Earth rotation parameters determ. from LAGEOS and lunar laser ranging data combination 3—30230
eight-colour photometric system for faint asteroids+planetary satellites spectral reflectance determ. 3—30219
electron density determ. O IV semiforbidden 1401 Å multiplet appl. 3—20250
elemental microdistrib. in unequilibrated chondritic meteorite 3—10277
extragalactic distance scale, use of inner ring structs. in galaxies as distance indicators 3—54500
Fabry-Perot interferometers, astronomical applications *(Spanish)* 3—40052
fireball automatic network, use of 35 mm all sky camera 3—30224
Fourier analysis of variable star data, Nyquist freq. as high frequency limit 3—59228
Fourier spectroscopy, appl. to IR obs. on planetary missions including Voyager 3—10182
frequency determination by autoregressive spectral estimator, accuracy 3—54261
galactic collisions, numerical simulation techniques 3—16015
galactic structure from object separation meas. *(Russian)* 3—20506
galaxies angular correlation functions estimation 3—20252
galaxies digital surface photometry, appl. to 20 Virgo cluster galaxies rel. to quantitative classification 3—10463
galaxy velocity dispersion determ. methods 3—40040
Geneva photometric boxes, direct access using square files 3—5146
globular cluster dynamical evolution, determ. method 3—25534
gravitational theory testing, use of Viking mission and POINTS satellite 3—10714
helioseismology with high degree p-modes, theory 3—54317
high contrast copying with Kodak technical pan film 2415 3—20251
high speed photometry, computer-controlled, appl. to occultation of 57 Orionis by Moon *(German)* 3—35410
high speed photometry computer controlled, appl. to occultation of 57 Orionis by Moon *(German)* 3—35411
high-precision instrumental neutron activation analysis of meteoritic, lunar, and terrestrial samples 3—9378
high-velocity clouds, transverse vels. determ. from soft X-ray emission 3—59426
HIPPARCOS star catalogue, methods for link with VLBI 3—25344
image enhancement, digital filtration methods 3—20257
image processing for atm. distortions compensation, cepstral anal. and speckle-interferometry of wideband images 3—35457
image processing techniques in astronomical research 3—48831
imaging of Uranus and Neptune, appl. of charge-coupled device 3—5222
instrumental neutron activation analysis for meteorite metallic grains 3—5119
instrumentation in astronomy, conference, Tucson, Arizona, (1982 March 8 to 10) 3—35769
interacting galaxies, literature review and computer simulations 3—16014
intergalactic continuous extinction determ. *(Polish)* 3—49034
interstellar masers, radiation field stability, variational technique 3—20451
interstellar reddening estimation at low galactic latits., appl. of Lick galaxy counts 3—48993
IR telescope point source location, coherent and incoherent imaging comparison 3—10211
IUE high resolution spectra, interactive procedure for background subtraction problems, appl. to image SWP 4616 3—25341
Jilin meteorite, temp. gradient, thermoluminescent determ. 3—54292
Jupiter/Saturn third order theory missing terms determ. method *(French)* 3—10221

astronomical techniques continued
Kodak Technical Pan Film 2415, hypersensitised/unhypersensitised, absolute sensitivity rel. to standard astron. emulsions 3—35448
Kodak colour negative films, testing for astrophotography 3—35449
Kodak IIIa-J plates, hypersensitisation techniques for astrometry at Goethe Link Observatory 3—35447
laser ranging system *(Japanese)* 3—25245
Local Group motion determ., effect of Local Supercluster extended low density region 3—30512
luminosity determination from broadband and Hβ photometry 3—54460
lunar colorimetric mapping in 620-950 nm range 3—30252
lunar surface material dating method, use of U neutron induced fission 3—48833
magnetic field determ. for solar-type stars 3—54253
Mars, spectral reevaluation in mid-IR region 3—30248
meteor streams mass coefficient determ. methods 3—5237
meteorite inclusions tomographic anal. 3—54259
meteorite isotope anomaly determination procedures 3—20307
meteoroid parameter determ. during quasicontinuous atm. crushing 3—30307
microfilms hypersensitisation and evaluation in astrophotography 3—35450
molecular cloud structure, standard anal. accuracy 3—40222
Moon, spectral reevaluatioin in mid-IR region 3—30248
Moon orbital motion, Earth tides effects, modelling techniques 3—30255
multicolour photometry of solar corona during eclipse using colour films 3—59296
narrow band photometry in 1-4 micron region, calibration and appl. 3—54255
narrow spectral bandpass observing techniques for solar corona, historical aspects 3—30339
nebulae density and luminosity structure from polarization maps, deconvolution 3—15853
NGC 1961, disc galaxy mass determ. 3—40270
North Galactic Pole disc and halo stars, density functions separation method using RGU photometry 3—40051
open cluster age determ. from photometry not reaching unevolved main sequence 3—54458
optical figuring process for Dupont 2.6-m telescope, implications of optical testing data 3—25323
periodicities, random fluctuations, persistence and quasi-persistence 3—25248
photoclinometry, appl. to determ. of topography of Martian north polar cap 3—5189
photographic image enhancement, direct approach 3—10224
photographic photometry, colour equations for United Kingdom Schmidt Telescope 3—10215
photographic positional observations of major planets, effect of photographic irradiation 3—44674
photographic spectroscopy, intensity recording via direct intensity microphotometer 3—59221
photographic surface photometry of central region of Galaxy, techniques and errors *(German)* 3—40259
photographic surface photometry of Milky Way, data and reduction methods *(German)* 3—40258
photometry, real-time data reduction via microcomputer-controlled photometer 3—10218
planet surface type analysis, use of albedo spectral variability 3—39938
planetary chronology and chemical evolution studies, importance of Lu-Hf isotopic system 3—48513
planetary nebulae chem. comp. determ. methods 3—59436
planetary systems, extrasolar, detect. via astrometric techniques 3—30416
planets, soil composition studies, antenna impedance meas. method 3—15854
polarization imaging and mapping 3—59223
polarized brightness distrib. reconstruction by max. entropy method 3—44673
projection angle of radio sources on sky, statistical correction technique 3—10473
QSO luminosity determination, use of C IV emission as luminosity indicator 3—49052
QSOs, quantitative measures of slitless spectra 3—10477
radiative transfer in cold plasma with strong mag. field, problem soln. methods 3—59224
random band model method for outer Solar System obs. anal. 3—35487
red noise power spectra, computation formulation 3—5120
REDUCE, interactive spectrophotometric program 3—40049
relativistic gravity testing, space expt. using multiple time-correlated radio signals 3—54225
Sagittarius B2, temp. and density determ. from methyl cyanide lines anal. 3—25644
shock front produced by stellar wind-interstellar gas interaction, geometrical props. determ. method 3—30221
Shternberg stellar spectrophotometry method accuracy 3—20255
sky noise in IR astronomy, processing by chopping, nodding and filtering 3—40039
solar astronomy, correlation tracking method for improvement of imaging quality of ground-based solar telescopes 3—54250
solar astronomy, meas. of long-period solar oscills. at Sacramento Peak Observatory and South Pole 3—54312
solar atmosphere He abundance, determ. from cut-off freq. of solar acoustic modes 3—54323
solar diameter measurements, comparison of Pic-du-Midi expt. and SCLERA expt. rel. to solar oscills. 3—54319
solar flares detection when Sun is observed as star, Ca II K-line transients technique 3—10293
solar IR intensity variations, differential technique rel. to obs. of global 160-minute var. 3—54310
solar neighbourhood interstellar matter analysis and diagnostic methods *(Italian)* 3—15982
solar oscillation data anal. via superposed epoch method, statistical considerations 3—54260
solar oscillations observation, new system at Mount Wilson Observatory 3—54241
solar photosphere velocity oscillations, study using vel. subtraction technique 3—54327
solar prominences magnetic fields, meas. with new spectrally scanning magnetograph 3—15890
solar proton flares forecasting, determ. of α factor of force-free mag. field *(Chinese)* 3—40087
solar wind acceleration region probing, use of spectroscopic techniques 3—30228

astronomical techniques continued
solar wind vel. determ. from flare photosphere mag. field determ. 3—40053
speckle interferometric imaging, shift and add method performance at low light levels 3—48835
speckle interferometry review 3—30227
speckle interferometry with BTA 6 m telescope 3—30206
spectral line intensity profiles from photographic spectrograms, computer controlled method 3—5121
spectral line profile fitting, statistical uncertainties 3—10220
spectrophotometric data reduction, appl. of command language RETICENT 3—10226
spectrophotometry, importance of atmospheric differential refr. 3—10225
spectroscopic close binary stars before and after mass transfer, absolute dimensions determ. method 3—25342
spectroscopy, appl. of derivative techniques 3—59222
spectroscopy, meas. and model computations of shifts of O$_2$ lines used as wavelength references 3—15617
sphalerite cosmobarometer for meteorites, experimental calibration 3—48864
spiral galaxies, automatic classification 3—30506
spiral galaxies nuclei, luminosities and stellar population estimation, spectroscopic method 3—25340
star angular coordinate determ. using optoelectronic measuring systems 3—5123
star classification, use of photometry and spectra 3—35456
star images measurement on pixel array, photometric and astrometric accuracy 3—59229
STARLINK image-processing facilities, present status and future development 3—25346
stars classification and discriminant anal. 3—54254
stellar absolute spectrophotometry, absolute flux meas. for secondary standard stars 3—54344
stellar composition, abundance anal. of metal-poor late-type stars from theoretical standpoint 3—59322
stellar compositions, errors in high-resolution abundance anals. of metal-poor giant stars 3—59321
stellar differential rotation from line broadening, Fourier transform, note 3—20249
stellar oscill. eigenfrequencies determ., matrix method 3—54358
stellar photoelectric photometry, simple and accurate on-line data acquisition program in BASIC 3—48832
stellar photometry, errors in monochromatic magnitudes at Cerro Tololo Inter-American Observatory due to atmospheric extinction 3—10065
stellar resonance polarisation detect. in Ca II H/K lines 3—54443
stellar RGU photometry, photoelectric realisation of system and definition of standard stars 3—40041
stellar speckle interferometry, appls. of achromatic-Fourier-transform systems 3—32314
stellar speckle interferometry, cross spectrum anal. appls. *(French)* 3—54251
stellar speckle interferometry, speckle boiling origin and effects 3—30225
stellar spectra, principal components anal. of stars, method appl. to nonconforming spectra detect. 3—59227
stellar spectral classification, principal components anal. appl. to narrow band photometric data 3—59226
Sun, corona nature, use of occulted spacecraft signals 3—30342
Sun, cosmic ray proton integrated flux forecasting from cosmic ray event initial characts. 3—35451
Sun, five minute oscillations wave patterns, convective eddies effects determ. 3—54262
Sun, flare EUV radiation from indirect ionosphere radiowave obs. and direct optical obs. 3—15852
Sun, flare microwave bursts, source optical depth determ. by empirical statistical method 3—40108
Sun, flare prediction *(Polish)* 3—48883
Sun, transition zone above faculae, density determ., comparison of methods 3—59308
Sun, transition zone velocities and line broadening determ. by Double Dopplergram Determination 3—25343
sunspot longitudinal mag. fields determ. in photosphere/transition region 3—40096
super-resolution of compact-source beyond Rayleigh limit, evaluation of flux, position, size and shape 3—10227
supergiant stars, luminosity determ. from broadband and Hβ photometry 3—54460
supergiant stars spectral classification obs. of metal-deficient O9-B0 supergiants in SMC 3—48897
supernova searching, automated technique using IIIaJ Schmidt plates 3—30401
time measurement system for neutron flux events timing from collapsing stars 3—35966
time series analysis, statistical aspects of spectral anal. of unevenly spaced data 3—30218
transformation methods in non-linear systems, theory *(Chinese)* 3—40042
two dimensional goodness-of-fit tests, appl. to quasar candidates in Virgo cluster field plate 3—40046
Type II supernovae distance determination method and photospheric continuum emission 3—25347
Universe large scale struct. determ., method 3—40045
unsaturated P Cygni line profiles, first order moment W$_1$ and mass loss rate determ. 3—35446
Uranus rings, structure, content, detection methods *(French)* 3—40070
uvby photometry appl. to G-type stars 3—54256
valve electronic camera, remote controlled, at C.F.H. 3.60 m telescope prime focus *(French)* 3—30199
VCROSS, interactive cross-correlation vel. program 3—40050
VELMEAS, interactive radial vel. meas. program appl. to 61 Cygni A 3—40047
Venus atmosphere, aerosol elemental comp. method 3—48842
video-image real time correlator *(French)* 3—50626
VLINE, interactive line fitting spectrophotometric reduction program 3—40048
white dwarfs, $\geq 10^6$ gauss mag. fields identification from line widths 3—30368
X-ray absorption-line studies, appl. to detect. of very hot intergalactic or interstellar gas 3—30445
X-ray astronomy, development of observational techniques (1962 to 1982) *(Russian)* 3—10548
X-ray spectroscopy of solar flares, review 3—30319

astronomical techniques continued
^{10}Be content meas. in meteorites, mass spectroscopic meas. using tandem van de Graaff accelerator 3—30222
Fe abundance in K-type giants, method using very strong lines 3—30226
H II regions, excitation conditions determ. from IR fine struct. line ratios 3—44818
H$_2$ in spherically symm. inhomogeneous clouds, photodissociation rate and radiation field 3—30458

astronomical telescopes
see also radiotelescopes
4.2 m Herschel telescope on La Palma, design, instrumentation and observatory 3—30185
10 m IR orbiting telescope, Astronomy Survey Committee recommendations 3—30177
15 m optical orbiting telescope, Astronomy Survey Committee recommendations 3—30177
250 mm amateur Newtonian reflector, design *(French)* 3—30174
aplanatic object glass, $3^1/_4$ inch dia., first by Tulley (c. 1821) 3—25328
apodisation of telescopes, method and appl. to obs. of visual binary stars 3—44668
balloon borne equipment for submillimetre brightness temp. of Sun 3—30196
balloon-borne, orientation platform design 3—54238
BTA 6 m TV spectrum scanner 3—30210
Canada-France-Hawaii telescope and observatory, general concepts and technical data 3—30183
Cassegrain focus, 10 μm heterodyne spectrometer 3—30214
Cassegrain system, view field aspherical plate corrector, design and characts. *(Chinese)* 3—59217
catadioptric cameras for spectroscopy with image tubes 3—30191
CFH 3.6 m, electronographic camera at prime focus 3—30212
CFH 3.6 m, high resolution images and spectroscopy at prime focus 3—30190
conference on advanced technology optical instruments at Tuscon, Arizona (March 1982) 3—25679
coronographic mode for large telescopes 3—30187
coude efficiency improvement using train of small mirrors with high reflectance coatings 3—30186
Crimean 2.6 m reflector, electronographic image convertor for spectroscopy 3—30211
Dupont 2.6-m telescope, Las Campanas Observatory, Chile, optical testing data rel. to figuring process 3—25323
extra-solar astronomy with a 2.4 m normal incidence X-ray telescope at 0.1 arcsec resolution 3—25325
eyepiece with rectilinear movements *(French)* 3—30176
Faint Object Camera of Space Telescope, image processing 3—48836
Faint Object Camera on Space Telescope, image integration memory, reliability design 3—30179
field effects in UK Schmidt Telescope plates 3—20253
Galileo project, image sensor with 800×800 CCDs appl. 3—10209
grazing incidence relay optics for Wolter type-I X-ray telescopes 3—30172
grazing-incidence X-ray imaging telescope, optical design 3—35437
ground based IR/visible telescopes for European Science Foundation countries (1982 inventory) 3—15841
ground based telescopes, image quality degradation effects 3—30188
honeycomb mirrors using borosilicate glass *(Japanese)* 3—5116
hyperbolic convex mirrors, null test 3—27187
hyperbolic secondary self-null corrector test 3—46354
information efficiencies of telescopes and their instrumentation 3—30189
Infrared Space Observatory, cooled telescope with photometric and spectroscopic instruments 3—40033
Infrared Space Observatory, cryogenically cooled telescope and instrumentation 3—30148
Infrared Telescope in Space, superfluid experiment in zero gravity aboard a rocket 3—35441
IR orbiting telescopes, He purge flow prevention of atm. contamination of cryogenically cooled optics 3—44638
IR space telescope, extended lifetime, hybrid cryogenic cooling system 3—40005
IR telescope, electromechanical device for support of oscillating secondary mirror 3—54243
IR telescope point source location, coherent and incoherent imaging comparison 3—10211
IRAS telescope 3—35438
IRAS telescope focal-plane array test facility, at NASA Ames Research Centre 3—30180
large optical telescopes and instrumentation, conf. at Zelenchukskaya, USSR (September 1981) 3—25693
large optical telescopes of future, design considerations *(French)* 3—30175
large telescopes, history and new developments *(Japanese)* 3—5111
layered synthetic microstructures for X-ray telescope appls. 3—16456
Multiple Mirror Telescope, performance 3—30182
multiple-mirror telescope at Preston 3—54236
NASA's Space Telescope project, collaboration of ACEC *(French)* 3—44667
phased array with large field-of-view, test telescope *(Japanese)* 3—59216
photoelectric meridian circle, division corrections derivation 3—15845
photovisual optical system with flat field, design 3—10214
polarisation compensators for stellar telescopes coude optics, design + adjustment 3—25322
resolving power project results 3—10213
Ritchey-Chretien, Space Telescope equipment 3—15848
sectional mirror adjustment using piezoelectric stepping drive 3—5783
Seidel aberration coeffs., derivatives determ. *(Japanese)* 3—48821
SIRE (Space Infrared Experiment) contamination potential, preliminary assessment 3—10183
solar coude telescope at Okayama Astrophysical Observatory, instrumental polarisation 3—25337
Solar Diameter Monitor, long term var. meas. 3—5110
solar telescope, tests using He gas filling of optical path 3—30173
solar telescope at South Pole, appl. to meas. of long-period solar oscills. 3—54312
solar telescopes, ground-based, imaging quality improvement via correlation tracking method 3—54250
solar X-ray telescope, advanced nested, grazing incidence relay optics addition 3—20242
Space Telescope, appl. to obs. of Uranus 3—5114
Space Telescope, design and fabrication 3—15842
Space Telescope, Faint Object Camera, data analysis facility 3—5139
Space Telescope, magnetic control systems 3—48795

astronomical telescopes continued
Space Telescope design and capabilities 3—59218
Space Telescope development, test, satellite, equipment, Danish participation *(Danish)* 3—39988
Space Telescope fine guidance aspheric collimating mirror, two null corrector designs 3—10208
Spacelab 2 IR telescope, He II Dewar subsystem performances obs. 3—35442
Starlab orbiting astronomical laboratory, characts. 3—25327
submillimetre astronomy from space platforms 3—30194
submillimetre-IR orbiting observatory, telescope and accessories 3—30195
testing astro-optical surfaces with general-purpose instrument 3—27280
thin mirrors, design and support 3—35440
UK 1.2 m Schmidt Telescope plate catalogue, problems 3—5152
United Kingdom Schmidt Telescope, colour equations for photographic photometry 3—10215
University of Texas 7.6 m telescope, mounting, building and optical system 3—30184
Wolter type I X-ray telescope coated by multilayer diffr. coatings, performance calc. 3—25326
X-ray mirrors, grazing incidence, automated cylindrical polishing 3—27276
X-ray telescope, conical primary, aspheric secondary, imaging characts. 3—10206
X-ray telescope, imaging performance at 0.18 keV in normal incidence mode 3—20961
X-ray telescope, Wolter Type I, with multilayer diffraction coatings, calculated performance 3—54240
X-ray telescope for Spacelab, using high resolution large area modular array of reflectors (LAMAR) 3—54239
Zelenchuk 6 m telescope and assoc. equipment 3—30181

astronomy *see astronomy and astrophysics*

astronomy and astrophysics
see also astroarchaeology; astronomical catalogues; astronomical instruments; astronomical observations; astronomical observatories; astronomical spectra; clusters of galaxies; cosmology; extraterrestrial life; galaxies; gamma-ray astronomy; infrared astronomy; intergalactic matter; interplanetary matter; interstellar magnetic fields; occultations; planetaria; radioastronomy; solar system; stars; ultraviolet astronomy; X-ray astronomy
1983 Astronomical Almanac 3—41
1983 observer's handbook, RAS Canada 3—16099
outstanding American astronomers, ages at publication of most-cited papers 3—59236
American Astronomical Society, 14th Annual Meeting of Division for Planetary Sciences (Boulder, Colorado, 1982 October 19 to 22) 3—5477
American Astronomical Society 161st meeting at Boston, USA (January 1983) 3—30543
American astronomy in the mid-nineteenth-century 3—54607
angular momenta of astronomical systems, role of cosmic turbulence 3—10488
Astronet National Convention 1982, conference, Rome, Italy (1982 April 1 to 2) *(Italian)* 3—16078
astronomic geology, subject and general problems 3—20000
Astronomical Society of India, 7th meeting, conf. at Roorkee, India (November-December 1981) 3—16066
Astronomical Society of the Pacific, meeting, La Jolla, California (1982 June 28 to July 1) 3—16080
Astronomischen Gesselschaft meeting at Strasburg, France (February 1982) 3—30550
Astronomy and Astrophysics Abstracts: a status report 3—48
automated data retrieval, IAU colloquium (Strasbourg, July 1981) 3—30
barytinos, astrophysical consequences 3—59200
book 3—20593
CASCA thirteenth meeting at Toronto, Canada (June 1982) 3—20566
chemical elements, cosmogeochemical classification rel. to periodic system 3—4833
compressible turbulence, cascading in nonlinear interaction of random modes 3—59198
conference, Sixth European Regional Meeting in Astronomy at Dubrovnik, Yugoslavia (October 1981) 3—20582
cosmic plasma physics, paradigm transition 3—59212
data handbook 3—54591
Earth dynamical ellipticity, revised value 3—39768
fast ion bombardment of ices, expts. and astrophysical implications 3—30264
galaxy images on new and old POSS prints, comparison 3—20254
general relativity, geometric constraints on nonsingular, momentarily static, axisymmetric systems 3—45030
GEOS—Italy/France/Belgium/Spain stellar obs. and study group *(French)* 3—30430
glossary of space terms 3—35785
gravitational potential of celestial body, harmonic coeffs., translation effect of ref. system 3—48815
high energy astrophysics, contribs. of binary star research 3—48956
hydrogenic atoms, energy values and sum rules in arbitrary mag. fields using numerical wave functions 3—10194
IAU, 1982 Reports from Commissions 3—20262
ice ages, appl. of climate models to astronomical theory 3—4951
INSPEC activities in astronomy and astrophysics 3—5165
instrumentation in astronomy, conference, Tucson, Arizona, (1982 March 8 to 10) 3—35769
internal wave turning surface, theory 3—9992
investigating the Universe, book 3—10524
Irish astronomy to 18th century 3—30583
jets from geometrically thick accretion disc, appl. to active galactic nuclei and (SS 433) 3—10203
journal editorial policy 3—5166
JPL ephemerides, DE200/LE200, orientation to dynamical equinox of J2000 3—15829
Julian period, twelfth century origins 3—35826
Kepler's cosmological theories, their agreement with observation 3—20602
light rays in gravitating refractive media, general relativistic eqn. of motion 3—10191
magnetic field configurations perturbations, theory 3—10192
magnetic field generation, two simple examples of nonzero-flow-rate (accretion) semidynamo 3—44664
magnetogravitational instability of finitely-conducting medium with variable streaming motion, theory 3—59196
mass scales in universe of dust and blackbody radiation 3—59510

astronomy and astrophysics continued
maximum useful observing time for a given declination 3—20260
meteor observer's handbook, naked eye work 3—16100
Moon, mag. monopole charge meas. 3—59211
Moon size illusion, objects large appearance on horizon 3—19711
New Moon, earliest global visibility (1981 to 1985) 3—48840
nomenclature dictionary *(French)* 3—5167
nuclei far from stability, beta decay half lives, appl. to astrophysical γ-process 3—31352
physics of stellar evolution and cosmology, book 3—10545
plasma, fusion, properties of low-temp. plasmas, appls. *(Dutch)* 3—50049
plasma, high-temperature, effects of nuclear forces on ion thermalisation 3—30160
plate vaults, information centralization 3—5168
Pleistocene ice ages, historical review of astronomical theory 3—4949
Ptolemy's star data authenticity 3—49135
radiative transfer, inverse problems and evolution of stars and galaxies *(Russian)* 3—54350
radiative transfer, Monte Carlo method for multilevel problems with allowance for continuous processes 3—44666
relativistic coherent curvature radiation 3—48813
relativistic Fermi gas, mag. props. 3—5705
Royal Astronomical Society meeting, Dublin, Ireland, (1982 April 5 to 7) 3—25682
Second Latin-American regional meeting of IAU at Merida, Venezuela (January 1981) 3—49081
seeing conditions, atmospheric effects anal. 3—25197
self-gravitating gas, strong spherical shock waves, novae 3—44657
Sir Arthur Eddington O.M., F.R.S., 1882-1944 AD, recollections 3—20599
STARLINK image-processing facilities, present status and future development 3—25346
terrestrial O_2 lines used as astronomical wavelength references, comparison of meas. and theory for line shifts 3—15617
transformation methods in non-linear systems, theory *(Chinese)* 3—40042
trends in physics, conf., Istanbul, Turkey, Sept. 1981 3—30555
^{12}C ^{13}C, Fourier spectroscopy of Phillips system 3—44648
$^{13}C_2$, Fourier spectroscopy of Phillips system 3—44648
^{12}C^{13}C, Fourier spectroscopy of Ballik-Ramsay system 3—30165
$^{13}C_2$, Fourier spectroscopy of Ballik-Ramsay system 3—30165
Fe II, electron impact excitation cross-section meas. 3—44665
H_2, quadrupole spectrum, line positions and strengths 3—30166
HD, vibration-rotation transition probabilities for ground electronic $X^1\Sigma^+$ state 3—35432
O II, oscillator strengths and collision strengths for electron impact excitation 3—35420
O III, oscillator strengths and collision strengths for electron impact excitation 3—35420
S I isoelectronic sequence, transition probabilities for forbidden lines in $3p^4$ configuration 3—45901
SiC_2, theoretical study of ground state and excited electronic states 3—54221

astronomy computing
see also computerised instrumentation
Abastumani galaxy catalogue in machine-readable form 3—5157
ASTRONET for astronomical data analysis and retrieval in Italy 3—5131
Astronet National Convention 1982, conference, Rome, Italy (1982 April 1 to 2) *(Italian)* 3—16078
Astronomical Data Center at NASA/GSFC, operations 3—5140
Astronomical Image Display and Analysis system at Tubingen for IUE images, echelle orders width 3—20248
automated data retrieval, IAU colloquium (Strasbourg, July 1981) 3—30
BASIC program to predict satellite positions 3—39987
celestial mechanics, general precompiler for algebraic manipulation of Poisson series in FORTRAN IV 3—48806
Clusters of Galaxies Data Centre (CEDAG) *(French)* 3—5435
comet-asteroid close approach predictions, calc. technique 3—30223
data and data retrieval in space astronomy 3—5145
data and plate vaults 3—5168
data retrieval and evaluation aids 3—5142
data structures analysis, system software approaches 3—5133
Dearborn Observatory stellar data file 3—5362
digital image processing and data retrieval 3—5135
ESA data analysis facility for Faint Object Camera 3—5139
extragalactic data centralization 3—5470
galactic collisions, numerical simulation techniques 3—16015
Galilean satellite positions, computer program *(French)* 3—35504
Geneva photometric boxes, direct access square files 3—5146
hidden line ruled surface display 3—25345
image enhancement, digital filtration methods 3—20257
image processing on archival plates for large-scale photometric surveys 3—5144
image processing techniques in astronomical research 3—48831
information retrieval from Padova-Asiago Observatory plate archives 3—5143
interacting galaxies, literature review and computer simulations 3—16014
IR data base and catalogue of IR obs. 3—5149
IRAS data analysis at OCC 3—35453
IRAS data processing at JPL/SDAS 3—35454
IUE data archiving and retrieval 3—5137
IUE data distribution 3—5128
IUE high resolution spectra, interactive procedure for background subtraction problems, appl. to image SWP 4616 3—25341
Kanazawa Data Center, astronomical data management 3—5126
modular Fabry-Perot interferometry system for H II regions imagery and spectrometry 3—25338
NASA data base and retrieval system 3—5125
open star cluster data cataloguing 3—5160
57 Orionis, occultation by Moon, computer controlled high speed photometry *(German)* 3—35411
57 Orionis, occultation by Moon, computer-controlled high speed photometry *(German)* 3—35410
photometer, microcomputer controlled, for astronomical use, hardware and software 3—10218
plate vault information centralization 3—5169
Potsdam Data Centre 3—5127
processing astronomical images, Faint Object Camera of Space Telescope 3—48836
QSOs, quantitative measures of slitless spectra 3—10477
radiotelescope data processing system *(Japanese)* 3—54237

astronomy computing continued
RETICENT, command language for spectrophotometric data reduction 3—10226
software structures, international standards 3—5136
solar oscillations observation, new computer system at Mount Wilson Observatory 3—54241
Soviet Center of Astronomical Data 3—5164
spectral line intensity profiles from photographic spectrograms, computer controlled method 3—5121
SPORA software package, system response 3—5141
STARLINK image-processing facilities, present status and future development 3—25346
stellar bibliography retrieving system in Japan 3—5363
stellar catalogue data retrieval for satellite attitude determ. 3—5138
stellar data centres, problems 3—5361
stellar photoelectric photometry, simple and accurate on-line data acquisition program in BASIC 3—48832
Sun and Moon on the Apple program in BASIC 3—40044
time and polar motion data, immediate access to data files 3—4756
UK 1.2 m Schmidt Telescope plate catalogue, problems 3—5152
UK Starlink computer network 3—5130
X-ray data, NSSDC and WDC-A-R&S activities 3—5129
astrophysics computing
see also computerised instrumentation
Astronet National Convention 1982, conference, Rome, Italy (1982 April 1 to 2) *(Italian)* 3—16078
black hole parameter evaluation using DELILAH program 3—44785
interstellar collapse, hydrodynamic computer codes 3—44650
interstellar dust clouds, radiative transport code DUSTCD 3—54491
polytropic primary, shape calc. program 3—10396
REDUCE, interactive spectrophotometric program 3—40049
spectrophotometric data reduction, appl. of command language RETICENT 3—10226
spiral galaxies, automatic classification 3—30506
VCROSS, interactive cross-correlation vel. program 3—40050
VELMEAS, interactive radial vel. meas. program appl. to 61 Cygni A 3—40047
VLINE, interactive line fitting spectrophotometric reduction program 3—40048
asynchronous electric machines *see asynchronous machines*
asynchronous machines
see also induction motors
induction MHD pumps, transient processes, end effects 3—22546
asynchronous motors *see induction motors*
ATM forces *see intermolecular forces*
atmosphere, solar *see solar atmosphere*
atmosphere, terrestrial *see terrestrial atmosphere*
atmosphere, upper *see upper atmosphere*
atmospheric acoustics
acoustic sounding method for anal. of tropospheric inversions *(Russian)* 3—10090
aerodynamic sound radiation from a double layer jet 3—37284
boundary layer temp. struct. coeff. determ. by sodar method *(Chinese)* 3—35202
Doppler sodar, appl. to atmospheric turbulence *(French)* 3—20107
meteorite in atmos., electrophonic sound generation 3—15879
Mount St. Helens eruption on 1980 May 18, related ionospheric disturbances 3—10131
noise barrier insertion loss in presence of ground, atm. turbulence effects 3—37288
noise spectra shaped by atmospheric attenuation, finite bandwidth corrections 3—17684
radiative damping of acoustic-gravity waves in non-isothermal atmosphere *(Russian)* 3—20084
radio acoustic sounding system (RASS) method, for temp. of boundary layer 3—54137
SODAR, appl. in pollutant meas. and related obs. from nucl. power plants 3—58582
sodar echoes and line of sight microwave propagation 3—54093
stratified atmosphere, sound wave propag. *(Japanese)* 3—42059
switched continuous-wave sonic anemometer for surface heat flux meas. 3—15621
temperature stratified atmosphere high-freq. acoustic waves *(Russian)* 3—59040
thunder, acoustic props. for tortuous lightning, quasilinear model and computer simulation 3—35232
wind measurement in convective boundary layer, use of acoustic Doppler radar *(Chinese)* 3—48716
wind velocity meas. by Doppler acoustic radar 3—54165
atmospheric boundary layer
acoustic/radioacoustic sounding system *(Russian)* 3—20149
aerosol deposition patterns determ. by Sr isotope study method 3—48635
aerosol from bursting of ocean surface bubbles 3—59033
aerosol of Hawaii boundary layer, of continental origin 3—15547
aerosol turbulent diffusion in boundary layer (and surface deposition) 3—39867
aerosols in marine boundary layer, total optical depth and mixed-layer visibility 3—54122
air pollution, particle fallout from plume from chimney 3—39546
air pollution ground-level concs. downwind of chimney, model 3—44172
air pollution long-range transport model with boundary layer chem. 3—44523
Antarctica, dry valleys and Little America V station microclimate, model 3—35213
Athabasca oil sands area, Canada, wind influenced by terrain 3—39869
NE Atlantic Ocean, seasonal variability below main thermocline, wind stress forcing 3—15469
Baffin Bay, winds through Smith and Jones Sounds 3—15561
Baltic Sea, sea ice region, momentum and heat transfers 3—35209
baroclinic ocean response to tropical cyclone, currents, temp. and disturbance evolution 3—48569
baroclinicity and thermal stability effects of marine boundary layer 3—25193
Bombay airport, India, temp. inversion occurrence 3—25168
Boulder Atmospheric Observatory, horizontal vel. components vertical cross spectra 3—20070
British Isles coastal boundary layer, Aitken nuclei conc. 3—35235
Cabauw, Netherlands, boundary layer wind profiles and heat fluxes 3—20069
atmospheric boundary layer continued
channelled winds through sounds in N.Baffin Bay 3—15561
clear air convective structs. in PBL 3—59064
coastal sites daytime mixed layer depth, model including advection/subsidence 3—35207
Cologne, Germany, inversion structure heights from wind/temp. obs., correl. with rural area 3—15577
convective boundary layers affected by large-scale motions *(Russian)* 3—54088
dense gas cloud dispersion, pollution appl. 3—48588
desert dust prediction model, devel. feasibility, heuristic investigation 3—59024
determination methods for height of daytime convective layer 3—15641
dichotomy in theoretical treatments 3—15536
diffusion model for chem. reactive species 3—54072
diffusion of material instantaneously released into boundary layer 3—39548
dispersion in boundary layer, results of 4th European Community Campaign 3—30058
Doppler radar observations, press. flunctuations and buoyancy data retrieval 3—20132
drainage flow at nighttime 3—25194
dust deposition rate onto rough and smooth surfaces 3—54075
eddy kinetic energy model of planetary boundary layer 3—54081
Ekman boundary layer dynamics using geostrophic momentum approx. 3—10003
electrode effect over snow, theory for turbulent and nonturbulent cases 3—4924
embankment, surface layer turbulent wind flow 3—35216
entrainment growth, effective stratification determ. method 3—48681
W Europe, surface geostrophic wind diurnal oscills. 3—25191
evaporation theory, book 3—5517
actual evapotranspiration determ. by IR scanning method *(French)* 3—25239
flow over topography in nonlinear and linear barotropic models 3—44509
forecasting of marine boundary layer with turbulence closure model 3—48592
frontogenesis model including planetary boundary layer effects 3—10004
Germany, North Sea coast, dispersion processes and aerosols, lidar obs. 3—39892
Germany, North Sea coast, planetary boundary layer characts., use of powered gliders in PUKK 3—39891
Germany, North Sea coast, PUKK tetroons used for meso-scale transport processes meas. 3—39920
gravity flows momentum balance 3—59044
ground pollution source surface layer diffusion, similarity forms 3—15015
growth of mixed layer during clear day 3—4909
gusts in boundary layer during cold front passage *(Chinese)* 3—59096
heat and moisture flux equations for local advection 3—54082
heat flux and radiation balance of atm. ground system 3—4913
heat flux through ground surface with short grass cover 3—44520
heat island (nighttime) above Al smelter in Australia 3—4911
heat island influence on boundary layer flow 3—20094
HF skywave radar sea backscatter, wind speed estimation 3—9993
HF surface waves propag. over ocean, attenuation with distance and wind speed 3—10031
Hogback Ridge, New Mexico, lee waves delineation by power plant plume 3—35214
Hurricane Frederic, boundary layer wind field, transition from Gulf of Mexico to landfall 3—59014
International Turbulence Comparison Experiment at Conargo, Australia 3—35208
inversion-capped planetary boundary layer, two-dimensional numerical study of horizontal roll vortices 3—15583
ionic high-resolution anemometer for boundary layer meas. 3—30080
IR device for CO_2 and water vapour fluctuation meas. 3—20140
JASIN 1978 project at N Rockall Trough 3—35179
Joint Air Sea Interaction project, atm. and ocean mathematical models 3—35187
Kauto Plain area, planetary boundary layer response to variable pressure gradient 3—54065
lake breeze model for southern Lake Ontario, USA 3—4914
Lake Michigan, USA, snowbands induced by land breezes 3—48593
land-sea breeze circulation, topographic effects 3—35203
Lannemezan Plateau, France, wind characts. *(French)* 3—39874
light propagation in turbulent atm., wave struct. function *(Chinese)* 3—48671
long wave flux divergence near surface of Earth *(Russian)* 3—59106
marine atmosphere, factors affecting 1 μm particle number density 3—54104
marine atmospheric boundary layer, meteorological model for optical props. 3—10064
marine boundary layer, wind profile fluctuations and subharmonic transitions in wave field 3—15455
marine boundary layer-ocean interaction, clouds devel. and evolution 3—59048
marine stratocumulus, aircraft obs. during JASIN expt. 3—15585
marine surface layer, GATE turbulent heat and moisture fluxes 3—15607
mesoregion concept and energy spectrum in wavenumber space 3—32719
meteorological tower of Trino Vercellese Environmental Laboratory, Italy 3—54133
methane conc. in Atlantic boundary layer 3—15543
micrometeorology during total solar eclipse 3—59078
microwave fading characts. of atmos. boundary layer 3—15596
midday all-slope surface temperature, solar radiation transmission/energy budge models coupling 3—39878
model of boundary layer suitable for atm. prediction application 3—30009
models based on turbulent exchange coeff. 3—35201
moderate relief boundary layer near to mountain chain *(French)* 3—54077
mountain forest cloud droplet deposition (chem. and water) 3—39899
nonmethane hydrocarbon conc. in Atlantic boundary layer 3—15543
nuclear power plant wake region, diffusion of radioactive pollutants 3—44175
occult precipitation from clouds, rel. to pollutants transfer in upland regions 3—53606
ocean waves, wind generated, momentum and energy transfer 3—15466
ocean-air heat fluxes during cold air outbreaks 3—29978
ocean-atmosphere interaction, turbulent heat and moisture fluxes calc. 3—9934
optical refr. index theory *(Russian)* 3—35230
optical transmittance meas. by passive sound methods *(Russian)* 3—59120

atmospheric boundary layer continued

- N Pacific, sea surfae temp. var. on decade time scale 3−59097
- southwest Pacific, surface wind freqs. from radar-wind data 3−59069
- equatorial Pacific, updraft and downdraft events 3−10005
- Pacific Ocean, tropical, surface temp. and wind, annual var. 3−59011
- Pacific Ocean tropical boundary layer, water vapour density, temp. and wind from turbulence data 3−35211
- particle dispersion in turbulent flow, vertical vel. from Markov chain simulation 3−20068
- particulate deposition to ground, influence of humidity 3−20058
- particulate deposition vel. by box model 3−20059
- Persian Gulf low level wind profiles during shamal 3−39900
- planetary boundary layer, cloud convection model, assoc. with turbulence precipitation *(French)* 3−35210
- planetary boundary layer, review of microwave radar obs. 3−20062
- planetary boundary layer, vertical struct. of eddy diffusion coeff. 3−4904
- planetary boundary layer, vertical temp. gradient rel. to internal stability parameter *(German)* 3−44496
- planetary boundary layer flow, two dimens. finite elemental model 3−59022
- planetary boundary layer flow, two-layer models and similarity functions 3−39877
- planetary boundary layer high-resolution model 3−44519
- buoyant plume behaviour in neutral and stable condition 3−20048
- plume dispersal from point source radar obs. of chaff 3−44177
- plume dispersal model describing conc. fluctuations 3−20051
- plume growth rate models involving change of atmos. stability 3−15576
- plume rise and dispersal from multiple stack source 3−4426
- plume rise behaviour including stack tip downwash 3−20050
- plume rise meas. of Turbigo, Italy 3−20049
- pollutant dispersal in convective boundary layer 3−54070
- pollutant ground level point source at Worcester, Massachusetts, short range dispersion 3−48208
- pollutant transport, numerical model 3−15604
- pollution characts. in land and sea breeze presence, numerical simulation 3−44169
- pollution diffusion from short duration source 3−39547
- pollution dispersal from finite line source, theory 3−20052
- pollution dispersal in neutral boundary layer, diffusion model 3−54069
- pollution dispersed downwind of nucl. power plant, wind-tunnel expts. 3−44174
- pollution plume dispersal model incorporating decay of pollutants 3−44176
- prestorm convective boundary layer, wind profiling and mapping using Doppler radar 3−44568
- PUKK, German North Sea coast, meso-scale expt. 3−39908
- radiowave ducting in atmos. boundary layer of coastal Florida 3−15595
- refractive index determ . by lidar method 3−48704
- N Rockall Trough, cloud capped boundary layer, stratocumulus radiation and humidity 3−35245
- N Rockall Trough, mass/momentum/heat budgets, cloud effects (JASIN 1978) 3−35242
- N Rockall Trough, momentum, heat and water vapour fluxes (in JASIN 1978) 3−35241
- N Rockall Trough, turbulent boundary layer obs. (in JASIN 1978) 3−35243
- N Rockall Trough, warm front struct. and interaction with boundary layer 3−35244
- Roskilde Fjord, Denmark, nocturnal drainage flow 3−25194
- Rossby waves over orographically modified terrain, anal. in quasi-static approximation *(German)* 3−15521
- San Antonio Mountain Experiment (SAMEX) 3−20120
- sea breeze occurrence on E coast of India during SW monsoon 3−48626
- sea breeze simulation, implications of anelastic continuity eqn. spurious mass loss/gains 3−35217
- sea surface wind speed, extraction from HF sky wave radar Doppler spectra 3−10033
- small particulates deposition onto grass 3−20057
- smoke plume dispersion in turbulent atmos. 3−4432
- sodar echoes and line of sight microwave propagation 3−54093
- soil-atmosphere heat transfer calc. methods 3−15396
- specific enthalpy, sensible heat and latent heat fluxes rel. to humidity variations 3−10010
- St. Louis, USA, effect of city on downwind boundary layer airflow 3−15568
- St. Louis region, Missouri, surface and upper air winds, pollution implications 3−35215
- sub-cloud layer struct. during severe storm 3−4933
- sulphate deposition onto pine plantation 3−39871
- surface global temp. field in 1970s *(Chinese)* 3−48654
- surface heat flux measurement using switched continuous-wave sonic anemometer 3−15621
- surface layer, temp. ramps. rel. to struct. functions 3−15503
- surface layer space-time turbulence characts. 3−39876
- surface layer temperature var. due to stratosphere aerosol layer var. 3−44550
- surface layer types, temp., effect of solar angle/air temp./clouds 3−35212
- surface temperature and energy budget components for two landscapes, effect of air temp. 3−20071
- Table Mountain, USA, surface layer, structure parameters of temp., humidity and temp.-humidity 3−20073
- Tarapur, India, stability characts. during 1980 February 16 solar eclipse 3−39875
- temperature determ. by radio acoustic sounding system (RASS) method 3−54137
- temperature struct. coeff. determ. by sodar technique *(Chinese)* 3−35202
- temperature struct. parameter determ. by differential temp. sensors 3−4910
- temperatures and mean wind, spectral density variability *(French)* 3−30034
- terrain-induced mesoscale motions in mixed layer, numerical anal. 3−44508
- thundercloud, lower layer outflow obs. 3−48630
- topography interaction with flow 3−22507
- trade wind subcloud layer vertical rel. fluctuations 3−4912
- trapped mountain lee waves, humidity effects 3−44510
- Trino Vercellese meteorological obs. in R.Po valley, Italy 3−54133
- turbulence characts. from Wangara Expt. wind obs. 3−4908
- turbulence estimation from wind and temp. obs. 3−39868
- turbulence parameter obs. and theory 3−44521

atmospheric boundary layer continued

- turbulence statistics within and above maize canopy, wind+temp. meas. 3−39879
- turbulent energy exchange in near-surface layer 3−54080
- turbulent energy over complex terrain 3−54078
- turbulent planetary boundary layer, higher-order models, cloud-ensemble relations 3−59043
- two-layer air pollution model for mixing between surface layer and air aloft 3−44490
- United States, surface temp., decade time scale var. 3−59097
- unstable planetary boundary layer velocity spectra 3−30008
- Uppsala, Sweden, turbulence characts. in surface near neutrally stratified urban atm. 3−15504
- vegetation cover, thermal radiation transfer under canopy 3−48641
- vertical heat transport in advective inversions 3−54079
- vertical stability index near ground-level *(Spanish)* 3−44499
- vortex street downwind of mountainous island 3−25192
- water vapour plume model 3−59059
- wind, multilevel vel. profile *(Chinese)* 3−59094
- wind flow over conical hills in simulated atmospheric boundary layer 3−48629
- wind influenced by ill defined valley 3−39869
- wind measurement, vane+cup anemometer rel. to orthogonally mounted propellor anemometers 3−39912
- wind measurement in convective boundary layer, use of acoustic Doppler radar *(Chinese)* 3−48716
- wind over complex terrain, implication of spatial averaging 3−15569
- wind velocity meas. by Doppler acoustic radar 3−54165
- wind wave crests, air flow separation struct. 3−12723
- Wyoming, USA, wind characteristics 3−59060
- O_3 in boundary layer, chemistry and transport model 3−54071

atmospheric chemistry

see also atmospheric composition

- acid production (H_2SO_4, HNO_3) in warm front 3−54073
- acid rain production models 3−54076
- air pollution long-range transport model with boundary layer chem. 3−44523
- boundary layer model of diffusion for chem. reactive species 3−54072
- $CO_2^+ + 2O_2$, three-body assoc. reaction, temp. depend. study 3−24498
- catalytic processes in atmospheres of Earth and Venus, theory 3−15597
- D-region positive ion chemistry, temp. and solar zenith angle control 3−10134
- F-region negative ion chemistry 3−15732
- free radical chemistry of cloud droplets and rain composition 3−15550
- kinetic and photochemical data tables 3−16094
- lower atmos.-thermosphere photochem. model 3−15544
- methane cycle, contrib. of global production of methane by termites 3−48633
- methyl sulphide, photooxidation processes 3−25155
- mountain forest cloud droplet deposition (chem. and water) 3−39899
- plumes, gas-phase chemistry rel. to sulphate aerosol dynamics 3−4422
- satellite solar power systems, environmental impact of launching vehicles on middle atmosphere 3−48212
- small ion recombination in lower stratosphere/troposphere 3−35247
- stratosphere, minor constituents, diurnal var., zonally av. model 3−15557
- stratosphere, trace gas composition, implication of UV absorpt. by O_2 3−48614
- stratosphere/troposphere multiply scattered solar induced radiation field, results for appl. to photochemical models 3−4961
- sulphate production in clouds due to SO_2 oxidation 3−20056
- Sydney, Australia, Meteorology of O_3 and other pollutants 3−54074
- thermosphere and mesosphere, H_2O, H_2 and meteor ion chemistry 3−20105
- thermosphere photochem. model and D-region winter anomaly 3−15726
- trace matter in troposphere and stratosphere, anal. problems 3−48102
- $^{26}Al/^{10}Be$ production ratio in atmosphere, determ. from accelerator mass spectrometry meas. 3−48708
- CO, model of global zonally averaged distrib. *(Russian)* 3−54087
- H_2O^+ fluorescent emission mechanisms in upper atmosphere due to ionosphere human influence 3−35327
- H_2O_2 concentration in mesosphere, rel. to mesospheric clouds form. 3−10045
- H_2O_2 pollutant in Bombay region atom., India, concs. and photochemical form. mechanism 3−44171
- H_2SO_4-negative ion reaction rates for stratospheric conditions 3−15549
- $N+O_2$ producing NO, thermosphere chem. of translationally excited N 3−48727
- N_2+O^+ resonant charge exchange reactions in upper atmosphere 3−10106
- $N_2^+ + 2N_2$, three-body assoc. reaction, temp. depend. study 3−24498
- NO, effective photodissociation cross sections in Schumann-Runge bands 3−15676
- NO_2 photolysis rates in troposphere 3−15554
- NO_x secondary pollutant formation processes 3−4940
- N_2O_5 conversion to HNO_3 in stratosphere 3−54106
- neutral Na layer, chem. model of conc. diurnal variations 3−44598
- $Na+O_2+M \rightarrow NaO_2+M$, rate coeff. for mesosphere conditions 3−25256
- O^{2+} photochem. and photoionisation processes 3−10107
- O_2, effective photodissociation cross sections in Schumann-Runge bands 3−15676
- O_2 in upper atmosphere photodissociation and O I 6300 Å emission 3−10110
- O_3 air pollution due to photochem. of oil refinery emissions 3−54067
- O_3 conc. affected by methane increase 3−20082
- O_3, in boundary layer, chemistry and transport model 3−54071
- O_3, long-range transport model with boundary layer chem. 3−44523
- O_3 photolysis rates in troposphere 3−15554
- $O(^1D)+N_2 \rightarrow NO+N$ in lower thermosphere and mesosphere 3−35329
- SO_2, air pollutant absorpt. by droplets, and chem. reactions 3−39872
- SO_2, oxidation of pollutants cloud drops 3−54066
- SO_2 pollution of Scandinavia, non-photochem. oxidation 3−39870
- SO_4^{2-} particles in stratosphere, nucleation mechanisms 3−39897

atmospheric composition

see also atmospheric chemistry; atmospheric structure

- acetylene, atmos. conc. obs. *(French)* 3−25148
- acetylene, seasonal and latitudinal conc. variation over Pacific 3−4923
- acetyonitrile in lower troposphere, Germany and Switzerland 3−48612
- acidity of rain over Ireland 3−19635
- acidity trend of rain in United States 3−29472
- aerosol, Arctic summer aerosol obs. 3−59034

atmospheric composition continued
aerosol, formation and development *(Russian)* 3—54089
aerosol content determin. method, by Sun photometry 3—59001
aerosol content influenced by climate *(Russian)* 3—35254
aerosol deposition patterns determ. by Sr isotope study method 3—48635
aerosol evolution in stratosphere after 1980 eruption of Mt. St. Helens 3—20079
aerosol from bursting of ocean surface bubbles 3—59033
aerosol in Amazon Basin, preliminary data on comp. and particle size distribs. 3—4905
aerosol increase in early 1982 caused by unobserved volcano 3—4920
aerosol influence on albedo of atm.-surface system *(Russian)* 3—35261
aerosol of Hawaii boundary layer, of continental origin 3—15547
aerosol of urban areas, size, shape and element associations 3—4438
aerosol of Yaounde, Cameroon *(French)* 3—25159
aerosol pollution causing change in climate *(Russian)* 3—35257
aerosols, nitrated polycyclic aromatic hydrocarbons in urban air particles 3—34751
aerosols (submicron) or marine air, size distribs. and meteorological processes *(Russian)* 3—9995
aerosols in Detroit metropolitan area, chemical comp. rel. to visibility 3—35260
aerosols in N China rural area, element comp., pollutant contrib. 3—48216
aerosols of nitrate and sulphate, particle size distrib. 3—25156
n-alkane input to World Ocean from atmos. 3—15488
Antarctic sulphate aerosol originating from local volcanoes 3—10026
Arctic, acidity of aerosols and precipitation 3—59032
Arctic aerosol radiative props. 3—39904
Arctic air pollution and haze 3—19639
Atlantic, acidity of aerosols and precipitation 3—59032
Beer-Sheva, Israel, dust origin and chem. composition 3—59035
n-butane, seasonal and latitudinal variations over Pacific 3—4923
carbon tetrachloride, atmos. conc. at Harwell, England 3—19633
catalytic processes in atmospheres of Earth and Venus, theory 3—15597
Chicago, Illinois, USA, atmos. suspended particulates 3—53601
Cretaceous-Tertiary species extinctions due to meteorite dust cloud optical effects 3—48676
E-region O_2 conc. from ionisation due to solar X-rays/UV emission at different latitudes 3—15693
early atmosphere, implications of S isotopes in Precambrian rocks 3—59112
ethane, atmos. conc. obs. *(French)* 3—25148
ethane, seasonal and latitudinal conc. variation over Pacific 3—4923
ethene, seasonal and latitudinal conc. variation over Pacific 3—4923
Etna, 1980, reevaluation of particulate emissions *(French)* 3—48525
Mt. Etna, H_2S, SO_2 and sulphate emissions 3—15402
Mt Etna, volcano as source of heavy metal contamination of environment 3—48526
gaseous pollutants, meas. using mobile Fourier transform IR system 3—9527
halocarbon, stratospheric conc. estimation using more accurate UV spectra data 3—4919
homopause level, number density control by breaking internal gravity waves 3—5004
hot gas, quantitative emission and absorpt. spectrometry from moderate resolution spectra 3—9526
hydrocarbons, non-methane, in atmosphere of Sydney, Australia, concs. meas. 3—19637
ionosphere negative ions identification and abundance 3—35358
ionosphere positive ions identification, and origin abundance 3—35357
ionosphere pulsed plasma probe technique for multi-ion plasmas and assoc. effects on instabilities 3—20123
ionosphere topside, nonstationary polar wind rel. to H^+ and O^+ densities 3—15719
isotopic compositiion of cyclonic precipitation 3—30016
Israel, O and S isotopes and Cl/SO_4 ratios of rainwater 3—29985
Lacq industrial area, SW France, cloud condensation nuclei obs. *(French)* 3—25160
Ladakh Himalayas, India, chem. composition of fresh snow at high altitude 3—48580
lower atmos.-thermosphere photochem. model 3—15544
magnetosphere, ion composition correl. with K_p and solar activity 3—30123
magnetosphere ions, ionosphere as source 3—25262
magnetosphere N ion composition 3—15763
magnetosphere plasma mantle, ion comp. and source 3—48768
methane, atmos. conc. from Greenland ice core obs. 3—29989
methane, biosphere production increase following global temp. rise 3—59029
methane, conc. at South Pole from IR solar spectra obs. 3—54092
methane, contrib. of emissions by termites 3—30041
methane, global production by termites 3—48633
methane, seasonal and latitudinal conc. variation over Pacific 3—4923
methane, stratospheric conc. estimation using more accurate UV spectra data 3—4919
methane conc. in Atlantic boundary layer 3—15543
methane increase effect on total O_3 content 3—20082
methane release from 3—59030
methyltin species in atmosphere, aeolian transport rel. to concentrations and fluxes in seawater 3—29951
MSIS and IRI models of neutral atmos. and ionosphere composition, comparison study 3—48730
Mt. St. Helens volcanic plume chem. composition 3—20081
Mt. St. Helens volcano, aerosol composition of quiescent plume 3—20080
New York subregion, diurnal vars. and comp. of summer aerosol rel. to meteorological variables 3—4419
nitrate content of South Pole snow rel. to solar activity 3—25153
noble gases, evidence for atmospheric component in Mid-Atlantic Ridge basalt 3—53958
nonmethane hydrocarbon conc. in Atlantic boundary layer 3—15543
North America, chem. composition of precipitation 3—48610
occult precipitation from clouds, chemical content meas. rel. to pollutants transfer in upland regions 3—53606
organic compounds in rain of north-east USA 3—59031
palaeoatmosphere, ages and comp. of gas trapped in Allen Hills and Byrd core ice 3—9941
particulate deposition to ground, influence of humidity 3—20058
particulate deposition vel. by box model 3—20059
particulate mass determination by visibility technique 3—4995

atmospheric composition continued
peroxy radical meas. method involving 'chem. amplifier' technique 3—4987
peroxyacetyl nitrate, natural occurrence in Pacific troposphere 3—59068
Po Valley, Italy, aerosol characteristics 3—4436
polar atmospheric aerosols, X-ray spectrometry 3—48589
pollutant concentrations near roadways, comparison of pollutant dispersion models in Texas data 3—34750
pollutant transport, mesoscale var. of average airflow rel. to time integrated conc. Gaussian models 3—4903
prebiological paleoatmosphere: stability and composition 3—35267
propane, seasonal and latitudinal conc. variation over Pacific 3—4923
propene, seasonal and latitudinal conc. variation over Pacific 3—4923
rain composition and free radical chemistry of cloud droplets 3—15550
remote sensing, appl. of high resolution IR spectroscopy of upper atmosphere from space 3—10055
rocket exhaust emissions from TITAN III and ATLAS/Centaur launches 3—15574
satellite solar power systems, environmental impact of launching vehicles on middle atmosphere 3—48212
sea-salt scavenging by rain from coastal air 3—20060
Seney National Wildlife Range, Michigan, clean air mass, aerosol characts. 3—9509
small particulates deposition onto grass 3—20057
Solar Mesosphere Explorer, microcomputer based satellite examining ozone layer 3—25161
stratosphere, minor constituents, diurnal var., zonally av. model 3—15557
stratosphere, trace gas composition, implication of UV absorpt. by O_2 3—48614
stratosphere, trace gas transport described by 2-D model 3—30013
stratosphere disturbed state, negative ions effect on O_3 3—48608
sulphate aerosol dynamics in atmospheric plumes, model 3—4422
sulphate aerosol of Los Angeles basin 3—20055
sulphate deposition in precipitation from different cloud types 3—59066
sulphate production in clouds due to SO_2 oxidation 3—20056
S Sweden background aerosol, comp. rel. to particle size 3—44491
thermosphere N_2, O, He density global model in mag. coords. 3—54177
thermosphere neutral composition deduced from auroral ion ratios 3—48724
polar thermosphere neutral composition variability 3—15673
thermosphere photochem. model and D-region winter anomaly 3—15726
trichlorofluoromethane, atmos. conc. at Harwell, England 3—19633
turbidity of polar atmos., anal. of aerosol optical depth obs. 3—15563
NE United States, organic compounds in rain 3—59031
upper atmosphere, distrib. of major neutral components 3—15672
upper atmosphere composition var. rel to F-region height and electron concentration summer diurnal var. 3—35342
upper atmosphere neutral composition meas. with Vertikal 4 rocket 3—15665
Venezuela, acid rain over rain forest, natural or pollution? 3—59036
volatile elements abundances in terrestrial planets and atmospheres, rel. to planetary atmospheres form. 3—15861
volcanic dust in stratosphere after El Chichon eruption (Mexico) 3—48616
volcanic dust plume particle aggregation 3—19973
volcanic emissions research program (RAVE) and instrumentation 3—20121
water vap. content determin. by microwave radiometry method 3—15656
water-soluble material on aerosols collected within volcanic eruption clouds 3—15555
^{26}Al, cosmogenic, in stratospheric air filter samples, accelerator mass spectrometry meas. 3—48708
C isotope ratios of tree rings 3—4936
CO conc. at mesosphere altitude from mm wave emission obs. 3—15546
CO conc. meas. over long path using pulsed injection laser 3—4444
CO contribution from arid soil 3—48613
CO mixing ratio in troposphere, meas. by space shuttle 3—30043
CO mm wave spectra of mesosphere 3—15559
CO, model of global zonally averaged distrib. *(Russian)* 3—54087
CO pollution conc. in air of Yerevan, Armenia, USSR *(Russian)* 3—34753
CO_2, atmos. conc. controlled by marine biological productivity 3—59103
CO_2, conc. at South Pole from IR solar spectra obs. 3—54092
CO_2 conc. increase effects on surface temp. of early Earth 3—30051
CO_2 concentration increases, effect on climatic multi-layer energy balance model 3—59100
CO_2 content, anthropogenic changes in the global climate 3—15616
CO_2 content during glacial times 3—15487
CO_2, contrib. of emissions by termites 3—30041
CO_2 fluctuations in boundary layer, meas. with IR device 3—20140
CO_2 increases and atm. radiative heating, role of H_2O continuum absorpt. in 12-18 micron band 3—59102
CO_2 removal by lake sediment carbon organic carbon accumulation 3—4953
CO_2, removal from atm. by action of marine phytoplankton 3—4927
CO_2, seasonal fluctuation of atmos. conc. 3—20047
$^{13}C/^{12}C$ in methane 3—20088
^{14}C changes in atmosphere and ocean during Little Ice Age, evidence from banded corals 3—9938
^{14}C production rate rel. to O isotope records in ice cores 3—29984
Cd pollution of urban air in NW England 3—19634
Cl radionuclides in monsoon rain 3—20093
D/H ratios in peat bog core spanning 3100 to 2400 yr BP period 3—29986
H_2, contrib. of emissions by termites 3—30041
HCl determination by spectral method using improved 1-0 band emission calcs. 3—4921
HCl trace meas. using photoacoustic system 3—48224
H_2O, conc. at South Pole from IR solar spectra obs. 3—54092
H_2O concentration in thermosphere and mesosphere 3—20105
H_2O_2, in mesosphere, role in mesospheric clouds form. 3—10045
H_2O_2 in rainwater, S Florida and Bahama Is. 3—15560
H_2S, volcanic gas emission obs. 3—15402
HSO_3, stratospheric conc. due to volcanic emissions 3—35240
H_2SO_4, stratospheric conc. due to volcanic emissions 3—35240
Mg^+ morphology of F-region from airglow obs. 3—30114
N (^2D state) in thermosphere, transport from production region by winds 3—20161
N oxides at two New Zealand sites 3—59039
N, production in $O(^1D)+N_2 \rightarrow NO+N$ in mesosphere/lower thermosphere 3—35329

atmospheric composition continued
NH_3 ambient measurement in coastal SE Virginia, USA 3—9950
NH_3 concentrations in urban and rural atm. 3—9951
NHO_3 concentrations in urban and rural atm. 3—9951
NO atmos. conc. seasonal variations at D-region altitudes 3—20159
NO conc. of thermosphere due to $N+O_2$ reactions 3—48727
NO in upper atoms., calc. from UV dayglow near 2145 angstrom 3—5007
NO, production in $O(^1D)+N_2 \rightarrow NO+N$ in mesosphere/lower thermosphere 3—35329
NO_2 equatorial stratosphere conc. 3—15545
NO_2, far IR spectral meas. of conc. profile 3—48617
NO_2, stratosphere diurnal conc. variations 3—4918
NO_2 stratosphere seasonal conc. variations at 45°S 3—29993
NO_x chemiluminescent detector, modifications for high sensitivity 3—30092
N_2O, conc. at South Pole from IR solar spectra obs. 3—54092
N_2O, stratospheric conc. estimation using more accurate UV spectra data 3—4919
N_2O, stratospheric mixing ratio profile from solar absorpt. spectra and laboratory spectra 3—25147
N_2O_5, stratosphere conc. from IR spectra obs. 3—9991
neutral Na layer, chem. model of conc. diurnal variations 3—44598
O_2 contribution to atm. brightness temp. 3—25179
O_3 absorption at Cerro Tololo Inter-American Observatory, meas. (1964 to 1980) 3—10065
O_3 air pollution due to photochem. of oil refinery emissions 3—54067
O_3 and aerosol content determ. method based on lidar 3—48680
O_3 conc. affected by methane increase 3—20082
O_3 conc. at Jerusalem rel. to vehicle pollution 3—4429
O_3, conc. at South Pole from IR solar spectra obs. 3—54092
O_3 conc. determination method using dye laser based lidar 3—48702
O_3 concentration meas. by photometers, effect of aerosol light scatt. props. *(Chinese)* 3—48717
O_3 content, effect on surface radiative cooling computations for model atmospheres 3—25204
O_3 content and distrib. over Gadag, India, during 1980 Feb. 16 eclipse 3—59072
O_3, daily max. conc. forecasting in NE United States 3—44524
O_3 density, vertical profile from solar IR absorption *(Russian)* 3—20085
O_3 diurnal var., UV photometric obs. 3—15556
O_3, effect on thermosphere semi-diurnal tide 3—35330
O_3 episodes in SW Ontario, Canada, assoc. meteorological conditions 3—4421
O_3 equatorial stratosphere conc. 3—15545
O_3, ground level conc. meas. during 1980 Feb. 16 eclipse at Raichur 3—59075
O_3 in eclipsed atmosphere, rocket-borne meas. 3—59071
O_3, informativeness of global total O_3 obs. systems 3—10041
O_3 interannual variability monitoring by ground-based network 3—15637
O_3, natural background levels in California, USA 3—4939
O_3 over Uccle, Belgium, 1981 February to March obs. *(French, Flemish)* 3—54091
O_3, ozonosphere composition meas. by Umkehr method 3—59061
O_3 profiles, SAGE—European ozonesonde comparison 3—25169
O_3 radiation absorpt. as meas. by Meteosat-VIS-channel obs. 3—39905
O_3, remote sensing by UV backscatt. technique 3—44577
O_3 total trends from satellite BUV and ground-based meas. 3—30031
O_3 vertical distrib. over Trivandrum during 1980 Feb. 16 eclipse 3—59074
O_3 vertical profile determined by spectral (Umkehr) method *(Russian)* 3—10091
^{18}O and H isotope composition of Israel rainfall 3—48619
^{18}O variations in Syoura Station snow, Antarctica, correl. with preceding month temp. 3—35195
Pb, pollution of urban air in NW England 3—19634
^{222}Rn release from soil, effect of atmos. press. variations 3—4857
SO_2 air pollution in urban area, mathematical model for pollution forecast and alarm 3—4418
SO_2, volcanic gas emission obs. 3—15402
Si content of urban aerosol, Rabat, Morocco *(French)* 3—54098
Sn species in atmosphere, aeolian transport rel. to concentrations and fluxes in seawater 3—29951
Xe isotopic composition, implication for mantle outgassing time 3—9868
Zn, pollution of urban air in NW England 3—19634

atmospheric density *see atmospheric pressure and density*

atmospheric disturbances *see atmospheric movements; thunderstorms*

atmospheric duct *see atmospheric electromagnetic wave propagation*

atmospheric dynamics *see atmospheric movements*

atmospheric electricity
see also atmospheric electromagnetic wave propagation; atmospheric ionisation; atmospherics; aurora; electrojets; ionosphere; lightning; thunderstorms
quiet auroral arcs, field-aligned currents rel. to arc equilib. motion 3—15678
auroral breakup, assoc. three-dimensional current system, correl. with Pi 2 characts. 3—39973
auroral ionospheric currents, artificial LF radiation generation 3—39945
auroral kilometric radiations correl. with field-aligned currents 3—35373
auroral lines of force, anomalous resist. and longitudinal elec. fields 3—15689
conductivity profiles during non-volcanic period, stratospheric aerosols 3—30028
coronal discharge above earthquake shear zone, assoc. lights 3—53949
dayside polar region, field-aligned currents and magnetic disturbances 3—10160
E-region, effect of band of enhanced conductivity on F-region 3—15710
E-region current, correl. with geomag. daily var. at equatorial altitudes 3—35354
electric fields preceding cloud-to-ground lightning flashes 3—15551
electrode effect over snow, theory for turbulent and nonturbulent cases 3—4924
westward electrojet rel. to FAC and diffused auroral precipitation 3—35348
electrons (field-aligned) streaming out from ionosphere at auroral latitudes 3—10144
F_2-layer, effect of magnetospheric elec. fields on electron density distrib. 3—15709
F-region, daytime equatorial region, struct. simulation during action of east and westward electric currents 3—15692
F-region empirical elec. field model 3—54191
field aligned current region, elec. and mag. field obs. 3—15722

atmospheric electricity continued
Ibadan, Nigeria, 1961-80 meas. in tropical rain forest 3—30036
inverted-V electron precipitation, elec. fields and plasma characts. 3—30119
ionosphere, bay disturbance at low-latitude, 21 March 1981 obs. 3—48736
ionosphere, convective elec. fields and currents driven by field-aligned currents 3—39952
ionosphere, elec. fields and currents estimated from ground mag. data 3—15734
ionosphere, electric and mag. fields meas. by equipment on Intercosmos-Bulgaria 1300 satellite 3—20197
ionosphere, electrojet induced currents, contrib. to Sq var. 3—39778
ionosphere, equivalent currents representing solar daily variations 3—15729
ionosphere, field-aligned current distrib. during substorms 3—15728
ionosphere, kinetic theory for two-stream instability rel. to electron drift vels. and elec. fields 3—48763
ionosphere, moving bodies, induction from interaction with plasma 3—15810
ionosphere, relations between Birkeland currents, auroral electrojet indices and high latit. Joule heating 3—5030
polar ionosphere, role of viscous interaction in generation of currents and elec. fields 3—15713
ionosphere, S_q current systems for N America during quiet-Sun year 3—53920
ionosphere conductivity and VHF auroral backscatter amplitude in eastward polar electrojet region 3—59152
ionosphere conductivity tensor, altitude depend. inhomogeneity effect on longitudinal currents 3—35345
ionosphere current as origin of superposed northward field on $S_q(H)$ var. 3—44389
ionosphere current systems, rel. to diurnal motions of Earth's magnetic poles 3—35069
ionosphere currents, contrib. to low-latitude geomag. var. 3—59126
ionosphere currents associated with Pi 2 anal. and characts. 3—35381
ionosphere dynamo current system modulated by HF heater signal 3—48747
ionosphere elec. currents and rel. to electrojets, global dynamo model 3—39951
ionosphere elec. fields during storm disturbances 3—39948
ionosphere electrostatic field obs. of auroral zone 3—5020
ionosphere polar region convection vel. and longitudinal currents mag. effects 3—35338
ionosphere S_q/L currents estimation and var. 3—44603
ionospheric electric field variability at high-latitudes 3—15721
lightning-associated phenomenon, related geomag. meas. 3—30026
magnetic tail-ionosphere system elec. field generation by solar wind mag. field B_y component 3—10142
magnetopause electric field obs. 3—10145
magnetosphere, current system determ. and geomagnetic models development, IMP-HEOS data 3—10157
magnetosphere, elec. field and electron accel. above discrete auroras 3—15717
magnetosphere, electric and mag. fields meas. by equipment on Intercosmos-Bulgaria 1300 satellite 3—20197
magnetosphere, field-aligned currents rel. to random Alfven waves in collisionless nonuniform plasma 3—7721
magnetosphere, pot. elec. field and field-aligned currents 3—15753
magnetosphere currents, contrib. to low-latitude geomag. var. 3—59126
magnetosphere plasma, motion near rotating Earth, current and electric field prod. 3—35376
magnetosphere polar cap, role of viscous interaction in generation of currents and elec. fields 3—15713
magnetotail, field aligned currents and collisionless plasma Radler effect 3—5060
magnetotail electric field transportation of solar wind ions to radiation belts 3—35362
magnetotail fields generation due to solar wind-plasma viscous interactions 3—35364
plasmasheet electrons in geostationary orbits, density distrib. rel. to elec. parameters 3—15746
plasmasphere three-dimensional current systems and S_q regular var. 3—44388
polar cap elec. field consistent with photoelectron obs. 3—15720
post-noon quadrant field-aligned currents and electrojets 3—30111
potential gradients and point discharge currents for pollutant monitoring 3—29483
ring current field effect on proton fluxes irreversible changes 3—15752
S_q current representation of East Asia quiet day mag. field var., validity 3—44387
St. Elmo's fire and luminescence 3—20109
stratosphere, mid-latitude horizontal fields during magnetic disturbances 3—10028
substorm onset, effect of initial ionosphere cond. 3—35383
thermosphere electrostatic polarisation field, diurnal var. due to solar heating, wind and temp. var. 3—35328
thermosphere internal gravity waves characts. during substorm, depend. on auroral electrojet elec. field 3—15667
thundercloud charge separation during droplet-ice collisions 3—15541
thundercloud elec. charge structure obs. 3—48618
thundercloud elec. field and charge distrib. 3—15540
thundercloud electric charge generation by riming 3—4901
thundercloud electrification, time depend. model involving separation of charged precipitation particles 3—44489
thundercloud electrification rel. to precipitation 3—15605
thundercloud models with volume charge distribs., field configs. 3—30035
thunderclouds electrification, role of different charging mechanisms 3—44488
thunderstorm electrification, numerical study using three dimensional cloud model incorporating ice phase 3—15582
thunderstorm lower positive charge centres 3—15539

atmospheric electromagnetic wave propagation
see also atmospheric light propagation; ionospheric electromagnetic wave propagation; magnetospheric electromagnetic wave propagation; tropospheric electromagnetic wave propagation
11.6 GHz SIRIO beacon, precipitation effects 3—25182
airborne man-made radio noise assessment 3—44542
atmospheric EHF window transparencies near 35, 90, 140 and 220 GHz 3—48621

atmospheric electromagnetic wave propagation continued
atmospheric electric path length meas., optimum frequencies selection by satellite-borne microwave radiometers 3—48622
atmospherics, propagation in Earth-ionosphere guide 3—54101
S Baltic region, ultra short wave propag. *(Polish)* 3—15579
COMSTAR Earth-space propag. effects at low elevation angles 3—35206
conference, Aug. 1981, Washington D.C., USA 3—10505
Earth-ionosphere waveguide, struct. of natural ELF EM field in Arctic basin 3—15522
Earth-ionosphere waveguide model, computation of complex roots of modal eqns. 3—30109
Earth-space microwave links in France, attenuation rain 3—15502
Earth-space radio propagation, CCIR needs 3—25173
EHF propagation, effects of clear air and hydrometers, appl. to meteorology radars 3—20061
EHF scattering cross-section on rain drops 3—25176
EHF/SHF attenuation and brightness temp. due to O_2 and water vapour 3—25179
ELF (Schumann resonance) propagation and elec. conductivity perturbations 3—48754
ELF localised nocturnal propagation anomalies, obs. in Connecticut and N Atlantic Ocean 3—10032
ELF propagation, effects of lateral ionospheric gradients 3—10035
global EM resonances in terrestrial and planetary atmospheres, theory 3—15862
GWE, use of VLF Omega signals, multipath propag. 3—30044
ice depolarisation meas. at 28.56 GHz using COMSTAR beacon simultaneously with 16.5 GHz polarisation diversity radar 3—9994
ionised layer creation by breakdown of intersecting radio beams *(Russian)* 3—4916
ionosphere causing time delay variations of HF radio signals 3—15739
meteorite in atmos., electrophonic sound generation 3—15879
microwave (SHF) propagation over troposphere line-of-sight link 3—35231
microwave attenuation distribution in Earth-space communications links Dougherty-Dutton model improvement 3—25171
microwave fading characts. of atmos. boundary layer 3—15596
microwave noise temperature and attenuation of clouds, appl. to telecommunications from USA 3—25178
midday all-slope surface temperature, solar radiation transmission/energy budge models coupling 3—39878
mm wave propagation in turbulent atmosphere 3—54103
in multilayered media, anal. using dyadic Green's functions 3—6840
propagation medium between 45 and 75 GHz, theoretical anal. 3—48661
radio refr. index due to water vap., theory 3—15594
radionavigation by satellite Doppler method, meteorological errors 3—54171
radiowave ducting in atmos. boundary layer of coastal Florida 3—15595
radiowave Earth-space propagation paths, diversity gain model 3—25174
radiowave interference, tidal effects *(Russian)* 3—44531
radiowave propagation in atmosphere, refractive index inhomogeneities, anisotropy coeff. 3—4931
radiowave propagation over water, anal. of horizontal circular loop antenna near air-water interface 3—10029
satellite radioaltimeter accuracies due to atmospheric propag. effects 3—25275
SHF attenuation, depolarisation and rain effects from COMSTAR data 3—25170
submillimetre radio astronomy, atm. effects 3—30467
submillimetre wave transmission of atmosphere at Shorbulak, E Pamirs, meas. 3—44538
thunderstorm location method based on atmospherics group delaytimes 3—48698
VHF, models, ground effects, surveillance radar applic., meteoritic ionisation *(French)* 3—59081
VHF, UHF and SHF, marine atmosphere propagation limitations 3—46144
VLBI real time meas. technique and obs. of atmospheric and solar wind scintillation 3—35455
VLF radiation from transmission lines, characts. of power line used as VLF antenna 3—10030
water vapour influence on microwave anomalous propagation 3—48625

atmospheric electron precipitation
see also aurora; radiation belts
auroral electrons, precip. rel. to equilib. motion of quiet auroral arcs 3—15678
auroral electrons, two-dimensional model rel. to role in F_2-layer formation 3—15709
auroral precipitation, elec. field and electron accel. above discrete auroras 3—15717
westward electrojet rel. to FAC and diffused auroral precipitation 3—35348
F-region, night-time, low-energy electron precipit. rel. to ionisation layers over Cachoeira Paulista 3—5025
global distrib. of energy flux 3—15727
high-energy electron fluxes during mag. storm disturbances 3—44618
inverted-V electron precipitation, elec. fields and plasma characts. 3—30119
magnetosphere VLF wave-particle interaction induced precipitation 3—10151
plasma sheet interaction with detached plasma regions during substorm, cyclotron instability and precipitated electrons 3—10143
polar cap arc optical emissions and electron precipitation 3—54180
quasi-relativistic electron precipitation due to VLF wave-particle interaction 3—44608
SAR arc associated heated electron population obs. 3—15680
SAR arc event characts. and electron precipitation 3—15682
South Atlantic anomaly region, precipitation in quiet-conditions 3—39947
SPOLOKh-2 expt. artificially stimulated precipitation 3—5037
substorm assoc. VLF phase anomalies and energetic electron precipitation 3—54186
substorm onset, X-ray and electron precipitation obs. 3—15769
thermosphere heating by electron precipitation mechanism 3—20160

atmospheric elementary particle precipitation
see also atmospheric electron precipitation; atmospheric proton precipitation
artificial modulation of precipitating particle streams, appl. of modulated RF heating 3—15718
auroral particle injections, rel. to night-time ionospheric absorpt., assoc. withmag. storms 3—5024

atmospheric elementary particle precipitation continued
plasma flux, parallel to mag. field, moment eqns. *(French)* 3—2204
polar and auroral oval daytime sector, electrons/protons penetration 3—35337
thermosphere global dynamics, effect of high latitude particle precipitation 3—35333

atmospheric energetics *see atmospheric movements*

atmospheric humidity
see also hygrometers
anelastic equations of deep moist convection including atmospheric water conversion *(Russian)* 3—20083
Assmann psychrometer for micro-meteorological studies *(German)* 3—20136
atmospheric EHF window transparencies near 35, 90, 140 and 220 GHz 3—48621
boundary layer of equatorial Pacific, updraft characts. 3—10005
NE Brazil, energy and mass fluxes, interannual and seasonal var. 3—59098
brightness temperature, H_2O vapour contrib. 3—25179
China, heavy rain of July 1977, sensible/latent heat budget and kinetic energy *(Chinese)* 3—39884
cloud, moist convection, parameterisation scheme 3—39889
clouds, diffusive model of turbulent mixing of dry and cloudy air 3—15587
clouds structure at Great Dun Fell, Cumbria, effects of entrainment 3—15588
continuum absorption in 12-18 micron band and atm. radiative heating 3—59102
convective storms, condensation rate determ. method 3—10082
cumulonimbus, vertical mass transport on Day 261 of GATE 3—59020
cumulus clouds, droplet size distrib. near cloud base 3—15589
cumulus clouds droplet size spectrum, effects of entrainment 3—15586
East China Sea, mesoscale atm. cells detect., use of temp. and humidity 3—20003
fluctuations in boundary layer, meas. with IR device 3—20140
fog droplets, drop-size distrib. determ. from transmission meas. in 0.53 to 10.1 μ wavelength range 3—25146
Germany, North Sea coast, planetary boundary layer humidity, coastal effects 3—39891
Germany, pot. evapotranspiration at three sites *(German)* 3—20064
HIRS-AMTS satellite sounding system test—theoretical and empirical vertical resolving power 3—30085
humidity at sea surface during last glacial maximum 3—10048
India, climate areas based on human physiological response 3—25199
N Indian Ocean sea surface temp. meas. by satellite, humidity effects 3—29946
Indian summer monsoon and pre-monsoon water vapour transport 3—30032
IR outgoing radiation, parameterisation with temp. and humidity for climatic calcs. 3—59107
outgoing IR radiation, tropical minima due to clouds and humidity 3—44552
IR transmission determ. technique, by polarised radiometry *(French)* 3—25240
IR/visible radiation attenuation as measured by Meteosat-VIS-channel 3—39905
LIDAR measurement, spontaneous Raman scattering 3—39915
lidar techniques for humidity and temperature measurement 3—30090
marine surface layer, GATE turbulent heat and moisture fluxes 3—15607
maritime cumulus clouds, combined action of droplet coagulation, ice particle riming and splintering process 3—9989
measurement, graph use in relative humidity determ. 3—40618
measurement by microwave radiometry method 3—48625
measurement of precipitable water vap., by microwave radiometry method 3—15656
measurement technique using spontaneous Raman spectra method 3—44558
mesosphere, role of H_2O_2 in condensation processes and clouds formation 3—10045
microwave radiometry method for H_2O vap. profile retrieval 3—15647
moist quasi-geostrophic baroclinic instability including condensational heating 3—15530
monsoon depression rainfall and latent heat release 3—25166
SW Ontario, Canada, correl. between wet bulb potential temp and O_3 conc. 3—4421
Pacific Ocean tropical boundary layer, water vapour density, temp. and wind from turbulence data 3—35211
planetary boundary layer flow, humidity effects 3—39877
precipitable water content at Shorbulak, Eastern Pamirs, meas. rel. to submillimetre wave transmission 3—44538
psychrometric chart plotting program, eqns. and procedures 3—35272
radiation scheme for circulation and climate models, effects of water vapour and cloud cover 3—10052
N Rockall Trough, boundary layer, momentum, heat and water vapour fluxes (in JASIN 1978) 3—35241
N Rockall Trough, cloud capped boundary layer, stratocumulus radiation and humidity 3—35245
San Antonio Mountain Experiment (SAMEX) 3—20120
Saudi Arabia, meteorology and architectural design 3—29967
stratosphere, model of Antarctic sink for water vapour 3—15558
surface humidity at European mountain sites rel. to water vapour predictions 3—48624
Table Mountain, USA, surface layer, structure parameters of temp., humidity and temp.-humidity 3—20073
trapped mountain lee waves, humidity effects 3—44510
troposphere, water vapour cycle, lidar monitoring 3—30021
tropospheric absorption and dispersion of millimeter and submillimeter waves, in extended BASIC 3—54085
turbulent heat and moisture fluxes from ocean into atmosphere, calc. procedures comparison 3—9934
water content from Bhaskara SAMIR data 3—4915
water vapour content rel. to surface radiative cooling, computations for model atmospheres 3—25204
water vapour effect on satellite obs. of Pacific Ocean surface temp. near Fiji 3—29945
water vapour predictions for astronomical obs. from European mountain sites, surface humidity correl. 3—48624

atmospheric ionisation
see also atmospheric radioactivity; ionosphere
quiet auroral arcs, plasma density enhancement rel. to equilib. motion 3—15678
D-region, identification of ionisation ledges by LF/VLF obs. during meteor shower 3—5027
D-region, recombination processes (post-flare and post-sunset decay) 3—48735
D-region ionisation, evidence for dominant role of solar Lyman-α from radio wave absorpt. obs. 3—5029
D-region positive ion chemistry, temp. and solar zenith angle control 3—10134
E-region, characts. from ionisation due to solar X-rays/UV emission at different latitudes 3—15693
F_2-layer, two-dimensional model for various mechanisms of electron density distrib. form. 3—15709
F-region, night-time, over Cachoeira Paulista (22°S, 45°W), gravity wave induced ionisation layers 3—5025
F-region equatorial plasma depletions and nightglow 3—35351
ionosphere characteristics, effects of daily vars. on Doppler freq. shift on Boulder-Havana path 3—15714
layer creation by breakdown of intersecting radio beams *(Russian)* 3—4916
meteor ionisation height relative to magnitude 3—5238
meteor trail deionization 3—5018
relativistic electron beam, high-power, atmosphere ionisation effects 3—12814
relativistic high-energy electron beam, interaction with atmosphere 3—15677
stratosphere, Mt. St. Helens eruption effect on ion concs. 3—30029
stratosphere ion recombination coeffs. at low-press. 3—20078
thermosphere, photoelectron flux measurement by satellite method 3—54169
troposphere, Mt. St. Helens eruption effect on ion concs. 3—30029
vertical ionisation profiles of terrestrial and planetary ionospheres, rel. to possible global EM resonances 3—15862
O^{2+} photochem. and photoionisation processes 3—10107

atmospheric light propagation
aerosol, light scatt. props. effect on O_3 conc. meas. by photometers *(Chinese)* 3—48717
aerosol optical depth measurement over water, marine sediment tolerances for remote sensing 3—25203
angle estimator, optical detector array based, operating through turbulent atm., accuracy 3—27204
Arctic regions, aerosol light absorpt. and particulate C size segregated meas. 3—9512
astrometric refraction, three-dimensional problem 3—25278
attenuation in 8-13 μm range by aerosols *(Chinese)* 3—59111
background reflectance effects in Landsat data 3—20116
bimodal atmospheric guided energy laser scheme, radial thermal gradients 3—4958
boundary layer, light propagation in turbulent atm., wave struct. function *(Chinese)* 3—48671
clouds, optical props. rel. to climatic feedback effects on early Earth 3—15598
clouds, satellite albedo meas. rel. to cloud amounts around globe in belt from 54°N to 45°S 3—10043
contaminants effects computing, Electro-Optical Systems Atmospheric Effects Library 3—10056
differential refraction, importance in astronomical spectrophotometry 3—10225
diurnal astronomical refraction, expt. model 3—25207
extinction at Cerro Tololo Inter-American Observatory, meas., (1964 to 1980) 3—10065
extinction coefficient due to multicomponent aerosol pollutants, role of different chem. species 3—9508
fog, IR and visible extinction coeff. correl. 3—4960
fog, transmission meas. in 0.53 to 10.1 μ wavelength range rel. to drop size distrib. 3—25146
gas pollutant conc. determ. by laser comparative absorpt. 3—29484
Helwan, Egypt, dust content effect on total direct solar radiation depletion 3—9507
heterodyne detection through rain, snow, and turbid media 3—54136
ionosphere Ba ion cloud, sunlight reson. fluoresc. scatt., radiative transfer and lines anal. 3—5031
IR transfer function, rel. to ocean surface temp. determ. from 'Meteor' satellites 3—9933
laser beam, atmospheric path propag., thermal distortions 3—20118
laser beam propagation in turbulent, atmos., propag. model 3—54118
laser pulse propagation in particulate media, split-step Fourier transform analysis 3—6883
laser radiation extinction by fog and rain (CO_2 laser) 3—4956
laser remote-sensing measurements, signal averaging limitations due to temporal correl. 3—4957
laser transmission, conf., Ankwei, China (May 1982) *(Chinese)* 3—5
laser-generated speckle field after propag. through turbulent atm., intensity probability density function 3—10062
LIDAR correlation meas. in statistically inhomogeneous atmosphere, transparency fluctuations 3—44549
lidar scatt. matrix element determ. of marine hydrosols 3—10072
lidar techniques for humidity and temperature measurement 3—30090
long-path atmospheric transmission meas., laser transmissometer calibration 3—4983
marine stratocumulus clouds, aircraft obs. of radiative energy budget during JASIN expt. 3—15585
multiply scattering atmosphere, radiative props. of optically anisotropic spheres 3—10063
optical-heterodyne data transmission systems, temporal phase fluctuation influence compensation 3—4962
partially coherent radiation propag. through atm. turbulence 3—41764
in precipitation 3—39906
propagation state of propagating light beam, probability distrib. *(French)* 3—44547
radiative cooling of surfaces, computations for model atmospheres 3—25204
radiative transfer scheme, for circulation and climate models 3—10052
refracting spherically symmetric atmosphere, ray tracing 3—15618
refraction, 3-dimens. data from lidar probing 3—25254
refraction, determ. from observations of the Sun made from orbital station Salyut-6 3—25205

atmospheric light propagation continued
refraction and vertical temp. gradient in Thessaloniki area 3—25209
refraction calcs. for space-borne remote sensing appls. 3—54114
remote optical breakdown of atm. by CO_2 laser pulses, transmission cutoff 3—30054
scattering by atmospheric aerosols with Junge particle size distrib., normalised scatt. diagram 3—12071
scintillation due to turbulence, theory 3—54119
Seney National Wildlife Range, Michigan, clean air mass, aerosol characts. 3—9509
solar irradiance spectrum at Madrid, meas. 3—4906
solar radiation, atmospheric blurring of solar limb rel. to meas. of solar diameter 3—54319
solar radiation, contrib. of Earth's atmosphere to observed oscills. in solar diameter 3—54318
solar radiation and illumination on inclined planes for clear atmospheric conditions 3—30024
solar radiation transmission, Stark cell radiometer meas. 3—25917
South Pole, meteorological parameters rel. to meas. of long-period solar oscills. 3—54312
space-time diffusion eqn. higher-order boundary condition 3—32308
spectral extinction coeff., horizon line scanning telephotometry 3—20143
stratosphere, lidar obs. of increase in aerosol scatt. caused by Sierra Negra volcanic eruption 3—4925
stratosphere aerosol layer, twilight IR brightening over India due to eruption of El Chichon, Mexico 3—30053
turbulence effects on direction meas. 3—25208
turbulence effects on telescopic obs. 3—44548
turbulent atmosphere, probabilistic diffraction limited imaging expts. 3—54130
twilight brightness, quantitative relationship with cloud amount *(German)* 3—35236
UV backscattering by O_3, rel. to informativeness of global total O_3 obs. systems 3—10041
UV radiation in lower atmosphere, meas. of integral direct and scattered fluxes 3—10066
vectorial astrometry (book) 3—54598
vertical refraction angle determ. from light beam angle of arrival fluctuations 3—6886
visibility in Detroit metropolitan area, rel. to chemical comp. of fine particles 3—35260
water vapor absorption at isotopic CO_2 laser wavelengths in 9-12 μm range 3—54113
water vapour differential absorption, IR sounder meas. 3—10067
wavefront correction quality in adaptive transmitting systems 3—26946
zenith skylight optical path length and pollutant passive remote sensing 3—48219

atmospheric measuring apparatus
see also air pollution detection and control; ionospheric measuring apparatus; meteorological instruments
acoustic Doppler radar for wind meas. in convective boundary layer *(Chinese)* 3—48716
acoustic/radioacoustic sounding system for boundary layer studies *(Russian)* 3—20149
aerosol meas. using Sinclair nucleus counters 3—19649
aerosol samplers, efficiency for large wind-borne particles 3—53614
airborne microwave rain-scatterometer/radiometer 3—4975
airglow monitoring system for studying dynamic processes 3—48790
Assmann psychrometer for micro-meteorological studies *(German)* 3—20136
buoy system for coastal wind and temp. meas., with satellite telemetry 3—48713
cloud condensation nuclei conc. meas. with thermal diffusion chambers 3—44580
cryogenic Earth limb-scanning interferometer-radiometer, design for Earth radiation rejection 3—54218
Doppler imaging system, principles for optical meas. of vector wind 3—59114
ECC ozonesonde, background current, low pressure effects 3—59117
Fabry-Perot interferometer, design and construction of etalon for Dynamics Explorer 3—15804
Fabry-Perot interferometer, performance of etalon for Dynamics Explorer 3—15805
fog, rain and snow identification using laser equipment 3—44578
Fourier transform IR system, appl. to meas. of gaseous pollutants 3—9527
frequency response compensation of heat fluxmeters 3—54170
HIRS-AMTS satellite sounding system test—theoretical and empirical vertical resolving power 3—30085
hydrocarbon detector for oil and gas field prospecting *(Russian)* 3—35291
induction magnetometers, optically recording, for micropulsation obs. *(Chinese)* 3—10075
interferometer spectrometer, field-widened, remote sensing of auroral spectral emissions 3—10084
ionosphere, electric and mag. fields meas. by equipment on Intercosmos-Bulgaria 1300 satellite 3—20197
IR device for CO_2 and water vapour fluctuation meas. in boundary layer 3—20140
IR irradiance meas. accuracy of MONEX NCAR pyrgeometers 3—44554
laser long-range anemometry, atmospheric wind velocity meas. 3—35293
laser transmissometer calibration, for long-path atmospheric transmission meas. 3—4983
laser transmissometer for long-path extinction meas. 3—4457
magnetosphere, electric and mag. fields meas. by equipment on Intercosmos-Bulgaria 1300 satellite 3—20197
meteorological and clear-air phenomena, detection with air-traffic control radar 3—25251
meteorological tower of Trino Vercellese Environmental Laboratory, Italy 3—54133
mm wave propagation and method for meas. of turbulence 3—54103
multispectral absolute radiometer and transmissometer system for study of electro-optical phenomena 3—54168
nightglow photometer deployed on sounding rocket 3—48791
optical observatory, remote-controlled, appl. to obs. of airglow and thermospheric dynamics from Calgary, Alberta 3—54179
peroxy radical meas. method involving 'chem. amplifier' technique 3—4987
pressure gauge using α-particle counting method 3—48699
pressure meas. in humid air over 10^{-3} to 10^5 press. range 3—54166
pyrgeometer for IR flux determ. in cloud 3—15644
radiosonde performance during MONEX-79 programme 3—20156

atmospheric measuring apparatus continued
  SH-1 equipment use for whistlers/VLF emission obs. *(Chinese)* 3—10074
  Stark cell radiometer for atmospheric solar radiation meas. 3—25917
  Sun-photometers, multiwavelength, extinction meas. appls. in visible and near-IR spectral range 3—54134
  suspended particulate measurement, intercomparison of 6 instruments 3—4455
  thunderstorm elec. charge on precipitation particle meas. instrument 3—15539
  turbulence measuring instrument, aerodynamical errors 3—59123
  visibility impairment by pollution, multiwavelength telephotometer instrument 3—19648
  wind in upper atmosphere, radar meteor wind equipment 3—10079
  NO$_x$ chemiluminescent detector, modifications for high sensitivity 3—30092
  O$_3$ conc. determination method using dye laser based lidar 3—48702
  O$_3$ measurement with ECC ozonosonde, errors due to press. depend. 3—48691

atmospheric measuring instruments *see atmospheric measuring apparatus*

atmospheric motion *see atmospheric movements*

atmospheric movements
  see also atmospheric turbulence; wind
  acoustic-gravity waves, 3-dimens., in model nonisothermal atmospheres, propag. 3—39901
  acoustic-gravity waves in non-isothermal atmosphere *(Russian)* 3—20084
  advection-diffusion eqns. in atmos. environments, testing subroutines solving 3—35223
  aerosol deposition patterns determ. by Sr isotope study method 3—48635
  aerosol transport, coagulation in plume from cross-wind line source 3—4423
  air pollution dispersal from elevated source 3—25165
  air pollution long-range transport by 3-D model 3—54068
  airborne pollutants, transport and dispersion by land breeze-sea breeze system 3—4417
  Alpine lee cyclogenesis 3—15514
  anelastic equations of deep moist convection including atmospheric water conversion *(Russian)* 3—20083
  Arctic, atm. press. field statistical props. 3—30007
  Arctic haze, hydrocarbons and gaseous tracers (May 1982) 3—58570
  Arecibo upper troposphere/lower stratosphere, winds and waves fine altitude resolution radar obs. 3—44513
  Asia-Europe spring circulation, weather forecasting appl. *(Chinese)* 3—59089
  S Asian anticyclone motion in spring rel. to Tibet Plateau heating 3—48604
  E Atlantic intertropical convergence zone atmos. dynamics 3—48603
  Atlantic Ocean hurricane occurrence rel. to large scale circulation (1899-1978) 3—9983
  Atlantic Ocean-Caribbean Sea region, 1981 hurricanes, tracks 3—9971
  quiet auroral arcs, equilib. motion 3—15678
  auroral ionosphere, reduction of inherent noise in double-pulse Doppler technique 3—48761
  axisymmetric tropical circulation, multiple equilib. anal. 3—59028
  balance eqn. soln. using convergent method 3—29972
  baroclinic development by 1-D quasi-geostrophic model 3—29970
  baroclinic flow disturbance initial growth 3—9998
  baroclinic inertial instability in the nonstatic equilibrium atmosphere *(Chinese)* 3—48650
  baroclinic instability inhibition in low-resolution models 3—30000
  baroclinic instability of atmos. calc. from climatological data 3—10007
  baroclinic instability of high structured one-dimensional basic states 3—44503
  unstable baroclinic wave nonlinear theory 3—29998
  baroclinic waves in non-uniform pot. vorticity semi-geostrophic model 3—15529
  barotropic primitive equations, energy conservation Galerkin approx. *(Chinese)* 3—48657
  quasi-biennial oscillation theory 3—10009
  blocking, spectral energetics anal. 3—15507
  boundary layer, dense gas cloud dispersion, pollutant appl. 3—48588
  boundary layer, gravity flows momentum balance 3—59044
  boundary layer, topography interaction 3—22507
  Brunt-Vaisala freq. of moist atm. (theory of stability) 3—30002
  buoyant plumes in turbulent stratified atm., numerical modelling 3—9505
  Cheju Island, Korea orographically disturbed airflow 3—25151
  S China, early summer heavy rain assoc. with ultra-low level jets *(Chinese)* 3—39885
  China, heavy rain of July 1977, sensible/latent heat budget and kinetic energy *(Chinese)* 3—39884
  SE China, landed typhoon Billie, energetic anal. *(Chinese)* 3—39882
  circulation patterns favourable for typhoons over SW Pacific *(Chinese)* 3—59092
  circulation statistics based on GFDL/NMC anal., comparative study of transient eddy statistics/energy cycle 3—9974
  cloud, moist convection, parameterisation scheme 3—39889
  clouds structure at Great Dun Fell, Cumbria, effects of entrainment 3—15588
  Colorado hailstorm, dynamics and particle growth mechanisms 3—59053
  Colorado hailstorm, radar echo struct. and evolution 3—59052
  free convection, axisymmetric problem rel. to dynamic modification of cumulus cloud 3—10042
  convection, theory of bifurcation of steady 2-D convection 3—7576
  convection, two dimensional, in non-constant shear, model of mid-latit. squall lines 3—15580
  convection in layers with tilted rot. vectors, three dimens. simulations 3—48628
  convective cells on GATE day 261, cloud interactions and merging processes 3—15512
  cooling tower plumes, convective knock-down 3—48204
  coupled internal waves, theory *(Russian)* 3—9928
  cumulonimbus, vertical mass transport on Day 261 of GATE 3—59020
  cumulus clouds, effect of lateral entrainment on droplet size distrib. near cloud base 3—15589
  cumulus clouds, entrainment rel. to droplet size spectrum 3—15586
  cumulus convection, numerical model rel. to clouds grouping 3—9990
  cyclogenesis in winter polar air stream over N America 3—48602
  cyclone waves effect on larger scale flow, modelling, use of quasi-geostrophic dynamics 3—44505
  deep moist convection, scale anal. theory 3—30005

atmospheric movements continued
  drift waves near plasmapause, finite beta and curvature drift effects 3—48737
  drought period atmos. general circulation characts. 3—20096
  Eady wave growth rate 3—10008
  East African jet dynamics, Arabian Sea branch 3—30010
  East Asian polar air outbreaks, role of successive downstream devel. 3—15511
  East China Sea, mesoscale convection cells 3—20003
  Ekman boundary layer dynamics using geostrophic momentum approx. 3—10003
  El Nino Southern Oscillation phenomena 3—59067
  electron transport in ionosphere, photoelectron fluxes, energy spectra 3—15744
  elevated mesohigh convective formation model 3—48594
  Elk Mountain, Wyoming, air flow simulation 3—9965
  energy balance climate model with longwave flux parameterisation 3—30001
  energy cycle in general circulation model of USSR Hydrometeorological Centre 3—15602
  equatorial circulation, zonal models analysis 3—48642
  equatorial response to NE cold surges, satellite cloud imagery anal. 3—15517
  W Europe, surface geostrophic wind diurnal oscills. 3—25191
  F-region, night-time, over Cachoeira Paulista (22°S, 45°W), gravity wave induced ionisation layers 3—5025
  F-region plasma density and flow, effect of enhanced conductivity band in E-region 3—15710
  FGGE (First GARP Global Expt.), results and methods *(Russian)* 3—35268
  forced stationary waves in linear stratified quasi-geostrophic atm. 3—44506
  free particle motion on beta plane 3—29995
  frontogenesis in non-uniform pot. vorticity semi-geostrophic model 3—15529
  frontogenesis model including planetary boundary layer effects 3—10004
  general circulation, modulated point-vortex model for geostrophic, β-plane dynamics 3—27532
  general circulation, summer energy balance, role of constant energy tubes *(Chinese)* 3—39883
  general circulation diagnostic budget eqns. 3—59007
  general circulation model, seasonal response to CO$_2$ and sea temp. changes 3—44534
  general circulation model with cumulus convection thermodynamic forcing 3—30003
  general circulation models, radiative transfer scheme 3—10052
  general circulation models quality, appl. of budget parameters multi-year average=climate identity *(German)* 3—15615
  general circulation models rel. to climate, implications for astronomical theory of ice ages 3—4951
  general circulation of N Hemisphere moist atmosphere in winter *(Russian)* 3—35228
  general circulation of seasonal global climate model 3—25202
  general circulation statistics sensitivity to short time scales 3—9959
  geomagnetic activity effects on atmospheric press., temp. and movement 3—29824
  geostrophic flow theory 3—49167
  Germany, pollution transport study 3—4941
  GLAS general circulation model 3—9979
  GLAS model forecasts, effect of model resolution and satellite sounding data 3—9958
  global angular momentum, 3 and 4-months vars. correl. with geomag. and Earth rot. vars. 3—44373
  global circulation by primitive eqn. grid model 3—48597
  global circulation in 1979 January to February, planetary scale characts. 3—44512
  global scale weekly/monthly energetics (January to February 1979) 3—59047
  gravity wave behaviour, nonlinear theory 3—10000
  gravity wave induced flow in upper mesosphere and lower thermosphere 3—10105
  gravity wave momentum deposition and diffusion 3—4922
  gravity wave suppression in four-dimensional data assimilation 3—59005
  gravity waves, induced heat flux 3—59138
  gravity waves generation by jet streak in two-layer nonlinear primitive eqn. model 3—59023
  gravity waves in ionosphere generated by 16 Feb. 1980 solar eclipse 3—20174
  gravity waves shear excitation 3—15525
  Great Plains, United States, droughts and heat waves as result of abnormal circulation 3—9969
  ground pollution source surface layer diffusion, similarity forms 3—15015
  Hadley convective regimes in atmos. of rotating planet 3—44681
  Harang discontinuity variability, radar and magnetometer chain meas. 3—59151
  Hogback Ridge, New Mexico, boundary layer lee waves delineation by power plant plume 3—35214
  Holocene palaeotemperature and circulation over Canada 3—20113
  horizontal momentum flux by unresolved synoptic scale eddies in low resolution spectral general circulation model 3—44518
  horizontal roll vortices in inversion-capped planetary boundary layer, two-dimensional numerical study 3—15583
  Hunt's general circulation model vacillatory behaviour, transformed Eulerian mean diagnostics anal. 3—59056
  hurricane tracks objective determ. from aircraft obs. 3—15516
  India, stationary Rossby wave embedded in monsoonal zonal flow, stability 3—39888
  India summer monsoon, coarse-mesh general circulation model studies 3—35221
  Indian summer monsoon and pre-monsoon water vapour transport 3—30032
  internal gravity wave nonlinear interactions *(Russian)* 3—59139
  internal gravity waves interaction with wave induced turbulence 3—44507
  internal wave propagation numerical model 3—25157
  internal wave turning surface, theory 3—9992
  inviscid symmetric flows with variable stability and shear, variational theorem for circulation integrals 3—15584
  inviscid vortex rotating in a stratified environment 3—30038
  ionosphere, causes and effects of nonstationary polar wind 3—15719
  ionosphere, electron beam-plasma interaction in Zarnitsa-2 experiment, glow dynamics 3—15707

atmospheric movements continued
ionosphere, kinetic theory for two-stream instability rel. to electron drift vels. and elec. fields 3—48763
ionosphere, moving sporadic-E layer rel. to ELF localised nocturnal propagation anomalies 3—10032
ionosphere, planetary waves generation, Rossby soliton excitation 3—39956
ionosphere, plasma convection at high-latitudes, model 3—10121
ionosphere, possible existence of isolated internal gravity wave in boundless isothermal atmosphere 3—15671
polar ionosphere, role of viscous interaction in generation of currents and elec. fields 3—15713
ionosphere, sudden disturbance effect at high solar zenith distances 3—48729
ionosphere, thermal plasma fluxes rel. to F$_2$-layer form., two-dimensional model 3—15709
ionosphere field-aligned plasma flow in quiet, mid-latitude ionosphere 3—48700
ionosphere inhomogeneities formation on density gradients moving rel. to plasma 3—15700
ionosphere movements effect on sky wave radar sea-state sensing 3—35275
ionosphere polar region, advective eddies, effect on micropulsation amplitude 3—15750
ionosphere polar region convection vel. and longitudinal currents mag. effects 3—35338
ionospheric plasma convection producing high-latitude hot spots 3—20166
landing typhoons, constant energy tubes anal. *(Chinese)* 3—39883
large scale flow influenced by deep cumulus convection model 3—48591
large scale transient eddies, effect on time-mean flow 3—15527
large scale waves and zonal flow, theory 3—30014
large-scale analyses and use of multi-variate interpolation 3—29971
large-scale vortices, patterns in movement rel. to pure zonal flow 3—10040
Long's vortex, inviscid stability, mechanism for development of suction vortices in tornadoes 3—7600
long period UHF pulsations and reson. MHD waves, multisatellite obs. 3—35378
long-range dispersion expt. using ^{85}Kr tracer 3—39866
lunar and solar barometric tides at Nandi, Fiji 3—30030
Lyneham, Wiltshire, sudden temp. drops during weak advection 3—10012
magnetosphere, slightly dissipative MHD eqns., nearly exact helical wave soln. 3—44617
magnetosphere convection, correl. with interplanetary mag. field northward component 3—15798
magnetosphere convection at low power level 3—10161
magnetosphere convection model involving narrow-channel approx. 3—5057
magnetosphere ion cyclotron waves initiating Pc 1-2, wave characts. 3—35380
magnetosphere polar cap, role of viscous interaction in generation of currents and elec. fields 3—15713
magnetosphere polar cap region, plasma convection systems 3—15753
magnetotail neutral sheet, electrons in inhomogeneous mag. field, motion and radiation *(Chinese)* 3—59173
Manson, Iowa, high level airflow, 1979 June 28 rel. to tornadoes approaching from northwest 3—4930
mean flow interaction with standing internal gravity wave 3—10009
E Mediterranean-Lake Kinneret wind patterns anal. in circulation model 3—9981
mesopause-lower thermosphere region, semidiurnal tide characts. of various longitudes 3—15669
mesoscale air pollution dispersion, Eulerian GRID model 3—48206
mesoscale air pollution dispersion, Lagrangian PUFF model 3—48207
mesoscale wind speed prediction using site-specific interpolation functions 3—15565
mesosphere, 6-day oscillation in zonal wind above Arecibo Observatory, Kelvin wave 3—59141
meteor zone, springtime circulation changes rel. to stratosphere 3—48728
methyltin species in atmosphere, aeolian transport rel. to concentrations and fluxes in seawater 3—29951
MHD wave eqn. soln. and micropulsations 3—39972
Milford Haven SO$_2$ pollution dispersion 3—44170
summer monsoon, moisture budget study 3—20092
monsoon circulation devel. in July, radiative heating, clouds, orography and initial conditions role 3—59012
monsoon depressions described by quasi-geostrophic model 3—20099
monsoon onset in Arabian Sea, rainfall meas. in (1979) 3—30027
monsoon region planetary scale circulation components interaction from 200 mb wind anal. 3—9977
Morning Glory wind squalls (N Australia), extraordinary atmospheric undular bore 3—15590
Mount St. Helens 1980 volcanic eruption causing atmos. wave disturbance 3—10120
Mount Withington, New Mexico, air flow simulation 3—9965
N Mozambique Channel area, kinematic and thermal struct. of two flow surges 3—15591
Mt. St. Helens 1980 volcanic eruption causing travelling wave disturbance 3—10119
Mt. St. Helens volcanic eruption (May 1980) causing global wave disturbance 3—10011
multi-dimensional Crowley advection scheme 3—59018
multiply upstream semi-Lagrangian advective schemes, appl. to multi-level primitive eqn. model 3—59009
nonadiabatic primitive equation model of atmosphere, for meteorological elements forecasting over Europe 3—10039
nondivergent barotropic vorticity equation, general class of exact time-depend. solns. 3—15518
nonlinear heat diffusion equation, numerical predictability problem soln. 3—15510
nonlinear wave equation soln., appl. to turbulence forecasting *(Chinese)* 3—39881
Northern and Southern Hemisphere general circulation and temp. *(Russian)* 3—35227
Northern Hemisphere, general circulation model for mean climate *(Russian)* 3—35225
Northern Hemisphere available pot. energy during FGGE year 3—25189
Northern Hemisphere thermally-forced mean mass circulations 3—9976
Northern Hemisphere transient eddies, zonal wavenumber characts. 3—15528

atmospheric movements continued
Northern Hemisphgere circulation, annual variation of 500 mb surface *(German)* 3—48631
Oklahoma, 1977 May 20 severe storms, cloud tops black body temp. and convective activity 3—9962
Oklahoma storm complex, 1976 May 30, dynamics and thermodynamics 3—9984
SW Ontario, Canada, air mass movements rel. to O$_3$ episodes 3—4421
S Pacific Ocean, 10-18 January 1979 large scale circulation features 3—9980
tropical Pacific trade winds, sea surface temp. and atmos. circulation 3—20075
NE Pacific tropical cyclones in 1981, statistics and tracks 3—9970
particulate dispersion model evaluation, new approach using receptor models 3—24648
planetary boundary layer, clear air convective structures 3—59064
planetary boundary layer, cloud convection model, assoc. with turbulence precipitation *(French)* 3—35210
planetary boundary layer flow, two dimens. finite elemental model 3—59022
planetary boundary layer flow, two-layer models and similarity functions 3—39877
planetary wave modelling of middle atmosphere, importance of travelling wave components 3—15581
plume rise, effective stratification determ. method 3—48681
plume rise and dispersal from multiple stack source 3—4426
plume trajectories from mechanical-draught cooling towers at Plant Gaston, obs. and modellng 3—4420
polar air stream vortices mesoscale struct. 3—29977
distorted polar vortex at onset of stratosphere sudden warming 3—30012
pollutant dispersion parameters from smoke puff's photographic density meas. 3—48217
pollutant ground level point source at Worcester, Massachusetts, short range dispersion 3—48208
pollutant multiple point source dispersion model 3—44170
pollutant point source, transport, dispersion and elimination 3—48205
pollutant transport, mesoscale var. of average airflow rel. to time integrated conc. Gaussian models 3—4903
pollutant two-dimensional trajectory model 3—29474
pollutant vapour dispersion, role of mol. props. 3—58572
pollutants transfer in upland regions, role of occult precip. from clouds 3—53606
pollutants transport in New York subregion, relation between summer aerosol and meteorological variables 3—4419
pollution advection, time dependent, numerical treatment 3—9506
potential vorticity conservation theory 3—48598
propagating jet maximum, geostrophic adjustment, two-layer nonlinear primitive eqn. model 3—59023
propagating tropical cyclones, orographic effects induced by island mountain range 3—15513
quasi-biennial rhythm of atm. and climate *(Russian)* 3—35226
quasi-geostrophic eqns. zonal translation props. 3—29997
quasi-geostrophic pot. velocity gradient of atmos. 3—10007
quasi-triennial periodicities rel. to quasi-biennial and Southern oscillations and sunspot cycle 3—15534
Quebec, Canada, acid and heavy metal long-range transport 3—54084
radiative convective climate model, surface air temp. sensitivity anal. 3—15531
radioactive waste disposal, atmospheric transport from burial sites 3—44179
Red River Valley, United States, tornado outbreak, subsynoptic scale kinetic energy anal. 3—59021
roadway pollutants dispersion, comparison of models using Texas data 3—34750
equatorial Rossby waves and viscous damping effects 3—10001
Rossby waves in a rotating fluid of spheroidal configuration 3—35224
Rossby waves over orographically modified terrain, anal. in quasi-static approximation *(German)* 3—15521
Saudi Arabia, pollution dispersal model 3—4430
SESAME-AVE III region, 1979 April 25/26 cold front, struct. and storm devel. 3—59049
shallow water cyclone, track forecasting by spectral focusing 3—39890
short internal gravity waves swelling as cause of thermosphere/mesosphere turbulence 3—15666
solar eclipse generated gravity waves at ionospheric attitudes 3—59157
solar wind interaction regions influence on tropospheric dynamics 3—20104
South China Sea, winter monsoon tropical mesoscale convection, thermodynamic and circulation characts. 3—59013
Southern Hemisphere general circulation patterns 3—29974
Southern Hemisphere wavenumber-5 anomaly 3—48605
Southern Oscillation, sea surface temp. and wind, 1861-1960 data 3—35251
Southern Oscillation and role of cross-equatorial tropical cyclone pairs 3—29976
Southern Oscillation and troposphere wind interannual variability 3—29975
St. Louis, USA, effect of city on downwind boundary layer airflow 3—15568
stationary waves, sensitivity to thermal feedback 3—15523
storm internal motion from weather radar obs., use of pattern recognition techniques 3—20134
stratopause semiannual oscillation selective wave transmission and mesopause semiannual wind oscill. origin 3—59042
stratosphere, lunar semi-diurnal tide of temp. 3—48627
stratosphere, meridional transport of aerosols from Sierra Negra volcanic eruption 3—4925
stratosphere, trace gas transport described by 2-D model 3—30013
stratosphere internal gravity waves due to solar oscills., effect on cosmic gamma-ray flux 3—54211
stratosphere sudden warming and pot. enstrophy balance by β-channel model 3—10006
stratosphere vacillation cycles and pot. enstrophy balance by β-channel model 3—10006
stratosphere warming event prediction using numerical model 3—44533
stratospheric motions, ionic anemometer meas. from balloon 3—30081
subtropical region, synoptic scale regime short-range evolution, generalised quasi-geostrophic mechanism *(Chinese)* 3—48655
sulphate aerosol dynamics in atmospheric plumes, model 3—4422
surface heating anomalies interaction with zonally symmetric and axisymmetric flows, climatic implications 3—15526

atmospheric movements continued
S Sweden atmosphere, background aerosol classification from air mass trajectories 3—44491
synoptic-scale vertical motion fields, calc. via quasi-geostrophic omega-equation 3—35238
thermal convection, ring-type heat source, numerical anal. and expt. 3—20087
thermodynamics of turbulent atmosphere, parameterisation of fluxes 3—9988
thermosphere, transport of aurorally produced $N(^2D)$ atoms by winds 3—20161
thermosphere dynamics, remote ground-based obs. at Calgary, Alberta, Canada 3—54179
thermosphere global dynamics, effect of high latitude particle precipitation 3—35333
thermosphere internal gravity waves characts. during substorm, depend. on auroral electrojet elec. field 3—15667
thermosphere neutral gas motion and electrodynamnic state of circumterraneous space *(Russian)* 3—54185
thermosphere neutral winds and temp. during geomag. quiet conditions 3—48725
thermosphere neutral winds in polar region 3—15675
thermosphere response during geomag. storms near solar cycle max. 3—30107
thermosphere response to SAR arc event 3—15681
thermosphere semiannual oscill. identified as conduction mode 3—35331
thermosphere zonal winds, vertical motion and temp. of polar regions 3—15674
three-dimensional air motion from dual Doppler radars, turbulent motion filtering and advection 3—20131
three-dimensional mountain lee-waves in stratified flow 3—59045
tidal oscill. causing vertical energy flux 3—48726
tornado type vortex flow, theory 3—25195
tornado vortex dynamics, review of recent advances 3—25186
transient heat eqn. applied to fluid dynamic problems 3—48600
trapped mountain lee waves, humidity effects 3—44510
traveling planetary waves in Southern Hemisphere 3—15524
tropical atmosphere balanced flows, significance of nonelliptic regions 3—59017
tropical cyclone angular momentum transport 3—44535
tropical cyclone development in general circulation model 3—4934
tropical cyclone movement and surrounding flow relationships 3—29973
tropical cyclone track prediction, statistical-climatological technique using synoptic forcing EOF representation 3—59016
tropical drought and associated global circulation 3—20095
tropical easterly jetstream and summer precipitation *(Chinese)* 3—59091
upper troposphere, interannual variability of wind field 3—29975
troposphere, kinetic energy of large scale wave motions in winter N Hemisphere 3—59027
troposphere baroclinic wave activity and Hunt's general circulation model, vacillatory behaviour 3—59056
mid troposphere circulation assoc. with Southern Oscillation from 700 mb data 3—9968
troposphere dispersal and transport of impurity cloud 3—48637
turbulence parameter determination using Doppler radar 3—59063
two-dimensional nondivergent flow, extension to quasi-geostrophic two-layer model anal. 3—29994
two-layer air pollution model for mixing between surface layer and air aloft 3—44490
Typhoon Mac (1979), form., dissipation, movement and struct. from spiral cloud band anal. *(Chinese)* 3—48658
typhoon tracks, forecasting with nested models *(Chinese)* 3—39918
typhoons approaching Ryuku Islands, movement forecasting *(Japanese)* 3—25149
ULF wave particle interactions in magnetosphere 3—35379
ultra-long waves in equatorial region, origin and nature *(Chinese)* 3—39880
upper atmosphere, transport and vertical distribs. of major neutral components 3—15672
vertical circulation in upper air frontal zone over Siberia 3—15603
vertical stability index near ground-level *(Spanish)* 3—44499
volcanic dust cloud from El Chichon, Mexico, drift speed rel. to twilight IR brightening over India 3—30053
von Karman vortex streets in stratified fluids rel. to atmospheric vortex trails near islands 3—20090
vortex flow transport processes *(Russian)* 3—54090
vortex formation in rot. fluid layer *(Russian)* 3—9996
vorticity centres movement forecasting technique 3—10095
wave behaviour in temp. stratified atmos., model *(French)* 3—25158
wave phenomena in temperature stratified atmos. *(Russian)* 3—59040
wave propag. in W-E direction rel. to O I 630 nm airglow 3—5003
wave-interactions in quasi-geostrophic uniform potential vorticity flow 3—44504
waves analysis within finite difference schemes with nonuniform grids, computational chaos *(Chinese)* 3—48649
weather forecasting, sensitivity to lower stratosphere upper boundary, 15-layer general circulation model anal. 3—59019
weather regime dynamics, quasi-stationary waves and blocking 3—15506
wind field in Earth's atmosphere at altitudes 0 to 150 km, seasonal-latitudinal and diurnal model 3—15519
winter spectral energetics, contrib. of standing and transient waves 3—9978
zonal circulation model *(Russian)* 3—35229
zonal flow stability and effect of Ekman pumping 3—29999
zonal meridional eddy heat flux and baroclinic instability 3—10002
Sn species in atmosphere, aeolian transport rel. to concentrations and fluxes in seawater 3—29951

atmospheric noise *see atmospherics*

atmospheric optics
see also airglow; atmospheric light propagation; sky brightness; sunlight; twilight
aerosol (anthropogenic) effect on local planetary albedo 3—4963
aerosol content determin. method, by Sun photometry 3—59001
aerosol influence on albedo of atm.-surface system *(Russian)* 3—35261
aerosols, marine, optical property prediction, Navy aerosol model 3—54123
aerosols, optical properties comparison with models 3—48667
aerosols in marine boundary layer, total optical depth and mixed-layer visibility 3—54122
aerosols of urban areas, light scatt. depend. on humidity 3—10060

atmospheric optics continued
Arctic aerosol radiative props. 3—39904
Arctic air pollution and haze 3—19639
aspherical particle light scattering, calc. of surface area 3—10061
astrometric site selection 3—25321
average irradiance in random media *(Russian)* 3—35262
battlefield environment, obscuration modelling, US Army 3—54120
boundary layer refractive index theory *(Russian)* 3—35230
boundary refractive index determ. by lidar method 3—48704
cloud of ice and water drops, linear depolarisation 3—48669
clouds consisting of polydisperse and randomly oriented nonspherical particles, extinction at arbitrary wavelengths 3—54125
conditions for correct. appl. of speckle interferometry 3—30206
diesel smoke, optical characts. 3—54121
directional props., space-borne meas., reflection effects 3—54115
eclipse shadow, 1980 Feb. 16 TIROS-N obs. 3—59110
electro-optical phenomenon study using simultaneous multispectral absolute radiometer and transmissometer system 3—54168
fog, IR and visible extinction coeff. correl. 3—4960
fog microstructure, aerosol effect 3—54124
global scale radiation balance calc. of equilib. surface temp. *(Russian)* 3—10239
ice crystals, effect on skies at South Pole Station 3—30052
image distortion caused by scatt. layer, theory 3—25206
infrared emission from ocean surface with allowance for cloud effects 3—48670
IR irradiance meas. accuracy of MONEX NCAR pyrgeometers 3—44554
outgoing IR radiation, tropical minima due to clouds and humidity 3—44552
IR radiative heat balance of Earth's surface, effect of clouds 3—59109
IR transmission determ. technique, by polarised radiometry *(French)* 3—25240
IR transmissivity determ. by airborne radiometry method *(French)* 3—25241
laser beam propagation in turbulent, atmos., propag. model 3—54118
laser transmissometer for long-path extinction meas. 3—4457
lidar correl. meas. technique in presence of atm. transparency fluctuations 3—44549
lidar differential absorpt. theory for temp. profile determin. method 3—15646
lidar remote sensing methods using moving lidar *(Russian)* 3—35286
lidar signal systematic distortion in near field zone *(Russian)* 3—54116
Linke turbidity factor determ., reduction techniques 3—30083
London and S England 1962-79 visibility trends due to sulphate aerosols conc. 3—44546
marine atmospheric boundary layer, meteorological model for optical props. 3—10064
mesosphere, infrared radiative cooling in 15 micron CO_2 band 3—20117
modelling for horizon sensor performance analysis computing 3—4959
multiple scattering in atmosphere, meas. of additional absorbing masses *(Russian)* 3—59105
noctilucent cloud particle alignment and light polarisation 3—59137
particulate mass determination by visibility technique 3—4995
phase screens, turbulent random, K-distributed phase differences 3—50612
planetary albedo for clear sky conditions 3—15619
polar region aerosol optical depth obs. 3—15563
pollutant dispersion parameters from smoke puff's photographic density meas. 3—48217
probabilistic diffraction limited imaging through turbulence, exptl. investigation 3—54130
propagation state of propagating light beam, probability distrib. *(French)* 3—44547
radiation budget at top of atmosphere, from METEOSAT data 3—59108
radiation propagation, contaminants effects computing, Electro-Optical Systems Atmospheric Effects Library 3—10056
reflected solar radiances of regional scale land surfaces 3—44525
refraction, determ. from observations of the Sun made from orbital station Salyut-6 3—25205
scintillation due to turbulence, theory 3—54119
seeing conditions, atmospheric effects anal. 3—25197
seeing effect on Ap star 53 Camelopardalis, source of rapid variations 3—10358
snow (falling), extinction coeff. scatt. corrections 3—54127
snow (falling), optical effects, numerical anal. 3—54126
snow affecting visible and IR transmission 3—54128
snow cloud produced by helicopter, study of IR and visible obscuration 3—54129
solar diameter oscillations, contrib. of Earth's atmosphere to observed oscills. 3—54318
solar eclipse phenomena, shadow bands during 1980 Feb. 16 eclipse 3—59298
surface layer optical transmittance meas. by passive sounding methods *(Russian)* 3—59120
telescopes, ground based, image quality degradation effects 3—30188
thermal radiation downward flux in lower atm. *(Russian)* 3—10057
tilt spectrum of turbulence, high freq. behaviour 3—48665
turbulence profile (C_n^2) meas. by optical and radar methods 3—4969
United States, eastern, visibility and aerosols anal. 3—9510
United States, mideast region, 1948-78 visibility trends 3—10051
vegetation cover, thermal radiation transfer under canopy 3—48641
visibility impairment by pollution, multiwavelength telephotometer instrument 3—19648
visibility of object in turbid medium *(Russian)* 3—35263
visibility of remote objects due to light scatt. *(Russian)* 3—10059
visual range determination by photographic technique 3—4456
water surface (ocean or lake) light scatt. theory *(Russian)* 3—54117
water-haze aerosol model, anomalous diffr. approx. inversion for variable complex refr. index 3—4955
Zelenchuk 6 m telescope, USSR, astroclimate 3—30181
zenith skylight optical path length and pollutant passive remote sensing 3—48219
HDO, absorpt. spectra at DF laser wavelengths 3—20115
O_2, UV absorpt. cross-section and implications for stratosphere chem. 3—48614
O_2 ultraviolet absorpt. spectra of Schumann-Runge bands 3—44599

atmospheric pollution *see air pollution*

atmospheric precipitation
see also ice; rain; snow
11.6 GHz SIRIO beacon, precipitation effects 3—25182
acid precipitation, controversy over policy options 3—29479

atmospheric precipitation continued
- Alaska, lower atmosphere, clear sky ice crystals precipitation and form. 3—59055
- Asia-Africa monsoon regions, summer precipitation *(Chinese)* 3—59091
- auroral precipitation, correlated guided ULF waves, negative Landau damping 3—15736
- Britain, snow and ice-sheet balance in present and Devensian times 3—20111
- British Columbia, atmospheric temp. and precip. during last glaciation rel. to lag of Fraser glacial maximum 3—48662
- Clear Lake, California, temp. and precipitation during last glacial cycle, pollen anal. 3—48675
- cloud seeding and precipitation evolution 3—59051
- Colorado, United States, 1980 October 15 event forecasting 3—20066
- Colorado hailstorm, dynamics and particle growth mechanisms 3—59053
- conical hydrometeors shape, mathematical description 3—44516
- Europe, precipitation forecasting using nonadiabatic primitive equation model of atmosphere 3—10039
- frost form., thermal cond., generalised correl. 3—54086
- Greenland data rel. to ice core, climatic variables analysis 3—30047
- hail detection by radar using two-radar dual wavelength method 3—59124
- hail growth, use of dual wavelength radar obs. 3—20130
- hail suppression by AgI seeding of storm clouds 3—15564
- hail-producing cumulonimbus, structure and evolution 3—48645
- hail-stone melting in mesosynoptic model *(French)* 3—54097
- hailfall measurement, representativeness of point networks 3—15645
- hailstone growth by droplet accretion, laboratory expts. 3—30011
- He-Tao cyclones, precipitus stratiform cloud, precipitation characts. *(Chinese)* 3—48656
- High Plains storms, USA, pot. graupel and hail embryos dev. rates 3—59054
- hydrometeors effect on EHF propag., appl. to meteorology radars 3—20061
- ice crystals, effect on skies at South Pole Station 3—30052
- ice depolarisation meas. at 28.56 GHz using COMSTAR beacon simultaneously with 16.5 GHz polarisation diversity radar 3—9994
- India summer monsoon, coarse-mesh general circulation model studies 3—35221
- central Iowa, July precipitation patterns (1930-78) 3—35219
- isotopic compositiion of cyclonic precipitation 3—30016
- light propagation 3—39906
- magnetosphere VLF wave-particle interaction induced precipitation 3—10151
- mid-latitude squall lines precipitation, model of two-dimensional convection in non-constant shear 3—15580
- multiple-parameter-radar techniques and applications for precipitation measurements: a review 3—25252
- North America, $H_2{}^{18}O/H_2{}^{16}O$ ratio meas. rel. to origin of continental shelf and slope water in New York Bight and Gulf of Maine 3—20026
- occult precipitation from clouds, rel. to pollutants transfer in upland regions 3—53606
- planetary boundary layer, cloud convection model, assoc. with turbulence precipitation *(French)* 3—35210
- pollutant aerosol removal by rain and snow 3—4947
- San Antonio Mountain Experiment (SAMEX) 3—20120
- short-term precipitation forecasting, appl. of model output statistics concept 3—10038
- spongy ice hailstones, microwave backscattering 3—44517
- storm hydrometeor characteristics meas. by dual polarisation radar 3—20129
- storm runoff, evaluation of chemical mixing model for contrib. of throughflow 3—29955
- thundercloud electrification, time depend. model involving separation of charged precipitation particles 3—44489
- thundercloud electrification rel. to precipitation 3—15605
- thunderstorms, precip. and electrification in three dimensional cloud model incorporating ice phase 3—15582
- Tokyo urban area, days with heavy precipitation, increase 3—30019
- turbulence measurement in precipitation environments by radar method 3—10093
- typhoon precipitation distrib., condensation heating effect *(Chinese)* 3—59087
- United States, 1895-1981 drought analysis 3—35218
- United States, decade time scale var. 3—59097
- United States, summer precipitation specification 3—59010
- Washington DC smog problem, effect of O_3 depletion, natural hydrocarbons and precipitation 3—48203

atmospheric pressure *see atmospheric pressure and density*

atmospheric pressure and density
- 500 mb height, empirical orthogonal functions weighted rel. to anal. error 3—9975
- 500 mb surface, geopotential climatology for N Hemisphere presented by empirical orthogonal functions *(German)* 3—35237
- 700 mb height field fluctuations assoc. with Southern Oscillation 3—9968
- Arctic, atm. press. field statistical props. 3—30007
- quiet auroral arcs, plasma density enhancement rel. to equilib. motion 3—15678
- density and wind field at altitudes 0 to 150 km, seasonal-latitudinal and diurnal model 3—15519
- Doppler radar observations, press. fluctuations and buoyancy data retrieval 3—20132
- F-region, density/temp. disturbances from heating by HF waves 3—15697
- F-region, mid-latitude nonstationary self consistent model 3—15699
- F-region plasma density and flow, effect of enhanced conductivity band in E-region 3—15710
- geomagnetic activity effects on atmospheric press., temp. and movement 3—29824
- geopotential fields dynamic initialisation 3—10015
- geopotential fields on isobaric surfaces, objective anal. 3—10019
- homopause level, number density control by breaking internal gravity waves 3—5004
- India, tropospheric geopotential height, temp. and wind fields rel. to monsoon activity prediction 3—10016
- Indian region, dynamic initialisation expts. 3—10017
- ionosphere electron density decrease during storms, effect of heating from above 3—15749
- ionosphere inhomogeneities formation on density gradients moving rel. to plasma 3—15700
- ionosphere plasma density fluctuations, incoherent scatter radar obs. of plasma line with chirped pulse system 3—10139

atmospheric pressure and density continued
- ionosphere polar region, advective eddies critical temp. and density gradients 3—15750
- ionosphere topside, nonstationary polar wind rel. to H^+ and O^+ densities 3—15719
- Jacchia's 1977 model atm., density rel. to altitude and exosphere temp. 3—44597
- Kauto Plain area, planetary boundary layer response to variable pressure gradient 3—54065
- Kuril Islands coast, sea level rel. to atmospheric pressure *(Russian)* 3—20019
- measurement method using α-particle counting technique 3—48699
- Northern Hemisphere transient eddies, zonal wavenumber characts. 3—15528
- N Pacific, 700 mb height var. on decade time scale 3—59097
- N Pacific, surface pressure var. during Baiu season 3—25150
- central Pacific Ocean, atmospheric press. and wind struct. near Equator 3—10044
- Pacific Ocean, tropical, surface press., albedo and outgoing IR radiation 3—59011
- radiosonde (standard US design) press. and altitude estimation accuracy 3—20148
- sea level isobaric analysis, use of optimum interpolation 3—10020
- Southern Hemisphere eddy statistics, seasonality at 500 mb, wind and geopotential anal. 3—44511
- Southern Hemisphere general circulation patterns 3—29974
- Southern Oscillation, sea surface temp. and wind, 1861-1960 data 3—35251
- Southern Oscillation, sea-level press. anomalies at Easter Island, Rapa, Tahiti, and Darwin 3—9967
- thermosphere semiannual oscill. identified as conduction mode 3—35331
- tornado-like vortices, min. press. rel. to swirl ratio 3—59046
- Unimak Pass, Alaska, press. gradient rel. to exchange of water between Gulf of Alaska and Bering Sea 3—15460
- upper atmosphere, density determ. from motion of ANS satellite 3—59136
- upper atmosphere, density gradient rel. to solar activity and radar meteor rates 3—59272
- upper atmosphere, density meas. from trajectories of mother and daughter satellites Interkosmos 18 and Magion 3—20198
- upper atmosphere, density model rel. to air drag perturbation of satellite in orbit with small eccentricity *(Chinese)* 3—39986
- upper atmosphere densities near 400 km from satellite 1963-27A orbital anal. 3—5005
- upper atmosphere density at 280 km from satellite 1965-11D spin drag data 3—44600
- upper atmosphere density forecasting, use of heuristic self-adjusting algorithm 3—48722

atmospheric propagation *see atmospheric electromagnetic wave propagation*

atmospheric proton precipitation
- *see also aurora; radiation belts*
- No entries

atmospheric radiation
- *see also aurora*
- Antarctica, dry valleys and Little America V station energy fluxes, climatonomic model 3—35213
- artifical aurorae, brightness profiles 3—35335
- artificial LF radiation generation by auroral ionospheric currents 3—39945
- auroral hiss, Z mode radiation and AKR of polar magnetosphere 3—44620
- auroral kilometric radiation emission model 3—15774
- auroral kilometric radiation polarisation obs. 3—15757
- auroral kilometric radiations correl. with field-aligned currents 3—35373
- Beer Sheva, Israel, solar radiation data 3—35250
- brightness temperature due to O_2 and water vapour 3—25179
- Cherenkov radiation meas., EAS development 3—10167
- clear sky radiance from IR scanner data 3—15553
- climate multi-layer energy balance model, description+sensitivity to solar constant 3—59099
- climatic multi-layer energy balance model, radiation var. due to CO_2 increase 3—59100
- diffuse radiation components estimation under partial cumulus cloud cover 3—20108
- Earth-atmosphere radiative balance, var. due to stratosphere aerosol 3—44550
- ELF (Schumann resonance) propagation and elec. conductivity perturbations 3—48754
- emergent radiation, comparison of model generated radiation fields with satellite meas. 3—10053
- extinction measurement using slant path spectra obtained with Fourier transform IR spectrometer 3—10054
- extraterrestrial daily solar insolation 3—30025
- F-region, ion beam injection expt. and generation of electrostatic waves 3—44610
- flute mode waves excited by ion rings in vel. space 3—25265
- flux meas. at Gadag during 1980 Feb. 16 eclipse 3—59076
- flux meas. over India during 1980 Feb. 16 total eclipse 3—59077
- gamma-ray flux in energy range 4 to 100 MeV, spark chamber meas. 3—10485
- global daily irradiation simple statistical models 3—59083
- global insolation parameterized model under partially cloudy skies 3—25187
- global radiation/sunshine data correlation for India 3—54108
- heat flux and radiation balance of atm. ground system 3—4913
- auroral hiss and effect of ion conic damping 3—35349
- infrared emission from ocean surface with allowance for cloud effects 3—48670
- ionosphere, polar region, transitional HF and VHF emission from plasma inhomogeneities 3—15694
- ionosphere, radiowave emission following heating by HF signal 3—48748
- ionosphere broadband electrostatic noise from polar cusp 3—15725
- ionospheric radionoise modulated by HF radioheating transmission 3—48747
- IR, radiative heating due to CO_2-H_2O overlap in 12-18 micron band 3—59102
- IR attenuation, effect on thermographic temp. meas. systems 3—54730
- IR emission spectrum, radiation scheme for circulation and climate models 3—10052
- IR irradiance meas. accuracy of MONEX NCAR pyrgeometers 3—44554

atmospheric radiation continued
IR outgoing radiation, parameterisation for climatic calcs., radiative transfer models 3—59107
IR radiation, rel. to informativeness of global total O_3 obs. systems 3—10041
IR radiation, spectral radiance rel. to Z 3—25204
outgoing IR radiation, tropical minima due to clouds and humidity 3—44552
IR radiation pressure, rel. to perturbations in noda 3—35403
IR radiative heat balance of Earth's surface, effect of clouds 3—59109
IR/visible radiation attenuation as measured by Meteosat-VIS-channel 3—39905
LF emission characts. 3—51314
light flash characteristics, neutron induced 3—30055
long wave flux divergence near surface of Earth *(Russian)* 3—59106
magnetosphere, radiowave emission theory for nonthermal component 3—35372
magnetosphere auroral kilometric radiation emission mechanism 3—5055
magnetosphere harmonic auroral kilometric radiation of natural origin 3—20184
magnetosphere lion roar emissions 3—5040
magnetosphere non-thermal radioemission mechanisms 3—30120
magnetosphere VLF hiss, struct. of quasi-periodic fluctuations 3—15755
magnetotail neutral sheet, electrons in inhomogeneous mag. field, motion and radiation *(Chinese)* 3—59173
marine stratocumulus, aircraft obs. of thermodynamic and radiation fields during JASIN expt. 3—15585
mesosphere, infrared radiative cooling in 15 micron CO_2 band 3—20117
meteor luminous trails tubular struct., form. mechanism 3—10272
microwave remote sensing of atmos. props., influence of sea roughness 3—54159
microwave thermal emission of land surface, theory 3—15444
monsoon circulation devel. in July, radiative heating, clouds, orography and initial conditions role 3—59012
myriametric wave generation at equatorial plasmapause 3—5050
natural illumination computation of building from scattered clear-sky light using linear model 3—9948
natural waters, average irradiance attenuation coeff. determ., math. procedure 3—48547
night sky at Crimea, USSR, colour and brightness, UBV obs. 3—20261
North Carolina, USA, solar energy climatology 3—44544
Pacific Ocean, tropical, surface press., albedo and outgoing IR radiation 3—59011
photovoltaic solar reference cells calibration using global method 3—24603
plasmasphere LF noise during geomag. storms, amplitude vars. 3—15716
plasmasphere narrowband radioemission from near plasmapause 3—48772
pulsing hiss, pulsating aurora and micropulsations correlations 3—20164
pyrgeometer for meas. of IR flux in clouds 3—15644
radio noise, medium-frequency, wideband meas. made in Nevada, USA 3—44541
radio noise source environment 3—44540
reflected solar radiances of regional scale land surfaces 3—44525
N Rockall Trough, cloud capped boundary layer, stratocumulus radiation and humidity 3—35245
satellite airglow data, two-dimens. inversion technique 3—10109
Saudi Arabia, meteorology and architectural design 3—29967
sea surface temperature, multispectral estimation from satellite IR obs., atm. effects 3—30093
sensible heat flux determ. method from routine meteorological data 3—59062
sky noise in IR astronomy, processing by chopping, nodding and filtering 3—40039
sky radiance reflected at sea surface rel. to downwelling irradiance 3—39903
solar disorder-convertors, focusing-type, effect of circumsolar radiation on performance 3—15002
solar hourly irradiation simulation model *(French)* 3—39898
solar irradiation on inclined surfaces, prediction using clearness index probability density function 3—53582
solar radiation, eclipse effects 3—59070
solar radiation transmission, Stark cell radiometer meas. 3—25917
solar UV radiation at two New Zealand sites 3—59039
solar UV radiation over Delhi during 1980 Feb. 16 eclipse 3—59073
SOLTRAN 5 solar spectral model availability 3—59085
spectral radiance model utilisation for determ. of downwelling IR irradiance, LOWTRAN 5 appl. 3—59084
spectroradiometer measurements in support of photovoltaic device testing 3—20887
stratosphere/troposphere multiply scattered solar induced radiation field, results for appl. to photochemical models 3—4961
stratosphere/troposphere multiply scattered solar induced radiation field determ. method 3—4998
surface air temperature in sensitivity anal. radiative convective climate model, sensitivity anal. 3—15531
terrestrial solar spectral modeling using SOLTRAN and BRITE 3—24601
thermal radiance of clear skies, measurements and anal. 3—15600
thermal radiation downward flux in lower atm. *(Russian)* 3—10057
Tokyo hourly weather data-statistics anal. for 1960 to 1969 *(Japanese)* 3—59082
top of atmosphere radiation budget 3—59108
twilight brightness, quantitative relationship with cloud amount *(German)* 3—35236
ULF geomagnetic power near L=4 controlled by solar wind 3—35368
ULF wave emissions, from equatorial region 3—10149
upper atmosphere, UV radiation fluxes rel. to distrib. of major neutral components 3—15672
upper atmosphere IR radiation meas., baffle design for Earth radiation rejection in limb-scanning interferometer-radiometer 3—54218
UV radiation in lower atmosphere, expt. studies 3—10066
vegetation cover, thermal radiation transfer under canopy 3—48641
VLF broadband burst assoc. with ring current electrons 3—30126
VLF hiss at low-latitudes, narrow band characts. 3—35346
VLF radio noise obs. made in Europe 3—20165
VLF saucer source regions 3—30129
Warsaw solar radiation probabilistic anal. *(Polish)* 3—29987
water vapour 669 μm absorpt. lines 3—35264
water vapour effect on N Indian Ocean surface temp. meas. by satellite 3—29946
water vapour effect on satellite obs. of Pacific Ocean surface temp. near Fiji 3—29945
CO mm-wave emission at mesosphere altitudes 3—15546

atmospheric radiation continued
HCl IR emission spectra of 1-0 band 3—4921
H_2O^+ fluorescent emission mechanisms in upper atmosphere due to ionosphere human influence 3—35327
N_2, intersystem collisional excitation transfer in low altitude auroras 3—56056
NO IR radiation, kinetic model for upper atmosphere 3—10108
O_3 absorption of solar IR radiation, vertical density profile *(Russian)* 3—20085

atmospheric radioactivity
see also fallout
contamination of milk, water, air and deposition during 1980 in European Community 3—9520
nuclear power plant wake region, diffusion of radioactive pollutants 3—44175
pollution dispersal downwind of nucl. power plant, wind-tunnel expts. 3—44174
radiation monitoring experience in the vicinity of nuclear power stations 3—48215
RETADD II: modeling long-range atmospheric transport of radionuclides 3—911
waste disposal, atmospheric transport from burial sites 3—44179
^{222}Ra, daughter nuclides concentration in atmosphere, reactor pollution 3—35233
Rn conc. in houses, review of sources 3—53604
^{222}Rn daughter conc. in soil air, automatic monitoring instrument 3—30065
^{222}Rn obs. for vertical stability index near ground-level *(Spanish)* 3—44499
^{222}Rn release from soil, effect of atmos. press variations 3—4857
Sr isotope fallout from Chinese weapons tests 3—15016
T of natural origin deposited in antarctic snow 3—25152
T, release from nuclear power plant, South Carolina, USA 3—58571

atmospheric spectra
see also atmospheric optics
aerosol spectral absorpt. of aerosol from Georgia, USSR *(Russian)* 3—10058
auroral emission, remote sensing using field-widened interferometer spectrometer 3—10084
extinction measurement using slant path spectra obtained with Fourier transform IR spectrometer 3—10054
fog, spectral attenuation curves in 0.53 to 10.1 m wavelength range rel. to drop size distrib. 3—25146
gamma-ray flux in energy range 4 to 100 MeV, spark chamber meas. 3—10485
gaseous pollutants, meas. using mobile Fourier transform IR system 3—9527
hot gas, quantitative emission and absorpt. spectrometry from moderate resolution spectra 3—9526
ionosphere Ba ion cloud, sunlight reson. fluoresc. scatt., radiative transfer and lines anal. 3—5031
ionosphere plasma line obs. via incoherent scatter radar, appl. of chirped pulse system 3—10139
IR emission spectra of IBC class III aurora, HIRIS obs. 3—59148
IR spectral absorpt. at South Pole due to CH_4, H_2O, N_2O, O_3, CO_3 3—54092
IR spectroscopy, high resolution, of Earth upper atmosphere from space, review 3—10055
lidar differential absorpt. theory for temp. profile determin. method 3—15646
nightglow, Space Shuttle glow, STS-4 spectral obs. 3—59145
pollutants, detect. by spectroscopic means, optimum spectral ranges 3—48222
radiation scheme for circulation and climate models, effects of H_2O, CO_2, and O_3 spectra 3—10052
solar irradiance spectrum at Madrid, meas. 3—4906
solar spectral data sets for direct normal-and global normal radiation 3—48672
stratosphere, emission meas. at balloon altitudes, Fourier transform spectroscopy in subMM region 3—5887
stratosphere, temperature effect on far-Ir spectra, radiative transfer eqn. 3—35234
trace gases in localised cloud, remote Fourier transform IR detection limit 3—9525
water vapour differential absorption, IR sounder meas. 3—10067
water vapour with reson. wavelength of 669 μm, monomer absorp. line parameters 3—35264
CO mm wave spectra of mesosphere 3—15559
CO, nonequilib. vibr. excitation, Fourier transform IR emission spectra obs. 3—6628
CO, spectral line intensities and half-widths, collisional broadening 3—17274
CO^+ spectral bands, excitation cross sections and optical excitation functions 3—32225
CO_2, Fourier transform IR spectral meas. of high temp. $^{13}C^{16}O_2$ and $^{13}C^{16}O^{18}O$ 3—6629
$ClONO_2$, stratospheric mol., far-IR torsional obs. 3—26745
HCl 1-0 band earthlimb IR emission calc. 3—4921
HDO, absorpt. spectra at DF laser wavelengths 3—20115
H_2O, near IR absorpt., lidar techniques for humidity and temperature measurement 3—30090
H_2O, vapour, absorpt. line profile and broadening meas. 3—17267
H_2O vapour, spontaneous Raman spectra 3—44558
H_2O vapour absorpt. line parameter meas., 694.215, 694.237 and 694.38 nm 3—48668
N II, midday auroral emissions assoc. with nightside substorm 3—59149
N_2, synthetic spectra calc. for aurora and matrix isolation conditions 3—35332
NO, effective photodissociation cross sections in Schumann-Runge bands 3—15676
NO UV emission in airglow, meas. during UV spectroscopy of zodiacal light 3—30297
NO_2, 800 cm^{-1} region balloon-borne IR spectra rel. to calcs. 3—48666
NO_2, far IR spectral meas. of conc. profile 3—48617
N_2O, in stratosphere, mixing ratio profile from solar absorpt. spectra and laboratory spectra 3—25147
N_2O_5, stratosphere conc. from IR spectra obs. 3—9991
O I 1304 and 1356 Å emissions, night variations 3—25257
O I 558 nm green line, O(S) deactivation coeff. meas. during Stereotop expt. 3—5006

atmospheric spectra continued
O I 630 nm airglow emission intensity rel. to W-E waves in upper atmosphere 3—5003
O I 630 nm emission from polar aurorae 3—35334
O I 6300 Å emission at twilight correl. with O_2 distrib. at varying solar activity levels 3—10110
O II UV emission in airglow, meas. during UV spectroscopy of zodiacal light 3—30297
O_2 absorpt. spectra (200-220 nm) in Herzberg continuum 3—4919
O_2, effective photodissociation cross sections in Schumann-Runge bands 3—15676
O_2 lines used as astronomical wavelength references, comparison of meas. and theory for line shifts 3—15617
O_2 UV absorpt. cross-section and implications for stratosphere chem. 3—48614
O_2 ultraviolet absorpt. sepctra of Schumann-Runge bands 3—44599
O_2 ultraviolet Schumann-Runge continuum spectra (175-179 nm) 3—11819
O_3 absorption at Cerro Tololo Inter-American Observatory, meas. (1964 to 1980) 3—10065
O_3, IR atmos. spectra of ν_2 and $2\nu_2$-ν_2 bands 3—44551
O_3 spectra, rel. to informativeness of global total O_3 obs. systems 3—10041
O_3, UV absorpt. coeffs. for atmos. conc. meas. technique 3—30076
OH Meinel band system and space vehicle surface glow 3—59147

atmospheric structure
see also atmospheric composition
astrometric refraction rel. to structure, 3-dimens. data from lidar probing 3—25254
boundary layer 3—54093
cloud amounts around globe in belt from 54°N to 45°S, results from satellite albedo meas. 3—10043
D-region electron density profile, estimation from knowledge of VLF refl. coeffs. 3—48764
E_s-layer, height and probability of form. at temperate latits. 3—15712
F-region, night-time, over Cachoeira Paulista (22°S, 45°W), gravity wave induced ionisation layers 3—5025
homopause level, number density control by breaking internal gravity waves 3—5004
ionosphere, characts. of H_E-type irregularities at middle latits. and E_{sq} irregularities at poles and equator 3—15711
ionosphere, effects of lateral gradients on ELF propag. 3—10035
ionosphere, F-region 3—20178
polar ionosphere, investigation of irregular struct. using oblique incidence soundings 3—5026
ionosphere, single isolated irregularities investigation via wave field reconstruction of VHF radio waves 3—10136
ionosphere, total electron content structure over Israel 3—30116
ionosphere characteristics, effects of daily vars. on Doppler freq. shift on Boulder-Havana path 3—15714
ionosphere irregularities, power law spectrum from mutual coherence function for transionospheric radiowaves 3—10135
magnetosphere, morphology of spatial patterns in Pi 1-2 mag. field pulsation activity 3—35375
central Pacific Ocean, atmospheric press. and wind struct. near Equator 3—10044
planetary boundary layer, vertical struct. of eddy diffusion coeff. 3—4904
sporadic-E layers, high latit., cloud model rel. to partial transparency 3—5023
upper atmosphere, distrib. of major neutral components 3—15672

atmospheric techniques
see also air pollution detection and control; geophysical equipment; ionospheric measuring apparatus; ionospheric techniques; meteorological instruments; weather forecasting
acoustic Doppler radar for wind meas. in convective boundary layer *(Chinese)* 3—48716
acoustic sounding method for anal. of tropospheric inversions *(Russian)* 3—10090
acquisition of long-term field data, remote stations appl. 3—35294
aerosol coagulation in plume from cross-wind line source, numerical schemes 3—4423
aerosol composition in remote atmospheres of the northern and southern hemispheres 3—9518
aerosol content determ. by lidar method 3—48680
aerosol content determin. method, by Sun photometry 3—59001
aerosol deposition patterns determ. by Sr isotope study method 3—48635
aerosol inhomogeneity sounding, correlation anal. applicability *(Russian)* 3—44557
aerosol Si content determin. by neutron activation method *(French)* 3—54098
aerosols remote sensing over water, marine sediment tolerances 3—25203
air pollution forecast and alarm in urban area, mathematical model 3—4418
airglow low level imaging system utilising image intensifier 3—10114
atmospheric aerosol particles, S, C, N characterisation by ESCA and EGA 3—9517
auroral emission, remote sensing using field-widened interferometer spectrometer 3—10084
barotropic primitive eqns. spline-Galerkin approx. method *(Chinese)* 3—59086
boundary layer, temp. struct. parameter determ. method 3—4910
boundary layer entrainment growth, effective stratification determ. method 3—48681
boundary layer height determ. methods 3—15641
boundary layer temp. struct. coeff. determ. by sodar method *(Chinese)* 3—35202
boundary layer turbulence estimation from wind and temp. obs. 3—39868
boundary layer wind meas., vane+cup anemometer rel. to orthogonally mounted propellor anemometers 3—39912
buoy system for coastal wind and temp. meas., with satellite telemetry 3—48713
climate and palaeoclimate determ. from obs. of glaciers *(Russian)* 3—35256
climate trend determination method eliminating bias errors of daily temp. data 3—44579
cloud condensation nuclei conc. meas. with thermal diffusion chambers 3—44580
cloud cover and clear sky radiance from IR scanner data 3—15553
cloud cover characts. from archived satellite data 3—54083
cloud property determ. from two-dimensional histograms 3—25249

atmospheric techniques continued
cloud seeding opportunity determin. by microwave radiometry method 3—15571
clouds, three-dimensional representation from satellite pictures and computer imagery 3—15578
coherent polarisation-diversity radar concepts appl. to meteorology 3—20128
convective storms, condensation rate determ. method 3—10082
data analysis procedures for dual Fabry-Perot spectrometer meas. 3—54176
Doppler radar observations, press. flunctuations and buoyancy data retrieval 3—20132
Doppler radar probing of clear atm., review 3—20127
Doppler radars as tools for synoptic meteorology 3—10080
Doppler sodar, appl. to atmospheric turbulence *(French)* 3—20107
dual polarisation radar appl. to measuring storm hydrometeors characts. 3—20129
dual wavelength radar used for hail growth obs. 3—20130
Earth-atmosphere radiative balance, var. due to stratosphere aerosol, determ. method 3—44550
elemental composition of submicrometre particles from coal combustion 3—9533
ethylene monitoring by CO_2 laser technique 3—24655
actual evapotranspiration determ. by IR scanning method *(French)* 3—25239
extinction measurement in visible and near-IR spectral range using multiwavelength sun-photometers 3—54134
FGGE (First GARP Global Expt.), results and methods *(Russian)* 3—35268
fine raindrops size meas. using oil method *(Japanese)* 3—48718
fog, rain and snow identification using laser equipment 3—44578
Fourier transform spectroscopy in subMM region, stratospheric emission meas. at balloon altitudes 3—5887
gas sensor, solid state, calibration 3—16347
gaseous pollutants, meas. using mobile Fourier transform IR system 3—9527
global data assimilation system of National Meteorological Center (USA) 3—30059
ground-based observations of upper atmosphere, remote obs. of airglow and thermospheric dynamics at Calgary, Alberta 3—54179
hail detection by radar using two-radar dual wavelength method 3—59124
hailfall measurement, representativeness of point networks 3—15645
HCl detection using photoacoustic system 3—48224
heterodyne detection through rain, snow, and turbid media 3—54136
humidity measurement, graph use 3—40618
humidity measurement by LIDAR 3—39915
humidity measurement technique using spontaneous Raman spectra method 3—44558
hydrometeorological data transmission, new international code 3—10070
insect radar returns used to study small weather systems 3—4938
IR flux determ. in clouds with pyrgeometer 3—15644
IR irradiance meas. accuracy of MONEX NCAR pyrgeometers 3—44554
IR limb scanning in presence of horizontal temp. gradients, operational approach 3—10073
IR sensing of life cycle of severe storms 3—15623
IR spectroscopy, high resolution, of Earth upper atmosphere from space, review 3—10055
IR transmission determ. technique, by polarised radiometry *(French)* 3—25240
IR transmissivity determ. by airborne radiometry method *(French)* 3—25241
jetstream radar tracking system of benefit to airline industry 3—9953
lagged average forecasting in weather prediction, alternative to Monte Carlo Carlo forecasting 3—59116
laser remote-sensing measurements, signal averaging limitations due to temporal correl. 3—4957
lidar, pulsed differential absorpt. CO_2, for atm. species remote sensing, heterodyne and direct detect. 3—54135
lidar calibration and extinction coefficients 3—48679
LIDAR correlation meas. in statistically inhomogeneous atmosphere, transparency fluctuations 3—44549
LIDAR response, noise level estimation *(Russian)* 3—41903
lidar techniques for humidity and temperature measurement 3—30090
light element analysis methods for atmospheric aerosols 3—9532
lightning detection by 23 cm radar influence of signal polarisation 3—30075
long period UHF pulsations and reson. MHD waves, multisatellite obs. 3—35378
magnetometer ground arrays use for pulsation reson. region anal. 3—35377
magnetopause boundary remote sensing method involving energetic particles 3—48769
meteoritic debris, radiochemical search in atmospheric aerosols 3—30309
meteorological elements forecasting over Europe, appl. of nonadiabatic primitive equation model of atmosphere 3—10039
mm wave propagation and method for meas. of turbulence 3—54103
mososcale cells over East China Sea, detect., use of temp. and humidity 3—20003
multiple interpolation method for climatological data anal. 3—20141
multiple-parameter-radar techniques and applications for precipitation measurements: a review 3—25252
multispectral absolute radiometer and transmissometer system for study of electro-optical phenomena 3—54168
nonuniform grid schemes, design methods *(Chinese)* 3—48649
optical property determ. by moving lidar methods *(Russian)* 3—35286
opticoelectronic aerosol spectrometer, counting vol. as measure of resolving power 3—45213
palaeoatmosphere isotope composition from peat bog record 3—29986
particle light element anal. by gamma ray emission anal. 3—9531
particulate dispersion model evaluation, new approach using receptor models 3—24648
particulate mass determination by visibility technique 3—4995
particulates meas., calibration of smoke shade methods 3—19647
passive IR remote sensing, advanced signal processing 3—58579
peroxy radical meas. method involving 'chem. amplifier' technique 3—4987
photoelectron flux measurement by satellite method 3—54169
planetary boundary layer, cloud convection model, assoc. with turbulence precipitation *(French)* 3—35210
planetary boundary layer characts., use of powered gliders in PUKK 3—39891

atmospheric techniques continued
pollutant dispersion parameters from smoke puff's photographic density meas. 3—48217
pollutant tracer, use of smoke in wind anal. 3—44186
pollutants concentrations modelling, comparison of roadway pollutants dispersion models using Texas data 3—34750
pollution plume dispersal studied by release of radar reflecting chaff 3—44177
precipitation short-term forecasting, appl. of model output statistics concept 3—10038
pressure meas. in humid air over 10^{-3} to 10^5 press. range 3—54166
psychrometric chart plotting program, eqns. and procedures 3—35272
radar meteorology, development in 1980s 3—20135
radar meteorology, review 3—54107
radar monitoring of atm., correction for advection effects 3—30079
radar sounding of middle atmosphere, pulse compression technique 3—30100
radars for operational wind profile determination 3—10081
radiation field in troposphere/stratosphere general anal. 3—4998
radiation fog forecasting, statistical method for Rhein-Main-Airport *(German)* 3—15652
radionavigation for Indian Ocean wind measurement survey 3—25242
radiosonde (standard US design) press. and altitude estimation accuracy 3—20148
radiowave propagation, numerical method for extending ray trace calcs. into strong focusing regions 3—6842
radiowave propagation, remote determination of the structure constant profile from amplitude scintillation data using Tikhonov's regularized inverse method 3—48695
rain acidity measurement, analytical techniques rel. to questions regarding acidity data 3—4439
rainfall data mapping, rainfall anal., morphometric relationships *(French)* 3—48694
rainfall distribution in space, computer display and simulation *(French)* 3—48620
rainfall measurement via satellite images, appl. to rainfall over Arabian Sea during onset of 1979 monsoon 3—30027
rainfall rate determ. by satellite microwave radiometry method 3—48706
raingauge telemetry signal recording and printing system 3—20122
refractive index of boundary layer, determ. by lidar method 3—48704
remote sensing, CO meas. in troposphere by space shuttle 3—30043
remote sensing data, analytic inversion 3—4970
remote sensing of atmos. props. by microwave methods, effect of roughness 3—54159
remote sensing of marine troposphere, capabilities of remote sensing satellites 3—54138
satellite airglow data, two-dimens. inversion technique 3—10109
satellite method for mapping surface fluxes 3—15640
sea surface wind speed, extraction from HF sky wave radar Doppler spectra 3—10033
sensible heat flux determ. method from routine meteorological data 3—59062
snow cover satellite microwave remote sensing methods 3—54142
snow-cover parameter remote sensing by satellite microwave radiometry 3—25231
SODAR, appl. in pollutant meas. and related obs. from nucl. power plants 3—58582
soil moisture remote sensing by microwave radiometry 3—25232
solar eclipse rocket sounding programme, 16 Feb. 1980 over India 3—59169
spatial filtering algorithm for images spatially noninvariant to atm. distortions 3—41780
spectral extinction coeff., horizon line scanning telephotometry 3—20143
statistical analysis theory applicable to precipitation fields *(German)* 3—44563
storm internal motion from weather radar obs., use of pattern recognition techniques 3—20134
stratosphere eddy diffusivity and energy dissipation rate determ. method 3—44514
surface layer optical transmittance meas. by passive sounding methods *(Russian)* 3—59120
temperature deduced from OH radical airglow emissions 3—15622
temperature measurement technique using spontaneous Raman spectra method 3—44558
temperature of boundary layer by radio acoustic sounding system (RASS) method 3—54137
temperature profile determ. by VHF radar method 3—15642
temperature profile meas. by lidar two-wavelength method 3—15646
temperature remote sensing by satellite IR radiometry 3—48703
tetroons use in PUKK for meso-scale transport processes meas. 3—39920
three-dimensional air motion from dual Doppler radars, turbulent motion filtering and advection 3—20131
thunderstorm location method based on atmospherics group delaytimes 3—48698
trace gases in localised cloud, remote Fourier transform IR detection limit 3—9525
tropical cyclone track prediction, statistical-climatological technique using synoptic forcing EOF representation 3—59016
tropopause height determ. by VHF radar method 3—15643
troposphere radio refractivity profile, inference from satellite-to-ground RF meas. 3—10034
turbulence measurement in precipitation environments by radar method 3—10093
turbulence measuring instrument, aerodynamical errors 3—59123
turbulence parameter determination using Doppler radar 3—59063
turbulence profile (C_n^2) meas. by optical and radar methods 3—4969
turbulent heat and moisture fluxes from ocean into atmosphere, calc. procedures comparison 3—9934
typhoon tracks, forecasting with nested models *(Chinese)* 3—39918
upper atmosphere IR radiation meas., baffle design for Earth radiation rejection in limb-scanning interferometer-radiometer 3—54218
visual range determination by photographic technique 3—4456
volcanic emissions research program (RAM) and instrumentation 3—20121
vorticity centres movement forecasting technique 3—10095
water vap. content determin. by microwave radiometry method 3—15656
water vapour meas. by microwave radiometry anomalous absorpt. 3—48625
water vapour meas. using differential absorpt. lidar with optical parametric oscillator source 3—30061
weather forecasting, Doppler radar application 3—20133

atmospheric techniques continued
weather forecasting, synoptic-scale vertical motion fields calc. via quasi-geostrophic omega-equation 3—35238
weather forecasting, use of Chebyshev polynomials, transform. into irregular grids *(Chinese)* 3—48652
whistler frequency-time anal. method using matched filtering 3—4966
wind and temperatures derived from ion drift and vel. obs., 3—10094
wind direction estimation technique for anemometer application 3—59125
wind in upper atmosphere, radar meteor wind equipment 3—10079
wind meas. by satellite microwave method, errors due to rain 3—44566
wind meas. by UHF Doppler radar at Arecibo 3—15575
wind measurement by Seasat radar altimetry 3—25136
wind velocity meas. by Doppler acoustic radar 3—54165
wind velocity meas. by lidar, statistical error determ. 3—48590
wind Voluntary Observing Fleet obs. rel. to instrument obs. at fixed positions 3—30087
wind wind remote sensing by satellite microwave radiometry method 3—25238
Ba-cloud release, spectroscopic line-of-sight vel. meas. method 3—4968
Br/Pb ratio in airborne particles, pollutant appl. 3—48218
HCl determination by spectral method using improved 1-0 band emission calcs. 3—4921
H_2O vap. profile meas. by microwave radiometry method 3—15647
NO_2 vertical profile meas. by IR spectral method 3—48617
NO concentration monitoring using UV laser differential-absorpt. techniques 3—15030
O_3 conc. determination in atmos., using dye laser based lidar 3—48702
O_3 concentration meas. by photometers, effect of aerosol light scatt. props. *(Chinese)* 3—48717
O_3 content determ., informativeness of global total O_3 obs. systems 3—10041
O_3 content meas. by Umkehr method, 32-46 km altitude 3—59061
O_3 density, vertical profile from solar IR absorption *(Russian)* 3—20085
O_3 determ. by lidar method 3—48680
O_3 interannual variability monitoring by ground-based network 3—15637
O_3 measurement with ECC ozonosonde, errors due to press. depend. 3—48691
O_3, remote sensing by UV backscatt. technique 3—44577
O_3 vertical profile determined by spectral (Umkehr) method *(Russian)* 3—10091

atmospheric temperature
see also atmospheric thermodynamics
acoustic-gravity waves, 3-dimens., in model nonisothermal atmospheres, propag. 3—39901
aerosol pollution causing change in climate *(Russian)* 3—35257
airglow emissions from OH used to deduce atm. temp. 3—15622
Antarctica, dry valleys and Little America V station microclimate, climatonomic model 3—35213
N Atlantic Ocean tropical zone, Late Quaternary palaeotemperature fluctuations 3—48674
atmospheric electric path length meas., optimum frequencies selection by satellite-borne microwave radiometers 3—48622
N Australia, nocturnal inversion rel. to undular bore interpretation of Morning Glory 3—15590
Baltic Sea, sea ice boundary layer region, momentum and heat transfers 3—35209
Bombay airport, India, temp. inversion occurrence 3—25168
boundary layer, turbulence statistics within and above maize canopy, wind+temp. meas. 3—39879
boundary layer temp. and mean wind, spectral density variability *(French)* 3—30034
boundary layer temp. determ. by radio acoustic sounding system (RASS) method 3—54137
British Columbia, atmospheric temp. and precip. during last glaciation rel. to lag of Fraser glacial maximum 3—48662
Canada, July temp. variability in AD 1943 to 1972 period 3—20113
Cardington and Thurleigh, England, climatological records comp. 3—20110
NE China summer cold disasters rel. to global temp. *(Chinese)* 3—59104
Clear Lake, California, temp. and precipitation during last glacial cycle, pollen anal. 3—48675
climate multi-layer energy balance model, description+sensitivity to solar constant 3—59099
climate response to seasonal air temp., CO_2 and transparency variations *(Russian)* 3—35252
climate trend determination method eliminating bias errors of daily temp. data 3—44579
climatic multi-layer, energy balance model, temp. parameters var. due to CO_2 increase 3—59100
cloud microwave noise temperature, appl. to telecommunications from USA 3—25178
Cologne, Germany, inversion structure heights from wind/temp. obs., correl. with rural area 3—15577
D-region positive ion chemistry, temp. and solar zenith angle control 3—10134
daily range, altitude effect 3—35222
determination of temp. profile by VHF radar method 3—15642
Doppler radar observations, press. flunctuations and buoyancy data retrieval 3—20132
East China Sea, mesoscale atm. cells detect., use of temp. and humidity 3—20003
EHF/SHF attenuation and brightness temp. due to O_2 and water vapour 3—25179
escarpment edge, thermal turbulence two dimens. field 3—15505
exosphere, effect on Jacchia's 1977 model atm., density 3—44597
F-region, density/temp. disturbances from heating by HF waves 3—15697
F-region electron density and temp. during solar max. 3—15723
F-region neutral winds and temps. at mid-latitudes 1975-9, Fabry-Perot interferometric meas. 3—10133
field data logging system 3—35294
Florida, cold-prone areas, soil and water effects 3—30023
Florida peninsular, USA, rainfall and temp. records for past 50 years 3—25201
geomagnetic activity effects on atmospheric press., temp. and movement 3—29824
Germany, North Sea coast, planetary boundary layer temp., coastal effects 3—39891
global scale radiation balance calc. of equilib. surface temp. *(Russian)* 3—10239
global temp. rel. to NE China summer cold disasters *(Chinese)* 3—59104

atmospheric temperature continued

- Great Plains, United States, droughts and heat waves as result of abnormal circulation 3—9969
- ground air temp. forecasting, cloud obs. appl. 3—48644
- heat flux through ground surface with short grass cover 3—44520
- heat island (nighttime) above Al smelter in Australia 3—4911
- HIRS-AMTS satellite sounding system test—theoretical and empirical vertical resolving power 3—30085
- Holocene palaeotemperature and circulation over Canada 3—20113
- hot gas, quantitative emission and absorpt. spectrometry from moderate resolution spectra 3—9526
- hot-wire anemometer readings, average flow temp. effect 3—35298
- India, climate areas based on human physiological response 3—25199
- India, tropospheric geopotential height, temp. and wind fields rel. to monsoon activity prediction 3—10016
- Indiana, temp. records for 1901-80 period at West Lafayette 3—30049
- Indonesia volcano eruptions, stratosphere aerosols climatic impact 3—25057
- ionosphere, geomagnetic effect during modulated heating 3—15754
- ionosphere electron density decrease during storms, effect of heating from above 3—15749
- ionosphere electron temperature, effect of spacecraft borne radio transmitter emission 3—15698
- ionosphere heating by radiowaves 3—54192
- ionosphere polar region, advective eddies critical temp. and density gradients 3—15750
- IR limb scanning in presence of horizontal temp. gradients, operational approach 3—10073
- IR outgoing radiation, parameterisation with temp. and humidity for climatic calcs. 3—59107
- lidar remote sensing of temp. profile by two-wavelength method 3—15646
- lidar techniques for humidity and temperature measurement 3—30090
- Lyneham, Wiltshire, sudden temp. drops during weak advection 3—10012
- E Massachusetts, records from 18th century diaries 3—30048
- measurement technique based on O_2 and N_2 spontaneous Raman spectra 3—44558
- mesosphere temp. profile at low-latitudes during daytime 3—48723
- meteor trails, electrons cooling time 3—15670
- methane, biosphere production increase following global temp. rise 3—59029
- midday all-slope surface temperature, solar radiation transmission/energy budge models coupling 3—39878
- Milan, Italy, temp. rel. to model for air pollution forecast and alarm 3—4418
- moist quasi-geostrophic baroclinic instability including condensational heating 3—15530
- monthly data for Greenland rel. to ice core, climatic variables analysis 3—30047
- N Mozambique Channel area, kinematic and thermal struct. of two flow surges 3—15591
- New Brunswick, New Jersey, January thaw anal. 3—9966
- Northern and Southern Hemisphere general circulation and temp. *(Russian)* 3—35227
- Northern Hemisphere stratosphere, zonal mean climatology 3—59101
- Northern Hemisphere surface temp. in AD 1891 to 1980 period 3—59057
- ocean thermal action on atmos., dynamic-statistical parameterisation 3—48636
- Oklahoma, 1977 May 20 severe storms, cloud tops black body temp. and convective activity 3—9962
- SW Ontario, Canada, correl. between wet bulb potential temp and O_3 conc. 3—4421
- Pacific, sea surface temp. and wind, 1861-1960 data on Southern Oscillation 3—35251
- N Pacific, sea surfae temp. var. on decade time scale 3—59097
- Pacific Ocean tropical boundary layer, water vapour density, temp. and wind from turbulence data 3—35211
- tropical Pacific trade winds, sea surface temp. and atmos. circulation 3—20075
- Palaeogene temp. and climate in Europe, reconstruction from polynological evidence 3—35266
- palaeotemperature and ^{14}C production rate rel. to O isotope records in ice cores 3—29984
- palaeotemperature variations of Phanerozoic 3—48677
- phototachymetric measurement accuracy, ambient temp. effect 3—30096
- planetary boundary layer, temp. inversions rel. to vertical struct. of eddy diffusion coeff. 3—4904
- planetary boundary layer, vertical temp. gradient rel. to internal stability parameter *(German)* 3—44496
- plasmasphere temp. deduced from VLF obs. 3—48752
- Potsdam, interpretation of forecasts of mean monthly temp. anomalies at yearly intervals *(German)* 3—15520
- radiative convective climate model, surface air temp. sensitivity anal. 3—15531
- radiative cooling of surfaces, computations for model atmospheres 3—25204
- remote sensing of temp. profile by satellite IR radiometry 3—48703
- remote sensing quality of TIROS-N and NOAA-6 soundings 3—9972
- San Antonio Mountain Experiment (SAMEX) 3—20120
- Saudi Arabia, meteorology and architectural design 3—29967
- sea surface temp. zonal variations and air-sea interactions 3—44460
- seasonal, zonally averaged climate model 3—25202
- seasonal variation, 30-80 km altitude at mid-latitude *(French)* 3—44495
- sodar method for boundary layer temp. struct. determ. *(Chinese)* 3—35202
- soil-atmosphere heat transfer calc. methods 3—15396
- solar eclipse influence on atmosphere thermal struct. 3—59080
- solar region, effects of solar activity on atmospheric temps. 3—10037
- stratosphere, lunar semi-diurnal tide of temp. 3—48627
- stratosphere sudden warming, rel. to meridional transport of aerosols from Sierra Negra volcanic eruption 3—4925
- stratosphere sudden warming and D-region winter anomaly obs. 3—20173
- stratosphere sudden warming and polar vortex distortion 3—30012
- stratosphere sudden warming and pot. enstrophy balance by β-channel model 3—10006
- stratosphere warming, effect on thermosphere semi-diurnal tide 3—35330
- stratosphere warming event prediction using numerical model 3—44533
- stratospheric warming event, coupling with higher level winds 3—44529
- surface global temp. field in 1970s *(Chinese)* 3—48654
- surface layer, temp. ramps. rel. to struct. functions 3—15503
- surface layer space-time characts. 3—39876
- surface layer temperature var. due to stratosphere aerosol layer var. 3—44550
- surface layer types, temp., effect of solar angle/air temp./clouds 3—35212
- surface temp. of early Earth, CO_2 conc. increase effects 3—30051
- surface temperature and energy budget components for two landscapes, air temp. effects 3—20071
- surface temperature of early Earth, stabilising effect of cloud feedback 3—15598
- Syoura Station, Antarctica, snow $\delta^{18}O$ rel. to preceding month temp. 3—35195
- Table Mountain, USA, surface layer, structure parameters of temp., humidity and temp.-humidity 3—20073
- Tarapur, India, boundary layer stability characts. during 1980 February 16 solar eclipse 3—39875
- temperature effect on far-Ir spectra, radiative transfer eqn. 3—35234
- thermosphere, daytime temp. and wind vel., dual FP spectrometer meas. 3—54176
- thermosphere, neutral winds and temp. during geomag. quiet conditions 3—48725
- thermosphere electrostatic polarisation field, diurnal var. due to solar heating, wind and temp. var. 3—35328
- thermosphere heating by electron precipitation mechanism 3—20160
- thermosphere neutral gas temperature vertical profiles, var. with solar activity 3—15668
- thermosphere response during geomag. storms near solar cycle max. 3—30107
- thermosphere response to SAR arc event 3—15681
- thermosphere temp. distrib. and midnight max. 3—25255
- thermosphere zonal winds, vertical motion and temp. of polar regions 3—15674
- Tibet Plateau heating in spring, effect on S Asia high 3—48604
- tidal oscill. causing vertical energy flux 3—48726
- tropical storm genesis, numerical model sensitivity to sea surface temp. 3—59025
- tropical stratosphere and troposphere annual and interannual variations 3—25154
- United States, 1895-1981 drought analysis 3—35218
- United States, climate fluctuations rel. to variable snow cover 3—30045
- United States, surface temp., decade time scale var. 3—59097
- United States temperature prediction, use of simple analogue approach 3—9987
- upper atm. temp. derived from ion drift and vel. obs. 3—10094
- variational adjustment of global temp. and geopotential fields 3—48638
- vertical temp. gradient and refraction in Thessaloniki area 3—25209
- volcanic eruption (El Chichon) causing stratospheric warming 3—44530
- volcanic eruption (El Chicon, Mexico) causing temp. rise 3—48615
- CO_2-climate model with realistic geography 3—10050

atmospheric thermodynamics

- *see also atmospheric temperature*
- barotropic primitive equations, energy conservation Galerkin approx. *(Chinese)* 3—48657
- NE Brazil, heat content and energy, balance anal. 3—59098
- Cabauw, Netherlands, boundary layer wind profiles and heat fluxes 3—20069
- China, heavy rain of July 1977, sensible/latent heat budget and kinetic energy *(Chinese)* 3—39884
- climate multi-layer energy balance model, description+sensitivity to solar constant 3—59099
- climatic multi-layer energy balance model, sensitivity to CO_2 increases 3—59100
- cloud seeding, effects of latent heat of fusion and condensate loading 3—59051
- coastal sites daytime mixed layer depth, model including advection/subsidence 3—35207
- condensation heating rel. to cyclone genesis mechanism *(Chinese)* 3—59088
- East China Sea, cold air outbreaks heat fluxes 3—20003
- electron precipitation, energy transport assoc. with elec. field and electron accel. above discrete auroras 3—15717
- energy balance models of climate, rel. to astronomical theory of ice ages 3—4951
- entropy production 3—59242
- general circulation diagnostic budget eqns. 3—59007
- Greater London, United Kingdom, weak tornadoes suppression/dissipation, heat island effects 3—9963
- heat flux effect on baroclinic-ocean circulation model 3—15485
- heat flux induced by gravity waves 3—59138
- heat flux through ground surface with short grass cover 3—44520
- ionosphere, relations between Birkeland currents, auroral electrojet indices and high latit. Joule heating 3—5030
- large scale transient eddies, effect on time-mean flow 3—15527
- marine stratocumulus, aircraft obs. of thermodynamic and radiation fields during JASIN expt. 3—15585
- marine surface layer, GATE turbulent heat and moisture fluxes 3—15607
- monsoon circulation devel. in July, radiative heating, clouds, orography and initial conditions role 3—59012
- nonadiabatic primitive equation model of atmosphere, for meteorological elements forecasting over Europe 3—10039
- nonlinear heat diffusion equation, numerical predictability problem soln. 3—15510
- Northern Hemisphere thermally-forced mean mass circulations 3—9976
- Northern Hemisphere transient eddies, zonal wavenumber characts. 3—15528
- Oklahoma storm complex, 1976 May 30, dynamics and thermodynamics 3—9984
- Pacific Ocean tropical boundary layer, latent heat, buoyancy and momentum fluxes 3—35211
- planetary boundary layer, inversion-capped, two-dimensional numerical study of horizontal roll vortices 3—15583
- radiation balance models rel. to astronomical theory of Pleistocene ice ages, historical review 3—4949
- radiative energy budget, comparison of model generated radiation fields with satellite meas. 3—10053
- radiative heating due to CO_2-H_2O overlap in 12-18 micron band 3—59102
- radiative transfer scheme, for circulation and climate models 3—10052
- N Rockall Trough, boundary layer, momentum, heat and water vapour fluxes (in JASIN 1978) 3—35241
- N Rockall Trough boundary layer, mass/momentum/heat budgets, cloud effects (JASIN 1978) 3—35242

atmospheric thermodynamics continued

- sensible heat 10 day mean flux, effect of time scale on general circulation statistics 3—9959
- sensible heat flux, Brook's definition 3—20074
- South China Sea, winter monsoon tropical mesoscale convection, thermodynamic and circulation characts. 3—59013
- specific enthalpy, sensible heat and latent heat fluxes rel. to humidity variations 3—10010
- stationary waves, sensitivity to thermal feedback 3—15523
- stratosphere warmings as cause of polar cap O I 5577 Å airglow 3—5008
- subtropical region, synoptic scale regime short-range evolution, generalised quasi-geostrophic mechanism *(Chinese)* 3—48655
- surface heat flux measurement using switched continuous-wave sonic anemometer 3—15621
- surface heating anomalies interaction with zonally symmetric and axisymmetric flows, climatic implications 3—15526
- synoptic-scale vertical motion fields, calc. via quasi-geostrophic omega-equation 3—35238
- thermal convection, ring-type heat source, numerical anal. and expt. 3—20087
- thermosphere semiannual oscill. identified as conduction mode 3—35331
- tidal oscill. causing vertical energy flux 3—48726
- transient heat eqn. applied to fluid dynamic problems 3—48600
- turbulent atmosphere thermodynamics, parameterisation of fluxes 3—9988
- turbulent heat and moisture fluxes from ocean into atmosphere, calc. procedures comparison 3—9934
- typhoon precipitation distrib., condensation heating effect *(Chinese)* 3—59087
- wake downstream from industrial site, turbulent thermal and kinematic props. 3—54105

atmospheric turbulence

- acoustic wave scatt., Doppler sodar appl. *(French)* 3—20107
- Arecibo stratosphere, turbulent layers struct., fine altitude resolution radar obs. 3—44514
- baroclinic inertial instability in the nonstatic equilibrium atmosphere *(Chinese)* 3—48650
- boundary layer, effects of turbulence on electrode effect over snow 3—4924
- boundary layer, light propagation in turbulent atm., wave struct. function *(Chinese)* 3—48671
- boundary layer, mesoregion concept and energy spectrum in wavenumber space 3—32719
- boundary layer, temp. struct. parameter determ. method 3—4910
- boundary layer, turbulence parameter obs. and theory 3—44521
- boundary layer, turbulence statistics within and above maize canopy, wind+temp. meas. 3—39879
- boundary layer, vertical heat transport in advective inversions 3—54079
- boundary layer CO_2 and water vapour turbulent fluxes, meas. with IR equipment 3—20140
- boundary layer models based on turbulent exchange coeff. 3—35201
- boundary layer of equatorial Pacific, updraft characts. 3—10005
- boundary layer over moderate relief near to mountain chain *(French)* 3—54077
- boundary layer turbulence by anal. of Wangara wind profiles 3—4908
- boundary layer turbulence estimation from wind and temp. obs. 3—39868
- boundary layer turbulent energy over complex terrain 3—54078
- Brunt-Vaisala freq. of moist atm. (theory of stability) 3—30002
- clear air turbulence characts. in middle stratosphere over France 3—44515
- clear-air phenomena, detection with air-traffic control radar 3—25251
- clouds, diffusive model of turbulent mixing of dry and cloudy air 3—15587
- clouds structure at Great Dun Fell, Cumbria, effects of entrainment 3—15588
- coastal sites daytime mixed layer depth, model including advection/subsidence 3—35207
- cumulus cloud dynamic modification, axisymmetric free convection problem with const. turbulent coeffs. 3—10042
- cumulus model, entrainment, detrainment and turbulent transport 3—59050
- cyclones and anticyclones at middle lattitudes, turbulence properties *(Russian)* 3—59041
- dense gas dispersion, turbulence models 3—48660
- eddy diffusion coefficient in planetary boundary layer, vertical struct. 3—4904
- eddy kinetic energy model of planetary boundary layer 3—54081
- effect on observed solar corona intensity during eclipse 3—59302
- effects on direction meas. 3—25208
- effects on telescopic obs. 3—44548
- embankment, surface layer turbulent wind flow 3—35216
- escarpment edge, thermal turbulence two dimens. field 3—15505
- forecasting, use of nonlinear wave equation *(Chinese)* 3—39881
- generation by solar radiation 3—35486
- Germany, North Sea coast, planetary boundary layer turbulence, coastal effects 3—39891
- horizontal roll vortices in inversion-capped planetary boundary layer, two-dimensional numerical study 3—15583
- imaging through atmospheric turbulence using modified log gradients 3—41774
- instrument to measure turbulence, aerodynamical errors 3—59123
- internal gravity waves interaction with wave induced turbulence 3—44507
- International Turbulence Comparison Experiment at Conargo, Australia 3—35208
- ionosphere, small-scale artificial turbulence, spectrum 3—5016
- jets, breakdown coefficients used to determine universal exponent μ 3—20072
- laser interferometers, adaptive optics methods appls., wavefront distortion and atm. turbulence influence 3—30925
- laser remote-sensing measurements, signal averaging limitations due to temporal correl. 3—4957
- laser-generated speckle field after propag. through turbulent atm., intensity probability density function 3—10062
- light beam angle of arrival fluctuations for vertical refractive angle determ. 3—6886
- light propagation, probabilistic diffraction limited imaging through turbulence 3—54130
- marine atmospheric boundary layer, meteorological model for optical props. 3—10064
- measurement of C_n^2 profile by optical and radar methods 3—4969
- mesosphere radar echoes depend. on D-region electron density profile 3—59141

atmospheric turbulence continued

- mesosphere/thermosphere turbulence due to short internal gravity waves 3—15666
- mm wave atmospheric turbulence meas., comparison of results with propagation theory 3—39896
- mm wave propagation and method for meas. of turbulence 3—54103
- modern optics, mathematical appls., conf., San Diego, CA, USA (Aug. 1982) 3—40314
- near-surface layer turbulent energy exchange 3—54080
- ocean-atmosphere interaction, turbulent heat and moisture fluxes calc. 3—9934
- optical angle estimator operating through turbulent atm., accuracy 3—27204
- Pacific Ocean tropical boundary layer, water vapour density, temp. and wind from turbulence data 3—35211
- partially coherent radiation propag. 3—41764
- particle dispersion in boundary layer turbulent flow, vertical vel. from Markov chain simulation 3—20068
- phase screens, turbulent random, K-distributed phase differences 3—50612
- planetary boundary layer, clear air convective structures 3—59064
- planetary boundary layer, cloud convection model, assoc. with turbulence precipitation *(French)* 3—35210
- planetary boundary layer, higher-order models, cloud-ensemble relations 3—59043
- planetary boundary layer, vertical temp. gradient rel. to internal stability parameter *(German)* 3—44496
- planetary boundary layer (unstable) velocity spectra 3—30008
- pollution plume dispersal studied by release of radar reflecting chaff 3—44177
- radar detection of turbulence in precipitation environments 3—10093
- radar method for determination of 1-D spectra of vertical velocity 3—59063
- Rayleigh-Taylor instability with spatially varying accel. 3—54178
- N Rockall Trough, turbulent boundary layer obs. (in JASIN 1978) 3—35243
- seeing conditions, atmospheric effects anal. 3—25197
- Skeleton Coast, Namibia, atmospheric turbulence scale rel. to sand dunes geomorphology and grain size 3—29919
- stellar speckle interferometry, wind and turbulence effects 3—30225
- stratosphere rotating two dimens. turbulence, closure models 3—44502
- sulphate aerosol dynamics in atmospheric plumes, model 3—4422
- surface layer space-time turbulence characts. 3—39876
- thermodynamics of turbulent atmosphere, parameterisation of fluxes 3—9988
- three-dimensional air motion from dual Doppler radars, turbulent motion filtering and advection 3—20131
- three-dimensional incompressible turbulence 3—58999
- tilt spectrum of turbulence, high freq. behaviour 3—48665
- trade wind subcloud layer vertical rel. fluctuations 3—4912
- tropopause height determ. by VHF radar method 3—15643
- upper atmosphere, turbulence generation by gravity waves rel. to control of homopause level 3—5004
- upper atmosphere, vertical profiles of eddy diffusion coeff. rel. to distrib. of major neutral components 3—15672
- Uppsala, Sweden, turbulence characts. in surface near neutrally stratified urban atm. 3—15504
- vertical stability index near ground-level *(Spanish)* 3—44499
- von Karman vortex streets in stratified fluids rel. to atmospheric vortex trails near islands 3—20090
- vortex street downwind of mountainous island 3—25192
- wake downstream from industrial site, turbulent thermal and kinematic props. 3—54105
- wind, velocity measurement by laser beam intensity fluctuations 3—17988
- wind effects on free surface of sea, theory *(French)* 3—20038

atmospheric wind *see wind*

atmospherics

see also atmospheric electromagnetic wave propagation; whistlers

- Arctic Basin, struct. of natural ELF EM field 3—15522
- chorus, latitudinal variation of freq. in topside ionosphere 3—35355
- frequency spectra and polar characts. of VLF emissions 3—54101
- global EM resonances in terrestrial and planetary atmospheres, theory 3—15862
- ionospheric propagation at 27 kHz, absorpt. by lower D-region 3—48734
- lightning produced VLF and LF emissions, theory 3—4902
- plasmasphere LF noise during geomag. storms, amplitude vars. 3—15716
- thunderstorm location method based on atmospherics group delaytimes 3—48698
- VLF fadings associated with Calcutta monsoon depression rainfall 3—10018
- VLF hiss, struct. of quasi-periodic fluctuations 3—15755
- VLF radiation from transmission lines, characts. of power line used as VLF antenna 3—10030

atom-atom collisions

includes reactive collisions

- atomic collisions, molecular model, ab initio quantum chemistry 3—36642
- charge exchange and ionisation, impact parameter approx. 3—32197
- energy transfer in collisions between excited atoms, review 3—41657
- glory region, total cross section and spherical interaction pot. relation 3—11940
- glory region total cross sections from noble gas potentials 3—11939
- inert gas+halogen atom, channels of atom and excitation transfer, pot. surfaces 3—11929
- potential scatt., cross sections, semiclassical theory 3—32167
- vibronic coupling at intersections of covalent and ionic states 3—21674
- Ag+Ag(Cs), L-shell excitation, X-ray emission 3—32181
- Ar, Penning ionisation by $He(2^3S)$ and excitation transfer from $Ar(^{1,3}P)$ to N_2 meas. 3—11956
- Ar+Ar(Kr)(Xe), glory undulations for total cross section 3—26812
- Ca, collisionally assisted two-photon absorpt., interatomic pots., line shape study 3—1328
- Cd+Ar, Cd $(^1P_1)$ excitation transfer and quenching, fluoresc. obs. 3—32182
- Cs+H(D), electron loss and capture cross section meas. 3—6779
- F+$Xe(^1S)$, fine struct. transition, close-coupled study 3—32167
- Fe VII forbidden lines excitation under gaseous nebula conditions, transition probabilities and collision strengths 3—1279
- H+antiH, interaction potential 3—36886
- H+D, excitation transfer process, fluoresc., numerical simulation studies 3—50344
- H+H, exchange-induced dipole moments 3—11919

atom-atom collisions continued
H+H, recombination and binding on liq. He, mag. reson. study 3−1290
H+H(He), 0.3-3.5 MeV, total one-electron-loss cross sections 3−26836
H+He, exchange-induced dipole moments 3−11919
H(1s)+H(2s), ion pair production, absolute cross section meas. 3−6755
He atoms, collisional excitation transfer, time resolved laser induced fluorescence spectroscopy *(French)* 3−41658
He+Ar mixture, collision induced absorpt. spectra 3−26674
He+K(Rb)(Cs), intramultiplet mixing, quantum calcs. 3−21853
He+Ne, elastic and energy transfer scatt., interaction pots. 3−6772
HeI+He* collisions, excitation study by visible spectra 3−32183
^{4}He ion+Cu (Ge) (Mo) (Ag), target, K-shell ionisation cross sections 3−6774
He*+He(Ar)(Ne), crossed beam time of flight study, vel., resolved total integral cross sections 3−11936
K+ inert gas atoms, resonant fine struct. mixing, fluoresc. obs. 3−17358
Kr+Ar(Kr), glory undulations for total cross section 3−26812
Kr+Kr collisions, X-ray emission in keV range 3−41671
Li atoms, collisional excitation transfer, time resolved laser induced fluorescence spectroscopy *(French)* 3−41658
$Li+F \rightarrow Li^{+}+F^{-}$, chemi-ionisation collisions 3−36848
Li+He, coherent $S \rightarrow D$ excitation, polarisation anal. 3−50496
Li+inert gases, van der Waals interaction and contrib. to hyperfine shifts, many-body study 3−26820
$Li+N(He)(H_2)$, excitation and ionisation cross sections Born approx. 3−11959
Na vapour, ground state quantum beats and collisional relax., picosec. resolution 3−36842
Na+Ar(Kr)(Xe), Rydberg d states, collisional ang. momentum mixing meas. using selective field ionisation 3−6757
Na+Ca, light induced collisional energy transfer 3−41669
Na+Cs, fine struct. transition cross sections, Na fluoresc. obs. 3−1469
Na+He(Ne)(Ar), population transfer, time-resolved laser fluoresc. 3−6773
Na+I, charge transfer collision, electronic degrees of freedom, classical model 3−21900
Na+inert gas atoms, electronic and nuclear spin polarisations of $5^2S_{1/2}$ state, collisional disorientation meas. 3−26830
Na+Na collisions, energy transfer cross sections 3−46053
Na+Xe, collisional angular momentum mixing of Na Rydberg states 3−46060
Ne, $^3P_2$ and $^3P_1$ excited state quenching at 150, 300 and 400K in afterglow plasma 3−46057
Ne atom, 632.8 nm spectral line, collisional broadening and shift obs. in Ne and He-Ne glow discharges 3−55891
Ne, deexcitation rate coeffs. for neutral atom and electron collisions, absorpt. and fluorescence study 3−21886
Ne, dynamical optogalvanic effect, collisional mixing, atom role near cathode surface 3−36712
Ne-Cu discharge, formation of excited Cu II levels 3−36707
Ne+H(D), using state selected $Ne(3s^3P_2, {}^3P_0)$ metastable atoms, ionisation, electron spectra anal. 3−50509
Ni-Ni, quasi-molecular X-ray emission study 3−6754
$O(^5S)+Xe \rightarrow O+Xe(^3P_1)$ collision, energy dependent cross section 3−26827
Pb I 283.3 nm line growth curve by total absorpt., cross section of collision resonances 3−41531
Pb+Pb, nucl. sticking, superheavy quasimol. form., MO X-ray spectra 3−50421
Sr+He(Xe), $5sns^1S_0$, $5snd^1D_2$ and $5snd^3D_2$ levels impact broadening 3−32004
^{129}Xe+Cs, spin relax. by exchange interaction 3−46089
Zn+Ar, excited state quenching; fluoresc. study 3−17359

atom-ion collisions
includes reactive collisions
see also charge exchange
alignment in ionization by ion, electron and photon impact 3−41659
alignment studies in inner-shell processes by heavy projectiles 3−41660
alkali metal+halogen ions, mutual neutralisation and ter mol. recombination in burnt flame gases 3−41665
alkali-ion gun for atom-ion collision expts. 3−454
asymmetric ion-atom collisions in nonreson. laser fields, light scatt. 3−32164
atom-ion collisions, Rydberg states, collisional excitation transfer, noninertial mechanism 3−26838
atoms + heavy ions, slow recoil ions with few electrons prod. and props. 3−11931
binary encounter with massive projectile and isotropic target vel., doubly diff. cross section 3−21893
charge exchange and ionisation, impact parameter approx. 3−32197
electron capture, coherent excitation cross-sections 3−21898
electron emission, slow ion collisions and super-Rydberg cascades 3−21851
ethyl cation, bridged and classical structs., neutralised ioon-beam spectrosc. obs. 3−56030
ethyl radical, bridged and classical structs., neutralised ioon-beam spectrosc. obs. 3−56030
few electron slow recoil ion from heavy-ion collisions with gaseous targets, spectroscopic investigation 3−21877
few-electron recoil ions, X-ray and Auger electron emission 3−41663
Glauber amplitude calc. for atom-charged particle scatt. 3−46062
heavy ion+atom collisions, information-theoretical description 3−41637
heavy ion+atom collisions, MeV/u, single and double K-electron transfer 3−36838
heavy ion+U target atom collisions, direct pair prod. 3−45830
heavy ion beam+atomic gas, collisionally excited few-electron ions prod. 3−41662
heavy ion collisions, ionisation, ang. distrib. of emitted electrons 3−11962
heavy-ion collisions, electron capture cross section impulse approx. 3−6780
heavy-ion collisions, L- and K-shell excitation, impact param. dependence 3−41638
high energy collisions, electrons and X-rays angular distrib. 3−41646
inner shell ionisation, screened Coulomb trajectory effects 3−32189
K X-ray yield associated with electron capture, reson. behaviour, review 3−41639
L_3 sub-shell ionisation, atomic alignment by heavy-ion impact 3−46061
near-symmetric relativistic atoms, slow collisions, K-shell ionis., impact parameter depend 3−56035
resonant transfer and excitation processes 3−56068

atom-ion collisions continued
rotationally induced inner shell excitation, nonperturbative study 3−1463
slow multiply charged ion+atom, large angle scatt., $C^{6+}+H$ system 3−21902
thin C foil bombardment with fast ions, secondary electron emission, ion beam current and incidence angle dependence 3−21878
X-ray and atomic inner-shell physics, conf., Eugene, OR, USA (Aug. 1982) 3−40308
$\bar{p}+H(He^{+})(Li^{2+})$, excitation, ionisation and charge transfer 3−41661
$Ag+H^{+}$, K-shell ionis. cross-section meas. 3−41670
$Ar+Cl^{16+}$, quasimol. X-ray prod. probability, interference effects 3−31995
$Ar+H^{-}(D^{-})$, detachment collisions, electrostatic vs. dynamical coupling 3−56033
$Ar+H^{+}$, angular distribution of ejected L-shell electrons 3−26831
$Ar+H^{+}$, electron capture from the K and L shell, probability depend. on scatt. angle 3−1474
$Ar+H^{+}$, ionisation, differential cross section calcs. 3−56069
$Ar+He^{+}(C^{5+})(Li^{2+})(O^{7+})$, electron loss from fast one-electron ions 3−1471
$Ar+He^{+}(H_2{}^{+})$ collision, electron ang. distrib. in electron spectra 3−56034
$Ar+He^{+}(Ne^{+})$, rearrangement collisions, VUV emission spectra 3−26832
Ar+Kr(Xe)(Pb)(U) ions, X-ray and Auger transitions *(German)* 3−11761
$Ar^{+}+2Ar \rightarrow Ar_2{}^{+}+Ar$, $Ar_2{}^{+}$-electron impact dissociative recombination *(Chinese)* 3−41684
$Ar^{+}+He(Ne)$, rearrangement collisions, VUV emission spectra 3−26832
$Ar^{2+}+Ar$, symm. reson. charge transfer 3−11964
$Au^{2+}+He(Ne)$, electron capture, target ionisation, coincidence meas. 3−32185
$^{79}Au+{}_1{}^1H^{+}({}_2{}^4He^{+})$, M-shell X-ray prod. cross sections meas. 3−6759
$Be^{4+}+H$, charge transfer, molecular approach 3−17372
$^{83}Bi+{}_1{}^1H^{+}({}_2{}^4He^{+})$, M-shell X-ray prod. cross sections meas. 3−6759
$C+D_2{}^{+} \rightarrow CD^{+}+D$, reaction dynamics, 0.002-14 eV 3−58406
$C+H_2{}^{+}$, internucleon separation calcs. using realistic single scattering cross sections 3−21852
C+Ne(Mg)(S), 2 MeV/amu, K X-ray spectra, energy shifts and collision broadening of 2p to 1s transitions 3−21687
C+Ti(Cr), $^3P_2$ and $^4P_{5/2}{}^0$ states lifetime meas. in He, Li-like Ti and Cr 3−26698
$C^{6+}+H$, charge-exchange cross sections, semiclassical trajectory effects 3−26849
$^{12}C+{}^{15}N({}^{13}C)$, hyperfine interaction, induced nuclear spin polarisation meas., polarisation transfer from beat frequency 3−21937
$^{12}C+H^{+}$, K-ionisation probability across 460 keV $^{12}C(p,p_0)$ reson. 3−26840
$Ca+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3−32179
$Cl_2+Ar^{+}(Xe^{+})$, adiabatic charge transfer 3−32191
$Cr+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3−32179
Cs^{+} collisions, charge transfer and ionisation 3−21888
$Cu+H^{+}$, K-shell ionis. cross-section meas. 3−41670
$Cu^{4+}+Au(Pb)$, K- and L-vacancy production in asymmetric 1 MeV/N collisions 3−11954
$Eu^{+}+He$, excitation transfer process study 3−21890
$F+D_2{}^{+} \rightarrow FD^{+}+D$, reaction dynamics, 0.002-30 eV 3−58407
$F^{-}+Ar^{+}(Ne^{+})$, mutual neutralisation, Landau-Zener approx. 3−41673
$F^{-}+H(D)$, associative detachment reactions, product vibr. state distrib. 3−44051
$Fe^{2+}+Tl$, equilib. const., standard electrode pot. 3−29327
$Ge+H^{+}$, K-shell ionis. cross-section meas. 3−41670
H atom, charged particle scatt., Glauber amplitude calc. 3−46062
H, ionisation by fast highly stripped ions, scaling cross section 3−11965
H-like atom+ion, single ionis. at high and intermediate energies 3−56057
$H+C^{6+}$, continuum distorted wave capture into nth shell 3−11957
$H+C^{q+}(O^{q+})$, electron capture cross-section meas. in low energy collisions 3−6760
$H+H^{+}$, charge transfer cross section, high energy behaviour, eikonal approx. 3−6763
$H+H^{+}$, differential cross sections and charge exchange probabilities 3−56067
$H+H^{+}$, impact ionisation and charge transfer cross sections, classical-trajectory Monte Carlo method 3−11961
$H+H^{+}$, reson. charge transfer, total cross sections, impact parameter calcs. 3−50305
$H+H^{+}(He^{+})(He^{2+})$, 0.25-2.0 MeV, total electron capture cross sections 3−26837
$H+H^{+}(He^{2+})$ (Li^{3+}) (Be^{4+}) (B^{5+}) (C^{6+}) (O^{8+}) (Ne^{10+}) (Si^{14+}), partial cross section for charge transfer, report 3−21894
$H+He^{+}(H^{-})(He^{-})$, 0.3-3.5 MeV, total one-electron-loss cross sections 3−26836
H+ion, electron capture cross-sections by highly charged ions, charge exchange 3−56028
$H+Li^{q+}(C^{q+})$, electron capture cross sections, eikonal approx. 3−11972
$H+N_2{}^{+}$, state-selective electron capture, collision spectrosc. obs. 3−56066
$H+O^{8+} \rightarrow O^{7+}(n,l)+H^{+}$, electron capture cross sections, perturbed stationary states calcs. 3−50513
$H^{-}+He$, impact param. depend. on detached electron energy spectra 3−46056
$H^{-}+He$ collisions, electron detachment cross section 3−50504
$H^{-}+\bar{p}$ collisions, H^{-} stripping with low energy $\bar{p}$ 3−46058
H^{+}+atom central and noncentral collisions, 27.5-900 keV, time-depend. Thomas-Fermi approach 3−21860
H^{+}+atoms, (Z=1-92), energy loss, time-of-flight, inelastic collision probability data tables 3−10527
$H^{+}+Cs$, charge transfer excitation, Lyman-alpha emission 3−41674
$H^{+}+H(H^{+})(Li^{2+})$, excitation, ionisation and charge transfer 3−41661
$H^{+}+He$, elastic differential cross sections for small angle scatt., 25-, 50-, and 100 keV protons 3−11926
$H^{+}+Li$, adiabatic switching factors in slow collisions 3−41648
$H^{+}+Li$, charge exchange, mol. pot. model 3−41677
$H^{+}+Li^{+}$, electron capture cross sections calc. 3−11942
$H^{+}+Na(K)(Rb)(Cs)$, electron capture from ground and excited states, mol. calcs. 3−26816
He atom, charged particle scatt., Glauber amplitude calc. 3−46062
He, electron removal by fast multiply charged ions 3−11958
He^{2+}:Li, electron capture processes in energy range 15-150 keV 3−1457
He-like ions, electron capture by protons, cross sections calc. 3−11942

atom-ion collisions continued
$He+C^{3+}(N^{4+})(O^{5+})$, electron capture reactions, (n,l) distribs. meas. 3-21903
He+F, X-ray satellite lines from doubly excited states of F^{6+}, F^{7+} 3-41664
$He+H_2^+$, alignment in mol. excitation for 3.22 keV collision 3-56052
$He+H^-$, detached electron energy spectra 3-50495
$He+H^-$, electron detachment, doubly differential cross-section 3-26819
$He+H^+$, double ionisation at high velocity 3-6776
$He+H^+$, ionisation, differential cross section calcs. 3-56069
$He+H^+$, orbiting and rainbow structures, low-energy elastic differential cross sections, semiclassical anal. 3-50304
He+H(He)(Li)(B)(C)(O) ions, absolute partial ionisation cross sections determ. for inelastic interactions 3-6765
$He+He^+(Li^{2+})(C^{5+})(Li^{7+})$, electron loss from fast one-electron ions 3-1471
He+He(H)(Li)(B)(C)(O) ions, ionisation, deviations from q^2 scaling 3-6764
He+ion, impact ionisation scaling cross sections 3-36851
$He+N^{7+}(O^{7+})$, two electrons capture into autoionising states 3-11966
He^++H, charge exchange and excitation, OEDM orbital appl. 3-26844
He^++H, excitation and charge transfer cross sections, impact parameter formalism 3-32196
He^++He, 2-3 keV, photon polarisation meas., impact parameter selection 3-21895
He^++He, ang. distrib. of ejected electrons from 20 keV, autoionisation states 3-11967
He^++He, atomic excitation, level-crossing meas. 3-1468
He^++He collisions, autoionisation transition interference, electron distrib. 3-26829
He^++Ne, autoionisation electrons from $Ne(2p^43s^2)^1D$, ang. distrib. 3-11968
$He^{2+}+He(Ar)(Kr)$, electron capture, cross section binary encounter approx. 3-32194
$He^{2+}+Ne(Ar)(Kr)(Xe)(N_2)$, electron capture from gas target atoms, 0.7-4.5 keV 3-46064
$^3He^{2+}+C$, charge transfer reactions at 68, 99 and 130 MeV 3-21908
$He^*+H^+(H_2^+)(H_3^+)$ excited state impact induced alignment, backcoupling 3-50507
I+Ar, γγ ang. correl. on-line acquisition, charge exchange cross section 3-50511
I+I(Ag) slow collisions, K-shell ionis., impact parameter depend 3-56035
$K+H^+$, excitation-autoionisation 3-1464
Kr^++He, integral elastic scatt. cross-sections 3-26852
Kr^++Xe, excitation cross sections for ion energies below 100 eV 3-6762
Kr^{q+}+atom collisions, multiple electron transfer, statistical model 3-56065
Li + ions, ion excitation by electron capture, plasma impurity ion transport study appl. 3-12922
Li atom, charged particle scatt., Glauber amplitude calc. 3-46062
Li ions$+He(N)(H_2)$, excitation and ionisation cross sections Born approx. 3-11959
$Li+H^+$, excitation-autoionisation 3-1464
$Li+He^{2+}$, excitation between 15 and 600 keV, emission cross sections meas. 3-1458
$Li^++F^-\rightarrow Li+F$, mutual neutralisation collisions 3-36848
$Li^++He(Ne)(Ar)(Kr)(Xe)$, total cross section meas., pot. determ. 3-17355
Li^++Li^+, ionisation and charge exchange cross sections 3-1467
Li^++Na, elastic differential cross sections 3-11922
$Li^{3+}+H$, electron capture capture cross section calc. in continuum distorted wave approx. 3-11971
$Li^{3+}+H$, rot. induced transitions studied within one-electron united-atom approx., three state problem 3-11937
$Mo+H^+$, K-shell ionis. cross-section meas. 3-41670
$MuD+H^+(D^+)$, elastic scatt. cross-sections obs. 3-32163
$MuH+H^+(D^+)$, elastic scatt. cross-sections obs. 3-32163
NO+inert gas collisions, rot. transfer rates and propensity rules 3-32169
$Na+H^+$ excitation-autoionisation 3-1464
$Na+H^+(H_2^+)(H_3^+)$ excitation from 3s ground level to 3p level 3-21891
$Nb^{6+}+Au(Pb)$, K- and L-vacancy production in asymmetric 1 MeV/N collisions 3-11954
Ne ions+Ne(He), CC X-rays from radiative electron capture 3-11935
$Ne+H^+$, electron capture from the K and L shell, probability depend. on scatt. angle 3-1474
$Ne+H^+$, ionisation, differential cross section calcs. 3-56069
$Ne+He^+(C^{2+})(Mg^{3+})(Ar^{5+})$, K_α X-ray satellites and hypersatellites 3-50336
Ne^++Ne collisions, 10-300 keV coupled multichannel calcs. 3-26834
Ne^{10+}+rare-gas targets, electron capture, selective final state population, energy gain spectroscopy 3-11970
$Ne^{2+}+Xe$, charge exchange, transfer ionisation, translational spectroscopy 3-41676
Ne^{9+}+rare-gas targets, electron capture, selective final state population, energy gain spectroscopy 3-11970
$Ne^{q+}+Li$, state-selective and total one-electron capture, VUV line emission 3-6758
$Ni+H^+$, *K*-vacancy prod. cross sections, struct. effects 3-11943
$O^{3+}+H^+$, fine struct. transitions calc. 3-21859
$O^{3+}+H\rightarrow O^{2+}+H^+$, charge transfer reaction in low energy collision 3-46063
$^{82}Pb+{}_1{}^1H^+({}_2{}^4He^+)$, M-shell X-ray prod. cross sections meas. 3-6759
$S^{13+}+Ar$, electron capture, projectile X-ray yield, reson. processes 3-11969
SF_6^-, electron detachment in RF quadrupole trap *(French)* 3-26670
$Sc+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3-32179
$Sn+H^+$, K-shell ionis. cross-section meas. 3-41670
$Ti+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3-32179
$U+H^+$, *K*-vacancy prod. cross sections, struct. effects 3-11943
$^{92}U+{}_1{}^1H^+({}_2{}^4He^+)$, M-shell X-ray prod. cross sections meas. 3-6759
$V+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3-32179
Xe+Pb, high energy collisions, Pb K-shell ionisation probability 3-11963
Xe^++He, integral elastic scatt. cross-sections 3-26852
$^{136}Xe+{}^{232}Th$, deep inelastic collisions at 1160 MeV, X-ray study 3-50508
$^{136}Xe+Pb$, deep inelastic collisions at 1160 MeV, X-ray study 3-50508

atom-molecule collisions
see also atom-molecule reactions; molecular rotational-vibrational energy transfer
angular momentum transfer, classical trajectory calcs. 3-6753
atom+diatom rot. inelastic scatt., rainbows, model pot. surfaces 3-26813
atom+HF, vibr.-rot. energy transfer collisions, cross-section calcs. 3-56042
atom+symmetric top collisions, m-dependent transitions selection rule, appl. to NH_3+He 3-21855
chemical reaction theory, ideal-space representation with rearrangement S-matrix 3-36841
ethylene-inert gas mixtures, collision-induced far-IR spectra 3-1353
fluoromethane-d_3+He(Ne)(Ar)(Kr)(Xe), IR luminesc. and vibr. relax. at low temps. 3-17367
hexafluorobenzene+alkali atoms, collisional ionisation 3-1465
inert gas$+Cs^+$, pot. determ. using total cross-section meas. 3-56032
inert gas$+O_2$ interaction dynamics 3-50482
inert gas atom+TlCl(TlI), dissoc. excitation in flowing afterglow 3-58416
inert gas atoms$+H_2$, energy loss and scatt. angle calc. for medium energy collisions 3-6761
methane+inert gas, vibr.-translation/rot. and vibr.-vibr. processes, optoacoustic phase meas. 3-41651
positronium$+H_2$ scattering, elastic and vibr. excitation cross sections, perturbative calc. 3-36846
three-dimensional scattering problems, initial value representation 3-17348
very heavy quasi-molecular ion+atom collisions, additional coupling of invariant shells 3-21856
vibronic coupling at intersections of covalent and ionic states 3-21674
vinylidene triplet radical+He, quenching in UV region 3-36771
$Ar-N_2(CO)(NO)(CO_2)$, intermolecular short-range forces, differential scatt. study 3-11917
$Ar+HF(H_2)$, rot. energy transfer, pot. energy surface, trajectory calcs. 3-41656
Ar+methane (SO_2), vibr. relax. times, linear matrix rule 3-41652
$Ar+O_2(N_2)(NO)$, total collision cross section in glory region 3-21858
Ar+OH, quasiclassical trajectory state-to-state cross sections for energy transfer 3-17361
Bi+NF supersonic flow, Bi atoms electronic excitation by collisional transfer, chemiluminesc. study 3-41667
$C_3+Ar(He)$, vibr. relax of $C_3(X^1\Sigma_g^+)$, time-resolved and laser induced fluoresc. spectra 3-17362
CO+Ar(He), vibr. relax. following shock heating 3-41650
CO+hot H atoms, rot. excitation 3-11949
Ca, $(4s4p^1P_1)$ excited state collisional quenching, absolute cross sections 3-21885
$Cd+N_2(H_2)(CO)(CO_2)$, Cd $(^1P_1)$ excitation transfer and quenching, fluoresc. obs. 3-32182
CdH+He(Ar), rot. energy transfer, collision cross sections 3-6767
$D+H_2$, reaction rate const. meas. at 297K, EPR spectra 3-4273
D_2+Ar, D_2 vibr. population relax. 3-1460
$F+H_2\rightarrow HF+H$, quantum dynamical IOS calcs. 3-58418
$H+H_2(\nu=1)$, quantum dynamics, coupled state study of cross sections and rate consts. 3-36847
$H+H_2\rightarrow 3H$, collision-induced dissoc., rate coeffs. and third body efficiencies 3-58411
H_2-He mixture, collision induced spectra, intercollisional interf. effect on S_1 rot. line 3-45942
H_2+Ar, collision induced emission in fundamental vibr. rot. band 3-26732
$H_2+Ar(H)(D)$, rot. energy transfer, pot. energy surface, trajectory calcs. 3-41656
$H_2+H(He)$, 0.3-3.5 MeV, total one-electron-loss cross sections 3-26836
H_2+He, ortho-H_2 rovib. excitation 3-21864
HF+He, IR laser-crossed molecular beam study 3-26811
$He-He_2$, elastic and dissociative collisions, multiple scattering description 3-11920
$He-N_2(CO)(NO)(CO_2)$, intermolecular short-range forces, differential scatt. study 3-11917
$He+CO_2$ (N_2O)(cyanogen), crossed atomic and mol. beams, anisotropic intermolecular pots. 3-41647
$He+H_2$, energy surface in repulsive region, single configuration HF calcs. 3-6562
$He+H_2$, pot. energy surfaces relevant to Penning ionisation 3-1466
$He+H_2$, rot. inelasticity, initial value representation cross sections 3-17348
$He+H_2$, rot. vibr. scatt., off-energy-shell effects in energy sudden factorisation relations 3-36845
$He+H_2$ collision, far IR absorpt. spectrum anal. 3-11797
He+HD, viscosity transport, relaxation cross-sections, close-coupled calcs. 3-50497
$He+I_2$ collision, excitation and rotational relaxation, quantum mechanical study *(Spanish)* 3-36843
He+LiH, rot. energy transfer process, individual trajectory study 3-26822
$He+N_2$, anisotropic van der Waals pot., state-to-state differential scatt. cross-sections 3-50479
$He+N_2$, rot. excitation, time of flight spectra 3-26821
$He+NH_3$ collisions, microwave double reson. expt. interpretation using the m-dependent transitions selection rule 3-21855
$He+NH_3$ microwave double reson. expts., anal., m-dependence effects 3-55978
$He+Te_2$, relax. cross section, lifetimes and Lande factors for rovibronic Te_2 levels 3-17337
$^4He+H_2(D_2)$, vibr. relax., rate consts., semiclassical sudden approx. 3-56043
$He(2^3S)+CO_2$, CO_2^+ emissions resulting from Penning ionisation 3-17369
K+ethylbromide, reaction cross sections, collision energy depend. 3-6778
$K+H_2$, lifetimes and collisions of KH, rot. transfer cross sections, electric dipole moments determ. 3-17356
$K+H_2(N_2)$, fine-struct. transition, semiclassical model 3-6752
$K+N_2(H_2)(CO)(CH_4)$, collisions, 4^2P fine struct. mixing 3-26833
$K+O_2$, trajectory surface-hopping, energy transfer in neutral and ionic products 3-56041
$K+SnCl_4$ (carbon tetrachloride), ion pair form., total and double differential cross-sections 3-56029
K+vinylene carbonate, gas-phase negative mol. ion form. 3-56054
$Li+H_2$, excitation and ionisation cross sections Born approx. 3-11959

atom-molecule collisions continued
N_2 Penning ionisation by $He(2^3S)$ and excitation transfer from $Ar(^{1,3}P)$ to N_2 meas. 3-11956
N_2+Ar^* collisions, electronic excitation transfer 3-21887
N_2+H, electron loss and capture cross section meas. 3-6779
$NO+Na(K)(Cs)$, ion-pair formation, state-to-state total cross section 3-17368
$Na+H_2 \rightarrow Na(3s^2S)+H_2$, diatomics-in-molecules pot. energy surface, parametrisation 3-56055
$Na+Na_2$, electronic to vibr.-rot. energy transfer, crossed beam study, ang. distrib., product state anal., quenching 3-1459
$Ne+H_2$, thermal energy ionising collisions, mass and electron spectra studies 3-46055
$Ne+HCl \rightarrow Ne+HCl^+ +e^-$, Penning ionis. optical spectrosc. 3-32177
$O_2+Ar(Kr)$, total collision cross section in glory region 3-21858
O_2+I chemical laser excitation mechanism, temp. depend. 3-22046
$O_2+I(^2P_{1/2})$, rate const., equilib., time depend. I_2 conc. 3-56031
$O_2+I(I^*)$, rate consts. at 298K, flow-tube investig. 3-11933
$O_2+Na(K)(Cs)$, ion-pair formation, state-to-state total cross section 3-17368
$PN+He(2^3S)(Ne(^3P_{0,2}))$, energy transfer, Penning ionisation, emission spectra 3-41666
$Rb+H_2(N_2)$ 3-6752
SF_6-$Ar(Kr)$, scatt. cross sections, intermolecular pots. 3-21850
$TlI+He^*(Ar^*)(Kr^*)(Xe^*)(N_2^*)$, dissoc. excitation in flowing afterglow 3-58416
UF_6, A-X band excitation, collision-depend. photodissoc. 3-11905
$Xe+Te_2$, relax. cross section, lifetimes and Lande factors for rovibronic Te_2 levels 3-17337
$Zn+N_2(H_2)(CO)(CO_2)$, excited state quenching; fluoresc. study 3-17359

atom-molecule reactions
see also atom-molecule collisions
activated complexes, participation of 2D hindered internal rot. 3-4279
alkali metals+H, reaction rate meas. method 3-48066
alkaline earth atoms+halogen cpds., chemiluminescence and reaction kinetics 3-53411
amines$+O(^3P)$, H-abstraction, mol. beam-laser induced fluoresc. expt. 3-4278
atom-diatom rearrangement collisions, coupled-channel Born approx. 3-34619
chemical reaction theory, ideal-space representation with rearrangement S-matrix 3-36841
iodomethane+Rb reaction, steric depend. anal. using a Legendre expansion technique 3-19512
light atom+heavy diatomic mol. reaction product state distrib. calc. 3-53366
methylnitrite+Ca(Ba)(Sr), chemiluminescence, vibr. and bonding of product 3-29311
positronium$+O_2$, interaction in hexane, mag. quenching expt. 3-39363
three-dimensional, reson. theory, Feshbach anal. and computational techniques 3-14860
three-dimensional, reson. theory, Feshbach projection operator theory appls. 3-14861
trifluoromethane+Ar, radical form., UV and visible spectra 3-45954
unsaturated hydrocarbons+O, H-atom abstraction, chemical dynamics studied by mol. beam-laser induced fluoresc. expt. 3-4277
Ar+ArKr, atom exchange and dissoc. reaction mechanisms calcs. 3-29304
Ar+trifluoromethane, radical form., UV emission obs. 3-45963
Br+HCl reaction, ($\nu=2, 3, 4$), collinear quantum mechanical probabilities using hyperspherical coords. 3-24485
Br_2+Ar reactions, nonequilibrium effects in the energy distribution function 3-58420
$C+N_2O(X\ ^1\Sigma^+)$, reaction, pot. energy surfaces calcs. 3-44044
C+OSC, reaction at 300K, $CS(a^3\pi_r)$ chemiluminesc., laser appl. 3-39371
$C+SO_2$, reaction, $SO(A^3\Pi)$ chemiluminesc. 3-39359
CO_2 gasdynamic laser with mixing, recomb. reaction, levels, chem. pumping 3-22029
$Cl+ClONO_2$ reaction, flash photolysis reson. fluoresc. investig. 3-44039
$Cl+HNO_3$, rate consts., flash photolysis reson. fluoresc. 3-44036
$Cs+D_2$, reaction rate meas. method 3-48066
$D+H_2$, participation of 2D hindered internal rot. 3-4279
$D+H_2$, reaction rate const. meas. at 297K, EPR spectra 3-4273
D+HBr(HI), exchange reactions, integral and differential cross sections, rate coeff. and rot. distribs. 3-4270
$F+D_2 \rightarrow D+DF$, state-resolved ang. distrib., reactive IOS method calcs. 3-39356
F+ethylene, ab initio MO calcs., equilib. geom., transition struct. and vibr. freqs. 3-48059
F+ethylene, ab initio MO calcs., heats of reaction, barrier heights and bond dissoc. energies 3-48060
$F+H_2$, reactive infinite order sudden approximation, adiabatic anal. 3-58393
$F+H_2$, three dimens. reaction, quantum collinear reaction probabilities 3-44040
$F+HN_3$, N_3 radical form., vacuum UPS obs. 3-21820
F+methane, rate determ., chemiluminescence study 3-19524
H+ethylene, ab initio MO calcs., equilib. geom., transition struct. and vibr. freqs. 3-48059
H+ethylene, ab initio MO calcs., heats of reaction, barrier heights and bond dissoc. energies 3-48060
$H+H_2$, chemical exchanges, BKLT eqns. soln. 3-44037
$H+H_2$, pot. surface, bound trajectories, adiabatic model for reaction dynamics 3-14859
$H+H_2$ (MuH), light atom transfer reactions, classical anal. 3-44050
$H+H_2$ collinear reaction, density and flux anal. 3-4268
$H+H_2(n\leq7) \rightarrow H_2(m\leq7)+H$, collinear quantum reactive scatt. using Delves' coordinates 3-24484
$H+H_2 \rightarrow H_2+H$, integral cross-sections, reduced dimens. quantum calcs. 3-39357
H+methyl, pot. energy hypersurface, force consts., SCF theory 3-53367
H+propene (butene), absolute rate const. and temp. depend. studied by flash photolysis reson. technique 3-19508
$H_2+H(Cl)(O)$, rot. excitation effect on chemical reaction 3-48064
$H_2S+CL(H)$, reaction rate constant determ. using reson. fluoresc. in discharge flow 3-48056
I+HI (MuI), light atom transfer reactions, classical anal. 3-44050
K+ethylbromide, reaction cross sections, collision energy depend. 3-6778

atom-molecule reactions continued
$K+H_2$, lifetimes and collisions of KH, rot. transfer cross sections, electric dipole moments determ. 3-17356
$Kr+Ar_2$, atom exchange and dissoc. reaction mechanisms calcs. 3-29304
$Kr+Ar_2(NeAr)$, atom exchange and dissoc. reaction mechanisms calcs. 3-29304
$Li+FH \rightarrow LiF+H$ reaction, ab initio pot. energy surface, initial orientation effect 3-29295
Li+HF, pot. energy surface, quasiclassical trajectory calcs. 3-29305
Mg+hydrocarbons with alkyl C-H bonds, MgH ($X^2\Sigma^+$, $\nu=0$) rot. quantum state distrib. 3-14852
$Mu+H_2$, rates and temp. depend. activation energies, quasiclassical and var. calcs. 3-58409
$N+N_3 \rightarrow N_2(B^3\Pi_g)+N_2(X^1\Sigma_g{}^+)$, reaction, emission investig. 3-39360
$N+O_2$ producing NO, thermosphere chem. of translationally excited N 3-48727
$Na+O_2+M \rightarrow NaO_2+M$, rate coeff. for mesosphere conditions 3-25256
Ne^*+CO, $CO^+(A^2\Pi_i)$ form. 3-58415
$O+CS_2$, form. of OCS_2, pot. energy surface, reaction mechanism 3-6542
$O+H_2$, $OH(X^2\Pi)$ prod., vibr. excitation 3-48057
$O+H_2 \rightarrow OH+H$, abstraction and insertion reactions 3-29306
O+HBr reaction rate constant, 221 to 455K 3-58413
$O(^1D)+N_2 \rightarrow NO+N$ in lower thermosphere and mesosphere 3-35329
$Xe+Ar_2$, atom exchange and dissoc. reaction mechanisms calcs. 3-29304
$Xe+F_2$ photoexcitation, XeF^* excimer form. mechanism 3-24521
$Xe+O_2$ photoexcitation, XeO^* excimer form. mechanism 3-24521

atom probe field ion microscopy
biological molecules fast atom bombardment mass spectrometry 3-16453
field evaporated ions, charge state distrib., post-ionisation 3-3928
glasses, insulating, FIM and pulsed laser atom-probe mass spectroscopy studies 3-2424
hydrocarbon mixtures, field ion mass spectrometry, ion formation mechanism *(German)* 3-39431
metals, characterisation of H by time-of-flight atom probe 3-4214
steel, bainite transformation, incomplete, TEM and atom probe determs. comparison 3-39116
Al, physisorption of H_2, APFIM study 3-51939
Cu, physisorption of H_2, APFIM study 3-51939
Cu-Ni surface comp., sputtering effects, XPS, SIMS and atom probe FIM study 3-24074
Fe-Cr-Co permanent magnet alloy, atom probe FIM, microstruct. and comp., coercivity mechanism 3-14559
LaB_6 (001) plane, APFIM anal. 3-51904
Ni-Al (14.1 at.%), continuous phase separation 3-14558
NiAl, preferential sputtering, APFIM, SIMS, TEM, and XPS study 3-43693
Ni_3Al, preferential sputtering, APFIM, SIMS, and XPS study 3-43692
Si, surface characterisation of time-of-flight atom probe anal. 3-38174
Si-Ni interface, silicide formation, atom probe FIM study 3-51866
Si-W interface, silicide formation, atom probe FIM study 3-51865

atom-surface impact
see also sputtering
adsorbate-covered surfaces, atom-surface scatt., quantum theory for incommensurate and fluid phases 3-14424
adsorption, statistical mechanics, conf., Trieste, Italy (July 1982) 3-49083
alkali halide single crystal, surface phonon dispersion curves by He atom time-of-flight spectrosc. 3-18548
atom bombard. mass spectrometry for surface anal. 3-8926
atomic beam, force exerted on substrate during thin film deposition 3-52953
beam scattering from disordered surfaces in the sudden approximation 3-58017
benzene-d_0(-d_6) mol. dielectrics, sputter-ion form. mechanism 3-58014
classical collision theory of atoms with solid surfaces using the Langevin equation 3-47748
diamond with adsorbed He, ^4He atom beam probe study 3-51936
diffraction and scattering, semiclassical perturbation approx. calcs. 3-58015
disordered surfaces, atom-surface scatt. investigation 3-58022
dynamic interactions, review *(Japanese)* 3-24075
effective pot., semiclassical theory 3-45882
elastic and inelastic, semiclassical wave packet model 3-14428
elastic scattering probability, additive corrugated pot. 3-3906
energy transfer by atom/mol.-surface collisions, semiclassical approach 3-3892
fluid adsorbates, atom-surface scatt. investigation 3-58022
gas-surface interactions, dynamics, International School, Erice, Italy (July 1981) 3-32
graphite, basal plane surface, interaction with inert gases 3-58020
graphite, electron bombardment enhanced reactivity with atomic H, temp. depend., methane yield 3-26445
graphite, pyrolytic, reaction of atomic H, hydrocarbon form., synergistic effect of Ar ion bombardment 3-26447
graphite (0001), adsorbed Xe, surface vibrs., H scatt. study 3-42917
graphite and TiC-coated graphite, methane prod. under electron and atomic H impact 3-26446
interatomic interaction pot., atom relative motion energy effect 3-3900
line shapes and threshold resons. for scalar wave scatt. from surfaces 3-24079
metal surface, hot, adsorption of nucl. spin polarised alkali atom beams 3-19240
metal surfaces, scatt. of Ar, Kr and Xe low-energy atoms, energy and momentum transfer 3-38991
metals, gas-surface interactions as a localised dynamic perturbation 3-42921
physisorbed overlayers, at. beam scatt. study 3-52888
refraction effects, diffr. intensities 3-3903
slow atom-heated surface collision kinetics 3-34188
specimen manipulators, for surface science studies in ultra-high vac. 3-40620
sticking coeff. for atom-surface scatt. 3-24080
surface anal., conf., Teddington, England (Nov. 1981) 3-5490
surface structure determination using He diffr., review 3-18537
Ag (110), He interaction pot., absorption reson. and diffr. scatt. 3-52884
Ag(110)-He interaction pot. determ. by selective adsorption 3-3902
Al, low energy backscattered light atoms, angular and energy correls. calcs. 3-26452
Ar+W(110), effective pot., semiclassical theory 3-45882

atom-surface impact continued
- CO on Ni surface, (111), He and Ne metastable atom impact, surface Penning ionisation study 3—58016
- Cu (110), diffr. and adsorption of He, electronic density profile study 3—38988
- Cu (110), diffr. of He, coupled channels method anal. 3—38989
- Cu (110), local density of states probed by deexcitation of metastable noble gas ats. 3—43686
- $H^+(H_2^+)(H_3^+)$ ions, de-excitation probability on reflection from Be surface 3—50506
- ^{4}He liquid surface, scatt. meas. of ^{4}He atoms grazing the surface 3—58018
- Li surface, atomic collisions, electron excitation and emission 3—43695
- LiF (001), inelastic scatt. of ^{20}Ne 3—3897
- LiF, diffraction and scatt. of He, semiclassical perturbation approx. calcs. 3—58015
- LiF(001), inelastic scatt. of He from bulk longitudinal acoustic phonons 3—52878
- LiF(001) surface, quasi-elastic scatt. of Ne 3—58021
- NaF(001), surface ^{4}He scatt., kinematic focusing evidence 3—52882
- Ni (110), He scatt., surface interaction pot., polarisation forces, coupled channel calc. 3—43690
- Ni (111) surface, chemisorbed CO, NO, electronic struct., surface Penning ionisation electron spectra 3—43249
- Ni surface, (111), He and Ne metastable atom impact, surface Penning ionisation study 3—58016
- Pd (110) adsorbed CO, electron spectroscopy by He atom impact 3—3908
- Pd (111), local density of states probed by deexcitation of metastable noble gas ats. 3—43686
- Pt (111) surface, direct inelastic scatt. of Ar, time of flight distrib. meas. 3—47747
- Pt(997) surface, He scatt., refraction effects, diffr. intensities 3—3903
- Si (111)(7×7), oscillatory intensity in He scatt., random distrib. of islands model 3—24081
- SiO surface, thermal accommodation of Pb vapour, momentum transfer meas., mol. beam technique 3—28228
- W, low energy backscattered light atoms, angular and energy correls. calc. 3—26452
- W surface, refl. of Na atoms, electron transfer, reson. mechanism for ionisation 3—43697
- Xe, physisorbed on graphite and Cu (001), at. beam scatt. study 3—52888

atomic absorption spectroscopy
- analytic signal of elements, organic compounds, effect 3—9372
- batch processing technique for multi-element analysis 3—24542
- graphite furnace in electrothermal atomiser, longit. nonisothermality elimination 3—53468
- graphite rod atomiser for AAS using radioactive isotopes, profile optimisation 3—53467
- ICP data management using mainframe computers 3—4324
- natural waters, ICP and AAS anal., comparison 3—4440
- on-line dilution system for ICP spectrometry 3—411
- pulsed resonance detector, space-time characts. 3—16421
- review, instrumentation and spectroscopic process 3—4328
- spectrophotometry, data management system, BASIC software package 3—45121
- trace metals, simultaneous determ. in solids using laser AAS 3—19549
- As, atomisation mechanisms 3—19548
- Au, monitoring in carbon-in-pulp process, online flameless atomic absorpt. spectrometer 3—48112
- C rod atomiser configuration characteris. 3—53460
- Cd, determ. by electrothermal AAS, calibration *(French)* 3—19551
- $Cu_2S/(Zn,Cd)S$ heterojunction solar cells, chemiplated, comp. depth profiles meas. 3—53540
- $Ga_{1-x}Al_xAs$, MBE grown, comp. anal. by atomic absorpt. spectroscopy and X-ray diffr. *(French)* 3—52954
- Pd, determ. by graphite furnace AAS, press. effects 3—19550
- Sb_2Te_3, Ag doped and undoped, elec. props., reflectivity, nature of Ag impurity 3—23381
- W-P elements, P conc. effect on props. 3—47119

atomic beam electric resonance
- No entries

atomic beam magnetic resonance
- ^{53}Cr, metastable at. states HFS meas. by laser RF double reson. 3—31991

atomic beams
- *see also atom-molecule reactions; atom-surface impact; atomic beam electric resonance; atomic beam magnetic resonance; particle velocity analysis; plasma-beam interactions*
- deflection by resonant light press. 3—21950
- deflection profiles of a monoenergetic atomic beam crossing a standing light wave 3—36881
- fast accelerated atomic beam, reson. three-level saturation spectrosc. 3—50550
- high-temperature vacuum atomic and molecular source 3—17384
- monoenergetic, very slow, laser prod. 3—6807
- pulsed beams, microphone detection 3—36878
- radiatively excited atoms, polaris.-depend. assoc. ionis. 3—26818
- scattering from disordered surfaces in the sudden approximation 3—58017
- spin flipper for reversal of polarisation in a thermal atomic beam 3—26886
- tandem mirror reactor end plugs, light-atom neutral beams 3—46744
- Ar, direct inelastic scatt. from Pt(111), time of flight distrib. meas. 3—47747
- Ar+Ar(Kr)(Xe), total collision cross sections in glory region 3—11941
- Cs beams, hyperfine struct. meas. by laser beams 3—32232
- Eu I, isotope shift, crossed second-order effects 3—6568
- F high purity beam source 3—49498
- $^{19}F^{7+}$ 1s2p $^3P_1$-$^3P_2$ fine structure splitting meas. using fast beam laser interaction 3—21710
- ^{69,71}Ga, 6p $^2P_{3/2,1/2}$ levels, hyperfine struct. and lifetime 3—11747
- H, detection and energy analysis using time-of-flight technique 3—22721
- H, electron impact ionisation, spin exchange effect meas. 3—26870
- $He+CO_2$ (N_2O)(cyanogen), crossed atomic and mol. beams, anisotropic intermolecular pots. 3—41647
- He(2^3S) optical pumping, by colour-centre laser 3—21731
- Kr+Ar(Kr)(Xe), total collision cross sections in glory region 3—11941
- Li $2^2P_{1/2}$ lifetime meas. using fast beam laser interaction 3—21710
- Li atomic beam props. 3—50552
- Li isotope separation by laser deflection of the at. beams *(Chinese)* 3—41696

atomic beams continued
- Li, lowest $^2P_{1/2}$ state lifetime meas. 3—21725
- Li metastable atomic beams prod. by electron capture in ion-surface impact, X-ray laser implementation 3—32340
- Mg+ dielectronic recombination cross sections, crossed beam meas. 3—41690
- Na $3^2P_{1/2}$ lifetime meas. using fast beam laser interaction 3—21710
- Na, atomic beams, Ramsey fringes, using stimulated reson. Raman transition 3—45886
- Na beam, vel.-specific at.-state selection by CW optical pumping 3—32010
- Na, laser absorpt. spectroscopy, line-shape distortion elimination 3—45902
- Na, lowest $^2P_{1/2}$ state lifetime meas. 3—21725
- Na, Na_2^+ form. and dissoc. by ruby laser radiation 3—48074
- ^{23}Na, hyperfine struct. of 7, 8 and $9^2P_{3/2}$ states, quantum heat spectroscopy 3—32233
- Nb, excitation cross section 3—17238
- Ne I* fast accelerated atomic beam, reson. three-level saturation spectrosc. 3—50550
- Ne+Ar(Kr)(Xe), total collision cross sections in glory region 3—11941
- O, supersonic nozzle beam source 3—17385
- Ti I, excited state lifetimes by atomic beam meas. 3—1306
- V I, excited state lifetimes by atomic beam meas. 3—1306
- Xe+Ar(Kr)(Xe), total collision cross sections in glory region 3—11941
- Yb I, photoionisation spectroscopy from 6s7s$^1S_0$ state in presence of static mag. field 3—32023

atomic clocks
- *see also frequency measurement; time measurement*
- Cs beam resonator, time and frequency standard, applications *(French)* 3—30834
- Cs frequency standard, Rhode & Schwartz XSC standard *(French)* 3—54717
- H clocks metrological characts. 3—10807
- H oscillator frequency standard, magnetic screening methods 3—10806
- Na, atomic beams, Ramsey fringes, using stimulated reson. Raman transition 3—45886

atomic clusters
- alkali metal clusters, struct., binding energy, diatomics in molecules approx. 3—17398
- alkaline-earth metal clusters, struct., bonding, ab. initio pseudopotential CI calcs. 3—6821
- group IB metal clusters, binding energies, configs., diatomics in mols. approx. 3—17397
- linear approximation in self-consistent density functional calculations for atomic clusters 3—50565
- metal $(N+2)$-atomic clusters, cryst. growth, HMO method 3—18248
- microcluster struct., effect of three-body forces 3—18540
- microclusters, melting and surface tension, thermodynamic calcs. 3—33403
- one dimensional, local vibr. and electronic state study 3—12027
- SIMS, polyatomic ion emission, bond breaking model 3—8921
- slit-throat nozzle, cluster beam prod., classical condensation theory 3—46616
- small aggregates, magnetism and electronic struct., effect of electronic correls. 3—23732
- superhelical configuration, electron diffr. patterns, computer simulation *(French)* 3—21956
- trimeric homonuclear metal clusters, doubly charged, stability study 3—21954
- Van der Waals potentialities, spatial distrib. *(French)* 3—46045
- Ar clusters, form. in compressed gas, mol. dynamics study 3—6820
- Ar microclusters, supersonic expansion form. size distrib. anal. 3—36898
- Ar_3 clusters, RRKM behaviour, exponentially divergent trajectories 3—17393
- AuFe, magnetic behaviour, atomic order, Mossbauer spectra 3—57649
- $Be_{36}H$, cluster model for chemisorpt., convergence 3—41715
- Ca_4 cluster, bonding nature, PP MRD CI calc. 3—21955
- Cr_2, cluster, rot. consts., two-photon ionisation 3—17396
- Cu_2, electronic struct., localised d hole, ab initio SCF calcs. 3—41712
- Cu_3, electronic struct., localised d hole, ab initio SCF calcs. 3—41712
- Cu_5 cluster, ESR spectrum 3—46113
- a-Ge, vibr. states, effective local environment model 3—8162
- H_{12} ring, one-electron electron interaction energies, projected Hartree-Fock approx. 3—50564
- $(^3He)_4$ fermionic tetramer, binding energy, var. calc. 3—21944
- K_{15} clusters, electronic struct., SCF Xα and LSD SW calcs. 3—50311
- K_{27} clusters, electronic struct., SCF Xα and LSD SW calcs. 3—50311
- K_9 clusters, electronic struct., SCF Xα and LSD SW calcs. 3—50311
- Kr microclusters, supersonic expansion form. size distrib. anal. 3—36898
- Li_3 cluster, binding energies, ionisation pot., ab initio SCF and MRD CI calcs. 3—26890
- Mg_4 cluster, bonding nature, PP MRD CI calc. 3—21955
- Na clusters, prod. by seeded beam expansions, photoionisation and mass spectroscopic detection 3—12028
- Na small clusters, elec. and spin mag. moment 3—1517
- Sb, microclusters, fragmentation from electron bombardment 3—3880
- a-Si, vibr. states, effective local environment model 3—8162

atomic collision processes *see atomic inelastic collisions; elastic scattering of atoms and molecules*

atomic electric moment
- fluorescence, sensitised, collisional transfer of coherence by electric dipole-dipole interaction 3—50341
- magnetic dipole and electric quadrupole hyperfine struct., relativistic SCF calcs. in 4d- and 5d-shell atoms 3—1267
- B, isoelectronic series, elec. dipole oscill. strengths, length and vel. forms 3—55893
- Be isoelectronic series, E1, M1, E2, M2 transitions 3—32002
- Bi I, elec. quadrupole transition radial integral, mixed multipole line relative intensity meas. 3—11740
- Ca, atomic E1 and E2 radiation interf. detect. 3—21700
- ^{111}Cd I atoms, electric dipole moment, Zeeman effect, theory *(Russian)* 3—55889
- Cs, atomic E1 and E2 radiation interf. detect. 3—21700
- H, atomic E1 and E2 radiation interf. detect. 3—21700
- ^{199}Hg I atoms, elec. dipole moment, Zeeman effect, theory *(Russian)* 3—55889

atomic electron configuration interactions *see atomic electron correlations*

atomic electron correlations
- alkali atoms and diatoms, core-valence correl. effects inclusion in pseudopot. calcs. 3—1255

atomic electron correlations continued
antisymmetrised geminal power wave-functions in finite and extended systems 3—36689
atomic collisions, molecular model, ab initio quantum chemistry 3—36642
CIPSI algorithm, improved, convergence 3—50318
direct CI method, symm. group graphical approach 3—11706
electron pair correlations, review 3—41507
exchange-correlation energy for many electron system, one-particle approach 3—8431
excited Rydberg states, reorganisation, electron correl., Hartree-Fock calcs. 3—1272
highly ionised atoms, electronic struct. and emission spectra, theory 3—41525
inert gas ions, *sp*^{6} ^2S term, correl. effects 3—11705
ions, 5 to 10, highly excited states calcs. using square of the Hamiltonian 3—36705
ions, highly charged, relativistic and correl. effects, Green's function of Dirac's eqn. 3—31897
many electron systems, externally perturbed, correlation effects 3—36694
MRD CI calcs., size-consistency errors, separated pair model calc. 3—41500
multiply excited states, electronic correl., hyperspherical anal. 3—26656
negative ions, search of excited states lying above ground state of neutral atom 3—21647
open-shell systems, many-body perturbation theory, expansion through fourth order 3—6551
quasi-spin method for complex electronic configs. with jj-coupling 3—11640
small aggregates, magnetism and electronic struct., effect of electronic correls. 3—23732
spectra, satellite struct., electron correls. 3—36709
ten-electron atomic systems, dipole polarisability, electron correl. contrib., nucl. charge depend. calcs. 3—6553
theory based on coupled cluster ansatz of single and double excitations 3—17190
unitary group approach for CI calcs., matrix element factorisation 3—31899
Wannier ridge reson., electron impact, electron-electron correl. 3—26650
X-ray spectra classification in laser prod. plasmas of atoms from Tm to Pt in 6-9 Å range 3—46751
Al, Compton profile, stopping power, X-ray scatt., HF wavefunctions 3—6581
Al-like ions, oscillator strengths, transition probabilities, data tables 3—25702
Ar isoelectronic series, electron impact ionis. cross-section, distorted wave calcs. 3—26867
Ar, L$_1$-L$_{23}$M Coster-Kronig spectrum 3—21659
Ar, X-ray emission spectra, multivacancy effect 3—41519
B$^-$, bound state, electron correl. calcs., radiative autoionis. 3—45832
B^{2+}, doubly excited states, configuration interaction method 3—26645
Ba, 5d7d ^{1}D$_2$ perturbing state, hyperfine struct. and config. interaction 3—21660
Ba, Rydberg states, 6s14d ^{1}D$_2$ and ^{3}D$_{1,2,3}$, CI and singlet-triplet mixing probed by hyperfine struct. 3—11709
Ba, Stark effect in 6s5d and 5d6p states, meas. with laser at. beam spectroscopy 3—50350
Ba^{2+}, Rydberg spectra, correl., term depend. and autoionis. 3—21733
Be, ^{3}S and X^{1}S states, generalised antisymmetric geminal power wavefunctions 3—36700
Be, doubly-excited states, electron correl. study in hyperspherical coords. 3—50320
Be II, perturbation of 1s2p4l^{4}L states by 1s2snl′4L Rydberg series 3—50302
Be isoelectronic sequence, relativistic intermediate coupling calcs. 3—41527
Be$^-$, ^{2}P reson. state, SCF and CI calcs. 3—31961
Bi atom, (6p)^3 configuration, at. fine structure and HFS, two-body perturbation parametrisation 3—50538
Ca I, photoionisation cross section, near-threshold reson. struct. 3—6588
Cd, ground and ion states, valence electron distrib., CI calcs. 3—31958
CdI, 5s^2 ^{1}S$_0$-5s5p ^{1,3}P$_1$ transitions, oscillator strength calcs. 3—21648
Cr^{5+}, photoabsorpt. oscillator strengths of 3p^{6}3d^{2}D$\rightarrow$3p^{5}3d^2 ^{2}p^0, ^{2}D^0, ^{2}F^0 transitions 3—21716
^{53}Cr, metastable at. states HFS meas. by laser RF double reson. 3—31991
Cs, energy levels, fine struct. intervals, relativistic many-body calcs. 3—50324
Cs$^+$, Rydberg spectra, correl., term depend. and autoionis. 3—21733
F, static dipole polarisability, complete active space SCF and externally contracted multireference CI studies 3—1257
F$^-$, static dipole polarisability, complete active space SCF and externally contracted multireference CI studies 3—1257
Fe XXI, energy levels, L-shell correl. corrections 3—21661
Fe^{7+}, photoabsorpt. oscillator strengths of 3p^{6}3d^{2}D$\rightarrow$3p^{5}3d^2 ^{2}p^0, ^{2}D^0, ^{2}F^0 transitions 3—21716
Ga, configuration interaction effects in 4s^{2}nd^{2}D$_{3/2,\ 5/2}$ Rydberg series 3—11748
He atom, ground state trial functions 3—31962
He, doubly excited states, CI wave functions and adiabatic channel functions 3—31960
He, electric dipole polarisability, MC-TDHF calcs. 3—50291
He, electron correlation angular aspects and the Coulomb hole 3—1256
He, excited Rydberg states, reorganisation, electron correl., Hartree-Fock calcs. 3—1272
He isoelectronic sequence, two-electron spectra, correls., MCHF calcs. 3—21646
He$^+$+H, charge exchange and excitation, OEDM orbital appl. 3—26844
I VI, 5s^2 ^{1}S$_0$-5s5p ^{1,3}P$_1$ transitions, oscillator strength calcs. 3—21648
In II, 5s^2 ^{1}S$_0$-5s5p ^{1,3}P$_1$ transitions, oscillator strength calcs. 3—21648
In, Rydberg state spectroscopy, field ionisation technique 3—50359
K, electron affinity, valence correl. wavefunctions 3—50319
Kr III energy levels and Kr M$_{4,5}$NN Auger spectra, configuration interaction calc. 3—11763
Li atom, Waller-Hartree CI calculations 3—36687
Li, correl. electron density, density functionals and semi-empirical pseudopots. 3—11704
Li I isoelectronic sequence, var. wavefunctions 3—50317
Li, X^{2}S state, generalised antisymmetric geminal power wavefunctions 3—36700
Li$^-$, doubly-excited states, electron correl. study in hyperspherical coords. 3—50320

atomic electron correlations continued
Mg, X^{1}S state, generalised antisymmetric geminal power wavefunctions 3—36700
Mn^{6+}, photoabsorpt. oscillator strengths of 3p^{6}3d^{2}D$\rightarrow$3p^{5}3d^2 ^{2}p^0, ^{2}D^0, ^{2}F^0 transitions 3—21716
Ne, static dipole polarisability, complete active space SCF and externally contracted multireference CI studies 3—1257
O II, oscillator strengths and collision strengths for electron impact excitation 3—35420
O III, oscillator strengths and collision strengths for electron impact excitation 3—35420
Sc^{2+}, excitation, oscill. strength, HF and CI calcs. 3—1258
Si II, wavefunctions and oscillator strengths, CIV3 code calcs. 3—26643
Si IX, electron impact excitation of forbidden transitions, threshold and oscillator strengths calcs. 3—26861
Si XI transitions, CI calcs. 3—17230
Sr, interacting 5snd ^{1,3}D$_2$ sequences, natural radiative lifetimes 3—50355
Te I, vacuum UV absorpt. spectra by photolysis 3—50334
Ti^{3+}, excitation, oscill. strength, HF and CI calcs. 3—1258
V^{4+}, excitation, oscill. strength, HF and CI calcs. 3—1258
Xe III energy levels and Xe N$_{4,5}$00 Auger spectra, configuration interaction calc. 3—11763
Xe isoelectronic series, Rydberg spectra, correl., term depend. and autoionis. 3—21733
Xe VI, level energies and lifetimes calcs. 3—21649
Xe VII, 5s^2 ^{1}S$_0$-5s5p ^{1,3}P$_1$ transitions, oscillator strength calcs. 3—21648

atomic electron impact excitation
see also electron spectra
angular momentum exchange in post collision interaction 3—50505
atomic line radiation, polarisation excited by electron impact 3—32214
atomic recoil excitation by strongly interacting nuclei 3—11980
Balmer series H level population in electron beam, ion+mol. reaction role 3—14865
bibliography on electron collisions with at. positive ions, report 3—44918
Born scattering cross sections, Bethe surfaces spectra props. 3—36849
Born scattering cross sections, moment-theory approach 3—36850
bound channels and quantum defect theory 3—11982
conference, Arezzo, Italy (Sept. 1980) 3—30563
conference, Flinders Univ., Australia (Feb. 1982) 3—25676
double electron excitation cross section, Glauber theory calcs. 3—26868
electron drift and diffusion in at. gas between closely spaced electrodes, inelastic collision effect 3—50514
electron-atom scatt. in laser field 3—32223
electron-photon coincidences with polarised electrons and without plane symmetry invariance 3—26860
excited states, relative populations from sputtering and electron impact, plasma anal. 3—3896
integrated state multipoles and plane asymmetry 3—21927
metal atoms, electron scatt., shape reson. obs., low energy total cross sections 3—11978
negative ions, multi-quantum processes 3—32025
neutral atoms, electron bremsstrahlung emission 3—36715
one electron atoms in intense mag. fields, review 3—26695
partial cross-section calcs. for energy loss spectroscopy 3—6536
perfluoro-2,4-hexadiyne cation, $\tilde{A}^2E_u$-$\tilde{X}^2E_g$ emission and excitation spectra, photoelectron-photon coincidence 3—6712
populations of highly excited levels, analytical description 3—6560
positive ions of astrophysical interest, cross sections calc. methods 3—50524
positron impact, elastic and inelastic processes, review 3—1483
potential scattering phase shifts, upper and lower bounds from partitioning technique 3—49201
R-matrix propagation program for solving coupled second-order differential equations 3—6782
S-matrix description in combination with adiabatic formalism 3—21917
sphere, arbitrary radius, Kohn variational principle 3—36854
three charged particle system, threshold behaviour of scatt., influence of finite masses 3—6790
unitarisation of the eikonal-Born series method for electron-atom and positron-atom collisions 3—11911
Wannier ridge reson., electron impact, electron-electron correl. 3—26650
2r^{3+}, electron impact excitation-autoionisation, distorted wave approx. with exchange 3—41686
Ag II, electron impact excitation cross section meas. 3—46074
Al, slow-electron excitation, cross section calc. by strong-coupling method 3—11986
Ar, electron beam excitation from Ar$_2{}^+$ dissoc. recombination 3—50527
Ar, electron impact, characteristic X-ray prod., 4 to 10 keV 3—26687
Ar, electron impact, low energy, free-free emission 3—56085
Ar$^+$, electron capture, energy and width of Ar (3s3p^{6}nl) series 3—41688
Ar^{15+}, electron impact excitation, reson. effect, collision strengths calc. 3—6793
Ar$_2{}^+$, electron impact three-body dissociative recombination *(Chinese)* 3—41684
Be, electron scatt., ab initio adiabatic polarisation pots., matrix HF calc. 3—6789
Be$^+$, electron impact ionisation cross section 3—46077
C, electron-scattering cross-section, effects of excited configurations 3—32211
C$^+$, dielectronic recombination cross section meas. 3—41689
C^{3+}, electron impact excitation, reson. effect, collision strengths calc. 3—6793
Ca, 4^{3}P$_{0,1,2}$ metastable states, absolute excitation cross sections, electron impact meas. 3—21926
Ca, double electron excitation cross section, Glauber theory calcs. 3—26868
CaI, bound channels and quantum defect theory 3—11982
Cd, 12.81 eV autoionising level, electron impact excitation 3—11984
Cd$^+$, electron impact excitation, cross sections laser transitions 3—32219
Cd$^+$, electron impact excitation, Cd II spectral line emission cross section 3—45889
Co, multielectron, one-photon transition, line splitting and intensity 3—11744
Cr I, excitation cross section meas. by electron collision 3—21925
Cu, cross sections for transitions from Beutler states 3—50523
Fe II, electron impact excitation cross-section meas. 3—44665
Fe, multielectron, one-photon transition, line splitting and intensity 3—11744
Ga, slow-electron excitation, cross section calc. by strong-coupling method 3—11986

atomic electron impact excitation continued
H, electron elastic and inelastic scatt., close-coupling eqns. study 3—26850
H, electron elastic and inelastic scatt. at intermediate energies, coupled channel second order pot. model 3—26859
H, electron impact, laser-assisted, space-translation method calcs. 3—26806
H, electron impact, Space Translation Method used in laser assisted collision problems 3—26865
H, electron impact excitation angular distrib. of n=2 levels 3—21922
H, electron impact excitation, Faddeev-Watson approximation 3—56082
H, electron impact-excitation of n=2 level, polarised orbital method study 3—11989
H, electron scatt., exchange contrib. to optical-model pots. 3—46075
H, excitation rate coeffs. from ground state to n=2 and n=3 levels 3—26866
H, positron scatt., hyperspherical coordinate treatment, singly and double excited S-state props. 3—50525
H-like ions, electron impact excitation, linear algebraic approach 3—32218
He, 2^{1}P, electron impact excitation, alignment and orientation parameters meas. 3—6792
He, 2^{1}S state, electron impact excitation calcs. 3—32221
He (2^{1}P) electron impact alignment and orientation study 3—41687
He, double electron excitation cross section, Glauber theory calcs. 3—26868
He, electron elastic and inelastic scatt. at high energies 3—46079
He electron impact excitation, of 2^{1}P state, electron-photon ang. correl. 3—56086
He, electron impact near-threshold excitation of 2^{3}S state 3—46072
He, electron-photon joint excitaton of 1^{1}S→2^{3}S transition 3—6787
He, excitation and ionisation cross-sections by positron impact 3—26858
He, excitation cross section meas. 3—36863
He ions, electron de-excitation collisions, laser-based meas. 3—21924
He, positron impact excitation, cross sections, modified Born approx. 3—32220
He$^+$, electron impact 2s and 2p level excitation cross sections *(Russian)* 3—21928
He(2^{1}P), electron impact excitation, orientation, radiative decay polarisation 3—26855
He(3^{1}P), electron impact excitation, momentum transfers 3—26854
Hf^{3+}, electron impact excitation-autoionisation, distorted wave approx. with exchange 3—41686
Hf^{3+}, electron impact ionisation, excitation contrib. meas. 3—46078
Hg, electron impact excitation of 6^{3}P, excited state, polarised electron study and Stokes param. 3—46073
Hg, electron-laser excitation study 3—26856
In, slow-electron excitation, cross section calc. by strong-coupling method 3—11986
K, Rydberg states, electron scatt., position and width of resonance 3—6788
Kr, broadband photon yield excited by nonenergetic electron impact 3—46069
Kr, electron impact, characteristic X-ray prod., 4 to 10 keV 3—26687
Kr, electron impact excitation near-threshold 3—21923
Kr I lifetimes meas. by Hanle effect method under electron beam excitation 3—1308
La, fast electron bombardment, broad emission band study 3—50339
Li, electron impact excitation, anal. central pot. calcs. 3—46070
Li II, spectral line excitation in atom-electron collisions *(Russian)* 3—11990
Li III, spectral line excitation in atom-electron collisions *(Russian)* 3—11990
Li-like ions, electron impact excitation, reson. effect, collision strengths calc. 3—6793
Li-like ions, electron impact excitation, linear algebraic approach 3—32218
Li(3s), electron impact excitation studied using distorted wave approx. 3—11983
Mg, double electron excitation cross section, Glauber theory calcs. 3—26868
Mg, electron scatt., ab initio adiabatic polarisation pots., matrix HF calc. 3—6789
Mg^{3+}, electron capture, energy and width of Mg^{2+} (2s2p^{6}nl) series 3—41688
Mg+ dielectronic recombination cross sections, crossed beam meas. 3—41690
Mn II spectral lines, effective excitation cross sections 3—11985
Na(3^{3}P), electron impact excitation, electron-photon coincidence study 3—26853
Ne, Compton profile, electron energy loss spectra investig. 3—56080
Ne, deexcitation rate coeffs. for neutral atom and electron collisions, absorpt. and fluorescence study 3—21886
Ne$^+$, electron capture, energy and width of Ne2s2p^{6}nl series 3—41688
Ne^{7+}, electron impact excitation, reson. effect, collision strengths calc. 3—6793
O, electron impact excitation, differential cross-sections 3—6787
O II, oscillator strengths and collision strengths for electron impact excitation 3—35420
O III, oscillator strengths and collision strengths for electron impact excitation 3—35420
O III far IR lines, electron collision strengths for fine struct. transitions 3—17374
O IV, electron impact excitation rate coeffs., calcs., close-coupling approx. 3—32215
O VII, ground state, electron excitation, effective collision strengths 3—41694
O^{5+}, electron impact excitation, reson. effect, collision strengths calc. 3—6793
O(S) deactivation coeff. meas. during Stereotop expt. in lower ionosphere 3—5006
Si IX, electron impact excitation of forbidden transitions, threshold and oscillator strengths calcs. 3—26861
Si IX, electron impact excitation, fine struct. transitions 3—41685
Si x, coronal line intensities and level populations, radiative/collisional excitation 3—30314
Ta^{3+}, electron impact ionisation, excitation contrib. meas. 3—46078
Ti^{3+}, electron impact excitation-autoionisation, distorted wave approx. with exchange 3—41686
Ti^{3+}, electron impact ionisation, excitation contrib. meas. 3—46078
Tl, slow-electron excitation, cross section calc. by strong-coupling method 3—11986

atomic electron impact excitation continued
Xe, electron impact, characteristic X-ray prod., 4 to 10 keV 3—26687
Zr^{3+}, electron impact ionisation, excitation contrib. meas. 3—46078

atomic electron impact ionisation
see also electron spectra
alignment in ionization by ion, electron and photon impact 3—41659
atomic structure, electron coincidence spectroscopy, HF wavefunctions 3—26857
bibliography on electron collisions with at. positive ions, report 3—44918
Born scattering cross sections, Bethe surfaces spectra props. 3—36849
Born scattering cross sections, moment-theory approach 3—36850
bound channels and quantum defect theory 3—11982
conference, Flinders Univ., Australia (Feb. 1982) 3—25676
Coulomb effects in low-freq. laser field 3—56083
electron drift and diffusion in at. gas between closely spaced electrodes, inelastic collision effect 3—50514
electron motion and dynamic struct. of atoms and mols. 3—56071
gas, moderately dense, density corrections to positron annihilation rate 3—26863
inert gases, positron annihilation in presence of elec. field 3—46068
inner-shell ionisation, post-collisional interaction 3—36734
inner-shell ionization by relativistic electron impact 3—41683
inner-shell ionization problems calc. 3—17375
metal atoms, electron scatt., shape reson. obs., low energy total cross sections 3—11978
one electron atoms in intense mag. fields, review 3—26695
partial cross-section calcs. for energy loss spectroscopy 3—6536
particle-atom ionising collisions, laser effects 3—11981
photoelectron angular distribution from electron-atom collisions 3—6794
positron ionisational collisions, classical trajectory method 3—32216
random impulse approximation, time-depend. density operator 3—54638
S-matrix description in combination with adiabatic formalism 3—21917
scattering, inelastic, at. matrix element, EELS appl. 3—36864
structure functions and ionisation of isolated atoms by charged projectiles 3—11977
threshold effects, comparison of process induced by electron and photon impact ionisation 3—45912
Wannier exponents for excited states due to two-electron escape at threshold 3—26653
Wannier ridge reson., electron impact, electron-electron correl. 3—26650
wavefunction, asymptotic form, for ionisation problem 3—11979
X-ray and atomic inner-shell physics, conf., Eugene, OR, USA (Aug. 1982) 3—40308
2r^{3+}, electron impact excitation-autoionisation, distorted wave approx. with exchange 3—41686
Ag, electron impact, K shell ionisation cross sections 3—1488
Ag, inner-shell ionization by relativistic electron impact 3—41683
Ar, electron impact ionisation of 3p orbital, absolute triple differential cross section 3—26862
Ar isoelectronic series, electron impact ionis. cross-section, distorted wave calcs. 3—26867
Ar^{3+}, electron impact ionisation absolute cross section meas. 3—46076
Ar$_2{}^+$, electron impact three-body dissociative recombination *(Chinese)* 3—41684
Au, (e, 2e) reaction, relativistic and nonrelativistic HF calc. 3—1485
Be$^+$, electron impact ionisation cross section 3—46077
CaI, bound channels and quantum defect theory 3—11982
Cd, ground and ion states, valence electron distrib., CI calcs. 3—31958
^{165}Er, double *K*-shell-vacancy prod. per *K*-electron-capture-decay 3—11762
^{55}Fe, K-L double ionis., X-ray emission 3—26869
H, electron impact, Space Translation Method used in laser assisted collision problems 3—26865
H, electron impact ionisation, first-order eikonal exchange amplitudes 3—11987
H, electron impact ionisation, spin exchange effect meas. 3—26870
H, positron collisions, field-theoretic formalism 3—41680
H, positron impact, positronium+H$^+$ form., ideal space treatment 3—56084
H, positron ionisational collisions, classical trajectory method 3—32216
H, triple differential cross sections in Coulomb projected eikonal aprox. 3—56081
H$^-$, electron impact, H$^+$ form. 3—6791
He, electron elastic and inelastic scatt. at high energies 3—46079
He, electron impact double ionisation at high velocity 3—6776
He, electron impact ionisation, triple-differential cross section, core-model calcs. 3—21921
He, electron impact ionisation, laser assisted, cross section calcs. 3—32213
He, excitation and ionisation cross-sections by positron impact 3—26858
He-ions isoelectronic series, dielectronic recombination rate coeff. 3—26846
Hf^{3+}, electron impact excitation-autoionisation, distorted wave approx. with exchange 3—41686
Hf^{3+}, electron impact ionisation, excitation contrib. meas. 3—46078
Kr^{3+}, electron impact ionisation absolute cross section meas. 3—46076
Mg atoms, autoionisation states, electron spectra, many-body effects obs. 3—32222
Mn, K-L double ionis., X-ray emission 3—26869
N, transient voltage meas. by primary ionisation 3—2176
N^{2+}, electron impact ionisation including autoionisation 3—1486
Na, electron impact ionisation, spin-dependent ionisation asymmetry 3—1487
Na-like ions, electron impact inner-shell ionisation cross sections 3—11988
Ne^{3+}, electron impact ionisation absolute cross section meas. 3—46076
S, single, double, triple and quadruple ionisation appl. to Io torus 3—32217
Sc (IV) to (X), electron impact ionisation rate coeff. 3—26864
Ta^{3+}, electron impact ionisation, excitation contrib. meas. 3—46078
Th, (e, 2e) reaction, relativistic and nonrelativistic HF calc. 3—1485
Ti^{3+}, electron impact excitation-autoionisation, distorted wave approx. with exchange 3—41686
Ti^{3+}, electron impact ionisation, excitation contrib. meas. 3—46078
^{181}W, double *K*-shell-vacancy prod. per *K*-electron-capture-decay 3—11762
Xe^{3+}, electron impact ionisation absolute cross section meas. 3—46076
Zr^{3+}, electron impact ionisation, excitation contrib. meas. 3—46078

atomic electron scattering *see atomic electron impact excitation; atomic electron impact ionisation; elastic scattering of electrons by atoms and molecules*

atomic emission spectroscopy
alkali metals, interference in flame emission spectrometry, theoretical model 3—19545

atomic emission spectroscopy continued
gas-discharge spectral tubes, pulsed power source 3—16420
ICP-echelle spectrometer system, figures of merit 3—16426
laser-induced breakdown spectroscopy, technique and applications 3—29340
process gases, on line spectral anal. method for carbon and water vapour determ. 3—9366
scanning monochromator output, stability optimisation of ICP atomic emission spectrometer 3—25950
solution, HF inductively coupled plasma light source, investig. and optimisation 3—53466
solution anal., using glow discharge device 3—16424
surface analysis by means of nuclear methods *(Japanese)* 3—29352
wastewater, pollutant elements anal. by DC Ar plasma emission spectroscopy 3—48220
Pb in environmental samples, trace levels determ. by electrothermal atomic absorption spectrophotometry 3—48221

atomic energy *see nuclear power*

atomic excited states
see also atomic metastable states; atomic resonant states
alkali atom Rydberg state radiation and polarisation characts. 3—21671
alkali halide: $In^+(Tl^+)(Sn^{2+})$, at. photoionisation cross section, determ. from intracentre luminesc. quantum efficiency change 3—26718
alkali metal atoms, highly excited states, radiative and spectrosc. props. *(French)* 3—31969
atom+charged particle collisions, classical mechs. and correspondence principle theories 3—32168
atom-atom collisions, Rydberg state excitation and ionisation 3—32176
atom-ion collisions, Rydberg states, collisional excitation transfer, noninertial mechanism 3—26838
atomic spectra and transition probabilities study using beam-foil spectroscopy 3—21867
Auger electrons angular distrib. and spin polarisation following photoionisation and photoexcitation 3—1327
cascade excitation of levels, light-induced drift 3—36731
Compton defect behaviour for excited s and p hydrogenic states *(French)* 3—50326
conference, Flinders Univ., Australia (Feb. 1982) 3—25676
core-excited atomic levels, laser techniques for spectroscopy 3—26657
coupled atomic states, radiative decay, multiple time scale perturbation theory calcs. 3—21697
dressed atomic states, strongly coupled optical spectrum 3—1287
element traces, laser at. photoionisation spectral anal. 3—58456
energy transfer in collisions between excited atoms, review 3—41657
fast ion collision with foil target, highly excited states prod. 3—32184
Gaspar unviersal potential, quantum numbers 3—26671
Hartree-Fock function approximation, by linear combination of Slater and Gaussian orbitals 3—26638
heavy-ion collisions, L- and K-shell excitation, impact param. dependence 3—41638
high Rydberg atoms, elec. and mag. fields effects 3—26654
high Rydberg states in strong mag. field 3—45871
highly excited atom randomisation in low-freq. EM wave field 3—41512
highly excited atoms, tunnelling ionis. in alternating EM field 3—31972
highly excited levels, transitions 3—31970
hydrogenic, formation mechanism for H^+ and He^+ beam collisions with solid surface, elliptic polarisation meas. 3—21669
hydrogenic atoms, energy values and sum rules in arbitrary mag. fields using numerical wave functions 3—10194
inert gas atoms, excited *p* states, photoionisation cross section 3—11760
inert gas pots. meas. by excited state degenerate four wave mixing 3—11915
ions, 5 to 10, highly excited states calcs. using square of the Hamiltonian 3—36705
isoelectronic series, Li I to C IV, doubly excited $^2P^e$ states, SCC calc. 3—55870
lifetime meas. using beam-foil and fast-beam/laser spectroscopy 3—21711
multiconfiguration approximation of excited $1s^22s2p^N$ and $1s^22s^22p^2nl$ states 3—31980
multiply excited states, electronic correl., hyperspherical anal. 3—26656
negative ions, search of excited states lying above ground state of neutral atom 3—21647
orthogonality restricted SCF method 3—31898
photoionisation, review 3—41539
plasma potential fluctuations, effect on highly exited at. states populations *(Russian)* 3—32879
populations of highly excited levels, analytical description 3—6560
radiatively excited atoms, polaris.-depend. assoc. ionis. 3—26818
relative populations from sputtering and electron impact, plasma anal. 3—3896
resonance fluoresc. and Raman line shapes prod. by laser fields, branching ratio and broadening effects 3—50345
Rydberg atom in field of intense resonant EM radiation 3—11749
Rydberg atoms, field-ionised, obs. on convoy electrons 3—56059
Rydberg atoms, intense microwave interactions 3—26678
Rydberg atoms and electron transfer to the continuum spectra 3—56060
Rydberg atoms and radiation in a reson. cavity 3—26660
Rydberg atoms and radiation in resonant cavity 3—26659
Rydberg atoms collisions, recent advances 3—26661
Rydberg atoms in mag. fields scaling laws 3—41513
Rydberg atoms interacting with intense nonresonant EM field 3—26663
Rydberg state production in convoy electron expts. 3—56061
Rydberg states, multiphoton ionis. and induced X-ray emission 3—32014
Rydberg states, reorganisation, electron correl., Hartree-Fock calcs. 3—1272
Rydberg-atom maser, millimeter-wave photon emission statistics, single mode superradiance fluctuations 3—26988
slow recoil ions with few electrons, Auger electron and X-ray emission spectra 3—11931
spectroscopy based on Hertzian coherence 3—12011
three-body system in boson field, sequential decay, line broadening 3—21723
two-electron escape at threshold in excited states, Wannier theory 3—26653
two-electron ions, S, P, and D states, Z-depend. perturbation theory calcs. 3—55872
Ag, Gaspar unviersal potential, quantum numbers 3—26671
Al, ^2D absorption spectrum, multichannel quantum defect theory anal. *(Chinese)* 3—41528

atomic excited states continued
Al, slow-electron excitation, cross section calc. by strong-coupling method 3—11986
^{27}Al, hyperfine struct. of 4s $^2S_{1/2}$ state, laser spectra study 3—1501
Ar II excited states, radiative lifetime meas. for 4d′, 4d, 5d, 6d, 7d 3—26694
Ar, inner-shell threshold excitation with synchrotron radiation 3—41510
Ar, Rydberg state creation *(French)* 3—26670
Ar, two-photon excitation 3—11767
Ar VI-VIII, spectroscopy and lifetime *(French)* 3—21868
B, excited state, electronegativity, spin-polarised $X\alpha$ calcs. 3—55836
B^{2+}, doubly excited states, configuration interaction method 3—26645
Ba, 6snd $^3D_2$ Rydberg states, hyperfine struct., fine struct. perturbations 3—12005
Ba, excited state laser spectroscopy using thermionic double-diode detector 3—36102
Ba, excited state lifetime meas. using rapid Doppler switching 3—6571
Ba II, radiative lifetime meas. of 6p $^2P_{3/2}$ level, collinear laser ion beam technique 3—21712
Ba, photoexcitation, overlap-integral variation interferences, IR obs. 3—11729
Ba, Rydberg states, 6s14d $^1D_2$ and $^3D_{1,2,3}$, CI and singlet-triplet mixing probed by hyperfine struct. 3—11709
Ba, Rydberg states, high resolution study 3—31974
Ba, Rydberg states, hyperfine struct. optical-optical double resonance 3—1288
Ba, Rydberg states 6sns, high resolution spectroscopy 3—50327
Ba, Stark effect in 6s5d and 5d6p states, meas. with laser at. beam spectroscopy 3—50350
Be, ^3S and X^1S states, generalised antisymmetric geminal power wavefunctions 3—36700
Be, doubly-excited states, electron correl. study in hyperspherical coords. 3—50320
Be, excited state, electronegativity, spin-polarised $X\alpha$ calcs. 3—55836
Be II, core excited quartet levels, lifetime and oscillator strength 3—1285
Be II, doubly excited quartet states, multiconfiguration HF calcs. 3—11679
Be II, perturbation of $1s2p4l^4L$ states by 1s2snl′4L Rydberg series 3—50302
Be III, decay channels of $(2,3c)^3P^0$ and $(2,4c)^3P^0$ levels 3—26667
Be^+, doubly excited states 3—31977
Bi atoms, electronic excitation by collisional transfer in Bi+NF supersonic flow, chemiluminesc. study 3—41667
C, electron-scattering cross-section, effects of excited configurations 3—32211
C I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3—1281
C III, X-ray energy meas. by multichannel Doppler-tuned spectrometry 3—21590
C+Ti(Cr), $^3P_2$ and $^4P_{5/2}{}^0$ states lifetime meas. in He, Li-like Ti and Cr 3—26698
Ca, 4snd Rydberg states, singlet-triplet mixing 3—32027
Ca, autoionisation reson., elec. field effect 3—32011
Ca XIX, dielectronic satellite spectra and inner shell excitation, appl. to solar flare spectra 3—17246
Cl III-VIII, vacuum UV spectra, beam-foil study 3—21870
Cl VIII, $2p^53s$, 3p and 3d configurations, beam-foil study 3—21869
Cs, In Ar matrix, excited states laser excitation 3—36711
Cs plasma, recombination, excited state population 3—27647
Cs, radiative props. of very excited atoms obs. 3—11726
Cs, Rydberg states, double-reson. expt. in millimeter wave domain, quantum defects, fine and hyperfine-struct. 3—11728
Cs_2-Cs_2Kr-CsKr, photolysis, Cs(5 ^2D) prod., spectra 3—24516
^{133}Cs, optical pumping efficiency by D_1 and D_2 lines, relax. breaking of hyperfine coupling in excited state 3—21729
Cu, Ar^+ surface sputtering, excited state kinetic energy distrib. 3—8922
Cu, Gaspar unviersal potential, quantum numbers 3—26671
Cu I isoelectronic sequences, beam-foil spectroscopy 3—21873
Cu I vapour, transition probabilities, lifetimes, Ar collisional destruction 3—6577
D*, prod. by electron impact from D_2O, mechanism, translational energy distrib. 3—56093
Fe VII forbidden lines excitation under gaseous nebula conditions, transition probabilities and collision strengths 3—1279
Fe XIX-XXII, X-ray lines inner shell transition origin, solar flare+Tokamak appl. 3—48812
Ga, slow-electron excitation, cross section calc. by strong-coupling method 3—11986
Gd, autoionisation reson., elec. field effect 3—32011
H, beam-foil-excited into high Rydberg states, coherent Stark levels 3—56058
H, elastic electron scatt. from excited 2s state, HHOB approx. 3—50306
H, excitation rate coeffs. from ground state to n=2 and n=3 levels 3—26866
H excited states, Rydberg diamagnetism 3—26655
H, positron scatt., hyperspherical coordinate treatment, singly and double excited S-state props. 3—50525
H, Rydberg atoms, intense microwave interactions 3—26678
H Rydberg states, three-photon excitation 3—26700
H, two-electron atoms, supermultiplet classification and collective spectra 3—45880
H^-, high lying doubly excited state, radial and angular correl. 3—11720
H-like atoms, excited state radiative mean lifetimes, semiclassical calcs. 3—26666
H-like atoms, transition probabilities and branching ratios for elec. dipole transitions 3—44904
$H^+(H_2{}^+)(H_3{}^+)$ ions, de-excitation probability on reflection from Be surface 3—50506
H*, prod. by electron impact dissoc. of H_2O, translational energy distrib. meas. 3—46080
H*, prod. by electron impact from H_2O, mechanism, translational energy distrib. 3—56093
He atoms, excited, multiphoton ionisation in glow discharge by ruby laser 3—17250
He, doubly excited P-wave resonances 3—6559
He, doubly excited states, CI wave functions and adiabatic channel functions 3—31960
He, doubly excited states study 3—21874
He, excited state, at. Fues pot., energies and oscill. strengths 3—55892
He, photoionisation with excitation of residual ion 3—32016
He Rydberg atoms, intense microwave interactions 3—26678

atomic excited states continued
He$^+$, electron impact 2s and 2p level excitation cross sections *(Russian)* 3—21928
^{3}He, singlet-triplet mixing in the 13d Rydberg state obs. with laser stepwise excitation 3—21672
He^{2+}:Li, electron capture processes in energy range 15-150 keV 3—1457
He+F, X-ray satellite lines from doubly excited states of F^{6+}; F^{7+} 3—41664
He$^+$+He, atomic excitation, level-crossing meas. 3—1468
^{3}He, nd Rydberg states, Doppler-free UV-IR double reson. laser spectrosc. 3—50332
He*+H$^+$(H$_2{}^+$)(H$_3{}^+$) excited state impact induced alignment, backcoupling 3—50507
He(2^{1}P), electron impact excitation, orientation, radiative decay polarisation 3—26855
He(2^{3}S) optical pumping, by colour-centre laser 3—21731
He(3^{1}P), electron impact excitation, momentum transfers 3—26854
He(n^{1}P) Rydberg atoms, electric field ionisation 3—6592
Hg atoms, excited, multiphoton ionisation in glow discharge by ruby laser 3—17250
Hg, electron-laser excitation study 3—26856
I*+O$_2$, rate consts. at 298K, flow-tube investig. 3—11933
In, Rydberg state spectroscopy, field ionisation technique 3—50359
In, slow-electron excitation, cross section calc. by strong-coupling method 3—11986
K, excited state form. by K$_2$ and NaK photodissociation, atomic fluoresc. study 3—21695
Li 2^{2}P$_{1/2}$ lifetime meas. using fast beam laser interaction 3—21710
Li, electron impact excitation, anal. central pot. calcs. 3—46070
Li, excited state, electronegativity, spin-polarised Xα calcs. 3—55836
Li I, doubly excited states study 3—21874
Li I excited states, radiative lifetimes meas. 3—55895
Li spectra, identification of charged excited ion states *(French)* 3—21882
Li, X^{2}S state, generalised antisymmetric geminal power wavefunctions 3—36700
Li$^-$, doubly-excited states, electron correl. study in hyperspherical coords. 3—50320
Li+He, coherent S$\rightarrow$D excitation, polarisation anal. 3—50496
Li+He^{2+}, excitation between 15 and 600 keV, emission cross sections meas. 3—1458
Mg, 3^{3}P$_J$ state, time-resolved emission kinetics following dye laser excitation 3—45879
Mg, X^{1}S state, generalised antisymmetric geminal power wavefunctions 3—36700
N I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3—1281
Na, 2p subshell photoionisation, outer-shell environment effects 3—21736
Na 3^{2}P$_{1/2}$ lifetime meas. using fast beam laser interaction 3—21710
Na atoms in crossed elec. and mag. fields 3—31976
Na D lines, pots. meas. by excited state degenerate four wave mixing, light absorpt. meas. 3—11915
Na, excited state form. by Na$_2$ and NaK photodissociation, atomic fluoresc. study 3—21695
Na, laser excited, violet emission 3—26682
Na, radiative props. of very excited atoms obs. 3—11726
Na-like ions, electron impact inner-shell ionisation cross sections 3—11988
Na+He(Ne)(Ar), population transfer, time-resolved laser fluoresc. 3—6773
Na+inert gas atoms, electronic and nuclear spin polarisations of 5^{2}S$_{1/2}$ state, collisional disorientation meas. 3—26830
Na+Xe, collisional angular momentum mixing of Na Rydberg states 3—46060
Na$^+$+Na collisions near matching vel., CT final state distrib. 3—26843
Na(3^{3}P), electron impact excitation, electron-photon coincidence study 3—26853
Nb, excitation cross section 3—17238
Ne, ^{3}P$_2$ and ^{3}P$_1$ excited state quenching at 150, 300 and 400K in afterglow plasma 3—46057
Ne, deexcitation rate coeffs. for neutral atom and electron collisions, absorpt. and fluorescence study 3—21886
Ne I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3—1281
Ne, singly ionised, energy levels radiative lifetimes 3—21704
Ne-Cu discharge, formation of excited Cu II levels 3—36707
Ni, highly ionised, spectroscopy and mean lifetime meas. *(French)* 3—21705
O I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3—1281
O II, oscillator strengths and collision strengths for excitation to 2s2p^3 ^{3}D^0, ^{3}P^0 and ^{3}S^0 states 3—35420
O$_2$+I(^{2}P$_{1/2}$), rate const., equilib., time depend. I$_2$ conc. 3—56031
O(S) deactivation coeff. meas. during Stereotop expt. in lower ionosphere 3—5006
^{206}Pb, 803 and 2648 keV states, muonic isomer shifts 3—21218
Pd, 4d subshell, photoabsorption relativistic RPA approx. 3—32019
Pm isoelectronic sequence, closed N-shell alkali spectra 3—21613
Rb, excited and resonant states, Penning and associative ionisation 3—6775
Rb, excited s states, hyperfine interactions, approx. relativistic many-body calculation 3—21666
Rb, In Ar matrix, excited states laser excitation 3—36711
Rb, Rydberg state, stimulated radiative corrections 3—55867
Sc^{2+}, excitation, oscill. strength, HF and CI calcs. 3—1258
Sr, autoionisation reson., elec. field effect 3—32011
Sr, excited state laser spectroscopy using thermionic double-diode detector 3—36102
Sr+He(Xe), 5sns^{1}S$_0$, 5snd^{1}D$_2$ and 5snd^{3}D$_2$ levels impact broadening 3—32004
^{87}Sr, Rydberg states, energy-level shift, two-photon obs. 3—11773
TbI(II) excited state lifetimes 3—36727
Te I, vacuum UV absorpt. spectra by photolysis 3—50334
Ti I, excited state lifetimes by atomic beam meas. 3—1306
Ti^{3+}, excitation, oscill. strength, HF and CI calcs. 3—1258
Tl, slow-electron excitation, cross section calc. by strong-coupling method 3—11986
V I, excited state lifetimes by atomic beam meas. 3—1306
V^{4+}, excitation, oscill. strength, HF and CI calcs. 3—1258
Xe II, hyperfine structure and isotope shift meas. by collinear fast-beam laser spectroscopy 3—21667
Xe II, radiative lifetime meas. of 6p ^{4}P$^0{}_{5/2}$ level, collinear laser ion beam technique 3—21712

atomic excited states continued
Xe, inner-shell threshold excitation with synchrotron radiation 3—41510
Xe isoelectronic sequence, core charge effect on Rydberg spectra 3—26658
Xe VI, level energies and lifetimes calcs. 3—21649
Xe VIII, beam-foil excited, optical spectrum meas. 3—21871
Zn I isoelectronic sequences, beam-foil spectroscopy 3—21873
Zn+Ar(N$_2$)(H$_2$)(CO)(CO$_2$), excited state quenching; fluoresc. study 3—17359

atomic explosions *see nuclear explosions*

atomic fine structure
alkali metal atoms, highly excited states, radiative and spectrosc. props. *(French)* 3—31969
atoms, heavy and highly ionised, spectra and transition probabilities, semi-empirical regularities 3—21714
multichannel photodetachment, extended zero-core contrib. model 3—32022
transition elements, fine struct. splitting of inverted doublet rel. to splitting from K$_{\alpha 1,2}$ line separations 3—21939
two-electron ions, relativistic and QED calcs. of energy levels, anomalous magnetic moment corrections 3—21663
two-electron systems, 1s2s ^{3}S$_1$-1s2p ^{3}P$_{0,2}$ transitions, comparison between theory and expt. 3—21684
X-ray spectrometer for EXAFS and XANES meas. 3—40738
Ar$^+$, spin-orbit splitting direct obs. with diode laser 3—45885
B isoelectronic sequence, ground state fine struct. using extended regular doublet law 3—21636
B isoelectronic series, ^{2}P$_{1/2}$-^{2}P$_{3/2}$ transition, relativistic effects, multiconfiguration HF method 3—31989
Ba, 6snd ^{3}D$_2$ Rydberg states, hyperfine struct., fine struct. perturbations 3—12005
Ba, 6*sng*-6*snh*-6*sni*-6*snk* intervals, RF reson. meas., nonadiabatic effects in core polarisation 3—11727
Bi atom, (6p)^3 configuration, at. fine structure and HFS, two-body perturbation parametrisation 3—50538
C III, ^{5}P-^{5}S transition wavelengths, fine struct., MCDF-EAL calcs. 3—50323
C III, doubly excited states study 3—21874
Co-like ions, Ba^{29+} to Yb^{43+}, 3p^{6}3d^9-3p^{5}3d^{10} transitions diagnostics in laser-prod. plasmas 3—32231
Cs, energy levels, fine struct. intervals, relativistic many-body calcs. 3—50324
Cs, Rydberg states, double-reson. expt. in millimeter wave domain, quantum defects, fine and hyperfine-struct. 3—11728
Cs$_2$-Cs$_2$Kr-CsKr, photolysis, Cs(5 ^{2}D) prod., spectra 3—24516
F foil excited fast ion beams, EUV spectroscopy, line widths and broadening 3—21686
F isoelectronic sequence, ground state fine struct. using extended regular doublet law 3—21636
^{19}F^{7+} 1s2p ^{3}P$_1$-^{3}P$_2$ fine structure splitting meas. using fast beam laser interaction 3—21710
Ga, configuration interaction effects in 4s^{2}nd^{2}D$_{3/2,\ 5/2}$ Rydberg series 3—11748
H atom, relativistic, energy level calcs., Sommerfeld Puzzle 3—36699
H n=2 levels, atomic fine structure in space of constant curvature 3—1502
He, isoelectronic series, 2^{3}P fine struct., QED test 3—45872
He, isoelectronic series, 2^{3}S-2^{3}P$_{0,1,2}$ energies, QED test 3—45873
He$^+$, fine struct. interval anticrossing meas. 3—1315
He(2^{3}S) optical pumping, by colour-centre laser 3—21731
In, Rydberg state spectroscopy, field ionisation technique 3—50359
K+ inert gas atoms, resonant fine struct. mixing, fluoresc. obs. 3—17358
K+H$_2$(N$_2$), fine-struct. transition, semiclassical model 3—6752
K+N$_2$(H$_2$)(CO)(CH$_4$), collisions, 4^{2}P fine struct. mixing 3—26833
Li at. beams, fine and hyperfine struct., isotope shift, laser induced fluoresc. study *(Chinese)* 3—21692
Li isoelectronic series, 1s2s2p ^{4}P^0 and 1s2p^2 ^{4}P terms, fine struct., transition wavelengths 3—55881
Li$^+$, fine struct., HFS, laser, MM and RF spectroscopy 3—21682
Mg^{9+}, doubly excited, fine struct. transitions 3—21949
N IV, ^{5}P-^{5}S transition wavelengths, fine struct., MCDF-EAL calcs. 3—50323
Na, quantum beat anal., fine-structure splitting of D states 3—26673
Na-like systems, nd-states, at. fine struct. calcs. 3—21634
Na+Cs, fine struct. transition cross sections, Na fluoresc. obs. 3—1469
NeI, 3p-3s fine struct., absolute transition probabilities 3—41625
O, foil excited fast ion beams, EUV spectroscopy, line widths and broadening 3—21686
O III far IR lines, electron collision strengths for fine struct. transitions 3—17374
O V, ^{5}P-^{5}S transition wavelengths, fine struct., MCDF-EAL calcs. 3—50323
O^{3+}+H$^+$, fine struct. transitions calc. 3—21859
P^{13+}, He-like, n=2 states lifetimes and fine structure energies 3—21708
P^{14+}, Lamb shift, laser reson.-quenching method 3—26649
Rb+H$_2$(N$_2$) 3—6752
Si IX, electron impact excitation, fine struct. transitions 3—41685

atomic fluorescence
antiparticle excitation of atomic inner shells 3—32188
atomic physics information from (n, γ) experiments 3—1302
Balmer series H level population in electron beam, ion+mol. reaction role 3—14865
collisional resonance fluorescence, time-depend., intense field, theory 3—31998
dynamic Stark splitting in two-photon resonance fluorescence 3—50348
high field approximations and collective behaviour 3—21693
inner-shell photoionisation by elliptically polarised light, fluoresc. radiation polarisation 3—26711
literature survey in Soviet Union 3—38880
metal sputtering products, photon emission with continuous spectrum 3—50346
metastable states, lifetime meas. by collisional and laser excitation 3—21668
methane-air flame, two-line at. fluoresc. temp. meas. 3—19522
momentum cumulation effects *(Russian)* 3—11738
multiatom coherence in the redistribution of radiation 3—22013
multiphoton processes anal., model microfield theory of redistribution of laser radiation 3—11772
neutral atoms, electron bremsstrahlung emission 3—36715
photon antibunching, reson. fluoresc., laser line width effects 3—22018

atomic fluorescence continued
  populations of highly excited levels, analytical description 3-6560
  radiative lifetimes meas. using time-resolved laser-induced fluoresc. 3-11745
  redistribution of fluorescence radiation from collisional depolarisation 3-26686
  resonance fluoresc. and Raman line shapes prod. by laser fields, branching ratio and broadening effects 3-50345
  resonance fluoresc. light in quasi-monochromatic chaotic fields, intensity correl. 3-31996
  resonance fluorescence, photon-number statistics 3-21699
  resonance fluorescence radiation photon antibunching from at. beam with fluctuating number of atoms 3-1301
  resonant multiphoton ionisation near autoionising state, fluoresc. 3-1296
  sensitised fluorescence, collisional transfer of coherence by electric dipole-dipole interaction 3-50341
  three-level atomic model, plasma satellites in the presence of non-resonant, coherent and polarised radiation 3-21719
  three-level atoms, reson. fluoresc. in bichromatic field, induced two-photon transitions 3-45892
  three-level atoms, two-colour superfluorescence 3-1298
  three-level dressed atoms, quantum beats 3-36718
  transit-time laser velocimeter 3-7674
  two level atom, reson. fluoresc., antibunching, sub-poissonian photon statistics, bandwidth effects 3-36719
  two- and three-level atomic and mol. systems, response to stepwise excitation 3-41522
  two-level atom, adiabatic and near-adiabatic field turn-on effect on reson. fluoresc. spectrum 3-50342
  two-level atom, effects of broadening on reson. fluoresc. 3-1297
  two-level atomic gas, reson. fluoresc. theory 3-55886
  Ar, electron beam excitation from Ar_2^+ dissoc. recombination 3-50527
  Ar, electron impact, characteristic X-ray prod., 4 to 10 keV 3-26687
  Ar, electron impact, low energy, free-free emission 3-56085
  Ar Kβ region multivacancy process, threshold region obs. 3-50338
  Au, isotope shift determ. in D_1 line between ^{197}Au and ^{195}Au 3-32005
  Ba, excited state lifetime meas. using rapid Doppler switching 3-6571
  Ba II, in RF quadrupole trap, laser fluoresc. spectrosc., H_2 quenching technique 3-36716
  C arcs, metastable atom fluoresc. study by UV laser diagnostics 3-22736
  C II, UV fluoresc. by optical pumping with extreme UV line radiation 3-45894
  Ca, $4^3P_{0,1,2}$ metastable states, absolute excitation cross sections, electron impact meas. 3-21926
  Cd+Ar(N_2)(H_2)(CO)(CO_2), Cd ($^1P_1$) excitation transfer and quenching, fluoresc. obs. 3-32182
  Cl, reson. fluoresc. kinetic meas. of Cl_2 photolysis, optical thickness effects 3-29320
  D atomic concentration and vel. meas. in tokamak using harmonically generated Lyman-α 1215 radiation 3-12968
  Eu^++He, excitation transfer process study 3-21890
  Fe II, radiative lifetimes, selective laser excitation 3-41529
  Fe, matrix isolated, a^5P and a^3P states 3-50340
  ^{69,71}Ga, 6p $^2P_{3/2,1/2}$ levels, hyperfine struct. and lifetime 3-11747
  H atomic concentration and vel. meas. in tokamak using harmonically generated Lyman-α 1215 radiation 3-12968
  H plasma, fluoresc. spectra broadening diagnostics 3-32979
  H plasma, recombining, population inversion, laser-induced fluoresc. meas. 3-32902
  H+D, excitation transfer process, fluoresc., numerical simulation studies 3-50344
  He atoms, collisional excitation transfer, time resolved laser induced fluorescence spectroscopy *(French)* 3-41658
  He plasma, collisional-radiative mode and laser induced excitation transfer 3-21696
  He-like ions, isoelectronic series, dielectronic recombination rate 3-26845
  He(2^1P), electron impact excitation, orientation, radiative decay polarisation 3-26855
  Hg atoms, isotopically selective resonance photoionisation, fluorescence study 3-41538
  Hg, electron-laser excitation study 3-26856
  Ho I, hyperfine struct., line classifications, laser fluorescence and RF double resonance spectrosc. 3-36717
  Ir I atoms, radiative lifetimes, oscillator strengths, fluoresc. spectra 3-50343
  K, collisional m_J mixing and multipole relax. of 4^2P states, fluoresc. investig. 3-21698
  K, excited state form. by K_2 and NaK photodissociation, atomic fluoresc. study 3-21695
  K, population processes in laser excited vapour 3-21826
  K+ inert gas atoms, resonant fine struct. mixing, fluoresc. obs. 3-17358
  K+N_2(H_2)(CO)(CH_4), collisions, 4^2P fine struct. mixing 3-26833
  Kr, electron impact, characteristic X-ray prod., 4 to 10 keV 3-26687
  La, 3d-4f reson. Raman scatt., core-hole effect 3-41516
  La, fast electron bombardment, broad emission band study 3-50339
  Li at. beams, fine and hyperfine struct., isotope shift, laser induced fluoresc. study *(Chinese)* 3-21692
  Li atoms, collisional excitation transfer, time resolved laser induced fluorescence spectroscopy *(French)* 3-41658
  Mn II, lifetime meas. using laser excitation 3-21694
  Na, excited state form. by Na_2 and NaK photodissociation, atomic fluoresc. study 3-21695
  Na, laser excited, violet emission 3-26682
  Na+Cs, fine struct. transition cross sections, Na fluoresc. obs. 3-1469
  Na+He(Ne)(Ar), population transfer, time-resolved laser fluoresc. 3-6773
  Na+Na collisions, energy transfer cross sections 3-46053
  Na+Xe, collisional angular momentum mixing of Na Rydberg states 3-46060
  ^{23}Na, hyperfine struct. of 7, 8 and $9^2P_{3/2}$ states, quantum heat spectroscopy 3-32233
  Ne, $2p^53p$ levels, lifetime determ. by laser induced fluoresc. 3-31999
  Ne, deexcitation rate coeffs. for neutral atom and electron collisions, absorpt. and fluorescence study 3-21886
  Ne, light-induced drift under optical excitation from a metastable state 3-6570
  Ne VIII, Li-like, $2^4P_{5/2}{}^0$ state fluoresc. yield 3-21876
  Pb, M-shell fluorescence yields, wall-less proportional counter spectrometer study 3-26688
  Rh I, radiative lifetimes, time-resolved laser-induced fluoresc. obs. 3-45895

atomic fluorescence continued
  Sr, collisionally redistrib. fluoresc. polarisation 3-45893
  Sr-inert gas systems, fluoresc. polarisation, collisional redistrib. 3-55887
  Ta I, radiative lifetimes, time-resolved laser-induced fluoresc. obs. 3-45895
  Ti oxide coated, sputtering yields, laser fluoresc. and AES obs., oxidised surface influence 3-26443
  Ti, sputtering yields due to light ion bombardment, laser induced fluoresc. 3-26442
  Xe, electron impact, characteristic X-ray prod., 4 to 10 keV 3-26687
  Zn+Ar(N_2)(H_2)(CO)(CO_2), excited state quenching; fluoresc. study 3-17359

atomic fluorescence spectroscopy *see atomic emission spectroscopy*

atomic forces
  atom-atom interactions, exchange interaction with excitation transfer, Hartree-Fock calcs. 3-11673
  bicyclic methylenecyclopropanes, conformational geometry and equilib. mol. mech. calcs. 3-11912
  bicycloalkenes, conformational geometry and equilib. mol. mech. calcs. 3-11912
  5-ethyl-5, 10-dihydro-10, 10-dimethyl-phenazasiline intramol. interactions, quantum chem. investig. 3-17216
  excited electron orbit collapse in an isoelectronic series 3-31997
  HCP metals, lattice vibrs., anisotropy 3-13384
  interatomic pot., Thomas-Fermi-Dirac statistical electronic model, relative-motion energy depend. 3-50491
  interatomic potentials determ. from line shape studies 3-6741
  local density approx., self-interaction correction 3-41479
  multiphoton ionisation, nonperturbative methods 3-26715
  neutral nonresonant collisions, effect on atomic spectral lines, review 3-6579
  quantum defect theory in double-valley pot. 3-26809
  recurrence formula for matrix elements with screened potential 3-32159
  tetraphenyl-1, 2-cyclohexylenediphosphine dioxide, conformational anal. 3-17217
  Ar-BCl_3, van der Waals complex, vibr. predissociation, Monte Carlo RRKM study 3-41634
  Ba, Rydberg states, high resolution study 3-31974
  Ca, atomic E1 and E2 radiation interf. detect. 3-21700
  Cl_2 crystal struct. and lattice dynamics, electrostatic and anisotropic atom-atom pots. 3-27914
  Cs, atomic E1 and E2 radiation interf. detect. 3-21700
  Cu, modified effective core pot. 3-21653
  H, atomic E1 and E2 radiation interf. detect. 3-21700
  H-H two-atom bosonic systems, spin-polarised, boson-fermion hybrid representation 3-46043
  H+H, exchange-induced dipole moments 3-11919
  H+He, exchange-induced dipole moments 3-11919
  $(H_2O)_2$, dispersion term anal., direct reaction field Hamiltonian 3-6744
  He, excited state, at. Fues pot., energies and oscill. strengths 3-55892
  He+He, bound state form., repulsive forces effects *(Russian)* 3-1454
  Hg-Xe system, interatomic pots., determ. by temp.-depend. absorpt. spectrum 3-56024
  ^{129}Xe gas, Rb induced nucl. spin relax. in mag. field 3-31990

atomic hyperfine structure
  see also Lamb shift
  alkali atoms, ground state hyperfine transition line shifts, hyperfine-interaction noncontact term contrib. 3-21722
  alkali metal atoms, highly excited states, radiative and spectrosc. props. *(French)* 3-31969
  antiprotonic atoms, vacuum-polarisation contrib. to spin struct. 3-46104
  atom-external field interactions, approx. relativistic treatment 3-21665
  H atoms trapped in 8 M H_2SO_4 at 77K, ESE signal decay modulation anal. 3-11838
  magnetic dipole and electric quadrupole hyperfine struct., relativistic SCF calcs. in 4d- and 5d-shell atoms 3-1267
  muonium, HFS interval and muon mag. moment, high precision meas. 3-1513
  positronium, hyperfine interval, meas., line shape effects 3-32248
  protonium atoms, mag. moments and hyperfine struct. 3-46104
  radioactive atoms, hyperfine and isotope struct. study using laser photoionisation detect. 3-14891
  resonance EM field effect on spectral hyperfine struct., quasi-energy states method 3-41530
  ^{27}Al, hyperfine struct. of 4s $^2S_{1/2}$ state, laser spectra study 3-1501
  ^{75}As, muonic, 2s-2p and 3d-2p transitions HFS splitting meas. 3-32251
  Ba, 5d7d $^1D_2$ perturbing state, hyperfine struct. and config. interaction 3-21660
  Ba, 6snd $^3D_2$ Rydberg states, hyperfine struct., fine struct. perturbations 3-12005
  Ba, Rydberg states, 6s14d $^1D_2$ and $^3D_{1,2,3}$, CI and singlet-triplet mixing probed by hyperfine struct. 3-11709
  Ba, Rydberg states, high resolution study 3-31974
  Ba, Rydberg states, hyperfine struct. optical-optical double resonance 3-1288
  Ba, Rydberg states 6sns, high resolution spectroscopy 3-50327
  Bi atom, $(6p)^3$ configuration, at. fine structure and HFS, two-body perturbation parametrisation 3-50538
  ^{12}C+^{15}N(^{13}C), hyperfine interaction, induced nuclear spin polarisation meas., polarisation transfer from beat frequency 3-21937
  Ca, 4snd Rydberg states, singlet-triplet mixing 3-32027
  Ca, intermodulated optogalvanic Zeeman spectroscopy in hollow cathode discharge 3-5867
  ^{A}Ca, A=40-48, $4s^2$ $^1S_0$-4s4p $^1P_1$ transition, isotope shifts and HFS 3-21726
  ^{111}Cd I atoms, mag. quadrupole moment, Zeeman effect, theory *(Russian)* 3-55889
  ^{53}Cr, metastable at. states HFS meas. by laser RF double reson. 3-31991
  Cs beams, hyperfine struct. meas. by laser beams 3-32232
  Cs, Rydberg states, double-reson. expt. in millimeter wave domain, quantum defects, fine and hyperfine-struct. 3-11728
  Cu, intermodulated optogalvanic Zeeman spectroscopy in hollow cathode discharge 3-5867
  ^{63}Cu, muonic, 3d-2p transition HFS splitting meas. 3-32251
  Dy isotopes, changes of charge radii and hyperfine interactions 3-11746
  $^{19}F^{7+}$ 1s2p $^3P_1$-$^3P_2$ fine structure splitting meas. using fast beam laser interaction 3-21710
  Ga, $4s^26p$ $^2P_{3/2,1/2}$ levels, natural radiative lifetimes and hyperfine struct. 3-26697
  ^{69,71}Ga, 6p $^2P_{3/2,1/2}$ levels, hyperfine struct. and lifetime 3-11747

atomic hyperfine structure continued
H, doubly spin polarised, hyperfine states, ESR study 3—33535
H, ground state hyperfine transition line shifts, hyperfine-interaction non-contact term contrib. 3—21722
H, two-photon 0^+-0^- transitions 3—32026
H, two-photon excitation and ionisation with tunable VUV at Lyman-α 3—11768
He, $(\alpha$-$\mu^- e^-)^0$ atom, ground state hyperfine splitting 3—41708
^{3}He, singlet-triplet mixing in the 13d Rydberg state obs. with laser stepwise excitation 3—21672
^{3}He, 2^3P state, hyperfine struct. meas. 3—55825
^{3}He I, nd ^{1}D states HFS study 3—21938
^{3}He, muonic, theoretical hyperfine structure 3—12013
^{3}He, nd Rydberg states, Doppler-free UV-IR double reson. laser spectrosc. 3—50332
^{3}He, singlet-triplet mixing in ns (n=12-14) Rydberg states 3—45990
^{4}He motional Stark effect induced anticrossings, zero-field level separations 3—50349
^{4}He, muonic, theoretical hyperfine structure 3—12013
Hg atoms, isotopically selective resonance photoionisation, fluorescence study 3—41538
Hg II, $6s^2S_{1/2}$-$6p^2P_{1/2}$ first reson. line Doppler-limited absorpt. spectrum 3—37120
^{199}Hg I atoms, multipole lines, Zeeman effect, theory *(Russian)* 3—55889
Ho I, hyperfine struct., line classifications, laser fluorescence and RF double resonance spectrosc. 3—36717
In, Rydberg state spectroscopy, field ionisation technique 3—50359
K, HFS and isotope shifts meas. by RF modulated laser light 3—21715
Li at. beams, fine and hyperfine struct., isotope shift, laser induced fluoresc. study *(Chinese)* 3—21692
Li$^+$, fine struct., HFS, laser, MM and RF spectroscopy 3—21682
Li+inert gases, van der Waals interaction and contrib. to hyperfine shifts, many-body study 3—26820
^{6,7}Li$^+$, hyperfine splitting anomaly, shift calcs. 3—50303
Na beam, vel.-specific at.-state selection by CW optical pumping 3—32010
^{23}Na, hyperfine struct. of 7, 8 and $9^2P_{3/2}$ states, quantum heat spectroscopy 3—32233
Na(3^3P), electron impact excitation, electron-photon coincidence study 3—26853
Ne, intermodulated optogalvanic Zeeman spectroscopy in hollow cathode discharge 3—5867
P^{13+}, He-like, n=2 states lifetimes and fine structure energies 3—21708
Pb I lines, relative oscillator strength determ. by line-absorpt. method 3—11743
Pb, isotope shifts and hyperfine structure, high-resolution meas. 3—50329
Rb, excited s states, hyperfine interactions, approx. relativistic many-body calculation 3—21666
Rb vapour, CW Doppler-free two-photon freq.-modulation spectroscopy 3—26720
^{87}Rb, optical pumping, light shift, hyperfine filtering 3—1314
Ru, g$_I$-factors ratio and HFS anomalies of ^{99}Ru and ^{101}Ru 3—26679
^{87}Sr, Rydberg states, energy-level shift, two-photon obs. 3—11773
^{129,131}Xe, hyperfine struct. of 7p(3/2)2 and 7p(5/2)2 levels *(French)* 3—45874
Xe II, hyperfine structure and isotope shift meas. by collinear fast-beam laser spectroscopy 3—21667
Yb isotopes, stable and neutron deficient, fast-beam laser spectroscopy for isotope shifts and hyperfine structure meas. 3—22145

atomic inelastic collisions
see also atom-atom collisions; atom-ion collisions; atom-molecule collisions; atom-molecule reactions; atomic electron impact excitation; atomic electron impact ionisation; beam foil spectra; ionisation of atoms
adiabatic switching factors in slow collisions 3—41648
alignment and orientation, collision induced, coordinate frames study 3—11930
antiparticle excitation of atomic inner shells 3—32188
atom+charged particle collisions, classical mechs. and correspondence principle theories 3—32168
atom+diatom reactive scatt., off-shell vibrorot. sudden approx. study 3—45916
atom-atom collisions, Rydberg state excitation and ionisation 3—32176
atomic physics information from (n, γ) experiments 3—1302
atoms, L-shell ionisation by charged particle impact, relativistic correction factors 3—1470
closed-shell atoms, dispersion interaction, var. method 3—45817
collision broadened at. line profiles, nonadiabatic theory 3—21724
collisional depolarisation, correlation effects, redistribution of fluorescence radiation 3—26686
computer model, coupled linear differential eqns., Runge-Kutta methods 3—36839
conference, Arezzo, Italy (Sept. 1980) 3—30563
distant collisions, neutral atom effective charges, screening 3—21662
exponential atomic collision model, parameterisation of S-matrix 3—21843
fluorescence, sensitised, collisional transfer of coherence by electric dipole-dipole interaction 3—50341
four-wave mixing signal enhancement due to vel. changing collisions 3—45907
glory region, total cross section and spherical interaction pot. relation 3—11940
glory region total cross sections from noble gas potentials 3—11939
heavy particle collisions, VPS approx. 3—26828
inert gas mixtures, collision-induced absorpt., higher-order spectral moments 3—50493
integrated state multipoles and plane asymmetry 3—21927
ionisation cross sections K- and L-shell, in plane-wave Born approx., computer codes 3—21866
JWKB phase shifts for small impact parameters 3—50468
laser assisted problems, Space Translation Method 3—26865
metastable states, lifetime meas. by collisional and laser excitation 3—21668
molecular orbital X-ray prod. cross section calc. 3—32100
momentum transfer, translation factors 3—56063
multi-classical trajectories from systematic approx. scheme 3—50494
neutral nonresonant collisions, effect on atomic spectral lines, review 3—6579
nonadiabatic electronic transitions, dynamical state representation 3—26817
projected evolution superoperators and density operator 3—1446

atomic inelastic collisions continued
rarefied gas, spectra density of velocity autocorrelation function *(Russian)* 3—42357
Rydberg atoms collisions, recent advances 3—26661
scaling relations from initial value representation 3—36840
smooth spherical potential, high-order semiclassical scatt. phase shifts calc. 3—1447
space-translation method calcs. 3—26806
thermal collisions of Rydberg atoms with neutral particles 3—1478
two level model, second order Magnus approx. 3—11910
two- and three-level atomic and mol. systems, response to stepwise excitation 3—41522
Ar, collisional broadening and spectral line shift 3—1305
Ar-Xe mixture, mol. and at. excited states, collisions, kinetic anal., VUV emission 3—6671
Ar+Ar(Kr)(Xe), total collision cross sections in glory region 3—11941
C^{3+}, dielectronic recomb. cross-section 3—56038
Ca I and II, collisional spectral broadening and shifts 3—1307
Ce, coherent neutron scatt. lengths *(German)* 3—11945
H angular momentum coherences, group-theoretical classification using SU(2)×SU(2) 3—36720
H, beam-foil-excited into high Rydberg states, coherent Stark levels 3—56058
H Rydberg states, three-photon excitation 3—26700
H, Stark effect, collisions, quasi-classical theory of spectral line wings *(Russian)* 3—1280
H$^+$ charged particle, elastic and inelastic collisions, total cross sections 3—11927
H+H interaction, dispersion coeffs., sum rule calcs. 3—45817
H+μ^-, stopping powers, ionisation and capture cross sections, Monte Carlo calcs. 3—32187
K, collisional m$_J$ mixing and multipole relax. of 4^2P states, fluoresc. investig. 3—21698
Kr gas, inelasticity correction in neutron scatt. meas. 3—56806
Kr+Ar(Kr)(Xe), total collision cross sections in glory region 3—11941
La, coherent neutron scatt. lengths *(German)* 3—11945
Mg I and II, collisional spectral broadening and shifts 3—1307
N$^+$ ion beam, C-foil excited, K-shell vacancy fraction, target thickness dependence 3—21892
Na, four-wave mixing signals in low-press. buffer gas, collisional destruction 3—56274
Ne^{8+}, UV $1s2s^3S_1$-$1s2p^3P_{2,0}$ transitions prod. in gas target 3—26681
Ne+Ar(Kr)(Xe), total collision cross sections in glory region 3—11941
Se I, ($^1S_0$-$^1D_2$) transition, collision induced emission 3—41515
Sr I and II, collisional spectral broadening and shifts 3—1307
Sr-inert gas systems, fluoresc. polarisation, collisional redistrib. 3—55887
Xe+Ar(Kr)(Xe), total collision cross sections in glory region 3—11941
Yb, two-level optical radiatiors, quantum diffractive vel.-changing collisions 3—41649

atomic interaction potential *see atomic forces*

atomic magnetic moment
see also gyromagnetic ratio
antiprotonic atoms, vacuum-polarisation contrib. to spin struct. 3—46104
magnetic dipole and electric quadrupole hyperfine struct., relativistic SCF calcs. in 4d- and 5d-shell atoms 3—1267
muonium, HFS interval and muon mag. moment, high precision meas. 3—1513
protonium atoms, mag. moments and hyperfine struct. 3—46104
two-electron ions, relativistic and QED calcs. of energy levels, anomalous magnetic moment corrections 3—21663
B isoelectronic sequence, ground state fine struct. using extended regular doublet law 3—21636
Be isoelectronic series, E1, M1, E2, M2 transitions 3—32002
^{111}Cd I atoms, mag. quadrupole moment, Zeeman effect, theory *(Russian)* 3—55889
Co-like ions, Ba^{29+} to Yb^{43+}, $3p^63d^9$-$3p^53d^{10}$ transitions diagnostics in laser-prod. plasmas 3—32231
Cs beams, hyperfine struct. meas. by laser beams 3—32232
F isoelectronic sequence, ground state fine struct. using extended regular doublet law 3—21636
^{199}Hg I atoms, mag. quadrupole moment, Zeeman effect, theory *(Russian)* 3—55889
^{23}Na, hyperfine struct. of 7, 8 and $9^2P_{3/2}$ states, quantum heat spectroscopy 3—32233
^{129}Xe+Cs, spin relax. by exchange interaction 3—46089

atomic mass
see also isotopes; mass spectra; nuclear mass
alpha-active products from U(^{208}Pb, X), on-line mass determ. 3—46085
Li isotopic composition and at. wt. of natural sample 3—56096
Zr isotopic abundance ratios and at. wt., surface ionis. and at. wt. 3—56098

atomic metastable states
afterglow plasma, electron energy distrib., stepwise excitation effect 3—2185
alkaline earth atoms+halogen cpds., chemiluminescence and reaction kinetics 3—53411
inert gas+halogen atom, channels of atom and excitation transfer, pot. surfaces 3—11929
inert gas atom+TlCl(TlI), dissoc. excitation in flowing afterglow 3—58416
lifetime meas. by collisional and laser excitation 3—21668
Ar, collisional broadening and spectral line shift 3—1305
Ar glow discharge, metastable atom density, theoretical model 3—33009
Ba II, in RF quadrupole trap, laser fluoresc. spectrosc., H$_2$ quenching technique 3—36716
Bi vapour laser, decay of Bi atom $6p^3\ ^2D^0_{3/2}$ metastable levels in interpulse period 3—6956
Ca, $4^3P_{0,1,2}$ metastable states, absolute excitation cross sections, electron impact meas. 3—21926
Ca, Rydberg series from metastable levels, one-photon laser spectroscopy 3—1270
^{53}Cr, metastable at. states HFS meas. by laser RF double reson. 3—31991
D$^+$, low energy, polarisation meas. method 3—1178
H$^+$, low energy, polarisation meas. method 3—1178
H$_2$, $4s^3\Sigma_g^+$ electronic state obs. with a blue CW dye laser 3—17237
He glow discharge, metastable atom density, theoretical model 3—33009
He, metastable atom impact on Ni(111) and CO/Ni(111) surface, Penning ionisation study 3—58016
He+Ne, elastic and energy transfer scatt., interaction pots. 3—6772
^{3}He, singlet-triplet mixing in ns (n=12-14) Rydberg states 3—45990

atomic metastable states continued
He*-HeI collisions, excitation study by visible spectra 3—32183
He*+H_2, Penning ionisation, rel. to diatomics-in-mols. calcs. 3—17239
He*+He(Ar)(Ne), crossed beam time of flight study, vel., resolved total integral cross sections 3—11936
Hg light source linewidth effect on meas. of metastable decay time const. in afterglow 3—41706
I* anti-Stokes Raman laser, UV and VUV laser emission 3—12116
Li metastable atomic beams prod. by electron capture in ion-surface impact, X-ray laser implementation 3—32340
Li^+, fine struct., HFS, laser, MM and RF spectroscopy 3—21682
Li^+ metastable levels, soft X-ray pumping from laser plasma source 3—26705
Mg, 3^3P_J state, time-resolved emission kinetics following dye laser excitation 3—45879
Mn II, lifetime meas. using laser excitation 3—21694
N_2+Ar* collisions, electronic excitation transfer 3—21887
NII, metastable states, EUV branching ratios 3—31992
Ne atom, metastable state $3P_0$, elastic collisions, time resolved saturation spectroscopy *(French)* 3—41645
Ne, deexcitation rate coeffs. for neutral atom and electron collisions, absorpt. and fluorescence study 3—21886
Ne glow discharge, metastable atom density, theoretical model 3—33009
Ne, light-induced drift under optical excitation from a metastable state 3—6570
Ne, metastable, elastic collision kernels, time-resolved sat. spectroscopy 3—11925
Ne, metastable atom impact on Ni(111) and CO/Ni(111) surface, Penning ionisation study 3—58016
Ne, metastable states, optical pumping, optogalvanic detection 3—1316
Ne VIII, Li-like, $2^4P_{5/2}{}^0$ state fluoresc. yield 3—21876
Ne+H(D), using state selected Ne($3s^3P_2$, $^3P_0$) metastable atoms, ionisation, electron spectra anal. 3—50509
Ne*+CO, $CO^+(A^2\Pi_i)$ form. 3—58415
O^{5+}, H-like, Lamb shift meas. 3—21709
OII, metastable states, EUV branching ratios 3—31992
PN+He(2^3S)(Ne($^3P_{0,2}$)), energy transfer, Penning ionisation, emission spectra 3—41666
Sr, Rydberg series from metastable levels, one-photon laser spectroscopy 3—1270
Tl* anti-Stokes Raman laser, UV and VUV laser emission 3—12116
V, metastable levels in first atomic spectrum 3—26669
Xe, metastable and ground-state prod. by electron capture 3—45878
Xe plasma, metastable state, electron density variation due to Xe optical orientation 3—46697
Yb isotopes, stable and neutron deficient, fast-beam laser spectroscopy for isotope shifts and hyperfine structure meas. 3—22145

atomic orbitals *see atomic structure*

atomic orbitals calculations
see also GO calculations; GTO calculations; STO calculations
atomic props., differential coeff. 3—31892
atomic structure calcs., using Slater integrals, computer packages 3—36644
electron model, ionic radius calcs. *(Chinese)* 3—1206
electronic stopping powers, shell corrections, orbital mean excitation energies calcs. 3—26635
fast ion beam spectroscopy, conf., Quebec, Canada (Aug. 1981) 3—20563
HF orbitals, semiclassical long-range behaviour 3—1193
Huckel parameter, qualitative interpretation using catastrophe theory *(German)* 3—6544
ligand field theory, Lie groups and unitary transformations 3—36666
linear approximation in self-consistent density functional calculations for atomic clusters 3—50565
many electron atoms, complex electronic config., quasi-spin method for jj-coupling 3—11640
multicentre integrals, calc. method *(Russian)* 3—21612
multiconfiguration approximation of excited $1s^22s2p^N$ and $1s^22s^22p^2nl$ states 3—31980
tetracyanoethylene, equilib. geometry and in-plane vibr. spectra ab initio and semiempirical calcs. 3—26630
tricyanovinyl alcoholate anion, equilib. geometry and in-plane vibr. spectra ab initio and semiempirical calcs. 3—26630
Al, electronic stopping powers, shell corrections calcs. 3—26635
Ar, electronic stopping powers, shell corrections calcs. 3—26635
$Ar+H^+$, angular distribution of ejected L-shell electrons 3—26831
B isoelectronic sequence, ground-state doublet separations 3—55826
Be, correlation energy, explicitly correl. Gaussian geminals, 2nd order perturbation calcs. 3—41487
Cu isoelectronic sequences, oscillator strengths and wavelengths 3—44906
F isoelectronic sequence, ground-state doublet separations 3—55826
Ga to Cd, MINI-1 and MIDI-1 basis sets, GTO calcs. 3—6527
H atom, nonrelativistic, AO calcs. Green's function path integral, Kustaanheimo-Stiefel transform. 3—50290
H, electron impact-excitation of n=2 level, polarised orbital method study 3—11989
H, electron motion, dynamic symmetry in Coulomb field, Fock representation 3—31934
H, nonrelativistic, at. orbitals in 4-dimens. Riemann space, path integral calcs. 3—41482
H-like atoms, in superstrong mag. fields, props. 3—41481
H+positron elastic scatt. using polarised orbital method, positronium form. channel 3—56073
He, correlation energy, explicitly correl. Gaussian geminals, 2nd order perturbation calcs. 3—41487
He-like atoms, in superstrong mag. fields, props. 3—41481
Zn isoelectronic sequences, oscillator strengths and wavelengths 3—44906

atomic polarisability
alkali atom Rydberg state radiation and polarisation characts. 3—21671
alkali metal atoms, highly excited states, radiative and spectrosc. props. *(French)* 3—31969
antiprotonic atoms, vacuum-polarisation contrib. to spin struct. 3—46104
Auger electrons angular distrib. and spin polarisation following photoionisation and photoexcitation 3—1327
closed-shell atoms, dispersion interaction, var. method 3—45817
electronic and muonic atoms, polarisability effects 3—32252
inert gas atoms, dynamic dipole polarisabilities, density-functional calc. 3—55828
many-electron systems, dynamic polarisability calc., coupled HF and variational perturbation theories 3—1228
multicharged ions, static dipole polarisability 3—46090

atomic polarisability continued
muonic atoms, 2p and 1s state polarisation, muon helicity 3—46102
negative ions, multi-quantum processes 3—32025
ten-electron atomic systems, dipole polarisability, electron correl. contrib., nucl. charge depend. calcs. 3—6553
$AgNO_3$ melt, Ag^+ electronic polarisability from refractive index meas. 3—34052
Ar, elastic electron scatt. cross sections, dipole polarisability 3—32201
Ba, 6*sng*-6*snh*-6*sni*-6*snk* intervals, RF reson. meas., nonadiabatic effects in core polarisation 3—11727
Be, electron scatt., ab initio adiabatic polarisation pots., matrix HF calc. 3—6789
C I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3—1281
$^{12}C+^{15}N(^{13}C)$, hyperfine interaction, induced nuclear spin polarisation meas., polarisation transfer from beat frequency 3—21937
Ca, exptl. study of nonadiabatic core interactions in Rydberg states 3—21681
Cs, 6S→7S scalar to vector polarisability ratio meas. 3—50537
F, static dipole polarisability, complete active space SCF and externally contracted multireference CI studies 3—1257
F^-, static dipole polarisability, complete active space SCF and externally contracted multireference CI studies 3—1257
Ga, configuration interaction effects in $4s^2nd^2D_{3/2,\ 5/2}$ Rydberg series 3—11748
H-like atoms in arbitrary bound S state, static multipole polarisability 3—26634
H+H interaction, dispersion coeffs., sum rule calcs. 3—45817
He, dynamic polarisability, time-depend. density functional theory 3—6745
He, dynamic polarisability calc., coupled HF and variational perturbation theories 3—1228
He, EM hyperpolarisability tensor from Verdet consts. 3—50448
Li isoelectronic sequence ions, elec. polarisabilities, bounds obs. 3—31919
Li+inert gases, van der Waals interaction and contrib. to hyperfine shifts, many-body study 3—26820
Lu^{2+} polarisability, transition and probabilities, ionisation energies, one-electron spectrum 3—6565
Mg, electron scatt., ab initio adiabatic polarisation pots., matrix HF calc. 3—6789
N I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3—1281
N, model pot. for electron spin-polarised atom 3—55815
Na+inert gas atoms, electronic and nuclear spin polarisations of $5^2S_{1/2}$ state, collisional disorientation meas. 3—26830
Ne, $2p^53p$ levels, lifetime determ. by laser induced fluoresc. 3—31999
Ne I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3—1281
Ne, static dipole polarisability, complete active space SCF and externally contracted multireference CI studies 3—1257
O I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3—1281
Rb, 6 $^2P_{1/2}$ state polarisability determ. 3—36871
$TlNO_3$ melt, Tl^+ electronic polarisability from refractive index meas. 3—34052
^{129}Xe+Cs, spin relax. by exchange interaction 3—46089
$ZnCl_2$ melt, Zn^+ electronic polarisability from refractive index meas. 3—34052

atomic positron scattering *see atomic electron impact excitation; atomic electron impact ionisation; elastic scattering of electrons by atoms and molecules*

atomic potentials *see atomic forces*

atomic power *see nuclear power*

atomic reactors *see fission reactors*

atomic resonant states
atom+ion collisions, resonant transfer and excitation processes 3—56068
collisional resonance fluorescence, time-depend., intense field, theory 3—31998
dressed-atom continuum resonances 3—31975
fluorescence, photon-number statistics 3—21699
four-wave mixing under double-resonance conditions 3—26701
gas, finite cylindrical vol., reson. at. state decay 3—31978
gas, finite cylindrical vol., reson. at. state decay 3—36706
hyperfine structure of spectra, resonance EM field effect, quasi-energy states method 3—41530
multiphoton ionisation in multimode laser fields, Stark shifts 3—1322
quantum defect theory in double-valley pot. 3—26809
quasi-energetic term intersection of atom in standing light wave field 3—6582
rare earth atoms, low-lying resons., narrow and anomalously narrow 3—31971
rare earth atoms partial photoionis. cross-sections in 4d reson. region 3—41534
rare earth negative ions, low-lying resons., narrow and anomalously narrow 3—31971
resonant multiphoton ionis. rel. to third-harmonic generation, mean-field model 3—50358
S-matrix poles calcs. using Siegert method, resonance states calc. 3—11637
saddle point complex rotation method calcs. 3—21635
single-atom versus coherent pressure-induced extra resonances in four-photon processes 3—46257
three-level atom interacting with a strong bichromatic field, stimulated Raman spectra 3—56275
two level atom, reson. fluoresc., antibunching, sub-poissonian photon statistics, bandwidth effects 3—36719
variational method for obtaining resonant states 3—6561
Wannier ridge reson., electron impact, electron-electron correl. 3—26650
Ar, collisional broadening and spectral line shift 3—1305
Ar^{15+}, electron impact excitation, reson. effect, collision strengths calc. 3—6793
Au XIX, Pm-like lines and transitions of interest to fusion research 3—21872
Be^-, ^2P reson. state, SCF and CI calcs. 3—31961
Be^+, doubly and triply excited reson. Auger spectra 3—1325
C^{3+}, electron impact excitation, reson. effect, collision strengths calc. 3—6793
Ca I* fast accelerated atomic beam, reson. three-level saturation spectrosc. 3—50550
Cd^+, electron impact excitation, cross sections laser transitions 3—32219

atomic resonant states continued
Cu, electron impact excitation, cross sections for transitions from Beutler states 3−50523
Fe XXV (XXVI), autoionising states, resonant dielectronic satellite lines anal. *(French)* 3−41526
H quasi-Landau resonances and at. diamagnetism 3−26617
H,. two-state reson. persistence under periodic impulsive field influence 3−31973
H$^-$, 1s2p2p′4P^e reson. in photodetachment 3−45909
He ^{2}S atomic resonance states, propagator version of the direct Siegert method 3−36701
He 2s2s^{1}S and 2s2s^{1}P reson., saddle point complex rotation method calcs. 3−21635
He, doubly excited P-wave resonances 3−6559
He$^-$, ^{2}P^0 reson. state calc. 3−26652
He$^+$, $^1P^o$ reson. below $n=4$, oscillator strengths, autoionising levels 3−11902
He$^+$, electron impact 2s and 2p level excitation cross sections *(Russian)* 3−21928
He-Ne mixture, Na(K) diffusion coeffs. of normal states and states excited into lower reson. states 3−32836
Hg atoms, isotopically selective resonance photoionisation, fluorescence study 3−41538
K, first reson. doublet, satellite bands in far blue wing 3−31986
K, Rydberg states, electron scatt., position and width of resonance 3−6788
Li-like ions, electron impact excitation, reson. effect, collision strengths calc. 3−6793
Li+He^{2+}, excitation between 15 and 600 keV, emission cross sections meas. 3−1458
Li+inert gas, at. reson. lines impact shift 3−21717
Lu, low-lying resons., narrow and anomalously narrow 3−31971
Na+Cs, fine struct. transition cross sections, Na fluoresc. obs. 3−1469
Ne I* fast accelerated atomic beam, reson. three-level saturation spectrosc. 3−50550
Ne^{7+}, electron impact excitation, reson. effect, collision strengths calc. 3−6793
O IV, electron impact excitation rate coeffs., calcs., close-coupling approx. 3−32215
O resonant multiphoton optogalvanic detection in flames 3−45914
O VII, ground state, electron excitation, effective collision strengths 3−41694
O^{5+}, electron impact excitation, reson. effect, collision strengths calc. 3−6793
Yb$^-$, low-lying resons., narrow and anomalously narrow 3−31971

atomic scattering factors *see crystal atomic structure; crystallography; lattice dynamics*

atomic spectra
see also atomic fluorescence; atomic hyperfine structure; atomic spectral line breadth; atomic structure; beam-foil spectra; conversion electron spectra; radiative corrections; Russell-Saunders coupling; Stark effect; Zeeman effect
3d elements K$_\beta$/K$_\alpha$ X-ray intensity ratio, chem. sensitivity effect 3−26684
absorption measurements by the intracavity-spectroscopy method, coherence effect influence 3−21678
actinides, 5d^{10}-5d^{9}5f transition, effect of collapse of 5f electron 3−31994
asymmetric ion-atom collisions in nonreson. laser fields, light scatt. 3−32164
atom-ion collisions, K X-ray yield associated with electron capture, reson. behaviour, review 3−41639
atomic line radiation, polarisation excited by electron impact 3−32214
atomic props., differential coeff. 3−31892
atoms and atomic spectra, conf., Voronezh, USSR (June 1980) 3−30544
autoionising atomic states, reson. interaction with EM field 3−1275
cascade excitation of levels, light-induced drift 3−36731
complicated electronic configs., j-j coupling and quasispin 3−31887
configuration mixing electric and magnetic field effects, review 3−26676
double negative ions (X^{2-}), spectrum, bound states 3−36649
dressed atomic states, strongly coupled optical spectrum 3−1287
energy level series for pot. well in strong external field 3−31888
energy levels and EM transitions in superstrong mag. fields 3−26618
extreme UV spectroscopy, laser techniques 3−49466
few-electron ions, high precision spectroscopic studies 3−41521
few-electron recoil ions, X-ray and Auger electron emission 3−41663
heavy and highly ionised atoms, spectra and transition probabilities, semi-empirical regularities 3−21714
heavy-ion collisions, L- and K-shell excitation, impact param. dependence 3−41638
high density plasma effects 3−26677
highly excited levels, transitions 3−31970
highly ionised, mag. dipole transitions in Texas Exptl. Tokamak 3−55882
highly ionised atoms, electronic struct. and emission spectra, theory 3−41525
highly ionised atoms, solar and stellar spectra in VUV region 3−35575
highly ionized ions, energy spectra, theoretical interpretation 3−21677
hydrogenic atoms, energy values and sum rules in arbitrary mag. fields using numerical wave functions 3−10194
hydrogenic spectrum in two dimens. WKB model, quasi-Landau reson. and rel. to strong-field problems 3−26631
incoherent scatt. cross-sections, total photon attenuation meas. 3−55898
inert gas ions, $sp^6\ {}^2S$ term, correl. effects 3−11705
inert gas mixtures, collision-induced absorpt., higher-order spectral moments 3−50493
intensity shifts of K X-rays 3−41520
ionic beams, subDoppler spectroscopy *(Spanish)* 3−17245
ionised atoms, X-ray spectra, grazing incidence spectrometer for 1-100 Å range 3−50335
laser atomic and molecular spectroscopy, quantum electronics *(Japanese)* 3−20901
laser spectroscopy with the thermionic diode 3−5864
multilevel atom, unequally spaced, dipole interaction with monochromatic EM field 3−41536
negative ions, multi-quantum processes 3−32025
one-electron atoms, Stark effect and photoionisation spectra 3−26691
photoemission spectra in intense laser field induced autoionization 3−1318
radiative atomic trap theory 3−1685
Raman scatt., cooperative effects 3−21769
rare earth atoms, energy levels, spectra, random matrix theory 3−45802
rare earth metal ions, multiphoton transitions rate calcs. 3−11770

atomic spectra continued
rare earths, elec. dipole transitions, Coulomb approx. oscillator strengths 3−21703
resonance fluoresc. and Raman line shapes prod. by laser fields, branching ratio and broadening effects 3−50345
Rydberg atoms, intense microwave interactions 3−26678
Rydberg atoms in weak mag. fields, quadratic Zeeman effect, report 3−45898
Rydberg series, oscillator strengths, UV magneto-optical rot. meas. 3−41523
satellite struct., electron correls. 3−36709
slow recoil ions with few electrons, Auger electron and X-ray emission spectra 3−11931
three-level atom interacting with a strong bichromatic field, stimulated Raman spectra 3−56275
transition probabilities study using beam-foil spectroscopy 3−21867
two-electron systems, 1s2s ^{3}S$_1$-1s2p ^{3}P$_{0,2}$ transitions, comparison between theory and expt. 3−21684
two-level atom strongly driven by intense radiation field, absorpt. spectrum 3−1282
weak lines number in complex spectra, expt. law relation 3−26675
X-ray and atomic inner-shell physics, conf., Eugene, OR, USA (Aug. 1982) 3−40308
X-ray spectra classification in laser prod. plasmas of atoms from Tm to Pt in 6-9 Å range 3−46751
X-ray spectrometer for EXAFS and XANES meas. 3−40738
Z=188, radiative transition of electrons to K shell 3−1304
Ag IV 4d^{7}5s-4d^{2}5p transitions 3−45887
Ag, matrix isolated, absorpt. spectra, inner shell excitation 3−55884
Al, ^{2}D absorption spectrum, multichannel quantum defect theory anal. *(Chinese)* 3−41528
Al I, nsnp(n+1)p configurations 3−1292
Al ions, ionisation rate coeff. in theta-pinch discharge 3−32918
Al VI-X, C foil excited ions, lifetimes, charge state distrib., far-UV obs. *(French)* 3−32180
^{27}Al, hyperfine struct. of 4s ^{2}S$_{1/2}$ state, laser spectra study 3−1501
Ar II branching ratios for spectral intensity calibration 3−11741
Ar, L$_1$-L$_{23}$M Coster-Kronig spectrum 3−21659
Ar, optogalvanic spectra using high resolution near IR spectrometer *(Japanese)* 3−10925
Ar, optogalvanic spectrum in glow discharge lamps 3−17244
Ar VI-VIII, spectroscopy and lifetime *(French)* 3−21868
Ar, X-ray emission spectra, multivacancy effect 3−41519
Ar$^+$, spin-orbit splitting direct obs. with diode laser 3−45885
Ar-Xe mixture, mol. and at. excited states, collisions, kinetic anal., VUV emission 3−6671
Ar+He$^+$(Ne$^+$), rearrangement collisions, VUV emission spectra 3−26832
Ar$^+$+He(Ne), rearrangement collisions, VUV emission spectra 3−26832
As, highly ionised, mag. dipole transitions in Texas Exptl. Tokamak 3−55882
Au XIX, Pm-like lines and transitions of interest to fusion research 3−21872
B I isoelectronic series, intersystem lines, atomic spectra 3−11725
B isoelectronic series, ^{2}P$_{1/2}$-^{2}P$_{3/2}$ transition, relativistic effects, multiconfiguration HF method 3−31989
Ba, 6p^2 ^{1}S$_0$ autoionised level studied using two-step optogalvanic spectroscopy, oscillator strengths 3−11730
Ba, *6sng-6snh-6sni-6snk* intervals, RF reson. meas., nonadiabatic effects in core polarisation 3−11727
Ba, excited state laser spectroscopy, thermionic double diode as efficient detector 3−36102
Ba II, in RF quadrupole trap, laser fluoresc. spectrosc., H$_2$ quenching technique 3−36716
Ba, photoexcitation, overlap-integral variation interferences, IR obs. 3−11729
Ba V, 5s^{2}5p^4-5s5p^5 transitions 3−50333
BaI, perturbed 6snd ^{1,3}D$_2$ sequences, Zeeman effect obs., MQDT calcs. 3−6573
Be III, decay channels of (2,3c)^{3}P^0 and (2,4c)^{3}P^0 levels 3−26667
Be isoelectronic series, E1, M1, E2, M2 and E3 transitions 3−31985
Be isoelectronic series, mag. quadrupole transitions, relativistic intermediate-coupled wavefunctions 3−21676
Bi I, elec. quadrupole transition radial integral, mixed multipole line relative intensity meas. 3−11740
Br, in discharged Ar-Br, cpd. mixtures, emission spectra 3−45890
C I, interstellar, origin of forbidden IR emission in H II or H I regions 3−10422
C I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3−1281
C III, ^{5}P-^{5}S transition wavelengths, fine struct., MCDF-EAL calcs. 3−50323
C VI H$_\alpha$, observations of gains in the extreme ultraviolet 3−6584
C+Ne(Mg)(S), 2 MeV/amu, K X-ray spectra, energy shifts and collision broadening of 2p to 1s transitions 3−21687
CI isoelectronic sequence, Cl XII to VXVIII, 2s^{m}2p^n-2s^{m-1}2p^{n+1} intersystem transitions 3−1300
Ca, 4snd Rydberg states, singlet-triplet mixing 3−32027
Ca, exptl. study of nonadiabatic core interactions in Rydberg states 3−21681
Ca I absorption in interstellar diffuse clouds, electron and gas densities 3−48975
Ca I non-resonance line spectra in stars 3−40127
Ca I* fast accelerated atomic beam, reson. three-level saturation spectrosc. 3−50550
Ca, optogalvanic spectra from hollow cathode lamps, wavelength calibration *(Chinese)* 3−36710
Ca, Rydberg series from metastable levels, one-photon laser spectroscopy 3−1270
Ca XIX, dielectronic satellite spectra and inner shell excitation, appl. to solar flare spectra 3−17246
^{A}Ca, A=40-48, 4s^2 ^{1}S$_0$-4s4p ^{1}P$_1$ transition, isotope shifts and HFS 3−21726
Cd electron stimulated desorption of excited mol. ions, dissoc., spectra 3−43680
Cd II spectral line emission cross section in electron+Cd$^+$ ion collisions 3−45889
Cl I 1351 Å in chromospheric spectrum, line formation mechanism 3−54299
Cl III-VIII, vacuum UV spectra, beam-foil study 3−21870
Cl VIII, 2p^{5}3s, 3p and 3d configurations, beam-foil study 3−21869

atomic spectra continued
Co, multielectron, one-photon transition, line splitting and intensity 3−11744
Cr I, excitation cross section meas. by electron collision 3−21925
Cr, photoabsorption and photoemission, VUV obs. 3−1293
Cs 6S-7S transition in electric field, parity violation 3−11067
Cs, 7S-nP transitions, optogalvanic detect. 3−36713
Cs beam freq. standard based on Raman induced Ramsey reson., light shift evaluation 3−56277
Cs IV, $5s^25p^4$-$5s5p^5$ transitions 3−50333
Cs, In Ar matrix, excited states laser excitation 3−36711
Cs, $M_{4,5}N_{4,5}N_{4,5}$ Auger energy shift study in free CsI mol. 3−45911
Cs, oscillator strengths, atomic cone polarisation influence on multiphoton processes 3−41541
Cs, radiative props. of very excited atoms obs. 3−11726
Cs_2-Cs_2Kr-CsKr, photolysis, Cs(5 ^2D) prod., spectra 3−24516
Cu, Ar matrix isolation, spin-orbit and Jahn-Teller interactions, MCD and absorpt. spectra 3−55890
Cu, electron impact excitation, cross sections for transitions from Beutler states 3−50523
Cu, matrix isolated, d→p transition, MCD and synchrotron radiation absorpt. study 3−31987
Eu I, isotope shift, crossed second-order effects 3−6568
F, foil excited, X-ray spectrum, one- and two-electron one-photon satellite transitions 3−11735
F-like ions, 2-2 transition, relativistic calcs. 3−17235
Fe, atomic, three-photon ionisation, photoelectron spectra and angular distrib. 3−26708
Fe I, Kurucz-Peytremann gf values, errors 3−36722
Fe I, moderately accurate oscillator strengths determ. 3−36725
Fe II, electron impact excitation cross-section meas. 3−44665
Fe, multielectron, one-photon transition, line splitting and intensity 3−11744
Fe VII forbidden lines excitation under gaseous nebula conditions, transition probabilities and collision strengths 3−1279
Fe XIV, interferometric eclipse obs. of inner solar corona 3−59305
Fe XIV and XVII line identifications in EUV solar spectrum 3−30330
Fe XIX-XXII, X-ray lines inner shell transition origin, solar flare+Tokamak appl. 3−48812
Fe XXV, 2s ^3S-2p ^3P transitions of heavy He-like ions *(French)* 3−21875
Fe^{26+}, Lyman-α lines and 1s Lamb shift 3−55866
FeCl, sextet state interactions 3−21685
Ga, highly ionised, mag. dipole transitions in Texas Exptl. Tokamak 3−55882
Ga I, III, lifetimes beam-foil study 3−21707
Ga I, nsnp(n+1)p configurations 3−1292
Ge, highly ionised, mag. dipole transitions in Texas Exptl. Tokamak 3−55882
H, bound state spectrum in strong mag. fields 3−6566
H, in intense laser fields using Kramers-Henneberger transform. 3−17242
H, quadratic Zeeman effect for weak mag. fields 3−50347
H, Rydberg atoms, intense microwave interactions 3−26678
H, spectrum, blackbody radiation effects 3−35790
H, Stark effect, collisions, quasi-classical theory of spectral line wings *(Russian)* 3−1280
H, two-electron atoms, supermultiplet classification and collective spectra 3−45880
H-like ions, quasi-Landau spectrum, two dimens. quantisation 3−1283
H_2-inert gas van der Waals molecule IR spectra 3−50398
$H_2^+ + O^{6+}$, charge exchange, O^{5+} radiative decay 3−32195
$H^+(H_2^+)(H_3^+)$ ions, de-excitation probability on reflection from Be surface 3−50506
He, doubly excited states study 3−21874
He I, absorpt. spectrum line oscillator strengths in 190-600 Å region 3−1309
He I isoelectronic sequence, line ratio systematics 3−20221
He, Lamb shifts, precision wavelength meas. 3−41532
He Rydberg atoms, intense microwave interactions 3−26678
He-like ions, Bethe-Salpeter eqn. ladder approx. 3−31915
He+Ar mixture, collision induced absorpt. spectra 3−26674
He+H_2 collision, far IR absorpt. spectrum anal. 3−11797
He^{2+}+Li, electron capture processes in energy range 15-150 keV 3−1457
^{4}He I, triplet level energies, saturated absorpt. obs. 3−41517
Hg $6p^3P_0$-$9s^3S_1$ transition, CW UV saturation spectroscopy at 246.5 nm 3−55885
Hg II, $6s^2S_{1/2}$-$6p^2P_{1/2}$ first reson. line Doppler-limited absorpt. spectrum 3−37120
Hg-Xe system, interatomic pots., determ. by temp.-depend. absorpt. spectrum 3−56024
Ho I, hyperfine struct., line classifications, laser fluorescence and RF double resonance spectrosc. 3−36717
I, $M_{4,5}N_{4,5}N_{4,5}$ Auger energy shift study in free CsI mol. 3−45911
In I, nsnp(n+1)p configurations 3−1292
In, Rydberg state spectroscopy, field ionisation technique 3−50359
In VI, $4d^75s$-$4d^75p$ transitions, spectrum obs. 270-1550 Å 3−6567
K, first reson. doublet, satellite bands in far blue wing 3−31986
K, HFS and isotope shifts meas. by RF modulated laser light 3−21715
K vapour, magnetisation, under resonance excitation 3−42355
K vapour in buffer gas, stimulated electronic Raman scatt. and stimulated reson. emission 3−21679
Kr, broadband photon yield excited by nonenergetic electron impact 3−46069
Kr, optogalvanic spectra using high resolution near IR spectrometer *(Japanese)* 3−10925
Kr+Kr collisions, X-ray emission in keV range 3−41671
La, 3d-4f reson. Raman scatt., core-hole effect 3−41516
La, fast electron bombardment, broad emission band study 3−50339
La VI, $5s^25p^4$-$5s5p^5$ transitions 3−50333
Li core-excited spectroscopy overview 3−11647
Li I, doubly excited states study 3−21874
Li II, spectral line excitation in atom-electron collisions *(Russian)* 3−11990
Li III, spectral line excitation in atom-electron collisions *(Russian)* 3−11990
Li, identification of the 8508 Å line 3−17243
Li isoelectronic series, 1s2s2p $^4P^0$ and $1s2p^2$ ^4P terms, fine struct., transition wavelengths 3−55881
Li isoelectronic series, deexcitation in 1s2s2p state 3−32024
Li, optogalvanic spectra from hollow cathode lamps, wavelength calibration *(Chinese)* 3−36710
Li spectra, identification of charged excited ion states *(French)* 3−21882

atomic spectra continued
Li^+, fine struct., HFS, laser, MM and RF spectroscopy 3−21682
Li+He^{2+}, excitation between 15 and 600 keV, emission cross sections meas. 3−1458
Lu^{2+} polarisability, transition and probabilities, ionisation energies, one-electron spectrum 3−6565
Mg, 1s cone region, XPS, binding energy 3−6586
Mg isoelectronic series, E1, M1, E2, M2 and E3 transitions 3−31985
Mg V line identifications in EUV solar spectrum 3−30330
Mg XI, dielectronic satellite spectra, inner shell and He-like excitation rates, solar appl. 3−44723
Mg XI solar X-ray spectra, non-thermal interpretation 3−30331
Mn II spectral lines, effective excitation cross sections 3−11985
N I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3−1281
N I isoelectronic series, Cl XI to V X VII, $2s^m2p^n$-$2s^{m-1}2p^{n+1}$ intersystem transitions 3−1299
N IV, ^5P-^5S transition wavelengths, fine struct., MCDF-EAL calcs. 3−50323
NII, metastable states, EUV branching ratios 3−31992
Na, atomic beams, Ramsey fringes, using stimulated reson. Raman transition 3−45886
Na, continuum Stark spectroscopy and photoionisation 3−26692
Na in Xe matrix, Jahn-Teller splitting, absorpt. and MCD spectra 3−45888
Na, laser excited, violet emission 3−26682
Na, optogalvanic spectra from hollow cathode lamps, wavelength calibration *(Chinese)* 3−36710
Na, radiative props. of very excited atoms obs. 3−11726
Na vapour, ground state quantum beats and collisional relax., picosec. resolution 3−36842
Na vapour 3S to 4P absorpt. obs. at 3302 Å using pulsed freq.-modulation spectroscopy 3−45221
Na, Zeeman-sublevel echoes in 3 $^2S_{1/2}$, resonant light pulses 3−37138
NaI, photoabsorpt. spectrum below 1s ionis. threshold 3−50330
^{23}Na, hyperfine struct. of 7, 8 and $9^2P_{3/2}$ states, quantum heat spectroscopy 3−32233
Nb, excitation cross section 3−17238
Ne, $2p^54p$ config. level population, rel. to dissoc. recomb. of Ne_2^+ 3−50331
Ne atom, neutral, ground state, charge density 3−36649
Ne, dynamical optogalvanic effect, collisional mixing, atom role near cathode surface 3−36712
Ne I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3−1281
Ne I* fast accelerated atomic beam, reson. three-level saturation spectrosc. 3−50550
Ne, metastable, elastic collision kernels, time-resolved sat. spectroscopy 3−11925
Ne metastable atoms, absorpt. meas. by the intracavity-spectroscopy method, coherence effect influence 3−21678
Ne, optogalvanic spectra from hollow cathode lamps, wavelength calibration *(Chinese)* 3−36710
Ne, optogalvanic spectra using high resolution near IR spectrometer *(Japanese)* 3−10925
Ne, optogalvanic spectrum in glow discharge lamps 3−17244
Ne, singly ionised, energy levels radiative lifetimes 3−21704
Ne, strong shock wave generation 3−45884
Ne, visible spectrum self-broadening at low densities 3−45899
Ne^{8+}, UV $1s2s^3S_1$-$1s2p^3P_{2,0}$ transitions prod. in gas target 3−26681
Ne+H(D), using state selected Ne($3s^3P_2$, $^3P_0$) metastable atoms, ionisation, electron spectra anal. 3−50509
Ne^{q+}+Li, state-selective and total one-electron capture, VUV line emission 3−6758
Ni, highly ionised, spectroscopy and mean lifetime meas. *(French)* 3−21705
Ni in rare gas matrix, matrix induced change in electronic ground state 3−55883
Ni, optogalvanic spectra from hollow cathode lamps, wavelength calibration *(Chinese)* 3−36710
O I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3−1281
O I 145.5 μm forbidden emission line obs. of Orion Nebula 3−35694
O I 630 nm airglow emission intensity rel. to W-E waves in upper atmosphere 3−5003
O II, oscillator strengths and collision strengths for electron impact excitation 3−35420
O III, energy levels, visible and UV obs. 3−11734
O III, oscillator strengths and collision strengths for electron impact excitation 3−35420
O III far IR lines, electron collision strengths for fine struct. transitions 3−17374
O ions mean lifetimes study 3−21706
O V, ^5P-^5S transition wavelengths, fine struct., MCDF-EAL calcs. 3−50323
O VII, ground state, electron excitation, effective collision strengths 3−41694
O-like ions, 2-2 transition, relativistic calcs. 3−17235
OII, metastable states, EUV branching ratios 3−31992
Pb, isotope shifts and hyperfine structure, high-resolution meas. 3−50329
Pb, mean square charge radii differences of isotopes, from electronic K X-ray shifts 3−40963
^{202}Pb, radioactive, isotope shift in $6p^2$ $^3P_0$-$6p7s$ $^3P_1^0$ 283.3-nm line 3−36724
Pm isoelectronic sequence, closed N-shell alkali spectra 3−21613
Rb, In Ar matrix, excited states laser excitation 3−36711
Rb, Rydberg state, stimulated radiative corrections 3−55867
Rb, Stark effect and photoionisation spectra 3−26691
S I isoelectronic sequence, transition probabilities for forbidden lines in $3p^4$ configuration 3−45901
S XV, 2P state alignment by collision with C atoms in foil, X-ray meas. 3−26685
SI, VUV spectrum and ionisation energy 3−31993
Sc^{2+}, excitation, oscill. strength, HF and CI calcs. 3−1258
Se I, ($^1S_0$-$^1D_2$) transition, collision induced emission 3−41515
Se, X-ray absorption spectrum, double-vacancy excitations 3−21690
SeI, VUV absorpt. spectrum 3−45891
Si, foil excited, X-ray spectrum, one- and two-electron one-photon satellite transitions 3−11735
Si II, wavefunctions and oscillator strengths, CIV3 code calcs. 3−26643
Si IX, electron impact excitation, fine struct. transitions 3−41685

atomic spectra continued
- Si ions, ionisation rate coeff. in theta-pinch discharge 3-32918
- Si x, coronal line intensities and level populations, radiative/collisional excitation 3-30314
- Si XI transitions, CI calcs. 3-17230
- Sr, excited state laser spectroscopy, thermionic double diode as efficient detector 3-36102
- Sr, Rydberg series from metastable levels, one-photon laser spectroscopy 3-1270
- Te I, vacuum UV absorpt. spectra by photolysis 3-50334
- Ti I, moderately accurate oscillator strengths determ. 3-36725
- Ti I, relative oscillator strengths for excitation energies 0.81-1.07 eV 3-11733
- Ti II, relative oscillator strengths for excitation energies up to 0.15 eV 3-11732
- Ti^{19+}, plasma dielectronic and inner-shell satellite lines 3-27743
- Ti^{3+}, excitation, oscill. strength, HF and CI calcs. 3-1258
- Tl I, III, lifetimes beam-foil study 3-21707
- Tl I, nsnp(n+1)p configurations 3-1292
- Tl, laser light near reson. scatt., time depend. effects., phenomenological description 3-21728
- U, 5d absorpt. spectra 3-31988
- U III, IV lines, wavelengths meas. in near UV 3-26680
- V, metastable levels in first atomic spectrum 3-26669
- V^{4+}, excitation, oscill. strength, HF and CI calcs. 3-1258
- Xe, ionised, laser generated plasma, XUV spectrum, charge-depend. wavefunction collapse, HF calcs. 3-11731
- Xe VIII, beam-foil excited, optical spectrum meas. 3-21871
- $^{136}Xe+^{232}Th$, deep inelastic collisions at 1160 MeV, X-ray study 3-50508
- $^{136}Xe+Pb$, deep inelastic collisions at 1160 MeV, X-ray study 3-50508
- Y I, Y II, oscillator strengths rel. to solar Y abundance 3-6576
- Y II, moderately accurate oscillator strengths determ. 3-36725
- Yb isotopes, stable and neutron deficient, fast-beam laser spectroscopy for isotope shifts and hyperfine structure meas. 3-22145
- Zn II, $4^2S \rightarrow 4^2P$ transition, electron energy loss spectra and cross sections 3-1489
- Zn isoelectronic series, E1, M1, E2, M2 and E3 transitions 3-31985
- ^{A}Zn, A=64, 66, 67, 68, 70, isotope effects on nuclear charge distribution from optical isotope shift data, nuclear deformation 3-6578
- Zr II, moderately accurate oscillator strengths determ. 3-36725

atomic spectral line breadth
- 3d-4f reson. Raman scatt., core-hole effect 3-41516
- absorption line profile of particles captured by a trap, quadratic Doppler effect influence 3-1310
- actinides, X-ray energies, natural widths and intensities meas. 3-11737
- alkali metal atoms, NMR line shape in linearly polarized RF field, weak-pumping approx. 3-21683
- amplitude-phase method for absorpt. cross section determ. in spectral line wings *(Russian)* 3-45905
- broadening and saturation in n-photon absorption, reviews 3-22174
- broadening due to stellar differential rotation, Fourier transform, note 3-20249
- collision broadened at. line profiles, nonadiabatic theory 3-21724
- dressed-atom continuum resonances 3-31975
- equivalent width calibration of Kitt Peak National Observatory echelle spectrograph 3-54245
- forward scatt. amplitude method in H line broadening theory for plasma *(Russian)* 3-17248
- gas, finite cylindrical vol., reson. at. state decay 3-36706
- gas atom resonant interaction with standing-wave pulses separated in time 3-37608
- gases, relaxation, spectral line broadening mechanism contrib. separation using stimulated light echo method 3-37140
- inert gas, pots. meas. by excited state degenerate four wave mixing 3-11915
- integral of spectral (spatial of temporal) profile *(French)* 3-21824
- ions, captured in trap, two-photon absorpt. line profile, influence of thermal effects 3-21740
- laser spectroscopy with the thermionic diode 3-5864
- near-resonance absorpt. processes 3-44931
- neutral nonresonant collisions, effect on atomic spectral lines, review 3-6579
- nonLorentzian laser bandshapes in atomic processes, theory 3-21718
- positronium, hyperfine interval, meas., line shape effects 3-32248
- radial transformation problem, physically based regularisation method 3-21720
- resonance fluoresc. and Raman line shapes prod. by laser fields, branching ratio and broadening effects 3-50345
- resonant multiphoton ionis., photoelectron ang. distrib., theory 3-50357
- resonant multiphoton ionisation in multimode laser fields, Stark shifts 3-1322
- Rydberg atoms collisions, recent advances 3-26661
- Rydberg states, high resolution study 3-31974
- sub-laser linewidth autoionisation rates, spectroscopic meas. 3-11752
- three-body system in boson field, sequential decay, line broadening 3-21723
- three-level atomic model, plasma satellites in the presence of non-resonant, coherent and polarised radiation 3-21719
- two-level atom, effects of broadening on reson. fluoresc. 3-1297
- Ar, collisional broadening and spectral line shift 3-1305
- Ar I, Stark broadening of 430.01 nm line *(French)* 3-36721
- Ar ion laser with narrow emission line 3-7019
- Ar, L_{23}-MM Auger spectra, satellite struct. 3-1326
- Ar, LMM Auger spectra, line sharpening effects due to post-collision interaction 3-21739
- Ba I 553.5 nm line, reson. broadening, amplitude-phase method obs. *(Russian)* 3-45905
- Ba-inert gas systems, empirical interatomic pots. deduced from absorpt. meas. 3-11916
- Be II, perturbation of $1s2p4l^4L$ states by $1s2snl'4L$ Rydberg series 3-50302
- C I 505.2 nm line profiles and shifts in solar granulation 3-40084
- C II, Stark widths, transition probabilities, photoelectric meas. 3-6572
- C IV solar 1548 Å line widths and Doppler shifts, fluid motions in chromosphere-corona transition region 3-40078
- Ca I and II, collisional spectral broadening and shifts 3-1307
- Ca, optogalvanic line integral meas. 3-10908
- Cd II spectral line emission cross section in electron+Cd^+ ion collisions 3-45889

atomic spectral line breadth continued
- Cl, inverse Lamb saturation dip obs. in laser mag. reson. spectrum, isotopic shift meas. 3-21680
- Cr I spectral line profile, fast-scanning Fabry-Perot interferometer 3-10890
- Cs vapour, intra-Doppler resonances in selective reflection at low press. 3-6580
- ^{133}Cs, optical pumping efficiency by D_1 and D_2 lines, relax. breaking of hyperfine coupling in excited state 3-21729
- Cu target, Ar^+ sputtering, excited atom form., kinetic energy distrib. 3-8922
- D atomic concentration and vel. meas. in tokamak using harmonically generated Lyman-α 1215 radiation 3-12968
- D, excited state emission cross section from electron impact dissoc. of D_2 3-36865
- F foil excited fast ion beams, EUV spectroscopy, line widths and broadening 3-21686
- Fe I, solar photospheric absorption line asymmetry in quiet and active regions 3-40085
- Fe XXV (XXVI), autoionising states, resonant dielectronic satellite lines anal. *(French)* 3-41526
- H atomic concentration and vel. meas. in tokamak using harmonically generated Lyman-α 1215 radiation 3-12968
- H, excited state emission cross section from electron impact dissoc. of H_2 3-36865
- H I, Balmer line equivalent widths of rotating B and A-stars 3-44743
- H I Lyman α profile obs. during solar eclipse, coronal temp. structure 3-59292
- H I Lyman-alpha emission-line profiles in high-redshift QSOs 3-16029
- H plasma, fluoresc. spectra broadening diagnostics 3-32979
- Hα synthetic profiles for supergiant star α Cygni 3-20355
- He, spectral line profiles, ion dynamic effects at low density 3-42456
- He-Xe laser radiation bistability and polarisation due to $5d[3/2]_1^0$-$6p[3/2]_1$ transition in ^{136}Xe in weak mag. field 3-22036
- $He+H_2$ collision, far IR absorpt. spectrum anal. 3-11797
- HeI+He* collisions, excitation study by visible spectra 3-32183
- K, first reson. doublet, satellite bands in far blue wing 3-31986
- K, Rydberg states, electron scatt., position and width of resonance 3-6788
- Kr, radial transformation problem, physically based regularisation method 3-21720
- Li I, core-excited doublets, autoionisation rate determ. 3-21732
- Li, self-broadened first reson. line wing asymm. 3-50353
- Mg I 285.2 nm line, reson. broadening, amplitude-phase method obs. *(Russian)* 3-45905
- Mg I and II, collisional spectral broadening and shifts 3-1307
- $^{24}Mg^+$, single laser-cooled ion in RF trap, linewidth 3-50354
- Mn II spectral lines, effective excitation cross sections 3-11985
- Na beams, line-shape distortion elimination in laser absorpt. spectroscopy 3-45902
- Na D lines, pots. meas. by excited state degenerate four wave mixing, light absorpt. meas. 3-11915
- Na, polarisation spectroscopy within natural width 3-21727
- Na, self-broadened first reson. line wing asymm. 3-50353
- Na vapour, distortion of on-resonance two-photon spectroscopic line shapes caused by velocity-selective optical pumping 3-11771
- NaD_2 line, self-reversed line profiles by scanning laser excitation 3-26696
- Ne atom, 632.8 nm spectral line, collisional broadening and shift obs. in Ne and He-Ne glow discharges 3-55891
- Ne, light-induced drift under optical excitation from a metastable state 3-6570
- Ne, strong shock wave generation 3-45884
- Ne, visible spectrum self-broadening at low densities 3-45899
- $Ne^{q+}+Li$, state-selective and total one-electron capture, VUV line emission 3-6758
- O, foil excited fast ion beams, EUV spectroscopy, line widths and broadening 3-21686
- Pb I 283.3 nm line growth curve by total absorpt., cross section of collision resonances 3-41531
- Pb I lines, relative oscillator strength determ. by line-absorpt. method 3-11743
- Pd, determ. by graphite furnace AAS, press. effects 3-19550
- Rb, radial transformation problem, physically based regularisation method 3-21720
- ^{85}Rb D_2 line, broadening and shift, mag.-scanning determ., accuracy test 3-21721
- Si II and Si III, Stark broadening in SiH_4 plasma 3-27734
- Sr I and II, collisional spectral broadening and shifts 3-1307
- Sr+He(Xe), $5sns^1S_0$, $5snd^1D_2$ and $5snd^3D_2$ levels impact broadening 3-32004
- Tl line from photodissoc. of TlI, broadening and shift coeff., influence of O_2 3-1311
- Xe II, new spectroscopic results 3-1294
- Xe III, new spectroscopic results 3-1294
- Xe IV, new spectroscopic results 3-1294

atomic structure
- *see also atomic electron correlations; atomic excited states; atomic fine structure; atomic orbitals calculations; atomic polarisability; atomic spectra; nuclear screening; Russell-Saunders coupling; triplet state*
- actinides, $5d^{10}$-$5d^9 5f$ transition, effect of collapse of 5f electron 3-31994
- alkali atoms, ground state hyperfine transition line shifts, hyperfine-interaction noncontact term contrib. 3-21722
- alkali atoms and diatoms, core-valence correl. effects inclusion in pseudopot. calcs. 3-1255
- alkali earth atoms, atomic and ionic core binding energies from XPS and DF calcs. 3-1214
- alkali halide monatomic ions, charge clouds, density difference functions 3-45812
- antiparticle excitation of atomic inner shells 3-32188
- antiprotonic atoms, vacuum-polarisation contrib. to spin struct. 3-46104
- atoms and atomic spectra, conf., Voronezh, USSR (June 1980) 3-30544
- atoms and ions, generalised parentage coeffs. in relativistic calcs. 3-31967
- atoms in momentum space, local density functional model 3-26622
- autoionising atomic states, reson. interaction with EM field 3-1275
- autoionising states, level shift calc. 3-45904
- bound levels, multiphoton interactions, quasistationary quasienergy states 3-32150
- central field models 3-31890

atomic structure continued
closed-shell at. system, relativistic corrections 3–50321
closed-shell atoms, electron density direct calc. in many-electron atoms 3–36678
closed-shell ions, diamag. susceptibilities, Thomas-Fermi-Amaldi theory calcs. 3–17207
coupled atomic states, radiative decay, multiple time scale perturbation theory calcs. 3–21697
degenerate two-level excitation, reduction to independent two-state systems 3–50308
density functional theory, at. kinetic energy functional 3–41478
density functional theory for fractional particle number, derivative discontinuities of energy 3–21604
density-functional theories, complementary variational principles 3–31905
determinantal wavefunctions, group representations for fermion systems 3–21605
electron binding energy, relativistic corrections 3–11715
electron coincidence spectroscopy, HF wavefunctions 3–26857
electron density functional 3–21616
electron model, ionic radius calcs. *(Chinese)* 3–1206
electron motion and dynamic struct. of atoms and mols. 3–56071
electron-electron repulsion energies, representation by simple one-electron functionals 3–41477
electronic density, bounds in near-nuclear region 3–55814
electronic density, upper bound estimates 3–55810
energy level series for pot. well in strong external field 3–31888
energy levels, relativistic corrections, perturbation theory calcs. 3–31965
energy levels and EM transitions in superstrong mag. fields 3–26618
excited electron orbit collapse in an isoelectronic series 3–31997
extreme UV spectroscopy, laser techniques 3–49466
f-shell states, scalar products of irreducible tensors 3–17194
few-electron ions, high precision spectroscopic studies 3–41521
first-row atoms, diamag. shielding consts. piecewise exponentially decaying electron density model calcs. 3–17233
fractional parentage coefficient of the form $(l^{2l+1}|\}l^{2l+2})$ 3–31893
Hartree's equations, nonuniqueness in soln. 3–31895
heavy atoms, energy characts., Dirac-Fock-Slater eqns. 3–31914
heavy atoms in superstrong magnetic fields 3–55786
heavy ions, energy characts., Dirac-Fock-Slater eqns. 3–31914
high-field atomic and molecular physics, conf., Aussois, France, June 1982 3–25684
highly ionised atoms, electronic struct. and emission spectra, theory 3–41525
highly ionized ions, energy spectra, theoretical interpretation 3–21677
hydrogenic atoms, energy values and sum rules in arbitrary mag. fields using numerical wave functions 3–10194
hydrogenic Hamiltonian, Coulomb Green's function, generating integral for matrix elements 3–31902
hydrogenic spectrum in two dimens. WKB model, quasi-Landau reson. and rel. to strong-field problems 3–26631
inert gas atoms, dynamic dipole polarisabilities, density-functional calc. 3–55828
inert gas ions, sp^6 ^2S term, correl. effects 3–11705
ions, multiply charged, config. energies 3–31964
K- and L-shell Compton defects, electronic struct. study 3–32006
kinetic energy functionals with full Weizsacker connections 3–50298
ligand field theory, Lie groups and unitary transformations 3–36666
local density approx., self-interaction correction 3–41479
lowest $^2P_{1/2}$ state lifetime meas. 3–21725
magnetic radial integrals, use in symmetry props. of spin orbit matrix elements 3–11636
many-electron atom, Hamiltonian, diagrammatic calcs. *(French)* 3–31894
many-electron atoms, spin-rearrangement in mag. fields, Thomas-Fermi eqn. 3–1274
multichannel photodetachment, extended zero-core contrib. model 3–32022
multiphoton ionisation spectroscopy, laser-induced continuum struct. 3–11766
negative ions electronic structure, even-tempered basis functions, universal systematic sequences 3–11665
neutral, Thomas-Fermi-Dirac-Weizsacker variational eqns. soln. 3–31907
neutral atom energy, approx. rel. with nucl. electronic pot. 3–17188
neutral atoms, ground state energy, Thomas-Fermi-Scott-Schwinger expansion 3–31891
one electron atoms in intense mag. fields, review 3–26695
operator orthogonality and parameter uncertainty 3–11638
optical multistabilities and instabilities induced by at. coherence 3–41910
optimised mean fields for atoms, numerical calcs. 3–21607
optimised mean-field description of N-fermion system 3–21606
quantum chemistry, conf., Uppsala, Sweden (June 1982) 3–35770
quantum defect theory 3–11639
quantum defect theory foundations, review 3–41480
radial path integral, semiclassical calc. 3–30678
rare earth atoms, energy levels, spectra, random matrix theory 3–45802
relativistic hydrogenic wavefunctions for K- and L-shell electrons, momentum representation 3–21664
Rydberg atoms interacting with intense nonresonant EM field 3–26663
S-matrix poles calcs. using Siegert method, resonance states calc. 3–11637
self-energy of the $n=2$ states in a strong Coulomb field for $Z=10$ to 110 3–11719
shells, collective excitations 3–1230
spin-adapted creation and annihilation operators, field-theoretic formulation 3–26621
structure functions and ionisation of isolated atoms by charged projectiles 3–11977
Thomas-Fermi model, momentum expectation values 3–50312
Thomas-Fermi model, $Z^{-1/3}$ and $7^{-2/3}$ corrections 3–26639
three-level atom interacting with a strong bichromatic field, stimulated Raman spectra 3–56275
two level atom in standing EM wave field, self consistent pot. 3–1276
two-electron atom, energy-level shifts, adiabatic S matrix relativistic theory 3–31966
two-electron ions, relativistic and QED calcs. of energy levels, anomalous magnetic moment corrections 3–21663
two-level atom, dynamical evolution in monochromatic chaotic field 3–26987
unitary group method, particles and holes 3–6515
wave-functions, self-consistent, compliance with virial theorem 3–31900
Weizsacker term corr. using Thomas-Fermi term 3–36679

atomic structure continued
Weyl's theory in an L^2-basis Gauss quadrature of the spectral density 3–26623
X-ray and atomic inner-shell physics, conf., Eugene, OR, USA (Aug. 1982) 3–40308
Al I, nsnp(n+1)p configurations 3–1292
Al-like ions, oscillator strengths, transition probabilities, data tables 3–25702
Ar $(3s3p^6nl)$, energy and width calc. by ion-electron collision theory 3–41688
Ar, electronic props. by Green's function calcs. 3–6512
Ar, L_1-$L_{23}M$ Coster-Kronig spectrum 3–21659
B isoelectronic sequence, ground-state doublet separations 3–55826
B^-, bound state, electron correl. calcs., radiative autoionis. 3–45832
Ba, 4d photoabsorption, shell collapse and contraction theories 3–41533
Ba, 5d7d $^1D_2$ perturbing state, hyperfine struct. and config. interaction 3–21660
Ba^+, 4d photoabsorption, shell collapse and contraction theories 3–41533
Ba^{2+}, 4d photoabsorption, shell collapse and contraction theories 3–41533
BaI, perturbed 6snd $^{1,3}D_2$ sequences, Zeeman effect obs., MQDT calcs. 3–6573
Be-like four electron systems, third-order correl. energies for closed-shell systems 3–21620
Cl isoelectronic sequence, Cl XII to VXVIII, $2s^m2p^n$-$2s^{m-1}2p^{n+1}$ intersystem transitions 3–1300
Ca, exptl. study of nonadiabatic core interactions in Rydberg states 3–21681
Ca, Rydberg series from metastable levels, one-photon laser spectroscopy 3–1270
Co-like ions, Y XIII to Ag XXI, $3d^9$-$3d^84p$ transitions in X-ray spectra 3–1295
Cu, one-electron studies, pseudopot. method 3–50297
Eu, F-level features, Dirac-Fock calcs. 3–31913
F isoelectronic sequence, ground-state doublet separations 3–55826
F-like ions, 2-2 transition, relativistic calcs. 3–17235
Fe, matrix isolated, a^5P and a^3P states 3–50340
Fe XXI, energy levels, L-shell correl. corrections 3–21661
Ga I, nsnp(n+1)p configurations 3–1292
H atom, spheroidal analysis, recurrence relations and wavefunctions 3–45826
H, avoided crossings and autoionisation widths in mag. fields 3–26702
H, electron momentum distrib., thought expt. 3–44930
H, energy levels inside paraboloidal box in elec. field, Stark effect 3–6575
H, ground state, struct., Wigner's phase space function 3–21631
H, ground state hyperfine transition line shifts, hyperfine-interaction noncontact term contrib. 3–21722
H, stimulated radiative corrections and shifts, energy level broadening 3–31968
H, stimulated radiative corrections, two-photon ionisation, Stark shifts 3–45876
H-H two-atom bosonic systems, spin-polarised, boson-fermion hybrid representation 3–46043
H-like atoms, in superstrong mag. fields, props. 3–41481
H-like atoms in arbitrary bound S state, static multipole polarisability 3–26634
H-like ions, quasi-Landau spectrum, two dimens. quantisation 3–1283
H-like ions, quasi-energy levels intersections, relativistic theory 3–45829
He atom, ground state trial functions 3–31962
He, Coulomb three-body problem, hyperspherical expansions 3–21621
He electron impact excitation, of 2^1P state, electron-photon ang. correl. 3–56086
He ground state, correlated one-parameter momentum space function 3–55812
He, ground state in momentum space 3–6522
He plasma, collisional-radiative mode and laser induced excitation transfer 3–21696
He^-, resonances below $n=3$ threshold 3–36649
He-like atoms, in superstrong mag. fields, props. 3–41481
He-like ions, Bethe-Salpeter eqn. ladder approx. 3–31915
He-like two-electron systems, third-order correl. energies for closed-shell systems 3–21620
He+K(Rb)(Cs), intramultiplet mixing, quantum calcs. 3–21853
^3He, 2^3P state, hyperfine struct. meas. 3–55825
I, $5p^4ns$ and $5p^4np$ $(n=6,7)$ configs., wave functions of intermediate coupling, energy levels, Lande factors 3–31949
In I, nsnp(n+1)p configurations 3–1292
In low-lying S and D levels, lifetimes meas. 3–55894
K, collisional m_J mixing and multipole relax. of 4^2P states, fluoresc. investig. 3–21698
Kr, electron impact excitation near-threshold 3–21923
Kr III energy levels and Kr $M_{4,5}NN$ Auger spectra, configuration interaction calc. 3–11763
La, F-level features, Dirac-Fock calcs. 3–31913
Li, ^2S autoionising states, energy positions and wavefunctions 3–11754
Li, avoided crossings and autoionisation widths in mag. fields 3–26702
Li, correl. electron density, density functionals and semi-empirical pseudopots. 3–11704
Li I isoelectronic sequence, var. wavefunctions 3–50317
Li, lowest $^2P_{1/2}$ state lifetime meas. 3–21725
Mg, 3^3P_J state, time-resolved emission kinetics following dye laser excitation 3–45879
Mg^{2+} $(2s2p^6nl)$, energy and width calcs. by ion-electron collision theory 3–41688
Mn II, lifetime meas. using laser excitation 3–21694
N I isoelectronic series, Cl XI to V X VII, $2s^m2p^n$-$2s^{m-1}2p^{n+1}$ intersystem transitions 3–1299
Na, kinetic and exchange energy terms, Thomas-Fermi-Dirac model 3–45845
Na small clusters, elec. and spin mag. moment 3–1517
Nb, excitation cross section 3–17238
Nd, L atomic levels, double-vacancy excitations, X-ray absorpt. spectra obs. 3–21691
Ne, $2p^54p$ config. level population, rel. to dissoc. recomb. of Ne_2^+ 3–50331
Ne $(2s2p^6nl)$, energy and width calcs. by ion-electron collision theory 3–41688
Ne atom, neutral, ground state, charge density 3–36649
Ne, electronic props. by Green's function calcs. 3–6512

atomic structure continued
Ne, struct. calc., symm. adapted pair function appl., third order correl. energy 3—11683
Ni in rare gas matrix, matrix induced change in electronic ground state 3—55883
O III, energy levels, visible and UV obs. 3—11734
O-like ions, 2-2 transition, relativistic calcs. 3—17235
Pd I isoelectronic series, I VIII to Ho XXII, reson. lines identification 3—32003
S I isoelectronic sequence, transition probabilities for forbidden lines in $3p^4$ configuration 3—45901
S XV, 2P state alignment by collision with C atoms in foil, X-ray meas. 3—26685
SI, VUV spectrum and ionisation energy 3—31993
Sr, interacting 5snd $^{1,3}D_2$ sequences, natural radiative lifetimes 3—50355
Sr, Rydberg series from metastable levels, one-photon laser spectroscopy 3—1270
Tl I, nsnp(n+1)p configurations 3—1292
U, relativistic Hartree-Fock-Dirac calcs. in Roothaan approx., one-electron wave functions and energies *(Russian)* 3—45877
U V, $5f^2$ state, spin dependent interactions 3—45831
V IV, 3d5g config., energy levels, HF, semiempirical calcs. 3—1252
Xe I, $5p^5 6s$ config. anal. using two-photon excitation techniques 3—11908
Xe III energy levels and Xe $N_{4,5}00$ Auger spectra, configuration interaction calc. 3—11763
Zn, principal series oscillator strength calc. by two-channel quantum defect method 3—32001
atomic structure, crystals *see crystal atomic structure*
atomic weight *see atomic mass*
atoms
see also exotic atoms; helium atoms; hydrogen neutral atoms; positronium
No entries
ATR tubes *see gas-discharge tubes; radar equipment*
attaching *see joining processes*
attenuation *see absorption; dispersion (wave); scattering; transmission*
attenuation measurement
optical fibres, attenuation meas. and extrapolation over longer distances 3—22244
optical fibres, single-mode, cutoff wavelength meas. technique 3—37229
rain, considerations for satellite paths in Australia 3—48587
SAW attenuation measurement in acoustic microscope 3—12460
attenuators
see also waveguide attenuators
common mode attenuator for interference reduction in seismic data 3—39925
self-setting attenuator for laser pulse energy stabilisation 3—41966
He-Ne laser beam intensity stabiliser 3—46252
attitude control
artificial satellites, despin through unity inertia ratio 3—48794
artificial spinning satellite gravitational orientation, dissipative mag. moment effect 3—35404
Earth observation satellite, control using momentum wheel and offset thrusters 3—15811
Earth-pointing structures with hybrid control system, dynamics 3—48796
fixed head star tracker, stellar colour index computation 3—48797
horizon sensor errors calculated by computer models, comparison with measured orbit performance 3—5089
magnetic control systems for Space Telescope 3—48795
Mapsat, detectors tracking and description 3—10187
spacecraft guidance and control, radiation hardened star scanner 3—40032
audio acoustics
see also audio recording; audio systems; hearing; speech
ambisonic technology modern concepts 3—7299
High Fidelity, subjective tests for distortion evaluation using stereo headphones *(German)* 3—7347
audio amplifiers *see audio-frequency amplifiers*
audio discs *see video and audio discs*
audio equipment
see also audio-frequency amplifiers; gramophones; loudspeakers; microphones; pick-ups; video and audio discs
equalisation and its effects 3—50841
flat response and room gain anal. 3—50842
LED peak VU meter 3—7360
octophony, three dimensional sound panning system 3—17768
sound engineering for theatre and film 3—45226
audio-frequency amplifiers
High Fidelity, subjective tests for distortion evaluation using stereo headphones *(German)* 3—7347
audio recording
see also video and audio discs
M-S stereo technique implementation 3—12482
motion picture sound, history in years 1927-40 3—56411
synchronisation by automatic digital methods of 8 mm film projector and stereo tape recorder *(Russian)* 3—50732
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$, metallic glass, properties and appl. test *(Polish)* 3—52543
audio systems
see also acoustic devices; acoustic equipment
ambisonic technology modern concepts 3—7299
High Fidelity, subjective tests for distortion evaluation using stereo headphones *(German)* 3—7347
auditory activity *see hearing*
auditory evoked potentials *see bioelectric potentials; hearing*
auditory perception *see hearing*
Auger deexcitation *see Penning ionisation*
Auger effect
adsorbed layer thickness determ. by AES 3—23171
AES, chemical information for surfaces and adsorbed species 3—39421
AES, quantitative, matrix effect correction 3—58008
AES intensity and energy calibration, effect of analyser modulation 3—8910
alignment in ionization by ion, electron and photon impact 3—41659
alkali halides, core-hole induced relax. processes and photon stimulated desorption 3—57232
alkali silicate glass, AES on fractured surfaces, comp. obs. 3—14903
alloys, amorphous, Auger spectra, effect of electron correlations in filled narrow bands 3—38969
Auger effect continued
angular momentum exchange in post collision interaction 3—50505
anodic oxide film on stainless steel, anodic oxide film, AES study *(Chinese)* 3—51899
appearance pot. spectroscopy *(Japanese)* 3—16450
atom-ion collisions, K X-ray yield associated with electron capture, reson. behaviour, review 3—41639
atomic alignment studies in inner-shell processes by heavy projectiles 3—41660
atomic Auger electrons angular distrib. and spin polarisation following photoionisation and photoexcitation 3—1327
background correction for AES peak height measurements 3—14402
backscattering factor, primary electron incidence angle depend. 3—43671
bicrystals, grain boundaries, struct. and mech. props., expt. studies *(French)* 3—46962
brass, atomically clean surfaces, produced by diamond scratching in Auger microprobe *(Japanese)* 3—33545
bulk diffusivity meas. surface segregation technique, Auger study 3—2876
C $Fe_{80}B_{20}$, amorphous and cryst., electronic props., EELS, AES, and X-ray absorpt. study 3—52876
carbide, low-Z fusion reactor materials, surface comp. changes with ion bombardment and heat treatment 3—21522
carbide materials, preferential sputtering due to light ion bombardment, fusion reactor relevance 3—26441
ceramics, contamination removal by Ar ion plasma cleaning, Auger evaluation 3—43989
core levels and valence bands of solids, electron spectroscopy studies 3—33657
core spectra, dynamic effects 3—36730
deep levels, excitation spectroscopy techniques, review *(French)* 3—33671
deposition on to Cu substrate by cold-plasma technique 3—19286
diamond, LEED modulated electron energy loss spectra 3—3883
electron backscattering correction in quantitative analysis, Monte Carlo simulation 3—14901
electron spectrometry, basic principles and equipment 3—19484
electron spectroscopy, surface analysis and surface reactions monitoring 3—29334
electrostatic charged particle spectrometer 3—26557
escape depths of characteristic electrons 3—25986
fast ions traversing foils, K-shell charge exchange, equilibration lengths 3—42660
few-electron recoil ions, X-ray and Auger electron emission 3—41663
film, vacuum evaporation, Auger analysis, electron inelastic mean free path, Monte Carlo simulation 3—51975
fracture behaviour of materials applic., review 3—14827
grain boundaries, conf., Caen, France (Sept., 1982) 3—44892
grain boundary segregation, AES study 3—53065
graphite: B(p)(As), ion implanted, lattice damage and implant distrib., SEM, STEM and AES study 3—2597
graphite monolayer adsorbed on Ir, AES study 3—2984
He scatt. and work function meas. 3—38214
heavy ion+atom collisions, information-theoretical description 3—41637
hot dip metallic coatings on steel strip, surface characts. 3—4176
infinite systems, eigenstate wave packets, XPS calcs. 3—3918
interfaces, LEED, AES, and angle-resolved photoemission meas. 3—43711
iodobenzene, ^{125}I labeled, electron capture, Auger ionisation after-effects 3—36852
ion Auger spectra, orientational effects due to recoil atoms 3—43699
ion-atom high energy collisions, electrons and X-rays angular distrib. 3—41646
isolated atom, collective effects in electron shells 3—32013
K- M M Auger-intensity peaks from double-hole energy-level crossings 3—45913
materials analysis using analytical electron microscopy and Auger electron spectroscopy 3—24545
matrix effects correction method for quantitative analysis 3—14904
metal film/halide systems, ambient-induced diffusion 3—18521
metal hydride surface studies, electrons as H probes, review 3—47199
metal surface chemical anal. appl. *(Polish)* 3—29350
metals, contamination removal by Ar ion plasma cleaning, Auger evaluation 3—43989
metals, many-body effects on $L_{23}VV$ Auger spectra 3—34180
metals and alloys, surface anal. *(French)* 3—47201
methyl iodide, ^{125}I labeled, electron capture, Auger ionisation after-effects 3—36852
microprobe techniques, computerised, for chemical mapping of rough surfaces 3—44076
minerals, mech. prepared pyrite and quartz, surface changes, electron spectroscopy and microscopy obs. 3—13608
modulation doped structs. using multi-step MBE and ion implantation 3—42630
molecules, electronic polarisability, analysis by X-ray electronic and Auger spectroscopy 3—46095
molecules, photoemission, reson. and threshold effects 3—41628
one-step description 3—19247
p-n junction analysis, Auger voltage contrast method appl. 3—52239
quantitative anal., electron backscatt. correction factors 3—52873
quantitative Auger anal. *(Japanese)* 3—34179
quantum well heterostructure, Auger recombination 3—47361
recording equipment using quasispherical analyser 3—10946
Ru (001), clean and O-dosed, adsorption of water, desorption, AES and LEED studies 3—38221
Rubber to brass bonding mechanism studied by electron microanalysis techniques 3—53356
scanning Auger electron microscopy, spatial resolution, math. model 3—54818
scanning Auger electron microscopy, topographical effects correction 3—40725
scanning electron microscope, quantitative interpretation 3—49513
secondary electron spectrometer with angular resolution for studying single-crystal surfaces 3—36128
SEM, Auger currents extraction from direct energy spectra, method 3—10968
SEM secondary electron image brightness changes under electron irrad., electron spectroscopy studies 3—10964
semiconductor, bound exciton Auger recomb., selection rules 3—3809
semiconductor, direct gap n-type, Auger recombination, Kane four band model 3—43204
semiconductor injection laser threshold characts., Auger recombination effect 3—17499

Auger effect continued
semiconductor injection lasers, threshold characts. associated with Auger processes 3—46218
semiconductor-metal interfaces, structure, geometrical and electronic, props. 3—18780
semiconductors, Auger recombination, role of dielectric screening 3—3225
Si_3N_4 films, low pressure CVD composition and oxidation resistance determ. *(Chinese)* 3—14498
slow recoil ions with few electrons, Auger electron and X-ray emission spectra 3—11931
solar concentrator cell arrays, comp. of low-strength solder joints, metallisation comp. 3—14955
solid state photoelectric and Auger transition, screening contrib. effect 3—28966
spark gaps, high energy, materials, chem. and phys. studies 3—27773
spectrometer, control and data acquisition using Apple II personal computer 3—31870
spectrometer, electron-optical system with cylindrical mirror 3—40724
spectrometry, practical applications and experience *(German, English)* 3—24064
spectroscopy using Zener diode circuit for background subtraction *(Japanese)* 3—478
sputter profiles convection, electron mean free paths, self-consistent determ. by electron spectroscopic methods 3—43683
steel, alloy, friction surface layers, AES and X-ray microanal. study 3—4147
steel, austenitic stainless, precip. of TiC on surface, AES study *(Japanese)* 3—9066
steel, austenitic stainless, segregation, grain boundary, AES study 3—34326
steel, austenitic stainless 304L, passive film props. correlation with susceptibility to SCC in chloride media 3—9220
steel, austenitic stainless AISI 314, ion bombardment pretreatment, oxidations obs. by AES and ellipsometry 3—43979
steel, Ni-Cr-Mo-V, tempered, Mn effect on P segregation kinetics 3—9067
steel, stainless, SUS-304L, surface struct. variation with heat treatment, SEM and AES study 3—42901
steel, stainless/C composite layers, C bonding AES lineshape anal. 3—58007
steel, ultrahigh strength, medium C, B addition effect on P grain boundary segregation and fracture 3—53070
steel wire, coatings of Cu, Ni and solder, scanning Auger anal. 3—3877
stimulated desorption from surfaces, Auger processes 3—57228
sulphides, integral area AES meas., quantitative comparison with XPS studies 3—14403
supported small metal clusters, electronic struct., XPS, AES studies 3—43251
surface anal., conf., Teddington, England (Nov. 1981) 3—5490
surface comp. from Auger electron intensities 3—8310
surface struct. and surface electronic struct. anal. by AES, review *(Chinese)* 3—43666
Teflon, X-ray emission spectra, radiative Auger emission from KL double hole states 3—3871
tetrachloromethane plasma, polymer film form. during etching of Al 3—24394
thin films, AES chem. analysis technique *(Hungarian)* 3—39422
threshold effects, comparison of process induced by electron and photon impact ionisation 3—45912
transitions, allowed and forbidden effects, LS calculations, computer models 3—36735
two-electron atom, energy-level shifts, adiabatic S matrix relativistic theory 3—31966
X-ray and atomic inner-shell physics, conf., Eugene, OR, USA (Aug. 1982) 3—40308
X-ray photoemission and Auger decay, one-step model 3—38998
XPS review, UPS, AES and ion scatt. spectroscopy 3—8940
Ag (100) and (110), adsorption of Pd, LEED, AES, photoemission, and work function meas. 3—19246
Ag film growth on polycryst. Au, Auger line shape changes 3—38970
Ag film on TlBr-TlI, adhesion failure, atmosphere induced, AES and electron microscopy study *(Russian)* 3—19507
Ag halides, surface analysis by Auger and electron energy loss spectroscopy 3—57186
Ag, muonic Auger electron lines determ. 3—1512
Ag-Au, sputtering effects, correction factors in quantitative AES 3—14425
Ag-based solid solns., grain boundary segregation and diffusion, AES and scanning radioactive anal. 3—47115
Ag_cPd_{1-c}, band struct. effects on Auger spectra 3—34178
Ag(110), Auger electron and X-ray photoelectron diffr., expt. and kinematic model 3—14399
Al (111), adsorption of O, low-energy current image diffr. study 3—2963
Al alloys, fracture crack growth behaviour in 2000 and 7000 series, influence of corrosion deposits 3—34463
Al, Auger electrons, escape depth, elastic scatt. effect, Monte Carlo calcs. 3—38971
Al, Auger linewidths for $L_IL_{II,III}V$ processes 3—19231
Al film growth on Si surfaces, LEED and AES study 3—33606
Al, heavy ion and electron collisions, Auger line shape 3—43689
Al, many-body effects on $L_{23}VV$ Auger spectra 3—34180
Al, reactive ion etching in tetrachloromethane-N_2 mixture, effect of added N_2 3—24393
Al, secondary electron emission after ion bombardment *(German)* 3—38995
Al, secondary electron emission under ion bombardment, 100-800 keV *(German)* 3—58024
Al surface, interaction with O, electron irrad. effect, AES study 3—18562
Al-Cu, 2021, fatigue crack growth, effect of environment 3—29149
Al-InP interface, cryst. and electronic struct. 3—23189
Al-Li alloy, fusion reactor first wall material, sputtering props., surface comp. and segregation 3—21521
Al-Pd_2Si-Si junctions, material reactions, phase stability 3—23104
Al-Pd_2Si-Si junctions, material reactions, kinetic rates 3—23105
Al-Si interface, chem. interdiffusion, AES study 3—33520
Al-SiC interface, AES and EELS study 3—33582
Al-SiO_2 interface, Auger depth profiling 3—28940
AlF_3, X-ray emission spectra, radiative Auger emission from KL double hole states 3—3871
Al_2O_3 and other Al-O cpds., Auger and XPS data 3—24063
Al_2O_3, wear in fine grinding hard metals, metal transfer 3—34492

Auger effect continued
Ar, inner-shell threshold excitation with synchrotron radiation 3—41510
Ar, L_1-L_{23}M Coster-Kronig spectrum 3—21659
Ar, L_{23}-MM Auger spectra, satellite struct. 3—1326
Ar, LMM Auger spectra, line sharpening effects due to post-collision interaction 3—21739
Ar+Kr(Xe)(Pb)(U) ions, X-ray and Auger transitions *(German)* 3—11761
Au epitaxial growth on Pd (111), transition from pseudomorphic to nonregistered state 3—47242
Au film, polycryst., grain boundary diffusion of K 3—3017
Au/a-Se/Al struct., aging effect of capacitance and photoelec. characts. 3—33802
Au-Cu, surface conc. of Au during low temp. sputtering 3—13604
Au-Cu alloy, quantitative AES, backscatt. factor, preferential sputtering exam. 3—14902
Au-Ge (111) interface form., AES, LEED, and electron microscopy study 3—38240
Au-Ge ohmic contacts to GaAs, role of Ge, phys. and elec. meas. 3—33793
Au-Pd binary alloy system SIMS obs. 3—3909
Be clean surfaces, struct. depend. stimulated de-excitation of Auger electrons 3—34182
Be^+, doubly and triply excited reson. Auger spectra 3—1325
Bi (0001), interaction with Cl_2, incipient $BiCl_3$ form. and decomp. 3—18563
C coating, arc conditioned, on Cu electrode, metallurgical characterization 3—3015
C+Ti(Cr), $^3P_2$ and $^4P_{5/2}{}^0$ states lifetime meas. in He, Li-like Ti and Cr 3—26698
CO, Auger line shape investig. 3—21831
$Cd_{1-x}Mn_xF_2$, energy levels, AES study 3—43668
CdS_xSe_{1-x} electrodes, photoluminescence and electroluminescence, appl. to photoelectrochem. cells 3—34153
CdSe, aged electrodeposited photoelectrodes in liq. junction solar cell, scanning AES study 3—29394
$CdSe_{0.65}Te_{0.35}$, chemical shift, XPS study 3—28964
CdTe/CuAu low resistance elec. contact, vacuum deposition prep. 3—18783
CdTe-HgTe multilayers, MBE growth, surface studies 3—8981
CdTe-InSb heterostruct., MBE growth and InSb surface passivation appl., AES study 3—39037
Ce, electron excited Auger and autoionisation spectra, comparison with resonant photoemission 3—3875
Co, adsorption of O, AES, work function and UPS studies 3—38222
Co, oxidation at room temp., SIMS, AES, XPS, and work function study 3—43992
Co-Cr perpendicular magnetic recording medium for mag. tapes *(Japanese)* 3—47531
$Co(CO)_3NO$, Auger line shape investig. 3—21831
CoO film, chem. composition and struct., Auger and electron microscopy study 3—8351
CoO selective absorber coatings high temp. degradation 3—53588
CoO:In, grain boundary segregation 3—24235
Cr, Auger electron emission coeff. meas. 3—26719
Cr dendritic needle crystals, FCC struct., electron diffr. and Auger study 3—3021
Cr thin film, sputter deposited on Cu, laser and ion beam mixing 3—57242
Cr/Cu layer system, Ar ion implantation-induced intermixing, Cr precipitation 3—2622
Cs, $M_{4,5}N_{4,5}N_{4,5}$ Auger energy shift study in free CsI mol. 3—45911
Cu (111), O-covered, adsorption and oxidation of HCN, AES, EELS, and thermal desorption study 3—23172
Cu, Auger electron emission coeff. meas. 3—26719
Cu/Ni thin film couples, low temp. interdiffusion 3—57148
Cu-based solid solns., grain boundary segregation and diffusion, AES and scanning radioactive anal. 3—47115
Cu-InP (110) interface, AES and photoemission studies of atomic and electronic struct. 3—58032
$CuInSe_2$, oxidation and oxide interface obs. using AES and XPS, comp. 3—14762
Cu_cPd_{1-c}, band struct. effects on Auger spectra 3—34178
Cu_2S/(Zn,Cd)S heterojunction solar cells, chemiplated, comp. depth profiles meas. 3—53540
F_2, KVV Auger spectrum, hole-hole correls. 3—56003
Fe (100), diffusion of C following halocarbon adsorption, AES and XPS study 3—42924
Fe, electron backscatt. and sticking coeff. anisotropy of gases 3—8915
Fe, epitaxial growth on GaAs (100) by MOCVD, LEED, Auger and FRM studies 3—13652
Fe, oxidised, sulfur diffusion in oxide grain boundaries 3—43983
Fe-based solid solns., grain boundary segregation and diffusion, AES and scanning radioactive anal. 3—47115
Fe-Cr, oxidation at 600°C, influence of prior oxide film 3—19448
Fe-Cr (3wt.%), oxidation, microstruct. invest. 3—34537
Fe-Cr-Ni surface, superlattice form. by interaction with H_2O, I_2 ans O_2 3—2942
Fe-P dilute alloys, diffusivity, surface segregation technique, Auger study 3—2876
Fe-Si-P, P solubility, AES study 3—42788
$Fe_{1-x}B_x$ amorphous films, magnetisation and comp. 3—57722
$Fe_{83}B_{17}$ glass, spin polarised Auger spectroscopy probe of mag. props. 3—28938
$Fe(CO)_5$, Auger line shape investig. 3—21831
FeO, clean and K-promoted, CO adsorption, UPS, AES and thermal desorption study 3—2976
FeTi (100) and (111) surfaces, LEED and AES studies 3—18541
Fe(001) surface, reaction with H_2S, AES and LEED study 3—2955
Ga-In eutectic alloys, solid and liq., sputtering, ion scatt., AES, and Rutherford backscatt. study 3—52885
$Ga_{1-x}Al_xAs$ epitaxial layers, Al conc., Auger spectroscopy, ion microprobe anal., photoluminescence meas. 3—23993
$Ga_{1-x}Al_xAs$ film, capillary liq. epitaxy 3—43776
GaAs (001) surface, MBE grown, initial Al growth, temp. and reconstruction depend. 3—18585
GaAs (001)c(2×8), interdiffusion and nucleation of Al monolayers, AES study 3—13626
n-GaAs, Au-Ge-based ohmic contacts, characts., Auger and SEM anal., ageing effects 3—52250
GaAs, chemical and electrical characterisation 3—23404

Auger effect continued
GaAs epitaxial film, heat treatment, ellipsometric and AES studies 3—14621
GaAs, etched (100) surface, Auger anal. 3—34181
GaAs photocathodes, electron diffusion, radiative and Auger recombination, luminesc. 3—34199
GaAs, surface dissociation by pulsed laser irrad., AES study 3—8095
GaAs surfaces (100), (110) and (111), laser annealed, LEED, AES and RBS studies 3—57197
GaAs:Sn, epilayers, low pressure metal-organic CVD growth using tetraethyltin Sn source, AES study 3—34236
$Ga_{0.29}In_{0.71}As_{0.61}P_{0.39}$/AnP laser diode, Auger recomb., free-carrier losses 3—12144
GaN-GaAs MIS structure, thin film passivation, interface state density study 3—52262
GdFe amorphous films, calibration for quantitative Auger analysis 3—28241
Ge (100), adsorption of O, thermal desorption, work function, AES and EELS studies 3—38224
Ge (100), adsorption of O on Na, K, Cs-covered surface, AES, EELS, thermal desorption and work function meas. 3—38225
Ge epitaxial layers, initial growth on GaAs (100), LEED and AES study 3—42978
Ge, non-equilib. carrier conc. depend. on laser excitation intensity *(Russian)* 3—38426
Ge/Si interfaces, depth profile and depth resolution evaluation, by KARMA technique 3—51965
Ge-GaAs (110) interface, preparation and electronic props. 3—13889
Ge(111), adsorbed Ag surface diffusion, AES study 3—57206
I, $M_{4,5}N_{4,5}N_{4,5}$ Auger energy shift study in free CsI mol. 3—45911
In-Pb(Sn), equilibrium surface composition, AES study 3—57195
InGaAsP, Auger recombination, phonon-assisted, theory 3—52813
InGaAsP lasers with lightly doped active layers, meas. of radiative recombination coeff. and carrier leakage 3—27049
InGaAsP photocathodes with negative electron affinity, surface comp. 3—24094
InGaAsP, photoexcited carrier lifetime and Auger recombination 3—43192
InGaAsP quantum well lasers, Auger recombination rates calc. 3—50662
p-InGaAsP solid soln., Auger recombination rate and luminescence 3—19186
InGaAsP-InP quantum-well heterostruct. lasers, Auger recomb. calc. 3—6980
InGaAsP-InP:Zn, Mg p^+-n abrupt heterojunction, LPE growth techniques 3—3971
InGaAsP-oxide interface, comp. profiles, AES ESCA and ion sputtering studies *(Chinese)* 3—38237
$In_{1-x}Ga_xAs_{1-y}P_y$ quantum well lasers, threshold current density, Auger recombination effects 3—27044
In_2O_3:Sn film, deposited by RF sputtering, struct. and props. 3—51983
InP Schottky barrier formation, influence of water adsorption, LEED, AES and photoelectron spectroscopy study 3—3316
InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3—18721
InSb, AES evaluation of cleaning and etching methods 3—43667
InSb film MBE on CdTe, double cryst. X-ray diffr. and AES obs. 3—34233
Ir-W:Th, Th segregation to grain boundaries in alloys containing 5-1000 ppm 3—47837
Kr $M_{4,5}$NN Auger spectra, configuration interaction calc. 3—11763
Li isoelectronic series, deexcitation in 1s2s2p state 3—32024
LiB_2 Auger spectrum 3—52874
$LiBH_4$, Auger spectrum 3—14405
$Li_2B_4O_7$, Auger spectrum 3—14405
LiBr, Auger spectrum 3—52874
Li_2C_2, Auger spectrum 3—52874
Li_2CO_3, Auger spectrum 3—14405
LiCl, Auger spectrum 3—52874
$LiCl.H_2O$, Auger spectrum 3—14405
LiF, Auger spectrum 3—52874
LiH, Auger spectrum 3—52874
Li_3N, Auger spectrum 3—52874
$LiNbO_3$:Ti optical waveguide fabrication using $(Ti_{0.65}Nb_{0.35})O_2$ as Ti diffusion source, AES study 3—41973
Li_2O, Auger spectrum 3—52874
LiOH, Auger spectrum 3—14405
Li_2S, Auger spectrum 3—52874
Mg, Auger linewidths for $L_1L_{II,III}V$ processes 3—19231
Mg, heavy ion and electron collisions, Auger line shape 3—43689
MgO:Ca, (100) cleavage surface, Ca segregation, low energy ion scatt., AES 3—51902
Mn, Auger electron emission coeff. meas. 3—26719
Mn-Zn ferrites, defects, grain boundary segregation, and secondary phases rel. to mag. props. 3—13240
MnZn ferrite, CaO segregation 3—42778
Mo (110), Auger spectra at 25°C 3—10946
Mo (110) adsorbed Cl superstructure, LEED and AES study 3—2945
Mo, secondary electron yield anisotropy 3—28941
Mo surface, N_2^+ bombardment, N diffusion in MoNx film, Auger effect study 3—28014
$Mo(CO)_6$, Auger line shape investig. 3—21831
$MoSi_2$ thin films, AES anal., ion beam effects in depth profiling 3—43669
N^+ ion beam, C-foil excited, K-shell vacancy fraction, target thickness dependence 3—21892
NO, Auger line shape investig. 3—21831
Na, Auger linewidths for $L_1L_{II,III}V$ processes 3—19231
NaCl layer on Ag (111), electron irrad. induced desorption, Auger and photoelec. studies 3—51918
NaF, X-ray emission spectra, radiative Auger emission from KL double hole states 3—3871
Na_2O-CaO-SiO_2 glasses, electron irrad., field-assisted Na migration 3—2894
$Nb_3Al_{1-x}B_x$, struct. and supercond. props. 3—2472
NbN superconducting film, reactive sputtering, methane effects on struct. and supercond. props., AES and X-ray study 3—52292
Ni (100), chemisorbed O, phase diagrams, LEED and AES study 3—57220
Ni (111) with C monolayers, reversible step arrangement and segregation 3—8326
Ni alloys, Auger spectra correlation effects 3—52872

Auger effect continued
Ni alloys, dil., multiplet splitting in high-polarity states, effect on magnetism, Auger study 3—28939
Ni alloys, electronic struct., X-ray photoelectron spectra 3—52024
Ni, Auger electron emission coeff. meas. 3—26719
Ni, surface segregation of S, quantitative anal. Auger electron spectroscopy *(French)* 3—33566
Ni, X-ray emission spectra, K series, high resolution study 3—14393
Ni-Cr thin film, sputter deposited on Cu, laser and ion beam mixing 3—57242
Ni-Cr-(Sb, Zr) alloy, creep fracture, Sb and Zr traces effect 3—47964
Ni-Pt alloy, quantitative Auger analysis, preferential sputtering, matrix effects correction 3—14904
Ni_3Fe, surface composition of (100) and (110) faces, influence of S *(French)* 3—28198
NiO, Al_2O_3 supported, solid state prop. study, catalytic activity 3—29333
$NiSi_2$ epitaxial films, electronic and atomic struct., LEED, Auger and photoemission studies 3—33630
Pb cpds., chemical-state shifts, Auger line XPS study 3—28965
$PbS_{0.1}Se_{0.9}$, intrinsic, recombination, depend. on doping conc. and excitation level 3—52174
PbSe-like semiconductors, second-order Auger recomb. processes 3—43201
$Pb_{0.78}Sn_{0.22}Te$, intrinsic, recombination, depend. on doping conc. and excitation level 3—52174
Pd (110) adsorbed CO, electron spectroscopy by He atom impact 3—3908
Pd, adsorbed on Si (111), surface struct., ion scatt. spectroscopy and LEED-AES study 3—33562
Pd alloys, electronic struct., X-ray photoelectron spectra 3—52024
Pd-Si (100) and (111), surface reaction, ion beam anal. and AES study 3—42857
Pd-Si (111) system, low energy EELS and AES study 3—3885
Pt (100) and (111), adsorbed layers of solvents and electrolytes, struct. and comp., LEED and AES study 3—13640
Pt (111), surface oxidation, role of Al, AES study 3—39305
Pt (321) kinked surface, adsorption O_2 and O, thermal desorption, EELS, and AES study 3—42929
Pt, chemisorption and growth of Ag and Au monolayers AES, desorption, and LEED study 3—8334
PtSi formation at Si/Pt interface, substrate damage and impurity effects 3—2988
Sb thin film nucleation and growth, Auger-electron spectroscopy 3—13670
Sb-Pt/Si p-n junction form. by laser processing 3—57421
Si (100), reaction with N atoms, thermal desorption, AES and EELS studies 3—38219
Si (111), Ge adsorption, struct. and electronic props. 3—18539
Si (111) cleaved surface, adsorption of O_2, AES study 3—14400
Si (111) surfaces, H adsorption, Auger study 3—14401
Si amorphous solar cell, electrode element distrib. near contacts and junction layers 3—53536
Si, annealed, bulk material dislocation-free, O and C precipitation study *(Chinese)* 3—33439
Si as modified by O_2 exposure, electron spectroscopy 3—14404
Si, chemical and electrical characterisation 3—23404
Si, electron-hole correls. under uniaxial stress 3—43035
Si epitaxial growth on SiO_2 by Si mol. beam reactive etching, AES, RHEED and SEM study 3—8354
Si, heavy ion and electron collisions, Auger line shape 3—43689
Si, ion-induced Auger electron emission 3—3893
Si, multilayer structures, current-voltage characts. at high current densities, Auger recomb. 3—8571
Si, nitridation, ellipsometry and AES studies 3—4160
Si, p^+-n-n^+ multilayer struct., Auger recomb. at high current densities, I-V meas. 3—18772
Si Schottky contacts on n- and p-type surfaces, props. 3—52251
Si, solar grade, impurity segregation at grain boundaries and other comp. inhomogeneities 3—51812
Si substrate, silicide form. resulting from interfacial reaction with Ir-V films 3—18520
Si surface, (111), adsorbed Pd, surface superstruct., LEED-AES and ion scatt. spectra 3—51922
Si surface, anisotropically etched, scanning Auger electron microscopy, topographical effects correction 3—40725
Si surface, ion and electron excitation, Auger effect 3—8923
Si:Au, minority carrier lifetime, recombination mechanisms 3—3219
Si:B, single step doping by UV laser, Auger electron analysis, spreading resist. obs. 3—42634
Si:H, amorphous, Auger line shape anal. of struct. 3—24065
Si:H, amorphous, recombination, spin depend., ODMR study 3—3594
Si:H amorphous oxidised film, characterisation using Auger and UPS methods 3—18578
Si/Fe_2O_3 photoanode with negative flatband potential, XPS and AES studies 3—52244
Si/SiO_2 interface state, effect on MOS props., C-V characts., trap activation 3—47430
Si-Al_2O_3 interface, depth profiles, AES electron beam excited plasmon-loss features 3—8345
Si-Au, laser beam annealing of interface, diffusion 3—42657
Si-Pd interface, EELS and AES study 3—23191
SiC, tribological props. and surface chem. to 1500°C, XPS and AES obs. 3—53244
SiC, wear in fine grinding hard metals, metal transfer 3—34492
SiC:Al(B), sintered, microstruct., inclusions, comp., STEM, AES, X-ray analysis 3—39077
Si_3N_4, mechanochem. polishing, AES study 3—9207
Si_3N_4 thermal films, LPCVD, characterization by optical methods 3—28914
SiO_2 and other Si-O cpds., Auger and XPS data 3—24063
SiO_2 film, thermal nitridation 3—19435
SiO_2 films, thermally nitrided, N distribution, AES, IR and etching studies 3—51976
SiO_2 thin films, selective deposition in acid baths 3—3978
SiO_2, ultrathin layer on Si, AES and ellipsometry study *(Chinese)* 3—38241
SiO_2-Na_2O-Fe_2O_3-B_2O_3-TiO_2-CaO-MnO_2-Li_2O-Al_2O_3 glass surfaces, ion depletion during Auger anal. 3—14398
SiO_xN_y films, low press. CVD growth, Rutherford backscatt., AES and optical study 3—52964
Si(111), nitridation by N atoms, LEED, AES, EELS and thermal desorption studies 3—38218
Sn film growth on Si surfaces, LEED and AES study 3—33606

Auger effect continued
  $SrFe_{12}O_{19}$, defects, grain boundary segregation, and secondary phases rel. to mag. props. 3—13240
  Ta (100) surface struct. and H adsorption, LEED and AES study 3—38177
  ^{99}Tc, AES study 3—24066
  ThF_4 film as laser mirror coating, surface microanalysis characterisation 3—18535
  Ti and alloys, surface segregation of impurities or alloying elements, AES 3—14785
  Ti, B implanted, cavitation erosion behaviour 3—58257
  Ti oxide coated, sputtering yields, laser fluoresc. and AES obs., oxidised surface influence 3—26443
  Ti, resonant electron emission, UPS, EELS, and AES study 3—39010
  Ti-Al-V (6,4 wt.%), sintered, characterisation of fracture surface, pores and inclusions 3—24237
  Ti-Al-V B implanted, cavitation erosion behaviour 3—58257
  Ti-Si and Ti-SiO_x-Si systems, silicide and Schottky barrier form. 3—3289
  TiO_2, resonant electron emission, UPS, EELS, and AES study 3—39010
  $TiSi_2$ amorphous thin film, elec. resist. and crystallisation 3—3187
  $TiSi_2$ films, formation and elec. cond. 3—42979
  U, Auger MNN spectrum 3—3876
  ^{234}U, 43.48 keV transition internal conversion, L shell double vacancy formation 3—21255
  V_6O_{13}(001) surface, K segregation, low energy in ion scatt. study 3—8927
  W (110), adsorption of S, AES, LEED, work function, and thermal desorption meas. 3—23180
  W dispenser cathode, surface studies by AES, UPS, and XPS 3—13599
  W, electron backscatt. and sticking coeff. anisotropy of gases 3—8915
  W(110), adsorption of Se, AES, LEED, work function and thermal desorption meas. 3—38216
  Xe, inner-shell threshold excitation with synchrotron radiation 3—41510
  Xe $N_{4,5}$00 Auger spectra, configuration interaction calc. 3—11763
  Yb, atomic and solid, 4p and 4d Auger spectra 3—43670
  ZnSe, N^+ implanted, radiation damage wrt dosage and annealing 3—33314
  Zn(0001) surface, interaction with adsorbing SO_2, RHEED, LEED, AES study 3—47217
  $ZrC+O_2$, reaction, Auger spectrosc., characteristic energy loss and work function meas. 3—34648
Auger electrons *see Auger effect*
Auger recombination *see Auger effect; electron-hole recombination*
Auger showers *see cosmic ray showers and bursts*
Auger spectra *see Auger effect*
Auger spectroscopy *see Auger effect*
augmented plane wave calculations *see APW calculations*
aurora
  see also airglow; atmospheric electron precipitation; atmospheric proton precipitation; atmospheric spectra
  activity, use of jam jar magnetometer as warning device 3—30078
  altitude of aurora controlled by solar activity 3—44601
  arc fluctuations and fadings prior to substorm onset 3—20163
  artifical aurorae, brightness profiles 3—35335
  artificial LF radiation generation by auroral ionospheric currents 3—39945
  bifurcated structure of aurora seen from DE-1 satellite 3—15683
  break-up event, rocket and ground-based obs. 3—54181
  breakup, rel. to morphology of spatial patterns in Pi 1-2 pulsation activity 3—35375
  discrete auroras, assoc. elec. field and electron accel. 3—15717
  westward electrojet rel. to FAC and diffused auroral precipitation 3—35348
  F-region of auroral ionosphere, electron and ion velocity distribution functions, incoherent radar wave scatt. 3—30115
  field-aligned currents associated with auroral arcs 3—30121
  general nature 3—25258
  IR emission spectra of IBC class III event, HIRIS obs. 3—59148
  N Norwegian geomagnetic phenomena, communication effects *(Norwegian)* 3—35336
  polar aurorae, O I 630 nm emission 3—35334
  polar cap arc optical emissions and electron precipitation 3—54180
  polar cap arcs and magnetosphere open regions 3—54203
  pulsating aurora, fast motions in auroral patches 3—10115
  pulsating aurora, pulsing hiss and micropulsation correlations 3—20164
  pulsating aurora, rel. to morphology of spatial patterns in Pi 1-2 pulsation activity 3—35375
  pulsating aurora correl. with Pi 1 and riometer obs. 3—35371
  quiet auroral arcs, equilib. motion 3—15678
  radar echoes, reduction of inherent noise in double-pulse Doppler technique 3—48761
  radar experiments, interpretation using kinetic theory of two-stream instability 3—48763
  radiowave transmissions effect *(Norwegian)* 3—35360
  remote sensing using satellite-borne limb-scanning UV spectrometer 3—15806
  SAR arc associated heated electron population obs. 3—15680
  SAR arc event characts. and electron precipitation 3—15682
  SAR arc influence on thermosphere winds and temp. 3—15681
  SAR arc obs. on 20 and 21 Oct. 1981 by DE-1 satellite 3—15679
  spectral emission, remote sensing using field-widened interferometer spectrometer 3—10084
  three-dimensional current system assoc. with auroral breakup, correl, with Pi 2 characts. 3—39973
  near UV optical emissions from midday cusp and night aurora 3—44602
  N II emissions in midday aurora assoc. with nightside substorm 3—59149
  N_2, intersystem collisional excitation transfer in low altitude auroras 3—56056
  N_2, synthetic spectra calc. for aurora and matrix isolation conditions 3—35332
  O I 989- and 7990 angstrom emission spectra 3—10111
auroral ionisation *see aurora*
austempering *see heat treatment*
austenitic stainless steel
  alloy type, electron irrad., low-temp. ductility, irrad. effect on martensitic transform 3—19384
  aluminised coating, struct. and phase comp. 3—53282
  annealed and cold worked AISI 304, notch effect on low-cycle fatigue 3—58246
  anodic oxide film, AES study *(Chinese)* 3—51899
austenitic stainless steel continued
  carburisation during oil quenching, method of prevention *(Japanese)* 3—29211
  cavitation erosion resistance of two martensitic, two austenitic and three ferritic stainless steels 3—19426
  cold worked, irrad. creep, effect of flux and temp. gradients 3—28011
  cold worked, irrad. creep, stress and stress transient effects 3—28009
  cold-drawn, heavy ion irrad., radiation-induced recrystn. 3—28010
  constructional, corrosion and low-cycle corrosion fatigue resist., boric regulation influence 3—58305
  corrosion by $Cr+Li_3N$ reaction, X-ray powder diffr. study 3—58289
  corrosion by hydrogenation, mechanism in steel containing stress-induced martensite *(Japanese)* 3—24400
  corrosion fatigue in boiling conc. NaOH 3—34539
  corrosion in H_2-H_2O-H_2S gas mixtures, study at constant temp. and fixed O_2 potential 3—53279
  corrosion resistance, after high temp. thermomech. working 3—29219
  corrosion resistance, mech. props., influence of Mn:Ni ratio 3—9244
  corrosion resistance, P content effect on type 18-10 *(French)* 3—47988
  crack growth, slow, effect of H conc. 3—14714
  cracking and microstruct. development under time dependent fatigue modes in type AISI 304 3—58245
  creep, elevated temp., relationship between internal stress and struct. 3—34417
  creep, high temp., division from point of view of dislocation struct. 3—14671
  creep, tensile and fracture props. 3—34395
  creep, transient, rel. to dislocation structure, electron microscopy *(Czech)* 3—34389
  creep behaviour, pre-ageing effect 3—47927
  creep behaviour of type 316 base and weld metals in LMFBR 3—55159
  creep characteristics and self-diffusion coeffs., simultaneous meas. *(French)* 3—29137
  creep crack growth tests 3—4135
  creep deformation and fracture, small angle neutron scatt. and TEM study 3—53153
  creep limit, effect of reactor irrad. 3—43905
  creep rate, effect of grain size, invest. at 873 and 973K 3—47900
  creep resistance rel. to reactor irrad. 3—43898
  creep-fatigue interaction in notched specimens, 500°C *(Japanese)* 3—58211
  creep-fatigue properties, for high temp. service 3—24360
  crevice corrosion in sea water service conditions *(Japanese)* 3—58295
  cyclic plasticity with a nonhardening strain region in type 304, constitutive model 3—32629
  cyclic recrystallisation after deformation 3—29101
  deformation, axisymmetric, bulk strain and grain strain 3—53118
  deformation, low temp., 21Cr-6Ni-9Mn, struct. changes 3—53146
  diffusion coeff. of C, determ. by internal friction method *(Korean)* 3—2873
  duplex scale form., kinetic model of oxidation 3—4197
  dynamic recrystallisation during hot plastic deformation, kinetics 3—24270
  elevated temp. transient isotropic hardening, microstruct. based eqn. 3—47919
  elevated temperature deformation, grain size depend. 3—47925
  erosion or penetration by molten Zn, Zn vapour or ZnO, of unstressed type 304L 3—39295
  extruded pipes, texture effect on reliability of US testing 3—44035
  fatigue, time-depend., correl. with substruct. 3—4122
  fatigue crack propag., elevated temp., deform. 3—24344
  fatigue crack propag. charact. under repeated impact loading of type 18-8 3—53231
  fatigue failure mode, electron microscopy, soln. heat treated material 3—53233
  fatigue fracture and creep with cracks for type 304 steel *(Japanese)* 3—39195
  ferromagnetic martensite surface layer anal. by electron diffr. 3—47540
  films, tensile cracks, in situ obs. in HVEM 3—19392
  fracture criterion, kinetic, for combined low cycle and quasistatic loading 3—43957
  fracture strength with flaws, residual stress effect in type 316 3—57025
  fusion reactor components, He implanted, trapping and surface permeation of D 3—17038
  fusion reactor first wall, blistering on He ion bombardment 3—21512
  fusion reactor material, implanted D retention and release, dynamic meas. 3—21505
  grain boundary energy and extrinsic grain boundary dislocations, spreading time and temp. 3—13239
  H-assisted cracking, types 304L and 316L, grain size and heat treatment effects 3—19396
  He bubble growth in type 316 steel *(German)* 3—8077
  He embrittled, modelling high temp. mech props, 3—19398
  heat resistant, cyclic deformation resistance rel. to reactor irrad. 3—43897
  heat treatment, computer modelling 3—4057
  high N, struct. and mech. props., effect of V 3—53093
  hot embrittlement in heat affected zone of welded joints *(German)* 3—53097
  intergranular corrosion, review of type 304 3—14772
  intergranular SCC in fission reactor steels 3—24418
  internal friction peak, H-induced, effect of plastic deform. 3—9112
  internal friction peak due to α' martensite, low temp. deform. 3—9110
  internal friction peak due to stress-induced α' martensite 3—43878
  internal stresses in type 316, rel. to cathodic charging with hydrogen, X-ray obs. 3—39232
  ion bombardment pretreatment, oxidations obs. by AES and ellipsometry of type AISI 314 3—43979
  irradiated, high temp. ductility 3—29159
  irradiated fatigue characteristics for type 304 in fission reactor 3—41145
  isotropic hardening, separate roles of subgrains and forest dislocations 3—24256
  JRC fusion materials programme in-pile creep and fatigue facilities 3—55691
  martensite, strain-induced, nucleation and evolution 3—39117
  martensite formation and reversion, ϵ and α' types 3—43811
  martensite formation in type 304 at grain boundaries, EM obs. 3—34308
  martensitic transformation, heavy ion implantation induced 3—42680
  martensitic transformation, N ion implantation effects 3—4039
  mechanical properties, joining and applications 3—53072
  membrane, re-emission of implanted D^+ from back surface 3—17047
  metastable, H induced martensitic transform. and twin form. 3—43806

austenitic stainless steel continued
- metastable, kinetics of α'-martensite form. during fatigue deform. 3—39243
- microstructure, quench and deform. induced. TEM and electron diffr. study. 3—24309
- neutron irradiation effects, C content effect on damage 3—26324
- optical consts. and spectral selectivity 3—3663
- oxidation, high temp., under tensile stress *(Japanese)* 3—58291
- partially martensitic, sensitisation at very low temps. 3—19451
- passivation rate, in warm $MgCl_2$ solutions, quantitative approach *(French)* 3—24386
- passive film props. correlation with susceptibility to SCC in chloride media of type 304L 3—9220
- plastic-creep deformation of type 304, unified self-consistent theory 3—32630
- powder, hot ductility and recrystn., effect of oxide inclusions 3—58159
- precipitation of TiC on surface, AES study *(Japanese)* 3—9066
- punched specimens, for TEM obs., deform. twins 3—14815
- reactor irradiated, low cycle strain with holding 3—43904
- repassivation kinetics role in pitting potential meas. by scratch method in type AISI 304 3—9217
- salt uptake from high press. superheated steam by Type 316 steel, radiotracer obs. 3—34522
- SCC, high temp. aq. environment, impurities and supporting electrolyte effects 3—58275
- SCC and polarisation behaviour, effect of appl. stress *(Japanese)* 3—4194
- SCC in acidified chloride soln. rel. to martensite transformation 3—58277
- scratched type 304L, passivating film growth in alkaline soln. 3—39282
- segregation, grain boundary, AES study 3—34326
- sensitised, SCC in thiosulphate solns. 3—24403
- short-range ordering kinetics, elec. resist. changes 3—23073
- sintered powder metallurgy, corrosion resistance, methods of improvement 3—9213
- solidification mode, effect of solidification conditions 3—53041
- steel, durability, under thermal cycling, based on creep results 3—13320
- strength, creep and heat resistance in alkali liquid Na of type 10Kh18N9 3—14673
- stress corrosion cracking detect. using continuous modulus meas. 3—53305
- stress relaxation, cyclic, effect of reactor irrad. 3—43881
- structural changes during stength tests of neutron irrad. type Kh18N10T steel *(Russian)* 3—39235
- superalloy A-286, additive strengthening 3—9081
- texture and US velocities, neutron diffr. study 3—47849
- transient creep, 873 to 1023K *(Czech)* 3—14656
- turbogenerator rotor endwinding retaining rings of austenitic steel, SCC monitoring by acoustic emission 3—34603
- type 304, implemented D movement, simulated fusion reactor conditions 3—17049
- type 304 and 316, He^+ irrad., surface roughness factor of blistered and exfoliated surfaces 3—21513
- type 304LN, D trapping and re-emission, fusion reactor wall relevance 3—17044
- type 304LN, He damaged, D retention and detrapping energy 3—17050
- type 316, fatigue failure, effects of multienergy ion bombardment, neutron irrad. and stress/temp. cycling 3—24336
- type 316, H ion impact desorption of adsorbed D, SIMS obs. 3—21516
- void swelling, C and N effects, in-situ HVEM study for type 316 steel 3—39159
- weld fracture, H-assisted, effect of comp. and microstruct. 3—34465
- weld joints, corrosion damage in seawater 3—58309
- welds, solidification modes, effect of Mn and N 3—34291
- welds, texture, US vel. studies, theory 3—19474
- Cr-Ni, oxidation of C and alloying elements, thermodynamic anal. 3—34549
- Cr-Ni (15, 15 wt.%), ion irradiated, void-assisted grain boundary migration 3—33313
- Cr-Ni-Mn unstable, damping power, vibr. fatigue strength 3—19420
- Cr-Ni-Mo, ferritic-austenitic, corrosion fatigue in NaCl aq. soln. *(German)* 3—4178
- Cr-Ni-Mo (16,12,2.5 wt.%), steady state creep meas. *(Czech)* 3—58172
- Cr-Ni-Mo-Ti, shaped castings, intermetallic phases struct. and props. 3—29114
- Fe-Cr-Ni, high-purity, comp. depend. of martensitic transform. temp. 3—39146
- Fe-Ni-Mo-C, high M_s temp., stress and strain effect on martensitic transform. 3—39147
- H embrittlement, tempering effect, austenite content 3—34449
- H-induced phase transform. effect of X-rays 3—33300
- H_2 permeation 3—23100
- Mn, martensite nucleation mechanism, lattice stability, stacking fault energy 3—34304
- Mn, tensile props., effect of H 3—24349
- Mn-Cr-Ni, fatigue crack propag. influence of gaseous environment 3—14707
- Mn-N, Ni-free, low temp. mech. props., effect of N *(Korean)* 3—39242
- Mo, Z 3—39293
- N strengthened, Bauschinger effect 3—43891
- Nb-stabilised, ageing, carbide precip., grain boundary Cr-depleted zones, STEM and EDX 3—53062
- Ti modified, void swelling due to C^+ ion bombardment 3—22947
- Ti, pitting during anodic polarisation in methanolic-H_2O solns. 3—19446
- Ti stabilised, neutron irrad., microstruct. 3—28001
- Ti-modified, oxidation in low O_2 partial press. 3—4203
- Ti-stabilised, ageing, carbide precip., grain boundary Cr-depleted zones, STEM and EDX 3—53062

austenitic steel
- *see also austenitic stainless steel*
- bainite reaction, overall transformation kinetics 3—39115
- bainite transformation, incomplete, TEM and atom probe determs. comparison 3—39116
- bainite transformation, interface mobility 3—39114
- carbide phase morphology, deform. rate and austenite temp. and degree effects *(Ukrainian)* 3—14611
- corrosion crack initiation, method for determ. under biaxial tensile stress 3—9277
- decomposition of residual austenitic, rel. to H liberation 3—34276
- dispersion hardening, shock loading effect on struct. and props. 3—53074
- fatigue and creep crack propag. at elevated temps. *(Czech)* 3—58227
- fatigue crack growth parameters, strain intensity and cyclic J integral 3—56488

austenitic steel continued
- fatigue fracture, at 293 and 11K, influence of microstructure 3—4104
- fracture mechanisms evaluation, cracks for LMFBR materials 3—24455
- high-C, metastable, stress-thermal treatment *(Russian)* 3—58134
- joints, US monitoring, noise immunity of radio devices 3—53338
- liquid metal embrittlement by molten Rb, radwaste container test 3—58196
- martensitic transformation, rel. to stress intensity coeff. *(Russian)* 3—24224
- mechanical props. at low temp., H_2 effects on type SUS 304 *(Japanese)* 3—9160
- metals, FCC, critical strain hardening, grain growth, dislocation struct. *(French)* 3—58133
- Mn, plastic zone at tip of fatigue crack, X-ray diffr. study *(French)* 3—9143
- plane specimens, endurance prediction with combined forms of loading on type 30KhGSA 3—47905
- plastic flow behaviour, constitutive relations during strain-induced martensitic transform. 3—39222
- precipitation of excess phases during ageing of deformed 13Kh18N10G352M2 *(Russian)* 3—24233
- solid solution hardening, interstitial 3—29097
- stress corrosion cracking in $MgCl_2$ soln., effect of N_2 and P 3—39274
- stress relaxation of thermomechanically hardened crystals, expt. study *(Russian)* 3—34381
- thermodynamic properties rel. to corrosion 3—2851
- thermomechanical hardening, experiment planning optimisation methods 3—58135
- vacancy condensation after low rate coding of P doped austenite *(French)* 3—22886
- void density effect on dislocation bias during electron irrad. of type FV548 3—18348
- void swelling theory, continuous gas generation effects 3—37895
- Cr-(Ni)-Mn, fatiguq fracture in liq. N_2 3—34474
- Cr-Ni, creep and elongation, low cycle fatigue tests *(German)* 3—4095
- Cr-Ni welds, hot cracking, influence of primary and secondary structs. 3—19408
- Fe-Cr-Mn-C steel, electron interactions, Mossbauer sub-spectra interpretation 3—8743
- Fe-Cr-Mn-N steel, electron interactions, Mossbauer sub-spectra interpretation 3—8743
- Fe-Cr-Ni-C steel, electron interactions, Mossbauer sub-spectra interpretation 3—8743
- Fe-Ni-Cr, dislocation loops at twin boundaries, ion-irrad. effects 3—2565
- Mn, martensite nucleation mechanism, lattice stability, stacking fault energy 3—34304
- Mn-Al, high-alloy, struct. and mech. props., room and cryogenic temps. 3—39244
- Mn-Cr-N, interstitial solid soln. hardening, yield stress *(German)* 3—29096

austenitising *see heat treatment*

Autler-Townes effect *see Stark effect*

autoalignment model *see Hanle effect*

autoionisation
- *see also Auger effect*
- acetylene, auto- and photo-ionisation, const., PES study 3—32137
- alkaline earth metals multistep excitation to autoionising states 3—11753
- atom, laser-induced autoionisation, photon spectrum 3—41537
- atomic two-electron transition autoionisation state width computation using model-pot. method 3—1317
- atoms, autoionising states, level shift calc. 3—45904
- atoms, four-wave mixing under double-resonance conditions 3—26701
- atoms, multiphoton ionisation, nonperturbative methods 3—26715
- atoms, sub-laser linewidth autoionisation rates, spectroscopic meas. 3—11752
- autoionising atomic states, reson. interaction with EM field 3—1275
- autoionising state, multiphoton ionisation, reson. harmonic generation, intensity saturation effects 3—55901
- autoionsing-like states, spin polarization by selective laser-induced interference 3—55903
- configuration mixing electric and magnetic field effects, review 3—26676
- dressed-atom continuum resonances 3—31975
- fluorescence induced by resonant multiphoton ionisation near an autoionising state 3—1296
- methyl bromide, partial photoionisation cross sections using spin polarisation PES 3—26795
- multiphoton ionisation and autoionisation, laser intensity effect on config. interaction 3—21734
- multiphoton ionisation spectroscopy, laser-induced continuum struct. 3—11766
- negative ions, search of excited states lying above ground state of neutral atom 3—21647
- photoemission spectra in intense laser field induced autoionization 3—1318
- population trapping in the laser excitation of a realistic autoionising level 3—1320
- two-electron systems autoionising state, excitation energy and excitation widths 3—6585
- two-electron threshold escape rel. to autoionising states 3—26704
- water, electrical conductivity under shock loading up to 40 GPa 3—51836
- β^+-decay of nucleus, atomic K-shell excitation 3—36357
- $2r^{3+}$, electron impact excitation-autoionisation, distorted wave approx. with exchange 3—41686
- Al, ^2D absorption spectrum, multichannel quantum defect theory anal. *(Chinese)* 3—41528
- Ar^{3+}, electron impact ionisation absolute cross section meas. 3—46076
- B^-, bound state, electron correl. calcs., radiative autoionis. 3—45832
- B^{2+}, doubly excited states, configuration interaction method 3—26645
- Ba, 5d7d state, forced autoionis. 3—26703
- Ba, $6p^2\ ^1S_0$ autoionised level studied using two-step optogalvanic spectroscopy, oscillator strengths 3—11730
- Ba ($6p_jns_{1/2}$) states, electron ejection, energy and ang. distribs. 3—55904
- Ba, doubly-excited autoionising state spectroscopy using thermionic double-diode detector 3—36102
- Ba, multistep excitation to autionising states 3—11753
- Ba, photoexcitation, overlap-integral variation interferences, IR obs. 3—11729
- Ba^+ laser, photo-autoionisation pumped 3—12118
- Ba^+, optical inverted, 4-wave parmetric mixing, coherent radiation generation 3—12131
- Ba^{2+}, Rydberg spectra, correl., term depend. and autoionis. 3—21733

autoionisation continued
- Be III, decay channels of $(2,3c)^3P^0$ and $(2,4c)^3P^0$ levels 3−26667
- Be^+, doubly excited states 3−31977
- Be^+, electron impact ionisation cross section 3−46077
- CO_2, vibr., autoionisation, UPS study 3−32134
- CO_2^+, fluoresc. polarisation as mol. autoionisation probe 3−11900
- Ca, autoionisation reson., elec. field effect 3−32011
- Ca, optically forbidden ionic states, excitation and electronic decay of autoionisation states 3−11755
- Cd, 12.81 eV autoionising level, electron impact excitation 3−11984
- Ce, electron excited Auger and autoionisation spectra, comparison with resonant photoemission 3−3875
- Cs^+, Rydberg spectra, correl., term depend. and autoionis. 3−21733
- DCl, autoionisation, vibr. excitation, UPS study 3−36816
- DCl, vibronic transition ionisation energies, photoelectron spectroscopy study 3−41621
- Fe XXV (XXVI), autoionising states, resonant dielectronic satellite lines anal. *(French)* 3−41526
- Gd, autoionisation reson., elec. field effect 3−32011
- H, avoided crossings and autoionisation widths in mag. fields 3−26702
- H_2, doubly excited autoionising states, ab initio. pot. curve calc. 3−36703
- H_2, doubly excited autoionising states, ab initio calcs. 3−41629
- H_2, two-photon autoionisation, cross section and line shape 3−26793
- HCl, autoionisation, vibr. excitation, UPS study 3−36816
- He autoionising states widths, var. calc. using complex coords. 3−55902
- He, ground state, photoionisation cross section 3−1321
- He I, absorpt. spectrum line oscillator strengths in 190-600 Å region 3−1309
- He^+, $^1P^o$ reson. below $n=4$, oscillator strengths, autoionising levels 3−11902
- He-like ions, isoelectronic series, dielectronic recombination rate 3−26845
- $He+H_2$, pot. energy surfaces relevant to Penning ionisation 3−1466
- $He+N^{7+}(O^{7+})$, two electrons capture into autoionising states 3−11966
- He^++He, ang. distrib. of ejected electrons from 20 keV, autoionisation states 3−11967
- He^++He collisions, autoionisation transition interference, electron distrib. 3−26829
- He^++Ne, autoionisation electrons from $Ne(2p^43s^2)^1D$, ang. distrib. 3−11968
- Hf^{3+}, electron impact excitation-autoionisation, distorted wave approx. with exchange 3−41686
- Hf^{3+}, electron impact ionisation, excitation contrib. meas. 3−46078
- $K+H^+$, excitation-autoionisation 3−1464
- Kr^{3+}, electron impact ionisation absolute cross section meas. 3−46076
- Li, ^2S autoionising states, energy positions and wavefunctions 3−11754
- Li, avoided crossings and autoionisation widths in mag. fields 3−26702
- Li I, core-excited doublets, autoionisation rate determ. 3−21732
- Li II, spectral line excitation in atom-electron collisions *(Russian)* 3−11990
- Li III, spectral line excitation in atom-electron collisions *(Russian)* 3−11990
- $Li+H^+$, excitation-autoionisation 3−1464
- Lu, autoionising and high-lying Rydberg states 3−11757
- Mg atoms, autoionisation states, electron spectra, many-body effects obs. 3−32222
- MgI autoionising states, HF calcs. 3−32145
- N^{2+}, electron impact ionisation including autoionisation 3−1486
- NO+Na(K)(Cs), ion-pair formation, state-to-state total cross section 3−17368
- Na, laser excited, ionisation by synchrotron radiation 3−11758
- Na vapour, laser-induced autoionising-like resonance in continuum at third harmonic generation 3−27148
- Na vapour, optical freq. mixing, laser-induced autoionisation-like reson. study 3−22164
- Na-like ions, electron impact inner-shell ionisation cross sections 3−11988
- $Na+H^+$ excitation-autoionisation 3−1464
- Ne^{3+}, electron impact ionisation absolute cross section meas. 3−46076
- O_2, shape reson. and electronic autoionisation in vibr. resolved partial photoionisation cross sections 3−21828
- O_2+Na(K)(Cs), ion-pair formation, state-to-state total cross section 3−17368
- Pd, 4d subshell, photoabsorption relativistic RPA approx. 3−32019
- Sr, autoionisation reson., elec. field effect 3−32011
- Sr, three-photon ionisation and autoionisation, laser intensity effect on config. interaction 3−21734
- Ta^{3+}, electron impact ionisation, excitation contrib. meas. 3−46078
- Ti^{3+}, electron impact excitation-autoionisation, distorted wave approx. with exchange 3−41686
- Ti^{3+}, electron impact ionisation, excitation contrib. meas. 3−46078
- Xe isoelectronic sequence, core charge effect on Rydberg spectra 3−26658
- Xe isoelectronic series, Rydberg spectra, correl., term depend. and autoionis. 3−21733
- Xe^{3+}, electron impact ionisation absolute cross section meas. 3−46076
- Yb I, photoionisation spectroscopy from $6s7s'S_0$ state in presence of static mag. field 3−32023
- Zr^{3+}, electron impact ionisation, excitation contrib. meas. 3−46078

automata theory
- *see also switching theory*
- ECG, QRS detection using automata theory in a battery-powered microprocessor system 3−4671

automatic programming
- coupled product operators, configuration trace calc., FORTRAN program generation 3−20653

automatic test equipment
- advanced nucl. reactor control and protection system *(Japanese)* 3−41207
- autocollimator, adaptation for television use 3−41962
- avalanche photodiodes, detectors in optical communication systems, computer-based characterisation 3−40686
- combined stress testing machine, appl. to yield surfaces of low C steel 3−44008
- compressive strength meas. apparatus, for green and dry pellets 3−58334
- computer applications on material testing *(Japanese)* 3−34588
- condenser microphone, computer-controlled reciprocity calibration method 3−17762
- condenser microphone, laboratory standard, automated free field calibration system *(Japanese)* 3−17758
- condenser microphone, laboratory standard, automated pressure calibration system *(Japanese)* 3−17757

automatic test equipment continued
- dynamical texture meas. by neutron diffr. using position sensitive detector 3−58323
- eddy current probe, multisegment, for flaw detection of bolted structures 3−39341
- eddy current test system for nondestructive materials testing *(German)* 3−29241
- electrochemical potential spectroscopy, for electric cells testing 3−40643
- electronic hardness tester for automatic control on production lines *(German)* 3−53320
- electronic measuring technique to simplify testing of mirrors 3−22187
- fatigue testing by cantilever bending, magnetoreson. unit with programmer 3−58340
- fatigue testing with pure bending, low-cycle, rig for programmed testing 3−58341
- gauge blocks, meas. assurance procedure, computer software 3−40545
- hardness inspection apparatus using higher harmonics for chilled cast Fe 3−58337
- hearing-aid testing and audiological experimentation, microprocessor-controlled system 3−39747
- holographic nondestructive evaluation on-line acquisition and analysis 3−29251
- internal friction and Young's modulus meas., automatic kHz range unit 3−58333
- IRAS telescope focal-plane array test facility, at NASA Ames Research Centre 3−30180
- linear calorimetric probe for meas. thermal flux, automation 3−7659
- magnetic testing equipment for electrical steels grading 3−30903
- material testing machines summary *(Japanese)* 3−34582
- material testing system for corrosion in high-temperature water under high pressure *(Japanese)* 3−34584
- metallised glass fibre, automated flaw inspection 3−53343
- microbiology, automated rapid detection methods 3−44311
- MOS structure charge instability meas., accuracy improvement 3−45165
- optical correlators, incoherent, for automated alignment using registration fiducials 3−5776
- radiometric flaw detection of articles of complex profile, struct. and parameters of automated system 3−24473
- Shimadzu AUTOGRAPH DCS materials testing machines, printer/plotter accessory *(Japanese)* 3−34586
- shimadzu Flowtester CFT-500 and its application *(Japanese)* 3−34587
- Shimadzu material testing AE measuring device SAE-1000 and its application *(Japanese)* 3−34583
- solder bonds in superconducting cable, microcomputer based US inspection 3−47999
- sound level precision meter, automated measurement system *(Japanese)* 3−17743
- spectroradiometer measurements in support of photovoltaic device testing 3−20887
- spot welded joints, fatigue testing *(Japanese)* 3−34585
- stress determ., computerized US technique 3−48026
- superconductors, magnetisation measurements, automatic device 3−40645
- testing, automatic data collection and presentation 3−4224
- thickness indicator, automatic, Z-80 microcomputer 3−35970
- Tritium Systems Test Assembly, redundant control system 3−26488
- US C-scan system, microcomputer controlled 3−44011
- US inspection system for testing nuclear components 3−19503
- US system for fatigue crack development anal. under nonstationary loading 3−58367
- X-ray wafer probe for total dose testing of semicond. devices 3−36135
- CdS/Cu_2S solar cell arrays, test structures use in production, electrical parameters 3−24596

automatic testing
- acoustic emission method, consolidated system for materials and strength testing 3−9270
- coercivity, automatic meas., for mag. steel quality control *(German)* 3−29240
- computer-controlled ultrasonic testing of aircraft structures 3−14791
- corrosion fatigue crack propag. testing, using Krak-Gage 3−58326
- eddy-current method, computerised materials testing *(German)* 3−29241
- flaw inspection results, automated processing 3−34596
- flaw inspection system, computer processing of results 3−34595
- fuel cell test facility, distributed data acquisition and control system 3−29381
- heliostat control system for central receiver test facility 3−24554
- internal friction and Young's modulus meas., automatic kHz range unit 3−58333
- IR sensor technology, conf., Arlington, VA, USA (May 1982) 3−54566
- laser production oriented testing using a fully automated optical test system 3−56354
- materials, fracture criteria determ., automation 3−58328
- pellets, green and dry, compressive strength determ., automatic unit 3−58334
- quality control, central data bank for materials testing *(German)* 3−14810
- scatter imaging using X-ray fan beam and pinhole camera 3−9289
- US equipment, computer controlled, for automatic inspection of nuclear reactor components *(German)* 3−58354
- wire inspection, moving, quality of heat treatment 3−34597
- X-ray testing of castings based on local feature operator and flexible image matching 3−24479
- Al castings, scatter imaging using X-ray fan beam and pinhole camera 3−9289

automobiles
- alcohol as alternative vehicle fuel to gasoline, overview *(Hungarian)* 3−48118
- dashboard flat screen display *(French)* 3−45131
- Si solar cell arrays for theory and operation for powering cars *(German)* 3−44123

autoradiography *see radioisotope scanning and imaging*

autoresonant accelerators *see collective accelerators*

avalanche diodes
- *see also avalanche photodiodes*
- coherent sources of IR and mm waves, scientific appls., book contrib. 3−1651

avalanche photodiodes
- automatic photometry system for half-tone images, avalanche photodiode with operational amplifiers *(Russian)* 3−16399
- channelling, versatile interdigitated p-n junction photodetector 3−10900
- detectors in optical communication systems, computer-based characterisation 3−40686

avalanche photodiodes continued
- long wavelength photodetectors for fibre optic communication appls. 3−32506
- MBE preparation of optoelectronic devices 3−19271
- single-photon solid-state detector for low-intensity fluoresc. decay meas. with 100 picosec. FWHM resolution 3−36092
- space communication appl., radiation effects on semicond. optical devices 3−1807
- superlattice, graded band gap, channeling and staircase avalanche photodiodes: towards a solid-state photomultiplier 3−47418
- AlGaAs/GaAs low noise multilayer graded-gap photodiodes for 0.8-1.8 μm wavelength region 3−49447
- AlGaAsSb long-wavelength (1.3 to 1.6 μm) photodetectors for fibre optical communications, review 3−12361
- $Ga_{0.8}Al_{0.2}As_ySb_{1-y}$:Be implanted avalanche photodetectors, tunnelling in reverse dark current charact. 3−20895
- $GaAs_{1-x}Sb_x$ p-n junctions, avalanche breakdown voltage, misfit dislocations 3−8569
- InGaAsP long-wavelength (1.3 to 1.6 μm) photodetectors for fibre optical communications, review 3−12361
- InP avalanche photodiode with VPE grown p^+-n junction, imperfections effect 3−18573
- InP/InGaAsP/InGaAs/InP structure, LPE growth for avalanche photodiodes, circumferential meltback prevention 3−43765
- Si reach-through avalanche photodetector 3−40693
- Si, to replace photomultipliers in detectors 3−50164

avalanches, carrier *see impact ionisation*

avalanches, electron *see electron avalanches*

avalanches, electron-hole *see impact ionisation*

avionic systems *see aircraft instrumentation*

Avogadro's number *see constants*

avoided crossing *see energy level crossing*

axicons *see lenses*

Axilrod-Teller-Moto dispersion forces *see intermolecular forces*

axiomatic field theory
- 0^4 theory, asymptotic behaviour of effective pot. 3−16497
- $\lambda\phi^4$ lattice field theory and anisotropic rotators, IR bounds 3−33851
- $\lambda\phi^4$ theory, curvature and symmetry breaking, induced action approach 3−16484
- $\lambda\phi^4$ theory, spectrum calcs. in fluctuating Bose theories, 1+1 dimens. 3−11039
- $\lambda\phi^4$ theory, temp. depend. of false vacuum decay 3−36153
- $\lambda\phi^4$ theory in Robertson-Walker Universes, finite temp. effective pot. 3−59522
- $\lambda(\nabla\phi)^4$ models, bounds on decay of correl. 3−30978
- ${\phi_3}^4$ theory, alternate constructive approach, ${\phi_4}^4$ destructive approach, renormalisation 3−36141
- ${\Phi_3}^4$ theory, Gaussian processes and constructive scalar field theory 3−16518
- ${\phi_4}^4$ Euclidean field theory in ultraviolet limit 3−49286
- ${\phi_4}^4$ theory, Feynman amplitudes, large momentum behaviour 3−31004
- ϕ^3 field theories, crit. behaviour in three dimens. 3−5743
- ϕ^4 models, analyticity props. of weakly coupled double well model 3−10984
- ϕ^4 super-renormalisable massless field theories, perturbative expansion nonanalyticity 3−5940
- ϕ^4 theories in dimens ≥4 and dipole gas hierarchical model approx. 3−35929
- ϕ^4 theory, dimensional regularisation in the presence of large background fields 3−5938
- ϕ^4-theory, proper-time renormalisation of multi-loop amplitudes in background field method 3−10994
- Abelian Higgs model, continuum limit 3−16531
- antisymmetric tensor gauge fields, phase structure 3−11024
- asymptotically free fluids, $(\omega^3)_3$ field theory 3−31040
- axially symmetric monopoles for arbitrary gauge group 3−16538
- axially symmetric multimonopole solutions 3−16544
- Bohm-Aharonov strings, functional integrals for order-disorder variables 3−508
- central extensions of sôme Abelian finite gauge groups on lattices 3−16521
- chiral-invariant fermion models, path integral formulation of Thirring and Gross-Neveu models 3−16478
- cluster expansion in ${0_2}^4$ model 3−45071
- conference on grand unified theories, Kyoto, Japan (June-July 1981) 3−10509
- coupled boson-fermion systems at finite temp. and density, loop expansion for effective pot. 3−45294
- CP_1 model, instanton contribution on torus 3−30987
- CP_1 periodic model, numerical analysis, fugacity factor, periodic conditions 3−30988
- CP^{N-1} coupled to gauge fields, mean field theory and Monte Carlo results 3−534
- CP^{N-1} model, conformal transformation to crystal-like structures 3−49551
- deconfining phase transition, nonexistence in spin systems and lattice gauge theories 3−40865
- Dirac field, Wilson lattice fermions, evolution kernel 3−49531
- disordered QCD, quark confinement for supersymmetric model 3−31145
- dynamic quark confinement in Z(N) gauge fields 3−45355
- Eguchi-Kawai model, quenching method 3−54844
- Eguchi-Kawai model weak coupling phase, U(1) breaking 3−5960
- elastic scatt. amplitude, rigorous bounds at finite energy 3−54854
- entropy of self-avoiding surfaces on the lattice, field theory phase struct. 3−40787
- Euclidean ${\phi_3}^4$ theory in an electromagnetic potential 3−5937
- Euclidean field theories in 4-dimens., planar diagrams 3−40745
- Euclidean fields, Gibbs states uniqueness, global Markov property 3−16516
- Euclidean fields, Holder continuity props. in Markovian and non-Markovian theories 3−16527
- euclidean four-dimensional space, self-dual solns. for SU_2 gauge fields 3−40772
- euclidean quantum gravity on a lattice 3−151
- exceptional groups and elementary particle structures 3−6031
- extended Z(4) lattice gauge theory, massless phases and confinement 3−45297
- fermionic Federbush model, Wightman axioms 3−30975
- fermions on a lattice, Monte Carlo simulation 3−540

axiomatic field theory continued
- finite lattice fermions and gauge fields in 1+1 dimensions, Schwinger model 3−30989
- finite temp. QCD, critical behaviour 3−21243
- four-dimensional field theory, Borel summability 3−26013
- four-dimensional SU(2) non-Abelian lattice gauge theory, permanent confinement 3−54836
- four-dimensional U(2) gauge theory, Monte Carlo studies of Wilson loops 3−506
- free relativistic massive quantum particle, mass shell, gauge fixing conditions 3−5986
- fundamental-adjoint action lattice theory, large N phase diagram calc. 3−49560
- $g_0\phi^4$ field theory in 1 and 2 dimens., Monte Carlo solns. 3−512
- $g_0\phi^4$ lattice field theory in d-dimens., renormalised strong coupling series 3−10995
- $g|\phi|^4$ theory in four dimensions and polymers 3−36143
- gauge theories as problem of constructive quantum field theory and statistical mechanics, book 3−5516
- gauge theories on body-centered hypercubic lattice 3−21014
- Gaussian limit of compact spin systems, Wilson and Wilson-Villain U(1) methods 3−16517
- Gaussian model, spectrum and eigenfunctions of transfer matrix 3−31068
- generalised lattice fermion actions and appls., CP phase, vacuum energy density 3−20979
- geometries of planes and states of particles 3−5953
- global supersymmetry at finite temps. 3−16511
- glueball calculations in lattice gauge theories 3−40760
- glueball mass, estimation, plaquette-plaquette correlation in lattice gauge theory 3−26062
- glueball mass estimate from strong coupling series in lattice QCD 3−11144
- glueball mass from variant actions in lattice Monte Carlo simulations 3−40872
- glueball mass ratios, strong coupling expansion parameters, SU(3) lattice gauge theory 3−40851
- glueball mass spectrum, finite size scaling, finite lattice effects 3−588
- glueball mass spectrum, SU(3) lattice Monte Carlo calc. 3−6058
- glueball mass spectrum in lattice QCD, Monte Carlo calc. 3−31155
- glueball masses, 0^+ and 2^+ in SU(2) compatibility with the renormalisation group behaviour 3−26071
- glueball masses from lattice QCD, SU(2) and SU(3) appl., Monte Carlo simulation 3−40858
- glueball states in reduced large- N Hamiltonians 3−20996
- glueballs, bound states of massive gluons, study with Schrodinger eqn. 3−36202
- hadron mass spectrum in lattice QCD, numerical estimates, Monte Carlo calc. 3−26096
- hadron mass spectrum in lattice QCD, numerical estimates, Monte Carlo in SU_3 3−26097
- hadron spectrum, evidence for size problems on lattice 3−40886
- hadron spectrum calculations at strong coupling in lattice QCD 3−45354
- hadron-quark transition, effective dielectric theory. 3−606
- Hamiltonian lattice gauge theories, d+1 dimens., variational method 3−20980
- Hamiltonian lattice gauge theories, gauge invariance constraints 3−16509
- Hamiltonian U(I) lattice gauge theory, weak coupling limit 3−49558
- Hamiltonian U(N) SU(N) lattice gauge theories, variational calc., phase transition 3−54841
- Harrison-Neugebauer type transformations for instantons, multicharged monopoles as limits 3−16539
- heavy quark potential, calcs. by Monte Carlo in SU_2 lattice gauge theory 3−31054
- Heisenberg antiferromagnet, one-dimensional, continuum dynamics, identification with O(3) nonlinear sigma model 3−43347
- hierarchical ${\phi_3}^4$ model, phase cell cluster expansion 3−49529
- $(Higgs)_{2,3}$ quantum fields in finite volume, vacuum energy upper bound 3−10987
- Higgs model construction, Schwinger functions in $\lambda{\phi_3}^4$ coupled to Yang-Mills potential 3−49552
- hopping parameter expansion for the baryons and p wave mesons 3−6053
- hot SU(N) gluon matter, thermodynamic props. 3−36343
- infinite range pot. lattice gauge theory 3−45283
- interacting gauge theories, reduced large-N matrix and chiral models 3−16471
- Ising model, 2-dimens., fermionisation 3−20977
- Ising model, 3-dimens., grassmannian integral derivation, fermionisation 3−20978
- Ising model, critical behaviour, block spin techniques 3−45091
- Ising-gauge Ising-Higgs system in two-dimensions, gauge-invariant correl. functions 3−36146
- isotropic Heisenberg chain with arbitrary spins, thermodynamics 3−43388
- Jost-Schroer theorem for string fields 3−30976
- Kahler-Dirac equation in flat and curved space-times, fermionic degrees of freedom 3−11018
- Kahlerian chiral models, nonlinear systems with exponential interaction 3−45307
- Klein-Gordon field interacting with Schrodinger field, global solns. for Cauchy and initial-boundary value problems 3−16505
- large N spin models, quenching procedure simplification 3−45285
- large N theories, quenched momentum prescription, stochastic quantisation 3−40786
- lattice ϕ^4 theory, effect potential calcs. 3−31053
- lattice analogue for chiral gauge theories, technicolour mechanism and fermion generation 3−5942
- lattice and continuum QCD, gauge theory coupling, implications of change in lattice actions 3−11132
- lattice compact QED, universal critical behaviour 3−576
- lattice compact QED with scalar matter fields, mean field anal., phase diagrams 3−26057
- lattice field theories, Monte Carlo methods for fermions 3−31036
- lattice field theory props., projector Monte Carlo anal. 3−49565
- lattice gauge model, analogue of spin system on Cayley tree, phase transition 3−49541
- lattice gauge system, arbitrary external sources, generating functional, strong coupling expansion 3−49539
- lattice gauge theories, 4-dimens., phase transitions and local minima of the action 3−20984
- lattice gauge theories, confinement and phase transitions 3−5945
- lattice gauge theories, finite renormalisations of currents 3−54840

axiomatic field theory continued
lattice gauge theories, finite temp., quark deconfinement at high temp. 3—31159
lattice gauge theories, mean field theory with radiative corrections 3—54825
lattice gauge theories, mean-plaquette method for energy and coupling calcs. 3—16475
lattice gauge theories, method for updating SU(N) matrices in computer simulation 3—26016
lattice gauge theories, Monte Carlo results, lattice QCD, string tensions 3—11041
lattice gauge theories, plaquette formulation and Bianchi identity 3—16480
lattice gauge theories, precocious scaling, two-loop contributions 3—21003
lattice gauge theories, SU(N) and U(N), Monte Carlo simulation program 3—54829
lattice gauge theories, U(1) and SU(2), in 2+1 dimens., string tensions 3—10999
lattice gauge theories, variational anal. 3—21011
lattice gauge theories, Wilson loop expectation values, correlation length, varied boundary conditions 3—5964
lattice gauge theories 3—40763
lattice gauge theories and Monte Carlo simulations 3—11042
lattice gauge theories in strong coupling limit, meson and baryon spectra 3—49537
lattice gauge theories with matter fields, order parameter 3—45287
lattice gauge theory, iterative methods convergence to compute quark propagator 3—40871
lattice gauge theory, mean field approx. corrections 3—30990
lattice gauge theory, Monte Carlo calcs., vectorisation 3—499
lattice gauge theory, quark degrees of freedom in nuclei 3—49794
lattice gauge theory, reduced quenched large N hamiltonian 3—21010
lattice gauge theory, strong coupling, duality, roughening 3—11045
lattice gauge theory and statistical mechanics 3—40764
lattice gravity or Riemannian structure on piecewise linear spaces 3—10705
lattice QCD$_2$, $\langle \det U_p \rangle$ evaluation, weak coupling 1/N expansion 3—6061
lattice QCD, boundary effects and hadron mass fluctuations 3—49559
lattice QCD, hadron spectroscopy, u, d and s quark masses 3—11119
lattice QCD, non-abelian monopole condensate construction 3—45348
lattice QCD, trilinear gluon condensation parameter, SU(2) theory 3—26065
lattice QCD with SU(3) gauge, hadronic masses and decay constants 3—31154
lattice sine-Gordon model, physical sector 3—36164
lattice SU(2) gauge theory in 3-dimens., gauge invariant variable 3—26018
lattice theories, continuum limit 3—40758
lattice theory, approach to non-Abelian antisymmetric tensor gauge field theory 3—40752
lattice theory of quark confinement 3—49634
lattice Yang-Mills theories, monopoles role in confinement mechanism 3—16559
lattices in group manifolds, appl. to lattice gauge theory 3—503
Leech roots and Vinberg groups 3—26006
local representation for fermions on lattice 3—20971
logical localised approach for QFT and spacetime quantisation 3—30992
magnetic moments for nucleons and Ω^-, μ 3—637
many-particle amplitudes as analytic funct. boundary values 3—54852
mapping approaches in axiomatic quantum field theory 3—11005
massive Schwinger model in external background field, local hamiltonian Monte Carlo study 3—49647
massive Schwinger model on lattice, background field, chiral symmetry and string tension 3—16479
massive Thirring model, thermodynamics, soliton mass discontinuity 3—54835
massive Thirring models, strong coupling expansion 3—54849
massless ϕ^4 theory, nonexistence of multiple-instanton solution 3—11003
Maxwell eqns. in axiomatic theory, covariant and noncovariant gauges 3—11006
mixed action SU(2) lattice gauge theory, coupling expansions and nonperturbative configs. 3—40799
monopole study using loop space 3—16557
non-abelian gauge models, structure of vacuum 3—16487
nonlinear Klein-Gordon equation with nondispersive solitonlike singularity 3—5950
nonlinear sigma model in symmetric spaces, isomorphism, renormalisation group β-function 3—49538
nonperturbative aspects of quantum field theory, conference, St Felia de Guixols, Spain, (June 1982) 3—10508
O(3) nonlinear sigma model, lattice coupling constant renormalisation, instanton effects 3—16476
O(N) Heisenberg model, susceptibility and mass gap in continuum limit 3—54842
O(N) symmetric 1/N expandable field theories, consistency requirements 3—16469
O(N) symmetric Wess-Zumino model in two dimension, spontaneous supersymmetry breakdown 3—54846
one plaquette Manton gauge theory, large-N limit soln., Gross-Witten phase transition 3—16501
one-component lattice fermions, spinor algebra 3—502
one-dimensional harmonic oscillator with discrete time, lattice versions 3—45010
one-plaquette Hamiltonian lattice QCD with mixed fundamental-adjoint pot., exact phase structure 3—21072
one-plaquette lattice QCD with fermions in 1/N topological expansion, phase structure 3—11131
operator product expansion in minimal subtraction scheme 3—36160
point monopoles in quantum field theory 3—16553
Polyakov loop eqns., solns. for U(1) and SU(2) gauge theories on lattice 3—31064
Potts gauge theory, plaquette percolation problem 3—20982
pure Yang-Mills theory, lattice action with improved continuum limit behaviour 3—40747
QCD, sum rules for spontaneous chiral symmetry breaking parameters 3—16604
QED, infrared problem, nonperturbative approach, construction of charged states 3—31121
quantum gravity, BRS identities for general axial gauge 3—153
quantum gravity unpredictability 3—30742

axiomatic field theory continued
quantum pendulum on lattice, computer simulation of topological effects 3—49535
quantum string theory, Monte Carlo simulation on $N\times N$ lattice 3—11160
quark deconfinement; liberation above critical temperature, SU(2) lattice gauge theory 3—26072
quark mass in lattice gauge theories and on the continuum 3—11023
quark-hadron phase transition in early universe, from perturbative QCD and resonance gas model 3—20545
quenched master field eqns., variational method 3—40781
quenched master fields, algebraic equation for N-matrix theory 3—30986
quenched momentum prescription for large-N theories, quenched lattice and continuum theories, loop equations 3—10990
quenched reduced U(∞) chiral model, spontaneous symmetry breaking in weak coupling 3—31033
R-gauge theories, 2-dimens. electrodynamics, Wilson integral 3—5981
random fields in stat. mech. and QFT, conf., Esztergom, Hungary (June, 1979) 3—16089
random lattice, weights of links and plaquettes for action function 3—10998
random lattice gauge theory, Wilson string tension, strong coupling limit 3—10997
reduced hamiltonian model for U(∞) gauge theories 3—31034
reduced large- N lattice gauge theory without spontaneous symmetry breaking 3—5959
reduced models in large N limit, analytic investigation 3—21009
reflexion positivity proofs for transverse fields 3—16528
relativistic scattering in Federbush, massless Thirring and continuum Ising models 3—16481
roughening singularity in lattice gauge theories, fluctuation in quark-antiquark pair flux tubes 3—40864
scale-covariant field theory, stability 3—518
scaling limits of Euclidean quantum fields 3—16524
Schwinger model soln. using path integral 3—16483
self-dual multimonopole construction by ADHM method 3—16536
self-interacting $\lambda(\phi^2)^2$ scalar theory, large-N limit 3—519
sigma model, coupling to supergravity in gauge invariant supersymmetry 3—30753
sigma model, nonlinear, infrared finite expectation value in perturbation expansion 3—40756
space-time quantisation and new approach to quantum field theory, report 3—11040
spinor fields, to formulate lattice approximation of fermions 3—26019
statistical mechanical problems on lattice, exact partition function 3—11044
Steifel-Skyrme-Higgs models, classical static solns. and Yang-Mills-Higgs monopoles 3—16541
strange hadrons in lattice QCD 3—11147
string tension in four-dimensional compact U(1) lattice gauge theory, Monte Carlo study 3—31010
strong-coupling lattice gauge theories and composite models of quark and leptons 3—31182
SU(2) and SU(3) gauge theories, deconfinement and chiral symmetry restoration at finite temp. 3—40869
SU(2) axially symmetric multimonopole generation, review 3—16533
SU(2) Euclidean lattice gauge theory, finite temp., string tension, strong coupling expansions 3—31187
SU(2) lattice gauge theories, boundary effects in Monte Carlo calc. 3—535
SU(2) lattice gauge theories, finite volume effects, Monte Carlo methods 3—26008
SU(2) lattice gauge theory, large distance correl. functions 3—36145
SU(2) lattice gauge theory, phase structure and renormalisation trajectories 3—21012
SU(2) lattice gauge theory universality 3—31035
SU(2) lattice gauge theory with quintet representation, Monte Carlo study 3—40774
SU(2) lattice mean field theory, approx. calcs. for small Wilson loops 3—11002
SU(2) monopole soln. in SU(3), deformations of embedding 3—498
SU(2) Yang-Mills system with Villain, Manton and Wilson lattice actions, deconfinement transition 3—49533
SU(3) gauge theory in four dimensions, numerical studies of Wilson loops 3—11026
SU(3) gluon condensate from lattice Monte Carlo data 3—36187
SU(3) lattice QCD with fermions 3—40761
SU(5) model, Peccei-Quinn symmetries without domains 3—11098
SU(N_c)$\times$SU(N_f) lattice gauge theory, quenched reduction for topological limit 3—21070
SU(N) lattice gauge theories with $N\to\infty$, phase transitions 3—10981
SU(N) lattice gauge theory, large N, twisted model 3—31027
SU(N)/Z_N lattice gauge theories in four dimens., Monte Carlo studies 3—505
supersymmetric field theories and stochastic differential eqns. 3—10988
supersymmetric field theories on lattice, continuum limit 3—40776
supersymmetric gauge theory on lattice 3—21008
supersymmetric lattice gauge theory 3—45286
supersymmetric models, finite temp. effects 3—54847
Susskind lattice fermions, nondegenerate, unequal mass flavours 3—54843
symmetry groups of the regular tessellations of S^2 and S^3 3—530
Thirring model, conformal operator prod. expansions, field eqns. of motion 3—20994
Thirring models and gauge techniques 3—16482
three-dimensional Z(N) lattice gauge models at large N 3—509
Toda field theory in classical limit, Toda lattice mechanics 3—20974
Toda lattice eqns., Dynkin diagram symmetries 3—49534
topology of Yang-Mills fields and confinement, strings 3—26005
triplet Z(N) model in a triangular lattice, phase structure 3—513
twisted Eguchi-Kawai model, minimising configurations of the action 3—45289
two-dimensional SU(2)$\times$SU(2) lattice sigma model, effective pot. method 3—40773
two-loop background calcs. for arbitrary background fields 3—16474
U(1) lattice gauge theory, five dimensions, upper critical dimension for abelian theories 3—11022
U(1) lattice gauge theory, monopole-flux tube repulsion in strong coupling 3—31125
U(1) lattice gauge theory, space of variant mixed actions renormalisation 3—40780

- **axiomatic field theory** continued
  - U(3) four-dimensional lattice gauge theory and Monte Carlo calculations 3−11001
  - U(N) and SU(N) lattice gauge theories, gaussian fluctuations in mean field approx. 3−10996
  - U(N) and SU(N) lattice gauge theories, mean field approx. 3−30999
  - U(N) and SU(N) lattice gauge theories, phase transitions and latent heats 3−45288
  - U(N) lattice gauge theories, comparison of Monte Carlo data with strong-coupling expansion 3−45300
  - U(N) lattice gauge theories and spin systems with mixed actions 3−36144
  - weakly coupled $P(\phi)_2$ model, second Legendre transform 3−11007
  - Wilson action, axial anomaly depend., π-η-η' mass difference 3−31028
  - Wilson fermions, chiral transform. and lattice regularisation 3−40755
  - Wilson loop short distance expansion, SU(2) gluodynamics, Monte Carlo lattice results 3−20983
  - XY model, spectrum and phase struct., critical props., variational study 3−20981
  - XY model, two-dimensional, variational estimates for mass gap 3−36159
  - Yang-Mills eqns., multimeron solns. 3−30979
  - Yang-Mills theory as Schrodinger quantum mechanics on space of gauge group orbits 3−31042
  - Z_2 gauge model on square lattice in (2+1) dimens., frustrated phase 3−20992
  - Z_2 lattice gauge theory coupled to radially variable scalar field, phase structure 3−49536
  - Z_2 lattice gauge theory with radially varied Higgs field, Monte Carlo study of phase structure 3−542
  - Z_2-gauge-plus-matter model on a fractal lattice 3−40517
  - Z_4 lattice gauge theory and spin system, Migdal-Kadanoff study 3−49532
  - Z_n lattice gauge theory with generalised actions, phase structure and duality 3−36147
  - Z(2) gauge model, variational approach, modified mean field method appl. 3−31044
  - Z(2) gauge theory in four dimens., second order transitions 3−45284
  - Z(2) monopoles in SU(2) lattice gauge theories, addition of SO(3) symmetric term 3−11021
  - Z(N) lattice gauge theories, mean-field analysis, Coulomb-Higgs phase transition 3−11020
  - Z(N) lattice gauge theories, mean-field approach, dynamical generation of Coulomb phase 3−40757
  - Z(N) spin model in 1+1 and 2+1 dimens., phase transition, variational approach 3−510
  - zeros of the partition function for some generalized Ising models 3−16301
  - $\eta'(960)$ hadronic decay, pseudoscalar glueball treatment, flavor SU(3) symmetry 3−6096
  - $\iota(1440)$ hadronic decay, pseudoscalar glueball treatment, flavor SU(3) symmetry 3−6096
  - n magnetic moment, lattice QCD Monte Carlo calc. 3−6098
  - $\bar{p}p$ diffractive scatt., SPS energies, total cross sections, axiomatic field theory test 3−11206
  - $\bar{Q}Q$ static force from instanton gas and lattice Monte Carlo calcs. 3−45370
  - t-quark mass, gauge-independent computation 3−604
  - p magnetic moment, lattice QCD Monte Carlo calc. 3−6098
- **axions** *see intermediate bosons*
- **backscatter**
  - *see also particle backscattering*
  - atmosphere O_3 UV backscattering rel. to informativeness of global total O_3 obs. systems 3−10041
  - blood US backscatter coeff. determ. from A-mode echography 3−4597
  - dual-frequency microwave backscatter from the ocean at low grazing angles: comparison with theory 3−35274
  - Earth surface features imaging with backscattered microwaves from orbiting radar systems 3−20001
  - electron beam-plasma system, laser light backscatt. 3−56697
  - EM backscattering from vegetation layer over flat lossy ground 3−44449
  - EM wave scatt. from finite dielectric circular cylinders, Fredholm integral eqn. anal. 3−41741
  - fibre optics, polarisation backscatter analysis of field distribs. 3−37189
  - fibre waveguides, multimode, backscatt. study using fibre Raman convertor 3−1792
  - fibre-optic reflectometry for meas. of radiation power losses, backscatt. method 3−12376
  - free electron laser, nonlinear saturation around gyroresonance 3−41850
  - HF skywave radar sea backscatter, wind speed estimation 3−9993
  - homogeneous slab medium, stimulated backscattering reflectivity, negligible pump-wave damping *(Korean)* 3−7071
  - ionosphere, kinetic theory for two-stream instability rel. to auroral backscatter 3−48763
  - laser backscatter Doppler velocimeter, high energy oceanographic boundary layers obs. 3−4988
  - microwave backscattering by spongy ice hailstones 3−44517
  - ocean, marine sediment tolerances for remote sensing of atmospheric aerosols over water 3−25203
  - oil films on sea surface, characts. of 13.9 GHz radar scatt. 3−9529
  - optical fibre, single-mode, mode spot size, bending loss, backscattering, chromatic dispersion 3−37227
  - optical fibre backscatter measurement using optical time domain reflectometer 3−7212
  - optical fibre backscattering measurement, mode distrib. determ. 3−22215
  - optical fibres, backscattering method for characteristics meas. 3−37213
  - optical fibres, birefr. meas. by polarisation time-domain reflectometry 3−1774
  - optical fibres, single-mode, backscatter waveform anal. 3−56337
  - optical multimode fibres, parameter fluctuations determ. by backscatt. technique 3−7185
  - optical single mode fibre backscatt., optical time domain reflectometry 3−7188
  - quantitative volume backscatter imaging 3−44308
  - radar sea spectrum semi-empirical model for scattering coeff. estimation 3−4991
  - sea state information meas. from HF radar Doppler spectra 3−15664
  - sky wave radar sea-state sensing, ionosphere movements and propag. geometry effects 3−35275
  - solar flare relativistic protons, backscatter pulse obs. rel. to rigidity-dependent release from solar corona 3−10164
  - spliced pots., stimulated Brillouin backscattering, Zakharov-Manakov soln. 3−17565
- **backscatter** continued
  - stimulated Brillouin, backscattering of laser pulse by acoustic fluctuation 3−1701
  - stimulated Raman scattering, interaction and competition between forward and backscatt. 3−27162
  - stratosphere, lidar obs. of increase in aerosol scatt. caused by Sierra Negra volcanic eruption 3−4925
  - US scanning in medicine, backscatter and attenuation imaging 3−39699
  - VHF auroral backscatter amplitude, depend. on cond. in eastward polar electrojet region 3−59152
  - VHF auroral backscatter amplitude, depend. on ionosphere electron density 3−59153
- **backward wave oscillations** *see backward wave tubes; electromagnetic oscillations*
- **backward wave tubes**
  - *see also carcinotrons*
  - No entries
- **bacteriorhodopsin** *see proteins*
- **Badgers rule** *see bond lengths; molecular force constants*
- **bag models** *see quark confinement; quark models*
- **bainitic steel** *see steel*
- **bainitic transformations** *see solid-state phase transformations*
- **balance (physiological)** *see mechanoception*
- **balanced amplifiers** *see differential amplifiers*
- **balanced input amplifiers** *see differential amplifiers*
- **balances**
  - *see also weighing*
  - automatic compensating microdoublebalance 3−25874
  - density meas. of liquid and vapour, up to critical temp. 3−25852
  - electronic balance for calibration of weights with varying accuracy classes *(Rumanian)* 3−35965
  - electronic microbalance for thermogravimetric analysis 3−16358
  - electronic weighing machines, meas. stability rel. to component reliability and operational fault perceptibility 3−49331
  - errors correction, aerostatic force effects due to air density fluctuations 3−274
  - Langmuir film balance, microprocessor-controlled, for isotherm and isobar meas. 3−35958
  - magnetic content of small size samples, determ. using microcomputer based instrument 3−20879
  - microcomputer interfacing 3−5769
  - multicomponent balance using piezo force elements for high press. wind tunnel expts. *(German)* 3−42344
  - multicomponent strain-gauge balances, smoothing filter specifications for improved speed 3−42340
  - packed-bed balance reactor for gas adsorption and gas-solid reactions under elevated pressures 3−4315
  - precision balance design, review 3−286
  - rapid heating thermal balance, using IR image furnace 3−30851
  - standards, Hungarian and international, for weighing scales *(Hungarian)* 3−10801
  - submersible servo-controlled balance, Si density meas., reference standard appl. 3−35964
  - substance mass and dosage meas. with modern electronic balances 3−45118
- **Balescu-Lennard theory** *see plasma collision processes*
- **ball lightning** *see lightning*
- **ballistics**
  - *see also impact (mechanical); military equipment*
  - collision of deformable bodies, high-speed interaction, numerical modelling 3−16132
  - eastward deflection of falling object, inertial frame investig. 3−49109
  - horizontal deflection of falling object, exact soln. 3−49114
  - pendulum arrays, laser-produced plasma momentum meas. 3−27745
  - projectile sliding forces in a rifled barrel 3−44958
  - solid bodies, high velocity collisions, hydrodynamic model 3−16124
- **balloons**
  - *see also aircraft*
  - interconnected balloons, equilib. study 3−25843
  - IR telescope orientation platform design 3−54238
  - steam balloon for Venus atmos. exploration 3−44640
  - stratospheric horizontal wind between balloon and gondola, ionic anemometer appl. 3−30081
  - tetroons use in PUKK for meso-scale transport processes meas. 3−39920
  - X-ray spectrograph with ang. resolution for cosmic bursts and sources obs. 3−54242
- **banana regime** *see plasma collision processes*
- **band gap** *see energy gap*
- **band model of magnetism**
  - *see also Hubbard model*
  - antiferromagnetism itinerant model, dynamic matrix theory 3−52340
  - Curie-Weiss low spin susceptibility, electron-phonon interaction effect 3−52345
  - exchange enhanced paramag. materials, itinerant-electron magnetism 3−57507
  - ferromagnet, double exchange and spin wave approximation, s-d model *(Russian)* 3−23606
  - Heusler alloys, mag. props., spin-polarised energy band calc. 3−52341
  - Hubbard model, electron excitations in Fermi liquids, paramagnetic-ferromagnetic phase transitions 3−13986
  - Hubbard model, ground-state solns., two-lattice formalism 3−38579
  - Hubbard model in Roth scheme, antiferromagnetism 3−13996
  - Invar, local environment effect, ferromagnetic instability 3−52529
  - Invar alloys, mag. props., spin-polarised energy band calc. 3−52341
  - itinerant antiferromagnet, charge oscills. in SDW model *(Russian)* 3−47486
  - itinerant electron magnetism theory 3−52337
  - itinerant electron magnets, neutron scatt. studies 3−52410
  - itinerant ferromagnet, amorphous, anomalous Stoner enhancement 3−23664
  - itinerant ferromagnet, spin wave spectra, temp. depend. 3−23616
  - itinerant ferromagnetism and supercond., phase changes 3−3359
  - itinerant ferromagnets, effective Heisenberg Hamiltonian, effective exchange integral 3−38577
  - itinerant magnetic materials, highly enhanced, spin fluctuation quenching, sp. ht. and susceptibility meas. 3−57621
  - itinerant magnetism, mixed valence effects 3−52085
  - itinerant magnetism in paramag. phase, theory 3−57509

band model of magnetism continued
  itinerant metamagnetism, Fermi liq. model 3—23572
  metal, local magnetic moments, all-electron local density theory 3—52366
  metallic superlattices, mag. props., linear muffin-tin orbital band calcs. 3—23571
  metals, localised magnetic states, Green's function calcs. *(Russian)* 3—8642
  neutron magnetic form factors, theoretical aspects, review 3—52402
  rare earth intermetallics, localised-itinerant magnetism 3—23573
  rare earth metals and alloys, localised spins and d-like itinerant electrons, indirect coupling calc. 3—8664
  rare earth-transition metal Laves phase alloys, magnetovolume effects 3—57730
  semiconductor, dil., spin density around mag. ion 3—23583
  singlet ground state systems, electronic and nuclear magnetism formalism 3—57501
  spin dynamics at high temp., neutron scatt. meas. and theoretical models 3—57564
  superconductivity and itinerant ferromagnetism, coexistence 3—23534
  superexchange, correlation with superconductivity 3—3365
  thermo field dynamics and condensed states, book 3—10535
  transition metal, Fermi liquid theory of mag. props. *(Russian)* 3—47469
  transition metal magnets, spin density fluctuations, neutron scatt. studies 3—57520
  transition metal pyrite cpds., spin fluctuations effect of mag. susceptibility 3—57622
  transition metals, 3d, itinerant magnetism, phase transition and paramag. phase props. 3—18847
  transition metals, magnetic elec. struct., real space calcs. 3—52338
  transition metals and alloys, spin fluctuations effect on paramag. susceptibility 3—57628
  transuranics, magnetism 3—28519
  Ce alloys, mag. struct. and transitions, band struct. 3—18858
  $CeAl_2$, mag. ordering, electronic struct., LMTO calcs. 3—57508
  CeBi(Sb), mag. props., cryst. field splittings, mixing mechanism 3—52326
  Co alloys, anisotropy const., band model calcs. 3—52452
  Co, anisotropy const., band model calcs. 3—52452
  Co-metalloid alloys, chemical bonding, mag. moments and local symm. 3—42564
  Cr, band struct. in paramag. and antiferromag. phases, press. influence 3—3052
  $Eu_{1-x}Gd_xO$ (SM_xO), carrier scatt. and transport phenomena 3—28363
  $EuO_{1-\delta}$, carrier scatt. and transport phenomena 3—28363
  Fe, anisotropy const., band model calcs. 3—52452
  Fe, electronic struct. and magnetism above Curie temp. 3—28498
  Fe, ferromagnetic, pseudopotential calcs. of ground state props. 3—57510
  Fe, magnetism and thermodynamic props. above Curie temp. 3—52356
  Fe, short range mag. order above Curie temp., local band theory 3—57629
  Fe, temperature-pressure phase diagram 3—34284
  Fe-Co alloys, Fermi surface topology influence on kinetic props. 3—8405
  Fe-metalloid alloys, chemical bonding, mag. moments and local symm. 3—42564
  FeRh, magnetic phase diagram 3—52466
  Gd, anisotropy const., band model calcs. 3—52452
  Gd, spin dynamics at high temp., neutron scatt. meas. and theoretical models 3—57564
  HoNi single cryst., magnetisation and elec. resist. 3—28623
  α,β-Mn, band theory of mag. struct. 3—52339
  MnSi, antisymm. exchange interaction, APW band calc. 3—52450
  MnSi, ordered and paramag. phase, heavy Fermi liquid, spin fluctuations, neutron scatt. study 3—8672
  $NdCo_5$, Nd ground state, reduced 4f moment 3—52399
  Ni (001) monolayer, energy bands and magnetisation 3—52560
  Ni alloys, anisotropy const., band model calcs. 3—52452
  Ni alloys, dil., multiplet splitting in high-polarity states, effect on magnetism, Auger study 3—28939
  Ni, anisotropy const., band model calcs. 3—52452
  Ni, exchange splittings, effect of nonlocal spin density exchange pot. 3—52448
  Ni, ferromagnetic ground state, spin susceptibility, high field ^{61}Ni Knight shift 3—19003
  Ni, itinerant electron ferromagnetism, many-body effect 3—52344
  Ni, short range mag. order above Curie temp., local band theory 3—57629
  Ni, spin dynamics at high temp., neutron scatt. meas. and theoretical models 3—57564
  Ni-metalloid alloys, chemical bonding, mag. moments and local symm. 3—42564
  Ni-Rh(V), first magnetocrystalline anisotropy const. and press. effects, torque study 3—18881
  Ni-V, spontaneous magnetisation, press. effects meas. 3—18863
  Ni_xAl_{1-x}, weak itinerant ferromagnetism, disorder effects, spin fluctuation theory 3—57625
  Pr, electron-nuclear magnetism, singlet ground state 3—18848
  Rh, mag. susceptibilty, temp. depend., band model 3—18865
  $TiBe_2$, nearly ferromag., spin fluctuations, NMR study 3—57802
  U alloys, itinerant-electron magnetism 3—57507
  U alloys, mag. struct. and transitions, band struct. 3—18858
  UAs(P), two-ion anisotropic interaction from band of electron hybridisation 3—28497
  UFe_2, ferromagnetic critical phenomena, itinerant-electron magnetism 3—57507
  $U(Fe_{1-x}Co_x)_2$, electronic struct. calcs. 3—18608
  $U(Fe_{1-x}Mn_x)_2$, electronic struct. calcs. 3—18608
  UH_3, electronic energy band struct. 3—38301
  $UMn_2(Fe_2)(Co_2)(Ni_2)(Al_2)$, electronic struct. calcs. 3—18608

band-pass filters
  see also vocoders
  electrostatic charged particle spectrometer 3—26557
  octave-band filters for laboratory and demonstration expts. in acoustics 3—5565
  optical Fabry-Perot etalon, band-pass filter, simultaneous tuning to two wavelengths 3—12292
  optical fibre recirculating delay line 3—22237
  quartz SAW bandpass filter performance, cryst. growth seed plane effect 3—42597

band structure
  see also band structure of crystalline metals and alloys; band structure of crystalline semiconductors and insulators; band structure of semimetals; band theory models and calculation methods; Brillouin zones; conduction bands; degenerate semiconductors; electron energy states of amorphous solids; electron energy states of liquid metals; electron energy states of liquid semiconductors; energy gap; Fermi surface; many-valley semiconductors; valence bands
  alkali graphite intercalation cpds., electronic interlayer states, linearised APW calc. 3—52006
  condensed matter conference, Manchester, England (March 1982) 3—20571
  core levels and valence bands of solids, electron spectroscopy studies 3—33657
  graphite, electronic interlayer states, linearised APW calc. 3—52006
  graphite intercalation cpd., KC_8, electronic struct., XPS and EELS studies 3—19250
  graphite intercalation cpds., higher stage, band struct. and c-axis charge distribs. 3—38282
  infinite systems, eigenstate wave packets, XPS calcs. 3—3918
  itinerant magnetism, mixed valence effects 3—52085
  one dimensional periodic potentials, wave function, dispersion relations and Bloch states 3—33621
  one-dimensional crystal, electron form factors 3—52007
  phonon renormalization, force consts., electronic struct. influence 3—2698
  polydiacetylene cryst., energy levels of ionised states, photoemission study 3—24086
  potential scattering, transfer matrix and group theory 3—54647
  quasi-one-dimensional systems, kink form., continuum approx. 3—13699
  semiconductor staggered-lineup heterojunctions as sources of tunable below-gap radiation 3—38915
  $(TMTSF)_2X$, broken-symmetry band structure 3—57256
  transition metal ternary hydrides, review 3—2960
  two-dimensional electron system in strong mag. fields, CDW ground state and electron-hole symmetry 3—28287
  CoS_2, magneto-optical spectrum and electronic struct. 3—57889
  Ge, orientational effects, picosec. transient grating meas. 3—1690
  $Mn_3XN(C)$-type perovskites, metallic, phase transitions, band struct. anal. 3—52005
  2H-MoS_2, Li intercalation, struct. destabilisation 3—46880
  $Nb_3S_4(Se_4)(Te_4)$, quasi-one-dimensional, electronic struct. calc. 3—47249
  $NbSe_3$, ^{93}Nb NMR study, rel. to band struct. 3—3563
  $NbSe_3$, electronic band struct. calc. 3—47248
  Ni complex, porphyrinatonickel(II), band struct., INDO cryst. orbital approach 3—33618
  α-Sn, direct-gap semiconductor, MBE growth, band struct. investig. 3—8406
  $ZrMn_2$ hydride, electronic struct., photoelectron spectra study 3—2940

band structure of crystalline metals and alloys
  for band structure of semiconductor alloys see band structure of crystalline semiconductors and alloys or electron energy states of amorphous solids
  A15 compounds, disorder effects on density of states, Fermi vel. and Drude plasma freq. 3—3370
  actihnide metals, cohesion and electronic struct. 3—23255
  actinide metals, electronic struct. calcs. 3—18607
  actinide metals, energy band struct., spin-orbit coupling effect, relativistic corrections to at. vols. 3—28259
  alkali metals, band struct., role of electron-electron interactions 3—28262
  alkali metals, heavy, pseudopot. calc., nonlocality and d-level effects on struct. stability 3—38332
  alloys, band struct. and transport props., average lattice method *(Rumanian)* 3—13702
  binary FCC alloys, electronic struct. and local density of states, Husimi model 3—23258
  coherent composition modulated alloys, electronic struct. rel. to supermodulus effect 3—3047
  conference, Ganssig, Germany (April, 1982) 3—35779
  disordered binary alloys with off-diagonal disorder, band gap, interband repulsion effects 3—18606
  FCC metals, low energy electron reflectance spectra and band struct. 3—23257
  metallic glasses, Zr- and Hf-based, superconductivity and electronic struct. 3—38524
  metals, polyvalent nontransition, parallel bands and optical absorpt. 3—3044
  optical properties of metals, surface contrib. of bulk states 3—38787
  rare earth alloys, charge and spin density, electronic struct., Mossbauer study 3—28749
  rare earth metals, band structure and electron states, LMTO calc. 3—43005
  rare earth metals, X-ray L-edge absorpt. spectra, comparison with single particle band struct. calcs. 3—38957
  superconducting metals, Cooper pair form. rel. to exchange interaction 3—43320
  transition metal alloys, electronic struct., d-band LCAO interpolation and recursion methods 3—33628
  transition metal alloys, electronic struct. and density of states, cluster Xα calc. *(Russian)* 3—23252
  transition metal alloys, $L1_2$ and $D0_{22}$ ordered structures, electronic struct. and relative stabilities 3—43007
  transition metal bonding to nontransition metals 3—52052
  transition metal-p metal alloys, heat of form., rigid-band model 3—2846
  transition metals, Curie-Weiss law and band struct. parameters 3—28511
  Ag epitaxial film on Pd (001), band struct. determ. by photoemission 3—39007
  Ag-Pd, electronic struct. rel. to supermodulus effect 3—3047
  Ag_cPd_{1-c}, band struct. effects on Auger spectra 3—34178
  Ag_xPd_{1-x}, substitutionally disordered systems, self consistent pots. calc., KKR-CPA method 3—42995
  Al, band struct., photoemission study 3—43006
  Au, band struct, initial level population, and channelling radiation 3—47012
  Au, electronic struct. and d^ns^1 impurity states 3—3046
  Au_xNi_{1-x}, electronic struct. and density of states, KKR CPA calc. 3—43004
  Au_cPt_{1-c}, electronic struct., relativistic theory 3—3049
  Au_cPt_{1-c}, $N_{6,7}$ soft X-ray emission spectra, electronic struct. 3—3870
  Ba, electronic transitions, s→d and p→d, at high press., systematics 3—13700
  Be, Compton profile, electron struct. 3—14383
  Be slabs, electronic struct., ab initio LCAO HF calc. 3—23259

band structure of crystalline metals and alloys continued
Be$_2$, Xα calc. method 3—1240
Ca, electron structure compared with CaO, nonself-consistent calc. 3—18618
Ca$_2$, Xα calc. method 3—1240
Cd, photoelectron spectra, evidence of satellite struct. 3—58033
Ce, γ- and α-phases, band struct., cohesive props. and Compton profile 3—57268
CeAl$_2$, mag. ordering, electronic struct., LMTO calcs. 3—57508
CeAl$_2$(Pd$_3$)(Rh$_3$)(Ru$_2$), electronic struct., photoemission study 3—43015
CeH$_x$ (x=2.1, 2.9), XPS studies of electronic struct. 3—39008
CeIn$_3$(Sn$_3$)(Rh$_3$), self-consistent APW band calcs. 3—52022
Co, electronic band struct., Fermi surface, and optical props. under press. 3—3051
Co, positron annihilation, momentum density distribs., band. struct. calc. 3—28925
CoS$_2$, metallic electronic struct. calc. 3—18611
Cr, band struct. in paramag. and antiferromag. phases, press. influence 3—3052
Cr, electronic struct., effect of shear strains 3—52020
Cs, electronic s-d transition at high press., interband optical absorpt. study 3—28876
Cs, electronic transitions, s→d and p→d, at high press., systematics 3—13700
Cs, electronic transitions under high press., X-ray diffr. study 3—27891
Cs film, optical absorption study, band struct. 3—43653
Cs, isostructural phase transition under high pressure 3—47258
Cu (001), k-resolved inverse photoelectron spectroscopy 3—3853
Cu, band struct. calc. by linear muffin-tin method 3—8397
Cu, conduction spin density, Knight shift and Fermi surface, MAPW formalism 3—38707
Cu, momentum density and Compton profile, band struct. calc. 3—3050
Cu small particles, electronic struct. and binding energy 3—52023
Cu-Ni, band struct., angle-resolved photoemission study 3—28962
Cu-Ni, electronic struct. rel. to supermodulus effect 3—3047
Cu$_2$MnAl, optical absorpt. spectra from band struct. 3—28874
CuNi, modulated struct., electronic struct. and magnetism 3—57267
Cu$_c$Pd$_{1-c}$, band struct. effects on Auger spectra 3—34178
CuS$_2$, metallic electronic struct. calc. 3—18611
Fe, electronic struct. and magnetism above Curie temp. 3—28498
Fe-Co alloys, Fermi surface topology influence on kinetic props. 3—8405
Fe-Fe$_3$Si system, electronic struct., charge density study 3—23254
Fe-Ni, electronic and mag. structure evolution during ferromagnetic ordering *(Russian)* 3—28263
Fe$_{80}$B$_{20}$, electronic props., EELS, AES, and X-ray absorpt. study 3—52876
FeCo, partly ordered, electron energy spectra and subbands *(Russian)* 3—52019
FePd$_3$, electronic struct. and magnetism, LCAO calc. 3—28258
FeTiH$_x$ (x=1, 2), electronic props. 3—38294
Gd, band struct. and electronic density of states, mag. torque meas. 3—28257
La, electronic transitions, s→d and p→d, at high press., systematics 3—13700
La-H, self-consistent band struct. calcs. and optical props. 3—38298
LaH$_x$ (x=2.1, 2.9), XPS studies of electronic struct. 3—39008
LaNi$_{5-x}$Cu$_x$ hydrides, bonding, rel. to H storage materials, photoemission and band struct. calc. studies 3—27889
Li, band struct., variational cellular method 3—28261
Li, metallic, total energy calcs. 3—43057
Lu, electronic struct. calcs. 3—28260
Mg-Li, band struct., exciton-like behaviour 3—13714
Mg-Sc dilute alloy, H$_2$ absorpt. and electronic struct. 3—38195
Mg-Y dilute alloy, H$_2$ absorpt. and electronic struct. 3—38195
Mg$_2$, XCα calc. method 3—1240
Mn electronic and crystal structure peculiarities *(Russian)* 3—47256
Mn, positron annihilation, momentum density distribs., band. struct. calc. 3—28925
Mn$_{1.09}$Sb, interstitial site occupancy and electronic struct., neutron diffr. study 3—51590
NaWO$_3$, bronze, band struct., photoemission study, applicability of rigid band model 3—18610
Nb, X-ray emission spectra, electronic struct. *(Russian)* 3—24060
Nb-W, band struct., interatomic bonds 3—33185
Nb$_3$Ir(Pt)(Au), electronic struct., superconductivity and spin fluctuations 3—38299
Ni (001) and (110), k-resolved inverse photoelectron spectroscopy 3—3853
Ni (001) surface and thin films, spin-polarised electronic struct. 3—3277
Ni alloys, Auger spectra correlation effects 3—52872
Ni alloys, dil., multiplet splitting in high-polarity states, effect on magnetism, Auger study 3—28939
Ni alloys, electronic struct., X-ray photoelectron spectra 3—52024
Ni alloys, electronic struct., X-ray photoelectron spectra 3—52025
Ni, band struct. and electronic density of states, mag. torque meas. 3—28257
Ni, exchange splittings, effect of nonlocal spin density exchange pot. 3—52448
Ni, interband transitions and exchange splitting, EELS study 3—43677
Ni, metal-insulator transition at 34 TPa, APW calc. 3—8420
Ni-Zr alloys, band struct., specific heat, mag. props. 3—13715
Ni$_x$Fe$_{1-x}$, unoccupied electron states 3—13694
Ni$_2$MnSn, optical absorpt. spectra from band struct. 3—28874
Ni$_c$Pt$_{1-c}$, paramag., electronic struct., relativistic KKR CPA calc. 3—52021
NiS$_2$, metallic electronic struct. calc. 3—18611
NiSi$_2$ epitaxial films, electronic and atomic struct., LEED, Auger and photoemission studies 3—33630
NiSi$_2$, self-consistent energy bands and bonding 3—33629
NiTi, electronic struct. and optical cond., KKR calc. 3—3053
Ni(110), spin-polarized inverse photoelectron spectra 3—3851
Pd (111), unoccupied band density of states, secondary electron emission study 3—57255
Pd alloys, electronic struct., X-ray photoelectron spectra 3—52024
Pd alloys, electronic struct., X-ray photoelectron spectra 3—52025
Pd, electronic energy bands and optical absorpt. spectra 3—13716
PdAu, modulated struct., electronic struct. and magnetism 3—57267
Pd$_2$MnS$_n$, optical absorpt. spectra from band struct. 3—28874
Pt, electronic struct. and d^{n}s^1 impurity states 3—3046
Pt, g-factor, conduction electron, cyclotron orbit, meas. 3—52012
RU surface, clean and C-covered, electronic struct., self consistent LCAO calc. 3—23256

band structure of crystalline metals and alloys continued
Rb, electronic s-d transition at high press., interband optical absorpt. study 3—28876
Rh surface, clean and C-covered, electronic struct., self consistent LCAO calc. 3—23256
ScPd$_3$, self consistent band struct. 3—47257
α-Sn, electronic struct. and ground state props., self-consistent nonlocal pseudopot. calc. 3—57266
Ta$_{0.5}$W$_{0.5}$ alloy, electronic density of states and Fermi surface calc. 3—23232
TiBe$_2$, de Haas-van Alphen spectra and induced magnetism 3—3038
TiCr$_{1.8}$H$_x$, proton NMR and mag. susceptibility, electronic props. study 3—33993
TiFeH$_x$, substoichiometric, electronic struct. 3—38296
TiH$_x$ ($0 \leq x \leq 2$), nonstoichiometric, electronic struct. 3—38295
Tm, band structure and electron states, LMTO calc. 3—43005
U(Fe$_{1-x}$Co$_x$)$_2$, electronic struct. calcs. 3—18608
U(Fe$_{1-x}$Mn$_x$)$_2$, electronic struct. calcs. 3—18608
UIr$_3$ (100), f-band dispersion angle resolved and resonant photoemission study 3—57269
UMn$_2$(Fe$_2$)(Co$_2$)(Ni$_2$)(Al$_2$), electronic struct. calcs. 3—18608
UTe(Bi), electronic struct., relativistic calcs. 3—18609
V, electron thermal cond., band struct. model calc. *(Russian)* 3—52108
V, electronic struct., effect of shear strains 3—52020
V-H clusters, electronic struct. 3—38297
V$_3$Ir(Pt)(Au), electronic struct., superconductivity and spin fluctuations 3—38299
V$_{1-x}$M$_x$H$_y$ (M=Fe, Cr, Ti), soft X-ray emission spectra, metal-H bonding states 3—38962
VPd$_3$, electronic struct. and magnetism, LCAO calc. 3—28258
V$_3$Si, Fermi surface and band struct., positron annihilation and LMTO studies 3—57261
YPd$_3$, self consistent band struct. 3—47257
Zn, photoelectron spectra, evidence of satellite struct. 3—58033
Zr-Nb, sintering, solid-state electron-configuration model 3—9015
Zr-Nb system, sintering process investig. w.r.t. config. model *(Russian)* 3—47796
Zr-Nb-Mo-Re, electronic Gruneisen const. 3—23253
(Zr$_{1-x}$Hf$_x$)Fe$_2$, electronic struct., magnetisation and isomer shift 3—3048
Zr$_2$PdH$_x$, cryst. and amorphous, electronic struct., NMR studies 3—52644

band structure of crystalline semiconductors and insulators
see also conduction bands; energy gap; valence bands
4f materials, band struct., metal-semicond. transition due to Coulomb correlation, appl. to Er$_2$O$_3$ 3—18619
actinide monocarbides, MC (M=Th,Pa,U,Np), electronic struct., relativistic energy bands 3—18612
actinide nitrides, electronic struct., lattice parameters 3—18613
alkali halide crystal, valence p-states, spin-orbit splitting 3—33689
p-alkylbenzenes, electronic spectra, cryst. struct. effect 3—23278
binary semiconductors, forbidden bandwidths rel. to covalent bond parameters *(Chinese)* 3—43010
diamond, band struct, initial level population, and channelling radiation 3—47012
diamond type crystals, nonrelativistic dispersion eqn. 3—52026
elemental semiconductors, band structure, semiempirical construction of Slater-Koster parameters 3—57270
graphite, diamagnetic anisotropy and electronic energy band parameters, 4 to 300K 3—33858
graphite, electronic struct. and X-ray form factors, self consistent calc. 3—23263
graphite intercalated with C, electronic struct. 3—13723
graphite intercalation compounds, 2D band struct., optical props. *(French)* 3—23266
graphite intercalation cpd., third and fourth stage, band struct., LCAO calc. 3—23267
heterojunctions, band struct. discontinuities 3—23478
highly excited semiconductors, relaxation processes, equilib. state and dispersion mechanisms *(Spanish)* 3—13693
II-VI compounds, electronic struct. under press. 3—47260
III-V compounds, electronic struct. under press. 3—47260
III-V ternary compounds, band struct. tight-binding calcs., virtual cryst. approx. modification 3—47264
III-VI layered crystal, growth and charact., review 3—43723
IV-VI semiconductors, energy band struct. and Fermi surface, tight-binding calc. 3—57281
many-valley semiconductor, photomagnetic effect, theory *(Russian)* 3—3506
metal hydrides, props. and appls., conf., Toba, Japan (May 1982) 3—30547
n-type crystals, energy band parameters, heavy doping effects 3—13701
narrow gap semiconductors, diamond like, Kane model deviations caused by nonlocal pot. 3—8414
nucleotide base stacks, energy band struct., hydration effect 3—13720
orbital self-interaction in Hartree-Fock and density functional theories 3—18600
polyacenacene, electronic struct., SCF-MO calc. 3—23270
polyferrocenylene, band struct., INDO calcs. 3—33633
rubrene crystal, electronic struct., photocond., UPS and electron absorpt. study *(Russian)* 3—3054
ruby, d-orbital theory and high-press. effects on EPR spectrum 3—38688
semiconductor alloys, band struct. and transport props., average lattice method *(Rumanian)* 3—13702
semiconductor alloys, clustering and second-neighbour interactions, tight binding calc., virtual crystal approx. 3—23261
semiconductor physics, introduction, book 3—40329
semiconductor superlattice, interband absorption coefficient in quantising mag. and elec. fields 3—57877
semiconductors, band theory and transport processes, book 3—39
semiconductors, diamond-like, Γ_8 band dispersion law anisotropy in mag. fields 3—38308
semiconductors, heavily doped, band tail structure, injection level and compensation degree effects, theory *(Chinese)* 3—38339
semiconductors, optical phonon resonance scatt. effect on electron energy relax. *(Russian)* 3—23005
semiconductors and semimetals, mag. field. induced impurity bands and cond. bands 3—52008
sulphospinels, magnetic semiconductors, book contrib. 3—57551
ternary compounds, superconductivity, struct., electronic and lattice props., book 3—5515

band structure of crystalline semiconductors and insulators continued
tetraselenotetracene crystal, electronic struct., photocond., UPS and electron absorpt. study *(Russian)* 3−3054
$(TMTSF)_2X$, ($X=ClO_4$, ReO_4, FSO_3, PF_6 and AsF_6), band struct. parameters 3−28264
$(TMTSF)_2X$, band struct. and Fermi surface 3−13724
$(TMTSF)_2X$, Mulliken-Wolfsberg-Helmholtz band struct., role of basis set 3−57278
transition metal dichalcogenide intercalation compounds, electronic props. 3−23386
transition metal disulphides, band struct. and X-ray absorption spectra 3−58002
transition metal monosulphides, electronic struct., Xα discrete variational calc. 3−52027
V-VI layered compounds, binding energies, valence bond density of states, photoemission 3−8930
AgBr, band struct., spectral sensitisation by dyes, quantum chemical model 3−44064
$BaMo_6S_8$, cluster compounds, band struct., book contrib. 3−8418
$BaTiO_3$, adsorption of O_2, H_2 and methyl.alcohol, effect on polarisation processes 3−2983
BeF_2, crystalline, electronic struct., ab initio cluster calcs. 3−43019
BeF_2, crystalline and vitreous, electronic struct., optical study 3−52032
$Bi_{2-x}In_xTe_3$, constant energy surface anisotropy 3−3056
$Bi_{2-x}Sb_xTe_{3-y}Se_y$, constant energy surface anisotropy 3−3056
$Bi_3Sr(Eu)$, band struct. and superconductivity 3−13726
Bi_2Te_3, relativistic corrections to electron energies *(Russian)* 3−3059
$Bi_2Te_{3-x}Se_x(S_x)$, constant energy surface anisotropy 3−3056
$C_{8n}AsF_5$ stage 2 intercalation cpd., charge transfer and band struct. 3−23268
CaF_2, X-ray absorpt. spectra and electronic struct. 3−3866
CaO, electron structure compared with Ca, nonself-consistent cal. 3−18618
Cd_3As_2, diffusivity-mobility ratio in mag. field 3−43200
$Cd_3(As_xP_{1-x})_2$ solid solns., lasing obs. with optical pumping rel. to band struct. characts. 3−56207
$CdCr_2Se_4$, energy band struct. in atomic sphere approx. 3−57272
$CdGeAs_2$, energy band structure 3−8417
p-$CdGeAs_2$, energy spectrum and optical absorpt. 3−23246
$Cd_{1-x}Hg_xTe$, IR study of short-order clustering effect 3−43539
$Cd_{1-x}Mn_xF_2$, energy levels, AES study 3−43668
$Cd_{1-x}Mn_xF_2$, valence and conduction band struct., UPS study 3−23269
CdO, ab initio energy bands 3−43018
Cd_3P_2, band struct., Fermi level and g-factor in mag. field 3−33634
CdS, ideal vacancy electronic states and band struct., Green's function calc. 3−43099
$CdSiP_2$, energy band struct., pseudopot. calc. 3−8411
$CdSnAs_2$, energy band structure 3−8417
CdTe, cyclotron resonance of electrons and holes, optical detection 3−18603
CeB_6, self-consistent APW band calcs. 3−52022
CeH_2, electronic struct., photoemission study 3−43015
CeH_x ($x=2.1$, 2.9), XPS studies of electronic struct. 3−39008
Co (111) complex with phthalocyanine, energy band struct., EHT calcs. 3−13718
$CrAs_{0.47}Sb_{0.53}$, electronic struct. mag. and structural phase transitions, press. study 3−18896
$Cs_3Bi_2Br_9$, optical props., 2 to 10 eV, and photocond. meas. 3−43560
$Cs_xK_{1-x}C_8$ intercalation cpd., electronic struct., configuration propagator theory 3−38300
CuCl, band struct. and density of states, UV reflectivity study 3−43017
CuCl, band struct. and optical props., angle-resolved secondary electron emission study 3−47743
$CuInSe_2$, band struct. calcs. 3−3027
p-$CuInSe_2$ surface, clean and O contaminated, EELS studies 3−38976
Er_2O_3, band struct., metal-semicond. transition due to Coulomb correlation 3−18619
Eu chalcogenides, L_{III} X-ray absorption spectra, band struct. calc. 3−8904
$EuMo_6S_8$, cluster compounds, band struct., book contrib. 3−8418
$EuMo_6S_8$, low temp. transport props. 3−33727
Eu_2O_3, spin polarised band struct. Coulomb correlation effects 3−38303
FeS_2, electronic structure of 3d pyrite- and marcasite-type sulphides 3−18611
p-GaAs, heavily-doped compensative material, exponential band-tails and lasing characts. *(Chinese)* 3−32355
GaAs, oscillatory magnetoabsorption and diamagnetic excitons 3−38806
GaAs-$Al_\alpha Ga_{1-x}As$ heterojunction, 2D electron gas struct., FET and logic IC appl. 3−57420
GaS_xSe_{1-x}, thermoreflectance spectra, 3 to 9 eV 3−38807
$GdMo_6S_8$, cluster compounds, band struct., book contrib. 3−8418
Ge, band struct., self consistent APW calc. 3−47259
Ge, neutron scatt. cross section for intraband transitions 3−8395
Ge, resonant photoemission at 3p threshold 3−8937
$Ge_{2x}(GaAs)_{1-x}$ solid soln., band struct., LCAO calc. 3−8413
$Ge_{2x}(GaAs)_{1-x}$ solid solns., band struct., LCAO calc. 3−8415
GeO_2, resonant photoemission at 3p threshold 3−8937
$GeSe_2$, cryst. and amorphous, electronic struct., optical and photoemission props. 3−23265
$Ge_{0.9}Si_{0.1}$, energy band parameter study 3−52030
$Hg_{1-x}Te$, electronic struct., CPA and tight-binding calc. 3−43016
I_2, high pressure phase, hole-metal state, electronic band struct. 3−18615
I_2, solid, electronic transitions, s→d and p→d, at high press., systematics 3−13700
InAs, elec. transport and band struct. 3−3233
InAs-GaSb superlattices, electronic props. 3−23262
$In_{1-x}Ga_xAs_yP_{1-y}$, material parameters derivation from linear interpolation scheme 3−33632
$InP_xAs_ySb_{1-x-y}$, band. struct., pseudopot. calc. and electroreflection meas. 3−8412
InSb, diamagnetic excitons and energy band parameters, magnetoabsorption study 3−33644
n-InSb, longit. cond., effect of nonparabolicity for transverse in strong mag. fields 3−8539
$IrCl_3$, electronic props. relativistic correction, multiple scatt. Xα calc. 3−3061
$K_3Co(CN_5)X$, $X=CN$, NO_2, N_3, I, Cl, Br, electronic struct. *(Russian)* 3−23271
$KMgF_3$, electronic struct., photoemission expts. 3−57277
$K_xRb_{1-x}C_8$ intercalation cpd., electronic struct., configuration propagator theory 3−38300

band structure of crystalline semiconductors and insulators continued
LaH_2, electronic energy bands and optical props., APW calc. 3−43011
LaH_x ($x=2.1$, 2.9), XPS studies of electronic struct. 3−39008
LaH_x, self-consistent electronic struct. calcs. 3−23264
LaSb, de Haas-van Alphen effects, band struct. calcs. 3−52011
LiF, band struct., parametrisation of semi-empirical methods 3−23260
$LiNbO_3$, X-ray emission spectra, electronic struct. *(Russian)* 3−24060
$LiTiS_2$, intercalate, band struct., interlayer interactions 3−13725
$Mg_xHg_{1-x}Se$, zero gap semiconductor-ordinary semiconductor transition *(Russian)* 3−3204
$MgSiP_2$, energy band struct., pseudopot. calc. 3−8411
MnO, short range correlation effects, energy gap 3−8409
α-MnS, valence band characterisation, comparison of UPS and XPS 3−38302
Mo chalcogenides, cluster compounds, band struct., book contrib. 3−8418
MoO_2, electronic struct. and photoelectron spectra, Xα calc. 3−13722
$NaCl{:}Ag^+(Cu^+)$, electronic struct. and luminescent props., multiple scatt. Xα calc. 3−3060
NbC, vacancy band in electronic struct., DV-Xα cluster calc. 3−38306
NbH, electronic struct., photoemission study 3−43014
NbN, vacancy band in electronic struct., DV-Xα cluster calc. 3−38306
NbO, vacancy band in electronic struct., DV-Xα cluster calc. 3−38306
$NbSe_3$, discommensurate character 3−13193
NdH_2, electronic energy bands and optical props., APW calc. 3−43011
Ne crystalline, electron band struct., first-principles pseudopot. calc. 3−8396
Ni complex, bis-(1,2-benzoquinonedioximato)-nickel (II), band struct., cryst., orbital approach based on INDO approx. 3−57274
Ni complex, tetraza porphin nickel(II), band struct., semiempirical HF SCF cryst. orbital calcs. 3−52029
$NiBr_2(Cl_2)$, fundamental refl. and electronic struct. 3−43562
NiTi, partly ordered, electron energy spectra and subbands *(Russian)* 3−52019
n-$NiTiO_3$:Nb electrode, sintered, photoelectrochem. props. 3−19593
P, black, band struct. studied by angle resolved UPS 3−57279
P, black, electronic struct., XPS study 3−19249
$PbMo_6S_8$, electronic struct., role of cluster twisting angle, LCAO EHT tight-binding calc. 3−57280
$PbMo_6X_8$ ($X=$chalcogenide), cluster compounds, band struct., book contrib. 3−8418
PbO, tetragonal, self-consistent energy band struct. 3−43013
PbS-PbSe(Te) solid solutions, electronic density of states effective mass 3−57262
$Pb_{1-x}Sn_xTe$:In, band edge motion in quantising mag. field and nonequilib. states 3−57275
$Pb_{1-x}Sn_xTe$:In, energy spectrum in quantizing mag. field 3−18727
PbTe heteroepitaxial films, band. struct., magnetoresistance oscill. study 3−28266
$Pb(Zr,Ti)O_3$-MnO-$LaO_{1.5}$, oxide additions effect on band struct., diffuse refl. spectra 3−19155
PdH_x, normal and deuterated, electronic, struct., de Haas-van Alphen study 3−23244
$Rb_xCs_{1-x}C_8$ intercalation cpd., electronic struct., configuration propagator theory 3−38300
SbSI, adsorption of O_2, H_2 and methyl-alcohol, effect on polarisation processes 3−2983
ScN, energy band structs., LCAO interpolation scheme calcs. 3−3058
ScP, energy band structs., LCAO interpolation scheme calcs. 3−3058
ScS(Se)(Te), optical props. and electron struct. 3−19157
Si, band struct, initial level population, and channelling radiation 3−47012
Si, band struct., self consistent APW calc. 3−47259
Si, band struct. calcs. 3−3027
Si, electronic struct., localised orbital description 3−43008
Si, neutron scatt. cross section for intraband transitions 3−8395
Si-SiC structure formed by C ion implantation into n-Si, elec. characterisation *(French)* 3−13919
SiO_x, electronic struct. and density of states, random bonding model 3−38305
Sm chalcogenides, L_{III} X-ray absorption spectra, band struct. calc. 3−8904
SmS, electronic struct., relativistic KKR calcs. 3−47262
SmS, valence transition, CPA calcs. 3−13773
p-$(SnTe)_{0.2}(PbSe)_{0.8}$, epitaxial layer, transfer phenomena 3−8408
TaH, electronic struct., photoemission study 3−43014
$Tb_3Fe_5O_{12}$, 4f-electron asphericity 3−57276
Ti-Cu hydrides, proton NMR study of H diffusion and electronic struct. 3−34003
TiC_x, unoccupied electron states, EELS study 3−8410
TiN, energy band structs., LCAO interpolation scheme calcs. 3−3058
TiN_x, unoccupied electron states, EELS study 3−8410
TiO_2, electronic struct., polarised OKα valence band spectra 3−3055
TiS_2, band struct., interlayer interactions 3−13725
TiS_3, 1-D compound, valence band struct., XPS study 3−8933
$Ti_{1-x}V_xS_2$, photoemission study of elec. struct. 3−57273
$TlMo_3Se_3$, cluster compounds, band struct., book contrib. 3−8418
U halides, U^{3+} to U^{5+}, electronic struct., XPS of bonding ionicity 3−19245
U oxyhalides, U^{3+} to U^{6+}, electronic struct., XPS of bonding ionicity 3−19245
UH_3, electronic energy band struct. 3−38301
UN(100), photoemission study of electronic states 3−18614
UO_2, cohesive energy and charge density, self consistent band struct. calc. 3−46882
VH, electronic struct., photoemission study 3−43014
VN, unoccupied electron states, EELS study 3−8410
WO_c, electronic props., relativistic correction, multiple scatt. Xα calc. 3−3061
Xe, solid, electronic transitions, s→d and p→d, at high press., systematics 3−13700
Zn_3As_2, film and crystal, band struct., optical absorpt. and reflectivity study 3−8812
$ZnGeAs_2$, energy band struct. and optical props. 3−28265
$Zn_{1-x}Mg_xS$ ($0\leq x\leq 0.31$), energy band struct., exciton refl. spectra 3−3057
Zn_3P_2, absorpt. edge calcs. 3−14318
ZnS, band struct. calcs. 3−3027
ZnS_2, electronic structure of 3d pyrite-and marcasite-type sulphides 3−18611
ZrH_x, proton NMR study of electronic struct. 3−38307

band structure of crystalline semiconductors and insulators continued
ZrN, energy band structs., LCAO interpolation scheme calcs. 3-3058
ZrO_2, elec. struct., phase stability, DV-Xα cluster method 3-52028

band structure of semimetals
alloys, band struct. and transport props., average lattice method *(Rumanian)* 3-13702
mag. field. induced impurity bands and cond. bands 3-52008
Bi, electron spectrum parameters from high temp. magnetoresist. oscills. *(Russian)* 3-38405
Bi, valence band study 3-28268
Bi-Sb, electron spectrum parameters from high temp. magnetoresist. oscills. *(Russian)* 3-38405
$Bi_{1-x}Sb_x$, valence band study 3-28268

band theory models and calculation methods
see also APW calculations; band model of magnetism; band structure; cellular method; free-electron approximation; Hubbard model; KKR calculations; k.p calculations; Kronig-Penney model; muffin-tin potential; nearly-free-electron approximation; OPW calculations; pseudopotential methods; relativistic band structure calculations; tight-binding calculations
alkali halide crystal, valence p-states, spin-orbit splitting 3-33689
alloys, metallic, semiconducting and semimetals, band struct. and transport props., average lattice method *(Rumanian)* 3-13702
Bloch electrons dynamics in external elec. fields, Stark-Wannier ladder reson. 3-3024
density functional self-consistent field problem soln. 3-3027
electronic structure of surfaces, interfaces and organic solids, muffin-tin orbitals calcs. 3-42994
excitations in disordered systems, NATO Advanced Study Institute, East Lansing, MI, USA (Sept. 1981) 3-1
exponential cosine screened Coulomb pot. energies 3-3026
Fermi surface geometric props., Brillouin zones 3-38289
Green's function Fourier coeff. evaluation method 3-23228
Green's function Fourier component determ. method 3-23229
Green's function methods for electronic struct. calc. 3-23242
linear muffin-tin method for band struct. calc. 3-8397
orbital self-interaction in Hartree-Fock and density functional theories 3-18600
perfect cryst. electron block function, method of special points 3-8392
perfect crystal, electronic band struct., quasi-free electron case 3-8393
polyvalent heavy liquid metals, electronic density of states, Fermi surface 3-18598
pseudopotentials, first-principle, analytic representation from ab initio calcs. 3-38276
selfconsistent electronic struct. calcs., application of complex energy integration 3-18595
semiconductors, polar or covalent, electronic struct., equivalent-orbital and bond-orbital methods 3-18599
solids with nonuniform band struct., Wannier-Slater theorem 3-38285
substitutionally disordered systems, self consistent pot. calc., KKR-CPR method 3-42995
surfaces and interfaces, reduced Hamiltonian method for solving tight-binding model 3-52220
three-dimensional solids, LCAO SCF method calcs. 3-8398
three-dimensional solids, LCAO SCF method calcs. 3-8399
$(TMTSF)_2X$, Mulliken-Wolfsberg-Helmholtz band struct., role of basis set 3-57278
zero-energy gaps for deep 1-dimens. periodic pots. 3-25735
zinc-blende semiconductors, orthonormal local orbitals constructions 3-38284
Cu, Green's function Fourier component determ. method 3-23229
Ge, impurity energy levels of group V and VI elements using unified theoretical model 3-8455
LiF, band struct., parametrisation of semi-empirical methods 3-23260
Ni complex, tetraza porphin nickel(II), band struct., semiempirical HF SCF cryst. orbital calcs. 3-52029
NiS, metal-insulator transition, two-band model 3-13728
Si, impurity energy levels of group V and VI elements using unified theoretical model 3-8455

bands (kink) *see kink bands*

Bardeen-Cooper-Schrieffer theory *see BCS theory*

BARITT diodes
p^+np^+ structure, quasistatic injection current theory *(Russian)* 3-3311

barium
see also nuclei with ......
adsorbed on Re(1010) surface, work function and thermal stability 3-51957
atom, 4d photoabsorption, shell collapse and contraction theories 3-41533
atom, 5d7d $^1D_2$ perturbing state, hyperfine struct. and config. interaction 3-21660
atom, 5d7d state, forced autoionis. 3-26703
atom, $(6p_jns_{1/2})$ states, electron ejection, energy and ang. distribs. 3-55904
atom, excited state laser spectroscopy, thermionic double diode as efficient detector 3-36102
atom, muonic, QED electron propagator testing, Higgs boson contrib. and mass 3-36183
atom, photoexcitation, overlap-integral variation interferences, IR obs. 3-11729
atom, Rydberg states, high resolution study 3-31974
atom, Rydberg states, hyperfine struct. optical-optical double resonance 3-1288
atoms, *6sng-6snh-6sni-6snk* intervals, RF reson. meas., nonadiabatic effects in core polarisation 3-11727
atoms, $6p^2$ $^1S_0$ autoionised level studied using two-step optogalvanic spectroscopy, oscillator strengths 3-11730
atoms, 6snd $^3D_2$ Rydberg states, hyperfine struct., fine struct. perturbations 3-12005
atoms, collision-induced superradiance 3-41797
atoms, excited state lifetime meas. using rapid Doppler switching 3-6571
atoms, multistep excitation to autoionising states 3-11753
atoms, Stark effect in 6s5d and 5d6p states, meas. with laser at. beam spectroscopy 3-50350
electronic transitions, s→d and p→d, at high press., systematics 3-13700
intense ion beam source development expts. 3-6484
ion cloud in ionosphere, sunlight reson. fluoresc. scatt., radiative transfer and lines anal. 3-5031
laser oscillation, CW, superlong pulses on the 6^1P_1-5^1D_2 transition 3-17486
liquid, density and surface tension up to 1850K 3-51683

barium continued
Rydberg states, 6s14d $^1D_2$ and $^3D_{1,2,3}$, CI and singlet-triplet mixing probed by hyperfine struct. 3-11709
Rydberg states 6sns, high resolution spectroscopy 3-50327
sub-laser linewidth autoionisation rates, spectroscopic meas. 3-11752
surface, interaction with hydrocarbons, XPS study, appl. to electronic vac. devices 3-39014
vapour, XeCl laser generated IR stimulated Raman scatt. 3-41921
X-ray mass absorption coeff. and imaginary part of atomic scatt. factor, expt. determ. *(German)* 3-2342
Ba I 553.5 nm line, reson. broadening, amplitude-phase method obs. *(Russian)* 3-45905
Ba II, in RF quadrupole trap, laser fluoresc. spectrosc., H_2 quenching technique 3-36716
Ba II, radiative lifetime meas. of 6p $^2P_{3/2}$ level, collinear laser ion beam technique 3-21712
Ba V, $5s^25p^4$-$5s5p^5$ transitions 3-50333
Ba^+, 4d photoabsorption, shell collapse and contraction theories 3-41533
Ba^+, ion trapping from high energy sources into RF ion trap 3-12008
Ba^+ laser, photo-autoionisation pumped 3-12118
Ba^{2+}, 4d photoabsorption, shell collapse and contraction theories 3-41533
Ba^{2+}, Rydberg spectra, correl., term depend. and autoionis. 3-21733
Ba/Rb/Cs relative abundance in Earth's mantle 3-48520
Ba-$0.6Al_2O_3$, transmission ELS for STEM microanalysis 3-8916
Ba-inert gas systems, empirical interatomic pots. deduced from absorpt. meas. 3-11916
Ba+methylnitrite, chemiluminescence, vibr. and bonding of product 3-29311
BaI, perturbed 6snd $^{1,3}D_2$ sequences, Zeeman effect obs., MQDT calcs. 3-6573
Cs-Ba diode, large-amplitude current oscills. 3-51400
$KCl:Ba^{2+}$ solid soln., disintegration, heterophasal struct. *(Russian)* 3-8196
$NaCl:Ba^{2+}$, γ-ray irrad., luminescence from M and N centres 3-24005
$(Ni, Zn, Co)_2Fe_{16}O_{27}:Ba$, topotactic grain boundaries, TEM study 3-8057
$TiO_2:Ba$, second phase development 3-38135

barium alloys
see also barium compounds
BaAl 48 alloy, intensively cooled, anomalous segregation anal. *(Polish)* 3-19333

barium compounds
see also barium alloys
$Ba_2Fe_2{}^{2+}Fe_{28}{}^{3+}O_{46}$ ferrites, mag. props. and Mossbauer spectra 3-57581
dibarium copper formate tetrahydrate, ligand field behaviour, EPR spectra 3-23789
ferrite, single cryst., magnetisation processes, vibrating reed magnetometer meas. 3-28621
ferrite film with perpendicular magnetisation, form. by targets-facing sputtering 3-28994
ferrite particles, perpendicular mag. recording props. 3-28641
hexaferrites, substituted M-type, mag. props. and microstruct. 3-14086
thiogallates, Er doped, photolum. and cathodolum. props. 3-3780
AlF_3-ThF_4-BaF_2-RF_3 (R=rare earth), glass composition and transition temp. 3-23042
β''-Al_2O_3-BaO, solid electrolyte for divalent cations 3-42833
BH^+, low lying states, ab initio calcs. 3-1237
$BTiO_3$, perovskite oxide ferroelectric semiconductor, electron-scatt. model 3-43178
$Ba(A_{x/4}Nb_{3x/4}Ti_{1-x})O_3$ (A=Na,Li), cubic perovskite, prep., cryst. struct. and dielec. props. 3-52708
$BaAl_2Te$, crystal structure, X-ray diffr. study *(German)* 3-13198
$BaCO_3$, free energy of formation and thermal stability 3-9347
$Ba_xCa_{1-x}F_2$, insulating epitaxial films grown by MBE on InP substrates 3-33596
$BaCaFe_4O_8$, mag. struct., neutron diffr. anal. 3-23588
$Ba_3CaRu_2O_9$, exchange interaction in Ru(V) dimer, neutron inelastic scatt. study 3-52097
$Ba_3CaRu_2O_9$, magnetic interactions in clusters studied by neutron inelastic scattering 3-57527
$Ba_2Cd_3Bi_4$, prod. and cryst. struct. *(German)* 3-2500
$BaCd(HCO_2)_4$, cryst. growth, morphology and defects, etching study 3-37823
$BaCe(CO_3)F$, Huanghoite, cryst. superstructure determ., direct solutions *(Chinese)* 3-18264
$Ba_{1-x}Ce_x(La_x)Fe_{18}O_{27}$ ferrites, mag. props. and Mossbauer spectra 3-57604
BaCl, $^2\Sigma$ radical, microwave rot. spectrum and hyperfine struct. 3-17269
BaCl, radicals, Stark effect meas. and rot. spectra at Freie Univ., Berlin 3-50453
$BaCl_2$, X-ray emission and absorption spectra, rel. to bond ionicity 3-58006
$Ba_{11}Cr_4F_{34}$, anion-excess fluorite related superstructures *(French)* 3-27905
$BaCrO_3$, 4H polytype, cryst. struct., X-ray powder diffr. study 3-2506
BaF, $^2\Sigma$ radical, microwave rot. spectrum and hyperfine struct. 3-17269
BaF, radicals, Stark effect meas. and rot. spectra at Freie Univ., Berlin 3-50453
BaF_2, brittle, predeformation and fracture, high temp. study 3-37981
BaF_2 crystals, exciton form. during interaction of radiation-induced defect 3-3795
BaF_2, dielec. and anharmonic behaviour 3-42741
BaF_2, fast ion phase, anion disorder, neutron scatt. study 3-13520
BaF_2, high-temp. acoustic bond 3-46398
BaF_2, IR window material, multiwavelength laser rate calorimetry 3-7096
BaF_2, insulating epitaxial films grown by MBE on InP substrates 3-33596
BaF_2, laser window materials characts. 3-7098
BaF_2 optical film, stress, adherence, hardness and density 3-13685
BaF_2, oxidised, precipitates, HVEM study 3-18459
BaF_2 powder, Debye-Waller factors of Ba^{++} and F^- ions, temp. variation meas. by X-ray diffr. 3-28073
BaF_2 scintillator for subnanosecond timing 3-45759
BaF_2, vibr. entropy calc. of anion Frenkel defects 3-13489
$BaF_2:Eu^{2+}$, zero-field splitting 3-23335
$BaF_2:La(Lu)(Eu)$, type I and II dipoles, defect ion displacements and effective dipole moments 3-18506
BaF_2-GdF_3-ZrF_4, optical fibres, for transmission in mid-IR 3-12356

barium compounds continued
BaF_2-GdF_3-ZrF_4, optical fibre prep., transmission in mid-IR 3−12357
BaF_2-Si (111) heterostructures, epitaxial relations, ion channelling anal. 3−51967
BaF_2-ZnF_2-ThF_4-$YbF_3(LuF_3)$, prep. and props., effect of compositional modifications 3−14750
BaFCl:Eu luminescence anal. 3−3794
$BaF_{2-x}H_x$, mixed cryst., lattice vibr., IR spectra study 3−2705
$BaFe_{12-2x}Co_xTi_xO_{19}$ ceramic, magneto-optic Kerr effect 3−28840
Ba_2FeMoO_6, anomalous magneto-optic Kerr effect, influence of oxidation 3−34075
$BaFe_{12}O_{19}$, calcination process, sintering, and mag. props., effect of Fe_2O_3 aggregation 3−19309
$BaFe_{12}O_{19}$ ferrite, coaxial cylindrical domains, magnetostatic oscillations *(Russian)* 3−47555
$BaFe_{12}O_{19}$, ferrite, M-type, SiO_2 addition effect 3−14581
$BaFe_{12}O_{19}$ ferrites, mag. anisotropy, point charge model and perturbation theory 3−57585
$BaFe_{12}O_{19}$ KOEROX permanent magnets, production processes and mag. props. *(German)* 3−43402
$BaFe_{12}O_{19}$, magnetic domain width, cryst. thickness depend. 3−8698
$BaFe_{12}O_{19}$, magneto-optical and optical props. meas. 3−8805
$BaFe_{12}O_{19}$, order-order mag. transition, neutron diffr. study 3−47498
$BaFe_{12}O_{19}:Ru^{3+}$ single cryst., mag. anisotropy 3−14044
$BaFe_{1-x}Ru_xO_{3-y}$, cryst. struct. of polytypes, cond. props. *(German)* 3−18272
$Ba_{1+x}Fe_2S_4$, vernier struct., electron diffr. and microscopy study 3−27906
$BaFeSi_4O_{10}$, gillespite, Fe^{2+} Mossbauer spectrum, mag. relax. effects obs. 3−3609
$Ba_{11}Ga_4F_{34}$, anion-excess fluorite related superstructures *(French)* 3−27905
$BaGa_2S_4(Al_2S_4)$, cryst. struct., X-ray study *(German)* 3−2514
$BaGd_{2-x}Nd_x(MoO_4)_4$ crystal, Nd^{3+} $^4I_{11/2}$ level population relax. probability determ. from luminesc. dumping in external sample 3−38903
$BaGeO_3$, $BaGe_2O_5$, $Ba_2Ge_5O_{12}$, high press. transforms., X-ray powder diffr. data 3−19327
BaH_2, d orbitals effect on geometry CNDO/2 calcs. 3−46093
BaH_2, elec. resistance under high press. 3−28353
$Ba(H_2PO_4)_2$, sp. ht. meas., 100 to 373K, antiferroelec. phase transition 3−42806
$BaIn_2Te_4$, crystal structure, X-ray diffr. study *(German)* 3−13198
$Ba_{1-x}La_xF_{2+x}$ crystals, low temp. ionic cond. and dielec. relax. 3−18506
Ba_2LaRuO_6, mag. props. and cryst. struct., neutron diffr. studies 3−46912
$Ba(Li_{1/4}Nb_{3/4})O_3$, prep., thermal change and dielec. props. 3−29044
$Ba_2MgGe_2O_7$, isotypic with melilite, cryst. growth by Czochralski method *(German)* 3−3946
$Ba_2MgGe_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3−3689
$Ba(Mg_{1/3}Ta_{2/3})O_3$ ceramics with temp. stable high dielec. const. and low microwave loss 3−14189
$BaMg_2(VO_4)_2$, cryst. struct. determ. 3−8013
$BaMnF_4$ 2-D antiferromag., interlayer exchange interactions 3−57575
$BaMnF_4$, 2-D antiferromag. system, EPR and spin dynamics 3−57761
$BaMnF_4$, low dimensional antiferromags., EPR study *(Russian)* 3−3515
$BaMnF_4$, pyroelectric antiferromagnet, exciton and magnon-sideband absorption 3−57970
$BaMnF_4$, two-dimensional antiferromag., absorption and luminesc. spectra 3−57953
$BaMoO_4$, crystallisation kinetics from LiCl melts 3−24107
$BaMoO_4$ crystals, elec. cond. meas. 3−13522
$BaMoO_4$, elec. conductivity and dielec. props. 3−38383
$BaMoO_4$, translational and librational modes, phonon dispersion study 3−2700
$BaMo_6S_8$, cluster compounds, band struct., book contrib. 3−8418
$BaMo_6S_8$, resist., mag. susceptibility meas., supercond., press. study 3−28470
$BaMo_6S_8$, struct. phase transition, sp. ht. meas. 3−47102
$BaNH_2+H_2O(N_2H_4)$, chemiluminescent reactions 3−45957
$Ba(NO_2)_2.H_2O$ pyroelec. cryst., nuclear positions and spontaneous polarisation 3−28756
$Ba(NO_2)_2.H_2O$, X-ray mass absorption coeff. and imaginary part of atomic scatt. factor of Ba *(German)* 3−2342
$Ba(Na_{1/4}Nb_{3/4})O_3$, prep., thermal change and dielec. props. 3−29044
$Ba_2NaNb_5O_{15}$ crystal, intracavity freq. doubling of CW Nd:YAG laser *(Chinese)* 3−12235
$Ba_2NaNb_5O_{15}$, ferroelectric phase transition studies *(Chinese)* 3−3650
$Ba_2NaNb_5O_{15}$, SAW propag. 3−42906
$Ba_4Nb_2S_9$, cryst. struct., X-ray diffr. anal. 3−51570
$BaNi_2(PO_4)_2$, synthesis and crystallisation 3−14473
BaO, defect props., rel. to cryst. pots. 3−56874
BaO, Doppler-free polarisation spectroscopy in flame reactions 3−36770
BaO, muonic Coulomb capture 3−8751
BaO, oxides, lattice dynamics 3−22992
BaO, press. induced phase transition, interionic pot. calc. 3−2777
BaO, struct. stability rel. to interionic pots. 3−2466
BaO:M ($M=Mn^{2+}$, Fe^{2+}, Co^{2+}, NI^{2+}), defect props. 3−56923
BaO-B_2O_3, liq.-liq. immiscibility *(Japanese)* 3−38080
BaO-B_2O_3-Al_2O_3 glass, EPR and kinetic study of H centres 3−14129
BaO-B_2O_3-Fe_2O_3 glass, IR spectra 3−14295
BaO-B_2O_3-GeO_2 and B_2O_3-GeO_2 glass struct., NMR and Raman scatt. study 3−2428
BaO-$B_2O_3(-La_2O_3)$ glass, vacuum UV reflection spectra 3−14321
BaO-Fe_2O_3, melt, density and surface tension *(Japanese)* 3−47192
BaO-Fe_2O_3, molten ferrite system, elec. cond., viscosity, Fe^{3+} coordination *(Japanese)* 3−38107
BaO-FeO-P_2O_5 glasses, internal friction, torsion pendulum technique 3−51708
BaO-Ga_2O_3-SiO_2 glasses, ion exchange, effect of added ions 3−34617
BaO-GeO_2 amorphous thin film complex, DC cond. meas. prior to electroforming 3−3346
BaO-GeO_2 system, phase relations, 20 to 70 kbar, 750 to 1200°C 3−19327
BaO-Na_2O-SiO_2 glass, hydrated, microstruct., small angle X-ray scatt. study 3−53253
BaO-P_2O_5 glasses containing water, protonic cond., DC elec. cond. meas. 3−23082
BaO-SiO_2 glass, phase-separated, positron annihilation 3−58111
BaO-SiO_2-TiO_2 glass fibres, alkaline durability *(Japanese)* 3−4175
BaO-TiO_2-SiO_2 glasses, alkaline durability 3−34513

barium compounds continued
BaO-transition metal oxide-Fe_2O_3 ferrite, microsyntactic intergrowth and composition fluctuation 3−13472
BaO-ZnO-Al_2O_3-B_2O_3-SiO_2 optical glass, spangle form. during melting 3−33132
BaO.6Fe_2O_3 permanent magnet, oriented, fracture toughness and anisotropy 3−14741
$BaPb_{0.75}Bi_{0.25}O_{3-y}$, anomalous magnetoresist. and elec. resist. 3−47368
$BaPb_{1-x}Bi_xO_3$ ceramic, superconducting props. *(Russian)* 3−18816
$BaPb_{1-x}Bi_xO_3$ ceramic, Josephson tunnelling 3−23552
$BaPb_{1-x}Bi_xO_3$ ceramic supercond., anomalous behaviour of thermodynamic props. 3−28480
$BaPb_{1-x}Bi_xO_3$, single cryst. growth from PbO_2-Bi_2O_3-$BaPbO_3$ soln., supercond. props. 3−3936
$BaPb_{1-x}Bi_xO_3$, superconducting and normal elec. props. meas. *(Japanese)* 3−38560
$BaPbO_3$, electrical conductivity, mixture composition and baking conditions effect 3−52140
$Ba(Pt,Ni)(CN)_4$, delocalised and localised electronic states luminesc. and IR study 3−47694
$Ba(Pt,Pd)(CN)_4$, delocalised and localised electronic states luminesc. and IR study 3−47694
$Ba(Pt(CN)_4).4H_2O$, low temp. photoluminescence, grinding effects 3−43583
$BaPt(CN)_4.4H_2O$:Ni, doped and undoped, emission spectra and excited-state lifetimes, 10 to 50K 3−47693
$BaR_2F_6:R'^{3+}$ ($R,R'=Y$, Dy, Ho, Er, Tm, Yb, Lu) single cryst., prep., spectroscopy and stimulated emission 3−52919
BaS phosphors, prep., struct. characts., TL glow curves 3−52817
BaS:Cu, Bi phosphor, radiolum., radiative recomb. phenomena, thermolum. comparison 3−14356
BaS:Cu(Bi), dielect. props. 3−34030
$BaSO_4$ reflection standards, radiance coeff. determ. in IR and UV spectral range *(German)* 3−369
$BaSO_4$(Eu) thermoluminophore, use in prolonged exposure dose meas. 3−21567
$BaS_2O_3.H_2O(D_2O)$, H bonds, IR and Raman vibr. spectrosc. obs. 3−6648
$BaSnS_2(BaSn_2S_3)$, elec. cond. and optical absorpt. meas. *(French)* 3−52151
$BaSrFe_4O_8$, antiferromag. struct. and Neel temp., neutron diffr. study 3−38585
$Ba_{0.4}Sr_{0.6}Nb_2O_6$, polarisation distrib. along polar axis, regularisation method from pyroelec. meas. 3−52741
$(Ba_xSr_{1-x})TiO_3$, ferroelectric films, SIMS study 3−3008
$Ba_3Te_4O_{11}$, cryst. struct. study 3−51556
$Ba_{1.17}Ti_{5.04}Al_{2.1}O_{16}$, SYNROC B, hollandite phase struct., 20 to 1060°C, neutron diffr. obs. 3−18270
$BaTiO_3$, 180° domain walls, interaction with defects, electron and optical microscopy studies 3−38783
$BaTiO_3$, adsorption of O_2, H_2 and methyl.alcohol, effect on polarisation processes 3−2983
$BaTiO_3$, anomalous electron energy loss at ferroelec. Curie temp. 3−13294
$BaTiO_3$, anomalous grain growth below eutectic temp. *(German, English)* 3−47862
$BaTiO_3$ based powder, dielectric, comparison of calendered and tape cast form 3−34265
$BaTiO_3$ based rods and plates, ultrasonic props. *(Russian)* 3−22982
$BaTiO_3$ ceramic, ferroelec. phase transition, mag. field effects 3−47614
$BaTiO_3$ ceramic capacitors, DC leakage in Poole-Frenkel field 3−3208
$BaTiO_3$ ceramics, grain size effect on dielectric const. under DC biasing field 3−3634
In-$BaTiO_3$, donor-doped, resist. profile meas. using liquid-metal-wetted four-point probe 3−23480
$BaTiO_3$, electric transport, interface and bulk prop. effects 3−43172
$BaTiO_3$, ferroelec. transition stimulated by strong EM wave 3−28799
$BaTiO_3$ ferroelectric films, RF sputtered on Si, photovoltaic props. and dielec. hysteresis meas. 3−33757
$BaTiO_3$ ferroelectric, electrostatics, dielec. const. and spontaneous polarisation 3−34040
$BaTiO_3$ in passive (self-pumped) phase conjugate mirror, theory and imaging expt. 3−7077
$BaTiO_3$, monocrystalline film, thermal evaporation in vacuum 3−8984
$BaTiO_3$, PTC device, grain boundaries, TEM study 3−51617
$BaTiO_3$, Raman spectra of oblique phonons, soft mode temp. depend. 3−57909
$BaTiO_3$, Sb_2O_3 doped, release of O_2 during sintering 3−39081
$BaTiO_3$, semicond., initernal friction and elec. resist. meas. 3−8136
$BaTiO_3$, semiconducting, porous, factors, affecting positive temp. coeff. of resist. *(Japanese)* 3−3206
$BaTiO_3$ single domain cryst., permittivity, microwave dispersion 3−19035
$BaTiO_3$ single-domain crystal, image-bearing beam self-pumped CW phase conjugation 3−1719
$BaTiO_3$, soft mode spectroscopy, hyper-Raman scatt. 3−23953
$BaTiO_3$, soft X-ray emission spectra *(Russian)* 3−24059
$BaTiO_3$, thin ferroelectric film, internal mech. stresses 3−33611
$BaTiO_3$:Co, electronic struct. calcs. 3−43094
$BaTiO_3$:Co Remeika crysts., excitation energies and optical absorpt. spectra 3−38853
$BaTiO_3$:Pb,Ca semiconductor ceramics, liquid phase sintered, positive temp. coeff. resist. 3−52130
$BaTiO_3$-$SrTiO_3$ solid solution, diffuse phase transition 3−28792
$BaTiO_3$-$SrTiO_3$ system, sintering, influence of interdiffusion and solid soln. form. 3−14533
$Ba_2Ti_9O_{20}$, phase equilibria, 1100°-1400°C 3−43794
$Ba(Ti_{1-y}Zr_y)O_3$ ceramics, diffuse ferroelec. phase transition 3−28789
$BaTi_xZr_{1-x}O_3$, ferroelectric phases, domain-orientation process study 3−19086
$BaUO_{3+x}$, cryst. struct. determ. 3−22830
$BaWO_4$, translational and librational modes, phonon dispersion study 3−2700
$BaWO_4$-Na_2WO_4, solutions, solute-solvent interactions and solubility-temp. relations 3−42776
BaX_2, $X=Cl$, F, CNDO/2 calcs. bond angle 3−46094
$BaX_2.H_2O$, ($X=Cl,Br,I$), Raman and IR spectra, freq. shifts 3−23944
$BaYb_2F_8:Er^{3+}$ cryst., laser transitions, excitation schemes 3−27063
$BaYb_2F_8:Er^{3+}$ crystals, multistage sensitisation of $^4F_{9/2}\rightarrow{}^4I_{112}$ and $^4F_{9/2}\rightarrow{}^4I_{13/2}$ lasing transitions 3−38904
$BaZn_2Fe_{16-x}In_x(Sn_x)O_{27}$, cation distrib., mag. props. and Mossbauer spectra 3−18868
$Ba_2Zn_2Fe_{12}O_{22}$, magnetostriction, temp. depend. *(Korean)* 3−38667

barium compounds continued
$Ba_2ZnGe_2O_7$, isotypic with melilite, cryst. growth by Czochralski method *(German)* 3—3946
$Ba_2ZnGe_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
$Ba(Zn_{1-x}Mn_x)_2Fe_{16}O_{27}$ hexaferrite, Mossbauer and mag. characterisation 3—57602
$Ba(Zn_{1/3}Nb_{2/3})O_3$-$Sr(Zn_{1/3}Nb_{2/3})O_3$ solid solution ceramics with temperature-stable high dielectric constant and low microwave loss 3—34025
$Ba_2Zn_3P_{10}O_{30}$, cryst. struct., X-ray diffr. and Fourier anal. 3—27907
$Ba(Zn_{1/3}Ta_{2/3})O_3$-$Ba(Zn_{1/3}Nb_{2/3})O_3$, ceramic, low dielec. loss, for use at microwave freqs. *(Japanese)* 3—47600
$BaZrO_3$ crystals, $ZrO_6{}^{8-}$ cluster electronic spectra 3—3034
BeF_2-AlF_3-MgF_2-BaF_2:Cr^{3+} glass, energy level splitting, effective g value, ESR study 3—33971
BeF_2-AlF_3-MgF_2-BaF_2:Co^{2+} glass, effective g value, chem. bonding, ESR study 3—33972
CdF_2-BaF_2-ZnF_2 system glasses, prep. and optical props. *(French)* 3—18228
$CeBa(CO_3)_5F_2$, cebaite, cryst. struct., electron diffr. and lattice image study *(Chinese)* 3—18263
$CsBa_2(N_3)_5$, cryst. struct., X-ray diffr. study *(German)* 3—2526
Fe_2O_3-BaO-B_2O_3 glass, mag. and struct. props., ^{57}Fe Mossbauer spectra 3—3601
HfF_4-BaF_2-LaF_3-AlF_3 glass laser elements, hot pressing 3—7103
K_2O-BaO-Nd_2O_3-Pr_6O_{11}-SiO_2 glasses, colour and absorpt. spectra, effect of added Mn^{3+}, Co^{2+}, Ni^{2+} 3—34130
$La_xBa_{1-x}Fe_{12-x}Zn_xO_{19}$ ferrites, mag. props. and high temp. composition 3—57698
$La_xBa_{1-x}Zn_xFe_{12-x}O_{19}$ ferrite, high temp. comp. and mag. props. study *(Chinese)* 3—18887
Li_2O-BaO-Nb_2O_5, quenched glasses, prep. and props. 3—27851
Li_2O-BaO-Nb_2O_5 system, twin-roller quenching, glass formation, IR spectra 3—53012
Na_2O-SiO_2-Ba_2O, glass transition temp., network modifier mixing effects 3—51791
Na_2O-SiO_2-$MgO(CaO)(SrO)(PbO)(BaO)(ZnO)$, glasses, chem. durability in water 3—9205
$Na(Sr,Ba)[PO_4].9H_2O$, cryst. struct. determ. 3—8011
$Pb_{0.85}Ba_{0.05}Sr_{0.12}(Zr_{0.565}Ti_{0.435}Sb_{0.02})O_{3.07}$, piezoelec. props., comparison with PLZT solid solns. *(French)* 3—28782
$(Sr, Ba, Ca)Nb_2O_6$, single cryst. ferroelectrets, electrooptic props. with broad phase transitions 3—34073
$Sr_{0.65}Ba_{0.25}Ca_{0.1}Nb_2O_6$, ferroelec., photoelectret state 3—14200
$Sr_{0.45}Ba_{0.55}Nb_2O_6$, ferroelec., phonon dispersion, neutron scatt. study 3—2704
$Sr_{0.5}Ba_{0.5}Nb_2O_6$, piezoelectric, elastic and SAW props. meas.. 3—23153
$Sr_{0.5}Ba_{0.5}Nb_2O_6$ single cryst., electroelastic and SAW props. 3—52736
$Sr_{0.5}Ba_{0.5}Nb_2O_6$:Cu ceramics, ageing study, photovoltaic meas. 3—8524
$Sr_{0.6}Ba_{0.4}Nb_2O_6$, ferroelectric, dielec. props. press., temp. and freq. dependence meas. 3—23888
$Sr_{1-x}Ba_xNb_2O_6$, single cryst. glass-like behaviour in heat capacity meas. 3—13481
α'-$Sr_{1.9}Ba_{0.1}SiO_4$, cryst. struct. study 3—46904
$Sr_{1-x}Nb_2O_6$, polarisation switching, polarisation, permittivity, and electrooptic coeff. meas. 3—28757
$SrTiO_3$-$BaTiO_3$, ceramic solid solutions, X-ray phase anal., dielectric props. 3—9023
TiO_2-$BaCO_3$, disperse thin films, phase transition, TEM study, particle size effect 3—2786
$Zn_2Ba_2Fe_{12}O_{22}$, temp. depend. of magnetostriction 3—57734
ZrF_4-BaF_2-AlF_3-LaF_3-LiF optical glass, aqueous corrosion, IR and SEM study 3—1731
ZrF_4-BaF_2-AlF_3-LaF_3-EuF_3, glass, Eu(III) fluoresc. study 3—52818
ZrF_4-BaF_2-$BaCl_2$ glass, IR and Raman vibr. spectra and struct. 3—22785
ZrF_4-BaF_2-GdF_3-AlF_3 glass, Rayleigh scatt., melt cooling rate effects 3—38840
ZrF_4-BaF_2-LaF_3-AlF_3-LiF-BiF_3-PbF_2 glass, viscosity props. for fibre drawing 3—1786
ZrF_4-BaF_2-LaF_3-AlF_3 glass, low temp. sp. ht., transient pulse technique 3—51823
ZrF_4-BaF_2-ThF_4 glass laser elements, hot pressing 3—7103
ZrF_4-BaF_2-ThF_4 glass, low temp. sp. ht., transient pulse technique 3—51823

Barkhausen effect
ferroelectrics and ferromagnets, Barkhausen effect, conf., Kalinin, USSR (Dec. 1980) 3—20562
ferromagnet, domain wall quasi-resonance displacement and Barkhausen jumps 3—23694
ferromagnetic probe noise analysis, thermal-activation approach 3—352
ferromagnets, Barkhausen jumps and hysteresis, nonlinear theory 3—23709
ferromagnets, magnetisation jumps, spatial field distrib. 3—23712
noise, second-order periodic group pulse process 3—28605
nonlinear cryst., Barkhausen effect and hysteresis 3—23704
perlite, two-phase ferrite-cement mixture, domain struct., Barkhausen study 3—23693
Permalloy sheet, 65NP, large Barkhausen jumps, fluctuations under cyclic magnetisation *(Russian)* 3—52522
steel, mag. struct., effect of defects and internal stresses 3—3483
steel, surface stresses inspection using magnetisation jump parameters 3—58336
TGS:Tl (Co)(Cu), polarised state stability, Barkhausen thermal effect study 3—23863
TGS, Barkhausen effect and polarisation switching, growth condition effects 3—23865
TGS, thermal Barkhausen effect and temp. gradients 3—23864
triglycenselenate, Barkhausen effect and polarisation switching, growth condition effects 3—23865
$CdCr_2Se_4$, ferromag. semicond. film, delayed Barkhausen jumps and mag. struct. 3—23705
$CdCr_2Se_4$:Ga mag. semicond., light effects on Barkhausen jumps and mag. noise 3—23708
Fe microcrystals, Barkhausen jump parameters 3—23715
$Fe_5Co_{70}Si_{15}Bi_{10}$, amorphous ferromagnet, mag. noise, Barkhausen effect 3—23697
$Fe_{60}Ni_{20}B_{20}$ alloys, amorphous, magnetisation, mech. tensile stress effects 3—47537
Gd, magnetic hysteresis near Curie temp. 3—52541

Barkhausen effect continued
$Gd(Co,Cu)_5$, giant Barkhausen jumps and domain boundary displacement 3—23713
$Li_{0.5-x/2}Co_xFe_{2.5-x/2}O_4$, magnetisation and mag. switching, thermomag. treatment effects 3—23707
$NaH_3(SeO_3)_2$ ferroelec. domain struct. rearrangement and Barkhausen effect 3—23891
$NaH_3(SeO_3)_2$ single cryst., domain struct. rearrangement, Barkhausen effect study 3—23890
Ni-Fe, anomalously prolonged Barkhausen jumps, resonance study 3—23711
$Ni_{0.76-x}Co_xFe_{2.24}O_4$, magnetisation and mag. switching, thermomag. treatment effects 3—23707
SbSI, ferroelec. semicond., Barkhausen effect and switching processes 3—23862
SbSI ferroelec. semicond., single-domain state stability, Barkhausen and electron microscopy study 3—23893
$SmCo_5$, Barkhausen jumps, anisotropy of field 3—23714
Barnett effect *see gyromagnetic effect; magnetisation*
barometers
hypsometer type (vap. press.) barometer for remote weather station 3—54161
radioactive particle counter based instrument 3—48699
barometric pressure *see atmospheric pressure and density*
barrages *see dams*
barrel distortion *see aberrations*
barretters *see thermistors*
barrier injection transit-time diodes *see BARITT diodes*
baryon-baryon interactions
see also baryon-baryon scattering; hyperon-nucleon interactions; nucleon-nucleon interactions
No entries
baryon-baryon scattering
see also baryon-baryon interactions; hyperon-nucleon scattering; nucleon-nucleon scattering
No entries
baryon decay
see also baryon hadronic decay; baryon leptonic decay; hyperon decay
B decay study for the understanding of elementary particle interactions *(Spanish)* 3—11179
B-L violating proton decay and late cosmological baryon prod. 3—558
monopole catalysed nucleon decay in neutron stars 3—11178
neutron beta-decay, expt. studies, historical review 3—54608
neutron lifetime 3—49675
neutron properties, effect on Universe 3—54559
nucleon decay catalysed by grand unified monopoles in neutron stars 3—30412
nucleon decay expt. aspects 3—31206
nucleon decay expts. in Europe 3—31207
proton, unified forces search 3—36172
proton decay, catalysis by monopoles in grand unified gauge theories 3—40817
proton decay, current status 3—36243
proton decay, particle physics conf., Nashville, TN, USA (May 1982) 3—30539
proton decay, SO(10), lifetime, branching ratio 3—49599
proton decay, two-quark annihilation vs. three-quark fusion 3—49674
proton decay and mass scale of supersymmetry breaking 3—31110
proton decay in models with intermediate scale supersymmetry breaking 3—40831
proton decay in SU(5) grand unified theories and translational invariant bag model *(Chinese)* 3—40900
proton decay in SU(5) grand unified theory 3—11176
proton decay mech. from broken supersymmetric model, gaugino mass 3—21032
proton decay search using Soudan 1 tracking calorimeter 3—45389
proton decay structure in SO(n) family unification schemes 3—565
proton decays in SO(10) grand unified theory 3—11177
proton lifetime experiments, review 3—6023
proton semileptonic decay, contribution of three-quark fusion, bag model calc., lifetime uncertainties 3—26045
proton stability, restrictions on symmmetry breaking in extended unified models 3—45321
protons, conservation laws 3—49676
quantum Zeno paradox and proton decay, time scale 3—6037
SUSY GUTs, super B prod., matter stability and gauge hierarchy, cosmological baryon asymmetry 3—49613
two-proton annihilation, B and L violation, $SU_L(2)\times U(1)\times SU_C(3)$ and SU(5) GUT models 3—16580
$n\rightarrow e^+\pi^-$, nuclear effects 3—40898
$n\rightarrow \bar{p}e^+\nu_e$, decay rate estimates 3—21128
$n\rightarrow pe\nu$, finite temperature radiative corrections 3—31212
$n\rightarrow p\bar{\nu}\nu(p\bar{\nu}e)$, search for charge violation in $^{87}Rb\rightarrow{}^{87m}Sr$ 3—36246
n-$\bar{n}$ oscillations, search for baryon number nonconservation *(Dutch)* 3—54908
p, lifetime expts. 3—45391
p, two-body decay rates in SU(5) GUT 3—11106
p and n decay rates in GUTs and SUSY GUTs 3—31098
p decay, conference on grand unified theories, Kyoto, Japan (June-July 1981) 3—10509
p decay, fully contained events in the Mont Blanc nucleon decay detector 3—21129
p decay, one generation rishon model anal., B-L violation 3—26086
p decay branching ratios in SO(10) GUT, symmetry breaking depend. 3—49609
p decay in SUSY GUTs due to d=5 operators, lifetime, W-ino mass 3—31106
$p\rightarrow e^+X$, bag model, extended applications, decay probabilities of c and b quarks 3—26113
$p\rightarrow e^+X$, lifetime estimate from inclusive decay 3—21031
$p\rightarrow e^+\pi$ in SU(5) supersymmetric GUT 3—564
$p\rightarrow e^+\pi^0$, nuclear effects 3—40898
$p\rightarrow\gamma e^+$, Feynman diagram calc., pe^+ coupling strength 3—16572
$p\rightarrow\mu^+X$, bag model, extended applications, decay probabilities of c and b quarks 3—26113
$p\rightarrow\bar{\nu}_eX$, bag model, extended applications, decay probabilities of c and b quarks 3—26113
$p\rightarrow\nu_\mu X$, bag model, extended applications, decay probabilities of c and b quarks 3—26113

baryon decay continued
$p \to \pi^0 + e^+$ decay products, angular and energy distrib. 3−6039
$p \to \pi^0 e^+$, decay rate calc. in SU(5) grand unified theory using pole model 3−11175
$p \to \pi^\circ e^+$, searches *(German)* 3−49673
$p \to \pi^0 e^+$, decay rate in SU(5), chiral symmetry and quark model consistency 3−11088

baryon hadronic decay
p-wave nonleptonic hyperon decay amplitude and positive-parity excited baryons 3−16636
$\Lambda \to N\pi$, nonleptonic decay, final-state interaction from current algebra and PCAC 3−40899
Λ_c^+ charmed baryon lifetimes meas. in hybrid emulsion expt. 3−31201
Λ_c^+ inclusive nonleptonic decay in nonrelativistic quark model 3−36245

baryon interactions *see baryon-baryon interactions; lepton-hadron interactions; meson-baryon interactions; photon-hadron interactions*

baryon leptonic decay
charm particles, weak decays 3−40902
$pp \to e^+e^+(\mu^+\mu^+)$, matter-antimatter oscillations, B-L symmetry breaking in GUT 3−26050

baryon mass
see also hyperon mass
ground state properties, corrections to mass spectrum from one-gluon exchange 3−26083
heavier hadron masses with color hyperfine interaction 3−49640
lattice QCD with SU(3) gauge, hadronic masses and decay constants 3−31154
mass spectra from relativistic composite model 3−36227
neutron particle properties 3−49684
neutron properties, effect on Universe 3−54559
nucleon resonances, mass calc. from intrinsic mass, for Δ, Λ^*, N^* 3−40891
QCD sum rule calc., S mass, chiral symmetry breaking parameters 3−31193
quark model anal. of mass spectra 3−597
spectrum from Born's quantum metric operator 3−6091
strange hadrons in lattice QCD 3−11147
N-Δ mass splitting to zeroth order in QCD due to chiral symmetry breaking 3−26114
N^*-Δ^*, mass splitting in negative parity N^* and Δ^* spectrum, chiral bag study 3−31211

baryon photoproduction
see also hyperon production; neutron production; proton production
neutral fermions with mag. moments in field of nucleus 3−49691
Δ_{33} production and multipole anal. in $\gamma p \to \pi^+ n$ $(\pi^0 p)$ 3−6108

baryon production
see also baryon photoproduction; hyperon production; neutron production; proton production
B-L violating proton decay and late cosmological baryon prod. 3−558
cosmological baryon production and asymmetry, grand unification, review 3−16059
inflationary universe and cosmology, baryon prod. 3−10495
jets, baryon prod. from quark fragmentation, multiplicity, scaling 3−6081
quark jets, baryon-antibaryon ang. correl. 3−49648
supersymmetric grand unified models, monopole suppression and baryon production 3−6024
SUSY GUTs, super B prod., matter stability and gauge hierarchy, cosmological baryon asymmetry 3−49613
e^+e^-, baryon prod., gluon jet props. from KUV calculus and recombination 3−31156
e^+e^- annihilation, 30 GeV CM, baryon prod. and charmed-quark fragmentation function 3−21145
e^+e^- annihilation, kaon, baryon and vector meson prod. 3−31223
$eN \to e'\Delta(1236)X$, zero parameter model calc. within nuclei 3−16714
$\gamma p \to \pi\bar{\Delta}^{++}$, T-asymmetry sensitivity to reson. parameters *(Russian)* 3−11192
H dibaryon prod. cross section in $^3He(K^-, K^+n)$ 3−26277
K^+ and π^+ beam jets, meson and baryon prod. and quark-diquark cascade model 3−40867
$K^-p \to \Lambda\bar{p}p$ $(pK^-\bar{p}p)$, 18.5 GeV/c, narrow baryonium prod. study 3−11207
$pn \to \Delta^{++}X$, 19 GeV/c, cross sections, peripheral and diffractive Δ^{++} prod. 3−40931
$\bar{p}p$, large p_T strange or charmed baryon prod., higher power QCD mechanisms 3−49713
$pp \to$ beauty, CERN iSR 3−21191
$pp \to$ charm particles, CERN ISR 3−21190
$pp \to hX$, proton as quark and diquark, particle ratio production, in SU(6) 3−40934
$pp \to \Lambda^0 X$, $\sqrt{s}=63$ GeV, neutral strange particle prod. cross sections 3−21169
$\bar{p}p \to p\bar{n}\pi^+\pi^-\pi^-(\pi^+\bar{p}n\pi^+\pi^-)$, 6 and 9 GeV/c, evidence for narrow $N\bar{N}$ state at 2.02 GeV/c^2 3−49697
$\bar{p}p \to \bar{p}p\pi^0$ $(\bar{p}p\rho\omega)$ $(\bar{p}pX)$, 5 GeV/c, narrow $\bar{p}p$ state prod. search 3−54922
$\pi^-p \to \bar{p}p\Delta^0(1232)(\Delta^{++})(N^0)$, 12, 20 GeV, narrow $\bar{p}p$ state search 3−31239
$\pi^-p \to \pi^-\pi^0 p(\pi^-\pi^+n)$, 8 GeV/c, elastic scatt. and particle prod. cross section meas. 3−657
$\pi^-p \to \pi^-\pi^+\pi^-p$, 8 GeV/c, reson. prod. and decay study 3−656
$\pi^+p \to k^+\Sigma^+$, differential cross sections and polarisations 3−45411
$\pi^\pm p \to \pi^0\Delta^{++}(\pi^-\Delta^+)$ differential cross section, fit using phenomenological residue functions 3−40922
$^{13}C(p,d)^{12}C^*$, 800 MeV, Δ production, cross section meas. 3−55044

baryon resonances
see also hyperon resonances
baryonium and high dimensional representation of SU(3) *(Chinese)* 3−40887
charm particles, weak decay 3−40901
dibaryon resonance data, interpretation in quark bag models, NN system 3−16618
dibaryons, S-wave six-quark state, mass spectrum in variable press. bag model 3−614
dinucleon poles, M-matrix formalism 3−26091
heavy quark production by hadrons 3−21067
high energy spin physics, nucleon polarisation, multiquark resonances 3−21195
multiquark hadronic states in SU(4), SU(5), SU(6) flavour groups 3−6075
multiquark hadrons in joined-spring quark model 3−16612

baryon resonances continued
new particles containing charm and beauty, role in fundamental building blocks 3−613
P-wave baryons in consistent quark model with hyperfine interactions 3−16624
$Q\bar{Q}G$ and QQQG hadron ground state spectra in MIT bag model 3−45372
two-delta bound states binding energies 3−45441
Δ, mass calc. from intrinsic mass 3−40891
Δ^*, mass spectra from relativistic composite model 3−36227
$\Delta\bar{\Delta}$, mass spectrum, params. of ion multiple production 3−40885
$eN \to e'\Delta(1236)X$, zero parameter model calc. within nuclei 3−16714
$\gamma d \to pn$, T=0 dibaryon resonance prod., review 3−16662
$\gamma p \to \pi^0 p$, multipole anal. in Δ_{33} resonance region 3−6108
$\gamma p \to \pi^+ n$, 280-420 MeV, Δ_{33}^+ resonance, multipole analysis 3−6105
$\gamma p \to \pi^+ n$, multipole anal. in Δ_{33} resonance region 3−6108
$\gamma p \to \pi\bar{\Delta}^{++}$, T-asymmetry sensitivity to reson. parameters *(Russian)* 3−11192
H dibaryon prod. cross section in $^3He(K^-, K^+n)$ 3−26277
$K^-d \to K^+$+miss,ing mass 1.4 GeV/c, search for dibaryons with S=−2, Q=−1 3−26141
$K^-p \to \Lambda\bar{p}p$ $(pK^-\bar{p}p)$, 18.5 GeV/c, narrow baryonium prod. study 3−11207
Λ^*, mass calc. from intrinsic mass 3−40891
N^*, mass calc. from intrinsic mass 3−40891
NN, T=0 dibaryon resonance prod., review 3−16662
NN $(N\bar{N})$, $^3F_3$ dibaryon reson. and $T_1(2190)$ 3−16657
$\bar{p}D \to p + m\pi$ forward-backward asymmetry, $\bar{p}p$ resonance description 3−11314
$pn \to \Delta^{++}X$, 19 GeV/c, cross sections, peripheral and diffractive Δ^{++} prod. 3−40931
$p\bar{p}$, mass spectrum, params. of ion multiple production 3−40885
$pp \to$ beauty, CERN iSR 3−21191
$\bar{p}p$ elastic scatt., 300-800 MeV, C_{LL} meas. and P partial wave struct. 3−49694
$\bar{p}\bar{p}$ elastic scatt., 500-800 MeV, spin correlation in dibaryon resonance energy region 3−6125
pp elastic scatt., 800 MeV, polarisation structure at 90°, constraints, dibaryon resonance existence 3−26170
$\bar{p}p \to p\bar{n}\pi^+\pi^-\pi^-(\pi^+\bar{p}n\pi^+\pi^-)$, 6 and 9 GeV/c, evidence for narrow $N\bar{N}$ state at 2.02 GeV/c^2 3−49697
$\bar{p}p \to \bar{p}p\pi^0$ $(\bar{p}p\rho\omega)$ $(\bar{p}pX)$, 5 GeV/c, narrow $\bar{p}p$ state prod. search 3−54922
$pp \to \pi^+ d$, partial wave analysis, diproton investigation, $E \leq 810$ MeV 3−40920
π photoproduction amplitudes for resonant P_{33} state, Pade approx. 3−6103
πd, elastic scatt., parameters for B=2 reson. from fit to vector polarisation 3−41054
πd, T=0 dibaryon resonance prod., review 3−16662
πd collisions, dibaryon reson. prod., cross section data anal. 3−31234
$\pi d \to \pi pn$, 438 MeV/c, deuteron break-up reaction, dibaryon reson. 3−49896
π^-d, 420-1160 MeV/c, backward differential cross section, evidence for dibaryon reson. 3−41053
$\pi^-p \to \pi^-\pi^0 p(\pi^-\pi^+n)$, 8 GeV/c, elastic scatt. and particle prod. cross section meas. 3−657
$\pi^-p \to \pi^-\pi^+\pi^-p$, 8 GeV/c, reson. prod. and decay study 3−656
$\pi^-p \to V^0V^0\pi^\pm X$, $(V^0=K^0K^0$, $K^0\Lambda$, $K^0\bar{\Lambda}$, $\Lambda\bar{\Lambda})$, search for 1 to 5 GeV resonant states 3−21174
$^2H(\pi,X)$, dibaryon reson. prod., cross section data anal. 3−31234

baryon scattering *see baryon-baryon scattering; lepton-hadron scattering; meson-baryon scattering; photon-hadron scattering*

baryon spin and parity
see also hyperon spin and parity
baryon mass spectrum from Born's quantum metric operator 3−6091
neutron particle properties 3−49684
neutron properties, effect on Universe 3−54559
P-wave baryons in consistent quark model with hyperfine interactions 3−16624
N^*-Δ^*, mass splitting in negative parity N^* and Δ^* spectrum, chiral bag study 3−31211
$\bar{N}N' \to \bar{N}N'$, high energy, nucleon wave function, parity-violating strangeness-conserving weak non-leptonic Hamiltonian 3−11205
$\bar{p}p$, large P_T^2 scatt., spin physics 3−54936
pp $(\bar{p}p)$ elastic scatt., $p \gtrsim 1.5$ GeV/c, spin asymm. from parity violating nucleon wave functions 3−31233
πd collisions, dibaryon reson. prod., cross section data anal. 3−31234

baryons
see also baryon resonances; baryon spin and parity; hyperons; nucleons
big bang, gravitation and phase transitions, baryosynthesis, monopole production 3−16050
cloudy-bag model, convergence study including momentum conservation 3−31163
cosmological first-order phase transition and baryon-monopole problem 3−44880
cosmology, limits on neutrino number and baryon density of realistic universe 3−59516
Feynman rules for Bethe-Salpeter model of interacting mesons and baryons 3−49548
hopping parameter expansion for the baryons and p wave mesons 3−6053
inflationary universe, superheavy bosons and baryon asymmetry 3−5465
low-lying mesons, baryons and glueball masses in MIT bag model 3−54899
magnetic moment correction from kaon cloud in SU(3)×SU(3) chiral bag model 3−45394
magnetic moments, dynamical quark-diquark model calcs. 3−49683
magnetic moments and radiative meson decays 3−26084
masses nonperturbative calc. with one-parameter pot. 3−16626
nucleon octet, mag. moments, cloudy bag model 3−31164
octet baryons, mag. moment recoil corrections in MIT bag model 3−45397
P-wave baryons in consistent quark model with hyperfine interactions 3−16624
QCD, quarkonium and baryon spectra from nonrelativistic $q\bar{q}$ pot. 3−21069
reduced QCD in Veneziano limit, meson and baryon amplitudes 3−36192
semirelativistic QCD, inc. SU_3 flex-tube dynamics, asymptotic freedom 3−26068
string model, quarks and diquarks 3−600

- **baryons** continued
  - $SU(2)\times SU(2)$ chiral model, soliton states in QCD effective Lagrangian 3—49631
  - $gq\bar{q}$ annihilation in $\bar{K}N$ scatt., lower limit of effective gluon mass in baryons 3—609
  - N^*-Δ^*, mass splitting in negative parity N^* and Δ^* spectrum, chiral bag study 3—31211
- **barysphere** *see Earth core*
- **BASIC**
  - emergency radiological dose calculations using a pocket-sized computer 3—34982
- **basicity** *see pH*
- **batch processing (industrial)**
  - isothermal batch crystalliser pulse response analysis for growth rate and dispersion estimation 3—33166
- **bathymetry**
  - Atlantic, bottom relief in abyssal hills zone 3—58963
  - Atlantic Ocean, effects of bottom topography on general circulation 3—20009
  - Broughton Trough (Baffin Island continental shelf), origin and sediments 3—4846
  - N East Pacific Rise, evolution (Late Oligocene to present), bathymetry/mag. data anal. 3—15412
  - N East Pacific Rise tectonic history from seafloor spreading mag. anomalies and bathymetric data 3—15411
  - Grand Bahama Bank, bottom topography meas. using OSTA-1 ocean colour expt. imagery 3—29964
  - harbour mouth depth variation investig. 3—48552
  - N Hess Rise, N Pacific, multi-beam sonar studies 3—9907
  - Horn Island, Mississippi, beach morphology and inshore bathymetry 3—19982
  - E Indian Ocean, sea floor spreading history 3—4841
  - Kenya coast, submarine topography rel. to control of annually reversing Somali Current 3—20011
  - laser based depth measurement *(Polish)* 3—39936
  - Mid-Atlantic Ridge, bathymetry and tectonics, model 3—58960
  - nearshore slope, influence on bedload and wave thrust computations of alongshore sand transport 3—15420
  - ocean depth distribution, rel. to thermomechanical model of oceanic upper mantle 3—9871
  - N Pacific, major facture zone tectonics 3—4837
  - Pacific Ocean basin, intraplate volcanic features distrib. 3—9869
  - Pacific Ocean Seamounts, Late Cretaceous geomorphology rel. to lithospheric plates tectonics 3—48533
  - Red Sea floor, television obs. of sediments, volcanic rocks etc. 3—15422
  - Red Sea rift underwater volcanoes 3—15404
  - relief features, guidelines for geographic names standardisation 3—48536
  - Rupert Inlet, British Columbia, turbidity current surge in leveed submarine channel 3—4850
  - seafloor topography, marine seismic data, travel time effects 3—35090
  - shelf seas, bottom topography rel. to Monte Carlo approach to refr. of water waves 3—15456
  - swells in ocean basins, occurrence due to thermal expansion caused by lithosphere reheating 3—35148
  - Walvis Ridge (S Atlantic), fault distrib. 3—15419
- **batteries** *see cells (electric); primary cells; secondary cells; solar cells*
- **battery chargers**
  - photovoltaic battery charger with state-of-charge estimator and controller 3—34693
  - timing circuit, 4 hour, used for photographic charger 3—20910
- **Bauschinger effect**
  - computation simulation model rel. to near surface dislocation sources 3—51699
  - metallic materials, cyclic creep, dislocational models *(Czech)* 3—34388
  - steel, austenitic stainless 3—43891
  - steel, cementite content and morphology effect, tension-compression test 3—43916
  - steel, dual phase, stress-strain behaviour in forward and reverse straining, effect of heat treatment 3—14680
  - steel bars, cold twisted, tensile props. 3—47915
  - Cu, annealed, cyclic deform., dislocation dynamics anal. 3—4079
  - Cu(-Al), Bauschinger effect, internal stress meas. 3—43932
  - Fe-Al, ordered alloy, in situ plastic deformation in 200 kV electron microscope 3—53163
  - Mg-Zn alloy ML8, limit of proportionality and yield point change obs. on repeated loading 3—19382
- **Bayard-Alpert gauges** *see ionisation gauges*
- **Bayes methods**
  - bilinearity distorted image restoration, Bayesian method 3—32313
  - earthquake occurrences, Bayesian anal. and probabilistic hazard model 3—19909
  - femur medullary canal edge detect., Bayesian approach 3—15222
  - human acid-base state, computer-aided recognition 3—24908
- **bays (magnetic)** *see geomagnetic variations*
- **BBGKY equation** *see integro differential equations*
- **BCS theory**
  - *see also many-body problems*
  - A15 compounds, disorder effects on density of states, Fermi vel. and Drude plasma freq. 3—3370
  - anisotropic superconductor with approx. neutral electron-electron interaction, BCS-type theory 3—3366
  - antiferromagnetic supercond., mag. susceptibility in one-dimensional model 3—43321
  - antisymmetrised geminal power wave-functions in finite and extended systems 3—36689
  - isotropic Fermi superfluids, BCS and BW types, stability 3—13577
  - magnetic superconductors, AC susceptibility close to transition temp., BCS theory 3—52299
  - neutron star matter, BCS free energy taking account of relativistic effects 3—35649
  - Skyrme functional for HF calcs. of nucl. masses and density distrib. 3—54944
  - strong-coupling superconductors, cond. in terms of normal state cond. 3—38530
  - superconducting transition temp., effect of nonmagnetic impurities, Anderson theorem violation 3—18814
  - superconductor, anisotropic, sound attenuation, deviations from BCS relationship *(Russian)* 3—38536
  - superconductor, anisotropic, with repulsive average interaction 3—8611
- **BCS theory** continued
  - superconductor, impure, with anisotropic electron-electron interaction, generalised BCS theory 3—28476
  - La, superconductivity, electron-phonon interaction *(Chinese)* 3—52289
- **beam choppers**
  - No entries
- **beam-foil spectra**
  - atoms, lifetime meas. using beam-foil and fast-beam/laser spectroscopy 3—21711
  - fast ions traversing foils, K-shell charge exchange, equilibration lengths 3—42660
  - hydrogenic excited states, formation mechanism for H and He^+ beam collisions with solid surface, elliptic polarisation meas. 3—21669
  - metal surface, hot, adsorption of nucl. spin polarised alkali atom beams 3—19240
  - relative beam-foil level excitations in H^+, H_2^+, H_3^+, D^+, D_2^+, D_3^+, HD_2^+, HeH^+, molecular effects 3—21880
  - sputtered excited atoms, energy distribution, linear cascade theory derivation 3—21889
  - Stokes parameters, foil tilt angle dependence 3—21879
  - Al VI-X, C foil excited ions, lifetimes, charge state distrib., far-UV obs. *(French)* 3—32180
  - Ar VIII 3s-3p beam-foil decay curve synthesisation 3—21883
  - Au XIX, Pm-like lines and transitions of interest to fusion research 3—21872
  - Ba II, radiative lifetime meas. of $6p\ ^2P_{3/2}$ level, collinear laser ion beam technique 3—21712
  - Be II, core excited quartet levels, lifetime and oscillator strength 3—1285
  - C III, doubly excited states study 3—21874
  - C III, X-ray energy meas. by multichannel Doppler-tuned spectrometry 3—21590
  - C+Fe(Ni)(Cu), heavy ion excitation, visible radiation study 3—50503
  - C+Ti(Cr), $^3P_2$ and $^4P_{5/2}{}^0$ states lifetime meas. in He, Li-like Ti and Cr 3—26698
  - $^{12}C+^{15}N(^{13}C)$, hyperfine interaction, induced nuclear spin polarisation meas., polarisation transfer from beat frequency 3—21937
  - Cl III-VIII, vacuum UV spectra, beam-foil study 3—21870
  - Cl ions, Cl V to Cl VIII, beam-foil excitation mechanism, 2 to 10 MeV 3—11960
  - Cl VII, VIII, 2-10 MeV, beam-foil excitation mechanism, 3p and 3d levels 3—21881
  - Cl VIII, $2p^5 3s$, 3p and 3d configurations, beam-foil study 3—21869
  - Cu I isoelectronic sequences, beam-foil spectroscopy 3—21873
  - F, foil excited, X-ray spectrum, one- and two-electron one-photon satellite transitions 3—11735
  - F foil excited fast ion beams, EUV spectroscopy, line widths and broadening 3—21686
  - Fe XXV, $2s\ ^3S$-$2p\ ^3P$ transitions of heavy He-like ions *(French)* 3—21875
  - Ga I, III, lifetimes beam-foil study 3—21707
  - H, beam-foil-excited into high Rydberg states, coherent Stark levels 3—56058
  - He, doubly excited states study 3—21874
  - He I $3p\ ^3P$ state, beam foil excited, orientation and polarisation 3—21896
  - ^3He I, nd ^1D states HFS study 3—21938
  - Li I, core-excited doublets, autoionisation rate determ. 3—21732
  - Mg isoelectronic series, lifetime trends for $n=3$ singlet states 3—21713
  - Mg^{9+}, doubly excited, fine struct. transitions 3—21949
  - N^+ ion beam, C-foil excited, K-shell vacancy fraction, target thickness dependence 3—21892
  - Ne VIII, Li-like, $2^4P_{5/2}{}^0$ state fluoresc. yield 3—21876
  - Ni, highly ionised, spectroscopy and mean lifetime meas. *(French)* 3—21705
  - Ni VII, $2s^2\ ^1S_0$-$2s3p^3\ P_1{}^0$ intercombination line transition probability 3—32141
  - O, foil excited fast ion beams, EUV spectroscopy, line widths and broadening 3—21686
  - O ions mean lifetimes study 3—21706
  - O^{5+}, H-like, Lamb shift meas. 3—21709
  - P^{13+}, He-like, $n=2$ states lifetimes and fine structure energies 3—21708
  - S ions, K X-ray ang. distrib. meas. 3—21688
  - S^{7+} ions, Ni $K\alpha$ X-ray prod., foil thickness depend. 3—41707
  - Si, foil excited, X-ray spectrum, one- and two-electron one-photon satellite transitions 3—11735
  - Tl I, III, lifetimes beam-foil study 3—21707
  - Xe II, radiative lifetime meas. of $6p\ ^4P^0{}_{5/2}$ level, collinear laser ion beam technique 3—21712
  - Xe VIII, beam-foil excited, optical spectrum meas. 3—21871
  - Zn I isoelectronic sequences, beam-foil spectroscopy 3—21873
- **beam-foil spectroscopy**
  - atomic spectra and transition probabilities study using beam-foil spectroscopy 3—21867
  - CANDY computer program to perform ANDC anal. of cascade correl. decay curves 3—21946
  - fast ion beam spectroscopy, conf., Quebec, Canada (Aug. 1981) 3—20563
  - fast ion beam spectroscopy, current trends 3—49505
  - Ar VI-VIII, spectroscopy and lifetime *(French)* 3—21868
  - C foils manufacture and use for beam-foil spectroscopy 3—21945
  - Li spectra, identification of charged excited ion states *(French)* 3—21882
- **beam handling equipment**
  - *see also particle beam diagnostics*
  - 8 GeV/c pion beam line at KEK, cryogenic system design and performance 3—36606
  - 14UD Pelletron accelerator chopper-buncher system design, construction and operation 3—36580
  - accelerating tube, design and fabrication for 2 MV tandem Van de Graaff 3—41385
  - accelerators, conf., Los Alamos, NM, USA (Feb. 1982) 3—16064
  - beam transport with space charge effects *(Chinese)* 3—50086
  - betatron magnetic system with auxiliary magnetisation 3—11563
  - C-band superconducting structures, for high relativisitic energy e^- linac 3—36602
  - Chalk River cyclotron, mag. field meas. 3—45747
  - channel charge exchanger and beam, shaper, geometric effect on beam composition 3—6475
  - conducting solenoid magnets, thin wall, characts. and model results 3—36603
  - dipole magnets for ISABELLE 3—41363
  - electron beam acceleration in system of radial lines with ferrite *(Russian)* 3—11559
  - electron beam deflecting current generator, lithography appl. 3—36124

beam handling equipment continued
- fast-atom bombardment mass spectrometer conversion 3—36117
- ferrites, particle accelerator appls. 3—11595
- Heliotron E NBI fusion apparatus, cryogenic system design with closed-loop He refrigerator 3—36568
- high energy accelerators, theory design and application 3—45723
- HV control and protection system for Culham mult-Megawatt beam line 3—55766
- ion beam diode, plasma-filled, series field coil, performance 3—27751
- ion beam transport system, fundamental laws *(Japanese)* 3—36932
- JET neutral injector extraction grid power supply and protection system 3—55762
- JT-60 neutral beam injectors, hard-seal gate valve and fast shutter development 3—56762
- klystrons use in linear electron accelerators 3—21587
- laser-driven disc-loaded structure, scaled to 10 μm, beam loading, emittance growth 3—17144
- laser-driven template accelerator, optical element irrad. damage minimisation 3—17112
- line-focusing by means of a quadrupole lens, using novel shadow-image technique 3—30965
- linear accelerators, accelerating structure electrodynamic characts. *(Russian)* 3—11558
- linear ion accelerator, HF beaming matching at input with spatially uniform focusing 3—41350
- low temperature intense electron beam diodes, design and testing 3—37709
- magnetic coaxial lens system for hollow ion beams 3—41369
- magnetic field paralleliser for 2π electron-spectrometer and electron-image magnifier 3—50096
- magnetically insulated transmission line for GREC generator 3—11590
- martotron, high-power microwave amplifier for linear accelerators 3—36601
- Milan superconducting cyclotron, RF cavity electronic controls, conceptual design, report 3—11566
- molecular beam apparatus, intensity dispersion at detector plane, mathematical model 3—49501
- Munich MP tandem heavy ion postaccelerator, three-harmonics double-drift buncher 3—41345
- negative ion source for reactive plasma etching 3—36123
- neutral beam injector, prototype, for JT-60, cryopumps and cryogenic systems 3—36014
- neutron collimator, variable aperture, design 3—50082
- neutron mirror 3—463
- particle bunch traversing waveguide with slightly perturbed wall, total energy loss *(French)* 3—41371
- permanent magnet undulator NOEL for ACO storage ring 3—45726
- permanent quadrupole magnet, with adjustable strength, conceptual design 3—50079
- polarised neutron equipment with variable energy and resolution 3—50097
- proton beam excited X-rays characts. obs., Ag-Cu and Ag-Al joints analysis 3—39427
- proton beam of micron size, system for shaping 3—11577
- proton synchrotron magnet power supply, high accuracy control 3—6478
- relativistic electron beam wiggler buncher 3—17431
- resonantly-coupled ferrite-tuned buncher-cavity system for Los Alamos Proton Storage Ring 3—1102
- RF charged particle buncher modification 3—26544
- solenoid, magnetic field quality improvement method 3—26524
- SPS, electrostatic deflectors for luminosity meas. 3—17156
- SPS, electrostatic septa, high voltage, spark mechanism 3—17157
- SRS storage ring, RF system feedback loop design 3—11562
- superconducting accelerator magnets, high-field, small-bore dipole configuration 3—31866
- superconducting magnet system, three prototype cells 3—31867
- superconducting quadrupole magnet with large rectangular aperture 3—45733
- superconducting solenoid for muon channel, long-term performance 3—36604
- superconducting solenoid with supercritical HE cooling system, muon production appl. 3—36605
- SuperHILAC heavy-ion accelerator, online isotope separator, OASIS 3—50078
- synchrotron supercond. 10T magnets, stress anal. 3—41362
- tagged photon beam facility for photonuclear reactions study 3—1106
- TFTR neutral beam power supply system 3—55772
- Thomson CSF extremely high power klystrons for particle accelerators 3—45724
- transverse optical klystron, gain curve in small signal regime, report 3—21588
- travelling-wave linear accelerator, passive resonator for electron beam accel. 3—11555
- triggered pseudo-spark chamber as fast switch and as high-intensity beam source 3—41373
- waveguide with slightly perturbed wall, EM field accompanying bunch of particles *(French)* 3—41370
- Be, neutron scatt. and crystallisation, appl. as neutron monochromator *(German)* 3—7878
- C foils, light element impurity content 3—27965
- C stripper foil, preparation and thickness monitoring *(Chinese)* 3—41377
- Nb acceleration cavities for LEP at CERN 3—45732
- Nb RF supercond. reentrant cavities, reson. discharge study *(French)* 3—26518
- NbTi superconducting dipole magnet installed in pressurized He II cooling bath 3—31858
- NiZnCo ferrites for particle accelerators, high freq. mag. losses, microstruct. effects 3—11594

beam handling techniques
- *see also mass spectroscopy; particle beam diagnostics; particle optics*
- 14UD Pelletron accelerator chopper-buncher system design, construction and operation 3—36580
- accelerators, conf., Los Alamos, NM, USA (Feb. 1982) 3—16064
- ACO storage ring FEL, laser induced bunch lengthening 3—56218
- atomic beam deflection by resonant light press. 3—21950
- atomic beams, monoenergetic, very slow, laser prod. 3—6807
- beam matching in 150 keV linear accelerator and ion source 3—36582
- bunched beam instability due to RF cavities, simplified criteria 3—26521
- bunched beam phase detector using spiral loaded resonator 3—26536
- charged particle beam deflection and focusing in electrostatic transaxial system 3—32290

beam handling techniques continued
- charged particle beams transported through dense plasma, current instability 3—7757
- coherent bremsstrahlung in crystal to produce high energy photon 3—36591
- collective ion accel. by IREB, one-dimensional simulation code 3—17117
- collective ion accel. studies, theoretical considerations 3—17119
- colliding γe and $\gamma\gamma$ beams using linear e^+e^- colliders VLEPP and SLC 3—41343
- colliding high-energy photon beams using free electron laser 3—41388
- current-carrying plasma channels for intense ion beam transport, theory 3—6487
- cylindrical waves propag. at c, theory, appls. to waveguides and accelerating structs. 3—17408
- digitally controlled energy scanning system for Van de Graaff accelerators 3—41342
- electron beam, intense, temporal and spatial structure control 3—32297
- electron beam acceleration in system of radial lines with ferrite *(Russian)* 3—11559
- electron beam guiding ion source, ion optical props. 3—26539
- electron beam in modified betatron accelerator, ion reson. instability 3—37641
- electron beam self-focusing in gases and their ionisation 3—26546
- electron beam slowing down in spherical type recuperator 3—11580
- electron beams, TeV range, motion in a quadrupole mag. field allowing for synchrotron radiation 3—26543
- electron linear accelerator, optimum use high freq. source study 3—41349
- electron spectrum selector, triple focusing, with pair of sector magnets for in-beam spectroscopy 3—26555
- electron storage ring, longitudinally polarised electron beam prod. for ep collisions 3—26511
- electron storage rings, space charge neutralisation of beam 3—17136
- electron-ion fluxes in transport channels and in diodes with mag. isolation, steady states 3—6464
- electron-positron storage rings, depolariser using time dependent radial fields 3—26512
- four-electrode multiple-slit system for ion beam form., ion opt. props. 3—1109
- grating particle accelerators, struct. obscuration by plasma form. 3—17111
- heavy ion beam degradation, stripping effects from particle simulation code 3—1116
- heavy ion beam transport in hard and near vacuums, for ICF 3—1117
- heavy-ion inertial fusion, disk heating and beam transport expts. on accelerator test facilities 3—1118
- high-current electron beam shape control and heavy-ion beam generation in dielectric channels 3—17121
- high-current ion beams in Novosibirsk Institute of Nucl. Phys. 3—6466
- high-energy electron storage ring, Touschek effect *(Japanese)* 3—1101
- high-intensity accelerators 3—41364
- high-power electron and ion beam, conf., Palaiseau, France (June-July 1981) 3—5501
- hollow ion beam, high-intensity beam prod. and focusing 3—11585
- ICF reactor design, two-temp. model of thermal radiation transport 3—26477
- ICF research by light ion beams 3—6444
- inductive storage for particle beam prod. and plasma implosions 3—17067
- instantaneous magnetic insulation mode in a magnetic vacuum transmission line 3—11591
- intense beam of thermal neutrons obtained by transmission through a system of focusing mirrors 3—1114
- intense charge-neutral ion beam propag. in mag. fields 3—6489
- intense electron beam accel., self-consistent anal. 3—17120
- intense electron ring dynamics in modified betatron field 3—17140
- intense ion beam handling in magnetised plasma 3—6447
- intense light-ion beam transport, expt. study 3—6488
- intense pulsed light-ion beam, generation, focusing, propag. and target irradiation 3—6480
- ion beam focusing, edge of field effects and aberrations *(Japanese)* 3—36931
- ion beam technology, areas of research *(Japanese)* 3—36127
- ion trapping from high energy sources into RF ion trap 3—12008
- ion-driven fusion targets, beam production acceleration, transport and focussing 3—1069
- JET neutral beam injector operation with multi-aperture extraction system 3—26532
- kaon beam K2 at KEK 12 GeV proton synchrotron, design and performance 3—26520
- KEK beam transport line, non-destructive emittance meas. 3—17147
- laser-driven grating linac, transverse stability requirement 3—17108
- light ion beam fusion, beam transport by z-discharged plasma channel, computer simulation 3—50039
- light ion beam fusion, beam transport by z-discharged plasma channel, sausage instabilities 3—50040
- light ion prod. and focusing with pinch-reflex diodes 3—6481
- light-ion ICF, system requirements 3—6445
- linear accelerator, disk and washer accelerating structure, EH_{11n} modes of E type 3—36581
- linear accelerators, accelerating structure electrodynamic characts. *(Russian)* 3—11558
- linear electron accelerator, current loading in bunching section 3—31855
- linear electron accelerator, electron beam emittance and brightness study 3—17115
- linear induction accelerator, physics aspects 3—17128
- longitudinally polarized colliding beams 3—50261
- magnetically insulated ion diode, applied-B_θ, parameter studies 3—10940
- magnifying magnetic optical achromat 3—26523
- microtron, nonrelativistic particle acceleration 3—17135
- Milan superconducting cyclotron, RF cavity electronic controls, conceptual design, report 3—11566
- multiple scatt. with absorpt. 3—45735
- multipole wigglers in storage rings, sources of synchrotron radiation 3—1100
- Munich heavy ion accelerator, beam bunching and pulsing 3—1091
- Munich MP tandem heavy ion postaccelerator, three-harmonics double-drift buncher 3—41345
- NAC accelerator computer-based control system 3—26516
- near IR pulse guides, laser-driven accelerators appl. 3—17143
- neutral beam injector, double bifurcation optimisation for secondary loading reduction 3—27715
- neutral beam injector performance, capacitive stored energy effect 3—55743

beam handling techniques continued
neutral beam injector unit for JT-60, extraction of 70 A ion beam 3—55601
neutral beams, high energy, interactions with crystals 3—56926
neutralised electron beam, refl. from metallic surface, trapping into ring orbit 3—50106
neutrinos, direction control 3—45746
neutron diffr. grating interferometer for very cold neutrons 3—41368
neutron spin echo 3—50109
non-axisymmetric wave propagation in pulsed power machines 3—11592
nonlinear resonances, diffusion during multiple passage 3—17134
nuclear and space radiation effects, conf., Las Vegas, NV, USA (July 1982) 3—40315
particle beam, fast macroscopic, self-destruction, waveguide props. 3—17423
particle beam bending by channelling in bent crystal planes 3—11571
particle bunch traversing waveguide with slightly perturbed wall, total energy loss *(French)* 3—41371
photomultiplier mean dark current diminution, during operation with periodic signals 3—36596
positron beam prod. by 14 MeV CW electron accelerator 3—1104
potential created by elliptical beam inside coaxial rectangular vacuum chamber 3—17148
proton and heavy ion acceleration when high current electron beam traverses dielec. channels 3—6465
proton beam, intense, pulsed, geometric focusing 3—10941
proton storage rings, conditions for transverse stability of coasting beam 3—6469
pulsed two-sector racetrack microtron construction and operation 3—26510
quasimonochromatic photon beam at Frascati Linac, fission expt. 3—26529
refractory metal cluster beam generation 3—16442
relativistic coaxial diode, mag. insulation props. improvement 3—37710
relativistic electron beam, three-dimens. trajectory in helical mag. field 3—1112
relativistic electron beam injected into gas, transport props. 3—6491
relativistic electron beam transport in curved channels, theory 3—36930
relativistic electron beams injection and propag. into performed plasma channels for X-ray prod. 3—6490
relativistic particle motion by EM pulse propag. along static mag. field 3—55736
resonant accelerators, acceleration energy and rate increase *(Russian)* 3—11560
resonator model and elec. field distrib. on axis in periodic cavity chain for linac *(Chinese)* 3—31854
RF cavities, constant cross section and three-dimensional form, CAVIT and CAV3D programs 3—6468
RF charged particle buncher modification 3—26544
ribbon beam accumulation using spiral-sector magnets in betatrons 3—45727
second stripper for EN or FN tandem accelerator 3—41344
SILUND linear induction accelerator, automatic synchronisation of modulators 3—50066
soft X-ray driven ablation, use for acceleration scheme 3—50089
solenoid, magnetic field quality improvement method 3—26524
solenoid compensation, projection approach anal. 3—50101
SPEAR electron-positron storage rings, bunch lengthening, computer simulation 3—26509
spherical particles, focusing by planar mag. fields 3—30962
spin-flipper for polarised neutron beam, mag. field compensation 3—50095
standing wave accelerating systems for electron linac 3—11557
Stanford supercond. electron recyclotron, regenerative beam breakup, standing wave model 3—36584
storage rings, extrapolation algorithms, beam-beam interaction effects 3—6467
storage rings, longitudinal polarisation techniques 3—50260
superconducting cyclotrons, axial injection feasibility 3—45725
synchrotron, electron energy control by interference method 3—45728
synchrotron radiation, high flux and high voltage VUV beam line 3—41365
tagged photon beam facility for photonuclear reactions study 3—1106
thermal neutron transport in liquid H, cold neutron beam prod. 3—41078
third-order trajectory in crossed electric and mag. fields, ion-optical theory 3—16438
time-of-flight mass analyzer by induction acceleration 3—45242
TM_{01} modes of cylindrically symmetrical multicell resonant structures, LALAGE program 3—6462
transverse beam motion study in RFQ structure *(Chinese)* 3—41386
transverse optical klystron, gain curve in small signal regime, report 3—21588
ultracold neutron flux, fast cutoff by thin ferromag. shutter 3—45743
undulator optimisation for synchrotron radiation 3—41366
VCN, production and guide tube transmission from pulsed cold source, spectra 3—45741
waveguide and channel at axis of hollow laser beam, particle beam transport 3—22211
waveguide with slightly perturbed wall, EM field accompanying bunch of particles *(French)* 3—41370
C stripper foil shrinkage under heavy ion bombardment 3—45736
CO_2 guided plasma channel for light ion beam transport 3—7758
D^-, ion beam prod. by negative surface ionisation 3—20952
MgO moderator, ang. distrib. of slow positrons 3—1103

beam splitters (optical) *see optical elements*

beam-trapping *see self-trapping*

bearings (machine) *see machine bearings*

BEBO method *see bonds (chemical)*

behavioural sciences *see social and behavioural sciences*

behavioural sciences computing *see social and behavioural sciences computing*

bells
see also musical instruments
No entries

Belousov-Zhabotinski reaction *see chemical equilibrium; chemical reactions; reaction kinetics theory*

bending
see also bending strength; buckling; stress analysis; torsion
anisotropic composite sandwich plates, thermoelastic stress analysis 3—56439

bending continued
asymmetric bending of circular sandwich plate including transverse shear in facings 3—50961
bar, curvilinear naturally twisted, generalisation of elasticity theory eqns. and relationships 3—17804
bars, cross-sectional distortions, Bernoulli bending and St. Venant torsion assumptions *(German)* 3—7419
bars, thin walled of open cross section, elastic critical loads, pre-buckling displacement influence 3—46465
beam, three-ply, under transverse bending, lamination effect on stress-strain state *(Russian)* 3—56450
beam, vibration modes, beam bending-torsion dynamic stiffness calc. method 3—17858
beam in pure bending, effect of shear and rotary inertia on dynamic fracture 3—32682
beam or plate, dynamic fracture in tensile loading, effect of shear and rotary inertia 3—56478
beam or plate, dynamic fracture under tensile loading, effect of bending moment 3—56477
beam or plate in pure bending, dynamic fracture, axial force effect 3—7504
beam Rayleigh-Timoshenko, damped second-order vibr. in space, dynamic member stiffness matrix 3—56464
beams, curvilinear, thin, dynamic theory 3—50935
beams, elastic, pretwisted, torsion-extension coupling 3—27402
beams, multispan, continuous, under uniformly moving const. force, dynamic deflections 3—17831
bimodular material plates, geom. nonlinear bending, finite element results 3—37359
bone, tibia, mech. props. nonuniformity, effect of functional adaptation 3—34874
box profiles, anal. of deform. in bending process *(Polish)* 3—2648
brittle materials under flexure, surface flaws, fracture statistics, Weibull specific risk function 3—12585
caissons of thin-walled construction, bending, numerical calc. *(Russian)* 3—1968
cantilever beam under tension, bending or flexure at infinity 3—27384
cantilever rod, non-linear elastic analysis, bending on terminal co-planar concentrated force 3—27379
cantilever specimen, mag. hysteresis under simultaneous action of static and dynamic bending stresses 3—52595
ceramic compacts, ion implanted, anomalous cantilever deflection due to blistering 3—47891
ceramics, strength evaluation using six-point bend method 3—44001
circular pipe ends, with flanged ends, thin shell theory anal. 3—27386
components, thin-walled, bending stress determ. by tiltline-moire process *(German)* 3—2012
composite laminates, comprehensive theory for planar bending 3—17835
compressible elastica on elastic foundation 3—7454
crack growth resistance curves, key curve anal. 3—17876
crash simulation, triangular plate bending finite element 3—22345
curved channel dielectric waveguide bend, radiation loss 3—17640
cylinders, bent mitred, stresses under bending, photoelastic investigation 3—50936
cylindrical shells, prestressed clamped, numerical perturbation solns. for vibrs. 3—32647
cylindrical shells and plates, state equations 3—1959
deformation wave propagation, inhomogeneous statical initial deformation *(Russian)* 3—12582
dielectric optical waveguides, sharp bends with low losses 3—56310
fatigue testing by cantilever bending, magnetoreson. unit with programmer 3—58340
fatigue testing with pure bending, low-cycle, rig for programmed testing 3—58341
fibre reinforced composite, arbitrarily directed fibres, impulse function use in strength problem 3—50964
fibre reinforced composites, bending with imposed compressive stresses *(Russian)* 3—17820
flexible shells of complex form, stress-strain state, numerical soln. by computer 3—1970
glass, commercial crystallised, fracture features at internal fracture origins 3—14704
glass, strength evaluation using six-point bend method 3—44001
glass fibre reinforced plastic cylindrical shell, strain state, local load effect 3—53151
graphite bend strength increase, interpretation by couple stress theory 3—17810
grooved shafts, bending, stress anal. by foil strain gauge 3—12605
integrated-optic waveguide, arbitrarily curved, radiation loss calc., and design 3—37245
IR hollow waveguides, mode coupling analysis of bending losses 3—46288
laminates, sheet, under plane strain condition, pure plastic bending 3—32614
layered anisotropic composite plates, dynamic transient analysis 3—46448
loaded axisymmetric projections, stress concs. due to axial tension and bending 3—27404
membrane, annular, under axial load, nonlinear deflection, variational solns. 3—27400
metallic hollow waveguide, dielec. coated, IR transmission characts., slab waveguide model 3—37183
metals, laminated inhomogeneous, bending stress-strain relations, effect of initial residual stress *(Japanese)* 3—58167
metals, laminated inhomogeneous, method to estimate bending fatigue life *(Japanese)* 3—9177
metals, tube, impact strength testing, stored energy effect 3—9278
mirror, toroidal, with adjustable bending radius for X-ray imaging 3—5925
mirror bending block design 3—7240
optical fibre, single mode, bend sensitivity characterization, basket-weave test 3—46340
optical fibre, single-mode, mode spot size, bending loss, backscattering, chromatic dispersion 3—37227
optical loose tube fibre cables, low temp. excess loss 3—22220
orthotropic structures, rigid plastic dynamically loaded, lower bounds to large displacements 3—37378
paltes, thin in bending, calculation of natural frequencies and steady state response 3—56444
pipes, elastoplastic circular, response and stability under combined bending and external press. 3—7442
plastic rotational factor and J-COD relationship in three-point bend specimen 3—56479

bending continued
  plastic structures, stability, anisotropic hardening and cyclic loads 3—12536
  plate, annular plastic, residual deflections, transverse shear effect 3—7450
  plate, circular, subjected to bending, nonsteady-state creep 3—17829
  plate, circular, with a crack, bending, stress intensity factors 3—37427
  plate, circular clamped, of variable thickness, large deflections 3—37377
  plate, circular sandwich, axisymmetric flexure, Bessel function solutions 3—12545
  plate, cracked, subjected to bending, twisting and shear, finite element anal. 3—12584
  plate, inextensible, edge effect in bending 3—7431
  plate, rectangular, dynamic response to bending moment 3—12527
  plate, rectangular, elastic, high-freq. flexural mode anal. 3—17866
  plate, skew, deflection, block overrelaxation methods for non-rectangular co-ordinates 3—37343
  plate, thick rectangular, transverse shear deform., generalised Navier soln. 3—50959
  plate, thick rectangular, transverse shear deform., generalised Levy soln. 3—50960
  plate, thin, 12 degrees of freedom quadrilateral bending elements 3—17821
  plate, Y-shaped with round corners, stress anal. 3—12519
  plate bending, exact soln. of mixed problem 3—7451
  plate bending, hybrid stress elements 3—12513
  plate bending, Mindlin theory, mixed formulation finite elements 3—1967
  plate bending analysis element 3—27394
  plate bending element, shear flexible, triangular, shear locking term 3—46449
  plate bending problem, holographic and speckle interferometry comparison 3—51036
  plate in pure bending, effect of shear and rotary inertia on dynamic fracture 3—32682
  plates, annular plastic, supported on both edges, pulse load, dynamic bending 3—42138
  plates, bevelled, design by method of straight lines *(Russian)* 3—17819
  plates, circular, perforated, bending appl. of elastic-plastic constitutive eqn. for transversely isotropic materials 3—27376
  plates, cracked thick, three-dimens. finite element analysis in bending 3—46492
  plates, crystal, rectangular, cantilever, under transverse loading, stress anal. 3—27401
  plates, deflections and bending moments computation 3—7456
  plates, elastic, finite deflections, integral eqn. approach 3—1965
  plates, imperfect, flexure theory, stochastic bifurcation 3—7457
  plates, nonuniform through thickness, bending 3—37368
  plates, orthotropic elastic, bending anal., general boundary element method 3—12531
  plates, plastic, computations in limit analysis 3—46455
  plates, rectangular, with nonlinear props., finite element anal. 3—22336
  plates, rectangular and circular, pulsed rupturing load parameter estimate 3—22391
  plates, stress intensity factor when subjected to bending, influence of crack closure, 3D finite element anal. 3—32673
  plates, thin, crack, propag. in bending *(French)* 3—12586
  plates and shells, varying-rigidity, flexion *(Russian)* 3—17800
  plates and tubes, surface deform. determ. by holographic interferogram meas. 3—32696
  plates of reinforced materials, equilib. eqn. general soln. 3—50966
  plates with nonlinear transverse shearing strains, flexure eqns. 3—42155
  reactor materials, fracture mechanisms, concept, tensile and notch impact bend test 3—24454
  rod, axially rot., bifurcation solns. 3—27374
  rod, elastic, evaluated axial strain 3—27407
  rods, natural flexural oscills., anal. methods *(Russian)* 3—17846
  rotating pretwisted cantilever blading, coupled bending-torsion motion, Reissner functional appl. 3—12568
  sandwich annular plate, var. thickness, bending, splines technique appl. 3—42146
  sandwich beam, damped, flexural vibr., differential eqns. 3—7480
  sandwich beam with outer layers of box-section, theory and model expt. 3—12524
  sheet, isotropic, with unchanging thickness, plastic bending *(Russian)* 3—56448
  sheet, uniformly heated, cylindrical bending under conditions of creep *(Russian)* 3—56449
  shell, circular cylindrical, interaction between closely located large holes 3—22317
  shell, cylindrical, linearly and nonlinearly elastic, supporting power during net flexure *(Russian)* 3—56451
  shell, cylindrical, stability under pure bending 3—46469
  shell, cylindrical, with transverse shear and rotatory inertia, impulsive loading 3—37379
  shell, hypar shell supported at four corners, bending stresses, Ritz soln. 3—37350
  shell, short cylindrical, buckling in pure bending, new class of solns. 3—12548
  shell collapse by ponding 3—37385
  shell nonlinear analysis, mixed and reduced/selective integration displacement models 3—12512
  shell triangular finite elements, bending trial functions approx. 3—27392
  shells, cracked shallow, with transverse shear effects, stress intensity factors *(Chinese)* 3—51002
  shells, cylindrical, subjected to longit. bending moments, limit loads 3—12540
  shells, elasto-plastic, nonlinear anal. by hybrid stress finite elements 3—22335
  shells, multilayer, anisotropic, state of stress numerical anal. according to hybrid model of finite elements 3—22314
  shells, stiffened composite, instability anal., bending, pre-buckling displacement 3—37382
  shells, structurally orthotropic cylindrical, travelling waves 3—37412
  shells, thin elastic, secondary edge effect in bending 3—7411
  shells of revolution, multilayer, nonlinear theory nonaxisymm. problem numerical soln. 3—50951
  shells of rotation, flexible, stress-strain state, numerical investigation 3—12544
  smectic-A liquid crystals, continuum theory 3—51488
  steel, C, 45, mag. hysteresis under simultaneous action of static and dynamic bending stresses 3—52595
  steel, case-hardened, fracture in bending 3—58195

bending continued
  steel, fatigue in detrimental gaseous environment 3—29180
  steel, HSLA fatigue crack length distribs. *(Japanese)* 3—58224
  steel, medium C, impact toughness in different struct. states, complex dynamic loading effect 3—34475
  steel, stainless, fatigue damage in hydrogen under low-cycle bending load *(Ukrainian)* 3—9146
  steel, tube, impact strength testing, stored energy effect 3—9278
  steel fibre reinforced concrete beams, bending-torsion interaction 3—58175
  steel frame nonlinear analysis, inelastic behaviour, yield surface 3—14655
  steel low C-enamel coating interface props. *(Slovak)* 3—19458
  stress relaxation prediction by damping meas. 3—53319
  strip, eccentrically stretched, coupled flexural torsional vibr. 3—7486
  surface deflection anal. by Yoshida buckling test 3—22350
  synchrotron radiation optics, bent approximations 3—7119
  thick beams of bimodulus materials, bending 3—1963
  thin plate optimal parametric rectangular element, bending anal. 3—27395
  thin rectangular plates, vibration analysis 3—22360
  Timoshenko beam subjected to impulsive boundary loads, higher order flexural transient propag. 3—22362
  torsion box panels, elastic stability in bending, stiffening parameters 3—42157
  tube, elastic, thick-walled, axially compressed, bifurcation anal. 3—12511
  tube collapse analysis using finite elements 3—22338
  tubes, elliptic, nonlinear bending under normal pressure, local buckling *(German)* 3—7461
  viscoelastic crack in field of pure bending 3—7500
  warping torsion problem, simple finite element model 3—56422
  waveguide optical length instability meas. due to bending and heating 3—1763
  waveguide vibration isolator for arbitrarily polarized flexural modes 3—27301
  X-ray crystallography apparatus, sample curvature and torsion adjustment, bending device design 3—46812
  Al, deformed by cyclic bending to fracture, polygonalisation study *(Russian)* 3—34433
  Al_2O_3 bend specimens, slow crack growth, increase of crack resist. 3—34442
  Bi, elastic and relaxation properties during melting and solidification 3—39191
  C fibre reinforced plastic, fracture characteristics of heterogeneous materials 3—53203
  Cd, elastic and relaxation properties during melting and solidification 3—39191
  Cr condensates, brittleness threshold 3—34473
  Cu {100} surface, cone indented Laue spots, asterisms, slip systems 3—37922
  Cu-Be strip, stress relaxation in bending 3—39192
  Cu-Te, amorphous film, crystn., bending contours, electron microscopy study 3—2412
  Fe-Si grain oriented sheet, bending effect on domain configurations and losses 3—33964
  $LiNbO_3$:Ti diffused channel waveguides with bends, losses, integrated optical device design 3—17637
  Mo single cryst., bending deformation, recrystallisation and annealing *(Russian)* 3—24291
  Pb, elastic and relaxation properties during melting and solidification 3—39191
  Se, amorphous film, crystn., bending contours, electron microscopy study 3—2412
  Se-Te, amorphous film, crystn., bending contours, electron microscopy study 3—2412
  Si, bending gettering of cryst. defects 3—19348
  SiC refractories, deform. and fracture study by acoustic emission method under three-point bending *(Japanese)* 3—39252
  Sn, elastic and relaxation properties during melting and solidification 3—39191
  Zn, elastic and relaxation properties during melting and solidification 3—39191

bending of light *see gravitation; light*

bending strength
  β''-Al_2O_3-Na_2O-Li_2O-ZrO_2, transform. toughening by ZrO_2 addition 3—34438
  alumina ceramic, biaxial tension strength testing 3—44002
  borosilicate glass fibres, multicomponent optical, bending strength and fatigue rel. to environment and comp. 3—47976
  brittle material, cracked, bending and tensile strength, fracture mech. theory 3—53180
  brittle material, Weibull modulus estimation 3—22971
  brittle materials, delayed fracture, observed in stress rate tests, quantitative anal. 3—18380
  composite materials, nonlinear, rel. between tensile and bending props. 3—8122
  concrete, flexural fatigue, deterioration assessment 3—39249
  concrete, fracture toughness eval. of different material types *(Japanese)* 3—58230
  concrete, gypsum, mixed with sand and cement, strength and hardening condition *(Japanese)* 3—58060
  epoxide resins, SiO_2, Al_2O_3 or MgO filled, fracture toughness 3—34440
  fracture of metal, X-ray diffr. topographic method *(Chinese)* 3—4218
  glass, optical, devitrified, type SO-115M, axial compression, bending strength, influence of surface conditions 3—14761
  glass, technical grade, strengthening by deep etching in acid influence on strength in axial tension 3—19441
  glass ceramic, commercial, flexural strength and fracture toughness, surface finish effects 3—34418
  glass fabric filled epoxy resins, flexural and compressive strength, gamma irradiation effect 3—34386
  graphite, nuclear, fracture criterion 3—16851
  graphite fibre reinforced epoxy, fatigue life predictions from US detected laminar defects 3—39328
  machine parts, metal coated, endurance limit eval. 3—58285
  neutral hole anal., bending stress in reinforcement 3—7517
  plate, circular, large elastic-plastic deflection with springback under circumferential moments 3—1973
  plate with part-through crack under extension and bending, elastic-plastic problem 3—7493
  PMMA, bending and tensile strength, crack propagation 3—53180
  polyethylene, mica filled, hot rolling and forging, effect on mech. props. 3—29057

bending strength continued
polypropylene, mica reinforced, mech. props. 3—29121
porcelain cylinders, bending strength, brittle fracture, statistical analysis 3—58207
PVC-post chlorinated PVC blends, compatibility, mech. criteria 3—14641
refractory, brittle, heat resist. rel. to stress conc. sensitivity 3—24433
reverse bending machine design, for fatigue testing at elevated temp. 3—53332
rod, inelastic, supercritical strain and fracture 3—17828
rubber, natural and polybutadiene blend, flexing and tension fatigue failure 3—34434
shell, triangular element in quadratic parametric representation, inextensional bending 3—7440
α-silicon, hot pressed, bending strength and fracture toughness *(Japanese)* 3—9183
single edge notched bend specimens, displacement and rotational factors 3—7494
steel, Al-Cu-Mg-Mn(-Ti), fibre reinforced composite, mech. props. evaluation by bend tests *(Slovak)* 3—58174
steel, alloy HY 130, plane strain-crack growth resistance J_I-R curve determ., tentative procedure eval. by round robin tests 3—29235
steel, austenitic 30KhGSA, plane specimens, endurance prediction with combined forms of loading 3—47905
steel, bainitic, pressure vessel type, hydrostatic tension effect on cleavage fracture 3—9178
steel, high speed, R6M5, strength and phase comp. 3—53029
steel, impact loading, specimen size factor in surface active media 3—29255
steel, low alloy, type 03G4AF, rupture strength rel. to struct. 3—47957
steel, Ni-Cr-Mo, crack initiation, propag. and branching in delayed failure, effect of biaxial load *(Japanese)* 3—4115
steel, spheroidised, plastic instability in U-notched bend specimens 3—34461
steel, spheroidised medium C, bent bars, fracture and constrained yielding, H charging effect 3—34481
steel, stainless AISI 4140, fatigue life estimation, X-ray diffr. obs. *(Korean)* 3—4112
steel, structural, size of plastic region due to blunting of precrack tip, crit. stress intensity factor 3—29233
steel fibre reinforced concrete, folded plate ridges under bending moment, ultimate strength *(Japanese)* 3—58231
steel fibre reinforced concrete flexural fatigue, deterioration assessment 3—39249
three-point method for evaluating corrosion current and Tafel slopes from a single polarization curve 3—39263
Zircaloy-4, stress relaxation in bending at 673K, rel. to cold work 3—53104
Al, at 300°C, reverse bending machine design and expt. results 3—53332
Al coatings, heat-resistant, cracking conditions 3—58310
Al-Mg alloy AMg6M, plane specimens, endurance prediction with combined forms of loading 3—47905
Al_2O_3, hot isostatically pressed, fabrication and fracture toughness for prosthetic use 3—29049
Al_2O_3-MgO spinel based refractory, prep. and props. 3—29041
C fibre Al and alloys, chopped fibres, fabrication by graining process 3—52998
C fibre reinforced Al matrix composite, fabrication by plasma spraying and hot pressing, mech. props. *(Japanese)* 3—58077
C fibre reinforced epoxy resin, role of fibre surface-matrix combination 3—9156
C fibre reinforced plastics, unidirectional, failure, fibre strength props. 3—29174
$CaO-P_2O_5$ glass-ceramics, high strength, prep. by unidirectional crystn. 3—29055
Fe, cast, flake graphite, fractography study *(Japanese)* 3—19401
Fe, sintered, bending strength determ. by hardness meas. and mag. inductive meas. *(German)* 3—53307
Fe-Ni-Si (15, 12 wt.%), splat cooling to improve mech. workability and constancy of permeability 3—29111
Fe-Se (3 wt.%) statically bent vibrating ferromagnetic plate, magnetoelastic effect 3—28680
MgO, refractory-grade periclase materials, high temp. strength, influence of additions and $CaO:SiO_2$ ratio 3—53009
$MgO-CaO-SiO_2-P_2O_5-CaF_2$ glass-ceramics for prosthetic appl. 3—53123
NbC-graphite composites, strength with force and thermal loading 3—14726
$PbO-B_2O_3$ immiscible glasses, mech. props. 3—2661
Si-O-N-M (M=Mg, Y, Ca, Be or Zr,) reaction bonded and hot pressed ceramics, phase equilib. and mech. props. 3—58112
Si_3N_4 ceramics, hot-pressed, high-temp. strength and fatigue, effect of billet differences 3—9157
Si_3N_4, hot pressed, crack velocity at bending fracture *(Japanese)* 3—4131
Si_3N_4, hot-pressed, high temp. environmental strength degradation 3—53252
Si_3N_4, sintered, strength, effect of specimen size 3—14804
$Si_3N_4-Y_2O_3-Al_2O_3$-Mg-O, sintered compacts, hot isostatic pressing, density, flexural strength *(Japanese)* 3—58083
$\alpha+\beta$-Ti alloy, fracture toughness, strength and microstruct. 3—14734
$\alpha+\beta$ Ti alloys, welded joints, low cycle fatigue 3—14737
Ti, welded joints, stress concentrator effect on bend ductility 3—14685
TiC/TiB_2 microlaminate coating, vacuum evaporated, struct. and mech. props. meas. 3—24202
ZrC-graphite composites, strength with force and thermal loading 3—14726
ZrO_2 single crystals, partially stabilised, fracture toughness and strength, temp. depend. 3—9158

berkelium
see also nuclei with ......
X-ray energies, natural widths and intensities meas. 3—11737

berkelium compounds
$BkPO_4$, Raman spectra 3—47646

beryllium
see also nuclei with ......
atom, ^3S and X^1S states, generalised antisymmetric geminal power wavefunctions 3—36700
atom, correlation energy, explicitly correl. Gaussian geminals, 2nd order perturbation calcs. 3—41487
atom, electron scatt., ab initio adiabatic polarisation pots., matrix HF calc. 3—6789
atom, excited state, electronegativity, spin-polarised Xα calcs. 3—55836

beryllium continued
atomic doubly-excited states, electron correl. study in hyperspherical coords. 3—50320
atoms, Breit correction, calcs. using Coulomb Green's function 3—11716
chemisorption, of H, on (0001) surface, cluster model, convergence 3—41715
clusters, struct., bonding, ab. initio pseudopotential CI calcs. 3—6821
Compton profile, electron struct. 3—14383
distorted core effect on electric field gradient 3—3132
electronic struct., Xα method 3—1240
films, physical vapour deposition and microstruct., atomic incident angles effects 3—24135
foil, electron energy loss calc. 3—26605
IR spectra, multiple-reflection attachment for the IKS-22 spectrophotometer 3—45186
island-arc volcanic rock ^{10}Be concs. and subduction process 3—9898
isoelectronic sequence, ^5P-^5S transition wavelengths, fine struct., MCDF-EAL calcs. 3—50323
isoelectronic sequence, relativistic intermediate coupling calcs. 3—41527
isoelectronic series, E1, M1, E2, M2 and E3 transitions 3—31985
isoelectronic series, E1, M1, E2, M2 transitions 3—32002
isoelectronic series, mag. quadrupole transitions, relativistic intermediate-coupled wavefunctions 3—21676
isoelectronic series, third-order correl. energies for closed-shell systems 3—21620
Knight shift, chem. shift correction 3—38708
liquid, peak in static struct. factor, rel. to electron correl. effects 3—33654
microplastic deform. study *(Russian)* 3—33341
molecule, $^1\Sigma_g{}^+$ states, orbital energies 3—1241
negative ions, excited states lying above ground state of neutral atom 3—21647
neutron monochromator material, neutron scatt. and crystallisation props. *(German)* 3—7878
nuclear Gruneisen parameter for eqn. of state, vol. variation 3—28074
ocean ^{10}Be vertical profiles in Drake Passage and E.Pacific 3—9937
optical mirrors produced by vapour deposition 3—7227
permeability of H 3—8263
plasma, laser-produced, trapping by SL-1 Surmac 3—42422
pollutant elements in wastewater, anal. by DC Ar plasma emission spectroscopy 3—48220
polyvalent, vacancy formation energy, pseudopotential calc. 3—46928
sealing material for vacuum windows, Be foil and polyethylenephthalate film combination 3—16463
slabs, electronic struct., ab initio LCAO HF calc. 3—23259
surface, alpha irradiated, impurity element behaviour 3—22943
surface, clean, struct. depend. stimulated de-excitation of Auger electrons 3—34182
tektites (Australasian), ^{10}Be content indicating terrestrial origin 3—29926
XPS spectra, background intensities, elastic and inelastic scatt. contribs. 3—52899
Be II, core excited quartet levels, lifetime and oscillator strength 3—1285
Be II, doubly excited quartet states, multiconfiguration HF calcs. 3—11679
Be II, perturbation of $1s2p4l\,^4L$ states by $1s2snl'\,^4L$ Rydberg series 3—50302
Be II, quartet states, energy levels and lifetimes, multiconfig. HF calcs. 3—11678
Be II extreme UV absorption spectra using laser produced plasma extreme UV continuum source 3—10922
Be III, decay channels of $(2,3c)^3P^0$ and $(2,4c)^3P^0$ levels 3—26667
Be III extreme UV absorption spectra using laser produced plasma extreme UV continuum source 3—10922
Be IV, laser prod. plasma, Lyman α line red shift study 3—12975
Be^-, ^2P reson. state, SCF and CI calcs. 3—31961
Be^-, electronic structure, even-tempered basis functions, universal systematic sequences 3—11665
Be^+, doubly and triply excited reson. Auger spectra 3—1325
Be^+, doubly excited states 3—31977
Be^+, electron impact ionisation cross section 3—46077
Be:C, diffusion studies *(Russian)* 3—13553
Be^{4+}+H, charge transfer, molecular approach 3—17372
Be^{4+}+H, partial cross section for charge transfer, report 3—21894
Be_2, anion states, electron correl., MBPT, SCF calcs. 3—11708
Be_3, anion states, electron correl., MBPT, SCF calcs. 3—11708
Be_4, dissoc. energy from CI wavefunctions, hybridisation and bonding 3—17228
^{10}Be conc. meas. with FN tandem accelerator 3—41697
Cu-Be, precipitation kinetics *(Japanese)* 3—9065
p-GaAlAs, LPE growth on GaAs, Be and Zn diffusion obs. 3—52982
$Ga_{0.8}Al_{0.2}As_ySb_{1-y}$:Be implanted avalanche photodetectors, tunnelling in reverse dark current charact. 3—20895
GaAs:Be MBE layers, impurity and defect levels 3—3102
GaInAsP-InP:Be DH laser diodes, Be implantation fabrication 3—37038
InGaAs/InP:Be DH laser diodes room temp. pulsed operation 3—47365
InGaAsP:Be, LPE growth and charact., doping conditions 3—42959
InP:Be, LPE growth and charact., doping conditions 3—42959
InP:Be MBE layers, elec. and optical props. 3—47365
Si:Be, diffusion coeff., and solid solubility, elec. cond. study 3—2883
Si:Be, luminescence, Zeeman spectroscopy 3—14340
Si:Be,k isoelectronic bound excitons, photoluminesc. lifetime, absorpt. and excitation spectra 3—8878
SiC:Be, ESR spectra 3—38677

beryllium alloys
see also beryllium compounds
Au Be ohmic contacts to p-InP 3—13904
B-C-Be ternary compositions, Seebeck coeff. and resistivity obs. to 1000°C 3—13848
Be-B, ion implantation prep., wear resistance and microstructure 3—4152
Be-Fe-C, heterophasal, atomic ordering *(Ukrainian)* 3—13165
Be_2HfH formation 3—48179
Be_2TiH_3 formation 3—48179
$Be_2ZrH_{2.3}$ formation 3—48179
$Be_2ZrH_{1.5}(D_{1.5})$, neutron scatt. investig. 3—46887
Cr-Be, paramag. electronic density of states rel. to antiferromag., sp. ht. meas. 3—57599
$CrBe_{12}$, mag. phase transitions under high press. 3—8669
Cu-Al-Be, ternary system, shape memory effect, elec. resist., internal friction, Young's Modulus, temp. depend. 3—43835
Cu-Be (1.35 at.%), microstruct. evolution under electron irrad. in HVEM 3—27996

beryllium alloys continued
Cu-Be strip, stress relaxation in bending 3−39192
Cu-Be-Co (2.1, 0.2 wt.%), ageing, influence of rapid solidification 3−29095
Cu-Fe-Sn(Si)(Be), precip. processes, influence of addition of third element 3−47845
CuBe, electronic struct. and density of states, cluster $X\alpha$ calc. *(Russian)* 3−23252
$Cu_{98}Be_2$, thermal degration, preferential surface migration, ESCA study 3−14897
$ErBe_{13}$, cryst. field parameters, magnetisation and susceptibility meas. 3−52089
$Fe_{1-x}Mn_xBe_2$, inhomogeneous magnetism, hyperfine interaction meas. 3−33892
$(La_{1-x}Ce_x)Be_{13}$, behaviour in mixed valence and Kondo regimes 3−23333
$NdBe_{13}$, cryst. field parameters, magnetisation and susceptibility meas. 3−52089
$Ni_{1-x}Be_x$, dil. alloy, local vibr. broadening, inelastic neutron scatt. study 3−57048
$SmBe_{13}$, cryst. field parameters, magnetisation and susceptibility meas. 3−52089
$TiBe_2$, de Haas-van Alphen spectra and induced magnetism 3−3038
$TiBe_2$, itinerant metamagnetism, Fermi liq. model appl. 3−23572
$TiBe_2$, nearly ferromag., spin fluctuations, NMR study 3−57802
$TiBe_2$, resist. ratio, spin-flip relax., ESR study 3−14121
$TiBe_2$, specific heat, spin fluctuation suppression 3−8675
$Ti(Be_{1-x}Cu_x)_2$, g value, spin-flip relax., ESR study 3−14121
$TiBe_{2-x}Ga_x$, Laves phase, expansion by Ga addition 3−33189
$Ti_{50}Be_{40}Zr_{10}$, Metglas 2204, thermoelec. power anomalies, resist. meas., press. study 3−28341
$Ti_{50}Be_{40}Zr_{10}$, Metglas 2204, elec. resist., press. depend., 1.5 to 300K 3−33698
$TiBe_2$3, electronic sp. ht., mag. field depend., Fermi liq. model 3−51824

beryllium compounds
see also beryllium alloys
Be-Si-O-N, reaction bonded and hot pressed ceramics, phase equilib. and mech. props. 3−58112
$BeAl_2F_8$ complex, ab initio MO studies of struct. and stability 3−36647
$BeAl_2O_4:Cr^{3+}$, alexandrite-laser performance at high temperature 3−32367
$BeAl_2O_4:Cr^{3+}$, excited-state absorpt. temp. depend. 3−56200
$Be_3Al_2(SiO_3)^6:Cr^{3+}$ (emerald) tunable laser 3−12154
$Be_3Al_2(SiO_3)_6$ (Beryl), reflectivity and resolution meas. with synchrotron radiation in the 1 keV region 3−23899
$Be_3Al_2Si_6O_{18}$, beryl, blue and green, optical absorption and EPR studies 3−3518
$Be_3Al_2Si_6O_{18}$, beryl, high pressure hydrothermal synthesis, crystal size and shape 3−14461
$Be_3Al_2Si_6O_{18}$, beryl, lattice defects, X-ray topography study 3−37915
BeD^+, $X^1\Sigma^+$ state, vibr.-rot. anal. 3−55911
BeD_2, amorphous, neutron diffr. study 3−42523
BeF radical, pot. energy curves calcs. 3−1453
BeF_2, crystalline, electronic struct., ab initio cluster calcs. 3−43019
BeF_2, crystalline and vitreous, electronic struct., optical study 3−52032
BeF_2, vitreous, IR, Raman and neutron vibr. spectra, comparisons 3−43531
$BeF_2:Gd^{3+}$ glass, vibronic fluoresc., polarised Raman, and IR spectra 3−38895
BeF_2-AlF_3-MgF_2-$BaF_2:Cr^{3+}$ glass, energy level splitting, effective g value, ESR study 3−33971
BeF_2-AlF_3-MgF_2-$BaF_2:Co^{2+}$ glass, effective g value, chem. bonding, ESR study 3−33972
BeH^-, mag. susceptibility, screening const., ab initio calcs. 3−50310
BeH^+, $X^1\Sigma^+$ state, vibr.-rot. anal. 3−55911
$Be_{36}H$, cluster model for chemisorpt., convergence 3−41715
$Be(H_{0.64}D_{0.32})_2$, amorphous, neutron diffr. study 3−42523
BeO, high quality optical coating prep. by activated reactive evaporation 3−12369
BeO, pure, Li-Al, B-doped monocrystals and powder samples *(Russian)* 3−57966
BeO single cryst., ultrasoft X-ray irrad., absorption spectra and luminescence 3−28897
BeO, thermostimulated luminescence, spontaneous electron emission *(Russian)* 3−3839
BeO/AlGaAs/GaAs constricted DH large optical cavity laser, LPE grown, multichannel optical recording appl. 3−27074
BeO-P_2O_5 glasses containing water, protonic cond., DC elec. cond. meas. 3−23082
BeOH, spectrosc. consts., quantum chem. calcs. 3−21624
$BeOH^+$, spectrosc. consts., quantum chem. calcs. 3−21624
BeS, perturbations in $A^1\Pi$-$X^1\Sigma^+$ system, the $a^3\Pi_i$ state 3−31924
$BeSO_4$, Raman and IR spectral studies *(French)* 3−34097
$BeSO_4.4H_2O(4D_2O)$, Raman and IR spectral studies *(French)* 3−34097
Be_2SiO_4, thermal expansion, Gruneisen parameter anal. 3−8228
$Cr^{3+}:BeAl_2O_4$ (Alexandrite) laser, passive mode locking, 0.7-0.8 μm picosec. pulse generation 3−1641
LiF-BeF_2 binary melt, surface tension, max. bubble press. method 3−28195

Bessel differential equation *see Bessel functions*

Bessel functions
discontinuous integrals involving Bessel functions 3−30595
exponential-type orbitals, Fourier transform of two-center prod., one- and two-electron multicenter integrals appl. 3−45015
generalised, paths of integration, reln. to Fourier, Watson and Kontorowich-Lebedev transforms 3−30596
Klein-Gordon eqn. for wave motion across space-time shadow boundary 3−545
model of diffuse pinch discharge, minimum energy state 3−12822
plate thermoelasticity and thermoviscoelasticity, Fourier-Bessel integral transforms *(Ukrainian)* 3−7418
Runge's theorem, impedance boundaries in acoustic wave propagation 3−16157
Schrodinger equation, stationary, coherent memory functions calcs. from eigenvalues and eigenvectors 3−54637
Steed's method calc. of Coulomb and Bessel functions, computer program 3−87
thermal stresses, quasi-static, in circular plate 3−42126
viscous incompressible oscillatory fluid flow in elastic tube 3−46644
wave analysis, exponential approximation of the modified Bessel function 3−35855

beta-decay
see also beta-decay theory; beta-ray spectra; nuclear electron capture
A=102 nuclear data sheets, levels, transitions, J^π, β-decay 3−20588
A=128-154, neutron deficient, β^+ spectra, end point energies, Q_{EC} meas. 3−49817
A=190 nuclear data sheets, levels, transitions, J^π, β-decay 3−20589
A=94-100 very neutron deficient isotopes, β-delayed proton activities 3−735
atomic K-shell ionisation, relativistic and atomic effects during beta decay 3−50356
CANDU fuel cycles, heat from alpha-decay, WAD program, beta-chains 3−45616
collective 1^+ Δ-hole states, excitation energies 3−11223
double, constraints on lepton number nonconservation and Majorana neutrino mass 3−40813
electron radial wave functions, beta decay, book 3−10533
EM M1 strength quenching due to mesonic and ground state correl. effects 3−6189
forbidden β transitions, renormalisation, giant forbidden β resonances 3−31376
free neutron half-life meas. method using ultracold neutrons 3−45798
Gamow-Teller and M1 resonances 3−49812
Gamow-Teller and mag. isovector-spin transitions, role of Δ(1232) 3−49813
Gamow-Teller strength near pion threshold 3−31346
IBA and IBFA tests from radioactive decay schemes 3−45472
inner shells as a link between atomic and nuclear physics 3−40969
inner-shell ionization during nuclear β decay 3−50534
left-right symmetry in nucl. beta-decay using Bhabha polarimeter 3−31344
medium heavy nuclei, quenching of single particle spin-isospin operators with $\Delta l=1$ 3−49802
neutrinoless beta-decay, particle physics conf., Nashville, TN, USA (May 1982) 3−30539
neutrinoless double beta-decay and neutrino oscill., review 3−31198
neutrinoless double beta-decay in $SU(2)_L \times U(1)$ model 3−21039
neutrinoless double-β decay, consequences of neutrino mass and CP eigenvalues in SO(10) models 3−26046
neutron β-decay in independent quark model approach based on Dirac eqn. 3−31169
reactor fission products, β and $\bar{\nu}_e$ correlated spectra, reactor neutrino expts. 3−26540
relativistic theory of shakeoff accompanying β-decay 3−40993
short lived fission products, average β-decay energy from β-strength function data 3−41102
Sr short-lived precursors, β-delayed neutron emission probability (Pn) 3−21264
superallowed Fermi β-decays, anal. 3−36365
X-ray and atomic inner-shell physics, conf., Eugene, OR, USA (Aug. 1982) 3−40308
β^+-decay of nucleus, atomic K-shell excitation 3−36357
$e^-e^- \rightarrow W^-W^-$, inverse neutrinoless double beta decay 3−627
$^{228}Ac \rightarrow ^{228}Th$, internal conversion coeff. meas. 3−36356
^{121}Ag decay, $T_{1/2}$, ^{121}Cd levels, J^π, transition probabilities 3−26195
^{22}Al, beta-delayed two-proton radioactivity 3−40995
^{22}Al, odd-odd $T_z=-2$ isotope, beta-delayed proton decay 3−11292
$^{24}Al \rightarrow ^{24}Mg$, isospin forbidden Fermi matrix element meas. 3−54989
$^{26}Al^m$, Fermi beta-decay, Q-value doublet meas., from $^{26}Mg(^3He,t)$ 3−16736
^{76}As β-decay, ^{76}Se levels and γ-transitions *(Chinese)* 3−49745
^{207}At β^+-decay, ^{207}Po γ- and internal conversion electron spectra, e-γ coincidences 3−31329
^{207}At levels, β- and γ-decay schemes from spectra and coincidence data 3−36345
^{208}At β^+-decay, ^{208}Po ICE and γ spectra, transition multipolarities 3−31328
Ba, short-lived precursors, β-delayed neutron emission probability (Pn) 3−21264
^{117}Ba, β-strength function resonance struct., β-delayed particle emission 3−21256
^{140}Ba β-decay, ^{140}Ca γ-transition energies and intensities, ICE spectra, levels 3−36359
$^{207}Bi \rightarrow ^{207}Pb$, Li subshell orbital electron capture probability, Xγ coincidence meas., decay energy 3−6193
^{240}Bk beta-delayed fission study following $^{241}Am(^3He, 4n)$ 3−41064
^{81}Br Gamow-Teller matrix, solar neutrino detection feasibility from (p,n), $(^3He,t)$ 3−31350
$^{16}C \rightarrow ^{16}N$, $0^+ \rightarrow 0^-$ beta decay obs. 3−54994
^{45}Ca, β-decay, internal bremsstrahlung, at. fields effects 3−32028
^{48}Ca double beta-decay, Nilsson-pairing model 3−21260
^{144}Ce decay, γ-ray spectra 3−26221
^{147}Ce β-decay, ^{147}Pr level scheme and transitions 3−16734
$^{34}Cl^m(3^+) \rightarrow ^{34}S(2^+)$, β-transition shape factors, branching ratios 3−40996
$^{34}Cl(0^+) \rightarrow ^{34}S(0^+)$, β-transition shape factors, branching ratios 3−40996
$^{34}Cl \rightarrow ^{34}S$ superallowed β decay 3−54986
^{56}Co β-decay, Fermi-Gamow-Teller interference 3−6196
^{58}Co, K-shell ionisation from β^+ decay 3−40994
^{58}Co positron decay, K-shell electron shakeoff probability meas. 3−54984
^{60}Co, β^- decay, K-shell ionisation prob. form Ni X-ray spectra 3−40997
^{48}Cr carrier free isotope prod., decay props. from $^{51}V(p,X)$ 3−21316
^ACs, A=114,116, β-strength function resonance struct., β-delayed particle emission 3−21256
^ACs, A=142-146, very neutron rich, beta-decay energies and mass excesses 3−21263
^{58}Cu, Gamow-Teller resonances, excitation and GT strengths, from $^{58}Ni(p,n)$ 3−16752
^ADy, A=148, 150, 152, decay, $^{148,150,152}Tb$ low lying 1^+ and 2^- levels and isomers 3−6194
^{146}Dy, γ- and β-decay schemes 3−31327
^AEr, A=150, 152, 154, decay, $^{150,152,154}Mo$ low lying 1^+ and 2^- levels and isomers 3−6194
$^{150}Er \rightarrow ^{150}Ho$, decay props. study 3−732
$^{147}Gd \rightarrow ^{147}Eu$, low lying level structure in ^{147}Eu from γ-γ directional correl. meas. 3−54979
$^{66}Ge \rightarrow ^{66}Ga$, effective Coulomb matrix elements calc. using Nilsson model 3−40991
^{76}Ge double beta-decay, Nilsson-pairing model 3−21260
^{76}Ge double β-decay, lepton nonconservation, massive ν and righthanded current limits 3−40829
^{76}Ge, neutrinoless double beta decay, new limits for ν mass and lepton conservation 3−49815

beta-decay continued
^{3}H, β-decay, valine mol. struct. influence, neutrino mass determ. 3−21262
^{6}He half-life meas. 3−6195
^{203}Hg, β-decay, internal bremsstrahlung, at. fields effects 3−32028
^{159}Ho β^{+}-decay, ^{78}Kr excited state lifetimes and γ-ray energies 3−36360
^{A}I, 110,112, β-strength function resonance struct., β-delayed particle emission 3−21256
^{132}I→^{132}Xe, CC gamma-gamma angular correlation study 3−40987
^{135}I decay and shell model description of N=81 five-exciton ^{135}Xe 3−21261
^{102}In→^{102}Cd excited states study 3−26188
^{192}Ir photon emission probabilities from beta-decay 3−49798
La, short-lived precursors, β-delayed neutron emission probability (Pn) 3−21264
^{A}La, A=146, 148, beta-ray end-point energy meas. 3−21258
^{138}La, half-life and decay scheme 3−54993
^{140}La β-decay, ^{140}Ce γ-transition energies and intensities, ICE spectra, levels 3−36359
^{151}Lu, proton emission, half life from quasi-stationary model 3−31345
^{169}Lu decay of oriented nucleus, ^{169}Yb levels, J$^{\pi}$, transitions, mixing ratios, quasiparticle-phonon anal. 3−11221
^{183}Lu→^{183}Hf, half-life and excited state props. 3−31628
^{24}Mg(e,e′), inelastic form factors, transition strengths between 0^{+} and 1^{+} states 3−55029
^{A}Mo, A=87,88, neutron deficient isotopes, Q_{β} meas. and mass excess values 3−11293
^{87}Mo, T_z=3/2 β-delayed proton precursor decay, levels, branching ratios 3−45488
^{99}Mo, coincidence calibration, decay scheme parameter meas. 3−24885
^{99}Mo→^{99}Tc, levels and transitions in ^{99}Tc, nucl. spectroscopic study 3−26213
^{A}Na, A=31, 32, Q_{β} meas. of γ-coincident β-energy spectra, onset of nuclear deformation 3−36311
^{20}Na, kinematic shifts in β-delayed particle decay and β-ν ang. correl. 3−31343
^{A}Nb, A=86,87, neutron deficient isotopes, Q_{β} meas. and mass excess values 3−11293
^{90}Nb β^{+}/EC decay, ^{90}Zr levels, J$^{\pi}$, transitions 3−31347
$_{28}^{63}$Ni, K-shell electron ionisatin probability during β decay calcs. 3−11291
^{240}Np high-spin isomer decay 3−21259
^{14}O, Fermi beta-decay, Q-value doublet meas., from ^{14}N(^{3}He,t) 3−16736
^{14}O superallowed β decay 3−54986
^{26}P, T_z=−2 isotope from ^{28}Si(^{3}He,p4n), beta-delayed proton decay 3−54996
^{107}Pd in Fe meteorites, radioactive decay rel. to origin of exotic Ag 3−48863
^{109}Pd decay, 724.3 keV level lifetime and shell model intruder states in ^{109}Ag 3−725
$_{46}^{107}$Pd, K-shell electron ionisatin probability during β decay calcs. 3−11291
^{147}Pm, β-decay, internal bremsstrahlung, at. fields effects 3−32028
^{140}Pr β^{+}-decay, ^{140}Ce γ-transition energies and intensities, ICE spectra, levels 3−36359
^{239}Pu(n,f), fast n, A=233, 235, fission product β-ray decay heat *(Japanese)* 3−26317
^{241}Pu, half-life, isotope dilution mass spectrometry 3−26220
^{A}Rb, A=88, 94, 96, 98, beta-ray end-point energy meas. 3−21258
^{A}Rb, A=94-98, very neutron rich, beta-decay energies and mass excesses 3−21263
^{87}Rb→^{87}Sr^{m}, search for charge violation in neutron decay 3−36246
^{187}Re→^{187}Os, nuclear β-decay clock, determ. of Universe age 3−44649
^{188}Re β^{-}-decay, ^{188}Os levels, transitions and branching ratio *(Chinese)* 3−54953
^{91}Ru^{M}, T_z=3/2 β-delayed proton precursor decay 3−45488
^{35}S, β-decay, internal bremsstrahlung, at. fields effects 3−32028
Sc carrier free isotope prod., decay props. from ^{51}V(p,X) 3−21316
$_{62}^{151}$Sm, K-shell electron ionisatin probability during β decay calcs. 3−11291
^{107}Sn β^{+}-decay, ^{107}In levels and transitions 3−36358
^{90}Sr β-decay, inner bremsstrahlung spectrum 3−31349
^{94}Sr β-decay, β-energy spectra, ^{94}Y levels, J$^{\pi}$, transitions 3−49811
^{182}Ta→^{182}W, levels and transitions 3−31332
Tb β-decay, oriented, ^{150,152,154,156}Gd levels, J$^{\pi}$, transitions, mixing ratios 3−45493
^{145}Tb, γ- and β-decay schemes 3−31327
^{160}Tb β-decay, ^{160}Dy bands, transitions and mixing ratio 3−36363
^{165}Tb isotope identification and half-life 3−54991
^{A}Te, A=128, 130, double beta decay, rejection of evidence for nonzero neutrino rest mass 3−45490
^{A}Te→^{A}Xe, A=128, 130, double beta decay, neutrino rest mass determ. 3−31353
^{45}Ti carrier free isotope prod., decay props. from ^{51}V(p,X) 3−21316
^{147}Tm, proton emission, half life from quasi-stationary model 3−31345
^{A}U(n,f), fast n, A=233, 235, fission product β-ray decay heat *(Japanese)* 3−26317
^{45}V, mirror nuclide β^{+} decay 3−731
^{113}Xe, β-strength function resonance struct., β-delayed particle emission 3−21256
Y short-lived precursors, β-delayed neutron emission probability (Pn) 3−21264
^{90}Y β-decay, inner bremsstrahlung spectrum 3−31349
^{152}Yb→^{152}Tm, favoured β transitions $\pi h_{11/2}\to\nu h_{9/2}$, seniority isomerism 3−31351
^{156}Yb decay, ^{156}Tm low lying 1^{+} and 2^{-} levels and isomers 3−6194
^{156}Yb, mass-separated, decay study 3−54995
^{83}Zr, T_z=3/2 β-delayed proton precursor decay, mass excess and levels 3−45488
^{84}Zr identification and half-life from ^{58}Ni(^{28}Si, 2p) 3−31348
^{96}Zr neutrino free double β-decay, half-life lower limit 3−31342

beta-decay theory
see also beta-decay; beta-ray spectra
double-β decay and triplet scalar bosons 3−16738
neutrinoless double-β decay in left-right symmetric model 3−16737
nuclear beta decay induced by intense EM field 3−54987
nuclear beta decay induced by intense EM fields, forbidden transition 3−54988
nuclei far from stability, beta decay half lives 3−31352
superallowed β-decays, integrated Fermi function calc. variations 3−45492

beta-decay theory continued
β spectra, neutral currents in twice parity forbidden decay *(Chinese)* 3−49597
Δ-hole excitation, effect on quenching the Gamow-Teller matrix element 3−45491
^{37}Ar, EC decay, double internal bremsstrahlung, 1s,2s,2p,3p electron contribs. 3−16735
^{87}Br, β-strength function, semiempirical method, delayed neutron emission probabilities 3−45489
^{48}Ca→^{48}Ti, neutrinoless double-β decay, Higgs boson exchange contrib. 3−734
^{18}F, beta spectra and heavy neutrinos 3−54985
HT→HeH^{+} $\beta^{-}+\nu_{e}$, β-spectrum mol. corrections and neutino mass determ., theory 3−729
^{A}Hf(n,γ), A=178, 179, 180, 2.6-2000 keV, capture cross sections, resonance parameters, nucleosynthesis of ^{180}Ta 3−6234
^{137}I, β-strength function, semiempirical method, delayed neutron emission probabilities 3−45489
^{19}Ne, beta spectra and heavy neutrinos 3−54985
^{35}S, beta spectra and heavy neutrinos 3−54985
^{90}Zr, Gamow-Teller strength at high excitation 3−733
beta-particles *see beta-rays*
beta-radiation *see beta-rays*
beta-ray absorption
see also electron absorption
paper, optical and beta radiation method of grammage meas. 3−273
beta-ray angular distribution
see also beta-ray spectra
β-active nuclei, prod. by polarised neutron capture, NMR 3−57810
beta-ray detection and measurement
see also beta-ray spectrometers; radioactivity measurement
$4\pi\beta$-γ coincidence efficiency functions, meas. using multisource $4\pi\beta$-counter 3−31884
4π(α-^{7}Li)-γ coincidence technique for thermal neutron flux absolute meas. 3−45795
absorbed dose rate standards for beta radiation at protection level, report 3−21580
air proportional counters for detecting tritium β-rays 3−41418
dose distributions from β-radiation in heterogeneous media, calc. using two-group method 3−9749
Geiger-Muller counters, appl. to low-level counting system *(Rumanian)* 3−6507
Harwell 3230 beta-in-air monitor surveillance, alarm and record system 3−31851
high range survey meters for β- and γ-dose rates 3−6459
HPLC radioactivity monitors, continuous flow regime 3−58461
portable beta-gamma dose-rate meter, pulse shape discrimination 3−50225
space charge meas., of electron beam irradiated dielectrics 3−45159
thickness β-ray gauge for coatings meas., source fluctuations effects calc. 3−268
TLD, laser heating technique, beta dosimetry, selective readout 3−55708
β-emitting point source depth determ. from bremsstrahlung meas. 3−31885
β-γ coincidence system, performance characts. 3−31883
Au extended source activity meas. using $4\pi\beta$-γ coincidence technique 3−45794
^{60}Co half-life determ. using $4\pi\gamma$ ionisation chamber and $4\pi\beta$-γ coincidence techniques 3−45791
^{152}Eu activity determ. using $4\pi\beta$-γ spectroscopic coincidence method 3−26601
LiF TLD beta dosimetry meas. using Lucite Beta Dosimetry Platform 3−31845
beta-ray effects
see also electron beam effects
brain, chronic local exposure, tumours and pretumoural states induction, rabbit β-irrad. expts. *(Russian)* 3−58739
brain, chronic local irrad., β-applicator, morphology of tissue *(Russian)* 3−34903
cell membranes, effects of low doses of X-rays and HTO 3−15160
embryos, mouse, effect of chronic HTO β or ^{60}Co γ irrad. on preimplantation development 3−29665
germ cells of medaka embryos, effects of tritiated water β-rays, comparison with ^{137}Cs γ-rays 3−48337
immune response, primary, in rainbow trout, permanence of suppression after embryonic exposure to tritiated water 3−4563
mammalian cell cultures: induction of cell killing, micronuclei, and mutation resistance after β and γ irrad. 3−4558
mammary gland tumours induced in rats by single and fractionated β-irrad. *(Russian)* 3−58734
skin, albino rat, effect of X-rays and ^{133}Xe β-particles *(Russian)* 3−58741
spermatogonia effective depth, calcs. for external high-energy β-rays, rel. to genetic risk 3−15238
trichlorofluoromethane, β-radiation damage in ^{85}Kr removal system 3−45584
beta-ray polarisation
β-active nuclei, prod. by polarised neutron capture, NMR 3−57810
beta-ray scattering *see beta-ray effects; collision processes; energy loss of particles; particle backscattering; potential scattering; transport processes*
beta-ray spectra
see also beta-decay theory
dose distributions from β-radiation in heterogeneous media, calc. using two-group method 3−9749
^{18}F, beta spectra and heavy neutrinos 3−54985
^{19}Ne, beta spectra and heavy neutrinos 3−54985
^{35}S, beta spectra and heavy neutrinos 3−54985
beta-ray spectrometers
see also beta-ray spectra; electron spectrometers
No entries
beta-rays
see also electrons
dose distributions in water, air and other media, tables and graphs 3−54592
radiotherapy, beta point source dose function 3−15237
beta spectrometers *see beta-ray spectrometers*
betatrons
free electron laser drivers, use of high current high voltage accelerators 3−22103
high current betatron 3−17139

betatrons continued
- high-current betatron with stellarator fields 3−46797
- intense electron ring dynamics in modified betatron field 3−17140
- ion resonance instability of electron beam in modified betatron accelerator 3−37641
- magnetic system with auxiliary magnetisation 3−11563
- relativistic non-neutral electron ring in modified betatron accelerator, stability props. 3−17113
- ribbon beam accumulation using spiral-sector magnets in betatrons 3−45727

Bethe-Salpeter equation
- Bethe-Salpeter kernels and particle structure in the Yukawa$_2$ quantum field theory 3−16522
- bound states, relativistic quark in vector potential 3−36161
- dynamical symmetry breaking without fundamental scalars, dynamics and stability 3−49592
- EM wave propag. and radiative transfer in heterogeneous random media 3−50588
- fermions-antifermions relativistic bound states 3−16494
- Feynman rules for Bethe-Salpeter model of interacting mesons and baryons 3−49548
- hadronisation model with on-shell unitarity in hard scatt., QCD results 3−36198
- non-relativistic, quasi-potential equations 3−45302
- non-relativistic QED in the Lorentz gauge, potential calculations 3−579
- nucleon-nucleon scatt., one-loop diagrams 3−698
- proton decay, two-quark annihilation vs. three-quark fusion 3−49674
- quarkonium effective Hamiltonian, spin-independ., scalar confining pot. 3−31177
- reduced relativistic NN-scattering equations, suppression of virtual negative energy states by one-pion exchange 3−21147
- relativistic, unequal quark masses in excited Λ and Σ states, F(M) representation 3−26095
- relativistic harmonic oscillator kernel, nonexistence of discrete bound states 3−5972
- S-matrix structure in $m \rightarrow m$ interaction, irreducible kernels and nonperturbative expansions 3−49572
- scalar and tensor meson decay to two photons, relativistic calcs. 3−31215
- scattering function structure at m-particle threshold, S-matrix and Green's function nonholonomic character 3−45311
- three-body Bethe-Salpeter wavefunct., normalisation for protons 3−45273
- three-body calcs., reduction of separable Bethe-Salpeter equation kernels to quasipotential equations 3−31366
- two flavour preon model, spin 1/2 states, quark and lepton generation stability 3−618
- two-body relativistic eqn. 3−21221
- wave function norms calc. 3−497
- NN-NΔ coupled scatt., relativistic one-boson-exchange calcs. 3−31301
- $q\bar{q}$ dynamics under harmonic confinement, BS wave function for P, V, A_1 mesons 3−26094
- He-like ions, Bethe-Salpeter eqn. ladder approx. 3−31915

Bethe-Uhlenbeck equations *see quantum statistical mechanics*

bevatrons *see synchrotrons*

BGO detector *see scintillation counters*

Bi-FET integrated circuits *see monolithic integrated circuits*

Bi-MOS integrated circuits *see monolithic integrated circuits*

bicrystals
- bicrystallography, framework and methodology 3−47228
- creep, cavity growth mechanisms 3−47038
- grain boundaries, high angle, programming method for TEM 3−56785
- grain boundaries, struct. and mech. props., expt. studies *(French)* 3−46962
- phonon frequencies of finite bicrystal with line interface 3−13374
- refractory metals, bicryst. growth, match-up seed method 3−3947
- superconductor, anisotropic bicrystal, vortex interaction with boundary *(Russian)* 3−57500
- Al bicrystals, formed using ⟨100⟩, ⟨111⟩ and single glide crystals, plastic deform. 3−57016
- Cd, slip deform., grain boundary sliding 3−13233
- Cu bicrystals, galvanomagnetic phenomena near internal grain boundary, expt. study 3−23363
- Cu, local plastic heterogeneities, anal. using Kossel technique 3−46947
- Cu-Al thin film couple, phase form., X-ray anal. 3−18589
- Cu-Sb (0.5 at.%), segregation, obs. of fracture surface chem. 3−34332
- GaAs bicrystal, grain boundaries, elec. characterisation 3−52061
- Ge, grain boundary struct., intergranular dislocations, TEM study *(French)* 3−46937
- p-Ge inversion layers, elec. subbands, Shubnikov-de Haas study 3−47403
- MgO, twist boundaries, coincident site lattice type, stability, impurity effects 3−46932
- Mo, $\Sigma=41$ grain boundry, high resolution study 3−27953
- Nb, bicrystals, electron beam floating zone growth and struct. 3−8968
- Sn-Ge bicrystal, In diffusion along single twist phase boundaries 3−18515

biexcitons *see excitonic molecules*

big-bang theory *see cosmology*

bilinear systems *see linear systems; nonlinear systems*

bimetallic strips *see bimetals*

bimetallic wire *see bimetals*

bimetals
- components electrodynamic inspection using proximity effect 3−58369
- energy emission during electron irradiation *(Russian)* 3−3879
- explosively clad, ultrasonic inspection 3−9272
- strip, stability of plastic elongation 3−56453
- structural, methods for fracture toughness characts. determ., review 3−9274
- surface crack detection, US techniques, reliability eval. 3−44031
- thermobimetallic disc with recoil effect *(Bulgarian)* 3−18482

binaries (stellar) *see binary stars*

binary sequences
- *see also switching theory*
- seismic data deconvolution, recursive decision directed estimation of reflection coeffs. 3−35073

binary stars
- *see also cataclysmic binary stars; eclipsing binary stars; X-ray binary stars*
- Σ2367 AB, evolved binary system, orbital elements from visual and spectroscopic obs. 3−20435
- accretion discs in close binary stars, numerical calcs. 3−40119

binary stars continued
- accretion discs in close binary systems, hydrodynamics calcs. method 3−15905
- accretion discs in close binary systems, models from hydrodynamical calcs. 3−15906
- ADS 11060, G1 V triple star, visual-spectroscopic binary orbit 3−10401
- ADS 1360 and 3082, visual binaries, ephemerides (1980 to 2000), orbits and masses *(French)* 3−59389
- ADS 3230, visual binary star, two possible solns. for orbital elements *(French)* 3−5343
- ADS 4236, ADS 5515, visual binary stars, astrometric obs. and orbits *(French)* 3−5344
- ADS 7780 (β Leonis Minoris), visual-spectroscopic binary orbit 3−10401
- Am stars, RS Canum Venaticorum effect in close binary stars rel. to X-ray emission obs. 3−35612
- o Andromedae, Be star, long term radial vel. var. 3−5306
- λ Andromedae, long-period RS Canum Venaticorum star, obs. of flare in UV emission lines 3−44797
- λ Andromedae, RS Canum Venaticorum star, discovery of new periodicity from obs. of V-band polarisation vars. 3−48957
- Ap and Bp stars, energy distrib. and visible spectra of seven stars 3−48923
- 94 Aquarii A, spectroscopic binary, visual orbit determ. from speckle interferometry 3−20434
- LY Aurigae, double line O-type binary, mass-luminosity anomaly 3−20418
- 209 BAC, runaway WN8 star, low mass companion as neutron star 3−10345
- binary and multiple stars as tracers of stellar evolution, conference, Bamberg, Germany (1981 August 31 to September 3) 3−35775
- 53 Camelopardalis, Sr Cr Eu Ap star spectroscopic binary, visible spectrophotometry obs. 3−59348
- 81 Cancri, double lined spectroscopic visual binary, radial vel. and orbit 3−25525
- XZ Canis Majoris, Cepheid variable, discovery of unresolved blue companion from photometric obs. 3−59413
- α Canis Majoris (Sirius), props. of binary system in context of stellar evolution 3−15904
- RS Canum Venaticorum stars, short period subgroup, activity meas., UV obs. 3−40172
- RS Canum Venaticorum starspot model and sunspot longitudinal distrib. 3−25395
- CD−45°4482, new Wolf-Rayet binary star, spectroscopic obs. and orbital elements 3−25484
- V810 Centauri (HR 4511), Cepheid-like variable in Stock 14, UBV photometry and absolute magnitude 3−10410
- circular binary system evolving through gravit-radiation and degenerate component Roche lobe overflow, mass loss rate 3−25527
- close binaries, accretion disc form. 3−10403
- close binary, early type star heated by companion, photospheric circulation 3−5331
- close binary stars, accretion and inner excretion discs formation and rot. 3−10395
- close binary stars, eqns. of motion for spin and orbital ang. momenta with conservative mass transfer 3−54429
- close binary stars, statistical models 3−40195
- close binary stars, theory of relativistic tidal forces 3−35417
- close binary stars formation, effect on initial mass function 3−20426
- close binary systems, Roche dimensions of rotating gaseous discs 3−15959
- close low mass binary, red dwarf and condensed star, orbit evolution and mass loss 3−5335
- composite spectrum stars, anal. using scanner studies of giants and dwarfs 3−5348
- 59 Cygni, early-type Be star binary, obs. of transient emission events 3−48916
- V1016 Cygni, nature, cool component dust shell nature and system luminosity 3−44770
- V1329 Cygni, possible proto-planetary nebulae, model and spectral var. anal. 3−15932
- double star catalogues, progress 3−5154
- double stars, separation obs. (1980.0 to 1982.4) 3−59392
- DK Draconis, RS CVn star, BV obs. anal. 3−25518
- equations of motion, Einstein's field eqns. 3−45033
- δ Eridani, very bright new RS CVn variable star, V-band obs. and photometry period 3−35622
- evolution of close binary stars, observational aspects 3−40194
- evolutionary trends in wide binaries, review 3−40118
- Feige 24, binary white dwarf star, discovery of highly ionised species in UV spectrum 3−35597
- G61-29, white dwarf system, nearby nebulosity nature 3−54446
- gamma-ray burst, 1978 November 19, obs. of optical candidates rel. to low mass binary model 3−10484
- giants rot. acquisition from companion ang. momentum transfer, horizontal branch implications 3−48900
- HD 104451, HD 141458, double-line spectroscopic binaries, orbital elements 3−59399
- HD 105341, spectroscopic binary, orbit from radial vel. obs. 3−5349
- HD 108102, RS Canum Venaticorum star, light curve from UBVR photometry (1982) 3−35663
- HD 152270, Wolf-Rayet binary system, polarimetric determ. of orbital inclination 3−10368
- HD 162679, spectroscopic binary star in NGC 6475, variable linear polarisation obs. 3−10330
- HD 174429, identification as RS Canum Venaticorum system from BV photometry 3−30425
- HD 1833, new RS CVn-type variable star, photometric obs. 3−15945
- HD 185510, possible new RS CVn variable star photometric obs. 3−15947
- HD 187282, WN4 star with low-mass companion, BV photometry and spectroscopy *(Russian)* 3−48938
- HD 190540, new RS CVn variable star, photometric obs. 3−15948
- HD 205249, new RS CVn variable star, photometric obs. 3−15949
- HD 206631, A0-type binary star, discovery of short-period light variability 3−30383
- HD 207739, interacting binary, F8 IIe+B star, nature, UV obs. 3−30421
- HD 320102, new Wolf-Rayet binary star, spectroscopic obs. and orbital elements 3−25484
- HD 37847, new RS CVn-type variable star, photometric obs. 3−15946
- HD 5980 in SMC, line of sight vel. struct. and absorpt., UV obs. 3−59417
- HD 62910, new Wolf-Rayet binary star, spectroscopic obs. 3−25484

binary stars continued
HD 90524, spectroscopic binary orbit anal. 3—20433
8 Herculis, Be star, reduction and basic evaluation of photometric and spectroscopic data 3—35617
105 Herculis, binary, primary giant orbital anal. 3—59401
AC Herculis, RV Tauri star, kinematic and shock phenomena in stellar atmosphere 3—20397
112 Herculis, single-line spectroscopic binary, X-ray obs. 3—5339
homogeneous star radial pulsations freq., effect of rot. and companion star 3—44731
hot subdwarf binary mass loss as origin for bipolar nebula (NGC 2346) 3—30457
HR 2786, HR 2859, G-type supergiants, UV spectroscopy of hot companions with IUE 3—10327
HR 3084, early type close binary, radial vel. and photometric meas. 3—30422
HR 3119, spectroscopic binary star, photometric variability obs. 3—15950
HR 454 (K0 III), possible RS CVn star, discovery of strong Ca II emission 3—35600
HR 4896, spectroscopic binary, orbit characts. 3—48959
HR 7578, possible late-type eclipsing binary and/or BY Draconis variable, ephemeris for eclipses 3—30423
HR 8580, spectroscopic binary orbit and radial vel. 3—25526
HW 5553 and 6524, spectroscopic binaries, orbital elements determ. 3—54448
Hyades main sequence dwarfs, duplicity effects, JHK obs. 3—30438
HZ-22, hot halo subdwarf binary system, photometric and spectroscopic obs. 3—20367
investigating the Universe, book 3—10524
K-type giants, random sample duplicity and radical vel., globular cluster implications 3—48951
L726-8 A, M-type dwarf star, obs. of unusual microwave flare with 56-second oscills. 3—35598
17 Leporis, shell star, evidence for outburst from UV spectra 3—54376
in Local Group galaxies, review of double stars 3—40193
low mass semidetached binary, mass transfer, nonequilibrium effects 3—20424
low mass stars evolution, mass-radius relation for several mass loss rates 3—10311
low-mass binaries as γ-ray burst sources 3—40190
lunar occultation obs. 3—30353
M-type supergiant+B-type star binaries, colour synthesis, appl. of principal components anal. 3—59227
massive close binaries evolution, effect of overshooting 3—54434
massive close binaries evolution, overshooting effects 3—30355
massive close binaries in large groups, struct. and evolution and mass loss 3—25532
nearby binary and multiple stars, review 3—40193
NGC 1851-UV5, possible binary star in globular cluster, radial vel. meas. 3—20364
NGC 752, disc cluster, main sequence bimodality, rot. and binaries anal. 3—59406
O-type binary, double line, mass-luminosity anomaly 3—20418
occultation of binary stars and candidates, Cloudcroft occultation summary (April 1980-December 1981) 3—35657
orbital motion periodic perturbation in close binaries due to non-lagging tides 3—40169
orbital motion periodic perturbation in close binaries due to lagging tides 3—40170
orbital motion periodic perturbations in close binaries due to rot. distortion 3—40168
orbits and radial velocities from astrometric anal. 3—20206
δ Orionis, Hα profile phase depend. var., orbit, radius, shell anal. 3—25423
57 Orionis, occultation by Moon, computer controlled high speed photometry *(German)* 3—35411
57 Orionis, occultation by Moon, computer-controlled high speed photometry *(German)* 3—35410
θ^2 Orionis, single-line spectroscopic binary, X-ray obs. 3—5339
parallaxes and proper motions of wide visual binary stars, determs. from asterometric obs. 3—48887
IM Pegasi=Hr 8703, RS CVn star, orbit and photometric period 3—59385
56 Pegasi system, cool wind accretion onto WD, UV and X-ray obs. 3—20375
period changes in close binaries, stellar structure fluctuations model 3—40174
periods determination, statistical aspects of spectral anal. of unevenly spaced data in astronomical time series anal. 3—30218
KS Persei (HD 30353), spectroscopic binary star, hot component detect. from IUE obs. 3—10389
physical laws rel. to binary stars, review of three and a half centuries of research 3—48956
SZ Pictoris, RS Canum Venaticorum star, photometric period and light curve 3—44796
Pleiades low mass stars, 15.0-17.5 magnitude star sequence as binaries, premain sequence implications 3—30437
polytropic primary, shape calc. program 3—10396
PSR 1913+16, binary pulsar, orbit var. and gravit. radiation, UHF obs. 3—10379
PSR 1913+16, binary pulsar, two-body problem, radiation damping in general relativity *(French)* 3—5096
PSR 1913+16, binary pulsar gravit. radiation 3—44777
pulsar binary with high freq. due to spin-up 3—30409
c Puppis (HD 63032), B-type companion for cluster K-type giant 3—59328
radial velocities *(German)* 3—35589
radiation damping force due to gravitation wave emission 3—15961
radiative envelope of non-magnetic star in binary system, circulatory motions 3—5266
resolution with speckle camera on BTA 6 m telescope 3—30206
Ross 640, white dwarf, evidence for orbital motion from astrometric study 3—48946
runaway O-type stars, search for spectroscopic binaries from vel. obs. 3—5283
MV Sagittarii, hot R CrB star, model involving shell ejection to secondary star 3—5312
ν^1 Sagittarii, IUE obs. of early-type component 3—10399
BB Sagittarii+HD 174403, possible visual binary, ephemeris for eclipsing binary component (HD 174403) 3—35664
speckle interferometric measurements of binary stars, results 3—5347

binary stars continued
spectroscopic binaries, physical props. 3—35658
spectroscopic binaries with enhanced Ca II H/K emission, reson. polarisation search 3—54443
spectroscopic binary stars, observational selection in orbital eccentricities 3—40192
spectroscopic binary stars, search for secondary lines in visual spectra 3—10400
spectroscopic binary stars in Clube Selected Areas, orbits from photoelectric radial vels. 3—15953
spectroscopic close binary stars before and after mass transfer, absolute dimensions determ. method 3—25342
spectrum binaries, orbit anal. *(French)* 3—20425
supernovae in binary systems, prod. of run-away stars and pulsars 3—40156
V711 Tauri, RS Canum Venaticorum star, photometric obs. in October 1981 and January 1982 3—54436
V711 Tauri, RS CVn star, light changes and spot model 3—40173
41 Tauri, spectroscopic binary Ap star, visible spectrophotometry obs. 3—59349
V711 Tauri (HR 1099), RS CVn star, multi-colour photometry rel. to light curves and ephemeris 3—5353
thick accretion discs, instability 3—10308
Trumpler 16, young open cluster, spectroscopic binaries and composite spectrum star discovery 3—20442
Type I supernovae binary model and explosion rates rel. to observed rates 3—48940
visual binary star, suspected, in Cygnus, precise positions, position angle and separation 3—35665
visual binary stars, astrometric obs., and orbits of three binary stars *(French)* 3—5344
visual binary stars, orbital elements and ephemerides (1980 to 2000) of 11 stars *(French)* 3—59391
visual binary stars observations, method of apodisation of telescope 3—44668
visual close double stars, one-dimens. intensity profiles, use of computer controlled area scanner 3—40188
visual close double stars, separation and differential magnitudes 3—40189
visual double stars, photographic measures, (January to December 1981) 3—40179
visual double stars in southern hemisphere, measures in 1981 3—5345
visual double stars with early type primaries, photometric results 3—40184
visual double stars with early type primaries, spectroscopic results 3—40183
19W32, bipolar planetary nebula and binary central star 3—20462
white dwarfs, mass distrib. of single objects and white dwarfs in binary stars 3—40133
white dwarfs with solid cores in close binaries, evolution 3—40125
Wolf-Rayet+OB binary stars, theoretical expected galactic distrib. 3—10340
Wolf-Rayet binary stars origin, evolution of massive close binary stars 3—35594
Wolf-Rayet stars, mass transfer in binary systms rel. to C and N abundances in WN and WC stars 3—15930
Wolf-Rayet stars conference at Cozumel, Mexico (September 1981) 3—20584
Wolf-Rayet stars with compact companions, review 3—25483
Wolf-Rayet stars with massive companions, masses and evolution 3—25482
Wor 19, visual binary star, astrometric obs. and orbit *(French)* 3—5344
extreme C star and late-type visual companion near open cluster NGC 1960, photometric, spectroscopic and polarimetric obs. 3—59359

binding energy
see also lattice energy; nuclear binding energy; nuclear forces
actihnide metals, cohesion and electronic struct. 3—23255
alkali chalcogenides, cohesive props., interionic pots. anal. 3—22820
alkali earth atoms, atomic and ionic core binding energies from XPS and DF calcs. 3—1214
alkali halides, potential energy function calcs. 3—46047
alkali metal clusters, struct., binding energy, diatomics in molecules approx. 3—17398
alkali metal trimers, force consts., semi-empirical valence bond pot. energy surface 3—21645
alkali metals, heavy, pseudopot. calc., nonlocality and d-level effects on struct. stability 3—38332
alkaline earth metals, struct. phase transitions, cryst. struct. sequences 3—28094
alkaline earth oxides, cryst. binding and Gruneisen parameter 3—13157
amorphous alloys, struct. changes during crystallisation, interatomic binding *(Russian)* 3—51493
anisotropic cpds., two-electron impurity complexes in strong mag. field 3—13769
atom-positron scatt. amplitude, dispersion relations, perturbation theory 3—32209
atoms, electron binding energy, relativistic corrections 3—11715
atoms, neutral, ground state energy, Thomas-Fermi-Scott-Schwinger expansion 3—31891
β-brass, quenched, defect characts., TEM study 3—56901
catabolite activator protein binding to supercoiled DNA, model 3—9549
chemisorbed atoms, inner electron binding energies 3—2961
chemisorbed atoms, photoemission spectrosc. appls. and theory 3—55906
chemisorption binding energy nonperturbative calcs. 3—33572
condensed bodies, surface and cohesive energy 3—38186
core electron binding energies, transition operator calcs. using transition atomic basis 3—36658
crystal structures, pseudopots. and total energy calcs., development and appls. 3—23234
excited electron orbit collapse in an isoelectronic series 3—31997
FCC dilute alloys, free enthalpy of binding of impurity-vacancy pairs 3—42562
f.c.c. metals, divacancy binding energy 3—51592
formaldehyde, core electron binding energies, transition operator calcs. 3—36658
graphite, adsorption of CO_2, N_2O, and C_2N_2, phase diagrams 3—57219
graphite, structural and elastic props., density-functional approach 3—51537
graphite intercalation compound with Li, structural and elastic props., in-plane density 3—33213
graphite monolayer, total energy calc. method 3—13756

binding energy continued
group 1B metal clusters, binding energies, configs., diatomics in mols. approx. 3—17397
heavy atoms in superstrong magnetic fields 3—55786
hydrated positron+pseudo-halide ions reaction, solvated positron chemistry 3—24490
ionic crystals, diatomic, lattice props. calc. using short-range Rydberg pot. function 3—22819
ionisation cross sections K- and L-shell, in plane-wave Born approx., computer codes 3—21866
Langmuir-Blodgett multilayer deposition, transfer process energy meas., meaning 3—38264
liquid-vapour interfacial thickness, estimation from surface energies 3—38167
metal surface, binding energy for positrons, adiabatic approx. 3—3284
metallic bonds, cohesion and decohesion 3—23304
metallic glasses, binding energy of metalloid atoms 3—42534
metals, grain boundary vacancies and interstitials, self-diffusion, mol. dynamics study 3—46923
metals, H-defect interactions, binding energies and enthalpies 3—13260
metals, interatomic forces, rigid muffin-tin model 3—52051
metals, pair potentials, vacancy formation energies 3—52073
monolayers, total energy calc. method 3—13756
negative ions, multi-quantum processes 3—32025
nonbonding valence orbital ionis. pot., shifts, rel. to core binding energy shifts 3—50300
nucleosome core complex, HMG 14, neutron scatt. obs. and modelling 3—9548
oxides, acceptor doped, point defect complexes, association energies 3—18300
point defect-dislocation nonlinear elastic interactions 3—51653
polar mol. crystals, vacancy form., electrostatic energy 3—46921
polar semiconductor, D^--centre binding energy, effect of free carrier screening 3—43103
polyacetylene, doping study, levels and polarons 3—23290
polymer solutions, dilute, props., real gas model *(Russian)* 3—47670
polyparaphenylene, doping study, levels and polarons 3—23290
positive isoelectronic ions, Darboux approx. calcs. 3—21630
positron annihilation as a probe for impurities trapped by vacancy clusters 3—14382
2-quinolones tautomerism, semiempirical MND and UV absorpt. studies 3—21643
rare-gas solids, electronic relaxation, atoms ejection by fast ions 3—47744
semiconductor, core excitons, dynamical shift and broadening 3—13736
soft tissue US attenuation, role of cellular cohesion and organisation 3—4481
star-tetrahedron transformation, crystal-mother phase boundary, bond energies calc. 3—42561
supported small metal clusters, electronic struct., XPS, AES studies 3—43251
surface atom binding energy, elec. field depend. 3—8318
transition metal alloys, $L1_2$ and $D0_{22}$ ordered structures, electronic struct. and relative stabilities 3—43007
transition metal bonding to nontransition metals 3—52052
transition metal monoxides, cohesive props., heat of form., ab initio calc. 3—7958
transition metals, BCC, cryst. stability and phonon dispersion 3—47064
transition metals, binding energies, of He and H heats of soln., effective medium theory, covalent effects 3—3112
transition metals, heat of soln. and binding energy of H impurity 3—2806
transition metals, surface charge transfer and effective Coulomb interaction 3—33772
uranium oxides and halides, photoelectron spectra, electronic levels binding energy *(French)* 3—43704
V-VI layered compounds, binding energies, valence bond density of states, photoemission 3—8930
ylide-TCNQ, charge transfer complexes, binding energy, XPES 3—17333
zincblende-type semiconductors, lattice statics, interionic pot. model 3—22818
Ag (111), adsorption of I, adatom-adatom interactions, XPS and LEED study 3—14439
Ag dilute alloys, impurity interaction and elec. field gradients, PAC study 3—38731
Ag halides, cryst. binding and Gruneisen parameter 3—13157
AgBr, resonant Raman scatt. at indirect triplet exciton 3—47637
AgCl:Pd, EPR study of photocarrier trapping 3—52622
Al, positron surface states on clean and oxidized surfaces and in surface vacancies 3—38353
Al-H, dil., impurity electronic struct., energy and metal-impurity interaction 3—43070
Al_2O_3 with adsorbed Ar, cluster model 3—13633
BaO, struct. stability rel. to interionic pots. 3—2466
Be_2, electronic struct., $X\alpha$ method 3—1240
CO, chemisorbed on Ni (111), electronic props., surface Penning ionisation electron spectra 3—43249
CO_2 clusters, mol. beam-surface scatt. study 3—43698
Ca^{2+}-formate ion, chelation complex binding, ab initio STO-3G calcs. 3—17195
$Ca+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3—32179
Ca_2, electronic struct., $X\alpha$ method 3—1240
CaO, struct. stability rel. to interionic pots. 3—2466
Ce, γ- and α-phases, band struct., cohesive props. and Compton profile 3—57268
Ce, X-ray absorpt. and XPS peak energies, selection rules and multiplet effects 3—57999
Cl ions, highly stripped, moving in solids, K-shell binding energies, radiative electron capture 3—56070
ClF_3, binding energy calc. using multi-reference CI expansions 3—55862
CoGa, interaction energies, defect struct., thermodynamic props. 3—23058
Cr (100) surface, angle-resolved photoemission study 3—58031
$Cr+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3—32179
$Cr_{30}Zr_{70}$, amorphous, electronic struct., band struct. calcs., UPS and XPS studies 3—28255
Cs, binding energy, Dirac-Fock calcs., XPS study 3—32017
Cs halides, cryst. binding and Gruneisen parameter 3—13157
Cs monolayer, total energy calc. method 3—13756
CsCl, binding energy, Dirac-Fock calcs., XPS study 3—32017
Cu (111), adsorption of I, adatom-adatom interactions, XPS and LEED study 3—14439
Cu small particles, electronic struct. and binding energy 3—52023
Cu-Zn system, electron phase stability, pseudopot. calc. 3—43056

binding energy continued
CuO, low energy electronic states, MC SCF and valence CI calcs. 3—21653
$Cu_{95}Sn_5$, core level binding energy shifts, XPS study 3—14441
Fe, cluster complexes, core binding energies, gas-phase XPS study 3—41622
Fe II complexes, mixed, with phenanthroline, XPS, spin states effects 3—11881
Fe-Ni-H, bonding energy changes and heats of reaction, DSC study 3—42563
Fe-Ti, liq., enthalpies of form. 3—9349
GaAs, epitaxial, photoluminescence study of exciton-ionised donor complexes 3—3806
GaAs thin film Wannier exciton energy levels structure and effective radius *(Chinese)* 3—8422
GaAs-$Ga_{1-x}Al_xAs$ quantum well structs., Wannier exciton binding energies 3—47273
GaAs-$Ga_{1-x}Al_xAs$ quantum well structs., hydrogenic impurity state energy levels 3—47308
GaP, ground state struct. props., local density functional formalism 3—57300
GaP:N^-, binding to pair of marginal pots., N^- stability 3—28297
H, recombination and binding on liq. He, mag. reson. study 3—1290
H, sticking probability on liq. He surfaces, mag. reson. lineshape study 3—1291
HCN, core electron binding energies, transition operator calcs. 3—36658
H_2NO free radical π-complex with benzene, struct., quantum-chem. study 3—45852
^3He-^4He few-atom mols., binding energy calcs. 3—50299
$(^3He)_4$ fermionic tetramer, binding energy, var. calc. 3—21944
HfC_xN_{1-x}, heat of mixing, XPS core level binding energy shifts 3—24095
HgI_2-red, excitonic molecule state, two-photon absorpt. obs. 3—3077
InP, near gap energy levels, photolum. and photocond. study 3—3240
InSb, ion implantation, enthalpy of formation and stability 3—42637
$In_{95}Sn_5$, core level binding energy shifts, XPS study 3—14441
$KMgF_3$, electronic struct., photoemission expts. 3—57277
La, X-ray absorpt. and XPS peak energies, selection rules and multiplet effects 3—57999
Li, metallic, total energy calcs. 3—43057
Li_3 cluster, binding energies, ionisation pot., ab initio SCF and MRD CI calcs. 3—26890
$LiTmF_4$, lattice dynamics and electron-phonon interactions 3—42722
Mg, 1s cone region, XPS, binding energy 3—6586
Mg_2, electronic struct., $X\alpha$ method 3—1240
MgO, struct. stability rel. to interionic pots. 3—2466
MgO:$Fe^{2+}(Ca^{2+})$, twist boundaries, binding energy calcs. 3—46932
Mg_2SiO_4, forsterite, at. charges fitted to thermoelastic and struct. props. 3—33178
Mn oxides, natural, ESCA, Mn^{n+} inner electron line struct. 3—24544
$Mn(CO)_5X$, (X=halide), core binding energies use in UV photoelectron spectra assignment 3—50460
$Mn_{30}Zr_{70}$, amorphous, electronic struct., band struct. calcs., UPS and XPS studies 3—28255
NH_3 adsorbed on Fe and Ni, binding and valence photoemission *(German)* 3—38231
$(NH_3)_n$ clusters, (n=1 to 10), electron impact ionisation, appearance pot. of ions, mass spectra 3—17395
NO, chemisorbed on Ni (111), electronic props., surface Penning ionisation electron spectra 3—43249
$NO_2^-.(SO_2)_n$ complexes, gas-phase, thermodynamic props. 3—56639
$NO_3.^-(SO_2)_n$ complexes, gas-phase, thermodynamic props. 3—56639
Na stable modification, total energy, pseudopotential calc. 3—47281
Na_2O-SiO_2:Ar glass, ion implanted, XPS, charge correction method 3—43707
NbH, electronic struct., photoemission study 3—43014
Ni (100), dissociative chemisorption of O_2, LEPS calc. 3—48084
Ni-H, bonding energy changes and heats of reaction, DSC study 3—42563
Ni_xPd_{1-x}, core hole satellites 3—8935
Ni(100), chemisorbed $CO(N_2)(NO)$, absorption edge reson., core-hole screening and orientation 3—13631
Pb cpds., chemical-state shifts, Auger line XPS study 3—28965
Pd-H, bonding energy changes and heats of reaction, DSC study 3—42563
α-Pd-H, elastic binding energy 3—37842
PdH_x foil, electronic struct. and surface kinetics 3—28402
Pt single cyst. surface, surface core level shifts, photoemission study 3—14434
Sb_4, 3d levels, binding energies, XPES 3—17334
$Sc+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3—32179
Si, average stress tensor, ab initio pseudopot. calc. 3—47020
Si, deep defects, photolum. characterization 3—43609
Si, ground state struct. props., local density functional formalism 3—57300
Si, internal strain parameter, self-consistent calc. 3—22822
Si, surface (111), reconstruction mechanism and surface state dispersion 3—13877
Si:Ar, ion implanted, XPS, charge correction method 3—43707
Si-Ge, amorphous, sputtered, XPS study 3—3913
SiO_2:Ar, ion implanted, XPS, charge correction method 3—43707
Si(100) with adsorbed Ni, diffusion layer microstructure 3—13634
Sn complexes, chelates with substituted 8-quinolinols, ESCA study 3—43708
α-Sn, electronic struct. and ground state props., self-consistent nonlocal pseudopot. calc. 3—57266
SrO, struct. stability rel. to interionic pots. 3—2466
TaH, electronic struct., photoemission study 3—43014
$Ti+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3—32179
$V+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3—32179
VH, electronic struct., photoemission study 3—43014
$V_{36}Zr_{64}$, amorphous, electronic struct., band struct. calcs., UPS and XPS studies 3—28255
Xe-N_2-$H_2O(N_2)(CO)$-Ni(110) multilayers, physisorbed species electronic levels, dipoles influence, UPS study 3—8550
ZnSe:N, binding energy of shallow acceptor 3—52076
ZnTe:Cl(Br)(Cu)(Ag), ion implanted, donor related edge luminescence 3—52856

Bingham plastics and solids *see rheology*
bioacoustics
see also biological effects of acoustic radiation; biomedical ultrasonics; hearing; sonar
absorption coefficient meas., thermal pulse decay method 3—46418
asthma diagnosis, breath sounds digital processing techniques 3—15171
backscattering from ultrasonically tissuelike media 3—29622
bat's sonar signals and acceleration tolerance 3—19733
bats, echo waveform synthesis in rapidly varying geometry 3—7272
biological liquid samples, interferometric meas. method of ultrasonic attenuation 3—58876
blood, US scattering as function of haematocrit 3—29620
blood flow in veins, ultrasound echogenicity 3—39688
bone, US measurements of deer antler, bovine tibia and tympanic bulla, mech. props. 3—24789
coronary artery disease, correlates between diastolic auditory characts. and stenoses 3—48343
dipalmitoyl phosphatidylcholine lipid bilayer, US vel. meas., differential US resonator 3—4472
echolocation, use by harbour seals 3—29579
echolocation by bats, resolution enhancement due to tragus 3—19728
echolocation system of the European wide eared bat, bioacoustic characts. 3—29577
EM wave induced vibrs. in the eye, acoustic wave generation 3—19758
enhanced coronary phonocardiography, non-invasive diagnosis of coronary artery disease 3—4608
erythrocyte compressibility, US vel. meas. 3—19674
erythrocyte deformability, US determ. 3—4690
heart valve modelling, digital processing of heart sounds 3—34925
honey bees and social wasps, uniform freq. of sounds 3—9629
killer whales, captive, classification and comparison of vocalizations 3—9628
Korotkoff sound generation at distole 3—53711
liver tissue, contrib. of intercellular links to US absorption 3—29624
lung parenchyma, crackle generation, stress-relaxation quadrupole model 3—58699
lung simulation as acoustic model, reson. freqs. calc. *(Japanese)* 3—19747
muscle, human, in vivo US attenuation meas. 3—4542
muscle contraction, generation of discrete sound bursts 3—35052
personal noise exposure patterns in daily life *(Japanese)* 3—4540
phonocardiogram, automatic classification by distance measure 3—58755
phonocardiograms, pole-zero modelling and classification 3—48342
pulmonary parenchyma, sound vel. in excised horse lobes 3—58718
rat tail tendon fibres, axial phase velocity at 100 MHz by ultasonic microscopy 3—58877
respiratory sounds, detect. and discrimination of adventitious frames *(Japanese)* 3—58758
respiratory system props., acoustic determinants 3—9791
soft tissue US attenuation, role of cellular cohesion and organisation 3—4481
spectral shifts of US propag. through media with nonlinear dispersive attenuation, tissue appl. 3—4541
tendon fibers, rat tail, axial US phase vel., 100 MHz, US microscopy 3—48317
tissue properties, in vivo US meas., technique and obs. 3—48318
transducer, focused, dynamic scanning, temp. distribs. 3—46430
vesicular lung sound amplitude mapping by automated flow-gated phonopneumography 3—24816
zooplankton, acoustical and physical props. 3—29621
biocommunications
see also biocybernetics; hearing; learning systems; speech
dolphin, captive Eastern Pacific bottle-nosed dolphin, auditory thresholds meas. 3—29554
killer whales, captive, classification and comparison of vocalizations 3—9628
living systems communication processes 3—19654
macaque monkeys, enhanced speech discriminability at phonetic boundaries 3—58686
primates, vertical and horizontal sound localisation meas. 3—29556
Weddel seal, underwater vocalisations, quantitative analysis 3—29572
biocontrol
see also biocommunications; biocybernetics
adaptive control system for the artificial heart 3—15287
blowfly, optomotor system, motion sensitive interneurons, horizontal cells 3—44242
body fluids transport and distribution model using systems dynamics approach 3—19749
brain movement control mechanisms *(Japanese)* 3—44237
breathing pattern regulation in humans, mech. factors 3—9636
carotid baroreceptor control of blood press. in man, math. model and some meas. characts. 3—34872
Cuniculina impigra, neural basis of catalepsy, characteristic of femur-tibia control system 3—29526
eye, biomechanics, muscular stress calc., in humans 3—9580
heart blood vessel system, simulation of blood pressure control operations *(Japanese)* 3—9660
intra aortic balloon pumping control strategy, design model 3—4685
lung, ventilation control, positive feedback role 3—34868
motor control anal. from engineering point of view *(Japanese)* 3—44236
moving image perception, from multi-CRT display, eye movement role 3—15099
myoelectrically controlled hand, man-prostheses interactive system 3—9787
myopia avoidance in Naval Academy midshipmen, rel. to ocular servo control 3—15079
oculomotor control, visual-vestibular interaction, mathematical modelling and computer simulation 3—48286
oculomotor system, nonlinear behaviour 3—24720
regenerative growth and elec. control systems, review 3—29529
sinus artificial heart control system 3—4679
stick insect, catalepsy, neural basis 3—44231
tracking and chasing, houseflies, 3-D flight trajectory anal. 3—29586
vestibulo-ocular reflex, three-dimens. behaviour, matrix anal. method 3—44241
biocybernetics
see also artificial intelligence; brain models; learning systems; man-machine systems; neural nets
blowfly, optomotor system, motion sensitive interneurons, horizontal cells 3—44242
breathing, airways compressibility identification methods 3—9656

biocybernetics continued
ECG, model using new basis functions 3—48282
EMG studies using population stochastic model of skeletal muscle 3—15057
Fitzhugh-Nagumo system for nerve impulses along axon, threshold problem 3—53661
heart, left ventricular pumping, compliance descriptor anal. 3—58711
heart blood vessel system, simulation of blood pressure control operations *(Japanese)* 3—9660
horseshoe crab, lateral optic nerve impulses, synchronisation, discrete theory 3—44240
human visual system, spatio-temporal feature discrimination 3—34857
myocardial pacemakers, bidirectional interaction model based on phase response curve 3—48276
nervous system, mechanism energetics, fuel cell mechanism analogy 3—15055
nervous system anal., engineering approach *(Japanese)* 3—44235
oculomotor control, visual-vestibular interaction, mathematical modelling and computer simulation 3—48286
Pacinian corpuscle, mathematical model 3—44258
parameters estimation algorithm for mechanical respiratory systems 3—39683
pupil, model of nonlinear stochastic behaviour 3—15083
stick insect, catalepsy, neural basis 3—44231
vestibulo-ocular reflex, three-dimens. behaviour, matrix anal. method 3—44241
biodiffusion
blood platelet adhesion studies using flow cell 3—44349
brain tissue, isotopic anal. of diffusion and convection 3—29490
cardiac cells of frog, intracellular free Ca$^+$ conc., ionic diffusion theory 3—53651
fibroblasts initial attachment dynamics, diffusion model 3—44211
gramicidin C, lateral diffusion in phospholipid multilayers 3—24688
ligand binding to macromols. and cell-bound receptors, role of diffusion 3—9538
liposome proton-hydroxide permeability 3—48256
lung, small airways, settling and diffusion of aerosol particles during breath holding 3—9643
lung CO diffusing capacity, dynamic meas. using discrete samples of alveolar gas 3—58852
lymphocytes, bulbous, unconstrained lateral diffusion of concanavalin A receptors 3—4487
membrane lateral mobility, detect. by fluoresc. recovery after photobleaching 3—9794
membrane surfaces, diffusion-mediated localisation 3—34785
muscle tissue, red heterogeneous, myoglobin facilitated O transport 3—44219
serum albumin, bovine, effect of titration charge on diffusion 3—53622
water in barnacle muscle, factors contributing to reduced self-diffusion 3—4482
O_2 diffusion in blood plasma, transferrin effect 3—19655
bioelectric phenomena
see also bioelectric potentials; biomagnetism
acetylcholine receptor kinetics, single-channel currents at snake neuromuscular junctions 3—4489
airborne biological particles and elec. fields 3—24785
amphotericin B ionic channels, voltage-current charact. 3—48252
axon, giant, crayfish, slower component of gating current, Na-channel inactivation 3—53654
axon, squid, membrane response to sequential voltage and current clamps 3—34812
bipolar electrodes, small diameter, concentric, method for fashioning for nervous tissues stimulation 3—58885
blink responses to combined trigeminal, acoustic and visual repetitive stimulation, habituation in humans 3—34838
blood, electrical conductivity, practical anal. 3—58635
bone, bioelectric stimulation of form., methods, models and mechanisms 3—4610
bone, dielectric behaviour at microwave freqs., UV irrad. effects 3—58728
bone, fluid flow in vitro, electromech. effect appl. 3—24774
bone, tubular, internal stresses rel. to elec. fields 3—53716
bone elec. cond., 5-point electrode method 3—4491
breast carcinoma, elec. monitoring 3—4663
bronchomotor responses of isolated sheep airways to electrical field stimulation 3—39668
cardiac impedance meter, used for modulus/phase meas. *(Spanish)* 3—39738
cell division state detect., elec. parameters of biologically active points 3—9567
cell electrophoretic mobility determ., laser Doppler velocimetry device 3—9796
central nervous system, Locusta migratoria, multichannel recordings and real time current source density anal. 3—29789
cholinoreceptors, inactivation induced by membrane depolarisation 3—48275
cleaving embryo, struct. changes, effect on elec. characts. of intercellular interaction 3—29509
cochlear outer hair cells, intracellular recordings 3—29560
coherent oscillations in biological systems, interaction with ELF EM fields 3—24790
collagen in pig skin, elec. induced calcification, rel. to use of torture 3—29534
conference on health care engng., Philadelphia, USA (Sept. 1982) 3—10517
current pathways in high-voltage injuries 3—48281
cyanobacteria, respiration and photosynthesis in energy-transducing membranes, review, electron transport chain 3—34799
demyelinated nerve fibres, cond., effects of variation in voltage-sensitive ionic conductances 3—15074
dielectric model of human blood 3—44227
dielectric permittivity and electrical conductivity of fluid saturated bone 3—48280
dielectrophoresis, appls. to cell dielec. props., cell sorting and cell fusion determ. 3—15307
differential method for measuring impedance properties of bone 3—29792
DNA aqueous solns., thermal reversibility, dielec. and elec. cond. meas. 3—53633
E. coli, model of H^+-K^+ transport systems 3—48270
E. coli, systems of exchange of H^+ for K^+ ions 3—39610
ECG electrode, electrolyte-skin AC impedance studies 3—15265

bioelectric phenomena continued
E.coli, systems for exchange of H^+ for K^+ ions, independence of functioning 3—24694
eddy currents induced by RF magnetic fields in biological bodies 3—24787
elasmobranch fishes, elec. and mag. field detect. 3—29619
electrocoagulation, intra-arterial electrolysis, pig expts. 3—48274
electrocutaneous communication for a guide dog robot for the blind, MELDOG 3—9788
electrocutaneous stimulation, comparison of subdermal vs. surface methods 3—9813
electrocutaneous stimulation, perceptual processing of spatio-temporal patterns 3—9631
electrode spot-welding device for electrophysiological appls. 3—19866
electrophrenic respiration, method of prod. of natural respiratory flow rate, dog expts. 3—19843
electroreceptors of elasmobranch fishes, anal. of characts. using points sources of elec. field 3—48459
electrotactile sensation and pain thresholds and ranges, rel. to body site, laterality and sex 3—9630
electrotactile sensation and pain thresholds time response, evidence for tactile sense learning 3—9632
electrotherapy of peripheral paralysis *(German)* 3—58863
ellipsoidal models of man, ELF dosage due to HV transmission lines 3—4652
endodynamic vector, tool to fight pains *(Spanish)* 3—24705
engineering in medicine and biology, conf., Philadelphia, USA (Sept. 82) 3—10511
erythrocytes, human, packed, with haemoglobins F, AA, AS and SS, RF dielec. characts. 3—58620
excitable fibre, depolarisation level rel. to action pot. vel. spreading changes 3—58631
fibroplastics, living, adhesion to electrically charged Zn surface 3—4475
field inside biological structs., calc. method 3—4492
field sources for bioelec. and biomag. fields 3—4490
flight muscles of Drosophila mutants, 2 components of fast outward current 3—53658
fluid distribution in legs and arms, elec. meas., estimation of extra-cellular and intra-cellular fluid 3—9773
free radicals migration in long-chain hydrocarbon mols. rel. to membrane transport 3—48251
functional electrical stimulation, universal control unit development 3—48446
gastric mucosa, amphibian, acid secretion, AC impedance analysis 3—44223
gating currents, origin of rising phase 3—34811
giant axons, squid, unidirectional Na^+ and K^+ fluxes through Na channel 3—9572
hair cell, nonlinear elec. circuit model *(Japanese)* 3—4513
hearing, startle reflex habituation and sensitisation 3—29561
heart muscle cells, uphill Na^+ transport driven by an inward Ca^{2+} gradient 3—48273
helical waves in the heart 3—29523
higher plant, periodic struct. of constant elec. field 3—44229
impedance plethysmography, finite element anal. 3—39729
implanted electrodes, finite element anal. of current pathways 3—35027
inhibitory synaptic channels, reduction of Cl^- conductance by intracellular Cl^- accumulation 3—15066
injury currents and ECG, model study of effects of local change of resting pot. 3—15073
integument epithelia, metazoan, inherent spontaneous polarization, pyroelec. effect meas. 3—53655
ions adsorbed on the surface of biomembranes, kinetics of transmembrane transport 3—24687
laser acupuncture mechanism, point elec. cond. change *(Chinese)* 3—24793
lipid bilayer membrane, ion movement through gramicidin A channels, single channel current-voltage characts. 3—44220
lipid bilayer membrane, ion movement through gramicidin A channels, single-channel current meas., interfacial polarization 3—44221
lipid bilayer membrane, ion movement through gramicidin A channels, single-channel current-voltage characts., diffusion controlled step 3—44222
lipid bilayer membranes, electrostimulated fission and fusion, model expt. 3—34786
lipid bilayer membranes, phase transitions, electric field dependence; biological implications 3—53645
lipid headgroups, anionic, as proton-conducting pathway along membrane surface 3—48255
liposomes containing functionally reconstituted chloride channels, isolated-patch recording 3—48254
mammalian sympathetic efferent discharges, nonMarkov negative correlation between interspike intervals 3—29525
membrane potential and proton gradient meas. by flow dialysis, rel. to electron donors 3—29796
membranes, current-potential relationships across, interpretation 3—29508
mesencephalic reticular formation, elec. stimulation, ocular accommodation in cats 3—9578
metal-biopolymer interfaces, electronic charge transfer, tunnelling processes 3—15069
mitochondria, respiratory chain, role of intramembrane elec. fields in electron and proton transfer 3—29515
motor functions, abnormal, improvement by elec. stimulation 3—48445
motor unit properties in intact cats, physiological characterisation, axonal and mech. props. 3—53656
multiple choice apparatus for electrophysiological investigations of spatial working memory in rats 3—29800
multiport synthesized relax. oscillator representing a bioelec. rhythm 3—15075
muscle, omohyoid, rat, voltage depend. charge movement 3—44230
muscle fibres, intracellular local changes in resistance rel. to membrane pot. 3—44208
myoballs, rat, gating of single Ca^{2+}-dependent K^+ channels, activation/blockade mechanism 3—39615
myocardium, mech.-metabolic coupling on elec. stimulation 3—24744
myoglobin solution, dielec. dispersion 3—15070
nerve cell membrane, elec. oscillation characteristics 3—28431
nerve conduction mechanism and excitation blocking, obs. using Raman spectra of carotenoids 3—34819
neurons of edible snail, effect of permanent mag. field on electrophysiological parameters 3—24784

bioelectric phenomena continued
Nitella flexilis, cell plasmalemma, selective props. of cation channels 3—39613
odor receptor function in worker honeybee antennae, electrostatic enhancement 3—39660
pacemaker activity suppression by rapid repetitive phase delay 3—34817
phospholipid bilayers, charged, effects of monovalent ion binding and screening on measured electrostatic forces 3—34784
phospholipid membranes, anomalous surface conductivity obs. 3—29506
physiological electrical impedance and its clinical applications *(Japanese)* 3—19833
piezoelectricity and biological materials, review 3—29530
pituitary, anterior, single Ca^{2+}-dependent K^+ channels in clonal cells 3—4483
plant leaf membranes, effects of bioreactive substances on a semiconductive prop. 3—29507
polaron mechanism of ion transport across membranes 3—24686
proteins, charge transport props., expt. investigation 3—15068
psychogalvanic reflex and changes in electrical parameters of dry skin 3—19684
purple membrane particles, microelectrophoretic props. 3—4484
purple membranes in soln., interfacial elec. polarisability, light scatt. obs. 3—9560
quantum solid state mechanisms of biological effects of EM radiation, rel. to local supercond. 3—24795
regenerative growth and elec. control systems, review 3—29529
respiratory function monitoring system using impedance pneumography, microprocessor-based 3—4667
retina, toad, high-pass filtering of small signals by rod network, equivalent circuit modelling 3—53664
retina, toad, high-pass filtering of small signals by rod photoreceptor network, K^+ cond. mechanism 3—53665
retinal rod outer segment cytoplasmic membrane, cyclic nucleotides effect on conductance 3—34837
RF dielectric properties of animal tissues, in vivo and in vitro obs. 3—39686
Rhodospirillum rubrum, photosynthetic mutant, primary charge separation regulation 3—58612
sap, ascent in plants by means of elec. double layers 3—58621
sartorius muscle, frog, intracellular local changes in resistance, effect of temp. and chemicals 3—48271
skeletal muscle, anisotropy in dielec. props. 3—34825
skeletal muscle, frog, single fibres, transverse impedance obs. 3—9573
skin, acoustic stimulation, conductance rel. to evaporative-water-loss 3—19755
spin-labelled hydrophobic ions, transmembrane elec. currents 3—4471
surface charge of erythrocytes and model membranes, recording using a fluoresc. probe, obs. 3—48261
T-system optical signals associated with inward rectification in skeletal muscle 3—34827
thylakoid membrane protein phosphorylation rel. to local membrane surface charge near PS II primary acceptor 3—58609
transventricular defibrillation thresholds using quarter and half sinusoidal pulses, dog expts. 3—19685
UHF proton generators and cell membrane transport 3—29517
vertebrate neuron, action pot. repolarisation rel. to transient, Ca^{2+}-sensitive outward current 3—19686
vesicles of plasma membranes of cow parsnip phloem cells, active electrogenic transport of H^+ 3—39612
voltage-dependent K^+ current, Ca^{2+}-mediated decrease, mollusc photoreceptor obs. 3—34804
voltage-gated ion channel model, inference from cryst. struct. of alamethicin at 1.5 Å resolution 3—24667
Ca^{2+} channels of Paramecium, gating rel. to various ions 3—19678
Ca^{2+} in synaptic transmission 3—4494
Na^+, K^+-pump rel. to size of cell membrane pot. and intracellular ionic concs. 3—24695

bioelectric potentials
see also contact potential; electrocardiography; electroencephalography
acoustically derived auditory nerve action potential due to elec. stimulation, guinea pig 3—53688
action potential clamp as a test of space-clamp effectiveness—the Lettvin analog axon 3—48453
action potential recorded by fluid electrodes, origin, bullfrog expts. 3—58628
action potentials of single muscle fibres, simulation 3—53657
auditory, cat, brainstem response using forward-masking paradigm 3—39654
auditory brainstem response, correl. with speech discrimination scores in patients 3—29566
auditory brainstem response, lower audiometric limit 3—29569
auditory brainstem response in 5 vertebrate classes 3—48296
auditory brainstem response in neonates during first 48 hours after birth 3—53699
auditory brainstem response to rarefaction and condensation clicks in normal and abnormal ears 3—29564
auditory brainstem responses in chronic alcoholic patients 3—34858
auditory brainstem responses in the aged 3—29563
auditory evoked brainstem responses to monaural stimulation, bilateral recordings 3—29562
auditory evoked potentials, engng., considerations 3—15274
auditory evoked potentials, fundamental investigation of composition 3—39650
auditory evoked potentials, simultaneous recording and separation of early and middle latency pots. 3—15245
auditory evoked responses elicitation technique using bone-conducted stimuli for animal research 3—58884
auditory middle latency responses in patients with cortical lesions 3—15103
auditory vertex response, EEG and MEG, interstimulus interval depend. 3—34859
biomembranes, voltage clamp processor system 3—48452
body surface potential mapping system with microprocessor, potential pattern dynamic obs. *(Japanese)* 3—58855
bone tissue, alternating elec. pots. 3—44228
brain, signal detection by linear filtering 3—58623
brain function study using single event related pots., feature extraction algorithm 3—15308
brain potential spatio-temporal organisations, Gaussian distribution model *(Russian)* 3—53659

bioelectric potentials continued
- brainstem acoustic evoked response, distrib. of surface pot. on cat's head 3—15115
- brainstem audiometry, hearing aid selection appl. 3—29788
- brainstem auditory evoked pots., improved wave V resolution by dual-channel recording 3—58848
- brainstem auditory evoked pots., normative values obtained by digital filtering and automatic peak detect. 3—15106
- brainstem auditory responses, earphones for arrefact-free recording 3—53739
- brainstem potentials, use in abnormal hearing adaptation diagnosis 3—29679
- brainstem-evoked potentials evoked by peripheral auditory pathway, inverse solns. 3—29553
- branched neurons, unequal diameters and their effects on time-varying voltages 3—34814
- BVP models, adjustment to express mechanism of inactivation 3—15056
- cardiac muscle, isolated, data acquisition and on-line anal. of expts. with a PDP-12/PDP-11 system 3—19865
- cellular action currents magnetic field meas., using superconducting magnetometer 3—29802
- checkerboard pattern reversal visual evoked pots. in Parkinsonism 3—15086
- click-evoked brainstem response, monaural, rel. to contralateral white noise 3—53697
- click-evoked human electrocochleogramy noninvasive recording method, origin and physiologic significance 3—34993
- cochlear inner hair cell, neurotransmitter release, multiple reservoir model 3—19726
- cochlear microphonic responses to acoustic clicks, guinea pig 3—53686
- colonic electrical activity, human, quantitative meas. by microcomputerised system 3—35004
- colour vision and olfaction research at Osaka Branch, review *(Japanese)* 3—19703
- conference on health care engng., Philadelphia, USA (Sept. 1982) 3—10517
- cortical evoked potentials following stimulation of the urinary bladder in man 3—35011
- cyanobacteria, lateral transport of energy along coupling membranes, light-induced pot. changes 3—4485
- dioleyl phosphate-millipore membrane, elec. potential, self-sustained oscillations, expt. and theory 3—15047
- dipole localisation with a spherical homogeneous model, accuracy, auditory evoked response appl. 3—39649
- ear receptor potential of inner hair cels and Davis theory 3—34861
- EEG signal processing, time series, directed coherence anal. 3—9771
- electric sources in stratified spherical and prolate spheroidal volume conductors, surface potentials 3—58637
- electrocochleography, bone-conducted, reliability 3—29775
- electrogastrography in dogs, waveform anal. by coherent averaging 3—34826
- electroluminescent display visual stimulator—a new method for visual evoked potential studies 3—58850
- electromyelogram, human, spontaneous, studies on normal subjects 3—58624
- electromyelogram, spontaneous, in patients with peripheral nerve, root and spinal cord disorders 3—58625
- electrooculogram and eye position, combined recording during controlled room illumination, device *(French)* 3—58857
- EMG, microcomputer-based signal anal. instrument 3—4669
- EMG, motor unit active potential characts. quantification, computer method 3—19842
- EMG, real-time analysis using multiple microprocessor system 3—19827
- EMG, signal anal. for upper extremity limb function discrimination 3—39732
- EMG, surface, spectral anal. rel. to functional characts. of human skeletal muscle 3—19682
- EMG amplifier, gain compensation, equiv. elec. representation of sweat layer 3—48431
- EMG changes during acquisition of a motor skill 3—19679
- EMG detection of carriers of Duchenne muscular dystrophy, nearest neighbour decision rule 3—19828
- EMG frequency spectrum, use in feature characterisation of shape 3—53704
- EMG gait patterns of calf muscles, changes with walking speed 3—39618
- EMG integrator for muscle activity studies in ambulatory subjects 3—39733
- EMG parameters in assessment of neuromuscular diseases 3—29777
- EMG power spectra of facial and jaw-elevator muscles, changes during fatigue 3—58638
- EMG power spectrum, high-to-low ratio change with force fatigue in humans 3—39619
- EMG recordings, detection and classification of single motor unit potentials 3—29538
- EMG signals, system identification and sequential signal estimation algorithm 3—19841
- EMG silent period, microcomputer based meas. system 3—9767
- EMG studies using population stochastic model of skeletal muscle 3—15057
- EMG surface signals, acquisition and processing with a low-cost microprocessor based system 3—24902
- EMG tests of endurance, statistical analysis of spectral moments 3—24704
- EMG-EEG biofeedback instrument and appl. for therapy writer's cramp *(Japanese)* 3—4677
- EMGs of pathological tremors, demodulator for clinical use 3—53878
- epicardial potential distribution estimation using mode matching method *(Japanese)* 3—53660
- equivalent source models, use in evoked pot. research and differential diagnosis 3—15273
- ERG, cat, display of 2 retinal processes 3—34844
- ERG b wave, recent advances in origin and modulation 3—4496
- evoked potential data management 3—15309
- evoked potential latency meas., effects of ongoing EEG 3—15090
- evoked potential testing, introduction and overview 3—15260
- evoked potentials thresholds estimation using a lab. computer 3—58883
- excitable fibres, math. models of extracellular pots. generated in a vol. conductor 3—58634
- eye movement analysis, computerised method based on electronystagmography 3—24905
- filamentous cyanobacteria, spreading changes in elec. pot. 3—48272

bioelectric potentials continued
- FIR digital filtering programs for automatic processing of biological signals 3—4660
- grating visual evoked cortical pots. in laser bioeffects evaluation, instrumentation 3—35032
- halobacteria, reception of proton potential 3—34884
- hearing loss, noise induced, age effects, scalp-recorded response obs. 3—19754
- hemi-field pattern reversal visual evoked pots., normal subjects 3—15088
- hemi-field pattern reversal visual evoked pots., visual pathway lesions 3—15089
- hippocampal pyramidal cells exhibiting synchronised bursting 3—24706
- horizontal cells of turtle retina, spread of pots. along network 3—58660
- human infant brain activity asymmetry after visual stimulation 3—39620
- inhomogenous regions effects, theory 3—36905
- interference EMG spectral anal 3—29771
- intraoperative monitoring, sensory evoked pots., review 3—15279
- isolating biopotential single-transformer amplifier 3—24897
- lipid bilayer membranes, generation of potential rel. to proton-transfer reactions 3—34810
- lumbar and thoracic spinal evoked potentials in man 3—15120
- medullated axon exposed to RF EM radiation anal. of elec. and thermal effects 3—15152
- membrane, lipid, dipole potential, electrostatic modelling of ion pores 3—44224
- membrane potential rapid changes, improved fluoresc. probes for meas. 3—4691
- membrane systems, electrostatic potentials 3—53644
- microphonic cochlear potential of guinea pig as function of expt. conditions *(French)* 3—53681
- microwave-induced auditory brainstem responses, comparison of meas. and predicted characts. 3—24800
- motoneurons excitability prior to reaction movement, EMG silent period *(Japanese)* 3—19683
- motor units, extraterritorial pots. rel. to interstimulus interval 3—29533
- multichannel maps evoked by lateral visual half-field stimuli 3—48287
- multiple neural signals, comparison of classification techniques 3—19854
- muscle fatigue monitor, noninvasive device for observing localised fatigue by EMG meas. 3—19829
- muscle fibre action pot. cond. vel. meas., online technique using surface EMG cross-correl. 3—53880
- muscular potentials evoked by single shocks to sciatic nerves, mouse obs. 3—58633
- myocardium, discerning of contraction and elec. signals by voltage-sensitive dyes 3—35036
- myoelectrical activity of human muscles in vertical jumps, potentiation 3—29532
- myography electrode, implantable, for recording muscle activity in freely moving small animals 3—9799
- nerve conduction velocity estimation using evoked responses, matched filters appl. 3—39731
- neurological condition at birth rel. to EEG and visual evoked pot. at the age of 5 3—34823
- neuronal activity, instantaneous freq. meter for use with multi-trace CRO 3—44369
- neuronal spike-train activity, statistical analysis and stochastic modelling 3—58641
- neurophysiological single unit activity, method for long-term artifact-free recording in animals 3—44368
- Nitella internodal cell, entrained, harmonic, quasiperiodic and chaotic oscillatory responses to sinusoidal stimulation 3—44233
- occipital visually evoked pots., age differences in augmenting/reducing 3—15087
- olfaction and measurement of olfactory evoked potentials *(Japanese)* 3—39661
- olfactory evoked potentials, human, for odorant stimuli synchronized with respiration, meas. 3—39662
- on-line analysis of electrical signals from skeletal and cardiac muscle cells 3—19875
- opponent colour responses of visually evoked potentials in monkey brains 3—39626
- optically coupled stimulus isolation headstage for brain study 3—4736
- peripheral nerves, compound action pots. modelling 3—34862
- peripheral nerves, modelling compound action potentials, temp. depend. 3—34782
- plasmalemma membrane pot. of nitella flexilis cells, mechanism of light-induced hyperpolarisation 3—29631
- QRS duration measurement using high frequency electrocardiography, appl. and limitations of new technique 3—15244
- quadruped postural responses study system using multiple plate dynamometer and electromyograph 3—15296
- readiness-potentials preceding unrestricted 'spontaneous' vs. pre-planned voluntary acts 3—15063
- resting potential, model study of effects of local change on injury currents and ECG 3—15073
- skeletal muscle, human, action pot. cond. vel. estimation using surface EMG cross-correl. technique 3—58632
- smooth muscle, method for simultaneous detect. of motility and myoelec. activity 3—24920
- somatosensory and visual evoked pots. rel. to human aging 3—58690
- somatosensory evoked pot., expt. utility 3—15122
- somatosensory evoked potentials, anal. using normalised cross-correl. functions 3—53703
- somatosensory evoked potentials, human group mean, sex differences 3—34863
- somatosensory evoked potentials, short latency, to median nerve stimulation 3—15119
- somatosensory evoked potentials, short latency, to median nerve stimulation, effect of LF filter 3—58689
- somatosensory evoked potentials recorded in the epidural space in man 3—15121
- somatosensory evoked pots., event-related, spatial and spectral resolution, mag. gradiometry appl. 3—15256
- somatosensory evoked pots., instrumentation factors in stimulus artifact reduction 3—15262
- somatosensory evoked pots., variability anal. in unilateral hemispheric disease 3—15118
- somatosensory evoked responses to trivial nerve stimulation, spinous processes of lumbar vertebrae and scalp, stature effect 3—34865
- somatosensory tibial nerve evoked potentials with parasagittal tumours, CT, scan 3—34866

bioelectric potentials continued
spinal somatosensory evoked potentials in cervical cord lesions 3—15117
striate cortical neurons, cat, relation between response amplitude and contrast 3—44244
surface EMG power spectral analysis of neuro-muscular disorders during isometric and isotonic contractions 3—19826
synchronous neural afterdischarges in rat hippocampal slices 3—29535
time discrimination, early resolution of contingent negative variation 3—34822
vacuolar potential of Characean cells subjected to 200-8200 MHz radiation 3—39689
visual event-related potential manifestations of information processing stages, manipulation 3—29540
visual evoked potential, origin of wavelets 3—58649
visual evoked potential acuity in children 4 months to 8 years old rel. to eye patching 3—9577
visual evoked potentials, effects of grating contrast and length 3—9585
visual evoked potentials, enhancement by adaptive processing 3—24937
visual evoked potentials, flash and pattern, in hysterical amblyopia and provoked visual impairment 3—58648
visual evoked potentials, use in contrast sensitivity meas. 3—24730
visual evoked potentials and PET mapping of regional cerebral blood flow and cerebral metabolism 3—15085
visual evoked potentials to double-pulse pattern presentation 3—39629
visual evoked response to AC elec. stimulation 3—34840
visual evoked responses rel. to spatial freq. selective mechanisms in adults and infants 3—39628
visually evoked potentials in men, chromatic responses *(Japanese)* 3—19695
visually evoked responses to checkerboard patterns: check and field size interactions 3—19690
K^+ permeability rel. to action pot. form. in denervated frog muscle fibres 3—24699

bioenergy conversion
alcohol fuels production by fermentation of pawpaw 3—53590
alternative energy cogeneration technology potential 3—4408
biofuels production, transportation costs 3—58488
biogas as a means of generating electricity *(German)* 3—14916
biogas production from mixed agricultural manure history and technology review *(Dutch)* 3—44151
biogas prospects, European point of view 3—48115
biogas systems, control, safety, and economic aspects *(German)* 3—58468
biogas technology, China's energy policy 3—39528
biogasplant: irritating problems for engineers *(German)* 3—39531
biomass as monomer source, synthesis of 2-furyloxirane 3—48172
biomass as monomer source, synthesis of 2-vinylfuran 3—48171
biomass flash pyrolysis reactor, solar-fired, design and generation for liquid fuels production 3—58559
energy and materials recovery from waste: limits and prospects *(Italian)* 3—48173
energy sources other than oil and electricity for space heating *(German)* 3—39446
estimation of potential biomass resource and biogas production from aquatic plants in Argentina 3—9388
Omnifuel biomass gasifier, early commercial and technical performance 3—29456
power station of 200 kW(e), gas turbine or internal combustion options *(French)* 3—4410
refuse gasification, thermodynamics 3—39530
rural areas in India, seasonal constraints in management 3—9391
sewage gas utilisation by electric power generation using gas engines *(German)* 3—58469
solar power, future prospects, review *(German)* 3—9403
synthetic fuels from coal and biomass resources in Midwest USA, land use planning issues 3—58467
thermochemical conversion of biomass: gasification by flash pyrolysis study 3—24637

biographical dictionaries *see biographies*

biographies
outstanding American astronomers, ages at publication of most-cited papers 3—59236
Baillaud, R., acoustic work and sound detection of aircraft, 1915-22 *(French)* 3—5579
Doppler, Johann Christian (1803-53), and his effect, history 3—25743
Fermi, Enrico (1901-54), life and work 3—5580
Louis de Broglie, association with de Beauregard, personal reminiscences 3—30574
Newton and the Principia 3—54605
Sir Arthur Eddington O.M., F.R.S., 1882-1944 AD, recollections 3—20599
Smoluchowski, Marian (1872-1917), fluctuation theory history 3—35824

biological cybernetics *see biocybernetics*

biological effects of acoustic radiation
see also biomolecular effects of radiation; cellular effects of radiation
amphibian embryonic tissues, action of low-intensity pulsed US 3—29628
behavioural awakening from noise in the home 3—15113
botanical effects of US, review 3—58720
cavitation, transient, pot. for in biological systems with μs US pulses 3—29629
continuous traffic noise effects on deep sleep, waking and sleep latency 3—39563
erythrocytes, human, effect of pulsed US in vitro 3—29627
evoked acoustic emissions from the human ear, findings in neonates 3—53698
hearing, personal protectors, rating procedures 3—19729
hearing impairment for high level impulse noise, theoretical anal. *(French)* 3—9604
hearing levels, gunfire exposure effects meas. 3—9619
hearing loss, noise induced, age effects, scalp-recorded response obs. 3—19754
hearing loss, noise-induced, rel. to acoustic reflex threshold 3—53700
impulse noise and auditory hazard, workshop results 3—15149
kidney, ionising radiation combined with US induced hyperthermia, effects in mice 3—29671
neuroblastoma cell culture, metabolism, US effect 3—48319
noise, hearing damage due to impulse noise, spectral analysis 3—27307
noise exposure, daily, personal reaction 3—9522
noise-induced hearing loss in rural schoolchildren 3—29626
noise-induced shifts of pitch of pure and complex tones 3—58680

biological effects of acoustic radiation continued
noise-induced temporary threshold shifts in hearing due to low freq. noise 3—58673
protein aqueous solution, acoustic relaxation 3—47056
skin, acoustic stimulation, conductance rel. to evaporative-water-loss 3—19755
speech perception by children and handicapped individuals, effects of noise 3—44256
traffic noise, sleep disturbance effects meas. 3—15150
US, biological action, general problems 3—44279
US absorption and dispersion in liquids and tissues, theoretical model 3—29625
weapons impulse hazards, 105 mm howitzer effect on cats' ears 3—50837

biological effects of gamma-rays
see also biomolecular effects of radiation; cellular effects of radiation
A-bomb survivors, Hiroshima and Nagasaki, circular asymmetry in cancer mortality 3—44303
A-bomb survivors, Nagasaki, incidence of cancer 1959-78 3—44300
aberrant megakaryocytopoiesis preceding radiation-induced leukemia in the dog 3—53733
actinomycin D complexed to DNA, changes in Y-peak on γ-irrad., spectrophotometric obs. 3—9553
apple pollen, in vitro germination and ultrastruct., γ-irrad. effects 3—4555
bacterial cells, DNA-membrane interactions rel. to γ-irrad. *(Russian)* 3—58731
blood cell sensitivity and repair of children with some hereditary diseases *(Russian)* 3—19673
bone marrow architecture, sequential changes during continuous low dose γ-irrad. in dogs 3—15165
bone marrow cells of mice exposed to γ-rays, micronuclei freq. reduction by AET 3—44304
bone marrow regeneration, ^{60}Co-γ-irrad., O_2 breathing effect *(Russian)* 3—34899
brush border enzymes of rat small intestine, modifications after irrad. 3—48325
carcinogenic effects of foetal and postnatal irrad. in female mice 3—44294
children with angioma cutis, long-term clinical effects of γ-therapy *(Russian)* 3—29638
chromosomal aberrations induced by ^{137}Cs γ-rays in sea urchin eggs, sensitivity rel. to mitotic cycle 3—29667
clinical radiobiology, problems and perspectives for development *(Russian)* 3—15155
colo-rectal injury, RBE values after ^{137}Cs γ and neutron irrad., mouse obs. 3—58744
conductivity and permeability dynamics of cells at early times after γ-irradiation *(Russian)* 3—58735
diploid yeast radiosensitive mutants, Saccharomyces cerevisiae, rapid repair after γ and α-irrad. *(Russian)* 3—19762
DNA, supramolecular, γ-irradiated, degradation, lipid composition, thin-layer chromatography *(Russian)* 3—34775
DNA and chromosome repair kinetics in CHO cells 3—34909
DNA synthesis and postirrad. degradation in micrococcus radiodurans $R_{11}5$, comparative studies using UV and γ-rays 3—9676
E. coli B/r WP2 trp^-, antimutagenic effect of Ge-132 on γ-induced mutations 3—29650
embryos, mouse, effect of chronic HTO β or ^{60}Co γ irrad. on preimplantation development 3—29665
endosteal myelofibrosis in dogs, ultrastruct. 3—53734
erythrocytes, rabbit, natural radioprotectant interaction with γ-radiation 3—29669
erythrocytes and bone marrow of rats, effects of γ-irrad. and cystamine on superoxide dismutase activity 3—4561
eucaryotic chromatin, resistance of nucleosomal organisation to ionising radiation 3—4562
Euglena cells, light- and dark-grown, γ-irrad.-induced single strand DNA breaks and their repair 3—29654
Euglena cells, pot. lethal damage repair 3—29644
fibroblasts, human, defective recovery from pot. lethal damage in some strains 3—48331
fibrosarcoma cell subpopulations, response to small radiation doses delivered in situ 3—58750
fibrosarcoma cells, murine, grown as pulmonary nodules, cyclic-radiation response 3—29660
forebrain, damage after heavy ion irrad., comparison with γ-irrad., rabbit expts. 3—9672
gametic mutation for flower colour in Tradescantia 3—29642
germ cells of medaka embryos, effects of tritiated water β-rays, comparison with ^{137}Cs γ-rays 3—48337
gonads of olive fruit fly, pupae irrad. expts. 3—48332
herring fillets fatty acid, gamma ray irrad. effect on composition 3—9681
intestinal lesions in mice, RBE of neutrons to γ-rays *(Russian)* 3—58715
liver, rat, perinatal, enzymic differentiation, γ-irradiation effect 3—48340
liver cells of γ-irrad. senescent mice, unscheduled DNA synthesis and elimination of DNA damage 3—9674
lung and spinal cord, RBE for neutron, X-ray and γ-irrad. 3—44275
Lupinus albus L., chronic γ-irrad. effects 3—4556
lymphocytes, human peripheral, γ-irrad. and sister chromatid exchange induction 3—48333
malignant transformation at low doses, comparison of X- and γ-rays, hamster embryo cells obs. 3—34906
mammalian cell cultures: induction of cell killing, micronuclei, and mutation resistance after β and γ irrad. 3—4558
meristem cells, asynchronously dividing, of pea seedlings, γ-ray induced unscheduled DNA synthesis 3—44297
mutation frequency modification in plateau phase CHO cells 3—19771
nuclei of chicken thymocytes and erythrocytes, γ-radiation-induced damages to membrane structs. *(Russian)* 3—58736
nucleic acid content, biosynthesis in rat spleen, ^{239}Pu and external γ-irrad. combined effect *(Russian)* 3—19664
Paramecium tetraurelia growth stimulation under low-level chronic irradiation: investigations on a possible mechanism 3—34911
Pisum sativum L. root meristem cells exposed to electric field or γ rays, micronuclei form. 3—4551
plateau-phase cultures, unfed, repair of pot. lethal and sublethal damage 3—34913
posterior lenticular opacities among atomic bomb survivors in Hiroshima and Nagasaki 3—34912
potato epilachnid beetle, radiosensitivity of different developmental stages 3—53728

biological effects of gamma-rays continued
radiation training programmes in electric utilities operating nuclear reactors in USA 3−6433
reproductive capacity of female rats and state of progeny after ^{239}Pu administration and γ-irrad. *(Russian)* 3−58740
rice seedling development, gamma irrad. effect at low exposure 3−4552
RIF-1 tumour system, discrepancies between patterns of pot. lethal damage in vitro and in vivo 3−44302
seeds, barley, temp. effect on γ-induced lesions repair 3−29643
skin, early shrinkage in mice after single and multifractionated exposures 3−44295
skin, mouse, repair and repopulation during multifractionated irrad. 3−44296
small intestine, mouse, cell death after low doses of neutron- or γ-irrad. 3−29615
taste bud membranes, bovine, radiation effects rel. to taste loss 3−29664
thermophilic bacterium, radiation damage to membrane without concomitant lipid peroxidation 3−4564
thymus of adult fish of Oryzias latipes, γ-irrad. effects on morphology 3−9680
V79 cells, heat-resistant variant, characterisation and radiation response 3−44216
yeast, heat-shock induction of ionising radiation resistance 3−19781
yeast membrane, γ-irrad. effects on struct. and function 3−9673

biological effects of ionising particles
see also biomolecular effects of radiation; cellular effects of radiation
alpha energy potential exposure rel. to index of dose 3−48426
alpha particle irradiation, morphology of malignantly transformed cells 3−15168
barrier in rats, permeability after local proton irrad. 3−48324
brain, chronic local exposure, tumours and pretumoural states induction, rabbit β-irrad. expts. *(Russian)* 3−58739
brain, chronic local irrad., β-applicator, morphology of tissue *(Russian)* 3−34903
cell membranes, effects of low doses of X-rays and HTO 3−15160
cerebral capillaries in neonatal rats, Piotron pion irrad., RBE to X-rays 3−29668
Chlamydomonas reinhardtii, dividing, ultrastruct. alterations following X-ray and proton irrad. 3−53730
cytogenetic effects in Chinese hamster cells induced by accelerating He, C and Ne ions *(Russian)* 3−19764
cytogenetic effects in Chinese hamster cells RBE coeffs. of accelerating He, C and Ne ions *(Russian)* 3−34897
diploid yeast radiosensitive mutants, Saccharomyces cerevisiae, rapid repair after γ and α-irrad. *(Russian)* 3−19762
DNA, newly synthesised, post-irrad. defects, neutrons and electrons compared and the effect of misonidazole 3−29616
embryos, mouse, effect of chronic HTO β or ^{60}Co γ irrad. on preimplantation development 3−29665
EUE cells, age response to 31 MeV proton irrad. 3−4559
forebrain, damage after heavy ion irrad., comparison with γ-irrad., rabbit expts. 3−9672
germ cells of medaka embryos, effects of tritiated water β-rays, comparison with ^{137}Cs γ-rays 3−48337
heavy ion in vivo radiobiology 3−44289
heavy ion molecular and cellular radiobiology 3−44288
hydrated specimens in wet gas environment, quantitative meas. of radiation damage 3−15159
immune response, primary, in rainbow trout, permanence of suppression after embryonic exposure to tritiated water 3−4563
low level radiation, hazards to humans, review 3−4568
lung, inhalation exposure of Syrian hamsters to ^{239}PuO$_2$ aerosols 3−29653
mammalian cell cultures: induction of cell killing, micronuclei, and mutation resistance after β and γ irrad. 3−4558
mammalian cells, radiation induced DNA release, sedimentation assay 3−48339
mammary gland tumours induced in rats by single and fractionated β-irrad. *(Russian)* 3−58734
multicellular systems, biological effects of low dose ionising radiations 3−29641
mutagenicity of α particles from ^{238}Pu, rel. to X-rays, hamster cell expts. 3−29663
nucleic acid content, biosynthesis in rat spleen, ^{239}Pu and external γ-irrad. combined effect *(Russian)* 3−19664
ovaries of CBA mice ^{90}Sr treated as foetuses, neoplasms 3−24806
particle accelerators in radiation therapy, conf., Houston, TX, USA (Feb. 1982) 3−40316
pion radiobiology at LAMPF, use in therapy 3−44291
pion radiobiology at TRIUMF, using cultured cells, mice and pigs 3−44290
pion therapy beams, effects on cultured cells 3−58746
protons, neutrons, heavy ions and pions in radiotherapy, comparison 3−44292
radiation in small doses, effects *(French)* 3−34915
retina, struct. damage by heavy ion irrad. 3−15167
retinal photoreceptor cells, effects of heavy ions, anal. of DNA damage, rabbit obs. 3−53724
rhabdomyosarcoma tumours, rat, irrad. in vivo with extended-peak Si ions, cell survival obs. 3−19782
skin, albino rat, effect of X-rays and ^{133}Xe β-particles *(Russian)* 3−58741
skin cells, mouse foot, C ion beam irrad., response across Bragg peak 3−58745
thyroids, rat, damage profile after irrad. with a proton microbeam in vivo 3−48329
yeast, heavy-ion effects, survival and recovery in vegetative cells of different sensitivity 3−19777
yeast cells, heavy ion effects, induction of canavanine-resistant mutants 3−29647

biological effects of microwaves
see also biomolecular effects of radiation; cellular effects of radiation
auditory brainstem responses, microwave-induced, comparison of meas. and predicted characts. 3−24800
bacterial growth, comparison for high-intensity microwave exposure and conventional heating 3−39692
behavioural and biological effects of 2450 MHz EM radiation on squirrel monkeys 3−24797
blood neutrophils, adaptation to microwave irrad., math. simulation *(Russian)* 3−34887
blood-brain barrier in dogs, effect of 1.0 GHz microwave irrad. 3−24801

biological effects of microwaves continued
brain, effects of high-intensity pulse exposure in rats as a result of heating 3−24802
cancer incidence and electromagnetic radiation 3−4545
cardiac cell membrane noise changes during microwave exposure 3−4547
cellular bioeffects, broad-band temp. controlled exposure system 3−35040
chronic exposure of rabbits to 0.5 and 5 mW/cm^2 2450-MHz CW microwave radiation 3−58722
chronic exposure to very low intensity microwave radiation, effects on domestic fowl 3−29632
chronic microwave exposure, continuous and pulsed, effects on rabbits 3−24804
erythrocytes, human, 2450 MHz microwave irrad. effects on ^{24}Na$^+$ efflux 3−29636
erythrocytes, rabbit, effects of X-band microwave exposure on K$^+$ efflux 3−39690
evaporative heat loss in microwave-exposed mice, effect of heating rate 3−29502
eye lens motion in rat, in vitro meas. using laser interferometer 3−35049
human exposure to microwave radiation, safe limits standard 3−9667
immunity in late juvenile and young adult Japanese quail as related to microwave radiation during embryogeny 3−29634
insect pupae, constant-dose microwave irrad. effects, rel. to thermal interaction 3−24798
insect pupae, waveguide irrad., thermographic anal., dosimetry appl. 3−24796
liquids, microwave absorpt., study by heterodyne detect. of thermally induced refr. index fluctuations, biological appl. 3−24061
living organism, RF wave nonthermal and energy effects, informational nature 3−19760
mammary tumour, mouse, response to microwave heating at 2.45 GHz 3−24805
microtubular polymerisation in vitro, effect of 2450 MHz microwaves 3−48321
mm wave irradiation and meas. system for cell suspensions 3−24932
power absorption in biological specimen in standing-wave irrad. waveguide 3−34890
prostrate, rabbit, normal tissue response to localized deep microwave hyperthermia 3−58725
review of hazards from microwaves *(German)* 3−15151
review of scientific and hygienic issues in biological research on microwaves 3−24794
schedule-controlled behaviour in rats, interaction of ambient temp. and microwave power density 3−24803
sperm, turkey, in vitro microwave irrad. rel. to fertilising capacity 3−58721
systems for exposing mice to 2450 MHz EM field 3−39750
teratologic studies of prenatal exposure of rats to 915-MHz microwave radiation 3−19759
vacuolar potential of Characean cells subjected to 200-8200 MHz radiation 3−39689
^{45}Ca^{2+}, binding to brain tissue, attempts to alter using PM microwave irrad. 3−39693

biological effects of radiation
see also biological effects of acoustic radiation; biological effects of gamma-rays; biological effects of ionising particles; biological effects of microwaves; biological effects of ultraviolet radiation; biological effects of X-rays; biomolecular effects of radiation; cellular effects of radiation; dosimetry; radiation therapy
50 Hz electric field effects on lining organisms and human life *(Polish)* 3−15141
A-bomb survivors, Hiroshima and Nagasaki, circular asymmetry in cancer mortality 3−44303
acute radiation disease in man caused by uneven radiation *(Russian)* 3−29637
behavioural response of swine to a 60 Hz elec. field 3−39684
biological effects of electrostatic induction phenomena at 50 Hz from electrical equipment *(Italian)* 3−44232
blood, rat serum, total-body irrad., spontaneous chemiluminesc. rel. to dose *(Russian)* 3−34898
bone, electric field exposure rel. to bone growth and fracture repair in rats 3−58713
bone sarcomas following therapeutic irrad. 3−58748
brain Ca^{2+} binding and release due to low-level EM fields, review 3−24799
cancer incidence, radiation-induced, math. simulation of dose depend. *(Russian)* 3−19761
cardiovascular alterations in Macaca monkeys exposed to stationary mag. fields, ECG and blood press. obs. 3−58712
chronically irradiated dogs, response to acute exposure rel. to cholinesterase activity changes *(Russian)* 3−58738
colo-rectal injury, RBE values after ^{137}Cs γ and neutron irrad., mouse obs. 3−58744
conference on hazard arising from small radiation doses, London, England (Apr. 1982) 3−5476
conference on radiobiological work-in-progress, London, England (Feb. 1982) 3−5475
conference on the future in radiology, London, England (Feb. 1982) 3−10499
coronary heart disease rel. to ionising radiation *(Russian)* 3−58730
Crawford-cell exposure system automation, for laboratory animals irradiation (225-500 MHz) 3−9800
DFVLR Institute for Aerospace Medicine, new facilities 3−39727
eddy currents induced by RF magnetic fields in biological bodies 3−24787
electric fields, 50 Hz, exposure effects *(Italian)* 3−39685
ELF fields, effects in Ca^{2+} efflux from brain tissue in vitro 3−34881
ELF magnetic fields in electrosteel and welding industries 3−24786
EM fields, moving animal, elec. field visualisation by numerical calc. 3−29806
EM wave induced vibrs. in the eye, acoustic wave generation 3−19758
enhanced radiation weapon, biological effects 3−31832
epileptic baboon, effects of constant light on EEG and seizure activity 3−15064
eye damage due to laser radiation, safety standards 3−19757
fission reactor, steam generator, tube failures, radiological consequences 3−55348
general public exposure 3−15236
grating visual evoked cortical pots. in laser bioeffects evaluation, instrumentation 3−35032

biological effects of radiation continued
haemostatic homeostasis is total and local irrad. *(Russian)* 3—15154
human susceptibility to radiation, age depend. 3—53874
human whole-body radiofrequency absorption studies using a TEM-call exposure system 3—29793
hybrids of P. vulgaris and P. coccineus, development, gamma rays effect 3—9670
intestinal lesions in mice, RBE of neutrons to γ-rays *(Russian)* 3—58715
ionising radiation, physiological benefits from low levels, review 3—44283
laser acupuncture mechanism using He-Ne laser *(Chinese)* 3—24793
laser radiation induced primary and secondary damage to biological tissue, thermal injury 3—53719
late damage to normal tissues after radiotherapeutic doses, conf., London, England (May 1982) 3—25678
late effects after therapeutic whole-body irrad., symposium, Munich, Germany (Aug. 1981) 3—20583
late effects of total body irrad. prep. for marrow transplantation 3—24808
late effects of total body irradiation in man 3—24809
life shortening in mice, neutron exposures of 5 and 10 rad 3—44277
LSA tumours, pulsed mag. field modulation in mice 3—29614
lung and rectum, mouse, neutron irrad., early and late effects 3—44274
mango, internal breakdown of post-harvest sunlight exposure 3—15153
medical NMR, health effects for in vivo studies, known thresholds 3—48320
natural background radiation and the incidence of oncological illnesses *(Russian)* 3—34892
natural georadiation, detection and protection *(Polish)* 3—39725
near-field EM absorption in man, numerical and expt. results 3—34885
neoplasms, nonlethal, max. likelihood estimation of prevalence, Rn daughter inhalation appl. 3—4566
neutron carcinogenesis 3—34882
neutron effects, regularities and features, review *(Russian)* 3—4539
neutron irrad., tumour risks *(Dutch)* 3—58717
neutron RBE for early and late normal tissue injury in pig 3—44272
neutrons, 50 MeV, normal tissue tolerance in animals, comparison with patient clinical obs. 3—44273
nonionising radiation nonthermal action, interspecific differences in threshold PD *(Russian)* 3—58724
nuclear war, radiological effects, review 3—48327
nuclear waste repositories, extreme scenarios rel. to cancer induction 3—9671
organism, comparison of uniform and nonuniform irrad. effects *(Russian)* 3—19767
particle accelerators in radiation therapy, conf., Houston, TX, USA (Feb. 1982) 3—40316
photo-ergonomy, glossary of some terms used 3—4544
photopenic abnormalities induced by radiotherapy, characterisation on bone scans 3—15213
plants, wild type, radiosensitivity rel. to life cycle duration *(Russian)* 3—19751
probability models and cancer, conf., Berkeley, CA, USA (July 1981) 3—49088
protection and measurement of man-made electromagnetic fields *(Polish)* 3—34987
pulsed magnetic fields, biological effects, bone fraction therapy appl., review 3—44270
radiation sensors, requirements of risk assessments 3—53861
radioactive nuclides levels in persons residing around Nevada test site, 1971-80 3—44330
RF EM field effects 3—29633
RF radiation, pot. hazardous sources, review 3—34886
RF radiation biological affects study, exposure methods and dosimetric techniques 3—53902
SEM of tissue response to irrad. 3—15162
skeletal muscle damaged by ionising radiation, regeneration stimulation by He-Ne laser *(Russian)* 3—58723
skin injuries, glossary of terms useful in photoergonomy 3—4543
small intestine, irrad. at different times of day, morphology and kinetics, rat obs. 3—58729
small intestine, mouse, surface damage after X- or neutron irrad. 3—15166
societal cost of radiation exposure 3—5586
stereotypic behaviour of rats, dopaminergic structures, drug injection, ionizing radiation effect *(Russian)* 3—34901
tetraphenyl boron, transport through bilayer lipid membranes, effect of HF EM field 3—44280
total lymphoid irradiation in the Wistar rat: technique and dosimetry 3—58879
tumors, human, radiation pathomorphism, morphology study *(Russian)* 3—15156
tumour incidence in and life-span of rats after $^{90}\gamma$ administration *(Russian)* 3—34902
tumour incidence in mongrel female rats, ^{244}Cm administration *(Russian)* 3—34904
tumour induction in rats, effect of fast neutrons *(Russian)* 3—58716
tumours, human, regional blood flow changes as a result of radiotherapy 3—29659
VDU ergo-ophthalmology, visual strain and blue light lesion *(Italian)* 3—4495
wheat seed early accelerated root growth by He-Ne laser 3—58726
wound photostimulated healing using incoherent wide band polarised light 3—48322
^{252}Cf neutrons, effectiveness at low dose rates in radiobiology and radiotherapy 3—15142
^{A}I, A=123, 125, 131, effect on thyroid function after injection in mice 3—19773
^{129}I, contamination of biosphere, environmental effects 3—29768
^{85}Kr purge at Three Mile Island in 1980, risks of local and global public health effects 3—29646
^{239}Pu administration and γ-irrad. of female rats, effects on reproductive capacity and state of progeny *(Russian)* 3—58740
^{89}Sr, effect on bean plants *(Russian)* 3—58743
^{90}Sr, exposure of female mice, synergism with external irradiation 3—44284

biological effects of ultraviolet radiation
see also biomolecular effects of radiation; cellular effects of radiation
aromatic amino acids, photochem. stability on PS laser UV irrad. 3—29630
bone, dielectric behaviour at microwave freqs. 3—58728
cellular effects, shutter for UV irradiation 3—58888

biological effects of ultraviolet radiation continued
DNA, aq. soln., UV irradiated, free radicals, ESR, 77K *(Russian)* 3—34774
DNA, high-intensity UV radiation effect, photochem. transforms. 3—34905
DNA synthesis and postirrad. degradation in micrococcus radiodurans R$_{11}$5, comparative studies using UV and γ-rays 3—9676
DNA-repair deficient cells identification with multiwire proportional chamber 3—19776
Ehrlich ascites tumour cells, UV-induced division delay, pot. lethal damage repair 3—4560
enhanced survival during confluent holding recovery in UV-irrad. human and mouse cells 3—34908
IR/UV radiation protection during arc welding, visual training aids *(French)* 3—54603
mammalian cell colonies, living, direct screening for DNA repair deficient mutants identification 3—29805
mammalian cell DNA, replication forks blocking and pyrimidine dimers, autoradiographic evidence 3—53648
physiopathological effects on skin and eyes of UV, visible and IR radiation *(Italian)* 3—44282
serum albumins, change in conformation on exposure to UV 3—24807
soybean, effects of UV-B irrad. on photosynthetic constituents and processes 3—29645
thymine in aqueous soln., direct and indirect photolysis by laser UV radiation 3—24673
tumor cells, proliferating and resting, response to repetitive pulsed UV laser radiation 3—34888
vacuum-UV, characteristics of effects on Sendai virus 3—44293
xeroderma pigmentosum cells, detect. of DNA single-strand breaks during UV damage repair 3—44299
yeast, respiratory-deficient mutant, energetics of cellular repair processes 3—34801

biological effects of X-rays
see also biomolecular effects of radiation; cellular effects of radiation
Acetabularia mediterranea, starch accumulation after X-irrad. 3—4553
aortic endothelial cells, rat, proliferation following X-irrad. 3—29666
ataxia-telangiectasia and normal cells, effect of hypertonicity and X-radiation on DNA synthesis 3—34910
brain tumour 9L cells, rat, interaction of hyperthermia and radiation rel. to survival 3—19780
cancer induction in parabiont rats 3—19778
cell membranes, effects of low doses of X-rays and HTO 3—15160
cells, Chinese hamster, recovery kinetics from damage by step-up and step-down heatings combined with X-rays 3—9556
cells, mouse, replicon initiation, inhibition and resumption 3—48338
cellular ultrastructure, effect of X-irrad. and radiation modifiers 3—53731
cerebral capillaries in neonatal rats, Piotron pion irrad., RBE to X-rays 3—29668
Chlamydomonas reinhardtii, dividing, ultrastruct. alterations following X-ray and proton irrad. 3—53730
chromosome mutation, sex-linked recessive, lethal, in Drosophila melanogaster, imaginal disk development *(Russian)* 3—34896
colon tumour, human, survival responses of cell subpopulations after combinations of hyperthermia and X-irrad. 3—53726
computerised tomography and other diagnostic radiology procedures, risk analysis 3—24850
DNA replication intermediates, X-irrad. effects in replication initiation inhibition 3—29651
ear skin, mouse, long-term thermal sensitivity after previous X-irrad. 3—29501
electrocorticograms of the adult and aged mouse X-irradiated during the perinatal period 3—58626
epithelial cells of hair bulbs, action of X- and neutron-radiations *(Russian)* 3—19763
erythrocyte ghosts, membrane damage *(Russian)* 3—58733
feet of rats, persistent and late occurring lesions, clinical relevance 3—4550
fibroblast cell strain, normal human diploid, pot. lethal damage repair in X-irrad. cultures 3—53727
fibroblasts, normal and ataxia-telangiectasia, cell cycle dependence of mitotic delay after irrad. 3—29652
granulopoietic progenitor cells, canine, sensitivity to ionising radiation, blood and bone marrow obs. 3—48330
HeLa cell populations, mechanism of derivation of radioresistance after repeated X-irrad. 3—9679
heterotransplanted human colonic carcinoma, X-irrad. effects before and after cellular DNA content change 3—48336
intestine, mouse, effect of prior hyperthermia on subsequent thermal enhancement of radiation damage 3—19772
jejunal crypt cells exposed to radiation alone and combined with cancer chemotherapeutic agents, microcolony survival assay 3—29655
kidney, ionising radiation combined with US induced hyperthermia, effects in mice 3—29671
late effects after therapeutic whole-body irrad., symposium, Munich, Germany (Aug. 1981) 3—20583
late effects development after whole body irrad. and stem cell reconstitution, factors of significance 3—24810
late effects in rhesus monkeys after whole body irradiation with X-rays and fission neutrons 3—24814
late effects of total body irradiation in dogs treated with bone marrow transplantation 3—24812
lethality and mutation induced by radiation in a repair-deficient CHO cell line 3—48335
lumphocytes, G$_0$, human, X-ray induced reciprocal translocations and dicentrics 3—29657
lung, ultrastructure after exposure to ionising radiation, SEM and TEM obs. on mice 3—53736
lung and spinal cord, RBE for neutron, X-ray and γ-irrad. 3—44275
lymphoma cells L5178Y, mouse, heat and X-ray effects 3—53729
lymphosarcoma cells, X-irrad. effects on membrane lipids in vivo and in vitro 3—44298
magnetic field influence, infralow freq. low intensity, on X-irradiated mouse survival *(Russian)* 3—19766
malignant transformation at low doses, comparison of X- and γ-rays, hamster embryo cells obs. 3—34906
mammalian cells, air-, N$_2$O-, and N$_2$-saturated, low-LET radiation responses 3—29661
mammalian cells, cultured, enhancement of X-ray-induced inactivation by hyperthermia, rel. to pH and thermotolerance 3—53725

biological effects of X-rays continued
- mammalian cells, cultured, X-ray induced inactivation, hyperthermic enhancement rel. to prior heat treatment 3—53641
- mammalian cells with membranes subtituted by polyunsaturated fatty acids, X-irrad. effects on survival 3—34907
- mammary carcinoma, murine, effects of irrad. by single or multiple fractions per day 3—29640
- melanoma xenograft cells, human, intercellular contact and radiation response 3—58749
- murine tumour, contrasting regrowth delay responses to isocurative hyperthermia or X-irrad. 3—9669
- mutagenicity of α particles from ^{238}Pu, rel. to X-rays, hamster cell expts. 3—29663
- myeloid stem cells, recovery of number and radiosensitivity in sublethally X-irrad. mice 3—9677
- parenchymal hepatocytes, noncycling, repair of X-irrad. damage 3—19770
- potentially lethal X-ray damage repair, mol. and cellular basis, clinical radiotherapy appl. 3—58747
- preimplantation mouse embryos, effects of Pb and X-rays on blastocyst formation and cell kinetics 3—29656
- Saintpaulia leaves, radiation stimulated repair, cellular basis, effects on mutation frequency 3—4554
- skin, albino rat, effect of X-rays and ^{133}Xe β-particles *(Russian)* 3—58741
- skin, pig, functional and morphological changes after single or fractionated doses 3—15158
- skin, radiation response in young and old rats 3—19775
- small intestinal mucosa, mouse, damage following X-irrad. or hyperthermia, SEM and TEM obs. 3—53735
- small intestine, mouse, surface damage after X- or neutron irrad. 3—15166
- solid tumour in vivo, thermotolerance rel. to interaction between hyperthermia and radiation 3—58602
- spinal cord, rat, X-ray and neutron effects on repair and regeneration 3—44287
- split dose recovery of a mouse tumour and its stroma during fractionated irradiation 3—19769
- telencephalic neural cell proliferation kinetics during foetal regeneration following X-irrad. 3—15161
- thermocytes, rat, radiation-induced interphase death rel. to microvilli disappearance 3—15164
- thermotherapy of VX$_2$ rabbit carcinoma, augmentation by irrad. 3—48249
- thymocytes, depressed DNaseI inhibitor and delayed DNA damage after irrad. 3—19774
- thyroid tumours in rats follow localised X-irrad. to thyroid and pituitary glands 3—29662
- total body irradiation, pathological findings in lethally irradiated and reconstituted dogs 3—24813
- tumour cells, human, radioresistance conferred in vitro by pot. lethal X-ray damage repair 3—29670
- tumours, site dependent response to combined heat and radiation, mouse expts. 3—29639
- whole-body irradiation in dogs protected by autologous marrow infusion, acute and delayed toxicity 3—24811

biological fluid dynamics
- *see also biorheology; haemodynamics*
- biopolymers, drag-reducing, isolation from blood 3—24777
- body fluids transport and distribution model using systems dynamics approach 3—19749
- calanoid copepods, feeding currents, and the role of gravity 3—19748
- cerebrospinal fluid system, human, pressure response computer anal. *(Czech)* 3—48304
- engineering in medicine and biology, conf., Philadelphia, USA (Sept. 82) 3—10511
- epidural pressure meas. by telemetric device, Rotterdam teletransducer 3—34998
- gas bubble homogeneous nucleation in vivo rel. to decompression sickness 3—24761
- intracranial pressure model, parameter estimation 3—15138
- lymph dynamics in dogs, simultaneous comparison of tracheobronchial and right duct 3—58704
- Nitella internodal cell, entrained, harmonic, quasiperiodic and chaotic oscillatory responses to sinusoidal stimulation 3—44233
- oscillatory flow through bifurcating tube, steady streaming flow visualisation 3—15130
- oscillatory non-Newtonian flow in tubes of slowly varying radius 3—2118
- plane Poiseuille flow, effects of transversely moving boundary 3—24780
- steamline flow of marine animals, conditions *(Russian)* 3—24743
- sword-fish gill apparatus, hydrodynamic functions *(Russian)* 3—24742

biological macromolecules *see macromolecules; molecular biophysics*

biological membranes *see biomembranes*

biological sciences *see biology*

biological specimen preparation
- cell vertical section prep. for electron microscopy, cultivated anchorage-depend. cells 3—53899
- cryoultramicrotomy, recognition of artifacts 3—53905
- cytoskeletal elements of cells, three-dimens. organisation study, polyethylene glycol technique improvements 3—53897
- embedding plastics for electron microscopy, improved handling method 3—472
- freeze etching system Balzers BAF 400, improved specimen table 3—4727
- freeze substitution sample preparation for ion microscopy of plant tissue 3—53898
- freeze-etch specimens, cooling rate during impact freezing and liq.-jet freezing 3—24682
- frozen biological suspensions for electron microscopy 3—44364
- heating water treatment for Cryo-SEM of helminths and medical insects 3—48454
- light and electron microscopic comparative studies, procedure for specific section area selection 3—15303
- liquid scintillation counter sample prep., combustion technique for ^{3}H, ^{14}C, ^{51}Cr sample 3—21596
- low-temperature SEM and TEM techniques 3—58887
- microscope sections of hard substances 3—9804
- microscope stand for use with LKB Ultratome III and cryokit 3—44366
- microscopic phase objects, rapid fabrication method 3—16412
- molecular weight determination, electron scattering, STEM 3—39753
- myocardial tissue, normal and ischemic, prep. for SEM 3—53904
- PIXE analysis sample prep. 3—9739
- plant cuticular surfaces, easily damaged, evaluation of prep. methods for SEM 3—53896

biological specimen preparation continued
- plastic embedded tissues, grinding method for producing large area sections 3—4731
- protozoa rapid freezing, relative cooling efficiency of various fluids 3—15302
- rapid-freeze deep-etch replica method for unfixed tissues and cells, cryomicrotomy appl. 3—15297
- tissue preservation, low temp. techniques for CTEM and STEM 3—24929
- tissue sections, semithin, embedded in GMA and Quetol 523, microscopy in backscatt. electron mode of identical sites 3—15298
- tissue sections, semithin, embedded in Quetol 651, light and electron microscopy of identical sites 3—15299

biological techniques and instruments
- *see also biological specimen preparation; biomedical equipment; biomedical measurement; microelectrodes; specimen preparation*
- absorption coefficient meas., thermal pulse decay method 3—46418
- accelerometer device, use for human energy expenditure estimation 3—9810
- achromatising lens, modified, for optometry 3—19848
- acoustic determinants of respiratory system properties 3—9791
- action potential clamp as a test of space-clamp effectiveness—the Lettvin analog axon 3—48453
- activity recording in sleep research, transducer design and placement 3—19864
- L-amino acids, positron emitting, for protein synthesis meas. 3—4649
- aquatic animals, heart beat monitoring using US stethoscope 3—44370
- area detectors for recording X-ray diffr. patterns 3—4692
- ARGUS-2 multichannel X-ray diffractometer for protein struct. determ. using synchrotron radiation 3—37742
- artificial membrane props. obs., conductance meas. instrument 3—58605
- auditory evoked responses elicitation technique using bone-conducted stimuli for animal research 3—58884
- autofluorescence emission spectra from neuronal lipopigment 3—24928
- automated flow microfluorometer and cell sorter incorporating nuclear electronics 3—53894
- autoradiographic grain counting by fully automated image analysis 3—9805
- autoradiographic methodology in biological and medical research, review from historical viewpoint 3—19862
- autoradiography, quantitative macroscopic with ^{14}C, sources of error 3—58878
- backscattered electron image detector, particles in paraffin sections of human tissue 3—39754
- backscattered electron imaging for the life sciences 3—15305
- bibliography of microscopic equipment, methods, biomedical applications 3—44917
- biomagnetic field meas., SQUID gradiometer fine adjustment *(German)* 3—44360
- biomagnetic instrumentation development, review 3—29801
- biomechanics, kinematic variables derived from accelerometer and photographic meas., combination 3—4709
- biomechanics cinematography, calc. of derivatives from digital information 3—4708
- biomechanics cinematography, comparison with direct force meas. in pole vaulting 3—4523
- biomechanics cinematography, data editing 3—4711
- biomechanics cinematography, design of digital filter to eliminate HF noise from incontiguous film coord. data 3—4706
- biomechanics cinematography, determ. of sensitivity to error sources and target configuration of kinematic variables 3—4713
- biomechanics cinematography, dynamic film anal. system 3—4702
- biomechanics cinematography and high speed photography, conf., San Diego, USA (Aug. 1981) 3—10
- biomechanics cinematography and high-speed photography, timing signal generation and film annotation 3—4700
- biomechanics cinematography laboratory, light considerations 3—4698
- biomechanics cinematography laboratory development, human engineering considerations 3—4699
- biomechanics photography, electronic flash in data acquisition 3—4701
- biomolecular imaging, FIM principles and selected appl. 3—20954
- biotelemetry of animals 3—15312
- bipolar electrodes, small diameter, concentric, method for fashioning for nervous tissues stimulation 3—58885
- bipolymers phase transitions obs., DPS calorimeter for heating and cooling modes meas. 3—35044
- blood, sedimentation, photoacoustic spectroscopy study 3—19852
- blood cells, lanthanide-binding, mag. separation 3—35042
- blood material interactions, test devices development 3—53891
- blood pressure radiotelemeter for small animals 3—15311
- blood serum proteins, elemental anal. after pre-irradiation separation by gel filtration 3—9807
- body motions, image sequence anal. methods 3—15306
- bone elec. cond., 5-point electrode method 3—4491
- brain, electrical activity, microelectronic electrode probe for investigations 3—35050
- brain function study using single event related pots., feature extraction algorithm 3—15308
- calorie measuring device, microcomputer-controlled, human basal metabolism and exercise appl. 3—4741
- cardiac muscle, isolated, data acquisition and on-line anal. of expts. with a PDP-12/PDP-11 system 3—19865
- cardiac output values, technique for determ. in rapid succession using conductivity cell 3—19855
- cell counting, automated, in tissue sections, multiple grey level analysis 3—4725
- cell dynamics, computerised anal. of cell structure changes 3—19676
- cell image acquisition system 3—19874
- cell image anal., Fourier transformation for chromatin texture and shape 3—29809
- cell image segmentation method based on two-dimens. histogram 3—24936
- cell refractometry and NMR techniques for malignant rat liver tissue water content meas. 3—19861
- cells, sorting system using laser fluoresc. and scatt. 3—53893
- cells and ferritin-bound particles, high gradient mag. capture 3—35041
- cells and tissues cryopreservation, heat transfer from warm plates to liquid N$_2$ obs. 3—35051
- cellular action currents magnetic field meas., using superconducting magnetometer 3—29802

biological techniques and instruments continued
- cerebrospinal fluid bulk flow, clearance of albumin from mouse subarachnoid space 3—4735
- chromosomes, high resolution banded, image restoration and iterative processing 3—24844
- cinematography data systems at the Naval Biodynamics Laboratory 3—4704
- colour measuring techniques, development at Osaka Branch of Electrotechnical Laboratory *(Japanese)* 3—36056
- colour metric as a tool for cytologic image anal. 3—24938
- computer generation of surface distribution maps of measures of brain activity 3—4696
- computer graphics analysis of left-ventricular contraction mechs. 3—4533
- corneal endothelial specular-micrograms, computer anal. 3—39757
- Crawford-cell exposure system automation, for laboratory animals irradiation (225-500 MHz) 3—9800
- d'Arsonval's calorimeter: measurement of animal heat, 1877 3—30575
- density dilution method, circulation research, review 3—48458
- density gradient separation methods, evaluation, erythrocytes appl. 3—29797
- dental enamel, electron microscope image content meas. using a digital-optical process 3—4697
- dicentric chromosomes, automatic detection system 3—29808
- dielectrophoresis, appls. to cell dielec. props., cell sorting and cell fusion determ. 3—15307
- differential method for measuring impedance properties of bone 3—29792
- digital image processor for biological cell structures 3—39755
- direct difference infrared cell for studying the hydration of protein glasses 3—4717
- DNA, isodisperse, improved technique for strand break anal. 3—29804
- DNA structure probe, ^{125}I-labelled DNA ligand 3—58890
- double-barreled electrode for simultaneous iontophoresis and single unit recording during movement in awake monkeys 3—58882
- eardrum impedance of human ears, meas. method 3—39752
- EEGs quantitative analysis, artificial intelligence methods 3—34999
- EELS, detection limits, definition 3—34185
- elastic loading system for ventilatory studies in small animals 3—58881
- electrical tissue impedance spectra measurement by computer 3—39758
- electrocutaneous stimulation, comparison of subdermal vs. surface methods 3—9813
- electrode spot-welding device for electrophysiological appls. 3—19866
- electrogastrography in dogs, waveform anal. by coherent averaging 3—34826
- Electrolyte 2 Analyzer for Na and K quantitative determ. in biological samples 3—19851
- electron micrograph correlation averaging of a regularly arranged bacterial cell envelope protein 3—4724
- electron micrograph image analysis system, plant cell nucleus ultrastructure, automatic diagnosis 3—9566
- electron micrographs, estimating radial distribution function of protein particles in membranes 3—29791
- electron microscopic ultrastructural obs. of mouse fertilisation in vivo 3—4721
- electron microscopy, high resolution, improved low dose technique, corrective focusing method 3—10952
- electron microscopy, HV, top-bottom effect rel. to max. observable thickness 3—15300
- electron microscopy, methods for averaging non-periodic objects and distorted crystals 3—19867
- electron microscopy, multiple image integration method 3—4726
- electron radiation damage to hydrated specimens in wet gas environment rel. to microscope exposure 3—15159
- electron scattering in ice and organic materials 3—24927
- electronic autoradiography of living human cells with MWPC 3—44354
- EM exposure systems for exposing mice to 2450 MHz fields 3—39750
- EM fields, moving animal, elec. field visualisation by numerical calc. 3—29806
- EM valve for rebreathing exercise studies 3—19857
- epithermal neutron activation anal., I conc. in blood serum determ. 3—4336
- EPR saturation transfer spectra, microwave and modulational field inhomogeneities, cavity Q effect 3—4722
- EPR zeugmatography with modulated mag. field gradient 3—4613
- ergometer for concentric and eccentric muscular exercise in human subjects 3—24923
- evoked potential data management 3—15309
- evoked potentials thresholds estimation using a lab. computer 3—58883
- eye lens motion in rat, meas., microwave-induced, using laser interferometer 3—35049
- eye movement response to horizontally moving object, meas. system *(Japanese)* 3—44372
- facial nociception in rats, descending modulatory system effects, behavioural model, equipment for study 3—4734
- fast atom bombardment mass spectrometry 3—16453
- FET cascode preamplifier design criterion for interference minimisation 3—24930
- fibre optic Doppler anemometer for sperm mobility meas., bovine fertility prediction appls. 3—44350
- fibre optic scattering monitor for use with bulk opaque material 3—1779
- flow cell for blood platelet adhesion studies 3—44349
- flow dialysis, membrane pot. and proton gradient meas. rel. to electron donors 3—29796
- fluid shear stress effects on living cells obs. using cone-plate viscometer 3—29803
- fluorescence recovery after photobleaching, membrane lateral mobility detect. 3—9794
- fluorescent probes, improved, for biomembrane rapid pot. changes meas. 3—4691
- foliar injury eval., digital image processing in polarised light 3—4714
- forced excitation techniques for respiratory mechs. characterisation 3—9792
- Fourier transform IR spectroscopy obs. of protein adsorption at mol. level 3—9798
- fractal analysis and stereological evaluation of microstructures 3—53314
- frequency meter, instantaneous, for neuronal activity, use with multi-trace CRO 3—44369
- glass microelectrodes, fabrication with microprocessor control 3—53900
- goggles, yellow and luminance-matched neutral, reaction time to spatial freqs. 3—53670
- graphic displays of combined presentations of acoustic and articulatory information 3—35033

biological techniques and instruments continued
- grating visual evoked cortical pots. in laser bioeffects evaluation, instrumentation 3—35032
- gripping stub for multilaminous biological specimen exam. 3—4728
- head, human, composite physical model 3—35047
- histology as a method for determining thermal gradients in heated tumours 3—15293
- holographic microscopy, automated, computer simulation of 3D imaging 3—24933
- human whole-body radiofrequency absorption studies using a TEM-call exposure system 3—29793
- hygroscopic radioactive aerosols for inhalation studies, apparatus for generating 3—53857
- image analysis, use in measuring neuritic outgrowth from goldfish regenerating retinal explants 3—58886
- impact simulator for human head, expt. and modal anal. 3—15129
- impact testing of humans, targets for 3D tracking 3—4705
- implantable bipolar integrated micropower LV temp. controlled oscillator, body temp. meas. appl. 3—44361
- in-flow chromosome fluorescence meas., improved accuracy by digital processing of multi-parameter flow data 3—58892
- inertial response study, human, camera and site calibration for 3D target acquisition 3—4712
- intact biological systems, ^{31}P NMR external reference 3—48455
- integrated tracer kinetics system for studying C uptake and allocation in plants using continuously prod. $^{11}CO_2$ 3—15304
- IR optometer, continuously recording, for ocular accommodation changes meas. 3—39749
- label triangulation by small angle neutron scatt. 3—53908
- laser cytophotometer of the through-flow type *(Russian)* 3—44348
- laser Doppler anemometry apparatus for meas. on individual red blood cells 3—9795
- laser Doppler velocimeter with optical fibre, appl. to blood flow velocity meas. 3—19873
- laser Doppler velocimetry device for cell electrophoretic mobility determ. 3—9796
- laser light scatt. for determ. of undeformable erythrocytes in blood samples 3—24918
- laser radiation, biological and medical appls. 3—58769
- leaf surface preparation for SEM, comparative study 3—44365
- light and electron microscopic comparative studies, procedure for specific section area selection 3—15303
- light microscopes, Jena 250-CF range, Jenaval and Jenamed models 3—384
- light microscopy, high resolution, TV system for point counting morphometry 3—390
- linear imaging systems, focus adjustments 3—20894
- lip and jaw movements, optical recording system 3—9802
- lipid bilayers, solventless, interfacial tension measurement method contact angle at Plateau-Gibbs border 3—53890
- liquid samples, interferometric meas. method of ultrasonic attenuation 3—58876
- lumbar vertebrae of a primate exposed to Z-axis vibr., acceleration meas., technique and obs. 3—29605
- macromolecular crystallography using X-ray diffractometer based on spherical drift chamber 3—2335
- macromolecular imaging, 2D crystn. technique, antigen-antibody-complement complexes appl. 3—35048
- macromolecule structure neutron diffr. studies 3—44198
- magnetic sedimentation of protein molecules 3—48450
- magnetically coupled multimicroelectrode for neurophysiological recording, development and characts. *(Japanese)* 3—19850
- mass spectrometry of large, fragile, and involatile molecules 3—19544
- mass spectrometry with membrane catheters, ventilation-perfusion ratio distribs. determ. 3—24922
- microcalorimeters used as thermal power meters, test and calibration process 3—4733
- microcoaxial electrode designed for unit recording from human peripheral nerves, props. 3—29798
- microelectrode, 12-fold, for recording from vertically aligned cortical neurons 3—29799
- microfluorometer, computer-controlled, laser illum., lectin-erythrocyte interaction study appl. 3—35038
- microholography of living organisms 3—19870
- microphotometry advances, tissue sections obs. 3—24934
- microscope, reflected light, Jenamed fluoresc., for medical and biological laboratories 3—4719
- microscope stand for use with LKB Ultratome III and cryokit 3—44366
- microscopes, transmitted-light Jenamed series, for medical and biological routine exam. 3—4718
- microscopic equipment, methods, appls. and related topics, publications 3—16106
- microscopic images of human cerebral cortex, semi-automatic analysis using grey level index 3—44363
- microscopic obs. on endogenous fluorochromes in nerve fibre excited by He-Cd laser 3—4732
- microscopy, combined phase and reflection contrast, cellular contact form. and motility analysis 3—9803
- microwave broad-band temp. controlled exposure system for study of cellular bioeffects 3—35040
- microwave Hall effects in low-mobility materials, improved meas. technique 3—29794
- microwave hyperthermia, local, at 2.45 Ghz, temp. controlled, dynamic 'in vivo' performance 3—4740
- microwave power absorption in biological specimen in standing-wave irrad. waveguide 3—34890
- middle ear, electronic model 3—53695
- mirror stereophotogrammetry, human movements anal., spatial localisation with multiple perspective views 3—35046
- mm wave irradiation and meas. system for cell suspensions 3—24932
- monoenergetic neutron activation anal., appl. in medicine and biology 3—4646
- Mossbauer experiments, dose rate to inner ear 3—58681
- multichannel recordings and real time current source density anal. in central nervous system of Locusta migratoria 3—29789
- multielemental trace anal. by synchrotron radiation induced X-ray fluoresc. 3—34657
- multiple choice apparatus for electrophysiological investigations of spatial working memory in rats 3—29800
- multiple neural signals, comparison of classification techniques 3—19854

biological techniques and instruments continued
multiwire linear detector for X-ray time resolved meas. for biological structure study 3—1131
multiwire proportional chamber, use for DNA-repair deficient cells identification 3—19776
multiwire proportional chamber as area sensitive detector for X-ray protein crystallography 3—1137
multiwire proportional chamber method for direct screening of mammalian cell colonies 3—29805
muscle, time resolved meas., count rate capability of detectors 3—4693
MWPC, digital imaging of regional glucose metabolism, heart 3—53895
myocardial lipids, prelabelled with radioiodinated fatty acids, radiochromatographic microanal. 3—53640
myography electrode, implantable, for recording muscle activity in freely moving small animals 3—9799
nerve impulses, Daisy 12 system for stimulation signals and for acquisition of analogue data *(French)* 3—39751
neurophysiological single unit activity, method for long-term artifact-free recording in animals 3—44368
neutral carrier Na$^+$-and Ca^{2+}-selective microelectrodes for intracellular application 3—35034
neutron activation analysis, normal levels of total body Na and Cl in humans 3—53903
neutron diffraction technique for cryst. proteins 3—24669
neutron scattering applications in molecular biology 3—53907
neutron scattering in molecular and cellular biology, review 3—15036
NMR, four-dimens., spatially resolved high resolution spectroscopy 3—45181
NMR, solid-state, multinucl. approach to proteins and nucleic acids 3—44357
NMR introscopy, a new method for biophys. research and medical diagnostics 3—44353
NMR spectroscopy of living cells 3—44371
NMR spectroscopy using ^{31}P for in vivo tumours 3—4723
NMR studies of metabolites in living tissue 3—39756
olfaction and measurement of olfactory evoked potentials *(Japanese)* 3—39661
olfactory evoked potentials, human, for odorant stimuli synchronized with respiration, meas. 3—39662
on-line analysis of electrical signals from skeletal and cardiac muscle cells 3—19875
optical and electron microscopy, advances, book 3—10536
optical contrasting methods, intermediate image system 3—4720
optical dark ground microscopy with detuned interference filters 3—25943
optical method for investigating microwave absorpt. characts. of DNA and other biomols. in soln. 3—58874
optical methods of fractionating cell populations 3—44352
optical microscopy, 3-D image processing for eval. of chromatin struct. of cell nuclei 3—29807
optical microscopy, metaphase selection by analysis of the Fourier transformed image 3—24939
optical microscopy and image processing, individual sarcomere length determ. from isolated cardiac cells 3—35035
optical microscopy uses in medical research and practice 3—34933
optical mixing, use in phospholipid vesicles suspension heterogeneity anal. 3—24919
optical total internal reflection fluorescent microscopy, cell/substrate contact region obs. 3—44362
optical video-enhanced microscopy with a computer frame memory 3—40682
optically coupled stimulus isolation headstage for brain study 3—4736
osmolality, molecular weight and activity coeff. determ. using vapour pressure osmometer 3—35043
paravalbumin, Tb-labelled, in soln., anomalous X-ray scatt. using synchrotron source 3—53637
passive motion resistance, computer based instrument for anal. 3—15310
phantom model of man, induced elec. fields meas. system and obs. 3—24931
photoacoustic spectroscopy for plant productivity assessment 3—15295
photographic photometry of UV fluoresc. 3—9793
photon scattering, gel microviscosity and channel size probe, sickle haemoglobin appl. 3—58889
physiological signals, online method for reliable detection of waveforms and event estimation 3—15294
PIXE analytical technique using target intermediate air press., plant material obs. 3—53472
plant tissue remission and transmission spectra measured in glass cuvettes, correction technique 3—39748
pneumotachograph, Fleisch, for gas viscosity meas. 3—19858
pneumotachometer characteristics computerised determ. using calibrated syringe 3—19856
point projection imaging of unstained ferritin mols. on W substrate 3—4729
polyacrylamide gels, local protein distrib., photoacoustic spectroscopy study 3—19853
polyaldehyde microspheres, fluoresc. or mag., probes for cell membranes 3—4715
positron emission tomography using ^{82}Rb, blood-brain barrier permeability changes evaluation in monkey and man 3—48383
protein crystallography, least squares refinement and scaling procedure 3—34772
protein crystallography, MWPC area detector for synchrotron X-radiation diffr. and scatt. 3—1135
protein crystallography, phase extension and refinement by electron density modification 3—34770
protein crystallography, small angle diffraction and scattering, data collection facility 3—24921
protein crystallography using synchrotron X-radiation electronic area detectors 3—1134
protein single cryst. growth in micro gravity field *(German)* 3—8958
protein structures, comparison of atomic coords. using least squares technique 3—15292
protein/polymer films exam., microprocessor-controlled photon-counting spectrofluorometer appl. 3—49472
proteins, paramagnetically shifted NMR resons. detection using super WEFT pulse sequence 3—48456
proteins, stereochemistry, constrained-restrained least-squares macromolecular model building computer program, appl. to lysozyme 3—39585
proteins electrophoretograms, two dimensional, quantitative anal. by shape fitting 3—29371

biological techniques and instruments continued
psychoacoustic measurement, microcomputer controlled system *(Japanese)* 3—19849
psychophysical methods and human vision studies *(Japanese)* 3—19708
quadruped postural responses study system using multiple plate dynamometer and electromyograph 3—15296
radioactivity detector for HPLC separation of radiolabeled molecules 3—9790
radiometer, 1 to 2 GHz, for subcutaneous tissue temp. meas. 3—4739
rat, heat flow meas. by linear Fick's law calorimeter 3—5526
rat tail tendon fibres, axial phase velocity at 100 MHz by ultasonic microscopy 3—58877
relativistic heavy ion beam anal. spectrometer for biology and nucl. physics expts. 3—44355
respirator for NMR physiological obs. of small animals 3—19859
retinotectal map in Xenopus, order, technique for labelling growing nerve fibres 3—34841
RF electric field probe, diode detector response linearisation, biological appl. 3—35976
RF radiation biological affects study, exposure methods and dosimetric techniques 3—53902
Riken SSC, irrad. beam channel, biological and phys. appl. *(Japanese)* 3—9806
sarcomeres of contracted muscle, accuracy of length meas. by laser diffr. 3—44351
scanning acoustic microscopy, biology and non-destructive evaluation appls. 3—42086
sclerotic arteries vascular anastomoses, mech. behaviour, X-ray vasography 3—34875
sedimentation field flow fractionation, biological appls. 3—19869
SEM, bibliography of appl. to plant parasitic nematodes 3—49103
SEM, contrib. to internal cell struct. viewing, review 3—53906
SEM of tissue response to irrad. 3—15162
serial optical section recording with simple device, cell behaviour analysis 3—4730
serial section no. required for volume of structure reconstruction 3—19863
shutter for UV irradiation, for cellular effects, obs. 3—58888
SIMS applications in analysis of human organs *(Japanese)* 3—48457
single erythrocyte rigidometer as a reference for RBC deformability 3—48451
smooth muscle, method for simultaneous detect. of motility and myoelec. activity 3—24920
specimen protection in electron microscopes 3—19868
split laser technique for optical study of the cryst. lens 3—9789
SQUID magnetometer, use in middle ear research 3—9797
stereo display system for binocular depth perception meas. *(Japanese)* 3—19860
stereophotogrammetric system for kinesiological studies 3—53901
strain gauges, embedding within curing bone cement, technique 3—24926
strain gauges, encapsulated micro-miniature rosette, fabrication technique, in vivo implantation in rats 3—29795
subcutaneous tumours, Faraday shield surface-coil technique for NMR study 3—15301
submersible fluorometer for chlorophyll detect. 3—35301
subtractive image restoration, practical appls. 3—6896
sweat anal., PIXE anal. conditions 3—44356
synchrotron X-radiation, uses in biomolecular crystallography 3—58891
tendon fibers, rat tail, axial US phase vel., 100 MHz, US microscopy 3—48317
theodolites, determ. of Kendrew-model coords. of KDPG aldolase 3—58880
thoracic airways, human, charting by aerosols 3—44358
tibia, human, technique for in vitro meas. of principal strains 3—24925
time resolved meas., data acquisition system 3—4695
time resolved X-ray meas. using 1D and 2D detectors, requirements and practical experience 3—4694
tissue properties, in vivo US meas., technique and obs. 3—48318
titration of protein residues, Hill plot for NMR data 3—9552
topical magnetic resonance, medical and biological appls. 3—39704
total lymphoid irradiation in the Wistar rat: technique and dosimetry 3—58879
tracer method for glucose turnover rate meas., accuracy 3—44359
transmural cardiac pressures, estimation during ventilation with PEEP 3—29592
TV microscopy of sub-cellular particles, computer vision and sampling 3—24935
twin-beam laser velocimeter for the investigation of spermatozoon motility 3—35037
urine, iodinated biomolecules and chlorinated pesticides determ. by neutron activation anal. 3—9808
US applications to veterinary diagnostics 3—4716
US determination of erythrocyte deformability 3—4690
US resonator, differential, for studies in lipid bilayer membranes 3—4472
US technique to meas. muscle stiffness changes during contraction 3—4737
ventilator system, servo, microcomputer-controlled 3—4689
vertebral column segment testing, technique for in vivo loading conditions duplication 3—58875
video array processor, image anal. appl. 3—24940
video eye position detector, noise tolerance 3—9811
video sinusoidal grating generator for vision testing 3—9812
videography, high-speed, instrumentation and procedures, sports anal. and sports equipment testing appl. 3—4703
virus models, icosahedral, X-ray crystallography, mol. replacement method at low resolution 3—34771
visual contrast sensitivity, psychophys. and evoked pot. methods comparison 3—24730
visual evoked potentials, enhancement by adaptive processing 3—24937
voltage clamp processor system for biomembranes 3—48452
voltage-sensitive dyes, use in discerning contraction and elec. signals in the myocardium 3—35036
water doubly labelled method for energy expenditure meas. in humans 3—24924
whole-body calorimeter for humans, technical description and performance characts. 3—35045
X-ray coordinate diffractometer for macromolecular single crystals 3—18189
X-ray diffraction, experiment control and data acquisition system 3—53892
X-ray low angle scattering of chloroplast with CK$_\alpha$ radiation 3—15050

biological techniques and instruments continued
  X-ray microscopy using SEM for central nervous system structure imaging 3—44367
  X-ray mirror with improved refl. *(German)* 3—30968
  X-ray transmission micrographs, image contrast improvement with Ti tube *(Japanese)* 3—4738
  ^{252}Cf evaluation for partial-body prompt gamma in vivo neutron activation anal. 3—9809
  Hg direct determ. in whole blood and serum, quartz 'T' atomiser and C disc technique 3—53624
  ^{125}I, encapsulated sources, apparatus and dosimetry for determ. of mammalian cell RBE 3—9801
  N depth distrib. in single seeds of wheat using ^{14}N(d,p$_0$)^{15}N 3—29790
  Tl(I), NMR studies of ion complexation by gramicidin in non-aqueous and micelle solutions 3—53653
biological transport *see biotransport*
biology
  see also biological fluid dynamics; biological techniques and instruments; biophysics; blood; cardiology; ecology; evolution (biological); medicine; physiology; zoology
  banded corals, Florida Straits, evidence for changes in oceanic ^{14}C during Little Ice Age 3—9938
  benthic animals inhabiting hydrothermal vent areas 3—25138
  Chinese philosophical perspective on mathematics, physics and biology 3—5585
  deep sea prokaryotic organisms living in 105°C environment 3—15045
  forest trees of Amazon Basin, contrib. to atmospheric aerosol 3—4905
  marine biology, relations between reduced gases, nutrients and fluoresc. in surface waters off Baja California 3—20010
  ocean photic zone optical parameters, short-period fluctuations rel. to thermocline fluctuations 3—48571
  synchrotron radiation, application to chemistry and biology, review 3—20963
  Vema Channel-Rio Grande Rise region, Late Quaternary circulation from benthic foraminifera C isotope var. 3—25210
biology computing
  see also computerised instrumentation; computerised signal processing
  AD-MARC, atmospheric dispersion module for assessing radiological consequences of accidental releases 3—34754
  benzenoid hydrocarbons, carcinogenic bay regions, computer, identification and enumeration 3—58593
  biomembranes, chemical oscills. simulation program 3—24689
  brain activity meas., computer generation of surface distrib. maps 3—4696
  cardiac muscle, isolated, data acquisition and on-line anal. of expts. with a PDP-12/PDP-11 system 3—19865
  cell biology, stereology, point counting, BASIC program 3—35039
  cell dynamics, computerised anal. of cell structure changes 3—19676
  cell image acquisition system 3—19874
  corneal endothelial specular-micrograms, computer anal. 3—39757
  Drosophila mutants, visual orientation disturbance, mutants affected in movement and position computation 3—15097
  electrogastrography in dogs, waveform anal. by coherent averaging 3—34826
  electron micrographs, estimating radial distribution function of protein particles in membranes 3—29791
  EMG recordings, detection and classification of single motor unit potentials 3—29538
  EMG studies using population stochastic model of skeletal muscle 3—15057
  evoked potential data management 3—15309
  evoked potentials thresholds estimation using a lab. computer 3—58883
  extracellular space and ion distribs., calc. program in BASIC 3—34792
  foliar injury eval., digital image processing in polarised light 3—4714
  forward ECG calculations, accuracy testing, comparison of methods 3—15062
  His bundle activity, external recording, digital filtering process appl. 3—15243
  human microvascular exchange system, analogue simulation 3—9571
  intervertebral disc, computer graphics illustration of operation 3—4525
  Japanese voiceless fricative consonants, automatic anal. and recognition *(Japanese)* 3—1878
  left-ventricular contraction mechs., computer graphics anal. 3—4533
  passive motion resistance, computer based instrument for anal. 3—15310
  prey-catching behaviour, neural model of interaction of tectal columns 3—15080
  protein structures, comparison of atomic coords. using least squares technique 3—15292
  proteins, secondary structure plotting, Applesoft BASIC program 3—32254
  three-dimensional heart wall motion tracking, graphics method for cineangiography 3—15196
  US computerized tomography, corrections for refraction 3—4576
  X-ray diffraction, experiment control and data acquisition system 3—53892
biomagnetism
  auditory evoked magnetic fields, response amplitude vs. stimulus intensity 3—15105
  auditory vertex response, EEG and MEG, interstimulus interval depend. 3—34859
  bacterial magnetosomes, morphology and struct. of magnetite particles 3—58693
  bee mag. field perception and iron oxides found in abdomen 3—29584
  bladder stone, human, struct. studied by PMR and IR spectra 3—44194
  blood cells, lanthanide-binding, mag. separation 3—35042
  blood cells in plasma, high gradient mag. separation 3—34798
  blood component fractionation using high gradient mag. separation 3—34926
  bones, magnetic, in human sinuses 3—29582
  carbonic anhydrase, water exchange at active site, OH- and H$_2$O-models synthesis 3—44200
  cardiac conduction system, human, mag. field patterns, computer simulation 3—39664
  cardiac metabolism, rot., 2-dimens. P NMR exchange spectrosc. investig. 3—58597
  cardiovascular alterations in Macaca monkeys exposed to stationary mag. fields, ECG and blood press. obs. 3—58712
  cells, living, NMR spectroscopy 3—44371
  cells and ferritin-bound particles, high gradient mag. capture 3—35041
  cellular action currents magnetic field meas., using superconducting magnetometer 3—29802
biomagnetism continued
  collagen-water system, NMR cross-relax. expts. 3—58598
  cortical magnetic fields evoked by freq. glides of continuous tone 3—48301
  eddy currents induced by RF magnetic fields in biological bodies 3—24787
  elasmobranch fishes, elec. and mag. field detect. 3—29619
  ELF magnetic fields in electrosteel and welding industries 3—24786
  epileptic patients, biomag. obs. of spontaneous brain activity 3—48300
  erthrocytic malate- and lactate-dehydrogenase, haemoglobin and isoenzyme spectrum. mag. field effects in mice 3—9665
  erythrocytes, magnetic separation and behaviour in high gradient field 3—53707
  erythrocytes, solitary, human, mag. susceptibility obs. 3—29581
  erythrocytes sedimentation profiles under gravity, effect of inhomogeneous mag. field 3—39607
  eye movement measurement using double mag. induction 3—9688
  female urinary incontinence treatment, mag.-system for urethral closure *(German)* 3—9778
  ferrimagnetic particles in the lung, model of magnetisation and relax. 3—19734
  field sources for bioelec. and biomag. fields 3—4490
  haemoglobin, paramag.-diamag. switching tuning and reversible combination of O$_2$ with heme Fe^{2+} 3—29583
  human brain size, coevolution and paleolithic culture in Northern hemisphere rel. to geomagnetic intensity 3—4517
  hyperthermia by mag. induction, phys. characts. of technique 3—29692
  inhomogenous regions effects on magnetic fields, theory 3—36905
  instrumentation development for magnetic field meas., review 3—29801
  intact biological systems, ^{31}P NMR external reference 3—48455
  intracellular motion and viscosity probed by mag. particle method 3—58618
  LSA tumours, pulsed mag. field modulation in mice 3—29614
  lungs of miners, magnetopneumography, mag. field study, lung model 3—39665
  magnetotactic bacteria, birefringence determ. of mag. moments 3—9635
  neuromagnetic localisation of epileptiform spike activity in the human brain 3—29585
  neurons of edible snail, effect of permanent mag. field on electrophysiological parameters 3—24784
  NMR introscopy, a new method for biophys. research and medical diagnostics 3—44353
  protein, aromatic ring motion model, n.m.r. relax., fluorescence depolarization 3—44201
  protein molecules, mag. sedimentation 3—48450
  pulsed magnetic fields, biological effects, bone fraction therapy appl., review 3—44270
  purple photosynthetic bacteria, photophys. processes in light-collecting pigments, mag. field influence 3—34880
  red blood cells, high-gradient mag. separation, transverse particle trajectories 3—34797
  review of magnet Biology *(Japanese)* 3—15123
  rhodopsin, mag. susceptibility considerations 3—39663
  weak biomagnetic field meas., SQUID gradiometer fine adjustment *(German)* 3—44360
  X-irradiated mouse survival, low intensity infralow freq. mag. field influence *(Russian)* 3—19766
  Fe$_3$O$_4$, magnetite, biogenic in bacteria, animals and man 3—15124
  O$_2$ dissolved in aq. soln., conc. redistrib. under strong DC mag. fields 3—33968
biomass conversion *see bioenergy conversion*
biomechanics
  see also biological fluid dynamics; biorheology
  above-knee amputees, computer simulation for stump loading prediction, prosthesis fitting appl. 3—53714
  activity recording in sleep research, transducer design and placement 3—19864
  angular displacements in the upper body of AK amputees during level walking 3—34877
  ankle, human, stiffness dynamics rel. to displacement amplitude 3—24766
  ankle, human, stiffness dynamics rel. to mean torque 3—24765
  ankle joint, voluntary oscillations, mech. reson. 3—48312
  ankle joint biomechanics 3—9650
  aortic tissue, passive, human, failure props., uniaxial tension tests 3—24775
  aortic tissue, passive human, failure props., biaxial tension test 3—48307
  arm, human, biomech. anal. of stabilisation during force prod. 3—24770
  arm abduction, biomech. anal. of deltoid functions 3—4524
  arm spasticity, instrument for meas. 3—4664
  arterial smooth muscle, determinants of mech. performance 3—4534
  arterial tissue, contribs. to nonlinear characterisation, review 3—4536
  arterial wall model, 2-layer, parameter anal. 3—4538
  arterial walls, canine, mech. instabilities, theory of aneurysm formation in abdominal aorta *(Japanese)* 3—39679
  arteries, elastic and muscular, biomech. and reactivity 3—4535
  articular cartilage, compliance and its variation through thickness 3—53717
  balance platform centre of press. data, display method 3—24901
  balance recovery during fall forward 3—29602
  biceps brachii, human, level of excitation rel. to series elastic component compliance *(French)* 3—58708
  body motions, image sequence anal. methods 3—15306
  bone, adaptive remodelling, influence of strain rate 3—24768
  bone, mineral content, rel. to strength characts., hypodynamic conditions 3—34992
  bone, tibia, mech. props. nonuniformity, effect of functional adaptation 3—34874
  bone, tubular, internal stresses rel. to elec. fields 3—53716
  bone, US measurements of deer antler, bovine tibia and tympanic bulla, mech. props. 3—24789
  bone compact tissue, deform. rate effect on mech. props. 3—53715
  bone marrow pressure changes rel. to cellular egress 3—4519
  bone tissue, in vivo meas. of mech. props., osteosynthesis anchorage appl. 3—44268
  breathing, airways compressibility identification methods 3—9656
  bronchomotor responses of isolated sheep airways to electrical field stimulation 3—39668
  cardiac and skeletal muscle, book 3—58709
  cervical spine motion in sagittal plane, radiographic technique for parameters determ. 3—29703

biomechanics continued
- Charnley 'load angle inlay' knee prosthesis, kinesiologic and biomech. assessment 3—4680
- chest wall mechanics in dogs with acute diaphragm paralysis 3—29591
- chest wall mechs., theoretical anal. 3—29601
- cinematography, algorithm for minimising effect of LF errors in derived kinematic variables 3—4707
- cinematography, calc. of derivatives from digital information 3—4708
- cinematography, comparison with direct force meas. in pole vaulting 3—4523
- cinematography, data editing 3—4711
- cinematography, design of digital filter to eliminate HF noise from incontiguous film coord. data 3—4706
- cinematography, determ. of sensitivity to error sources and target configuration of kinematic variables 3—4713
- cinematography, dynamic film anal. system 3—4702
- cinematography and high speed photography, conf., San Diego, USA (Aug. 1981) 3—10
- cinematography and high-speed photography, timing signal generation and film annotation 3—4700
- cinematography data systems at the Naval Biodynamics Laboratory 3—4704
- cinematography laboratory, light considerations 3—4698
- cinematography laboratory development, human engineering considerations 3—4699
- cinematography of reptiles, quadrupeds, and bipeds, review 3—4710
- collagen, mech. destruction, electrophoretic and ESR obs. 3—48233
- condylar knee prostheses, fixation of femoral components 3—9781
- cone-shaped carotid sinus, stresses and strains rel. to baroreceptor functions 3—24767
- conference, Nijmegen, Netherlands (Jan. 1982) 3—20567
- cornea, isochromes and isoclines calc. 3—48283
- cranial system, human, free-vibr. anal. 3—9651
- cutting of soft tissue, ordinary and ultrasonic, comparative anal. 3—29781
- dental amalgam, tensile and shear adhesion to tooth struct. in selective interfacial amalgamation 3—53886
- dental implants, Al_2O_3 and C, bone-implant interface stiffness rel. to surrounding stress profile 3—58867
- diaphragm, normal human, force-length relationship 3—29595
- diaphragm action on rib cage inferred from force-balance analysis 3—24755
- diaphragm fatigue, press. and contraction timing effects 3—39673
- diaphragm volume displacement and length changes during breathing 3—24754
- disc pressure measurements when rising and sitting down on a chair 3—15126
- dolphin, actively swimming, dynamic press. distrib. 3—9659
- dropfoot brace mechanism, kinematic requirements, ankle joint analogues 3—4681
- electrogoniometer, digital, for limb joint motion range assessment 3—44338
- electrogoniometry system using a microprocessor for clinical use 3—9766
- EM wave induced vibrs. in the eye, acoustic wave generation 3—19758
- EMG gait patterns of calf muscles, changes with walking speed 3—39618
- endoprosthetics, developments in transducer stems for mech. coupling meas. 3—15282
- energy expenditure meas. in humans by doubly labelled water method 3—24924
- energy expenditure of humans, estimation using an accelerometer device 3—9810
- engineering in medicine and biology, conf., Philadelphia, USA (Sept. 82) 3—10511
- erythrocyte compressibility, US vel. meas. 3—19674
- eukaryotic flagella, 3D mechs. 3—34791
- eye, biomechanics, muscular stress calc., in humans 3—9580
- eye deformation measurement by laser interferometry 3—15180
- femoral head osteonecrosis, nonlinear finite element anal. of some early collapse processes 3—9655
- fertility of male mice after exposure to high environmental press. 3—39674
- foetus movements, human, near to CPM 3—39680
- force fatigue in humans, EMG power spectrum, high-to-low, ratio change 3—39619
- forces under the foot, transducer for shear components meas. 3—35006
- gait, human, multi-channel radio telemetry system for anal. 3—15191
- gingival tissue inflammation scoring, use of force-indentation probe 3—24900
- handgrip measurements variability 3—44340
- head, human, composite physical model 3—35047
- head, human, impact simulator, expt. and modal analysis 3—15129
- head movements, parameterised model, appl. to dynamics and control of normal and abnormal movements 3—15139
- heart, left ventricular pumping, compliance descriptor anal. 3—58711
- hemiplegia, biomechanics of functional electrical stimulation 3—34879
- hemiplegic gait improvement rel. to stride time-distance parameters 3—4531
- hip, human, passive elastic moment 3—29600
- hip joint, human, finite element study 3—4526
- hip joint prosthesis material, technical and biomech. tests *(German)* 3—58872
- hip nerve block, biomech. and clinical assessment in unilateral osteoarthrosis 3—4527
- hip prosthesis, total: stresses in femur, cement and implant 3—35024
- impact force attenuation during landing from vertical free fall, humans 3—9649
- impact testing of humans, targets for 3D tracking 3—4705
- inertial response study, human, camera and site calibration for 3D target acquisition 3—4712
- intervertebral disc, computer graphics illustration of operation 3—4525
- ischium, press. beneath, detect. using a pedobarograph 3—9648
- joint and muscle forces calc., optimisation methods appl. 3—44267
- joint stability and ligament function, apparatus for anal. 3—4665
- joint vibration, human, capture and anal. using a microcomputer 3—48440
- kinematic variables derived from accelerometer and photographic meas., combination 3—4709
- kinetic limitations of maximal sprinting speed 3—48311
- knee, total arthroplasticity, tibial component design analysis 3—48449
- knee joint, stiffness characts., math. model 3—48306
- knee joint stiffness, analytical technique for modelling, ligamentous forces 3—24781
- left ventricle mechanics theory 3—4520

biomechanics continued
- left ventricle wall motion, amplitude and timing, from digitised angiograms 3—29743
- left ventricular mechanics, anal. during filling, isovolumic contraction, and ejection 3—39666
- left ventricular strain and stress under isovolume contraction, finite deform. theory *(Japanese)* 3—58707
- leg biomechanics rel. to joint replacement 3—48315
- lips, human, phys. props., expt. and theoretical anal. 3—24772
- load cell system for foot press. anal. 3—9765
- lower limb amputees, max. end-wt.-bearing obs. 3—34878
- lower limb energy interchanges during swing in treadmill running 3—48310
- lower-extremity disability in erect standing, biomechanical evaluation in humans 3—34873
- lumbar trunk loads in tasks involving bends and twists, anal. and meas. 3—9653
- lumbar vertebrae of a primate exposed to Z-axis vibr., acceleration meas., technique and obs. 3—29605
- lumbar vertebral segment, human mechanical model *(French)* 3—48314
- lung, acoustic determinants of respiratory system properties 3—9791
- lung, axial distortion of airways 3—58703
- lung, elastic properties in acute induced asthma 3—58701
- lung, rat, mech. props. during postnatal development 3—19741
- lung deformation problems, elasticity anal. 3—9638
- lung lobe, dog, vascular resistance and compliance distrib. 3—19743
- lung mechanics in air- and liquid-filled rabbit lungs, temp. effects 3—24751
- mammalian muscle contractions and ATPase activities, temp. dependence 3—24680
- martensitic transformations rel. to biological processes 3—44192
- Meek grip analyser 3—19838
- metacarpophalangeal joint stiffness meas., finger arthrograph 3—24899
- mitral valve, frequencies calc. 3—19736
- moments of force and mechanical power in jogging 3—48313
- motor unit properties in intact cats, physiological characterisation, axonal and mech. props. 3—53656
- movements, human, anal., spatial localisation with multiple perspective views by mirror stereophotogrammetry 3—35046
- muscle, elastic nature and torsional wave propag. 3—44262
- muscle, striated, vertebrate, rigor state, lateral forces in filament lattice, osmotic press., electrostatic press. 3—53708
- muscle motor element mobilisation control by energy expenditure optimisation *(French)* 3—29588
- muscle stiffness changes during contraction, US meas. technique and obs. 3—4737
- muscular exercise, concentric and eccentric, ergometer for human subjects 3—24923
- myocardial relaxation mechanics, appl. of model to isometric and isotonic relax. in rats 3—24771
- myocardium, appls. of body forces concept 3—44261
- myocardium, mech.-metabolic coupling on elec. stimulation 3—24744
- myocardium mechanics, interrelationship with cardiohaemodynamics, in expt. cardiac tamponade 3—34876
- myoelectrical activity of human muscles in vertical jumps, potentiation 3—29532
- nail plate implants, multi-channel telemetry system for in vivo loads 3—24914
- neuromuscular disorder patients, reliability of dynamometry 3—15248
- orthodontic appliances, force generation 3—24917
- passive motion resistance, computer based instrument for anal. 3—15310
- patello-femoral joint biomechanics: contact, congruity and movement study 3—44265
- patello-femoral joint biomechanics, effect of simulated femoro-tibial varus deformity 3—44266
- pelvic ring fractures, unstable, external fixation, comparative rigidity of some current frame configurations 3—19847
- phospholipid bilayers, charged, effects of monovalent ion binding and screening on measured electrostatic forces 3—34784
- photography, electronic flash in data acquisition 3—4701
- photomechanical responses in crustacean retinula cells: the role of microtubules 3—34847
- piezoelectricity and biological materials, review 3—29530
- plantar pressure recording devices, evaluation using a pedobarograph 3—9764
- proximal femur, stress distrib. after surgical replacement: effects of prosthesis and surgical techniques 3—4521
- pulsed muscle stimulation, computer-controlled movement for patients *(German)* 3—15275
- quadruped postural responses study system using multiple plate dynamometer and electromyograph 3—15296
- respiratory load compensation, effective elastance components, maturational changes in human newborns 3—24756
- respiratory system compliance as seen from the cardiac fossa, dog expts. 3—19737
- saccadic eye movements, velocity calc., frequency limitations of two point central differentiation algorithm 3—15082
- sclerotic arteries vascular anastomoses, mech. behaviour, X-ray vasography 3—34875
- skeletal muscle, length-tension and contractile props., hindlimb immobilisation effects 3—29590
- skin, human, mech. props., response to small tensile loads in vitro 3—4528
- skin damping in whales during active swimming, self-adjustment *(Russian)* 3—24741
- squatting and rising from a deep squat, forces involved 3—4529
- stepping generator, two compartment model, anal. of roles of stage setter and rhythm generator 3—48278
- stereophotogrammetric system for kinesiological studies 3—53901
- strain gauges, encapsulated micro-miniature rosette, fabrication technique, in vivo implantation in rats 3—29795
- tendo-achilles, rat, traumatised, mech. props. and effect of an anti-inflammatory drug on repair props. 3—24769
- tendon and skin, biomechanical properties rel. to long term glucocorticoid treatment and food restriction 3—9647
- tendon healing biomechanics, tensile parameters obs. in rats 3—29604
- tensile 'skeletons' scaling: structs. with scale-independent length dimensions 3—15133
- three-dimensional heart wall motion tracking, graphics method for cineangiography 3—15196
- tibia, chicken, idiopathic scoliosis, stress relax., torsional testing 3—48309
- tibia, human, technique for in vitro meas. of principal strains 3—24925

biomechanics continued
  tibial prosthetic components, variables affecting fixation 3—4682
  tissue elasticity rel. to Prager's 'locking media' 3—4537
  tissues, fibrous connective, constitutive relations, general multiaxial theory 3—48305
  torsional strength comparison of vascularised and nonvascularised bone grafts in dogs 3—24773
  trachea, canine, direct in vivo meas. of elastic props. 3—24779
  tracking and chasing, houseflies, 3-D flight trajectory anal. 3—29586
  trajectory formation and handwriting, computational model 3—29587
  valve-aorta unit, mech. characts. 3—29606
  velocity signals related to hand movements recorded from red nucleus neurons in monkeys 3—4493
  vertebral column segment testing, technique for in vivo loading conditions duplication 3—58875
  videography, high-speed, instrumentation and procedures, sports anal. and sports equipment testing appl. 3—4703
  work of a T-6 paraplegic propelling a wheelchair and arm cranking a cycle ergometer 3—4522
biomedical applications of computers *see medical computing*
biomedical electronics
  see also electrocardiography; electroencephalography; microelectrodes; patient monitoring; patient treatment; prosthetics; sensory aids
  aids for the disabled and the elderly 3—15278
  applications review 3—39730
  balneologic cardiomonitor for use in bath and mud therapy 3—24896
  body temperature, meas. using plastic chip Si transistor 3—4662
  cerebellar stimulator, externally programmable, implantable, integrated 3—15291
  circulation parameters, visualisation by electronic oscillography *(German)* 3—34997
  conductance meas. instrument, artificial membranes props. obs. 3—58605
  demodulator, pathological tremor EMG appl. 3—53878
  ear design, cochlear microphonics changes rel. to white noise and NaCl crystal appl. in guinea pigs' ears *(Korean)* 3—24737
  ECG, simulator for sequence of R-waves, standard generator use 3—24898
  ECG/EEG common mode rejection ratio analyser 3—53877
  EEG, spike-wave activity, analog machine detect., special purpose electronic circuit 3—35002
  electrosurgery simulation, programmable variable waveshape modulator 3—9777
  field effect transistors, ion-sensitive *(French)* 3—19840
  heart, heart rate monitor, portable, with 3-digit LCD display 3—9693
  heart monitoring, microprocessor-based systems 3—48438
  isolating biopotential single-transformer amplifier 3—24897
  medical radiology CCTV digital noise reducer 3—4674
  microcomputerised biomedical signal processing, ECG, EEG waveform analysis *(Korean)* 3—19834
  monitoring system, bedside, modular measurement units 3—58858
  nerve conduction velocity estimation using evoked responses, matched filters appl. 3—39731
  ophthalmological setup using microprocessor based METROPHOR system 3—35012
  pulmonary artery pressure ambulatory monitoring, solid state recorder 3—15249
  radiotherapy, films digitisation for construction of tissue compensators, electronic device 3—29709
  respiration transducer based on graphite strain gauge 3—15246
  semiconductor devices, chem. sensitive *(French)* 3—19840
  signal monitoring, photocoupler for power isolation, cct. 3—44341
  somatosensory evoked pots., instrumentation factors in stimulus artifact reduction 3—15262
  surgery, intermittent thermistor switching for thermal cutting or coagulation instrument *(German)* 3—35019
  tomography, positron emission, count loss prediction 3—53838
  voltage-triggered system for adaptive sampling in body surface mapping 3—9768
biomedical engineering
  see also biomedical electronics; biomedical equipment; orthotics; patient treatment; prosthetics; sensory aids
  cardiac function evaluation, engineering approaches, review 3—48436
  cardiology applications 3—48435
  conference, Philadelphia, USA (Sept. 82) 3—10511
  conference on health care engng., Philadelphia, USA (Sept. 1982) 3—10517
  imaging techniques, applications, limitations, risks 3—39742
  optical technology in future biomedical science appls. *(Japanese)* 3—15182
  polymers, biomedical appls. *(Japanese)* 3—48439
  research in New Delhi, some aspects, review 3—15250
  review of contribs. and consequences 3—15247
biomedical equipment
  see also biomedical electronics; biomedical measurement; orthotics; prosthetics; radiography; radioisotope scanning and imaging; sensory aids
  abdominal US, real time scanners and the future 3—4580
  acoustic holographic equipment, cancer in abdomen diagnosis appl. *(Czech)* 3—50850
  acoustical impedance meter for stapedius metering and tympanometry 3—58759
  ambulatory ECG, Pathfinder system, computer assisted data anal. *(German)* 3—24895
  ambulatory ECG monitors, design of QRS and noise detectors 3—19836
  American Optical SR-IV programmed subjective refractor: principles of design and operation 3—24833
  Anger and multicrystal cameras, ^{178}Ta count rate limitations 3—48398
  angio-haemodynamical unit 3—58793
  angiographical X-ray units 3—58792
  arm spasticity, instrument for meas. 3—4664
  arrhythmia monitoring systems, computerised, review 3—15254
  autostereoscopic viewing device for tomographic scans 3—58775
  balneologic cardiomonitor for use in bath and mud therapy 3—24896
  battery operated monitor/defibrillator used for prehospital care, eval. 3—15277
  biomagnetic instrumentation development, review 3—29801
  blood pressure transducer system, disposable 3—15251
  body surface ECG mapping system, microprocessor based, for pot. patterns dynamic obs. 3—35007
  body surface potential mapping system with microprocessor, potential pattern dynamic obs. *(Japanese)* 3—58855
biomedical equipment continued
  brachytherapy, remote after loading units, mech. damage to small spherical ^{137}Cs sources 3—34966
  cardiac converging collimators for paediatric use, resolution and sensitivity 3—48397
  cardiac impedance meter, used for modulus/phase meas. *(Spanish)* 3—39738
  cardiac tomography, quadrant slant-hole collimator 3—4631
  cardiotocograph, gynaecologic diagnostic instrument based on US Doppler technique 3—58756
  cardiovascular simulation pogrammable pulse generator *(Spanish)* 3—15067
  cassetteless Bucky radiography and planigraphy *(Japanese)* 3—4642
  catheter tip pressure transducer for use in infant lung function tests, assessment 3—19835
  CCU arrhythmia monitor system, computerised, performance 3—15252
  chest radiography, phys. characts. of 4 proposed roentgenographic chains 3—29701
  Clinac 4/100, tissue phantom ratios 3—9755
  cold air production apparatus for bronchial challenge 3—53879
  collimator effects in high resolution X-ray CT 3—19799
  collimator for scintillation camera, variable angle slant-hole, resolution and sensitivity using ^{99}Tc source 3—34961
  computerised tomography, support device for obtaining direct coronal scans of the pelvis and lower abdomen 3—15217
  computerised tomography scanner, Siemens, SOMATOM 2, acceptance tests and patient dose meas. 3—4618
  computerised tomography scanners, practical method to meas. MTF 3—9724
  conference on health care engng., Philadelphia, USA (Sept. 1982) 3—10517
  cryosurgery, design philosophy of simple instruments 3—35020
  cryosurgical apparatus, design and technical features 3—35021
  CT, automated performance test of Somatom-2 scanner using phantom 3—53802
  CT, dynamic spatial reconstructor, 3D spatial, density and temporal resolution 3—58777
  CT scanner, contrast-detail-dose and object-detectability curves, energy depend. 3—53777
  CT scanner quality assurance protocol 3—48399
  CT systems, square wave response function determ. using phantom 3—53803
  Curietron afterloading unit, dosimetry of cervical cancer intracavitary gamma therapy *(Russian)* 3—48409
  Diagnost 73 P in paediatric radiology 3—19808
  diagnostic US, computer anal. and diplay modes 3—15172
  diagnostic X-ray tubes, focal spot size meas. 3—4622
  diathermy applicator using open-ended circular waveguide 3—34932
  diathermy equipment, meas. of elec. and mag. stray fields prod. by electrodes 3—24832
  difference compensators for radiotherapeutic tissue compensation 3—19814
  digital fluoroscopy Unit of Georgetown Univ. 3—15227
  digital radiography, fibre optically coupled diode array system 3—53813
  digital radiography system, contrast signal generation, beam hardening, radiation scatt. effects 3—53798
  digital radiography system, spatial resolution, contrast, quality control 3—53799
  digital subtraction angiography, procedure and results using a conventional X-ray fluoroscopic unit 3—34958
  digital subtraction angiography using a temporal bandpass filter: initial clinical results 3—29712
  digital subtraction angiography using a temporal bandpass filter: associated patient motion properties 3—29713
  digital video subtraction angiography equipment, technique rel. to conventional angiography 3—4620
  digital X-ray imaging device for radiation therapy verification 3—15210
  dual collimator design for beat-to-beat measurement of cardiac performance with an Anger camera 3—4632
  Dynaray 18 accelerator, dose rate variation obs. 3—9745
  ECAT III, positron tomography, design considerations 3—53839
  ECG, simulator for sequence of R-waves, standard generator use 3—24898
  ECG Holter tape anal., multiprocessor system 3—4673
  ECG monitoring equipment 3—44337
  ECG suction electrodes with external vac. pump for investigs. during phys. exertion 3—9775
  EEG, electrode cap evaluation 3—35003
  EEG recording balanced non-cephalic reference electrode system, ECG rejection *(Japanese)* 3—58853
  Ektacytometer for erythrocyte deformability measurement, clinical utility 3—19793
  electrochemical O_2 partial pressure analyser with automatic temp. compensation 3—9367
  electrogoniometer, digital, for limb joint motion range assessment 3—44338
  electrogoniometry system using a microprocessor for clinical use 3—9766
  electroluminescent display visual stimulator—a new method for visual evoked potential studies 3—58850
  electron applicator assembly on a linear accelerator, radiation leakage 3—9725
  electronics applications review 3—39730
  electrooculogram and eye position, combined recording during controlled room illumination, device *(French)* 3—58857
  electrosurgical dispersive electrodes, effect of gelled-pad design on performance, thermal anal. 3—24911
  EM blood flowmeter, noninvasive, theoretical aspects and technical evaluation 3—19794
  EM flowmeter, rapid technique for dynamic calibration 3—19790
  EMG, microcomputer-based signal anal. instrument 3—4669
  EMG, real-time analysis using multiple microprocessor system 3—19827
  EMG amplifier, gain compensation, equiv. elec. representation of sweat layer 3—48431
  EMG silent period, microcomputer based meas. system 3—9767
  EMG surface signals, acquisition and processing with a low-cost microprocessor based system 3—24902
  EMI CT5005 whole body scanner, radiation dose reduction using a Cu wedge 3—15229
  endocavitary irradiator: two modifications for improved utility 3—58785
  endoscope, gradient index, chromatic aberration correction 3—39701

biomedical equipment continued
endoscopic photography using white-light flashlamp-pumped dye laser 3—50675
exhaust instrument for leaking gas detect. in lung function testing with ^{133}Xe *(Japanese)* 3—29711
facial movement meas., US apparatus 3—34921
fibre endoscope, objective of simple design *(Russian)* 3—48367
fibre optic endoscope, therapeutic equipment for Ar laser photocoagulation *(Chinese)* 3—15178
fibre optics appls. in medicine 3—24834
fibre optics for endoscopic CO$_2$ laser surgery 3—53745
filter for contaminant electrons in MV photon beams, evaluation of Pb acrylic 3—53848
finger arthrograph for metacarpophalangeal joint stiffness meas. 3—24899
fixed-angle emission tomographic cardiac imaging systems, phys. comparison 3—34964
flow cytofluorometry for gynecologic cytology, multibeam interferometer as screening system 3—24835
fluorescent screen-isocon camera system for X-ray imaging in radiology, evaluation 3—9727
fluorography, digital, imaging device, image quality evaluation using phantom 3—53800
fluorography, digitally controlled beam attenuator development 3—53883
fluoroscopic imaging systems, contrast ratio evaluation 3—53810
force-indentation probe, appl. to gingival tissue inflammation scoring 3—24900
gamma camera, ^{201}Tl imaging artifacts rel. to NaI crystal hydration 3—48396
gamma camera, rotating conventional, for single-photon tomographic system, physical performance 3—48377
gamma camera collimator, MTF and contrast detail image evaluation tests 3—53882
gamma camera for emission computed tomography *(Hungarian)* 3—24855
gamma-gamma coincidence scintigraphy with the scintillation camera, advances 3—24862
graticule for MV X-ray port films evaluation 3—44320
grids in mammography 3—48401
gynaecology, real-time ultrasonography using a mech. sectorscanner 3—4579
HEADTOME-II circular detector array hybrid ECT *(Japanese)* 3—4638
hearing aid test system accuracy, revised estimates 3—24817
heart monitoring, microprocessor-based systems 3—48438
heart-rate variability monitor, microcomputer-based 3—48430
heat rate monitor, design 3—39739
heavy metal foils, use for radiographic dose reduction 3—19813
HIDAC, electron avalanche chamber with wire chamber for positron emission tomography 3—53825
hot-film anemometer used for human blood vel. determ., patient safety unit 3—4668
hygroscopic radioactive aerosols for inhalation studies, apparatus for generating 3—53857
hyperthermia applicator using cylindrical dipole array, cancer treatment, deep heating 3—4615
hyperthermia therapy equipment for cancer, local 3—15179
image intensifier tube contrast, in field meas., 1981 3—53809
image quality improvement for medical objects when using digital and optoelectronic devices 3—4569
image quality improvement with high-speed film/screen combinations 3—58809
image scanner OSIRIS, for fluoroscein angiography, still photo sequence functional imaging 3—24872
implantable microwave radiators for clinical hyperthermia 3—24841
intra-oral cone for an 18 MeV linear accelerator 3—4623
intraoral cone for electron beam therapy with an 18 MeV linear accelerator, characts. 3—44321
intravenous angiography, performance of X-ray imaging systems 3—9711
isolating biopotential single-transformer amplifier 3—24897
Jarvik artificial heart, peripheral instrumentation 3—15286
joint stability and ligament function, apparatus for anal. 3—4665
Krioelektronika-1 cryogenic dental unit 3—58864
laser fluorescence-absorption measuring device for in-situ organ metabolism investigation 3—53751
laser future appls. in medicine and surgery 3—53749
laser immunology, current instrumentation value and limitations 3—53746
laser in veterinary medicine, overview 3—53748
laser medicine and surgery 3—53744
laser scanning ophthalmoscope with active focus control 3—24910
laser surgical system new generations 3—53752
lasers in medicine *(French)* 3—15186
lasers in medicine and surgery, conf., San Diego, CA, USA (Aug. 1982) 3—49071
lens applicator for localized microwave hyperthermia, elec. field *(Japanese)* 3—48373
light microscopes, Jena 250-CF range, Jenaval and Jenamed models 3—384
load cell system for foot press. anal. 3—9765
mammographic examinations, quantitative eval. of screen film combinations, comparison by ROC analyses 3—29725
Maximar-100 X-ray therapy machine, filter thickness rel. to exposure rate 3—9715
Medicor products, up-to-date angiographic unit and radiographic working places 3—4636
MEDICYC cyclotron, 150 kV DC dry feedthrough 3—17137
Meek grip analyser 3—19838
metal heart marker position, recognition and storage from biplane X-ray images, microcomputer-based instrument 3—39708
micro-movement transducers as an aid in EEG interpretation 3—4661
microanalysis system of PPM-order ^{10}B conc. in tissue for neutron capture therapy 3—44312
microscope, reflected light, Jenamed fluoresc., for medical and biological laboratories 3—4719
microscope photometer, computer controlled 3—39705
microscopes, transmitted-light Jenamed series, for medical and biological routine exam. 3—4718
microwave (2450 MHz) diathermy applicator, assessment for hyperthermia 3—53769
microwave multiapplicator systems for focused hyperthermia, evaluation, cancer therapy appl. 3—53759
microwave therapeutic applicators, new class for diathermy and hyperthermia 3—24840

biomedical equipment continued
mobile radiography, automatic exposure control device, clinical evaluation 3—34969
Mobilett, a new mobile X-ray generator to the intensive care unit 3—34957
monitoring system, bedside, modular measurement units 3—58858
monolithic pressure-pH sensor for esophageal studies 3—48444
morphofunctional tomography, techniques *(Italian)* 3—39706
multichannel dynamic radiograph, microprocessor controlled, cardiac appl. 3—19810
muscle fatigue monitor, noninvasive device for observing localised fatigue by EMG meas. 3—19829
neonatal ventilator eye support system, fail safe microprocessor controller 3—29783
neutron irradiation facility, (γ, n) in heavy water moderator, effects on beam quality 3—53772
neutron leakage characteristics in high energy medical accelerators 3—19820
neutron therapy results rel. to machines available 3—15200
NMR flowmeter, in vivo evaluation, human forearm blood flow obs. 3—34942
NMR imaging, conf., London, England (Mar. 1982) 3—3
NMR magnet design for anal. and imaging 3—30916
NMR scanners, fundamental limits to sensitivity 3—53756
nuclear medicine, conf., Kekesteto, Hungary (1981) *(Hungarian)* 3—14
nuclear medicine, methods and means of visualisation, rel. to γ-chambers, review *(Russian)* 3—15193
nuclear medicine, metrological supervision of radionuclide calibrators with ionisation chambers *(Hungarian)* 3—58789
nuclear medicine conf., Budapest, Hungary (Sept. 82) *(Hungarian)* 3—15
nuclear medicine imaging instrumentation, review *(Hungarian)* 3—4624
nuclear medicine instrumentation problems, troubleshooting 3—15203
nuclear medicine scanner, 3D, for direct imaging without image reconstruction using a coincidence technique 3—15197
nuclear track detector, CR-39, appls. in medicine and technology 3—36628
ophthalmological setup using microprocessor based METROPHOR system 3—35012
optical fibre variable section delivery system of high-power laser radiation for surgical use 3—39700
optical instrument advances in Japan *(Japanese)* 3—15181
optical microscopy uses in medical research and practice 3—34933
optical mid-IR transmitting fibre fabrication for medical appls. 3—50767
optical scanner as an aid in simulating treatment with CT data 3—58761
optical system demands and conditions for medical engng. instruments 3—34934
organic glass rules for determ. of level correl. between computerised tomograms and standard roentgenograms *(Russian)* 3—58770
PANGIOMAX system for cerebral and abdominal stereoscopic magnification angiography *(Japanese)* 3—4640
phantom for mapping slice thickness in X-ray CT 3—15195
phonopneumography, automated flow-gated apparatus, vesicular lung sound amplitude mapping 3—24816
piezoelectric earphones for artefact-free recording of auditory brainstem responses 3—53739
PIOTRON: initial performance, preparation and experience with pion therapy 3—15199
plantar pressure recording devices, evaluation using a pedobarograph 3—9764
pneumotachometer, improved nasal mask, appl. to neonate ventilation 3—39736
pneumotachometer characteristics computerised determ. using calibrated syringe 3—19856
pneumotachometric measurement of forced expiration, dynamic error for max. vol. vel. 3—9774
POLYP, biological dosimetry by aberration scoring 3—29765
portable ECG event detector 3—48432
positron camera, multiwire proportional chamber, imaging performance 3—24874
positron computed tomography, multilayer scanner, image forming performance analysis 3—53774
positron emission CT, anatomical localisation using a specially designed headholder 3—58772
positron emission tomography, BGO crystal—photosensor combinations, assessment 3—53827
positron emission tomography ring camera, single-slice design, Monte Carlo simulation 3—48407
positron imaging with a dense drift space multiwire proportional chamber 3—9706
positron tomograph, BGO scintillation camera 3—53826
positron tomography, high resolution system, BGO crystal, HI$_2$ photodetector 3—53828
positron tomography ring sensitivity-aperture response, circular tomography 3—53829
pressure transducer, piezoresistive, monolithic IC, biomedical appl. 3—4675
proton accelerator, energy necessary for choroidal melanomas treatment 3—58787
proton therapy, automated range compensation system 3—9723
pulmonary artery pressure ambulatory monitoring, solid state recorder 3—15249
pulmonary functions meas. instrument, microprocessor-based, for critically-ill newborn infants 3—15253
RACAPS, semiautomated chromosome karyotyping system 3—29695
radiation control equipment in medical institutions *(Russian)* 3—48410
radio telemetry system, multichannel, for human gait anal. 3—15191
radiographic digital image processing system 3—53788
radiographic digital systems, area and line scanned detectors, technology overview 3—53784
radiographic grid performance, scatter field characts. 3—53807
radiographic screens, high-speed rare-earth and par-speed, clinical comparison for diagnostic efficacy and radiation dosage 3—15218
radiographic screens, MTF noise-power and detective quantum efficiency 3—49520
radiographic spectrometers, energy dispersive, signal processing velocity improvement *(Hungarian)* 3—24852
radiographic tubes, focal spot sizes meas. utilising star test patterns at low mag. factors 3—53849
radiography, cassette performance evaluation, phys. factors affecting patient exposure and image contrast 3—58800

biomedical equipment continued
- radiography, digital, line-scanned, contrast resolution, tumour simulation using phantom 3−53776
- radiography, electrostatic X-ray image recording methods 3−58794
- radiography, fluoroscopes, C-arm, radiation exposure 3−58824
- radiography, linearity, film density and exposure 3−58782
- radiography, shaped Pb-loaded acrylic filters for patient exposure reduction and image quality improvement 3−58804
- radiography, Ta air-interspaced crossed grid, design and performance characts. 3−29717
- radiography digital system, noise props. characterisation and meas. 3−53786
- radiotherapy, use of match-line wedge for MV radiation field matching 3−58786
- radiotherapy by 4-MeV linear accelerator, computer controlled conformation technique *(Japanese)* 3−48390
- radiotherapy compensating filter system consisting of simulator mounted camera and light beam device 3−9697
- radiotherapy patients positioning using laser and interference transmission grating 3−53770
- rare-earth film-screen systems, comparative evaluation 3−9731
- rare-earth intensifying screens, various, rapidly occurring radiographic processes detect. 3−34956
- respiration monitoring in infants, long-term, comparison of impedance and press. capsule monitors 3−44339
- respiration transducer based on graphite strain gauge 3−15246
- respiratory and anaesthetic gas analyser using flueric jet-edge resonator oscillators 3−44336
- respiratory function monitoring system using impedance pneumography, microprocessor-based 3−4667
- retinal vessls, electro-optical system for non-invasive oximetry 3−9700
- RETINOPHOT 211, stereoophthalomoscopy and stereophotography of fundus oculi 3−34937
- RF hyperthermia for cancer therapy, device for non-invasive local deep heating 3−9694
- RF surgery equipment *(German)* 3−35018
- RF surgery equipment *(German)* 3−58862
- Roentgen densitometer as a noninvasive means for infant intracardiac shunts detect. 3−53843
- rotary positron tomography, POSITOLOGICA II, quad-detect. arrangement and sampling characts. 3−19800
- rotation therapy using a novel high-gradient filter 3−29716
- Rotterdam teletransducer, telemetric device for epidural press. meas. 3−34998
- scanning laser ophthalmoscope, image control 3−15190
- scintillation camera, quality control using orthogonal-hole test pattern 3−34970
- scintillation chamber, MB 9100 type, MTF study *(Hungarian)* 3−58790
- SCT-200N CT scanner *(Japanese)* 3−4639
- sensors, phys. and chem. for medical instrumentation 3−48437
- shear transducer for meas. of forces under the foot 3−35006
- shoe, instrumented, for ambulatory meas. of orthogonal components of ground reaction forces *(Japanese)* 3−19832
- Sinuscan, a hand held ultrasonic unit to detect maxillary sinusitis 3−48355
- slant-hole collimator: noncardiac, nontomographic appls. 3−4629
- solenoidal-type hyperthermia systems in cancer therapy, theoretical temp. distribs. 3−9696
- SPRINT, stationary detector single photon ring tomograph for brain imaging 3−9712
- stereo display system for binocular depth perception meas. *(Japanese)* 3−19860
- stereotactic system, improved, for CT aided neurosurgery 3−29741
- stomatology, X-ray equipment 3−58779
- superconducting magnet for whole body NMR-imaging 3−34947
- superposition analyser for nuclear diagnostic examination *(Hungarian)* 3−24854
- surface bolus material for high-energy photon and electron therapy 3−48403
- surgery, intermittent thermistor switching for thermal cutting or coagulation instrument *(German)* 3−35019
- Surgery Microscope Model 212 applic. to ENT photography 3−34936
- Surgery Microscope Model 230 applic. in restorative and plastic surgery 3−34935
- tele-Co unit, computer controlled 3−44322
- telemetry, 104 MHz, normal-mode helical aerial 3−24836
- tomographic attachment for zone recording in X-ray diagnostic equipment 3−24847
- tomography, emission, dual sensors, seven pinhole, orthogonal detectors, 3-D imaging 3−53833
- tomography, linear orientation system, microprocessor control 3−53808
- tomography, noise characteristics, projection reconstruction, 2-D Fourier transforms 3−53761
- tomography, positron emission, 5 slice whole body detector, performance 3−53840
- tomography, positron emission, engineering developments at UBC-TRIUMF 3−53834
- tomography, positron emission, time of flight, reconstruction image error estimates 3−53836
- tomography positron emission, time of flight, whole body camera, results 3−53841
- transfer shielding window for X-ray operating unit 3−24893
- TV ophthalmoscopy and fluoroscopy of fundus oculi 3−34939
- TV system for the positioning correl. between computed tomographs and conventional radiographs 3−58781
- ultrafiltration monitor for haemodialysis research 3−48448
- urologic image intensifier for combined fluoroscopy and fluorography 3−19807
- US hyperthermia, focused transducer design 3−48359
- US linear scanner, portable *(Japanese)* 3−4581
- US mammographic viewer playout system, rapid review of multiple images 3−34919
- US piezoceramic probes fabrication technology effects, medical diagnostics appl. *(Czech)* 3−24815
- US pulse-echo refl. from test object cylindrical reflectors 3−19786
- US therapeutic instruments, testing and calibration, rel. to transducer effective radiating area 3−9684
- US therapy, development of improved heaters for superficial tissue heating 3−29678
- UVA fluorescent lamps, UVB content rel. to erythemal effectiveness in human skin 3−58763

biomedical equipment continued
- UVA meter for monitoring the irradiance within a photochemotherapy unit 3−34944
- vapour pressure osmometer for osmolality, molecular weight and activity coeff. determ. 3−35043
- ventilatory volume monitor, non-invasive 3−4666
- video patient repositioning system for computed tomography and radiation therapy 3−53778
- videofluorography and pulsed fluoroscopy, combined system, clinical experience 3−29720
- viewing system, 3D, for tomographic scan interpretation 3−29721
- water-bed scanner system for US transmission pictures without hazard *(German)* 3−34916
- wedge filter, Al, for improved arch aortograms 3−48404
- WHA-10 mobile X-ray unit for surgical use *(Japanese)* 3−4644
- whole-body computerised tomography scanner, Model TCT-80A, resolution, detectability 3−34971
- X-ray, video-fluoroscopic CT scanner for dynamic vol. imaging of moving organs 3−9709
- X-ray apparatus, resolving power, simple device for determ. *(German)* 3−54822
- X-ray diagnostic systems, system structure choice 3−9705
- X-ray image intensifiers, image quality aspects 3−24859
- X-ray medical systems, spatial resolution optimisation of moving object imaging 3−24875
- X-ray tube operated with exposure meter, power-variation law choice 3−9704
- X-ray unit, kV test cassette calibration 3−53818
- CdTe(Cl), portable γ-sensitive detector, collimation and spatial props. for biotelemetry 3−58783
- CsF scintillators for time-of-flight positron tomography, timing props. 3−44313
- He-Ne laser, reprographics, optical storage, gauge and medical appls. 3−56271
- Pt electrode polarisation, onset of nonlinear behaviour in freq. and time domains, medical appl. 3−15267
- Si diaphragm pressure sensors using Kanda effect 3−281

biomedical measurement
- *see also biological techniques and instruments; biomedical equipment; electrocardiography; electroencephalography; radiography; X-ray apparatus*
- arterial volume measurement using X-ray imaging and solid state imaging sensor *(Japanese)* 3−19805
- auditory evoked potentials, simultaneous recording and separation of early and middle latency pots. 3−15245
- balance platform centre of press. data, display method 3−24901
- bi-directional ultrasonic Doppler blood flow measurement with direct single-sideband separation *(Chinese)* 3−39698
- biomagnetic instrumentation development, review 3−29801
- blood density, continuous recording, cardiovascular dynamics study appl. 3−9772
- blood EM flowmeter, rapid technique for dynamic calibration 3−19790
- blood flow, instantaneous volumetric, rel. to CW Doppler US recordings, theoretical model 3−29681
- blood flow, instantaneous volumetric, rel. to CW Doppler US recordings, canine expts. 3−29682
- blood flow, instantaneous volumetric, rel. to CW Doppler US recordings, power spectra calc. 3−29683
- blood flow and velocity meas. in vivo by electromagnetic induction 3−34927
- blood flow meas., photoplethysmography appl. 3−34945
- blood flow meas. and partition coeff. of ^{133}Xe in bone 3−15212
- blood flow measurement, appl. of props. of thermal waves in vascular media 3−9769
- blood flowmeter for noninvasive cardiac output meas., computerised Doppler US system 3−4575
- blood pressure measurement, engineering appls. *(Japanese)* 3−19830
- blood serum trace element concentrations in liver and biliary disease 3−9740
- blood serum trace element determ. by neutron activation anal. 3−9738
- body temperature, meas. using plastic chip Si transistor 3−4662
- bone composition analysis using neutron activation and X-ray transmission tomography 3−9735
- bone density, quantitative meas. using γ-ray CT 3−58778
- bone mineral content meas., crossover correction in dual photon absorptiometry with ^{153}Gd 3−24863
- brain trace element studies using instrumental neutron activation anal. 3−9733
- brainstem auditory evoked pots., normative values obtained by digital filtering and automatic peak detect. 3−15106
- cardiac stroke volume radioisotope determ., influence of attenuation 3−4628
- cardiotocograph, gynaecologic diagnostic instrument based on US Doppler technique 3−58756
- carotid wave interpretation using knowledge based system 3−19872
- cerebral blood flow, regional, meas. using continuous inhalation of $C^{15}O_2$ using positron emission tomography *(French)* 3−15205
- cerebral blood flow, regional, noninvasive method for determ. *(French)* 3−15207
- cerebral blood flow meas., conf., Toulouse, France (Sept. 1981) 3−10504
- cerebral blood flow meas. in man, problems, review *(French)* 3−15204
- cerebral blood flow measurement, restoration of contrast by spatial deconvolution *(French)* 3−15206
- circulation parameters, visualisation by electronic oscillography *(German)* 3−34997
- click-evoked human electrocochleogramy noninvasive recording method, origin and physiologic significance 3−34993
- coherent Doppler tomography for microwave imaging 3−49458
- colonic electrical activity, human, quantitative meas. by microcomputerised system 3−35004
- computerised tomography scanners, practical method to meas. MTF 3−9724
- conductance meas. instrument, artificial membranes props. obs. 3−58605
- conference, Sheffield, England (Sep. 82) 3−40310
- cortical evoked potentials following stimulation of the urinary bladder in man 3−35011
- double beam Doppler US method for quantitative blood flow vel. meas. *(Chinese)* 3−9683
- ear, frequency selectivity meas. psycho-acoustical tuning curves determ. *(German, English)* 3−58757

biomedical measurement continued
electrocochleography, bone-conducted, reliability 3—29775
electrooculogram and eye position, combined recording during controlled room illumination, device *(French)* 3—58857
EMG, signal anal. for upper extremity limb function discrimination 3—39732
EMG detection of carriers of Duchenne muscular dystrophy, nearest neighbour decision rule 3—19828
EMG silent period, microcomputer based meas. system 3—9767
EMG surface signals, acquisition and processing with a low-cost microprocessor based system 3—24902
endoprosthetics, developments in transducer stems for mech. coupling meas. 3—15282
epidural pressure meas. by telemetric device, Rotterdam teletransducer 3—34998
EPR zeugmatography with modulated mag. field gradient 3—4613
erythrocyte deformability measurement using Ektacytometer, clinical utility 3—19793
evoked potential testing, introduction and overview 3—15260
eye, slitlamp estimate of anterior chamber depth, rel. to angle structs. gonioscopic visibility 3—19791
eye, smooth pursuit movement vel. in humans, computer technique for determ. 3—35000
eye deformation measurement by laser interferometry 3—15180
eye movement measurement using double mag. induction 3—9688
eyes, angle of deviation, anal. of 7 methods for meas. 3—39728
facial movement meas., US apparatus 3—34921
fluid distribution in legs and arms, elec. meas., estimation of extra-cellular and intra-cellular fluid 3—9773
foetal vessels, quantitative assessment of blood flow by pulse Doppler techniques 3—15170
forbidden indicators in flow measurement using the saline dilution method 3—19837
forces under the foot, transducer for shear components meas. 3—35006
gingival tissue inflammation scoring, use of force-indentation probe 3—24900
haemofiltration, microcomputer-aided processor 3—15270
haemoglobinometry rel. to IR reflectance from whole blood soaked filter paper 3—34943
handgrip measurements variability 3—44340
hot-film anemometer used for human blood vel. determ., patient safety unit 3—4668
imaging techniques, applications, limitations, risks 3—39742
impedance plethysmography, finite element anal. 3—39729
ischium, press. beneath, detect. using a pedobarograph 3—9648
joint vibration, human, capture and anal. using a microcomputer 3—48440
laser scanning ophthalmoscope with active focus control 3—24910
lateral pharyngeal wall position meas. and detection using computerized linear US array 3—48357
liquid scintillation counting for estimation of T in urine, methodology for optimisation 3—58811
liver, trace element distributions, by neutron activation anal. 3—9736
load cell system for foot press. anal. 3—9765
lung, regional extravascular density meas. using positron emission and transmission tomography 3—48382
lung CO diffusing capacity, dynamic meas. using discrete samples of alveolar gas 3—58852
lung density meas. by CT, implications for radiotherapy 3—9716
lung function measurement by optical contouring 3—29696
lung volume in infants and young children, plethysmographic estimation problems 3—24752
lung water, microwave method for estimating average amount 3—24839
mechanical properties of bone tissue, in vivo meas., osteosynthesis anchorage appl. 3—44268
metacarpophalangeal joint stiffness meas., finger arthrograph 3—24899
microbiology, automated rapid detection methods 3—44311
microcirculatory blood flow assessment, laser-Doppler methods appl. 3—34946
microwave thermography of subcutaneous tissue, thermal drift problems 3—4617
monolithic pressure-pH sensor for esophageal studies 3—48444
multi-element analysis of the human body using neutron activation 3—53853
muscle fibre action pot. cond. vel. meas., online technique using surface EMG cross-correl. 3—53880
nerve conduction velocity estimation using evoked responses, matched filters appl. 3—39731
neuromuscular disorder patients, reliability of dynamometry 3—15248
neutron activation analysis, in vivo, interferences 3—24861
neutron activation analysis in biomedical studies 3—9732
neutrons for cancer treatment and physiological tracer studies 3—58812
neutrons in medicine 3—39712
NMR 2-coil method for fluid flow meas., blood appl. 3—9695
non-invasive measurements review 3—24907
noninvasive blood pressure measurement *(Japanese)* 3—19831
noninvasive physiological measurements with positron emission tomography 3—35013
ocular counterrolling measurement using polarised light 3—9691
ocular US biometry, tolerances in eye meas., retinal irradiance calcs. *(Italian)* 3—4572
ophthalmological setup using microprocessor based METROPHOR system 3—35012
optical system demands and conditions for medical engng. instruments 3—34934
organ metabolism in-situ investigation, laser fluoresc.-absorpt. meas. device 3—53751
organ volume determination by single-photon emission CT 3—24856
pachometry: a comparison between touch and overlap measurement method 3—39702
pachometry, review of technique over past 250 years 3—19792
perimetry, layer-by-layer, quantitative tests 3—34994
phonocardiogram, automatic classification by distance measure 3—58755
physiological electrical impedance and its clinical applications *(Japanese)* 3—19833
plantar pressure recording devices, evaluation using a pedobarograph 3—9764
pneumotachometric measurement of forced expiration, dynamic error for max. vol. vel. 3—9774
poststenotic flow, extraction and characterisation of underlying vel. waveforms 3—29769

biomedical measurement continued
pulmonary functions meas. instrument, microprocessor-based, for critically-ill newborn infants 3—15253
QRS duration measurement using high frequency electrocardiography, appl. and limitations of new technique 3—15244
radiotherapy dosimetry, computer-controlled direct tissue max. ratio meas. 3—29757
remote temperature measurement using an acoustic probe, appl. to tumour treatment by hyperthermia 3—10842
respiratory sounds, detect. and discrimination of adventitious frames *(Japanese)* 3—58758
respiratory tract, human, inhaled particle deposition meas. 3—39678
sample preparation in PIXE analysis of biological materials 3—9739
sclerotic arteries vascular anastomoses, mech. behaviour, X-ray vasography 3—34875
short-time-series spectral analysis of biomedical data, review 3—29770
signal maximum freq. indication, minima counting vs. zero-crossing counting 3—39735
signal monitoring, photocoupler for power isolation, cct. 3—44341
skin blood flow rate evaluation by heat flow anal. *(Japanese)* 3—39737
skin differential temp. correlation for ovulation detect. using IR thermography 3—24845
sound pressure measurements in the aided ear, probe placement 3—29680
stroboscopic recording centrifuge technique for erythrocyte deformability meas. 3—53881
thermography in Japan *(Japanese)* 3—44310
thermometry noninvasive, using a clinical CT scanner 3—9721
thyroidal ^{125}I 3—58795
trabecular bone mineral content meas., coherent/Compton scatt. method employing an X-ray tube 3—58796
trace element research, role in health physics 3—9770
TV ophthalmoscopy and fluoroscopy of fundus oculi 3—34939
US tissue characterisation, recent advances 3—35016
ventilatory noninvasive volume monitor using elec.impedance method, cardiac oscill. impedance elimination *(Japanese)* 3—58854
ventricular specialised cond. system of the heart, non-invasive meas. 3—34996
vesicular lung sound amplitude mapping by automated flow-gated phonopneumography 3—24816
visual vergence limits measurement, rot. grid method, line freq. effect 3—53875
vitamin B$_{12}$ absorption, fast method of meas. using a whole-body counter 3—44315
^{56}Fe, in heart, liver, of human, meas. using γ scatt. resonance 3—53821
^{125}I measurement in radioimmunoassay using liq. scintillation counter *(Chinese)* 3—44344
N$_2$O, determ. of content in air using IR gas analyser in hospital environ. *(Hungarian)* 3—39432
Pt baseline determination in biological material 3—9737

biomedical NMR
abdominal nuclear spin resonance diagnostics, perspectives *(German)* 3—58764
blood flow, approaches to NMR imaging 3—53755
blood flow imaging techniques using NMR 3—15189
cardiovascular imaging, conf., London, England (Feb. 1982) 3—4
cerebral and vascular abnormalities visualisation, effects of imaging parameters on contrast 3—9699
clinical efficiency of NMR imaging using short examination times 3—48371
computer simulation, apparatus adjustment *(French)* 3—20881
computer simulation of NMR imaging in substantially non-uniform fields 3—34928
conference, London, England (Mar. 1982) 3—3
conference, optical instrumentation appl. in medicine, New Orleans, LA, USA (May 1982) 3—49072
conference of Biophysical Society, San Diego, USA (Feb. 1983) 3—40309
conference on the future in radiology, London, England (Feb. 1982) 3—10499
diagnostics, display methods for internal human organs *(Danish)* 3—39703
display, three-dimens., of NMR zeugmatographic images 3—15183
flowmeter, in vivo evaluation, human forearm blood flow 3—34942
Fourier transform Nuclear Magnetic Resonance tomographic imaging, computer simulations, imaging methods 3—15184
generalised Fourier NMR imaging methods 3—53757
head imaging by proton NMR, techniques and approaches 3—58762
health effects for in vivo studies, known thresholds 3—48320
images obtained in a 0.12 T resistive magnet 3—53758
imaging, in vivo, techniques and presentation 3—53753
implants, surgical and dental, hazards and artifacts from NMR imaging 3—58766
introscopy, a new method for biophys. research and medical diagnostics 3—44353
magnet design for anal. and imaging 3—30916
methods and instrumentation in NMR imaging *(Japanese)* 3—53762
movie images in real time, rabbit heart obs. 3—9689
multiplanar NMR imaging of the human head 3—48374
nuclear science and power systems, conf., Washington DC, USA (Oct., 1982) 3—44890
optimal sampling method in NMR tomography 3—53742
overview of NMR imaging, impact on medical diagnosis and digital data communications 3—34930
pacemakers, NMR imaging effects 3—58767
review, history physics and appls. 3—48366
review of ^{1}H NMR phys., medical imaging appl. 3—29694
review of medical applications of NMR spectroscopy *(French)* 3—53764
review of NMR and its impact on medical imaging 3—53754
review of NMR imaging fundamentals 3—53763
review of NMR imaging in medical physics 3—44309
safety implications of NMR imaging, follow-up of 181 patients 3—9690
scanners, fundamental limits to sensitivity 3—53756
sensitive point method for localised NMR spectroscopy 3—34940
sensitive point method for spatial localisation of ^{31}P NMR 3—34941
serum, human NMR relax. and malignant neoplasms diagnosis 3—48365
single-coil pulsed-NMR method for fluid flow meas., theoretical and expt. anal. 3—24837
superconducting magnet for whole body NMR-imaging 3—34947
tomography, 3-D interpolation technique, total volume imaging 3—53760
tomography, noise characteristics, projection reconstruction, 2-D Fourier transforms 3—53761

biomedical NMR continued
- topical magnetic resonance, medical and biological appls. 3—39704
- uterus muscle tumor, human, pulsed NMR study 3—53741

biomedical phenomena
- *see also biomagnetism*
- No entries

biomedical ultrasonics
- abdominal surgery, microcomputer system for US incision plane documentation *(German)* 3—58760
- abdominal US, real time scanners and the future 3—4580
- acoustic arrays, cross-coupling compensation by lateral deconvolution 3—50869
- acoustic microstreaming by pulsed radiators 3—46368
- array beam pattern simulator for parasitic lobe suppression 3—4586
- array transducer, sound field 3—1912
- atherosclerosis, quantitative evaluation using Doppler US 3—9682
- attenuation tomography, accuracy enhancement strategies evaluation, computer simulation 3—48351
- B-mode ultrasonogram processing parameters affecting texture 3—4595
- B-scan echography linear array, acoustic field, two dimensional model 3—50870
- B-scan image tomographic reconstruction by integration or convolution 3—4599
- B-scan images, proposed method for evaluation of numerical image anal. 3—29689
- B-scan speckle meas. and analysis 3—4592
- B-scan spherical focusing apertures, pulsed echographic response theory 3—4605
- B-scan ultrasonographic images, noisy, recursive restoration scheme 3—15176
- backscatter and attenuation imaging from ultrasonic scanning in medicine 3—39699
- backscatter quantitative measurements with phase distortions, expt. and computer simulation 3—29676
- bi-directional ultrasonic Doppler blood flow measurement with direct single-sideband separation *(Chinese)* 3—39698
- bibliography 3—25711
- blood, computer-based flow mapping system, intracardiac appl. 3—15174
- blood flow, coherent structure, Doppler US obs. 3—48350
- blood flow, Doppler US signals real-time spectral anal. 3—48348
- blood flow, instantaneous volumetric, rel. to CW Doppler US recordings, theoretical model 3—29681
- blood flow, instantaneous volumetric, rel. to CW Doppler US recordings, canine expts. 3—29682
- blood flow, instantaneous volumetric, rel. to CW Doppler US recordings, power spectra calc. 3—29683
- blood flow meas. using Doppler shifted ultrasound 3—34924
- blood flow relation to US echogenicity, red cell aggregation effect 3—34867
- blood US backscatter coeff. determ. from A-mode echography 3—4597
- blood velocity meas., fast dedicated microprocessor for real-time freq. anal. 3—19789
- blood vessels, geometrical optics method for inverse scattering assessing, multistatic single frequency approach 3—44306
- blood vessels, geometrical optics method for inverse scattering assessing, monostatic multifrequencies approach 3—44307
- bone, US transmission imaging, digital enhancement 3—48354
- bounded pulse propagation in US imaging of tissues 3—4604
- breast cancer detection, US pulse-echo RF waveform anal., pattern recognition technique 3—24822
- breast real-time US imaging, video-photographic system for unit-record recording and replay 3—34918
- breast US for the general radiologist, review *(French)* 3—4578
- cardiac imaging, centralised digital picture processing system 3—34955
- cardiotocograph, gynaecologic diagnostic instrument based on US Doppler technique 3—58756
- cardiovascular imaging, conf., London, England (Feb. 1982) 3—4
- carotid arterial disease, quantification by Doppler US 3—48349
- carotid artery stenosis, spectral anal. patterns evaluation 3—29684
- cerebrovascular disorders, sonic diagnosis *(Japanese)* 3—58861
- computer analysis and diplay modes 3—15172
- computer augmented diagnostic system, average echo amplitudes for rat livers 3—34923
- computerised tomography, attenuation imaging, energy ratio methods 3—48346
- computerised tomography, multipath artifact corrections 3—4582
- computerised tomography, review of methods using different information carriers *(French)* 3—4634
- computerised transmission US tomography 3—48345
- computerised US echo tomography, image quality improvements 3—4603
- computerised US tomography by ring array electronic scanning and steering 3—4602
- computerized tomographic imaging by various modes 3—29691
- computerized tomography, corrections for refraction 3—4576
- conference, medical imaging and image interpretation, Berlin, Germany (Oct. 1982) 3—20575
- conference, San Diego, CA, USA (Oct. 1982) 3—40325
- conference on the future in radiology, London, England (Feb. 1982) 3—10499
- cutting of soft tissue, ordinary and ultrasonic, comparative anal. 3—29781
- cystic structures, side-lobe artifacts 3—34922
- dark-field scanning acoustic microscope with transducer on front of lens 3—1903
- delay time measurement by echo envelope anal. 3—34917
- digital images, Moire undersampling artifacts 3—24819
- double beam Doppler US method for quantitative blood flow vel. meas. *(Chinese)* 3—9683
- echocardiogram, structured noise removal by 2D FIR digital filter 3—24823
- echocardiogram, two-dimens., computer-aided analysis system *(Japanese)* 3—19787
- echocardiographic images, 3D reconstruction using the rot. method 3—29685
- echocardiographic images, sector-scan, digitising and processing 3—4573
- echocardiography, distortions of US field by rib cage 3—19785
- echocardiology, Doppler US computerised blood flowmeter for noninvasive meas. 3—4575
- echographic real-time system, acoustic beam visualization and quantization 3—27315
- echographic signal online deconvolution algorithm 3—4598

biomedical ultrasonics continued
- echographic signal processing, method taking into account medium geometry 3—24831
- echotomography in muscular traumatology, review *(French)* 3—4577
- engineering in medicine and biology, conf., Philadelphia, USA (Sept. 82) 3—10511
- epigastric diagnosis, improved photographic documentation with 3D recording of sectional planes applied 3—4574
- fast-frame-rate B-mode US imaging with SAW transducers 3—4585
- femora, pathological, human, US characterization 3—48353
- foetal haemodynamics, Doppler US evaluation 3—29688
- foetal vessels, quantitative assessment of blood flow by pulse Doppler techniques 3—15170
- foetoscope visualisation enhancement by real-time US 3—58754
- frequency compounding for speckle contrast reduction in phased array images 3—4583
- grating lobe of ultrasonographic array directivity, systematic analysis 3—24824
- gynaecology, real-time ultrasonography using a mech. sectorscanner 3—4579
- hydrophone calibration method 3—46429
- hyperthermia, deep local heating induced by US phased array transducer 3—48358
- hyperthermia, focused transducer design 3—48359
- hyperthermia, local US induced in vivo, temp. distribs. 3—48361
- hyperthermia, localized, production by focalized US system 3—53740
- hyperthermia in cancer therapy *(Japanese)* 3—15276
- hyperthermia therapy equipment for cancer, local 3—15179
- image processing to reduce speckle 3—46387
- image reconstruction from US array data, statistical estimation approach 3—4589
- image speckle model and computer simulation 3—4590
- images, compound, blurring reduction by image realignment 3—46386
- imaging, 10th International Symposium, Cannes, France (Oct. 1980) 3—29
- imaging, nonlinear focusing effects 3—46388
- imaging piezoelectric transducer optimisation criteria 3—4607
- imaging techniques, and instruments, review *(Japanese)* 3—12471
- impediogram accuracy improvement by process identification convolution 3—4593
- inhomogeneous layers, transmission and refl. props. and appl. to medical US 3—15173
- intracardiac masses, 2D echocardiography, echo pattern-histopathology correl. 3—29687
- lateral pharyngeal wall position meas. and detection using computerized linear US array 3—48357
- linear phased array US imaging system 3—4588
- linear scanner, portable *(Japanese)* 3—4581
- linear scanning echographic system, focalization processings 3—4571
- linear transducer array, dynamic focusing and compound scanning 3—4587
- liver, human, fixed, US vel., empirical anova and regression modelling on histologically assessed pathology 3—15146
- liver, tissue-mimicking, phantom including freq. dependence of backscatt. 3—9686
- mammary tissue component characteristic US echostructures 3—4596
- mammary tumour, spontaneous, localized US hyperthermia effect 3—48362
- mammographic viewer playout system, rapid review of multiple images 3—34919
- motion analysis of 3-dimensional left ventricle from 2-dimensional echocardiograms 3—48443
- multi-image echo tomography 3—34920
- myocardium, abnormal changes, 2D echocardiographic recognition 3—29686
- nonlinear parameter tomography, active incoherent imaging and adaptive imaging 3—29690
- ocular US biometry, tolerances in eye meas., retinal irradiance calcs. *(Italian)* 3—4572
- paranasal sinus, diagnostic ultrasonography 3—48356
- phased-array imaging with multifreq. and nonuniformly spaced arrays, grating lobe amplitude, computer simulation 3—22297
- piezoceramic probes appl., fabrication technology effects obs. *(Czech)* 3—24815
- piezoelectric material selection for US clinical diagnostic system 3—4606
- polyvinylidene fluoride film piezoelec. transducers, single-element and array, for acoustic imaging 3—50894
- power ultrasonics in medicine 3—9687
- principles, methods and appl. 3—42085
- pulse-echo imaging, interpolation scan conversion 3—24818
- pulse-echo imaging, phase-insensitive detection for speckle reduction 3—24820
- pulse-echo refl. from test object cylindrical reflectors 3—19786
- pulse-rate ultrasonic transmitters, design, biomedical appls. *(Hungarian)* 3—29677
- pulsed-Doppler echocardiography, microprocessor sample-vol. tracker and light-pen 3—15175
- quantitative echography, new approaches 3—24826
- quantitative US scatt. imaging 3—24830
- quantitative volume backscatter imaging 3—44308
- real-time constant-depth scanning with phased acoustic arrays 3—4584
- real-time digital scan converter for compounding dual sector scans 3—48352
- reconstructive imaging, ARMA processing 3—46382
- reconstructive US tomography based on time-of-flight projections 3—4601
- remote temperature measurement using an acoustic probe, appl. to tumour treatment by hyperthermia 3—10842
- review of changing trends in medical diagnostic US, rel. to acoustics, packaging and processing 3—24829
- review of medical US imaging 3—48344
- sector scanning in renal US 3—19788
- signal digital preshaping, equipment and appls. 3—46383
- Sinuscan, a hand held ultrasonic unit to detect maxillary sinusitis 3—48355
- stenoses, axisymmetric, in vitro Doppler detect. from transverse vel. meas. 3—9685
- stratified absorbent media, extension of Jones' US impediography 3—4594
- synthesis of images in real-time, new digital approach 3—24827
- therapy, development of improved heaters for superficial tissue heating 3—29678
- time characterisation, explicit use of US propag. props. 3—29674

biomedical ultrasonics continued
- tissue, US propagation, dispersive model 3−24821
- tissue characterisation, recent advances 3−35016
- tissue information and tissue characterisation 3−24825
- tissues and liquids, US absorption and dispersion, theoretical model 3−29625
- transducer, focused, dynamic scanning, temp. distribs. 3−46430
- transducer, phased-array, miniature, modelling and design 3−50892
- transducer effective radiating area rel. to testing and calibration of therapeutic instruments 3−9684
- transmission imaging, coherence and noise 3−4591
- transmission imaging in medical diagnosis, system characts. and results 3−24828
- tumour, US treatment, high intensity 3−48360
- two-dimensional image field generation from one-dimensional scans 3−4600
- ultrasonography for medical diagnostics 3−48441
- urinary bladder imaging, catheter balloon artifacts 3−58753
- venous gas emboli, detection and size meas. by Doppler US flowmeter 3−48347
- water-bed scanner system for US transmission pictures without hazard *(German)* 3−34916

biomembrane transport
- *see also osmosis*
- amphotericin B ionic channels, voltage-current charact. 3−48252
- artificial, conductance meas. instrument 3−58605
- axon, giant, crayfish, slower component of gating current, Na-channel inactivation 3−53654
- axon, squid, membrane response to sequential voltage and current clamps 3−34812
- bacteriorhodopsin, photoexcited, proton and nonproton transient release, absolute quantum yields 3−48247
- blood plasma membranes, low-temp. alteration of permeability due to dehydration 3−34805
- cardiac cells of frog, intracellular free Ca^+ conc., ionic diffusion theory 3−53651
- cell organelle volume rel. to ion transport through membrane 3−29514
- chloroplast thylakoid membranes, protein cross-linking photophosphorylation, coupling Factor 1, bifunctional maleimides effect 3−34808
- chloroplast thylakoid membranes, site-specific interaction of ATPase-pumped protons 3−4486
- chromaffin granule membrane, water permeability, ^1H NMR obs. 3−9561
- chronic granulocytic leukaemia, NMR investig. of H_2O exchange 3−44206
- conference of Biophysical Society, San Diego, USA (Feb. 1983) 3−40309
- current-potential relationships across membranes, interpretation 3−29508
- cyanobacteria, lateral transport of energy along coupling membranes, light-induced pot. changes 3−4485
- Debye layers of neural membrane, ionic currents, relation to elementary learning process 3−29528
- E. coli, model of H^+-K^+ transport systems 3−48270
- erythrocyte membrane, porcine, spin-labelled compounds transport, ionising radiation effect 3−48334
- free radicals migration in long-chain hydrocarbon mols. rel. to membrane transport 3−48251
- gastric mucosa, amphibian, acid secretion, AC impedance analysis 3−44223
- giant axons, squid, unidirectional Na^+ and K^+ fluxes through Na channel 3−9572
- gramicidin C, lateral diffusion in phospholipid multilayers 3−24688
- heart mitochondria, isolated, H^+-depend. efflux of Ca^{2+} 3−34809
- ion movement through gramicidin A channels, single channel current-voltage characts. 3−44220
- ion movement through gramicidin A channels, single-channel current meas., interfacial polarization 3−44221
- ion movement through gramicidin A channels, single-channel current-voltage characts., diffusion controlled step 3−44222
- ion pores electrostatic modelling, lipid membrane dipole pot. 3−44224
- ions adsorbed on the surface of biomembranes, kinetics of transmembrane transport 3−24687
- Kadem-Katchalsky eqns. for ionic fluxes, nonlinear generalisations 3−44225
- leukocyte lysosomes, defective cystine transport in cystinosis patients 3−15053
- lipid bilayer membranes, generation of potential rel. to proton-transfer reactions 3−34810
- lipid headgroups, anionic, as proton-conducting pathway along membrane surface 3−48255
- liposome proton-hydroxide permeability 3−48256
- liposomes containing functionally reconstituted chloride channels, isolated-patch recording 3−48254
- lymphocytes, bulbous, unconstrained lateral diffusion of concanavalin A receptors 3−4487
- membrane lateral mobility, detect. by fluoresc. recovery after photobleaching 3−9794
- mitochondrial membranes, induction of H^+ transport 3−39611
- nerve conduction mechanism and excitation blocking, obs. using Raman spectra of carotenoids 3−34819
- Nitella flexilis, cell plasmalemma, selective props. of cation channels 3−39613
- Nitella internodal cell, entrained, harmonic, quasiperiodic and chaotic oscillatory responses to sinusoidal stimulation 3−44233
- nonlinear EM interactions in living systems, cell membrane and neurophysiology appl. 3−15148
- osmolality, molecular weight and activity coeff. determ. using vapour pressure osmometer 3−35043
- osmotic potential of water solns., eqn. for contrib. of separate solutes calc. 3−53647
- phospholipid membranes, anomalous surface conductivity obs. 3−29506
- photoreceptor cell, light induced pore formation in membrane 3−19699
- pituitary, anterior, single Ca^{2+}-dependent K^+ channels in clonal cells 3−4483
- planar bilayer membranes, ion channels reconstitution, review 3−53642
- polaron mechanism of ion transport across membranes 3−24686
- potential and proton gradient meas. by flow dialysis, rel. to electron donors 3−29796
- proteoliposomes derived from rat cortical synaptosomes, high-affinity choline transport 3−4488

biomembrane transport continued
- proton injection into ice using photoisomerisation, model for H^+ transport in proteins and membranes 3−34787
- purple membrane particles, microelectrophoretic props. 3−4484
- retina, toad, high-pass filtering of small signals by rod photoreceptor network, K^+ cond. mechanism 3−53665
- retinal rod outer segment cytoplasmic membrane, cyclic nucleotides effect on conductance 3−34837
- spectrin-actin complex, multiple motions in saturation transfer EPR time domain 3−53646
- spin-labelled hydrophobic ions, transmembrane elec. currents 3−4471
- T-system optical signals associated with inward rectification in skeletal muscle 3−34827
- tetraphenyl boron, transport through bilayer lipid membranes, effect of HF EM field 3−44280
- transvascular fluid flux measured from intravascular water concentration changes 3−58622
- UHF proton generators and cell membrane transport 3−29517
- vesicles of plasma membranes of cow parsnip phloem cells, active electrogenic transport of H^+ 3−39612
- voltage-gated ion channel model, inference from cryst. struct. of alamethicin at 1.5 Å resolution 3−24667
- yeast membrane, γ-irrad. effects on struct. and function 3−9673
- Na^+, K^+-pump rel. to size of cell membrane pot. and intracellular ionic concs. 3−24695
- T 3−24698
- Tl(I), NMR studies of ion complexation by gramicidin in non-aqueous and micelle solutions 3−53653

biomembranes
- *see also biomembrane transport; lipid bilayers*
- Acholeplasma laidlawii B, membrane lipids, gel to liq. cryst. transition 3−48257
- anisotropic rotation, saturation transfer ESR obs. 3−58596
- bacterial cells, DNA-membrane interactions rel. to γ-irrad. *(Russian)* 3−58731
- bacteriorhodopsin in purple membrane, location of carboxyl terminus 3−4461
- blood cell, solid/vapour interfacial free energy and surface tension 3−47191
- BVP models, adjustment to express mechanism of inactivation 3−15056
- cardiac cell membrane noise changes during microwave exposure 3−4547
- cell membrane phase transition, statistical mechanical study 3−19672
- cell membranes, effects of low doses of X-rays and HTO 3−15160
- cell membranes, polyaldehyde microspheres probes 3−4715
- chain ordering, mol. model 3−29495
- chemical oscills. simulation program 3−24689
- chlorophyll based monolayer and multilayer arrays, optical props. 3−39591
- chlorophyll fluorescence and thylakoid stacking changes, electrostatic screening versus charge neutralisation 3−48241
- chloroplasts, thylakoid membranes, proton spin-lattice relax. study 3−9559
- cholinoreceptors, inactivation induced by membrane depolarisation 3−48275
- coherent oscillations in biological systems, interaction with ELF EM fields 3−24790
- conference of Biophysical Society, San Diego, USA (Feb. 1983) 3−40309
- conformational changes due to phosphorylation and energy transfer control in photosynthesis review 3−58591
- diffusion-mediated localisation on membrane surfaces 3−34785
- dioleyl phosphate-millipore membrane, elec. potential, self-sustained oscillations, expt. and theory 3−15047
- electrostatic potentials 3−53644
- energy-transducing membranes of cyanobacteria, respiration and photosynthesis 3−34799
- erythrocyte ghosts, membrane damage after X-irrad. *(Russian)* 3−58733
- erythrocyte membrane, lipid organisation, phloretin effects, EPR obs. 3−58607
- erythrocyte membrane, temp. dependence of yield shear resultant and plastic viscosity coeff. 3−4474
- erythrocytes, Frohlich interaction study 3−39609
- erythrocytes, human, cytosol-membrane interface, reson. energy transfer, donor fluoresc. 3−53643
- fatty acids, unsaturated, structured as micelles or liposomes, radiosensitivity obs. 3−29648
- fluorescence energy transfer in 2D, Monte Carlo calcs., membrane appl. 3−24675
- hyperthermia, involvement of membranes in cellular responses 3−34789
- intrinsic proteins, struct. and amino acid sequences 3−53625
- Langmuir-Blodgett film, purple-membrane containing, deposition on lipid and paraffin impregnated filters 3−38262
- lipid bilayer membranes, phase transitions, electric field dependence, biological implications 3−53645
- lipid bilayer membranes, photon correlation spectroscopy, viscoelastic props. 3−44204
- lipid bilayers vesicle form., size control by edge-active agents 3−44205
- lipid films, coloured, hydrodynamics and stability analysis 3−58700
- lipid-proteolipid membranes, artificial, struct. and phys.-chem. props. 3−48250
- lipids, free and protein bound, in membranes, viscosity obs. 3−39600
- lymphosarcoma cells, X-irrad. effects on membrane lipids in vivo and in vitro 3−44298
- mammalian cell membrane, alterations in struct. and function after exposure to ionizing radiation 3−15163
- mammalian cells with membranes subtituted by polyunsaturated fatty acids, X-irrad. effects on survival 3−34907
- motion, hydrodynamic stability, of viscoelastic thin film, dispersion equation 3−39601
- neutron scattering in molecular and cellular biology, review 3−15036
- nuclei of chicken thymocytes and erythrocytes, γ-radiation-induced damages to membrane structs. *(Russian)* 3−58736
- phospholipids, vibrational assignment for chain carbonyl stretching modes 3−34788
- photoreceptor membrane shedding and assembly in insect retinae 3−29539
- photosystem types, localisation in separate regions of chloroplast membranes 3−58619
- plant leaf membranes, effects of bioreactive substances on a semiconductive prop. 3−29507

biomembranes continued
plasmalemma membrane pot. of nitella flexilis cells, mechanism of light-induced hyperpolarisation 3—29631
potential rapid changes, improved fluoresc. probes for meas. 3—4691
protein particles in membranes, radial distrib. function estimation from electron micrographs 3—29791
purple membrane, protein side chain motion restriction during photocycle of bacteriorhodopsin 3—48243
purple membranes in soln., interfacial elec. polarisability, light scatt. obs. 3—9560
reconstituted, struct. and permeability 3—39602
rod outer segment photoreceptor membrane multilayers, phase separation obs. 3—4470
surface charge of erythrocytes and model membranes, recording using a fluoresc. probe, obs. 3—48261
taste bud membranes, bovine, radiation effects rel. to taste loss 3—29664
thylakoid membrane protein phosphorylation rel. to local membrane surface charge near PS II primary acceptor 3—58609
voltage clamp processor system 3—48452
yeast membrane, γ-irrad. effects on struct. and function 3—9673

biomolecular effects of radiation
see also biological effects of .... (type of radiation)
see also photosynthesis
actinomycin D complexed to DNA, changes in Y-peak on γ-irrad., spectrophotometric obs. 3—9553
amino acid pool in rat tissues, ionising radiation effect *(Russian)* 3—19765
aromatic amino acids, photochem. stability on PS laser UV irrad. 3—29630
bacteria, photosynthetic, radical ion recomb., microwave and mag. field effects 3—34780
bacteriorhodopsin, photoexcited, proton and nonproton transient release, absolute quantum yields 3—48247
bacteriorhodopsin intermediates from 11-cis rhodopsin and 9-cis rhodopsin, picosec. transients obs. 3—39595
chromatin, rat thymus, post-irrad. degradation, low mol. wt. DNA fraction *(Russian)* 3—19663
clinical radiobiology, problems and perspectives for development *(Russian)* 3—15155
DNA, aq. soln., UV irradiated, free radicals, ESR, 77K *(Russian)* 3—34774
DNA, isodisperse, improved technique for strand break anal. 3—29804
DNA, radiation effects, review 3—54563
DNA, supramolecular, γ-irradiated, degradation, lipid composition, thin-layer chromatography *(Russian)* 3—34775
DNA labelling of control and irrad. rat tissues after ^{3}H-DNA, ^{3}H-DNP administration *(Russian)* 3—19665
eosin-caseine complex, electron phototransfer reaction kinetics 3—48226
erthrocytic malate- and lactate-dehydrogenase, haemoglobin and isoenzyme spectrum. mag. field effects in mice 3—9665
fatty acids, unsaturated, structured as micelles or liposomes, radiosensitivity obs. 3—29648
haemeproteins, liganded, femtosec. and picosec. transient processes after photolysis 3—39592
haemoglobin, dog, irradiated, whole-body exposure, modified beta-chains, chromatography *(Russian)* 3—34894
heavy ion molecular and cellular radiobiology 3—44288
herring fillets fatty acid, gamma ray irrad. effect on composition 3—9681
liver, rat, perinatal, enzymic differentiation, γ-irradiation effect 3—48340
magnetic sedimentation of protein molecules 3—48450
nucleic acid content, biosynthesis in rat spleen, ^{239}Pu and external γ-irrad. combined effect *(Russian)* 3—19664
nucleoid of rat thymocyte subpopulation, radiosensitivity determ. by viscosimetry *(Russian)* 3—19666
oxyhaemoglobin, picosec. time-resolved reson. Raman spectroscopy of photolysis, product 3—39598
potentially lethal X-ray damage repair, mol. and cellular basis, clinical radiotherapy appl. 3—58747
proton spin-lattice relax. studies of tissue response to radiotherapy 3—58600
quantum solid state mechanisms of biological effects of EM radiation, rel. to local supercond. 3—24795
retinal, primary photoprocess obs. by picosec. linear dichroism spectroscopy 3—39596
retinal polypeptides, Drosophila, light-induced modification, in vivo obs. 3—4546
review, rel. to radiation protection *(German)* 3—15157
rhodopsin, visual pigment, photoisomerisation, numerical calc. 3—15093
rhodopsin, visual pigment, photoisomerisation, theoretical study 3—15092
serum albumins, change in conformation on exposure to UV 3—24807
soliton formation and propagation, nonlinear elec. field effects 3—29617
solutions of medically important substances in water, stacking, US study 3—13065
thymine in aqueous soln., direct and indirect photolysis by laser UV radiation 3—24673
vacuum-UV, characteristics of effects on Sendai virus 3—44293

biomolecules *see macromolecules; molecular biophysics*

bionics *see biocybernetics*

biophysical effects of radiation *see biological effects of radiation*

biophysical instrumentation *see biological techniques and instruments*

biophysical techniques *see biological techniques and instruments*

biophysics
see also aerospace biophysics; biological fluid dynamics; biomechanics; cardiology; cellular biophysics; haemodynamics; hearing; molecular biophysics; speech; vision
complex system dynamics, skeleton of phys. ideas 3—29488
human body, effect on antenna radiation patterns 3—58719
ICRP Reference Man, electron interaction data of 69 tissues, fitting by 5th order polynomial coeffs. 3—9666
insects, Tenebrio pupa, microwave power absorption, expt. 3—24792
laser and other radiation transmission enhancement by soft turbid physical and biological media 3—29623
liver, radioisotope uptake curves, comparison between 2 methods of estimating rate constants 3—58584
microbeam analysis, conf., Washington, DC, USA (Aug. 1982) 3—25690
microwaves, partial-body absorption resonances in a sitting rhesus model at 1.29 GHz 3—15145
muscle, striated, laser diffraction intensity calc., numerical method 3—34883

biophysics continued
natural radiation environment of marine organisms and aspects of human food chain 3—24645
natural radioactive aerosols, effect of polydispersiveness of tracheobronchial deposition 3—19876
neutron quality parameters versus energy below 4 MeV from microdosimetric calculations 3—44278
perception as an active process 3—29489
prolate spheriodal models of humans and animals, irrad. in near field of a small loop antenna 3—24791
review *(Rumanian)* 3—15033
tissue EM wave power absorption *(Polish)* 3—39687
^{37}Ar, retention and release from human bone samples 3—58583

biorheology
alveolar liquid pressure measured by micropipettes in isolated dog lung 3—24753
arterial tissue, contribs. to nonlinear characterisation, review 3—4536
arterial wall, rat, rheological props. 3—29610
blood, fluid mechs., continuum physics theory of equilib. and sedimentation 3—24748
blood, human, rheological characterisation *(French)* 3—15131
blood, human, rheological props., viscoelasticity and thixotropy, unified description 3—29612
blood, plasma and blood viscosities, and aggregation of red cells in racehorses 3—24749
blood, solutes dispersion during blood flow through curved tubes 3—53713
blood aggregational equilibria 3—29608
blood cell suspension, theoretical modelling of filtration 3—58615
blood cell suspensions filtration, rel. to erythrocyte conc. 3—58614
blood cell suspensions filtration, role of leukocytes 3—58613
blood flow at low shear rates in a concentric cylindrical viscometer 3—48302
blood flow measurement, appl. of props. of thermal waves in vascular media 3—9769
blood platelet adhesion studies using flow cell 3—44349
blood vessel wall stability 3—9658
blood viscosity, formulae and syndromes 3—58697
bone, fluid flow in vitro, electromech. effect appl. 3—24774
cerebrospinal fluid bulk flow, clearance of albumin from mouse subarachnoid space 3—4735
conference, Japan (1982) 3—54564
coupled intra- and extraluminal flows for single and multiple capillaries, anal. 3—9657
density dilution method, circulation research, review 3—48458
engineering in medicine and biology, conf., Philadelphia, USA (Sept. 82) 3—10511
erythrocyte, motion along a capillary, hydromech. model *(Russian)* 3—24692
erythrocyte deformability, meas. using a stroboscopic recording centrifuge 3—53881
erythrocyte deformability, US determ. 3—4690
erythrocyte deformability measurement using Ektacytometer, clinical utility 3—19793
erythrocyte membrane, temp. dependence of yield shear resultant and plastic viscosity coeff. 3—4474
erythrocyte orientation in a flow, meas. by spin labelling, EPR spectra 3—48262
erythrocyte sedimentation rate time curve 3—48264
erythrocyte transport rel. to plasma viscosity and haematocrit 3—24750
erythrocytes, human, washed, spontaneous aggregation in isotonic media of reduced ionic strength 3—9563
erythrocytes, undeformable in blood samples, determ. using laser light scatt. 3—24918
eye, aqueous humour outflow through pores in lining endothelium of Schlemm's canal 3—44263
fluids, rheological and biological charact. interrelationship 3—34869
haemotocrit reduction in bifurcations due to plasma skimming 3—53709
human joints, micropolar fluid film lubrication between two parallel plates 3—15127
lipid bilayer membranes, photon correlation spectroscopy, viscoelastic props. 3—44204
lipid films, coloured, hydrodynamics and stability analysis 3—58700
lung, boundary lubrication imparted by pleural surfactants and their identification 3—29597
lung, small airways, settling and diffusion of aerosol particles during breath holding 3—9643
lung lymph flow, seizure alterations, recreation by left atrial press. elevation 3—29596
mammalian blood, in vivo material functions 3—58696
microcirculatory blood flow assessment, laser-Doppler methods appl. 3—34946
micropolar fluid model for blood flow through a small tapered tube 3—53710
microvascular bifurcations, flow conditions of red cells and plasma 3—9646
microwave hyperthermia, local, determ. of perfusion field using finite element thermal models 3—24842
milk and milk gel, dynamic mech. props. 3—58695
mixed arterial concentration of O_2 in a global pulmonary gas exchange model 3—15132
muco-ciliary interaction and epithelial clearance, biorheological matching 3—29609
myocardial tissue, rheological props. 3—29607
papillary muscle, cat, internal viscoelastic loading 3—24745
papillary muscle, cat, vel. transients and viscoelastic resistance to active shortening 3—24746
pipe flow, transient, prolonged by viscoelastic enclosure *(French)* 3—22528
polyacrylamide sol., rheological props., appl. as synthetic synovial fluid *(German)* 3—7537
pulmonary capillary transit times meas., direct obs. in dogs 3—24776
pulmonary interstitial compliance, rel. to osmotic constituents of the interstitium 3—29589
pulmonary microcirculation, tubules rather than sheet and post, rat. obs. 3—29599
pulmonary vascular tone rel. to basal lung perfusion in normal seated subjects 3—58706
rheophoresis and platelet dispersivity 3—48263
seminal fluid, peristaltic transport, microstructural and peripheral-layer viscosity effects 3—48303

biorheology continued
- serum albumin soln., bovine, thixotropic props., effects of monohydric alcohols 3—48236
- single erythrocyte rigidometer as a reference for RBC deformability 3—48451
- skeletal muscle, perfusion distrib. meas. by H_2 clearance following sympathectomy 3—9663
- sperm deoxyribonucleoprotein, sea urchin, progressively depleted of proteins, struct., hydrodynamic and opt. props. *(Russian)* 3—48240
- spherical cells with anisotropic membrane, viscoelasticity of dispersions 3—9564
- synovial fluid, rheological props., comparison with polymer solution *(German)* 3—7537
- tear film rupture, dispersion force and surface tension 3—4530
- vascular wall rheological props., toward a non-traumatic determ. 3—9652
- velocity distribution due to suction change across cylindrical tube wall 3—12783
- ventilation-perfusion ratio distributions by mass spectrometry with membrane catheters 3—24922
- ventilation/perfusion ratios distrib. estimation 3—9642
- O_2 transport to the human arterial wall, effect of pulsatility 3—24697

biosonic generation *see bioacoustics; mechanoception*

Biot-Savart law *see electromagnetism*

biothermics
- Arrhenius analysis of survival curves from thermotolerant and step-down heated L1A2 cells in vitro 3—4479
- autonomic nervous system, human, asymmetry when stimulating the head by heat 3—19670
- bacteria, DNA damage repair and cell viability after ionising radiation and hyperthermia treatment *(Russian)* 3—58608
- bacterial growth, comparison for high-intensity microwave exposure and conventional heating 3—39692
- bipolymers phase transitions obs., DPS calorimeter for heating and cooling modes meas. 3—35044
- blood flow measurement, appl. of props. of thermal waves in vascular media 3—9769
- blood plasma membranes, low-temp. alteration of permeability due to dehydration 3—34805
- body temperature, human, meas. using plastic chip Si transistor 3—4662
- brain, microwave heating, effects of high-intensity pulse exposure in rats as a result of heating 3—24802
- brain tumour 9L cells, rat, interaction of hyperthermia and radiation rel. to survival 3—19780
- breast cancer detection by thermography, performance goal and diagnostic feature identification 3—48369
- bronchial-tree models, convective exchange in oscillatory flow 3—24763
- cardiac pacemaker, temp.-sensitive 3—44347
- cells, Chinese hamster, recovery kinetics from damage by step-up and step-down heatings combined with X-rays 3—9556
- CHO cells, heated G1-phase, cell death, fusion and multipolar divisions 3—29513
- CHO cells, heated G1-phase, division probabilities and generation times 3—29512
- CHO cells, interaction of thermotolerance and thermosensitisation 3—4469
- clinical thermographic diagnosis for mass screening, computer implementation 3—15188
- cold air production apparatus for bronchial challenge 3—53879
- colon tumour, human, survival responses of cell subpopulations after combinations of hyperthermia and X-irrad. 3—53726
- computerised design for hyperthermia therapy 3—44305
- cryopreservation of cells and tissues, heat transfer from warm plates to liquid N_2 obs. 3—35051
- cryosurgery, design philosophy of simple instruments 3—35020
- cryosurgical apparatus, design and technical features 3—35021
- cryoultramicrotomy, recognition of artifacts 3—53905
- cutaneous vasculator responses to initiation of exercise, effect of heat stress 3—24683
- d'Arsonval's calorimeter: measurement of animal heat, 1877 3—30575
- deep sea prokaryotic organisms living in 105°C environment 3—15045
- diathermy applicator using open-ended circular waveguide 3—34932
- diathermy equipment, meas. of elec. and mag. stray fields prod. by electrodes 3—24832
- Diptera (fly) dormancy maintained by low temps. 3—29504
- dissociated cells heated in vitro, survival rel. to location within tumour 3—19675
- diver heating, predictive engng. formulations 3—24685
- DNA, intercalation of acridines, thermodynamics and optical absorption spectroscopy 3—19657
- DNA, low-temp. heat capacity at different degrees of hydration, conform. state depend. 3—34781
- DNA aqueous solns., thermal reversibility, dielec. and elec. cond. meas. 3—53633
- DNA replication in HeLa cells, effects of hyperthermia 3—44217
- DNA synthesis, hyperthermic inhibition in CHO cells, mol. studies 3—29492
- ear skin, mouse, long-term thermal sensitivity after previous X-irrad. 3—29501
- electrosurgical dispersive electrodes, effect of gelled-pad design on performance, thermal anal. 3—24911
- EM applicators for regional and whole-body hyperthermia 3—53771
- EM hyperthermia for cancer therapy 3—29633
- engineering in medicine and biology, conf., Philadelphia, USA (Sept. 82) 3—10511
- erythrocyte membrane, temp. dependence of yield shear resultant and plastic viscosity coeff. 3—4474
- evaporative heat loss in microwave-exposed mice, effect of heating rate 3—29502
- facial nociception in rats, descending modulatory system effects, behavioural model, thermal stimuli 3—4734
- fibroblasts, human, normal and ataxia telangiectasia, thermal sensitivity obs. 3—44215
- freeze-etch specimens, cooling rate during impact freezing and liq.-jet freezing 3—24682
- heat shock proteins and thermotolerance; a comparison of induction kinetics in CHO cells 3—4468
- heat stroke, the physics of the body's response to high temp. 3—44924
- histology as a method for determining thermal gradients in heated tumours 3—15293

biothermics continued
- human diver (subaqua), dive duration extended by supplementary heating 3—48248
- hyperthermia, deep local heating induced by US phased array transducer 3—48358
- hyperthermia, involvement of membranes in cellular responses 3—34789
- hyperthermia, local, in malignant tumour radiotherapy, cellular radiobiological aspects *(Russian)* 3—4467
- hyperthermia, local US induced in vivo, temp. distribs. 3—48361
- hyperthermia, localized, production by focalized US system 3—53740
- hyperthermia and the cell nucleus 3—34800
- hyperthermia applicator using cylindrical dipole array, cancer treatment, deep heating 3—4615
- hyperthermia at 50°C, effects on V-79 cells in vitro 3—9557
- hyperthermia by EM induction, temp. distribs., thorax model 3—53767
- hyperthermia by mag. induction, phys. characts. of technique 3—29692
- hyperthermia considerations for a conducting cylinder heated by an oscill. elec. field 3—9558
- hyperthermia in cancer therapy *(Japanese)* 3—15276
- hyperthermia therapy equipment for cancer, local 3—15179
- hyperthermia using focused microwave multiapplicator system, evaluation, cancer therapy appl. 3—53759
- hyperthermic response, in vivo, change resulting from metabolic effects of temporary vascular occlusion 3—58603
- hyperthermic treatment, math. model to calc. temp. distribs. 3—15046
- ice crystal size distribution in frozen aq. specimens, theoretical anal. 3—24681
- ice formation in aqueous systems, nucleation theory 3—13413
- implantable bipolar integrated micropower LV temp. controlled oscillator, body temp. meas. appl. 3—44361
- implantable microwave radiators for clinical hyperthermia 3—24841
- insect pupae, constant-dose microwave irrad. effects, rel. to thermal interaction 3—24798
- insect pupae, waveguide irrad., thermographic anal., dosimetry appl. 3—24796
- intestine, mouse, effect of prior hyperthermia on subsequent thermal enhancement of radiation damage 3—19772
- kidney, ionising radiation combined with US induced hyperthermia, effects in mice 3—29671
- Krioelektronika-1 cryogenic dental unit 3—58864
- laser acupuncture mechanism, temp. rising test *(Chinese)* 3—24793
- laser radiation induced primary and secondary damage to biological tissue, thermal injury 3—53719
- linear polymer, energy states spectrum determ. based on adsorpt. isotherms anal., DNA appl. 3—24660
- liver nuclei, native chromatin DNA, quaternary and quinternary structs., differential scanning calorimetry obs. 3—48269
- localized hyperthermia cancer treatment, subcutaneous tissue temp. meas., microwave radiometer 3—4616
- low-temperature SEM and TEM techniques 3—58887
- lung mechanics in air- and liquid-filled rabbit lungs, temp. effects 3—24751
- lymphocytes, human, mitogenesis following brief exposure to hyperthermia 3—58617
- lymphoma cells L5178Y, mouse, heat and X-ray effects 3—53729
- mammalian cells, cultured, enhancement of X-ray-induced inactivation by hyperthermia, rel. to pH and thermotolerance 3—53725
- mammalian cells, cultured, X-ray induced inactivation, hyperthermic enhancement rel. to prior heat treatment 3—53641
- mammalian muscle contractions and ATPase activities, temp. dependence 3—24680
- mammary adenocarcinoma cell clones of differing metastatic pots., heterogeneity in hyperthermic sensitivities 3—4480
- mammary tumour, mouse, response to microwave heating at 2.45 GHz 3—24805
- mammary tumour, spontaneous, localized US hyperthermia effect 3—48362
- medical thermography in Japan *(Japanese)* 3—44310
- medullated axon exposed to RF EM radiation anal. of elec. and thermal effects 3—15152
- microcalorimeters used as thermal power meters, test and calibration process 3—4733
- microwave (2450 MHz) diathermy applicator, assessment for hyperthermia 3—53769
- microwave broad-band temp. controlled exposure system for study of cellular bioeffects 3—35040
- microwave heating technique for hyperthermic treatment of eye tumours, especially retinoblastoma 3—15185
- microwave hyperthermia, local, at 2.45 Ghz, temp. controlled, dynamic 'in vivo' performance 3—4740
- microwave hyperthermia, local, determ. of perfusion field using finite element thermal models 3—24842
- microwave hyperthermia, localized, elec. field from lens applicator *(Japanese)* 3—48373
- microwave therapeutic applicators, new class for diathermy and hyperthermia 3—24840
- microwave thermography of subcutaneous tissue, thermal drift problems 3—4617
- microwave-induced hyperthermia combined with ionising radiation, preliminary clinical results 3—48364
- microwave-induced hyperthermia technique for superficial human tumours 3—48363
- mitotic cells, effect of cold storage on hyperthermic killing and hyperthermic radiosensitisation 3—34802
- murine tumour, contrasting regrowth delay responses to isocurative hyperthermia or X-irrad. 3—9669
- network thermodynamic simulation of biological systems: an overview 3—29503
- peripheral nerves, modelling compound action potentials, temp. depend. 3—34782
- photoradiation therapy of malignant tumours, temp. rise 3—53765
- plant leaves, fluoresc. rel. to temp. 3—24788
- prostrate, rabbit, normal tissue response to localized deep microwave hyperthermia 3—58725
- protozoa rapid freezing, relative cooling efficiency of various fluids 3—15302
- radiometer, 1 to 2 GHz, for subcutaneous tissue temp. meas. 3—4739
- rat, heat flow meas. by linear Fick's law calorimeter 3—5526
- remote temperature measurement using an acoustic probe, appl. to tumour treatment by hyperthermia 3—10842

biothermics continued
- RF hyperthermia, whole-body, thermal deposition from a single loop applicator 3—53768
- RF hyperthermia for cancer therapy, device for non-invasive local deep heating 3—9694
- sartorius muscle, frog, intracellular local changes in resistance, effect of temp. and chemicals 3—48271
- schedule-controlled behaviour in rats, interaction of ambient temp. and microwave power density 3—24803
- seeds, barley, temp. effect on γ-induced lesions repair 3—29643
- skin, heat transfers, numerical soln., surgery appl. 3—44203
- skin blood flow rate evaluation by heat flow anal. *(Japanese)* 3—39737
- skin differential temp. correlation for ovulation detect. using IR thermography 3—24845
- small intestinal mucosa, mouse, damage following X-irrad. or hyperthermia, SEM and TEM obs. 3—53735
- solenoidal-type hyperthermia systems in cancer therapy, theoretical temp. distribs. 3—9696
- solid tumour in vivo, thermotolerance rel. to interaction between hyperthermia and radiation 3—58602
- spontaneous animal tumours, treatment with heat and/or radiation 3—44318
- surgery, intermittent thermistor switching for thermal cutting or coagulation instrument *(German)* 3—35019
- Tetrahymena pyriformis BJ 4, cultivation and induced synchronous division, temp. change sensitivity *(Chinese)* 3—44202
- thermometry noninvasive, using a clinical CT scanner 3—9721
- thermophilic bacterium, radiation damage to membrane without concomitant lipid peroxidation 3—4564
- thermoregulatory response restoration rel. to cooling hands and feet 3—39599
- thermoregulatory responses of patients with extensive healed burns 3—24684
- thermotherapy of VX$_2$ rabbit carcinoma, augmentation by irrad. 3—48249
- thermotolerance, cell cycle dependence, CHO cells heated at 42°C obs. 3—44218
- thermotolerance and heat stock proteins in mammalian cells 3—34783
- thyroid hormone, mitochondrial entry during acute cold exposure 3—34807
- transient thermal tolerance: cell killing and polymerase activities 3—34803
- tumours, site dependent response to combined heat and radiation, mouse expts. 3—29639
- US hyperthermia, focused transducer design 3—48359
- US therapy, development of improved heaters for superficial tissue heating 3—29678
- V79 cells, heat-resistant variant, characterisation and radiation response 3—44216
- whole-body calorimeter for humans, technical description and performance characts. 3—35045
- work-heat tolerance in endurance-trained rats 3—58604
- yeast, heat-shock induction of ionising radiation resistance 3—19781

biotite *see mica*

biotransport
- *see also biodiffusion; biological fluid dynamics; biomembrane transport; cellular transport and dynamics; neurophysiology*
- active transport mechanism, free energy, dissipation and free energy transduction 3—29518
- aerosol deposition and clearance in the human upper airways, review 3—9644
- anoxia development following arteriolar occlusion 3—44226
- body fluids transport and distribution model using systems dynamics approach 3—19749
- coupled intra- and extraluminal flows for single and multiple capillaries, anal. 3—9657
- ELF fields, effects in Ca^{2+} efflux from brain tissue in vitro 3—34881
- human microvascular exchange system, analogue simulation 3—9571
- oesophageal scintigraphy, bolus transport diagram, functional display method 3—24848
- particle deposition and clearance in the bronchial tree, review 3—9569
- plants, mechanism of auto-oscills. of water exchange 3—44212
- proteins, charge transport props., expt. investigation 3—15068
- respiratory system function anal. and appls., conf., Houston, USA (Sept. 1981) 3—5473
- sap, ascent in plants by means of elec. double layers 3—58621
- seminal fluid, peristaltic transport, microstructural and peripheral-layer viscosity effects 3—48303
- species transport dynamics for clinical pulmonary evaluation 3—9568
- vitamin B$_{12}$ absorption, fast method of meas. using a whole-body counter 3—44315
- O$_2$ transport critical value, rat skeletal muscle O$_2$ uptake 3—24696
- O$_2$, transport during exercise following blood reinfusion 3—39616
- O$_2$ transport to the human arterial wall, effect of pulsatility 3—24697

bipolar integrated circuits
- implantable integrated micropower LV temp. controlled oscillator, body temp. meas. appl. 3—44361
- magnetic-field vector sensor based on two-collector transistor structure 3—279
- pressure transducer, capacitive integrated, with DC output voltage proportional to pressure 3—283
- pressure transducer, piezoresistive, monolithic IC, biomedical appl. 3—4675
- Si, doping profile shaping by multiple-pulse laser processing 3—56925
- Si IC, bipolar, FeSi$_2$ precip. contamination effect on circuit yield 3—23045

bipolar transistor circuits
- *Used for general papers and papers where use of bipolar transistors is significant*
- low noise preamplifiers for fast pulse processing, working points optimisation 3—50219
- low-noise pre-amplifiers for gas proportional counters, emitter followers and source followers 3—45785
- radiation-hardened accelerometer preamplifier for nucl. power plants 3—41204

bipolar transistors
- *see also bipolar integrated circuits*
- drift field p-n junction transistor, I-V characteristics calc. 3—33783
- magnetic field using dual-collector bipolar transistor 3—45173
- magnetic-field vector sensor based on two-collector transistor structure 3—279

bipolar transistors continued
- p-n-p, minority carriers lifetime meas., in base region of three-layer structures 3—45162
- SHF oscillators for meas. of material parameters 3—25893
- Ga$_{1-x}$Al$_x$As-GaAs cascade solar cell using n-p-n struct. 3—19590
- GaAs permeable base transistor, GaAs VPE overgrowth over W gratings, TEM study 3—28998
- n-Si, heavily doped, band-gap shrinkage, luminesc., IR absorpt. and bipolar transistor data 3—38859

biquadratic filters *see active filters*

birefringence
- *see also flow birefringence; Kerr electro-optical effect; light polarisation; magneto-optical effects; mechanical birefringence; optical constants; optical rotation*
- acetonitrile, liq. struct., rot. Zeeman effect 3—52771
- bacterial virus fd, lyotropic liq. cryst., isotropic phase, pretransitional phenomena 3—34769
- benzene, Cotton-Mouton effect and rot. Zeeman effect, mol. mag. props. determ. 3—6687
- benzene, liq., orientational correl., molecular quadrupole moments, birefringence 3—36786
- benzene, liq. struct., rot. Zeeman effect 3—52771
- cholesteryl 2 (ethoxy-ethoxy) carbamate, electric field induced birefringence meas., Kerr effect *(Rumanian)* 3—19108
- cholestric compensate mixtures, periodical change of birefringence *(Rumanian)* 3—19109
- cubic crystal, Ewald microscopical theory of diffr., generalised Snell law 3—12069
- dipolar hard ellipsoids fluid, second virial coeffs. 3—13394
- electro-optical crystals, induced birefr. anisotropy and eigenwave oscill. direction 3—3682
- elliptically cored self-locating fibre with accessible guiding region 3—12340
- ferrite thin film magnetooptical waveguides, Cotton-Mouton effect 3—22213
- fibre coupler, single mode, output polarisation state correction 3—32495
- fibre couplers, single-mode, polarisation characts. 3—7194
- fibre reinforced composites, birefringent, applicability of absolute retardation techniques for stress separation 3—34065
- fibre waveguide, single mode birefr. optically active, dispersion-free propag. of signal 3—7207
- fibres, elliptical-core birefringent, polarisation holding 3—7190
- fibres, linearly birefr. beat length meas. using wavelength-sweeping technique 3—41990
- fibres, single-mode, 3-psec. dye laser pulse reshaping based on nonlinear birefr. 3—46321
- fibres, single-mode W-type, polarisation effects 3—56338
- filter for CW dye laser emission wavelength selection 3—27219
- filter materials, dispersive birefringent, figures of merit 3—12289
- gases, dichroism and birefr. spectra, spatial freq. manifestation *(French)* 3—12815
- gelatin bichromated layers, holography, guided birefringence *(Russian)* 3—50640
- glass, stress-strain relations, detection and measurement methods 3—22962
- glass fibre waveguides, few-mode, with noncircular cores, polarisation props. 3—7209
- glasses, optical and laser, laser-induced birefr., optical Kerr and refractive coeffs. meas. 3—32424
- gyrotropic isoindex filter 3—17609
- heptyl cyanobiphenyl, nematic, surface-induced order, birefr. study 3—51485
- hexaethyleneglycol dodecyl ether, elec. birefringence studies 3—55981
- hexafluorobenzene, liq., orientational correl., molecular quadrupole moments, birefringence 3—36786
- hexapentoxytriphenylene, optical retardation and developable domain struct. in tubular discotic liq. crysts. 3—22769
- n-hexyl 4′-n-pentyloxbiphenyl-4-carboxylate smectic A-hexatic-B phase transition, birefringence investig. 3—2798
- isobutane, Cotton-Mouton effect and rot. Zeeman effect, mol. mag. props. determ. 3—6687
- liquid anisotropy, nonlinear mol. dynamics at high field strengths 3—37757
- liquid crystal spatial light modulators, image subtraction method using birefringence 3—12311
- liquid crystals, tubular discotic, optical retardation and developable domain struct. 3—22769
- liquids, dispersion of induced birefringence with strong alternating field 3—14249
- magnetic birefringence, appl. to mag. phase diagram and critical exponents, review 3—28839
- magnetic materials, use of magnetooptics to study mag. props. 3—52772
- magnetic rotation spectroscopy with synchrotron radiation 3—26761
- magneto-optical props., appl. to magneto-optical unidirectional TE-TM mode convertor 3—23926
- magnetotactic bacteria, birefringence determ. of mag. moments 3—9635
- MBBA, nematic-isotropic phase transition, classical critical behaviour obs. 3—47109
- measuring apparatus for birefringence and dichroism meas., in liquids and colloids 3—25912
- mesitylene, liq., orientational correl., molecular quadrupole moments, birefringence 3—36786
- mixed Solc birefringent filter, transmission characts. 3—12294
- monoaxial optical components, ray tracing formulas 3—41754
- nematic liquid cryst., refractive index, extraordinary wave, temp. depend. for various angles of incidence 3—14246
- nematic liquid crystals, thermal dependence and dispersion obs. *(Slovak)* 3—27835
- nematics, hybrid, aligned, enhanced nonlinear birefr. 3—1687
- nitrobenzene, liq. struct., rot. Zeeman effect 3—52771
- nonyloxybenzylidene butylaniline, tilt susceptibility above smectic A-smectic F transition, mag. birefr. determ. 3—51788
- optical activity, birefr., simultaneous meas. using high-accuracy universal polarimeter 3—54765
- optical fibre, birefringence enhancement using borosilicate region, drawing with thermal anneal 3—46289
- optical fibre, polarization properties meas. using photoelastic modulator 3—46343
- optical isolators, single-mode, design feasibility 3—12283
- optical plastics, fabrication techniques, materials and parameters 3—56291
- organogermanes, mol. polarisability and anisotropies 3—1507

birefringence continued
- parametric mixing, spatial and temp. profile effects 3−22155
- pentyl cyanobiphenyl, nematic, surface-induced order, birefr. study 3−51485
- photoelastic composites, exact and approx. strain-optic law 3−23915
- photoelastic modulator design 3−50746
- PMMA, submicrometer periodic grating as artificial birefringent material 3−50745
- polarisers, wire grid, generalised model 3−7134
- poly(γ-benzyl-L-glutamate) in *m*-cresol, dynamic elec. birefr., LF and HF relax. 3−19110
- polyethylene, high density, dynamic X-ray diffr. 3−56834
- polymer film, oriented, Brillouin spectrum, assignment of anomalous peak 3−3750
- polymer nets, inhomogeneous, birefr. 3−19105
- polystyrene sulphonate, aq. soln., mol. weight and conc. depend., Cotton-Mouton const. 3−34066
- potassium malate, phase-matched SHG 3−1708
- pulse compression using polarising techniques 3−6869
- PVC, prod. with double refraction props. *(German)* 3−38794
- quartz, crystal, dichroism, birefringence, X-ray polarisation activity 3−3868
- retardation transient meas. equipment with nanosecond time resolution 3−45184
- retinal polarisation effects 3−15077
- Reusch piles, normal incidence illum. by monochromatic plane and uniform waves *(French)* 3−1528
- tRNA solution, optically induced birefringence 3−34064
- single crystals, high-energy γ-photon birefringence 3−51660
- sodium dodecylsulphate emulsion, birefr., interface defects and curvature, spin-labelling technique 3−58450
- Solc filter engineering 3−7144
- stress wave loading, dynamic crack-tip stresses, comparison of theory and expt. 3−17885
- tetramethylammonium copper tetrachloride, ferroelastic transitions, thermal and spectral studies 3−33424
- TGS, optical, electro-optical props., in ferroelec. and paraelectric states, high accuracy universal polarimeter meas. 3−57880
- toluene, liq. struct., rot. Zeeman effect 3−52771
- (+)-(1S,5R)-1,8,8-trimethylbicyclo[3.2.1] octan-3-one, chair-boat conform. equilib. investig. 3−21800
- UV magneto-optical spectra anal. 3−41524
- wedges, birefringent, used as compact optical isolator for fibres 3−22219
- YAG CW ring laser emitting single-mode linearly polarised radiation, intracavity SHG in $LiIO_3$ 3−17501
- AgCl emulsion printed out by linearly polarised achromatic signal, anisotropic response 3−49480
- $AgGaS_2$ gyrotropic isoindex filter 3−17609
- AgTlSe, optical elastic and acousto-optical props. 3−52767
- CS_2, femtosec. transient birefringence, Kerr gate config., relax. rate 3−34067
- CS_2, liq., orientational correl., molecular quadrupole moments, birefringence 3−36786
- CS_2, subpicosecond birefr. response, direct meas. 3−14250
- $CdCr_2Se_4$, magnetic birefringence, angular, temp. and field depend. 3−19106
- CdS acousto-optic tunable filter, resolution enhancement using birefr. dispersion 3−12297
- Co, ferrofluid, form birefr., dichroism meas. 3−28829
- $CsCo_{1-x}Mg_xCl_3$, quasi-one-dimens. Ising diluted antiferromag., short- and long-range order 3−43383
- $CuGaS_2$, Faraday effect in optically active crystals with birefringence inversion 3−38803
- Cu_2O crystals, spatial dispersion of light near the quadrupole absorpt. line 3−23912
- DyIG, linear mag. birefr., phenomenological anal. 3−28845
- DyIG, linear mag. birefringence, phenomenological anal. 3−57895
- $Er_3Fe_5O_{12}$ garnet, linear mag. birefringence and optical axis position 3−28844
- $FeBO_3$, magneto-optical props., appl. to magneto-optical unidirectional TE-TM mode convertor 3−23926
- FeF_2, antiferromagnet, anisotropic, critical behaviour 3−57671
- Fe_3O_4, ferrofluid, form birefr., dichroism meas. 3−28829
- GaP, edge dislocations, stress-induced birefr. images, TEM study 3−3683
- GaS_xSe_{1-x} crystals, linear and nonlinear optical props. 3−28827
- GeO_2, cryst. growth, optical props. rel. to those of vitreous samples 3−19262
- KCl, deformed, dislocation struct., birefringence data anal. 3−22904
- K_2CuF_4, magnetization, critical behaviour, magneto-optical study 3−52775
- KDP, nonlinear electrooptic effect and birefringence 3−43516
- KH_2PO_4, lattice parameter determ., birefr., dislocation density and impurity conc., X-ray study 3−46892
- KH_2PO_4, nonreciprocal linear mag. birefringence study 3−19113
- $KNiF_3$, antiferromagnet, isotropic, induced linear birefringence, critical behaviour 3−57886
- K_2SeO_4, birefringence, electrooptical effect and ferroelec. transitions 3−14255
- $KTaO_3$:Li, collective effects in random-site elec. dipole system 3−38716
- LiF:U^{6+} crystal, impurity electrooptical effect in 5185-Å absorpt. line region 3−23913
- α-$LiIO_3$, nonreciprocal linear mag. birefringence study 3−19113
- $Li_{0.02}Na_{0.98}NbO_3$, ferroelec.-ferroelastic coupling, transitions and optical props. *(French)* 3−47613
- $Li_{0.2}Na_{0.98}NbO_3$, ceramic and single cryst., ferroelectric phase transitions *(French)* 3−8782
- $LiNbO_3$:Fe, photorefractive effect and surface elec. breakdown, space charges obs. 3−23898
- MnF_2, antiferromagnet, anisotropic, critical behaviour 3−57671
- NH_4HSeO_4, optical and electrooptical props. near ferroelectric transition 3−28831
- Na halides, high press. polymorphs and birefringence 3−56844
- NaCl, deformed, dislocation structure, birefringence data anal. 3−22904
- Na_2GeF_6, optical props. 3−57871
- $Na_4Ge_9O_{20}$, cryst. growth, optical props. rel. to those of vitreous samples 3−19262
- O_2, $^3\Sigma$ state, diamag. susceptibility anisotropy from temp. depend. of Cotton-Morton effect 3−56104
- PLZT ceramics, transparent ferroelec., appl. field induced birefr. mechanism 3−28834

birefringence continued
- $RbCrCl_4$, magnetization, critical behaviour, magneto-optical study 3−52775
- Rb_2GeF_6, optical props. 3−57871
- $RbMnF_3$, antiferromagnet, isotropic, induced linear birefringence, critical behaviour 3−57886
- $RbNiCl_3$, antiferromag., intrinsic magneto-optical effect obs. 3−57893
- Si crystal, dichroism, birefringence, X-ray polarisation activity 3−3868
- SiC, heavy doping influence on dispersion dependence of refr. index and intrinsic birefr. 3−43511
- Si_3N_4, submicrometer periodic grating as artificial birefringent material 3−50745
- YAG:Nd rods, thermal effects, refringence, birefr., cryst. symm., optical pumping study *(Chinese)* 3−22074
- YAP:Nd rods, thermal effects, refringence, birefr., cryst. symm., optical pumping study *(Chinese)* 3−22074
- YIG film, Bitter patterns in polarised light, microfields probe 3−28597
- Zn_3P_2, optical props. anisotropy meas. using GDM-1000 monochromator 3−49468

bismuth
- *see also nuclei with ......*
- abundance anomaly in Hg-Mn star HR 7775. Bi II line anal. 3−5318
- adsorbed on GaAs (100), surface atomic struct. determ. 3−2946
- adsorption of aniline on single crystal faces 3−53420
- adsorption of Cl_2 on (0001) surface, incipient $BiCl_3$ form. and decomp. 3−18563
- adsorption of thiourea on single crystal faces 3−53419
- adsorption on W (100), FEM study 3−13643
- alkaline earth sulphides:Bi, luminescence characteristics 3−43581
- atom, $(6p)^3$ configuration, at. fine structure and HFS, two-body perturbation parametrisation 3−50538
- atoms, electronic excitation by collisional transfer in Bi+NF supersonic flow, chemiluminesc. study 3−41667
- BCC struct. stability at high press., X-ray diffr. meas. 3−28092
- block structure, twinning angles, zone recrystallisation 3−13236
- Compton scattering, L-shell integral, cross-section meas. 3−3850
- discontinuous films, crystallisation, electron diffr. study 3−23214
- elastic and relaxation properties during melting and solidification 3−39191
- electron spectrum parameters from high temp. magnetoresist. oscills. *(Russian)* 3−38405
- film, elec. cond., electron localization and interaction effects 3−18802
- film, magnetoresist. in weak mag. fields, localisation effects *(Russian)* 3−28370
- film thermoelectric figure-of-merit characterisation by Harman method 3−14978
- films with Ag, Fe, Cr island layers, elec. resistance 3−43304
- high temp. internal friction and elastic moduli 3−28046
- ion laser, hollow cathode, 680.9, 660.0, 571.9 nm Bi II lines, 1.1711 μm Bi I line 3−27008
- island films, nucleation, small particle crystallisation 3−3006
- liquid, at. motions from line width studies of scatt. functions 3−57117
- liquid, dynamic scatt. function, neutron scatt. study 3−42507
- liquid, electronic density of states, perturbation and Green function calcs. 3−43003
- liquid viscosity meas. using oscillating crucible method 3−57119
- magnetoresistance and magnetothermoEMF, variational calc. 3−3231
- magnetostriction detection in static fields by capacitance technique *(Japanese)* 3−28678
- magnetostriction meas. in pulsed fields using capacitance cell dilatometer *(Japanese)* 3−28679
- magnetothermo-EMF, commutational effect 3−13841
- microclusters, condensation parameters effect on size distrib. 3−3022
- microwave magnetoabsorption resonances 3−57743
- molecule, electronic states studied by laser-excited fluoresc. 3−11870
- particles, internal potential, contrib. of excess charge and image forces 3−8914
- powder, prep. by low temp. hydrothermal reduction of metal hydroxides 3−3984
- semimetal-semiconductor transition, mag. field induced 3−13866
- Shubnikov-de-Haas effect, oscill. amplitudes two-band model 3−38403
- thin film, anti-localisation effect, cond., temp. and mag. field depend. 3−47435
- thin film, N_2^+ and Ar^+ ion bombarded, elec. cond. 3−28457
- thin film, resist., Hall effect and magnetoresistance, anisotropic two carrier model 3−43300
- thin films, elec. cond. 3−43294
- valence band study 3−28268
- vapour laser, decay of Bi atom $6p^3\ {}^2D^0_{3/2}$ metastable levels in interpulse period 3−6956
- whiskers, nonlinear elastic consts. 3−51999
- Young's modulus and internal friction during heating, free carrier effects 3−13311
- BaS:Bi, dielect. props. 3−34030
- BaS:Cu, Bi phosphor, radiolum., radiative recomb. phenomena, thermolum. comparison 3−14356
- Bi I, elec. quadrupole transition radial integral, mixed multipole line relative intensity meas. 3−11740
- Bi-$BiCl_3$, phase equilib., miscibility gap with two crit. temps. 3−47099
- Bi-BiI_3, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3−43241
- Bi-H amorphous film, elec. props., supercond. props. and crystallisation 3−33817
- Bi-MnBi, irreversible magnetisation processes 3−23718
- $^{83}Bi+{}_1^1H^+({}_2^4He^+)$, M-shell X-ray prod. cross sections meas. 3−6759
- ^{207}Bi radioactive isotope thin target preparation by rapid methods 3−50094
- CdP_2:Bi, impurity effect on elec. cond. type *(Russian)* 3−47350
- GaP:Bi, ODMR study 3−47576
- $GeSe_{3.5}$:Bi chalcogenide glasses, doping-induced struct. changes 3−51502
- GeTe-SnTe:Bi, rhombohedral distortion, phase transition point 3−13430
- HCl-Bi^{3+} solution, luminescence study *(Russian)* 3−43630
- InAs-Bi vapour press. and melting equilib. *(German)* 3−2752
- InP-Bi, vapour press. and melting equilib., activity coeffs. *(German)* 3−2753
- InSb:Bi, doping during LPE, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3−33603
- InSe/Bi p-n junctions, elec. and photovoltaic props. 3−47384
- LiH:Bi^{2+}, photoluminescence of S^2 configuration ions 3−47690
- NaCl:Bi, dielec. const., losses and conductivity 3−19034

bismuth continued
$Pb_{1-x}Sr_xS$:Bi, film, semiconducting, optical absorpt. edge 3−24039
PbTe:Bi, thermoelec. props., elec. cond. and thermal cond. 3−47371
Si: Bi, ion implanted, doping profiles meas. by 200 keV α-particle backscattering 3−24077
Si:Bi, influence of laser beam homogeneity on regrowth 3−56954
Si:Bi, ion implanted, characterisation by ellipsometry and channelling 3−46977
Si:Bi, ion implanted, metastable solid soln. form., backscatt. and channelling study 3−2588
Si:Bi, ion implanted, morphological instability and cell form. during pulsed laser annealing 3−8093
V_2O_5-Bi, glass-metal particulate system, switching kinetics 3−52208

bismuth alloys
see also bismuth compounds
melting mechanisms and surface structures in crystals, impurity depend. 3−33409
$(Bi, Sb)_2(Te, Se)_3$ high-performance thermocouple alloy prep. and props. 3−14528
Bi-MnBi, irreversible magnetisation processes 3−23718
Bi-Sb, block structure, twinning angles, zone recrystallisation 3−13236
Bi-Sb, electron spectrum parameters from high temp. magnetoresist. oscills. *(Russian)* 3−38405
Bi-Sb, high temp. internal friction and elastic moduli 3−28046
Bi-Sb, Shubnikov-de Haas oscillation amplitude enhancement obs. in high mag. field 3−13837
Bi-Sb film thermoelectric figure-of-merit characterisation by Harman method 3−14978
Bi-Te(Cd)(Pb), eutectic possibility of use in production of cooling elements based on bismuth and antimony chalcogenides 3−9047
$Bi_{1-x}Sb$, electron probe microanalysis, extrapolation method 3−9368
$Bi_{1-x}Sb_x$, lattice parameters, X-ray study 3−13163
n-$Bi_{1-x}Sb_x$ semicond. alloys, impact ionisation and carrier recombination in mag. field 3−3215
p-$Bi_{1-x}Sb_x$, thermoelec. and magnetothermoelec. efficiency 3−28373
$Bi_{1-x}Sb_x$, valence band study 3−28268
p-$Bi_{1-x}Sb_x$, x=0.12-0.14, thermoelec. power, elec. resist. meas., interband scatt. study 3−43217
$Bi_{91.5}Sb_{8.5}$ semicond. alloy, carrier statistics and thermoelectric power 3−13845
Cr/Pb-Bi layered films, flux pinning strength and upper crit. field 3−13977
Cu-Bi alloys, liq., activity of O 3−9036
InBi-Bi alloys, effects of high press., struct. transitions detected 3−19336
In_5Bi_3:Cd, temp. and press. depend. of electric field gradient, TDPAC study 3−34017
$InBi(In_2Bi)$, intermetallic cpds., Fermi surface, transverse magnetoresist. and Shubnikov-de-Haas effect study 3−18601
MnBi fine particles, SEM obs. of domains *(Japanese)* 3−52552
Pb-Bi films, supercond., grain-boundary flux pinning 3−3395
ε-Pb-Bi films for Josephson junction counterelectrodes, film comp. and thermal stability 3−47237
Pb-Bi-Au Josephson junction counterelectrodes, film microstructure and thermal stability 3−47238
Pb-Bi-Sb, ternary system with binary eutectic, contact melting 3−39096
Pb-In-Au/Pb-Bi thin-film diffusion couples, Kirkendall voids ring form. 3−8266
PbBi/Cu proximity effect junctions, resist. transition 3−13969
Sb-Bi alloy coated Ta substrated for large grain CdTe film growth, solar cell appl. 3−24580
$Se_{0.95}Bi_{0.05}$ alloy, crystallisation, calorimetric investig. 3−3944
$Se_{0.95}Bi_{0.05}$ amorphous thin films, coevaporated, characterisation 3−3196
TmBi ferromagnetic film, bubble translation study *(Russian)* 3−23752
UBi, electronic struct., relativistic calcs. 3−18609

bismuth compounds
see also bismuth alloys
halide-PbI_2 film layer sensitivity during physical development *(Russian)* 3−54804
layer struct. cmpd., grain-oriented ceramic, prep. by unidirectional solidification of melt *(Japanese)* 3−58085
trihalides, cryst. struct. and polymorphic transitions 3−7986
$AgBi(CrO_4)_2$ and $Bi_2O(CrO_4)_2$ cathodic materials, electrochemical behaviour in Li batteries *(French)* 3−24512
$AgF-BiF_3$ system, ionic cond. and struct. props. of phases 3−42844
n-BNi_2Te_3, carrier mobility and effective mass, Hall effect and magnetoresist. study 3−3202
$B_2S_3-Li_2S-LiI$ glass, prep. and ionic cond. props. 3−51845
$BaPb_{1-x}Bi_xO_3$, single cryst. growth from $PbO_2-Bi_2O_3-BaPbO_3$ soln., supercond. props. 3−3936
Bi-$BiCl_3$, phase equilib., miscibility gap with two crit. temps. 3−47099
Bi-BiI_3, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3−43241
Bi-I, liquid, cluster formation and chem. short range order, neutron scatt. study 3−13066
Bi-Sb:Ge, electrophys. props., n-type thermoelec. alloy 3−3235
Bi-Se melt, crystn. 3−57063
$BiBr_3$, PES and relativistic interpretation 3−26786
$BiCl_3$, incipient form. and decomp. during Cl_2 adsorption on Bi (0001) 3−18563
$BiCl_3$, PES and relativistic interpretation 3−26786
$BiCl_3$, polycrystalline samples, volume thermal expansion coeff. derivation from NQR data 3−19010
$Bi_{12}GeO_{20}$, cryst. struct., chem. bonds, and natural vibrs. 3−27916
$Bi_{12}GeO_{20}$, dissolution in HNO_3-acetic acid mixture, kinetics and mechanism 3−57093
$Bi_{12}GeO_{20}$, electroacoustic echo and NQR 3−43238
$Bi_{12}GeO_{20}$, photorefractive cryst., sign of photoconductivity carriers, holography study 3−13862
$Bi_{12}GeO_{20}$ photorefractive crystals, real-time image division in four-wave mixing 3−22168
$Bi_{12}GeO_{20}$, pure and doped, US attenuation, 4 to 270K 3−38003
$Bi_{12}GeO_{20}$, sillenite, optical waveguide, electro-optic light polarisation modulation *(Russian)* 3−46291
$Bi_{12}GeO_{20}$, sillenite type struct., single crystals, formation of defects 3−13211
$Bi_{12}GeO_{20}$, space charge prod. during optical recording 3−36954
$Bi_{12}GeO_{20}$ substrate for acousto-optical devices, planarity monitoring of polished surfaces 3−45106
$Bi_{12}GeO_{20}$ transparent material optical uniformity monitoring, using holographic interferometry 3−16406

bismuth compounds continued
$Bi_{12}GeO_{20}$, NQR study 3−23833
$Bi_4(GeO_4)_3$, refinement of crystal struct. *(French)* 3−22846
$Bi_4Ge_3O_{12}$, calorimetric and fluorescent props., EM calorimetry appl. 3−52853
$Bi_4Ge_3O_{12}$, cryst. struct., neutron diffr. and EPR study 3−8009
$Bi_4Ge_3O_{12}$ crystal, radiation damage due to γ-rays, protons and fast neutrons 3−45757
$Bi_4Ge_3O_{12}$ scintillating crystal, photodiode readout 3−26568
$Bi_4Ge_3O_{12}$ scintillator sensitivity to fast neutrons 3−17172
$Bi_2(H_2O)_2(SO_4)_2(OH)_2$, cryst. struct. determ. 3−22841
BiI_3, PES and relativistic interpretation 3−26786
BiI_3, resonant Raman scatt., zone folding effects on phonons and excitons 3−8836
$BiI_3:Pb^{2+}(Cd^{2+})(Mn^{2+})$ thin films, exciton absorpt. spectrum 3−19162
$Bi_{2-x}In_xTe_3$, constant energy surface anisotropy 3−3056
Bi_2O_3 and WO_3, smoke particles coalescence, high resolution electron microscopy study 3−51522
Bi_2O_3 thin film, N_2^+ ion implanted, photoconductivity 3−28457
$Bi_2O_3-B_2O_3$, liq.-liq. immiscibility *(Japanese)* 3−38080
$Bi_2O_3-V_2O_5-P_2O_5$ glass-metal particulate composite, elec. cond. switching, obs. and theory 3−18755
$(Bi_2O_3)_{0.8}(Er_2O_3)_{0.2}$, struct. and ionic cond., neutron diffr. study 3−33201
$Bi_2O(OH)_2SO_4$, cryst. struct. determ. 3−22842
γ-$6Bi_2O_3.SiO_2$ and γ-$6Bi_2O_3.GeO_2$, monocryst. growth by temp.-gradient furnace technique using double crucibles *(Japanese)* 3−8966
Bi_2S_3 semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3−39492
Bi_2S_3, solid, vap. press., vaporisation study 3−42764
$Bi_2S_3-Ag_2S$ semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3−39492
Bi_2S_3-PbS semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3−39492
BiSb, quantitative anal., electron backscatt. coeff. meas. 3−19541
$Bi_{0.88}Sb_{0.12}$:Fe(Co)(Ni), Fe Co or Ni effect 3−38413
$Bi_{1-x}Sb_x$, plasma dynamics study 3−38418
$Bi_xSb_{1-x}SI$, soft mode behaviour, microwave dielec. spectra 3−43497
$Bi_xSb_{2-x}Sn_2S_5$, cryst. struct. determ. 3−27903
$Bi_{2-x}Sb_xTe_{3-y}Se_y$, constant energy surface anisotropy 3−3056
Bi_2Se_3, binding energies, valence bond density of states, photoemission 3−8930
$Bi_{10}SiO_{20}:Nd^{3+}$, absorption spectra, vibronic struct. 3−34131
$Bi_{12}SiO_2$:Nd, impurity-induced circular dichroism and optical activity 3−28830
$Bi_{12}SiO_{20}$, cryst. struct., chem. bonds, and natural vibrs. 3−27916
$Bi_{12}SiO_{20}$ crystal, travelling hologram intensification 3−32331
$Bi_{12}SiO_{20}$, electret state formed under X-ray irrad., characteristics 3−47589
$Bi_{12}SiO_{20}$, electrooptic nature of photorefractive effect 3−14257
$Bi_{12}SiO_{20}$ monocrystalline material based liq. cryst. light valve 3−7160
$Bi_{12}SiO_{20}$, optical activity, effects of hydrostatic press. and temp. 3−34063
$Bi_{12}SiO_{20}$ phase-conjugate mirror based coherent optical image delay device, appls. 3−56141
$Bi_{12}SiO_{20}$, photorefractive cryst., sign of photoconductivity carriers, holography study 3−13862
$Bi_{12}SiO_{20}$ photorefractive crystals, running holograms 3−22008
$Bi_{12}SiO_{20}$ photorefractive crystal, light beam steering using reversible photoinduced grating 3−46281
$Bi_{12}SiO_{20}$, sillenite type struct., single crystals, formation of defects 3−13211
$Bi_{12}SiO_{20}$, single crystals, IR absorpt. spectra, 500-2500 cm^{-1}, at 90 and 300K 3−34117
$Bi_{12}SiO_{20}$ single cryst., photoelectret and X-ray electret state characts. 3−47590
$Bi_{12}SiO_{20}$:Al(Ga)(Ca), electrooptic props., doping effects 3−23918
$Bi_{12}SiO_{20}:Fe^{3+}$, paramag. impurity, EPR study 3−28693
$Bi_{12}SiO_{20}:Ho^{3+}$, Er^{3+}, impurity IR absorption spectra, Stark levels 3−19165
$Bi_4Si_3O_{12}$, cryst. struct., neutron diffr. and EPR study 3−8009
$Bi_4Si_3O_{12}$, scintillation characts. for EM shower detectors 3−41414
$BiSiO_{20}(GeO_{20})$, optical information recording inelec. field 3−12093
$Bi_3Sr(Eu)$, band struct. and superconductivity 3−13726
BiTe-TlTe system, phase diagram, X-ray microstruct. and DTA studies *(French)* 3−33394
Bi_2Te_3, binding energies, valence bond density of states, photoemission 3−8930
Bi_2Te_3, doping effects and impurity elec. activity 3−13251
Bi_2Te_3 films, thermoelectric power, electrical cond., temp. coeff. of resistance and activation energy 3−8598
Bi_2Te_3, relativistic corrections to electron energies *(Russian)* 3−3059
$Bi_2Te_3-Sb_2Te_3-Sb_2Se_3$ thermoelectric ingot preparation and characterisation 3−14475
$Bi_2Te_3-Sb_2Te_3-Sb_2Se_3$ thin film thermoelectric generator design and fabrication 3−14967
$Bi_2Te_3-Sb_2Te_3(Bi_2Se_3)$ alloy, doping effects and impurity elec. activity 3−13251
Bi_2Te_3-Te eutectic system, hardness and elec. cond. interrelations 3−52138
$Bi_2Te_{3-x}Se_x(S_x)$, constant energy surface anisotropy 3−3056
$Bi_{10}Ti_3O_{30}$, solid-phase form. in $Bi_4Ti_3O_{12}-Bi_2WO_6$ system, struct. 3−8205
$Bi_{12}TiO_{20}$, cryst. structure, X-ray diffr. study 3−22856
$Bi_{12}TiO_{20}$, photorefractive cryst., sign of photoconductivity carriers, holography study 3−13862
$Bi_7Ti_5O_{20}F$, synthesis, cryst. struct. and thermal props. 3−8001
$Bi_5Ti_2WO_{14}F$, synthesis, cryst. struct. and thermal props. 3−8001
$(BiTm)_3$ $(FeGa)_5O_{12}$ film, multilayer struct., mag. anisotropy, dynamic study 3−43416
$(BiTm)_3(FeGa)_5O_{12}$ epitaxial films, spin-reorientation phase transition in mag. field 3−33952
$(BiTm)_3(FeGa)_5O_{12}$, mag. bubble lattices, thermal and field stability 3−38663
$Bi_xTm_{3-x}Fe_yGa_{5-y}O_{12}$ films, mag. props. 3−33949
$BiVO_4$, absorpt. edge, temp. depend. 3−28814
$BiVO_4$, Brillouin scatt. at high temps. 3−3749
$BiVO_4$, ferroelastic, elastic consts., US velocity study 3−47023
$BiVO_4$, single cryst., ferroelastic domain struct. 3−38095
$BiVO_4$, single crysts., acousto-optical props. 3−34071
$BiVO_4$, struct. phase transitions, Brillouin scatt. studies 3−57083
$Bi_xY_{1.2-x}Ca_{1.8}Sn_{0.3}V_{0.5}Ge_{0.5}Fe_{3.7}O_{12}$, solid state reaction 3−33939

bismuth compounds continued
- $Bio_{12}GeO_{20}$, single crystals, IR absorpt. spectra, 500-2500 cm^{-1}, at 90 and 300K 3—34117
- $(Gd,Bi)_3(Fe,Ga)_5O_{12}$ epitaxial film, nuclear tracks from Xe and U ion irrad. 3—3493
- Ge-Bi-Te, phase transition temp., lattice periods and electrophysical props. 3—9057
- GeO_2-PbO-$Bi_2O_3(Tl_2)$, glass-forming systems, study using X-ray diffr., DTA and thermomech. anal. 3—13108
- $Hg_{1-x}Bi_xF_{2+x}$ solid soln., ionic cond. props. *(French)* 3—18502
- $InSe/Ga_{0.98}Bi_{0.02}Te$ p-n heterojunctions, I-V characts. 3—43275
- K-Bi-O system, phase synthesis and characterisation *(French)* 3—19329
- $K_{0.5}Bi_{0.5}TiO_3$, ferroelec. transitions and piezoelectricity, permittivity meas. 3—28798
- $K_{0.5}Bi_{0.5}TiO_3$-$Na_{0.5}Bi_{0.5}TiO_3$ ferroelec. ceramics, lattice parameters and phase transition, X-ray study *(Chinese)* 3—28785
- $La_{3-x}Bi_xWO_6Cl_3$, luminesc. studies 3—52837
- Na-Bi-O system, phase synthesis and characterisation *(French)* 3—19329
- $Na_{0.5}Bi_{0.5}TiO_3$, ferroelec. transitions and piezoelectricity, permittivity meas. 3—28798
- $PbBi_2TiNbO_8F$, synthesis, cryst. struct. and thermal props. 3—8001
- $PbBi_2TiTaO_8F$, synthesis, cryst. struct. and thermal props. 3—8001
- PbTe-Bi_2Te_3, kinetic parameter dependence on impurity level, annealing effects 3—8515
- PbTiO-$Bi(Zn_{2/3}(Mg_{2/3})Nb_{1/3})O_3$, ferroelec. phase transition, X-ray, permittivity and dilatometric studies 3—38777
- $Sb_{1.5}Bi_{0.5}Te_3$-Bi_2Se_3 solid soln. single cryst., elec. and thermal conductivities 3—57345
- $Sb_{2-x}Bi_xTe_3$:Se, elec. cond. and forbidden-band width 3—3186
- $Sb_{2-x}Bi_xTe_{3-y}Se_y$:Pb solid soln., thermoelec. props. 3—57372
- $(TmBi)_3(FeGa)_5O_{12}$ films, domain wall dynamics, effect of elevated coercivity 3—38662
- $(TmBiPb)_3(FeGa)_5O_{12}$ epitaxial film, magnetooptic visualization and topographical study of magnetic fields 3—40652
- $(Y,Bi)_3(Fe,Ga)_5O_{12}$ garnet films, stripe domain dynamics, photography study 3—8706
- $(Y, Gd, Yb, Bi)_3(Fe, Al)_5O_{12}$ garnet films, epitaxial, pulsed remagnetisation, magneto-optical and high-speed photography studies 3—23761
- $(YBiCa)_3(FeSi)_5O_{12}$ epitaxial garnet films, mag. props. 3—33945
- $Y_{2.6}Bi_{0.4}Fe_{3.75}Ga_{1.25}O_{12}$ ferrite-garnet epitaxial film, anomalous mag. viscosity and bubble struct. obs. 3—3498
- $Y_{3-x}Bi_xFe_5O_{12}$ single cryst., Curie temp. and Mossbauer spectra *(Chinese)* 3—43463
- $(YGdYbBi)_3(FeAl)_5O_{12}$ epitaxial garnet films, magnetisation processes *(Russian)* 3—23745
- ZrF_4-BaF_2-LaF_3-AlF_3-LiF-BiF_3-PbF_2 glass, viscosity props. for fibre drawing 3—1786

bistable multivibrators *see flip-flops*

bistable optical devices *see optical bistability*

bit-slice computers
- 168/E fast processor as stand alone computing facilities, memory interface 3—17185
- PROM simulator and word generator for microprogrammable high speed processor development 3—17186

Bitter patterns *see magnetic domains*

bitumen *see materials*

BL Lacertae-type objects
- 1413+135, extreme IR identification 3—25614
- 1704+6077, 1408+020, X-ray selected BL Lacertae candidates, X-ray, optical and radio obs. 3—5417
- AO 0235+164, UV obs. 3—20490
- arc second radio structure of 12 BL Lacertae objects, VLA obs. 3—54501
- broad emission lines, reason for absence from BL Lacertae objects and presence in Seyfert galaxies 3—54509
- bursts of high energy electrons, deceleration and adiabatic expansion 3—35415
- continuum obs. at 1 mm wavelength 3—20522
- flat spectrum radiosources, optical identification 3—40274
- flux density measurements of bright extragalactic sources at 36.8 GHz, results 3—40278
- galaxies associated with BL Lacertae objects, results from CCD photometry 3—25617
- BL Lacertae, optical posn. of benchmark radiosource 3—44863
- BL Lacertae, rapid outburst at 2.72 GHz, obs. 3—10456
- local volume density of BL Lacertae objects, determ. from Einstein X-ray obs. 3—54508
- multiaperture JHK photometry obs. 3—30504
- OJ 287, emission models and IR/visible/UV and EHF obs. 3—5403
- OJ 287, obs. of optical and radio outburst (1983 January 10 to 14) 3—35735
- OJ 287, obs. of rapid variability at 1.25 μm 3—16000
- OJ 287, optical posn. of benchmark radiosource 3—44863
- OJ 287, visual magnitude estimates, 1983 February 15 and 21, after outburst in January (1983) 3—54532
- PKS 0548−322, UV and X-ray spectrophotometry 3—10436
- PKS 0735+178, flat spectrum rel. to bursts of high energy electrons 3—35415
- polarisation in optical and near IR, wavelength depend. 3—59477
- QSO 1308+326, linear polarisation and 2.7 GHz flux density, opacity effects 3—49051
- radio variability of BL Lacertae objects, anal. from 2380 MHz obs. 3—49010
- radio-independent search calibration 3—20491
- spectra, visible and UV *(Polish)* 3—49033
- variability of compact radio sources at 1 mm wavelength 3—20514
- X-ray emission, absence of rapid X-ray variability 3—30490

black holes
- *see also gravitational collapse*
- accretion discs nature 3—44738
- accretion tori orbiting black holes, evolution 3—59476
- active galactic nuclei, origin of broad emission lines in Seyfert galaxies and featureless spectra in BL Lacertae objects 3—54509
- V1343 Aquilae (SS 433), mass transfer binary star, observational characts. and theoretical models 3—40149
- barytropic gas transonic accretion from disc 3—25510
- binary star research, contrib. to recognition of neutron stars and black holes 3—48956
- blue shifted radiation from accreting black holes/neutron stars 3—40162
- Bogomolny inequality for Einstein-Maxwell theory 3—16210

black holes continued
- central object in quasars and active galaxies, flux variations time scale anal. 3—25652
- charged particle in mag. field, negative energy states on Kerr space-time 3—20741
- classical singularities and black holes life, quantum gravity effects 3—10699
- collapsing matter trajectory in Penrose diagram 3—44786
- cosmological first-order phase transition and baryon-monopole problem 3—44880
- dense objects, relativistic continuum mechanics 3—15839
- double radiosources, collimated beam model involving electron-positron showers of black hole origin 3—16023
- dynamics at globular cluster centres 3—10408
- Einstein-Yang-Mills-Higgs system, wormhole solns. 3—45035
- electric charge in the Kruskal space-time and the Jeans conjecture, matter from white holes 3—40299
- energy fluctuation and upper limit of radiation temp. *(Chinese)* 3—44784
- energy mining proces 3—59381
- entropy evaporation 3—20746
- entropy evaporation by black hole, theoretical anal. 3—59210
- ergosphere gyration calcs. 3—35653
- evaporation, density fluctuations in early Universe 3—35753
- event horizon particle-pair prod., Hawking model *(French)* 3—39977
- formation from axion clumps and Universe struct. evolution 3—59518
- funnels in thick accretion disks, luminosity limits 3—16002
- in galactic centre, black hole model rel. to IR, radio and X-ray props. 3—49032
- galactic nuclei, distrib. of stars around black hole from numerical soln. of kinetic eqn. with collisions 3—10380
- galactic nuclei, spherical accretion and quasars 3—59497
- galactic nuclei, supermassive black holes, merging rel. to gravit. waves *(Russian)* 3—35725
- galaxies active nuclei, consequence of asymmetry of radio jets 3—25622
- galaxies active nuclei, dynamics and fuelling of massive black hole 3—54513
- galaxies active nuclei, supermassive objects rel. to energy source 3—25615
- general relativity, gravitation without black holes 3—20721
- generalised master equation for wave eqn. separation in black-hole background 3—10681
- generalised Zipoy-Voorhees metric, three-parameter vacuum soln. 3—30726
- geodetic deviation equation, const. of the motion 3—10683
- gravitating plasma disc in poloidal mag. field, nonlinear effects *(Russian)* 3—20237
- gravitation collapse of black holes, implications of barytinos for violation of baryon number conservation 3—59200
- gravitational radiation energy, momentum and ang. momentum from particle plunging into nonrotating black hole 3—49234
- high energy γ-ray production from accreting plasma 3—25511
- jets, production in thick accretion disks, relativistic Navier-Stokes solutions 3—20416
- jets from geometrically thick accretion disc, appl. to active galactic nuclei and (SS 433) 3—10203
- Kaluza-Klein theory, five dimens., classical dyonic black hole solns. 3—40446
- Kerr black hole field with fluctuating perturbations, test particle motion 3—44788
- Kerr black hole in EM field, charged particle orbit off equatorial plane 3—5329
- Kerr gravitational field, radiation reaction 3—20738
- Kerr-Newman black hole soln., proof of uniqueness 3—5326
- Kerr-Newman black holes, linearised perturbation techniques 3—10684
- Kerr-Newman metric in Robertson-Walker Universe background 3—5453
- lattice universe geometry, black hole models 3—40298
- LMC X-3 optical counterpart, mass, and radial vel., visible obs. 3—20431
- M87, X-ray obs. of galactic nucleus rel. to massive black hole 3—10440
- Markarian 205 quasar as massive black hole ejected from spiral galaxy NGC 4319, general relativistic anal. 3—20525
- massive black holes, indirect existence evidence 3—15940
- massless Klein-Gordon equation for interior normal modes, effective potential 3—20417
- model Einstein-Maxwell system, quantum theory of wormholes 3—30750
- $N=4$ supergravity, antigravitating black holes solitons with scalar hair 3—16219
- nearby stellar passage, disruption/destruction model 3—20415
- neutrino emission pulse from collapsing star 3—35640
- nonluminous matter constraints in dwarf spheroidal galaxies 3—49021
- one-wormhole processes, generating functional Z_0, quantum corrections 3—30751
- parameter evaluation using DELILAH program 3—44785
- particle creation by a black hole as a consequence of the Casimir effect 3—5328
- path integral for scatt. theory 3—45017
- primordial black holes, abundance from cosmological first-order phase transition 3—44881
- primordial black holes, cosmological mass density rel. to gravitationally lensed Seyfert nuclei model for quasars 3—44865
- primordial black holes form. and early Universe inhomogeneity 3—44872
- primordial black holes form./mass spectrum in Universe with maximally hard eqn. of state 3—59513
- quantum evaporation of a black hole in an external field 3—10382
- quasars, black hole model rel. to origin of relativistic particles and gamma-rays 3—49047
- quasars, consequence of asymmetry of radio jets 3—25622
- quasars, supermassive black holes merging rel. to gravit. waves *(Russian)* 3—35725
- radiation, asymptotic behaviour in Vaidya space-time, energy-momentum tensor 3—10381
- radio galaxies, supermassive objects rel. to energy source 3—25615
- radio sources, extragalactic, massive black holes model 3—25635
- Reissner Nordstrom spacetime, chiral flux from black holes 3—40445
- Reissner-Nordstrom black hole, crossing the Cauchy horizon 3—30413
- Reissner-Nordstrom black hole perturbations 3—15939
- Reissner-Nordstrom geometries, spin radiation field Debye potential calc. 3—16193
- relativistic gravity testing, space expt. using multiple time-correlated radio signals 3—54225
- rotating, vacuum polarisation of massive fields in Kerr space-time 3—59382

black holes continued
Schwarzschild black hole, null geodesics in static Ernst space-time 3—35651
Schwarzschild black hole, scalar tardyons and tachyons scatt. 3—5327
Schwarzschild black hole in spherical cavity, vacuum polarisation 3—54424
Schwarzschild horizon, EM test fields 3—54423
second law, violation by tachyons 3—40433
second law of thermodynamics, negative energy flux absorption by hot body 3—16214
in Seyfert galaxies, multiple low mass black holes model 3—54511
spherically symmetric uncharged black hole, vacuum polarisation and effective temp. 3—44789
spin temp,., three-stage process 3—44787
stars distribution around black hole, numerical soln. of kinetic eqn. with collisions 3—10380
stationary spherical accretion, optically thin to optically thick transition 3—25512
superhair, Ravita-Schwinger solutions in O(2) supergravity 3—30758
supermassive, characts. and navigational hazard theory 3—44658
supermassive black holes in active galactic nuclei thick supercritical accretion discs 3—5106
surface effects in black hole physics 3—10682
temperatures, cosmological constraints 3—49126
thermodynamics of black holes in anti-de Sitter space 3—35650
thick accretion discs, instability 3—10308
thick accretion disks models 3—35652
thin disc, transonic accretion flow 3—25509
thin-wall vacuum domain evolution, eqn. of motion, black holes 3—30725
transformation into grey holes from neutrino constraints 3—15938
two Schwarzschild black holes, 'closed' trapped region and apparent horizon 3—5325
Universe, invisible mass, dead stars, black holes and cosminos *(French)* 3—25672
vacuum polarisation near a black hole creating particles 3—54425
vacuum polarisation near black hole horizon in presence of boundaries 3—25513
very early Universe, first-order phase transitions, bubble nucleation and collisions, primordial black hole formation 3—20549
very massive stars critical O core mass for black hole evolution 3—25416
vierbein gauge theory of gravitation and existence of black holes 3—40163
Wolf-Rayet stars with compact companions, masses of compact objects 3—25483
blast waves *see shock waves*
blazars *see BL Lacertae-type objects*
bleaching, optical *see optical saturable absorption*
Bloch walls *see magnetic domain walls*
blood
see also haemodynamics
aberration scoring using POLYP, biological dosimetry 3—29765
aggregational equilibria 3—29608
biopolymers, drag-reducing, isolation from blood 3—24777
brain-blood barrier in dogs, effect of 1.0 GHz microwave irrad. 3—24801
brain-blood barrier in rats, permeability after local proton irrad. 3—48324
brain-blood barrier permeability changes, evaluation using ^{82}Rb and positron emission tomography in man and monkey 3—48383
cardiac blood pool, feasibility of gated single-photon emission transaxial tomography 3—58806
cell, solid/vapour interfacial free energy and surface tension 3—47191
cell sensitivity and repair of children with some hereditary diseases *(Russian)* 3—19673
cell suspension, theoretical modelling of filtration 3—58615
cell suspensions filtration, rel. to erythrocyte conc. 3—58614
cell suspensions filtration, role of leukocytes 3—58613
cell transport phenomena during dialysis deglycerolisation, computer simulation 3—53652
cells, lanthanide-binding, mag. separation 3—35042
cells in plasma, high gradient mag. separation 3—34798
chemiluminescence of rat serum after total-body irrad., dose depend. *(Russian)* 3—34898
chromosome aberration scoring with parallel image processing for biological dosimetry 3—53860
chromosome aberrations induced in human lymphocytes by 600 MeV neutrons 3—19752
chronic granulocytic leukaemia, NMR investig. of H_2O exchange 3—44206
component fractionation using high gradient mag. separation 3—34926
continuum ambulatory peritoneal dialysis, effect on trace element concs. 3—9734
coupled intra- and extraluminal flows for single and multiple capillaries, anal. 3—9657
density dilution method, circulation research, review 3—48458
density gradient separation methods, evaluation, erythrocytes appl. 3—29797
dielectric model of human blood 3—44227
electrical conductivity, practical anal. 3—58635
engineering in medicine and biology, conf., Philadelphia, USA (Sept. 82) 3—10511
erythrocyte, motion along a capillary, hydromech. model *(Russian)* 3—24692
erythrocyte compressibility, US vel. meas. 3—19674
erythrocyte crenation by low power He-Ne laser radiation, ABO system depend. 3—53720
erythrocyte deformability, meas. using a stroboscopic recording centrifuge 3—53881
erythrocyte deformability, US determ. 3—4690
erythrocyte deformability measurement using Ektacytometer, clinical utility 3—19793
erythrocyte ghosts, membrane damage after X-irrad. *(Russian)* 3—58733
erythrocyte membrane, lipid organisation, phloretin effects, EPR obs. 3—58607
erythrocyte membrane, porcine, spin-labelled compounds transport, ionising radiation effect 3—48334
erythrocyte membrane, temp. dependence of yield shear resultant and plastic viscosity coeff. 3—4474
erythrocyte orientation in a flow, meas. by spin labelling, EPR spectra 3—48262
erythrocyte sedimentation rate time curve 3—48264
erythrocyte signals in conductor systems, mathematical modelling *(Russian)* 3—44207
blood continued
erythrocyte transport rel. to plasma viscosity and haematocrit 3—24750
erythrocytes, Frohlich interaction study 3—39609
erythrocytes, human, 2450 MHz microwave irrad. effects on $^{24}Na^+$ efflux 3—29636
erythrocytes, human, cytosol-membrane interface, reson. energy transfer, donor fluoresc. 3—53643
erythrocytes, human, effect of pulsed US in vitro 3—29627
erythrocytes, human, packed, with haemoglobins F, AA, AS and SS, RF dielec. characts. 3—58620
erythrocytes, human, washed, spontaneous aggregation in isotonic media of reduced ionic strength 3—9563
erythrocytes, magnetic separation and behaviour in high gradient field 3—53707
erythrocytes, rabbit, effects of X-band microwave exposure on K^+ efflux 3—39690
erythrocytes, rabbit, natural radioprotectant interaction with γ-radiation 3—29669
erythrocytes, solitary, human, mag. susceptibility obs. 3—29581
erythrocytes, undeformable in blood samples, determ. using laser light scatt. 3—24918
erythrocytes and bone marrow of rats, effects of γ-irrad. and cystamine on superoxide dismutase activity 3—4561
erythrocytes sedimentation profiles under gravity, effect of inhomogeneous mag. field 3—39607
flow at low shear rates in a concentric cylindrical viscometer 3—48302
flow measurement, appl. of props. of thermal waves in vascular media 3—9769
fluid mechanics, continuum physics theory of equilib. and sedimentation 3—24748
granulopoietic progenitor cells, canine, sensitivity to ionising radiation, blood and bone marrow obs. 3—48330
haemeproteins, liganded, femtosec. and picosec. transient processes after photolysis 3—39592
haemoglobin, Raman spectra of Fe-histidine linkage struct. depend. 3—39590
haemoglobinometry rel. to IR reflectance from whole blood soaked filter paper 3—34943
haemostatic homeostasis is total and local irrad. *(Russian)* 3—15154
haemotocrit reduction in bifurcations due to plasma skimming 3—53709
Korotkoff sound generation at distole 3—53711
laser Doppler anemometry apparatus for meas. on individual red blood cells 3—9795
leucocyte in blood, phagocytic ability strengthening by laser irrad. of horse perineal region skin *(Chinese)* 3—39694
leukocyte lysosomes, defective cystine transport in cystinosis patients 3—15053
lumphocytes, G_0, human, X-ray induced reciprocal translocations and dicentrics 3—29657
lymphocytes, bulbous, unconstrained lateral diffusion of concanavalin A receptors 3—4487
lymphocytes, human peripheral, γ-irrad. and sister chromatid exchange induction 3—48333
lymphocytes, human peripheral blood, chromosomal aberrations induced by 14.9 MeV neutrons *(Hungarian)* 3—15144
lymphocytes, mature, survival curve 3—34914
mammalian blood, in vivo material functions 3—58696
microcirculatory blood flow assessment, laser-Doppler methods appl. 3—34946
micropolar fluid model for blood flow through a small tapered tube 3—53710
microvascular bifurcations, flow conditions of red cells and plasma 3—9646
microwave hyperthermia, local, determ. of perfusion field using finite element thermal models 3—24842
mixed arterial concentration of O_2 in a global pulmonary gas exchange model 3—15132
neutrophils, adaptation to microwave irrad., math. simulation *(Russian)* 3—34887
nuclei of chicken thymocytes and erythrocytes, γ-radiation-induced damages to membrane structs. *(Russian)* 3—58736
osmolality, molecular weight and activity coeff. determ. using vapour pressure osmometer 3—35043
oxyhaemoglobin, picosec. time-resolved reson. Raman spectroscopy of photolysis, product 3—39598
plasma and blood viscosities, and aggregation of red cells in racehorses 3—24749
plasma membranes, low-temp. alteration of permeability due to dehydration 3—34805
platelet adhesion studies using flow cell 3—44349
protein adsorption at mol. level, Fourier transform IR spectroscopy appl. 3—9798
pulmonary capillary transit times meas., direct obs. in dogs 3—24776
pulmonary density and blood vol., meas. with positron emitting isotopes *(French)* 3—58791
pulmonary vascular tone rel. to basal lung perfusion in normal seated subjects 3—58706
radionuclide dilution and clearance curves, analogue recording, error estimation 3—9703
red blood cell aggregation, statistical props., rouleaux distrib. 3—39608
red blood cells, 1.06 μm pulsed laser damage, safety problems *(Chinese)* 3—44281
red blood cells, high-gradient mag. separation, transverse particle trajectories 3—34797
reinfusion, O_2 transport during exercise 3—39616
reticulocytes, peripheral, amount as biologic dosimetry of ionising radiation, rabbit expts. 3—53723
retinal vessls, electro-optical system for non-invasive oximetry 3—9700
rheological characterisation of human blood *(French)* 3—15131
rheological props., viscoelasticity and thixotropy, unified description 3—29612
rheophoresis and platelet dispersivity 3—48263
sedimentation, photoacoustic spectroscopy study 3—19852
serum, human NMR relax. and malignant neoplasms diagnosis 3—48365
serum proteins, elemental anal. after pre-irradiation separation by gel filtration 3—9807
serum trace element concentrations in liver and biliary disease 3—9740
serum trace element determ. by neutron activation anal. 3—9738
sickle haemoglobin, gel microviscosity and channel size, photon scatt. as probe 3—58889

blood continued
- single erythrocyte rigidometer as a reference for RBC deformability 3—48451
- skeletal muscle, perfusion distrib. meas. by H_2 clearance following sympathectomy 3—9663
- solutes dispersion during blood flow through curved tubes 3—53713
- surface charge of erythrocytes and model membranes, recording using a fluoresc. probe, obs. 3—48261
- test devices for blood material interactions study 3—53891
- US backscatter coeff. determ. from A-mode echography 3—4597
- US echogenicity of blood flow in veins 3—39688
- US scattering as function of haematocrit 3—29620
- venous gas emboli, detection and size meas. by Doppler US flowmeter 3—48347
- ventilation-perfusion ratio distributions by mass spectrometry with membrane catheters 3—24922
- vessel wall stability 3—9658
- vessels, geometrical optics method for inverse scattering assessing, multistatic single frequency approach 3—44306
- vessels, geometrical optics method for inverse scattering assessing, monostatic multifrequencies approach 3—44307
- vessels vascular anastomoses, mech. behaviour, X-ray vasography 3—34875
- viscoelastic parameters in humans, myocardial infarction effects 3—29611
- viscosity, formulae and syndromes 3—58697
- Hg direct determ. in whole blood and serum, quartz 'T' atomiser and C disc technique 3—53624
- I determination in blood serum by epithermal neutron activation analysis 3—4336
- O_2 diffusion in blood plasma, transferrin effect 3—19655
- O_2 transport critical value, rat skeletal muscle O_2 uptake 3—24696
- O_2 transport to the human arterial wall, effect of pulsatility 3—24697

blood circulation *see haemodynamics*

blood dynamics *see haemodynamics*

blood flow *see haemodynamics*

blood platelets *see blood*

blowing problem *see boundary layers*

blue brittleness *see brittleness*

boilers
- 19-tube once-through steam generator, steady state and transient prediction using RELAP5/MOD1 3—41242
- BOR 60 LMFBR power station, 30 MW Czechoslovak steam generator, expts. and operation 3—55236
- breeder reactors, international development *(German)* 3—17022
- critical heat flux influence on 19 tube once through steam generator 3—11419
- double walled steam generator design considerations for fusion reactor 3—21539
- energy sources other than oil and electricity for space heating *(German)* 3—39446
- evaporator pipe position influence on heat transmission *(German)* 3—32582
- Experimental Breeder Reactor II, superheater duplex tubes, post-service examination 3—6368
- Experimental Breeder Reactor II superheater, destructive examination 3—6367
- feedwater material corrosion in PWR steam plants, release rates 3—50008
- fluidised bed combustors, horizontal boiler tubes, circumferential wall temperature variations 3—51217
- fuel-solar hot water supply system for hotel, thermal characts. 3—9473
- Inconel 600, mill-annealed, intergranular corrosion in PWR steam generator tubing 3—6365
- Inconel 600/316-stainless steel Na-heated steam generator, cracks and deposits due to Na-to-water leak 3—6366
- liquid Na heated steam generators, heat exchange crisis 3—11409
- LMFBR, sodium heated once through steam generators, simulation using DYNOT-S computer code 3—55250
- LMFBR steam generators, in-service monitoring and service after leak detection 3—41270
- LWR steam generator tube performance, experience during 1980 3—55214
- LWR steam generator tubes, in-service inspection by multiple-frequency eddy current methods 3—6398
- marine water reactor, helically coiled once through steam generator, two-phase flow parameters 3—45619
- methanol as boiler fuel for electric power generation, combustion test and economics 3—29372
- MHD channel cooling by boiler feedwater, end effects on performance 3—39495
- multivalent heat supply for a shopping centre 3—14988
- nuclear power plant steam generators, earthquake isolation system 3—55372
- nuclear power station, LMFBR, steam generator proposed, future reactors, PHENIX data 3—55268
- once through steam generators transient simulation with ALMOD/GDE 3—6400
- PWR, secondary system. modifications 3—16949
- PWR boiler mechanical components, effects of system fluctuations *(French)* 3—31649
- PWR boilers, corrosion removal from boiler secondary, electrochemical meas., Fe ions behaviour 3—50006
- PWR boilers, tube hydrodynamic loads in LOCA, CEFLASH computer code 3—45657
- PWR boilers at two power stations in France, thermal-hydraulic and chemical sampling data for computer codes 3—45634
- PWR LOCA, decay heat removal experiments in U-tube boiler two-loop test facility 3—50021
- PWR once through steam generators, moisture separator drain routing effects 3—21450
- PWR power station boilers, EM and graphite high-temp. filter tests 3—55238
- PWR secondary water chemistry guidelines for corrosion reduction in steam plant 3—45633
- PWR single steam generator cooldowns, radiation field control 3—55241
- PWR steam generator, simulation of three dimensional two phase flow 3—55084
- PWR steam generators, instrumenting steam separators 3—50010
- PWR steam generators simulation of heat transfer behaviour using RELAP4 and RELAP5 computer codes 3—55249

boilers continued
- PWR U-tube steam generators; modular modelling system simulation 3—55251
- PWRs, Westinghouse, steam generator channel heads, radiation fields compilation 3—11467
- R.E. Ginna PWR power plant, steam generator tube rupture 3—55364
- reactor steam generators, heat transfer in primary water distribution *(Czech)* 3—11406
- recirculating U-tube nuclear steam generators, modelling and simulation using ATHOS computer program 3—55247
- St. Lucie Nuclear Power Station Unit 1, in USA, secondary water chemistry control 3—50007
- steam generator, service degraded, examination prior to tubing strength research 3—6364
- steam generator plate crack detection by radiography 3—55149
- steam generator test facility, four loop, U-tube, natural circulation experiments 3—41286
- steam generators, heat exchangers for gas cooled reactors *(Russian)* 3—50001
- Super-Phenix, French fast breeder nuclear reactor steam generator, discrete time model reference multivariable adaptive control 3—6405
- thermal-hydraulic analysis of a steam generator tube break transient 3—11432
- thermal-hydraulic analysis of Westinghouse Model 51 recirculating steam generator using computer code THIRST 3—45635
- TMI-1 once through steam generator tube failure anal. 3—26371
- transient simulation of a helical coil sodium/water steam generator 3—31656
- various types, industrial energy efficiency 3—37323
- water droplet removal efficiency in steam dryers 3—31660
- N_2O_4, initial non-equilibrium state influence on steam generator efficiency *(Russian)* 3—50003
- Ti tubed surface condensers for nuclear steam generators 3—16863

boiling
- *see also boiling point*
- autowave transitions from nucleate to film boiling regimes 3—50920
- bubble departure and boiling onset, quasi-static conditions anal. 3—42758
- cryogenic liquids, heat transfer at forced flow boiling in tubes 3—7574
- film, boiling with subheating, minimum wall superheat 3—28085
- finned tube bundles, boiling heat transfer 3—51093
- flashing liquid transient blowdown in pipe 3—51224
- flow blockage involving shock boiling of liquid 3—12739
- fluidised bed structure with surface boiling of fluidising medium 3—12764
- forced convective boiling, thermal hysteresis 3—50903
- forced convective nucleate boiling from horizontal surface, heat transfer, void fraction meas. *(Japanese)* 3—2067
- forced convective nucleate boiling from horizontal surface, eqns. for determ. bubble layer thicknesses *(Japanese)* 3—2068
- gaseous nuclei stability at liquid-solid interface, free energy analysis 3—2760
- geysers, metastability of water rel. to theory and modelling of geyser process 3—20043
- heat transfer and its interference on horizontal tube with circumferential fins *(Japanese)* 3—12497
- heat transfer from plane heater to K layer 3—27362
- heat transfer with evaporation and boiling of a liquid in porous bodies 3—12494
- interface role in heat transfer processes 3—51763
- latent heat transport in nucleate forced boiling 3—51103
- liquid, boiling, acoustic probing by active location method 3—12472
- liquid flow model in nozzles 3—37484
- LMFBR, subassembly accident initiation, Na boiling and flaw, clad melting 3—55275
- LWR LOCA anal., flow boiling critical heat flux correlation for water and Freon-12 3—26421
- nucleate boiling heat transfer, system press. and surface roughness effects 3—1934
- nucleate pool boiling at reduced press., boiling patterns 3—17777
- nucleation, press. effects obs. 3—51767
- octadecylene surfactant soln. boiling in steam generators, heat transfer and vaporisation 3—37327
- n-octane bubble growth in liq. droplets at superheat limit, pressure effect 3—37549
- PWR rod bundle dispersed flow film boiling heat transfer neat spacer grids 3—41243
- saturated nucleate boiling along heated wire, statistical anal. 3—50910
- subcooled nucleate pool boiling heat transfer in microgravity, TEXUS IIIb expt. *(German)* 3—7386
- submerged bodies in saturated liqs., boiling, crit. heat flux, hydrodynamic model 3—46550
- transient boiling heat transfer under forced convection 3—51104
- tube flow, forced convection boiling and condensation heat transfer coeff. 3—27515
- water, boiling in high thermal cond. capillary structs., heat exchange 3—42108
- water, nucleate boiling in vertical upflow and downflow 3—51230
- water, subcooled pool boiling, heat transfer in transition boiling 3—2038
- water, subcooled pool boiling charact. curves, vapour bubbles and surface temp. var. 3—56418
- water, subcooled pool boiling characteristic curves, heat transfer and vapour bubble minimisation, contamination effect 3—56417
- water boiling in a microthermosiphon, heat transfer intensification 3—12495
- water drop with insoluble core, heating under 10.6 μm radiation, explosive boiling 3—51659
- water saturated porous medium, thermal convection and boiling 3—37545
- Ar flow boiling, fouling phenomena obs. 3—32590
- H liquid, convection-boiling boundary, press. and underheating effects 3—7578
- H_2O pool boiling phenomena, polymer additives effects 3—2762
- He I, Kapitza resistance influence on nucleate boiling at solids 3—37486
- He, liquid, convection-boiling boundary, press. and underheating effects 3—7578
- He pool-boiling heat transfer from small monolithic Cu stabilisers 3—30874
- ^{4}He, non-superfluid, boiling in centrifugal force field, crit. heat transfer charact. 3—13424
- ^{4}He subcooled channel flow, heat transfer characts. obs. 3—38150
- K boiling in vertical tube in transverse mag. field, fusion reactor cooling appl. 3—17027

boiling continued
- N_2 flow boiling in horizontal tube 3—32808
- N_2-Freon-12, liq., heat transfer with bubble boiling on porous Cu/Al coating 3—50904

boiling point
- *see also boiling; heat of vaporisation*
- insulating gases, dielectric strength, boiling point and toxicity 3—2173
- methanol-water, condensation on flat plate, heat transfer 3—37325
- vapour-liq. equilibria expt. methods, dew-and bubble-point method 3—18430

bolometers
- bolometer-Langmuir and ion trapping-Langmuir probe operation, anal. 3—18114
- high temp. plasma diagnostics 3—402
- spaceborne thermal detectors calibration, earth radiation budget expt. appl. 3—400
- thin film devices, 1/f noise model, appl. to bolometers, Josephson junctions, SQUIDS 3—52314
- thin film technology appl. *(German)* 3—25949
- Au-Sn metal film second sound detectors and their appl., exptl. study 3—42870
- Ge bolometer operation, influence of temp. fluctuations in vacuum pumped liq. He bath *(French)* 3—10851

Boltzmann equation
- *see also transport processes*
- anisotropic multiple scattering of collimated irradiance 3—20801
- asymptotic behaviour of the Boltzmann equation with infinite range forces 3—10769
- binary interactions, adiabatic approx., master hierarchy of kinetic eqns. 3—45056
- Chapman-Enskog and Grad solution methods 3—16317
- Chapman-Enskog method and nonequilibrium thermodynamics 3—20815
- criticality eigenvalue problem, finite element method 3—30817
- density expansions of correlation functions 3—32838
- diatomic gas, Boltzmann eqn. asymptotic soln. 3—42349
- discrete velocity models of the Boltzmann eqn. in several dimensions, global existence results 3—10770
- drift and diffusion of electrons in at. gas between closely spaced electrodes 3—50516
- electrolyte solns., symmetric, statistical mechanical theory using BBGKY hierarchy 3—16224
- electrolyte solutions, cylindrical Poisson-Boltzmann eqn. 3—56802
- electron drift and diffusion in at. gas between closely spaced electrodes, inelastic collision effect 3—50514
- electron gas interacting with polar optical phonons, energy-diffusion eqn. 3—23004
- electron heating in laser-irradiated plasmas, collisionless and collisional bremsstrahlung 3—18091
- electron swarms with power-law elastic scatt., Boltzmann eqn. anal. 3—51272
- electron system, transport coeffs. in mag. field, variational principle calc. 3—28319
- electron transport in ionosphere, photoelectron fluxes, energy spectra 3—15744
- energetic heavy-ion reactions, three-component fluid dynamics for description 3—6251
- Enskog eqn. generalisation to case of steep resulsive pots. 3—16312
- extended irreversible thermodynamics, kinetic derivation 3—25838
- fast neutron scatt. anisotropy, Boltzmann-Fokker-Planck eqn. treatment 3—41088
- fluid, stationary state, light scatt. caused by temp. gradients, stochastic Boltzmann eqn. 3—19146
- gas discharges, electron distribution function formulation from transport coeffs. of electron swarm 3—7690
- general band motion, local field corrections 3—33692
- hard sphere fluid, steady state self-diffusion at low density 3—13499
- hard-sphere Lorentz gas, drift vel. 3—163
- integration in relaxation time approx. 3—40528
- lattice thermal cond. calc. method 3—23110
- linear transport operators, spectral decomposition 3—25833
- local existence theorem for the Boltmann equation in L_1, Cauchy problem 3—49292
- Maxwell transport eqn., soln. from bimodal two-stream relaxing distrib. 3—32835
- metal, magnetoresistivity, linearised Boltzmann eqn. soln. using Fermi surface harmonics 3—33710
- metal conductivity, impurity density depend. 3—18695
- metallic contacts, elastic scatt. effects on I-V characts., ohmic current 3—43267
- metals, elec. resistivity at low temps. 3—33708
- metals, electromigration, thermomigration and thermoelec. transport 3—33521
- metals, muon diffusion const. at low temps. 3—51855
- microscopic dynamics and macroscopic laws 3—5750
- Milne problem, mass depend. 3—54699
- mixtures, Boltzmann eqn., linearised, Chapman-Enskog soln. method 3—54694
- multi-temperature generalized moment method in Boltzmann transport theory 3—25834
- multipole vibrs. and isoscalar giant reson. widths, nucl. fluid dynamics 3—11227
- neutron stars, solid envelopes, neutron diffusion and heat transfer, Boltzmann eqn. anal. *(Russian)* 3—5324
- noble metals, low temp. elec. resist., deviations from Matthiessen's rule 3—33702
- noninteracting particles, diffusion coeff. relax., Boltzmann eqn. anal. 3—16318
- nonlinear, soln. for nonisotropic initial conditions 3—42347
- nonlinear flow behavior of the Boltzmann gas 3—2093
- particle transport theory, global soln. to nonlinear integral evolution problem 3—30814
- particle transport theory, iterated solns. to nonlinear integral evolution 3—10772
- plasma, magnetised current-carrying plasma, potential disturbance by floating disturber, theory 3—42365
- polyelectrolyte solutions, cylindrical Poisson-Boltzmann eqn. 3—56802
- primitive model electrolyte, modified Poisson-Boltzman eqn. 3—22759
- quasi-one-dimensional cpds., transverse magnetoresist. 3—23362
- rare earth metals, theory of spin fluctuation resistivity below the critical point 3—3173

Boltzmann equation continued
- reactor physics, firt order Boltzmann eqn. and initial value problem, least squares derivation 3—41094
- relativistic hydrodynamic fluctuations, stochastic Boltzmann eqn. 3—56627
- relativistic plasma, balance eqns. 3—51373
- relativistic plasma, Boltzmann theory, hydromag. wave attenuation 3—22715
- semiconductor, carrier transport, Boltzmann eqn. and Legendre polynomials 3—52128
- semiconductor, electron density, Fermi-Dirac integrals appl. 3—23372
- semiconductor, polaron vel. distrib. in crossed elec. and mag. fields 3—8426
- semiconductors, band theory and transport processes, book 3—39
- semiconductors, carrier mobility and irreversible thermodynamics, nonlinear field depend. 3—43176
- semiconductors, energy conversion, photoelec. and thermoelec., Boltzmann eqn. 3—38424
- slab geometry problems, stationary Boltzmann eqn. multigroup discrete ordinates soln. for γ and n 3—41081
- slab of finite thickness, charged test particle diffusion, density profiles 3—35944
- spatially uniform Maxwellian gas, Boltzmann eqn. solns., asymptotic props. 3—16226
- superconductor two-fluid description, EM perturbation effect on charge imbalance 3—57465
- test particles, nonlinear diffusion in presence of external conservative force 3—20803
- torque on rotating sphere or cylinder, extended Boltzmann equation calc. 3—10591
- transport theory, minimum entropy prod., semiclassical Boltzmann eqn. 3—10771
- uniaxial ferromagnetic metals, anisotropic effects on spin fluctuation thermoelec. power 3—43157
- Vlasov eqn. as collisionless Boltzmann eqn. 3—10198
- GaAs, dislocation effect on electron mobility, theory 3—33724
- GaAs velocity overshoot effect anal. *(Chinese)* 3—13822
- $Ga_xIn_{1-x}As_yP_{1-y}$, lattice matched to InP, high freq. elec. transport 3—13850
- ^4He, injected phonon beam ang. spreading calc. at low temps. 3—18526
- N_2, electron transport, comparison of Monte Carlo and Boltzmann calcs., multi-term results 3—2177
- Nb:Ta(Cr)(Fe)(Co)(Ni), effective valence for electromigration 3—42860

Boltzmann equation (gases) *see kinetic theory of gases*

Boltzmann-Vlasov equation *see Vlasov equation*

bond angles
- alkanes, Born-Oppenheimer energy surfaces, bond lengths-angles interrelations and normal vibr. freq. 3—12003
- ammonium bis-[2,2′-butylamino-bis-8-quinolinolato (2-)-N^2, O^8, $N^{1'}$, $O^{8'}$]-yttriate (1−)hydrate, cryst. and mol. structures, X-ray anal. 3—33234
- benzenediazonium tetrafluoroborate, cryst. struct. 3—33226
- bis(4′-p-nonyloxybenzylidene)-1,4-phenylenediamine, liq. cryst., cryst. struct., X-ray anal. 3—33236
- p-bis(trimethylsilyl)benzene mol. struct. determ. from gas phase electron diffr. 3—32203
- bis-(3-nitro-1,2,4-triazoyl-5) dihydrate, mol. and cryst. structures, thermal, deform. and optical props. 3—33233
- 3-butenenitrile, gas phase, mol. struct., electron diffr. obs. 3—50519
- butyl-bis-(8-hydroxy-2-quinolyl)amine, mol. and cryst. structures, X-ray anal. 3—33235
- crystalline hydrates, H_2O mol. geometry and environment, neutron diffr. study 3—2476
- cyan trichloride, mol. struct., gas phase electron diffr. obs. 3—50521
- 4-4′ diamino diphenyl sulphone, cryst. and mol. struct. 3—56868
- 2,2′-diamino-1,1′-dinaphthyl, cryst. struct., X-ray anal. 3—33232
- 1,1-dichloroethylene, mol. equilib. struct. determ. by gas electron diffr. and microwave data and model anal. 3—32205
- 1,3-diethylbicyclobutane-exo,exo-2,4-dicarboxylic acid, charge density distribs. 3—37889
- 2,2′-dihydroxy-1,1′-dinaphthyl, cryst. struct., X-ray anal. 3—33232
- formaldehyde, ($\tilde{A}^1A_2$) state, rot.-inversion study 3—26725
- heavy atom mols., electron correl. effect on equilib. geometry 3—26642
- 1,1,1,3,3,3-hexachloro-1,3-disilapropane, mol. struct. determ. by electron diffr. 3—32204
- larusan, cryst. struct., X-ray anal. 3—33231
- methyl isocyanide, ground-state average struct. 3—32236
- methylene radical, $\tilde{X}^3B_1$ ground state, vibr.-rot., geometry, pot. function 3—21743
- naphthidine (4,4′-diamino-1,1′-binaphthyl), cryst. struct. 3—51582
- octachloro-1,3-disilapropane, mol. struct. determ. by electron diffr. 3—32204
- proteins, stereochemistry, constrained-restrained least-squares macromolecular model building computer program, appl. to lysozyme 3—39585
- pyrazine, enhancement of through-bond coupling by bond angle distortion 3—17378
- pyrazine-2-carboxyamide, cryst. and mol. struct., H bonding 3—56867
- triatomic molecules, vibr. levels calc. using a variational method 3—26731
- vinyldimethylchlorosilane, mol. struct. and conformation determ. by gas phase electron diffr. 3—32206
- BH_3NH_3, microwave spectrum, torsional barrier and struct. 3—36744
- BaH_2, d orbitals effect on geometry CNDO/2 calcs. 3—46093
- BaX_2, X=Cl, F, CNDO/2 calcs. bond angle 3—46094
- CO_2, bond angle calcs., SCF and MC-SCF studies 3—50295
- CO_2, symm. breaking of lowest $^3B_2$ and $^3A_2$ states, orthogonal orbital MCSCF and CI calc. 3—55860
- CaH_2, d orbitals effect on geometry CNDO/2 calcs. 3—46093
- CaX_2, X=Cl, F, CNDO/2 calcs. bond angle 3—46094
- Cu complex, dichloroacrylonitrile copper (II), cryst. struct., X-ray anal. 3—33219
- F_2O_2 struct., theoretical predictions and comparisons with F_2 and F_2O 3—26641
- GaSe(S), ionicity, effective charges, bond angles, optimised bond orbital model 3—13156
- $Ge_{0.5}Te_{0.5}(Se_{0.5})$ chalcogenide glass, struct., continuous random network approach 3—33106
- InSe, ionicity, effective charges, bond angles, optimised bond orbital model 3—13156
- $LiOH.H_2O$, deform. electron density, X-ray and neutron diffr. studies 3—7967
- $LiOH.H_2O$, theoretical electron density 3—7968

bond angles continued
- $MgSiO_3$, orthoenstatite to protoenstatite transition and cryst. struct. 3 51579
- $RbNO_3$ phase IV, cryst. struct. and polymorphic transition, neutron diffr. study 3—2479
- $SbCl_5$ complexes, NQR and Zeeman obs. 3—3586
- a-Si, static charge fluctuations; 2p core-level photoemission spectra 3—24091
- SiO_2, amorphous, atomic structural models 3—37788
- SiO_2, amorphous, struct. and bonding, ^{17}O NMR study 3—51495
- SiO_2, crystalline and vitreous, Si-O-Si bond angle distribution, steric theory 3—33195
- SiO_2, vitreous, mol. dynamics simulation of surface 3—51901
- SiO_x, amorphous, atomic structural models 3—37788
- α-siO_2, quartz, cryst. struct. and thermal expansion at low temps. 3—13184
- $SnCl_4$ complexes, NQR and Zeeman obs. 3—3586
- SrH_2, d orbitals effect on geometry CNDO/2 calcs. 3—46093
- SrX_2, X=Cl, F, CNDO/2 calcs. bond angle 3—46094

bond energy *see ionisation potential*

bond lengths
- alkanes, Born-Oppenheimer energy surfaces, bond lengths-angles interrelations and normal vibr. freq. 3—12003
- ammonium bis-[2,2′-butylamino-bis-8-quinolinolato (2-)-N^2, O^8, $N^{1'}$, $O^{8'}$]-yttriate (1−)hydrate, cryst. and mol. structures, X-ray anal. 3—33234
- anharmonicity estimation from a Morse potential 3—46046
- benzenediazonium tetrafluoroborate, cryst. struct. 3—33226
- bis(4′-p-nonyloxybenzylidene)-1,4-phenylenediamine, liq. cryst., cryst. struct., X-ray anal. 3—33236
- p-bis(trimethylsilyl)benzene mol. struct. determ. from gas phase electron diffr. 3—32203
- bis-(3-nitro-1,2,4-triazoyl-5) dihydrate, mol. and cryst. structures, thermal, deform. and optical props. 3—33233
- 3-butenenitrile, gas phase, mol. struct., electron diffr. obs. 3—50519
- butyl-bis-(8-hydroxy-2-quinolyl)amine, mol. and cryst. structures, X-ray anal. 3—33235
- cage molecules, mol. dimensions, MNDO calcs. 3—11692
- chalcogen compounds, isotope effects on nucl. shielding and correl. with bond lengths, NMR study 3—50426
- conjugated dienes, hetero-atom. substituted, bond lengths, force consts., ab initio study 3—36662
- crystalline hydrates, H_2O mol. geometry and environment, neutron diffr. study 3—2476
- cyan trichloride, mol. struct., gas phase electron diffr. obs. 3—50521
- cyclic hydrocarbons, substituted, interatomic distances and electronic structs. calcs. 3—31909
- 4-cyclopentene-1,3-dione, $n\pi^*$ transition, visible spectra 3—45956
- 4-4′ diamino diphenyl sulphone, cryst. and mol. struct. 3—56868
- 2,2′-diamino-1,1′-dinaphthyl, cryst. struct., X-ray anal. 3—33232
- diatomic molecule, total energy calc., Gaussian quadrature $X\alpha$ method for Hartree-Fock-Slater eqn. 3—31923
- trans-dichlorobis (L-ethylphenyl-alanate) platinum, cryst. struct. anal. *(Chinese)* 3—42589
- 1,1-dichloroethylene, mol. equilib. struct. determ. by gas electron diffr. and microwave data and model anal. 3—32205
- 1,3-diethylbicyclobutane-exo,exo-2,4-dicarboxylic acid, charge density distribs. 3—37889
- 2,2′-dihydroxy-1,1′-dinaphthyl, cryst. struct., X-ray anal. 3—33232
- N,N′-dimethyl-2-imidazolidinethione, cryst. struct. 3—51583
- ethyl alcohol-d_6 liq., struct. studies by neutron diffr. 3—27821
- formaldehyde, ($\tilde{A}^1A_2$) state, rot.-inversion study 3—26725
- formaldehyde, EELS of forbidden transitions to valence and Rydberg states 3—1491
- glass, elastic moduli, three-band theory and characteristic temps. 3—33337
- graphite intercalation compounds, charge transfer, bond lengths 3—21909
- heavy atom mols., electron correl. effect on equilib. geometry 3—26642
- 1,1,1,3,3,3-hexachloro-1,3-disilapropane, mol. struct. determ. by electron diffr. 3—32204
- homonuclear diatomics, nucl. charge, at. energies and equilib. bond lengths 3—55811
- hydrogen bonds, ab initio mol. orbital calc. using flexible atomic orbital basis set 3—36646
- ionic radii, ionic charges and electrostatic bond strengths, iterative calc. *(French)* 3—2485
- isoelectronic diatomic molecules, 13-, 14-, and 22-electron sequences 3—36874
- larusan, cryst. struct., X-ray anal. 3—33231
- main group element cpds., bond distance periodic variation 3—50282
- methanol, solid, ^{17}O and ^2H NQR, near its melting temp. 3—3588
- methyl isocyanide, ground-state average struct. 3—32236
- methyl radical, intramol. motions and mol. struct. 3—32033
- methyl radicals, rot.-vibr., pot. function, mol. consts. 3—26727
- methylene radical, X^3B_1 ground state, vibr.-rot., geometry, pot. function 3—21743
- molecular struct., solvent effects, spectroscopic props., virtual-charge model, appl. to benzophenone 3—45848
- monofluorobenzaldehydes internal rot., SCF MO studies 3—31942
- naphthidine (4,4′-diamino-1,1′-binaphthyl), cryst. struct. 3—51582
- octachloro-1,3-disilapropane, mol. struct. determ. by electron diffr. 3—32204
- octahedral XY_6 mols., vib. anharmonic coeffs. 3—26883
- osumilite. cryst. struct. and site occupancy refinement 3—51576
- phase transferability and bond length determination using EXAFS linear phase functions 3—58003
- phenylphosphonic dichloride, in liq. cryst. soln., ^1H, ^{31}P and ^{13}C NMR studies 3—50431
- planar molecules, containing C-OH, N-OH and O-OH groups, bond length and stretching force consts., ab initio calc. 3—31927
- polyacetylene, Peierls instability and vibr. spectra 3—13805
- polymers, atomic H shedding mechanism during fracture *(Russian)* 3—14689
- polypropylene, atomic H shedding mechanism during fracture *(Russian)* 3—14689
- proteins, stereochemistry, constrained-restrained least-squares macromolecular model building computer program, appl. to lysozyme 3—39585
- pyrazine-2-carboxyamide, cryst. and mol. struct., H bonding 3—56867
- synthetic metals, C based, charge transfer and maximum cond. 3—18691
- thiourea, electron density distrib., charge-cloud model 3—8027

bond lengths continued
- thiourea, electron density distrib., comparison with urea mol. 3—8026
- transition metal hydrides, diatomic mol. param. calc., electronegativities 3—26878
- triatomic molecules, vibr. levels calc. using a variational method 3—26731
- vinyldimethylchlorosilane, mol. struct. and conformation determ. by gas phase electron diffr. 3—32206
- α-$ZrCu(PO_4)_2.4H_2O$, EXAFS, dehydration and calcination effects on bond lengths 3—8903
- $Ag(PS_4,P_2S_7)$ monoclinic, cryst. struct., X-ray diffr. study *(French)* 3—2484
- Al, adsorbed O, surface extended energy loss fine structs. above K-edge 3—19235
- BH_3NH_3, microwave spectrum, torsional barrier and struct. 3—36744
- CF radical, term energy, bond lengths, vibr. $a^4\Sigma^-$-$X^2\Pi$ transition 3—55956
- CO_2, symm. breaking of lowest $^3B_2$ and $^3A_2$ states, orthogonal orbital MCSCF and CI calc. 3—55860
- CS^-, PES, electron affinity and bond lengths 3—46026
- $CeVO_4$, neutron powder diffr. study, bond distances determ. 3—7971
- ClF_3, binding energy calc. using multi-reference CI expansions 3—55862
- $Co(NH_3)$ $_6CuCl_5$, cryst. and mol. struct., single cryst. X-ray and neutron diffr. data 3—7977
- Cr_2, cluster, rot. consts., two-photon ionisation 3—17396
- Cr_2, ground state, bonding, dissoc. energies, local spin-density theory 3—45801
- $Cr_2(CH_3)_8{}^{4-}$, Cr-Cr multiple bonding, INDO calcs. 3—50313
- $Cr_2Cl_8{}^{4-}$, Cr-Cr multiple bonding, INDO calcs. 3—50313
- Cu $\{001\}c(2\times2)$, adsorbed Cl, CC at. struct., overlayer model, LEED anal. and photoemission meas. 3—13638
- Cu complex, dichloroacrylonitrile copper (II), cryst. struct., X-ray anal. 3—33219
- Cu, EXAFS and EXELFS above $M_{II,III}$ edges 3—58004
- Cu_2, bond length, ab initio SCF CI calcs. 3—26644
- $CuZr(PO_4)_2$, bond lengths, EXAFS 3—8903
- F_2O_2 struct., theoretical predictions and comparisons with F_2 and F_2O 3—26641
- ϵ-Fe_3C, valence electron struct. anal., spatial distrib. of bonds, mech. strength depend. *(Chinese)* 3—33177
- Ge intermediates, double bonds and carbene-like unsaturations calcs. 3—21654
- Ge:^{129}I (^{125}Te), nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3—8464
- H-bonded cpds. with hydroxyl chains, bond length correl. with IR freqs. 3—36754
- H_{12} ring, one-electron electron interaction energies, projected Hartree-Fock approx. 3—50564
- $H_3{}^+$, singlet states, high one-electron excitation, CI calcs. 3—11710
- HD, nuclear spin-spin coupling, equilib. value and bond length depend. 3—45968
- H_2O dimer equilib. separations and bond energies, electron correl. calc. 3—36691
- H_2O, isotopic substitution effects on mol. props. bond length and nucl. shielding calcs. 3—26791
- H_2O polarisable electropole model, comparison to quantum calcs. 3—46092
- H_2O, semirigid bender model 3—6525
- $Hg_{3-\delta}SbF_6$, cryst. struct., X-ray diffr. study 3—2473
- $K_5Ag(IO_5OH)_2.8H_2O$, cryst. struct. and chem. prep. 3—8003
- $K_2(PtCl_4)$, electron density distrib. and bond lengths, X-ray and neutron diffr. studies 3—37863
- $KSbF_2(HPO_4)$, prep., struct. and vibr. spectrum *(German)* 3—46911
- $LiOH.H_2O$, deform. electron density, X-ray and neutron diffr. studies 3—7967
- $LiOH.H_2O$, theoretical electron density 3—7968
- $MgGa_2O_4$, cryst. struct. 3—8020
- $MgSiO_3$, orthoenstatite to protoenstatite transition and cryst. struct. 3—51579
- $MnGa_2O_4$, cryst. struct. 3—8020
- Mo_2, ground state, bonding, dissoc. energies, local spin-density theory 3—45801
- N-H...O=C hydrogen bond, comparison of X-ray and neutron diffr. results 3—37838
- NH_2, pot. curves, transition moments and photodissoc. cross sections 3—36837
- NS^-, PES, electron affinity and bond lengths 3—46026
- NaOH(OD), vibr. spectra and normal coordinate anal. 3—34095
- Ni, EXAFS and EXELFS above $M_{II,III}$ edges 3—58004
- Ni(II) complexes, spin-labelled, metal-nitroxyl interactions, EPR obs. 3—55975
- PdC, electronic struct., pseudopot. SCF and CI investig. 3—11703
- PdCO, electronic struct., pseudopot. SCF and CI investig. 3—11703
- PdH, electronic struct., pseudopot. SCF and CI investig. 3—11703
- $PrVO_4$, neutron powder diffr. study, bond distances determ. 3—7971
- $RbNO_3$ phase IV, cryst. struct. and polymorphic transition, neutron diffr. study 3—2479
- Re_2, bonding study by ab initio calcs. 3—45868
- SF radial, vibration-rotation spectra, IR diode laser spectrosc. study 3—45940
- $S_2O_4{}^{2-}$, Raman spectrum and struct. 3—32084
- $ScVO_4$, neutron powder diffr. study, bond distances determ. 3—7971
- Se, amorphous, atomic models and radial distrib. function, review 3—33097
- a-Si, static charge fluctuations; 2p core-level photoemission spectra 3—24091
- Si:^{125}Te (^{129}I), nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3—8464
- SiO_2, amorphous, atomic structural models 3—37788
- SiO_x, amorphous, atomic structural models 3—37788
- α-siO_2, quartz; cryst. struct. and thermal expansion at low temps. 3—13184
- Sn_2OSO_4, cryst. struct., bond lengths, X-ray diffr. study 3—2480
- Th_2S_5, cryst. struct., X-ray study, heavy atom method 3—2490
- V_2O_3:Cr(Ti), cryst. struct., doping effects, metal-insulator transition 3—8002
- $YLnFeSbO_7$, (Ln=La-Ce), EXAFS study 3—43663

bonds (adhesive) *see adhesion*

bonds (chemical)
- *see also binding energy; bond angles; bond lengths; crystal binding; hydrogen bonds; intermolecular forces; lattice energy*
- acetic acid, gaseous at 21°C, Raman spectrum 3—17291
- acrylyl chloride, internal rot., Raman spectra 3—36767
- actinide complexes, electronic struct., relativistic self-consistent calcs. 3—17234
- actinide nitrides, electronic struct., lattice parameters 3—18613
- alkali metal oxides, change in ground state symmetry ab initio CI calcs. 3—6541
- alkaline-earth metal clusters, struct., bonding, ab. initio pseudopotential CI calcs. 3—6821
- n-alkanes, π-nonbonded and through-bonded interactions, ab initio study 3—31930
- alkyl chain stretching by nematics 3—56023
- n-alkyl radicals, π-nonbonded and through-bonded interactions, ab initio study 3—31930
- alkyl-2-pyrazinyl sulphones, solvent effect on electric dipole moments, O-S bond polarity 3—55875
- alkylphenyl sulphones, solvent effect on electric dipole moments, O-S bond polarity 3—55875
- alloys, amorphous, mol. cluster constituents in bond equilibrium theory 3—37785
- alloys, amorphous covalent, random and nonrandom bonding, Ising lattice study 3—37786
- amidophosphite, bicyclic, constrained, hydrolysis and acidolysis, IR and NMR studies *(French)* 3—44053
- amorphous semiconductor research, review *(Japanese)* 3—44949
- amorphous semiconductors, covalent bonding and defects 3—33098
- aromatic dichalcogenides, intramol. interactions in Raman spectra, bond vibrs. 3—50416
- aromatic hydrocarbons, Franck-Condon principle for radiationless transitions and Morse oscills. 3—32138
- benzene, susceptibility tensor, PCILO calcs. 3—21642
- benzene liq., C-H stretch fifth overtone absorpt. spectrum 3—27318
- benzenethiol, rot. angle depend. of $^{5}J_{m}^{H,SH}$ 3—1505
- bis(benzoimidazole-2-thiol) methane, C-S bond IR vibrs., assignments by selenation 3—41575
- bis(benzothiazole-2-thiol) methane, C-S bond IR vibrs., assignments by selenation 3—41575
- bis(benzoxazole-2-thiol) methane, C-S bond IR vibrs., assignments by selenation 3—41575
- bis(ethylene)(tetrafluoroethylene) platinum, cryst. and mol. struct., X-ray and neutron diffr. studies 3—46917
- borate glasses, struct. change at solid-liquid transition, absorption spectra study 3—13453
- boron compounds, bond order depend. bond enthalpy terms 3—53439
- butadiene, energy surfaces and double bond torsion and elongation, CI calc. 3—45866
- butadiene-methylstyrene elastomers, multiplicity of relax. transitions *(Russian)* 3—51517
- closo-carboranes, polyhederal mols., overlap control and stability 3—45825
- chalcogen hexahalogenides, electronic struct., discrete var. Xα calc. method 3—55834
- chalcogenide glasses, quasi molecular defects, relationship to melt viscosity 3—2430
- chalcogenide glasses, structural modification and chem. composition effects on props. 3—37797
- chemical bonding impurity embrittlement 3—46960
- chemical information theory, struct. aspects 3—36641
- chemical species stabilisation energies 3—39403
- chemisorptive bond energies and vibr. freq. on surfaces, empirical eqns. 3—2956
- conjugate molecules with repeat units, spectra 3—45923
- covalent and ionic crysts., electronic response to valence modifications 3—56848
- crystal-liquid interface, dangling bonds, interfacial roughening rel. to struct. 3—33156
- cubene electronic struct., HF wave-functions 3—21615
- cubic crystals, rel. between bond strength and interatomic distance, semi-empirical approach 3—27890
- diamagnetics, separation into diamagnetic and paramagnetic components 3—8645
- diatomic interactions, binding/antibonding analyses, nuclear charge effect on one-electron chem. bonding 3—45837
- diatomic interactions in momentum space, polarisation and floating functions effect 3—45836
- dicyclopentadienyl-metal complexes, charge separation, IR intensities 3—11788
- N,N-dimethyl acrylamide, CNDO calcs. 3—11713
- dimethyl sulphone, solvent effect on electric dipole moments, O-S bond polarity 3—55875
- dimethyl sulphoxide, solvent effect on electric dipole moments, O-S bond polarity 3—55875
- dimethyltellurium dichloride, Te(IV) bonding, lone-pair electron density, X-ray diffr. study 3—56100
- distance matrix, fast algorithm calcs. in PASCAL 3—55779
- divalent metal ions, 1,8-dihydroxyanthraquinone chelates, struct. and bonding 3—12000
- (2S,3S)-(—)2,3-epoxybutane, methyl torsion Raman optical activity 3—55946
- ethane, vibr. struct. in electronic spectrum, excited states and photochem. ab initio CI calc. 3—41506
- ethene, susceptibility tensor, PCILO calcs. 3—21642
- ethylene, ionisation energies of bent and twisted double bonds 3—11670
- α-ethynyl alcohols, tertiary, struct. information from OH stretching freq., IR absorpt. band 3—50543
- $Fe_{81}B_{19}$ metallic glasses, struct. factor, neutron diffr. study 3—7922
- ferroelectrics, spontaneous polarisation, chemical bond model 3—47610
- first row homonuclear diatomic mols., electron momentum distrib., HF calcs. 3—41489
- first-row diatomic hydrides, electron momentum density contour maps 3—21622
- glass, planar rings, intermediate order 3—18230
- glass, structure, glass transition and phys. props. *(Polish)* 3—2426
- graphite, structural and elastic props., density-functional approach 3—51537
- graphite islands, adsorbed on Ir, bond nature 3—33579
- hexahalogenogallate salts, bonding, NQR obs. 3—21785

bonds (chemical) continued
- histone 2A-2B complex, cooperative props. in various salt media 3—34764
- histones H1 and H5, cooperativity of compact struct. 3—34765
- hydrocarbons, alternant and nonalternant, p-band transition freq. rel. to bonding energy and ionic. pot. 3—50360
- impurity bonds, correlation function at transition point *(Russian)* 3—3469
- inorganic compounds, $A^{N}B^{10-N}$, struct. diagrams and chem. bonding *(French)* 3—42580
- intermolecular binding 3—50288
- Ising spin glass, bond disorder effects 3—57685
- kinetic gelation, Monte Carlo study on triangular lattice 3—45074
- ligand binding to macromols. and cell-bound receptors, role of diffusion 3—9538
- ligand field theory, Lie groups and unitary transformations 3—36666
- localized orbitals in the coupled cluster singles and doubles model 3—36651
- lysozyme+methyl orange interaction, binding study 3—19511
- metal methoxides, vibr., bonds, chemiluminescence and laser excitation spectra 3—29311
- metal-sapphire interfacial strength, SCF Xalpha scattered wave cluster MO calc. 3—13903
- metallic bonds, cohesion and decohesion 3—23304
- metallic simple alloys, charge transfer 3—37839
- metals, stopping power, valence bond effects on mean excitation energies 3—22951
- metals and alloy phases, elastic consts., lattice energy function, model anal. 3—51687
- methanol cation, electronically excited, unimol. reaction paths, cation prod., isolated state decomp. 3—14854
- methyl, bond order, STO-3G calcs. 3—17202
- N-methyl acrylamide, cis- and trans-, CNDO calcs. 3—11713
- methylene, bond order, STO-3G calcs. 3—17202
- molecular electronic transition assignment by geometry optimisation 3—11681
- molecular struct., solvent effects, spectroscopic props., virtual-charge model, appl. to benzophenone 3—45848
- molecules, potential energy curves in bonding region, importance of ionic dissoc. energies 3—1278
- naphthalene, susceptibility tensor, PCILO calcs. 3—21642
- nitrocyclopropane, strained systems, electrostatic pots. 3—17351
- organoboranes, ^{13}C-^{11}B spin-spin couplings, interpretation using finite perturbation methods 3—1381
- oxalyl bromide, internal rot., Raman spectra 3—36767
- oxalyl chloride, internal rot., Raman spectra 3—36767
- pending bonds in cpds., characteristic polynomials 3—6802
- perchloro-2-cyclopentenone, ^{35}Cl NQR Zeeman investig. using pulsed FT spectrometer 3—21786
- phenol, internal rot. spectrum, CNDO calc. 3—11693
- phosphate:$Co^{2+}(Ni^{2+})$ glasses, effective g value, chem. bonding, ESR study 3—33972
- physisorption and chemisorption, nature of adatom-substrate bond 3—38232
- polyacetylene film, thermal isomerisation, Raman study 3—38934
- polyatomic molecule bond selective breaking in laser field 3—34638
- polyatomic molecules, photodissociation by visible radiation, self-consistent eikonal treatment 3—36826
- polybenzobisoxazoles, cis and trans, nonplanar conformation, CNDO study 3—56108
- polybenzobisthiazoles, cis and trans, nonplanar conformation, CNDO study 3—56108
- polyene Schiff base, electronic level in free, H-bonded and H^{+} species, fluoresc. study 3—46008
- polyethylene, electron beam irrad., mech. props., spatial crosslink distrib. effects 3—47014
- polyethylene, thermolum., long-term strength, strong elec. field influence 3—3838
- polymers, oriented, fracture criterion based on electron spin resonance spectroscopy 3—47934
- polymers, overstressed at. bonds, vibr. spectra study 3—27858
- polymethylene radicals, π-nonbonded and through-bonded interactions, ab initio study 3—31930
- polystyrene, molecular charm scission during crazing, gel permeation chromatography 3—47949
- propylene, pyramidalized during torsion, CI study 3—45863
- quantum chemistry, conf., Uppsala, Sweden (June 1982) 3—35770
- rare earth metals, oxides and silicides, X-ray emission L-spectra, chem. effects meas. 3—14392
- rare earth monopnictides, ionic bond energies and effective charges 3—51535
- D-ribose-Na^{2+} binding in aq. solns. using H^{+} reson. shifts 3—26769
- semiconductors, binary, forbidden bandwidths rel. to covalent bond parameters *(Chinese)* 3—43010
- semiconductors, polar or covalent, electronic struct., equivalent-orbital and bond-orbital methods 3—18599
- silanes, Si-H bond charact. rel. to IR stretching freq. 3—11780
- silica glass, radial distrib. function and correlation function, comparison with bonding topologies 3—33109
- silicate glasses, struct. change at solid-liquid transition, absorption spectra study 3—13453
- silicates, spinels and pyrites, deformation, STEM studies, review *(French)* 3—8123
- SIMS, polyatomic ion emission, bond breaking model 3—8921
- solids, chemical bonding and defect form. 3—37783
- spinels, AB_2X_4 (X=0,S,Se,Te), electronic struct. and dielec. props., crystallographic concepts 3—18281
- steel, stainless/C composite layers, C bonding AES lineshape anal. 3—58007
- ternary supercond. cpds., cryst. struct. and bonding, book contrib. 3—8023
- thioureas, ^{15}N chemical shifts, nucl. shielding, CNDO/S calcs. 3—17222
- transition metal alloys, A_3B struct., supercond., multiple metal-metal bonding, conjugated reson. struct. study 3—37841
- transition metal aluminides, projected surface energy bands, Shockley surface states, stability and bonding 3—57398
- transition metal bonding to nontransition metals 3—52052
- transition metal carbonyl clusters, bonding, chem. props., NMR 3—12030
- transition metal complexes, covalency, polarised neutron diffr. studies 3—56847
- transition metal hydrides, diatomic mol. param. calc., electronegativities 3—26878
- transition metals, chemisorptive bonds with H, O, N, and S, tight-binding parameters 3—52216

bonds (chemical) continued
- transition metals, multiple metal-metal bonding, charge overlap and mol. orbital energies 3—37841
- trimethylene oxide (-dn), high resolution CARS appl. to ring puckering progressions in C-H stretching region 3—11804
- tris(ethylene)platinum, cryst. and mol. struct., X-ray and neutron diffr. studies 3—46917
- two-centre bond, bond energies, bond lengths, and force consts., tight-binding theory 3—57252
- ureas, ^{15}N chemical shifts, nucl. shielding, CNDO/S calcs. 3—17222
- vinyl chloride metabolites, mol. props., ab initio SCF-MO calcs. 3—31920
- X-ray spectra, multi-ionised atoms in molecules, extraatomic relax. effect 3—45966
- $[LiBH(NH_2)_2]^+$, bonds, struct., ab initio investig. 3—45809
- Ag halide systems, ionic and covalent configs. rel. to photographic sensitivity 3—29322
- Ag^+ π-donor complexes, structs., luminesc. behaviour *(German)* 3—34149
- $AgAsS_2$ vibrational spectra features ex 3—3734
- Al-GaAs (110) interface structure on Al chemisorption, energy minimisation study 3—8328
- Al_2CH_2, model system of terminal vs. bridge bonding of methylene to metal systems 3—36697
- As_2S_3, glass, vibr. props., IR and Raman spectra and struct. model 3—23942
- $BaCl_2$, X-ray emission and absorption spectra, rel. to bond ionicity 3—58006
- Be_4, dissoc. energy from CI wavefunctions, hybridisation and bonding 3—17228
- BeF_2-AlF_3-MgF_2-BaF_2:Co^{2+} glass, effective g value, chem. bonding, ESR study 3—33972
- Bi-BiI_3, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3—43241
- $BiBr_3$, PES and relativistic interpretation 3—26786
- $BiCl_3$, PES and relativistic interpretation 3—26786
- $Bi_{12}GeO_{20}$, cryst. struct., chem. bonds, and natural vibrs. 3—27916
- BiI_3, PES and relativistic interpretation 3—26786
- $Bi_{12}SiO_{20}$, cryst. struct., chem. bonds, and natural vibrs. 3—27916
- C:H amorphous film, struct. optical props. and decomposition kinetics 3—18590
- C^++hydrocarbons reactions at 296K, C-C bond formation 3—34609
- $C_{8.4}AsF_6$, intercalate, composition, IR spectra 3—23954
- CH, bond order, STO-3G calcs. 3—17202
- CO_3^- co-clustered with water, energetics and struct. studied by mass spectrometer and photodissoc. techniques 3—6732
- $C_{7.3}SbF_6$, intercalate, composition, IR spectra 3—23954
- Ca_4 cluster, bonding nature, PP MRD CI calc. 3—21955
- Ca_4, dissoc. energy from CI wavefunctions, hybridisation and bonding 3—17228
- $CaNa[B_5O_7(OH)_4].3H_2O$, probertite, cryst. struct. determ. 3—27904
- $CdCl_2(Br_2)(I_2)$, Cd 4d orbitals, high resolution HeI and HeII PES, ligand field splittings and intensity var. 3—55993
- $CdCr_2X_4$ (X=O,S,Se), spin-orbit interaction, bond form. effects, g-factor study 3—8462
- $Cd_2In_6Sn_3Te_5$, $Cd_6In_2SnTe_7$, RMS displacement of Sn atoms in anion sublattice, Mossbauer effect 3—34024
- $CeCl_3$, X-ray emission and absorption spectra, rel. to bond ionicity 3—58006
- Cl_2 crystal struct., Cl_2-Cl_2 pair pot. anisotropy, intermol. bonding and lone pair effects 3—27915
- Co alloys, glassy and crystalline, mag. moment variation, chem. bonding and local symm. model 3—23598
- Co-metalloid alloys, chemical bonding, mag. moments and local symm. 3—42564
- Co-Nb-B, amorphous and microcryst., mag. moments and bonding 3—57561
- β'-CoAl, projected surface energy bands, Shockley surface states, stability and bonding 3—57398
- $Co(BF_4)_2.6H_2O(D_2O)$, mag. susceptibility and anisotropy, dielec. const., struct. transitions, ligand field parameters, bond ordering 3—57558
- Cr III-hexafluoride complex, ESCA studies using an internal standard of calibration 3—6720
- $Cr(CO)_6$: $Os(CO)_5^+$, EPR spectrum 3—3522
- Cs-Sb liq. alloys, metal-nonmetal transition and bonding changes, NMR study 3—28723
- CsCl, X-ray emission and absorption spectra, rel. to bond ionicity 3—58006
- Cs_3CoBr_5, $CoBr_4^{2-}$ ion spin density and bonding, magnetic structure factors, polarised neutron diffraction study 3—8651
- Cs_3CoCl_5, $CoCl_4^{2-}$ ion spin density and bonding, polarised neutron diffraction data, HF calc. or magnetic structure factors 3—8650
- $CsNb_2O_5F$, IR absorpt. and Raman scatt. spectra *(French)* 3—28858
- Cu complex, bis-(N-phenylsalicylaldiminato) Cu II, ESR obs. 3—47542
- Cu complex, bis(N,N′-dimethylethylenediamine) copper II thiocyanate, polycryst., ESR studies 3—38682
- Cu complex, bis(N-2(hydroxyethyl)ethylenediamine) copper II salts 3—38682
- Cu complex, bis(N-methylethylenediamine) copper II thiocyanate, polycryst., ESR studies 3—38682
- Cu^{2+} EPR param. and ground state wavefunctions in single crysts. and complexes 3—38683
- $Cu_x(As_{0.4}Se_{0.6})_{100-x}$, amorphous, bonding of Cu impurity, EXAFS study 3—24055
- CuBr, phase factor in EXAFS 3—43662
- D_xMoO_3, attachment and motion of D, ^2D NMR study 3—38704
- Fe alloys, glassy and crystalline, mag. moment variation, chem. bonding and local symm. model 3—23598
- Fe, cluster complexes, core binding energies, gas-phase XPS study 3—41622
- Fe III-hexafluoride complex, ESCA studies using an internal standard of calibration 3—6720
- Fe-metalloid alloy glasses, soft X-ray emission study of chemical bonding 3—28933
- Fe-metalloid alloys, chemical bonding, mag. moments and local symm. 3—42564
- Fe-Sn clusters in Ar matrix, Mossbauer studies 3—26891
- $Fe_{81}B_{19}$ metallic glass, struct., high resolution neutron diffr. study 3—18231
- $Fe(BF_4)_2.6H_2O(D_2O)$, mag. susceptibility and anisotropy, dielec. const., struct. transitions, ligand field parameters, bond ordering 3—57558
- GaAs, amorphous, defects, elec. cond. and optical absorpt. studies 3—22778

bonds (chemical) continued
- GaAs, phase factor in EXAFS 3—43662
- $Ga_{1-x}In_xAs$, atomic-scale struct., EXAFS study 3—14388
- GaP:O, electronic states of O, weak bonding example 3—47303
- GaP(Sb), amorphous, defects, elec. cond. and optical absorpt. studies 3—22778
- GaSe(S), ionicity, effective charges, bond angles, optimised bond orbital model 3—13156
- Ge, interatomic bonds, vacancy formation potential at diffusion temp. 3—8043
- Ge intermediates, double bonds and carbene-like unsaturations calcs. 3—21654
- Ge, phase factor in EXAFS 3—43662
- $Ge_{1-x}S_x$, non-crystalline, optical gaps from 'mean' bond energy 3—3669
- $Ge_kSb_mS_n$, non-crystalline, optical gaps from 'mean' bond energy 3—3669
- $GeSe_2$, cryst. and amorphous, electronic struct., optical and photoemission props. 3—23265
- GeTe, bonding in cubic and rhombohedral crystals, valence bands 3—47261
- H_2, bond formation in terms of electron momentum distrib. 3—36654
- H_2, chemical bond formation and orbital contraction 3—11677
- H_2^+, bonding process in ground state, LCAO calc. 3—45836
- H_2^+, chemical bond formation and orbital contraction 3—11677
- H_2O dimer equilib. separations and bond energies, electron correl. calc. 3—36691
- H_2O, OH bond and stretching region in IR vibr. spectrum 3—36738
- H_2S molecules, X-ray spectra of multi-ionised atoms, extraatomic relax. effects 3—45966
- H_2SCl radical, three electron bond ab initio MO calcs. 3—6532
- H_2SSH radical, three electron bond ab initio MO calcs. 3—6532
- He_2, bond formation in terms of electron momentum distrib. 3—36654
- $HgCr_2X_4$ (X=O,S,Se), spin-orbit interaction, bond form. effects, g-factor study 3—8462
- IHI, vibr. stabilisation, new possibility of chemical bonding 3—24483
- In-InI_3, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3—43241
- InSe, ionicity, effective charges, bond angles, optimised bond orbital model 3—13156
- $K_xFe(CN)_6$, x=3, 4, XANES spectra, multiple scatt. resonances 3—34170
- $K_3ReO_2(CN)_4$ and isotopic species, IR and Raman vibr. spectra and force const. anal. 3—23956
- $LaCl_3$, X-ray emission and absorption spectra, rel. to bond ionicity 3—58006
- La_2LiFeO_6, Fe oxidation states and electronic configurations, oxide stabilisation 3—33179
- $LaNi_{5-x}Cu_x$ hydrides, bonding, rel. to H storage materials, photoemission and band struct. calc. studies 3—27889
- Li_2O-Na_2O-Al_2O_3-SiO_2, mixed alkali glasses doped with Cu^{2+} 3—46864
- Mg_4 cluster, bonding nature, PP MRD CI calc. 3—21955
- Mg_4, dissoc. energy from CI wavefunctions, hybridisation and bonding 3—17228
- $MgAl_{2-x}Fe_xO_4$, Mossbauer recoilless fraction 3—14183
- MgO, bonding charge density and eqn. of state 3—42565
- MgO, rock salt struct., aspherical valence charge parts, X-ray bond charge model 3—2463
- MgO-Al_2O_3-SiO_2, Z 3—22793
- $Mn(BF_4)_2.6H_2O(D_2O)$, mag. susceptibility and anisotropy, dielec. const., struct. transitions, ligand field parameters, bond ordering 3—57558
- Mn(II) complexes, solid and soln., EPR study 3—52606
- $Mn_{1.09}Sb$, interstitial site occupancy and electronic struct., neutron diffr. study 3—51590
- Na_2CO_3, ^{23}Na-central lineshape temp. depend. NMR study 3—47559
- NaF, rock salt struct., aspherical valence charge parts, X-ray bond charge model 3—2463
- Na_2O-B_2O_3-SiO_2:Cu^{2+} glass, optical absorpt. and ESR spectra 3—33119
- Na_2O-SiO_2 glass, Na^+/Ag^+ interdiffusion from melt 3—33518
- Na_xWO_3, photon stimulated desorption of O^+, bond site selectivity demonstrated 3—13627
- Nb-W, band struct., interatomic bonds 3—33185
- Ni (111), CO photon stimulated desorption 3—57231
- Ni, grain boundary chem. bonding, impurity embrittlement study 3—46960
- Ni-metalloid alloy glasses, soft X-ray emission study of chemical bonding 3—28933
- Ni-metalloid alloys, chemical bonding, mag. moments and local symm. 3—42564
- $Ni(BF_4)_2.6H_2O(D_2O)$, mag. susceptibility and anisotropy, dielec. const., struct. transitions, ligand field parameters, bond ordering 3—57558
- $Ni(NH_3)(NO_2)_2$, spin and charge distribs., polarised neutron, X-ray diffr., ab initio calcs. 3—57320
- $NiSi_2$, self-consistent energy bands and bonding 3—33629
- Ni(111), adsorption site for S, coverage depend., photoemission study 3—2962
- Os carbonyl clusters, struct., bonding, chem. props. 3—12029
- $Pb_{1.5}M_2O_{6.5}$ (M=Nb, Ta), vibr. anal. and chem. bonds, IR and Raman spectra *(French)* 3—19129
- Pd_2Si, form. at Si-Pd interface, chem. bonding, photoemission study 3—58034
- RbHF stability. HF study 3—1215
- RbH_2O stability, HF study 3—1215
- $RbNb_2O_5F$, IR absorpt. and Raman scatt. spectra *(French)* 3—28858
- $RbTa_2O_5F$, IR absorpt. and Raman scatt. spectra *(French)* 3—28858
- Re_2, bonding study by ab initio calcs. 3—45868
- $Re_2O_3(CN)_8^{4-}$, IR and Raman vibr. spectra and force const. anal. 3—23956
- Re_2Te_5, cryst. struct. and semicond. props. 3—42582
- Ru (0001) CO photon stimulated desorption 3—57231
- Ru carbonyl clusters, struct., bonding, chem. props. 3—12029
- Ru complex, Ru(II)-bipyridine, reduced, ligand-ligand inter-valence CT absorpt. 3—24486
- S-Se bonds in cpds., ab initio theoretical study 3—31912
- SCl, vibr. freq., CEPA calcs. on open-shell mols. 3—45926
- SF, vibr. freq., CEPA calcs. on open-shell mols. 3—45926
- SF_6 molecules, X-ray spectra of multi-ionised atoms, extraatomic relax. effects 3—45966
- $(SN)_x$ electronic struct. and bonding, ab initio MO calcs. 3—55793
- S_5N_6, electronic struct. and bonding, ab initio Hartree-Fock-Slater MO calcs. 3—17206
- SO_2 molecules, X-ray spectra of multi-ionised atoms, extraatomic relax. effects 3—45966

bonds (chemical) continued
Se, liq., viscosity meas., impurity depend. 3—2863
Se-P glasses, transition temp., bulk modulus, comp. depend. US vel. meas. 3—13307
Si (111), surface struct., π-bonded molecular and chain models 3—13602
Si, interatomic bonds, vacancy formation potential at diffusion temp. 3—8043
Si, oxidation, oxygen trapping, induced by laser irradiation 3—56953
Si, tetrahedral bonding effect on vibr. props. 3—38006
Si:F(H), amorphous, chemical bonding 3—22777
Si:H, amorphous, electronic struct. model 3—3043
Si:H, amorphous, three-centre bond model calcs. 3—37789
a-Si:H, As(Cl), ion implanted, IR absorpt. spectra 3—47681
a-Si:H,O, IR absorpt. spectra, structural interpretation 3—23987
Si:H amorphous film, dangling bond correlation energy 3—8437
Si:H amorphous film, H anal., mass spectrometry *(Japanese)* 3—23205
$Si:Pt^-$, spectroscopic splitting in strain-modulated ESR study 3—57767
Si/SiO_2 interface, Au doped, interface states, chem. bond model 3—38484
Si-O-OH polymer glasses, network parameters, melting point and viscosity 3—7918
SiC:H amorphous window material for a-Si solar cells, characterisation 3—53538
$a\text{-}SiH:Cl^-(As^{n+})$, bond stability, IR absorpt. spectrosc. obs. 3—38809
$SiH_5{}^+$, struct. and energy, comparisons with $CH_5{}^+$ and BH_5 3—55794
Si_3N_4 plasma CVD films, comp. and chem. bonds, optical props. 3—51971
$Si_xN_{1-x}:H(P)$, amorphous films, substitutional doping study 3—51635
SiO_2, amorphous, struct. and bonding, ^{17}O NMR study 3—51495
SiO_2 amorphous film, AC hopping conduction model 3—43177
SiO_2, electron traps, annealing in NH_3 effects 3—3221
SiO_2, thermally grown, bonding, ion sputtering effects, XPS study 3—52879
SiO_2, vitreous, absorption band at 300 nm, radiation colour centres 3—23986
$SiO_2\text{-}Al_2O_3$ system, cryst. and glossy, struct. and vibr. spectra 3—42527
$Sr_{0.5}La_{1.5}Li_{0.5}Fe_{0.5}O_4$, Fe oxidation states and electronic configurations, oxide stabilisation 3—33179
Tb complexes containing 1,2-benzenedicarboxylic acid and chiral carboxylic acids, optical activity, luminesc. study 3—19103
Tb complexes containing 5-sulphosalicyclic acid and chiral hydroxycarboxylic acids, optical activity 3—52764
$ThRh_x(Ir_x)Si_{2-x}$, synthesis and supercond. transition temps. 3—47448
TiB_2, Compton profile 3—52689
TiN, Compton profile study of bonding 3—47729
TiO_2, cryst. struct. and covalent bonding, X-ray charge density study 3—51577
$TiVO_4$, prep., lattice consts., mag. susceptibility and EPR spectra 3—28499
$TlGaS_2(Se_2)$, high-press. Raman spectra 3—3718
$TlInS_2(Se_2)$, high-press. Raman spectra 3—3718
$TlNb_2O_5F$, IR absorpt. and Raman scatt. spectra *(French)* 3—28858
Tl_xTe_{1-x} liq. alloys, electronic struct. and bonding 3—38290
U halides, U^{3+} to U^{5+}, electronic struct., XPS of bonding ionicity 3—19245
U oxyhalides, U^{3+} to U^{6+}, electronic struct., XPS of bonding ionicity 3—19245
VB_2, Compton profile 3—52689
$VC_{0.87}$, quadrupole effects and chemical bond 3—23813
$V_{1-x}M_xH_y$ (M=Fe, Cr, Ti), soft X-ray emission spectra, metal-H bonding states 3—38962
VN, Compton profile study of bonding 3—47729
$VN_{0.98}$, quadrupole effects and chemical bond 3—23813
$VO_{0.97}$, quadrupole effects and chemical bond 3—23813
VPO_4, prep., lattice consts., mag. susceptibility and EPR spectra 3—28499
$ZnCl_2(Br_2)(I_2)$, Zn 3d orbitals, high resolution HeI and HeII PES, ligand field splittings and intensity var. 3—55993
$ZnCr_2X_4$ (X=O,S,Se), spin-orbit interaction, bond form. effects, g-factor study 3—8462
ZnSe, phase factor in EXAFS 3—43662
ZrO_2, elec. struct., phase stability, DV-Xα cluster method 3—52028

bone
adaptive remodelling, influence of strain rate 3—24768
ankle joint, voluntary oscillations, mech. reson. 3—48312
ankle joint biomechanics 3—9650
bioelectric stimulation of form., methods, models and mechanisms 3—4610
blood flow meas. and partition coeff. of ^{133}Xe 3—15212
bond with glass-ceramics for prosthetic appls. 3—53123
children undergoing ^{67}Ga citrate scanning, absorbed dose estimates for liver, spleen and metaphyseal growth complexes 3—58838
colony-forming cells, 2 subpopulations differing in radiosensitivity, mouse obs. *(Russian)* 3—58737
compact tissue, deform. rate effect on mech. props. 3—53715
composition analysis methods 3—9735
condylar knee prostheses, fixation of femoral components 3—9781
cranial system, human, free-vibr. anal. 3—9651
current pathways in high-voltage injuries 3—48281
density, quantitative meas. using γ-ray CT 3—58778
dental implants, Al_2O_3 and C, bone-implant interface stiffness rel. to surrounding stress profile 3—58867
dielectric behaviour at microwave freqs., UV irrad. effects 3—58728
dielectric permittivity and electrical conductivity of fluid saturated bone 3—48280
differential method for measuring impedance properties of bone 3—29792
digital processing of microradiographic and fluorochromic images from bone biopsy 3—53743
electric field exposure rel. to bone growth and fracture repair in rats 3—58713
electrical cond., 5-point electrode method 3—4491
electrical potentials, alternating, of bone tissue 3—44228
engineering in medicine and biology, conf., Philadelphia, USA (Sept. 82) 3—10511
femora, pathological, human, US characterization 3—48353
femoral head osteonecrosis, nonlinear finite element anal. of some early collapse processes 3—9655
femur medullary canal edge detect., Bayesian approach 3—15222
fluid flow in vitro, electromech. effect appl. 3—24774
fracture images, psychophys. comparison of a video display system to film 3—24882
granulopoietic progenitor cells, canine, sensitivity to ionising radiation, blood and bone marrow obs. 3—48330

bone continued
Heidelberg (Mauer) and Tautavel bones, model of linear U accumulation for ESR age 3—20605
hip joint, human, finite element study 3—4526
hip joint endoprostheses using alumina, remodelling 3—58868
hip prosthesis, total: stresses in femur, cement and implant 3—35024
ischium, press. beneath, detect. using a pedobarograph 3—9648
joint and muscle forces calc., optimisation methods appl. 3—44267
knee, total arthroplasticity, tibial component design analysis 3—48449
knee joint, stiffness characts., math. model 3—48306
lumbar vertebrae of a primate exposed to Z-axis vibr., acceleration meas., technique and obs. 3—29605
lumbar vertebral segment, human mechanical model *(French)* 3—48314
magnetic bones in human sinuses 3—29582
marrow, regenerating and normal, radiosensitivity, aberrant cell freq., mitotic index *(Russian)* 3—34900
marrow and erythrocytes of rats, effects of γ-irrad. and cystamine on superoxide dismutase activity 3—4561
marrow architecture, sequential changes during continuous low dose γ-irrad. in dogs 3—15165
marrow cells of mice exposed to γ-rays, micronuclei freq. reduction by AET 3—44304
marrow pressure changes rel. to cellular egress 3—4519
marrow regeneration, $^{60}Co\text{-}\gamma$-irrad., O_2 breathing effect *(Russian)* 3—34899
marrow transplantation in mice exposed to a modified fission neutron field 3—29618
mast-cell precursors in bone marrow and skin of mice, different radiosensitivities 3—44301
mechanical properties of bone tissue, in vivo meas., osteosynthesis anchorage appl. 3—44268
mineral content, rel. to strength characts., hypodynamic conditions 3—34992
mineral content meas., crossover correction in dual photon absorptiometry with ^{153}Gd 3—24863
myeloid stem cells, recovery of number and radiosensitivity in sublethally X-irrad. mice 3—9677
osteoscintimetry, skeletal scintigram semiquantitative eval. using profiles and computer macroprogram 3—9714
patello-femoral joint biomechanics: contact, congruity and movement study 3—44265
patello-femoral joint biomechanics, effect of simulated femoro-tibial varus deformity 3—44266
pelvic ring fractures, unstable, external fixation, comparative rigidity of some current frame configurations 3—19847
photopenic abnormalities induced by radiotherapy, characterisation on bone scans 3—15213
proximal femur, stress distrib. after surgical replacement: effects of prosthesis and surgical techniques 3—4521
pulsed magnetic fields, biological effects, bone fraction therapy appl., review 3—44270
Range: a technique for lumbar CT 3—48386
sarcomas following therapeutic irrad. 3—58748
spine in scoliosis, dose reduction during radiography 3—9742
stromal cells in continuous, long-term marrow culture, ultrastruct. and radiobiological characterisation 3—53732
tibia, chicken, idiopathic scoliosis, stress relax., torsional testing 3—48309
tibia, human, technique for in vitro meas. of principal strains 3—24925
tibia, mech. props. nonuniformity, effect of functional adaptation 3—34874
tibial prosthetic components, variables affecting fixation 3—4682
torsional strength comparison of vascularised and nonvascularised bone grafts in dogs 3—24773
trabecular bone, estimates of absorbed energy due to β-particles or electrons 3—39719
trabecular bone mineral content meas., coherent/Compton scatt. method employing an X-ray tube 3—58796
tubular, internal stresses rel. to elec. fields 3—53716
US measurements of deer antler, bovine tibia and tympanic bulla, mech. props. 3—24789
US transmission imaging, digital enhancement 3—48354
vertebral column segment testing, technique for in vivo loading conditions duplication 3—58875
^{37}Ar, retention and release from human bone samples 3—58583
Rn/Ra ratio in skeletons of beagles, after Ra exposure, prediction eqn. 3—58820
^{90}Sr body burdens and radiation and radiation dose in Anakturuk Pass Alaska Eskimos due to fallout, prediction 3—9759
^{90}Sr in bone, case study in age-dependent dosimetric modelling 3—9758
^{99m}Tc-MDP uptake in man, rel. to local blood flow 3—19795

Boolean algebra
see also Boolean functions; formal logic
No entries

Boolean functions
No entries

Boolean lattices *see Boolean algebra*

bootstrap models *see bootstrapping*

bootstrap theory *see bootstrapping*

bootstrapping
σ-model, critical exponent η in order $1/n^3$ by conformal bootstrap method 3—5980
electroweak bootstrap 3—45324
electroweak model, topological bootstrap theory predictions of boson couplings and spectra 3—54868
relativistic ensembles and mass spectrum 3—21108
spin structures, self-consistant, meson amplitudes, CPT invariance 3—31184
topological bootstrap theory, review, photons 3—54895

bootstraps *see bootstrapping*

borate glasses
see also borosilicate glasses
alkali borate glasses, thermal expansion, glass transform. 3—57112
bulk modulus of inorganic glasses, struct. depend. 3—2643
$Li_2O\text{-}K_2O\text{-}B_2O_3$, spectral absorption of Cu^{2+} mixed alkali effect 3—47676
phase separation and eutectic form., thermodynamic anal. 3—33449
struct. change at solid-liquid transition, absorption spectra study 3—13453
vibr. IR and Raman spectra and nonlinear susceptibility 3—34086
$AgI\text{-}Ag_2O\text{-}B_2O_3$ glassy electrolytes, struct. and glass transition 3—22783
$(AgI)_x(Ag_2O_nB_2O_3)_{14-x}$ glass, Raman study of vibr. props. 3—34100

borate glasses continued
$(AgI)_{0.79}(Ag_2O.B_2O)_{0.21}$, vitreous electrolyte, thermoelec. power 3—18509
$(AgI)_x(Ag_2O.B_2O_3)_{1-x}$ superionic glasses, ultrasonic absorpt. study 3—28057
$AgI(Br)$-Ag_2O-B_2O_3 superionic conducting glasses, IR spectra, glass transition temp. and cond. studies 3—33495
B_2O_3-Na_2O, glass, retarded elasticity rel. to viscosity, compressive method *(Japanese)* 3—4076
B_2O_3-Na_2O, glass form., crit. cooling rates and liquidus viscosities *(Japanese)* 3—39088
B_2O_3-P_2O_5-$SiO_2(Al_2O_3)$, glass, struct., IR spectra and X-ray diffr. study 3—13113
$^{10}B(n,\alpha)^7Li$ reaction in borate glasses, Mossbauer spectroscopy 3—3615
BaO-B_2O_3-Al_2O_3, EPR and kinetic study of H centres 3—14129
BaO-B_2O_3-Fe_2O_3 glass, IR spectra 3—14295
BaO-B_2O_3-GeO_2 and B_2O_3-GeO_2 glass struct., NMR and Raman scatt. study 3—2428
BaO-$B_2O_3(-La_2O_3)$ glass, vacuum UV reflection spectra 3—14321
CaO-B_2O_3-Al_2O_3-Fe_2O_3 glass, IR spectra, annealing effects 3—43529
CeO_2-ZrO_2-Y_2O_3-ThO_2-HfO_2-La_2O_3-Na_2O-B_2O_3, heat resistant nonsilicate porous glasslike material, prep., leaching 3—58110
$(CoO)_x(2B_2O_3.K_2O)_{1-x}$ glasses, mag. props. 3—23577
CuO-MnO-B_2O_3-K_2O glasses, Cu^{2+}-Mn^{2+} interaction, EPR and mag. susceptibility study 3—23792
Cu_2O-Al_2O_3-SiO_2-M_xO_y (M=Na, Ca, Fe, B, Ge, P) glass, thermal expansion, comp. depend. 3—42817
Fe_2O_3-B_2O_3-PbO based glasses, susceptibility and Mossbauer effect meas. 3—57514
Fe_2O_3-BaO-B_2O_3 glass, mag. and struct. props., ^{57}Fe Mossbauer spectra 3—3601
Fe_2O_3-PbO-B_2O_3 glasses, ^{11}B and ^{207}Pb NMR lineshape studies 3—52636
K_2O-Al_2O_3-B_2O_3-Fe_2O_3 glass, Fe aggregation on heat treatment, optical and mag. study 3—13467
Li_2O-B_2O_3, phys. props. and struct. 3—29066
Li_2O-B_2O_3 glass, struct., ^{10}B NMR study 3—7915
Li_2O-B_2O_3 glass, struct., ESR, optical and Mossbauer study 3—22784
Li_2O-B_2O_3-Fe_2O_3 glasses. mag. props. from ^{57}Fe Mossbauer spectroscopy 3—14169
Na_2O-B_2O_3 glass, neutron irrad., elec. cond. and light absorpt., fast-neutron dosimeter appl. 3—51667
Na_2O-B_2O_3 glass melt struct. rel. to glass struct. 3—2378
Na_2O-B_2O_3-CeO_2-$TiO_2(-Al_2O_3)$, porous glass ceramic, charact., prep. and props. 3—42535
Na_2O-B_2O_3-Fe_2O_3 glass, IR spectra 3—14295
Na_2O-Fe_2O_3-B_2O_3 glass system, Mossbauer spectra study 3—43469
Na_2O-Fe_2O_3-NiO-B_2O_3-P_2O_5 glass ceramics, crystallised, mag. and elec. props. *(Japanese)* 3—58144
Na_2O-K_2O-B_2O_3, spectral absorption of Cu^{2+}, mixed alkali effect 3—47676
PbO-B_2O_3 glass, thermal cond. 3—13564
PbO-B_2O_3 glasses, water corrosion mechanism 3—34512
PbO-B_2O_3 immiscible glasses, mech. props. 3—2661
PbO-B_2O_3-Al_2O_3-Fe_2O_3-Y_2O_3 glass-ceramics, mag. props. 3—57833
$PbO-B_2O_3$ glasses, microcrack-branching and fracture toughness 3—34445
SrO-B_2O_3, phys. props. and struct. 3—29066
SrO-B_2O_3 glass, struct., ESR, optical and Mossbauer study 3—22784
V_2O_5-B_2O_3-CaO, AC dielectric losses, elec. cond. 3—52724
V_2O_5-B_2O_3-CaO, DC elec. cond. in weak and strong elec. fields 3—52167
ZnO-$B_2O_3(-La_2O_3)$ glass, vacuum UV reflection spectra 3—14321

Bordoni effect
Mg, internal friction associated with dislocations and electron irrad. induced point defects 3—28045

boron
see also nuclei with ......
amorphous film, polymorphism and substructure 3—18586
atom, excited state, electronegativity, spin-polarised $X\alpha$ calcs. 3—55836
diamond:B, ion implanted, mechanical props. enhancement 3—4154
diffusion in Si, back-side oxidation effects with Si_3N_4 film direct mask 3—8261
doping additions in Si-WSi_2 bilayers, B profile determ. 3—23103
elec. conduction mechanism, elec. and optical props. 3—8495
fibre, residual stress determ. using length change on electropolishing, instrument design 3—9268
fibre reinforced Al, contact stresses and force parameters during rolling *(Russian)* 3—39207
fibre reinforced Al, tensile strength, room-temp., function of annealing temp. and time 3—34484
fibre reinforced Al, unidirectional, damage, math. modelling 3—56472
fibre reinforced Al 3—47960
fibre reinforced Al and Al alloy composites, mech. props. anisotropy 3—24316
fibre reinforced Ti-Al-V, hot pressing and struct. 3—29038
fibre reinformced Ti 3—47960
fibre-organic fibre reinforced plastics, deform., fibre fracture effect 3—34409
fibres, bare and SiC coated, mech. props. temp. depend. 3—34408
GaAs:B, elec. cond., impurity effects 3—23398
graphite:B, dielectric function and critical-point transitions 3—14244
graphite:B, ion implanted, lattice damage and implant distrib., SEM, STEM and AES study 3—2597
intense ion beam source development expts. 3—6484
isoelectronic sequence, ground state fine struct. using extended regular doublet law 3—21636
isoelectronic sequence, ground-state doublet separations 3—55826
isoelectronic series, elec. dipole oscill. strengths, length and vel. forms 3—55893
modified C fibres, BN form., X-ray photoelectron spectroscopy study *(Russian)* 3—43786
negative ions, excited states lying above ground state of neutral atom 3—21647
oxidation-enhanced diffusion in Si, quantitative model 3—23101
β-rhombohedral, {100} twinning, high resolution electron microscopy study 3—18317
volcanoes of Japan Island arcs, B isotopes of fumarole condensates 3—25056
B I isoelectronic series, intersystem lines, atomic spectra 3—11725
B ions+He, absolute partial ionisation cross sections determ. for inelastic interactions 3—6765
B ions+He, ionisation, deviations from q^2 scaling 3—6764

boron continued
B isoelectronic series, $^2P_{1/2}$-$^2P_{3/2}$ transition, relativistic effects, multiconfiguration HF method 3—31989
B V, laser prod. plasma, Lyman α line red shift study 3—12975
B^-, bound state, electron correl. calcs., radiative autoionis. 3—45832
B^-, electronic structure, even-tempered basis functions, universal systematic sequences 3—11665
B:C ion implantation form. of B_4C, TEM and electron diffr. study 3—27959
$B^{5+}+H$, partial cross section for charge transfer, report 3—21894
^{11}B muonic atom, muon capture in hyperfine states 3—12012
^{11}B-p fuel potentiality for ICF 3—26459
BeO:B, near-UV luminescence excitation spectra, 3 to 7.5 eV *(Russian)* 3—57966
C:B, ion implantation form. of B_4C, TEM and electron diffr. study 3—27959
GaAs:B, ion implanted, electron trap EL2, photocapacitance transients study 3—28294
GaAs:B, ion implanted, compensation mechanisms, study 3—33665
Ge:B single cryst., CW laser beam annealing and junction formation 3—56974
a-Ge:H, B, ESR spectra and transport props. 3—43435
Ge:H,B, amorphous, elec. cond. and thermoelectric power 3—23393
$Hg_{1-x}Cd_xTe$:B, ion implanted, laser annealed, Hall, cond. and C-V meas. 3—28347
$Hg_{1-x}Cd_xTe:B^+$, implantation damage, thermal pulse annealing, expt. study 3—8070
Si:^{11}B, divacancy annealing, electron beam and pulsed ruby laser excitation 3—56986
Si:As, B, ion implanted and incoherent light annealed, characterisation 3—56922
Si:B, amorphous film, CW laser annealing, solid phase epitaxy and random crystallisation, B doping effects 3—56948
Si:B, As, ion implanted and CW laser annealed, Fe-related defect centres 3—47304
Si:B, bound exciton and multi-exciton complexes, kinetics 3—57285
p-Si:B, distinction of thermally induced defects, resist. meas. 3—51654
Si:B, doping profiles determ. by electrical meas. and anodic stripping 3—49403
Si:B, grain boundary diffusion of dopants 3—51863
Si:B, impurity content meas. by photoluminesc. technique *(Chinese)* 3—38863
Si:B, ion implant damage and annealing, EPR studies 3—14132
Si:B, ion implantation, impurity distribution prediction using ion range statistics 3—51650
Si:B, ion implantation damage annealing, etching and ellipsometry study, I^2L gate appl. 3—22927
Si:B, ion implantation damage, flame annealing, TEM and Van der Pauw studies 3—46970
Si:B, ion implantation through submicron slit at 1 MeV, ion conc. study 3—51639
Si:B, ion implantation through mask window, impurity distrib. study 3—51640
Si:B, ion implanted, activation and process characts. of IR rapid isothermal and furnace annealing 3—51652
Si:B, ion implanted, characterisation by ellipsometry and channelling 3—46977
Si:B, ion implanted, elec. activation of B ions during solid phase epitaxy 3—2579
Si:B, irradiated, photolum. 1.080 eV (I_2) line origin 3—43610
Si:B, laser annealed, surface electron props. 3—57408
Si:B, laser annealing, picosecond dynamics 3—56938
Si:B, lattice constants meas. using X-ray double crystal method 3—13028
Si:B, oxidation effects on diffusion, dual vacancy-interstitial mechanism 3—8259
Si:B, P, sequential diffusion, impurity profiles, SIMS study 3—42853
Si:B, point defect recombination-induced migration 3—57141
Si:B, polycrystalline, MESA diodes on photocells, electronic props. rel. to grain size and intragrain defects 3—38470
Si:B, shallow strain distributions near impurities, X-ray Bragg reflection meas. 3—42622
Si:B, Si-B3 paramagnetic defect, extended Huckel theory calc. 3—38345
Si:B, single step doping by UV laser, Auger electron analysis, spreading resist. obs. 3—42634
Si:B, X-acceptors 3—28303
Si:B,As, CW laser annealing, quenched-in defects 3—57313
Si:B,C, electron irrad., defect accumulation, IR study 3—27998
Si:B,P, ion implantation, diffusion, annealing 3—27962
Si:B amorphous solar cells, junction props. of nip and pin structs. 3—53530
Si:B film, highly doped, deposited on Si(100) substrates, solid phase epitaxy 3—23198
Si:B films prep. by plasma decomp. of SiH_4, elec. props. 3—58054
Si:B wafer, etch-stop mechanism 3—4158
Si:B-Al thermocouples, thermopile fabrication using semicond. planar technology 3—54731
Si:Co,B, impurity electron states, DLTS and Mossbauer studies 3—43081
Si:Co,B,Al,Ga, pairing reactions of interstitial Co and acceptors, Mossbauer study 3—42623
Si:Cr,B, charact. by EPR, DLTS, luminesc. and neutron activation anal. 3—47283
Si:Cr,B Cr-B pair photolum. 3—43612
Si:Fe,B, EPR spectra 3—52615
Si:Fe,B, interstitial-substitutional pairs, electronically controlled reactions 3—43079
Si:Fe,B,Al,Ga, deep impurity levels, photocapacitance photocond. and Hall effect studies 3—43080
Si:H, B, amorphous, optical absorpt. spectra and struct. props. 3—52803
a-Si:H, B, anomalous optical and struct. props. 3—34127
Si:H,B, amorphous, H diffusion coeff., H_2 effusion expts. 3—33501
Si:H,B, amorphous, optical props. 3—23908
Si:H,B, amorphous film, in situ doping during homogeneous CVD growth, charact. 3—52967
Si:H,B amorphous films, ionized cluster beam deposition 3—52977
Si:H,B thick films, H evolution, film morphology 3—23217
Si-SiO_2 MOS structure, B implanted, incoherent light pulse annealing 3—23496
SiC:B, 3C polytype, photoluminescence and radiative recombination centres 3—38898
SiC:B, paramag. defects, ESR study 3—3533

boron continued
SiC:B, sintered, microstruct., inclusions, comp., STEM, AES, X-ray analysis 3—39977
SiC:B polytypes, ESR study 3—38676
SiO_2:B, vitreous, ion implanted, optical props. study 3—3677
SiO_2:B films, dopant conc.-depth SIMS study 3—27967
SiO_2:B ion implanted layer, capture cross section of induced traps, elec. field depend. 3—38402
Sn-B, normal-superconductor junction, Andreev reflection obs. *(Russian)* 3—8626
Ti, B implanted, cavitation erosion behaviour 3—58257
Ti-Al-V B implanted, cavitation erosion behaviour 3—58257

boron alloys
see also boron compounds
C $Fe_{80}B_{20}$, amorphous and cryst., electronic props., EELS, AES, and X-ray absorpt. study 3—52876
$Fe_{81}B_{19}$ metallic glasses, struct. factor, neutron diffr. study 3—7922
steel, ultrahigh strength, medium C, B addition effect on P grain boundary segregation and fracture 3—53070
B-B-Mg(Be) ternary compositions, Seebeck coeff. and resistivity obs. to 1000°C 3—13848
$B_{1-x}Fe_x$, amorphous, ^{57}Fe Mossbauer isomer shift 3—52691
Be-B, ion implantation prep., wear resistance and microstructure 3—4152
$(CO_{100-x}Mn_x)_{76}B_{24}$ amorphous alloy, mag., thermal and elec. props. 3—28524
Co- B-Si metallic glasses, spin wave stiffness const., magnetisation study 3—28535
Co-Fe-B, solid soln. equilibrium distrib. *(Italian)* 3—53020
Co-Fe-B, ternary system behaviour at 1273K *(Italian)* 3—53019
Co-Fe-Ni-Mn-B-Si metallic glasses, near zero magnetostrictive, with very high saturation induction 3—28672
Co-Fe-Ni-Mo-B-Si glassy alloys, nonmagnetostrictive, mag. props. 3—28619
Co-Fe-Si-B, amorphous, short-range order, stability, and mag. props. *(Russian)* 3—37792
Co-Gd-B system, mag. moments and coercive forces 3—33919
Co-Mn-B amorphous alloys, elec. resist., p-d hybrids 3—28323
Co-Nb-B, amorphous and microcryst., mag. moments and bonding 3—57561
Co-Nb-B metallic glass, mag. moment, magnetisation and Curie temp. 3—28523
Co-Si-B amorphous alloy, mech. props. and struct. 3—51685
Co-Sm-B system, mag. moments and coercive forces 3—33919
$Co_{100-x}B_x$, amorphous, effective mag. moment *(Korean)* 3—3423
$Co_{75}B_{25}$ amorphous alloy, melt temp. effect on thermal stability *(Korean)* 3—4063
$Co_{66}B_{30}Si_4$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3—33932
$Co_{58}Fe_5Ni_{10}Si_{11}B_{16}$, amorphous ribbon, power loss, annealing conditions effect 3—28649
$(Co_{0.94}Fe_{0.06})_{74.5}Si_{13.5}B_{12}$, amorphous, hyperfine field of Fe in precipitated Co 3—57834
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloy, induced anisotropy reorientation kinetics 3—28547
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$, metallic glass, properties and appl. test *(Polish)* 3—52543
$Co_{71}Fe_5Si_{15}B_9$, amorphous and recrystallised, absorpt of H_2 *(Russian)* 3—23044
$Co_{5.8}Ni_{10}Fe_5B_{16}Si_{11}$ amorphous alloy struct. changes during heating 3—51778
$Co_{42.9}Ni_{29.3}Fe_{7.8}Si_8B_{14}(Co_{50.2}Ni_{19.5}Fe_{7.8}Si_6B_{16})$, metallic glass, structure, X-ray diffr. study *(Chinese)* 3—18224
$Co_{75}Si_{15}B_{10}$ amorphous alloys, mag. after-effects of H 3—23742
$Co_{3n+5}Sm_{n+1}B_{2n}$, permanent magnets, substitution of Fe for Co, effect on mag. props. 3—47500
Cr-B-Ni powder for wear resist. hard facing using laser, choice of paste binder *(Russian)* 3—58280
Cu-Ni-Zn-Mn-B alloys, heat treated, effect of B on an order-disorder transform. 3—24221
$EuPd_3B_x$, valence state, lattice const., mag. susceptibility 3—23331
Fe-Au-B sputtered amorphous alloys, high mag. moment 3—28521
Fe-B, molten, structural transition, phase diagram 3—18435
Fe-B amorphous RF sputtered film, magnetoelastic wave excitation 3—38664
Fe-B glasses formed by picosecond pulsed laser quenching 3—9027
Fe-B melts, structure close to eutectic comp., X-ray study *(Russian)* 3—46834
Fe-B-Si, amorphous, casting, max. melt spun thickness, composition effect 3—29027
Fe-B-Si amorphous ribbon, mag. props., Al and S additions effect 3—28648
Fe-B-Si(-C) amorphous ribbons, mag. props. limited by surface crystn. 3—28200
Fe-B(-Mo)(Ni-P)(-Cr) 3—28326
Fe-Co-B-Si, amorphous, high-field magnetisation and spin wave const. meas. 3—23717
Fe-Cr-B amorphous systems, mag. permeability after-effect 3—28643
Fe-Cu-B amorphous systems, mag. permeability after-effect 3—28643
Fe-Ni-B (40, 20 at.%) glassy alloy, stress corrosion behaviour in aq. acidic media 3—53269
Fe-Ni-Cr-B-Si amorphous ribbons, Cr conc. effects, magnetisation study 3—28616
Fe-Ni-Cr-Si-B metallic glass, resistivity and galvanomag. coeffs. 3—28325
Fe-Ni-Mo-B metallic glass, struct. relax., elec. resist. study 3—33101
Fe-Ni-P-B amorphous ribbons, electron and proton irrad. effects on mag. props. 3—28554
Fe-Si-B, high C, texture, effect of cold work *(Korean)* 3—53081
Fe-Si-B, Metglas 2605S2 and S3, magnetomechanical coupling, ΔE and permeability 3—23768
Fe-Si-B amorphous alloys, Mossbauer spectra, hyperfine fields and mag. props. 3—28740
Fe-Si-B-C-Mn-S-N, secondary recrystn., cold work and C role 3—34348
Fe-Si-B-C-N alloy, high induction development, C content rel. to hot rolling temp. 3—29197
FeB metallic glass, struct. determ. by polarised neutron diffr. 3—52392
$Fe_{1-x}B_x$ amorphous films, magnetisation and comp. 3—57722
$Fe_{100-x}B_x$, amorphous, effective mag. moment *(Korean)* 3—3423
$Fe_{100-x}B_x$, amorphous, Invar effect, magnetostriction meas. 3—57738
$Fe_{100-x}B_x$, metallic glass, positron annihilation study 3—19226

boron alloys continued
$Fe_{100-x}B_x$ metallic glasses, hyperfine fields, local environment model 3—28316
Fe_3B, electron irrad. amorphisation, TEM study 3—2417
Fe_3B, phase equilib. 3—14563
$Fe_{40}B_{60}$ amorphous sputtered film, magnetism, Mossbauer study 3—28657
$Fe_{75}B_{25}$ amorphous and cryst. electron irrad., Frenkel-type defects, elec. cond. study 3—2611
$Fe_{75}B_{25}$ ribbons and sputtered films, ion bombardment amorphisation and props. 3—2416
$Fe_{80}B_{20}$ amorphous alloys, electron diffr. 3—22795
$Fe_{80}B_{20}$ amorphous ferromagnet, instantaneous reversible permeability 3—28610
$Fe_{80}B_{20}$, metallic glass, crystn. kinetics 3—2425
$Fe_{80}B_{20}$, metallic glass, electron irrad., point defects, positron lifetime and mag. aftereffect study 3—3860
$Fe_{81}B_{19}$ metallic glass, struct., high resolution neutron diffr. study 3—18231
$Fe_{82}B_{18}$-Al_2O_3 amorphous granular film, Mossbauer study 3—43466
$Fe_{83}B_{17}$, amorphous, mag. excitations, neutron scatt. study 3—14030
$Fe_{83}B_{17}$ glass, spin polarised Auger spectroscopy probe of mag. props. 3—28938
$Fe_{90}B_{10}$, $Fe_{83}B_{17}$ molten alloys, interatomic distances and coord. nos., X-ray diffr. obs. *(German)* 3—56808
$Fe_{87}B_{11}Au_2$ amorphous ribbons, high mag.moments and magnetisation 3—28522
$(Fe_yB_{1-y})_{1-2x}R_xLa_x$ alloys, amorphous, low field mag. props. 3—28545
$Fe_{80}B_{20}Sb_x$ amorphous alloy, Sb impurity hyperfine field, Mossbauer study 3—14168
FeBSi amorphous alloys, microstructurally depend. mag. props. 3—28620
$Fe_{75.4}B_{14.2}Si_{10.4}$, amorphous ferromagnet, hyperfine field distrib. *(Korean)* 3—38735
$Fe_{78}B_{13}Si_9$ amorphous ribbon, mag. props., toroid radius influence 3—28611
$Fe_{78}B_{13}Si_9$ metallic glass, accelerated ageing, 60 Hz appl. 3—29109
$Fe_{78}B_{13}Si_9$, Metglas 2605 S2, magnetomechanical props. 3—23767
$Fe_{79}B_{16}Si_5$, Metglas 2605S3, magnetomechanical props. 3—23767
$Fe_{81.5}B_{14.5}Si_4$ amorphous particles, Curie temp. and ferromag. resonance 3—43441
$Fe_{79}B_{15.5}Si_{3.5}C_2$, amorphous, composite mag. annealing effect 3—28650
$Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous ribbon, power loss, annealing conditions effect 3—28649
$Fe_{81}B_{13.5}Si_{3.5}C_2$, metallic glass, theory and application 3—23766
$Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glass, resistivity and galvanomag. coeffs. 3—28325
$Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glass, crystallisation, Mossbauer spectra study 3—56829
$Fe_{81}B_{13.5}Si_{3.5}C_2$ ribbons, Metglas 2605SC, Mossbauer study 3—34020
$Fe_{81}B_{13.5}Si_{3.5}C_2$ toroidal amorphous ribbon and polycryst. cores, step magnetization losses 3—43398
$Fe_{70.5}B_{15.5}Tb_7La_7$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3—33932
$(Fe_xB_{1-x})_{0.9}Tb_{0.05}La_{0.05}$, crystallized, coercive force and microstruct., composition depend. 3—33931
$Fe_xCo_{80-x}B_{20}$, amorphous, elec. resistivity and thermopower 3—28327
$Fe_{67}Co_{18}B_{14}Si_1$, amorphous ribbons, with transverse or oblique mag. anisotropy, domain studies 3—28594
$(Fe_6Co_{88}Ni_3V_3)_{75}Si_{10}B_{15}$, amorphous soft mag. material with extra low core loss at HF, mag. props. 3—28589
FeCoSiB amorphous alloys, zero-magnetostrictive, disaccommodation elimination 3—28644
FeCoSiB amorphous alloy, zero-magnetostrictive, initial permeability produced by mag. annealing 3—28651
$(Fe_{0.05}Co_{0.95})_{78}Si_8B_{14}$, amorphous accommodation and disaccommodation effects 3—18946
$Fe_5Co_{75}Si_{15}B_5$ metallic glass, resistivity and galvanomag. coeffs. 3—28325
$Fe_5Co_{75}Si_4B_{16}$, amorphous metallic glass, mag. annealing kinetics 3—28652
$Fe_{70.3}Co_{4.7}Si_{15}B_{10}$, metallic glass, induced anisotropy reorientation kinetics, isotropic behaviour 3—28546
$Fe_5Co_{70}Si_{15}Bi_{10}$, amorphous ferromagnet, mag. noise, Barkhausen effect 3—23697
$Fe_4Co_{66}V_2Si_8B_{20}$, amorphous, mag. props., mag. head appls. 3—33930
$Fe_{80-x}Cr_xB_{20}$, metallic glass, crit. indices for ferromag. ordering and spin glass state 3—23650
$(Fe_{1-x}M_x)_{77}Si_{10}B_{13}$ (M=Ni, Co, Mn, Cr), amorphous, Invar effect, magnetostriction meas. 3—57738
$(Fe_{1-x}Mn_x)_2B$, mag. moments, magnetisation, neutron scatt., Mossbauer, and NMR meas. 3—3420
$(Fe_{1-x}Mn_x)_{75}P_{16}B_6Al_3$ ribbon, spin glass, ESR absorpt. 3—3451
$(Fe_{1-x}Mn_x)_{75}P_{16}B_6Al_3$ amorphous ribbon, ferromagnet-spin glass transition, magnetisation study 3—28551
$Fe_{72.5}Mo_{7.5}B_{20}$, amorphous ferromagnets, relax. above Curie point 3—33986
$(Fe_{1-x}Ni_x)_{80}B_{20}$ amorphous alloy, crystallisation, elec. resist. and X-ray diffr. studies 3—27848
$Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. props., Mossbauer study 3—19027
$Fe_{40}Ni_{40}B_{20}$, amorphous, struct. anal. by X-ray diffraction *(Korean)* 3—37784
$Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. phases study by EPR 3—43430
$Fe_{40}Ni_{40}B_{20}$, amorphous, ductility, neutron-induced changes 3—51668
$Fe_{40}Ni_{40}B_{20}$, amorphous metallic glass, internal friction and oscillation decay *(Spanish)* 3—42713
$Fe_{40}Ni_{40}B_{20}$ powder, production by rotating water atomisation process *(Japanese)* 3—24179
$Fe_{60}Ni_{20}B_{20}$ alloys, amorphous, magnetisation, mech. tensile stress effects 3—47537
$Fe_{40}Ni_{38}B_{18}Mo_4$, magnetomechanical coupling, ΔE and permeability 3—23768
$Fe_xNi_{80-x}B_{10}Si_{10}$, amorphous alloy, microhardness and occurrence of mech. anisotropy *(Polish)* 3—24354
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, amorphous, mag. hyperfine field distrib. 3—57835
$Fe_{40}Ni_{38}Mo_4B_{18}$, amorphous, Mossbauer study and mag. props. *(Korean)* 3—14172
$Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous alloy, hydrogenation effects on mag. props. 3—28555
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, crystn. kinetics 3—2425
$Fe_{40}Ni_{38}Mo_4B_{18}$ metallic glass, crystallisation, size effect, high voltage electron microscopy obs. 3—3236
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, X-ray photoelectron spectra obs. of surface oxidation 3—34533

boron alloys continued
- $Fe_{40}Ni_{38}Mo_4B_{18}$, Metglas 2826 MB, domain dragging by elec. current 3−28598
- $Fe_{40}Ni_{38}Mo_4B_{18}$, Metglas 2826MB, elec. resist., rel. to deform. in tension *(French)* 3−53135
- $Fe_{40}Ni_{38}Mo_4B_{18}$, Metglas 2826MB, anomalous elec. resist. 3−57329
- $Fe_{40}Ni_{40}P_{14}B_6$, amorphous, H permeability, diffusivity and solubility, electrochem. technique 3−8262
- $Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, crystn. by eutectic reaction, kinetics and mechanism *(French)* 3−13104
- $Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, homogeneous flow, threshold stresses 3−14631
- $Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, struct. relax., threshold stresses 3−14632
- $Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloys, stress relax. kinetics, effect of pre-annealing 3−24287
- $Fe_{40}Ni_{40}P_{14}B_6$ amorphous ferromagnet, instantaneous reversible permeability 3−28610
- $Fe_{40}Ni_{40}P_{14}B_6$ amorphous film, volume change on order-disorder transition *(Russian)* 3−38045
- $Fe_{40}Ni_{40}P_{14}B_6$, amorphous, deform. and fracture, mech. props. and struct. regularities 3−53202
- $Fe_{40}Ni_{40}P_{14}B_6$, crystn., stability, effect of electron irrad. *(French)* 3−51662
- $Fe_{40}Ni_{40}P_{14}B_6$, domain struct. and behaviour 3−28593
- $Fe_{40}Ni_{40}P_{14}B_6$, glassy alloy, SCC, H embrittlement in aq. acidic media 3−58286
- $Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, electron irrad., point defects, positron lifetime and mag. aftereffect study 3−3860
- $Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, CW laser annealing, effects on magnetostriction and Young's modulus 3−37956
- $Fe_{45}Ni_{45}P_{8.5}B_{1.5}$, struct. changes during crystallisation, interatomic binding *(Russian)* 3−51493
- $Fe_{15}Ni_{60}P_{16}B_6Al_3$ amorphous alloy, para, ferro and spin glass regions, high field magnetisation study 3−28614
- $(Fe_xNi_{1-x})_{75}P_{16}B_6Al_{13}$, spin glass, deviations from Curie-Weiss behaviour 3−57521
- $Fe_{29}Ni_{49}P_{14}B_6Si_2$, amorphous ferromagnets, relax. above Curie point 3−33986
- $Fe_{40}Ni_{40}Si_{14}B_6$, metallic glass, positron annihilation study 3−19226
- $Fe_{75}Si_{15}B_{10}$ amorphous spark eroded particles, atomic struct. 3−33099
- $Fe_{78}Si_{10}B_{12}$ amorphous alloy, struct. relax., elec. and mag. study 3−27847
- $Fe_{83-x}V_xB_{14}Si_3$ amorphous N_2 containing alloy, thermal and mag. props. 3−28552
- $Fe_{67}B_{24}$, amorphous, Mossbauer Zeeman spectrum, correl. effects 3−38740
- $(Ho_{0.6}Er_{0.4})Rh_4B_4$, re-entrant superconducting-ferromagnetic transition, specific heat 3−3444
- $(La,Dy)B_6$, spin glass behaviour, elec. resist. and thermoelec. power meas. 3−43379
- $(La, Gd)B_6$, spin glass behaviour, elec. resist. and thermoelec. power meas. 3−43379
- $(Mn_{1-x}M_x)_3B_4$, M=Cr, Mo, Ta, W, mag. phase diagram, Curie temp. 3−52473
- Mo-P-B alloy, rapidly quenched, amorphous struct., supercond. transition temp., comp. depend. 3−47447
- Mo-Zr-Cr-B, microplastic deform., grain boundary segregation *(Russian)* 3−39206
- $(Mo_{0.6}Ru_{0.4})_{1-x}B_x$ amorphous sputtered film, superconductivity and elec. resist., ion irrad. effects 3−47446
- $(Mo_{0.6}Ru_{0.4})_{1-x}B_x$, planar magnetron sputtered films, internal stress and mech. props. 3−8383
- $(Mo_{0.6}Ru_{0.4})_{82}B_{18}$ amorphous film, magnetron sputter deposited, struct. and thermal anal. 3−8348
- $(Mo_{0.6}Ru_{0.4})_{82}B_{18}$, glassy, superconducting, surface flux pinning obs. 3−23555
- $(Mo_{0.6}Ru_{0.4})_{82}B_{18}$ metallic glass, annealing effect on struct. 3−37790
- $Nb_3Al_{1-x}B_x$, struct. and supercond. props. 3−2472
- NbB_2-$NbSi_2$ and NbC-$NbSi_2$ systems, quasibinary, eutectic constitution diagram and reactions 3−58098
- Ni-B amorphous alloys, sp. ht., elec. resist. and Debye temp. 3−28114
- Ni-B film, electroless plating, amorphous, struct. rel. to B conc. *(Japanese)* 3−58055
- Ni-Cr-Fe-Si-B self-fluxing coatings for stationary gas turbines, modification by Al_2O_3 protective scales 3−4211
- Ni-Fe-B alloys, chemically deposited, mag., elec., mech. props. 3−52985
- $Ni_{100-x}B_x$, glassy, B coord., NMR study 3−57798
- $Ni_{81}B_{19}$ amorphous metallic glass, at. struct., neutron diffr. study 3−22796
- $Ni_{81.5}B_{18.5}$ amorphous alloys, mag. props., magnetisation and NMR study 3−28617
- $Ni_x(BSi)_{1-x}$, amorphous, high field magnetisation meas. 3−57702
- $(Ni_{65}Fe_{35})_{77}B_{23}$ metallic glass, short range order, neutron diffr. study 3−18233
- $Ni_{80-x}M_xB_{16}Si_4$ (M=3d transition metal), amorphous, elec. resist. 3−28328
- $Ni_{76}Si_{12}B_{12}$, metallic glass, X-ray photoelectron spectra obs. of surface oxidation 3−34533
- Pb-B, electrical props. under high gaseous H_2 press. 3−38365
- $Pd_{1-x}B_x$, ion implantation prep., amorphisation, elec. props., and supercond. 3−3154
- $Pd_{76}B_{24}$ glassy alloy, local atomic arrangement, X-ray diffr. anal. 3−42531
- RhB-Si bilayer struct. films for optical recording 3−1726
- Ti-B, adhesive wear, boronising effect 3−19431
- TiB_2-Fe-Mo cermet, sintering, effect of TiB_2 fine struct. 3−24201

boron compounds
- *see also boron alloys*
- bond order depend. bond enthalpy terms 3−53439
- BWR control blades, B_4C powder loss determ. by nondestructive testing 3−55237
- photochemical reactions, CO_2 IR laser induced 3−24524
- AgI-Ag_2O-B_2O_3 glassy electrolytes, struct. and glass transition 3−22783
- Al_2O_3-B_4C composite ceramics, sintering, densification, microstruct. development 3−47807
- Al_2O_3-B_4C composite pellets, moisture adsorption, microstruct. 3−47221
- Ar-BCl_3, van der Waals complex, vibr. predissociation, Monte Carlo RRKM study 3−41634
- B_4C, BWR advanced control blade materials, critical expts. 3−16867
- B_4C low-Z fusion reactor materials, surface comp. changes with ion bombardment and heat treatment 3−21522

boron compounds continued
- B_4C neutron absorbers, behaviour in spent fuel storage pool 3−45592
- BCl_2 radical, form. by X-irrad., struct. investig. 3−36781
- BCl_3 condensed gas, selective evaporation by laser radiation 3−1430
- BCl_3 cryst., X-irrad., BCl_2 form., struct. investig. 3−36781
- BCl_3-Xe mixtures, sublimation, laser-induced suppression effect 3−42762
- BD_3CO, rot. transitions, hyperfine struct. nucl. quadrupole coupling obs. 3−11829
- BF, ground state, IR transition rates, ab initio SCF calcs. 3−11656
- BF^+, ground state, IR transition rates, ab initio SCF calcs. 3−11656
- BF_3^+ mutlimode Jahn-Teller and pseudo-Jahn-Teller effects 3−41549
- BF_4^- doped polypyrrole, conducting polymer, optical absorpt. and XPS study 3−52901
- BH, full CI calcs. 3−50316
- BH, ground state, full CI and perturbatively corrected MRD CI calc. methods 3−55855
- BH, mag. susceptibility, screening const., ab initio calcs. 3−50310
- BH_2^+, ab initio pot. energy surfaces 3−55799
- $B_{10}H_{14}$, nuclear quadrupole double reson. spectrum 3−32106
- B_2H_6 and B_2D_6, rot. distortion consts. determ. 3−6804
- B_5H_9, Frenske-Hall LCAO-MO-SCF calcs., isolobal principle validity 3−26640
- BH_3CO, rot. transitions, hyperfine struct. nucl. quadrupole coupling obs. 3−11829
- $BH(NH_2)_2$, IR and Raman spectra, normal coord. anal. 3−50400
- BH_3NH_3, microwave spectrum, torsional barrier and struct. 3−36744
- BN, adsorption of Kr and Xe, dielec. and adsorption isotherms 3−23175
- BN, cubic form. from rhombohedral BN by explosive shock compression 3−13339
- BN, cutting tool, wear resist. rel. to binder composition, EPMA obs. *(Japanese)* 3−39256
- BN, dielec. polarisability at RF and microwave freq. calc. 3−8755
- BN film, hard, ion beam sputter deposited, prep. and props. 3−13673
- BN film growth, low temp. double-plasma process, on semiconductor substrate 3−24154
- BN films, ion-activated formation, microstruct. and hardness props. 3−52978
- BN, Geksanit-R polycrysts., reflection spectra of various phase comps. 3−14817
- BN in B modified C fibres, determ. by X-ray photoelectron spectroscopy *(Russian)* 3−43786
- BN, negative muon capture in cubic and hexagonal structs. 3−52700
- BN, wurtzite form, high press. deformation. expt. study 3−18389
- $B_3N_3H_6$, electronic struct., mol. props., HMO calcs. 3−50284
- B_2O_3 additions to NiO, sintering mechanism, 973 to 1373K *(Russian)* 3−47806
- B_2O_3-Na_2O-MgO-Fe_2O_3-SnO_2, vitreous, coordination of Fe^{3+} and Sn^{4+} 3−37794
- B_2O_3-P_2O_5-SiO_2(Al_2O_3), glass, struct., IR spectra and X-ray diffr. study 3−13113
- BP, compression behaviour under high press., X-ray diffr. study 3−46881
- $B_{12}X_{12}^{2-}$ icosahedral anions, (X=H,D,Cl,Br,I) vibr. spectra in solids and solns. 3−8832
- BaO-B_2O_3, liq.-liq. immiscibility *(Japanese)* 3−38080
- BaO-B_2O_3(−La_2O_3) glass, vacuum UV reflection spectra 3−14321
- Bi_2O_3-B_2O_3, liq.-liq. immiscibility *(Japanese)* 3−38080
- CaO-B_2O_3, liq.-liq. immiscibility *(Japanese)* 3−38080
- $Co_{77}B_{23}$, metallic glass, positron annihilation study 3−19226
- Cu-SiO/B_2O_3-Cu MIM structs., vacuum evap. prep., thermal-voltage memory effects 3−3331
- CuO-MnO-B_2O_3-K_2O glasses, Cu^{2+}-Mn^{2+} interaction, EPR and mag. susceptibility study 3−23792
- $Fe(CO)_3B_4H_8$, Frenske-Hall LCAO-MO-SCF calcs., isolobal principle validity 3−26640
- $[Fe(CO)_3]_2B_3H_7$, Frenske-Hall LCAO-MO-SCF calcs., isolobal principle validity 3−26640
- K_2O-Al_2O_3-B_2O_3-Fe_2O_3 glass, Fe aggregation on heat treatment, optical and mag. study 3−13467
- Li_2O-B_2O_3 glass, struct., ESR, optical and Mossbauer study 3−22784
- MgO-B_2O_3, liq.-liq. immiscibility *(Japanese)* 3−38080
- $Na_2B_4O_7.10H_2O$ heat storage material used in thermochemical energy storage system, heat and mass transfer considerations 3−34738
- $PbBPO_5$, $PbBAsO_5$, synthesis and characterisation *(French)* 3−22845
- PbO-B_2O_3, liq.-liq. immiscibility *(Japanese)* 3−38080
- PbO−B_2O_3 glasses, microcrack-branching and fracture toughness 3−34445
- SiO_2-B_2O_3 system, phase diagram, thermodynamic model calc. 3−2741
- SrO-B_2O_3, liq.-liq. immiscibility *(Japanese)* 3−38080
- SrO-B_2O_3 glass, struct., ESR, optical and Mossbauer study 3−22784
- ZnO-B_2O_3(−La_2O_3) glass, vacuum UV reflection spectra 3−14321

boronising *see surface hardening*

borosilicate glasses
- crack healing, using double torsion loading config. 3−39247
- diffusion processes and surface reaction, Rutherford backscatt. study 3−28168
- fatigue properties, comparative study with synroc 3−14703
- fibres, multicomponent optical, bending strength and fatigue rel. to environment and comp. 3−47976
- fibres, single-mode with elliptical cores, birefr. caused by thermal stress 3−12344
- glass:Np, Np conc. in soln. contacting 3−895
- graded-index antireflective films on phase separated substrate borosilicate glass, microstruct. 3−42949
- high-level waste form for transportation and storage 3−6348
- honeycombe mirrors, large lightweight *(Japanese)* 3−5116
- immobilisation of U nuclear waste, redox chemistry 3−899
- ion implantation effects, microhardness and refr. index meas. 3−33133
- neutron irradiated, thermal release of T 3−55632
- nuclear waste glass, corrosion, Rutherford backscatt. study 3−43974
- optical fibre, birefringence enhancement using borosilicate region, drawing with thermal anneal 3−46289
- phase separation and eutectic form., thermodynamic anal. 3−33449
- radioactive waste form, ^{241}Am and ^{239}Pu leaching, gamma-ray effects 3−41171
- teachability study for high-level waste immobilisation 3−6349
- viscosity, temp. depend. at const. fictive temps. 3−33478
- vitrified radioactive waste, neutron scatt. obs. 3−42525
- B_2O_3-Al_2O_3-SiO_2 system, glass ceramic form. 3−34273
- B_2O_3-SiO_2-Na_2O glasses, Na^+ ion transport 3−23081
- B_2O_3-SiO_2-PbO glass, crystn., TEM study 3−27854

borosilicate glasses continued
- $BaO-ZnO-Al_2O_3-B_2O_3-SiO_2$ optical glass, spangle form. during melting 3—33132
- $CaO-Na_2O-MgO-B_2O_3-Al_2O_3-SiO_2$, electrocond. glass fibre prep. by ion exchange and reduction method 3—14551
- $Cu_2O-Al_2O_3-SiO_2-M_xO_y$ (M=Na, Ca, Fe, B, Ge, P) glass, thermal expansion, comp. depend. 3—42817
- Li electrolysed, impedance meas. 3—23415
- $Na_2O-Al_2O_3-B_2O_3-SiO_2$ photochromic glasses, precipitation of Ag(Cl, Br), crystallite size 3—33130
- $Na_2O-B_2O_3-SiO_2$, electrocond. glass fibre prep. by ion exchange and reduction method 3—14551
- $Na_2O-B_2O_3-SiO_2$, fabrication of hollow glass microspheres from metal alkoxides, laser fusion targets 3—6438
- $Na_2O-B_2O_3-SiO_2$, porous glass, adsorbate self-diffusion, NMR obs. 3—42923
- $Na_2O-B_2O_3-SiO_2$ glasses, tie-line direction in liq. phase separation region, temp. effect 3—2820
- $Na_2O-B_2O_3-SiO_2$ glass, comp., ^{11}B NMR study 3—33989
- $Na_2O-B_2O_3-SiO_2$ glass with Zn, Al and Mg oxides, double crucible optical fibre developments 3—50802
- $Na_2O-B_2O_3-SiO_2$ melt, thermodynamic activity of Na_2O 3—9046
- $Na_2O-B_2O_3-SiO_2$ system glass fibre waveguides with wide core and large numerical aperture 3—32492
- $Na_2O-B_2O_3-SiO_2:Cu^{2+}$ glass, optical absorpt. and ESR spectra 3—33119
- $Na_2O-FeO_n-B_2O_3-SiO_2$ glass system, elec. resist., semicond. props. 3—33721
- $Na_2O-ZnO-B_2O_3-SiO_2$ glass, surface layer form. during aq. attack 3—43975
- Pu loaded, leaching 3—55133
- $SiO_2-B_2O_3-Al_2O_3-ZrO_2-Li_2O-Na_2O$ glasses, uniform refractive index model, obtained by Li^+ for Na^+ ion exchange 3—23905
- $SiO_2-Na_2O-Fe_2O_3-B_2O_3-TiO_2-CaO-MnO_2-Li_2O-Al_2O_3$ glass surfaces, ion depletion during Auger anal. 3—14398
- Ti containing borosilicate glasses, U nuclear waste immobilisation 3—900

Borrmann effect *see X-ray crystallography; X-ray diffraction*

Bose-Einstein statistics *see quantum statistical mechanics*

Bose gas *see boson systems*

boson fluids *see boson systems*

boson systems
- *see also liquid helium-4; quantum statistical mechanics*
- annihilation and creation operators, nonlinear autonomous system embedding in infinite linear system 3—40476
- binary boson mixture at zero temp., struct. 3—25806
- Bose gas, nonideal, superfluidity over impure substrate *(Russian)* 3—47177
- Bose-Einstein condensation, spontaneous gauge symmetry breaking 3—54670
- Bose-Einstein integral functions, asymptotic behaviour 3—49255
- canonical Bose fields, collective variables, correlation functions on Gaussian functionals 3—35914
- central potentials, energy trajectories, geometrical theory 3—40481
- charged Bose gas, pair correl. functions, SCF approx. 3—10742
- correlation hole for an exactly solvable problem 3—35912
- degenerate Bose system, Green's functions low-freq. asymptotic singularities *(Russian)* 3—42873
- degenerate boson system, quasi-particle description 3—40483
- dilute Bose gas, order parameter relax. and quasiparticle scatt. time 3—171
- electromagnetism, spin and statistics 3—6049
- ensemble-averaged level density, symm. effect 3—30774
- equation of state, barometric formula in weak external potential 3—30768
- exactly solvable one-dimens. problem for Fermi or Bose particles 3—10744
- ferromagnetic S=1 chain, spin dynamics, finite-ring calcs. 3—23608
- Goldstone theorem for Bose systems, gauge symmetry breaking 3—10739
- ground state energy, system interacting Bose particles 3—30772
- ideal Bose-Einstein gas, distrib. of zeros and eqn. of state 3—16249
- ideal relativistic Bose gas, with pair production, surface props. 3—20760
- interacting Bose fluid, renormalisation group theory of crit. props. 3—10740
- kinetics of interacting quasiparticles in strong external fields, review 3—33752
- many-boson system, exact canonical momenta of collective motion 3—40482
- momentum distrib. determ. from dynamic struct. factor 3—2907
- quantum collective field and 1/ N correction 3—35888
- quasi-one-dimensional electron system, ordered states 3—57296
- relativistic Bose-Einstein integrals 3—10738
- relativistic ideal Bose gas with pair production, critical behaviour 3—5707
- SU_2*SU_2 tensor props., d-boson systems and traceless boson operators *(Chinese)* 3—31091
- superradiant phase transitions of Fermi and Bose operators with trilinear interaction 3—36976
- two-level hamiltonian, dynamic group 3—25782
- CdS, many-exciton systems, boson description 3—47274
- CuBr(Cl), many-exciton systems, boson description 3—47274
- CuCl films, excitonic molecules, Bose-Einstein statistical props., optical study 3—52041
- H, spin polarised, Bose-Einstein condensation and superfluidity 3—28192
- He, superfluid bose system, path integral for coherent states of dynamical group SU(1,1) 3—20667

bosons
- *see also alpha particles; boson systems; deuterons; gravitons; intermediate bosons; meson resonances; mesons; photons*
- fermion-boson metamorphosis in a chiral invariant theory 3—11064
- galactic halos of massive fermions and bosons 3—54535
- Goryachev-Chaplygin top, quantum analogue 3—10641
- indistinguishability interference 3—5573
- Interacting Boson Model, effective quadrupole force between like bosons, SU(3) occurrence 3—16707
- radiation, relativistic bosons in periodic magnetic field 3—30705
- supergravity, massless second-order tetradic spin-3 and higher-helicity bosons 3—30754
- XPS, high energy spectra, many-body effects, RPA boson approx. 3—8934
- U, supersymmetric, U′(1) gauge group requirement of SU(3)×SU(2)×U(1), 3—54839

boundaries *see boundary layers; boundary value problems; grain boundaries; metal-insulator boundaries; semiconductor-insulator boundaries; semiconductor-metal boundaries*

boundary-elements methods
- discs, composed, anal. using boundary element method *(German)* 3—32598
- discs, thermal stress determ. using boundary element method *(German)* 3—42125
- elastodynamics, comparison of three boundary element method approaches 3—35846
- electrical problems, steady-state, analytical solns. in rectangular domain 3—41717
- fracture mechanisms, boundary element and Green's function methods 3—42181
- membrane and torsion crack problems, boundary element method 3—46486
- plane linear elasticity problem soln., boundary element technique 3—82
- plates, orthotropic elastic, bending anal., general boundary element method 3—12531
- Poisson's equation for axisymmetric vector pot. problems, hybrid finite element-boundary element formulation 3—26893
- two-dimensional eddy current and mag. field problems, interactive graphic soln. 3—36908
- viscoplastic axisymmetric deformation by the boundary element method 3—22341
- zoned media with stress discontinuities, implementation of boundary element method 3—35845

boundary layer flow *see boundary layers*

boundary layer turbulence
- *see also atmospheric boundary layer*
- air flow over flat plate, turbulent Prandtl no. in inner boundary layer 3—46536
- approximate analytic investigation of vel. profiles and press. gradients 3—56533
- axisymmetric Stokes flow due to a point force near a circular disk 3—46537
- blunt fin-induced shock wave/turbulent boundary-layer interaction 3—32759
- boundary layer on a circular sector studied using finite difference method 3—2024
- buoyancy force effects on heat transfer charact, 3—37467
- circular pipe, Hagen-Poiseuille flow, amplitude depend. neutral modes 3—27609
- compliant coatings, flow-induced instabilities 3—32642
- compressible boundary layer, laminar to turbulent flow transition, acoustic disturbance effect 3—51078
- compressible gas flow, turbulent separation, friction, heat transfer, boundary layer eqns. 3—37457
- compressible turbulent flow, three dimens. boundary layer, numerical simulation 3—22435
- conditional sampling and averaging techniques comparison 3—12649
- cooling gas blanket injection into developed turbulent boundary layer 3—37464
- Corcos model boundary-layer press., incorporating low wavenumber constraints 3—32721
- cryogenic fluids, laser Doppler anemometry appl. to boundary layer flows 3—37596
- curved duct, vel. meas. of developing laminar and turbulent flow 3—12781
- curved surfaces, turbulent shear flows, heat transfer modelling 3—51117
- cylinder in longitudinal streamline flow variable props. external turbulence, effect on friction coeffs. *(Russian)* 3—51076
- detachment on two dimens. surfaces 3—46532
- distorted rectangular tubes of large aspect ratio, flow at sharp corners, large Re flow 3—22532
- drag of bluff bodies immersed in turbulent boundary layers 3—12652
- drag on surface with unequal mass blowing and suction 3—42225
- energy spectrum in wavenumber space and mesoregion concept 3—32719
- fin-induced shock wave turbulent boundary layer interaction, upstream influence 3—46534
- flat smooth plate in open channel flow, laminar and turbulent boundary layers *(Chinese)* 3—51222
- flow, struct., thermal nonstationarity effect 3—7554
- flow past circular cylinders, surface roughness effects 3—12650
- fluctuating struct. of turbulent thermal boundary layer is laminarised flow 3—37463
- fluid dissipation energy, heat transfer promoter evaluation 3—37475
- free stream turbulence effect on heat and mass transfer in boundary layer 3—37477
- Gortler vortex nonlinear evolution in nonparallel boundary layers, stability 3—7593
- growing boundary layer, two-dimens. wavepacket development, linear stability theory 3—27535
- high strain rate free surface boundary layer flows, laser Doppler anemometry study 3—51073
- high-speed turbulent boundary layers, one dimens. spectra 3—51077
- incompressible fluid, laminar and turbulent boundary layer separation 3—27480
- incompressible liquid, average turbulent flow in tube and boundary layer 3—37466
- inviscid flow and boundary layers for compressor cascades, simultaneous soln. 3—12642
- liquid layer exposed to flow of gaseous oxidiser, thermal combustion regime analysis 3—53391
- Local isotropy and anisotropy, temp. and velocity meas. 3—27499
- logarithmic vel. profile in equilibr. region 3—37465
- macromolecular solution, diffusion in turbulent boundary layer in pipe 3—42228
- macromolecular solution, diffusion in turbulent boundary layer in pipe, parametric models 3—42229
- memory effects, review 3—27497
- mixing layer constrained by solid surface, single and two-point meas. 3—2032
- momentum integral method calc. 3—46535
- near wall mean backflow vel. profile model 3—46533
- near-wall treatment for turbulent boundary-layer computations 3—12643
- nonsteady detached flow around solid profile lattice 3—32724
- parallel channels, cylinder-type turbulence promoters, flow patterns, heat transfer 3—16944
- period between bursting in turbulent boundary layers 3—7566
- periodic free stream unsteadiness, effects on structure of separating turbulent boundary layer 3—51075

boundary layer turbulence continued
- periodically turbulent flow meas. 3—32817
- polymer solution, injection into turbulent boundary layer, drag of plate 3—32725
- porous plates, turbulent boundary layer with gas injection 3—37461
- porous surfaces, homogeneous blowing, turbulent boundary layers 3—37458
- positive pressure gradient boundary layer, numerical study *(Russian)* 3—22434
- pressure distrib. around two cylinders immersed in turbulent boundary layer 3—51081
- pulsatile pipe flow, turbulence transition, reversing flow charact. accompanied by relaminarisation 3—37566
- pulsed slot suction effect on turbulent boundary layer 3—56532
- rectangular cavities in laminar and turbulent flow, separated zone heat transfer 3—42240
- rectangular cylinder, exposed to grid turbulence, drag coeff. evaluation 3—51080
- return bend of rectangular cross-section, turbulent heat transfer from heated concave wall 3—42241
- saltating turbulent boundary layer flow, two-phase meas. 3—12646
- shear layer, rate of spread determ. 3—7564
- shear stress across boundary layer 3—37462
- shock wave turbulent boundary-layer interactions, sharp and blunt fin induced 3—12713
- skin friction and entrainment correls. 3—51082
- Space Shuttle boundary-layer transition, due to distributed roughness and surface cooling 3—12647
- spectral investigation of flow struct. 3—37456
- stagnation point of jet flowing over a baffle, heat transfer and microstructure 3—22455
- streamwise rot. obs. in near-wall region of turbulent boundary layer 3—56534
- structure at low Reynolds number 3—2034
- subsonic, press. spectral density meas. 3—12648
- subsonic boundary layer flow, linear problem of vibrator 3—22433
- subsonic turbulent boundary layer evolution characts. in gas veil region after porous section 3—51072
- supersonic, slightly nonparallel, development of small perturbations 3—56570
- supersonic boundary layers with wall mass transfer, interactive computation 3—7568
- supersonic flow past bodies of star-shaped form, aerodynamic characts. 3—37519
- surface-streamline flow visualisation technique 3—32819
- swirled tube flow, turbulent boundary layer, heat and mass transfer 3—22449
- tangential blowing of H_2 into a turbulent supersonic boundary layer 3—37459
- three-dimensional jet-obstacle interaction, turbulent boundary layer, heat transfer 3—37472
- three-dimensional separation flows initiated by skewed compression shocks 3—56573
- transitional boundary layer, incipient spot created by point disturbance 3—7565
- transonic shock wave-boundary layer interactions, turbulence meas. 3—56531
- turbine blade networks boundary layer separation, coefficient of profile losses determ. 3—42227
- turbulent friction at plane turbulent boundary layer at transonic velocities 3—42226
- turbulent viscosity of external flow effect on heat transfer in boundary layer 3—37460
- two-dimensional layer, sub-boundary layer devlopment, vel. distrib. 3—42224
- viscous sublayer in two-dimens. incompressible turbulent wall boundary layer 3—27496
- vortex shedding from rectangular prism and circular cylinder placed vertically in turbulent boundary layer 3—46575
- wake function for turbulent boundary layers 3—2036
- wall pressure fluctuations at large Reynolds numbers, field characts. 3—27500
- wind turbine wake analysis, three-dimensional numerical model 3—51121

boundary layer turbulent flow *see boundary layer turbulence*

boundary layers
- *see also atmospheric boundary layer; boundary layer turbulence*
- acoustic wave reflection from boundary layers in flowing medium 3—17656
- airfoil-cascade flows, thermal boundary layers devel., heat transfer 3—37476
- arbitrary Prandtl number effect on forced convection in laminar separation 3—2065
- axisymmetric body in hypersonic imperfect gas flow, boundary-layer injection effect on drag 3—37523
- binary gas mixture fluid dynamics and mass transfer in a centrifuge 3—32733
- binary mist flow, heat transfer expt. study, incidence angle on a plate effect 3—27592
- blast wave generated by intense explosion, boundary layer study 3—22484
- cavity separation from a body, viscosity and surface tension effects 3—22497
- characteristic boundaries role in Navier-Stokes eqns. asymptotic soln. 3—17917
- chemically reacting flow systems modelling 3—4288
- circular cylinder with 2-dimens. slit, boundary layer suction effect 3—17923
- circular duct, boundary layer effects on acoustic field, numerical anal. 3—17655
- circular tube flow, transitional boundary layers, flow development 3—37569
- clay slurry, pseudoplastic, periodic flow in pipes 3—27567
- collapse of a one-dimensional cavity 3—42276
- combustion gas flow behaviour in MHD generator boundary layer 3—51243
- compressible boundary layer, laminar to turbulent flow transition, acoustic disturbance effect 3—51078
- compressible boundary layer flow at 3-dimens. stagnation pt. with massive blowing 3—12693
- confined jets in two-dimensional laminar flow, boundary layer eqns. 3—17955

boundary layers continued
- continuous temporal eigenvalue spectrum for Ekman boundary layer 3—22436
- convection boundary layer in air along vertical plate expt. study using laser Doppler velocimeter 3—51086
- convection induced by insulated boundaries in tilted square cavity 3—56544
- convection-diffusion equation with small viscosity coefficient 3—7573
- convective heat transfer in rectangular pipes under Neumann boundary conditions 3—2046
- coupled intra- and extraluminal flows for single and multiple capillaries, anal. 3—9657
- creeping flow from an orifice in a spherical wall 3—51183
- critical angle of incidence for the flow around spheroids *(German)* 3—46540
- cryogenic fluid heat and mass transfer, laser Doppler anemometry appl. 3—40617
- Curles boundary layer, series soln. *(Chinese)* 3—17919
- curved duct, vel. meas. of developing laminar and turbulent flow 3—12781
- drag force fluctuation on cylinder 3—46522
- dusty fluid, flow due to unsteady rotation of infinite disk 3—12742
- early-type rotating stars, boundary layer anal. of mean steady meridional circulation 3—5276
- Earth mantle, temp. profile and thermal boundary layers 3—9872
- Eddington factor-flux limited diffusion, variable $\nabla.\mathbf{F}$ description 3—50901
- Falkner-Skan solution branching for $\lambda<0$ 3—16138
- finite element-shooting analysis of laminar boundary layers 3—22421
- flames, gasdynamic discontinuity theory 3—22551
- flat smooth plate in open channel flow, laminar and turbulent boundary layers *(Chinese)* 3—51222
- flow in pie-shaped cylinder, boundary layer 3—51129
- flow on uniformly heated moving continuous flat surface 3—32734
- flow past vertical oscillating plate, effects of free convection currents and mass transfer 3—56530
- flow regimes of viscous gas in 3-dimens. shock layer 3—37525
- flow stability over a spring mounted piston 3—32722
- fluid flow at a wall, two-dimensional random walk study 3—30784
- forced convection heat transfer over a semi-infinite plate 3—12668
- forced convection on heated bottom surface of cavity 3—51114
- free convection flow for porous vertical plate in Stokes problem 3—22533
- free convection in porous medium adjacent to heated surface, asymptotic expansions 3—51096
- free convective flow in vertical gaps 3—27517
- free convective flow over heated sphere, collision phenomena 3—22464
- free jet boundary heat transfer, curvature effects 3—12726
- free-convective boundary layers, unsteady collisions 3—46570
- freestream vel. specification in boundary layer flow calc. around bodies of revolution at incidence *(German)* 3—46539
- fully developed incompressible flow between non-coaxial circular cylinders 3—37446
- gas flow along wall, Navier-Stokes eqn. modification 3—27478
- gas suspension flowing past sphere, particle deposition, viscous boundary layer influence 3—2109
- gas-liquid interface, conc. boundary layer charact. 3—27619
- gas-liquid slug flow, boundary layer relax. model 3—12751
- grey fluids in vertical cavities, combined radiation-convection 3—37493
- half-infinite channel with moving and porous walls, viscous flow 3—42305
- heat-releasing cylinder boundary layer, longitudinal streamline airflow, vel. and temp. profiles *(Russian)* 3—12651
- helical wave in type I comet tails, Kelvin-Helmholtz instability 3—20303
- heterogeneous media, boundary layers of finite thickness 3—32792
- high strain rate free surface boundary layer flows, laser Doppler anemometry study 3—51073
- horizontally rotating cylinder, partially-filled, azimuthal vel. meas. 3—12685
- hydraulic models of flow in the channel of an MHD generator based on the equations of a two-dimensional boundary layer 3—2133
- hydromagnetic viscous boundary layer at free surface of rot. baroclinic fluid 3—37579
- incompressible fluid, laminar and turbulent boundary layer separation 3—27480
- incompressible Newtonian fluid, stagnation flow with temperature dependent viscosity 3—46528
- incompressible viscous fluid in plane layer, laminar motion, thermal inhomogeneity influence 3—2025
- infinite plate with variable suction, MHD fluctuating flow of non-Newtonian fluid, slip flow 3—12721
- inhomogeneous liquid flow instability and surface layer separation theory *(Russian)* 3—27485
- injectant effect on ionisation level in boundary layer of blunt body and its wake 3—46572
- jet supply of reagent into mixer, mixing process optimisation *(Ukrainian)* 3—12729
- laminar, three-dimens., at curvilinear permeable surface, universal eqns. 3—37445
- laminar boundary layer eqns., asymptotic solns. 3—12626
- laminar boundary layer on a circular sector studied using finite difference method 3—2024
- laminar boundary layers, steady, multifold series general soln., multifold series expansion 3—51053
- laminar boundary layers, steady, multifold series general soln., Euler transform appl. theory 3—51054
- laminar buoyancy force effects on heat transfer charact, 3—37467
- laminar flow, when free stream vel. varies as power function, approx. variational soln. 3—42222
- laminar flow in parallel plate channel entrance region 3—17918
- laminar three-dimensional asymptotic boundary layer with suction 3—56524
- laminar transverse flow in a corner, local pressure gradient effect 3—27481
- laminar viscous fluid flow, decay inside retarded rotating cylindrical vessel 3—37444
- latent heat transport in nucleate forced boiling 3—51103
- laterally converging duct flow, mean flow 3—46650
- laterally converging duct flow, temporal wall shear stress 3—46651
- linearized dynamics for step jumps of velocity and displacement of shearing flows of a simple fluid 3—7619
- liquid film flow, isothermal multilayer, on inclined planes, model calcs. for flow curves *(German)* 3—27482
- liquid films, coating flows with interfacial air drag, nonlinear theory 3—2020

boundary layers continued
magnetohydrodynamic flow between eccentrically rotating discs 3—42317
MHD flow past porous plate with suction velocity step function change, free convection effects 3—2129
MHD generator, channel flow, boundary layers, hydraulic models 3—37707
MHD generator, combustion gas flow behaviour in boundary layer 3—7562
MHD generators, boundary layer investig. using Langmuir probe 3—51388
micropolar boundary layer flow at a stagnation point on a moving wall 3—22420
mixed convection boundary layer flow, 3-dimens., numerical solns. 3—7582
mixed convection over vertical zircaloy plate with oxidation 3—27514
mixed correction boundary layer eqns., comparison between expt. and numerical soln. 3—2063
moving boundary problems in porous media 3—17970
natural convection driven by osmosis 3—46569
natural convection fluid flow from heated plate-attached cylinder interaction 3—37500
natural convection heat transfer in low aspect ratio enclosures 3—56536
Navier-Stokes equation for oscillating stagnation point flow, boundary layer receptivity 3—7602
near wakes, evaluation by Falkner-Skan-type eqns. soln. 3—46571
nitrobenzene boundary layers, liq. cryst. states induced bysurface forces 3—22770
non-Newtonian fluid nonsteady flow through a porous medium 3—37553
noncavitating inducers, fluid dynamics, review 3—51079
nonviscous and boundary layer eqns., combined soln., simplified Navier-Stokes eqns. *(Chinese)* 3—51052
nozzles, subsonic shape with flat acoustic surface, viscosity allowance in boundary-layer approx. 3—37538
oceanographic high energy expt., using laser backscatter Doppler velocimeter 3—4988
oscillatory flow past infinite moving vertical isothermal plate, free convection and mass transfer effects 3—2037
oscillatory flow under gravity waves 3—51150
parabolic flows, three-dimensional, streamwise computation 3—37516
parallel boundary layer flows, spatial stability 3—12631
parallel flows, three-dimensional disturbances for plane Poiseuille flow in channel 3—22426
parallelogram prism protruding from rotating disk, press. fluctuations, flow 3—17920
perfect gas mixture, high temp. blown shock layer simulation 3—56571
perturbations, locally nonviscous, in boundary layer with self-induced press. 3—22423
pipe networks, nonlinear flow analysis 3—56616
plane symmetric resistive tearing mode, long wavelength limit 3—27698
plastic boundary layers in steady rectilinear flow of rigid linear hardening materials 3—1962
plate, flat, free convection boundary layer due to small surface temp. fluctuations, asymptotic anal. 3—22462
polymer solutions, flow over 2-dimens. profile, boundary layers, wakes 3—7543
potential flow around bodies, multigrid methods for integral eqns. 3—27528
power-law fluid flow over two dimens. or axisymmetrical bodies, heat transfer 3—51098
Prandtl eqns. soln. for incompressible boundary layer at zero surface friction 3—7561
profiles, fluid flow around arbitrary systems 3—16137
Rayleigh-Stokes second problem for a corner 3—46531
receptivity, flow instability coupling with incident sound 3—7546
rectangular cavities in laminar and turbulent flow, separated zone heat transfer 3—42240
Reynolds equation for hydrodynamic lubrication 3—2127
rigid/hardening solids, steady Couette-type flow 3—22511
rotating cone in axial flow, boundary layer transition 3—51134
rotating cone in still fluid, boundary layer transition 3—51135
rotating disk sector, laminar incompressible boundary layer flow over surface 3—7545
secondary flow development, vorticity in curved ducts, cascades and rotors 3—51138
shear flow, low Reynolds number, along elliptic hole in wall 3—56523
slender body, motion near interface between two immiscible liquids at very low Reynolds numbers 3—51131
sphere in viscous incompressible fluid 3—46578
split plate, slow flow of rot. fluid 3—37508
stability, spectral theory, diffusion eqn. 3—32713
stagnation point flows, 3D laminar, with mass transfer, compressible 2nd order boundary layers 3—2026
stationary diffusion convection eqn. with degenerate parabolic boundary layer *(German)* 3—22467
steadily moving infinite vertical porous plate, constant heat flux, MHD flow 3—27613
Stokes wave, free boundary problem in two dimens. 3—17951
streamlining of unknown bodies above a curvilinear smooth floor or in a jet 3—2035
streamwise corner flow with wall suction 3—46521
streamwise vortices formation in flow past a corner 3—42243
suddenly cooled vertical flat surface in saturated porous medium, heat transfer 3—22461
supersonic boundary layer on a moving surface shock wave interaction, recirculation zones *(Russian)* 3—32765
supersonic boundary layers with wall mass transfer, interactive computation 3—7568
supersonic flow, three-dimensional boundary conditions, nonuniqueness in body tangency condition 3—22487
supersonic gas flow on blunt bodies, laminar boundary layers study 3—37447
swirl growth in curved circular pipes 3—51136
thermal, on cylindrical gas column with distributed heat sources 3—56542
thin vertical fluid layer, heated from below, oscillatory Hele-Shaw convection 3—51108
three dimens. fluid flows, spatial and temporal stability anal. 3—46523
three-dimensional flows driven by resultant force distrib. along boundary layer thickness, separation patterns 3—56552
Tollmien-Schlichting waves, evolution near leading edge 3—51074
transient heat transfer between laminar boundary layer and plate containing internal heat source 3—2049

boundary layers continued
transitional, at a plate, intermittence and struct., laser anemometer meas. 3—42336
turbine blade edges, boundary conditions of fluid flow 3—2128
turbulent spot spreading in absence of press. gradient, Reynolds no. and laminar boundary layer depend. 3—12637
two dimens. flow in boundary layer developing in rotating system 3—37506
two-dimensional laminar flow near stagnation point, stability to massive blowing 3—27483
unsteady flow around oscill. sphere in viscous fluid 3—32720
unsteady forced convection from hot film in reversing and nonreversing shear flow 3—51102
unsteady free-convection boundary layer, singularity 3—27487
unsteady incompressible boundary layers near asymmetric stagnation point 3—51055
unsteady laminar boundary layer heat transfer, instant nonsimilarity solns. 3—7549
unsteady MHD flow past porous plate with suction step function change at slip flow regime 3—2130
velocity past cylinder for creeping motion, approx. calc. *(German)* 3—42219
viscoelastic liquid, laminar free convection stagnation heat transfer from isothermal cylinder 3—17945
viscoelastic liquid flow past infinite porous plate, response to main flow fluctuation 3—7544
viscoplastic liq. planar enclosed jet behaviour 3—27586
viscous gas flows, enhanced accuracy difference method for computing *(Russian)* 3—46605
viscous gas laminar nonisothermic flows in thin pipes, generalised similarity 3—12627
viscous incompressible fluid, rotating, boundary layer on fixed sphere 3—12679
viscous incompressible fluid near leading edge of slender airfoil, short separation regions, asymptotic theory 3—2018
viscous incompressible liq. flow on vertical plane with boundary condition changes 3—32723
viscous wall jet, stability 3—46613
wake effect on flow around cylindrical stay in diffuser 3—17947
wall jet flow of cond. gas over permeable surface in transverse mag. field 3—12734
wall temperature calc., post dryout heat transfer 3—12669
water, free convection over vertical porous plate 3—37501
water, laminar boundary layer, natural convection flow adjacent to flat surface, multiple steady-state solns. 3—2027
water, transient natural laminar convection flow adjacent to flat surface 3—37497
water-bubble boundary layer as a hydrodynamic sound source 3—12413
$F+H_2$, supersonic chemically reacting jets, laminar mixing 3—37582
^{4}He, supercritical, natural convection heat transfer, constant wall heat flux conditions 3—32729

boundary-value problems
see also initial value problems
acoustic plane wave diffr. by bodies which mixed boundary conditions, Green's function method 3—27289
acoustic wave diffr. by plate near a plane 3—22273
acoustic waveguide, layered, normal mode amplitude calc. 3—12387
anisotropic elastic medium; nonsteady problems of dynamics, numerical soln. 3—46452
arc, circular, varying cross section, natural freqs., transfer matrix method 3—22361
atom, single-photon ionisation as Hilbert boundary value problem 3—32018
axisymmetric Stokes flow due to a point force near a circular disk 3—46537
bivariational methods appl. to Schrodinger and Dirac eqn. 3—106
burner-stabilized premixed laminar flames, boundary value solutions 3—19523
caissons of thin-walled construction, bending, numerical calc. *(Russian)* 3—1968
characteristic boundaries role in Navier-Stokes eqns. asymptotic soln. 3—17917
circular conducting discs, dissimilar pair, mixed boundary value problem 3—50572
circular duct, boundary layer effects on acoustic field, numerical anal. 3—17655
combustion, stationary, in gas-free system, effects of boundary kinetics 3—53397
composite media 3—17798
compressible elastica on elastic foundation 3—7454
conducting right angle wedge in the field of a double line *(German)* 3—17404
continuum mechanics boundary-value problems, bifurcation and limit load problem soln. *(German)* 3—42115
convection in porous medium *(French)* 3—32794
cylinders, deformable, with nonplanar endfaces, three-dimens. boundary-value problems 3—50946
cylinders, thick-walled, transversely corrugated, 3-dimens. boundary value problems of elasticity theory 3—1957
dam, porous isotropic homogeneous 3D, fluid filtering, finite element soln. of free boundary 3—56607
deformable bodies, homogeneous, isotropic, almost-cylindrical, heat-cond. and thermoelasticity boundary-value problems 3—22326
dielectrics, nonhomogeneous, potential energy, iterative calc. 3—52752
diffraction, external problems, method of nonorthogonal series and Rayleigh hypothesis 3—36920
elastic media, general solution of mixed boundary value crack problem 3—27435
elastic medium, three-dimens. boundary value problem soln. using an improved dislocation approach 3—22323
elastic solids mixture, unbounded domain, boundary-value problems, uniqueness and reciprocity theories 3—46443
elastic wave scattering theory, unimoment method appl. 3—25766
elasticity, mixed problem for half-space on an elastic foundation 3—7428
elasticity theory, convergence of difference schemes for second boundary-value problem *(Ukrainian)* 3—20633
elasticity theory, stochastic linear boundary-value problems, variational formulation 3—49162
elastodynamics, formation of implicit constraints and free-boundary problems 3—77

boundary-value problems continued
elastodynamics, linear, primal mixed boundary problem, variational principle 3—40365
elastostatic problems, 2D stress intensity factor computation by boundary element method 3—5608
elastostatics, contact problems with friction, numerical anal. 3—22395
elastostatics, linear, classical, three-dimens. boundary value problems, indirect fictitious-boundary integral method 3—50937
electrofluidised beds, stabilisation against bubbling and boundary value problems, elec. field effects 3—37581
electromagnetic fields, parabolic equation weak solution uniqueness 3—41716
fibre reinforced composites, thermal expansion, anisotropy depend. on struct. *(Ukrainian)* 3—13492
fibre reinforced elastic plate with fibres lying in concentric circles, stress 3—42129
filtration of fluid in curvilinear layers of variable thickness 3—22522
filtration problem, up-wind finite element method 3—22524
flame front, laminar, stability during propag. from closed end of tube 3—53404
flow in porous media, nonlinear theory, finite element method 3—37552
fluid-solid reactions, pseudo-steady-state approx. validity 3—57120
foundation model, generalised Vlasov-Jones, grade 4 foundation 3—46440
fourth order diffusion; boundary value problem soln. 3—45092
heat eqn. with mixed nonlinear boundary conditions, soln. to crystn. problem 3—17776
heated channel thermohydraulic equations transient problems solution 3—51228
Helmholtz eqn., finite-difference solns. to boundary-value problems 3—53912
Helmholtz-type eqns. in unbounded domains, finite-element method 3—20644
heterogeneous media, elasticity theory, hybrid integral transforms 3—20635
HF heating in Alfven freq. range in Tokamak plasma 3—22667
hollow finite cylinder in presence of spherical conductor, electrostatic problem 3—26901
hydrodynamics, optimization problems with free boundaries *(Russian)* 3—20636
hyperelastic materials, shear deformation, boundary-value problem soln. 3—27387
integral equations, crack problems in anisotropic elasticity 3—51003
interstellar dust clouds, radiative transport code DUSTCD 3—54491
inverse source and inverse scatt. theory, rigorous solns., review 3—25770
ionisation tracks, Brownian motion of reacting charged particles 3—30778
laminates, corrugated, temp. field and thermal stress anal. 3—50950
layered media, radiative transfer statistical theory 3—95
liquid layer exposed to flow of gaseous oxidiser, thermal combustion regime analysis 3—53391
load transfer from a rod to an elastic anisotropic half-space 3—7511
magnetic fields diffusion into conductors with external EM transients, initial boundary value problem 3—12031
Maxwell transport eqn., soln. from bimodal two-stream relaxing distrib. 3—32835
metals, porous, plane plastic flow *(German)* 3—33342
mixed inverse electrodynamic diffraction problem for a doubly-connected scatterer 3—12050
moving layered inhomogeneous medium, sound propag. theory 3—12397
Navier-Stokes eqns., higher order accurate fully discrete Galerkin approx. 3—22413
Navier-Stokes linearised equations, first boundary-value problem *(Ukrainian)* 3—5610
nonlinear diffusion equation, boundary-initial value problem 3—45098
nonlinear eigenvalue problems, numerical method, appl. to laser-plasma interactions 3—56690
nonlinear viscoelasticity theory, elastic and viscous deforms. 3—46458
nonlinearly elastic strings, equilibria 3—40354
nonradiative energy transfer, diffusion eqn. with sink term, radiation boundary condition soln. 3—52834
null-field method for acoustic scatt. and radiation problems 3—1825
oblique derivative boundary value problems for nonlinear elliptic systems of second order 3—49149
open uniform channel flow over a shelf under gravity, numerical soln., Hilbert's method 3—56618
optical graded index multimode fibre splices, mode splitting 3—37190
orthotropic elastic plane region, stress in neighbourhood of corner point 3—46444
phase retrieval problem, importance of boundary conditions 3—17461
planar elastoplastic problems, soln. technique for indirect boundary integral eqn. 3—37375
planar EM wave diffr. from radially conducting conical surface 3—12049
planar MHD structures, topological theory 3—22534
plane EM wave diffr. by semi-infinite grid of parallel conductors 3—21975
plane-and axisymmetric eddy current distributions calc. using finite element method 3—21971
plasma confinement, equilibrium, boundary values of soln. of problem 3—46769
plasticity, class of boundary problems, successive approx. method *(Russian)* 3—37381
plate, geometrically nonlinear thin, coupled thermoelastic vibration 3—50971
plate, rectangular, in nonuniform compression, stability 3—42118
plates, elastic, finite deflections, integral eqn. approach 3—1965
quantum field theory, covering space method 3—45306
rapidly oscillating random coeffs., boundary value problems 3—16283
rod, compressed elastic, critical load increase problem 3—32612
rods and shells design, computer-aided anal. *(Russian)* 3—17789
rotational flow of incompressible fluid in round pipe, Navier-Stokes eqns. self-similar solns. 3—7655
Runge's theorem, impedance boundaries in acoustic wave propagation 3—16157
shell of revolution, thin, nonsteady state temp. fields in nonaxisymmetric heating 3—17774
shells, sandwich, variable stiffness, with compressible core 3—22318
shells, spherical, coated, resons. in the sonar cross sections 3—22275
shells of revolution, closed, analysis incl. physical nonlinearity under cyclic symm. loading 3—50932
shells of revolution flexible nonhomogeneous, axisymm. deform. 3—42135
shock wave reflection from concave wall, linear approx. 3—46597

boundary-value problems continued
short EM wave diffr. from semi-infinite shield with variable admittance 3—17416
Signorini problem, idea of duality, linear elasticity theory 3—44967
solidification, math. modelling 3—2747
space like hypersurfaces with prescribed boundary values and mean curvature 3—16189
sphere, sound scatt., mixed boundary conditions 3—12390
streamlining of unknown bodies above a curvilinear smooth floor or in a jet 3—2035
stress-assisted diffusion theory 3—38114
subsonic flow, boundary value problems for hydrodynamic stationary eqns. 3—27544
superconductor, surface effects, boundary problems and topological singularities 3—38532
thermal conductivity, boundary-value problems, Laplace transforms and memory eqns. 3—27355
thermal ignition in a reactive slab with unsymmetric boundary temperatures 3—40536
thermal reaction of fluid and unevenly heated solid 3—27502
thermoelasticity, incremental, uniqueness and continuous depend. results 3—7425
thermomechanics, classical and generalised, thermal stress eqns., boundary-initial value problem soln. 3—79
time-varying media, transport processes, Green's function calcs. 3—40531
transparent isotopic medium boundary with nonlinear medium, light reflection and transmission 3—17560
turbine blade edges, boundary conditions of fluid flow 3—2128
two dimensional problems soln. method 3—40360
two-dimensional Vlasov equilib. as nonlinear boundary value problem, numerical method 3—37679
viscoelastic semi-infinite block, stressed state near vertical circular well 3—42151
viscous flow at a viscoelastic boundary, boundary conditions *(Russian)* 3—22410
water pollutant distribution model allowing for aquifer structural variability *(Hungarian)* 3—39543
Yang-Mills eqns., multimeron solns. 3—30979
α— Fe, (001) plane two-dimens. crack simulation, using new boundary scheme 3—14716

bowing *see bending*

brain
see also neurophysiology
auditory, cat, brainstem response using forward-masking paradigm 3—39654
auditory brainstem response, correl. with speech discrimination scores in patients 3—29566
auditory brainstem response, lower audiometric limit 3—29569
auditory brainstem response in 5 vertebrate classes 3—48296
auditory brainstem response in neonates during first 48 hours after birth 3—53699
auditory brainstem response to rarefaction and condensation clicks in normal and abnormal ears 3—29564
auditory brainstem responses in chronic alcoholic patients 3—34858
auditory brainstem responses in the aged 3—29563
auditory evoked brainstem responses to monaural stimulation, bilateral recordings 3—29562
auditory evoked magnetic fields, response amplitude vs. stimulus intensity 3—15105
auditory evoked potentials, engng., considerations 3—15274
auditory evoked potentials, fundamental investigation of composition 3—39650
auditory evoked potentials, simultaneous recording and separation of early and middle latency pots. 3—15245
auditory evoked responses elicitation technique using bone-conducted stimuli for animal research 3—58884
auditory middle latency responses in patients with cortical lesions 3—15103
blood flow, and rapidly exchangeable water vol., positron emission tomography *(French)* 3—48393
blood flow, regional, noninvasive method for determ. *(French)* 3—15207
blood flow, regional, positron emission tomography *(French)* 3—48392
blood flow meas., conf., Toulouse, France (Sept. 1981) 3—10504
blood flow meas. in man, problems, review *(French)* 3—15204
blood flow measurement, restoration of contrast by spatial deconvolution *(French)* 3—15206
blood vessels, 3D reconstruction from angiograms and traditional tomograms 3—29732
blood-brain barrier in dogs, effect of 1.0 GHz microwave irrad. 3—24801
blood-brain barrier in rats, permeability after local proton irrad. 3—48324
blood-brain barrier permeability changes, evaluation using ^{82}Rb and positron emission tomography in man and monkey 3—48383
brainstem acoustic evoked response, distrib. of surface pot. on cat's head 3—15115
brainstem audiometry, hearing aid selection appl. 3—29788
brainstem auditory evoked pots., improved wave V resolution by dual-channel recording 3—58848
brainstem auditory evoked pots., normative values obtained by digital filtering and automatic peak detect. 3—15106
brainstem auditory responses, earphones for arrefact-free recording 3—53739
brainstem of alert cats, ocular accommodation neurons 3—24710
brainstem potentials, use in abnormal hearing adaptation diagnosis 3—29679
brainstem-evoked potentials evoked by peripheral auditory pathway, inverse solns. 3—29553
capillaries in neonatal rats, Piotron pion irrad., RBE to X-rays 3—29668
cerebellar stimulator, externally programmable, implantable, integrated 3—15291
cerebral angiography, depth information detectability using magnification stereoscopic technique 3—48394
cerebral blood flow, regional, meas. using continuous inhalation of $C^{15}O_2$ using positron emission tomography *(French)* 3—15205
cerebral cortex, human, microscopic image semi-automatic analysis using grey level index 3—44363
cerebrospinal fluid bulk flow, clearance of albumin from mouse subarachnoid space 3—4735
checkerboard pattern reversal visual evoked pots. in Parkinsonism 3—15086

brain continued
chronic local exposure, tumours and pretumoural states induction, rabbit β-irrad. expts. *(Russian)* 3—58739
ciliated cells of the CNS in man, effects of ionising irrad., SEM study, radiotherapy appl. 3—15169
click-evoked brainstem response, monaural, rel. to contralateral white noise 3—53697
cortical evoked potentials following stimulation of the urinary bladder in man 3—35011
cortical magnetic fields evoked by freq. glides of continuous tone 3—48301
cranial system, human, free-vibr. anal. 3—9651
CT, human infant, density resolution artifacts, use of phantom 3—53806
digital radiography, Xe perfusion, canine obs. 3—53798
dopaminergic cells in octopus optic lobe, inhibitory retinal efferents 3—58663
dorsal lateral geniculate nucleus, kitten, struct. of physiologically classified neurons 3—19696
electric sources in stratified spherical and prolate spheroidal volume conductors, surface potentials 3—58637
electrical activity, microelectronic electrode probe for investigations 3—35050
ELF fields, effects in Ca^{2+} efflux from brain tissue in vitro 3—34881
epileptic patients, biomag. obs. of spontaneous brain activity 3—48300
forebrain, damage after heavy ion irrad., comparison with γ-irrad., rabbit expts. 3—9672
frequency, time and memory, Gabor's pioneering work 3—5581
function study using single event related pots., feature extraction algorithm 3—15308
grating visual evoked cortical pots. in laser bioeffects evaluation, instrumentation 3—35032
hearing, startle reflex habituation and sensitisation 3—29561
hemi-field pattern reversal visual evoked pots., normal subjects 3—15088
hemi-field pattern reversal visual evoked pots., visual pathway lesions 3—15089
hippocampal pyramidal cells exhibiting synchronised bursting 3—24706
human brain size, coevolution and paleolithic culture in Northern hemisphere rel. to geomagnetic intensity 3—4517
human infant brain activity asymmetry after visual stimulation 3—39620
implanted electrodes, finite element anal. of current pathways 3—35027
interocular transfer in cats with early callosal transection 3—39627
intraoperative monitoring, sensory evoked pots., review 3—15279
iso-effect tables for tolerance of irradiated normal human tissues 3—58751
isotopic analysis of diffusion and convection in brain tissue 3—29490
lateral geniculate nucleus, monkey, cone-system contribs. to responses of colour-opponent neurons 3—15081
lateral geniculate nucleus of the mink, on and off layers 3—24712
mammalian brain, impulse cond., physiological props. of individual axons 3—29536
mesencephalic reticular formation, elec. stimulation, ocular accommodation in cats 3—9578
microelectrode, 12-fold, for recording from vertically aligned cortical neurons 3—29799
microwave irradiation, effects of high-intensity pulse exposure in rats as a result of heating 3—24802
microwave-induced auditory brainstem responses, comparison of meas. and predicted characts. 3—24800
morphological change under chronic local irrad., β-applicator *(Russian)* 3—34903
multichannel maps evoked by lateral visual half-field stimuli 3—48287
multiplanar NMR imaging of the human head 3—48374
neuroanatomical structure size, shape and position, quantitation in positron emission CT 3—48380
neuromagnetic localisation of epileptiform spike activity in the human brain 3—29585
NMR imaging for cerebral and vascular abnormalities visualisation, effects of imaging parameters on contrast 3—9699
NMR zeugmatographic images, three-dimens. display 3—15183
occipital visually evoked pots., age differences in augmenting/reducing 3—15087
ocular-dominance columns rel. to spatial limits for hyperacuity processing 3—9598
ontogenesis of iso-orientation domains in visual cortex 3—15084
opponent colour responses of visually evoked potentials in monkey brains 3—39626
optically coupled stimulus isolation headstage for brain study 3—4736
photoradiation therapy with haematoporphyrin derivatives, wavelength and dosimetry considerations, cat brain tissue 3—53750
positron emission tomography, cranial, attenuation correction, contour-finding algorithm 3—53775
positron emission tomography, radiation absorbed dose estimates for the ^{38}K, ^{81}Rb, ^{82}Rb and ^{130}Cs 3—48389
positron-emission CT unit, for head imaging, performance and calibration 3—53824
potentials signal detection by linear filtering 3—58623
primate visual system, mapping with [2-^{14}C]deoxyglucose, rhesus monkey obs. 3—24714
proton NMR head imaging, techniques and approaches 3—58762
PTFE perforated tubing, shunt for draining cerebrospinal fluid 3—9211
pulvinar units, human, spontaneous activity and sensory-motor influences 3—34821
readiness-potentials preceding unrestricted 'spontaneous' vs. pre-planned voluntary acts 3—15063
receptive fields of cells in visual cortex, theory of spatial position and spatial frequency relations 3—48284
regional cerebral blood flow, calc. from emission CT of inert gas concs. 3—48379
regulation of cardiac output and cerebral blood flow 3—34870
retino-geniculate connectivity in kittens, abnormal development in absence of action pots. 3—4501
retinogeniculate terminations in cats: morphological differences between X and Y cell axons 3—24713
retinogeniculate terminations of X- and Y-cells in cats, rel. to monocular deprivation 3—19697
retinotectal map in Xenopus, order, technique for labelling growing nerve fibres 3—34841
RF dielectric properties of animal tissues, in vivo and in vitro obs. 3—39686
single-photon emission tomography and cerebral blood flow *(French)* 3—15208
somatosensory and visual evoked pots. rel. to human aging 3—58690
somatosensory evoked pot., expt. utility 3—15122
somatosensory evoked pots., event-related, spatial and spectral resolution, mag. gradiometry appl. 3—15256
somatosensory evoked pots.; variability anal. in unilateral hemispheric disease 3—15118
somatosensory tibial nerve evoked potentials with parasagittal tumours, CT, scan 3—34866
SPRINT, stationary detector single photon ring tomograph for brain imaging 3—9712
stereotactic system, improved, for CT aided neurosurgery 3—29741
stereotactical neurosurgery, CT-images as the basis of operation planning 3—24881
striate cortex, cat, direction selectivities of simple cells *(Japanese)* 3—19693
striate cortical neurons, cat, relation between response amplitude and contrast 3—44244
synchronous neural afterdischarges in rat hippocampal slices 3—29535
textured surfaces touching, somatosensory cortex cells responses 3—29580
time discrimination, early resolution of contingent negative variation 3—34822
trace element studies using instrumental neutron activation anal. 3—9733
tumour 9L cells, rat, interaction of hyperthermia and radiation rel. to survival 3—19780
tumours, human, sensitivity to irrad. and combined effect of metronidazol and irrad. *(Russian)* 3—34891
vision, functional size invariance rel. to cortical magnification factor 3—9602
visual axion pathway development in brain of frog 3—34842
visual cortex, cat, neural interactions in cellular responses to paired slits *(Japanese)* 3—19694
visual cortex, postnatal development, rel. to environment, review 3—4500
visual cortex, primary, exploration 1955-78, historical review 3—4499
visual event-related potential manifestations of information processing stages, manipulation 3—29540
visual evoked potential, origin of wavelets 3—58649
visual evoked potential acuity in children 4 months to 8 years old rel. to eye patching 3—9577
visual evoked potentials, effects of grating contrast and length 3—9585
visual evoked potentials, flash and pattern, in hysterical amblyopia and provoked visual impairment 3—58648
visual evoked potentials and PET mapping of regional cerebral blood flow and cerebral metabolism 3—15085
visual evoked potentials to double-pulse pattern presentation 3—39629
visual evoked response to AC elec. stimulation 3—34840
visual relay nucleus, partially denervated, functional reconnections without new axonal growth 3—4498
visually evoked potentials in men, chromatic responses *(Japanese)* 3—19695
visually evoked responses to checkerboard patterns: check and field size interactions 3—19690
Ca^{2+} binding and release due to low-level EM fields, review 3—24799
$^{45}Ca^{2+}$, binding to brain tissue, attempts to alter using PM microwave irrad. 3—39693

brain models
see also learning systems; neural nets
cerebellum, adaptive filter model 3—34818
cerebellum, neuronal networks, simulation of learning process 3—29524
dynamic model, neuronal oscillators in cerebral cortex, chaotic behaviour 3—9537
first passage time problems and some related computational methods [neurobiology application] 3—15054
memory, neuron function for biological information processing *(German)* 3—58639
movement control mechanisms *(Japanese)* 3—44237
potential spatio-temporal organisations, Gaussian distribution model *(Russian)* 3—53659
retino-tectal connections formation, extended branch-arrow model 3—34835
vestibulo-ocular reflex, adaptive modification, simulation appl. to adaptive filter model of cerebellum 3—34836

brass
bonding to rubber, electron microanalysis 3—53356
α-brass, corrosion rate in aerated or oxygenated H_2SO_4 3—19445
α-brass, dealloying in aq. electrolytes, As addition effects 3—9229
α-brass, dynamic recryst. during high temp. tensile tests 3—29105
β-brass, thermal diffuse scatt. anal., determ. of solute-lattice coupling parameters 3—28100
cold rolled, nucleation and recrystn. texture 3—47850
corrosion in 1% H_2SO_4, effect of pyridine and its derivatives 3—39278
corrosion inhibition in dil. nitric acid, haloacetic acid effect 3—58274
defect study using positron annihilation in β-phase 3—43859
deformation, high temp. flow stress oscills., recrystallisation and dislocation mechanisms *(Polish)* 3—47878
dezincification and inhibitive efficiency of some azoles rel. to corrosion in H_2SO_4 3—14771
dezincification in conc. NH_3 3—9218
electrodeposited and cast, containing 1-4% Sn, Mossbauer study of composition and corrosion behaviour 3—4205
feedwater material corrosion in PWR steam plants, release rates 3—50008
forming limit diagram, new model, appl. to expts. 3—47898
friction and wear of cartridge and free-cutting types 3—58258
grain growth, irregular, nucleus-free mechanism 3—29102
laser-induced periodic surface struct. 3—42897
LF internal friction, due to dislocations oscillating in lattice of α-beam 3—37920
low Zn, rolled, origin of recrystn. texture 3—43865
ordered β-brass in Cu-Sn system, disorder *(German)* 3—29064
oxidation and dezincification, ESCA study 3—14897
oxide layer, spectral emissivity *(Japanese)* 3—42822
plastic stress-strain relationships, tested in biaxial tension 3—47913
polycrystalline, induced plastic anisotropy mechanism 3—37370
quenched β-brass, defect characts., TEM study 3—56901
SCC of 72/28 type in $NaClO_3$ soln. 3—34529
space group and struct., electron diffr. and microscopy study 3—13161
stress/strain relations under inelastic deformation 3—9132
subcritical crack growth due to SCC or H_2 embrittlement, AE obs. 3—14767

brass continued
  α/β superplastic, second-phase volume fraction effect on grain size stability and flow stress 3—9124
  surface, atomically clean, produced by diamond scratching in Auger microprobe *(Japanese)* 3—33545
  tubular specimens, plastic deform. along orthogonal bilinear strain trajectories, pre-strain effect 3—29125
  β-Al brass, cyclically transformed, dislocation study, thermoelastic martensitic transform. 3—43833
Bravais lattice *see crystal atomic structure*
braze bonding *see brazing*
brazing
  see also soldering
  steel, stainless, mech. props., joining and applications 3—53072
  Al alloy-ceramic feedthrough 3—36028
  Au-Ni/stainless steel, brazing, joint strength, wetting and spreading 3—29107
  Cu-W divertor plates for INTOR fusion reactor, expt. tests 3—55624
breakage *see fracture*
breakdown (electric) *see electric breakdown*
breakdown (mechanical) *see manufacturing processes*
breakdown diodes *see avalanche diodes; Zener diodes*
breeder reactors *see fission reactors*
bremsstrahlung
  see also electron radiation; gamma-ray spectra; gamma-rays; X-ray emission spectra; X-rays
  acoustic emission from dislocations emerging to the surface of a crystal 3—13224
  amplification by stimulated emission, multicollision model 3—27668
  atomic field bremsstrahlung, Z depend. 3—26699
  atomic number determination, using bremsstrahlung backscatt, sensitivity 3—34594
  coherent bremsstrahlung in crystal to produce high energy photon 3—36591
  crystals, e^+e^- photoproduction, direct and inverse electron bremsstrahlung 3—38972
  diamond relativistic electron radiation spectra, absolute cross section 3—3854
  electron heating in laser-irradiated plasmas, collisionless and collisional bremsstrahlung 3—18091
  EM interactions of muons, pair production and bremsstrahlung 3—44632
  exotic atoms, radiative Coulomb sum rules from a continuum-spectrum initial state 3—36884
  finite-size effects on relativistic electrons in nucl. Coulomb field 3—11217
  flash X-ray source, time depend. Monte Carlo deposition rate 3—36137
  fusion reactor neutron flux, photo neutrons from runaway electrons 3—31782
  galactic cosmic rays, bremsstrahlung emission rel. to cosmic ray electron density and gamma-ray colour of Milky Way 3—49027
  gases, dense, bremsstrahlung and photocond. 3—2178
  interstellar clouds, electron energy spectra, propag. and interactions, bremsstrahlung γ-ray luminosity 3—20188
  kinetic theory, transport and hydrodynamics of high-Z plasma in intense laser field 3—37621
  Laplace transform pair model for spectral reconstruction 3—25997
  M87, thermal bremsstrahlung rel. to rel. to high resolution X-ray obs. 3—10440
  multiphoton bremsstrahlung, sum rule 3—55897
  multiple bremsstrahlung in gauge theories, fermion helicities, QED formalism 3—6044
  neutral atoms, electron bremsstrahlung emission 3—36715
  plasma, bremsstrahlung, quantum statistical theory *(Chinese)* 3—18010
  quasifree electron bremsstrahlung emission, induced by heavy charged particle impact 3—38960
  radiation, relativistic bosons in periodic magnetic field 3—30705
  relativistic electron beam diode, intense, electron transverse vel. meas. 3—25984
  relativistic electron bremsstrahlung, circular polarisation component, neutral currents 3—12032
  soft X-ray bremsstrahlung emission in laser plasma, spatial distrib., density and temp. effects 3—46731
  spectrometer, momentum-resolved and polarisation-dependent, vacuum UV range 3—31869
  stimulated bremsstrahlung effect in multimode laser radiation field 3—37126
  waveguide, electron classical radiation from finite segment of its path 3—46147
  X-ray and atomic inner-shell physics, conf., Eugene, OR, USA (Aug. 1982) 3—40308
  X-ray binary stars, Coulomb bremsstrahlung and cyclotron emissivity in hot magnetized plasmas 3—44791
  $Z=80$, atomic field bremsstrahlung 3—26699
  β-emitting point source, depth determ. from bremsstrahlung meas. 3—31885
  $e^+e^-\rightarrow e^+e^-\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3—6092
  $e^+e^-\rightarrow\gamma\gamma\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3—6092
  $e^+e^-\rightarrow\mu^+\mu^-\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3—6092
  (γ, e^+e^-), polarised electron bremsstrahlung, differntial cross section 3—36404
  $\pi^\pm p\rightarrow\pi^\pm p\gamma$, bremsstrahlung cross section calc. using soft-photon approx. 3—658
  Ar, electron impact, low energy, free-free emission 3—56085
  ^{37}Ar, EC decay, double internal bremsstrahlung, 1s,2s,2p,3p electron contribs. 3—16735
  Au (e, eγ) X, computation of bremsstrahlung at 0°, partial wave calculations 3—49838
  CO chemisorbed layer on Ni (111), $2\pi^*$-derived states, UV bremsstrahlung spectra study 3—43253
  ^{45}Ca, β-decay, internal bremsstrahlung, at. fields effects 3—32028
  Co complex, cobalt dialkyldithiophosphato complexes, core-excited quantum yield spectra 3—24053
  Cr complex, chromium dialkyldithiophosphato complexes, core-excited quantum yield spectra 3—24053
  Cu (001), k-resolved inverse photoelectron spectroscopy 3—3853
  $DyAl_2$, electron density of states at Fermi level 3—13704
  $GdAl_2(Ni_2)$, electron density of states at Fermi level 3—13704

bremsstrahlung continued
  $Gd_{0.5}Dy_{0.5}Al_2$, electron density of states at Fermi level 3—13704
  GdMnAl, electron density of states at Fermi level 3—13704
  Ge *(Russian)* 3—43658
  Ge, channelled relativsitic particles, characteristic X-ray radiation 3—3855
  Hg, atomic field bremsstrahlung 3—26699
  ^{203}Hg, β-decay, internal bremsstrahlung, at. fields effects 3—32028
  La, fast electron bombardment, broad emission band study 3—50339
  Ni (001) and (110), k-resolved inverse photoelectron spectroscopy 3—3853
  Ni (100), adsorbed O overlayer, unoccupied electronic states 3—38452
  Ni (111), chemisorption of CO and O, adsorbate empty orbitals, inverse UPS study 3—24042
  Ni complex, nickel dialkyldithiophosphato complexes, core-excited quantum yield spectra 3—24053
  Ni_xFe_{1-x}, unoccupied electron states 3—13694
  Ni(110), spin-polarized inverse photoelectron spectra 3—3851
  ^{147}Pm, β-decay, internal bremsstrahlung, at. fields effects 3—32028
  ^{35}S, β-decay, internal bremsstrahlung, at. fields effects 3—32028
  Si, positron annihilation radiation and bremsstrahlung at 1 GeV *(Russian)* 3—43658
  Si, single cryst., relativistic electron radiation spectra, absolute cross section 3—3854
brewing industry
  waste heat recovery by heat pump utilisation *(German)* 3—29438
bridge circuits
  see also bridge instruments
  strain gauge signal-to-frequency convertor 3—49345
bridge instruments
  see also bridge circuits
  AC bridge for comparing four-terminal-pair impedances, SI units derivation 3—5810
  AC bridge for current-voltage characts. plotting, tunnel and microjunction spectroscopy appl. 3—45158
  AC Kelvin double bridge technique, for impurity (defect) concentration levels monitoring 3—49402
  battery voltage monitor, using expanded scale voltmeter cct. 3—45125
  capacitive level meter for continuous meas. of liquid nitrogen level 3—45128
  conductivity bridge, 10 MHz, for meas. on semicond. 3—10855
  eddy current conductivity meas. of metal annular specimens, using Heydweiller bridge 3—54749
  electrocaloric flowmeter with PTC thermistors, construction, heat meas. appl. 3—54737
  heat flow and temp. simultaneous meas., under transient conditions 3—49374
  multiterminal capacitor sensors, design and performance, bridge instrum. and meas. appl. 3—54725
  mutual inductance bridge for magnetic relaxation measurements at low temperatures 3—16381
  pressure transmitter using diffused piezoresistive diaphragm sensor 3—297
  programmable DC current- and voltage-sources, connection to precision bridges *(German)* 3—25891
  reflectometer operation in the measurement of complex reflection coefficients 3—10858
  thermoelectric digital temp. meter, with analogue linearisation 3—49373
  thermometer design using thermistors and Wheatstone bridges *(Rumanian)* 3—40607
  Wheatstone bridge, self-balancing pneumatic, for surface roughness meas. 3—40564
Bridgman method *see crystal growth from melt*
brightness
  see also sky brightness
  1982 TA, fast-moving asteroid, UBV photometry (1982 October 13) 3—10248
  1982 XB, fast-moving asteroid, UBV photometry, (1982 December 16) 3—30291
  Abell 2255 compact galaxies and nearby compact galaxies, morphology and brightness profiles 3—44856
  active galaxies, absence of rapid X-ray variability 3—30490
  Antarctic sea ice, microwave emissivity and brightness rel. to Nimbus 5 ESMR and Landsat imagery 3—15462
  Arctic sea ice, microwave brightness and emissivity rel. to distrib. at end of summer (1973 to 1976) 3—15461
  atmosphere, brightness temp. due to O_2 and water vapour 3—25179
  136 Austria, rot. period and light curve from UBV photometry 3—40064
  automobile night driving, detection potential of normal observers at prevailing visibility conditions 3—19701
  automobile night driving transient adaptation mechanisms formulation 3—19702
  3C 400.2 (G53.7—2.2), supernova remnant, X-ray luminosity from HEAO-1 obs. 3—59428
  Ceres, brightness temp., SHF flux densities and positions 3—30285
  coherence effects in radiometry, radiance, radiant emittance and intensity of planar source 3—12070
  colour matching for saturation and brightness, relationship to luminance 3—9592
  colour vision, brightness luminous-efficiency functions for 2° and 10° fields 3—29545
  Coma cluster, mass-to-light ratio and density of dark matter 3—5434
  Coma cluster of galaxies (Abell 1656), brightness distrib. and radio emission characts., VHF obs. 3—59484
  Coma galaxy cluster, diffuse X-rays brightness profile rel. to cluster gravit. mass distrib. 3—10470
  Comet Arend-Roland (1957 III), tail brightness profiles and dust characteristics *(Chinese)* 3—40071
  Comet Austin (1982g), fine-error-sensor magnitude and UV spectrum from IUE obs. 3—15875
  Comet Austin (1982g), total visual magnitude estimate, (1982 November 16) 3—20298
  Comet Austin (1982g), total visual magnitude estimates (1982 September 24 to October 27) 3—10267
  Comet Bowell (1980b), total visual magnitude estimate (1982 August 20) 3—20297
  Comet Bowell (1980b), UBV photometry (1982 July 24 and 26) 3—25382
  P/Comet Churyumov-Gerasimenko (1982f), fine-error-sensor magnitude and UV spectrum from IUE obs. 3—15875
  P/Comet Churyumov-Gerasimenko (1982f), total visual magnitude estimates and coma diameters (1982 September 18 to 19) 3—5233
  P/Comet Churyumov-Gerasimenko (1982f), total visual magnitude estimates (1982 October 11 to 27) 3—15874

brightness continued
P/Comet Churyumov-Gerasimenko (1982f), total visual magnitude estimates and tail lengths, (1982 November 8 to 20) 3—20299
P/Comet Churyumov-Gerasimenko (1982f), total visual magnitude estimates (1982 November 22 to December 8) 3—25384
P/Comet Churyumov-Gerasimenko (1982f), total visual magnitude estimates and obs. of tail (December 1982) 3—35543
P/Comet Churyumov-Gerasimenko (1982f), total visual magnitude estimates (1983 January 1 to 22) 3—35546
P/Comet Churyumov-Gerasimenko (1982f), total visual magnitude estimates, 1983 February 1 to 11, and ephemeris 3—44705
P/Comet Churyumov-Gerasimenko (1982f), total visual magnitude estimates, (1983 February 15 to March 16) 3—59270
P/Comet d'Arrest (1982e), total visual magnitude estimates, (1982 November 6 to 15) 3—20300
P/Comet Halley (1982i), apparent visual magnitude, 1983 January 14, rel. to intrinsic brightness vars. 3—44704
P/Comet Halley (1982i), B-magnitude during (November 1982) 3—25383
P/Comet Halley (1982i), precise position, 1982 December 10, and approximate V-magnitude 3—30303
P/Comet Halley (1982i), precise position and V-magnitude, (1982 December 13) 3—48859
P/Comet Halley (1982i), recovery, semi-accurate positions and magnitude, (1982 October 16) 3—5235
P/Comet Kopff (1982k), total visual magnitude estimate (1983 March 16) 3—59267
P/Comet Schwassmann-Wachmann 1, total visual magnitude estimates, (1983 February 19 and 20) 3—44710
P/Comet Tempel 1 (1982j), total visual magnitude estimates, (1983 March 3 to 21) 3—59269
comets, magnitude distrib. rel. to mass distrib. and total mass of Oort cloud 3—44702
3 Cr radio galaxies, IR colour-redshift diagrams and IR Hubble diagram 3—25618
Cygnus Loop, monochromatic photographs and isophotes in Hα and forbidden O III and N II lines *(Russian)* 3—35700
dark clouds, HCN and CO densities, dust density and brightness temp., EHF obs. 3—44829
disc galaxies, luminosity-vel. dispersion ($L\propto\sigma^n$) for bulge components from vel. dispersion meas. 3—49002
edge-on disc galaxies, global struct. from surface brightness anal. 3—40266
electron gun, point cathode, gun geom. depend. of brightness characts. 3—10948
faint elliptical galaxies, central velocity dispersion-luminosity relation 3—54503
elliptical galaxies, detectability of X-ray emission resulting from hierarchical merging 3—49001
elliptical galaxies intrinsic shape testing, use of vel. dispersion and surface brightness data 3—5410
equal-luminance light brightness 3—9593
fluorescent film radiance factor and chromaticity coordinates, calculator assisted evaluation 3—10880
Fourier image, reconstruction of brightness distrib. from fragments of modulus 3—46173
G116.9+0.2 (CTB 1), supernova remnant, 21 cm continuum flux density and spectral index 3—10420
galaxies, absolute magnitudes rel. to H I 21 cm line widths and extragalactic distance scale 3—44835
nearby galaxies, catalogue of IR magnitudes and H I vel. widths 3—44846
galaxies, IR absolute magnitude-H I rel. width-surface brightness relation rel. to cosmological expansion *(Russian)* 3—35724
spherical galaxies, mass-luminosity ratio determ. using models with anisotropic rel. dispersions 3—54504
galaxies, perturbation of magnitude-redshift relation in homogeneous relativistic model 3—16041
galaxies, radial distrib. of luminosity and H_2 in propagating star form. model 3—54517
nearby galaxies, radio-optical luminosity ratios of irregular and blue compact galaxies 3—40256
galaxies, spherical, simple model for three-dimensional light distrib. 3—49024
galaxies active nuclei, optical and X-ray luminosities of X-ray selected nuclei 3—10441
galaxies in Revised Shapley-Ames Catalogue, luminosity classification 3—20499
galaxies in Virgo cluster, luminosity profiles from digital surface photometry 3—10463
Galaxy, near-IR surface brightness distrib. from anal. of contributing stellar populations 3—10316
galaxy cluster surrounding 3C 295, radius and luminosity function 3—49036
glare and discomfort test results in adaptation to luminance changes *(Japanese)* 3—53668
globular clusters, luminosity functions of extended and compact cluster populations 3—10409
238 Hypatia, rot. period and light curve from UBV photometry 3—40064
Io plasma torus, interpretation of dawn-dusk asymmetry of UV emission 3—54274
Jupiter, Copernicus meas. of Lyman-alpha emission intensity and aeronomical significance 3—10252
BL Lacertae objects, 2380 MHz flux density meas. rel. to radio variability 3—49010
BL Lacertae objects, X-ray luminosity and local volume density from Einstein X-ray obs. 3—54508
125 Liberatrix, CMEU asteroid, photometric obs. rel. to rot. period and lightcurve amplitude 3—5196
M31, luminosity profile of central region from CCD CCD photometry rel. to dynamical model 3—54518
magnitude-redshift relation perturbation in inhomogeneous relativistic cosmological model, redshift effect intrinsic to galaxy clusters 3—44838
MSH 15-56, supernova remnant, X-ray luminosity from HEAO-1 obs. 3—59428
nearby galaxies with Seyfert-like nuclei, luminosities and emission line spectra 3—54512
NGC 1079, low-visibility H I rich spiral galaxy, H I mass-blue luminosity ratio 3—49014
NGC 2264, H II region brightness distrib. mapping, HF obs. 3—44828
NGC 4565, edge-on spiral galaxy, surface brightness, colour distrib. and stellar population 3—44843

brightness continued
NGC 6503, emission line galaxy nucleus, rot., mass and physical conditions 3—49023
OJ 287, BL Lacertae object, obs. of rapid variability at 1.25 μm 3—16000
OJ 287, BL Lacertae object, visual magnitude estimates, 1983 February 15 and 21, after outburst in January (1983) 3—54532
P/Comet d'Arrest (1982e), total visual magnitude estimates, (1982 October 5 to 20) 3—10266
Pallas, brightness temp., SHF flux densities and positions 3—30285
parametric scattering theory and method of absolute light brightness meas. 3—1717
phosphor powder, AC, electrolum. brightness and maintenance, etching effect 3—3819
Pluto, photometry during 1982 opposition, light curve var. and albedo effect 3—59261
polarized brightness distrib. reconstruction by max. entropy method 3—44673
QSO 0957+561, double quasar, increase in brightness of A component (May to November 1982) 3—20528
QSO 2345—167, obs. of low freq. flux density vars. 3—59500
QSOs, evidence for cosmological evolution from radio-selected samples 3—25654
QSOs, luminosity evolution rel. to cosmological deceleration parameter *(Chinese)* 3—40288
QSOs, rest-system magnitudes from quantitative measures of slitless spectra 3—10477
QSOs at large redshift, continua and line spectra 3—16031
QSOs with flat radio spectra, radio-optical fluxes correlation 3—49041
quasar candidates near A1139, A1775 and 1633+33, positions and magnitudes from CFHT blue grens obs. 3—59235
quasars, appl. of C IV emission as luminosity indicator 3—49052
quasars, X-ray and optical props. rel. to gravitationally lensed Seyfert nuclei model 3—44865
quasars with 1 Jy flux density at 408 MHz, optical apparent magnitude distrib. 3—5439
radio galaxies, evidence for cosmological evolution from radio-selected samples 3—25654
radio galaxies, systematics of large-scale radio jets rel. to radio cores luminosity 3—25611
radio galaxies at high redshifts, optical colours and radio luminosity function 3—25619
radio galaxies with 1 Jy flux density at 408 MHz, optical apparent magnitude distrib. 3—5439
radio sources, ang. size-flux density relation rel. to evolution of linear sizes 3—25639
radio sources, extragalactic, flux density meas. at 36.8 GHz 3—40278
radio sources, extragalactic, VLA source counts at 6-cm wavelength rel. to luminosity evolution 3—49044
radio sources, variable, low freq. vars. rel. to inverse Compton problem 3—25636
radio sources from 5 GHz surveys, magnitudes and precise positions of optical counterparts 3—40277
radiosources, extragalactic, found in metre-wave surveys, spectral index-flux density relation 3—5437
random rough surface, plane wave refl., radiant intensity 3—41766
roughness parameters for polished metal surfaces, reflectometric determ. 3—40552
S0 galaxies, luminosity rel. to rot. vels. and central vel. dispersions 3—49004
Saturn rings unlit face, luminance meas. rel. to solar altitude 3—59259
Seyfert 1 galaxies, C IV 155 nm line strengths rel. to intrinsic luminosities 3—54524
Seyfert 1 galaxies, continuum source vars. rel. to time var. of broad emission-line profiles 3—10439
solar chromosphere, obs. of brightness oscills. in K and Hα 3—54302
solar disorder-convertors, focusing-type, effect of circumsolar radiation on performance 3—15002
solar limb, long-period brightness oscills. meas. at Sacramento Peak Observatory and South Pole 3—54312
spectral radiance, irradiance and radiance coeff., comparison of independent scales *(German)* 3—369
spiral galaxies surface brightness, Freeman's law and spheroidal component 3—59473
Sun, brightness fluctuations in CN filtergrams rel. to new features of oscillation spectrum 3—5245
Sun, brightness temp. at 127 MHz during solar minimum 3—40094
Sun, manifestation of 160-minute oscills. in vel. and brightness from optical and radio obs. 3—54309
Sun, meas. of radial brightness gradient rel. to definition of solar diameter 3—54319
Sun, quiescent prominences, impulsive brightenings and vel. transients obs. 3—20325
Sun, quiescent prominences, Na I D-lines brightening 3—20324
young supernova remnants, X-ray emissivities and line spectra from non-ionisation-equilib. models 3—10417
RY Tauri, T Tau star, brightness, polarisation and UBV obs. 3—44740
TV picture perception, staircase patterns emphasized with edge transitions, Mach phenomenon suppression 3—44248
uniform illumination fields produced using milk glass 3—37146
Uranus, disc-averaged brightness of auroral H Lyman-alpha emission 3—35527
Uranus ring system, 2.2 μm maps, brightness var. and optical depth, IR obs. 3—35530
vision, peripheral target luminance rel. to pupillary area 3—24707
visual acuity test results in adaptation to luminance changes *(Japanese)* 3—53667
W28, supernova remnant, X-ray flux meas. 3—54481
W3(OH), OH maser brightness temp. predictions rel. to interpretation of OH maser obs. 3—16026
X-ray galaxy clusters, luminosity function from HEAO 1 survey of complete Abell catalogue 3—54541
GaAlAs red ultra-high brightness 500 mcd LED, LPE, optical communication appls. 3—22257
H I survey of southern galactic plane, integrated brightness temp. and H I column density 3—15977

Brillouin scattering *see Brillouin spectra*

Brillouin spectra
- *see also stimulated Brillouin scattering*
- alkali chlorides, molten, hypersonic velocities, Brillouin spectra study 3—33363
- bromoform, US vel. and absorpt. meas., vibr. relax. 3—2675
- carboxylic acids, liquid, sound attenuation, Brillouin scatt. study 3—47050
- chloroform, liq., relax., spontaneous Buillouin scatt. obs. 3—38839
- ferromagnetic bubble film, Raman and Brillouin scatt. from lattice fluctuations 3—28918
- ferromagnetic films, layered stack, surface spin, waves, light-scattering spectrum 3—33878
- ferromagnetic films and heterogeneous double layers, mag. props., Brillouin scatt. from spin waves *(German)* 3—14314
- ferromagnetic thin films, Brillouin light scatt. by spin waves, magnetostatic theory 3—57943
- film, supported, Brillouin scatt. from surface acoustic phonons 3—57945
- fluid in nonequilib. steady state, plane Couette flow, light scatt. calc. 3—43554
- fluids, dense, Brillouin scatt., Rayleigh line intensity *(German)* 3—57949
- glassy polymers, Brillouin scatt. obs. using multimode low-power laser radiation 3—19148
- graphite, electronic structure, single particle and collective excitations, EELS and secondary electron emission study 3—58011
- ion fluctuations driven by stimulated Brillouin scatt., time-resolved Thomson scatt. meas. 3—42362
- Mandelstam-Brillouin scatt. by optically linear media 3—57948
- methanol-cyclohexane, near critical system, multiple light scatt. 3—47666
- nonequilibrium stationary states, modified Navier-Stokes model, sound absorpt., Brillouin Rayleigh spectra 3—2019
- opaque materials, Brillouin scatt. from phonons and magnons, central modes, book contrib. 3—3756
- oxide glasses for long-wavelength optical fibres, optical props. 3—22177
- pentachlorobiphenyl, liq., polarised and depolarised light scatt. spectra *(French)* 3—19144
- phonon linewidths and lineshapes 3—57940
- photon and phonon field quantum statistical props. in Brillouin scatt. with intense pumping 3—17570
- plasmas, CO_2 laser produced, harmonic light emission, link with Brillouin scatter 3—27667
- PMMA, glassy, press. effect on thermal phonons vel., Brillouin scatt. study 3—33378
- PMMA, hypersonic shear wave obs. by Brillouin scatt. 3—18402
- poly(propylene oxide) polyurethane, gels, hypersonic props., Brillouin scatt. 3—34120
- polychlorotrifluoroethylene, sketched and hydrostatically extruded, orientation effect on elastic 3—4070
- polymer blends, miscible, charact. techniques, review 3—38089
- polymer film, oriented, Brillouin spectrum, assignment of anomalous peak 3—3750
- polystyrene, glassy, press. effect on thermal phonons vel., Brillouin scatt. study 3—33378
- polystyrene, hypersonic shear wave obs. by Brillouin scatt. 3—18402
- semiconductors, excitonic polaritons, resonant light scatt., book contrib. 3—3087
- single mode fibre, Raman amplification at 1.118 μm, limitation by Brillouin scatt. 3—12236
- solids, light scattering, Brillouin and Raman spectra, book 3—46
- thin film optical waveguides, Brillouin scatt. and phonon modes 3—46284
- thin film optical waveguides, Brillouin scatt. theory 3—46285
- thin film optical waveguides, Brillouin scattering 3—46286
- thiourea, elastic const., C_{33}, in elec. field, Brillouin scatt. study 3—3753
- urea single cryst., elastic behaviour, Brillouin and Rayleigh studies 3—19145
- urotropin single crystal Mandelshtam-Brillouin spectrum 3—3751
- o,m-xylene, liquid, hypersonic vel. dispersion, Brillouin scatt. study 3—52801
- Ar, liq., short-wavelength sound modes, dynamic struct. factor from Rayleigh, Brillouin lines 3—57049
- Ar:$O_2(N_2)$ alloys, single cryst., elastic const. determ. by Brillouin scatt. 3—13309
- $BiVO_4$, Brillouin scatt. at high temps. 3—3749
- $BiVO_4$, ferroelastic, elastic consts., US velocity study 3—47023
- $BiVO_4$, struct. phase transitions, Brillouin scatt. studies 3—57083
- $(Ca,K)NO_3$, short time struct. relax. process, glass transitions, expt. and computer simulation 3—38068
- $CaPd(CN)_4.5H_2O$, Brillouin scatt. and thermal anal. 3—3754
- CeF_3, elastic props., Brillouin scatt. study 3—47021
- $CoCO_3$, antiferromagnet, Mandelstam-Brillouin scatt. from magnons and phonons 3—28870
- $CsNiF_3$, 1-D ferromag., elastic consts., Brillouin scatt. and US propag. studies 3—57013
- $CsNiF_3$, elastic consts., ultrasonic propagation study 3—18365
- n-D_2, solid acoustic velocity angular dependence, Brillouin scatt. study using diamond anvil cell 3—38838
- EuO ferromagnetic thin films, Brillouin light scatt. by spin waves, magnetostatic theory 3—57943
- Fe epitaxial films on GaAs substrates, growth and mag. props. 3—18950
- Fe ferromagnetic thin films, Brillouin light scatt. by spin waves, magnetostatic theory 3—57943
- Fe film, mag. parameters determ. from spin wave Brillouin scatt. 3—19150
- $FeBO_3$, antiferromagnet, Mandelstam-Brillouin scatt. from magnons and phonons 3—28870
- $FeBO_3$, high freq. spin wave branch and uniform precession mode, Brillouin scatt. study 3—28536
- $InPS_4$, elastic, optical and nonlinear optical props. 3—37114
- KCl:CN^-, Brillouin spectra, phonon linewidths and lineshapes 3—57940
- KCl:CN^-, phonon-defect interactions, Brillouin scatt. study 3—23966
- $K_{1-x}Li_xTaO_3$, elastic const. discontinuity, Brillouin spectra 3—3752
- KNO_3-$Ca(NO_3)_2$, glass, elastic props., Brillouin scatt. study 3—47664
- LaF_3, elastic props., Brillouin scatt. study 3—47021
- $LiKSO_4$, elastic consts. and phase transition, Brillouin scatt. study 3—57947
- NH_4LiSO_4, Brillouin scatt. intensity near ferroelec. phase transition point, anomalous temp. depend. 3—57942
- $NaNO_2$, incommensurate antiferroelectric, phase transition, Brillouin scatt. study 3—19147
- NdF_3, elastic props., Brillouin scatt. study 3—47021

Brillouin spectra continued
- Ni film, mag. parameters determ. from spin wave Brillouin scatt. 3—19150
- $Ni_{0.8}Fe_{0.2}$ film, mag. parameters determ. from spin wave Brillouin scatt. 3—19150
- PrF_3, elastic props., Brillouin scatt. study 3—47021
- SiO_2 (stishovite), elastic moduli from Brillouin spectra obs. 3—4855
- SiO_2, amorphous, Brillouin spectra, phonon linewidths and lineshapes 3—57940
- SiO_2 film, Brillouin scatt. from surface acoustic phonons 3—57945
- $Tb_2(MoO_4)_3$, Raman and Brillouin studies of acoustic anomalies 3—34104
- $TbVO_4$, cooperative Jahn-Teller phase transition, fluctuation dynamics, Brillouin scatt. study 3—47665
- YIG, parametric spin waves, Brillouin scatt. study 3—23618
- $(ZrO_2)_{1-x}(YO_{1.5})_x$, x=0, 0.18, 0.33, quasi-elastic light scatt. and ionic cond. correl. 3—43555

Brillouin zones
- *see also band structure*
- A_3B lattice dynamics model, phonon freqs., augmented system of compatibility eqns. 3—28069
- A-15 compounds, lattice dynamics, dynamical matrix at k=0 *(Rumanian)* 3—8153
- bis-ethylammonium copper tetrachloride, parallel pumping of Brillouin zone boundary magnons 3—57570
- black P to A7 phase transform., press. induced, orbital symm. conservation anal. 3—18439
- colloidal crystals, phonon dispersion curves, lattice dynamics, photon correl. spectroscopy 3—13376
- Fermi surface geometric props., Brillouin zones 3—38289
- graphite intercalation cpd., Raman scatt., lattice dynamics and internal modes, book contrib. 3—3742
- graphite intercalation cpd. with Rb, lattice dynamics, Raman scatt. from low freq. phonons 3—28859
- Heisenberg antiferromagnet, theory of electron scatt., surface and bulk effects 3—57571
- II-VI compounds, electronic struct. under press. 3—47260
- III-V compounds, electronic struct. under press. 3—47260
- IV-VI semiconductors, energy band struct. and Fermi surface, tight-binding calc. 3—57281
- leaky surface Rayleigh waves on flat and corrugated surfaces 3—47205
- metal corrugated surface, plasmons, dispersion relations 3—23300
- metals, FCC and BCC, static lattice Green functions 3—28061
- perfect cryst. electron block function, method of special points 3—8392
- polyethylene, normal mode vibr., rigid mol. model 3—2726
- product representation weights for Brillouin zone integrals in the biquadratic limit 3—38283
- $(TMTSF)_2X$, ($X=ClO_4$, ReO_4, FSO_3, PF_6 and AsF_6), band struct. parameters 3—28264
- vibration representation, crystal constructed by induction from representations *(French)* 3—22812
- zero-energy gaps for deep 1-dimens. periodic pots. 3—25735
- Ag (100), surface electronic struct. study 3—13876
- Al, Fermi surface props. from phase shift parametrisation 3—13703
- Au-Si(111) 7×7 interface growth, cryst. and electronic struct. 3—23190
- BiI_3, resonant Raman scatt., zone folding effects on phonons and excitons 3—8836
- $Cd_{1-x}Mn_xF_2$, valence and conduction band struct., UPS study 3—23269
- Cr, antiferromag. and paramag. phases, phase transition effects on Fermi surface 3—38615
- Cs film, optical absorption study, band struct. 3—43653
- CsI, phonon force models, surfaces near degeneracy 3—13363
- Cu, defect states, Green's function Fourier coeff. evaluation 3—23228
- GaAs (001)-(2×4) surface electronic struct., XPS study 3—3280
- Ge(111)-(2×1) surface, dangling-bond band, angle-resolved photoemission 3—47402
- $HoAl_2$, spin dynamics, inelastic neutron scatt. study 3—57528
- KCl, phonon force models, surfaces near degeneracy 3—13363
- $KCoF_3$ Heisenberg antiferromagnet, 3D, linear birefringence, crit. behaviour 3—8798
- $KNiF_3$ Heisenberg antiferromagnet, 3D, linear birefringence, crit. behaviour 3—8798
- $K_{0.5}Rb_{0.5}I$, phonon dispersion relations, two-mode behaviour 3—42729
- K_2ZnF_4 layered cryst., phonon dispersion meas. 3—51733
- MgO, press. depend. to 100 kbar of phonons, vibronic spectra 3—33367
- Mg_2SiO_4, Brillouin zone, Raman study 3—19125
- NaF, phonon force models, surfaces near degeneracy 3—13363
- $NiSi_2$ epitaxial films, electronic and atomic struct., LEED, Auger and photoemission studies 3—33630
- $PbSe_{1-x}Te_x$, electron effective mass, Shubnikov-de Haas effect study 3—13710
- Pd, electronic energy bands and optical absorpt. spectra 3—13716
- RbBr, phonon force models, surfaces near degeneracy 3—13363
- $RbMnF_3$ Heisenberg antiferromagnet, 3D, linear birefringence, crit. behaviour 3—8798
- $RbNiF_3$, magnon spectra calcs. *(Chinese)* 3—43357
- Se, permittivity, reflectivity, absorption coeff. and electron energy loss spectra 3—8846
- SmS, electronic struct., relativistic KKR calcs. 3—47262
- SnI_2 film, optical consts. meas., cond. band min. and valence band max. 3—3846
- Te, optical and electron energy loss spectra 3—23972
- $Ti_{1-x}V_xS_2$, photoemission study of elec. struct. 3—57273
- UN(100), photoemission study of electronic states 3—18614
- W, piezoreflection spectra 3—28833
- YPO_4, IR and Raman vibr. spectra and dynamic parameters 3—19141
- YVO_4, IR and Raman vibr. spectra and dynamic parameters 3—19141
- $ZnGeAs_2$, energy band struct. and optical props. 3—28265

Brinell testing *see hardness testing*

bristles *see fibres*

brittle-ductile transitions *see ductile-brittle transition*

brittle fracture
- *see also ductile-brittle transition; notch brittleness*
- alkali silicate glass, AES on fractured surfaces, comp. obs. 3—14903
- alloys, creeping, intergranular cavitation, fracture 3—47952
- brittle, elastic solid *(French)* 3—46484
- brittle material, cracked, bending and tensile strength, fracture mech. theory 3—53180
- brittle material, time-depend. failure, fracture probability analysis 3—51010
- ceramics, fracture mechanics, cracks, TEM 3—51701

brittle fracture continued
- condensed systems, cleavage fracture investig. 3—2663
- dislocation force, appl. to brittle fracture 3—51598
- embrittlement model, effective fracture energy rel. to surface energy 3—29146
- energy conditions for brittle failure, nonuniform loading with plastic strain *(Russian)* 3—51018
- experimental fracture mechanics, developments and state-of-the-art 3—56496
- fibre optic waveguides and cables, fracture mechanisms 3—22247
- fibre reinforced plastic and fibre/matrix interfaces, temp. depend. of strength *(Japanese)* 3—58222
- glass, fracture statistics, normal, Weibull and Type I extreme value distributions 3—43939
- grain boundary segregation, AES study 3—53065
- high-pressure boilers, pulsed destruction 3—14721
- Inconel 600 and 625, single-phase, hydrogen-assisted fracture 3—14719
- indentation microfracture in Palmqvist crack regime, implications for fracture toughness eval. 3—19467
- Maryland diabase, high temp. creep to fracture 3—15424
- materials with initial stresses, brittle fracture criterion 3—17888
- PMMA, bending and tensile strength, crack propagation 3—53180
- poly(2,6-dimethyl-1,4-phenylene oxide)/styrene-maleic anhydride copolymer blends, characterisation 3—14642
- polyester fabric, PVC coated, boiling water treatment, 6 weeks, stake and socket fractures 3—39231
- polyethylene pipes, fatigue failure, constant and fluctuating internal press. loading 3—58204
- porcelain cylinders, bending strength, brittle fracture, statistical analysis 3—58207
- PVC rigid pipe materials, fracture toughness, time and temp. effects 3—19409
- reliability analysis for brittle materials, fracture mech. theory applic., review 3—29286
- rubber, natural and polybutadiene blend, flexing and tension fatigue failure 3—34434
- sintered materials, subcrit. crack growth determ. method 3—58363
- soda-lime glass plate, stress distrib. effects on crack-branching 3—53176
- steel, austenitic, Cr-(Ni)-Mn, fatiguq fracture in liq. N_2 3—34474
- steel, austenitic stainless, H-assisted cracking, types 304L and 316L, grain size and heat treatment effects 3—19396
- steel, bainitic, pressure vessel type, hydrostatic tension effect on cleavage fracture 3—9178
- steel, C type, 20k, brittle fracture susceptibility eval., nondestructive magnetomech. method, hot rolling and ageing effects 3—48017
- steel, cleavage fracture in upper ductile brittle transition region 3—34430
- steel, cleavage plane of pearlite, TEM study 3—14715
- steel, constructional, resistant to H embrittlement, alloying additions and struct. 3—53200
- steel, high strength, prestrain effect at elev. temp. effect on fracture 3—58244
- steel, low alloy, powder-forged, fracture, effect of inclusions 3—53207
- steel, low-alloy, crack resist., temp. depend., fracture features, 20 to −80°C 3—19414
- steel, low-alloy, structural, brittle fracture susceptibility, prolonged ageing effect 3—34470
- steel, low-C, sample dimens., influence on brittle fracture transition temp., static loading 3—58235
- steel, maraging VNS-2, temp. relationship of retarded fracture process, mobile H content 3—58236
- steel, spheroidised medium C, bent bars, fracture and constrained yielding, H charging effect 3—34481
- steel, structural weldable, elastoplastic failure concepts limits *(German)* 3—53175
- steel type St.3sp, plastically deformed, resistance to fracture *(Russian)* 3—34431
- steel weldments, quenched and tempered, H-induced crack propag. 3—14729
- surface flaws in materials under flexure, fracture statistics Weibull specific risk function 3—12585
- Westerly granite, uniaxial cyclic compression, microfracture source mechanisms 3—29914
- Zircaloy-2 cladding, irradiated, I-induced stress corrosion cracking 3—58290
- Al-Zn-Mg, single crysts., environmentally assisted cracking 3—4105
- β-Al_2O_3, polycrystalline, hot pressed or sintered, fracture toughness, temp. depend. *(Japanese)* 3—58219
- Al_2O_3, temp. depend. of strength ionisation, relationship with structure *(Russian)* 3—14706
- Fe-Co, fracture and stress relax., effect of at. ordering *(Russian)* 3—24332
- GaP, single cryst., cleavage, fracture toughness meas. 3—33351
- Ge single cryst., internal friction, amplitude depend., in brittle fracture temp. range *(Russian)* 3—2670
- MgO single crystals, cathodoluminescence at frictional damage 3—24025
- Mo alloys, homologous recrystallisation temp., annealing and fracture 3—34369
- Ni-base superalloy, fracture of single crysts. 3—34453
- NiPt, atomic ordering influence on plasticity, strength and fracture *(Russian)* 3—39204
- Si single crystal, lifetime subjected to loads of duration 10^{-6}-10 s 3—8133
- $\alpha+\beta$-Ti alloy, fracture toughness, strength and microstruct. 3—14734
- α-Ti alloys, intergranular fracture at temps. above $0.5T_m$ 3—9188
- UO_2, fracture up to high strain rates, effects of pore shape 3—29158
- W alloys, homologous recrystallisation temp., annealing and fracture 3—34369
- ZrO_2-Y_2O_3 (15 wt.%), temp. depend. of strength ionisation, relationship with structure *(Russian)* 3—14706

brittle materials *see brittleness*

brittleness
- *see also brittle fracture; embrittlement; hydrogen embrittlement; liquid metal embrittlement; notch brittleness*
- brittle material, cracked, bending and tensile strength, fracture mech. theory 3—53180
- brittle material, time-depend. failure, fracture probability analysis 3—51010
- brittle materials, fracture toughness testing, crack formation in test piece 3—58332
- brittle materials, machining damage anal. 3—34477

brittleness continued
- ceramic, brittle, thermal stress resist., quenching method, effect of spatial variation of heat transfer coeff. 3—44004
- ceramics, brittle, elastic stress fields caused by indentations 3—4093
- delayed fracture, observed in stress rate tests, quantitative anal. 3—18380
- elastic solid in mode I and steady state, damaged zone propag. *(French)* 3—46484
- elastic solids, compressed, containing crack arrays, surface instability and splitting 3—32681
- erosion resistance of brittle materials, rel. to hardness and critical stress intensity factor, dimensional analysis 3—47965
- generalised fracture toughness 3—27440
- glasses, brittle, elastic stress fields caused by indentations 3—4093
- IR transmitting materials, impact damage and erosion mechanisms, opt. quality 3—9145
- particulate composite, brittle, crack bowing, fracture toughness prediction 3—42706
- PMMA, bending and tensile strength, crack propagation 3—53180
- porcelain cylinders, bending strength, brittle fracture, statistical analysis 3—58207
- rain erosion damage in brittle materials 3—32688
- solids with microcracks, overall moduli, load-induced anisotropy 3—57022
- steel, Cr-Mn-Si-Ni, temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
- steel, Cr-Ni-Mo-V, structural, crit. brittleness temp., alloying comp. influence 3—34469
- steel, grain boundary segregation of P, intergranular embrittlement, alloying element effect 3—58247
- steel, low-alloy thermally improved, thermal embrittlement tendency 3—19352
- steel, Mn(-Mo), temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
- steel, Ni-Cr-Mn-Si, temper brittleness, influence of initial microstruct. 3—47945
- transition metals, cold brittleness 3—33355
- Weibull modulus estimation 3—22971
- BaF_2, brittle, predeformation and fracture, high temp. study 3—37981
- Cr condensates, brittleness threshold 3—34473
- SiC refractories, deform. and fracture study by acoustic emission method under three-point bending *(Japanese)* 3—39252
- Ti, brittleness, grain size effect 3—29172
- TiAl, ordered, brittleness, effect of temp. 3—14738

broadband amplifiers *see wideband amplifiers*

broadcasting
- population exposure to VHF and UHF broadcast radiation in the United States 3—24892

broadside antennas *see antenna arrays*

bromine
- *see also nuclei with .:....*
- adsorbed on Cu (110), coadsorbed H_2O, work function changes 3—43262
- adsorption on Pd (111), electronic excitations, angle-resolved EELS study 3—43678
- atom, in discharged Ar-Br cpd. mixtures, emission spectra 3—45890
- atomic laser action obs. in hollow cathode discharge 3—12122
- bubbles, formation via phonon state in KBr, electron microscopy study 3—27995
- crystals, interat. pot. model 3—2462
- inhibition of carbon fibre growth, from naphthalene at 1100°C 3—24105
- ion, specific adsorption on Ag electrochemical electrode 3—57223
- molecular, intracavity gain detect. 3—41805
- molecule, MINI-1 and MIDI-1 basis sets, GTO calcs. 3—6527
- molecule, reson. series in the VUV 3—41589
- molecule, vibr. energies, near dissoc. expansions using spectrosc. data 3—55915
- molecule+HgBr*, quenching consts. of $B^2\Sigma_{1/2}^+$ state 3—17371
- polyacetylene:Br, elec. cond. meas. 3—38390
- single crystal, polarised Raman spectra 3—38815
- solar energy storage as H_2 and Br_2 from HBr, idealised system performance 3—58563
- Br^- formation from $HgBr_2$ energy electron dissociative attachment 3—26874
- Br^- self diffusion in 1:1 electrolytes, radiotracer obs. 3—51832
- Br/Pb ratio in airborne particles, pollutant appl. 3—48218
- Br+HCl reaction, (ν=2, 3, 4), collinear quantum mechanical probabilities using hyperspherical coords. 3—24485
- Br_2-CO_2-He gas laser, solar energy conversion, lasing power and efficiency 3—26998
- Br_2-liquid-core optical fibre Raman-gain medium, broadband IR generation 3—12139
- Br_2+Ar reactions, nonequilibrium effects in the energy distribution function 3—58420
- Br_2+Hi, slow chain reactions, IR chemiluminesc., deactivation rate coeff. 3—19516
- Br_2+OH, reaction kinetics and products, EPR and laser-induced fluoresc. obs. 3—34612
- KCl:Br, exciton decay to Frenkel defects, tunnel recharge *(Russian)* 3—57287
- KCl:Br, F-centre accumulation efficiency, temp. depend. *(Russian)* 3—56887
- Zn-Br, 10 kW battery for energy storage, building and testing 3—34686
- ZnTe:Br, ion implanted, donor related edge luminescence 3—52856

bromine compounds
- graphite-Br intercalation cpd., $C_{28}Br_2$, commensurate-incommensurate transition, X-ray scatt. study 3—13435
- graphite-Br intercalation cpds., dil., commensurate-incommensurate transition and disordering 3—8193
- Ar-Br cpds. mixtures, discharged, Br emission spectra 3—45890
- BrCN, electron impact dissoc., $CN(B^2\Sigma^+)$ form., emission spectra 3—50526
- BrCN, vibrational self-relax. times 3—37311
- BrCn, hyperfine struct., MM spectra 3—45935
- BrF_3, intercalation compound with graphite, composition and struct. 3—13183
- BrO_3^-/H^+ oxidation of 1,4-cyclohexanedione, uncatalysed oscillatory chem. reactions 3—34611
- $KBr_{1-x}I_x$, lattice dynamics calcs. 3—13364
- $Pt(NH_3)_4PtBr_2(NH_3)_4$ $(HSO_4)_4$, cryst. struct. determ. 3—22834

Brownian motion
- *see also colloids*
- adiabatic elimination schemes for fast variables 3—45060

- **Brownian motion** continued
  - algorithms for Brownian dynamics 3−5720
  - alkali metal nitrates, molten, IR line widths, fundamental tones, interparticle interaction effects *(Russian)* 3−3739
  - assembly of mols. containing rot. polar groups, dielec. relax., inertial effects 3−12810
  - Brownian particle absorption by black sphere, Fokker-Planck eqn. and diffusion eqn. 3−54673
  - n-butane, interacting Brownian particles, fluctuation-dissipation theorem appl. 3−5721
  - charged spherical Brownian particles, self-diffusion coeff. 3−20764
  - coagulation, distribution function rate of change, vol. conservation 3−44071
  - coagulation, particle size distrib. 3−4320
  - damped quantum systems, nonlinear relax. and fluctuations 3−25808
  - diffusion coeff. of Brownian particle in two-dimensional periodic channel 3−30787
  - dispersion in flow through spatially periodic porous media, transport processes 3−7651
  - dynamical theories of motions 3−16286
  - extended Brownian dynamics for reactive nonlinear diffusion 3−54674
  - flowing fluids, harmonically bound, Brownian motion 3−22439
  - fluids, mol. and at., rattling motions detection 3−2354
  - fractional Brownian motions $B_{LH}(t)$ and the $B(t^{2H})$ process 3−30783
  - friction drag coefficients, fluctuating force formulation 3−173
  - gas-particle suspension, diffusional deposition to spheres and cylinders 3−27633
  - ionisation tracks, Brownian motion of reacting charged particles 3−30778
  - Kramers approx., double and associated harmonic oscillator models, $\pi^{1/2}/2$ factor 3−30687
  - Langevin equation for harmonic oscillator in a fluid 3−180
  - memory effect on thermally activated escape rates 3−10758
  - Millikan's oil drop data, reevaluation rel. to motion of small particles in air 3−35917
  - moelcular spin relaxation, Brownian motion in group manifolds 3−1391
  - molecules, nuclear magnetic spin relax. undergoing anisotropic rot. Brownian motion and internal. rot. 3−1389
  - multiwell potential, spatially varying viscosity, Brownian motion 3−5716
  - nondiffusive behaviour 3−40488
  - nonMarkovian Brownian harmonic oscillator, long time behaviour, relaxation processes 3−10750
  - nonuniform gas, modified Fokker Planck eqn. for motion of Brownian particles 3−189
  - particles, boundary condition at absorbing surface, random walk 3−5714
  - particles, transfer to continuous moving surfaces 3−25810
  - Poisson noise, white and coloured, to drive Brownian particle, generalised master eqns. 3−30786
  - polymer, rodlike, in semidil. solns., rot. Brownian motion, tube model, kinetic eqn. 3−13072
  - polyvinyl acetate, dielectric behaviour rel. to mol. wt. 3−38756
  - proteins, Mossbauer effect for strong damped Brownian oscill. and internal dynamics 3−6815
  - renormalized diffusion in systems with periodic variables 3−16257
  - rotational Brownian motion, Smoluchowski eqn. soln. applicable to large temporal field changes 3−178
  - rotational Brownian motion in nonspherical mols., nucl. mag. relax. by quadrupole interactions 3−32112
  - Rydberg atoms and radiation in resonant cavity 3−26659
  - self-diffusion of interacting Brownian macroparticles, conc. depend., nonhydrodynamic contrib. 3−45093
  - single-spin model, time evolution, relax. function and random force, Mori method, Brownian analogues 3−54635
  - soliton, double quadratic, stochastic mechanics in phonon gas 3−191
  - steady one dimens. Brownian motion with an absorbing boundary 3−5717
  - stochastic waves for symmetric stable processes and Brownian motion 3−49271
  - suppression of Brownian motion by gravity field 3−16264
  - two-dimensional, approx. calc. methods *(German)* 3−35920
  - weak convergence of a random walk in a random environment 3−16260
- **Brownian movement** *see Brownian motion*
- **brush discharges** *see discharges (electric)*
- **bubble chambers**
  - BIBC, heavy liq. miniature bubble chamber for short-lived particle detection 3−1142
  - camera shutter used in high resolution bubble chamber photography 3−26569
  - European Hybrid Spectrometer for multihadron events study in high energy interactions 3−41398
  - HOBC, holographic bubble chamber performance 3−17168
  - Ar, liquid, bubble chamber/calorimeter hybrid detector, scintillation light 3−26561
  - Ar, liquid, detector simultaneous operation as bubble chamber and calorimeter 3−26562
  - D track-sensitive target in Lyudmila bubble chamber, expanding device 3−11609
- **bubble nuclei** *see nuclear density*
- **bubble point** *see boiling point*
- **bubble points** *see bubbles*
- **bubbles**
  - *see also foams*
  - acoustic propagation velocity in bubbly medium 3−7286
  - acoustic radiator, cavitation zone, wave field struct. characts. 3−12402
  - acoustic streaming in a medium containing bubbles 3−12399
  - acoustic waves in media containing bubbles 3−12401
  - air-water, two-phase turbulent flow is noncircular channels 3−22516
  - air-water interface, bubbles breaking waves and jets at free surface 3−51212
  - air-water two-phase stream in vertical tube, local characts. meas. by thermoanemometer *(Russian)* 3−42332
  - asymptotic bubble size in tubed fluidised beds 3−7643
  - boiling heat transfer from plane heater to K layer 3−27362
  - boiling onset and bubble departure, quasi-static conditions anal. 3−42758
  - cavitating inducers, dynamic transfer functions scale effects 3−51176
  - cavitation bubble collapse, shock generation study 3−51175
  - cavitation liquid quality control instrument 3−51178
  - cavitation noise monitoring and correl. to erosion capability 3−51177
  - cavitation study, bubble response to tension wave 3−56586
  - cloud patterns around a bubble growing in a gas-fluidized bed 3−2112
  - creeping flow through cubic arrays of spherical bubbles 3−51206
- **bubbles** continued
  - dimpled liquid film, thinning, London-van der Waals forces effects 3−51897
  - electrofluidised beds, AC and DC applied elec. fields, bubble rise velocity 3−37580
  - electrofluidised beds, stabilisation against bubbling and boundary value problems, elec. field effects 3−37581
  - flow cavitation number limitation of water jet pumps 3−51180
  - fluid-gas mixture in porous medium, compressibility behaviour 3−2179
  - fluid-structure interaction, finite element methods with user-controlled meshes 3−10586
  - fluidised beds, bubble hold up 3−51208
  - fluidised beds, bubbling properties anal. using flow optic light probe 3−46642
  - fluidised beds, mass transfer and motion of bubbles 3−7648
  - forced convective nucleate boiling from horizontal surface, heat transfer, void fraction meas. *(Japanese)* 3−2067
  - forced convective nucleate boiling from horizontal surface, eqns. for determ. bubble layer thicknesses *(Japanese)* 3−2068
  - formation in vertically vibr. system, Tate's law region 3−17957
  - gas atoms in very small bubbles, anal. of thermodynamics, report 3−46680
  - gas bubble homogeneous nucleation in vivo rel. to decompression sickness 3−24761
  - gas bubble motion, Marangoni convection induced *(German)* 3−51116
  - gas bubble pair motion in perfect liquid 3−17961
  - gas bubble-liquid media, variable conc., shock wave reflection 3−27550
  - gas bubbles, adiabatic compression in non-compressible viscous liq. 3−51162
  - gas bubbles, growth or collapse in viscoelastic liqs., oscill. behaviour 3−51193
  - gas bubbles, shock compression in ideal compressible liq. 3−51163
  - gas bubbles driven to oscill. in liq. pulsate, polytropic exponent 3−37280
  - gas bubbles in fission reactor materials, thermodynamics 3−36460
  - gas bubbles in liqs., nonlinear oscills., harmonic reson. 3−37281
  - gas microbubbles, conc. in seawater, natural vibr. freq. method meas. 3−54055
  - gas-liquid bubble suspensions, waves and critical phenomena 3−22508
  - gas-liquid flow pattern transition in a vertical rod bundle, PWR LOCA appl. 3−11403
  - growth threshold, rectified diffusion, generalized eqns. 3−17960
  - He bubble growth in type 316 stainless steel *(German)* 3−8077
  - hydrocarbon mixtures, binary, bubble press. and vapour-liq. equilibria 3−2761
  - inertial forces, as bubble moves and expands in fluid *(French)* 3−22509
  - inviscid bubbles, nonlinear oscillations investig. using Poincare-Lindstedt expansion technique 3−46633
  - ion implanted materials, bubble lattice form. 3−37971
  - lake, bubble entrainment after breaking of surface waves, sonar study 3−54064
  - large bubble flow characts., SMAC calcs. 3−42294
  - latent heat transport in nucleate forced boiling 3−51103
  - linear ordering on dislocations, elastic interaction explanation 3−56904
  - liquid, bubble and dissolved gas-containing, shock wave amplification 3−22957
  - liquid, bubble containing, acoustic wave propag., model nonlinear eqns. 3−12403
  - liquid, bubble-containing, nonlinear acoustic waves 3−12404
  - liquid, bubble-containing, shock wave struct. 3−12419
  - liquid, bubble-containing, wave processes induced by explosions and shocks 3−13304
  - liquid, bubbling, large-amplitude pulse resonant interaction 3−13344
  - liquid, bubbling, propagation of plane nonstationary waves *(Russian)* 3−42263
  - liquid, gas bubbles, nonlinear acoustical spectroscopy 3−12473
  - liquid, optical breakdown, excited bubble dynamics 3−12725
  - liquid bubble sheet, nonlinear sound scatt. 3−12400
  - liquid containing gas bubbles, spatial acoustic echo 3−50826
  - liquid film thinning as small drop or bubble approaches a fluid-fluid interface 3−18533
  - liquid-gas interface of stirred liquid-gas solution closed to mass transport, bubble evolution kinetics 3−42883
  - liquid-vapour bubbles media, shock wave propag. 3−12717
  - LMFBR, bubble growth in liquid sodium, noncondensables and vapour convection effects 3−41275
  - LMFBR, incipient boiling of superheated K, bubble growth and pressure transient 3−21447
  - low-enthalpy geothermal well discharge enhancement by noncondensable gas lift 3−44093
  - measurement of hydrodynamic local characts. 3−2153
  - metallic thin film, voids and gas bubbles, form. and growth 3−8375
  - metals, cavity nucleation during post-irradiation creep, bubble sweeping model, appl. to stainless steel 3−33305
  - molten glass, thermal gradient induced migration of bubbles 3−8302
  - moving bubble, mass transfer during slow chem. reaction 3−37543
  - nucleation during fluid motion in porous metals 3−37555
  - ocean wave, bubble entrainment in breaking waves 3−4895
  - n-octane bubble growth in liq. droplets at superheat limit, pressure effect 3−37549
  - parametric acoustic radiator with a bubble layer 3−27293
  - PMMA film, deposition by plasma polymerisation from SF_6Ar-MMA, bubble formation obs. 3−14507
  - pressure waves in a liquid containing gas bubbles 3−56556
  - radiation induced, TEM, automatic image analysis 3−20958
  - rising bubbles or falling drop in incompressible viscous fluid, shape computation 3−12748
  - salol, cryst. growth from melt, gas inclusion form., bubble capture kinetics 3−33164
  - saturated nucleate boiling along heated wire, statistical anal. 3−50910
  - sea, sound attenuation for high-freq. beams by wind-generated bubble layer, theory 3−56370
  - soap bubbles, He-filled, visualisation study, appl. to combustor swirling flowfields 3−12641
  - sound beam wavefront inversion and other nonlinear effects in medium containing bubbles 3−12398
  - spark generated bubble collapse near wall, impact press. generation 3−46608
  - splitting in shear flow 3−12756
  - spray-bubbling transition on sieve trays 3−12747
  - steam bubble growth obs. by bidirectional cinematography 3−27630

bubbles continued
steel, austenitic stainless, He embrittled, modelling high temp. mech props, 3—19398
Stokes flow past bubbles or drops partially coated by thin films, surfactant film stagnant cap 3—46631
submerged burners, in reactor bubble velocity in gas-liquid bed 3—56624
superheated and subcooled cryogenic liquids, vapour bubble size and motion, theory 3—32786
transient mass transfer with suction at phase boundary appl. to bubble in fluidised beds 3—51216
turbulent stream flow effects on bubble motion 3—41241
two-phase bubble flow in concentric annuli, momentum and heat transfer 3—51196
two-phase flow, homogeneous state stability to disturbances 3—32788
two-phase gas-fluidised bed, bubble structure *(Polish)* 3—32797
two-point functions and bubbles 3—43385
US flaw detector for monitoring of fluid flow continuity 3—56629
vapour-liquid bubble medium, heat and mass transfer, shock wave struct. 3—27590
vapour-liquid medium, bubbling, propag. of finite-amplitude press. perturbations 3—56605
velocity fields around spheres and bubbles moving in non-Newtonian liqs. 3—27569
venous gas emboli, detection and size meas. by Doppler US flowmeter 3—48347
viscous, steady-state oscills. of gas bubbles, freq. response curves 3—50823
viscous fluid in circular tube, motion of bubble, drop and solid sphere *(Chinese)* 3—17973
water, subcooled pool boiling, heat transfer in transition boiling 3—2038
water, subcooled pool boiling charact. curves, vapour bubbles and surface temp. var. 3—56418
water, subcooled pool boiling characteristic curves, heat transfer and vapour bubble minimisation, contamination effect 3—56417
water-bubble boundary layer as a hydrodynamic sound source 3—12413
Al film, He ion irrad., He bubble form. 3—22949
Al film, implantation induced He bubble press. and density determ. 3—8381
Br bubbles, formation via phonon state in KBr, electron microscopy study 3—27995
He bubble growth in Ni:He$^+$, growth curves and bubble distrib. 3—56905
He, collapse of He platelets in Mo 3—26456
He, in implanted Al and Ni, bubble density and press. 3—21510
He, in ion implanted Ni, bubble obs. with small-angle X-ray scatt. 3—21514
He in V-Ti alloys, fate of implanted species 3—28008
He$^+$ and D$^+$ irradiated Cu, depth distrib. of bubbles and fracture 3—21511
Ni film, implantation induced He bubble press. and density determ. 3—8381
TeO$_2$ single crystals, Czochralski grown, gas-bubble entrapment 3—8961

bucket-brigade device arrays *see charge-coupled device circuits*

bucket-brigade devices *see charge-coupled devices*

buckling
bars, thin walled of open cross section, elastic critical loads, pre-buckling displacement influence 3—46465
brittle elastic solids, compressed, containing crack arrays, surface instability and splitting 3—32681
cholesteric liq. cryst., buckling instabilities, light scatt. and optical spectroscopy study 3—33075
circular plates of variable thickness, vibration and buckling 3—7478
column, cracked, follower and vertical loads, flutter instability 3—46466
column buckling, Engesser and modified Engesser procedures 3—7464
composite cylindrical panels, expt. investigation of instability 3—7460
composite cylindrical shells, stability under creep conditions 3—32633
composite material closed toroidal shell, stability 3—50969
composite panel buckling, comparison of numerical and experimental behaviours 3—56456
composite plates postbuckling, energy theory 3—22346
compressible elastica on elastic foundation, higher buckling loads and critical modes 3—7469
compressible elastica on elastic foundation 3—7454
cross-ply laminated plates with elastically restrained angles, postbuckling analysis 3—42161
cylinder, thin-walled, plastic torsional buckling 3—7467
cylinder clusters in axial flow, fluidelastic instability study 3—12633
cylinders, axially compressed ring stiffened, elastic buckling 3—56457
cylinders, axially compressed stringer stiffened, elastic buckling 3—27413
cylinders with elliptical cross section, vibrations and buckling calc. 3—12566
cylindrical shell, progressive plastic buckling, contact problem analysis 3—42159
cylindrical shells, nonlinear analysis 3—17832
Duffing's equation with negative stiffness, universal metric props. of approx. Poincare's map 3—56458
elastic cylinder, plane buckling mode 3—42162
elastoplastic post-buckling analysis, load path tracing creep type strategy 3—17815
embedded layer in rubber-like materials 3—9904
Engesser's buckling formulae, arguments for and against 3—7463
finite elements in nonlinear mech., conf., Stuttgart, Germany (Aug. 1981) 3—16068
glass fibre reinforced epoxy, uniaxially aligned, compressive failure and kinking under hydrostatic press. 3—29157
loads, estimation by modification of Rayleigh-Ritz method 3—7466
mechanics, modelling and analysis 3—17812
nonlinear structures, stability and postbuckling anal. 3—17839
optical fibre cable, single-mode, thermal characts. of pulse transit time delay and fibre strain 3—56320
optical loose tube fibre cables, low temp. excess loss 3—22220
PANDA—interactive program for minimum weight design of stiffened cylindrical panels and shells 3—17833
panel, cylindrical sandwich, subjected to axial compression, dynamic stability 3—50967
plastic structures, stability, anisotropic hardening and cyclic loads 3—12536
plate, buckled, flutter as example of chaotic motion of deterministic autonomous system 3—22373
plate, laminated, anisotropic buckling, transverse shear determ. effect 3—12549

buckling continued
plate structure, finite strip method for geometrically nonlinear analysis 3—56429
plate structures, prismatic, post-buckling behaviour, semianalytical method 3—17840
plates, annular, subjected to torque, buckling loads 3—32631
plates, buckled, nonlinear free vibr. with deformable loaded edges 3—50982
plates, heated rectangular, temp. depend. props., finite deflection, post-buckling behaviour 3—27414
plates, polar orthotropic annular, buckling under inplane radial pressures 3—1974
plates, rectangular, buckling, Neale plate eqns. and appls. 3—7465
plates, rib-stiffened, stability and optimal design 3—50970
postbuckling collapse of general structure 3—17834
rectangular box-shaped structures under transverse uniform compressive loading 3—50965
reduction methods for instability analysis of structures 3—17811
rings, deflection and buckling, straight and curved finite elements 3—1976
rod, elastic line, non-linear differential equation 3—27383
Roorda frame, plastic symmetry 3—42160
rotationally symmetric plastic shells, crushing anal. 3—1978
sandwich beam with outer layers of box-section, theory and model expt. 3—12524
shell, clamped thin shallow spherical, buckling under external press., initial imperfection influence 3—46464
shell, cylindrical, nonaxisymm. buckling under axial dynamic compression 3—46467
shell, cylindrical, optical method of dynamic deform. meas. 3—56508
shell, imperfect cylindrical, stability anal. from buckling pattern data 3—42164
shell, short cylindrical, buckling in pure bending, new class of solns. 3—12548
shell, thin, cutouts effect on stability, review 3—17842
shell, thin convex, with fixed simply-supported edge, nonrigidity 3—22351
shell, thin-walled, with holes, review 3—17841
shell, toroidal, stability and catastrophes 3—22352
shell collapse by ponding 3—37385
shell structures, large deflection and post-buckling anal. 3—17838
shells, aeolotropic composite, cylindrical, compressed, stability and vibrs. 3—32662
shells, circular cylindrical, antisymm. angle-ply laminated, buckling and vibr. 3—37383
shells, cylindrical, stability under creep conditions 3—32633
shells, cylindrical stiffened and unstiffened, axially loaded, limit point behaviour 3—7468
shells, imperfect, circular cylindrical, periodically supported, post-buckling dynamic behaviour 3—1977
shells, sandwich, conical, under axial compression and external press., elastic-plastic buckling 3—1975
shells, spherical, stability loss *(Ukrainian)* 3—7459
shells, stiffened composite, instability anal., bending, pre-buckling displacement 3—37382
shells of revolution, stability of nonlinear vibrs. 3—50986
slabv, elastic, axially fibre-reinforced, instability under axial loads 3—50968
steel flange beam, hot rolled, residual stresses, effect on beam stability 3—19353
steel shell, cylindrical, impulsive collapse due to explosive charge detonation 3—46468
steel structures behaviour at elevated temperatures 3—17808
storage vessel, thin-walled cylindrical, stability equation, critical fluid density 3—27412
structural design, nonlinear analysis 3—17836
strut, large elastic-plastic deform., the Plastica 3—1966
surface deflection anal. by Yoshida buckling test 3—22350
Symposium on Advances and Trends in Structural and Solid Mechanics, conf., Washington, DC, USA (Oct. 1982) 3—16067
systematic occurrence of repeated eigenvalues in structural optimization 3—12559
thin-walled structures, post-buckling large displacement anal. formulation and soln. procedure 3—17837
tube, spinning, stability and vibrations under uniform radial press. 3—37402
tubes, elliptic, nonlinear bending under normal pressure, local buckling *(German)* 3—7461
tubes, thick, circular, elast.-plastic, under lateral press., bifurcation and post-bifurcation behaviour 3—17817
Cu-Te, amorphous film, crystn., bending contours, electron microscopy study 3—2412
Se, amorphous film, crystn., bending contours, electron microscopy study 3—2412
Se-Te, amorphous film, crystn., bending contours, electron microscopy study 3—2412

buffers (chemical) *see pH*

building
see also architecture; civil engineering
cellular structures, pattern selection in a slowly varying environment 3—46520
materials for nonmagnetic building and distrib. of Earth's mag. field *(Japanese)* 3—58895

bulk density *see density*

bulk diffusion *see diffusion in solids*

burning *see combustion*

burnout *see combustion*

burst noise *see random noise*

bushes *see bushings*

bushings
TEXTOR, high current vacuum bushing for liner-heating 3—55607

business *see commerce*

BWT *see backward-wave tubes*

C invariance
CP^{n-1} model, nonlocal charge conservation, supersymmetric extension to all orders 3—45292
non-Abelian gauge field charge conjugation 3—40793
nuclear currents phenomenological study 3—45446
six-vertex model and S-matrix theory 3—21019
spin structures, self-consistent, meson amplitudes, bootstrapping, CPT invariance 3—31184

C invariance continued
symmetry violation in nucl. interactions 3—49819
$n \rightarrow p\bar{\nu}\nu(p\bar{\nu}e)$, search for charge violation in $^{87}Rb \rightarrow {}^{87m}Sr$ 3—36246
$\pi p \rightarrow l^+l^-$, polarisation distribution of quarks, perturbative QCD, weak asymmetries 3—21088
C steel *see carbon steel*
cable insulation
see also insulating oils
ethylenepropylene rubber, LOCA simulation test period effect on durability of reactor cables 3—11470
flame-resistant cables for PWR power plants with ethylene-propylene rubber and silicone elastomer insulation *(Japanese)* 3—11375
LWR electric cable insulation ignition during potential nuclear containment hydrogen burns 3—6431
polyolefins oxidative thermal stability, quality control testing by DTA 3—19502
power transmission line HV insulations measurement and testing *(French, German)* 3—27754
superconducting cables, insulation, elec. breakdown studies of supercritical He gas 3—42465
XLPE cable insulation, effect of morphology on impulse voltage breakdown 3—3646
cable jointing
mass fusion splices for high density optical fibre units 3—42048
optical fibre, flat mass splicing process for cylindrical V-grooved cables 3—42052
cable sheathing
optical fibre, nylon jacketed, with compressive strain, characts. and fabrication 3—42000
optical fibre dual-coating system 3—42047
optical fibres, tight nylon secondary coatings, processing and characterisation 3—17630
cable sheaths *see cable sheathing*
cables (electric)
see also coaxial cables; power cables; superconducting cables; telecommunication cables
microstrip input-output cable for Josephson appl., electrical props. obs. 3—16344
tester using time domain reflectometer 3—54747
CAD
see also architectural CAD; computer-aided analysis; control system CAD; interactive systems; power system CAD
achromat doublet optimisation with TI-59 calculator 3—17593
containment structive analysis, using impulse functions 3—16843
core materials, shear modulus 3—17807
fast reactor design, appls. of swelling and irradiation creep 3—31508
finite element method, interactive processor for teaching 3—25739
interference layers calc. using TI-59 calculator *(Czech)* 3—1753
lenses, prototype, automatic generation by global minimum technique 3—32437
magnetisation curves, interactive modelling for CAD 3—33929
nuclear power stations, CAD role and interconnection in engineering appl. programs 3—11363
optical design with a pocket calculator 3—1737
optical glass filters, algorithm for optimum design 3—22189
optical lens system design 3—12276
optical system, universal imaging program for the TI-59 calculator *(Czech)* 3—41956
optical system CAD *(Russian)* 3—56297
PANDA—interactive program for minimum weight design of stiffened cylindrical panels and shells 3—17833
single-pole lens as a scanning electron microscope objective 3—49514
structural design, nonlinear analysis 3—17836
Symposium on Advances and Trends in Structural and Solid Mechanics, conf., Washington, DC, USA (Oct. 1982) 3—16067
Thomson CSF extremely high power klystrons for particle accelerators 3—45724
Pb/acid batteries, improved electrodes, computerised design and evaluation 3—34685
CAD/CAM *see CAD; manufacturing computer control; manufacturing data processing*
cadmium
see also nuclei with ......
air pollution, Pb, Cb, Zn concs. in urban NW England 3—19634
atom, ground and ion states, valence electron distrib., CI calcs. 3—31958
atoms, 12.81 eV autoionising level, electron impact excitation 3—11984
bicrystals, slip deform., grain boundary sliding 3—13233
Blanca Bay, Argentina, Cu, Cd and Zn in surface sediments 3—29468
cathode arc spot movement, random walk anal., crater form., erosion rate determ. 3—27779
concentration in Amazon plume rel. to salinity 3—25103
corrosion prediction using EMF-pH diagrams 3—58276
determination by electrothermal AAS, calibration *(French)* 3—19551
elastic and relaxation properties during melting and solidification 3—39191
electron stimulated desorption of excited mol. ions, dissoc., spectra 3—43680
Lake Huron, USA, heavy metals in Saginaw Bay 3—58995
lattice vibrations, anisotropy 3—13384
metallic, EXAFS study at 26.7 keV K edge 3—47738
muonic atom, 2p and 1s state polarisation, muon helicity 3—46102
nuclear orientations of ^{109}Cd and ^{115m}Cd 3—38360
Periyar river, India, heavy metal pollution 3—39553
photoelectron spectra, evidence of satellite struct. 3—58033
pollutant elements in wastewater, anal. by DC Ar plasma emission spectroscopy 3—48220
solar cell properties, production, and materials 3—39468
thermometric fixed points for Pt resistance thermometry 3—35992
thin film, laser induced oxidation 3—42658
vacuum-arc plasma, absorpt. effects of Cd II 4416 Å line 3—13007
vapour arc, CW recombination laser action 3—41807
$AgBr:Ca^{2+}$, Cd^{2+}, resonant exciton trapping at impurity states 3—57290
AgCl:Cd, elec. cond. mechanism 3—3176
$BiI_3:Cd^{2+}$ thin films, exciton absorpt. spectrum 3—19162
Cd II spectral line emission cross section in electron+Cd^+ ion collisions 3—45889
Cd^+, electron impact excitation, cross sections laser transitions 3—32219
Cd^+, electron impact excitation, Cd II spectral line emission cross section 3—45889
cadmium continued
^{111}Cd I atoms, multipole lines, Zeeman effect, theory *(Russian)* 3—55889
Cd:He, diffusion during deform. at low temp. 3—28161
$Cd+Ar(N_2)(H_2)(CO)(CO_2)$, Cd ($^1P_1$) excitation transfer and quenching, fluoresc. obs. 3—32182
CdI, $5s^2\ {}^1S_0$-$5s5p\ {}^{1,3}P_1$ transitions, oscillator strength calcs. 3—21648
CdS-Cr_2S_3-In_2S_3, phase relationships, X-ray diffr., thermal anal., and IR spectra 3—43795
Cd(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
$GaAs_{1-x}P_x:Cd$, acceptor photoionisation, IR absorption spectra study 3—19164
Ge:Cd, deep donor centres, H plasma passivation 3—47287
He-Cd commercial gas lasers, reliability 3—17523
He-Cd II laser, upper level decay rate meas., axial mode competition at 533.7, 537.8 nm 3—37006
He-Cd II rod anode laser tube, characteristics meas. 3—7006
He-Cd laser, effect of weak axial mag. field 3—7047
He-Cd lasers, lifetime and reliability 3—1660
He-Cd lasers, oscill. and striation effects on emission charact. 3—6955
He-Cd lasers in commercial systems 3—1659
He-Cd^+ laser, electron impact excitation of Cd^+, laser transitions 3—32219
He-Cd^+ laser, white light prod. 3—27078
He-Cd^+ positive column laser, 441.6 nm emission, excitation mechanism anal. 3—22042
He-Cd^+ positive column laser discharge, Cd II lines radial profiles meas. 3—50648
^3He-^{116}Cd, high press. mixture, lasing activity at 441.6 nm 3—17487
n-$Hg_{0.8}Cd_{0.2}Te:Cd^+$, ion implantation, effect on elec. props., IR study 3—8073
$In_5Bi_3:Cd$, temp. and press. depend. of electric field gradient, TDPAC study 3—34017
InGaAsP:Cd, LPE growth and charact., doping conditions 3—42959
InGaAsP/InP:Cd lasers, LPE grown, high quantum efficiency 3—27072
InP:Cd, Cd diffusion profiles meas. with etching/Schottky contact method 3—23097
InP:Cd, Cd-diffused, Cd phosphide precipitates, TEM obs. 3—42782
InP:Cd, LPE growth and charact., doping conditions 3—42959
InP:Cd, Zn, diffusion and p-n junction form., Hall effect and EBIC study 3—18512
InSb:Cd, H ion irrad., conduction type inversion by isochronous annealing 3—43180
$NaCl:Cd^{2+}$, first stage coloration, X-irrad. dose rate depend. 3—56890
Ni/Cd accumulators, plastic-bonded NiO_x electrodes, nature of second discharge step 3—19572
Ni/Cd batteries, sealed, failure model 3—19574
Ni/Cd cells, sealed, deeply discharged, anomalous behaviour 3—19577
Ni-Cd accumulators, plastic-bonded Cd electrodes, O_2 recombination rate with various active materials 3—24573
Ni-Cd batteries with sintered plates, production and characts. *(Polish)* 3—39459
Ni-Cd cell, dendritic growth of Cd 3—53494
Ni-Cd sealed batteries from LRDE, India, production and characts. 3—48136
$Pb_{0.76}Sn_{0.24}Te:Cd$, elec. cond. and cond. relax. to equilib. value 3—3201
$Pb_{1-x}Sn_xTe:Cd$ single cryst., photosensitivity in far IR 3—18745
$Pb_{1-x}Sn_xTe:Cd$ single cryst., band gap, rel. to electrophysical props. 3—28267
$Sm_2S_3:Cd$ films, photocond. and photoEMF meas. 3—23521
cadmium alloys
see also cadmium compounds
melting mechanisms and surface structures in crystals, impurity depend. 3—33409
Ag-Cd, cubic centred high conc. solid solns., creep and stacking fault energy 3—58177
Ag-In-Cd PWR control rods, stainless steel cladded, predicted service life 3—6360
Al-Cu-Li-Mn-Cd, alloy 2020, ductility, influence of grain struct. 3—34397
AlCd, dilute alloys, electric field gradient calcs. 3—52091
Au-Cd, (hhl) habit planes in martensite growth wave models 3—47835
Au-Cd (47.5 at.%), martensitic interfaces, TEM 3—34319
Au-Cd (47.5at.%), single cryst., pseudoelasticity 3—43820
Au-Cd (75 at.%) phase transform. 3—9059
Au-Cd-Ag-Cu, Ag and Cu additions, order and quenched-in defect effects on martensitic transform. 3—43832
AuCd, martensitic transform., internal friction *(Chinese)* 3—43803
$Au_{2+x}Cd_{1-x}$, two-dimensional antiphase-domain struct., modulated struct. anal. 3—38092
Cd-Zn, directionally solidified eutectic alloy, tensile deform., metallography 3—53134
Cd-Zn, single crysts., creep, crit. resolved shear stress, conc. depend at low temps. *(Czech)* 3—14658
Cd-Zn, unidirectionally solidified eutectic alloy, compressive deform., metallography 3—53133
Cd-Zn eutectic melts, undercooled, solidification 3—4028
Cd-Zn single cryst., solid soln. hardening and CRSS 3—58125
CdMn, low temp. resist anisotropy of single cryst. spin glass systems 3—28343
CeCd, mag. and struct. phase transitions, at high press. 3—51781
Cu-Cd(Mg), dil., yield and flow stress 3—4088
In-Cd, structural phase transformations, Landau theory 3—34312
In-Cd, surface morphology rel. to phase transformations 3—29079
Li-Cd system, phase diagram, resist. and DSC meas. 3—24209
Mg-Ag-Cd, phase equilib., solubility isotherms 3—4012
Mg-Y-Zn-Cd, nature of solidification 3—39106
Pb-Cd, flux vortex and dislocation pinning *(Russian)* 3—13976
Pb-Cd binary alloy battery grids, preliminary studies 3—48133
$Pb_{96.1}Cd_{3.9}$ alloy, temp. depend. of positron annihilation at dislocations 3—38952
PrCd single crysts., elec. and thermal transport props., phase transitions 3—52112
Sn-Cd single crystals, Mossbauer effect probability, effect of lattice dynamics 3—13369
Sn-Pb-Cd ternary eutectic, crystallographic orientation relationship 3—33188
cadmium compounds
see also cadmium alloys
arachidate molecular monolayers anisotropic orientation, FT IR spectroscopy 3—38193

cadmium compounds continued
- bis(α-L-alaninato)cadmium(II) trihydrate and dehydrated, cryst. struct., X-ray powder diffr. study 3–56870
- cadmium arachidate Langmuir-Blodgett film with selectively laser excited perylene, low temp. dynamical processes 3–38945
- cadmium arachidate monolayer assembly, ellipsometry, reflection, luminesc. and Raman spectra 3–38941
- cadmium arachidate-d_{39} Langmuir-Blodgett multilayers on glass, crit. neutron reflection 3–38263
- n-$Cd_xHg_{1-x}Te$ photoconductor, carrier accumulation effects at contacts 3–28381
- n-CdSe electrodes, electrodeposition and liq. junction solar cell props. 3–9453
- magnetic interactions in clusters studied by neutron inelastic scattering 3–57527
- oxalate trihydrate, gel grown, elec. cond. and dehydration 3–33720
- photogalvanic cell using anthraquinone-2-sulfonate 3–39491
- Ag-CdO cermet contact, fabrication using ultrasound, physical and mechanical props. improvement *(Bulgarian)* 3–43843
- β''-Al_2O_3-CdO, solid electrolyte for divalent cations 3–42833
- β-Al_2O_3-Na_2O, AC cond., temp. depend. 3–23086
- As-Te-Cd thin films, struct. and optical energy gap 3–34058
- $Ba_2Cd_3Bi_4$, prod. and cryst. struct. *(German)* 3–2500
- $Ca_7Sb_{12}O_{36}F_2$, formed from cubic $KSbO_3$, cryst. struct., X-ray study *(French)* 3–2513
- Cd-As-Br system, glass form., optical and elec. props. 3–56824
- Cd-GaSb solid solutions, retrograde solubility, mechanical and optical study 3–2805
- Cd-Hg-Te and related materials, epitaxial layers, SIMS study 3–9377
- Cd-In-Te, liquidus surface building, mathematical experiment planning *(Russian)* 3–57066
- Cd-Ni-As system, reactions 3–58106
- Cd-Sn-O, thin films, reactively DC magnetron sputtered, comp. control, sheet resist. determ. 3–8978
- Cd-Te binary system, regular associated soln. model 3–7896
- $Cd_{14-x}Mn_xTe$, semimagnetic semicond., mag. excitations, Raman scatt. study 3–23936
- $CdAl_2O_4$, thermal expansion, Gruneisen parameter anal. 3–8228
- Cd_3As_2, $\alpha'\rightarrow\alpha''$ transformation mechanism 3–57078
- Cd_3As_2, diffusivity-mobility ratio in mag. field 3–43200
- Cd_3As_2, free electron term in g-factor calcs. 3–28251
- Cd_3As_2, mono- and polycryst., fundamental reflectivity spectra 3–8848
- Cd_3As_2, polymorphic transitions, thermographic study 3–57076
- Cd_3As_2, reflectivity spectra, surface roughness effects 3–8850
- Cd_3As_2 single cryst. growth by zone recrystallization 3–58044
- $Cd_3As_{2-x}P_x$, g-factor, effect of free electron terms 3–18604
- $Cd_3(As_xP_{1-x})_2$ solid solns., lasing obs. with optical pumping 3–56207
- $CdBr_2$, photodepolarisation mechanism *(Russian)* 3–3639
- $CdBr_2$:Eu, optical props. and EPR 3–3526
- $CdC_2O_4.3H_2O$ single crystals, Vickers microhardness indentation study 3–9153
- $CdCl_2$ C19 struct., rel. to CaF_2 C1 struct. 3–27909
- $CdCl_2$, molten, hypersonic vel. and compressibility 3–18394
- $CdCl_2$:Ni^{2+}, optical absorpt. and emission spectra 3–23984
- $CdCl_2(Br_2)(I_2)$, Cd 4d orbitals, high resolution HeI and HeII PES, ligand field splittings and intensity var. 3–55993
- $CdCl_2(Br_2)(I_2)$, high-resolution HeI and HeII PES valence bands 3–55992
- $CdCl_2(Br_2)(I_2)$, thin films, IR spectra 3–47723
- $CdCr_{2x}In_{2-2x}S_4$, spin glass, EPR study 3–28695
- $CdCr_2S_4$ (Se_4), lattice parameters and thermal expansion, 28 to 685°C 3–2501
- $CdCr_2S_4(Se_4)(O_4)$, ESR line width and line broadening 3–33978
- $CdCr_2Se_4$, active electron-magnon interaction 3–52432
- $CdCr_2Se_4$, carrier heating, thermal noise temp. meas. 3–28399
- $CdCr_2Se_4$, energy band struct. in atomic sphere approx. 3–57272
- $CdCr_2Se_4$, ferromag. semicond. film, delayed Barkhausen jumps and mag. struct. 3–23705
- $CdCr_2Se_4$, ferromag. semiconductor, P(Se_2)-a(CdSe) phase diagram 3–42751
- $CdCr_2Se_4$, ferromag. semicond., negative differential resistances 3–52165
- $CdCr_2Se_4$ film, synthesis, chem. composition, elec. and mag. props. 3–58050
- $CdCr_2Se_4$ mag. semicond. film, domain boundary stabilisation, Kerr effect study 3–28669
- $CdCr_2Se_4$, mag. semicond., photoluminescence spectra under laser excitation 3–43619
- $CdCr_2Se_4$, magnetic birefringence, angular, temp. and field depend. 3–19106
- $CdCr_2Se_4$, photoferromagnetic effect for local illumination 3–18970
- $CdCr_2Se_4$ single cryst., elec. cond. and magnetoresist. in alternating elec. fields 3–28361
- $CdCr_2Se_4$ vacuum deposited films, amorphous-cryst. transition 3–38257
- $CdCr_2Se_4$:Ag, impurity effect on FMR spectra 3–57784
- $CdCr_2Se_4$:Al(In)(Cu)(Ag), dislocation patterns, rel. to elec. cond., hardness and doping 3–27947
- $CdCr_2Se_4$:Ga mag. semicond., light effects on Barkhausen jumps and mag. noise 3–23708
- $CdCr_2Se_4$:In(Ag), impurity effects on carrier density and mobility, elec. cond. and Hall EMF studies 3–33810
- $CdCr_2Se_4$:In(Ag), mag. semicond., elec. cond., mag. order effects 3–28362
- $CdCr_2Se_4$:In(Ag), magnetoconductivity study 3–43210
- $CdCr_2Se_4(S_4)$, ferromagnets, EPR linewidth critical behaviour 3–23799
- $CdCr_2X_4$ (X=O,S,Se), spin-orbit interaction, bond form. effects, g-factor study 3–8462
- CdF_2, band struct., photoemission spectra study 3–38997
- CdF_2, first-order Raman spectra linewidth, temp. depend., meas. and calc. 3–3712
- CdF_2, high-temp. acoustic bond 3–46398
- CdF_2:Eu^{2+} crystal, thermal ionisation energy of deep centres from ESR data 3–38689
- CdF_2-BaF_2-ZnF_2 system glasses, prep. and optical props. *(French)* 3–18228
- $CdGa_2S_4$, connection between emission centres and intrinsic defects 3–19194
- $CdGa_2S_4$, lattice vibr. spectra, Keating model study 3–42732
- $CdGa_2S_4$:Fe(III), EPR spectra, crystal field interactions, twinning characteristics *(German)* 3–3520
- $CdGa_2Se_4$, lattice vibr. spectra, Keating model study 3–42732
- $CdGa_2Se_4$, oblique phonon Raman scatt. 3–3700

cadmium compounds continued
- $CdGeAs_2$, acoustic phonon modes from specific heat meas. 3–33371
- $CdGeAs_2$, energy band structure 3–8417
- p-$CdGeAs_2$, energy spectrum and optical absorpt. 3–23246
- $CdGeAs_2$, glass crystallisation, determ. of activation energy from thermal anal. 3–37795
- $CdGe_{1-x}Si_xAs_2$ glassy alloys, phase stability, microstruct. and glass form. 3–27855
- CdH + He(Ar), rot. energy transfer, collision cross sections 3–6767
- $Cd_{1-x}Hg_xCr_2Se_4$ solid soln., cathodolum., temp. depend. 3–3829
- CdHgTe, thin-film photoelectromag. detectors for far IR radiation 3–47382
- $Cd_{0.2}Hg_{0.8}Te$ crystal, photocond. kinetics under surface excitation *(Russian)* 3–3257
- $Cd_{0.2}Hg_{0.8}Te$, density of states distrib. in valence and cond. bands, UPS study 3–14433
- $Cd_{0.2}Hg_{0.8}Te$, free-carrier IR absorpt. spectra 3–43526
- $Cd_{0.2}Hg_{0.8}Te$, photoconductivity, acceptor impurity band 3–8533
- $Cd_{0.2}Hg_{0.8}Te$, photocond. relax., lifetime and generation-recombination noise 3–18759
- $Cd_{0.21}Hg_{0.79}Te$ crystals, non-linear refr. index changes at 175K with 10.6 μm radiation 3–1691
- $Cd_{1-x}Hg_xTe$, IR study of short-order clustering effect 3–43539
- $Cd_xHg_{1-x}Te$ crystal, deform. twinning 3–56910
- p-$CCd_xHg_{1-x}Te$ crystals, thermoelectromotive force on nonequilibrium carriers 3–8516
- n-$Cd_xHg_{1-x}Te$, discrete exciton absorpt. struct. flare-up in mag. field 3–57930
- $Cd_xHg_{1-x}Te$, elec. props., annealing effects 3–38384
- $Cd_xHg_{1-x}Te$, energy gap-refractive index interrelation 3–14238
- $Cd_xHg_{1-x}Te$, epitaxial layer struct. 3–3007
- $Cd_xHg_{1-x}Te$, local degree of imperfection, electroreflection study 3–14256
- $Cd_xHg_{1-x}Te$, MBE growth, epitaxy temp. effect on cryst. quality and elec. props. *(French)* 3–42969
- $Cd_xHg_{1-x}Te$ photodiodes, zero bias resistance area product calc. for 8-14 μm range, doping effects 3–25947
- $Cd_xHg_{1-x}Te$, reflectivity spectra as function of composition and temp. 3–34054
- p-$Cd_xHg_{1-x}Te$ solid soln., single cryst., photocond., transverse mag. field influence 3–8537
- $Cd_xHg_{1-x}Te$, surface composition fluctuation effects on optical props. 3–28823
- CdI, discharge pumped laser, 653 to 662 nm operation 3–27006
- CdI, low temp. luminescence study *(Russian)* 3–47708
- CdI_2, absorption spectra and photoconductivity *(Russian)* 3–19159
- CdI_2, polytype cryst. struct. determ. 3–27902
- CdI_2, polytype identification and struct. 3–27901
- CdI_2, polytypic growth from soln., elec. field effect on crystn. 3–37822
- CdI_2, press. effects on elec. cond. 3–47136
- CdI_2 type structures, new thr polytype notation 3–46889
- CdI_2:Eu, optical props. and EPR 3–3526
- CdI_2-type cpds., polytypes, the $\alpha\beta\gamma$-notation 3–2531
- Cd(II) complex with 1-benzoyl-2-monothiobiuret, spectrophotometric study 3–41591
- Cd(II) complexes, structure, mag. moments visible and visible spectra 3–52786
- $CdInAlS_4$, fundamental absorption edge shift under hydrostatic press. 3–19100
- $CdIn_{2-2x}Cr_{2x}S_4$, mag. diluted spinel, spin glass and ferromag. states, EPR, Mossbauer and magnetisation studies 3–23651
- $CdInGaS_4$, fundamental absorption edge shift under hydrostatic press. 3–19100
- $CdInGaS_4$, Raman scatt. at high press. 3–43546
- $CdInGaS_4$ thin films, electron diffr. study 3–51980
- $CdIn_2S_4$, cationic ordering effects on Raman vibr. spectra 3–14299
- $CdIn_2S_4$, optical absorpt. spectrum, Raman active T_{2g} mode obs. 3–34123
- $CdIn_2S_4$, phonon density of states, heat capacity, thermal expansion and compressibility calc. 3–51734
- $CdIn_2S_4$, photoelectrochemistry 3–24613
- $CdIn_2S_4$, thermal cond. and diffusivity, photoacoustic spectra 3–2686
- $CdIn_2S_4$, thermal props. and moments of phonon spectra 3–28121
- $CdIn_2S_4$, time varying temp. profile CVD growth methods 3–8948
- $Cd_2In_6Sn_3Te_5$, $Cd_6In_2SnTe_7$, RMS displacement of Sn atoms in anion sublattice, Mossbauer effect 3–34024
- $Cd_{1-x}M_xTe$, semimagnetic semicond., delocalised d-electrons, UV photoemission study 3–28967
- $(Cd_{1-x}Mn_x)_3As_2$, semimagnetic semicond., prep. cryst. struct., X-ray powder diffr. study 3–46891
- $(Cd_{1-x}Mn_x)_3As_2$, spin glass behaviour 3–57664
- $CdMnCaO_4$, X-ray study of struct. and ionic config. 3–37866
- $Cd_{1-x}Mn_xF_2$, energy levels, AES study 3–43668
- $Cd_{1-x}Mn_xS$, spin-flip Raman scatt., magnetisation, and transport meas. 3–47656
- $Cd_{0.9}Mn_{0.1}Se$, magnetisation and spin-flip Raman meas. 3–23724
- $Cd_{0.95}Mn_{0.05}Se$ crystals, Bridgman growth and elec., optical and mag. props. 3–52921
- $Cd_{1-x}Mn_xSe$, D^- levels, far IR transmission and transport studies 3–47677
- $Cd_{1-x}Mn_xSe$, mag. polaron contrib. to donor bound exciton, photoluminesc. study 3–57972
- $Cd_{1-x}Mn_xSe$, optical absorption edge, temp. and Mn content depend. 3–57874
- $Cd_{1-x}Mn_xSe$, sp.ht. and mag. susceptibility at low temp. 3–52500
- $Cd_{0.5}Mn_{0.5}Te$, semicond., effect of cryst. struct. on mag. props. 3–57723
- $Cd_{1-x}Mn_xTe$, diluted mag. semicond., Raman studies 3–14312
- $Cd_{1-x}Mn_xTe$, exciton transfer between Mn ions, photoluminesc. study 3–3796
- $Cd_{1-x}Mn_xTe$, excitons, exchange spin splitting effects, magnetoabsorption study 3–33643
- $Cd_{1-x}Mn_xTe$, fundamental absorpt. study 3–43563
- $Cd_{1-x}Mn_xTe$, mag. semicond., Raman scatt. study of mag. excitations 3–57924
- $Cd_{1-x}Mn_xTe$, paramagnet-antiferromag. transition, cluster model 3–28564
- $Cd_{1-x}Mn_xTe$, photoluminescence study 3–3800
- $Cd_{1-x}Mn_xTe$, picosecond high-resolution modulation spectroscopy of near interband resons. 3–36099
- $Cd_{1-x}Mn_xTe$, semimag. semicond., two-magnon Raman scatt. 3–28852
- $Cd_{1-x}Mn_xTe$, semimagnetic, cryst. struct. imperfections, X-ray diffr., etching and optical transmission studies 3–33194

cadmium compounds continued
$Cd_{1-x}Mn_xTe$, $x>0.4$, absorpt. edge pinning 3—14329
$Cd(NH_3)_6Cl_2$, phase transition, IR absorpt. study 3—14284
$Cd(NO_3)_2$, hydration effect on annealing of chem. radiation damage 3—39368
$Cd(NO_3)_2.nH_2O$, cryst. struct. and co-crystallisation 3—27881
$Cd_4Na(VO_4)_3$, dielec., thermal expansion and plastic deformation props. 3—38772
$Cd_2Nb_2O_7$, ferroelec. transitions and domain struct., permittivity study 3—28797
$Cd_2Nb_2O_7$, ferroelectric and electro-optical props., permittivity and $\tan\delta$ study 3—28795
$Cd_2Nb_2O_7$, phase transition, 4 to 230K, Raman scatt. and permitt. meas. 3—8821
CdO, ab initio energy bands 3—43018
CdO surface, Kr adsorption, surface homogeneity and surface hydroxyl effects 3—2957
CdO whiskers, growth and morphology 3—38273
CdO-P_2O_5 glass, phototransients investig. 3—43222
CdO-P_2O_5 glass, temp. dependence of photoconductivity 3—47383
CdO-SiO_2-Si solar cell characts. 3—39486
CdO-ZnO-P_2O_5 glasses, elec. conduction, refr. index, IR transmission spectra, dielec. const. 3—3184
CdO-ZnO-P_2O_5 glasses, photocond. band gap, comp. depend. 3—28382
CdO-ZnO-P_2O_5 glasses, elect. cond. at high and low elect. fields 3—57353
CdP_2 amorphous layers, refr. index and extinction coeff. meas. 3—3845
CdP_2:Cu(Hg)(Ga)(Bi)(As), impurity effect on elec. cond. type *(Russian)* 3—47350
Cd_3P_2, band struct., Fermi level and g-factor in mag. field 3—33634
$Cd_3(PO_4)_2$ and PO_4-H_2O interactions 3—22755
$Cd_3(P_3O_9)_2.14H_2O$, decondensation of $P_3O_9{}^{3-}$ cycles, IR vibr. spectroscopy study *(French)* 3—43525
$CdPS_3$, intercalated with amines, cryst. struct. and semiconducting props. 3—51573
$CdPS_3$:Mn II impurity centres, ESR anal. 3—52603
$CdPS_3$:Mn^{2+}, first-order phase transition, ESR and X-ray diffr. study 3—38059
$Cd_{1-x}Pb_xF_2$ mixed cryst., first order Raman scatt., two mode behaviour 3—8837
$CdPt_3O_6$, hydrothermal crystal growth 3—34210
CdS, 1.06 μm Nd:YAG laser-induced damage meas. 3—18336
CdS (Se), light diffraction by inhomogeneous transient gratings 3—17585
CdS (Se)(Te), colouring mechanism in glasses, IR, visible and UV transmission spectra 3—34122
CdS, absorpt. and stimulated emission processes, electron-phonon interaction influence 3—8852
CdS, acoustic domain injection into amorphous As_2S_3 3—2682
CdS acousto-optic tunable filter, resolution enhancement using birefr. dispersion 3—12297
CdS, acoustoconcentration effect due to bulk acoustic waves 3—18748
CdS amorphous films, photocond. 3—23428
CdS, anodes for photoelectrochemical cells, electrophoretic deposition 3—48158
CdS, B excitons, two-photon spectroscopy 3—52042
CdS, biexcitons or drop embryos in luminesc. 3—47269
CdS binder layers, photoelectric props. for image recording appl. 3—52197
CdS, Cd interstitial electron states, luminescence study 3—28306
CdS, CdSe, CdSSe, optically pumped semiconductor platelet lasers in external cavities 3—27067
CdS ceramic, X-ray luminesc. *(Russian)* 3—3874
CdS, complex dielec. function in exciton and plasma limit 3—38330
CdS, compression behaviour and high press. polymorphic transformations, X-ray diffr. study 3—46881
CdS crysts., acoustoinjection luminesc. 3—47716
CdS, deformed at low temp., luminescence 3—3812
CdS, dielectric constant, temp. and press. dependences 3—57854
CdS, dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
CdS, dispersion in exciton-transition region 3—8791
CdS, donor-acceptor luminescence depend. on elec. field *(Russian)* 3—19195
CdS, donor-acceptor recomb., ODMR study 3—14163
CdS edge photoluminescence band *(Russian)* 3—24013
CdS, electroconversion to Cu_xS for thin film solar cells 3—4294
CdS electrophotographic binder layers, degradation process 3—16435
CdS epitaxial film, lasing obs. at 492, 497 nm 3—8853
CdS, exciton reflection spectra, Brewster effect, theory and expt. *(Russian)* 3—3084
CdS, exciton transitions, two-beam interferometry study 3—43508
CdS, excitonic transmission spectra, memory effect 3—43561
CdS, extended dislocations obs. by high resolution electron microscopy 3—13227
CdS film, oxidation, mechanism and kinetics of initial stages 3—19440
CdS films, chem. bath deposited, elec. resist., Ar^+ laser annealing study 3—38498
CdS, high pressure optical absorpt., resistivity and phase transformation 3—57028
CdS, high temp. sensitisation phenomena 3—43227
CdS, highly excited, picosec. spectroscopy, free carrier-exciton system dynamics 3—38910
CdS, hot wall epitaxial growth 3—47782
CdS, ideal vacancy electronic states and band struct., Green's function calc. 3—43099
CdS, ion-bombarded layers, reflection spectra *(Russian)* 3—38889
CdS, laser irrad., structural defects, recombination radiation spectra 3—52844
CdS, laser irradiated, subthreshold defect formation, photoluminesc. and reflectivity study 3—18341
CdS lattice, characteristic temp. and mean square displacement, X-ray study 3—18421
CdS, luminesc. of high density electron-hole plasma 3—43603
CdS, many-exciton systems, boson description 3—47274
CdS multicomponent laser emitting visible radiation, electron-beam-pumped 3—37050
CdS, optical radiation excitation by acoustic waves *(Russian)* 3—3685
CdS, orange luminescence struct. 3—38897
CdS, photoacoustic effect, influence of appl. DC elec. field 3—18400
CdS, photoacoustic signal induced by pulse ruby laser 3—2685
n-CdS photoanodes in conc. aq. iodide electrolytes 3—9447
CdS, photocond., linearly polarised light depend. 3—18742

cadmium compounds continued
CdS, photoconductivity relax. under repeated illumination 3—8534
CdS photoconductor-liq. cryst. system, electro-optical props., surface pot. barriers effect 3—14258
CdS, photocurrent temp. depend. irreproducibility 3—28388
CdS, photoluminesc., edge emission depolarization under intense laser excitation 3—38887
CdS, photosensitive, dielec. dispersion and photoconductivity 3—18747
CdS piezoelectric crystals meas., by resonance-antiresonance method 3—36036
CdS, piezoelectric thin film on amorphous substrate, SAW propagation, expt. study *(French)* 3—18544
CdS, polariton energy transport and green edge luminesc. at low temps. 3—34144
CdS, possible excitonic supercond. state, theoretical studies 3—38527
CdS, radiative recomb. anisotropy in cpds. excited with unpolarised light 3—38861
CdS single cryst., high temp. conductivity relax., Cd diffusion 3—3263
n-CdS single cryst., high field DC elec. cond. 3—43189
CdS solar cell, review of progress 3—14949
CdS solar cell structs., dielectric relax. contrib. to freq. dispersion of junction admittance 3—14951
CdS solar cells, airless spray technique 3—53552
CdS, spatially disperse exciton-polariton medium, light propag. 3—47615
CdS, splitting near a surface of the $n=2$ exciton level, optical reflectance 3—47272
CdS streamer semiconductor laser, spatial, temporal and power characts. 3—37048
CdS, time resolved luminescence at high excitation 3—34138
CdS type photoconductors, electrophotographic versatility 3—20917
CdS, ultrasonic amplification under uniaxial deformation, electron-phonon interaction 3—8538
CdS, ultrasonic Lamb wave irrad., point defect form., exciton luminescence study 3—14363
CdS, vapour-grown, interface morphology and sub-grain struct. obs. 3—7935
CdS, wavevector-reversed phonon echoes due to acoustoelec. interaction 3—13863
CdS:Ag, illumination-induced diffusion, radioactive atom method 3—13550
CdS:Ag(Cu), orange luminescence struct. 3—38897
CdS:Ag(Ni), impurity diffusion, two-sample luminescence study 3—18513
CdS:Al films, transport and optical props., dopant conc. effects 3—18804
CdS:Cl, luminescence, recombination flows *(Russian)* 3—24012
CdS:Cl, press. quenched, elec. behaviour and flux penetration, supercond. at high temps. 3—47453
CdS:Cu, Cl activated phosphors, luminescent centre form., photoluminescence study 3—43606
CdS:Cu, photoacoustic spectra, using piezoelec. transducers 3—2684
CdS:Cu,Cl, quenched phosphor, isochronal annealing, photochem. meas. 3—52846
CdS:H(Zn)(In)-Cu_2S solar cell, role of impurities 3—44131
CdS:N_2, acoustic luminescence study *(Russian)* 3—24031
CdS:Na crystal, microscopic Na impurity determ. by laser cascade photoionization of atoms 3—33292
CdS:Na^+ ion irrad., ^4He backscattering orientation dip depend. *(Russian)* 3—14427
CdS:Te, low temp. photoluminescence, grinding effects 3—43583
CdS/CdTe screen printed solar cells 3—53518
CdS/Cu_2S solar cell arrays, test structures use in production, electrical parameters 3—24596
CdS/Cu_2S solar cells, sintered, having spherical grain structure, experimental confirmation of theory 3—39481
CdS/Na_2S-NaOH-S/C cell formed by chemical deposition of CdS film, temperature effects on performance 3—29398
CdS-CdSe heterojunctions, exciton effects in photo-EMF spectra 3—28430
CdS-CdTe, p-n, heterojunction, electron and hole diffusion length determ. using surface photovoltage method 3—28461
CdS-CdTe solar cell, screen-printed, fabricated on glass substrate 3—53498
CdS-Cu_2S solar cell fabrication, Cu_2S film CVD on moving CdS substrate 3—51769
CdS-Cu_2S solar cells, mechanisms and fabrication research *(Chinese)* 3—14941
CdS-Cu_2S stable thin film solar cells fabrication by inhibiting vertical junction formation 3—53548
CdS-Cu_2S thin film photovoltaic cells 3—14957
CdS-Cu_xS solar cell, heat treatment effects 3—39475
CdS-InP photoelectrochemical solar cells 3—58528
CdS-polyacetylene photovoltaic heterojunction, solar cell appls. 3—52240
CdS-SiO_2-Si, photosensitivity of semiconductor-insulator-semiconductor structures 3—33779
CdS-trivalent metal phthalocyanine heterojunction photovoltaic cells 3—39466
Cd_xS, integral area AES meas., quantitative comparison with XPS studies 3—14403
$CdSO_4$:Pr^{3+}, complexes in soln., optical absorpt. spectra and fluoresc. obs. 3—8845
n-CdS(Se) photoelectrode, time resolved photolum., surface state influence 3—38911
CdS(Se), photoluminescence and dielec. losses, vacuum annealing effects 3—52825
CdS(Se), picosec. spectroscopy of excitonic mols. and electron-hole plasma 3—38908
CdS(Se), time resolved spatial expansion of electron-hole plasma 3—38912
$CdS_{0.5}Se_{0.5}$ two photon pumped bulk semicond. laser for psec. pulse generation 3—27068
$CdS_{1-x}Se_x$, recombination emission under high excitation levels 3—43580
$CdS_{1-x}Se_x$ solid solns., localised excitons, luminesc. study 3—14345
$CdS_{1-x}Se_x$:Cu, photoconducting props., solid-state image intensifier appl. 3—52196
$CdS_{1-x}Se_x$:Cu in polystyrene binder layers, electrophotographic characts. 3—28379
$CdS_{1-x}Se_x$:Te, exciton binding energy of isolated and paired Te impurities 3—13739
$CdS_{1-y}Se_y$ waveguides, light wave diffr. by dynamic gratings 3—7159
CdS_xSe_{1-x} electrodes, photoluminescence and electroluminescence, appl. to photoelectrochem. cells 3—34153
n-CdS_xSe_{1-x} graded electrodes, electron-hole pair separation efficiency mapping, luminescent props. 3—47686

cadmium compounds continued
CdS_xSe_{1-x} multicomponent laser emitting visible radiation, electron-beam-pumped 3–37050
CdSb, melting point and sp. ht. of melt 3–51753
n-CdSb, Shubnikov-de Haas oscill. study 3–33745
p-CdSb, Shubnikov-deHaas oscills., Fermi surface topology, hole cyclotron masses, Dingle temp. determ. 3–23245
CdSb:In, diffusion and solubility of ^{114}In 3–8256
p-CdSb:In p-n junctions, LPE grown, props. *(Russian)* 3–13898
CdSb-GaSb solid solutions, retrograde solubility, mech. and optical props. 3–2805
CdSe, aged electrodeposited photoelectrodes in liq. junction solar cell, hot electron luminesc. obs. 3–29394
CdSe, anisotropic semicond., photocond. and pleochroism, polarisation sensitivity calc. for oblique illumination 3–23439
CdSe, anodes for photoelectrochemical cells, electrophoretic deposition 3–48158
CdSe, biexcitons or drop embryos in luminesc. 3–47269
n-CdSe, electro-acoustic effects 3–52204
CdSe electrodeposited coatings characts. dependence on deposition rate, application in photoelectrochemical cells 3–29400
CdSe film, Hall EMF meas. by two frequency method 3–49398
CdSe film, polymorphism, production by evaporation 3–28235
CdSe film, prep. by laser annealing, elec. and optical characts., photovoltaic appls. 3–52931
CdSe films, chem. bath deposition for photoelectrochem. solar cells 3–52983
CdSe films, one-barrier residual cond., control by O_2 adsorption induced changes in surface state density 3–38507
CdSe, luminesc. of high density electron-hole plasma 3–43603
n-CdSe, minority carrier diffusion length, photoelectrochem. determ. in aq. solvent 3–33788
CdSe, nonlinear attenuation of excitonic polariton pulses 3–38846
CdSe, photocond., linearly polarised light depend. 3–18742
CdSe piezoelectric crystals meas., by resonance-antiresonance method 3–36036
CdSe, self-diffraction of picosecond light pulses 3–34177
CdSe single cryst., high temp. conductivity relax., Cd diffusion 3–3263
CdSe, surface photovoltage meas., surface electron transitions 3–18740
CdSe thin cryst., polariton time of flight meas. 3–3085
CdSe thin film electrode electrochemical solar cells 3–48150
CdSe thin film solar cells, photovoltaic behaviour 3–53554
CdSe thin film solar cell development *(German)* 3–58514
CdSe thin films, dark current instabilities obs. 3–33808
CdSe thin films electrodeposited on Ni substrate, etched and unetched cross-sections prep. and anal. 3–28987
CdSe three-electrode photoelectrochem. storage cells, transport props. of Nafion membranes 3–24612
CdSe vacuum deposited film, photocond. props. 3–38439
CdSe:Cu, defect structure from conductivity and solubility meas. 3–33280
CdSe:La γ-irrad. films, photoconductivity and dark conductivity 3–38508
$CdSe/LiNbO_3$ acoustoelectronic memory, convolution signal storage 3–18750
CdSe(Te), crystal growth from soln. and photoluminesc. *(Japanese)* 3–39020
$CdSe_{0.65}Te_{0.35}$, chemical shift, XPS study 3–28964
$CdSe_xTe_{1-x}$ film, vacuum deposited, phase diagram, expt. and theory 3–24138
$CdSe_xTe_{1-x}$ thin films, struct. and elec. props. 3–57237
p-$CdSiAs_2$, photoluminescence, carrier density effects 3–8879
$CdSiP_2$, energy band struct., pseudopot. calc. 3–8411
$CdSnAs_2$, energy band structure 3–8417
$CdSnAs_2$, n- and p-type, carrier lifetime, optical energy gap, photocond. study 3–18743
$CdSnAs_2$ p-n diode, photosensitivity polarisation anisotropy and photopleochroism meas. 3–3310
Cd_2SnO_4 films for solar energy utilisation, materials chemistry and optical props. 3–53577
Cd_2SnO_4 thin films, reactively DC magnetron plasmatron sputtered, press. ratio 3–8977
Cd_2SnO_4 thin films obtained by DC reactive sputtering of Cd-Sn alloys 3–52284
$CdSnP_2$, lattice consts. and thermal expansion, high temp. X-ray study 3–18483
$CdSnP_2$-SiO(SiO_2, Sb_2S_3)-Al structures, props. 3–23498
CdTal crystals, verticle unseeded vapour growth, high resistivity 3–34206
CdTe, 1.06 μm Nd:YAG laser-induced damage meas. 3–18336
CdTe, bare and covered, decomposition during annealing in vacuum 3–51768
CdTe, carrier lifetime determ., dynamic phase grating method 3–18720
CdTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3–28248
CdTe crystal, deform. twinning 3–56910
CdTe, cyclotron resonance of electrons and holes, optical detection 3–18603
CdTe, dislocation structs. and motion, TEM study 3–46943
CdTe, edge luminesc. under high-power optical excitation 3–38901
CdTe, exciton diffusion, reson. self-absorpt., luminesc. spectrum profiles 3–19189
CdTe Fabry-Perot type light modulator, 10.6 μm *(Japanese)* 3–50750
CdTe film, CND on foreign substrates and minority carrier diffusion length meas. 3–43746
CdTe film, electron and hole diffusion length determ. using surface photovoltage method 3–28461
CdTe film, prep. by laser annealing, elec. and optical characts., photovoltaic appls. 3–52931
CdTe films, large grain, vacuum evaporation on Sb-Bi alloy coated Ta for solar cell appl. 3–24580
CdTe films, MBE growth on sapphire, X-ray diffr. and VV reflectivity studies 3–43735
CdTe films obliquely deposited in vac., anomalous photovoltaic effect 3–57381
CdTe, fundamental optical functions and relectivity spectra *(Russian)* 3–47618
CdTe heteroepitaxial film, electron beam polishing technique 3–57198
CdTe, hot electron diffusion, Monte Carlo calc. 3–47354
CdTe, hot wall epitaxial growth 3–47782
CdTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3–33441

cadmium compounds continued
CdTe laser material, laser-induced damage and two-photon absorpt. meas. 3–8091
n-CdTe, minority carrier diffusion length, photoelectrochem. determ. in aq. solvent 3–33788
CdTe p-n homojunction, electron and hole diffusion length determ. using surface photovoltage method 3–28461
CdTe, shallow donor photoionisation cross section, photoconductivity spectra 3–23433
CdTe shallow p^+nn^+ solar cells, fabrication and photovoltaic props. 3–58535
CdTe single cryst., exciton-phonon bound state, detection by photocond. 3–8423
CdTe single crystal film deposition on unoriented surfaces by vacuum phase laser epitaxy 3–52948
CdTe single crysts., streamer discharges 3–8868
CdTe solar cells, thin film, review 3–44124
p-CdTe solar cells *(German)* 3–58510
CdTe, surface oxidation, XPS study, appl. to Cr-CdTe junction 3–43282
CdTe, thin film photovoltaic technologies, review 3–9441
CdTe thin films, hole effective masses ratio determ. from optical transition 3–43651
CdTe thin films, obliquely deposited, anomalous photovoltaic effect *(Japanese)* 3–47386
CdTe:Ag (Cu), excited states, photoluminescence and IR absorption study 3–8450
CdTe:Cu(Li), impurity distrib., spectrally resolved cathodoluminesc. in SEM 3–43636
CdTe:Ge, deep impurity centre ionisation 3–28304
CdTe:Ge, impurity states and carrier recombination *(Russian)* 3–52078
CdTe:In, diffusion and solubility 3–33502
CdTe:In, solution-grown, cathodoluminesc., effect of Cd-vapour and Te-vapour heat treatments 3–3826
CdTe:In(Cl), ion implanted, heat treated, defect reactions, cathodolum. and pulse laser annealing studies 3–56932
CdTe:Li, localised vibr. modes and defects, IR absorpt. study 3–2720
CdTe:Mn, current carrier mobility 3–43182
CdTe/CuAu low resistance elec. contact, vacuum deposition prep. 3–18783
$CdTe/Hg_{0.8}Cd_{0.2}Te$ (111) system, laser annealing effects, electrolyte electrorefl. study 3–14252
CdTe/HgTe system, interdiffusion meas. 3–2890
n-$CdTe/In_{2-x}Sn_xO_{3-y}$ thin film solar cell 3–53555
CdTe-CdHgTe heterojunctions with common anion 3–33785
CdTe-HgCdTe photodiodes, In diffused, I-V and C-V characts., minority carrier diffusion length 3–25946
CdTe-HgTe multilayers, MBE growth, surface studies 3–8981
CdTe-InSb heterostruct., MBE growth and InSb surface passivation appl. 3–39037
CdTe-InSb(PbTe) heteroepitaxial structs. deposition on unoriented surfaces by vacuum phase laser epitaxy 3–52948
CdTe-NH_4Br gas mixture, diffusion mass transfer, one-dimens. model 3–2161
CdTe(Cl), portable γ-sensitive detector, collimation and spatial props. for biotelemetry 3–58783
Cd_3TeO_5, cryst. struct. study, compared to Ca_3TeO_6 *(German)* 3–2493
$CdTe_xSe_{1-x}$ film, prep. by laser annealing, elec. and optical characts., photovoltaic appls. 3–52931
$CdTiO_3$, soft X-ray emission spectra *(Russian)* 3–24059
$CdTl_eTe_4$:Ag, 77-650K 3–8517
$CdY_4Mo_3O_{16}$, cryst. struct., X-ray diffr. study 3–2483
$Cd_xZn_yMn_zTe$, semimagnetic semicond., spin glass transition, ESR study 3–33970
$Cd_{1-x}Zn_xS$-liq. junction cells, optical props., impurity content, surface states, film composition, photo response curves 3–8787
$Cd_{1-x}Zn_xS$, solid solution alloyed films form. by chemical bath deposition, growth and struct. 3–9000
$Cd_{1-x}Zn_xS$/p-GaAs heterojunction, trap states in space-charge region, AC admittance study 3–23470
$Cd.NH_3^*$ gas phase, emission kinetics 3–46017
Cds, dislocation structs. and motion, TEM study 3–46943
CrS-CdS heterojunctions preparation by electrochemical treatment of polycrystalline CdS, for solar cells 3–43270
$CsNi_{1-x}Cd_xFe_3$, cryst. chemistry and trimeric mag. interactions, neutron diffr. study 3–3415
$CuInSe_2$-CdS thin films solar cell, p-i-n heterojunction model 3–29385
$Cu_2S/(Zn,Cd)S$ heterojunction solar cells, chemiplated, comp. depth profiles meas. 3–53540
$Cu_2S/Cd_{1-x}Zn_xS$ solar cells prepared by solution reaction method, junction geometry 3–58505
Cu_2S/CdS solar cells prepared by solution reaction method, junction geometry 3–58505
Cu_2S-CdS, solar cells, dry form., X-ray diffr. obs. 3–48155
Cu_2S-CdS solar cells, electrochem. prep. and conditioning of Cu_2S 3–53553
Cu_2S-CdS system, phase diagram 3–58107
Cu_2S-$Zn_xCd_{1-x}S$ heterojunctions electrical and photoelectric properties, application in solar cells 3–43269
Cu_xS-$Cd_{1-y}Zn_yS$-CdS evaporated thin film solar cells 3–53550
Cu_xS-CdS heterojunctions, evaporation and sputtering prep., solar cell characts. 3–53551
Cu_xS-CdS solar cells, assessment using cathodoluminesc. 3–58527
$Cu_{2-x}Te$-CdS heterojunctions preparation by electrochemical treatment of polycrystalline CdS, for solar cells 3–43270
(Hg,Cd)Te MIS devices, impedance characts., effect of crystal defects 3–47431
$Hg_{1-x}Cd_xSe$, g-factor, effect of free electron terms 3–18604
HgCdTe, directionally solidified, one-dimens. analysis of segregation 3–33157
HgCdTe, LPE growth using Hg pressure differential 3–43764
HgCdTe photodiode, blackbody heterodyne receiver for noise equiv. power meas. and photodetector characterisation 3–393
HgCdTe photodiodes fibre optic communication appls. 3–32506
n-$Hg_{0.8}Cd_{0.2}Te$, ion implanted, elec. props., IR reflectivity diagnostic technique 3–3713
n-$Hg_{0.8}Cd_{0.2}Te$, LPE growth for photoconductivity-type IR detector 3–52979
n-$Hg_{0.8}Cd_{0.2}Te$ layers, LPE growth, IR detector appls. 3–34245
n-$Hg_{0.8}Cd_{0.2}Te:Al^+(Ga^+)$, ion implanted, IR refl. study 3–18327
$Hg_{0.8}Cd_{0.2}Te$:I, doping behaviour, single donor sites, Hall effect studies 3–18324

cadmium compounds continued
n-$Hg_{0.8}Cd_{0.2}Te:Mg^+(Zn^+)(Cd^+)$, ion implantation, effect on elec. props., IR refl. 3−8073
$Hg_{0.8}Cd_{0.2}Te:P$, P incorporation during Hg vapour anneal, elec. characterisation 3−51636
$Hg_{1-x}Cd_xTe$ biased MIS capacitor, surface pot. relax. 3−38456
$Hg_{1-x}Cd_xTe$, cleaved, stress-mediated Hg migration, photoemission and electrolyte electroreflectance study 3−47195
$Hg_{1-x}Cd_xTe$, density of states, virtual cryst. approx. breakdown, UPS and CPA study 3−8389
p-$Hg_{1-x}Cd_xTe$, electron irrad., effect on carrier props., isochronal annealing study 3−33303
$Hg_{1-x}Cd_xTe$, energy gap vs. comp. and temp. 3−13719
$Hg_{1-x}Cd_xTe$ film, LPE growth modes 3−29020
$Hg_{1-x}Cd_xTe$, g-factor, effect of free electron terms 3−18604
$Hg_{1-x}Cd_xTe$, IR reflection spectra, coupled subband-phonon resonances 3−28861
$Hg_{1-x}Cd_xTe$, intrinsic carrier conc. calc. 3−52172
$Hg_{1-x}Cd_xTe$, isothermal VPE under controlled Hg vapour press. and elec. props. 3−34242
$Hg_{1-x}Cd_xTe$, LPE growth and elec. props. 3−18577
$Hg_{1-x}Cd_xTe$, laser excited, electron mobility meas. 3−52178
$Hg_{1-x}Cd_xTe$, low temp. metal saturation 3−18467
$Hg_{1-x}Cd_xTe$ MIS structs., capacitance transient anal. 3−47432
$Hg_{1-x}Cd_xTe$ p-n junctions, field ionisation of deep levels, theory 3−38467
$Hg_{1-x}Cd_xTe$, pure and ion implanted, laser annealed, Hall, cond. and C-V meas. 3−28347
$Hg_{1-x}Cd_xTe$, VPE by chem. vapour transport 3−43749
$Hg_{1-x}Cd_xTe:B^+$, implantation damage, thermal pulse annealing, expt. study 3−8070
$Hg_{1-x}Cd_xTe$-Al interface formation, local chem. comp. and Schottky barrier height, photoemission study 3−28220
p-$Hg_{1-x}Cd_xTe$-Al_2O_3-Pb, tunnel cond. oscills. in mag. field 3−3330
$Hg_{1-x}Te$, electronic struct., CPA and tight-binding calc. 3−43016
InSe-$Cd_{0.2}Hg_{0.8}Te$ heterojunctions, elec. characts. 3−28429
$In_{2-x}Sn_xO_{3-y}$-Cdte sprayed solar cells, optical and elec. characts. 3−58538
Li_2O-CdO-P_2O_5 glass, synthesis and struct. study 3−2422
$Mg_xCd_{1-x}Se$ mixed crysts., reson. Raman scatt. 3−8829
$Mn_xCd_{1-x}Se$, electroreflectance spectra, 1.2 to 2.7 eV 3−57887
$Mn_xCd_{1-x}Te$, one-phonon and two-phonon states interf. caused by anharmonicity, Raman study 3−28866
$(NH_4)_2Cd_2(SO_4)_3$, vibr. spectra and phase transitions 3−23940
NaBr-KBr-$CdBr_2$ system, melting diagram, comp. and temps. of crystn. *(Russian)* 3−47092
Na_2CdCl_4, Δ_fG° meas. in galvanic cell, 548 to 668K 3−34644
$Pb_{1-x}Cd_xSe$ diode lasers, p-n junctions, EBIC mode SEM study 3−17529
PbF_2-CdF_2, solid solutions, superionic, elec. props. 3−13526
PbSe-CdS, phase equilibria 3−9040
SnTe-CdTe p-n junctions, photovoltaic effect, solar cell appls. 3−57391
$(TbErCd)_3Fe_5O_{12}$ crystals, multiplet mag. domains, Faraday effect study 3−33924
$Tl_2Cd_2(SO_4)_3$, vibr. spectra and phase transitions 3−23940
$(YGdTm)_3(FeGa)_5O_{12}$ epitaxial films, elastic stresses effect on mag. props. 3−52575
$Zn_{1-x}Cd_xS$, single crystal growth by iodine transport 3−14450
$Zn_xCd_{1-x}S$ epitaxial layer deposition and props. on GaAs 3−43761
$Zn_xCd_{1-x}S$, mechanoluminescence and high press. photoluminescence 3−57985
$Zn_xCd_{1-x}S$ thin film photovoltaic cells 3−14957
$Zn_xCd_{1-x}S:Te$, exciton binding energy of isolated and paired Te impurities 3−13739
n-$Zn_xCd_{1-x}S$/p-Si heterojunction solar cells, form. and behaviour optimisation under various heat treatments 3−9440
$Zn_xCd_{1-x}Se$, phonon mode anharmonic coupling, Raman scatt. study 3−14298
$Zn_xCd_{1-x}SnP_2$, LPE growth on InP and elec. props. meas. 3−19291

CAE *see CAD; manufacturing computer control*

caesium
see also nuclei with ......
6S-7S transition in electric field, parity violation 3−11067
adsorbed layer on Mo(111), electronic struct., surface plasmons, EELS and UPS study 3−28404
adsorbed on Si, conduction band density of states, secondary electron emission study 3−24067
American coots inhabiting a nuclear reactor cooling reservoir, 4-year declines of radioactive Cs concs. 3−4658
atom, 7S-nP transitions, optogalvanic detect. 3−36713
atom, binding energy, Dirac-Fock calcs., XPS study 3−32017
atom, core exchange effects, SCF spin density calcs. 3−55833
atom, electron scatt., shape reson. obs., low energy total cross sections 3−11978
atom, In Ar matrix, excited states laser excitation 3−36711
atom, intra-Doppler resonances in selective refl. at low press. 3−6580
atom, $M_{4,5}N_{4,5}N_{4,5}$ Auger energy shift study in free CsI mol. 3−45911
atom, photoionisation of outermost closed shell 3−21735
atom, radiative props. of very excited atoms obs. 3−11726
atom flux from oxidised W, electron stimulated desorption 3−2982
atomic, beam freq. standard based on Raman induced Ramsey reson., light shift evaluation 3−56277
atomic E1 and E2 radiation interf. detect. 3−21700
atomic energy levels, fine struct. intervals, relativistic many-body calcs. 3−50324
atoms, $6S \rightarrow 7S$ scalar to vector polarisability ratio meas. 3−50537
atoms, hyperfine struct. meas. by laser beams 3−32232
atoms, multiphoton ionisation 3−11765
atoms, oscillator strengths, atomic cone polarisation influence on multiphoton processes 3−41541
atoms, Rydberg states, double-reson. expt. in millimeter wave domain, quantum defects, fine and hyperfine-struct. 3−11728
Baltic Sea, ^{137}Cs and ^{90}Sr radionuclide concs. 3−15491
BWR and PWR cement solidified bead resins, Cs leaching 3−6309
CANDU fuel, I, Cs, Te conc. in postulated LOCA 3−45602
colloids in additively coloured CsF, annealing, IR spectra, precip. and ripening obs. 3−28881
discharge, K mol. ion prod., temp. effect on prod. rate 3−51335
electronic s-d transition at high press., interband optical absorpt. study 3−28876
electronic transitions, $s \rightarrow d$ and $p \rightarrow d$, at high press., systematics 3−13700
electronic transitions under high press., X-ray diffr. study 3−27891

caesium continued
expanded liquid, enhanced paramag. and spin fluctuations, ^{133}Cs NMR meas. 3−47472
Fermi surfaces, press. depend., de Haas-van Alphen study 3−42997
film, optical absorption study, band struct. 3−43653
foil, electronic stopping power for 50-230 keV D^+ and He^+ 3−28019
frequency standard, optically pumped fountain design with 10^{-15} accuracy 3−10805
frequency standard, Rhode & Schwartz XSC standard *(French)* 3−54717
isostructural phase transition under high pressure 3−47258
liquid, expanded, metal-nonmetal transition 3−43022
liquid, ion-ion effect potential at melting point 3−37769
liquid, struct. anal. 3−33071
liquid, struct. param. temp. depend. 3−51473
liquid, surface tension, ion density profiles, density functional calc. 3−42886
liquid-vapour interface, density profile, X-ray reflectivity 3−47094
melting curve, occurrence of maxima 3−47091
molecule, $X^1\Sigma_g^+$ state, GVB CI pot. curves 3−6547
molecule, $X^1\Sigma_g^+$ state, pot. energy curve, MC SCF CI calcs. 3−6546
monolayer, total energy calc. method 3−13756
oxidised adsorbed layer on Ti, emission props. and thermal stability *(Russian)* 3−23187
plasma, recombination, excited state population 3−27647
radioactive ^{137}Cs removal from reactor waste water using $Zr(HPO_4)_2$ 3−6318
radioactive ions, implantation into solid materials 3−46976
radioactive waste discharge control in Irish Sea, ICRP-26 in practice 3−17081
solid and liq., thermal cond., elec. cond. and thermoelec. power 3−47329
solute adsorption at container walls in liq. Na, linear response theory 3−33540
sorption on granite, for radwaste underground leak retardation 3−45589
thermionic converter electrode, O-Cs film emission-adsorpt. props., O chem. state effects 3−34707
thermodesorption on Sm films on W substrates, lifetime depend. on film thickness 3−42931
vaporisation, thermodynamic characts. 3−8179
vapour, conversion of 3 μm IR radiation 3−27161
vapour, D_2-line Doppler-free spectrum, freq. stabilisation of GaAlAs laser 3−37037
vapour, saturated, for MHD generators 3−51392
water pollution (^{137}Cs and ^{90}Sr) of Dardanelle Reservoir, Arkansas, USA 3−48201
Ba/Rb/Cs relative abundance in Earth's mantle 3−48520
$^{134,137}Cs$, in intertidal sediments from S Scotland, meas. 3−4415
Cs IV, $5s^25p^4$-$5s5p^5$ transitions 3−50333
Cs^+, amplification factors of a particle multiplier for singly charged alkali ions 3−40727
Cs^+ collisions, charge transfer and ionisation 3−21888
Cs^+, inverted spherical ioniser sputter ion source 3−45731
Cs^+ ion source, based on surface ionisation, for ion-photon emission 3−49499
Cs^+, Rydberg spectra, correl., term depend. and autoionis. 3−21733
Cs^+ sputtered ions, electron tunnelling 3−34190
Cs^{+1} beam diagnostics, electron beam probe for charge neutralisation studies 3−31861
Cs-Ar, inhomogeneous discharge struct. in MHD generator simulation 3−12982
Cs-Ba diode, large-amplitude current oscills. 3−51400
Cs-graphite intercalate, lattice dynamical model 3−13379
$Cs+{}^{129}Xe$, ^{129}Xe spin relax. by exchange interaction 3−46089
Cs+Ag, L-shell excitation, X-ray emission 3−32181
$Cs+D_2$, reaction rate meas. method 3−48066
$Cs+H^+$, electron capture from ground and excited states, mol. calcs. 3−26816
Cs+H(D), electron loss and capture cross section meas. 3−6779
Cs+He, intramultiplet mixing, quantum calcs. 3−21853
$Cs+Na(3^2P_{1/2})$, fine struct. transition cross sections, Na fluoresc. obs. 3−1469
$Cs+O_2(NO)$, ion-pair formation, state-to-state total cross section 3−17368
Cs^++inert gas, pot. determ. using total cross-section meas. 3−56032
Cs_2^+, pot. curves calc. using semi-empirical pseudopot. method 3−31948
Cs_2-Cs_2Kr-CsKr, photolysis, Cs(5 ^2D) prod., spectra 3−24516
Cs_3, force consts., semi-empirical valence bond pot. energy surface 3−21645
^ACs, A=134, 137, metallic fission products in HTGR, diffusion in graphitic fuel elements 3−21414
^{130}Cs, radiation adsorbed dose estimate for positron emission tomography 3−48389
^{133}Cs, optical pumping efficiency by D_1 and D_2 lines, relax. breaking of hyperfine coupling in excited state 3−21729
^{133}Cs, optically polarised, nonstationary mag. reson. signals obs. 3−1289
^{137}Cs, activity levels in marine species caught in Malaysian waters 3−44335
^{137}Cs γ-sources and irradiation tech., nuclear waste by-product 3−21390
^{137}Cs, in stream channels and banks of Los Alamos liq. effluent-receiving areas 3−29463
^{137}Cs, ingested, imprecision in dose estimates due to variability in human biological characts. 3−39718
^{137}Cs, pollution of West Cumbria soils from Irish Sea, Windscale origin 3−9501
^{137}Cs resuspension 3−29475
^{137}Cs, small spherical sources, mech. damage in a remote after loading brachytherapy unit 3−34966
^{137}Cs, whole body counting, in people living around Nevada test site 3−44330
GaAs-O-Cs photocathode, (110) surface electronic struct., photoelectron spectra study 3−52892
He-Cs VUV and soft X-ray lasing based on charge-exchange mechanisms 3−12119
$Sc+H^+$, charge transfer excitation, Lyman-alpha emission 3−41674
SiO_2, vitreous, diffusion of Cs^+, Rb^+ and K^+ 3−28156
Xe-Cs laser, amplification by solar radiation 3−27017
ZrC_xO_y-Cs systems, work function 3−8584

caesium alloys
metal-insulator transitions 3−57284
Au-Cs melts, short-range ionic correls., neutron diffr. study 3−2381

caesium alloys continued
- Cs-Au, liq. alloys, showing metal non-metal transition, NMR studies 3–3583
- Cs-Sb, liq. alloys, showing metal non-metal transition, NMR studies 3–3583
- Cs-Sb liq. alloys, metal-nonmetal transition and bonding changes, NMR study 3–28723
- Cs-Sb liquid alloy, struct., neutron diffr. expt. 3–56809
- KCs, press. depend. of elec. cond. and thermopower 3–13798
- K_2Cs, critical point at 258K 3–38025
- Na-Cs, liquid, thermodynamic props. meas. 3–22762
- Na-Cs, liquid-vapour interface struct., Monte Carlo simulation 3–23024
- $Na_{0.85}Cs_{0.15}$, liq., interchange energy, small angle X-ray diffr. study 3–56807

caesium clocks *see atomic clocks*

caesium compounds
- *see also caesium alloys*
- halides, cryst. binding and Gruneisen parameter 3–13157
- halides, mixed lattice disorder, defect energies study 3–13220
- halides, self trapped exciton and V_k centre, small polaron model 3–56897
- intercalated in graphite, nonhexagonal superlattice observation, STEM study 3–42586
- magnetic interactions in clusters studied by neutron inelastic scattering 3–57527
- TCNQ salt, Cs_2TCNQ_3, photoconductivity meas. for 3.39 μm 3–23438
- zeolite, enhanced thermionic emission of positive Cs ions 3–3910
- A-zeolites, tetrahedrally coordinated Cu^{2+} ion, EPR and electron spin echo studies 3–38686
- C_8Cs, intercalation cpd., cond. bands, low energy photoelectron spectroscopy study 3–28968
- $CSO(^2\Sigma^+)$, ground state symmetry, ab initio CI calcs. 3–6541
- Cs_2-Cs_2Kr-CsKr, photolysis, Cs(5 ^{2}D) prod., spectra 3–24516
- $CsAlSiO_4$, nuclear waste immobilisation, possible host, alteration in hydrothermal fluids 3–41116
- $CsAlSi_2O_6$, leucite-type cpds., heat capacity and phase transition 3–8218
- $CsBO_2$, mol. struct., electron diffr. obs. 3–21911
- $CsBa_2(N_3)_5$, cryst. struct., X-ray diffr. study *(German)* 3–2526
- Cs_3Bi_2 $(Sb_2)Cl_9$, luminescence props. and α-β transformation 3–47692
- $Cs_3Bi_2Br_9$, optical props., 2 to 10 eV, and photocond. meas. 3–43560
- $Cs_5Bi(MoO_4)_4$, cryst. struct., X-ray anal. 3–33218
- CsBr, anion and cation exciton decay into anion and cation defects 3–3083
- CsBr, excitons, luminesc., self-localisation, and decay to defects 3–38875
- CsBr, low temp. plasticity and dislocation motion inertial effect 3–42698
- CsC_{24} intercalation cpd., stage 2, orientational in-plane ordering and phonon dispersion 3–56862
- CsC_8, graphite intercalation cpd., layer-bending modes, neutron scatt. study 3–22999
- CsCN, density functional theory 3–2497
- CsCN, mol. motion, rot. correl. times, ^{14}N NMR 3–43444
- $CsCOBr_3(Cl_3)$ quasi-1-D Ising antiferromag., spin wave response, neutron scatt. study 3–38606
- $CsCaCl_3$:Gd^{3+}, paramagnetic resonance and displacive transitions 3–18987
- $CsCaCl_3$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3–43629
- $CsCaCl_3$:Sn^{2+} crystals, luminesc. props. 3–19183
- CsCl, binding energy, Dirac-Fock calcs., XPS study 3–32017
- CsCl, X-ray emission and absorption spectra, rel. to bond ionicity 3–58006
- CsCl:Ag^+, F-H centre production under light irrad. 3–56896
- CsCl-AgCl, fused salt conc. cells, transference transport numbers 3–47137
- CsCl+K^+ collisions, rot. energy transfer distrib. and classical differential cross sections in CPST limit 3–32171
- CsCl(Br)(I), thermal cond. and heat capacity 3–2902
- $CsClO_4$, high and low temp. phases, IR and Raman study *(German)* 3–34110
- $CsCoBr_3$, Raman scatt. from magnons and excitons 3–28853
- Cs_3CoBr_5, $CoBr_4{}^{2-}$ ion spin density and bonding, magnetic structure factors, polarised neutron diffraction study 3–8651
- $CsCoBr_3(Cl_3)$, solitons, inelastic neutron scatt. studies 3–57572
- $CsCoCl_3$, one-dimensional magnet, mag. excitations, ESR study 3–57752
- Cs_2CoCl_4, one-dimensional XY antiferromag. chains with spin frustration, neutron scatt. study 3–57534
- $Cs_2(CoCl_4)$, X-ray K absorpt. edge struct. of ligand Cl ion 3–57997
- Cs_3CoCl_5, $CoCl_4{}^{2-}$ ion spin density and bonding, polarised neutron diffraction data, HF calc. or magnetic structure factors 3–8650
- $CsCo_{1-x}Mg_xCl_3$, quasi-one-dimens. Ising diluted antiferromag., short- and long-range order 3–43383
- $Cs_3Cr_2Br_9$, Cr^{3+} ($^4A_2 \times {}^2T_1$) exchange-coupled excited states, pair spectra 3–52774
- $Cs_2CrCl_5.4H_2O$, mag. susceptibility, exchange and cryst. field effects 3–52426
- $CsCrP_2O_7$, crystalline struct. 3–51561
- $CsCuCl_3$, EPR line broadening, cooperative Jahn-Teller effect 3–52610
- CsD_2AsO_4 crystal, frequency doubling of Nd:YAG laser 3–27147
- CsD_2PO_4, ferroelec., sp. ht. study 3–19077
- CsD_2PO_4, interchain inverse correl. length, anisotropic three-dimens. Ising model 3–38778
- CsD_2PO_4 single cryst., vibr. IR and Raman spectra 3–57907
- $CsEr(PO_3)_4$ structural type IV crysts. 3–56853
- CsF, additively coloured, annealed, CsF, Cs colloid prod., IR spectra, precip. and ripening obs. 3–28881
- CsF, aq. soln., struct., mol. dynamics simulation 3–46824
- CsF, F'-centres, form. and bleaching characts., optical props. 3–2551
- CsF-$ErF_3(YbF_3)$ systems, phase diagrams and X-ray powder data *(French)* 3–19330
- $CsFeCl_3$:$2H_2O$, nuclear spin-lattice relax. study 3–52658
- Cs_3FeCl_5, Raman, polarised absorption, and magnetic circular dichroism spectra 3–28846
- $CsFeCl_3.2D_2O$, Ising chain systems, mag. struct. and relax. phenomena, neutron diffr. studies 3–57537
- $Cs_2FeCl_5.H_2O$, Mossbauer study of hyperfine field variation 3–57826
- $Cs_2FeF_5.H_2O$, hydrothermal synthesis, cryst. struct., mag. props. 3–33220
- $CsFeS_2$, quadrupolar and mag. hyperfine anisotropy, Mossbauer study 3–38738
- $Cs_{10}Ga_6Se_{14}$, centrosymmetric crystal, X-ray crystallography using expt. phases with direct method 3–33191

caesium compounds continued
- $Cs_{10}Ga_6Se_{14}$, structural anal. from Bragg reflex. phases *(German)* 3–51447
- $Cs_3Gd_2Br_9$, mag. behaviour of Gd^{3+}-Gd^{3+} pair *(French)* 3–23703
- Cs_2GeF_6, optical props. 3–57871
- CsH particles, laser-produced from Cs-H_2 vapour, size distrib., light scatt. study 3–22804
- CsH, struct. transition and phase diagram, vol. press. depend. study 3–38051
- CsH^+, pot. curves calc. using semi-empirical pseudopot. method 3–31948
- CsH_2AsO_4, gamma-ray irrad. and annealed, temp. depend. of dielec. props. 3–2607
- $CsH_{2(1-x)}D_{2x}PO_4$, quasi-one-dimens. ferroelectric, static dielec. props., deuteration effects obs. 3–19075
- $CsH_{2(1-x)}D_{2x}PO_4$, ferroelectric, dynamic dielec. props., deuteration effects obs. 3–19076
- CsH_2PO_4, ferroelec., sp. ht. study 3–19077
- CsH_2PO_4, polycryst., IR spectra of paraelec. and ferroelec. phases 3–3729
- CsH_2PO_4 quasi-1D ferroelec., permittivity and relax., Ising model study 3–23856
- CsH_2PO_4 single cryst., vibr. IR and Raman spectra 3–57907
- CsHe, pseudopot. mol. struct. calcs. 3–21637
- CsI deposition photocathodes in X-ray imaging microchannel plate detectors 3–25334
- CsI opaque photocathodes with channel electron multiplier arrays, quantum efficiency in VUV 3–30145
- CsI, phonon force models, surfaces near degeneracy 3–13363
- CsI, plasticity, flow stress and activation vol., temp. depend. 3–37986
- CsI, soft X-ray photocathodes characterisation 3–45764
- CsI:He, diffusion during deform. at low temp. 3–28161
- CsI:In, Tl, optical gain meas., amplified spontaneous emission study 3–23974
- CsI:Na scintillation counter, hot plasma X-ray diagnostics appl., performance obs. 3–45254
- CsI:Tl scintillation counter, hot plasma X-ray diagnostics appl., performance obs. 3–45254
- $(CsI)_nCs^+$ cluster ions, time-of-light mass spectrometric obs. 3–32260
- CsI(Na) scintillator, cathodoluminesc. and thermoluminesc. meas. *(Russian)* 3–3828
- $Cs_xK_{1-x}C_8$ intercalation cpd., electronic struct., configuration propagator theory 3–38300
- $Cs_{1-x}K_xDy(MoO_4)_2$ and $Cs_{1-x}Rb_xDy(MoO_4)_2$, layer crystals, phase transition, permittivity study 3–18451
- $Cs_2KFe(CN)_6$, low-spin 3d^5 cpd., polarised neutron diffr. and spin density 3–52406
- $CsLiMoO_4$, ferroelec., elastic, dielec., and structural props. 3–19084
- $CsLiSO_4$, ferroelastic phase transition, piezo-optical study 3–19107
- $CsLiWO_4$, ferroelec. phase transitions, calorimetric study 3–38773
- $CsMgCl_3$:V^{2+}, single cryst. absorpt. and emission spectra 3–19173
- $CsMnCl_3$ crystals, antiferromag., exciton migration, luminesc. and excitation spectra *(Russian)* 3–3073
- $CsMnCl_3.ZH_2O$ and deuterated cpd., isotope effects in multiphonon relax. 3–38826
- $CsMnCl_3.2H_2O$, 1-D antiferromag. system, EPR and spin dynamics 3–57761
- $CsMnCl_3.2H_2O$, low dimensional antiferromags., EPR study *(Russian)* 3–3515
- $CsMnF_3$, antiferromag., exciton motion *(Russian)* 3–3073
- $CsMnF_3$, octahedral Mn^{2+} complex, d-d transitions absorpt. spectra meas. 3–3766
- $CsMnFeF_6$, ^{57}Fe Mossbauer spectra 3–3618
- $CsMnFeF_6$, frustration effects, neutron study 3–28518
- $CsNO_2$, glass transition, adiabatic calorimeter with built-in cryorefrigerator 3–30860
- $CsNO_3$, low temp. form, circular dichroism spectrum, forbidden n-π* transition 3–52791
- $CsNO_3$-KNO_3, internal mobility ratio, Klemm method meas. 3–47138
- $Cs_2NaBiCl_6$, thermal props., phse transitions, Landau thermodynamic theory anal. 3–42812
- $Cs_2NaHoCl_6$, enhanced nuclear spin system, antiferromag. state 3–52390
- $Cs_2NaHoCl_6$, quadrupolar ordering in Γ_3 doublet system, NMR study 3–28713
- Cs_2NaHoF_6, phase transition rel. to specific heat, enhanced NMR and magnetisation meas. 3–28718
- $Cs_2NaPrCl_6$, thermal props., phse transitions, Landau thermodynamic theory anal. 3–42812
- $Cs_2NaYbCl_6$, spin-spin relax., Mossbauer study 3–19025
- $Cs_4Nb_6O_{17}$, cryst. struct. and hydration mechanisms, X-ray study, Fourier Patterson anal. *(French)* 3–2511
- $CsNb_2O_5F$, IR absorpt. and Raman scatt. spectra *(French)* 3–28858
- $CsNbOP_2O_7$, cryst. struct. study 3–37883
- $CsNi_{1-x}Cd_xFe_3$, cryst. chemistry and trimeric mag. interactions, neutron diffr. study 3–3415
- $CsNiCl_3$, ESR absorption line, exchange interaction and critical indices 3–14124
- $CsNiCl_3$, low temp. magnetostriction studies 3–47538
- $CsNiCl_3$, spin-phonon interaction, ultrasonic attenuation 3–28056
- $CsNiF_3$, 1-D ferromag., elastic consts., Brillouin scatt. and US propag. studies 3–57013
- $CsNiF_3$, scaling laws, magnetization and optical linewidth 3–57700
- $CsNiF_3$, semiclassical theory of planar spin states 3–38623
- $CsNiF_3$, solitons, inelastic neutron scatt. studies 3–57572
- $CsNiF_3$, sp. ht. anomaly due to mag. solitons 3–57638
- $CsNiF_3$, sp. ht. meas., 4.3 to 7.25K, evidence for spin solitons 3–57639
- $CsNiF_3$, spin fluctuations without applied field, neutron scatt. study 3–57533
- $CsNiFeF_6$, ^{57}Fe Mossbauer spectra 3–3618
- $Cs_2NpO_2Cl_4$, Mossbauer study, spin fluctuations 3–19026
- CsO, $X^2\Sigma^+$ and $A^2\Pi$ potential energy curves, relativistic calcs. 3–55865
- CsO_2, muonic Coulomb capture 3–8751
- Cs_2O-Nd_2O_3-P_2O_5-H_2O system, phase formation, hydrothermal synthesis 3–47086
- CsOH, glass, modulation effects of metal nuclei in spin echo of trapped electrons 3–38694
- $CsPbCl_3$, Debye-Waller factor near ferrodistortive transition, soft modes 3–13389
- CsSCN, room temp. elastic constants meas. 3–51684
- Cs_2SO_4, mol. struct., electron diffr. obs. 3–21912
- Cs_2SO_4:$MoO_4{}^{2-}$, single cryst., low temp. absorpt. spectra 3–14323
- $CsSO_4F$, low. temp. heat capacity, thermodynamic functions 3–33464

caesium compounds continued
$Cs_3Sb_2I_9$, NQR studies 3—23828
$Cs_4Sb^{III}Sb^VBr_{12}$, ^{81}Br NQR obs. 3—3587
Cs_2SiF_6, optical props. 3—57871
$CsTa_2(PO_4)_2P_3O_{10}$, cryst. struct. study 3—37884
$Cs_3Ti_2Cl_9$, exchange between orbitally unquenched ions 3—8463
$Cs_2UO_2Cl_{4-x}Br_x$, migration and trapping, electronic energy transfer 3—3790
$CsUO_2(NO_3)_3$, luminescence quantum yield, 220-250 nm 3—47706
$CsVCl_3$, single cryst. absorpt. and emission spectra 3—19173
$CsVCl_3(Br_3)(I_3)$, magnetic ordering, 1D→3D, inelastic neutron scatt. investig. 3—57535
Cs_xVF_3, cryst. struct., high resolution TEM study 3—27911
$Cs_3V_{1.5}Mo_{0.5}O_3F_6$, cryst. struct. and Raman vibr. spectra 3—22852
$CsVO_2$, matrix isolation IR and Raman spectra, oxyanion coord. 3—36749
$CsVO_3$, matrix isolation IR and Raman spectra, oxyanion coord. 3—36749
$Cs_3V_2O_4F_5$, cryst. struct. and Raman vibr. spectra 3—22852
$Cs_2(VOF_4(H_2O))$, green and blue phases, cryst. struct. and optical spectra 3—33211
CsX, ($X=NO_3$, PO_3, PO_2), matrix isolated IR spectra 3—55938
$Cs_2Zn_3S_4:Mn^{2+}$, zero field splitting, site distortions, EPR study 3—47545
$Cs_3[UO_2(NCS)_5]$, cryst. struct. determ. 3—22837
$K_{1-x}Cs_xSc(MoO_4)_2$-$K_{1-x}Cs_xSc(WO_4)_2$, phonon spectra and displacive phase transitions, permittivity meas. 3—28075
Li_2O-Cs_2O-SiO_2 glass systems, immiscibility isotherms 3—28105
$(Na,Cs)_2O$-SiO_2 glass, impurity alkali diffusion, ^{86}Rb tracer, comp. depend. 3—57134
Na_2O-Cs_2O-SiO_2 glass systems, immiscibility isotherms 3—28105
$Rb_xCs_{1-x}C_8$ intercalation cpd., electronic struct., configuration propagator theory 3—38300
$ZnCs_2(SO_4)_2.6H_2O:Co^{2+}$, optical absorpt., impurity states 3—34126

caesium generators *see plasma diodes*

caesium plasma diodes *see plasma diodes*

calcination *see heat treatment*

calcium
see also nuclei with ......
abundance in rho Ophiuchi cloud, visible obs. 3—48985
Allende meteorite, Ca and Ti isotope anomalies prod. by sp-process 3—35416
atom, $(4s4p^1P_1)$ excited state collisional quenching, absolute cross sections 3—21885
atom, autoionisation reson., elec. field effect 3—32011
atom, collisionally assisted two-photon absorpt., interatomic pots., line shape study 3—1328
atom, double electron excitation cross section, Glauber theory calcs. 3—26868
atom, exptl. study of nonadiabatic core interactions in Rydberg states 3—21681
atom, optogalvanic spectra from hollow cathode lamps, wavelength calibration *(Chinese)* 3—36710
atom, photoionisation, relativistic RPA calcs. 3—32021
atom, Rydberg series from metastable levels, one-photon laser spectroscopy 3—1270
atomic, intermodulated optogalvanic Zeeman spectroscopy in hollow cathode discharge 3—5867
atomic E1 and E2 radiation interf. detect. 3—21700
atomic ionisation processes involving synchrotron and laser radiations, recent progress 3—26713
atoms, $4^3P_{0,1,2}$ metastable states, absolute excitation cross sections, electron impact meas. 3—21926
atoms, 4snd Rydberg states, singlet-triplet mixing 3—32027
atoms, optically forbidden ionic states, excitation and electronic decay of autoionisation states 3—11755
atoms, optogalvanic line integral meas. 3—10908
clusters, struct., bonding, ab. initio pseudopotential CI calcs. 3—6821
electron structure compared with CaO, nonself-consistent calc. 3—18618
electronic struct., Xα method 3—1240
FCC, heat capacity, entropy Debye temp. up to 450K 3—47120
glass, EXAFS spectra for local atomic order determ., use of synchrotron radiation 3—46862
interstellar Ca abundance determ., implications of ionisation equilib. inside ρ Ophiuchi cloud 3—54472
L 745-46 A, L 791-40, He-rich white dwarfs, discovery of Ca II absorpt. at 1840 Å 3—10321
molecule, $^1\Sigma_g{}^+$ states, orbital energies 3—1241
negative ions, excited states lying above ground state of neutral atom 3—21647
pulmonary nodules, solitary, quantification of Ca using single- and dual-energy CT 3—29718
synaptic transmission, role of Ca ions 3—4494
thin films, elec. cond., grain boundary effects 3—23507
AgBr:Ca^{2+}, Cd^{2+}, resonant exciton trapping at impurity states 3—57290
$BaTiO_3$:Pb,Ca semiconductor ceramics, liquid phase sintered, positive temp. coeff. resist. 3—52130
$Bi_{12}SiO_{20}$:Ca, electrooptic props., doping effects 3—23918
Ca I, II segmented plasma recomb. lasers employing foil electrodes 3—12125
Ca I, photoionisation cross section, near-threshold reson. struct. 3—6588
Ca I absorption in interstellar diffuse clouds, electron and gas densities 3—48975
Ca I and II, collisional spectral broadening and shifts 3—1307
Ca I and II spectra of Ap-star atmospheres, Ca content 3—44771
Ca I non-resonance line spectra in stars 3—40127
Ca II H and K lines and Wilson-Bappu effect interpretation *(Polish)* 3—40112
Ca II H/K enhanced emission in spectroscopic binaries, reson. polarisation search 3—54443
Ca II K_{2V} solar chromospheric spectral features rel. to small scale photospheric mag. fields 3—20321
Ca I* fast accelerated atomic beam, reson. three-level saturation spectrosc. 3—50550
Ca XIV, $2s^m2p^n$-$2s^{m-1}2p^{n+1}$ intersystem transitions 3—1299
Ca XIX, dielectronic satellite spectra and inner shell excitation, appl. to solar flare spectra 3—17246
Ca XV, $2s^m2p^n$-$2s^{m-1}2p^{n+1}$ intersystem transitions 3—1300
Ca XVI, intersystem lines, atomic spectra 3—11725
Ca^{2+}, brain, binding and release due to low-level EM fields, review 3—24799

calcium continued
Ca^{2+} channels of Paramecium, gating rel. to various ions 3—19678
Ca^{2+} efflux from isolated heart mitochondria, H^+-depend. 3—34809
Ca^{2+} intracelluar conc. in frog cardiac cells, ionic diffusion theory 3—53651
Ca^{2+}, ionic solution, struct. and dynamics 3—51472
Ca^{2+}-formate ion, chelation complex binding, ab initio STO-3G calcs. 3—17195
Ca+He^{2+}(N^{7+}) collisions, K-shell vacancy production 3—32179
Ca+methylnitrite, chemiluminescence, vibr. and bonding of product 3—29311
Ca+Na, light induced collisional energy transfer 3—41669
Ca_4 cluster, bonding nature, PP MRD CI calc. 3—21955
Ca_4, dissoc. energy from CI wavefunctions, hybridisation and bonding 3—17228
CaI, bound channels and quantum defect theory 3—11982
$CaSO_4$, gypsum board walls, steel studded, sound transmission variations 3—12434
^ACa, A=40-48, $4s^2$ $^1S_0$-4s4p $^1P_1$ transition, isotope shifts and HFS 3—21726
^{40}Ca, isotope shift for various values of delta-log interaction 3—45462
^{41}Ca detection by laser-selective enrichment of Ca II ion 3d-states 3—26877
^{45}Ca, β-decay, internal bremsstrahlung, at. fields effects 3—32028
^{45}Ca, internally deposited in adult Indian desert gerbils, oocyte depopulation pattern 3—9678
$^{45}Ca^{2+}$, binding to brain tissue, attempts to alter using PM microwave irrad. 3—39693
KCl:Ca, gamma irradiated, thermal bleaching of $V_2{}^M$ centres, oscillator strengths 3—8047
KCl:Ca (100) surface, field-enhanced evaporation, terrace-ledge-kink model 3—39015
$KCl_xBr_{1-x}:Ca^{2+}$, X-irrad., Z_1- and F-centres, thermoluminesc. and optical absorpt. studies 3—19212
MgO:Ca^{2+}, Al^{3+}, Sc^{3+}, migration energy of cation vacancies 3—13523
MgO:Ca^{2+}, twist boundaries, binding energy calcs. 3—46932
NaCl:Ca, Eu, precipitation of Ca, Eu^{2+} fluorescence studies 3—51806
NaCl:Ca, post-irradiation deform., thermolum. studies 3—3835
NaCl:Ca, thermoluminesc., γ-dosimetry appl. 3—57982
NaCl:Ca,OH, optical strength change, impurity distrib. effects 3—42651
NaCl:Ca^{2+}, electrification kinetics during plastic deformation, electron mechanoemission 3—33780
NaCl:Ca^{2+}, first stage coloration, X-irrad. dose rate depend. 3—56890
NaCl:Ca^{2+}, γ-ray irrad., luminescence from M and N centres 3—24005
NaCl:Ca^{2+}, OH^-, relax. phenomena 3—34031
NaCl:Ca(Pb) crystals, microhardness and dislocation mobility, quenching effects 3—13326
$PbTiO_3$-Ca-$Pb(CoW)_{1/2}O_3$ US array transducer 3—50896
Si:Ca, solubility of dopant during LPE 3—33444
YIG:Ca, V, densification mechanism 3—19302
YIG:Ca film, semicond., negative magnetoresistance 3—28458
Y_2O_3:Ca, Ca determ. by neutron activation anal. 3—27969

calcium alloys
see also calcium compounds
Al-Ca, liq., mixing enthalphy, thermodynamic invest. *(German)* 3—47118
Al-Ca eutectic composition alloy props. as superplastic selective coatings for solar absorber-convertors 3—29454
Ca-Al metallic glasses, struct. relax., calorimetric invest. *(German)* 3—24289
Ca-Fe, dilute, positive mag. hyperfine field for impurities, perturbed angular distrib. obs. 3—57836
Ca-Ni, liq., mixing enthalphy, thermodynamic invest. *(German)* 3—47118
CaAg, cryst. struct. 3—2471
$Ca_{100-x}Al_x$ metallic glass, atomic and electronic struct., MNR and mag. susceptibility studies 3—27850
CaAu, cryst. struct. 3—2471
$Ca_{70}Mg_{30}$ metallic glass, atomic struct. and vibr. dynamics 3—42521
$CaNi_5$, absorption of H_2, disintegration, acoustic emission and exoelectron emission 3—47935
$CaNi_5$, electronic struct. and surface oxidation, photoelectron spectra study 3—3912
$CaNi_5$, phase transformations in H_2 atmosphere, X-ray powder diffr. study 3—33429
Co-Cu-Mg system, glass form. and crystn. 3—22789
Mg_xCa_{1-x} disordered alloy, heat of form., cellular density functional theory 3—33184

calcium compounds
see also calcium alloys
calcite concretions growth rate 3—19984
calcium-strontium tartrate tetrahydrate, mixed crystals, gel growth, lattice parameter, density, Fe content 3—39023
dicalcium lead propionate, high-temp. paraelec. phase, cryst. struct. and ferroelec. transition, X-ray study 3—18284
dicalcium strontium propionate, ferroelec, dielec. dispersion 3—43494
dicalcium strontium propionate single cryst., elec. cond. and stimulated thermocurrents 3—33740
ethylene-methacrylic acid copolymer, Ca salt, annealing, ionic struct., DSC, Fourier transform IR spectra 3—51506
halides, mixed lattice disorder, defect energies study 3—13220
heat transfer in cubic heat storage container with helical tube heat exchanger and $CaCl_2.6H_2O$ latent heat storage material *(Japanese)* 3—34736
limestone, porous, powder compacts, porosity effect on compressive strength 3—58061
oxalate monohydrate, fine surface obs. by SEM, rel. to cryst. growth from gel 3—51528
phosphate precipitation, reaction mechanism rel. to corrosion protection 3—53267
solar Trombe walls filled with $CaCl_2.6H_2O$ phase change material, thermal behaviour 3—4405
thiogallates, Er doped, photolum. and cathodolum. props. 3—3780
tremolite: Mn^{2+}, Fe^{3+}, S-state ions study, use of ultrasonically modulated electron resonance 3—33973
tris-sarcosine calcium chloride, electrostriction coeff., temp. depend. near ferroelec. phase transition 3—19081
vermiculite, lattice and interlayer water vibr. spectral regions, Raman microscopy study 3—14292
$Y_{3-x}Ca_xGe_yFe_{5-x}Fe_{x-y}O_{12}$ epitaxial films, mag. props. 3—33948
Al_2O_3-CaO, evaporation thermodynamics, study by Knudsen effusion method 3—18431

calcium compounds continued
β''-Al_2O_3-CaO, solid electrolyte for divalent cations 3−42833
Al_2O_3-SiO_2-CaO glass, Al ion co-ord. number and physical props. 3−33122
$Ba_xCa_{1-x}F_2$, insulating epitaxial films grown by MBE on InP substrates 3−33596
$BaCaFe_4O_8$, mag. struct., neutron diffr. anal. 3−23588
$Ba_3CaRu_2O_9$, magnetic interactions in clusters studied by neutron inelastic scattering 3−57527
$Bi_xY_{1.2-x}Ca_{1.8}Sn_{0.3}V_{0.5}Ge_{0.5}Fe_{3.7}O_{12}$, solid state reaction 3−33939
$CXaSO_4$:Dy Teflon TLD, low dose meas., N_2 flushing during readout 3−9748
(Ca,K)NO_3, short time struct. relax. process, glass transitions, expt. and computer simulation 3−38068
$Ca_2Al_3Si_3O_{12}(OH)$:Mn, EPR and optical absorption studies 3−43423
$Ca(Al_2Si_3O_{10}).3H_2O$, etching by H_3PO_4, HCl and formic acid, dislocations, pile ups, twinning 3−8051
$Ca_3(AsO_4)_2.xH_2O$, cryst. struct. and phaunouxite→Rauenthalite topotactic dehydration 3−37860
CaB_6, X-ray diffr. approach to fine crystallographic features determ. 3−56864
$Ca_{10-2x}Bi_xNa_x(PO_4)_6F_2$, struct., charge balanced substitution study, X-ray powder diffr. anal. 3−51569
CaBr, radicals, Stark effect meas. and rot. spectra at Freie Univ., Berlin 3−50453
CaBr, $X^2\Sigma$ spin rot. and HFS param., vibr., rot. and isotopic depend. 3−6556
$CaCO_3$:Mn^{2+}, internal mag. viscosity induced by paramag. centres 3−28501
$CaCO_3$ (aragonite), shock compression expts. and eqn. of state 3−4856
$CaCO_3$, calcite, coherent anti-Stokes and Stokes Raman scatt., higher-order spectra 3−22163
$CaCO_3$, calcite, etch pit morphology, by glacial acetic acid 3−9200
$CaCO_3$, calcite, longitudinal-transverse mixed-mode polaritons, dispersion relations and reflection spectra calc. 3−18627
$CaCO_3$, calcite, molecular crystal, vibrational energy relaxation, Raman scatt. study *(Russian)* 3−47659
$CaCO_3$, cleaved surface, etch pit morphology, chem. eqns. and lateral reaction rates 3−47970
$CaCO_3$ crystals, Raman scatt. indicatrix asymm. 3−38823
$CaCO_3$ percentage in loess profiles, Earth orbital geometry and climatic variations 3−48663
$CaCO_3$, precipitation from aqueous soln., induction period rel. to supersaturation and impurities 3−33154
$CaCO_3$, solubility of aragonite and calcite in water 3−51797
$CaCO_3$:Mn^{2+}, fluorescence, lifetime and quenching 3−52830
$CaCO_3$:$PO_4{}^{3-}$, calcite, ionic cond. in high-pressure polymorphs 3−33496
CaCl, Doppler-free polarisation spectroscopy in flame reactions 3−36770
CaCl, radicals, Stark effect meas. and rot. spectra at Freie Univ., Berlin 3−50453
CaCl, $X^2\Sigma$ state hyperfine struct., microwave-optical polaris. spectrosc. 3−50392
$CaCl_2$, aq. soln., ionisation consts. assoc., behaviour and elec. cond. 3−33474
$CaCl_2$:Eu^{2+} single crystals of low symm., luminesc. of Eu^{2+} centres 3−34141
$CaCl_2$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3−43629
CaF cubic cryst., elastically anisotropic, phonon conduction 3−33527
CaF MIM structs., AC, DC and ionic thermocurrent conduction, dielec. breakdown 3−13923
CaF_2, autocovariance functions for polished optical surfaces 3−37143
CaF_2 C1 struct., rel. to $CdCl_2$ C19 struct. 3−27909
CaF_2, cleavages, surface distortion features 3−51908
CaF_2 containing ceramic systems, temp. limit evaluation for subsolidus state *(Ukrainian)* 3−24215
CaF_2, crystal, absorption coeff., refractive index, temp. depend. 3−34062
CaF_2 crystals, exciton form. during interaction of radiation-induced defects 3−3795
CaF_2, dielec. and anharmonic behaviour 3−42741
CaF_2, dislocation etch pits, X-ray topography study 3−13226
CaF_2, fast ion phase, anion disorder, neutron scatt. study 3−13520
CaF_2, IR window material, multiwavelength laser rate calorimetry 3−7096
CaF_2, insulating epitaxial films grown by MBE on InP substrates 3−33596
CaF_2, Kumakhov radiation under planar positron and electron channelling 3−37977
CaF_2, laser window materials characts. 3−7098
CaF_2 monocrystals; polished surface shape accuracy rel. to anisotropy and block disorientation, specular reflection coeff. 3−32428
CaF_2 NMR laser, inhomogeneously broadened Q-switched, superfluoresc. transients 3−56201
CaF_2, nucl. dipolar antiferromag., field-entropy phase diagram 3−3449
CaF_2 optical film, stress, adherence, hardness and density 3−13685
CaF_2, proton irrad., lattice defects 3−47003
CaF_2, radiation damaged, oscillating thermal annealing, neutron diffr. study 3−13266
CaF_2 release agent, influence on vac. evaporated Ti foil 3−29013
CaF_2 single crystals, impact erosion by sharp projectiles 3−18384
CaF_2 single crystals, impact erosion by blunt particles, damage struct., microscopy 3−47043
CaF_2, soft X-ray photocathode characterisation 3−45764
CaF_2 solid electrolyte/O_2 interface, dopant redoxing and diffusion, electrochem. study 3−51843
CaF_2, solubility and distrib. coeff. of O 3−18460
CaF_2 surface, scatt. of vibrationally excited NO 3−28950
CaF_2, surface oxidation 3−14757
CaF_2 thin films, surface roughness meas. using interferometric and surface plasmon techniques 3−5771
CaF_2, vibr. entropy calc. of anion Frenkel defects 3−13489
CaF_2 window mounting, leak-tight 3−329
CaF_2, with alkaline impurities, luminesc., thermal stability, and photoconversion of perturbed colour centres 3−38873
CaF_2, X-ray absorpt. spectra and electronic struct. 3−3866
CaF_2:Ce^{3+}, level splitting, odd parity cryst. field effects 3−52090
CaF_2:$Ce^{3+}(Eu^{3+})(Dy^{3+})$, vacuum UV excitation spectra of luminescence 3−14320
CaF_2:Er, transverse Zeeman effect, optical absorpt. and fluoresc. spectra 3−3691
CaF_2:Eu^{2+}, Faraday rot. behaviour of light polarisation plane with superposition of weak radio-freq. field 3−23921
CaF_2:Eu^{2+}, spectral distrib. of HF phonons generated by nonradiative transitions 3−47697
CaF_2:Eu^{2+}, zero-field splitting 3−23335
CaF_2:Eu^{2+},Ho^{3+}, fluorite, interaction and luminesc. of activator ions *(Ukrainian)* 3−23995
CaF_2:$Eu^{2+}(Sm^{2+})$, reson. electron-phonon interaction, luminesc. study 3−38872
CaF_2:Gd^{3+}, F atom structural position, proton backscatt. study 3−22866
CaF_2:La(Lu)(Eu), type I and II dipoles defect ion displacements and effective dipole moments 3−18506
CaF_2:Li(K), disturbed colour centres after X-ray irrad., optical studies 3−27937
CaF_2:Mn, X-irrad., thermally stimulated luminesc., glow curve anal. 3−43638
CaF_2:Mn crystals, mag. quenching of tunnelling-recombinational afterglow and ESR spectra 3−3529
CaF_2:Mn TLD, portable γ-and neutron dosimeter checking in γ-, neutron and mixed fields *(Hungarian)* 3−21562
CaF_2:Mn-polyethylene detectors, neutron dosimetry evaluation using optically stimulated luminesc. 3−31834
CaF_2:Nd(Ce), Zeeman IR spectra, optical absorption and fluorescence meas. 3−19124
CaF_2:O^{2-}, disturbed colour centres after X-ray irrad., optical studies 3−27937
CaF_2:Tm TLD, quality and intensity of low energy photon radiation determ. 3−9747
CaF_2:Tm^{2+}, electron spin dipole-dipole reservoir heating with transverse modulation of const. mag. field 3−23797
CaF_2:Tm^{2+}, ligand hyperfine interaction, optical detection of ENDOR 3−52670
CaF_2:U^{3+}, nuclear spin-lattice relax. anisotropy 3−38717
CaF_2-AlF_3, phase diagram, median section, stability of Ca_2AlF_7 *(French)* 3−9044
CaF_2-based TLD, UV and gamma ray sensitivity after temp. treatment, thermolum., X-ra and ESCA anal. 3−26498
CaF_2-LaF_3, defect phases, anion mobility, NMR study 3−13525
CaF_2-Si (111) heterostructures, epitaxial relations, ion channelling anal. 3−51967
$CaF_{2-x}H_x$, Z 3−2705
$Ca_3Fe_2Ge_3O_{12}$ garnet, single ion magnetic anisotropy model correction 3−47495
Ca_2FeMoO_6, anomalous magneto-optic Kerr effect; influence of oxidation 3−34075
$CaFeO_3$, Mossbauer spectroscopic studies 3−14186
$Ca_2Fe_2O_5$, weak ferromagnetism 3−14084
$Ca_4Fe_9O_{17}$, X-ray Fe $L_{\alpha 1,2}$ emission lines, chemical shifts meas., electron microprobe anal. appl. 3−8906
$Ca_3Ga_2Ge_4O_{14}$, cryst. struct. study 3−37885
CaH_2, d orbitals effect on geometry CNDO/2 calcs. 3−46093
CaH_2, elec. resistance under high press. 3−28353
$CaHPO_4.2H_2O$, powdery, changes in surface props. during thermal treatment *(Japanese)* 3−18536
$Ca_9H(PO_4)_6.(OH).3.3H_2O$, densification by hot isostatic pressing 3−58089
$CaK_3H(PO_4)_2$, cryst. struct. 3−51553
$CaKNd(PO_4)_2$, cryst. struct., X-ray diffr. study 3−2475
$CaK_2[B_4O_5(OH_4)]_2.8H_2O$, cryst. struct., H-bonds 3−2488
$Ca_{1-x}La_xFeO_3$, preparation, crystallographic and mag. characterization 3−13775
$Ca_2LaFe_3O_8$, microdomain texture and O excess, TEM and electron diffr. anal. 3−42793
Ca_2LaRuO_6, mag. props. and cryst. struct., neutron diffr. studies 3−46912
$CaLa_2S_4$, opt. window material for 8 to 14 μm region, development 3−7092
$CaLa_2S_4$ starting powder eval. for 8-14 μm region domes and windows fabrication 3−7090
$Ca_{3.18}M_{2.20}(Ti_{0.43}Fe_{0.37}Al_{0.31})B_{4.04}(Si,Al)_4O_{22}$, M=transition metal, cryst. struct. determ. 3−33216
$CaMgSi_2O_6$ diopside single crysts., Czochralski growth 3−34217
$Ca_2MgSi_2O_7$, isotypic with melilite, cryst. growth by Czochralski method *(German)* 3−3946
$Ca_2MgSi_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3−3689
$Ca_7Mg(SiO_4)_4$, bredigite-structured phases, props. and comp. 3−4016
$CaMnO_x$, O deficient cpd., reduction prep., cryst. struct. and characterisation 3−7994
$CaMnO_x$, struct. determ., X-ray and neutron diffr. studies 3−33203
$CaMoO_4$, translational and librational modes, phonon dispersion study 3−2700
$CaMo_6S_8$, struct. phase transition, sp. ht. meas. 3−47102
$CaNH_2$, laser excitation spectra 3−46014
$CaNH_2+H_2O(N_2H_4)$, chemiluminescent reactions 3−45957
$Ca(NH_3)_6$, rot. hindering pot., spin-lattice relax. NMR study 3−52648
$Ca(NO_3)_2$, γ-ray irrad., chem. radiation damage, annealing kinetics 3−2606
$Ca(NO_3)_2.nH_2O$, cryst. struct. and co-crystallisation 3−27881
$Ca_2NaMg_2V_3O_{12}$, photoinduced reduction of V^{4+} ESR signal, photocond. and refl. meas. 3−38685
$CaNa[B_5O_7(OH)_4].3H_2O$, probertite, cryst. struct. determ. 3−27904
$Ca_2Nd_8(SiO_4)_6O_2$, apatite struct., radiation damage 3−27977
CaO additive in reaction bonded Si_3N_4 prep., influence on vitrification of grain boundary phases 3−29040
CaO containing ceramic systems, temp. limit evaluation for subsolidus state *(Ukrainian)* 3−24215
CaO, defect props., rel. to cryst. pots. 3−56874
CaO, dissoc. energy, ab initio STO calcs. 3−36656
CaO, electron structure compared with Ca, nonself-consistent cal. 3−18618
CaO, evaporation thermodynamics, study by Knudsen effusion method 3−18431
CaO, heat of fusion, calc. 3−18428
CaO, low lying $^1\Sigma^+$ and $^1\Pi$ states, MCSCF/CI treatment 3−21655
CaO molecule, r-centroids and Franck-Condon factors calc. 3−55998
CaO, muonic Coulomb capture 3−8751
CaO, oxides, lattice dynamics 3−22992
CaO, press. induced phase transition, interionic pot. calc. 3−2777
CaO segregation in MnZn ferrite 3−42778

calcium compounds continued
CaO, struct. stability rel. to interionic pots. 3—2466
CaO:Cr, APR study, dynamic Jahn-Teller effect 3—8721
CaO:M, ($M=Mn^{2+}$, Fe^{2+}, Co^{2+}, Ni^{2+}), defect props. 3—56923
CaO:Tb, Ce, phosphor system, sensitised electrolum. 3—8885
$CaO-(MgO)-SiO_2$ melts, surface props. etimation, polymer models appl. 3—8306
$CaO-Al_2O_3$ glass, IR window material, multiwavelength laser rate calorimetry 3—7096
$CaO-Al_2O_3-P_2O_5$, glass, ^{27}Al NMR study of struct. 3—46863
$CaO-Al_2O_3-P_2O_5$ glass composite, prep., struct. props., and prosthetic appls. 3—34274
$CaO-B_2O_3$, liq.-liq. immiscibility *(Japanese)* 3—38080
$CaO-B_2O_3-Al_2O_3-Fe_2O_3$ glass, IR spectra, annealing effects 3—43529
$CaO-CeO_2$ solid solns., ionic cond. study *(French)* 3—28149
$CaO-CuO-P_2O_5-CuI$ glasses, memory switching 3—43239
$CaO-Fe_2O_3$, melt, density and surface tension *(Japanese)* 3—47192
$CaO-FeO-SiO_2$, glass, liquid-phase separation processes 3—23050
$CaO-MgO-Al_2O_3-SiO_2$ glasses, cation distrib. 3—2433
$CaO-MgO-V_2O_5$, crystalline solns. and cryst. chem. 3—9043
$CaO-Na_2O-MgO-B_2O_3-Al_2O_3-SiO_2$, electrocond. glass fibre prep. by ion exchange and reduction method 3—14551
$CaO-P_2O_5$ glasses containing water, protonic cond., DC elec. cond. meas. 3—23082
$CaO-SiO_2$, crystal growth of silicates, historical review 3—8954
$CaO-Ta_2O_5$ system, phase equilibria and structures, X-ray diffr. study 3—8167
$CaO+SiO_2$ polycryst. pellets, interdiffusion behaviour, DC field effects 3—28165
$CaO(-ZnO)-Al_2O_3-SiO_2$ glass, surface crystallised, high strength, characterisation by electron microscopy 3—4162
CaOD, vibr. struct., laser spectrosc., rot. anal. 3—45958
$Ca(OD)_2{:}^{109}Ag^{2+}$, EPR spectrum 3—47546
CaOH, vibr. struct., laser spectrosc., rot. anal. 3—45958
$Ca(OH)_2$ suspensions, aq., rheological props., rel. to elastic floc model 3—27470
$Ca(OH)_2$, transverse mag. ordering of proton spins 3—3448
$2CaO.P_2O_5-3CaO.P_2S_5$, eutectic, unidirectional solidification *(Japanese)* 3—4033
$CaO.SiO_2-ZnO$ solid solution, polymorphism, hydration 3—43787
$8CaO.8SiO_2.3Fe_2O_3.2FeO$, amorphous slag, EPR study 3—18977
$Ca_5(PO_4)_3$, apatite, electron irrad. damage, TEM study 3—13285
$Ca_5(PO_4)_3OH$, hydroxyapatite, cryst. growth in gel 3—19260
$Ca_5(PO_4)_3OH$, hydroxyapatite, relay crystallisation from supersaturated aq. soln. 3—28973
$CaPd(CN)_4.5H_2O$, Brillouin scatt. and thermal anal. 3—3754
$Ca_{3-x}R_xSi_xP_{2-x}O_8$, ($R=$rare earth), sintered, phase composition and props. 3—8210
$Ca(ReO_4)_2.2H_2O$, NQR study 3—23832
CaS, Ce activated, polycryst., thermolum. due to intrinsic point defects 3—3832
CaS:Cu,Ce phosphors, photoluminesc. and electroluminesc. 3—47683
CaS:Eu and $Ca_{1-x}Sr_xS$:Eu, redo phosphors, prep. and cathodluminesc. 3—38925
$CaSO_4$:Dy, TLD, nonlinearity mechanism anal. 3—24890
$CaSO_4$:Dy, thermolum. spectra and optical absorption 3—19209
$CaSO_4$:Dy phosphors, glow curve characts., dosimetry appl. 3—43641
$CaSO_4$:Dy TLD, response as a function of storage conditions 3—45718
$CaSO_4$:Dy Teflon discs based TLD badge, X-and γ-ray response 3—6452
$CaSO_4$:Dy Teflon TLD, sensitised, for in-phantom dosimetry for ^{60}Co γ-irrad. 3—9750
$CaSO_4$:Dy Teflon TLD disk dosimeters, energy response to photons and electrons 3—41339
$CaSO_4$:Tm, composite thin-element TLD, construction using an optical-heating method 3—6451
$CaSO_4.2H_2O$, gypsum crysts. in suspension inhibitor conc. influence on growth rate 3—27874
$CaSO_4.2H_2O$, selenite, cleavage faces dehydration, expt. study 3—14843
$Ca_{1-x}Sr_xFeO_3$, electronic state of Fe^{4+} 3—14185
$Ca_{10-x}Sr_x(PO_4)_6(OH)_2$, mol. vibr. and lattice consts., IR and X-ray study 3—3702
$Ca_{1-x}Sr_xS$:Ce and CaS:Ce phosphors, preparation and cathodoluminesc. 3—52855
$Ca(Tb)_3Ga_2Ge_3O_{12}$ luminescent garnets with Tb on dodecahedral lattice sites 3—28886
Ca_3TeO_6, cryst. struct. study, compared to Cd_3TeO_6 *(German)* 3—2493
$CaTiO_3$, laser induced Raman scatt., mol. vibrs. 3—23957
$CaTiO_3$, soft X-ray emission spectra *(Russian)* 3—24059
$CaTiO_3$:La, defect struct., elec. cond. studies 3—51591
$CaTiSiO_5$ glass for radioactive waste disposal medium 3—6319
$CaUO_4$, fission fragment irradiation 3—18354
$Ca_2V_2O_7$, cryst. growth, struct., elec. and dielec. props. 3—24110
$CaWO_4$, melting transition, high temp. Raman spectra study 3—28867
$CaWO_4$, translational and librational modes, phonon dispersion study 3—2700
$CaWO_4{:}Eu^{3+}$, energy transfer between ions, obs. and calcs. 3—14336
$CaWO_4-Na_2WO_4$ solutions, solute-solvent interactions and solubility-temp. relations 3—42776
CaX_2, $X=Cl$, F, CNDO/2 calcs. bond angle 3—46094
$Ca_{14}Y_5F_{43}$, tveitite, cryst. struct., X-ray diffr. study 3—7992
$Ca_2ZnSi_2O_7$, isotypic with melilite, cryst. growth by Czochralski method *(German)* 3—3946
$Ca_2ZnSi_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
$Ca_2Zn_4Ti_{16}O_{38}$, cryst. struct., X-ray diffr. study 3—46908
$Ca.6H_2O(SnCl_6)$, reorientation, spin-lattice relax., NQR study 3—34005
$Cd_{1-x}Mn_xF_2$, valence and conduction band struct., UPS study 3—23269
$Cd_7Sb_{12}O_{36}F_2$ formed from cubic $KSbO_3$, cryst. struct., X-ray study *(French)* 3—2513
$CsCaCl_3{:}Pb^{2+}$, luminescence in cryst. fields of various symm. *(Russian)* 3—43629
$CsCaCl_3{:}Sn^{2+}$ crystals, luminesc. props. 3—19183
$CuO-CaO-P_2O_5$ glasses, annealing, effect on properties 3—39178
$CuO-Fe_2O_3$, molten ferrite system, elec. cond., viscosity, Fe^{3+} coordination *(Japanese)* 3—38107
$(Eu,Tm,Y,Ca)_3(Fe,Ge)_5O_{12}$ epitaxial garnet films, domain wall resonance 3—8705
$(EuLaCa)_3(FeGeAl)_5O_{12}$, garnet films, LPE grown, mag. props., growth atm. effects 3—23753
$(EuTmCa)_3(FeGe)_5O_{12}$ film, ion-implanted layers, defects study 3—18328

calcium compounds continued
$(Fe_{0.35}-Ca_{0.65})_2SiO_4$, X-ray Fe $L_{\alpha1,2}$ emission lines, chemical shifts meas., electron microprobe anal. appl. 3—8906
$KCaCl_3{:}Pb^{2+}$, luminescence in cryst. fields of various symm. *(Russian)* 3—43629
$KCaCl_3{:}Sn^{2+}$ crystals, luminesc. props. 3—19183
$KCl{:}CaCl_2$, M_A and Z_4 centres, photoluminesc. study 3—3797
$KNO_3-Ca(NO_3)_2$, glass, elastic props., Brillouin scatt. study 3—47664
$KNO_3-Ca(NO_3)_2-Mg(NO_3)_2$ glasses, discrete anion site struct., Raman study 3—46861
$K_2O-Al_2O_3-CaO-SiO_2$, liq.-liq. immiscibility and phase separation, STEM study 3—51805
$(La_{1-x}Ca_x)CoO_3$, semiconductive and metallic elec. cond., composition depend. 3—8487
$La_{0.95}Ca_{0.05}CrO_3$, sintering in an oxidising atm. 3—3991
$(La_{1-x}Ca_x)CrO_3$ ceramics, hot isostatic pressing and props. *(Japanese)* 3—3997
$(La_{0.8}Ca_{0.2})MnO_3$, cryst. growth by travelling-solvent floating-zone method 3—14477
$La_{0.8}Ca_{0.2}MnO_3$, prep. by co-precipitation method, mag. behaviour *(French)* 3—38651
$(La_{0.8}Ca_{0.2})MnO_{3+y}$, ferromag.-antiferromag. transition temp., press effects 3—57605
$LiF/CaWO_4$ system, blue luminesc., intrinsic nature 3—19174
$Li_2O-CaO-Nb_2O_5$ system, twin-roller quenching, glass formation, IR spectra 3—53012
$MgO-Ca_2P_2O_7$, $Ca_2P_2O_7$, addition effect on sintering *(Japanese)* 3—3996
MgO-CaO system, heats of fusion of MgO and CaO 3—18428
$MgO-CaO-SiO_2-P_2O_5-CaF_2$ glass-ceramics for prosthetic appl. 3—53123
$NaCa_2Cu_xZn_{2-x}V_3O_{12}$, garnet, Jahn-Teller effect, X-ray diffr. and Young's moduli meas. 3—18672
$NaO-CaO-SiO_2$, glass, crack healing, using double torsion loading config. 3—39247
$Na_2O-Al_2O_3-CaO-SiO_2$, liq.-liq. immiscibility and phase separation, STEM study 3—51805
Na_2O-CaO microslide glass detector, thermal stability of fission tracks 3—6502
$Na_2O-CaO-SiO_2$, crack growth, effect of basic and acidic D_2O solns. 3—39266
$Na_2O-CaO-SiO_2$ glass, electrochem. treated, surface durability 3—43969
$Na_2O-CaO-SiO_2$ glasses, electron irrad., field-assisted Na migration 3—2894
$Na_2O-CaO-SiO_2$ glasses, proton irrad., field-assisted Na migration 3—2895
$Na_2O-CaO-SiO_2$ glasses, N-containing, struct., mech., optical, and elec. props. 3—33129
$Na_2O-SiO_2-Ca_2O$, glass transition temp., network modifier mixing effects 3—51791
$Na_2O-SiO_2-MgO(CaO)(SrO)(PbO)(BaO)(ZnO)$, glasses, chem. durability in water 3—9205
$Pr_{1-x}Ca_xMnO_3$, struct. and mag. props. 3—33202
$RbCaCl_3{:}Pb^{2+}$, luminescence in cryst. fields of various symm. *(Russian)* 3—43629
$RbCaF_3$, biaxially stressed, cubic-tetragonal transition 3—2778
$SiO_2-Na_2O-CaO-MgO-Fe_2O_3$ glass, ferric Fe reduction, EPR and optical spectra studies 3—34616
$(SmLuCa)_3(FeVSi)_5O_{12}$ garnet films, mag. props. 3—33947
$(SmLuCa)_3(FeVSi)_5O_{12}$ garnet film for ion implanted bubble devices, prep. and high temp. bubble propagation 3—38659
(Sr, Ba, Ca)Nb_2O_6, single cryst. ferroelectrets, electrooptic props. with broad phase transitions 3—34073
$Sr_{0.65}Ba_{0.25}Ca_{0.1}Nb_2O_6$, ferroelec., photoelectret state 3—14200
$Sr_{0.5}Ca_{0.5}Fe_{12}O_{19}$ ferrite, structural props., X-ray and Mossbauer studies *(Russian)* 3—13200
$(Sr_{0.5}Pb_{0.25}Ca_{0.25})TiO_3-Bi_2O_3.3TiO_2$ ceramics, dielec. props., appl. in HV capacitor 3—28752
$SrTiO_3-CaTiO_3$, ceramic solid solutions, X-ray phase anal., dielectric props. 3—9023
$V_2O_5-B_2O_3-CaO$, AC dielectric losses, elec. cond. 3—52724
$V_2O_5-B_2O_3-CaO$, DC elec. cond. in weak and strong elec. fields 3—52167
$WO_3-CaO-TeO_2$ glasses, density, optical absorption edges, IR spectra 3—57952
(Y, Sm, Ca)$_3$, (Fe, ge)$_5O_{12}$, ferrite garnet thin films, mag. bubbles, domain equilib. 3—28670
$(Y,Sm,Lu,Ca)_3(Fe,Ge)_5O_{12}$ garnet thin film, dynamic props., ferromag. resonance study 3—8727
$(Y,Sm,Lu,Ca)_3(Fe,Ge)_5O_{1\ 2}$ garnet epitaxial films, uniaxial mag. anisotropy, high press. effects 3—18952
$(YBiCa)_3(FeSi)_5O_{12}$ epitaxial garnet films, mag. props. 3—33945
$Y_{3-x}Ca_xFe_{5-x}Ti_xO_{12}$ garnet, mag., elec. and thermoelec. props. 3—28352
$Y_{2.78}Ca_{0.25}In_{0.6}Ge_{0.25}Fe_{4.11}O_{12}$, magnetic properties study and Mossbauer spectrum *(Chinese)* 3—52413
$Y_{1-x}Ca_xMnO_3$, struct. and mag. props. 3—33202
$(YEuLuCa)_3(FeGe)_5O_{12}$ garnet films, LPE grown, mag. props., growth atm. effects 3—23753
$(YSmCa)_3(FeGe)_5O_{12}$ bubble film, domain walls, saturation vel. 3—43418
$(YSmCaTm)_3(FeGe)_5O_{12}$ films, $H_2{}^+$ ion implanted, conversion electron Mossbauer spectroscopy study 3—57831
$(YSmLuCa)(FeGe)O_{12}$, surface-spin orientation, Mossbauer spectroscopy determ. 3—52685
$(YSmLuCa)_3(FeGe)_5O_{12}$ ion implanted films, Kerr rotation study 3—34076
$(YSmLuCa)_3(FeGe)_5O_{12}$ garnet film for 1.5 μm bubble devices, mag. props. 3—38660
$(YSmLuCa)_3(FeGe)_5O_{12}$ epitaxial films, elastic stresses effect on mag. props. 3—52575
$(YSmTmCa)_3(FeGe)_5O_{12}$, small bubble domain dia. materials for high density devices 3—23757
ZrO_2, CaO stabilised, electronic cond. and O_2 semipermeabiity 3—23079
$ZrO_2-CaO-B_2O_3$, densification with borate additions 3—53007
ZrO_2-CeO_2-CaO, ionic conductivity, lattice parameter effects 3—8246

calculating *see calculation*

calculating apparatus
No entries

calculating machines *see calculating apparatus*

calculation
see also graphs; nomograms
No entries

calculators *see calculating apparatus*

calculus
see also differentiation; integration; variational techniques
pulse signal amplitude estimation using collocation in terms of Krakovian calculus 3—1121

calibration
see also measurement standards; standardisation
accelerometer calibration, testbed operation analysis 3—298
accelerometers, linear liquid type, using double centrifuge, error analysis 3—49355
acoustic backscatt. from elastic spheres, calibrations appl. of optimal Cu spheres 3—56399
acoustic emission, quantitative measurement methods, NBS developments 3—39346
acoustic emission transducers, absolute calibration 3—1909
acoustic imaging system calibration by falling spherical target 3—1901
acoustical standards calibration at the physics division of the National Research Council of Canada 3—1882
AES intensity and energy calibration, effect of analyser modulation 3—8910
Agat photochronograph, time sweep calibration 3—16338
anemometers, hot-wire, using Taylor series expansion and iterative procedure 3—49310
angle transducer calibration using ring laser, systematic errors analysis 3—49318
astronomical far IR photometer and IR spectrometer, low background conditions 3—30198
calibration and standards. Vibration and shock measurement, calibration of accelerameters 3—45119
calorimeter array, LED calibration system 3—50242
camera and site calibration for 3D target acquisition in human inertial response study 3—4712
capillary viscometers calibration using newtonian reference liqs. with $\nu<$/mm^{2}/s 3—32825
Casino nuclear weapon effect simulator diagnostic data acquisition and calibration 3—17070
certification program for photovoltaic modules 3—24607
charge carrier distribution determ. in psn diodes, by meas. recombination radiation *(German)* 3—348
Coastal Zone Colour Scanner on Nimbus 7, failure of active calibration 3—5092
commercial photovoltaics measurements workshop assessment 3—24591
condenser microphone, computer-controlled reciprocity calibration method 3—17762
condenser microphone, laboratory standard, automated free field calibration system *(Japanese)* 3—17758
condenser microphone, laboratory standard, automated pressure calibration system *(Japanese)* 3—17757
condenser microphone, laboratory standard, reciprocity calibration convections *(Japanese)* 3—17759
crack length determination, calibration of elec. pot. drop technique, comparison of theoretical and expt. methods 3—17906
CRO time base, Y-amplifier, frequency response calibration 3—35975
cryogenic flow calibration system, performance test of head type flowmeters 3—36015
cryogenic level-measuring calibration system with thermal stabilization of the transducer mounting 3—10850
digital EM thickness gauge, calibration with account of correction function 3—25906
digital instrumentation, direct calibration, digital measuring technique *(Chinese)* 3—40579
digital thermometers, direct calibration, digital measuring technique *(Chinese)* 3—40579
dimer conc. meas., role of mass flux gauge for mass spectrometer calibration 3—453
dimer population calibration in molecular beam, errors using mass flux gauge 3—452
DISA nozzle unit characts. obs., for hot-wire probes testing and calibration 3—51253
drift chamber for high resolution spectrometer at PEP 3—26560
drift chamber tests using laser induced electron clusters 3—26588
eddy current meters, for conductivity meas. of metal annular specimens 3—54749
Edelmans opto-electric dilatometer for thermal length changes measurement of dry transformer epoxide insulation *(Slovak)* 3—16333
electron spectroscopy, calibration of sample Fermi level 3—52875
EM flowmeter, rapid technique for dynamic calibration 3—19790
faint star photographic photometry, sub-beam prism calibration *(Japanese)* 3—48834
fast neutron fluences and emission rates from ^{3}H(d,n) and ^{252}Cf spontaneous fission, absolute reference establishment *(Japanese)* 3—17151
fibre optic communication systems, signal generators for calibration 3—37198
fibre optic neutron imaging system calibration 3—1781
flowmeter test system, universal operating characteristic 3—42339
foil thickness measurement in TEM, rapid in situ meas. method, calibration curve 3—470
force meas., automated system for static calibration 3—20850
fracture toughness specimens, short rod and short bar, compliance calibration 3—34569
gas sensor, solid state, calibration 3—16347
gauge blocks, meas. assurance procedure, computer software 3—40545
graduated circle, error determ. by digital method 3—40555
high-illumination detector calibration, systematic error anal. 3—12287
high-pressure generating and meas. techniques for Mossbauer studies 3—10852
HV divider for TEXTOR neutral injectors 3—55769
hydrophones, variable-depth calibration errors 3—50861
hygrometers, electronic type, for moisture meas. *(French)* 3—36024
impulse calibration of seismometers 3—30068
interstellar reddening estimation at low galactic latits. from Lick galaxy counts, calibration using H I column density 3—48993
ionisation manometer, class 2 standard, for pressures in 10^{-4} to 10^{-1} Pa range 3—40633
IR calibration and standards, conf., San Diego, CA, USA (Aug. 1981) 3—12
IR seeker calibration errors at low energy levels 3—54770
IR sensor, long-wavelength, using laser sources, coherence effects and their avoidance 3—399

calibration continued
Kitt Peak National Observatory echelle spectrograph, equivalent width calibration 3—54245
laser certification and freq. reproduction at 0.633 μm standard apparatus 3—41857
laser metrology system with microprocessor calibration *(French)* 3—30836
laser transmissometer, for long-path atmospheric transmission meas. 3—4983
length meas. instruments *(Rumanian)* 3—5770
liquid flow rate meas., working standards calibration automation, statistical processing algorithm 3—2152
load transducers up to 10 N, static calibration devices *(Rumanian)* 3—40594
machine tools calibration using laser measurement systems *(German)* 3—16331
magnetic field intensity meter calibration, loop antenna appl., effect of infinite-size conductive objects *(Japanese)* 3—16378
magnetostriction meas. by cantilever capacitance method, amorphous Dy-Fe film appl. 3—14101
Michelson interferometer active calibration, for plasma density meas. 3—45193
microcalorimeters used as thermal power meters, test and calibration process 3—4733
microchannel plate detectors efficiency and absolute time calibration 3—26551
microwave generator freq. standards, effect of parameters of multiresonator system with superconducting resonator 3—10861
mirror standards, second surface, of spectral specular refl., reflectometer calibration for solar conc. mirror evaluation 3—41960
monochromator, spectral calibration using W strip lamp 3—250
Mossbauer spectrometer, isomer shift compensation with reson. detectors. 3—1123
noise meas. devices calibration *(Hungarian)* 3—56400
nuclear facility environments monitoring, dosimeter systems, compulsory calibration in Germany *(German)* 3—17071
nuclear medicine, metrological supervision of radionuclide calibrators with ionisation chambers *(Hungarian)* 3—58789
optical ruled limbs and code discs, methods of checking division errors 3—27283
optogalvanic spectroscopy using hollow cathode lamps, wavelength calibration *(Chinese)* 3—36710
Particle Beam Fusion Accelerator data handling and recording facility 3—17066
particle size measurements, turbidimetric spectral transmission techniques review 3—20825
photomultipliers, Anacker-Mannkopff black body 3—11602
photonuclear break energies for accelerator energy calibration, radiotherapy appl. 3—21581
photovoltaic reference cell development approved laboratory program 3—24602
photovoltaic solar reference cells calibration using global method 3—24603
photovoltaics industry measurement equipment, manufacturer's perspective 3—24592
piezoelectric pressure transducer, static calibration 3—49343
piezoelectric transducer, selector for calibration 3—25872
piezoelectric transducer calibration by spectral methods 3—50877
pneumotachometer characteristics computerised determ. using calibrated syringe 3—19856
positron-emission CT unit, for head imaging, performance and calibration 3—53824
pressure meas. in PWR system, line pressure effects 3—21456
pressure probe for incompressible flows, dynamic fast response design 3—2142
pressure transducer, dynamic, frequency response determ. 3—20847
pressure transducers, for use in safeguarding special nuclear materials 3—21444
pressure transducers, two absolute calibration methods comparison 3—25869
pressure transducers NBS calibration facility, accuracy assessment 3—10833
proportional counter, 4π, ^{55}Fe activity meas. method, efficiency calibration 3—6501
proton beam intensity monitor calibration method, ^{27}Al(p,3pn)^{24}Na cross section meas. 3—11307
pulsed spectroscopic appl. in visible and UV, absolute calibration using laser sources 3—40702
pyranometer design, construction and tests for solar radiation detection 3—5859
pyrheliometers and pyranometers calibration for testing photovoltaic devices 3—20888
radiance broadband lamp standard, for UV, visible and IR ranges 3—398
radiographic screen-film noise power spectrum, microdensitometer meas., calibration and intercomparison 3—481
radiography, digital, contrast signal generation, beam hardening, radiation scatt. effects 3—53798
radiometer, multiband modular, for remote sensing field research 3—4866
radiometer, Navy forward looking IR systems program support 3—396
radiometers, total-power, calibration and sensitivity, satellite-borne Earth observations appl. 3—25221
radiometric calibration of space-borne instruments, for Earth Radiation Budget Experiment 3—5091
radiotelescopes with periscopic reflector, absolute calibration 3—40035
random pulser, meas. and improvements of random deteriorations 3—50220
retroreflection measurement, calibration method for luminous intensity coeff. 3—5830
Rockwell hardness tester, effect of geom. arrangement of hardness dents using ref. blocks *(German)* 3—34576
scintigraphic images, digital, spatial calibration 3—9730
seismic transducers, principles and techniques for shock and vibr. meas. *(Italian)* 3—35282
silicates, quantitative anal. by ion microprobe, calibration of standards 3—19542
skin friction time-resolved meas., modified gauge 3—27626
slit, variable, calibration with X-ray source 3—50743
solar cells calibration by reference cell method—spectral mismatch problem 3—14954
solar photovoltaic modules certification, experience with applicable specifications 3—24609
solar photovoltaic modules certification activities 3—24608

calibration continued
  sound pressure standard realisation, by closed-coupler reciprocity technique 3−12466
  spaceborne thermal detectors calibration, earth radiation budget expt. appl. 3−400
  specific heat meas. in intense magnetic fields at low temp., using capacitance thermometry 3−16367
  spectral intensity calibration using Ar II branching ratios 3−11741
  spectrometer gamma sources, X-ray radiation intensity changes obs. 3−45257
  spectrophotometer or colorimeter calibration for daytime colorimetry of retroreflective materials 3−36060
  sphalerite cosmobarometer for meteorites, experimental calibration 3−48864
  stable isotope reference samples in geophysics, comparison 3−53957
  stellar photometry, empirical calibration of RGU-system 3−40041
  strain gauge metrological certification, Soviet practices 3−10830
  tank calibration by volumetric method, interpolation formula *(Rumanian)* 3−40558
  temperature sensing devices, developments 3−5789
  temperature standards establishment by Pt resistance thermometry *(Korean)* 3−10845
  thermocouple calibration furnaces, design and construction 3−16354
  thermocouples, distributed EMF generation and consequences 3−40599
  thyroidal ^{125}I 3−58795
  torque dynamometers up to 50 N, static calibration devices *(Rumanian)* 3−40594
  traceability system for radiation pyrometry *(Japanese)* 3−40610
  transducers and measuring units, dynamic calibration *(Hungarian)* 3−16330
  US hydrophone calibration method 3−46429
  US receiver, miniature, calibration using planar scanning technique 3−17760
  US therapeutic instruments, testing and calibration, rel. to transducer effective radiating area 3−9684
  using self-calibrated thermistor, design and operation 3−27744
  UV sources, H_2 arc emission, 124 to 300 nm, 3−42478
  vibration-measuring equipment calibration using interferometer 3−40678
  voltmeters, peak values meas. in high-voltage techniques, calibration methods *(Rumanian)* 3−36040
  VUV and EUV radiometry using synchrotron radiation at NBS 3−10881
  VUV monochromator calibration using measured at. branching ratios 3−50740
  waveform computerised recording system for particle beam fusion accelerator 3−5775
  weights, varying accuracy classes, use of electronic balance *(Rumanian)* 3−35965
  weld inspection, US, using rectangular calibration screen overlays 3−9291
  X-ray mirrors flown on Ariel-6 satellite, soft X-ray reflectivity meas. 3−59214
  X-ray unit, kV test cassette calibration 3−53818
  XPS nonlinearities effect on calibration 3−25996
  Ar-ethane drift chamber calibration using focused N laser shot as ionisation source 3−2170
  C thermometer, calibration in 1.2 to 4.2K temp. range *(Czech)* 3−303
  Cd, determ. by electrothermal AAS, calibration *(French)* 3−19551
  Ge(Li) detector efficiency calibration using ^{166m}Ho source 3−26212
  Ge(Li) detector efficiency calibration using primary standard sources and Monte Carlo calcs. 3−26573
  Ge(Li) detectors in close geometry, efficiency calibration 3−17169
  ^{178m}Hf decay use for intensity calibration 3−1177
  ^{99}Mo, coincidence calibration, decay scheme parameter meas. 3−24885
  Pb-In-Au/oxide/Pb-Au Josephson tunnel junction, high precision potentiometer appl. 3−36038
  Pt resistance thermometer, two-point calibration method, 4.2 to 273K 3−40601
  Pt resistance thermometers, industrial-grade, calibration and interpolation, 77 to 273K 3−30855
  Ra standardisation at National Physical Laboratory 3−54710
  SO_2 level measurement using SO_2-air mixture calibration standards 3−39570
  Si photodiode self-calibration for IR radiometry 3−395
  Si:B(P), impurity content meas. by photoluminesc. technique *(Chinese)* 3−38863
  Si:O, O content meas. by 9 μm IR absorpt., calibration curve *(Chinese)* 3−38850
  Si(Li) detector, calibration by radioisotope X-ray fluorescence 3−17167
  Si(Li) detector efficiency calibration using primary standard sources and Monte Carlo calcs. 3−26573
  SiO_2 standard dielect. capacitor evaluation and calibration against horizontal model of calculable capacitor 3−5762
  ^{99m}Tc, coincidence calibration, decay scheme parameter meas. 3−24885
californium
  see also nuclei with ......
  X-ray energies, natural widths and intensities meas. 3−11737
  ^{249}Cf, self-diffusion coeff. determ. in $Nd(ClO_4)_3$ soln. 3−2859
  ^{252}Cf, neutron energy spectra meas. using neutron time-of-flight spectrometer *(Chinese)* 3−50113
  ^{252}Cf neutron multiplier appl. for routine instrumental neutron activation anal. 3−29348
  ^{252}Cf neutrons, effectiveness at low dose rates in radiobiology and radiotherapy 3−15142
  ^{252}Cf photon dosimetry, neutron insensitive depolymerisation of polyacrylamide 3−9752
  ^{252}Cf, spontaneous fission, fast neutron fluences and emission rates, absolute standard establishment *(Japanese)* 3−17151
californium compounds
  $Cf(PO_3)_3$, Raman spectra 3−47646
  $CfPO_4$, Raman spectra 3−47646
calorimeters
  see also calorimetry
  adiabatic, built-in cryo-refrigerators, heat capacity meas., 13.8 to 350K 3−30860
  adiabatic calorimeter for heat capacity measurements from 80 to 400K *(Chinese)* 3−49375
  anti-Cherenkov photomultiplier tube for modular calorimeter array 3−26585
  ARGUS electron-photon calorimeter for low-energy EM shower detection 3−41413
  calibration system for hadron calorimeter array 3−50242
calorimeters continued
  central shower counter prototype for FNAL collider detector facility 3−36616
  CERN UA2 central calorimeter 3−50205
  d'Arsonval's calorimeter: measurement of animal heat, 1877 3−30575
  DPS, for heating and cooling modes meas. 3−35044
  electromagnetic, conductive plastic proportional tube high energy test 3−50238
  EM calorimeter photomultipliers linearity and stability tests with two-stage amplifiers 3−26571
  fast charge-integrating sample-and-hold cct. for calorimeter arrays, report 3−21600
  flow, isothermal high-pressure, excess enthalpy of cyclohexane+n-hexane 3−30861
  flow-microcalorimeter for determ. of heat of solution of slightly soluble gases 3−4314
  gas sampling calorimeter using conductive plastic tubes 3−36617
  gas sampling saturated avalanche EM calorimeter testing in positron beam 3−41412
  gas tube calorimeter with intelligent structs. for EM showers 3−50257
  Geiger mode discharge cells, for PEP-4 3−50239
  hadron calorimeter towers of scintillator/Fe sandwich, high space resolution 3−26587
  hadronic calorimeters for energies 100-2000 GeV, albedo study 3−26565
  HARP, calorimeter high press. argon readout 3−50255
  high density projection chambers 3−50207
  high-temp., heat-flow, using thermopiles 3−20856
  laser plasma diagnostics, soft X-rays energy meas. using large-area calorimeter 3−45142
  laser power meters, review 3−40687
  long drift techniques for calorimeters 3−50258
  MAC calorimeters and applications 3−50253
  magnetic loss meas. in small samples 3−25902
  microcalorimeters for absorbed dose meas. in benchmark rad. fields 3−55776
  microenergy laser calorimeter, highly sensitive, principle, struct. and performance *(Chinese)* 3−20854
  multichannel microcalorimetry system design and testing 3−25879
  nonisolated-sensor solid polystyrene calorimeter for absorbed dose meas. 3−6454
  plasma calorimeter using self-calibrated thermistor, design and operation 3−27744
  plastic streamer tube calorimeters 3−50206
  reactor specific power meas. *(French)* 3−55306
  refrigeration plant evaporators testing using calorimeter chamber 3−20855
  saturated avalanche calorimeter 3−50256
  scintillator calorimeter, photodiode readout 3−50240
  superconducting magnet for HE detector at LEP 3−36615
  TASSO liquid argon calorimeters 3−50254
  titration calorimeter, microcomputer controlled 3−25880
  twin high-temp. calorimeter for enthalpy meas. *(Japanese)* 3−30859
  whole-body calorimeter for humans, technical description and performance characts. 3−35045
  ν, calorimeter, calibration of detector in π/e beam 3−50241
  Ar, liquid, detector simultaneous operation as bubble chamber and calorimeter 3−26562
  Pb-liquid scintillator EM calorimeter 3−45754
calorimetry
  see also calorimeters; specific heat; thermal analysis
  alloys, thermodynamic quantities, exptl. methods for determ., review 3−13484
  boiling liquids, meas. of intensity of heat exchange *(Russian)* 3−54739
  CALOR code for calorimetry design for high-energy particle detection 3−11631
  calorimetric microflowmeter for gas flows 3−46673
  fluorides, heat capacity, low temp. 3−57105
  heat capacities determ. calorimetric experiment setup 3−312
  heat capacity measurements, progress in expt. techniques 3−54740
  heat flow meas. by linear Fick's law calorimeter 3−5526
  IR window materials, multiwavelength laser rate calorimetry, effective opt. absorpt. coeffs. 3−7096
  laser materials, optical absorpt. meas. using interferometric calorimetry *(Japanese)* 3−1729
  linear calorimetric probe for meas. thermal flux, automation 3−7659
  LKB batch microcalorimeter, fully automated micro-injection system 3−20857
  low-temperature specific heat meas., review 3−30862
  microcalorimeters used as thermal power meters, test and calibration process 3−4733
  microcomputer-controlled calorimetric apparatus for slow reactions 3−49376
  microcomputer-controlled vacuum adiabatic calorimeter for 4.2-300K 3−313
  molten alloy electrode, sustained high-current arcs during vacuum consumable arc remelting 3−18182
  nylon 6,6 and 12, drawn and undrawn films, equilib. melting temp. determ. 3−51752
  optical absorption coeffs. meas. by pulsed photoacoustic calorimetry 3−36104
  optical absorption measurement of films by laser calorimetry 3−10874
  optical fibre absorption loss meas., calorimetric technique 3−46336
  PMMA, glassy, light scatt. and absorpt. coeffs., laser calorimetry 3−8842
  polystyrene, glassy, light scatt. and absorpt. coeffs., laser calorimetry 3−8842
  pulsed reactor thermocouples, neutron effects, thermoelectromotive force transient variations 3−45631
  rubber, natural, optical and calorimetric anal. of stress induced crystallisation 3−2435
  solar radiation absorption and reflection in solids meas., vacuum technique 3−49457
  superconducting magnet losses meas., in pressurised ^{4}He, using calorimetry 3−35999
  water dissolved in dielectric fluids, calorimetric meas. 3−2804
  Al, electron stopping power, 11-127 keV 3−13297
  Al, plastic deform., calorimetric meas. of polycryst. samples 3−39196
  $Co_{5.8}Ni_{10}Fe_5B_{16}Si_{11}$ amorphous alloy struct. changes during heating 3−51778
  Cu, electron stopping power, 11-127 keV 3−13297
  Fe-Ni-Si-Co, aging of martensite, Co influence *(Russian)* 3−53087

calorimetry continued
$LiF-K_2SO_4/KF-Li_2SO_4$ charge-asymmetric reciprocal molten salt mixtures, excess enthalpies 3—4313
$LiNO_3$ and $NaNO_2$ latent heat storage materials, thermodynamic props. using twin high-temp. calorimeter *(Japanese)* 3—34732
$Li_{17}Pb_{83}$ eutectic alloy, breeding material for fusion reactor, thermodynamic props. 3—57111
Mo, enthalpy meas., certification of standard specimen for thermodynamic props. 3—47124
$NaNO_3-KNO_3$ heat transfer salts, thermodynamic props. *(Japanese)* 3—33468
NbO_2, phase transition, calorimetric study 3—3063
$Se_{0.95}Bi_{0.05}$ alloy, crystallisation, calorimetric investig. 3—3944
$Ti-H_2(D_2)$ system, high temp. thermodynamics 3—42809
$\alpha-TiO_x-H_2(D_2)$ system, high temp. thermodynamics 3—42809
UI_4, high temp. phase transform., elec. cond. and calorimetric meas. 3—33419
$(UO_2)_x(AsOy)_z$, standard enthalpies of form. 3—4311
V, heat capacity, 80 to 1000K, laser-flash calorimetry 3—2835

caloristers *see calorimeters*

CAMAC
accelerator synchronisation device, within CAMAC standard 3—11620
automated laboratory general physics expt., interactive mode of operation *(Russian)* 3—16341
automated mass spectrometer complex for struct. investig. and thermal anal. of flames *(Russian)* 3—40714
automatic γ-activity meas. in CAMAC system for VVER fuel elements *(Czech)* 3—49942
automatic expt. experiment using small computers and CAMAC apparatus, input/output software 3—10813
calibration channel unit, 16 channel data acquisition module with autonomous memory 3—1187
CATY, BASIC-like language for expt. control, data collection, display and anal. 3—1184
coincidence circuits, nanosecond, controlled and majority types 3—1171
drift chamber, data registration system design 3—1160
EM calorimeter photomultipliers linearity and stability tests with two-stage amplifiers 3—26571
encodable real time interval counter, CAMAC module to control time resolved meas. 3—1186
EPR spectroscopy complex, automated problem-oriented system *(Russian)* 3—16382
fast multichannel analyser in CAMAC format 3—1166
FASTBUS at KEK, status report 3—50273
geophysics, multipurpose research ships, integrated research automation systems 3—20126
interface module for data acquisition from multiple ADCs 3—45799
JT-60 fusion reactor control system, safety design 3—55650
laser fusion facility, processing system, hardware and software 3—50063
linear accelerator, analogue storage system for data acquisition 3—50224
mass spectrometer with specimen introduction in modulated mol. beam form, automated recording system 3—450
microprocessor based CAMAC isolated digital output module 3—50213
multichannel amplitude analyser in CAMAC standard, design and operation 3—11617
multiparameter multichannel anal. system 3—1188
MWPC area detector for synchrotron X-radiation diffr. and scatt. 3—1135
NAC accelerator computer-based control system 3—26516
nanosecond pulse form measurement system on-line with computer, for heavy ion accelerator automated control system 3—1170
physical field automated investig. system, CAMAL multichannel analogue input complex *(Russian)* 3—16340
proportional chamber, data registration system based on hybrid IC 3—1161
pulsed laser data acquisition system 3—30844
spin spectrometer parallel processor 3—50266
TV camera interfacing to CCD for automatic processing of particle track images 3—50275
wire spark chamber capacitive readout system with low leakage current 3—45758
X-ray position sensitive detector with delay line readout, direct time digitising 3—1185

camera lenses *see photographic lenses*

camera tubes, television *see television camera tubes*

cameras
see also coronagraphs; television cameras
Anger and multicrystal cameras, ^{178}Ta count rate limitations 3—48398
automatic focusing, using CCD receptor *(German)* 3—45229
cinematographic ultra-high speed cameras, with image commutation and mirror secondary objectives, kinematic aberrations 3—5904
colour camera with dynamic cross-colour-suppression and automatic convergence adjustment *(German)* 3—30945
dust ray camera, imaging by dust rays 3—12060
dye laser output, modified Hansch-type, XeCl-and N_2-laser pumped, streak-camera anal. 3—27118
electron diffraction camera modification for investig. of reverse scatt. of electrons on material targets 3—5914
electron-diffraction, structural change kinetics, obs. 3—46816
exposure instability vs. film camera mechanism and electric drive parameters *(Russian)* 3—49488
fibre-optic waveguides, stimulated Raman scatt. Stokes component pulses, temporal and amplitude characts., streak camera technique 3—22250
filming equipment, photographic inspection *(Russian)* 3—49489
fireball automatic network, use of 35 mm all sky camera 3—30224
gamma camera, ^{201}Tl imaging artifacts rel. to NaI crystal hydration 3—48396
gamma camera, rotating conventional, for single-photon tomographic system, physical performance 3—48377
gamma camera collimator, MTF and contrast detail image evaluation tests 3—53882
gamma camera for emission computed tomography *(Hungarian)* 3—24855
hand-held optical instrument stabilisation, review 3—25913
high speed photographic system for expt. mech. 3—40709
high-speed, measuring technique application *(Hungarian)* 3—25970
high-speed camera image quality, influence of dynamic defocusing *(Russian)* 3—54789
holographic camera for phase problem soln. in crystallography *(German)* 3—56162
human inertial response study, camera and site calibration for 3D target acquisition 3—4712
Kodak disc system 3—20908
Kulpe-Schulz convergence camera for X-ray study of mica polytypes 3—46808
laser scanning camera [for viewing inside nuclear reactors] for viewing inside nuclear reactors 3—40713
laser viewer, LV-3M, based on receiving camera with confocal attachment 3—46226
lens—film camera—film system, methods of increasing resolution *(Russian)* 3—45236
medical engineering instruments, optical system demands and conditions 3—34934
medical fluorescent screen-isocon camera system for X-ray imaging in radiology, evaluation 3—9727
microcomputer-controlled camera 3—25968
Minolta X-700 Program System 3—5900
mounting equipment for greater camera movement *(German)* 3—30944
movie-camera part fabrication on automatic general-purpose bending presses 3—25976
optical fibres, step-index, mode propag. meas. using synchroscan streak camera 3—37237
photomicrographic camera system, mf-AKS model 3—431
picosecond streak camera performance in exciplex form. dynamics studies 3—50455
plane grating monochromator, off-axis parabolical mirrors in collimator and camera 3—27221
Plaubel 69W Proshift Superwide, review, design, construction 3—5893
Plaubel 69W proshift superwide, review, performance 3—5894
positron camera, multiwire proportional chamber, imaging performance 3—24874
positron emission tomography ring camera, single-slice design, Monte Carlo simulation 3—48407
professional 35-mm motion picture cameras from Bell & Howell Co. 3—20922
RETINOPHOT 211, stereoophthalomoscopy and stereophotography of fundus oculi 3—34937
rotary focal plane shutter, performance and image distortion 3—5905
shutter used in high resolution bubble chamber photography 3—26569
slow-electron diffraction camera, low temp., sample holder 3—51462
SLR 35 mm photogrammetric system for glacier meas. 3—10097
solid-state line scanner camera for advanced crystal diameter control during crystal growth 3—54728
speckle camera for use with BTA 6 m telescope, description and use 3—30206
streak camera, 400 kHz triggered, used with mode-locked dye laser, temporal performance 3—50690
streak camera image converter tube, photocathode design, plasma diagnostics appl. 3—40711
streak camera OTF and slit width determ. *(Chinese)* 3—10932
streak camera system, jitter-free 3—25983
streak camera system, picosecond diode laser pulse obs. 3—40712
synchroscan streak-camera read-out system for use with CW mode-locked lasers 3—40710
underwater photographic techniques for irradiated nucl. fuel inspection, report 3—31690
valve electronic camera, remote controlled, at C.F.H. 3.60 m telescope prime focus *(French)* 3—30199
veiling glare in photographic systems 3—420
vibration compensation systems, development *(Russian)* 3—30947
video shooting appl. *(Russian)* 3—45240
vision systems, real-time automatic ranging algorithm 3—20948
X-ray camera for low-angle diffr. from small specimens 3—54819
X-ray pinhole camera, laser forming of microholes 3—10974
Nd laser radiation fluctuating subpicosec. struct. recording using image-convertor camera 3—27122
Xe filled electrolum. emission gamma-camera 3—41422

candoluminescence *see luminescence*

canted spin arrangements
see also weak ferromagnetism
Au-Fe (19 at.%), spin canting and ferromag., Mossbauer and susceptibility meas. 3—14012
$Ca_2Fe_2O_5$, weak ferromagnetism 3—14084
Co_2TiO_4, semi-spin glass behavior 3—8652
$CrAs_{0.47}Sb_{0.53}$, electronic struct. mag. and structural phase transitions, press. study 3—18896
$DyMn_2$, Laves phase, mag. characts. 3—47480
$\beta-Fe_{1.67}Ge$, spin struct., Mossbauer study 3—19018
$\gamma-Fe_2O_3$, Co adsorbed, mag. and Mossbauer studies 3—57830
$\alpha-Fe_2SiO_4$, mag. props., neutron diffr. study 3—57540
$GdCu_{1-x}Ga_x$, cryst. struct. transforms. and mag. ordering phenomena 3—38595
Li ferrites, substituted, hyperfine fields relaxation, temp. effect, Mossbauer study 3—13784
Li-Zn ferrites, mag. anisotropy 3—14043
$Li_{0.5-x/2}Zn_xFe_{2.5-x/2}O_4$, hyperfine field distribs. and spin canting, Mossbauer study 3—34013
γ-Mn, antiferromag., anisotropy energy calc. 3—57579
$TmFeO_3$ orthoferrite, spin structure, NMR study 3—23594
$YCrO_3$ orthochromite, spin structure, NMR study 3—23594
$YFeO_3$ orthoferrite, spin structure, NMR study 3—23594
Zn ferrites, hyperfine fields 3—13783

capacitance
see also photocapacitance
conducting body capacitance optimised simulated image method 3—26895
conductors, shape factors calc. 3—36904
glass capacitance thermometer for mK temp. range 3—36009
Josephson tunnel junction, capacitance effects on noise rounded current-voltage curves 3—23547
Langmuir-Blodgett film MIS structures on narrow band-gap semiconductors 3—38487
Lindner high-freq. MOS capacitance approx. 3—57427
lipid bilayer membranes, modified with UO_2^{2+}, reversible elec. breakdown mechanism 3—8769
magnetostriction detection in static fields for nonmagnetic metals by capacitance technique *(Japanese)* 3—28678
magnetostriction meas. in pulsed fields using capacitance cell dilatometer *(Japanese)* 3—28679

- **capacitance** continued
  - metal-semiconductor interface, localised states, capacitance spectroscopy 3—3314
  - MIS structure, surface capacitance under depletion-type static bias 3—18794
  - MOS structure with very thin substrate, low freq. capacitance characts., mathematical modelling 3—23488
  - n^+-n-p asymmetric junctions, anal. and meas. of built-in-field in highly doped emitters 3—28420
  - p^+-n junction containing mid-bandgap electron traps, looped C-V characts., modelling 3—38469
  - p-n junction diodes and transistor diodes, forward-biased, transition region capacitance, phenomenological model 3—23471
  - porphyrins, esterified, Langmuir-Blodgett films 3—38512
  - pressure transducer, capacitive integrated, with DC output voltage proportional to pressure 3—283
  - solar cells p-n junction, diffusion capacitance at max. power operation 3—9431
  - tuning fork resonator using shear mode piezoelectric ceramic 3—1914
  - Al-polymer-Al (Au), thin film form. by plasma polymerisation, elec. property meas. 3—13921
  - $Al_xGa_{1-x}As$ organometallic VPE layer, electron traps, transient capacitance study 3—3340
  - Au/a-Se/Al struct., aging effect of capacitance and photoelec. characts. 3—33802
  - BN, adsorption of Kr and Xe, dielec. and adsorption isotherms 3—23175
  - $Ce_{1-x}Y_xO_{2-x/2}$ ceramic, impedance, AC and DC, inhomogeneity contrib. 3—3188
  - GaP:Cr epitaxial layers, MOCVD grown, high temp. resist., capacitance and I-V meas. 3—13930
  - HgCdTe MOS structures, photovoltage 3—23500
  - $Hg_{1-x}Cd_xTe$ MIS structs., capacitance transient anal. 3—47432
  - MIS structs., capacitance relax., tunnel generation effects 3—57430
  - β''-Na_2O-Al_2O_3 superionic conductor, complex admittance plots 3—42835
  - $Na_{1-x}Si_xZr_zP_{3-x}O_{12}$, NASICON, superionic conductor, complex admittance plots 3—42835
  - $Pb(Zr,Fi)O_3$ hollow spherical piezoelectric elements operating at large static pressure 3—27339
  - $Pb(Zr, Ti)O_2$ piezoelectric ceramics, material property meas. 3—19068
  - Si (111)-Ag(Au)(Ni) interfaces, localised states, capacitance spectroscopy 3—3315
  - p-Si, divacancies, hole capture cross sections, isothermal capacitance relax. study 3—43107
  - Si, polycryst., grain boundary passivation and analysis for solar cell applications 3—51629
  - Si, trace contamination, capacitance transient spectroscopy 3—3103
  - Si:H amorphous, photocond., I-V and C-V characts., field quenching 3—57387
  - SnO, thin film capacitors, temp. effects 3—38501
  - $SrTiO_3$, electric transport, interface and bulk prop. effects 3—43172
  - Zn phthalocyanine thin films, O_2 doping 3—22925
  - ZnSe, deep centres, electrolum., barrier capacitance relax. study 3—18654
- **capacitance measurement**
  - AC bridge for comparing four-terminal-pair impedances, SI units derivation 3—5810
  - capacitance meter with digital readout for 1 nF to 999-99 μF range *(German)* 3—45126
  - digital multimeter, used for capacitance meter, 556 IC 3—20868
  - electrochemical potential spectroscopy, for electric cells testing 3—40643
  - level meter for continuous meas. of liquid nitrogen level 3—45128
  - MOS capacitors, constant current charging technique for meas. of generation rates 3—52265
  - MOS capacitors, set up for simultaneous meas. of quasistatic and high freq. C-V characts. 3—347
  - paper capacitor dielectric meas., mechanical resonance influence 3—10857
  - void discharges meas. techniques comparison 3—10856
  - voltage comparison method, influence of voltmeter internal resist. on accuracy *(German)* 3—30896
  - Si wafer bulk generation lifetime evaluation from pulsed MOS capacitance and gated diode meas. 3—38400
- **capacitance meters** *see capacitance measurement*
- **capacitor storage**
  - accelerator for masses up to 1 g, using capacitor bank 3—49523
  - pulsed nuclear fusion expt., use of high powered capacitor bank 3—6436
- **capacitor stores** *see capacitor storage*
- **capacitors**
  - *see also electrolytic capacitors; thin film capacitors; varactors*
  - ceramic capacitor as energy source for small-size N_2 laser *(Chinese)* 3—12171
  - ethylene glycol-water capacitor, high voltage charge injection and transport 3—43483
  - HV plasma focus for high intensity neutron source, design study using water capacitor bank 3—56763
  - magnetic fields, steady-state, solution using finite elements method *(Rumanian)* 3—6827
  - MIM capacitor, quantum oscills. of charging current in mag. field *(Russian)* 3—23501
  - MOS capacitors, constant current charging technique for meas. of generation rates 3—52265
  - MOS capacitors, irradiated, space-charge accumulation dynamics, numerical simulation 3—23490
  - multiterminal capacitor sensors, design and performance, bridge instrum. and meas. appl. 3—54725
  - weakly conducting fluid, dispersion in elec. field of plane condenser *(Russian)* 3—2132
  - $BaTiO_3$ ceramic capacitors, DC leakage in Poole-Frenkel field 3—3208
  - $Hg_{1-x}Cd_xTe$ biased MIS capacitor, surface pot. relax. 3—38456
  - SiO_2 standard dielect. capacitor evaluation and calibration against horizontal model of calculable capacitor 3—5762
  - $(Sr_{0.5}Pb_{0.25}Ca_{0.25})TiO_3$-$Bi_2O_3$.$3TiO_2$ ceramics, dielec. props., appl. in HV capacitor 3—28752
- **capillarity**
  - *see also bubbles; contact angle; drops; foams; liquid films; surface tension*
  - batteries, sealed storage, calc. of capillary equilib. in space between electrodes during charging 3—53424
  - benzoic acid, gas-liq. flow through capillary, solid-liq. mass transfer 3—27600
  - buoyancy-thermocapillary instability, interfacial deformation in one- and two-component fluid layers 3—27518
- **capillarity** continued
  - butadiene-α-methylstyrene rubber blends, ingredient redistrib., ambient medium effects *(Russian)* 3—7539
  - cluster free energy in Ising model, Monte Carlo calc., comparison with capillarity approx. 3—33908
  - coupled intra- and extraluminal flows for single and multiple capillaries, anal. 3—9657
  - dilute polymer solns., vertical pipe flow, stringiness of drops at exit end 3—27558
  - electrocapillary transducer, oscillatory motion acceleration measurement *(Polish)* 3—35986
  - floating zone crystal growth, thermal Marangoni convection *(German)* 3—2451
  - fluid, bridge between solid plates in gravitational field, contact angle 3—2932
  - fluid filling a half-space, stability of thermocapillary convection 3—46544
  - gas mixture in capillary, barodiffusion and thermodiffusion 3—46677
  - gases, low-density, in capillaries, mass transport induced by laser radiation 3—32766
  - jet, instability development, control by ultrasonic beams 3—46670
  - laminar two phase flow in constricted capillary tube, inertia, viscosity and capillary forces 3—51209
  - line of contact of three media, conditions 3—8297
  - liquid, thermocapillary convection under high-power laser irrad. 3—7585
  - liquid columns, steady and oscillatory thermocapillary convection 3—51109
  - liquid menisci deform. under action of elec. field 3—8304
  - liquid surface deformation by floating particles, holographic interferometry study 3—57176
  - liquids, capillary equilibrium and stability under microgravity 3—2927
  - long slender heat pipe performance for latent-heat thermal energy storage 3—39534
  - low gravity simulation methods 3—2159
  - polymer solns., elongational capillary flow, contraction influence 3—27608
  - polymer solutions, capillary flow at high shear rate 3—32771
  - polystyrene, charged surface behaviour near softening point, frost effect 3—9208
  - porous metal gauzes, capillary impregnation with liquids 3—42887
  - refractory-metallic binder composite, sintered, anomalous behaviour of liq. metals in flat capillaries 3—58090
  - sinuosity and Darcy's law for capillary and creviced materials 3—51218
  - solid-liquid friction, one-parameter model 3—12775
  - suspension containing two different sizes of particles, flow through capillary tube 3—2114
  - thermocapillary MHD convection in cylindrical liq. layer under conditions of weightlessness 3—22541
  - thermocapillary migration, appl. to controllable heat valve 3—37530
  - thermoplastics, charged surface behaviour near softening point, frost effect 3—9208
  - two-phase channel flow, divergent-convergent, finite difference method *(French)* 3—12752
  - US penetrant inspection, liq. filling of microcapillaries under US action, filling parameters calc. 3—29280
  - viscous fluid, pulsating laminar flow in a capillary 3—37570
  - water, boiling in high thermal cond. capillary structs., heat exchange 3—42108
  - $Ga_{1-x}Al_xAs$ film, capillary liq. epitaxy 3—43776
  - H_2 isotopes, surface tension and quantum mechanical law of corresponding states *(Russian)* 3—2929
  - ^4He and ^4He-^3He mixtures, cooling effects in vortex cooler 3—37338
  - Hg, slipping, in quartz microcapillaries during laminar flow 3—17975
  - Kr, liquid-vapour interface, surface tension, density distrib. *(Russian)* 3—2935
  - Mo-W single crystal, floating zone melted, thermocapillary flow charact. rel. to impurity distrib. pattern 3—8079
- **capillary phenomena** *see capillarity*
- **capillary waves**
  - capillary-gravity waves on fluid of infinite depth, method of multiple scales study 3—32749
  - deep-water capillary waves, reson. three-wave interaction, subharmonic generation 3—22481
  - droplets generation by capillary waves, excited in small meniscus 3—27625
  - liquid-vapour interface, percolation props. 3—33537
  - nonlinear capillary waves, numerical soln. method 3—51144
  - rotating stratified fluid, phase configuration of waves around accelerating disturbance 3—51148
  - surface models, geometrically invariant interactions 3—32751
  - Hg/air interface, surface capillary wave propagation, viscoelasticity 3—2082
- **capture cross-sections, nuclear** *see nuclear reactions and scattering*
- **Caratheodory's principle** *see thermodynamics*
- **carbon**
  - *see also nuclei with ......*
  - *see also carbon fibres; charcoal; diamond; graphite*
  - abundance in G8-K3 giant stars 3—20360
  - abundance in globular clusters NGC 7006 and Palomar 13 giant stars 3—54457
  - abundance in H II region NGC 1977 bright rim, detect. from 492 GHz obs. 3—25585
  - abundance in OMC-1 from 492 GHz obs. 3—25584
  - abundance in WC11 star CPD—56°8032, UV obs. 3—25480
  - adsorbed on Al, Ni, Cu surfaces, nuclear reaction meas. 3—19239
  - adsorbed on PbTe, Raman scatt., roughness induced 3—57928
  - adsorption, high resolution electron microscopy, high surface area 3—33560
  - adsorption, on Ir(111) surface, submonolayer phase composition investig. 3—33577
  - adsorption of C, O and S on Rh, vibr. spectra anal. 3—19533
  - allotropic modification based on sp^2 hybridisation 3—22815
  - amorphous, localised Compton scatt. using EELS 3—24041
  - amorphous C, Planck mean absorpt. efficiency, interstellar appl. 3—59193
  - amorphous diamond-like film, glow discharge bias sputtering, props. and appls. 3—47769
  - amorphous film, appl. of method for controlling cryst. growth 3—38249
  - amorphous film prep. from Ag-C films 3—52929
  - amorphous films, ion beam deposition and struct. 3—3969
  - arcs, metastable atom fluoresc. study by UV laser diagnostics 3—22736
  - atmosphere C isotopes, study of tree rings 3—4936

carbon continued
- atmospheric aerosol particles, S, C, N characterisation by ESCA and EGA 3—9517
- atom, *K*- and *L*-shell electron stopping power calcs. 3—11974
- atom, electron-scattering cross-section, effects of excited configurations 3—32211
- atomic laser action obs. in hollow cathode discharge 3—12122
- black, form. in combustion of homogeneous hexane-air mixture at high press. 3—53395
- black, high-purity prod. for solar grade Si prod. 3—34253
- black filled elastomer, nonlinear viscoelastic behaviour, stress relax. 3—19362
- black filled rubber, degree of dispersion rel. to elec. resist. and matrix phys. props. 3—14814
- Cassiopeia A direction, search for low-freq. excited C radio lines *(Russian)* 3—35701
- cermet, stainless steel-C sputtered solar selective surfaces, optical props., effect of Ar press. 3—53574
- chemisorption on Ti (0001), discrete variational Xα cluster method 3—52221
- coating, arc conditioned, on Cu electrode, metallurgical characterization 3—3015
- coating, low-Z, for Tokamak reactor, thermal fatigue testing 3—21526
- coke, combustion temp. in fluidised bed, heat transfer 3—7649
- contamination of Czochralski grown Si single cryst. 3—33153
- content determ. in thin layers, nuclear method 3—19552
- content in Si, meas. by ratio spectrum *(Chinese)* 3—4325
- DC planar-magnetron sputtered film microstruct., Ar press. effect 3—3001
- deep levels due to isolated single and pair vacancies 3—13761
- diamond:C, ion implanted, mechanical props. enhancement 3—4154
- diffusion and thermotransport in β-La *(Russian)* 3—38127
- diffusion from Fe (100) following halocarbon adsorption, AES and XPS study 3—42924
- diffusion in alloy steel 3—9181
- diffusion in steel during thermocyclic treatment *(Russian)* 3—38128
- dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
- dust cloud, flame propagation in zero gravity, burning velocity, thickness, radiation heat loss 3—24537
- dust clouds, ignition energy and flame quenching meas., quenching distance formula 3—24536
- electron and H bombardment, methane prod. 3—53438
- energy loss meas., low-velocity ion effective charge 3—14418
- energy storage using latent heat of fusion of paraffin adsorbed on activated C 3—19620
- ESR line intensity, A-centres, of C blocks, chars and cokes 3—23800
- field-emission cathodes, stability in sealed instruments 3—28970
- film, hard, ion beam sputter deposited, prep. and props. 3—13673
- film, ion beam sputter deposited, diamond-like 3—3952
- film deposition with diamondlike props. from acetylene-Kr plasma 3—33609
- films, diamond-like, ionized deposition from methane gas and hardness props. 3—52976
- films, diamondlike, deposited by ion activated techniques 3—14506
- films, hydrogenated, produced by sputtering in Ar-H$_2$ mixtures 3—8975
- films, ion-activated formation, microstruct. and hardness props. 3—52978
- foil, electronic stopping power for 50-230 keV D$^+$ and He$^+$ 3—28019
- foil, specific energy loss depend. on foil thickness 3—41463
- foil+^{238}U ions, thermal neutron activation anal., stopping power values 3—8920
- foils, heavy ion energy loss and energy loss straggling calcs. 3—36634
- foils, light element impurity content 3—27965
- foils manufacture and use for beam-foil spectroscopy 3—21945
- fusion reactor material, implanted D retention and release, dynamic meas. 3—21505
- fusion reactor material, ion-induced release of D 3—17043
- fusion reactor material, radiation damage effect on D trapping and re-emission 3—17042
- geochemistry, anal. of geodynamic C cycle 3—19969
- glassy electrodes in H$_2$O-KCl solns., interface impedance, mechanical surface treatment effect 3—47410
- H$_2^+$, dissoc., H$^+$ velocity distrib. and separation in C foil, computer model 3—50541
- HD 149499B, hot DO white dwarf, photosphere C IV features 3—48905
- impurities in plasma, detect. by at. fluoresc. spectrosc. 3—18117
- impurity, trapping at ^{181}Hf probe atoms in Pt, TDPAC study 3—57840
- incompletely graphitised C, Raman scattering model 3—34082
- intense ion beam source development expts. 3—6484
- intercalated in graphite, electronic struct. 3—13723
- interstellar medium, C depletion in tubulent mol. cloud cores 3—10413
- isotope changes in S Atlantic benthic foraminifera, Late Quaternary abyssal circulation 3—25210
- isotope separation in expanding supersonic flow 3—36870
- liquid scintillation counter sample prep., combustion technique for ^{3}H, ^{14}C, ^{51}Cr sample 3—21596
- M15, metal-poor globular cluster, C and N abundances in giant stars 3—54455
- M92, metal-poor globular cluster, giant stars C and N abundances 3—5372
- microporous, physical adsorption, heat of immersion studies 3—23160
- molecular sieve, adsorption equilib. coeffs., effects of adsorbed water 3—33561
- molecule, interstellar, radiative processes, photodissociation, pot. energy curves, CI and SCF calcs. 3—41635
- monolayers on Ni(111), reversible step arrangement and segregation 3—8326
- negative ions, excited states lying above ground state of neutral atom 3—21647
- oxidation on Ni surface, effects of surface morphology 3—33559
- particles in gas suspension, optical props., comp. effects 3—19537
- particulate samples, thermal wave interf., photoacoustic signal meas. 3—18399
- particulate size distributions in Arctic region atm. 3—9512
- plasma, laser generated, population density and VUV gain meas. 3—12969
- Population I G and K giant stars, C and N abundances from DDO photometry 3—5298
- porous and fibrous, microstructure and properties, TEM study 3—8212
- process gases, on line spectral anal. method for carbon and water vapour determ. 3—9366
- pyrocarbon coating, depthwise structural inhomogeneity 3—8350

carbon continued
- pyrocarbon sheaths for reactor fuel micropins, microstructure 3—41184
- pyrolytic, CVD, laser induced, apparent activation energies, rapid determ. 3—47778
- radical, reson. enhanced coherent anti-Stokes Raman scatt. 3—36769
- resistance thermometer with fast response below 10 mK 3—40602
- resistors, RS-11-$^1/_4$w, appl. on low temp. thermometers 3—36010
- rod atomiser configuration characteris. for atomic absorpt. spectrometry 3—53460
- room temperature molten salt electrolytes for photoelectrochemical applications 3—14963
- solar selective absorber, catalytically deposited 3—19602
- solid, F ion motion, single and double K vacancies 3—47008
- solid state, negative muon capture in cubic and hexagonal structs. 3—52700
- soot, from diesel engine exhaust, electrostatic precipitation 3—39562
- steel, stainless/C composite layers, C bonding AES lineshape anal. 3—58007
- stellar core C flash evolution, axisymmetric hydrodynamical calcs. 3—10313
- stopping ratios for 30-330 keV ions with $1 \leq Z_1 \leq 5$ 3—22950
- stripper foil shrinkage under heavy ion bombardment 3—45736
- surface, heavy-ion-induced wake pot. interf. effects 3—24076
- surface pollution on Cu electrode, enhanced by electron bombardment 3—19463
- surface processes under H isotope bombardment, SIMS obs., Tokamak relevance 3—17039
- surface properties, struct. and reactivity, from carbon black to carbon composites, review 3—24527
- target, H$^+$ collision, secondary electron emission, Compton profile 3—34187
- thermoanthracites, C K-band X-ray emission 3—24056
- thermometer, calibration in 1.2 to 4.2K temp. range *(Czech)* 3—303
- thin C foil bombardment with fast ions, secondary electron emission, ion beam current and incidence angle dependence 3—21878
- thin film, electron microscope, on-line image processing system *(Japanese)* 3—49504
- Venus atmosphere, atomic C chemistry, photoionisation and light scatt. 3—30282
- VHTR core support, testing of thermal insulation materials *(Japanese)* 3—11377
- vitreous, XPS line shape anal., appl. to coals 3—8932
- vitreous and glass ceramic, neutron irrad., gas permeability 3—8241
- ^{12}C ^{13}C, Fourier spectroscopy of Phillips system 3—44648
- ^{13}C$_2$, Fourier spectroscopy of Phillips system 3—44648
- Au-C-poly(butene-1 sulfone) three-layered system, soft X-ray induced energy deposition 3—37962
- B:C ion implantation form. of B$_4$C, TEM and electron diffr. study 3—27959
- Be:C, diffusion studies *(Russian)* 3—13553
- C foil+Si(Cl), equilibrium charge state distribs. of fast ions 3—32190
- C I, interstellar, origin of forbidden IR emission in H II or H I regions 3—10422
- C I, Rydberg states, polarisability and quadrupole moments from spectroscopic data 3—1281
- C I 505.2 nm line profiles and shifts in solar granulation 3—40084
- C I in interstellar sources, 610 μm fine struct. transition anal. 3—30471
- C II, Stark widths, transition probabilities, photoelectric meas. 3—6572
- C II, UV fluoresc. by optical pumping with extreme UV line radiation 3—45894
- C II 157 μm forbidden line emission for NGC 2024, H II region 3—35683
- C III, ^{5}P-^{5}S transition wavelengths, fine struct., MCDF-EAL calcs. 3—50323
- C III, doubly excited states study 3—21874
- C III, X-ray energy meas. by multichannel Doppler-tuned spectrometry 3—21590
- C IV 116.8 nm recombination laser 3—12117
- C IV solar 1548 Å line widths and Doppler shifts, fluid motions in chromosphere-corona transition region 3—40078
- C ions+H$_2$, nondissociative ionisation and dissoc. ionisation 3—6756
- C ions+He, absolute partial ionisation cross sections determ. for inelastic interactions 3—6765
- C ions+He, ionisation, deviations from q^2 scaling 3—6764
- C VI, laser prod. plasma, Lyman α line red shift study 3—12975
- C VI H$_\alpha$, observations of gains in the extreme ultraviolet 3—6584
- C$^-$, electronic structure, even-tempered basis functions, universal systematic sequences 3—11665
- C$^+$, dielectronic recomb. cross-section 3—46065
- C$^+$, dielectronic recombination cross section meas. 3—41689
- C$^+$, energy straggling in Al and Ag, comparison Bethe-Livingston theory 3—51675
- C$^+$, interstellar mol., mobility in He meas. 3—12811
- C^{3+}, dielectronic recomb. cross-section 3—56038
- C^{3+}, electron impact excitation, reson. effect, collision strengths calc. 3—6793
- C:B, ion implantation form. of B$_4$C, TEM and electron diffr. study 3—27959
- C:H amorphous film, struct. optical props. and decomposition kinetics 3—18590
- C:H amorphous films, plasma deposition and optical props. 3—38251
- a-C:H films, elec. cond., optical absorpt., dopant gas effects on props. 3—18705
- α-C:H sputtered solar selective surfaces, optical props., effect of Ar press. 3—53574
- C/H ratio in Jupiter and Saturn atm. 3—35510
- C-PVC composite, random stick-like conducting particles, percolation 3—8494
- C-PVC composites, elec. cond. and permittivity 3—8479
- C-stainless steel magnetron sputtered coatings, comp. anal., electron probe X-ray microanalysis 3—48108
- C+^{3}He^{2+}, charge transfer reactions at 68, 99 and 130 MeV 3—21908
- C+alkaline metal (alkaline earth) fluorides, multiple ionisation, electron transfer, K X-ray emission spectra 3—32186
- C+D$_2^+$→CD$^+$+D, reaction dynamics, 0.002-14 eV 3—58406
- C+Fe(Ni)(Cu), heavy ion excitation, visible radiation study 3—50503
- C+H$_2^+$, internucleon separation calcs. using realistic single scattering cross sections 3—21852
- C+N$_2$O(X $^1\Sigma^+$), reaction, pot. energy surfaces calcs. 3—44044
- C+Ne(Mg)(S), 2 MeV/amu, K X-ray spectra, energy shifts and collision broadening of 2p to 1s transitions 3—21687

carbon continued
$C+OSC$, reaction at 300K, $CS(a^3\pi_r)$ chemiluminesc., laser appl. 3−39371
$C+SO_2$, reaction, $SO(A^3\Pi)$ chemiluminesc. 3−39359
$C+Ti(Cr)$, $^3P_2$ and $^4P_{5/2}{}^0$ states lifetime meas. in He, Li-like Ti and Cr 3−26698
$C^+ + Cn \rightarrow C_{n+1}{}^+$, n-depend. of reaction rate in interstellar space 3−30443
C^++hydrocarbons reactions at 296K, C-C bond formation 3−34609
$C^{2+}+Ne$, K_α X-ray satellites and hypersatellites 3−50336
$C^{3+}+He$, electron capture reactions, (n,l) distribs. meas. 3−21903
$C^{4+}+H_2$, electron capture to Rydberg states 3−21904
$C^{5+}+He(N_2)(Ar)$, electron loss from fast one-electron ions 3−1471
C^6+H, large angle scatt., illustration for slow multiply charged ion+atom collisions 3−21902
$C^{6+}+H$, charge-exchange cross sections, semiclassical trajectory effects 3−26849
$C^{6+}+H$, continuum distorted wave capture into nth shell 3−11957
$C^{6+}+H$, partial cross section for charge transfer, report 3−21894
$C^{q+}+H(H_2)$, electron capture cross-section meas. in low energy collisions 3−6760
C_2, ab initio spin-orbit coupling constants for potential interstellar molecule 3−48974
C_2 absorption bands in white dwarfs, just overlapping line approximation 3−5104
C_2 and OH simultaneous spatially resolved monitoring in acetylene-O_2 flame using diode array detector 3−14892
C_2 in molecular clouds, excitation and abundances from radioastronomy 3−30468
C_2 molecule, total energy calc., Gaussian quadrature $X\alpha$ method for Hartree-Fock-Slater eqn. 3−31923
C_2 radical, emission spectrum, rel. to carbon tetrafluoride plasma diagnostics 3−2289
C_3, in Ar matrix, vac. UV spectrum 3−11820
C_3 in diffuse interstellar clouds, column density limits 3−15980
C_3, proton affinity determ. by reactivity meas. 3−55879
C_3+alkenes(alkynes), reaction rates in 295-610K 3−34613
$C_3+Ar(He)(N_2)(O_2)$(acetylene), vibr. relax of $C_3(\tilde{X}^1\Sigma_g{}^+)$, time-resolved and laser induced fluoresc. spectra 3−17362
Cl isoelectronic sequence, Cl XII to VXVIII, $2s^m2p^n$-$2s^{m-1}2p^{n+1}$ intersystem transitions 3−1300
^{11}C, positron emitting isotopes production using collective accelerator 3−41387
^{12}C, muonic, nucl. polarisation shifts 3−32247
$^{12}C^+$, projected range distributions, low-intermediate-high energy, Al target 3−51676
$^{12}C^{13}C$, Fourier spectroscopy of Ballik-Ramsay system 3−30165
$^{12}C+^{15}N(^{13}C)$, hyperfine interaction, induced nuclear spin polarisation meas., polarisation transfer from beat frequency 3−21937
$^{12}C+H^+$, K-ionisation probability across 460 keV $^{12}C(p,p_0)$ reson. 3−26840
^{13}C in marine sediments in Mediterranean region, evidence for latest Miocene sea-level fall 3−20034
^{13}C, laser isotope separation by an elimination method 3−56095
^{13}C, multi-stage laser separation by elimination method, energy efficiency 3−50536
$\delta^{13}C$ values for stable isotope reference samples in geophysics, comparison 3−53957
$^{13}C/^{12}C$ in atmospheric methane 3−20088
$^{13}C_2$, Fourier spectroscopy of Ballik-Ramsay system 3−30165
$^{13}C+^{12}C$, hyperfine interaction, induced nucl. spin polarisation meas. polarisation transfer from beat freq. 3−21937
^{14}C atmospheric production rate rel. to O isotope records in ice cores 3−29984
^{14}C changes in atmosphere and ocean during Little Ice Age, evidence from banded corals 3−9938
^{14}C, dose to man, specific activity model, applicability, food chain analysis 3−44331
^{14}C, quantitative macroscopic autoradiography, sources of error 3−58878
^{14}C, radioactive effluent retention in nuclear facilities, cost-benefit analysis 3−11394
^{14}C releases from heavy-water-moderated reactors, dose limitation, production and release 3−11535
^{14}C standard solution in liquid scintillator with different degrees of quenching 3−41470
^{14}C, tagged liquid and solid specimens, specific activity 3−41471
^{14}C-labelled alanine, total body absorbed radiation dose 3−29746
α-Fe, C-vacancy interaction study 3−13259
Fe:C, ion implanted form. of Fe_3C, TEM and electron diffr. study 3−27959
Fe-C, ferrite 3−8202
Fe-C system, martensite growth, habit planes description in two-wave scheme 3−42774
GaAs:C, host isotope fine struct. of local modes 3−18418
GaAs:C, MOVPE grown, photoluminescence study 3−43752
GaAs:C, shallow acceptors, luminesc. study 3−52828
He isoelectronic sequence, two-electron spectra, correls., MCHF calcs. 3−21646
He-C arc plasma, lifetimes and Stark widths of C II, plasma diagnostics 3−6572
MgO:C, subsurface segregation and diffusion, XPS study 3−28104
Mo:C monocyrystals, alloy softening, ductile to brittle transition temp. 3−43964
Mo-Si-C, ternary alloys, diffusion couples, phase relations and diffusion paths at 1200°C 3−9037
Mo_2C, C diffusion, determ. from carburisation of Mo 3−51841
Si:B,C, electron irrad., defect accumulation, IR study 3−27998
Si:C, crystal growth by Czochralski technique, quantitative model for C incorporation 3−46876
Si:C, irradiated, luminescence, 0.97 eV line origin 3−43611
Si:C, MBE, interfacial C and line dislocation density, SIMS study 3−42945
Si:C, O, suppression of O precipitation by C for two-step thermal anneal 3−13454
Si:C, single crystal, errors in measuring C conc. from IR absorption 3−47675
Si:C, substitutional impurity, local modes and IR absorpt., local effective charge model *(Chinese)* 3−38014
Si:C, trap centres in wafers containing A-swirl defects, annealing behaviour, DLTS study 3−13760
Si:C CVD layers, polycryst., morphology and resist. 3−23209

carbon continued
$Si:C^+$, ion implantation, radiation damage accumulation kinetics 3−37945
Si:O, C, Czochralski grown, C and O nucleation during annealing, O-C complexes obs. 3−33287
Si:O,C, annealed, bulk material dislocation-free, O and C precipitation study *(Chinese)* 3−33439
Si_3N_4-C, amorphous, composite, CVD, d.c. elec. cond., 250-950°C 3−38387
Sn-C film filters for EUV instrumentation, long term variability of transmission 3−1751
W-C layered synthetic microstructures, Bragg refl. in X-ray anomalous scatt. regions 3−28927
W-C multilayers on mica and Si, as graded-layer-thickness Bragg X-ray reflectors 3−5927
ZrC-C system, chemical gas-phase deposited, specimens high temp. electrical resistivity, temp. dependence 3−52137

carbon compounds
see also organic compounds
buoyancy-dominated turbulent flow, heat transfer coeff., pressure drop 3−22452
carbonaceous systems, 1600 cm^{-1} band, beam deflection IR obs. 3−28863
CO_2, atmospheric concentration, energy supply and demand implications 3−58569
CO, press. shift expt. on vibr.-rot. band, differential Fourier spectroscopy 3−5884
CO in IRC 10216 and LDN 1551, movement obs. 3−25550
cyano complexes, dimag., $^{13}C/^{12}C$ isotope effects on ^{15}N chemical shielding 3−11825
graphite erosion charact. in CO gas blown rail-type spark gaps 3−7847
methane, Td symmetry, SCF-SW-$X\alpha$ calcs. 3−45842
supersaturated vapour containing CS_2, UV photoinduced nucleation 3−2765
Al^{3+}/CO system, equilib. geometry, ab initio calcs., NMR chem. shielding tensors 3−17205
Ar-CO_2 filled wire chambers, large saturated pulse obs. 3−26583
Ar-CO_2 gas scintillation proportional counters, emission spectra 3−41432
Ar-CO_2 with or without methylal, single electron longit. diffusion meas. with MWPC 3−41425
Br_2-CO_2-He gas laser, solar energy conversion, lasing power and efficiency 3−26998
CF radical, mol. consts., rot. transition microwave obs. 3−32043
CF_2-CO(NF)(SO)(CF_2), combination products, ab initio SCF calcs. 3−17199
$CH_3{}^+$, electron stimulated desorption from condensed branched alkanes 3−2971
CI_4, cryst. and mol. struct. determ. *(German)* 3−2524
CN,$(B^2\Sigma^+$-$X^2\Sigma^+)$, polarisation emission prod. from HCN and DCN electron impact dissoc. 3−26881
CN in globular cluster 47 Tucanae giant stars, correl. with Na, visible obs. 3−5373
CN in globular cluster M5 red giants 3−30365
CN in Taurus dark cloud complex, abundance and N=1-0 emission 3−40209
CN, possible spectroscopic discovery in Periodic Comet Tempel 1 (1982j) 3−30301
CN solar spectra lines in 414.5 to 419.0 nm range, identification 3−40107
CN^+, nearly degenerate problem, CIPSI calcs. using improved algorithm 3−50318
CN-violet band system, Franck Condon factors from quasi-Morse pots. 3−6725
CN^++neutral molecule, reaction channels and rate coeffs., ICR meas. 3−58405
C_2N^++neutral molecule, reaction channels and rate coeffs., ICR meas. 3−58405
C_2N_2, adsorbed on graphite, phase diagram 3−57219
CO, $(A\ ^1\Pi)$ state, reson. multiphoton ionisation, photoelectron spectra 3−32136
CO, $A\ ^1\Pi$ state, two-photon optical pumping 3−21839
CO, $a^3\Pi_r$ state collisional quenching rate consts., vibr. temps. effects 3−21815
CO absorption spectra using fast Fourier transform spectroscopy 3−54775
CO abundance in dark cloud B5, EHF obs. 3−5380
CO abundance rel. to visual extinction in interstellar molecular cloud complexes 3−20444
CO adsorbed layer on W, surface vibr. excitation cross section EELS study 3−3890
CO, adsorbed on β-PdH electrodes, surface enhanced Raman spectrosc. obs. 3−57905
CO, adsorbed on Cu (110), satellite peaks in photoelectron spectrum 3−28960
CO, adsorbed on Cu (111), band struct., multielectron excitations, photoelectron spectra 3−52217
CO adsorbed on Cu(111) surface, electronic struct., mol. cluster model anal. 3−13878
CO, adsorbed on Ni (001)c(2×2), secondary ion emission, primary beam energy effect, classical dynamics calcs. and SIMS 3−24082
CO, adsorbed on Pt{110}, electronic and geometric struct., UPS study 3−3924
CO, adsorbed on Rh (111), interaction with coadsorbed species, EHT calc. 3−23179
CO, adsorbed on Rh (111), surface struct. at different surface sites, LEED anal. 3−57212
CO, adsorbed on Ru (001), intact emission in SIMS 3−14419
CO, adsorbed on transition metal surfaces, ionisation energies and work function, surface mol. approach 3−23182
α-CO, adsorbed on W (100), lowest excited states, electron stimulated desorption 3−38454
CO, adsorpt. on Cu (100) surface, chemisorptive bond calcs. 3−8339
CO, adsorption and coadsorption with H_2 on Pd (111) 3−38209
CO adsorption and decomposition on Fe (110), vibrating capacitor study 3−42913
CO adsorption on clean and K promoted FeO, UPS, AES and thermal desorption study 3−2976
CO, adsorption on Cu (110) surface, dipole coupling and chem. shifts, IR refl. absorpt. spectra 3−38833
CO, adsorption on PT, saturation coverages nucl. microanal. and LEED 3−18559

carbon compounds continued
CO, adsorption on Pd (111), electronic excitations, angle-resolved EELS study 3—43678
CO, adsorption on Pt (100), surface phase transform. 3—8331
CO, adsorption on Pt (110), phase transitions 3—2970
CO, adsorption on Pt (111) and vicinal surfaces, He scatt. and work function meas. 3—38214
CO, adsorption on Pt(111) surface, LEED, thermal desorption and EELS studies 3—38220
CO, adsorption on Ru (001), Ni (111), and Pd (111), static SIMS study 3—43694
CO, adsorption on W-Sc cathode, electron field emission stability 3—52905
CO aggregates in Ar and O_2 matrices, IR absorpt. freq. investig. 3—32052
CO atmosphere conc., contrib. from arid soil 3—48613
CO atmospheric conc. meas. over long path using pulsed injection laser 3—4444
CO, Auger line shape investig. 3—21831
CO, α phase, electron stimulated desorption from W (110) 3—42916
CO, CW flame chemical laser, CS_2-O_2-N_2O type, output characts. 3—27024
CO CW IR laser system *(Chinese)* 3—22044
CO, catalytic oxidation over Pt, transient study 3—4318
CO, catalytic oxidation over ZnO, ^{13}C and ^{14}C kinetic isotope effect 3—58448
CO chemisorbed layer on Ni (111), $2\pi^*$-derived states, UV bremsstrahlung spectra study 3—43253
CO, chemisorbed on Ni (111), electronic props., surface Penning ionisation electron spectra 3—43249
CO, chemisorbed on Ni(100), absorption edge reson., core-hole screening and orientation 3—13631
CO, chemisorbed on Ni(111), empty orbitals, inverse UPS study 3—24042
CO, chemisorbed on Pt(111), angle-resolved photoemission study 3—58036
CO chemisorbed on Ru, angular distrib. of neutral CO desorbed by electron impact 3—57213
CO, chemisorbed on supported metals, errors and artifacts in IR bands 3—8838
CO clouds, correl. with H I clouds 3—25586
CO, coadsorption with H_2 and NO on Rh 3—8332
CO, coadsorption with K on Pt (111), thermal desorption, EELS and UPS study 3—8335
CO conc. at mesosphere altitude from mm wave emission obs. 3—15546
CO, coordinated, hydride nucleophilic attack, ab initio SCF pot. energy surfaces 3—11682
CO corona discharge, chemical reactions 3—42463
CO, desorption and oxidation on Ir (110), lattice-gas model 3—38211
CO distrib. in solar atmosphere, effective absorption-line parameters 3—10303
CO, EM hyperpolarisability tensor from Verdet consts. 3—50448
CO, ESCA peak intensities in DA and GSA calcs., using Fourier transformed GTOs 3—50292
CO, elastic and inelastic electron scatt. cross sections, pot. model 3—32226
CO electric discharge laser with selective and nonselective resonators 3—27020
CO, electron and positron scatt., total cross-sections meas. 3—56079
CO, electron correlation, molecular electronic structure calcs. by conjugate gradient method 3—17193
CO, electron elastic scatt., 0.1-3 keV, eikonal approx. calcs. 3—56075
CO, electron impact excitation, rot. and rot.-vibr. cross sections meas., energy loss spectra 3—6797
CO, electron impact excitation cross sections 3—11993
CO, electron impact ionisation-excitation in cold supersonic mol. beam 3—56090
CO, electron low energy scatt., analytic method for outer region in frame-transformation theory 3—21931
CO electron stimulated desorption from Ge oxide layer 3—8322
CO, electron thermalisation 3—50528
CO emission in directions of some millimeter wavelength continuum sources 3—48970
CO emission search in Magellanic Clouds, EHF obs. 3—15993
CO emission survey in Magellanic Clouds 3—25623
CO first overtone band in facular and photospheric models, equiv. widths 3—35577
CO fundamental, N_2 broadened vibr.-rot. linewidths 3—55923
CO gasdynamic laser, parametric eqns. for working medium characts. estimation 3—56177
CO, gasdynamic laser, supersonic nozzle shape influence on vibr. levels 3—32351
CO, ground state multiconfig. SCF calcs. 3—31922
CO high velocity emission from clouds surrounding T Tauri stars, mass outflow determ. 3—25436
CO high velocity gas from T Tauri and Herbig Ae/Be stars 3—5282
CO high velocity line wings in star forming mol. cloud cores 3—25573
CO highly excited states, laser induced processes 3—11764
CO, highly rotationally excited spectrum 3—11816
CO, IR emission and absorpt. spectra intensity calc. under vibr. nonequilib. conditions 3—36756
CO, IR intensities, ab initio calcs. 3—1238
CO in atmosphere, model of global zonally averaged distrib. *(Russian)* 3—54087
CO in cometary comae, photochemical heating rel. to neutral gas expansion 3—35532
CO in dark clouds, column densities anal. 3—44829
CO in dark interstellar clouds, 2.7 mm obs. and column densities 3—35682
CO in IR sources in H II region S235, radio spectroscopy rel. to line excess problem 3—54477
CO in interstellar molecular cloud G35.2-0.74, J=2-1 transition obs. 3—59442
CO in molecular clouds with high vel. gas, clumpy outflow evidence, EHF obs. 3—54470
CO, in ocean surface waters of Baja California, relation to nutrients and fluoresc. 3—20010
CO in Orion Molecular Cloud, motions from EHF, THF and IR obs. anal. 3—30470
CO in outer Galaxy (longitudes 50° to 72°), UHF obs. 3—59431
CO in Sc I galaxy M 101, EHF obs. 3—54531

carbon compounds continued
CO, in troposphere, mixing ratio meas. by space shuttle 3—30043
CO, intensities and broadened half-widths of spectral lines 3—6726
CO, intensity of transitions, function of altitude in atmosphere of Mars *(French)* 3—44695
CO, interstellar, catalogue of radial velocities towards galactic H II regions 3—5148
CO, interstellar, collisional vibr. excitation theory 3—54476
CO, interstellar, in NGC 7635 (Bubble Nebula), 115 GHz emission obs. 3—15976
CO, interstellar, obs. rel. to extended anisotropic high-vel. gas flows in Orion-KL region 3—10424
CO, interstellar, search for high vel. features in supernova remnant (G78.2+2.1) 3—48980
CO interstellar clouds, distribution at galactic centre, EHF obs. 3—59445
CO interstellar integrated 2.6 mm intensity, conversion to H column density 3—15972
CO isotope abundances in H II region Sharpless 68, photochemistry anal. and EHF obs. 3—25579
CO isotopic forms relative abundances, effects of isotope selective photodissociation 3—59421
CO J=16 to 15 transition in Kleinmann Low Nebula, obs. 3—40239
CO J=2→1 line obs. in southern galactic plane star form. regions with H_2O masers 3—30456
CO, jet cooled, $A^1\Sigma \leftarrow X^1\Sigma^+$ reson. enhanced multiphoton ionisation 3—1434
CO laser, sealed, energy characts. rel. to impurities 3—56179
CO laser, struct. in generation lines by active element spectroscopy 3—40707
CO laser, vibrational-kinetics methods, appls. to mol. lasers and laser chemistry 3—6769
CO laser active medium props., mol. isotopic composition influence, numerical kinetics calcs. in anharmonic oscillator system 3—27022
CO lines in QSO absorpt. spectra anal. 3—44868
CO, lung diffusing capacity, dynamic meas. using discrete samples of alveolar gas 3—58852
CO, mag. susceptibilities and NMR chem. shifts theory in terms of localised quantities 3—55969
CO mapping in spiral galaxy M51, mol. gas distrib., EHF obs. 3—40249
CO mapping of H II region Sharpless 222 assoc. mol. cloud 3—25576
CO matrix isolated methanol, specific interactions, IR study 3—41577
CO, melting pressure, meas. of 81.64K and 90.24K, blocked capillary method 3—33413
CO migration on Pt (111), He-scatt. study 3—23165
CO mm wave spectra of mesosphere 3—15559
CO, mol. adsorpt. on Cu, Ni, Shockley surface states investig. 3—38188
CO, mol. fluid interphases, electric field effects, perturbation-variational theory 3—23137
CO molecular cloud complex in ON-1, struct. and star form. onset, EHF obs. 3—25643
CO molecule, microwave spectra, 0.1 to 1 THz region 3—40694
CO, multiphoton ionisation and resonantly enhanced VUV generation 3—12231
CO, multiquantum V-V transitions 3—36844
CO, nonequilib. vibr. excitation, Fourier transform IR emission spectra obs. 3—6628
CO on Ni surface, (111), He and Ne metastable atom impact, surface Penning ionisation study 3—58016
CO on Pt single cryst. surface, surface core level shifts, photoemission study 3—14434
CO outflow detection from Orion Molecular Cloud 3—10431
CO outflow from reflection nebula NGC 2071 assoc. with IR sources 3—5383
CO, oxidation on Pt (111), desorption of CO_2 3—38203
CO oxidation on Pt (111) surface, temp. programmed reaction of coadsorbed O and CO 3—39405
CO, phase matched, VUV generation 3—7072
CO, photon stimulated desorption from Ru (111) and Ni (111) 3—57231
CO, photon stimulated dissoc. of gas phase and chemisorbed mols. 3—58437
CO pollution conc. in air of Yerevan, Armenia, USSR *(Russian)* 3—34753
CO preionisation laser operating in active zone of stationary nuclear reactor 3—27002
CO pulsed electron beam controlled laser with selective resonators, emission spectra 3—6957
CO pulsed electron beam controlled high press. laser, emission spectrum characts. 3—6958
CO, resonantly enhanced VUV generation and multiphoton ionisation 3—12231
CO, resonantly scatt. electrons angular distrib. 3—46083
CO, rot. branch struct. theory 3—21910
CO sealed waveguide CW laser, energy and spectral characts. 3—7020
CO sealed-off branch-selected laser operating at room temp., lifetime results *(Chinese)* 3—37001
CO, semiclassical IR vibr. spectra 3—50364
CO, semiempirial dipole-moment functions with correct asymptotic behaviour 3—21644
CO sensitive MOSFET, Pd gate, design and IC sensor appl. 3—54727
CO, solid, mol. reorientation, audio freq. dielec. meas. 3—2447
CO, spectral line intensities and half-widths, collisional broadening 3—17274
CO, thermal desorption, laser induced, from Fe (110) 3—13642
CO thermal desorption on Ni surface, oxidation of C study 3—33559
CO, total energy calc., Gaussian quadrature $X\alpha$ method for Hartree-Fock-Slater eqn. 3—31923
CO tropospheric mixing ratio inference from gas filter radiometer data 3—53599
CO, two lowest rot. transitions, anal. curves, large vel. gradient radiative transfer model 3—59204
CO, VUV spectroscopy using coherently generated VUV 3—12228
CO, valence XPS, EXAFS-like modulation 3—11880
CO, vibr. energy exchange pumping, isotope enrichment, fluoresc. and IR obs. 3—41613
CO, vibrationally excited by hot Pt surface, internal energy distrib. 3—56050
CO^+, $X^2\Sigma^+$ and $A^2\Pi$ electronic states, radiative transition probabilities, ab initio calcs., dipole moment 3—6533
CO^+, far IR transitions obs. 3—11792
CO^+ spectral bands, excitation cross sections and optical excitation functions 3—32225

carbon compounds continued
CO^+, struct., linewidths and shifts, microwave obs. 3−50382
^{13}CO and ^{12}CO line maps of W33 region, molecular gas distrib. 3−48972
CO-Ar (He), intermolecular short-range forces, differential scatt. study 3−11917
CO-Ar liq. mixtures, thermodynamics, direct calorimetry meas. 3−18463
CO-CO(NF)(SO)(CF_2), combination products, ab initio SCF calcs. 3−17199
CO-He, RF discharge, dissoc. vibr. distrib., IR, UV, visible obs. 3−7815
CO-N_2-H_2 laser discharge, plasma kinetics, N_2 and H_2 additions effects meas. 3−17483
CO+Ar(He), vibr. relax. following shock heating 3−41650
CO+CO, short range intermolecular forces 3−17353
$CO+COH^+ \rightarrow (CO)_2H^+$, 3-body ion assoc. reactions, chaperone participation 3−44043
CO+Cd, Cd ($^1P_1$) excitation transfer and quenching, fluoresc. obs. 3−32182
CO+H is interstellar medium, mol. vibr. excitation theory 3−54476
$CO+H_2$, vibr. inelastic scatt., pot. energy surface 3−56044
$CO+H_2$ gaseous mixtures, (V,T) collisional energy exchange 3−56051
$CO+H^-$(D^-), electron detachment and charge transfer cross sections 3−46059
CO+K collisions, 4^2P fine struct. mixing 3−26833
$CO+Li^+$ collisions, rot. energy transfer distrib. and classical differential cross sections in CPST limit 3−32171
$CO+N_2$, N_2 dissoc. to N(^4S), long contact effect 3−26814
$CO+N^+$, flowing afterglow, prod. state distrib. laser induced fluoresc. study 3−39386
CO+Ne*($3s^3P_{20}$), CO^+($A^2\Pi_i$) form. 3−58415
CO+OD reaction, press. depend. of rate const. 3−24492
CO+Pt(Au), nonspherical scatt. study using thermomagnetic effect in Knudsen gas 3−52881
$CO+SF_6+c\text{-}C_4F_8$ high dielectric strength gas mixtures, breakdown strength under impulse and power freq. voltages 3−7694
CO+Zn, excited state quenching; fluoresc. study 3−17359
CO^++H_2, rate constant meas. rel. to loss of CO^+ in Orion MC-1 by reaction with H_2 3−15974
CO_2, ^{13}C and ^{10}O isotopically enriched samples, rovibrationally resolved Raman spectra 3−6655
CO_2 10.6 μm lasers, damage in optical materials 3−41801
CO_2 10.6 μm lasers, heterodyne expts. 3−7048
CO_2, 1.4 and 4.3 μm bands, absorption coeff. 3−50410
CO_2, (ν_3) self-trapping fluoresc. study 3−11869
CO_2, absorption coeff. in wings in 790-910 cm^{-1} spectrum range 3−50411
CO_2 absorption into aq. Na_2SO_3 solns., kinetics 3−51794
CO_2, absorption of 9.6 μm CO_2 laser radiation at high temps. 3−50394
CO_2 abundances in gas trapped in Allen Hills and Byrd core ice, Antarctica 3−9941
CO_2, acentric factor 3−17991
CO_2, active media for gasdynamic lasers 3−12128
CO_2, adsorbed on graphite, phase diagram 3−57219
CO_2, adsorption on ultrathin Pd layers on W (110) 3−38205
CO_2 and CO in middle atmosphere, produced by satellite solar power system launch vehicles 3−48212
CO_2 and N_2O gasdynamic laser emission energy comparison in systems with mixing 3−17479
CO_2, anharmonic force field, gas phase electron diffraction obs. 3−21919
CO_2, anharmonic vibr. problem 3−6605
CO_2, atmos. conc. at South Pole from IR solar spectra obs. 3−54092
CO_2, atmos. conc. controlled by marine biological productivity 3−59103
CO_2, atmos. conc. seasonal fluctuations 3−20047
CO_2 atoms. and ocean content during glacial times 3−15487
CO_2, band parameters determ. by whole band analysis, collision broadening 3−6724
CO_2 band parameters near 3.6 μm 3−41564
CO_2, bond angle calcs., SCF and MC-SCF studies 3−50295
CO_2 CW closed-cycle laser with nonself-sustained discharge 3−32385
CO_2 CW gasdynamic laser 3−17530
CO_2 CW laser, grating tuned, spectral power output, rotational temp. and population ratio determ. *(Korean)* 3−12200
CO_2 CW laser, line tunable orthogonally polarised dual wavelength operation 3−1668
CO_2 cascade lasing due to 00^01-02^00-01^10 transitions, pulsed gas discharge pumping 3−36989
$(CO)_2$, chemically bound triplet electronic ground states, SCF calcs. 3−55871
CO_2 chemistry of Black Sea 3−15490
CO_2, climate model with realistic geography 3−10050
CO_2 clusters, mol. beam-surface scatt. study 3−43698
CO_2 conc. increase effects on surface temp. of early Earth 3−30051
CO_2 concentration increase in atm., effect on climatic multi-layer energy balance model 3−59100
CO_2 concentrator, in molten carbonate fuel cell, cathode performance at high CO_2 utilisation 3−48143
CO_2 cryodeposits, optical constants and thermal radiative props. 3−36011
CO_2, desorption from Pt (111), ang. distrib. at low temps. 3−38203
CO_2, distrib. function in combined mode from IR emission in 2.7 and 15 μm bands 3−50412
CO_2, double discharge TEA laser modified electrode system, V-I characteristics *(Korean)* 3−37069
CO_2, EM hyperpolarisability tensor from Verdet consts. 3−50448
CO_2 elec. discharge laser with emission energy of 500 J 3−7017
CO_2, electron and positron scatt., total cross-sections meas. 3−56079
CO_2, electron elastic scatt. at intermediate energies 3−6785
CO_2, electron elastic scatt., 50-500 eV, modified independent atom model calcs. 3−21916
CO_2, electron impact, near-threshold vibr. excitation 3−26875
CO_2, electron impact excitation cross sections of low-lying electron states 3−46082
CO_2, elimination by high frequency oscills. in dogs, histamine infusion effects 3−39677
CO_2, excited state bending mode, rot. R branch Raman spectra 3−32081
CO_2 fast-flow closed-cycle industrial laser, active medium investigation 3−37072
CO_2 fast-flow laser with mixing, optical inhomogeneities of active medium 3−56172
CO_2 filled multipass optical cell, stimulated Raman scatt. 3−37127
CO_2, flowing-gas CW laser, small signal gain meas. 3−26997
CO_2 force consts., effective nuclear charge model 3−41644

carbon compounds continued
CO_2, Fourier transform IR spectral meas. of high temp. $^{13}C^{16}O_2$ and $^{13}C^{16}O^{18}O$ 3−6629
CO_2 gas, lightning impulse breakdown of rod-plane gaps 3−17997
CO_2 gas, population-inverted, wavefront reversal caused by light-induced heating 3−27168
CO_2 gas, vibr. relax. on collision with Ag, Ni and stainless steel surfaces 3−56049
CO_2 gas lasers with inhomogeneous active med., lasing zone shape 3−6947
CO_2, gas viscosity meas. with Fleisch pneumotachograph 3−19858
CO_2 gasdynamic continuous laser, high temp. selective 3−50674
CO_2 gasdynamic laser, combustion driven, with narrow throat and high area ratio and nozzles *(Chinese)* 3−17476
CO_2 gasdynamic laser, nozzle flow of vibr. nonequilib. medium 3−27000
CO_2 gasdynamic laser, unstable telescopic resonator calc. by approximate method 3−27091
CO_2 gasdynamic laser with mixing, recomb. reaction, levels, chem. pumping 3−22029
CO_2 gasdynamic laser with local inhomogeneities in active medium flow, output spectrum 3−32346
CO_2 guided plasma channel for light ion beam transport 3−7758
CO_2 He I photoelectron spectra, vibronic coupling 3−55994
CO_2 helical transversely excited laser, rotating mirror Q-switching, theory 3−37086
CO_2 heterodyne laser systems, acousto-optic modulators 3−56249
CO_2, high repetition rate mini TEA CO_2 laser using a semiconductor preionizer 3−17480
CO_2 high-power electric-discharge lasers, dynamic saturation of optical transitions 3−22030
CO_2, hydrothermal soln., high temp. and press. 3−28849
CO_2, IR emission and absorpt. spectra intensity calc. under vibr. nonequilib. conditions 3−36756
CO_2, IR spectra, intensity of $(11^10, 03^10)_I$-00^00 band 3−41567
CO_2, IR spectra, vibr.-rot. bands *(Chinese)* 3−41565
CO_2 in atmosphere, conc. increase affecting general circulation 3−44534
CO_2 in atmosphere, removal by marine phytoplankton fixation 3−4927
CO_2 in boundary layer atmosphere, fluctuations meas. with IR device 3−20140
CO_2 in cometary comae, photochemical heating rel. to neutral gas expansion 3−35532
CO_2 in Venus atm., 6-8 μm bands transmission 3−35490
CO_2 intracavity-waveguide lasers, gain, saturation intensity and internal losses *(Chinese)* 3−36984
CO_2, ionisation pots. in 20 to 30 eV, CI calcs. 3−31954
CO_2 isotopic laser wavelengths, atmos. water vapour absorption 3−54113
CO_2 laser, appls. in inorganic chemistry 3−24524
CO_2 laser, emission modulation by discharge current 3−17543
CO_2 laser, intracavity SF_6 saturable absorber, optical bistability 3−36986
CO_2 laser, miniature, with sealed-off electron source 3−41874
CO_2 laser, pulsed, passive frequency stability 3−22140
CO_2 laser, radiation up conversion to UV in Na vapours 3−27149
CO_2 laser, regenerative amplification of nanosecond pulses, numerical simulation 3−6948
CO_2 laser amplifier, vibr.-rot. transition line shape parameter anal. 3−56170
CO_2 laser amplifier gain mapping using wavefront analyser 3−41855
CO_2 laser discharge, non-self-sustaining, limited energy input *(Russian)* 3−33006
CO_2 laser interaction expts. 3−22592
CO_2 laser interferometer, 10.6 μm operation, slow movement meas. appls. 3−25939
CO_2 laser media, with high pumping level, characts. 3−46191
CO_2 laser operating at difference freqs. with optical pumping under saturation conditions, output parameter theory 3−46192
CO_2 laser output stabilization for use in subMM wave laser *(Japanese)* 3−1669
CO_2 laser passive Q-switching by bleachable filters based on heterocyclic compounds 3−32345
CO_2 laser radiation absorption meas., high-temp. 10 μm absorption cell 3−32397
CO_2 laser resonator, Fabry-Perot type, beat freq. meas. between transverse modes *(Korean)* 3−12190
CO_2 laser system, large, optical design and assembly, use of Zernike polynomials and interferometry 3−7005
CO_2 laser system LEKKO VIII, booster amplifier for ICF 3−41802
CO_2 laser testbeds with unstable resonators, analytical and numerical laser mode prediction comparison with expt. data 3−41883
CO_2 lasers, ion aging effects on the dissociative-attachment instability 3−12111
CO_2 lasers, pulsed, transverse mode formation time 3−41887
CO_2 lasers, simple TEA, scaling laws for mode purity 3−1608
CO_2 lasers, TEA discharge system with integral semiconductive preionisation 3−27083
CO_2, low press. collisional broadening of Q-branch of the Raman spectrum 3−32078
CO_2, microcluster growth, transition from successive monomer addition to coagulation 3−28087
CO_2 mini-TEA laser, high efficiency, medium repetition rate 3−46236
CO_2, mol. fluid, Rayleigh light scatt., mol. dynamics study 3−57941
CO_2, mol. laser, optical pumping difference freq. excitation under saturation conditions 3−17477
CO_2 nonequilibrium plasma, mol. vibr. temp., spectral meas. technique 3−2298
CO_2, O^- zero kinetic ion formation in dissociative electron attachment 3−11991
CO_2, on Mars, regolith-atmosphere polar cap CO_2 system rel. to climate change 3−5194
CO_2 partly sealed-off laser of 500 W output power, design and technology *(Chinese)* 3−12174
CO_2, photodesorption from O saturated Si:O (100) 3−51923
CO_2 pollution of air, effects on climate 3−4954
CO_2, positron scatt. cross section meas. 3−32202
CO_2 preionisation laser operating in active zone of stationary nuclear reactor 3−27002
CO_2, pressure derivatives near crit. point, specific heat data anal. 3−2764
CO_2 pulse-periodic electron-beam-controlled laser with cooled active mixture, energy charact. calc. 3−36991
CO_2 pulsed lasers, improved performance using H_2 buffered gas mixtures 3−1607

carbon compounds continued
CO_2 Q-switched laser, subharmonic bifurcations, multistability and turbulence 3—12112
CO_2 quasi-CW electric-discharge laser having an unstable resonator, radiation divergence 3—36987
CO_2, Raman spectra in different phases, Fermi doublet ν_1-$2\nu_2$ 3—41586
CO_2 rapid-flow combined-action industrial laser 3—37071
CO_2, rare gas mixtures, mean square torque IR vibr.-rot. bands 3—45925
CO_2 rich coma model application to Comet West (1976 VI) 3—30298
CO_2 sealed-off waveguide laser, reliability factors 3—1657
CO_2 single-mode laser, output-beam parameters, active-medium inhomogeneity and aperture stop influence 3—17553
CO_2, solid, automatic filling of cryostat 3—5798
CO_2, solid, compression at 296K to 10GPa, X-ray diffr. obs. 3—28030
CO_2, solid, photoemission satellite structures, excitation energy 3—39001
CO_2, soln. in liq. N_2, evaporation instabilities in cryogenic liquids 3—36020
CO_2, solubility liq. Kr, heat of soln. 3—33445
CO_2, sorption on ZnO nonpolar, stepped, and polar surfaces 3—18561
CO_2 spectroscopic charact. calc. in random-phase approx., dynamic polarisability, fast electron inelastic-loss cross section 3—1495
CO_2 spectrum absorption coeff. calc., transmission microwindows and periphery 4.3 μm band with broadening by Ar and He 3—1361
CO_2, stopping power and average energy to form an ion pair for 42 MeV O^{6+} ions 3—22568
CO_2, symm. breaking of lowest $^3B_2$ and $^3A_2$ states, orthogonal orbital MCSCF and CI calc. 3—55860
CO_2 TEA helical laser, improved performance and rot. spectral characts. 3—36985
CO_2, TEA laser, corona preionization type, output energy 3—26999
CO_2 TEA laser, photoionization sources 3—6945
CO_2 TEA laser, shock waves due to discharge 3—42259
CO_2 TEA laser, vibr. temp. kinetics 3—36988
CO_2 TEA laser amplifier, rot. relax. influence on nanosec. radiation pulse shape 3—56263
CO_2 TEA laser gas mixture optimization, use of topographical plot 3—22027
CO_2 TEA laser with UV preionisation, active medium composition influence on 00^02-$[10^01, 02^01]_1$ band gain 3—27001
CO_2 TEA laser without selective elements, output radiation spectra *(Chinese)* 3—12110
CO_2 TEA lasers, injection-locking by orthogonally-polarised injection source 3—7016
CO_2 TEA lasers, injection-locking, polarisation coupling effects and single axial mode operation 3—27094
CO_2 TEA lasers with plane-plane resonators, transverse mode struct. meas. 3—17537
CO_2 TEA pulsed laser with preliminary photoionisation and high specific energy input 3—32384
CO_2 TEA rapidly tunable laser 3—17548
CO_2 TEA sealed laser, 100 Hz, using high CO_2 concentrations and SnO_2-Pd catalyst 3—32383
CO_2 TEA wide-aperture lasers, injection locking 3—37088
CO_2 transport in amorphous polyesters rel. to β-relaxation 3—33506
CO_2, transport props. low density, 50 to 3000K 3—42350
CO_2 tunable laser, mode locking by intracavity saturable absorber synchronous modulation 3—27110
CO_2 tunable lasers with Fabry-Perot resonators *(Chinese)* 3—37077
CO_2 unstable-resonator TEA laser mode selection by injection from waveguide laser 3—12188
CO_2, valence XPS, EXAFS-like modulation 3—11880
CO_2, valence-electron shake-up satellite bands in ionisation spectra, HAM/3 calcs. 3—50285
CO_2, vibr., autoionisation, UPS study 3—32134
CO_2, vibr. excited, dissoc. electron attachment, double electron beam technique obs. 3—46084
CO_2, vibrationally excited by hot Pt surface, internal energy distrib. 3—56050
CO_2 waveguide laser employing RF electrodeless discharge, amplification 3—36990
CO_2 waveguide laser with modulated parameters 3—27003
CO_2 waveguide lasers, RF excited, problems and status of reliability 3—1656
${CO_2}^+$, $C^2{\Sigma_g}^+$ state, geometrical struct., ab initio calcs., vibr. struct., photoelectron spectrum, predissoc. reaction paths 3—14839
${CO_2}^+$, electronic emission spectrum, the $\tilde{B}^2 \rightarrow X^2$ band, rot. cooled in mol. beam 3—32092
${CO_2}^+$, fluoresc. polarisation as mol. autoionisation probe 3—11900
${CO_2}^+$, perturbed $\tilde{B}$-$\tilde{X}$ system, optical-optical double reson., rot. assignments 3—11842
${CO_2}^+$, valence CI bands, electron correl. calcs. 3—31954
$^{13}CO_2$ laser pumped $^{15}NH_3$ far IR laser, dispersion, laser fulling effects 3—12123
$^{14}CO_2$ detection in radiotoxicology, liq. scintillation and Geiger-Muller detector thresholds 3—58826
$^{14}CO_2$ release meas. from TRIGA reactor 3—55711
CO_2/CCl_2F_2 gas mixture, lightning impulse breakdown of rod-plane gaps 3—17997
CO_2/H_2O ice mixture under fast ion irradiation, formaldehyde form. 3—19531
CO_2-Ar mixture, glow discharge, particle excitation mechanism, relax. studies 3—2320
CO_2-Ar(He), intermolecular short-range forces, differential scatt. study 3—11917
CO_2-ethylene mixtures, optoacoustic detection using multiphoton absorpt. 3—17347
CO_2-H_2O in atm., radiative heating due to overlap in 12-18 micron band 3—59102
CO_2-H_2O-N_2, laminar mixing calc., Navier-Stokes eqns., appl., shock wave effect. 3—2022
CO_2-H_2(He), heat of mixing meas. 3—42784
CO_2-HCl, mol. struct., RF and microwave mol. beam elec. reson. 3—11830
CO_2-He(Ne), 10 μm absorpt., optical broadening coeffs. 3—18000
CO_2-methane mixture, contaminated natural gas, thermodynamic props. meas., expt. apparatus 3—38096
CO_2-methane mixture, contaminated natural gas, thermodynamic props. meas., expt. apparatus 3—38097
CO_2-methane mixture, enthalpy and heat of mixing, BWR equation of state 3—37598

carbon compounds continued
CO_2-methane mixture, volumetric and thermodynamic props., BWR equation of state 3—37597
CO_2-N_2, nonself sustaining discharge, attachment instability 3—13001
CO_2-N_2 gas in cylindrical tube, nonequilib. mol. processes effects on attenuation and dispersion, theory 3—12808
CO_2-N_2 mixture, volume gas discharge with external ionization by electron beam, injection instability 3—42483
CO_2-N_2-H_2 gasdynamic laser 3—22028
CO_2-N_2-H_2O gas mixture for gasdynamic laser, active medium and optical resonators 3—12189
CO_2-N_2-H_2O gasdynamic lasers, operating mode selection and organisation 3—6946
CO_2-N_2-H_2O gasdynamic laser optimisation and vibr.-relax. const. anal. 3—17478
CO_2-N_2-He laser, operating efficiency, kinetics model 3—26996
CO_2-N_2-He TEA laser, circuit modelling and discharge modelling 3—1609
CO_2-N_2O, diffusion coeff. and viscosity meas. 3—7681
CO_2-$N_2(CF_2Cl_2)$ and CO_2-N_2-CF_2Cl_2 3—33412
CO_2-Ne gasdynamic laser, 18.4 μm operation 3—22123
CO_2-O_2, thermal electron attachment mechanism, isotope effects 3—41693
CO_2-TE laser sustained plasma in front of metallic target, interferometric electron density estimate 3—42449
CO_2-TEA laser, sealed-off review *(Rumanian)* 3—12113
CO_2+Cd, Cd $(^1P_1)$ excitation transfer and quenching, fluoresc. obs. 3—32182
CO_2+H, mol. vibr. states, spectral distrib. 3—56046
$CO_2+H^-(D^-)$, electron detachment and charge transfer cross sections 3—46059
CO_2+He, crossed atomic and mol. beams, anisotropic intermolecular pots. 3—41647
$CO_2+He(2^3S)$, ${CO_2}^+$ emissions resulting from Penning ionisation 3—17369
CO_2+Li^+, vibr.-rot. decoupling, semiclassical time-correl. function calcs. 3—56027
CO_2+N_2, cc CO_2 collisionally excited high-resolution emission spectroscopy, rot. distrib. 3—21884
CO_2+NH_3, pot. transitions, cross sections, beam maser investig. 3—41653
CO_2+NO, vibr. relax., fluoresc. decay rate consts. meas., semiclassical theory calcs. 3—46006
CO_2+O_2, singlet $(^1{\Sigma_g}^+)$ state quenching, inverse temp. depend. 3—41610
CO_2+Zn, excited state quenching; fluoresc. study 3—17359
${CO_3}^-$ co-clustered with water, energetics and struct. studied by mass spectrometer and photodissoc. techniques 3—6732
C_3O_2, geometry, force consts., CNDO calcs. 3—17219
$CO^+(A^2\Pi_i)$ form. in $Ne^*(3s^3P_{20})+CO$ collision 3—58415
$CO(O_2)$, solid, libration motion dynamics *(Russian)* 3—13355
COS, electron affinity determ. using electron capture detector 3—50512
$CO(\nu=1)+H_2$, vibr. deactivation 3—32170
CS velocity gradient/ridge in reflection nebula NGC 2071 assoc. with IR sources 3—5383
CS vibr. states, millimeter and submillimeter wave spectrum, isotopic depend. of Dunham coeff. 3—6620
CS^-, PES, electron affinity and bond lengths 3—46026
CS/thioformyl ion ratio in interstellar clouds 3—40238
CS_2, $(a^3\pi_r)$ chemiluminesc., electronic transition chem. laser appls. 3—39371
$(CS)_2$, chemically bound triplet electronic ground states, SCF calcs. 3—55871
CS_2, diluted, picosec. mol. dynamics, phase conjugation obs. 3—32422
CS_2, electron affinity determ. using electron capture detector 3—50512
CS_2, excited states, EELS 3—41679
CS_2, femtosec. transient birefringence, Kerr gate config., relax. rate 3—34067
CS_2, force consts. effective nuclear charge model 3—41644
CS_2, fundamental vibrs., polarized IR transmission obs. 3—50404
CS_2 gasdynamic laser with an aim of increased efficiency and expanded spectral range 3—17485
CS_2 He I photoelectron spectra, vibronic coupling 3—55994
CS_2 in Ar matrix, photolysis, S_2 form., fluoresc. and recombination emission spectra 3—1408
CS_2, liq., backward stimulated Brillouin scatt., generation of phase conjugate wavefront *(Korean)* 3—37130
CS_2, liq., EM hyperpolarisability tensor from Verdet consts. 3—50448
CS_2, liq., orientational correl., molecular quadrupole moments, birefringence 3—36786
CS_2, liq., shock-induced changes in visible and UV spectra 3—47671
CS_2, liquid, time correlation functions for three centre Lennard-Jones model 3—27814
CS_2, Mt. St. Helens volcanic plume chem. composition 3—20081
CS_2, optical Kerr effect for psec. pulse generation, appls. to electron trapping in amorphous media 3—7033
CS_2 photodissoc. yields at 1060-1520 Å 3—21837
CS_2, solid intermolecular modes using 150K lattice parameters 3—18413
CS_2, subpicosec. optical resonances, polarisation and temporal selectivity 3—12254
CS_2, subpicosecond birefr. response, direct meas. 3—14250
CS_2:Te plasma-polymerised film for laser recording, stability 3—22175
CS_2-O_2 mixture, chemically active media in gasdynamic lasers 3—12128
CSFCl, microwave Fourier transform spectroscopy 3—49417
CSe_2, optical Kerr susceptibility, absorpt. spectra 3—41939
$^{11}CO_2$, continuously prod., integrated tracer kinetics system for studying C uptake and allocation in plants 3—15304
$^{12}C^{18}O^+$, vibr. consts. of electronic transition $B^2\Sigma^+ \rightarrow X^2\Sigma^+$ 3—17253
^{12}CO, ^{13}CO in compact planetary nebula NGC 7027, millimetre-wave spectroscopy 3—35686
^{12}CO, interstellar, search for 2.6 mm emission from Weaver's jet region 3—10433
$^{14}C^{14}N$, $A^2\Pi$ to $X^2\Sigma^+$ red system, vibr. levels 3—45951
$^{14}C^{16}O$, Herzberg system $C^1\Sigma^+-A^1\Pi$ transition 3—32029
^{14}CO $J=1 \rightarrow 0$ line in star form. regions and SNRs, EHF obs. 3—30519
Co, sorption on ZnO nonpolar, stepped, and polar surfaces 3—18561
${Co_2}^+$, photoionisation leading to $C^2{\Sigma_g}^+$ state, cross section, photoelectron asymmetry parameters, vibr. effects 3—1436
CuI vapour lasers, output parameters, influence of electron heating during Cu recomb. 3—32352
D_2-F_2-CO_2 photoinitiated chemical laser, high-efficiency 3—1618
DF-CO_2 chemical laser, shortening of emitted pulses 3—7041
${H_3}^+ + CO$ reaction, HCO^+ and HOC^+ formation 3—24501
HCN, anharmonic vibr. problem 3—6605

carbon compounds continued
- KCl:CN$^-$, Brillouin spectra, phonon linewidths and lineshapes 3−57940
- NCS$^-$ ion, specific adsorption on Ag electrochemical electrode 3−57223
- NCS$^-$ ions adsorbed on AG electrochem. electrode, surface enhanced Raman spectra 3−57934
- NO, Auger line shape investig. 3−21831
- N_2O, mag. susceptibilities and NMR chem. shifts theory in terms of localised quantities 3−55969
- Ne-CO_2 system, thermal diffusion factor, conc. and temp. depend. 3−32831
- O+CS_2, form. of OCS_2, pot. energy surface, reaction mechanism 3−6542
- O_2, glow discharge, particle excitation mechanism, relax. studies 3−2320
- OCS, ^{33}S enrichment by isotopically selective two step laser photodissoc. 3−1439
- OCS, excited state, nonlinear mech. intramolecular dynamics 3−6598
- OCS, force consts., effective nuclear charge model 3−41644
- OCS, He I photoelectron spectra, vibronic coupling 3−55994
- OCS, hot band rot. relax. time determ. by transient IR-microwave double reson. 3−1398
- OCS, photodissociation, photofragment fluoresc. yield 3−17344
- OCS, pot. energy surface semiclassical determ. from obs. vibr. rot. spectra 3−55877
- OCS, rovibration, IR laser diode spectra 3−45945
- OCS, S$^-$ zero kinetic ion formation in dissociative electron attachment 3−11991
- OCS, vibr., pressure broadening in IR spectra 3−32061
- OCS+C, reaction at 300K, CS($a^3\pi_r$) chemiluminesc., laser appl. 3−39371
- OCS_2, singlet pot. energy surface, CNDO calcs. 3−6542
- SF_6-CO_2 mixtures, impulse breakdown behaviour of negative rod-plane gaps 3−2172
- Si_xC_{1-x}:H, amorphous, electroluminescence obs. 3−47711
- WC electrodes, Co-cemented, O_2 electrochemical reduction 3−39392
- Xe-N_2-CO-Ni(110) multilayers, physisorbed species electronic levels, dipoles influence, UPS study 3−8550

carbon fibre reinforced composites
- amorphous-crystal structure of C fibre as example of self-reinforced composite 3−53073
- cross-ply laminated plates with elastically restrained angles, postbuckling analysis 3−42161
- epoxy matrix, damping props., anisotropy 3−42714
- epoxy matrix, elastic moduli, temp. depend. 3−34370
- epoxy matrix, role of fibre surface-matrix combination 3−9156
- epoxy matrix 3−58149
- graphite fibre reinforced Al, residual stress meas. 3−53352
- graphite fibre reinforced Al, room temp. tensile strength, function of annealing temp. and time 3−47960
- graphite fibre reinforced cross-ply epoxy laminates and adhesive joints, optimal cooling 3−33473
- graphite fibre reinforced epoxy, appl. of US testbed to defect sizing and location 3−39327
- graphite fibre reinforced epoxy, charact. of stability mechanisms, NDT 3−39329
- graphite fibre reinforced epoxy, fatigue life predictions from US detected laminar defects 3−39328
- graphite fibre reinforced epoxy, fracture surface energy, effect of absorbed water 3−24329
- graphite fibre reinforced epoxy, interlaminar fracture 3−51014
- graphite fibre reinforced epoxy, model composite, crack initiation and propagation 3−39237
- graphite fibre reinforced epoxy, unidirectional dynamic fracture 3−9150
- graphite fibre reinforced epoxy 3−19372
- graphite fibre reinforced epoxy angle ply laminate, hydroscopic boundary layer stresses 3−9076
- graphite fibre reinforced epoxy angle ply laminate, layer thickness effect on strength 3−9128
- graphite fibre reinforced epoxy laminate, damaged, bonded repair anal. with B fibre reinforced epoxy or Ti 3−14834
- graphite fibre reinforced epoxy laminates, fracture, unifying strain criterion 3−14696
- graphite fibre reinforced epoxy laminates, with Al embedded particles, moisture detection by X-ray diffr. 3−14806
- graphite fibre reinforced epoxy parts, acceptance testing using AE monitoring 3−24457
- graphite fibre reinforced epoxy resin to metal joint, fatigue spectrum sensitivity 3−34426
- graphite fibre reinforced epoxy tubes, fatigue, static axial and shear props. under completely reversed load controlled loading 3−9126
- graphite fibre reinforced epoxy unidirectional laminate with Al filler particles, residual stresses 3−53169
- graphite fibre reinforced glass, compliant, high failure strain, prep. and characteris. 3−29056
- graphite fibre reinforced polyimide laminates, fracture, unifying strain criterion 3−14696
- graphite fibre reinforced polyimide resin 3−24284
- graphite fibre reinforced polyimides, self-lubricating, for extreme environmental appls. 3−24373
- graphite fibre reinforced polymers, dynamic mech. meas., fibre surface effect 3−19365
- graphite fibre reinforced Sn-Sb-Cu alloy, Babbitt pin-steel ring sliding system, spherical wear particle formation 3−29195
- laminates, fracture, unifying strain criterion 3−14696
- plastic matrix, damage susceptibility determ. by nondestructive methods 3−53326
- plastic matrix, environmental fatigue, moisture gradient considerations 3−14758
- plastic matrix, fracture characteristics of heterogeneous materials 3−53203
- plastic matrix, transverse tensile strength, time and temp. depend. *(Japanese)* 3−19377
- plastic matrix, unidirectional, failure, fibre strength props. 3−29174
- plastic matrix laminate, cross ply, edge effects in uniaxial compression testing 3−9129
- plastics, tensile fatigue and fatigue life diagrams, review 3−43935
- polyamide 66 matrix, stress-strain curve prediction 3−9120
- resin matrix, elastic plates reinforced by fibres lying in concentric circles, stress 3−42129
- shell, cylindrical, load-carrying capacity under combined thermal and mech. loading 3−17793

carbon fibre reinforced composites continued
- surface properties, struct. and reactivity, from carbon black to carbon composites, review 3−24527
- wear and friction up to 260°C 3−47966
- Al alloy matrix, chopped fibres, fabrication by graining process 3−52998
- Al matrix, chopped fibres, fabrication by graining process 3−52998
- Al matrix, fabrication, graining process, alloying effect on wettability *(Japanese)* 3−58078
- Al matrix, fabrication by plasma spraying and hot pressing, mech. props. *(Japanese)* 3−58077
- C matrix, tridimensionally reinforced, mech. props. 3−53107
- C plastic matrix, thermal deformation rel. to heating rate and gas media comp. 3−43900
- C-fibre reinforced epoxy resin laminate, natural vibr. modes, holographic study *(Japanese)* 3−37389
- Si_3N_4 matrix, processing, characteris. and incompatibility problems soln. 3−29051

carbon fibres
- *see also carbon fibre reinforced composites*
- amorphous-crystal structure of C fibre as example of self-reinforced composite 3−53073
- electrical resist., anomalous behaviour 3−47325
- ESR, conduction electron motional averaging and struct. 3−33980
- graphite, effects of intercalation on microstructure 3−33459
- graphite fibres, highly ordered, high field magnetoresist., X-ray diffr., and Raman spectra 3−57333
- graphite intercalation cpd. with $CuCl_2$, pitch-based fibre, elec. and mechanical props. 3−52106
- growth inhibition, by halogens, from naphthalene at 1100°C 3−24105
- magnetic susceptibility, anal. using structural model 3−33857
- micropoint cathodes, field electron emission, energy spectrum meas. 3−52903
- production from polyacrylonitrile fibres, X-ray structural study *(German)* 3−33137
- surface properties, struct. and reactivity, from carbon black to carbon composites, review 3−24527
- surfaces, industrially treated, effect of heat and exposure to O, XPS studies 3−14442
- vapour grown, piezoresistance effect 3−8485
- wetting properties, manufacture of composites *(French)* 3−33539
- B modified, BN form., X-ray photoelectron spectroscopy study *(Russian)* 3−43786
- $CuCl_2$ intercalated C fibres, metallic cond., air stability and mech. props. meas. 3−38363

carbon microphones *see microphones*

carbon steel
- aged, strain hardening, prior deform. effect 3−34356
- austenisation, X-ray diffr. study *(Russian)* 3−39111
- austenite transformation in intercrit. temp. range, α-phase form. 3−24207
- austenite-pearlite transform., Co addition effect 3−34295
- Bauschinger effect rel. to cementite content and morphology, tension-compression test 3−43916
- boriding, gaseous media 3−34547
- boronised, autoradiographic study 3−43990
- brittle fracture susceptibility eval., nondestructive magnetomech. method, hot rolling and ageing effects on type 20k 3−48017
- BWR torus structural items, electrolytic decontamination 3−936
- cantilever specimen, mag. hysteresis under simultaneous action of static and dynamic bending stresses 3−52595
- cavitation damage in type S15C specimens, mag. field effects, tap water expts. 3−53260
- cementite-ferrite interface, interaction with H 3−33293
- compacted particle core, AC mag. characts. 3−43397
- corrosion fatigue tests in nucl. reactor coolant water 3−58338
- crack propagation transition temp. determ. method 3−24429
- cracked plate, fatigue crack growth, effect of residual stress field *(Japanese)* 3−19399
- decarburising activity of salt baths, thermoelectric method for inspection 3−29266
- dual-phase, fatigue crack path, high mean stress, ferrite selection ratio *(Japanese)* 3−39241
- eutectic morphology, carbide and sulphide 3−24205
- eutectoid, fatigue crack behaviour in plain specimens *(Japanese)* 3−9166
- eutectoid, pearlite, microstruct. parameters, evaluation of method of determ. 3−24451
- eutectoid, plain C, isothermal form. of austenite 3−53083
- fatigue, push-pull, influence of overloads on crack initiation and propag. *(Japanese)* 3−9170
- fatigue crack growth resistance of steel 65G, struct. influence 3−58234
- fatigue life, statistical invest. by separating crack initiation and crack propag. lives *(Japanese)* 3−9173
- ferritic-martensitic, tensile fracture 3−4120
- fracture under mixed mode I and II loading, ferrite grain size effect 3−14695
- grain size determ. by US testing 3−34562
- hardfaced rolls, fatigue strength improvement using ultrasonic treatment 3−9212
- high strength, fatigue, impact and nonimpact, comparison of crack growth rates *(Japanese)* 3−9172
- high-C, high strength, thickness effect on fatigue crack propag. 3−14690
- laminated inhomogeneous, method to estimate bending fatigue life *(Japanese)* 3−9177
- low and medium C, laminated, bending stress-strain relations, effect of initial residual stress *(Japanese)* 3−58167
- low C, Al-killed sheet steels, development of texture after uniaxial tensile deform., deep drawing and stretching 3−9082
- low C, austenite-ferrite structs., hot torsion deformation 3−43915
- low C, dual phase, initial struct. effect on mech. props. *(Korean)* 3−4086
- low C, fatigue crack propagation under polymodal loading 3−58199
- low C, fatigue limit, distribs. characts. of microcracks and role of cyclic strain ageing *(Japanese)* 3−58214
- low C, fatigue limit, effect of initial dislocation locking *(Japanese)* 3−58213
- low C, fracture surface fine struct., X-ray diffr. obs. *(Russian)* 3−39234
- low C, heat treated, quantitative anal. of fatigue fractographs 3−34483
- low C, primary recrystallised textures, vol. fractions 3−58131
- low C, rimmed texture form. during cold plastic deform. *(Russian)* 3−9084
- low C, structural, stress relax. in cyclic straining *(Czech)* 3−14635

carbon steel continued
low C, thermomech. treatment, effect on struct. and mech. props. 3—43874
low C, thin laminations, eddy current losses associated with rotating mag. fields calc. 3—38642
low C, yield surface study by automated combined stress testing machine 3—44008
low C dual-phase, thermomech. treatment, strengthening effects 3—58148
low C plate, fatigue crack propag., effect of strain ageing history *(Japanese)* 3—9167
low C strip, Al-45 wt.% Zn alloy coated, sandwich-composite, strength and ductility 3—43917
low-C, sample dimens. influence on brittle fracture transition temp., static loading 3—58235
low-C, stress/strain relations under inelastic deformation 3—9132
low-C martensitic structural, design for high strength and toughness, struct.-prop. relations 3—39162
magnetoelastic charact. under quasistatic effects, NDT appl. in type St.5 3—47539
martensite, high C, quantitative geometric characterisation 3—53052
martensite crystal lattice struct. 3—13169
medium and high C martensites, tempering from 100-700°C 3—24273
medium C, fatigue crack propag., effect of H and microstruct. 3—43948
medium C, impact toughness in different struct. states, complex dynamic loading effect 3—34475
medium C, integral J value, Charpy test, inclusions effect *(French)* 3—58232
medium C, plastic deform. development in packet martensite *(Russian)* 3—39203
medium C, surface characts. after electrospark alloying, heat treatment effect *(Russian)* 3—4059
mild, annealed disc compressed, mech. stress meas. 67 mg. field strength rotation 3—58358
mild, anodic dissolution in HCl soln. containing thio-ureas 3—39283
mild, anodic protection in HNO_3 3—53263
mild, caustic cracking in hot NaOH-Na_2S soln., fracture mechanics study 3—43986
mild, coated, simulated underfilm corrosion using artificial blister 3—53270
mild, corrosion, effect of hydrolysis of elemental S in water 3—14769
mild, corrosion fatigue in $NaNO_3$ soln. 3—29205
mild, corrosion meas. derived from small perturbation non-linearity, harmonic anal. 3—53303
mild, cylindrical shells, subjected to longit. bending moments, limit loads 3—12540
mild, dissolution inhibition by halide ions in H_2SO_4 3—39285
mild, ductile, generalised fracture mech. 3—9151
mild, ductile targets, deform., effect of penetrator geometry 3—47912
mild, fatigue crack propag., AE detection 3—53348
mild, fatigue crack propag. threshold, influence of strain ageing 3—47953
mild, fatigue strength, effect of nitriding in electrolyte plasma *(Russian)* 3—53184
mild, Luder's band fronts 3—43928
mild, nitrided, oxidation and corrosion resist. 3—4184
mild, subcritical crack growth due to SCC or H_2 embrittlement, AE obs. 3—14767
mild, wear related to physicochem. reactions 3—34496
mild, yield at very high strain rates 3—43927
mild steel, boronising study 3—34520
mild steel, corrosion in acid medium, Mossbauer study 3—24408
normalised, crack resist. rel. to macrofractographic features of fracture 3—29188
oxide inclusions formation during diffusion of O_2 3—38138
pearlitic eutectoid rail, cyclic deform. 3—24308
plate, projectile impact, critical fracture energy 3—14691
powder, bonding processes during dynamic compaction 3—43779
sheet, cyclic stress-strain, fatigue testing 3—53318
solubility of H in AISI 4340 steels, 298 to 873K 3—18461
spheroidised, medium C, bent bars, fracture and constrained yielding, H charging effect 3—34481
spheroidised, notch ductility and fracture, effect of H_2 charging 3—53196
spheroidised, plastic instability in U-notched bend specimens 3—34461
spheroidised, strength and microstruct. parameters, new statistical relation 3 14662
steel, C, plunge grinding process with constant load *(Japanese)* 3—14780
steel, mild, defects produced by fusion welding, AE eval. 3—4243
structural, prestrained in tension, yield point anisotropy secondary specimens test methods development 3—19490
structural, size of plastic region due to blunting of precrack tip, crit. stress intensity factor 3—29233
tempered, remanent magnetism, induction under alternating mag. field in type 45 and 50 3—58143
tempering, comparative study 3—47867
tempering process-kinetic, 200 to 300°C *(Serbian)* 3—34358
tensile deform., 700-1300°C *(Chinese)* 3—53122
time thermal stresses *(Ukrainian)* 3—47864
tubular specimens, plastic deform. along orthogonal bilinear strain trajectories, pre-strain effect 3—29125
ultrahigh C/mild and UHC/UHC laminates, impact props. 3—58203
wires, thin high-strength, material and Zn coating influence on props. 3—47886
Cu-C steel multilayer composite, mech. props. 3—39250
Fe, cast, impact wear *(Japanese)* 3—58254
Fe-graphite compact undergoing sintering, diffusion obs., thermal microscopy 3—58068
Ni type, thermal stabilisation of retained austenite 3—39148

carbon tetrachloride, CCl_4 *see organic compounds*

carbonitriding *see surface hardening*

carburising *see surface hardening*

carcinotrons
relativistic electron beam pulse-periodic microwave generators 3—17130

cardiology
see also blood; electrocardiography; haemodynamics
adaptive control system for the artificial heart 3—15287
Anger and multicrystal cameras, ^{178}Ta count rate limitations 3—48398
angiography, low-contrast, with digital subtraction technique 3—24857
aquatic animals, heart beat monitoring using US stethoscope 3—44370
arterial blood pressure, signal from analysis *(German)* 3—39743
artificial heart system, development 3—53887
artificial total heart, elec. motor driven 3—15285

cardiology continued
biomedical engineering in cardiology 3—48435
blood pool, feasibility of gated single-photon emission transaxial tomography 3—58806
blood vessel-heart system, simulation of blood pressure control operations *(Japanese)* 3—9660
cardiac metabolism, rot., 2-dimens. P NMR exchange spectrosc. investig. 3—58597
cardiotocograph, gynaecologic diagnostic instrument based on US Doppler technique 3—58756
cardiovascular alterations in Macaca monkeys exposed to stationary mag. fields, ECG and blood press. obs. 3—58712
cardiovascular CT, quantitative, baseline subtraction 3—58801
cardiovascular diagnostic parameters derived from pressure and flow pulses 3—4609
cardiovascular dynamics study by continuous recording of blood density 3—9772
cardiovascular finite-element analyses, recent developments 3—9661
cardiovascular imaging, conf., London, England (Feb. 1982) 3—4
cardiovascular simulation pogrammable pulse generator *(Spanish)* 3—15067
catheter including manometers and velocity probe, computerised anal. 3—29780
cell membrane noise changes during microwave exposure 3—4547
cells of frog, intracellular free Ca^+ conc., ionic diffusion theory 3—53651
cineangiocardiographic image processing technique 3—15216
computer-based flow mapping system, intracardiac appl. 3—15174
computerised cathlab of the present and future 3—29779
computerised tomography, future prospects 3—4633
computerised tomography, gated scanning, myocardial infarction study appls. 3—29742
computerised tomography, multiplanar, ECG gated 3—15215
computerised tomography appls. 3—29744
computing appls., conf., London, England (Nov. 1982) 3—25699
conduction system, human, mag. field patterns, computer simulation 3—39664
conference on health care engng., Philadelphia, USA (Sept. 1982) 3—10517
copulsating left heart assist system 3—4687
coronary arterial segments, reconstruction from two projections, network flow algorithm 3—15219
coronary artery models, representation in angiographic films 3—24870
coronary heart disease rel. to ionising radiation *(Russian)* 3—58730
coronary obstruction severity, computer aided quantitation from single view cineangiograms 3—24869
CT image reconstruction from X-ray projections, penalty method, inverse matrix *(Japanese)* 3—48406
CT images, comparision of information between gated and nongated images 3—58773
current pathways in high-voltage injuries 3—48281
diagnostic cardiac images, centralised digital picture processing system 3—34955
dual collimator design for beat-to-beat measurement of cardiac performance with an Anger camera 3—4632
early diagnosis of cardiac disease, noninvasive clinical method 3—29778
ECAT III, positron tomography, design considerations 3—53839
echocardiogram, two-dimens., computer-aided analysis system *(Japanese)* 3—19787
echocardiographic images, 3D reconstruction using the rot. method 3—29685
echocardiographic images, sector-scan, digitising and processing 3—4573
echocardiography, distortions of US field by rib cage 3—19785
echocardiology, Doppler US computerised blood flowmeter for noninvasive meas. 3—4575
EDP for Cardio tocographical supervision *(German)* 3—39745
electrohydraulic left heart assist system 3—4686
engineering approaches to cardiac function evaluation, review 3—48436
engineering in medicine and biology, conf., Philadelphia, USA (Sept. 82) 3—10511
enhanced coronary phonocardiography, non-invasive diagnosis of coronary artery disease 3—4608
first-pass radionuclide angiocardiography, decontamination of time-activity curves 3—15223
fixed-angle emission tomographic cardiac imaging systems, phys. comparison 3—34964
gated blood pool nuclear imaging, smoothing, thresholding and contour extraction 3—24879
gated blood pool studies of human heart, interpretation, model 3—19812
glucose metabolism, regional, digital imaging with a MWPC 3—53895
heart rate monitor, portable, with 3-digit LCD display 3—9693
helical waves in the heart 3—29523
impedance meter, used for modulus/phase meas. *(Spanish)* 3—39738
intraaortic balloon pumping, cardiac assistance optimisation, theoretical considerations 3—58865
intracardiac masses, 2D echocardiography, echo pattern-histopathology correl. 3—29687
inverse fan beam CT system, redundant ray projection completion method, cardiac appl. 3—53780
Jarvik artificial heart, peripheral instrumentation 3—15286
left ventricle, features of compliance pumping 3—4532
left ventricle, infarcted, finite element model of pressure-volume relation 3—48308
left ventricle angiography, variable thresholding 3—24880
left ventricle mechanics theory 3—4520
left ventricle wall motion, amplitude and timing, from digitised angiograms 3—29743
left ventricular ejection fraction, clinical assessment with short-lived ^{195m}Au 3—15192
left ventricular end-diastolic vol., nuclear quantification, influence of background and absorpt. correction 3—48385
left ventricular mechanics, anal. during filling, isovolumic contraction, and ejection 3—39666
left ventricular overload, simple models, assessment of a parametric identification procedure 3—34871
left ventricular pumping, compliance descriptor anal. 3—58711
left ventricular strain and stress under isovolume contraction, finite deform. theory *(Japanese)* 3—58707
left ventricular wall motion assessment, cross correlation technique 3—53797
left ventricular wall motion pattern clustering, cineangiographic sequence 3—24877

cardiology continued
  left-ventricular contraction mechs., computer graphics anal. 3−4533
  magnetic energy converter for implantable left ventricular assist devices 3−53888
  mechanics of cardiac and skeletal muscle, book 3−58709
  metal heart marker position, recognition and storage from biplane X-ray images, microcomputer-based instrument 3−39708
  microcomputer-controlled cardio-vascular measuring place in nuclear-medical functional diagnostics *(German)* 3−39713
  microprocessor-based heart monitoring 3−48438
  mitochondria, isolated, H^+-dependent efflux of Ca^{2+} 3−34809
  mitral valve, frequencies calc. 3−19736
  multichannel dynamic radiograph, microprocessor controlled, cardiac appl. 3−19810
  muscle, isolated, data acquisition and on-line anal. of expts. with a PDP-12/PDP-11 system 3−19865
  muscle, sharp rise in refractoriness on suppression of excitability in the Fitz Hugh-Nagumo model 3−29520
  muscle cells, uphill Na^+ transport driven by an inward Ca^{2+} gradient 3−48273
  myocardial blood flow during acute isovolumic anaemia and threadmill exercise in dogs 3−19744
  myocardial imaging with ^{201}Tl uptake kinetics, two successive administrations method *(Japanese)* 3−39711
  myocardial lipids, prelabelled with radioiodinated fatty acids, radiochromatographic microanal. 3−53640
  myocardial pacemakers, bidirectional interaction model based on phase response curve 3−48276
  myocardial perfusion abnormalities, ^{201}Tl scintigrams, computer quantitation location 3−24878
  myocardial relaxation mechanics, appl. of model to isometric and isotonic relax. in rats 3−24771
  myocardial tissue, normal and ischemic, prep. for SEM 3−53904
  myocardial tissue, rheological props. 3−29607
  myocardium, abnormal changes, 2D echocardiographic recognition 3−29686
  myocardium, appls. of body forces concept 3−44261
  myocardium, discerning of contraction and elec. signals by voltage-sensitive dyes 3−35036
  myocardium, mech.-metabolic coupling on elec. stimulation 3−24744
  myocardium mechanics, interrelationship with cardiohaemodynamics, in expt. cardiac tamponade 3−34876
  NMR, real time movie images, rabbit heart obs. 3−9689
  NMR zeugmatographic images, three-dimens. display 3−15183
  nuclear medicine, computerized interpretation of ^{201}Tl scintigraphs 3−15226
  nuclear medicine conf., Budapest, Hungary (Sept. 82) *(Hungarian)* 3−15
  on-line analysis of electrical signals from skeletal and cardiac muscle cells 3−19875
  output rel. to positive end-expiratory pressure 3−39676
  output values, technique for determ. in rapid succession using conductivity cell 3−19855
  pacemaker activity suppression by rapid repetitive phase delay 3−34817
  paediatric cardiac converging collimators, resolution and sensitivity 3−48397
  papillary muscle, cat, internal viscoelastic loading 3−24745
  papillary muscle, cat, vel. transients and viscoelastic resistance to active shortening 3−24746
  pathology, contrib. of conventional and computerised nuclear medicine, review *(Hungarian)* 3−4626
  periodic breathing in infants, spectral anal., cardiovascular-respiratory interaction appl. 3−15135
  phonocardiogram, automatic classification by distance measure 3−58755
  phonocardiograms, pole-zero modelling and classification 3−48342
  positron emission tomography, radiation absorbed dose estimates for the ^{38}K, ^{81}Rb, ^{82}Rb and ^{130}Cs 3−48389
  prosthetic valve, 2-leaflet, development and in vitro assessment 3−35029
  pulsed-Doppler echocardiography, microprocessor sample-vol. tracker and light-pen 3−15175
  radiographic image sequences, processing and anal., cardiac and haemodynamic appl. 3−29724
  radionuclide ^{201}Tl imaging artifacts rel. to NaI crystal hydration 3−48396
  regulation of cardiac output and cerebral blood flow 3−34870
  respiratory system compliance as seen from the cardiac fossa, dog expts. 3−19737
  right ventricular pressure response to $+G_z$ acceleration stress in miniature swine 3−24894
  Roentgen densitometer as a noninvasive means for infant intracardiac shunts detect. 3−53843
  sarcomere, individual, length determ. from isolated cardiac cells using optical microscopy and image processing 3−35035
  scans, iterative limited-angle reconstruction of missing scans 3−53830
  scintigram, ECG triggered, sequence anal. 3−29726
  Shimadzu cardiovascular X-ray diagnostic systems *(Japanese)* 3−4641
  single photon emission tomography, attenuation compensation 3−48388
  single photon tomographic imaging of a standard heart phantom with ^{201}Tl 3−15198
  sinus artificial heart control system 3−4679
  stenosis angiographic quantitation by digital image processing 3−24871
  stroke volume and cardiac output in exercising ducks and pigeons 3−19745
  stroke volume radioisotope determ., influence of attenuation 3−4628
  subphrenic pumping device implantation for cardiac bypass *(German)* 3−24912
  tachycardia, anomalous growth of refractoriness 3−29522
  thermoregulatory responses of patients with extensive healed burns 3−24684
  three-dimensional heart wall motion tracking, graphics method for cineangiography 3−15196
  tomography, quadrant slant-hole collimator 3−4631
  transmural cardiac pressures, estimation during ventilation with PEEP 3−29592
  transventricular defibrillation thresholds using quarter and half sinusoidal pulses, dog expts. 3−19685
  US applications to veterinary diagnostics 3−4716
  valve modelling, digital processing of heart sounds 3−34925
  valve prostheses, various types, in vitro closing behaviour 3−24915
  valve replacement, bioengng. aspects, review 3−58866
  valve-aorta unit, mech. characts. 3−29606

cardiology continued
  ventricles, algorithm for 3D reconstruction from orthogonal radiographic projections 3−29735
  ventricular kinetics of a magnetically actuated artificial heart 3−4688
  ventricular pressure and myocardial contractility, math. interrelationship 3−9664
  ventricular wall motion, regional and global, left, temporal Fourier anal. appl. to equilib. radionuclide cineangiography 3−9713
  zero-g simulation for ground based studies in human physiology, emphasis on cardiovascular and body fluid systems, conf., Toulouse, France (Mar. 82) 3−10515
  ^{56}Fe, in heart, liver, of human, meas. using γ scatt. resonance 3−53821
  $^{195}Hg^m$-$^{195}Au^m$ generator for use in first-pass nuclear angiocardiography 3−34974

carrier avalanches *see impact ionisation*

carrier concentration *see carrier density*

carrier density
  see also current density; electron density; electron density (metals)
  abrupt l-h junctions and epitaxial layer structures interface, charge carrier conc. 3−3301
  amorphous semiconductors, dielec. relax. and delayed-collection field expts., dispersive transport anal. 3−43484
  amorphous semiconductors, elec. cond., field depend., rel. to electronic struct. 3−43186
  n-$Cd_xHg_{1-x}Te$ photoconductor, carrier accumulation effects at contacts 3−28381
  current-carrier density distributions meas. in semiconductors, contactless instrument 3−36037
  film on sapphire, elec. props., thermal stress effects 3−38506
  GaAs:B, elec. cond., impurity effects 3−23398
  granular materials, Hall effect rel. to carrier density 3−18726
  high density electron-hole plasma form. below 25K 3−47426
  impurity levels and carrier conc., computer calc. *(Russian)* 3−18648
  insulators, numerical anal. of transient photocond. 3−23423
  intrinsic semiconductors, carrier concentration under high mag. fields 3−47362
  IV-VI semiconductors, energy band struct. and Fermi surface, tight-binding calc. 3−57281
  n^+-n-n^+(n^+-p-n^+) symmetrical double junction diodes, drift-diffusion theory 3−23475
  p^+np^+ BARITT diode, quasistatic injection current theory *(Russian)* 3−3311
  p-n junction solar cells, operating under concentrated sunlight, physical principles 3−58504
  p-s-n diode, forward biased, charge carrier distrib. determ. by recombination radiation *(German)* 3−30895
  photoemission spectra and γ-α phase transition 3−34196
  poly-N-epoxypropylcarbazole, photosensitivity, effect of photo-oxidation 3−34640
  polymers, molecularly doped, elec. field assisted triplet exciton annihilation, photocond. meas. 3−52173
  polyvinylfluoride films, I_2 doped, elec. cond. meas. 3−23520
  PVCz-TNF charge-transfer complex amorphous films, carrier drift mobilities *(Chinese)* 3−43298
  semiconductor, electron density, Fermi-Dirac integrals appl. 3−23372
  semiconductor, photoexcited carriers, temp. and conc. self-oscillations 3−28389
  semiconductor, two-donor (majority) levels determ. from Hall effect meas. 3−8442
  semiconductor of varying comp., charge carrier transport eqns. 3−18718
  semiconductor photocells with thin front layer, charge carrier collection 3−404
  semiconductor quantum well heterostructure laser, gain spectra and sensitivity to carrier density calc. 3−50659
  semiconductor thin film, size-limited intrinsic transport, quantum freeze out effect 3−47437
  semiconductor-insulator boundaries, carrier density, local density approx. calcs. 3−52264
  semiconductors, carrier conc. and mobility distrib., multiprobe meas. apparatus *(Russian)* 3−3193
  semiconductors, energy spectra, dependence of limiting solubilities of impurities 3−8444
  semiconductors, nonequilibrium electron-hole distrib., light absorpt. 3−28278
  semiconductors, randomly inhomogeneous, Hall effect theory 3−38408
  semiconductors, temperature and carrier density stratification 3−28368
  semiconductors, transient screening with weakly ionised impurities 3−43165
  semiconductors with doping superlattices, electronic subband struct. and effective energy gap 3−57401
  solar cells, Schottky-barrier, minority carrier collection model of depletion region generated carriers 3−39485
  transition metal dichalcogenide intercalation compounds, electronic props. 3−23386
  Ag chalcogenides, Hall effect, thermoelec. power and elec. cond. changes on melting 3−13839
  Ag-sapphire-In_2Te_3, gate field effects on carrier density and mobility 3−33799
  (Al,Ga)As, luminesc. centre form. during pulsed laser irrad. 3−47699
  Al/merocyanine:Cl/Au thin film photovoltaic cell, carrier photogeneration, depletion layer study 3−3335
  AlGaAs/GaAs multiple segmented stripe contact lasers, longit. vars. in current injection and carrier conc. 3−32361
  $Al_{0.25}Ga_{0.75}As$-GaAs modulation doped structs. grown by MBE, light sensitivity 3−52279
  $Al_xGa_{1-x}As$ MBE layers, Si doped, elec. props. 3−23512
  $Al_xGa_{1-x}As$: Si, MBE growth, effect of H_2 on elec. and optical props. 3−51973
  $Al_xGa_{1-x}As$:Si, Si doping during MBE growth 3−24133
  $Al_xGa_{1-x}As$:Si epitaxial layer on GaAs; Hall effect and photocond., heterojunction phenomena 3−47438
  $Al_xGa_{1-x}As$:Si MBE layers, elec. props. and precipitation 3−38509
  $Al_xGa_{1-x}As/Al_yGa_{1-y}As$ visible lasers, contaminated, MOCVD grown, elec. and optical characts. 3−41871
  $Al_xGa_{1-x}N$ MBE films, struct., elec. and optical props 3−8355
  Bi, electron spectrum parameters from high temp. magnetoresist. oscills. *(Russian)* 3−38405
  Bi thin film, resist., Hall effect and magnetoresistance, anisotropic two carrier model 3−43300

carrier density continued
Bi, Young's modulus and internal friction during heating, free carrier effects 3—13311
Bi-Sb, electron spectrum parameters from high temp. magnetoresist. oscills. *(Russian)* 3—38405
$Bi_{91.5}Sb_{8.5}$ semicond. alloy, carrier statistics and thermoelectric power 3—13845
Bi_2Te_3-Sb_2Te_3-Sb_2Se_3 thin film thermoelectric generator design and fabrication 3—14967
$CaTiO_3$:La, defect struct., elec. cond. studies 3—51591
Cd_3As_2 single cryst. growth by zone recrystallization 3—58044
$CdCr_2Se_4$:In(Ag), impurity effects on carrier density and mobility, elec. cond. and Hall EMF studies 3—33810
$Cd_{0.95}Mn_{0.05}Se$ crystals, Bridgman growth and elec., optical and mag. props. 3—52921
$Cd_{1-x}Mn_xSe$, D^- levels, far IR transmission and transport studies 3—47677
CdS:Al films, transport and optical props., dopant conc. effects 3—18804
n-CdSb, Shubnikov-de Haas oscill. study 3—33745
p-$CdSiAs_2$, photoluminescence, carrier density effects 3—8879
$CuInS_2$:Fe, defect electron levels, elec. cond. and Mossbauer studies 3—52062
$CuInSe_2$, single cryst., elec. props. *(Korean)* 3—13838
$CuInSe_2$ single cryst., elec. resist. and Hall effect 3—57351
Cu_xS thin films, transport props., heat treatments effects 3—38502
Cu_2Se-Cu_2Te-Si junctions, photovoltaic props., solar cell appls. 3—53514
$Eu_{1-x}Gd_xO$ (SM_xO), carrier scatt. and transport phenomena 3—28363
EuO_{1-8}, carrier scatt. and transport phenomena 3—28363
p-GaAlAs, LPE growth on GaAs, Be and Zn diffusion obs. by carrier density meas. 3—52982
GaAlAs:H_2S(Se), doping relationships during MOCVD growth 3—42632
GaAlAs/GaAs DH lasers, Sn doped and undoped, MBE grown, p-n junction positioning study 3—41835
$Ga_{1-x}Al_xAs$ epitaxial layers, Al conc., Auger spectroscopy, ion microprobe anal., photoluminescence meas. 3—23993
$Ga_{1-x}Al_xAs$:Se(Zn), elec. resist., Hall effect meas., impurity energy levels 3—23510
GaAs bicrystal, grain boundaries, elec. characterisation 3—52061
GaAs, diodes, n-type negative differential cond. localised development 3—38391
GaAs, epitaxial and bulk, $S^+(Si^+)(Se^+)$ implanted, chemical and elec. profiles 3—27968
GaAs film, Dember EMF theory 3—28387
GaAs film, triode sputtering prep., elec. characts. 3—28995
n-GaAs, light-scatt. spectrum for single-particle excitations 3—38841
n-GaAs, MCD in 10.6 μm range, rel. to free carrier conc., homogeneity determ. of doped semicond. 3—28868
GaAs MOCVD grown, atmos. and reduced press. growth and elec. props. 3—23197
GaAs n-type Ge doped, MBE grown, elec. and photolum. props. 3—33807
n-GaAs, nonradiative recomb., electron probe investigation 3—18773
GaAs p^+-p^0-n^0-n^+ structs., minority carrier diffusion length, electron-probe-induced-current meas. 3—18722
GaAs, reactive ion beam etching damage, annealing behavior 3—2617
GaAs, semiinsulating, electrical characterisation using galvano-magnetic measurements *(Slovak)* 3—47364
GaAs:Ge, homojunction interfaces, carrier compensating centres, luminescence and DLTS study 3—3273
GaAs:H_2S(Se), doping relationships during MOCVD growth 3—42632
GaAs:Mg, carrier profile, correlation with Mg atomic profiles, SIMS and Hall effect study 3—3218
GaAs:S, VPE grown, doping anisotropy, Hall effect and photoluminescence studies 3—42631
GaAs:Sb(In) epitaxial films, elec. props. and acceptor centres 3—57441
GaAs:Si, ion implanted, IR rapid thermal annealing, MESFET appl. 3—8071
GaAs:Si, post-implantation annealing, capless technique, carrier conc. and mobility 3—53096
GaAs:Si^+, ion implanted, TEM damage studies and elec. profile meas. 3—47006
GaAs:Sn, epilayers, low pressure metal-organic CVD growth using tetraethyltin Sn source 3—34236
GaAs:Zn, Te, N, Zn diffusion profiles, Hall effect and elec. cond. study 3—8085
GaAs-$Al_xGa_{1-x}As$ heterostructure, selectively doped, two-dimens. electron gas mobility and conc. 3—52231
GaAs(:Si), MBE growth of high-purity layers and elec. props. meas. 3—34231
n-$Ga_{0.47}In_{0.53}As$, VPE growth and characterisation for microwave applications 3—19281
$Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$ heterojunctions, electron mobility, spacer thickness and electron density effects 3—47412
$Ga_xIn_{1-x}As$, n- and p-type, on InP substrate, optical, crystallographic, and transport props. 3—43597
GaP, slip-induced elec. resist. anisotropy 3—57350
GaP:Mn, impurity centres, internal friction and ESR study 3—18660
n-GaP:S, proton implanted fabrication, visible and IR waveguiding 3—17615
GaP:Si, N, LPE growth with N doping from NH_3, Si incorporation kinetics 3—34250
GaP:Te (2n), inhomogeneous distrib. of doping elements 3—8080
GaP-Si heterojunction, GaP metalorganic CVD epitaxy and elec. and photoelec. props. meas. 3—19285
GaSb:Te, LEC growth, uniform carrier conc. distrib., Hall meas. 3—14470
GaSb(:Te), shaped melt lowering growth technique, photoluminesc. and Hall meas. 3—34214
$(GaSb)_{1-x}Ge_x$, metastable, RF sputtering deposition ion-beam mixing effects 3—3955
GaSe, luminescence study of screening of optical phonon-hole interaction 3—14349
n-Ge, Benedicks thermo-emf meas. 3—47375
Ge, electron-hole plasma drift in inhomogeneous mag. field 3—18734
Ge, epitaxial growth on (100)GaAs, RF sputter deposition, controlled doping, hole conc. and mobility 3—43730
Ge, non-equilib. carrier conc. depend. on laser excitation intensity *(Russian)* 3—38426
p-Ge:Au, recombination wave instability in injected electron-hole plasma 3—38420
Ge:Sb, P, shallow donors, photoexcitation line quenching by γ-irrad. 3—8454

carrier density continued
Ge-Si alloy, electron and X-ray irrad.-induced acceptors, elec. cond. study 3—18653
$Ge_{38}As_8I_8$, clathrate semicond., prep., struct. and elec. props. 3—13814
$(Ge_2)_x(GaAs)_{1-x}$ solid soln., luminescence and electrophysical props. 3—14352
GeTe, high press. phase transitions, elec. cond. 3—28095
GeTe:Cu, solubility of Cu and ionised donor states 3—51800
n-$Hg_{0.8}Cd_{0.2}Te$, ion implanted, elec. props., IR reflectivity diagnostic technique 3—3713
n-$Hg_{0.8}Cd_{0.2}Te$, LPE growth for photoconductivity-type IR detector 3—52979
n-$Hg_{0.8}Cd_{0.2}Te$:$Al^+(Ga^+)$, ion implanted, IR refl. study 3—18327
n-$Hg_{0.8}Cd_{0.2}Te$:$Mg^+(Zn^+)(Cd^+)$, ion implantation, effect on elec. props., IR refl. 3—8073
$Hg_{0.8}Cd_{0.2}Te$:P, P incorporation during Hg vapour anneal, elec. characterisation 3—51636
p-$Hg_{1-x}Cd_xTe$, electron irrad., effect on carrier props., isochronal annealing study 3—33303
$Hg_{1-x}Cd_xTe$, intrinsic carrier conc. calc. 3—52172
$Hg_{1-x}Cd_xTe$, LPE growth and elec. props. 3—18577
$Hg_{1-x}Cd_xTe$, laser excited, electron mobility meas. 3—52178
$Hg_{1-x}Cd_xTe$, pure and ion implanted, laser annealed, Hall, cond. and C-V meas. 3—28347
InAs, contactless method of measuring free-carrier concentration in narrow-band semiconductors 3—23922
InAs, elec. transport and band struct. 3—3233
InAs:Cr, impact ionisation, I-V characts. 3—18713
p-$In_{0.53}Ga_{0.74}As$:Zn VPE layers, elec. and optical props. 3—18800
$In_{1-x}Ga_xAs$, LPE growth on (100), (111)B faces, impurity and carrier concs. 3—8360
$In_xGa_{1-x}As$, current controlled LPE on InP (100) 3—19292
InGaAsP lasers, lightly doped, radiative and nonradiative recomb. law 3—46209
InGaAsP, photoexcited carrier lifetime and Auger recombination 3—43192
InGaAsP quaternary alloys, analytical model for gain spectra 3—22059
InGaAsP-InP:Zn double heterostructures, luminescence study 3—38922
In_2O_3:Sn, crystal struct., electric props. *(Korean)* 3—38504
In_2O_3-ZrO_2 solid soln., heat treatment, elec. resist. and struct. 3—58136
InP, CVD epitaxial films, elec. props. of doped and undoped material 3—19278
n-InP crystals, compensated, illumination influence on inpurity pot. elec. props., study 3—8548
InP epitaxial film, MOCVD grown, elec. props., low temp. photoluminescence study 3—23511
InP epitaxial films, MOCVD, growth using Lewis acid-base adducts 3—43758
InP epitaxial layer growth by In-PCl_3-H_2 technique, surface quality and mobility characts. 3—43756
InP, epitaxial layers, carrier conc. and Hall data rel. to vapour etching before growth 3—34239
InP epitaxial layers, carrier density and mobility, optical meas. 3—43199
InP, LPE growth on (100), (111)B faces, impurity and carrier concs. 3—8360
InP:Be MBE layers, elec. and optical props. 3—47365
InP:Se^+, ion implanted, multiply scanned electron beam annealing, elec. props., RBS study 3—8102
InP-Hg(Au) Schottky barrier diodes, noninvasive anal. of InP surface 3—13881
InSb, contactless method of measuring free-carrier concentration in narrow-band semiconductors 3—23922
InSb highly homogeneous single crysts., growth and characterisation for IR imaging devices 3—34215
n-InSb, magnetoresist., temp. and mag. field depend., localisation effects 3—43211
InSb, magnetoresistance, Hall effect and elec. cond. near high press. phase transition 3—13840
n-InSb, temperature-electric instability in static elec. field 3—18716
InSb:Bi, doping during LPE, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3—33603
InSb:S, ion implanted, S diffusion, laser annealing and elec. props. 3—38140
InSb:S(Se), highly localised impurity states, press. depend. 3—52068
n-$In_{2-x}Sn_xO_{3-y}$/p-InP sputtered solar cells 3—53519
In_2Te_3-Sb_2Te_3, elec. and photoelectric props. 3—28358
KCl, electron irradiation, reduction of rate of electric aging 3—8767
$Mg_xHg_{1-x}Se$, zero gap semiconductor-ordinary semiconductor transition *(Russian)* 3—3204
NaCl, electron irradiation, reduction of rate of electric aging 3—8767
$NbSe_3$, CDW cond. study 3—28342
Pb-Sn-Te(Se), extruded alloys, carrier conc. and mobility 3—8507
$PbFe_{12}O_{19}$, photoelectrochemical studies 3—52195
PbS-PbSe(Te) solid solutions, electronic density of states effective mass 3—57262
$PbS_{0.1}Se_{0.9}$, intrinsic, recombination, depend. on doping conc. and excitation level 3—52174
$Pb_{1-x}Sn_xSe$, nonstoichiometric defect levels, Hall coeff. study 3—18656
PbSnTe, homostructure diode lasers, refractive index rel. to carrier conc., dielectric const. and optical confinement 3—27050
$Pb_{0.78}Sn_{0.22}Te$, intrinsic, recombination, depend. on doping conc. and excitation level 3—52174
$Pb_{0.8}Sn_{0.2}Te$:Ag, solid soln., effect of Ag impurity on elec. and struct. props. 3—8498
p-$Pb_{1-x}Sn_xTe$, ferroelec. phase transition under electron irrad. 3—3651
$Pb_{1-x}Sn_xTe$ photosensitive p-n structures, LPE growth 3—52232
$Pb_{1-x}Sn_xTe$:Cd single cryst., band gap, rel. to electrophysical props. 3—28267
$Pb_{1-x}Sn_xTe$:In, energy spectrum in quantizing mag. field 3—18727
PbTe epitaxial films, carrier density and mobility 3—47439
PbTe thin film, elec. props., ion bombardment effects 3—52277
PbTe:Ag, effect of impurities on elec. props. 3—8497
n-PbTe:Cr, thermoelec. props., current carrier conc. 3—47372
PbTe-Bi_2Te_3, kinetic parameter dependence on impurity level, annealing effects 3—8515
$Sb_{1.5}Bi_{0.5}Te_3$-Bi_2Se_3 solid soln. single cryst., elec. and thermal conductivities 3—57345
$Sb_{2-x}Bi_xTe_{3-y}Se_y$:Pb solid soln., thermoelec. props. 3—57372
Sb_2Te_3, Ag doped and undoped, elec. props., reflectivity, nature of Ag impurity 3—23381

carrier density continued
  Si CVD films, polycryst., grain boundary induced deep levels, transport props. meas. 3−23316
  Si, CVD grown on amorphous substrate, shaped beam laser recrystallised, structural and elec. characts. 3−57244
  Si, electron-hole droplet transport up to near-sonic velocity 3−23280
  Si epitaxial layers by vacuum sublimation, impurity conc., minority carrier lifetime 3−38255
  Si inversion layer, quantised Hall resistance and freq. effect 3−43291
  Si, ion implantation by 11 MeV As ions 3−8076
  Si MOS inversion layers, effective mobility edge and inelastic scatt. time in strong mag. fields 3−43292
  Si MOSFET structs., one-dimens. effects, nonmetal-metal transition 3−3328
  n-Si, n^+-n-n^+ asymmetrical struct., effect of strong microwave elec. fields 3−33787
  Si, p-n junction, luminosity distrib., in secondary breakdown zone *(Russian)* 3−57414
  Si, polycrystalline, Hall mobility and resistivity, model 3−18725
  Si, polycrystalline, transport props., three-dimens. model 3−18700
  Si, polycrystalline film, ion implanted laser annealing, struct., resist., carrier mobility *(Chinese)* 3−43299
  Si polycrystalline film grain-boundary trapping model 3−3343
  Si solar cells, n^+-p-p^+ structure, open circuit voltages across junctions under high illumination levels 3−58502
  Si:As^+ wafers, rapid annealing with scanning Hg arc lamp 3−13264
  Si:B, ion implanted, elec. activation of B ions during solid phase epitaxy 3−2579
  Si:B, P, sequential diffusion, impurity profiles, SIMS study 3−42853
  Si:B film, highly doped, deposited on Si(100) substrates, solid phase epitaxy 3−23198
  Si:Be, diffusion coeff., and solid solubility, elec. cond. study 3−2883
  Si:H/electrolyte amorphous contacts, band bending, photoresponse and surface reactions 3−8573
  Si:In, ion implanted, high temp. diffusion and elec. props. 3−57142
  Si:P, impurity ionisation energy, elastic deformation effects, elec. cond. study 3−3119
  Si:P, ion implanted, light scanning annealing, elec. and defect props. 3−27980
  Si:P, ion implanted, solid soln. form. after solid phase epitaxial regrowth 3−57099
  Si:P films, elec. cond., Hall mobility and carrier density 3−8602
  Si:P^+ ion implanted buried amorphous layers, recrystallisation behaviour 3−27845
  Si:P(As), polycrystalline film, ion implanted, pulsed incoherent light annealing 3−22933
  Si:P(B)(As), doping profiles determ. by electrical meas. and anodic stripping, automatic apparatus 3−49403
  SmS, semicond.-metal phase transition, critical press., carrier conc. study 3−28271
  SnO_2:Sb film, RF magnetron sputtered, struct., elec. and optical props. 3−13934
  SnTe films, vacuum deposited, substrate temp. effects on microstruct. and elec. props. 3−24137
  p-$(SnTe)_{0.2}(PbSe)_{0.8}$, epitaxial layer, transfer phenomena 3−8408
  $Ti_{1+x}S_2$, angle-resolved photoemission and transport props., stoichiometry effects 3−39004
  $Ti_{1-x}V_xS_2$, far-IR studies of electronic and vibr. props. 3−57911
  $Zn_xCd_{1-x}SnP_2$, LPE growth on InP and elec. props. meas. 3−19291
  ZnO film, RF sputtered, elec., optical and structural props. 3−28229
  ZnSe:Cl, photoluminescence and electron conc., defects effects 3−38885

carrier diffusion length *see carrier lifetime*

carrier lifetime
  amorphous materials, field diffusion, theory 3−3227
  anthracene crysts., charge carrier trapping at physical defects 3−57359
  bipolar p-n junction devices with drift fields, I-V characteristics calc. 3−33783
  charge carrier distribution determ. in psn diodes, by meas. recombination radiation *(German)* 3−348
  disordered materials, carrier diffusion, integral representation of incoherent field 3−3222
  III-V semiconductor, light sources, carrier lifetime meas., recomb. rate and doping level determ. 3−8505
  injection laser diodes, new method for damping relax. oscillations 3−12151
  large grain polycrystalline silicon from rice husk 3−29072
  laser diode switch controlled by forward injection current, switching characts. 3−37035
  metal-glass-insulator-semicond. struct., surface recombination and minority carrier generation meas. *(Russian)* 3−3324
  minority carrier diffusion length meas. in solar cells, techniques review 3−43193
  minority carrier lifetime temp. dependence meas., microwave contactless instrument 3−40642
  minority carriers lifetime meas., in base region of three-layer structures 3−45162
  MOS capacitors, constant current charging technique for meas. of generation rates 3−52265
  MOS capacitors, thin oxide, radiation effects caused by evaporation of Al 3−52267
  MOS structure, transient response, minority carriers bulk generation lifetime and surface generation rate *(Chinese)* 3−18788
  n-type II-VI and III-V semiconductors, minority carrier diffusion length, photoelectrochem. determ. in aq. solvent 3−33788
  organic solar cells, current status 3−48156
  p^+-n-n^+ semiconductor structs., diffusion p-n junctions, I-V charact. at large current density 3−8567
  p-n junction depth determ., by nondestructive time resolved EBIC technique 3−52238
  p-n junction solar cells, operating under concentrated sunlight, physical principles 3−58504
  p-n junctions, large area, I-V characteristic, minority charge carrier lifetime and geometrical dimensions 3−8566
  p-n-p structure, base region, hole lifetime meas., combined optical/electronic method 3−49404
  photovoltaic solar energy, conf. Stresa, Italy (May 1982) 3−54583
  semiconductor, carrier lifetime and extrinsic photocond. at high excitation rate 3−38433
  semiconductor, compensated non-polar, IR Faraday rotation due to hot carriers, trapping parameters 3−34078

carrier lifetime continued
  semiconductor, photoacoustic signal generation, carrier diffusion and recombination influence 3−47055
  semiconductor thin-film photoelectromag. detectors for far IR radiation 3−47382
  semiconductors, carrier diffusion length, SEM measurements anal. 3−23405
  semiconductors, intra-pair metastable state thermoluminescence model 3−28907
  semiconductors, minority carrier diffusion length and surface recombination velocity, light- and electron-beam induced currents 3−57358
  semiconductors, temperature and carrier density stratification 3−28368
  solar cell, interdigitated back contact fabrication process for high photocurrent 3−24579
  solar cells, polycrystalline SIS structures, carrier mobility and lifetime calc. 3−58500
  solar cells, Schottky-barrier, minority carrier collection model of depletion region generated carriers 3−39485
  spin-dependent recombination under conditions of optical excitation with polarized radiation 3−47363
  surface barrier struct. photon-diffusion transport of nonequilib. carriers 3−28412
  AgBr emulsion grains, Ag specks formed during reduction sensitisation, electrochem. and photoelec. props. 3−58439
  Al-SiO_2-n-Si system, 1.3 MeV electron radiation effects obs. *(Chinese)* 3−38481
  $Al_xGa_{1-x}As$, LPE grown, composition and minority carrier diffusion length meas. *(Chinese)* 3−38242
  $Al_xGa_{1-x}As$, luminescence and minority carrier transport 3−28889
  α-Al_2O_3, recombination luminescence and energy transfer 3−52842
  As_2Se_3, glassy, nonequilib. hole diffusion and drift length, photoconductivity study 3−13831
  Cd_3As_2, diffusivity-mobility ratio in mag. field 3−43200
  CdHgTe, thin-film photoelectromag. detectors for far IR radiation 3−47382
  $Cd_{0.2}Hg_{0.8}Te$ crystal, photocond. kinetics under surface excitation *(Russian)* 3−3257
  CdS-CdTe, p-n, heterojunction, electron and hole diffusion length determ. using surface photovoltage method 3−28461
  $CdSnAs_2$, n- and p-type, carrier lifetime, optical energy gap, photocond. study 3−18743
  CdTe, carrier lifetime determ., dynamic phase grating method 3−18720
  CdTe film, CND on foreign substrates and minority carrier diffusion length meas. 3−43746
  CdTe film, electron and hole diffusion length determ. using surface photovoltage method 3−28461
  CdTe p-n homojunction, electron and hole diffusion length determ. using surface photovoltage method 3−28461
  CdTe-HgCdTe photodiodes, In diffused, I-V and C-V characts., minority carrier diffusion length 3−25946
  Fe_2O_3 electrodes for photoassisted electrolysis of water 3−14962
  $Ga_{1-x}Al_xAs$ variable gap films, photoelectron spectra, electron diffusion length 3−14440
  GaAs, chemical and electrical characterisation 3−23404
  n-GaAs epitaxial layer, minority carrier diffusion length meas. with high spatial resolution 3−52180
  n-GaAs, nonradiative recomb., electron probe investigation 3−18773
  GaAs p^+-p^0-n^0-n^+ structs., minority carrier diffusion length, electron-probe-induced-current meas. 3−18722
  GaAs:Cr, carrier lifetime determ., dynamic phase grating method 3−18720
  GaAs:Zn, VPE grown, minority carrier diffusion length, photocathode appl. 3−47779
  GaAs-AlGaAs DH laser, transverse mode selection, ambipolar excess carrier diffusion 3−46215
  GaP, computer controlled LEC growth, struct. and elec. props., LED appls. 3−14464
  (Hg,Cd)Te MIS devices, impedance characts., effect of crystal defects 3−47431
  p-$Hg_{1-x}Cd_xTe$, electron irrad., effect on carrier props., isochronal annealing study 3−33303
  $Hg_{1-x}Cd_xTe$, LPE growth and elec. props. 3−18577
  InGaAsP lasers with lightly doped active layers, meas. of radiative recombination coeff. and carrier leakage 3−27049
  InGaAsP, photoexcited carrier lifetime and Auger recombination 3−43192
  $In_{0.5}Ga_{0.5}P$-InGaAsP double heterostructs., nonequilib. carrier lifetime in active region, effect of emitter recomb. 3−38900
  $In_xGa_{1-x}P$:N LPE layers ($x<0.01$), minority carrier diffusion length meas. 3−13933
  InP, VPE grown, Hall effect, photothermal ionisation, diffusion length, photoluminescence studies 3−19277
  n-InP:Sn, radiative recomb., absorpt. and reemission processes 3−38899
  InSb bistable device as optical AND gate and for carrier lifetime meas. 3−37099
  InSb, photoacoustic signal generation, carrier diffusion and recombination influence 3−47055
  InSe, photocond., photovoltaic props., carrier mobility and lifetime 3−47384
  $In_{2-x}Sn_xO_{3-y}$-p-InP solar cell, electron diffusion length 3−19585
  MgO, recombination luminescence and energy transfer 3−52842
  $PbS_{1-x}Se_x$ photovoltaic detectors, carrier lifetimes and resist.-area product 3−47381
  Sb-Pt/Si p-n junction form. by laser processing 3−57421
  Se based amorphous xerographic photoreceptors, charge transport, time of flight expts. 3−3245
  Si, amorphous, surface-photovoltage diffusion length, theory and expt. 3−43223
  Si amorphous solar cells, photocarrier collection, carrier transport model 3−53537
  Si, carrier diffusion coeff. 3−57364
  Si, chemical and electrical characterisation 3−23404
  Si crystal growth, Czochralski method increased C content for carrier lifetime and yield improvement 3−14468
  Si, edge defined film fed growth ribbon, effect of heat treatment on bulk diffusion length 3−52179
  Si, electron beam annealed, minority carrier diffusion length, solar cell appls. 3−57365
  Si, electron beam recrystallised, cathodoluminescence and minority carrier lifetime 3−47718

carrier lifetime continued
- Si, electronic props. of dislocations, Shockley partials, and stacking fault ribbons 3—47305
- Si epitaxial layer on O_2^+ implanted substrate, carrier lifetime meas., IC appl. 3—47360
- Si epitaxial layers by vacuum sublimation, impurity conc., minority carrier lifetime 3—38255
- Si film, elec. oscills., surface recomb. waves 3—18805
- Si, gamma-ray irrad., charge carrier recombination at defect clusters 3—3226
- Si, minority carrier diffusion coeff., AC photo-current study 3—52168
- Si, neutron irrad., minority carrier lifetime study 3—23403
- Si, p^+-n-n^+ multilayer struct., Auger recomb. at high current densities, I-V meas. 3—18772
- Si p-n junction, minority carrier lifetime meas. using AC photovoltages 3—52169
- Si p-n junction characts., photovoltaic method using cut-off freq. 3—47411
- Si p-n junction solar cell, minority carrier effective lifetime 3—44133
- Si, photoacoustic signal generation, carrier diffusion and recombination influence 3—47055
- Si, polycrystalline, grain size influence on mobility, lifetime and diffusion length 3—43167
- Si, polycrystalline, laser recrystallisation effect on substrate minority carrier lifetime 3—27987
- Si polycrystalline, n^+-p/p^+ solar cell, fabrication and characts. *(Korean)* 3—34698
- Si, polycrystalline solar cell, minority carrier diffusion length and interface recombination velocity, EBIC and light induced currents anal. 3—53541
- Si ribbon, photovoltaic mechanism, lifetime meas. 3—33760
- Si, selective lifetime doping by laser scanning, meas. on p-n junctions and MOS capacitors 3—33736
- Si solar cell, low-cost material, optical absorpt. coeff. and minority carrier diffusion length meas. 3—23900
- Si solar cells, EFG ribbon, minority carrier diffusion length, bias light wavelength depend. 3—4386
- Si solar cells, effective surface recombination velocity and minority-carrier lifetime meas. 3—44128
- Si solar cells with highly-doped substrates, recombination mechanisms 3—39489
- Si wafer, epitaxial, laser annealed, defect form., SEM, TEM and X-ray studies 3—56958
- Si wafer, minority carrier lifetime, extent of LID gettering effect, nondestructive SAW technique 3—48025
- Si wafer, nonradiative processes, piezoelec. photoacoustic spectroscopy 3—47709
- Si wafer bulk generation lifetime evaluation from pulsed MOS capacitance and gated diode meas. 3—38400
- Si wafers, virgin and implanted, laser beam annealed, point defects, EPR, cyclotron reson., DLTS meas. 3—56957
- Si:As, B, ion implanted and incoherent light annealed, characterisation 3—56922
- Si:Au, minority carrier lifetime, recombination mechanisms 3—3219
- Si:B, polycrystalline, MESA diodes on photocells, electronic props. rel. to grain size and intragrain defects 3—38470
- Si:Ga, electron irrad., defect studies and minority carrier lifetime, DLTS studies 3—57306
- Si:H, amorphous, dangling bond defects, trapping parameters, photoconductivity study 3—28367
- Si:H, amorphous, electron-hole recombination lifetime distrib., light induced ESR and luminesc. 3—8510
- Si:H, amorphous, light soaked state, transient photoconductivity 3—52188
- Si:H, amorphous solar cell, hot carrier diffusion influence on collection efficiency 3—44130
- a-Si:H, elec. and optical props., effect of prolonged illum. 3—23441
- Si:H amorphous alloys, minority carrier diffusion length, photovoltaic device study 3—3220
- Si:H amorphous film, elec. and struct. props., capacitor photo-EMF spectra study 3—8535
- Si:H amorphous film, elec. props. and solar cell characts. 3—53539
- α-Si:H solar cells thin film, design, fabrication and characts. 3—9438
- Si:N, amorphous CVD film, optical and electrical props. meas. 3—8484
- Si:P, ion implanted, light scanning annealing, elec. and defect props. 3—27980
- Si:P, ion implanted, solid soln. form. after solid phase epitaxial regrowth 3—57099
- $Si/Mg_{(1-x)}SiP_{2(1-x)}$ heterojunctions, prep. and elec. props. 3—38473
- n-SiC, 6H and 4H polytypes, minority carrier diffusion length 3—23516
- SiGe:H amorphous film, elec. props. and solar cell characts. 3—53539
- SiO_2, recombination luminescence and energy transfer 3—52842

carrier mean free path
- *see also electron mean free path (metals)*
- one-dimensional conductor, electron scatt. due to impurities, Green's function study 3—43161
- polyparaxylylene, on Au, electron mean free path, kinetic energy depend. 3—8508
- InP, carrier mobility, grain size depend., elec. cond. and Hall effect studies 3—47343
- InSb, nonlinear acoustoelectronic amplification at high electron drift speeds 3—13864
- PbSe:In films, elec. props. dopant effects on scatt. parameters 3—18806
- $Si-SiO_2$ interface, radiation induced defects meas. with XPS 3—43288
- Xe film, elastic and inelastic mean free paths 3—28464

carrier mobility
- *see also carrier mean free path; carrier relaxation time; current density; electron-hole recombination; electron mobility (metals)*
- amorphous semiconductors, elec. cond., field depend., rel. to electronic struct. 3—43186
- anthracene:phenothiazine, TSC transport peak 3—33739
- anthracene crysts., charge carrier trapping at physical defects 3—57359
- bis-(4-dimethylamino-2-methylphenyl)phenylmethane, hopping transport 3—3200
- carbazole-based polymers, phys. and chem. props., review 3—16104
- copper phthalocyanine single cryst., low temp. microwave Hall mobility meas. 3—23408
- disordered materials, carrier diffusion, integral representation of incoherent field 3—3222
- disordered semiconductors, elec. cond. theory 3—52158
- disordered systems, time-of-flight meas. under dispersive transport conditions 3—38362

carrier mobility continued
- drift mobility measurement in organic semiconductors *(Polish)* 3—10859
- effective mobility edge and inelastic scatt. time in strong mag. fields 3—43292
- eicosane, charge mobility, time of flight meas. 3—57348
- electronic shot-noise devices, quantum electro-dynamic circuit soft-photon renormalisation of conductance 3—57396
- energy diffusion eqn. for electron gas interacting with polar optical phonons, non-parabolic case 3—43142
- ethylene glycol-water capacitor, high voltage charge injection and transport 3—43483
- ferromagnetic semiconductor, conduction electron self-energy effects 3—52031
- granular materials, Hall effect rel. to carrier density 3—18726
- hydrocarbon fluids, electron transport, mol. props. effect 3—51270
- III-V degenerate p-type semiconductors, high electron mobility and impurity scatt., theory 3—52133
- industrial oxide systems, radiative properties, effects of chemical and mineralogical composition 3—51831
- large grain polycrystalline silicon from rice husk 3—29072
- metal-amorphous semicond. contact, diffusion theory 3—33792
- octadecane, charge mobility, time of flight meas. 3—57348
- organic solar cells, current status 3—48156
- perovskite oxide ferroelec. semicond. electron mobility and TO phonon modes 3—43178
- photoconductors, layered, xerographic system, photoinduced discharge characts. 3—36108
- poly(N-vinylcarbazole) and mixtures with poly(N-epoxypropylcarbazole), holes drift mobility in glass transition region 3—8492
- poly(vinylidene fluoride), X-ray induced photocond. meas. 3—43224
- poly-N-vinylcarbazole, trap-free drift mobility, transient photocurrent curves 3—52202
- polyacetylene:I, magnetoresist. and Corbino resist. 3—57371
- polycarbonate films, carrier and chain mobility, thermally stimulated current techniques appl. 3—8509
- polydiacetylenes, electronic struct. and electron transport 3—18605
- polyethylene, charge carrier transport, simulation calcs. 3—33726
- polyethylene, high density, carrier mobility meas. by different methods 3—52146
- polyethylene terephthalate, X-ray induced photocond. meas. 3—43224
- polymer solids, electron mobility, time of flight electron-pulse technique meas. *(German)* 3—45156
- polymers, carrier and chain mobility, thermally stimulated current techniques appl. 3—8509
- polymers, electron irrad. induced cond., current transients 3—8488
- polyorganosilicon thin films, hole transport 3—8491
- polyvinylfluoride films, I_2 doped, elec. cond. meas. 3—23520
- PVCz-TNF charge-transfer complex amorphous films, carrier drift mobilities *(Chinese)* 3—43298
- quartz, gamma-ray irrad., adhesion levels, TSC study 3—52059
- p-quaterphenyl, polycryst. layers, field depend. carrier drift mobility 3—8601
- random noise, carrier mobility fluctuations 3—13871
- semiconductor, amorphous, localised state density, field effect study 3—8391
- semiconductor alloys, disorder scattering, Brooks mobility formula 3—38377
- semiconductor of varying comp., charge carrier transport eqns. 3—18718
- semiconductor photocells with thin front layer, charge carrier collection 3—404
- semiconductor physics, introduction, book 3—40329
- semiconductor solar cells with strong volume recombination, inapplicability of diffusion theory 3—9426
- semiconductor-insulator boundaries, carrier density, local density approx. calcs. 3—52264
- semiconductors, carrier conc. and mobility distrib., multiprobe meas. apparatus *(Russian)* 3—3193
- semiconductors, carrier mobility and irreversible thermodynamics, nonlinear field depend. 3—43176
- semiconductors, compensated, low temp. mobility due to unscreened charged impurities 3—8483
- semiconductors, disordered, cond. theory 3—13810
- semiconductors, electron scatt. by localised defect pot. and space-charge regions 3—47336
- semiconductors, photoacoustic effect, influence of appl. DC elec. field 3—18400
- semiconductors, randomly inhomogeneous, Hall effect theory 3—38408
- semiconductors, velocity, overshoot, velocity autocorrelation and hot electron noise calc. from small signal microwave mobility 3—52166
- single layered structure, ionised impurity scatt., quantum transport 3—47321
- solar cells, polycrystalline SIS structures, carrier mobility and lifetime calc. 3—58500
- solar cells, polycrystalline thin film, struct. and performance, review 3—9439
- solar cells, Schottky-barrier, minority carrier collection model of depletion region generated carriers 3—39485
- SOS small-size p^+nn^+ diodes, double injection phenomena, hot carrier effects obs. 3—13888
- synthetic aromatic insulating liquid, elec. conduction and dielectric loss obs. 3—28762
- $TCNQ_2$ salt, Qn $TCNQ_2$, pure and neutron irrad. spin diffusion coeffs., cond., proton NMR study 3—28710
- Teflon FEP foils, electron beam irradiated, charge dynamics model 3—38399
- tetracene, dispersive transport of charge carriers, pulsed photoconductivity *(Russian)* 3—57382
- tetracene, hopping mobility, temp. depend., photocurrent transient study 3—38388
- tetracene, polycryst. layers, field depend. carrier drift mobility 3—8601
- tetramethylsilane, liquid, injected electrons Hall mobility, room temp. meas. 3—38404
- variband semiconductor, nonequilibrium charge carrier transfer *(Russian)* 3—24014
- weakly localised regime, spin-orbit scatt. effect on Hall effect 3—43138
- wide-gap semiconducting magnetic alloys, electron mobility 3—33723
- Ag chalcogenides, Hall effect, thermoelec. power and elec. cond. changes on melting 3—13839
- Ag-sapphire-In_2Te_3, gate field effects on carrier density and mobility 3—33799

carrier mobility continued
- β-Ag_2Te, electronic and electrogalvanic props., Frenkel defect form. energy *(French)* 3−57347
- $Al_{0.25}Ga_{0.75}As$-GaAs modulation doped structs. grown by MBE, light sensitivity 3−52279
- $Al_xGa_{1-x}As$ epitaxial layer on GaAs:Cr, elec. cond. and transfer doping effect 3−23509
- $Al_xGa_{1-x}As$ layers, compositionally graded, electron drift vel. meas. by time resolved optical reflectivity 3−52285
- $Al_xGa_{1-x}As$, luminescence and minority carrier transport 3−28889
- $Al_xGa_{1-x}As$ MBE layers, Si doped, elec. props. 3−23512
- $Al_xGa_{1-x}As$: Si, MBE growth, effect of H_2 on elec. and optical props. 3−51973
- $Al_xGa_{1-x}As$:Si, Si doping during MBE growth 3−24133
- $Al_xGa_{1-x}As$:Si epitaxial layer on GaAs; Hall effect and photocond., heterojunction phenomena 3−47438
- $Al_xGa_{1-x}As$:Si MBE layers, elec. props. and precipitation 3−38509
- $Al_xGa_{1-x}As$:Te, impurity states, electron mobility 3−33681
- $Al_xGa_{1-x}As/Al_yGa_{1-y}As$ visible lasers, contaminated, MOCVD grown, elec. and optical characts. 3−41871
- $Al_xGa_{1-x}As$/GaAs heterostruct., MBE grown, mobility enhancement using superlattice struct. 3−57413
- $Al_xGa_{1-x}As$-GaAs heterostructures, MBE growth conditions effect on elec. and optical props. 3−42965
- $Al_xGa_{1-x}As$-GaAs modulation doped heterostruct., current transport meas. at moderate fields 3−8562
- $(Al_xGa_{1-x})_yIn_{1-y}As$, lattice matched to InP, MBE growth and elec. and optical props. 3−24132
- $Al_xGa_{1-x}N$ MBE films, struct., elec. and optical props 3−8355
- As_2Se_3, glassy, nonequilib. hole diffusion and drift length, photoconductivity study 3−13831
- Au-merocyanine-TiO_2, sandwich cells, photovoltaic props., transient effects 3−33758
- B-B, elec. conduction mechanism, elec. and optical props. 3−8495
- n-BNi_2Te_3, carrier mobility and effective mass, Hall effect and magnetoresist. study 3−3202
- Bi thin film, resist., Hall effect and magnetoresistance, anisotropic two carrier model 3−43300
- Bi_2Te_3-Sb_2Te_3-Sb_2Se_3 thin film thermoelectric generator design and fabrication 3−14967
- Bi_2Te_3-Te eutectic system, hardness and elec. cond. interrelations 3−52138
- Cd_3As_2, diffusivity-mobility ratio in mag. field 3−43200
- Cd_3As_2 single cryst. growth by zone recrystallization 3−58044
- $CdCr_2Se_4$ single cryst., elec. cond. and magnetoresist. in alternating elec. fields 3−28361
- $CdCr_2Se_4$:In(Ag), impurity effects on carrier density and mobility, elec. cond. and Hall EMF studies 3−33810
- $Cd_xHg_{1-x}Te$ photodiodes, zero bias resistance area product calc. for 8-14 μm range, doping effects 3−25947
- $Cd_{0.95}Mn_{0.05}Se$ crystals, Bridgman growth and elec., optical and mag. props. 3−52921
- n-CdS single cryst., high field DC elec. cond. 3−43189
- CdS(Te), hot wall epitaxial growth 3−47782
- n-CdSb, Shubnikov-de Haas oscill. study 3−33745
- CdSe, self-diffraction of picosecond light pulses 3−34177
- $CdSnAs_2$, n- and p-type, carrier lifetime, optical energy gap, photocond. study 3−18743
- CdTe, hot electron diffusion, Monte Carlo calc. 3−47354
- CdTe:Mn, current carrier mobility 3−43182
- $CdTl_eTe_4$:Ag, 77-650K 3−8517
- $Co_{1-x}Mg_xO$ solid solution, elec. cond., Seebeck coeff., hole mobility, 900-1200°C, comp. depend. 3−43169
- $CuInS_2$:Fe, defect electron levels, elec. cond. and Mossbauer studies 3−52062
- $CuInSe_2$, single cryst., elec. props. *(Korean)* 3−13838
- $CuInSe_2$ single cryst., elec. resist. and Hall effect 3−57351
- $CuInTe_2$, electron effective mass. carrier mobility anal. 3−43001
- $CuInTe_2$, polycrystalline thin film, elec. transport props., H_2 effect, grain boundary scatt. 3−52282
- Cu_2O, elec. cond., switching phenomena, temp. depend. 3−18709
- Cu_xS thin films, transport props., heat treatments effects 3−38502
- $Eu_{1-x}Gd_xO$ (SM_xO), carrier scatt. and transport phenomena 3−28363
- EuO, carrier mobility, mag. spin, acoustic phonon and impurity scattering 3−3195
- EuO_{1-8}, carrier scatt. and transport phenomena 3−28363
- EuS, feromagnetic semiconductor, conduction electron self-energy effects 3−52031
- FeOCl-ferrocene intercalation cpds., elec. cond. and thermoelec. power elec. cond. and thermoelec. power *(French)* 3−28355
- $Ga_{1-x}Al_xAs$, electron mobility and deformation pots, meas. in X-conduction band minima 3−18703
- $Ga_{1-x}Al_xAs$:Se(Zn), elec. resist., Hall effect meas., impurity energy levels 3−23510
- GaAs, compensation by low energy ion irrad., defect diffusion and carrier mobility 3−57001
- GaAs, dislocation effect on electron mobility, theory 3−33724
- GaAs, epitaxial and bulk, $S^+(Si^+)(Se^+)$ implanted, chemical and elec. profiles 3−27968
- GaAs film, triode sputtering prep., elec. characts. 3−28995
- GaAs films, α-irrad., defect migration, hall effect study 3−47167
- GaAs films, α-irrad. defect migration, elec. study 3−47168
- GaAs, hot wall epitaxial growth 3−47782
- GaAs impurity and mobility profiling techniques 3−23395
- GaAs LEC semi-insulating wafers for IC appls., resist. and Hall mobility meas. technique 3−20878
- GaAs MOCVD grown, atmos. and reduced press. growth and elec. props. 3−23197
- GaAs n-type Ge doped, MBE grown, elec. and photolum. props. 3−33807
- GaAs, pulsed laser annealing in high press. Ar gas ambience 3−33296
- GaAs, semiinsulating, electrical characterisation using galvano-magnetic measurements *(Slovak)* 3−47364
- GaAs VPE layer, elec. props. improvement by cooling HCl liq. source 3−23514
- GaAs:Cr, 3 inch diameter crystal growth by horizontal Bridgeman technique, characts. 3−24115
- GaAs:Sb(In) epitaxial films, elec. props. and acceptor centres 3−57441
- GaAs:Si, Cr, multiply scanned electron beam annealing 3−56991
- GaAs:Si, ion implanted, IR rapid thermal annealing, MESFET appl. 3−8071
- GaAs:Si, liquid doping in CVD, electron mobilities, FET devices 3−18323

carrier mobility continued
- GaAs:Si, post-implantation annealing, capless technique, carrier conc. and mobility 3−53096
- GaAs:Si^+, ion implanted, TEM damage studies and elec. profile meas. 3−47006
- GaAs:Zn, Te, N, Zn diffusion profiles, Hall effect and elec. cond. study 3−8085
- GaAs-$Al_{1-x}Ga_xAs$ modulation doped heterostructure, high-mobility electrons, electric field induced heating obs. 3−28417
- GaAs-$Al_xGa_{1-x}As$ heterojunction, low temp. mobility 3−28424
- GaAs-$Al_xGa_{1-x}As$ heterostructures, modulation doped, electron or γ-irrad., transport props. 3−38461
- GaAs-$Al_xGa_{1-x}As$ heterostructure, selectively doped, two-dimens. electron gas mobility and conc. 3−52231
- GaAs-$Al_xGa_{1-x}As$ heterostruct., intersubband scatt. study 3−57418
- GaAs-$Al_xGa_{1-x}As$ semicond. superlattice with tunable electronic props. 3−38462
- GaAs-AlAs heterostructures, modulation doped, mobility enhancement 3−3300
- GaAs-AlGaAs heterojunctions and superlattices, electron transport *(Japanese)* 3−28426
- GaAs-GaAlAs heterostructures, high-mobility selectively doped, grown by LP OM-VPE 3−28418
- GaAs(:Si), MBE growth of high-purity layers and elec. props. meas. 3−34231
- $Ga_{0.47}In_{0.53}As$, single longitudinal-mode optical phonon scatt. obs. 3−47334
- n-$Ga_{0.47}In_{0.53}As$, VPE growth and characterisation for microwave applications 3−19281
- $Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$ heterojunctions, electron mobility, spacer thickness and electron density effects 3−47412
- $Ga_xIn_{1-x}As$, n- and p-type, on InP substrate, optical, crystallographic, and transport props. 3−43597
- GaInAsP VPE layer, elec. props. improvement by cooling HCl liq. source 3−23514
- $Ga_xIn_{1-x}As_yP_{1-y}$ LPE layer, electron and hole mobilities and scatt. 3−18798
- $Ga_xIn_{1-x}As_yP_{1-y}$, lattice matched to InP, high freq. elec. transport 3−13850
- GaN films, reactive MBE growth on AlN-sapphire substrates and elec. and luminescent props. 3−47771
- GaP, computer controlled LEC growth, struct. and elec. props., LED appls. 3−14464
- GaP, slip-induced elec. resist. anisotropy 3−57350
- GaP-Si heterojunction, GaP metalorganic CVD epitaxy and elec. and photoelec. props. meas. 3−19285
- n-GaSb:Te, electron mobility, elec. cond. Hall effect 3−8506
- n-Ge, Benedicks thermo-emf meas. 3−47375
- Ge, electron-hole plasma drift in inhomogeneous mag. field 3−18734
- Ge, epitaxial growth on (100)GaAs, RF sputter deposition, controlled doping, hole conc. and mobility 3−43730
- Ge, γ-irrad., layer inhomogeneities, piezoresistance and mobility anisotropy 3−28359
- Ge, hot hole noise at liq. He temps., expt. and Monte Carlo calc. 3−13874
- Ge, neutron transmutation doped, elec. props., annealing effects 3−46971
- Ge on Si ⟨111⟩, heteroepitaxial growth by vacuum deposition, elec. props. 3−24130
- Ge, phonon anisotropic scatt. by holes 3−52127
- Ge, photoexcited electron drift vel. space overshoot, Monte Carlo method calc. 3−52191
- Ge, picosecond laser excited, transmission at various wavelengths, carrier diffusion role 3−38837
- Ge-Si alloy, electron and X-ray irrad.-induced acceptors, elec. cond. study 3−18653
- $(Ge_2)_x(GaAs)_{1-x}$ solid soln., luminescence and electrophysical props. 3−14352
- GeSi:Sb solid solns., γ-irrad., carrier mobility and magnetoresist. 3−38410
- n-$Hg_{0.8}Cd_{0.2}Te$, ion implanted, elec. props., IR reflectivity diagnostic technique 3−3713
- n-$Hg_{0.8}Cd_{0.2}Te$, LPE growth for photoconductivity-type IR detector 3−52979
- $Hg_{0.8}Cd_{0.2}Te$:P, P incorporation during Hg vapour anneal, elec. characterisation 3−51636
- $Hg_{1-x}Cd_xTe$, density of states, virtual cryst. approx. breakdown, UPS and CPA study 3−8389
- $Hg_{1-x}Cd_xTe$, LPE growth and elec. props. 3−18577
- $Hg_{1-x}Cd_xTe$, laser excited, electron mobility meas. 3−52178
- $Hg_{1-x}Te$, electronic struct., CPA and tight-binding calc. 3−43016
- $In_x Ga_{1-x}As_yP_{1-y}$, high-field electron transport 3−23396
- InAs:Cr, impact ionisation, I-V characts. 3−18713
- InAs-GaSb heterojunctions and superlattices, electron transport *(Japanese)* 3−28426
- InGaAs epitaxially grown layers, Sn-doping effects on some properties 3−51634
- $In_{0.53}Ga_{0.47}As$, electron transport, compositional clustering effects 3−8482
- $In_{0.53}Ga_{0.47}As$, high purity LPE growth and characterisation 3−43777
- $In_{0.53}Ga_{0.47}As$ high-purity LPE layers, postgrowth heat treatment effects on elec. characts. 3−52278
- $In_xGa_{1-x}As$, current controlled LPE on InP (100) 3−19292
- InGaAsP, growth by MBE, optical and elec. props. 3−24131
- InGaAsP, LPE growth and charact., doping conditions 3−42959
- InGaAsP lasers with lightly doped active layers, meas. of radiative recombination coeff. and carrier leakage 3−27049
- $In_xGa_{1-x}P$:N LPE layers ($x<0.01$), minority carrier diffusion length meas. 3−13933
- $In_{0.2}Ga_{0.8}Sb$, undoped and S doped, MBE and elec. props. 3−52945
- In_2O_3-ZrO_2 solid soln., heat treatment, elec. resist. and struct. 3−58136
- InP, carrier mobility, grain size depend., elec. cond. and Hall effect studies 3−47343
- InP epitaxial film, MOCVD grown, elec. props., low temp. photoluminescence study 3−23511
- InP epitaxial layer growth by In-PCl_3-H_2 technique, surface quality and mobility characts. 3−43756
- InP, epitaxial layers, carrier conc. and Hall data rel. to vapour etching before growth 3−34239
- InP epitaxial layers, carrier density and mobility, optical meas. 3−43199
- InP, LPE growth and charact., doping conditions 3−42959
- InP, MBE growth from cracked PH_3, photoluminesc. and carrier mobility 3−47770

carrier mobility continued
  InP:Be MBE layers, elec. and optical props. 3—47365
  InP:Se$^+$, ion implanted, multiply scanned electron beam annealing, elec. props., RBS study 3—8102
  p-InSb, IR absorpt., anisotropic, by free holes under strong elec. field 3—23917
  n-InSb, static cond. changes under ESR conditions 3—38697
  n-InSb, temperature-electric instability in static elec. field 3—18716
  InSb:Bi, doping during LPE, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3—33603
  InSb:S, ion implanted, S diffusion, laser annealing and elec. props. 3—38140
  InSe, photocond., photovoltaic props., carrier mobility and lifetime 3—47384
  InSe:Te, diffusion intercalated, elec. and struct. props. 3—3185
  In_2Te_3-Sb_2Te_3, elec. and photoelectric props. 3—28358
  Mn/SiO_2 thin cermet films, conductivity and Hall constant meas. using van der Pauw technique 3—38491
  N_2, liquid, prebreakdown phenomena, optical observation 3—23873
  N_2, liquid-phase, electron transport mechanisms under high electric fields 3—28349
  Pb chalcogenides, hot wall epitaxial growth 3—47782
  Pb-Sn-Te(Se), extruded alloys, carrier conc. and mobility 3—8507
  $Pb_{0.8}Sn_{0.2}Te$:Ag, solid soln., effect of Ag impurity on elec. and struct. props. 3—8498
  $Pb_{1-x}Sn_xTe$ epitaxial films, elec. transport props., band parameters 3—18801
  PbTe epitaxial films, carrier density and mobility 3—47439
  PbTe films, cond., photocond., thermoelectric, Hall and photothermoelectric meas. 3—8596
  PbTe thin film, elec. props., ion bombardment effects 3—52277
  PbTe:Ag, effect of impurities on elec. props. 3—8497
  PbTe-Bi_2Te_3, kinetic parameter dependence on impurity level, annealing effects 3—8515
  $PtSb_2$, narrow gap semicond., elec. cond., Hall and Seebeck coeffs. 3—52144
  Sb_2Te_3-Te eutectic system, hardness and elec. cond. interrelations 3—52138
  Se:Te, amorphous, density of gap states 3—28254
  Si (111), adsorption of H, surface struct. and cond. studies 3—51938
  p-Si, acoustic phonon limited cond. and Hall mobilities, deform. pot. theory calcs. 3—47366
  Si, amorphous, electronic struct. using reverse-recovery techniques 3—13711
  Si amorphous solar cells, photocarrier collection, carrier transport model 3—53537
  Si CVD film, solid-phase-recrystallised, on fused SiO_2, thin film transistors fabrication 3—43727
  Si CVD films, polycryst., grain boundary induced deep levels, transport props. meas. 3—23316
  Si, electrical conductivity under large uniaxial deformations 3—52157
  Si, electron-hole droplet transport up to near-sonic velocity 3—23280
  Si, epitaxial growth on Si by RF plasma CVD using Si-Ge buffer layer and elec. characterisation 3—52968
  Si film on sapphire, elec. props., thermal stress effects 3—38506
  Si, Hall coeff. and conductivity mobility, acoustic phonon scatt. 3—8512
  Si MOSFET, electron mobility and electron-phonon interaction study by negative magnetoresist. expts. 3—23486
  Si MOSFET using laser recrystallised polycryst. Si islands 3—33295
  Si plasma sprayed film, microstruct. and elec. props. 3—23213
  Si, polycrystalline, grain size influence on mobility, lifetime and diffusion length 3—43167
  Si, polycrystalline, Hall mobility and resistivity, model 3—18725
  Si, polycrystalline, MOSFETs and thin films, elec. characterisation 3—8597
  Si, polycrystalline film, ion implanted laser annealing, struct., resist., carrier mobility *(Chinese)* 3—43299
  Si, pulsed doping in high-current gas discharge 3—33282
  Si, self-diffraction of picosecond light pulses 3—34177
  Si, subdoped layers, average carrier mobilities calc. 3—13932
  Si:As, heavily doped, low minority carrier mobility and diffusivity meas. 3—38398
  Si:As$^+$ wafers, rapid annealing with scanning Hg arc lamp 3—13264
  Si:As(B), ion implantation damage, flame annealing, TEM and Van der Pauw studies 3—46970
  Si:B, ion implanted, elec. activation of B ions during solid phase epitaxy 3—2579
  Si:B, polycrystalline, MESA diodes on photocells, electronic props. rel. to grain size and intragrain defects 3—38470
  Si:H, amorphous, dangling bond defects, trapping parameters, photoconductivity study 3—28367
  Si:H, amorphous, light soaked state, transient photoconductivity 3—52188
  Si:H, amorphous, solar cells, carrier mobility, photocapacitance study 3—48147
  Si:H,F, amorphous, majority carrier drift mobility 3—23407
  Si:H film, polycryst., lightly doped, effects of hydrogenation, Hall effect meas. 3—23513
  α-Si:H solar cells thin film, design, fabrication and characts. 3—9438
  Si:In, ion implanted, high temp. diffusion and elec. props. 3—57142
  Si:N, amorphous CVD film, optical and electrical props. meas. 3—8484
  Si:P, impurity ionisation energy, elastic deformation effects, elec. cond. study 3—3119
  Si:P, ion implanted, light scanning annealing, elec. and defect props. 3—27980
  Si:P, ion implanted, solid soln. form. after solid phase epitaxial regrowth 3—57099
  Si:P CVD coatings, incoherent light annealing, elec. cond. study 3—42646
  Si:P films, elec. cond., Hall mobility and carrier density 3—8602
  Si:P$^+$ ion implanted buried amorphous layers, recrystallisation behaviour 3—27845
  Si:P(As), polycrystalline film, ion implanted, pulsed incoherent light annealing 3—22933
  Si:P(B)(As), doping profiles determ. by electrical meas. and anodic stripping, automatic apparatus 3—49403
  Si-Ge alloys, epitaxial, device fabrication 3—28425
  Si-on-insulator wafers, lateral zone growth and device quality characterisation 3—24116
  Si-SiO_2 MOS struct., high-field hole drift vel. in inversion layers 3—13911
  Si-SiO_3 interface, high field drift velocity, time-of-flight study technique 3—52260

carrier mobility continued
  SiO_2, plasma enhanced CVD, gate insulator for InSb MOS struct. 3—13917
  SnO_2:Sb film, RF magnetron sputtered, struct., elec. and optical props. 3—13934
  SnTe films, vacuum deposited, substrate temp. effects on microstruct. and elec. props. 3—24137
  TiO_2:Nb, H, elec. cond., Hall effect and carrier scatt. 3—47344
  $YbGa_2Se_4$ single cryst., injection and thermodepolarisation currents 3—43187
  $Zn_xCd_{1-x}SnP_2$, LPE growth on InP and elec. props. meas. 3—19291
  ZnO film, RF sputtered, elec., optical and structural props. 3—28229
  ZnO, transparent conducting films, fabrication and props., solar cells 3—3963
  Zn_3P_2, elec. cond., Hall effect and acceptor levels 3—18702
carrier relaxation time
    see also electron relaxation time (metals)
  one-dimensional conductor, electron scatt. due to impurities, Green's function study 3—43161
  semiconductor, phonon-assisted carrier transport across a grain boundary 3—28345
  semiconductor, photoexcited carriers, temp. and conc. self-oscillations 3—28389
  semiconductor, unipolar, short sample, relaxational elec. instability 3—23397
  semiconductor near interband resons. high-resolution picosec. modulation spectroscopy 3—36099
  semiconductors, non-polar, hole relax. time and transport coeffs., intervalence band interaction effects 3—43197
  spin-dependent recombination under conditions of optical excitation with polarized radiation 3—47363
  time-resolved cathodoluminescence in scanning electron microscopy 3—52857
  wide-gap semiconducting magnetic alloys, electron mobility 3—33723
  Bi film, magnetoresist. in weak mag. fields, localisation effects *(Russian)* 3—28370
  EuO, carrier mobility, mag. spin, acoustic phonon and impurity scattering 3—3195
  GaAs, dislocation effect on electron mobility, theory 3—33724
  GaAs, hot electron relax. and saturated current dispersion, DC to 1200 GHz 3—33749
  n-GaAs, intervalley picosecond electron relax. times, nonlinear optical susceptibility study 3—37100
  GaAs, nonequilibrium direct-gap polar, ultrafast transient transport 3—57341
  n-GaSb, intervalley picosecond electron relax. times, nonlinear optical susceptibility study 3—37100
  p-Ge, CW laser induced dynamic grating and subpicosecond hole relax. time 3—46254
  p-Ge, galvanomagnetic effects, hole distrib. functions 3—43207
  p-Ge, laser induced dynamic grating, subpicosec. hole relaxation time, Bragg diffr. study 3—50696
  n-$Hg_{0.8}Cd_{0.2}Te$, ion implanted, elec. props., IR reflectivity diagnostic technique 3—3713
  InSb, electron energy relaxation by neutral donor impurities in quantising mag. fields 3—57361
  Sb film, magnetoresist. corrections due to electron localisation *(Russian)* 3—38500
  Si:H, amorphous glow discharge film, optically illuminated, picosecond carrier dynamics obs. 3—33735
  Te, photoinduced complex permittivity at 9 GHz 3—57388
  V_2O_5-TeO_2 glasses, elec. cond. and dielec. const., 0.1 to 100 kHz, 77 to 400K 3—57346
  YIG:Ca film, p-type semicond., elec. cond., mag. field gradient dependence meas. 3—33806
carrier scattering at surfaces *see surface scattering*
carrier scattering by dislocations *see dislocation scattering*
carrier scattering by impurities *see impurity scattering*
carrier scattering by point defects *see point defect scattering*
carrier systems (power lines) *see carrier transmission on power lines*
carrier transmission on power lines
  time dissemination by carrier-current waves 3—25855
carrier traps *see electron traps; hole traps*
CARS *see coherent antiStokes Raman scattering*
cartography
  Central Ranges, Honshu, Japan, Bouguer anomaly map compilation and interpretation 3—44380
  digital cartography system at Defense Mapping agency Aerospace Center, using digital image technology 3—24950
  digital mapping, topographic information processing system 3—4750
  electronic distance measurement, instruments, data anal., digital cartography, mining appls. 3—10798
  geochemistry, regional interpreting, using optimal interpolation, FORTRAN program 3—4977
  geological map digitisation, graphic cell method, FORTRAN program 3—4979
  image processing appls. in cartography and remote sensing 3—24949
  mapping sciences, microcomputer use 3—48460
  Mapsat, automated mapping satellite system description 3—10186
  Mapsat, detectors tracking and description 3—10187
  mountainous regions, multiple contour lines, altitude assignment, computer processing *(Japanese)* 3—48465
  planets photographic atlas (book) 3—38
  polarization imaging and mapping 3—59223
  terrestrial heat flow in Siberia, review of meas. and map 3—4832
  thematic mapping, areal data anal. 3—9821
  USA ecological mapping, use for radioactive waste disposal studies 3—44162
  Zeiss Stereotop modified into analytical stereoplotter 3—10098
cascade showers *see cosmic ray showers and bursts*
Cassegrain antennas *see reflector antennas*
cast iron *see iron alloys*
casting
  alloys, binary, directional solidification with mushy zone, analytical soln. 3—53039
  alloys, cast, partially dispersed with uncoated C microballoons, wear resist. 3—19424
  cermet, cast particulate composites, fabrication expts. in space 3—3998
  heat and mass transfer occurring in casting process 3—50911

casting continued
metals, solidification and melting, US meas. of solid-liq. interface 3−4217
molten alloy electrode, sustained high-current arcs during vacuum consumable arc remelting 3−18182
optical plastics, fabrication techniques, materials and parameters 3−56291
space environment expts., review 3−4026
steel, solidification of semicontinuously cast ingot, computer simulation 3−9054
steel, stainless, type (G)X-5 CrNiMo 16 5, casting and forging, props. and possible appls. *(German)* 3−47873
steel, stainless martensitic, cast, notch toughness at −196 and −253°C 3−34405
Syalon ceramics development, fabrication and engng. applics. 3−29048
Al, grain refining efficiency of PM122 wire inoculant 3−52995
Al-Cu, elastic consts., effect of solute content and heat treatment *(Japanese)* 3−58152
Al-Cu (6-10 wt.%), hypoeutectic, rheocast, microstruct. 3−24220
Al-Cu(Si), cast and extruded, cyclic behaviour, fatigue crack propag. 3−58193
Al-Cu(Si), cast and extruded, cyclic behaviour, electron fractographic study 3−58194
Al-Mg-Zn, cast, struct. changes during ageing 3−9103
α-Al$_2$O$_3$, corundum, cast materials prod. using ethyl silicate binders, thermal shock resist. 3−24192
Fe, cast, nodular, alloyed with Cu, Ni, and Mo, investment cast method *(French)* 3−43800
Fe, white cast, solidification kinetics, mech. vibration effect *(French)* 3−58114
Fe-B-Si, amorphous, casting, max. melt spun thickness, composition effect 3−29027
Fe-TiC magnetoabrasive powder, struct. effect on service life in metal polishing 3−24370
Mg-Li and Mg-Li-Al alloy, anode constitution and fabrication for use in primary batteries 3−29029
Ni-Cr (80, 20 wt.%), cast, melting conditions influence on struct. 3−9055
Si sheet casting using mould releasing agent, solar cell fabrication 3−53505

castings
eutectic alloys, crystn., effect of temp. gradient in casting, computer simulation *(Polish)* 3−4022
steel, austenitic stainless, Cr-Ni-Mo-Ti, shaped castings, intermetallic phases struct. and props. 3−29114
steel, directional solidification *(Russian)* 3−19331
steel, stainless, Cr-Ni, castings, excess phase struct. and comp. 3−29083
superalloy castings, surface grain refinement investigation *(Chinese)* 3−4001
Al, grain refining efficiency of PM122 wire inoculant 3−52995
Al, scatter imaging using X-ray fan beam and pinhole camera 3−9289
Al-Si alloy, chill castings, supersaturation method influence on precip. hardening 3−29093
α-Al$_2$O$_3$, corundum, cast materials prod. using ethyl silicate binders, thermal shock resist. 3−24192
Fe chilled layer hardness, inspection apparatus using higher harmonics 3−58337
Nb and alloys, fabrication, deform. parameters 3−4081
Ti-Al-V, cast, weld repaired, high cycle fatigue 3−4123
Ti-Al-V alloy, heat treatment processes and microstructures, mech. props. 3−24282

cataclysmic binary stars
see also novae
2A 0311−227 (EF Eridani), AM Herculis star, simultaneous IR and optical light curves rel. to accretion model 3−35672
A 0620−00, X-ray nova, dwarf+neutron stars, quiescent state var., visible obs. 3−48952
3A 1148+719, identification with dwarf nova with very long cycle length 3−35743
accretion discs, Roche dimensions evaluation from rot. vels. 3−15959
accretion discs in cataclysmic variables, numerical calcs. 3−40119
accretion discs in close binary systems, models from hydrodynamical calcs. 3−15906
RX Andromedae, dwarf nova, outbursts and supermaximum, comparison with AY Lyrae 3−5300
Z Andromedae, symbiotic star, spectroscopic obs. of new outburst, (August to October 1982) 3−10361
Z Andromedae, symbiotic star, visual magnitude estimates (1982 June 15 to November 3) 3−15928
Z Andromedae, symbiotic star, visual magnitude fluctuations, (1974 to 1982) 3−20393
Z Andromedae, UV spectra variability and JHKL obs. in 1982 November 3−20388
VY Aquarii, additional historical outbursts (1929 to 1942) 3−59356
VY Aquarii, discovery of new outburst in (1958) 3−44751
R Aquarii, IUE UV spectra of jet 3−20385
VY Aquarii, outburst in 1973, photographic magnitudes and upper limits 3−35624
R Aquarii, symbiotic star, JHKL photometry rel. to IR variability and nature of components 3−59365
V603 Aquilae (Nova Aquilae 1918), obs. of periodic polarisation vars. 3−10352
BF Arae, possible SU Ursae Majoris type dwarf nova, photometric and spectroscopic obs. during superoutburst 3−59352
TT Arietis, cone accretion in nova-like binary, radial vels. *(Russian)* 3−48937
TT Arietis, nova-like variable, short-term brightness vars. obs. during low state (1983 January 7) 3−44760
TT Arietis, nova-like variable, spectroscopic and photometric obs., (October and November 1982) 3−20392
TT Arietis, UV obs. by IUE rel. to mag. rotator hypothesis 3−20395
KR Aurigae, visual magnitude estimates during new brightening (1982 October 11 to 1983 February 11) 3−44759
AC Cancri, eclipsing cataclysmic variable, secondary mass/spectral type, visible obs. 3−54396
AM Canum Venaticorum, possible outburst 3−15931
QU Carinae, nova-like variable, orbital parameters and spectra 3−10331
TX Carum Venaticorum, Z And. star, radiation var., VBVRIJHK obs. *(Russian)* 3−44767
cataclysmic variables, outbursts decay time rel. to binary period 3−30360
BV Centauri, dwarf nova, spectroscopic study and model 3−20377
TV Columbae (2A 0526-328), optical and UV flare obs., (1982 November 22) 3−25454

cataclysmic binary stars continued
CPD−48°1577, new cataclysmic variable, IUE obs. of UV spectrum 3−20394
CPD−48°1577, new cataclysmic variable, photometric and spectroscopic obs. 3−5313
CW 1103+254, new cataclysmic binary at high galactic latit., spectroscopic obs. 3−10366
CW 1 1103+254, newly identified AM Herculis star, UBV photometry 3−5358
N1016 Cygni, bipolar nebula detect., mass flows and visible obs. 3−54380
BF Cygni, brightness fluctuations of symbiotic star 3−20401
EM Cygni, dwarf nova, rapid brightness oscills. obs. 3−10365
CI Cygni, symbiotic eclipsing binary, three colour photoelectric obs. during 1980 eclipse 3−59339
CH Cygni, symbiotic star, circumstellar spectra in 1981, visible obs. 3−25442
CI Cygni, symbiotic star, giant absolute magnitude, mass transfer and wind, spectral obs. 3−30381
CI Cygni, symbiotic star, giant viscous accretion discs evolution rel. to light vars. 3−5281
CH Cygni, symbiotic star, high-dispersion spectroscopic obs., 1981 to 1982, rel. to transformation into shell star 3−59370
CI Cygni, symbiotic star, optical emission lines vars. during 1980 eclipse 3−25467
CH Cygni, symbiotic star, radial vel. during 1977 outburst (to 1981) 3−10341
CH Cygni, symbiotic star, review of props. from optical and UV obs. 3−25466
CH Cygni, symbiotic star, UBV obs. 3−25439
V1016 Cygni, symbiotic star as very young planetary nebula, line profile anal. 3−30382
CH Cygni, symbiotic star binary model and stable/unstable accretion disc, photometry anal. 3−54379
V1016 Cygni, UBVRJHKLMN photometry and spectrophotometry 3−40137
V1016 Cygni, UV shell formation obs. from IUE spectra 3−35613
CH Cygni, wide-band photometry (1978-82) *(Russian)* 3−48935
HR Delphini (Nova 1967), accretion disc nature and primary struct. 3−54394
HR Delphini (Nova 1967), UV spectrum obs. at different orbital phases 3−15922
disc models, inclusion of centre convection, mass, luminosities and matter fluxes 3−40135
AG Draconis, brightness fluctuations of symbiotic star 3−20401
AG Draconis, IUE obs. during active phase of high-vel. symbiotic star 3−59345
AG Draconis symbiotic star, X-ray detect. 3−25465
dwarf novae, localised thermonuclear runaways and volcanoes on degenerate dwarf stars 3−10306
dwarf novae during active phases, UV obs. 3−5307
dwarf novae outburst models and evolutionary status *(German)* 3−35635
E1405−451, optical identification with 101.5 minute binary with extremely rapid quasi-periodic variability 3−35656
E 1405-451, AM Her star, continuum flux, interstellar extinction and wind existence, UV obs. 3−48954
energy distributions, contrib. of accretion disc and secondary, spectrophotometric anal. 3−30380
XZ Eridani, U Geminorum star, magnitude estimate from non-detect. at minimum light 3−54385
eruptive variables, statistical model of light curve bursts 3−59346
evolution, use of red dwarf models 3−25443
U Geminorum, dwarf nova, orbit period var. from eclipse timings 3−54404
U Geminorum, dwarf nova, UV light curve during quiescence 3−40148
U Geminorum, dwarf nova, UV light curves obs. 3−10332
globular cluster X-ray source neutron stars and white dwarfs 3−44810
gravitational wave emission, orbital effects 3−15962
H2215−086, DQ Her star, rot. and orbital periods anal., visible obs. 3−35615
H 0139-68, AM Her-like X-ray source and optical counterpart 3−35673
YY and V443 Herculis, brightness fluctuations of symbiotic star 3−20401
AH Herculis, system parameter constraints on dwarf nova 3−40139
AM Herculis (3U 1809+50), long-term light curve from photographic and visual photometry 3−20430
AM Herculis (3U 1809+50), visual magnitude estimates, (1982 August 25 to September 11) 3−10398
AM Herculis (3U 1809+50), visual magnitude estimates (1982 October 27 to November 11) 3−30428
AM Herculis stars, magnetic fields 3−30373
high energy astrophysics, contribs. of binary star research 3−48956
RU Horologii, U Geminorum star, magnitude estimate from non-detect. at minimum light 3−54385
EX Hydrae, eclipsing dwarf nova, orbit and light curve 67 min modulation 3−48925
EX Hydrae, soft X-ray emission variability obs. by Einstein Observatory 3−40151
VW Hydri, dwarf nova, photometric obs. rel. to outburst models 3−44745
VW Hydri, dwarf nova, UV light curve during quiescence 3−40148
VW Hydri, dwarf nova, UV light curves obs. 3−10332
Kuwano's peculiar object, red giant plus low luminosity star, nature 3−44769
AY Lyrae, dwarf nova, outbursts and supermaximum, comparison with RX Andromedae 3−5300
V426 Ophiuchi, colour index and variability, UVB obs. *(Russian)* 3−44766
RS Ophiuchi, recurrent nova, visual magnitude estimates (1982 August 11 and 15) 3−15927
CN Orionis, photometric obs. of dwarf nova 3−20382
AR Pavonis, eclipsing symbiotic star, photometric and spectroscopic props. 3−25468
RU Pegasi, U Gem star with faint companion, obs. summary (1970 to 1979) 3−54391
AX Persei, brightness fluctuations of symbiotic star 3−20401
PG 1550+191, AM Herculis-type magnetic binary system, photographic photometric obs. (August 1972 to May 1981) 3−44792
TY Piscium, dwarf nova, visual magnitude estimates (1982 October 27 to November 9) 3−20391
TY Piscium, SU Ursae Majoris star, new superoutburst (1983 January 10 to 11) 3−44756

cataclysmic binary stars continued
- TY Piscium, SU Ursae Majoris star, recurrence periods of normal outbursts and superoutbursts rel. to recent obs. 3−54390
- TY Piscium, suspected SU Ursae Majoris star, supermaximum, visual magnitude estimates (1982 October 24 to 27) 3−10362
- PS 74, new SU Ursae Majoris star with high orbital inclination, discovery 3−15921
- VV Puppis, AM Herculis star, ellipsoidal light curve obs. at 1.2 μm 3−15954
- RX Puppis, symbiotic star, JHKL photometry rel. to IR variability and nature of components 3−59366
- RX Puppis, symbiotic stars, IUE obs. of UV spectrum 3−25469
- T Pyxidis, recurrent nova, extended shell anal. 3−5299
- radio survey of six stars at 6 cm with VLA 3−54406
- HM Sagittae, symbiotic star, spectrum and continuous emission and binary star model 3−25470
- HM Sagittae, UBVRJHKLMN photometry and spectrophotometry 3−40137
- WY Sagittae (Nova 1783), Weaver's candidate and deep eclipses 3−35602
- VZ Sculptoris, nova-like variable, deep low state, photometric obs., October and November (1982) 3−30388
- symbiotic stars, anal. of IR variability and spectra rel. to nature of components 3−59367
- symbiotic stars, conference, Observatoire de Haute Provence, France (1981 August 26 to 28) 3−20579
- symbiotic stars, evolution of viscous accretion discs rel. to brightness vars. 3−5281
- symbiotic stars, evolutionary status 3−25473
- symbiotic stars, fifty years of research 3−25457
- symbiotic stars, flux calibrated spectra and Hα line profiles for twelve objects 3−25462
- symbiotic stars, implications of radio obs. 3−25458
- symbiotic stars, IR photometry and spectroscopy 3−25459
- symbiotic stars, IR props. of Mira-type components from JHKL photometry 3−15929
- symbiotic stars, models and evolutionary status 3−25474
- symbiotic stars, near IR spectra 3−25460
- symbiotic stars, observational aspects of evolution 3−40194
- symbiotic stars, props. from studies in optical region 3−25461
- symbiotic stars, search for mag. fields 3−10334
- symbiotic stars, single star and binary star models 3−25472
- symbiotic stars, UV line emission spectra 3−25463
- symbiotic stars, UV props. from IUE obs. 3−25464
- symbiotic stars as binary stars, models and evolutionary stages 3−25471
- symbiotic stars in SMC, identification and nature, spectral obs. 3−59470
- RR Telescopii, obs. of IR variability rel. to nature of symbiotic stars 3−48931
- RR Telescopii, slow nova, IUE spectra and other new obs. 3−48930
- UBV photometry of cataclysmic variables, results 3−59353
- ultrashort period stars, orbital period determ. *(German)* 3−35635
- unusual cataclysmic variable stars in Grus, photometric and spectroscopic obs. 3−48933
- CH Ursae Majoris, cataclysmic variable, X-ray and optical meas. 3−5316
- SU Ursae Majoris, dwarf nova, 4750 MHz emission detection 3−54392
- SU Ursae Majoris, dwarf nova, possible occurrence of classical nova outburst 3−40152
- SU Ursae Majoris, dwarf nova, visual magnitude estimates, (1983 March 1 to 10) 3−59362
- SU Ursae Majoris, dwarf nova, visual magnitude estimates during superoutburst (1983 February 21 to 28) 3−48928
- BZ Ursae Majoris, missing link between dwarf novae of U Geminorum and WZ Sagittae types, dates of maxima and cycle length estimate 3−35621
- SU Ursae Majoris stars, outburst models *(German)* 3−35635
- UV and X-ray radiation field, accreted matter boundary layer 3−20386
- PU Vulpeculae, nova-like variable, spectroscopic and photometric obs., (1981 and 1982) 3−59355
- PU Vulpeculae, novalike object, photoelectric UBV obs. in (1982) 3−35625
- PU Vulpeculae, photometry and polarimetry of nova-like binary 3−20398
- PU Vulpeculae, spectral obs. of nova-like binary 3−20399
- PU Vulpeculae, UBV and spectroscopic obs. (October and November 1982) 3−44754
- PU Vulpeculae (Nova 1979), spectroscopic obs. (April 1979 to December 1981) 3−10370
- white dwarf components, mass distrib. 3−40133
- X-ray pulsar with 67 millisecond period in Equuleus, discovery, period and X-ray light curve 3−30526

cataloguing
- open star cluster data cataloguing 3−5160
- UK 1.2 m Schmidt Telescope plate catalogue, problems 3−5152

catalysis
- *see also catalysts; reaction kinetics*
- α-acetylenic tertiary alcohols, acid-catalysed rearrangements, energy hypersurface, STOC calc. 3−39354
- alkaline solutions, Pt catalyst corrosion 3−24401
- atmospheres of Earth and Venus, role of catalytic processes 3−15597
- catalytic hydrogenisation project using Kentucky no. 11 coal process development unit run no. 9 3−58471
- compensation effect in thermally activated processes 3−9305
- complex, kinetic equation, structured form 3−48054
- composite system containing ferromagnetic additives, mag. field influence on burning rate 3−53399
- heterogeneous catalysis, thin film applications, review 3−53446
- heterogeneous catalysis and catalytic science 3−39406
- heterogeneous catalysis and chemisorption on single cryst. 3−38235
- liquid metal droplet dispersions, metastable phase synthesis, undercooling behaviour obs. 3−13421
- metallic particles, surface site distrib. rel. to catalytic activity 3−13689
- multiplicty change, $\Delta S=2$, point-group selection rules, appl. to catalysis and organo-transition metal reaction 3−50296
- phenol alkylation by olefins, Al-containing catalysts electronic struct. and activity 3−48067
- polyacetylene, morphology, polymerisation catalyst influence *(German)* 3−42538
- silicon ethoxide, hydrolysis and gelling process, rel. to glass prep. 3−34654
- singularly perturbed semilinear Robin problems 3−9307

catalysis continued
- solar energy conversion to chemical by photoassisted processes, NH_3 production over TiO_2 catalysts 3−14959
- solar energy conversion to chemical energy by photoassisted processes, NH_3 production over TiO_2 catalysts, influence of iron content 3−14960
- substilisation, protonation, environmental effects, MO anal. 3−14842
- surface catalytic reactions, chemisorption and bond cleavage, new approaches using ESCA 3−4317
- van der Waals molecules: quantum chemistry, physical properties, and reactivity 3−39351
- viologen-Pt systems for H_2 generation 3−24643
- water, liquid, photocatalytic decomposition on NiO-$SrTiO_3$ catalyst 3−19532
- μ catalysis of nuclear fusion in D-T mixtures 3−31823
- C solar selective absorber, catalytically deposited 3−19602
- CO, catalytic oxidation over ZnO, ^{13}C and ^{14}C kinetic isotope effect 3−58448
- FeTi, activation for H_2 storage 3−48176
- H_2 production by catalysis of SO_2 3−48187
- H_2O photocatalytic dissoc. for H prod. by p/n Fe_2O_3 polycryst. assembly 3−48175
- H_2O+H_2, D isotope exchange on Al_2O_3-supported Pt catalyst bed 3−46088
- $La_{1-x}Me_xMnO_3$, Me=K, Na, reduction products, car engine exhaust gas control appl. *(Italian)* 3−53443
- NiO, Al_2O_3 supported, solid state prop. study, catalytic activity 3−29333
- O_3 production in corona, influence of nature of electrode material 3−9358
- Pd-Ir-P amorphous alloys, anodic characts. in hot NaCl soln. 3−53277
- RuO_2 redox catalysis of aq. $HBrO_3$ soln. 3−48085
- ZnO, binding and decomp. of organic dye mols. 3−23184

catalysts
- *see also catalysis*
- adsorption at gas-solid and liq., solid interfaces, symposium, Aix-en-Provence, France (Sept. 1981) 3−25692
- alkaline solutions, Pt catalyst corrosion 3−24401
- alkoxyaluminium catalysts, struct. and activity in alkylation of phenols 3−48067
- catalytic activity stability of Pt impregnated porous Teflon for water detritiation 3−45710
- dynamic recoil mixing, production, material modification techniques 3−43700
- ferromagnetic additives in composite fuel system, mag. field influence on burning rate 3−53399
- gas phase reactions in flow systems, photoelectron spectra *(German)* 3−9310
- redox flow cell energy storage device catalytic electrodes 3−9497
- solar energy conversion to chemical by photoassisted processes, NH_3 production over TiO_2 catalysts 3−14959
- solar energy conversion to chemical energy by photoassisted processes, NH_3 production over TiO_2 catalysts, influence of iron content 3−14960
- sulphide catalysts, ESR study 3−57766
- surface anal., fast atom bombard. mass spectrometry 3−8926
- surface analysis, using high-pressure-low-pressure apparatus 3−29334
- thermoelectrolysis, for H_2 prod., using various catalysis 3−48188
- thin film, anomalous behaviour close to mag. phase transition, adsorpt. and desorpt. rates 3−19534
- Voronoi cell model for interpreting small angle X-ray scatt. 3−37733
- AgI, ice formation nucleation obs., automatic apparatus appl. 3−26001
- $AlCl_3$, catalyst, struct. and activity in alkylation of phenols 3−48067
- Al_2Cl_6, catalyst, struct. and activity in alkylation of phenols 3−48067
- $AlCl(OH)_2$, catalyst, struct. and activity in alkylation of phenols 3−48067
- ClO_x in atmospheres of Earth and Venus, role in catalytic processes 3−15597
- α-CrO_3 catalysts, heterogeneity of labile O, desorption study *(French)* 3−33558
- $CuAl_2O_4$, Li_2O impregnated, solid soln. form., X-ray and elec. cond. studies 3−47116
- α-Fe_2O_3, highly dispersed, in SiO_2 gel pores, interaction obs. using Mossbauer effect *(Russian)* 3−48093
- H_2 production by hybrid thermoelectrolysis using various catalysts 3−48188
- NH_3, turbulent flow in heated circular tubes in presence of catalytic dissoc. at walls 3−12636
- NiO-Al_2O_3 catalysts, magneto-chemistry 3−38598
- Pb-acid cells maintenance-free using catalytic gas recombination device *(German)* 3−24572
- Pd particles, Al_2O_3 supported, chemisorbed acetylene, IETS study 3−42914
- Pt catalyst, NMR spin relaxation 3−3578
- Pt catalyst, spin echo NMR, line shapes 3−3591
- Pt, catalytic oxidation of CO, transient study 3−4318
- Pt electrocatalyst, hydrous oxide growth, improved activation technique 3−24528
- Pt supported on Al_2O_3 and TiO_2, ESR signals, oxidation and reduction effects 3−53445
- SnO_2-Pd, for sealed 100 Hz CO_2 TEA laser 3−32383
- ZnO, catalytic oxidation of CO, ^{13}C and ^{14}C kinetic isotope effect 3−58448

cataphoresis *see electrophoresis*

catastrophe theory
- conic umbilic catastrophes, singular coord. sections 3−62
- diffraction, asymptotics and catastrophes 3−17435
- Huckel parameter, qualitative interpretation using catastrophe theory *(German)* 3−6544
- nonlinear and linear systems, identification using externally applied random force 3−49260
- self-similar processes and related ultraviolet and infrared catastrophes 3−16245
- shell, toroidal, stability and catastrophes 3−22352

cathode-ray oscilloscopes
- *see also oscillographs*
- developments, LSI appls., digital techniques, facilities 3−36035
- digital *(French)* 3−30846
- digital memory oscilloscopes, characts., market survey *(French)* 3−5779
- high-frequency digital CROs, accuracy considerations 3−5808
- Hitachi V-1050 100 MHz oscilloscope, facilities, operation, expt. results *(French)* 3−5784
- Memoscope add-on storage unit *(German)* 3−20838
- microchannel plate CRT increases gain, aid to fault finding 3−35979
- multi-trace CRO, instantaneous freq. meter for neuronal activity 3−44369

cathode-ray oscilloscopes continued
  multifunctional CRO from Iwatsu Electric, instrum. description and specifications 3—35981
  selection criteria for particular appls. 3—35980
  sound spectrograph, conversion system for oscilloscope 3—1883
  Tektronix 503 oscilloscope, power transformer repair 3—49342
  theory and application, book 3—35784
  time base, Y-amplifier, frequency response calibration 3—35975
cathode-ray tube displays
  see also cathode-ray oscilloscopes
  ergo-ophthalmology of VDUs, visual strain and blue light lesion *(Italian)* 3—4495
  stereo display system for binocular depth perception meas. *(Japanese)* 3—19860
cathode-ray tube screens *see cathode-ray tubes; fluorescent screens*
cathode-ray tubes
  see also image convertors; image intensifiers; image storage tubes; television camera tubes
  safety parameter display system design 3—55216
  X-ray emission standard for video display terminals, operator organ doses estimation 3—39720
  ZnS phosphors with plate microcrystals, prep. and characts. *(Japanese)* 3—47715
cathode rays
  No entries
cathodes
  see also electron emission; oxide coated cathodes; photocathodes; thermionic cathodes
  arc discharge, cathode region erosion processes 3—22738
  arc erosion of cathodes containing inclusions of emission-active phase 3—19457
  current distribution measurements on the cathode of a transient plasma column 3—2294
  electron gun, point cathode, gun geom. depend. of brightness characts. 3—10948
  electron microscope field emission gun, beam current stabilisation 3—10945
  glow discharge, high voltage stationary, cathode visualisation 3—13002
  hollow cathode, cooled, light source for spectra excitation of monolithic dielectrics 3—53469
  hollow cathode lamp light sources for spectrochem. analysis, emission stability for pulsed operation 3—53470
  microwave emission, long-term, using a relativistic electron beam prod. by explosive emission cathode 3—7761
  nanosecond spatial discharge, finite energy parameters and cathode spot form. by explosive emission *(Russian)* 3—33003
  plasma cathode layers near Cs diode electrodes 3—51430
  vacuum arc, cathode spot, transverse forces and motions 3—18174
  vacuum arcs, cathode erosion rate in transverse mag. field 3—18150
  vacuum arcs, vel. and erosion in mag. field 3—18151
  vacuum discharge, cathode fast processes 3—18168
  vacuum discharge, cathode processes, numerical simulation 3—18178
  vacuum gap breakdown, anode and cathode material combination effect 3—18166
  $AgBi(CrO_4)_2$ and $Bi_2O(CrO_4)_2$ cathodic materials, electrochemical behaviour in Li batteries *(French)* 3—24512
  Al cathode arc spot movement, random walk anal., crater form., erosion rate determ. 3—27779
  C fibre micropoint cathodes, field electron emission, energy spectrum meas. 3—52903
  C field-emission cathodes, stability in sealed instruments 3—28970
  Cd cathode arc spot movement, random walk anal., crater form., erosion rate determ. 3—27779
  Cu cathode arc spot movement, random walk anal., crater form., erosion rate determ. 3—27779
  Cu vacuum arcs, high-current, time resolved charact. of erosion products 3—27793
  p-GaP photoelectrode, interfacial chemistry 3—4292
  Li_xCoO_2 $(0< x\leq 1)$: a new cathode material for batteries of high energy density 3—14937
  MnO_2 rechargeable batteries, cathodic material production reactions *(Polish)* 3—39461
  Ni-Cd batteries with sintered plates, production and characts. *(Polish)* 3—39459
  W-Sc cathodes, field emission stability, effect of gas adsorption 3—52905
cathodes, electrochemical *see electrochemical electrodes*
cathodochromism
  $Na_2Al_6Si_6$, $O_{24}Cl_2$, sodalites, non-stoichiometric, ionic cond. and dielectric losses 250-450K, 0.7-10 kHz *(Russian)* 3—57124
  $Na_8Al_6Si_6O_{24}Cl_2$, sodalite, polycryst., optical and cathodochromic props. *(Russian)* 3—57870
  $Na_3Al_3Si_3O_{12}(NaCl)_x$, monolithic polycryst. sodalites, cathochromic and photochromic props. meas. 3—23895
cathodoluminescence
  diamond:Si, cathodoluminescence, annealing temp. depend. 3—8891
  diamond, synthetic, luminescence study, impurity states 3—47719
  ice purified, UV and visible emissions, pulse radiolytic studies 3—14359
  ionic crystals, short wave luminesc., excitation by nanosecond electron beam probe *(Russian)* 3—57979
  metals 3—24028
  optical spectrometer for cathodoluminescence studies in scanning electron microscopy 3—408
  phosphors, cathode ray luminesc. efficiency improvement using V_2O_3 additive 3—47717
  quartz, cathodolum. colours, causes 3—14361
  semiconductors, cathodoluminescence excitation using EM-5 electron microscope 3—19206
  thiogallates, Er doped, photolum. and cathodolum. props. 3—3780
  time-resolved cathodoluminescence in scanning electron microscopy 3—52857
  Ag spheroids, radiative decay of surface plasmons 3 -24027
  $AgGaS_2$, single cryst., edge emission, cathodolum. study 3—24026
  $Al_{0.5}Ga_{0.5}As$-$In_xGa_{1-x}As$ heterostructs. lattice mismatch effects on radiative recombination 3—38926
  $Al_xGa_{1-x}N$ epitaxial film, photoluminescence and cathodoluminescence 3—28904
  $Al_xGa_{1-x}N$ MBE films, struct., elec. and optical props 3—8355
  AlN epitaxial film, cathodoluminescence after irrad. with fast electrons 3—14360
cathodoluminescence continued
  $Ca_{1-x}Sr_xS$:Ce and CaS:Ce phosphors, preparation and cathodoluminesc. 3—52855
  $Ca_{1-x}Sr_xS$:Eu and CaS:Eu redo phosphors, prep. and cathodluminesc. 3—38925
  $Cd_{1-x}Hg_xCr_2Se_4$ solid soln., cathodolum., temp. depend. 3—3829
  CdTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3—33441
  CdTe:Cu(Li), impurity distrib., spectrally resolved cathodoluminesc. in SEM 3—43636
  CdTe:In, solution-grown, cathodoluminesc., effect of Cd-vapour and Te-vapour heat treatments 3—3826
  CdTe:In(Cl), ion implanted, heat treated, defect reactions, cathodolum. and pulse laser annealing studies 3—56932
  CsBr, excitons, luminesc., self-localisation, and decay to defects 3—38875
  CsI(Na) scintillator, cathodoluminesc. and thermoluminesc. meas. *(Russian)* 3—3828
  Cu_xS-CdS solar cells, assessment using cathodoluminesc. 3—58527
  GaAlAs DH laser, long-lived, Cu identification by SEM, cathodoluminesc., EBIC and electron probe anal. 3—50661
  $Ga_{1-x}Al_xAs$-GaAs quantum well wires, MBE growth and cathodoluminesc. props. 3—3825
  $Ga_{1-x}Al_xP$/GaP p-n structures, cathodoluminescence from p and n regions 3—8890
  GaAs, dislocation glide, recombination enhanced, cathodoluminesc. microscopy study 3—42609
  GaAs LEC crystal, undoped, semi-insulation mech., role of dislocations 3—22898
  n-GaAs, nonradiative recomb., electron probe investigation 3—18773
  GaAs p^+-p^0-n^0-n^+ structs., minority carrier diffusion length, electron-probe-induced-current meas. 3—18722
  GaAs, semi-insulating substrate, spatially resolved cathodolum. study 3—8888
  GaAs:Cr, semi-insulating, thermal conversion, cathodoluminesc., photoluminesc. and SIMS study 3—43635
  GaAs:S, Te, dislocation-point defect-dopant interaction, effects on recombination processes 3—37951
  GaAs:Si, 1.4 eV Si-related emission, luminesc. characts. 3—43613
  GaAs:Si^+, ion implanted, TEM damage studies and elec. profile meas. 3—47006
  $GaAs_{1-x}P_x$:N, Zn epitaxial layers, cathodoluminesc. doping level influence 3—8889
  GaN epitaxial film, cathodoluminescence after irrad. with fast electrons 3—14360
  GaN epitaxial films, VPE growth on sapphire, rel. to nonuniformity of cathodoluminesc. emission 3—57981
  GaN films, reactive MBE growth on AlN-sapphire substrates and elec. and luminescent props. 3—47771
  GaP-based epitaxial structs., isoelectronic N impurities spectrosc. obs. 3—3820
  $In_{1-x}Ga_xP_{1-z}As_z$ solid solution, intrinsic exciton luminescence 3—47720
  InP-InGaAsP LEDs, luminescence study of dark spot defects 3—3824
  InP-InGaAsP multilayer struct., damage-free grooving method 3—4159
  InP-InGaAsP system, Au based ohmic contacts, metallurgical behaviour 3—23481
  KBr(I), electron irrad., O_2^- ion form., luminesc. study 3—19207
  KCl:I, electron irrad., impurity exciton prod., optical absorpt. and luminesc. studies 3—43576
  MgO deformed crystals, cathodoluminesc. and optical absorpt. meas. 3—24024
  MgO single crystals, cathodoluminescence at frictional damage 3—24025
  N_2, excitation by an electron beam, charact. features 3—36867
  $Pb_{1-x}Sn_xTe$ expitaxial films with growth plane comp. gradient, cathodoluminesc. 3—28913
  Si, electron beam recrystallised, cathodoluminescence and minority carrier lifetime 3—47718
  SnO_2:Eu powder phosphor, synthesis, physicochemical props., luminesc. characts., low energy electron excitation *(Japanese)* 3—57980
  Xe crystals, polariton luminesc. spectra 3—38924
  Xe, liquid, high press., fluorescence excitation meas. for electron, α-particle and fission fragment irrad. 3—24023
  YAG:Fe, coloration on reduction, absorpt. spectra and luminesc. quenching studies 3—47674
  $YAlO_3$:Fe, coloration on oxidation, absorpt. spectra and luminesc. quenching studies 3—47674
  $Y_2W_3O_{12}$:Eu^{3+} red phosphor of high lumen equivalent, cathodoluminesc. meas. 3—8887
  ZnO, microstructure, plastic deform., microhardness anisotropy, SEM study 3—37992
  ZnS:Ag, single cryst., photolum. and cathodolum. studies 3—19193
  ZnS:Tm^{3+}, energy levels and cryst. field parameters, fluorescence and cathodoluminesc. study 3—43066
  ZnSe, epitaxial films, use in electron-beam pumped lasers 3—56206
  ZnSe, MO CVD grown, optoelectronic props. of donors 3—43618
  n-ZnSe, single cryst., recomb. radiation with electron excitation 3—3827
  $ZnSiO_4$:Mn(As) phosphors with improved cathodoluminescence performance, synthesis technique 3—24197
  ZnTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3—33441
  ZnTe:Cl(Br)(Cu)(Ag), ion implanted, donor related edge luminescence 3—52856
cathodophosphorescence *see cathodoluminescence*
cathodothermoluminescence *see cathodoluminescence*
catholytes *see electrolytes*
Cauer filters *see active filters*
causality *see physics fundamentals*
causticity *see pH*
cavitation
  see also bubbles; vortices
  acoustic cavitation, review 3—42277
  acoustic microstreaming by pulsed radiators 3—46368
  acoustic radiator, cavitation zone, wave field struct. characts. 3—12402
  air-water horizontal flow, void distribution, effect of flow obstruction 3—51202
  air-water interface, bubbles breaking waves and jets at free surface 3—51212
  axisymmetric, problems rel. to shape pulsations, drag of cavity forming body and surface tension 3—2095
  bubble collapse, shock generation study 3—51175
  bubble growth threshold, rectified diffusion, generalized eqns. 3—17960

cavitation continued
- bubble response to tension wave 3—56586
- collapse of a one-dimensional cavity 3—42276
- constrained flow, nonlinear anal. around arbitrarily shaped bluff bodies 3—32773
- flow cavitation number limitation of water jet pumps 3—51180
- inducers, dynamic transfer functions scale effects 3—51176
- light-scattering cavitation nuclei classifier 3—51260
- liquid, optical breakdown, excited bubble dynamics 3—12725
- liquid flow, vel. field meas., cavitation flow visualisation 3—27617
- liquid quality control instrument 3—51178
- liquids, transient cavities generation by microsecond US pulses, theory 3—32530
- Navier Stokes equation, vorticity-velocity form, stagnation point and driven cavity flow calcs. 3—17912
- Navier-Stokes eqns. in three dimensions, wall driven cavity flow penalty finite element anal. 3—17911
- noise monitoring and correl. to erosion capability 3—51177
- nonlinear elasticity 3—1956
- polyurethane protective surface material resist. to cavitation erosion 3—19438
- rotational structures, 2D and 3D, in cavitating wake *(French)* 3—32741
- separation from a body, viscosity and surface tension effects 3—22497
- shock tube, vertical, bulk cavitation, theory and expt. 3—17954
- sonoluminescence obs. using image intensifiers 3—19216
- spark generated bubble collapse near wall, impact press. generation 3—46608
- steel, low alloy, growth of creep cavities 3—14664
- steel, stainless, cavitation erosion resistance 3—19426
- steel, stainless and C, cavitation damage, mag. field effects, tap water expts. 3—53260
- steel, ultrasonic effects on Mn phosphating, microstruct. and wear resist. 3—58314
- US, μs pulses, pot. for transient cavitation, biological appls. 3—29629
- US wave generation by axisymmetrical transducer under cavitation conditions 3—27349
- water, dissolved gas content and the static breaking tension 3—2096
- Al alloy, fine grained, type 7475, microstruct. obs. of superplastic cavitation 3—14663
- Al alloy 7475, fine grained, superplastic deform. effect on service props. 3—58182
- Cu-Zn (20 wt.%), creep cavitation meas., two techniques 3—39198
- Ti, B implanted, cavitation erosion behaviour 3—58257
- Ti-Al-V B implanted, cavitation erosion behaviour 3—58257

cavities (solid) *see voids (solid)*

cavity resonators
- *see also acoustic resonators; laser cavity resonators*
- acoustic resonance, flow-excited, in covered cavities 3—37469
- bunched beam phase detector using spiral loaded resonator 3—26536
- cylindrical resonators, vector field props. of modes 3—7024
- dielectric resonators, influence of space charge on resonance characts., investigation using optical microscopy 3—5851
- EDIP software for automatic soln. of problems *(Russian)* 3—17407
- EM radiation exchange and oscills. in cavities sharing a partial reflector 3—56123
- Fabry-Perot bistable cavity with gaussian input beam, oscillation and chaos 3—17562
- Fabry-Perot resonator with NH_4 gas, critical slowing-down 3—17561
- HVDC voltage, absolute determ. by frequency meas., electron-optical system 3—54748
- integrated optical ring resonators made by Ag ion exchange in glass 3—56347
- mesh Fabry-Perot resonant cavity for refr. index determ. in near MM range 3—25928
- microwave cavity lens primary (second-order) aberration calc., computer-aided methods 3—26928
- microwave Hall effects in low-mobility materials, biological appl. 3—29794
- Milan superconducting cyclotron, RF cavity electronic controls, conceptual design, report 3—11566
- multimirror, four-terminal network theory appl. 3—41955
- multistability at microwave freqs., Fabry-Perot resonator using ammonia 3—41908
- Munich MP tandem heavy ion postaccelerator, three-harmonics double-drift buncher 3—41345
- nonlinear ring resonators using GaAs with photon energy below band gap, transient response 3—17558
- optical cavity, bistability, chaotic behaviour 3—37110
- optical cavity, tristability and oscillating instabilities in a dispersive two-beam system 3—22151
- optical encircling coupler, coherent waves in ring resonator *(French)* 3—41979
- optical guided-wave intrinsic bistable devices, theory and appls. 3—17557
- passive resonator for electron beam accel. in travelling-wave linear accelerator 3—11555
- quasi-optical electron cyclotron maser, nonlinear anal. 3—17472
- resonant optical cavities, refl. props. and appls. 3—12191
- second-sound attenuation determ., meas. superfluid transition in ^{4}He 3—33531
- semiconductors specific resistivity meas., microwave cavity method, spatial resolution 3—20876
- split ring resonator design, for ESR 1-4 GHz spectroscopy 3—25909
- unstable cavity, adaptive intracavity compensation of quadratic phase aberrations 3—12272
- H_2 masers with small resonator 3—22021
- Nb acceleration cavities for LEP at CERN 3—45732
- Nb RF supercond. reentrant cavities, reson. discharge study *(French)* 3—26518

CCCS *see active networks*

CCD *see charge-coupled devices*

c.c.d. circuits *see charge-coupled device circuits*

CCTV *see closed circuit television*

CCVS *see active networks*

CDW *see charge density waves*

celestial mechanics
- *see also Earth orbit; N-body problems; stellar motion*
- 1963-27A, orbit analysis giving upper atm. density near 400 km 3—5005
- 1965-11D spin drag data used for upper atm. density determ. 3—44600

celestial mechanics continued
- 1974-70A, inclination used to determine lumped coeffs., near 15th order orbital reson. 3—10190
- 1974-70A, orbital anal. and drag coeff. 3—5087
- adiabatic invariant use 3—20217
- ANS satellite, mean daily motion anal. rel. to upper atmosphere density 3—59136
- area preserving polynomial mapping, stability limits, celestial mechanics appl. 3—25302
- artificial satellite, main problem, Asknes' intermediary 3—25274
- artificial satellite orbital dynamics and obs. strategies for agriculture 3—10188
- artificial satellite orbital motion, effect of oblate rotating atmosphere with symm. diurnal effect 3—5085
- artificial satellite orbital perturbations due to solar radiation pressure 3—44636
- artificial satellites, air drag perturbation of satellite in orbit with small eccentricity *(Chinese)* 3—39986
- artificial satellites, parametric excitation of attitude motion of high altitude gravity gradient satellite 3—48792
- artificial satellites, perturbations in nodal period caused by terrestrial IR radiation press. 3—35403
- artificial satellites orbit intersection points with planet conical shadow 3—20199
- asteroid inclinations, mean and median, variation with increase in sample 3—10247
- asteroid orbit resonances use for determining masses 3—25369
- asteroid orbits, effect of planetary perturbations and minor planets in cometary like orbits *(Polish)* 3—48846
- asteroid orbits, stabilising and destabilising factors 3—20213
- asteroids, Hilda-type orbits, characteristic parameters 3—10246
- asteroids, orbital eccentricities and inclinations near Jovian resons. rel. to nature of Kirkwood gaps 3—35500
- δ Aurigid meteor stream hourly rate, orbital elements and parent comet 3—35547
- binary stars, eqns. of motion for spin and orbital ang. momenta with conservative mass transfer 3—54429
- Blagg's formula for relative distances in planetary satellite and ring systems 3—10240
- Brown's lunar theory derivatives determ. 3—25295
- Cantor sets integrability for Hamiltonian systems 3—25289
- 2060 Chiron, orbital perturbations rel. to masses of Saturn and Uranus *(German)* 3—54275
- P/Comet Ashbrook-Jackson, orbital investigation, mechanical energy and planetary perturbations 3—35536
- P/Comet Churyumov-Gerasimenko (1982f), improved orbital elements and non-gravitational parameters 3—15875
- P/Comet Halley (1982i), improved orbital elements and non-gravitational parameters 3—35545
- comet origin, dynamic aspects 3—5229
- P/Comet Swift-Tuttle (1862 III), orbital vars. rel. to date of next apparition *(French)* 3—30300
- comet-asteroid close approach predictions, calc. technique 3—30223
- comets, catalogue of orbits, fourth edition 3—16098
- comets, interstellar origin in globules through dust grain sedimentation, orbit anal. 3—59265
- comets, new original and future orbits 3—48857
- comets capture into Solar System, three-body processes efficiency 3—48861
- compatibility conditions for a non-quadratic integral of motion 3—30154
- conference on Earth rot. and Earth-Moon dynamics at Grasse, France (May 1981) 3—25691
- conference on modern dynamics appl. to celestial mechanics/astrodynamics, at Cortina d' Ampezzo, Italy (August 1981) 3—16088
- constraint problem of three bodies in noninertial reference system, math. model 3—71
- degenerate quadruple collisions 3—25284
- diffuse ionised mass orbiting around magnetised central body, containment rel. to planetary cosmogony 3—35483
- dynamical systems with 3 degrees of freedom, invariant surfaces and orbital behaviour 3—20210
- Earth orbital elements variations rel. to ice ages, appl. of climate models 3—4951
- Earth orbital variations rel. to Pleistocene ice ages, historical review 3—4949
- Earth-crossing asteroids, orbits nature 3—25367
- Earth-Moon dynamics and selenocentric reference frame 3—30158
- Earth-Moon system, relativistic dynamics 3—25356
- Earth-Moon system, tidal evolution rel. to long-term stability of Earth's obliquity 3—4751
- eccentric polar orbits around Moon, stability and orbital lifetimes 3—20265
- energy surfaces boundary manifolds 3—25283
- ergodic theory and area preserving mappings *(French)* 3—16232
- exploding dynamical systems, appl. to celestial mechanics and astrodynamics 3—16233
- finite dimensional maps invariant manifolds, appl. to averaging and celestial mechanics 3—16234
- four-body problem, planar case with one inferior mass, central configs. 3—25280
- Fourier-Chebyshev approximation for many term time series 3—30157
- Galilei invariance, implication of action-reaction principle and centre of mass theorem 3—40010
- general precompiler for algebraic manipulation of Poisson series in FORTRAN IV 3—48806
- general three-body problem, families of periodic collision orbits 3—48807
- geodesic of ellipsoid with three unequal axes *(French)* 3—16231
- Giorgilli-Galgani's and Deprits algorithms 3—25301
- global effects on non-linear stability at libration points, use of 3-body problem 3—25294
- Hamiltonian systems, dimensions and increases, KS tranform. and particular integrals appl. 3—35412
- heavy rigid body about fixed point, Euler Poisson's eqns., geometrical props. *(French)* 3—25297
- 944 Hidalgo, orbital perturbations rel. to masses of Saturn and Uranus *(German)* 3—54275
- Hilda-type bodies proper inclination and eccentricities, use of four-body problem 3—25362
- Interkosmos 18 and Magion, comparison of trajectories of mother and daughter satellites 3—20198
- Interkosmos satellites, data obtained from orbit anal. 3—10181

celestial mechanics continued
- interplanetary gas molecules in Kepler orbits, effect of solar wind 3—48788
- interplanetary grains in Jupiter 2/1 resonance, Poynting-Robertson drag and gravit. interaction 3—35531
- investigating the Universe, book 3—10524
- Io Na cloud, solar radiation press. explanation of east-west asymmetries 3—35502
- Jupiter, encounter with comets and asteroids 3—25374
- Jupiter satellites, orbital evolution rel. to tidal heating of Io 3—15872
- Jupiter/Saturn 3rd order theory, missing terms determ. method *(French)* 3—10221
- kinematic equations, solution error eqns. derivation using quaternions, artificial satellite appl. 3—35413
- KS-transformation in hypercomplex form 3—44644
- Kustaanheimo-Stiefel variables derivation 3—25299
- LAGEOS orbit, effect of Earth refl. sunlight 3—39984
- Lagrange's formula for implicit functions, generalisation 3—15833
- level lines computation, use of Stiefel-Baumgarte stabilisation technique 3—25293
- lunar acceleration from tables in Ptolemy's Almagest, Babylonian obs. theory 3—20601
- lunar theory constants from timing of occultations 3—20205
- lunar theory ELP 2000, lunar shape perturbations 3—59186
- Lyapunov transformation of Hill's eqn. and dynamic interpretation *(French)* 3—25298
- Magion and Interkosmos 18, comparison of trajectories of daughter and mother satellites 3—20198
- Mars, axial obliquity and orbital eccentricity vars. rel. to quasi-periodic climate changes 3—5190
- Mars, eccentricity and obliquity vars. rel. to models of climate cycles recorded in polar layered deposits 3—5188
- Mars, orbital perturbations rel. to periodic climate change and distrib. of volatiles 3—5185
- Mars, orbital variations rel. to climatic history 3—4950
- Melnikov's method and averaging 3—25292
- meteoroids from Periodic Comet Lexell in 1770, Jupiter encounter (1779) 3—30305
- meteoroids orbits distribution, astronomical factor effect 3—10271
- Mimas-Tethys libration about Saturn, appl. of periodic orbits algorithm *(French)* 3—30155
- minor planets, distrib. of orbital eccentricities 3—30286
- Moon, classical Hill's eqn. discretisation 3—59188
- Moon, libration, analytical theory 3—59239
- Moon, motion perturbations and theory 3—20272
- Moon, orbit elements var., tidal friction model 3—35484
- Moon, orbit motion from lunar laser ranging obs. 3—30256
- Moon, orbital motion, depend. on relativistic planetary perturbations 3—30257
- Moon, orbital motion review 3—30258
- Moon, relativistic perturbations in ELP 2000 calcs. 3—25353
- Moon orbital motion, Earth tides effects, modelling techniques 3—30255
- N-body problem, planar case, collinear relative equilibria 3—25281
- n-body problem, singularities regularisation 3—20218
- Newtonian potentials and dynamics of a stratified ellipsoid 3—44661
- orbits of S- and C-type asteroids, average motions. 3—30292
- particle motion in gravitational field of pulsating variable star 3—40011
- periodic orbits properties in dynamical systems with three degrees of freedom 3—25303
- Phoebe, orbital perturbations by planets and Titan rel. to comparison between obs. and ephemeris *(French)* 3—35521
- Picard method of successive approximations, matrix formulation for parallel computation 3—48830
- planet orbit rel. to Sun's quadrupole gravity field (general relativity) 3—30323
- planet orbits, stabilising and destabilising factors 3—20213
- planetary rings and close satellites, dynamics 3—20212
- planetary rings and satellites dynamics, review 3—25357
- planetary satellites round oblate planet, algorithm for periodic orbits in rot. frame *(French)* 3—30153
- planets, theory for motion of all planets and VSOP82 solution *(French)* 3—15832
- point mass motion in classical mechanics, use of relativistic spinor regularisation 3—65
- precession of equinoxes, rel. to revised value of Earth dynamical ellipticity 3—39768
- reference systems for Earth dynamics, importance for celestial mechanics 3—20216
- resonance theory, contrib. of Garfinkel 3—25300
- resonant periodic orbits, characteristic curves 3—25279
- restricted three-body problem, bifurcations of planar to three-dimensional periodic orbits 3—15834
- satellite orbital inclination, effect of rotating oblate atmosphere 3—48799
- satellite orbits from laser ranging using finder at Metsahovi Space Geodetic Station of Finnish Geodetic Institute 3—35409
- Saturn A-ring, identification of 1980 S 27 and 1980 S 26 from Voyager 2 occultation obs. 3—10258
- Saturn F-ring, numerical study of effects of shepherding satellites 3—59260
- Saturn ring system, self-gravitation and thickness of rings 3—20292
- Saturn satellites, mutual phenomena in 1980, orbital anal. 3—5215
- selenodetic reference coordinate system selection 3—30261
- Seventh Oberwolfach conference on mathematical methods at Oberwolfach, Germany (August 1981) 3—20594
- short-period comets pre-discovery encounters 3—25381
- solar altitude frequency tables 3—48803
- space vehicles kinematic equations soln., accuracy, use of quasicoordinates 3—48808
- spacecraft orbiting planet or moon, third body perturbation, semianalytic theory 3—25291
- spacecraft with constant radial accel. motion and trajectories 3—35405
- stability criteria in many-body systems, empirical stability regions for corotational coplanar hierarchical three-body systems 3—48804
- stability criteria in many-body systems, empirical stability parameters for general hierarchical dynamical systems 3—48805
- stability of n-body hierarchical dynamical systems 3—20215
- stellar periodic orbits determ. in nearly axisymmetric galaxies 3—20208
- Sun and Moon on the Apple program in BASIC 3—40044
- synchronous satellites, quasistationary stable circular orbits 3—15807
- Szebehely's equation, generalisation for three dimensions 3—25296

celestial mechanics continued
- three-body problem, coplanar prograde case, dynamic stability, criterion 3—5095
- three-body problem, elliptic restricted case including body shape, Hill's stability *(Chinese)* 3—59187
- three-body problem, elliptical restricted case, appl. to dynamically symmetric artificial satellite, reson. rot. 3—20211
- three-body problem, expansion of disturbing function by factorisation 3—30159
- three-body problem, general case in three dimensions, periodic solns. of Poincare's third type 3—25288
- three-body problem, general planar case, solns. near periodic solutions 3—20214
- three-body problem, modified, bounded motion 3—20207
- three-body problem, periodic perturbation in generalised theory of gravitation 3—20231
- three-body problem, photogravitational restricted circular case, libration points 3—35414
- three-body problem, planar case, Murnaghan's symm. variables *(French)* 3—20219
- three-body problem, planar case, quasi-periodic solns. near Euler's orbits 3—25290
- three-body problem, planar isosceles case, motion near total collapse 3—25282
- three-body problem, planar triple collision manifold, symm. and regularised coords. 3—25286
- three-body problem, restricted case, asymmetric periodic solns., mass, parameter evolution 3—44646
- three-body problem, restricted case for Sun-Jupiter mass ratio, asymmetric periodic solns. 3—44645
- three-body problem, restricted case when mass parameter is small 3—25287
- three-body problem, symm. and planetary appl. *(Polish)* 3—48810
- three-body problem, triple collision appl. to equilib. stability *(French)* 3—25285
- three-body problem, two-dimensional restricted elliptical twice-averaged case, orbit evolution 3—48809
- Titan and Hyperion capture into reson., appl. of adiabatic invariant 3—20217
- Titius-Bode law of planetary distances from quantum gravity theory 3—20209
- transformation methods in non-linear systems, theory *(Chinese)* 3—40042
- triple conjunctions of outer planets 3—30263
- Trojan asteroids, orbit anal. 3—20284
- two-body problem, classical case with drag, analytical soln., appl. to artificial satellites 3—30156
- Uranus ring system, dynamics of narrow planetary rings 3—5225
- Uranus rings, struct. and orbits from occultation obs. 3—5226

cell model (liquids) *see liquid theory*

cell motility
- contact formation and motility, anal. by combined phase contrast and reflection contrast microscopy 3—9803
- image sequence interpretation system 3—15052
- micrometer-sized organisms, tactic migration, space time rescaling symmetry 3—48268
- Paramecium, cell motility on exposure to elec. fields 3—48316
- photokinesigraphic characteristics of the translationally mobile bull spermatozoa without helicoidal component 3—9565
- shape and motility interdependence, SEM and time lapse cinematography obs. 3—53650
- sperm motility measurement usig fiber optic Doppler anemometer, bovine fertility prediction appls. 3—44350
- twin-beam laser velocimeter for the investigation of spermatozoon motility 3—35037

cells (electric)
- *see also fuel cells; photoelectric cells; photoelectrochemical cells; primary cells; secondary cells*
- batteries, sealed storage, calc. of capillary equilib. in space between electrodes during charging 3—53424
- disc electrode cells potential distribution, effect of electrode material resistance 3—58429
- electrochemical, with electrodes within free vol. of electrolyte, processes numerical simulation 3—53421
- electrode parameters meas., by electrochemical potential spectroscopy 3—40643
- gravity field meas. using gravit. field induced EMF 3—54150
- liquid metal droplets, potentiostatic study of diffusion layer, natural convection case 3—53423
- lithium hydrogen peroxide power cell system, microprocessor control of development system 3—29379
- polyvinyl chloride membrane systems behaviour 3—58490
- separator tortuosity 3—58489
- sintered plate electrodes containing β-Ni(OH)$_2$, voltammetric behaviour 3—58432
- solid-state electrolytes, polymers, PEO$_8$-LiClO$_4$, ionic conductivity, press. effects 3—13542
- superionic semiconductors in electrochemical cells, thermoelec. effects 3—2882
- H_2 production using steady-state pH-differential water electrolysis cell 3—19623
- MnO_2 production by electrolytic process for electrochemical cells *(Polish)* 3—39452
- Ni(s)-NiO(s) electrodes for high temp. solid oxide electrolyte galvanic cells, role of sintering time 3—58430

cellular biophysics
- *see also biomembrane transport; biomembranes; cellular effects of radiation; cellular transport and dynamics; lipid bilayers*
- action currents magnetic field meas., using superconducting magnetometer 3—29802
- Arrhenius analysis of survival curves from thermotolerant and step-down heated L1A2 cells in vitro 3—4479
- automated cell counting in tissue sections, multiple grey level analysis 3—4725
- automated flow microfluorometer and cell sorter incorporating nuclear electronics 3—53894
- bacterial cell envelope protein, regularly arranged, electron micrograph correlation averaging 3—4724
- bacterial magnetosomes, morphology and struct. of magnetite particles 3—58693
- biomedical images, software for interactive processing 3—29672

cellular biophysics continued
bipolar cells, carp, double colour-opponent receptive fields 3—58659
blastoderm, developing fish, serial optical section recording with simple device 3—4730
blood cell, solid/vapour interfacial free energy and surface tension 3—47191
blood cell sensitivity and repair of children with some hereditary diseases *(Russian)* 3—19673
blood cells, lanthanide-binding, mag. separation 3—35042
blood cells, red, 1.06 μm pulsed laser damage, safety problems *(Chinese)* 3—44281
blood cells in plasma, high gradient mag. separation 3—34798
blood component fractionation using high gradient mag. separation 3—34926
blood flow relation to US echogenicity, red cell aggregation effect 3—34867
branched neurons, unequal diameters and their effects on time-varying voltages 3—34814
cerebral cortex, human, microscopic image semi-automatic analysis using grey level index 3—44363
chloroplast, low angle X-ray scatt. with CK$_\alpha$-radiation 3—19753
chloroplast low angle X-ray scatt. using CK$_\alpha$ radiation 3—15050
chloroplasts, thylakoid membranes, proton spin-lattice relax. study 3—9559
CHO cells, heated G1-phase, cell death, fusion and multipolar divisions 3—29513
CHO cells, heated G1-phase, division probabilities and generation times 3—29512
CHO cells, interaction of thermotolerance and thermosensitisation 3—4469
chromatin structure of cell nuclei, eval. by 3-D light microscopic image processing 3—29807
chromosome microphotograph, image restoration technique for blurred biomedical images 3—24843
chromosomes, high resolution banded, image restoration and iterative processing 3—24844
cleaving embryo, struct. changes, effect on elec. characts. of intercellular interaction 3—29509
cochlear inner hair cell, neurotransmitter release, multiple reservoir model 3—19726
cochlear outer hair cells, intracellular recordings 3—29560
colour metric as a tool for cytologic image anal. 3—24938
computer assisted scanning microscopy in cytology 3—29698
contact formation and motility, anal. by combined phase contrast and reflection contrast microscopy 3—9803
corneal endothelial specular-micrograms, computer anal. 3—39757
cryopreservation of cells and tissues, heat transfer from warm plates to liquid N$_2$ obs. 3—35051
cyanobacteria, respiration and photosynthesis in energy-transducing membranes, review 3—34799
cytoskeletal elements of cells, three-dimens. organisation study, polyethylene glycol technique improvements 3—53897
density gradient separation methods, evaluation, erythrocytes appl. 3—29797
depth profiles of the electrocorticogram 3—24700
diagnosis of cell division, elec. parameters of biologically active points 3—9567
dicentric chromosomes, automatic detection system 3—29808
dielectric model of human blood 3—44227
digital image processor for biological cell structures 3—39755
dissociated cells heated in vitro, survival rel. to location within tumour 3—19675
DNA replication in HeLa cells, effects of hyperthermia 3—44217
DNA synthesis, hyperthermic inhibition in CHO cells, mol. studies 3—29492
dopaminergic cells in octopus optic lobe, inhibitory retinal efferents 3—58663
electron microscopic prep., vertical sections of cultivated anchorage-depend. cells 3—53899
electronic autoradiography of living human cells with MWPC 3—44354
erythrocyte compressibility, US vel. meas. 3—19674
erythrocyte deformability, meas. using a stroboscopic recording centrifuge 3—53881
erythrocyte deformability, US determ. 3—4690
erythrocyte deformability measurement using Ektacytometer, clinical utility 3—19793
erythrocyte membrane, lipid organisation, phloretin effects, EPR obs. 3—58607
erythrocyte membrane, temp. dependence of yield shear resultant and plastic viscosity coeff. 3—4474
erythrocyte signals in conductor systems, mathematical modelling *(Russian)* 3—44207
erythrocytes, Frohlich interaction study 3—39609
erythrocytes, human, cytosol-membrane interface, reson. energy transfer, donor fluoresc. 3—53643
erythrocytes, human, packed, with haemoglobins F, AA, AS and SS, RF dielec. characts. 3—58620
erythrocytes, magnetic separation and behaviour in high gradient field 3—53707
erythrocytes, solitary, human, mag. susceptibility obs. 3—29581
erythrocytes, undeformable in blood samples, determ. using laser light scatt. 3—24918
eucaryotic living cells, UV reson. Raman spectra of nucleic acids, in vivo study 3—48265
excitable fibres, math. models of extracellular pots. generated in a vol. conductor 3—58634
extracellular space and ion distribs., calc. program in BASIC 3—34792
ferritin-bound particles, high gradient mag. capture 3—35041
fertilisation, mouse, ultrastructural in vivo obs. using 200 kV electron microscopy 3—4721
fibroblasts, human, normal and ataxia telangiectasia, thermal sensitivity obs. 3—44215
fibroblasts, initial stage of attachment, study by reflective interference microscopy 3—44210
fibroplastics, living, adhesion to electrically charged Zn surface 3—4475
flow cytofluorometry for gynecologic cytology, multibeam interferometer as screening system 3—24835
fluid distribution in legs and arms, elec. meas., estimation of extra-cellular and intra-cellular fluid 3—9773
fluid shear stress effects using cone-plate viscometer 3—29803

cellular biophysics continued
freeze substitution sample preparation for ion microscopy of plant tissue 3—53898
hair cell, nonlinear elec. circuit model *(Japanese)* 3—4513
halobacteria, reception of proton potential 3—34884
heat shock proteins and thermotolerance; a comparison of induction kinetics in CHO cells 3—4468
histology as a method for determining thermal gradients in heated tumours 3—15293
horizontal cell response in carp retina, discrete nonlinear reduction model 3—58661
horizontal cells, isolated, from teleost retina, biophys. and biochem. studies, review 3—58662
horizontal cells of carp retina, colour coding mechanisms *(Japanese)* 3—19692
horizontal cells of turtle retina, spread of pots. along network 3—58660
hyperthermia, involvement of membranes in cellular responses 3—34789
hyperthermia and the cell nucleus 3—34800
hyperthermia at 50°C, effects on V-79 cells in vitro 3—9557
image acquisition system 3—19874
image anal., Fourier transform for chromatin texture and shape 3—29809
in-flow chromosome fluorescence meas., improved accuracy by digital processing of multi-parameter flow data 3—58892
intracellular motion and viscosity probed by mag. particle method 3—58618
intracellular water of Artemia cysts, density obs. 3—58616
laser cytophotometer of the through-flow type *(Russian)* 3—44348
laser-Raman lines from living cells, assignment to internal soliton vibrs. 3—15051
leaf surface preparation for SEM, comparative study 3—44365
ligand binding to macromols. and cell-bound receptors, role of diffusion 3—9538
light and electron microscopic comparative studies, procedure for specific section area selection 3—15303
lipid films, coloured, hydrodynamics and stability analysis 3—58700
liver nuclei, native chromatin DNA, quaternary and quinternary structs., differential scanning calorimetry obs. 3—48269
liver tissue, contrib. of intercellular links to US absorption 3—29624
lymphocytes, human, mitogenesis following brief exposure to hyperthermia 3—58617
magnetic perception of bees, iron oxides found in abdomen cells 3—29584
magnetotactic bacteria, birefringence determ. of mag. moments 3—9635
malignant rat liver tissue water content meas. using cell refractometry and NMR 3—19861
mammary adenocarcinoma cell clones of differing metastatic pots., heterogeneity in hyperthermic sensitivities 3—4480
membrane lipids of Acholeplasma laidlawii B, gel to liq. cryst. transition 3—48257
membrane motion, hydrodynamic stability, of viscoelastic thin film, dispersion equation 3—39601
membrane phase transition, statistical mechanical study 3—19672
membrane potential rapid changes, improved fluoresc. probes for meas. 3—4691
membrane surfaces, diffusion-mediated localisation 3—34785
membranes, polyaldehyde microspheres probes 3—4715
metabolically active cells, collective dynamics 3—4478
metabolically active cells, Raman spectra, time consistent feature 3—4477
metaphase selection by analysis of the Fourier transformed image 3—24939
microbial growth on substrates, thermodynamic efficiency for maximal growth rate 3—48267
microelectrode, 12-fold, for recording from vertically aligned cortical neurons 3—29799
microholography of living organisms 3—19870
microspectrofluorimetry on single living cells, kinetics of intracellular mechanisms, fluorophor photodegradation role *(French)* 3—53649
mitotic cells, effect of cold storage on hyperthermic killing and hyperthermic radiosensitisation 3—34802
molecular level cellular components, low temp. techniques for CTEM and STEM 3—24929
muscle fibres, intracellular local changes in resistance rel. to membrane pot. 3—44208
myocardial tissue, normal and ischemic, prep. for SEM 3—53904
neutron scattering in molecular and cellular biology, review 3—15036
NMR spectroscopy of living cells 3—44371
on-line analysis of electrical signals from skeletal and cardiac muscle cells 3—19875
On-Off response variation in frog retinal ganglion cells, functional implications 3—24716
optical methods of fractionating cell populations 3—44352
optomotor system, fly, motion sensitive interneurons, horizontal cells, structure and signals 3—29547
oxidative phosphorylation, phys. model of initial stages of energy transformation 3—44209
plant cell nucleus ultrastructure, automatic diagnosis with image analysis system 3—9566
plant cuticular surfaces, easily damaged, evaluation of prep. methods for SEM 3—53896
processor-oriented methods for quantitative image analysis applied to cytology and radiology 3—24884
protozoa rapid freezing, relative cooling efficiency of various fluids 3—15302
RACAPS, semiautomated chromosome karyotyping system 3—29695
rapid-freeze deep-etch replica method for unfixed tissues and cells, cryomicrotomy appl. 3—15297
red blood cell aggregation, statistical props., rouleaux distrib. 3—39608
retina, carp, connections between photoreceptors and horseradish peroxidase-injected bipolar cells 3—58656
retina, catfish, synaptic organisation involving receptor, horizontal and on- and off-centre bipolar cells 3—58655
retina, goldfish, convergence of signals from red-sensitive and green-sensitive cones onto L-type horizontal cells 3—58658
retina, L-type horizontal cells, nonlinear response characts. 3—29541
retina, turtle, kinetics of synaptic transmission from photoreceptors to horizontal and bipolar cells 3—58657
retinal ganglion cells, turtle, 2 identifiable classes 3—58654
retinogeniculate terminations in cats: morphological differences between X and Y cell axons 3—24713
rhodopsin like pigments identification in phototactic Halobacterium halobium 3—24693
ribosomes, struct. studies, review 3—29511

cellular biophysics continued
- sarcomere, individual, length determ. from isolated cardiac cells using optical microscopy and image processing 3−35035
- segmentation method for cell image based on two-dimens. histogram 3−24936
- SEM, contrib. to internal cell struct. viewing, review 3−53906
- single erythrocyte rigidometer as a reference for RBC deformability 3−48451
- small intestinal mucosa, mouse, damage following X-irrad. or hyperthermia, SEM and TEM obs. 3−53735
- soft tissue US attenuation, role of cellular cohesion and organisation 3−4481
- sorting system using laser fluoresc. and scatt. 3−53893
- spermatozoa, bull, light scatt. obs., interaction and conc. effects 3−9562
- spherical cells with anisotropic membrane, viscoelasticity of dispersions 3−9564
- stereology, point counting, BASIC program 3−35039
- striate cortex, cat, direction selectivities of simple cells *(Japanese)* 3−19693
- subcellular particles, TV microscopy, computer vision and sampling 3−24935
- Sulfolobus acidocaldarius, struct. of S-layer 3−15049
- surface charge of erythrocytes and model membranes, recording using a fluoresc. probe, obs. 3−48261
- tail withdrawal reflex of Aplysia, associative conditioning of single sensory neurons and learning 3−53706
- Tetrahymena pyriformis BJ 4, cultivation and induced synchronous division, temp. change sensitivity *(Chinese)* 3−44202
- textured surfaces touching, somatosensory cortex cells responses 3−29580
- thermotolerance, cell cycle dependence, CHO cells heated at 42°C obs. 3−44218
- thermotolerance and heat stock proteins in mammalian cells 3−34783
- tissue sections, semithin, embedded in GMA and Quetol 523, microscopy in backscatt. electron mode of identical sites 3−15298
- tissue sections, semithin, embedded in Quetol 651, light and electron microscopy of identical sites 3−15299
- transient thermal tolerance: cell killing and polymerase activities 3−34803
- ventricular gradient, rel. to area under the cellular action pot. 3−39734
- visual cortex, cat, neural interactions in cellular responses to paired slits *(Japanese)* 3−19694
- Fe_3O_4, magnetite, biogenic in bacteria, animals and man 3−15124

cellular effects of radiation
- *see also biological effects of .... (type of radiation)*
- *see also photosynthesis*
- aberrant megakaryocytopoiesis preceding radiation-induced leukemia in the dog 3−53733
- aberration scoring using POLYP, biological dosimetry 3−29765
- Acetabularia mediterranea, starch accumulation after X-irrad. 3−4553
- after γ-irrad. 3−29644
- alpha particle irradiation, morphology of malignantly transformed cells 3−15168
- aortic endothelial cells, rat, proliferation following X-irrad. 3−29666
- apple pollen, in vitro germination and ultrastruct., γ-irrad. effects 3−4555
- ascites sarcoma, mouse, growth kinetics, cell numbers rel. to cell cycle 3−48323
- ataxia-telangiectasia and normal cells, effect of hypertonicity and X-radiation on DNA synthesis 3−34910
- bacteria, DNA damage repair and cell viability after ionising radiation and hyperthermia treatment *(Russian)* 3−58608
- bacterial cells, DNA-membrane interactions rel. to γ-irrad. *(Russian)* 3−58731
- bacterial conjugation, recombinogenic effect of low-level radiation *(Russian)* 3−19750
- bacterial growth, comparison for high-intensity microwave exposure and conventional heating 3−39692
- blood cell sensitivity and repair of children with some hereditary diseases *(Russian)* 3−19673
- blood cells, red, 1.06 μm pulsed laser damage, safety problems *(Chinese)* 3−44281
- blood neutrophils, adaptation to microwave irrad., math. simulation *(Russian)* 3−34887
- bone marrow, regenerating and normal, radiosensitivity, aberrant cell freq., mitotic index *(Russian)* 3−34900
- bone marrow cells of mice exposed to γ-rays, micronuclei freq. reduction by AET 3−44304
- bone marrow regeneration, ^{60}Co-γ-irrad., O_2 breathing effect *(Russian)* 3−34899
- bone marrow transplantation in mice exposed to a modified fission neutron field 3−29618
- botanical effects of US, review 3−58720
- brain tumour 9L cells, rat, interaction of hyperthermia and radiation rel. to survival 3−19780
- brain tumours, human, sensitivity to irrad. and combined effect of metronidazol and irrad. *(Russian)* 3−34891
- cell membrane noise changes during microwave exposure 3−4547
- Chinese hamster V79 cells, dependence on neutron energy of the OER and RBE 3−15143
- Chlamydomonas reinhardtii, dividing, ultrastruct. alterations following X-ray and proton irrad. 3−53730
- chromatin, rat thymus, post-irrad. degradation, low mol. wt. DNA fraction *(Russian)* 3−19663
- chromosomal aberrations induced by ^{137}Cs γ-rays in sea urchin eggs, sensitivity rel. to mitotic cycle 3−29667
- chromosome aberration data, regression analysis, dose response curves 3−48341
- chromosome aberrations induced in human lymphocytes by 600 MeV neutrons 3−19752
- chromosome mutation, sex-linked recessive, lethal, in Drosophila melanogaster, imaginal disk development *(Russian)* 3−34896
- chromosome translocations, carcinogenic risk from low-level radiation *(Russian)* 3−34895
- ciliated cells of the CNS in man, effects of ionising irrad., SEM study, radiotherapy appl. 3−15169
- clinical radiobiology, problems and perspectives for development *(Russian)* 3−15155
- colon tumour, human, survival responses of cell subpopulations after combinations of hyperthermia and X-irrad. 3−53726
- colony-forming cells, 2 subpopulations differing in radiosensitivity, mouse obs. *(Russian)* 3−58737

cellular effects of radiation continued
- conductivity and permeability dynamics of cells at early times after γ-irradiation *(Russian)* 3−58735
- cyanobacteria, lateral transport of energy along coupling membranes, light-induced pot. changes 3−4485
- cytogenetic effects in Chinese hamster cells induced by accelerating He, C and Ne ions *(Russian)* 3−19764
- cytogenetic effects in Chinese hamster cells RBE coeffs. of accelerating He, C and Ne ions *(Russian)* 3−34897
- diploid yeast radiosensitive mutants, Saccharomyces cerevisiae, rapid repair after γ and α-irrad. *(Russian)* 3−19762
- distal lung of mouse, morphologic changes reflecting early and late effects of irrad., review 3−53737
- DNA, high-intensity UV radiation effect, photochem. transforms. 3−34905
- DNA, newly synthesised, post-irrad. defects, neutrons and electrons compared and the effect of misonidazole 3−29616
- DNA damage induced by ionising radiations with different phys. characts. *(Russian)* 3−58732
- DNA replication intermediates, X-irrad. effects in replication initiation inhibition 3−29651
- DNA synthesis and postirrad. degradation in micrococcus radiodurans $R_{1}1$5, comparative studies using UV and γ-rays 3−9676
- DNA vulnerability to damage, repair and degradation in irrad. animal tissues, anal. *(Russian)* 3−4549
- DNA-repair deficient cells identification with multiwire proportional chamber 3−19776
- dosimetry by chromosome aberration scoring with parallel image processing 3−53860
- E. coli B/r WP2 trp^-, antimutagenic effect of Ge-132 on γ-induced mutations 3−29650
- Ehrlich ascites tumour cells, UV-induced division delay, pot. lethal damage repair 3−4560
- embryos, mouse, effect of chronic HTO β or ^{60}Co γ irrad. on preimplantation development 3−29665
- enhanced survival during confluent holding recovery in UV-irrad. human and mouse cells 3−34908
- epithelial cells of hair bulbs, action of X- and neutron-radiations *(Russian)* 3−19763
- erythrocyte crenation by low power He-Ne laser radiation, ABO system depend. 3−53720
- erythrocyte ghosts, membrane damage after X-irrad. *(Russian)* 3−58733
- erythrocyte membrane, porcine, spin-labelled compounds transport, ionising radiation effect 3−48334
- erythrocytes, human, 2450 MHz microwave irrad. effects on $^{24}Na^+$ efflux 3−29636
- erythrocytes, human, effect of pulsed US in vitro 3−29627
- erythrocytes, rabbit, effects of X-band microwave exposure on K^+ efflux 3−39690
- erythrocytes, rabbit, natural radioprotectant interaction with γ-radiation 3−29669
- erythrocytes and bone marrow of rats, effects of γ-irrad. and cystamine on superoxide dismutase activity 3−4561
- erythrocytes sedimentation profiles under gravity, effect of inhomogeneous mag. field 3−39607
- eucaryotic chromatin, resistance of nucleosomal organisation to ionising radiation 3−4562
- EUE cells, age response to 31 MeV proton irrad. 3−4559
- Euglena cells, light- and dark-grown, γ-irrad.-induced single strand DNA breaks and their repair 3−29654
- fibroblast cell strain, normal human diploid, pot. lethal damage repair in X-irrad. cultures 3−53727
- fibroblasts, human, defective recovery from pot. lethal damage in some strains 3−48331
- fibroblasts, normal and ataxia-telangiectasia, cell cycle dependence of mitotic delay after X-irrad. 3−29652
- fibrosarcoma cell subpopulations, response to small radiation doses delivered in situ 3−58750
- fibrosarcoma cells, murine, grown as pulmonary nodules, cyclic-radiation response 3−29660
- fractionated radiation therapy, simple radiobiological model, rat skin appl. 3−44285
- gametic mutation for flower colour in Tradescantia after γ-irrad. 3−29642
- gamma irradiation, DNA and chromosome repair kinetics in CHO cells 3−34909
- gamma irradiation of mouse skin, repair and repopulation during multifractionated irrad. 3−44296
- gamma-ray exposed mice, single and multifractionated exposures, early skin shrinkage 3−44295
- gene transfer-misrepair mechanism of radiation carcinogenesis, low radiation doses 3−4557
- genetic mechanisms of radiosensitivity *(Russian)* 3−4473
- germ cells of medaka embryos, effects of tritiated water β-rays, comparison with ^{137}Cs γ-rays 3−48337
- glioblastoma, human, possible explanation of radioresistance in situ 3−58752
- granulopoietic progenitor cells, canine, sensitivity to ionising radiation, blood and bone marrow obs. 3−48330
- haemopoietic stem cell migration, irrad. conditions influence in mice *(Russian)* 3−19677
- heavy ion in vivo radiobiology 3−44289
- heavy ion molecular and cellular radiobiology 3−44288
- HeLa cell populations, mechanism of derivation of radioresistance after repeated X-irrad. 3−9679
- HeLa cells, biological action of low-intensity 633 nm light as function of coherence, dose, wavelength and irrad. regime 3−58727
- heterotransplanted human colonic carcinoma, X-irrad. effects before and after cellular DNA content change 3−48336
- hyperthermia, local, in malignant tumour radiotherapy, cellular radiobiological aspects *(Russian)* 3−4467
- hyperthyroidism, ^{125}I treatment, evidence for special radiobiological effect on follicular cells 3−19768
- immune responsiveness of mice irrad. with CW or PM 425 MHz RF radiation 3−39691
- intercellular communication and 3D cell contact, rel. to radiosensitivity 3−39697
- intestinal cell radiosensitivity, cell death assays comparison 3−29649
- intestinal crypts, topographic variations in clonogenic response to cytotoxic treatments 3−48328

cellular effects of radiation continued
- intestine, mouse, effect of prior hyperthermia on subsequent thermal enhancement of radiation damage 3–19772
- iso-effect tables for tolerance of irradiated normal human tissues 3–58751
- jejunal crypt cells exposed to radiation alone and combined with cancer chemotherapeutic agents, microcolony survival assay 3–29655
- laser radiation, visible range, mutagenic effect on human cell culture *(Russian)* 3–19756
- lasers in medicine and surgery, conf., San Diego, CA, USA (Aug. 1982) 3–49071
- late effects after therapeutic whole-body irrad., symposium, Munich, Germany (Aug. 1981) 3–20583
- late effects development after whole body irrad. and stem cell reconstitution, factors of significance 3–24810
- late effects in rhesus monkeys after whole body irradiation with X-rays and fission neutrons 3–24814
- late effects of total body irradiation in dogs treated with bone marrow transplantation 3–24812
- lethality and mutation induced by radiation in a repair-deficient CHO cell line 3–48335
- leucocyte in blood, phagocytic ability strengthening by laser irrad. of horse perineal region skin *(Chinese)* 3–39694
- liver cells of γ-irrad. senescent mice, unscheduled DNA synthesis and elimination of DNA damage 3–9674
- liver neoplasms, prod. in Chinese hamster, interaction of ^{144}Ce and partial hepatectomy 3–4565
- luminescence decay after exposure to light, living cell population 3–39696
- lumphocytes, G_0, human, X-ray induced reciprocal translocations and dicentrics 3–29657
- lung, ultrastructure after exposure to ionising radiation, SEM and TEM obs. on mice 3–53736
- lung and spinal cord, RBE for neutron, X-ray and γ-irrad. 3–44275
- Lupinus albus L., chronic γ-irrad. effects 3–4556
- lymphocytes, human peripheral, γ-irrad. and sister chromatid exchange induction 3–48333
- lymphocytes, human peripheral blood, chromosomal aberrations induced by 14.9 MeV neutrons *(Hungarian)* 3–15144
- lymphocytes, mature, survival curve 3–34914
- lymphoma cells L5178Y, mouse, heat and X-ray effects 3–53729
- lymphosarcoma cells, X-irrad. effects on membrane lipids in vivo and in vitro 3–44298
- malignant transformation at low doses, comparison of X- and γ-rays, hamster embryo cells obs. 3–34906
- mammalian cell colonies, living, direct screening for DNA repair deficient mutants identification 3–29805
- mammalian cell cultures: induction of cell killing, micronuclei, and mutation resistance after β and γ irrad. 3–4558
- mammalian cell cultures, RBE determ. using encapsulated ^{125}I sources 3–9675
- mammalian cell DNA, replication forks blocking and pyrimidine dimers, UV irrad., autoradiographic evidence 3–53648
- mammalian cell membrane, alterations in struct. and function after exposure to ionizing radiation 3–15163
- mammalian cells, air-, N_2O-, and N_2-saturated, low-LET radiation responses 3–29661
- mammalian cells, cultured, enhancement of X-ray-induced inactivation by hyperthermia, rel. to pH and thermotolerance 3–53725
- mammalian cells, cultured, X-ray induced inactivation, hyperthermic enhancement rel. to prior heat treatment 3–53641
- mammalian cells, radiation induced DNA release, sedimentation assay 3–48339
- mammalian cells, radiobiological studies with therapeutic neutron beams 3–15140
- mammalian cells exposed to ionising radiation, models for DNA damage formation repair 3–19779
- mammalian cells with membranes subtituted by polyunsaturated fatty acids, X-irrad. effects on survival 3–34907
- mast-cell precursors in bone marrow and skin of mice, different radiosensitivities 3–44301
- medullated axon exposed to RF EM radiation anal. of elec. and thermal effects 3–15152
- melanoma xenograft cells, human, intercellular contact and radiation response 3–58749
- membranes, effects of low doses of X-rays and HTO 3–15160
- meristem cells, asynchronously dividing, of pea seedlings, γ-ray induced unscheduled DNA synthesis 3–44297
- microdosimetry of internally deposited radionuclides 3–48412
- microspectrofluorimetry on single living cells, kinetics of intracellular mechanisms, fluorophor photodegradation role *(French)* 3–53649
- microtubular polymerisation in vitro, effect of 2450 MHz microwaves 3–48321
- microwave broad-band temp. controlled exposure system for study of cellular bioeffects 3–35040
- mm wave irradiation and meas. system for cell suspensions 3–24932
- multicellular systems, biological effects of low dose ionising radiations 3–29641
- mutagenicity of α particles from ^{238}Pu, rel. to X-rays, hamster cell expts. 3–29663
- mutation frequency modification in plateau phase CHO cells 3–19771
- myeloid stem cells, recovery of number and radiosensitivity in sublethally X-irrad. mice 3–9677
- neuroblastoma cell culture, metabolism, US effect 3–48319
- neurons of edible snail, effect of permanent mag. field on electrophysiological parameters 3–24784
- neutron irradiation late effects, biological bases for high RBE values 3–44271
- neutron radiobiology, cellular sensitivity 3–44276
- normal tissue radiation responses: dose fractionation, dose rate and iso-effect relationships 3–44286
- nuclei of chicken thymocytes and erythrocytes, γ-radiation-induced damages to membrane structs. *(Russian)* 3–58736
- nucleic acid synthesis in HeLa cells, biostimulation by low-intensity visible light 3–39695
- oocyte depopulation pattern in adult Indian desert gerbils exposed to internally deposited ^{32}P, ^{60}Co and ^{45}Ca 3–9678
- ovaries of CBA mice ^{90}Sr treated as foetuses, neoplasms 3–24806
- Paramecium, cell motility on exposure to elec. fields 3–48316
- Paramecium tetraurelia growth stimulation under low-level chronic irradiation: investigations on a possible mechanism 3–34911
- parenchymal hepatocytes, noncycling, repair of X-irrad. damage 3–19770

cellular effects of radiation continued
- particle accelerators in radiation therapy, conf., Houston, TX, USA (Feb. 1982) 3–40316
- photoradiation therapy, tissue as medium for laser light transport 3–53722
- photoradiation therapy with haematoporphyrin derivatives, wavelength and dosimetry considerations 3–53750
- photoreactivation phenomenon after exposure of cells to ionising radiation, basic aspects *(Russian)* 3–4548
- photoreceptor cell, light induced pore formation in membrane 3–19699
- phototherapy, haematoporphyrin augmented, dosimetric studies in expt. liver cancer in rat 3–53721
- pion radiobiology at LAMPF, use in therapy 3–44291
- pion radiobiology at TRIUMF, using cultured cells, mice and pigs 3–44290
- pion therapy beams, effects on cultured cells 3–58746
- Pisum sativum L. root meristem cells exposed to electric field or γ rays, micronuclei form. 3–4551
- plasmalemma membrane pot. of nitella flexilis cells, mechanism of light-induced hyperpolarisation 3–29631
- plateau-phase cultures, unfed, repair of pot. lethal and sublethal damage 3–34913
- potentially lethal X-ray damage repair, mol. and cellular basis, clinical radiotherapy appl. 3–58747
- preimplantation mouse embryos, effects of Pb and X-rays on blastocyst formation and cell kinetics 3–29656
- prokaryotes and eukaryotes, radiosensitivity to ionizing radiation, DNA repair *(Russian)* 3–34893
- protons, neutrons, heavy ions and pions in radiotherapy, comparison 3–44292
- purple photosynthetic bacteria, photophys. processes in light-collecting pigments, mag. field influence 3–34880
- quality factor for low doses of high-LET radiations 3–58828
- radioisotopes incorporated in cells, transmutation effect rel. to irrad. effect 3–29658
- radiotherapy optimisation, evaluation of radiobiological parameters *(Russian)* 3–48326
- recovery kinetics of Chinese hamster cells after damage by step-up and step-down heatings combined with X-rays 3–9556
- rectal adenocarcinoma, mitotic process for various methods of preoperative irrad. *(Russian)* 3–34949
- reticulocytes, peripheral, amount as biologic dosimetry of ionising radiation, rabbit expts. 3–53723
- retina, injurious effects of light, singlet O_2 and lipid peroxides role 3–34889
- retinal photoreceptor cells, effects of heavy ions, anal. of DNA damage, rabbit obs. 3–53724
- rhabdomyosarcoma tumours, rat, irrad. in vivo with extended-peak Si ions, cell survival obs. 3–19782
- RIF-1 tumour system, discrepancies between patterns of pot. lethal damage in vitro and in vivo 3–44302
- Saintpaulia leaves, radiation stimulated repair, cellular basis, effects on mutation frequency 3–4554
- seeds, barley, temp. effect on γ-induced lesions repair 3–29643
- self-renewing normal tissues with differing proliferative organisation, effect of irrad. on function 3–9668
- skin cells, mouse foot, C ion beam irrad., response across Bragg peak 3–58745
- small intestinal mucosa, mouse, damage following X-irrad. or hyperthermia, SEM and TEM obs. 3–53735
- small intestine, mouse, cell death after low doses of neutron- or γ-irrad. 3–29615
- sperm, turkey, in vitro microwave irrad. rel. to fertilising capacity 3–58721
- spinal cord, rat, X-ray and neutron effects on repair and regeneration 3–44287
- stromal cells in continuous, long-term marrow culture, ultrastruct. and radiobiological characterisation 3–53732
- telencephalic neural cell proliferation kinetics during foetal regeneration following X-irrad. 3–15161
- thermocytes, rat, radiation-induced interphase death rel. to microvilli disappearance 3–15164
- thermophilic bacterium, radiation damage to membrane without concomitant lipid peroxidation 3–4564
- thymocyte subpopulation radiosensitivity determ. in rats, nucleoid viscosimetry method *(Russian)* 3–19666
- thymocytes, depressed DNaseI inhibitor and delayed DNA damage after X-irrad. 3–19774
- thymus of adult fish of Oryzias latipes, γ-irrad. effects on morphology 3–9680
- thyroid gland cells, effect of small radiation doses during embryogenesis from ^{131}I *(Russian)* 3–58742
- total body irradiation, pathological findings in lethally irradiated and reconstituted dogs 3–24813
- tumor cells, proliferating and resting, response to repetitive pulsed UV laser radiation 3–34888
- tumour cells, human, radioresistance conferred in vitro by pot. lethal X-ray damage repair 3–29670
- UV, shutter design, construction and operation 3–58888
- V79 cells, heat-resistant variant, characterisation and radiation response 3–44216
- vacuolar potential of Characean cells subjected to 200-8200 MHz radiation 3–39689
- whole-body irradiation in dogs protected by autologous marrow infusion, acute and delayed toxicity 3–24811
- X-irradiated mouse cells, replicon initiation, inhibition and resumption 3–48338
- X-irradiation and radiation modifiers, effect on cellular ultrastruct. 3–53731
- xeroderma pigmentosum cells, detect. of DNA single-strand breaks during UV damage repair 3–44299
- yeast, heat-shock induction of ionising radiation resistance 3–19781
- yeast, heavy-ion effects, survival and recovery in vegetative cells of different sensitivity 3–19777
- yeast, respiratory-deficient mutant, energetics of cellular repair processes 3–34801
- yeast cells, heavy ion effects, induction of canavanine-resistant mutants 3–29647
- yeast membrane, γ-irrad. effects on struct. and function 3–9673

cellular effects of radiation continued
- ^{125}I, encapsulated sources, apparatus and dosimetry for determ. of mammalian cell RBE 3—9801
- ^{125}I interstitial implants in the RIF-1 murine flank tumour, animal model for brachytherapy 3—4567

cellular method
- AlH_x, bound state induced by interstitial H 3—38342
- Li, band struct., variational cellular method 3—28261

cellular transport and dynamics
- *see also cell motility*
- axon, fast transport of transmitter, rapid and precise down regulation 3—29537
- axon, squid, membrane response to sequential voltage and current clamps 3—34812
- axonal transport, fast, in extruded axoplasm from squid giant axon 3—34829
- axonal transport, fast, in squid giant axon 3—34828
- blood, plasma and blood viscosities, and aggregation of red cells in racehorses 3—24749
- blood cell suspension, theoretical modelling of filtration 3—58615
- blood cell suspensions filtration, rel. to erythrocyte conc. 3—58614
- blood cell suspensions filtration, role of leukocytes 3—58613
- blood cell transport phenomena during dialysis deglycerolisation, computer simulation 3—53652
- blood plasma membranes, low-temp. alteration of permeability due to dehydration 3—34805
- blood platelet adhesion studies using flow cell 3—44349
- bone marrow pressure changes rel. to cellular egress 3—4519
- chloroplast thylakoid membranes, site-specific interaction of ATPase-pumped protons 3—4486
- cholinoreceptors, intracellular Ca^{2+} as inactivation initiator 3—29519
- chronic granulocytic leukaemia, NMR investig. of H_2O exchange 3—44206
- conductivity and permeability dynamics of cells at early times after γ-irradiation *(Russian)* 3—58735
- cyanobacteria, lateral transport of energy along coupling membranes, light-induced pot. changes 3—4485
- dielectrophoresis, appls. to cell dielec. props., cell sorting and cell fusion determ. 3—15307
- E. coli, model of H^+-K^+ transport systems 3—48270
- E. coli, systems of exchange of H^+ for K^+ ions 3—29516
- E. coli, systems of exchange of H^+ for K^+ ions 3—39610
- E.coli, systems for exchange of H^+ for K^+ ions, independence of functioning 3—24694
- electrophoretic mobility determ., laser Doppler velocimetry device 3—9796
- epithelium, lung, protein permeability rel. to lung inflation and alveolar edema 3—19740
- erythrocyte, motion along a capillary, hydromech. model *(Russian)* 3—24692
- erythrocyte membrane, porcine, spin-labelled compounds transport, ionising radiation effect 3—48334
- erythrocyte orientation in a flow, meas. by spin labelling, EPR spectra 3—48262
- erythrocyte sedimentation rate time curve 3—48264
- erythrocyte transport rel. to plasma viscosity and haematocrit 3—24750
- erythrocytes, human, 2450 MHz microwave irrad. effects on $^{24}Na^+$ efflux 3—29636
- erythrocytes, human, washed, spontaneous aggregation in isotonic media of reduced ionic strength 3—9563
- erythrocytes, rabbit, effects of X-band microwave exposure on K^+ efflux 3—39690
- erythrocytes sedimentation profiles under gravity, effect of inhomogeneous mag. field 3—39607
- eukaryotic flagella, 3D mechs. 3—34791
- fibroblasts initial attachment dynamics, diffusion model 3—44211
- filamentous cyanobacteria, spreading changes in elec. pot. 3—48272
- haemopoietic stem cell migration, irrad. conditions influence in mice *(Russian)* 3—19677
- heart mitochondria, isolated, H^+-dependent efflux of Ca^{2+} 3—34809
- heart muscle cells, uphill Na^+ transport driven by an inward Ca^{2+} gradient 3—48273
- inhibitory synaptic channels, reduction of Cl^- conductance by intracellular Cl^- accumulation 3—15066
- laser Doppler anemometry apparatus for meas. on individual red blood cells 3—9795
- leukocyte lysosomes, defective cystine transport in cystinosis patients 3—15053
- lymphocytes, bulbous, unconstrained lateral diffusion of concanavalin A receptors 3—4487
- microvascular bifurcations, flow conditions of red cells and plasma 3—9646
- mitochondria, respiratory chain, role of intramembrane elec. fields in electron and proton transfer 3—29515
- mitochondria, stressed, aeroions effect on forward and back electron transfer relationship 3—39614
- mitochondrial membranes, induction of H^+ transport 3—39611
- muscle tissue, red heterogeneous, myoglobin facilitated O transport 3—44219
- myoballs, rat, gating of single Ca^{2+}-dependent K^+ channels, activation/blockade mechanism 3—39615
- nerve conduction mechanism and excitation blocking, obs. using Raman spectra of carotenoids 3—34819
- neutral carrier Na^+- and Ca^{2+}-selective microelectrodes for intracellular application 3—35034
- Nitella flexilis, cell plasmalemma, selective props. of cation channels 3—39613
- Nitella internodal cell, entrained, harmonic, quasiperiodic and chaotic oscillatory responses to sinusoidal stimulation 3—44233
- nonlinear EM interactions in living systems, cell membrane and neurophysiology appl. 3—15148
- organelle volume rel. to ion transport through membrane 3—29514
- pituitary, anterior, single Ca^{2+}-dependent K^+ channels in clonal cells 3—4483
- proteoliposomes derived from rat cortical synaptosomes, high-affinity choline transport 3—4488
- purple membrane particles, microelectrophoretic props. 3—4484
- red blood cells, high-gradient mag. separation, transverse particle trajectories 3—34797
- retina, bee, faster O_2 uptake than Na^+ pumping after a light flash 3—44243

cellular transport and dynamics continued
- retinal rod outer segment cytoplasmic membrane, cyclic nucleotides effect on conductance 3—34837
- rheophoresis and platelet dispersivity 3—48263
- $tRNA_i^{Met}$, human variant, impaired nuclear transport 3—9570
- sartorius muscle, frog, intracellular local changes in resistance, effect of temp. and chemicals 3—48271
- structural changes in cells, computerised anal. 3—19676
- thyroid hormone, mitochondrial entry during acute cold exposure 3—34807
- UHF proton generators and cell membrane transport 3—29517
- ventral serve-photoreceptor of Limulus polyphemus, light-induced ionic current and intracellular Ca^{2+} conc. obs. *(German)* 3—39631
- vertebrate neuron, action pot. repolarisation rel. to transient, Ca^{2+}-sensitive outward current 3—19686
- vesicles of plasma membranes of cow parsnip phloem cells, active electrogenic transport of H^+ 3—39612
- voltage-dependent K^+ current, Ca^{2+}-mediated decrease, mollusc photoreceptor obs. 3—34804
- wheat seeds, NMR spin echo obs. of initial steps of swelling 3—34806
- Ca^{2+} channels of Paramecium, gating rel. to various ions 3—19678
- Ca^{2+} intracelluar conc. in frog cardiac cells, ionic diffusion theory 3—53651
- K^+ channel survival in axons externally and internally perfused with K^+-free media 3—24703
- Na^+, K^+-pump rel. to size of cell membrane pot. and intracellular ionic concs. 3—24695
- T 3—24698

cementation steel *see alloy steel*

cements (**building materials**)
- *used only for those materials which bind together particulate matter so as to form a coherent mass of considerable strength. For cements that cause two or more separate masses to adhere see adhesion*
- cement-concrete, anelastic props., elastic-plastic constitutive eqns. 3—51710
- mortar prism, dynamic deform. modulus and Poisson ratio eval. by resonance frequency method *(German)* 3—19477

centrifuges
- accelerometers checking, using double centrifuge, error analysis 3—49355
- plasma centrifuge, appl. to D_2O vapour decomposition 3—34621
- pressure measurement with instruments in centrifuges, allowance for mass of air 3—45135
- separator, centrifugal, integral characts. calcs. 3—40592
- standard means of accelerations reproduction, Soviet development 3—49353

ceramals *see cermets*

ceramics
- *see also refractories*
- β''-Al_2O_3-Na_2O-Li_2O-ZrO_2, transform. toughening by ZrO_2 addition 3—34438
- alumina, biaxial tension strength testing 3—44002
- basalt glass-ceramic, nucleation and crystallisation, small-angle neutron scatt. obs. 3—46859
- beta dosimetry for thermoluminescence dating 3—4972
- biomaterial application, review of history 3—49130
- brittle, thermal stress resist., quenching method, heat transfer coeff. effect 3—44004
- brittle fracture theory, cracks, TEM 3—51701
- brittle polycrystalline, role of cracks in creep deform. 3—34384
- carbide low-Z fusion reactor materials, surface comp. changes with ion bombardment and heat treatment 3—21522
- compacts, ion implanted, anomalous cantilever deflection due to blistering 3—47891
- composite, two-phase 3—46491
- composites, with elliptical inclusions, shear moduli 3—57012
- corrosion resistant materials, prep. and characts. *(French)* 3—53008
- creep, compression to tension rate ratio, struct. effect 3—43902
- creep, mech. charact., review 3—34383
- crystalline, high-level nucl. waste forms 3—6351
- crystalline, high-level waste form based on titanate minerals 3—6350
- development trends 3—43716
- disc, crack branching, biaxial flexure 3—43942
- electronic ceramics, grain boundaries, TEM study 3—51617
- ferroelectric, elec. and mech. losses 3—52747
- ferroelectric ceramic, transparent, interf. effect on electro-optical props. using polarisation method 3—38800
- ferroelectric ceramics, piezoelectric consts. calc. 3—28783
- ferroelectric transducers and sensors, book 3—25701
- fibrous silica material, transversely isotropic, fracture, double-cantilever beam testing 3—44003
- fine polycryst., review *(Japanese)* 3—47810
- firing process *(Czech)* 3—14822
- fracture toughness, loading rate depend., high temp., second phase effect, J concept appl. 3—53188
- glass ceramic, commercial, flexural strength and fracture toughness, surface finish effects 3—34418
- glass ceramics, crystn., microstructure, heat treatment effects, elec. resist. and thermal anal., review 3—33116
- glass-ceramic femoral cups, comp., manufacture and related props. 3—35026
- glass-ceramic fibre powder, crystallinity determ., X-ray diffr. study using Ruland's method 3—56825
- glass-ceramics appl. to radioactive waste disposal and as thermal shock resist. material 3—879
- grain boundary struct., TEM and diffr. studies, review 3—46956
- hard materials, future potential developments, mech. props. rel. to appl. 3—3981
- heat resistant materials, prep. and characts. *(French)* 3—53008
- high-level waste form for transportation and storage 3—6348
- hot isostatic pressing effect on porosity, sound velocity meas. eval. 3—9293
- insulator, surface flashover in vacuum at room and liq. N_2 temps. 3—18180
- IR dome ceramics, development status 3—7087
- Knoop and Vickers indentation, controlled flaws, residual stress field, fracture analysis 3—53312
- lateral crack system, elastic-plastic indentation damage in ceramics 3—27444
- low loss, prep. by modified ceramic method 3—19311
- materials for fusion reactors 3—26485

ceramics continued
- medical US imaging piezoelectric transducer optimisation criteria 3—4607
- metal oxide containing ceramic systems, temp. limit evaluation for subsolidus state *(Ukrainian)* 3—24215
- metallurgy conference, Paris, France (Oct. 1982) *(French)* 3—5488
- mica ceramics, nonadditive, fabrication by hot isostatic processing 3—9025
- microbeam analysis, conf., Washington, DC, USA (Aug. 1982) 3—25690
- mirror materials for synchrotron radiation, radiation resist. and polishability 3—7124
- nuclear waste ceramics, α-irrad. damage 3—36464
- optical, polycryst., light scatt., coeffs. w.r.t. relative density of medium 3—8841
- optical, thermal shock testing techniques 3—9264
- optical, toughened materials selection rationale 3—7097
- optical and electronic appls. 3—47809
- optical ceramic, type KO-2, strain, yield stress and stress relax. study 3—12258
- optical ceramic, type KO-4, tensile strength and yield stress temp. depend. 3—1730
- optical materials, comparative and limiting heat-resist. characts. 3—27177
- oxide, EXAFS, exam. of local atomic arrangements 3—38955
- pellets prod. with close shape tolerances, hot impact densification 3—969
- periclase, dielec. props. rel. to chem. and grain comp. 3—23874
- permanent magnets, KOEROX, production processes and mag. props. *(German)* 3—43402
- perovskite piezoelectric ceramics, future appl. 3—19065
- piezoceramic shells, eqns. of state 3—8770
- piezoceramic US transducers response, simple wave propag. anal. 3—42100
- piezoelectric ceramic, poled, nonlinear relax. of complex permittivity in uniaxial compression 3—38770
- piezoelectric ceramic acoustic radiators flaw detection using thermovisor 3—48022
- piezoelectric ceramic US transducer for pulse driving 3—1913
- piezoelectric for high power use *(Japanese)* 3—47607
- piezoelectric material selection for US clinical diagnostic system 3—4606
- piezoelectric plates, HF long-wavelength vibrs. 3—38769
- PLZT, effects of impurities on phys. props. *(Korean)* 3—3631
- PLZT, translucent, prep. *(Japanese)* 3—47808
- PLZT ceramic, hysteresis loops 3—28803
- PLZT electro-optic filters for fusion reactor material testing appls. 3—7143
- polarisers and applications, conf., San Diego, CA, USA (Aug. 1981) 3—5482
- porcelain, effects of fast neutrons on elec. resistivity, dosimetry appl. 3—26500
- porcelain, insulator temp., flashover voltage meas. procedure in vacuum 3—8766
- porcelain, struct. depend. of thermally induced microcracking, AE study 3—9152
- porous composites, US transmission spectra 3—51723
- processing in space, review 3—3990
- quartz containing porcelain subjected to low rate thermal changes, acoustic activity 3—53085
- rare earth oxide-Al_2O_3, solidification points for cmpds. in the system *(Japanese)* 3—4034
- rare earth ternary sulphides, AB_2S_4 type, opt. window materials for 8 to 12 μm airborne applic., development 3—7091
- reactor insulation, thermal conductivity 3—8278
- residual stress development 3—53170
- α-silicon, hot pressed, bending strength and fracture toughness *(Japanese)* 3—9183
- sintered materials, subcrit. crack growth determ. method 3—58363
- solar thermal receiver high-temp. ceramic-metal heat exchanger element 3—39521
- steatite, microstruct. and deterioration 3—53254
- strength evaluation using six-point bend method 3—44001
- strength under mech. and thermal loading, acoustic emission studies 3—44018
- subcritical crack extension, combination with statistics 3—13332
- superhard abrasive grains, wear against hard ceramics, SEM obs. *(Japanese)* 3—4151
- surface area and pore size meas. using flow adsorption method *(German, English)* 3—24421
- surface heating by arc plasma filament 3—39267
- Syalon ceramics development, fabrication and engng. applics. 3—29048
- ternary sulphide ceramics, powder prep., sintering, hot pressing 3—43783
- thermal fatigue life under mechanical load 3—19395
- thermal shock resistance determination, acoustic emission signal system appl. 3—44000
- transient electrooptic response meas. equipment with nanosecond time resolution 3—45184
- tuning fork resonator using shear mode piezoelectric ceramic 3—1914
- US piezoceramic probes appl. to medical diagnostics, fabrication technology effects obs. *(Czech)* 3—24815
- Zerodur, glass-ceramic, thermal props. at low temp. 3—8226
- Zerodur, heat capacity from 1.8 to 20K 3—33461
- zircon, sintering using SiO_2-TiO_2-Al_2O_3 liquid phase *(Japanese)* 3—3995
- $AgNbO_3$, phase transitions, dielec. props., domain struct., X-ray, DTA studies 3—57086
- $AgNb_{1-x}Ta_xO_3$, solid soln., dielec. props., phase transitions, DTA study 3—38748
- Al alloy-ceramic feedthrough 3—36028
- AlN, hot-pressed, high temp. fracture 3—39239
- AlN, powder, synthesis and characts. 3—58080
- AlN-SiO_2, containing long-period polytypes, charact. by fracture toughness 3—39093
- Al_2O_3 bend specimens, slow crack growth, increase of crack resist. 3—34442
- Al_2O_3 bone for hip endoprostheses and tooth root replacement, remodelling 3—58868
- α-Al_2O_3, corundum, abrasion-resistant ceramic development for drawing microwires 3—24193
- α-Al_2O_3, corundum, cast materials prod. using ethyl silicate binders, thermal shock resist. 3—24192
- α-Al_2O_3, corundum, thermal shock resistance improvement using additives 3—24194
- Al_2O_3 diffusion bonding to stainless steel using Al foil interlayers 3—24396
- α-Al_2O_3, electrical conductivity 3—52141

ceramics continued
- Al_2O_3, fine and coarse, pressed powder mixtures, density and strength *(Japanese)* 3—19301
- Al_2O_3, grain boundary struct., TEM and diffr. studies, review 3—46956
- Al_2O_3, hot isostatic pressing effect on porosity, sound velocity meas. eval. 3—9293
- β''-Al_2O_3, Li-stabilised, starting Al_2O_3 and prep. method effect on ceramic characts. 3—29043
- α-Al_2O_3, liquid phase sintered, grain boundary microstruct., TEM study 3—46966
- α-Al_2O_3, N_2-stabilised, ALON spinel, advanced opt. material fabrication 3—7089
- Al_2O_3 plasma sprayed coating, interlamellar contact, TEM study 3—24417
- β-Al_2O_3, powder processing and crystallisation 3—53000
- Al_2O_3, residual surface stress, caused by grinding, X-ray diffr. determ. 3—51903
- Al_2O_3, sintered, powder compacts, porosity effect on compressive strength 3—58061
- Al_2O_3, strengthening by heat treatment 3—43855
- Al_2O_3, temp. depend. of strength ionisation, relationship with structure *(Russian)* 3—14706
- Al_2O_3, translucent, polycrystalline, sintering, prod. conditions for capacitor appl. *(Japanese)* 3—58081
- α-Al_2O_3:Cr(Zr)(Ti), ion implantation and thermal annealing, channelling, EPR and microhardness study 3—46972
- Al_2O_3/Cr system, Fe^+ ion irrad. prep. of ceramic alloys, mech. props. 3—4000
- Al_2O_3/graphite mixture, microstructure development during carbothermic reduction 3—39079
- α-Al_2O_3/quartz (cristobalite), sintering rel. to mullite form. 3—53002
- Al_2O_3/Zr system, Fe^+ ion irrad. prep. of ceramic alloys, mech. props. 3—4000
- Al_2O_3-B_4C composite ceramics, sintering, densification, microstruct. development 3—47807
- Al_2O_3-B_4C composite pellets, moisture adsorption, microstruct. 3—47221
- β-Al_2O_3-N_2O polycryst. ceramic, dielec. loss 3—57859
- β''-Al_2O_3-Na_2O ceramics, Li_2O stabilised membrane, for Na-S cell, sintering process 3—14538
- Al_2O_3-SiO_2-ZrO_2, dispersion ceramic, twin boundaries in ZrO_2 particles, TEM 3—51614
- Al_2O_3-talc, fine and coarse, pressed powder mixtures, density and strength *(Japanese)* 3—19301
- Al_2O_3-ZrO_2, ZrO_2 tetragonal particles in ceramic matrices, stability 3—39120
- Al_2O_3-ZrO_2 composites, critical microstruct. for microcracking 3—39240
- Al_2O_3-ZrO_2 composites, K_{Ic} values, comparison of notched-beam and indentation strength technique 3—53313
- $AlTiO_5$ glass-ceramic, heat resistant, low thermal expansion coeff. 3—51829
- Ar ion plasma cleaning, Auger evaluation of contamination removal 3—43989
- As-Ge-Se chalcogenide glasses, controlled crystallisation in nucleated system 3—33123
- B_2O_3-Al_2O_3-SiO_2 system, glass ceramic form. 3—34273
- $Ba(A_{1/4}Nb_{3/4})O_3$ (A=Li, Na), prep., thermal change and dielec. props. 3—29044
- $Ba(A_{x/4}Nb_{3x/4}Ti_{1-x})O_3$ (A=Na,Li), cubic perovskite, prep., cryst. struct. and dielec. props. 3—52708
- $BaFe_{12-2x}Co_xTi_xO_{19}$ ceramic, magneto-optic Kerr effect 3—28840
- Ba_2FeMoO_6, anomalous magneto-optic Kerr effect, influence of oxidation 3—34075
- $Ba(Mg_{1/3}Ta_{2/3})O_3$ ceramics with temp. stable high dielec. const. and low microwave loss 3—14189
- $BaPb_{1-x}Bi_xO_3$ ceramic, superconducting props. *(Russian)* 3—18816
- $BaPb_{1-x}Bi_xO_3$ ceramic, Josephson tunnelling 3—23552
- $BaPb_{1-x}Bi_xO_3$ ceramic supercond., anomalous behaviour of thermodynamic props. 3—28480
- $BaTiO_3$, anomalous grain growth below eutectic temp. *(German, English)* 3—47862
- $BaTiO_3$ based powder, dielectric, comparison of calendered and tape cast form 3—34265
- $BaTiO_3$ based rods and plates, ultrasonic props. *(Russian)* 3—22982
- $BaTiO_3$ ceramic, ferroelec. phase transition, mag. field effects 3—47614
- $BaTiO_3$ ceramic capacitors, DC leakage in Poole-Frenkel field 3—3208
- $BaTiO_3$ ceramics, grain size effect on dielectric const. under DC biasing field 3—3634
- $BaTiO_3$, PTC device, grain boundaries, TEM study 3—51617
- $BaTiO_3$, Sb_2O_3 doped, release of O_2 during sintering 3—39081
- $BaTiO_3$, semiconducting, porous, factors, affecting positive temp. coeff. of resist. *(Japanese)* 3—3206
- $BaTiO_3$:Pb,Ca semiconductor ceramics, liquid phase sintered, positive temp. coeff. resist. 3—52130
- $BaTiO_3$-$SrTiO_3$ system, sintering, influence of interdiffusion and solid soln. form. 3—14533
- $Ba_2Ti_9O_{20}$, phase equilibria, 1100°-1400°C 3—43794
- $Ba(Ti_{1-y}Zr_y)O_3$ ceramics, diffuse ferroelec. phase transition 3—28789
- $BaTi_xZr_{1-x}O_3$, ferroelectric phases, domain-orientation process study 3—19086
- $Ba(Zn_{1/3}Nb_{2/3})O_3$-$Sr(Zn_{1/3}Nb_{2/3})O_3$ solid solution ceramics with temperature-stable high dielectric constant and low microwave loss 3—34025
- $Ba(Zn_{1/3}Ta_{2/3})O_3$-$Ba(Zn_{1/3}Nb_{2/3})O_3$, low dielec. loss, for use at microwave freqs. *(Japanese)* 3—47600
- Bi layer struct. cmpd., grain-oriented ceramic, prep. by unidirectional solidification of melt *(Japanese)* 3—58085
- C, vitreous and glass ceramic, neutron irrad., gas permeability 3—8241
- CaF_2, surface oxidation 3—14757
- Ca_2FeMoO_6, anomalous magneto-optic Kerr effect, influence of oxidation 3—34075
- $Ca_9H(PO_4)_6.(OH).3.3H_2O$, densification by hot isostatic pressing 3—58089
- $CaLa_2S_4$, opt. window material for 8 to 14 μm region, development 3—7092
- $CaLa_2S_4$ starting powder eval. for 8-14 μm region domes and windows fabrication 3—7090
- CaO-Al_2O_3-P_2O_5 glass composite, prep., struct. props., and prosthetic appls. 3—34274
- CaO-P_2O_5 glass-ceramics, high strength, prep. by unidirectional crystn. 3—29055
- $2CaO.P_2O_5$-$3CaO.P_2S_5$, eutectic, unidirectional solidification *(Japanese)* 3—4033

ceramics continued
- $CaO.SiO_2$-ZnO solid solution, polymorphism, hydration 3−43787
- $CaTiSiO_5$ glass for radioactive waste disposal medium 3−6319
- CdS ceramic, X-ray luminesc. *(Russian)* 3−3874
- CeO_2 ceramics, doped, grain boundary type Maxwell-Wagner peak in thermally stimulated depolarisation 3−8756
- CeO_2:Gd, solid electrolyte, prep. by thermal decomposition of mixed Ce-Gd oxalate 3−39078
- $Ce_{1-x}Y_xO_{2-x/2}$ ceramic, impedance, AC and DC, inhomogeneity contrib. 3−3188
- $CoFe_{2-x}M_xO_4$ (M=Mn, Cr, Al) ceramic, magneto-optic Kerr effect 3−28840
- $Cu_{60}Zr_{40}$, amorphous, possible metallic glass-ceramic, crystn., effect of O doping 3−51498
- $CuZr_2(PO_4)_3$, prep., ionic cond., and lattice parameters 3−42841
- Er_2O_3-ZrO_2 solid solutions, sintering *(Japanese)* 3−39084
- Fe_2O_3, acicular powder, sintering, pore struct., densification 3−58079
- γ-Fe_2O_3 ceramics, elec. resist. meas., gas sensitivity 3−52132
- α-Fe_2O_3 ceramics, gas sensing props., effect of SO_4^{2-} ion 3−34659
- Fe_2O_3, γ-α transform., effect of dry grinding Fe_3O_4 with added γ-Al_2O_3 3−53003
- Fe_2O_3 powder specimens, charact. and sintering 3−14545
- γ-Fe_2O_3 semiconducting ceramic gas sensor, life testing, appls. 3−30847
- α-Fe_2O_3:SO_4^{2-} ceramics, gas sensitivity, elec. resist. study 3−52134
- He liberation from irradiated ceramic materials, control purposes 3−28002
- HfO_2 powders, monoclinic, prep. by hydrothermal oxidation of Hf metal chips 3−53006
- KAg_4I_5 fast ionic conductor, prep. and characterisation 3−24190
- $K_{0.5}Bi_{0.5}TiO_3$-$Na_{0.5}Bi_{0.5}TiO_3$ ferroelec. ceramics, lattice parameters and phase transition, X-ray study *(Chinese)* 3−28785
- $K_2Ti_6O_{13}$, sintered, thermal props. 3−57154
- $La_{0.95}Ca_{0.05}CrO_3$, sintering in an oxidising atm. 3−3991
- $(La_{1-x}Ca_x)CrO_3$ ceramics, hot isostatic pressing and props. *(Japanese)* 3−3997
- Lab_6-Ni powder, hot pressing, densification kinetics rel. to Ni additon 3−47812
- Li-Al-N ceramics in liq. Li, thermodynamic stability 3−55645
- Li-Al-O ceramics in liq. Li, thermodynamic stability 3−55645
- $Li_{0.2}Na_{0.98}NbO_3$, ceramic and single cryst., ferroelectric phase transitions *(French)* 3−8782
- Li_2O blanket, materials and design solns. for breeding T 3−55591
- Li_2O-$2SiO_2$, glass and glass ceramic, aqueous durability 3−34499
- Li_2O-Al_2O_3-SiO_2 glass ceramics, microstruct. and grain growth 3−4003
- Li_2O-Al_2O_3-SiO_2 glass ceramic, flaw growth, indentation-produced 3−19393
- Li_2O-MgO-Al_2O_3-SiO_2, Fe_2O_3 doped, transparent glass ceramic, microstruct. and crystallisation 3−2423
- Li_2SiO_3 blanket, materials and design solns. for breeding T 3−55591
- $MgAl_2O_4$ spinel, F^- influence on synthesis 3−24189
- $MgAl_2O_4$ spinel, hot pressed, fabrication and props. for UV, visible and IR requirements 3−7088
- $MgAl_2O_4$ spinel IR domes, thermostruct. eval. 3−9265
- $MgAl_2O_4$-LiF, polycryst. spinel densified with LiF additions, morphological changes in intergranular thin film 3−14613
- $MgCr_2O_4$-TiO_2 humidity sensor, recent trends and applications of ceramic sensors 3−35983
- MgH_2O_4, spinel powders, prep. by thermal decomp. of freeze dried sulphate, charact. and sinterability *(Japanese)* 3−3994
- MgO, cation doped, bulk and {001} surface, calc. defect struct. 3−8045
- MgO compacts, sintering, surface area, pore size distribution 3−43784
- MgO, deform. study by Vickers, microhardness test. 3−29177
- MgO, dense and porous compacts, normal grain growth 3−8248
- MgO, grain boundary struct., TEM and diffr. studies, review 3−46956
- MgO, prep. and sintering, from natural magnesites 3−14537
- MgO, solubility of Al_2O_3 *(Japanese)* 3−38081
- MgO:Fe, grain boundary chem., analytical electron microscope study 3−46959
- MgO-$Ca_2P_2O_7$, $Ca_2P_2O_7$, addition effect on sintering *(Japanese)* 3−3996
- MgO-CaO-SiO_2-P_2O_5-CaF_2 glass-ceramics for prosthetic appl. 3−53123
- MgO-FeO-Al_2O_3-SiO_2 glass-ceramics with coal stone as main raw material 3−34275
- MgO-NiO-Al_2O_3-SiO_2 glass-ceramics, coordination of Ni^{II}, spectroscopic study 3−42528
- MgO-ZrO_2, partially stabilised zirconium ceramics, enhanced thermal up-shock resist. 3−4041
- γ-MnO_2, proton diffusion coeff. determ. by NMR *(French)* 3−3559
- Na_2O-B_2O_3-CeO_2-TiO_2(-Al_2O_3), porous glass ceramic, charact., prep. and props. 3−42535
- Na_2O-Fe_2O_3-NiO-B_2O_3-P_2O_5 glass ceramics, crystallised, mag. and elec. props. *(Japanese)* 3−58144
- $Na_{1-x}Si_xZr_zP_{3-x}O_{12}$, NASICON, superionic conductor, complex admittance plots 3−42835
- NiO, grain boundary struct., TEM and diffr. studies, review 3−46956
- NiO powders, cold pressing mechanism *(Serbian)* 3−34266
- NiO with small B_2O_3 additions, sintering mechanism 973 to 1373K *(Russian)* 3−47806
- PLZT ceramic electrically controlled retardation plate, phase modulation distortion 3−46283
- PLZT ceramic ferroelec., ion implanted, optical imaging and information storage 3−1588
- PLZT ceramic optoelectronic analogue, logic and switch devices 3−50748
- PLZT ceramics, grain boundary phenomena, electron microscopic study 3−18316
- PLZT ceramics, transparent ferroelec., appl. field induced birefr. mechanism 3−28834
- PLZT electro-optic shutter stereoscopic displays, advances 3−7150
- PLZT electro-optic min./const. voltage shutters 3−7151
- PLZT ferroelec. ceramic, dielec. props., permanent mag. field effects 3−57866
- PLZT ferroelectric ceramic controlled transparency arrays 3−27230
- PLZT fibre optic reflection coupler for bidirectional transmission 3−7177
- PLZT light gate array, high density, electro-optical, light transmission characts. 3−7152
- PLZT thick film, sintering props. and optical transmittance 3−39055
- PLZT wafer electro-optic shutter devices 3−7149
- (Pb,Ni)(Zr,Ti,Zn,Nb)O_3 ceramic, uniaxial compression, piezoelec. props., additives effect 3−14221
- $Pb(Fe_{1/2}Nb_{1/2})O_3$, ferroelec. perovskites form. mechanism and ceramic process 3−14577

ceramics continued
- $Pb(Fe_{2/3}W_{1/3})O_3$-$Pb(Fe_{1/2}Nb_{1/2})O_3$-$Pb_5Ge_3O_{11}$ solid solution, sintering dielec. props. 3−52702
- $Pb_5Ge_{3-x}Si_xO_{11}$ glass-ceramic prep. with high transparency, permittivity and Curie temp. 3−53001
- $Pb_{2-x}La_xLi_{0.5}Nb_{1.5}O_{6+\delta}$, ceramic solid solution, thermoelectric props. 3−52183
- $PbMg_{1/3}Nb_{2/3}O_3$, ceramic, elastic moduli, Debye temp. and specific heat 3−51690
- $PbMg_{1/3}Nb_{2/3}O_3$, fabrication scheme 3−19308
- $Pb(Mg_{1/3}Nb_{2/3})O_3$, ferroelec. perovskites, form. mechanism and ceramic process 3−14577
- PbO-B_2O_3-Al_2O_3-Fe_2O_3-Y_2O_3 glass-ceramics, mag. props. 3−57833
- $Pb_{1-x}R_xTi_{1-y}Mn_yO_3$ ceramics, R=rare earth, electromech. props. and transducer appl. 3−14217
- $Pb(Sc_{1/2}Ta_{1/2})O_3$ ceramics, reversible pyroelec. effect under DC bias 3−38771
- $PbTiO_3$ planar transducer for short-pulse US generation 3−46427
- $PbTiO_3$ US linear array probe, 7.5 MHz 3−50872
- $PbTiO_3$-Ca-$Pb(CoW)_{1/2}O_3$ US array transducer 3−50896
- $PbTiO_3$-$La(Zn_{2/3}Nb_{1/3})O_3$ ceramics, high-voltage photovoltaic effect, MnO_2 doping influence 3−33755
- $PbTiO_3$-$PbZrO_3$-$PbNb_{2/3}Zn_{1/3}O_3$-$PbSb_{2/3}Mn_{1/3}O_3$-$PbW_{1/2}Mg_{1/2}O_3$, region of morphotropic transition 3−9041
- Pb(Zr,Fi)O_3 hollow spherical piezoelectric elements operating at large static pressure 3−27339
- $Pb(Zr, Ti (Mn_{1/3}Sb_{2/3}))O_3$ piezoelec. ceramics, used for thickness shear mode and appls. 3−1891
- Pb(Zr, Ti)O_2 piezoelectric ceramics, material property meas. 3−19068
- Pb(Zr,Ti)O_3 ceramics, ageing *(French)* 3−52739
- Pb(Zr,Ti)O_3 piezoelectric ceramic transducer for HF US power generation, vibr. characts. 3−1917
- Pb(Zr,Ti)O_3 piezoelectric disks, transient voltage produced by mech. disturbances 3−47609
- Pb(Zr,Ti)O_3-type piezoelec. ceramics, physical props. 3−52733
- $PbZrO_3$, ceramic, elastic moduli, Debye temp. and specific heat 3−51690
- Pb(Zr.Ti)O_3 ceramic transducers, bevelling effect on thickness vibrs. *(Japanese)* 3−17763
- $PbZr_{1-x}Ti_xO_3$ ceramics, doped, low field poling, dielec. and piezoelec. props. 3−38750
- $Pb(Zr_{1-x}Ti_x)O_3$:Nb, 95/5 PZT ceramics, cryst. and domain struct., TEM study 3−23894
- $Pb(Zr_xTi_{1-x})O_3$, prep. by appl. of elec. field, sluggish transition between tetragonal and rhombohedral phases 3−14535
- $PbZr_xTi_{1-x}O_3$ textured ferroelec. piezoceramic, polarisation process 3−52709
- $^{238}PuO_2$ fuel pellet fabrication for space vehicle isotopic heat sources 3−24187
- Si-Al-O-N system sialon refractories, prep. and props. 3−29045
- Si-O-N-M (M=Mg, Y, Ca, Be or Zr,) reaction bonded and hot pressed ceramics, phase equilib. and mech. props. 3−58112
- $Si_{6-z}Al_zO_zN_{8-z}$, β-sialons, IR absorpt. spectra study 3−8820
- SiC, grain boundary films, characterisation, TEM study 3−51622
- SiC, siliconised ceramic for solar energy receiver/convertor 3−39516
- SiC structural ceramics, defect detection, appl. of NDT techniques 3−39325
- Si_3N_4, acoustic method of crack detection 3−44032
- Si_3N_4 ceramic test bars, scanning photoacoustic microscopy for NDT, comparison with scanning laser acoustic microscopy 3−48029
- Si_3N_4 ceramics, hot-pressed, high-temp. strength and fatigue, effect of billet differences 3−9157
- β-Si_3N_4 coating, CVD, surface morphology, X-ray diffr. obs. 3−43750
- Si_3N_4, dielec. props., impurities effect 3−23870
- Si_3N_4, direct crystn. from amorphous to β-phase under high press. 3−14531
- α-Si_3N_4, EM window material, CVD, opt. props. 3−8789
- Si_3N_4 flaw detection, 50 MHz US three-dimensional synthetic focus system 3−4254
- Si_3N_4, grain boundary struct., TEM and diffr. studies, review 3−46956
- Si_3N_4, hot pressed, crack velocity at bending fracture *(Japanese)* 3−4131
- Si_3N_4, hot pressed, microstruct. rel. to heat treatment, air and Ar atmospheres 3−53005
- Si_3N_4, hot pressed, strength, effect of high temp. exposure in air 3−58263
- Si_3N_4 hot pressed dielectric material, quality control 3−24195
- Si_3N_4, hot-pressed, electron microscopy obs. of microstruct., grain boundary struct. 3−51612
- Si_3N_4, hot-pressed, preoxidised, static fatigue 3−53190
- Si_3N_4, mechanochem. polishing, AES study 3−9207
- Si_3N_4 powders, high press. hot pressing, densification, α to β phase transform., hardness, fracture toughness, temp. depend. *(Japanese)* 3−58084
- Si_3N_4, probabilistic failure prediction, rel. to near surface cracks 3−44033
- Si_3N_4, reaction bonded, prep. and additives effect on vitrification of grain boundary phases 3−29040
- Si_3N_4, solid state reaction with Ni-base alloy 3−38239
- Si_3N_4, tensile testing, optical and SEM obs. 3−39326
- Si_3N_4-MgO materials, compressive creep, activation energy, high temp. obs. 3−29126
- Si_3N_4-SiO_2-AlN β-sialons, mol. and cryst. struct., IR absorpt. spectra obs. 3−23929
- SiO_2 film, thermal nitridation 3−19435
- SiO_2 thin films, selective deposition in acid baths 3−3978
- SiO_2 vitreous ceramic for optical glass making 3−29047
- SiO_2-TiO_2-Al_2O_3 liquid phase, appl. in zircon sintering *(Japanese)* 3−3995
- $Sr(A_{1/4}Nb_{3/4})O_3$ (A=Li, Na), prep., thermal change and dielec. props. 3−29044
- $Sr(A_{x/4}Nb_{3x/4}Ti_{1-x})O_3$(A=Na,Li), cubic perovskite, prep., cryst. struct. and dielec. props. 3−52708
- $Sr_{0.5}Ba_{0.5}Nb_2O_6$:Cu ceramics, ageing study, photovoltaic meas. 3−8524
- Sr_2FeMoO_6, anomalous magneto-optic Kerr effect, influence of oxidation 3−34075
- $SrO.xFe_2O_3$ anisotropic magnets, optimum prep. conditions and mag. props. *(Japanese)* 3−57705
- $SrTiO_3$:La, quenched and reduced ceramic, elec. cond. 3−52145
- $SrTiO_3$:Y^{3+}(Nb^{5+}) 3−23853
- $SrTiO_3$-Ba(Ca)TiO_3, solid solutions, X-ray phase anal., dielectric props. 3−9023
- ThO_2, Hertzian crack growth, serial sectioning obs. 3−14793
- TiB_2-CoB, boride additives effect on mech. props. 3−24323
- TiB_2-Ni, struct. and comp., analytical electron microscopy obs. 3−14900

ceramics continued
TiB$_2$-Ni ceramics, hot pressing, fracture, thermal expansion, microstruct., comp. depend. 3—43941
TiC, single cryst., oxidation, TEM obs. of early stages 3—14759
TiC/TiB$_2$ microlaminate coating, vacuum evaporated, struct. and mech. props. meas. 3—24202
TiO$_2$ ceramic, cation contamination effects on elec. resist., microstruct. and discoloration 3—33718
TiO$_2$ ceramic pellets with asymmetrical elec. cond. unusual microstruct. 3—27972
TiO$_2$ monodisperse powders, form., packing and sintering 3—39080
TiO$_2$:Ba, second phase development 3—38135
TiO$_2$-SnO$_2$, system, precipitation from soln., grain growth *(Japanese)* 3—58082
(U,Pu)C and (U,Pu)(C,O), fuels for fast breeder reactor, fracture surface energy, fracture toughness 3—55140
YIG crystallisation in Na$_2$O-SiO$_2$-Y$_2$O$_3$-Fe$_2$O$_3$ glass system, effect of nucleating agents 3—29196
YIG, low loss, prep. by modified ceramic method 3—19311
Y$_2$O$_3$-ZrO$_2$, plasma sprayed layers, vertical cracking, surface oxidation, densification under laser treatment 3—53247
Y$_x$(Si, Al)$_{12}$(N, O)$_{16}$ α-sialon, struct. refinement from X-ray powder diffr. data 3—22847
ZnAl$_2$O$_4$, form. kinetics, effect of reactant dispersion in powder mixture *(Japanese)* 3—58086
ZnO, ceramic semicond., nonlinear cond., potential barriers, voltage contrast imaging in secondary electron microscope 3—52162
ZnO combustible and freon gas sensors, recent trends and applications of ceramic sensors 3—35983
ZnO, ultrafine powder prep. by CVD using Zn acetylacetonate *(Japanese)* 3—58088
ZnO varistor, fabrication, grain growth control using seed grains 3—53010
ZnO varistor, grain boundaries, TEM study 3—51617
ZnO-Al$_2$O$_3$-SiO$_2$ glass-ceramic, particulate, indentation hardness 3—4111
ZnO-Cr$_2$O$_3$ humidity sensor, recent trends and applications of ceramic sensors 3—35983
ZnS phosphors with plate microcrystals, prep. and characts. *(Japanese)* 3—47715
ZnS, static and impact loading, comparisons 3—14702
ZnSiO$_4$:Mn(As) phosphors with improved cathodoluminescence performance, synthesis technique 3—24197
Zn$_2$SiO$_4$ glass-ceramic, He diffusion, density, refractive index, thermal expansion coeff., thermal history depend. 3—56827
Zr-O-F ceramics, for immobilisation of Zircaloy nuclear waste, fabrication and props. 3—6316
ZrO$_2$, CaO stabilised, electronic cond. and O$_2$ semipermeabiity 3—23079
ZrO$_2$, modified abradable seal coating for high temp. gas turbine appls. 3—4210
ZrO$_2$ monoclinic, high resolution electron microscopy, martensite transform. and domain struct. 3—39145
ZrO$_2$, partially stabilised, two-wavelength X-ray analysis of transformed zone 3—14602
ZrO$_2$, partially stabilised, PSZ, solute partitioning, STEM anal. 3—29068
ZrO$_2$, partially stabilised, PSZ, stress-induced transform. during subcrit. crack growth 3—29163
ZrO$_2$ powder, shock-induced reactivity enhancement 3—14530
ZrO$_2$ powder, tetragonal to monoclinic phase transformation, water vapour effect 3—58118
ZrO$_2$ powder, ultrafine tetragonal, hydrothermal treatment at 100 MPa 3—43781
ZrO$_2$ tetragonal particles in ceramic matrices, stability 3—39120
ZrO$_2$ thermal barrier coating, plasma sprayed, laser glazed, cyclic oxidation and corrosion 3—4173
ZrO$_2$ toughened Al$_2$O$_3$, X-ray microanal. and electron microscopy of ZrO$_2$ particles 3—39160
ZrO$_2$-Y$_2$O$_3$ (15 wt.%), temp. depend. of strength ionisation, relationship with structure *(Russian)* 3—14706
ZrO$_2$-Y$_2$O$_3$ solid soln., stabilised, hydrostatic press. depend. of elastic behaviour and stability against shear 3—14633
ZrO$_2$-Y$_2$O$_3$ system, subsolidus phase equilibria, ordering, eutectoid reactions, DTA obs. 3—43793
ZrO$_2$-Y$_2$O$_3$-Cr$_2$O$_3$, pseudoternary system, phase equilib. at 1600°C in air 3—14580

Cerenkov counters *see Cherenkov counters*

Cerenkov radiation *see Cherenkov radiation*

cerium
see also nuclei with ......
$\alpha \rightleftharpoons \alpha'$ polymorphic press.-induced transition, elec. resist. and thermoelec. studies 3—37837
γ-α phase transition, 4f features in valence band, photoemission study 3—33434
Atlantic Ocean, rare earth element distrib. 3—35191
atom, coherent neutron scatt. lengths *(German)* 3—11945
atom, partial photoionis. cross-sections in 4d reson. region 3—41534
band struct., cohesive props. and Compton profile of γ-and α-Ce 3—57268
comparison of loss and absorpt. spectra *(Russian)* 3—34184
electron excited Auger and autoionisation spectra, comparison with resonant photoemission 3—3875
Kondo vol. collapse and γ to α transition 3—3413
Kondo volume collapse in dilute and concentrated cases, γ-α transition 3—52364
mixed-valent impurities in metals, model, Bethe-ansatz soln. of groundstate 3—28295
monopnictides, MZ:Ce (M=Sc, Y, La; Z=As, Sb, Bi), cryst. field splitting and single-ion exchange, elec., mag., and ESR study 3—18985
N$_{4,5}$ appearance potential spectra interpretation *(Russian)* 3—34171
phase diagram and three phases with FCC structure 3—47089
photoemission spectra and γ-α phase transition 3—34196
silica glass:Ce, absorption and fluorescence spectra, melting and heat treatment effects 3—34140
valence, electronic and struct. environment effects 3—3128
X-ray absorpt. and XPS peak energies, selection rules and multiplet effects 3—57999
CaF$_2$:Ce, Zeeman IR spectra, optical absorption and fluorescence meas. 3—19124
CaF$_2$:Ce^{3+}, level splitting, odd parity cryst. field effects 3—52090
CaF$_2$:Ce^{3+}, vacuum UV excitation spectra of luminescence 3—14320
CaO:Ce, phosphor system, sensitised electrolum. 3—8885

cerium continued
CaS, Ce activated, polycryst., thermolum. due to intrinsic point defects 3—3832
CaS:Cu,Ce phosphors, photoluminesc. and electroluminesc. 3—47683
Ca$_{1-x}$Sr$_x$S:Ce and CaS:Ce phosphors, preparation and cathodoluminesc. 3—52855
Ce-W cathode surfaces, conc. and distrib. of Ce *(Chinese)* 3—23141
^{138}Ce-^{138}La geochronometer, new dating method 3—25244
^{144}Ce, liver neoplasms, neoplasms, prod. in Chinese hamster, interaction of ^{144}Ce and partial hepatectomy 3—4565
Gd$_2$SiO$_5$:Ce single crystal scintillator, luminescence props. meas. 3—28883
La$_3$WO$_6$Cl$_3$:Ce^{3+}, luminesc. studies 3—52837
LiTmF$_4$:Ce^{3+}, Nd^{3+}, Er^{3+}, Yb^{3+}, magnetisation of non-Kramers ions, ESR study 3—14127
RPO$_4$:Ce^{3+}, R=Sc, Y, Lu, hyperfine parameters EPR study 3—33975
SrF$_2$:Ca^{3+}, level splitting, odd parity cryst. field effects 3—52090
SrF$_2$:Ce, Zeeman IR spectra, optical absorption and fluorescence meas. 3—19124
(Y, Gd)F$_3$:Ce^{3+}, Eu^{3+}, energy transfer from Ce^{3+} to Eu^{3+}, quantum efficiency 3—43607
Y$_2$SiO$_5$:Ce, luminescence excitation spectra, caused by synchrotron radiation *(Russian)* 3—57964

cerium alloys
dilute Ce ions recoil implanted into metallic elements, local mag. moment form. 3—47476
intermetallic cpds., with nontransition metals, valence states, heat of form. calcs. 3—52082
mag. struct. and transitions, band struct. 3—18858
mixed valent, L$_{III}$ absorpt. edge studies 3—14386
valence fluctuation cpds., metallic point contact spectra 3—3298
Ce-La-Ni-Al(Mn)-Co(Cr)(Cu)(Nb)(Ti)(V)(Zr), absorption and desorption of H$_2$ 3—48090
Ce-La-Ni-H-Al(Fe), hydriding and dehydriding kinetics 3—48048
CeAg$_{1-x}$In$_x$, elec. and mag. props. 3—52419
CeAl, resonant photoemission study 3—3916
CeAl$_2$, bound state between cryst. field excitation and phonon 3—23338
CeAl$_2$, Kondo alloy, elastic props., ultrasonic vel. study 3—18366
CeAl$_2$, mag. ordering, electronic struct., LMTO calcs. 3—57508
CeAl$_2$, transport phenomena 3—18683
CeAl$_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3—8233
CeAl$_3$ dense Kondo system resistivity and periodic Anderson model 3—52123
CeAl$_3$, magnetoresistivity meas. 3—52115
Ce$_{1-x}$Al$_x$, metallic glass, thermal conductivity study 3—18677
Ce$_{89}$Al$_{11}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
CeAl$_2$(Pd$_3$)(Rh$_3$)(Ru$_2$), electronic struct., photoemission study 3—43015
Ce$_{80}$Au$_{20}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
CeCd, mag. and struct. phase transitions, at high press. 3—51781
Ce$_{72}$Cu$_{28}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
CeCu$_2$Si$_2$, effect of composition on superconductivity 3—57455
CeCu$_2$Si$_2$, heavy fermion systems, gapless supercond. and transition temp. variation 3—52294
CeCu$_2$Sn$_2$, cryst. struct. and mag. props. *(Russian)* 3—27896
Ce(Fe$_{0.8}$Al$_{0.2}$)$_2$, elec. resist., 1.5 to 300K, spin glass phase 3—23357
Ce(Fe$_{0.8}$Al$_{0.2}$)$_2$, magnetisation meas., spin glass behaviour 3—33905
CeGa$_6$Ni$_{1-x}$, cryst. struct. 3—33190
(Ce$_{1-x}$Gd$_x$)Ru$_2$, mag. supercond., NMR study 3—57476
CeH$_x$ (x=2.1, 2.9), XPS studies of electronic struct. 3—39008
CeIn$_3$, mag. form factor, neutron studies 3—52380
CeIn$_3$, self-consistent APW band calcs. 3—52022
Ce(In$_{1-y}$Sn$_y$)$_3$, behaviour in mixed valence and Kondo regimes 3—23333
CeIn$_{3-x}$Sn$_x$, mixed valent system, elec. cond., specific heat 3—23332
Ce$_{1-x}$La$_x$Ag, elec. and mag. props. 3—52419
Ce$_{1-x}$La$_x$Cu$_2$Si$_2$, elec. cond., transition from Kondo lattice to Kondo impurity 3—43163
(Ce$_{0.55}$La$_{0.45}$)Ni$_{4.5}$Al$_{0.5}$D$_3$, equilibrium and kinetic props. of hydriding and dehydriding 3—48049
CeMg, Neel temp., press. depend. 3—57617
CeMg$_{12}$, hydride form. mechanism and kinetics 3—48051
CeNi$_5$, paramag., susceptibility densities, thermal depend., polarised neutron study 3—57518
CeNi$_{5-x}$Cu$_x$, H storage and desorption, hydride heat of form. 3—24641
CePb$_3$, thermodynamic and mag. props. 3—47512
CePd$_3$, electron tunnelling spectra 3—3292
CePd$_3$, field induced paramagnetic form factor 3—28504
CePd$_3$, magnetisation and elec. cond. 3—28505
CePd$_3$, optical cond., refl. spectra 3—3672
CePd$_3$, point contact spectroscopy 3—28415
CePd$_{3+x}$, low temp. sp. ht. and elec. resist. 3—42801
Ce(Pd$_{1-y}$Ag$_y$)$_3$, behaviour in mixed valence and Kondo regimes 3—23333
CePt, resist. and magnetisation meas. 3—47482
CePt$_{2-x}$Rh$_x$, lattice parameter, X-ray diffr., ^{195}Pt NMR Knight shift studies 3—51543
CeRh$_3$, self-consistent APW band calcs. 3—52022
CeSb, thermodynamic props., invest. by vapour press meas. 3—19321
CeSn$_3$, Fermi surface props., dense Kondo and mixed valence models 3—52010
CeSn$_3$, high temp. heat capacity 3—33467
CeSn$_3$, magnetostriction meas. 3—28673
CeSn$_3$, self-consistent APW band calcs. 3—52022
Ce(Sn$_x$Pb$_{1-x}$)$_3$, elec. cond., mixed valence behaviour 3—28334
Ce$_{1-x}$Y$_x$Co$_5$, absorption of H in 20-50°C range *(Russian)* 3—47212
CeZn, Neel temp., press. depend. 3—57617
Fe, cast, white, mischmetal effect on microstructure and mech. props. 3—24327
Ho-Ce, mag. struct. neutron diffr. study 3—52373
(La$_{1-x}$Ce$_x$)Sn$_3$(Th)(Be$_{13}$), behaviour in mixed valence and Kondo regimes 3—23333
Ni-Ce-Y-C, graphite morphology and microdistrib. of Ce and Y modifying agents 3—39108
Pd-Ce (12.5 at.%Ce) solid soln., LRO and superlattices, phase diagram obs. 3—19319
Th-Ce, dil., supercond. transition temp. depression rel. to Ce valence 3—3128
Y-Cu-Ce, dilute amorphous alloy, crystal field, neutron diffr. study 3—23337

cerium compounds
- *see also cerium alloys*
- photoemission, core and valence spectra in limit of large degeneracy 3–47753
- pnictides, 4f and core level X-ray photoemission satellites 3–58035
- valence instabilities and mag. ordering 3–18664
- $BaCe(CO_3)F$, Huanghoite, cryst. superstructure determ., direct solutions *(Chinese)* 3–18264
- $Ba_{1-x}Ce_xFe_{18}O_{27}$ ferrites, mag. props. and Mossbauer spectra 3–57604
- Ce^{3+} system, X-ray electronic spectra of inner levels, terminal state of photoionised system 3–28934
- Ce-Si-O-N, reaction bonded and hot pressed ceramics, phase equilib. and mech. props. 3–58112
- CeAs, mag. props., neutron scatt. studies 3–52379
- CeB_6, ^{11}B spin echo NMR, mag. field depend. 3–28737
- CeB_6 and alloys, dense Kondo behaviour 3–52361
- CeB_6, antiferromag. phase, ^{11}B NMR spin echo study 3–52665
- CeB_6, de Haas-van Alphen study 3–8401
- CeB_6, elastic consts., US attenuation 3–51689
- CeB_6, mag. form factor meas., polarised neutron diffr. study 3–57543
- CeB_6, self-consistent APW band calcs. 3–52022
- CeB_6, spin dynamics, NMR study 3–52657
- CeB_6, spin struct., NMR study 3–57793
- CeB_6, valence fluctuation systems, mag. props., review *(Japanese)* 3–28310
- $CeBa(CO_3)_5F_2$, cebaite, cryst. struct., electron diffr. and lattice image study *(Chinese)* 3–18263
- CeBi, crit. neutron scatt. near antiferromag. ordering temp. 3–18909
- CeBi, mag. props., cryst. field splittings, mixing mechanism 3–52326
- CeBi, mag. props., neutron scatt. studies 3–52379
- $Ce_{1-x}Ca_xO_{2-x}$, solid soln., ionic cond. study *(French)* 3–28150
- $CeCl_3$, X-ray emission and absorption spectra, rel. to bond ionicity 3–58006
- $CeCl_3$-KCl(-AgCl) melts, thermodynamic props. *(Chinese)* 3–51825
- $CeCu_2Si_2$, heavy fermion supercond., crit. fields 3–13974
- $CeCu_2Si_2$, single cryst., supercond. obs. under high press. 3–38525
- CeD_{2+x}, FCC solid soln., hydrogen ordering and superlattice struct., neutron diffr. study 3–33217
- CeF_3, elastic props., Brillouin scatt. study 3–47021
- $CeF_3:Gd^{3+}$, point charge and induced dipole model anal. of spin Hamiltonian parameters 3–57321
- CeH_2, electronic struct., photoemission study 3–43015
- CeH_x (x=2.1, 2.9), XPS studies of electronic struct. 3–39008
- CeH_x, non-stoichiometric, XPS, UPS spectra and density of states 3–39009
- $Ce_{1-x}La_xB_6$, elec. resist. meas., scatt. mechanisms 3–52122
- $Ce_xLa_{1-x}Sb$, reverse magnetostriction effects in [001] shape magnetostriction 3–8708
- $Ce_{1-x}La_xSb(Bi)$, anomalous mag. and transport props. 3–52591
- $Ce_yLa_{1-y}Si_{2.00}$, mag. and nonmagnetic behaviour 3–52482
- $Ce_2Mg_3(NO_3)_{12}$ powdered thermometers for temp. range 10 mK to 4K 3–307
- $Ce_2(MoO_4)_2(Mo_2O_7)$, cryst. struct., X-ray and Fourier anal. study 3–8000
- CeN, mag. props., neutron scatt. studies 3–52379
- CeO identification in long period variable R Cygni visible spectrum 3–10337
- CeO, identification of new features in spectrum of S-type star π^1 Gruis 3–59337
- CeO_2 ceramics, doped, grain boundary type Maxwell-Wagner peak in thermally stimulated depolarisation 3–8756
- CeO_2, crystn. and cryst. growth under hydrothermal conditions, mineralisers effect 3–19261
- CeO_2, IR optical props., refl. and transmission spectra 3–23947
- CeO_2 thermal barrier coating on superalloys, dip process 3–43996
- CeO_2:Gd, solid electrolyte, prep. by thermal decomposition of mixed Ce-Gd oxalate 3–39078
- CeO_2-CaO($YO_{1.5}$) solid solns., ionic cond. study *(French)* 3–28149
- CeO_2-$YO_{1.5}$, solid soln., dipolar dielec. relax., vacancy redistribution 3–52720
- CeO_2-ZrO_2-Y_2O_3-ThO_2-HfO_2-La_2O_3-Na_2O-B_2O_3, heat resistant nonsilicate porous glasslike material, prep., leaching 3–58110
- CeP, mag. props., neutron scatt. studies 3–52379
- $Ce(PO_3)_3$, Raman spectra 3–34099
- $CeRh_3B_2$, NMR, mag. and superconducting studies 3–23819
- CeSb, de Haas-van Alphen effects, p-f mixing theory 3–52011
- CeSb, mag. props., cryst. field splittings, mixing mechanism 3–52326
- CeSb, mag. props., neutron scatt. studies 3–52379
- $CeSi_2$, resonant photoemission study 3–3916
- $CeSi_x$, mag. and nonmagnetic behaviour 3–52482
- $CeSn_3$, thermodynamic props. study 3–2838
- CeTe, mag. form factors, polarised neutron diffr. study 3–57542
- $CeVO_4$, neutron powder diffr. study, bond distances determ. 3–7971
- $Ce_{1-y}Y_yB_6$, elec. resist. meas., scatt. mechanisms 3–52122
- $Ce_{1-x}Y_xO_{2-x/2}$ ceramic, impedance, AC and DC, inhomogeneity contrib. 3–3188
- $(La,Ce)B_6$, dil., Kondo system, Hall coeff., mag. field depend. 3–57335
- $La_xCe_{1-x}F_3:Gd^{3+}$, EPR linewidth study 3–43431
- Na_2O-B_2O_3-CeO_2-TiO_2(-Al_2O_3), porous glass ceramic, charact., prep. and props. 3–42535
- $Pb_{1.2-x}Ce_xMo_6S_8$, supercond. and mag. props. 3–57453
- SiO_2-Ce_2O_3-Al_2O_3(Na_2O) glass, luminescence and IR absorption spectra 3–14353
- $(U, Ce)O_2$, mixed oxide fuel, cation distribs., neutron scatt. study 3–26318
- $(Y,Ce,Gd,Tb)F_3$ system, energy transfer phenomena 3–8871
- ZrO_2-CeO_2-Y_2O_3(CaO), ionic conductivity, lattice parameter effects 3–8246
- ZrO_2-Y_2O_3-CeO_2, conductivity and transfer no. 3–57393
- Zr_2O_3-Y_2O_3-Co_2O_3-system, solid state synthesis of fluorite, kinetics and mechanism 3–24216

cermets
- $3Al_2O_3.2SiO_2$-Mo, mullite based composite, high temp. creep, diffusion-viscous flow 3–9118
- cast, particulate composites, fabrication expts. in space 3–3998
- plasma etching of cermet films, two-stage process 3–53250
- refractory-metallic binder composite, sintered, anomalous behaviour of liq. metals in flat capillaries 3–58090
- steel, stainless, –C(Si) sputtered solar selective surfaces, optical props., effect of Ar press. 3–53574

cermets continued
- Ag-CdO cermet contact, fabrication using ultrasound, physical and mechanical props. improvement *(Bulgarian)* 3–43843
- Al_2O_3-Cr(Pt) insulators, thermal-shock-resistant, prep. and characteris. 3–24198
- Au-MgO selective cermets optical props., application in solar absorber-convertors 3–29451
- Au-SiO_2, fault struct. form. during coalescence and growth of Au particles 3–13234
- Au-SiO_2, fault struct. form., mechanism in fine particles 3–13235
- Co-Al_2O_3 cermet film, electron beam coevaporated, dielec. function meas. 3–8895
- Cr_7C_3-Fe composite, phase constitution and chem. comp. of phases formed during sintering 3–58092
- GeTe, characteristics of $\alpha \rightarrow \gamma$ phase transform. 3–9056
- Mn/SiO_2 thin cermet films, conductivity and Hall constant meas. using van der Pauw technique 3–38491
- Mo-Al_2O_3 cermet photothermal absorber coatings, surface roughness and thermal stability 3–8385
- Mo-Al_2O_3 cermet photothermal absorbers, roughened graded-index, with very high absorptivities 3–19604
- Mo-MoO_2, solar absorptance, surface texture influence 3–4409
- Ni-SiC cermet coatings, mech., thermal and tribological props. 3–3019
- Pt-Al_2O_3 cermet photothermal absorber coatings, surface roughness and thermal stability 3–8385
- Pt-Al_2O_3 cermet/Al_2O_3 sputter-deposited multilayer selective absorber coatings, thermal stability 3–8384
- TiB_2-Fe composite, sintered, transverse rupture strength, temp. depend. 3–58242
- TiB_2-Fe-Mo cermet, sintering, effect of TiB_2 fine struct. 3–24201
- TiB_2-Ni ceramics, hot pressing, fracture, thermal expansion, microstruct., comp. depend. 3–43941
- TiC-Fe, Ni, with different binder concs. in alternating layers, prod. and struct. form. 3–58091
- TiC-Ni microlaminate condensate, microstruct., phase anal. and tensile tests 3–14600
- WC hard metals, strength and microstruct. parameters, new statistical relation 3–14662
- WC-Co, cemented carbide prod., influence of trace elements 3–3999
- WC-Co, crack resist. testing, 20-2000°C 3–58329
- WC-Co, intergranular cracking, appl. of von Mises criterion 3–53172
- WC-Co, microstructure, processing effects 3–29050
- WC-Co cement, fracture toughness, effects of nonstoichiometric C contents 3–4106
- WC-Co hard metal, oxidation at high temp. and low press. 3–24181
- WC-Co hardmetal, indentation and compressive creep tests equivalence 3–24427
- WC-Co powder pressing using US vibr. press with vibr. die 3–1893

CESR
- dilute alloys, nonmagnetic, spin-orbit scatt. of cond. electrons 3–52096
- metals, surface spin relax., CESR study 3–28703
- Ag-Cu(Pd)(Pt)(Au) foils, dil., CESR linewidth 3–3534
- $AgCl:Pb^{2+}$, photochem. modification by dopant, ESR, microwave photocond., and photodielec. effect 3–53433
- Al, ESR linewidth and g-anisotropy, temp. and freq. depend. 3–52628
- C, fibre, conduction electron motional averaging and struct. 3–33980
- n-InSb, ESR at submillimeter wavelengths 3–28686
- n-InSb, static cond. changes under ESR conditions 3–38697
- K, spin waves obs. at 80 GHz using transmission microwave spectrometer 3–52627
- Na particles, CESR g shift 3–3535
- Na, spin waves obs. at 80 GHz using transmission microwave spectrometer 3–52627
- Si, neutron transmutation doped, radiation damage, EPR study 3–46973
- Si:H amorphous, non-geminate recombination, EPR and photoluminescence study 3–24008

chalcogenide glasses
- absorption edge, photoluminescence and photoconductivity, review *(Japanese)* 3–28900
- chalcogen and related alloy films, photocontraction effect 3–7919
- covalent bonding and defects 3–33098
- doubly occupied defect states and AC cond. 3–23373
- electrical conductivity by small polaron hopping, theory 3–52152
- films, amplitude-phase holographic grating form. 3–6935
- films, light sensitivity during hologram pulsed recording 3–6936
- films, negative differential resistance switching 3–47440
- films, spin-coated 3–19289
- IR fibre prep., drawing technique 3–46356
- IR low loss fibre materials 3–41942
- local structure, impurity atom states, Mossbauer and electron spectroscopies, review 3–33135
- mid-IR fibre fabrication for medical appls. 3–50767
- photoconductivity, transient and steady-state anal. 3–23440
- photoelectron spectroscopic studies *(Japanese)* 3–24088
- photoinduced carriers, ultrafast relax. 3–38836
- photostructural changes due to interband correlation of pot. fluctuations, theory 3–19088
- photostructural transforms., defect levels 3–22787
- quasi molecular defects, relationship to melt viscosity 3–2430
- Raman scattering, including impurity atoms Tl, Ge, P, As and Sb 3–46866
- semiconductor, thin film, threshold and bistable switching, chem. modification effects 3–52283
- semiconductor fibres, optical props. 3–1793
- structural modification and chem. composition effects on props. 3–37797
- vitreous semicond., photostruct., transformations due to local heating 3–7916
- X-ray irrad., ESR signals due to metastable centres and impurities 3–23801
- Ag-As_2S_3 system, electroluminescence excitation of Ag diffusion 3–28169
- Ag-Ge-Se-Ga(In)/SnO_2 sandwich structs., optical transmittance and I-V characts. 3–57428
- As chalcogenides, amorphous and cryst., photoluminescence total light decay, excitation energy depend. 3–38892
- As-based chalcogenide glasses, photoinduced struct. changes, IR absorpt., Urbach tail features 3–52804
- As-Ge-Se chalcogenide glasses, controlled crystallisation in nucleated system 3–33123
- As-S amorphous semiconductors, X-ray stimulated struct. transforms. 3–13276

chalcogenide glasses continued
As-S films, vitreous chalcogenide semicond., photostimulated dissolution 3—8379
As-S(-Se) glasses, heat of soln. in alkaline solns. 3—33450
As-Sb-Se glass system, struct. and elec. props. 3—22788
As-Se, amorphous, second-order vibration spectrum, IR absorpt. study 3—23934
As-Se amorphous semiconductors, X-ray stimulated struct. transforms. 3—13276
As-Se glasses, heat of soln. in alkaline solns. 3—33450
As-Se-Tl, temp. dependence of dielectric constant 3—23858
As-Te film, amorphous, fabrication, comp. and physicochem. props. 3—8995
$AsGeSe_x$ vitreous chalcogenide film, electron induced cond. meas. 3—28460
$As_{15}Ge_{30}Se_{55}$ glass IR optical fibres for 2 to 11 μm band 3—41984
$As_{10}Ge_{15}T_{75}$:Ag glassy alloy, dielec. relax. and dispersion using polarisability plots 3—52713
As_2S_3, amorphous, injected CdS acoustic domain effects, optical transmission and X-ray diffr. 3—2682
As_2S_3, amorphous, local struct., lowest unoccupied MO approach 3—22794
As_2S_3, amorphous, picosec. radiative and nonradiative recomb. 3—38914
As_2S_3, amorphous, thermal expansion, 0.2 to 10K 3—8232
As_2S_3, amorphous state, vaporisation, high temp. mass spectrometry 3—33415
As_2S_3 amorphous thin films, contact reactions with metal films, electron diffr. studies 3—23223
As_2S_3, As_2Se_3 fibre characterisation for 10.6 μm transmittance 3—46296
As_2S_3 chalcogenide glass film, refractive index, press. and wavelength depend. *(Chinese)* 3—43646
As_2S_3, estimate of minimum optical losses 3—7104
As_2S_3, film, effect of moisture on elec. props. 3—23390
As_2S_3 glass, atomic tunnelling spectrum, optically induced gap 3—14445
As_2S_3 glass, photoluminescence and competing nonradiative processes 3—14348
As_2S_3, glass, vibr. props., IR and Raman spectra and struct. model 3—23942
As_2S_3 glass waveguide, monolithic-hybrid joining to $Ga_{1-x}Al_xAs$ heterojunction injection laser 3—22259
As_2S_3, glassy, optical props. and microhardness, electron stimulated reversible changes 3—18352
As_2S_3 thin film, press. effect on optical absorpt. edge *(Chinese)* 3—43645
As_2S_3, vitreous, surface potential dark decay meas. 3—23460
As_2S_3:Ag amorphous film, Ag photodoping sensitivity, optical and elec. resist. study 3—46851
As_2S_3:Au glass, structural, optical and electrical props. *(Japanese)* 3—56822
As_2S_3-Ag, photochemical reactions *(Russian)* 3—24522
As_2S_3-Ag_2S glasses, elec. cond. and diffusion 3—23087
As_2S_x, $2.8 \leq x \leq 3.3$, glassy system, Raman spectra, As-As bond conc. 3—47627
$As_{40}S_{60}$ thin films, sputtered, optical energy gap and refr. index meas. 3—8979
$(As_2S_3)_x(GeS_2)_{1-x}$ system, refractive index variation *(Russian)* 3—19102
$AsSSe_xTe_{1-x}$ chalcogenide glass film, saturated optical absorption under laser irrad. 3—32423
AsSe-Ag_2Se glasses, elec. cond. and diffusion 3—23087
As_2Se_3, amorphous, localised states, SCL currents activation energy 3—57354
As_2Se_3, amorphous, spectral distrib. of steady-state photocond. 3—43231
As_2Se_3 chalcogenide glass, charged impurity conc., MIS CV charact. study 3—28447
As_2Se_3, cryst. and glassy, photoluminescence, excitation energy depend. 3—38893
As_2Se_3, estimate of minimum optical losses 3—7104
a-As_2Se_3 films, time-of-flight and photocond. studies 3—43230
As_2Se_3 glass IR fibre prep., drawing technique 3—46356
As_2Se_3, glassy, crystallized vol. fraction determ. at different cooling rates 3—56823
As_2Se_3, glassy, nonequilib. hole diffusion and drift length, photoconductivity study 3—13831
As_2Se_3, glassy, site inequivalence limit, XPS study 3—42532
As_2Se_3, glassy, with optical absorpt. of 60 dB/km 3—28826
As_2Se_3, glassy and cryst., X-ray irrad., ESR signals due to metastable centres and impurities 3—23801
As_2Se_3 intreous films, chem. modification of elec., photoelec., and optical props. 3—23391
As_2Se_3, photostimulated processes, configurational model and transmission spectra 3—19158
As_2Se_3, photothermal recording, spatial-frequency transfer 3—32323
As_2Se_3:Ge glasses, transport props. 3—38425
As_2SeTe_2-Mg(Al)(Zn) contacts, conductivity control and photovoltaic effects 3—52246
As_2Te_3, amorphous, in Si/As_2Te_3 interface, I-V and C-V characteristics and photovoltaic effects 3—52233
As_xTe_{1-x} glasses, crystallisation and local order, X-ray, Mossbauer and DSC study 3—13114
As_xTe_{100-x}, glassy, refr. index, 82 to 300K 3—23907
$(As_{13}Te_{24}Si_{27}Sb_{18})_{1-x}Fe_x$ RF sputtered films, struct., elec., and optical props. 3—13649
Au-$As_{30}Te_{48}Ge_{10}Si_{12}$-Au struct., thermal switching at electrode-amorphous semicond. interface 3—8542
$Cu_x(As_{0.4}Se_{0.6})_{100-x}$, amorphous, bonding of Cu impurity, EXAFS study 3—24055
$Ga_{12}Ge_{6.5}Si_{6.5}As_{25}Te_{50}$, amorphous-crystalline magnetodiodes, threshold switching effects 3—13895
Ge monochalcogenides, amorphous, optical consts., reflectivity meas. 3—38791
Ge-As-S-Se evaporated films, giant photocontraction, mol. models 3—3004
Ge-based chalcogenide glasses, photoinduced struct. changes, IR absorpt., Urbach tail features 3—52804
Ge-S:Mn, glass, neutron irrad., EPR meas. 3—8715
Ge-Te amorphous film, transient effects in electron pulse annealing, time-resolved TEM 3—7910
$Ge_{22.5}As_{10}Se_{67.5}$, thin film, sputtered, optical energy gap and refr. index meas. 3—8979
$Ge_{10}As_{40}Se_{25}S_{25}$, thin film, sputtered, optical energy gap and refr. index meas. 3—8979
GeS_2, vitreous, optical props. rel. to prep. conditions 3—23901
$Ge_{1-x}S_x$, non-crystalline, optical gaps from 'mean' bond energy 3—3669

chalcogenide glasses continued
Ge_2S_3:Au chalcogenide glass, impurity effects on EPR and photoluminescence 3—28895
$Ge(S_xSe_{1-x})_2$ glasses, local modes, Raman spectra study 3—3723
$Ge_{40-x}Sb_xS_{60}$ glasses, refr. index and DC elec. cond. 3—28813
$Ge_kSb_mS_n$, non-crystalline, optical gaps from 'mean' bond energy 3—3669
GeSe amorphous film, local struct., XPS and UPS studies 3—33111
$GeSe_2$ amorphous film, low temp. AC conductivity 3—47349
$GeSe_2$, electronic struct., optical and photoemission props. 3—23265
$GeSe_2$ film, amorphous self-supporting, laser induced optical anisotropy 3—19220
$GeSe_2$ glass and evaporated films, switchable microcrystallisation near threshold in laser annealing 3—56941
$GeSe_2$, glassy and single cryst., radiative recombination mechanisms 3—28896
$GeSe_2$, photostimulated processes, configurational model and transmission spectra 3—19158
$GeSe_{3.5}$:Bi chalcogenide glasses, doping-induced struct. changes 3—51502
$Ge_{25}Se_{75}$, thin film, sputtered, optical energy gap and refr. index meas. 3—8979
Ge_xSe_{1-x} glasses, broken chem. order and phase separation, Mossbauer study 3—42533
Ge_xSe_{1-x} glasses, struct. and luminesc. props. 3—8883
$Ge_{40}Se_{60-x}Te_x$ thin films, prep. by flash evaporation, comp., I-V characts. 3—29011
$Ge_{32}Se_{24+x}Te_{40-x}As$ ($x=0, 8, 16, 24, 32$) glasses, optical and elec. gaps, cond., glass transition temp., DSC study 3—34056
$Ge_{15}T_{81}S_2Sb_2$ films, switching and memory phenomena, thermophonic investigation 3—12476
GeTe, amorphous film, local struct., crystn. and thermal annealing effects, UPS and XPS study 3—14438
GeTe, cryst. and glassy, imperfections, positron annihilation study 3—18229
$GeTe_4$:Au, amorphous film, diffusion and structural aspects *(French)* 3—2889
$Ge_{15}Te_{81}S_2Sb_2$ amorphous thick films, switching and memory phenomena, thermophonic investigation 3—38441
$Ge_{0.5}Te_{0.5}(Se_{0.5})$ chalcogenide glass, struct., continuous random network approach 3—33106
$In_x(Si_{0.1}Se_{0.9})_{1-x}$-$In_{2-x}Sn_xO_{3-y}$ solar cells, effects of photo-induced microcrystn. 3—53511
P-Se chalcogenide glasses, electron transfer from broken bonds, ESR study 3—8722
S-Ge-As-Te glass, elec. cond., 20°-1150°C 3—47347
Se-Ge-As-Te glass, elec. cond., 20°-1150°C 3—47347
Se-P glasses, transition temp., bulk modulus, comp. depend. US vel. meas. 3—13307
Se-Te alloy, amorphous, crystn. and elec. cond., temp. and conc. depend., Avrami eqn. 3—51500
$Se_{0.95}Bi_{0.05}$ amorphous thin films, coevaporated, characterisation 3—3196
$Si_{12}Te_{48}As_{30}Ge_{10}$ chalcogenide glass films, size effect and switching in high elec. field 3—43303
SnTe film, struct. analysis, disordered microcrystallites 3—13655
Te-Ge-Sb glasses, photocond. decay 3—3250
Te-Sn(Pb)(Ge)(Cu), obtained by rapid cooling from liq., crystn., morphological aspects 3—7913
$Te_{80}Se_{20}$, amorphous-crystalline magnetodiodes, threshold switching effects 3—13895
$Te_{75}Si_{25}$, amorphous-crystalline magnetodiodes, threshold switching effects 3—13895

change of state *see phase transformations*

channel flow
see also pipe flow
acoustic properties of piping systems and mufflers with flow, time averaging transient testing method 3—56395
air flow in a duct, turbulence meas. and predictions 3—12640
air flow in two dimensional channel, backward facing step flow, experimental and theoretical investig. 3—46652
air-water, two-phase turbulent flow is noncircular channels 3—22516
air-water horizontal flow, void distribution, effect of flow obstruction 3—51202
annular channel, radiative heat flow calc. *(Russian)* 3—56620
Bingham's fluid, resistance test, rectangular open channel, muddy water 3—46653
Bingham plastic fluid dispersion, effect of peripheral layer 3—42273
circular cylinder in rot. channel, on beta-plane, flow rel. to geophys. flow 3—4891
circular duct, boundary layer effects on acoustic field, numerical anal. 3—17655
co-flowing annular streams, swirl effect for mixing 3—17981
convective circulation, buoyancy-driven, in free-surface channels 3—2053
Couette flow of nonhomogeneous viscous fluid 3—12778
cryogenic liquids, heat transfer at forced flow boiling in tubes 3—7574
curved duct, vel. meas. of developing laminar and turbulent flow 3—12781
cylinder, previously stressed incompressible, containing viscous compressible liq., wave propag. 3—32804
developed turbulent-flow form. in a quadratic channel 3—7547
diffusional deposition from laminar stream in rectangular channel 3—7660
dilute gas-particle flow, two-way coupling effects 3—12761
discharge coefficent for air flow through perforated walls 3—42310
dissociating gas, equilib. flow in turbine channels of nuclear power plants 3—42326
dissolved macromolecules, cross-stream migration, hydrodynamically induced 3—51207
duct flow, acoustic transmission finite element anal. 3—12767
duct flow, pure acoustic tone generation by vortex shedding, expt. study 3—12776
duct with highly turbulent recirculating flow, freq. shift LDV system meas. *(Chinese)* 3—17987
duct-nozzle system, acoustic radiation impedance 3—50810
ducts, far field boundary conditions, acceleration of convergence to steady state for compressible flow 3—22483
ducts, natural convective flow, appl. to reactor cooling after pump failure 3—16941
eddy diffusivity and viscosity of heat into fluid flow 3—51100
EHD flow in transfer channel, direct energy conversion 3—39497
ethanol, liquid film flowing down heated surface, breakdown heat fluxes 3—27509
Eurelios solar power plant dynamic modelling and simulation 3—44150

channel flow continued
- Faraday MHD channels with variously shaped electrodes in supersonic flow 3−37578
- Faraday MHD convertor three-dimensional model flow and electric field interaction 3−51397
- flat smooth plate in open channel flow, laminar and turbulent boundary layers *(Chinese)* 3−51222
- flow split relationships in two-phase parallel channel flows 3−51236
- fluid flow in heated vertical channel, heat transfer in entry region 3−27513
- forced convection in a rapidly rotating annulus 3−2054
- forced convection laminar flow in inclined channel, vortices, ionic mass transfer stability 3−51125
- four-pole parameters, finite element anal. 3−12777
- gas, dissoc. and vibr. relax., heat transfer in turbulent channel flow with rough walls 3−51090
- gas flow in duct, acoustic amplitude-phase response, expt. study 3−51233
- gas mixture nonisothermic flow in channel at intermediate Knudsen nos. 3−22527
- gas moving in channel of variable cross sections, acoustic, entropy and vorticity perturbations propag. 3−2121
- gas scatt. from channel surface, Poiseuille flow and thermal creep, scatt. kernels calcs. 3−2125
- gas suspension, flow in cylindrical channel, unsteady heat transfer 3−42311
- gas with variable physical props., flow is annular channel transitional section *(Russian)* 3−56619
- gas-liquid flow, flow pattern transition modeling 3−12758
- gas-liquid horizontal flow, pattern transitions, effect of flow obstructions 3−51201
- half-infinite channel with moving and porous walls, viscous flow 3−42305
- heat exchange, laminar convective, bilateral case soln. *(Russian)* 3−17940
- heat exchange in annular channel, porous inner wall effects 3−42234
- heat exchange in helical flow 3−12670
- heat exchangers, radiation heat transfer effect on performance, expt. results of one flow channel 3−27510
- heated channel thermohydraulic equations transient problems solution 3−51228
- n-heptane, liquid film flowing down heated surface, breakdown heat fluxes 3−27509
- hydraulic models of flow in the channel of an MHD generator based on the equations of a two-dimensional boundary layer 3−2133
- hydraulic resistance of cylindrical and annular particles under transition conditions of flow 3−22521
- hyperconcentration flow, law of resistance 3−42315
- hypersonic flow past rectangular profile through which gas is blown strongly 3−2087
- incompressible fluid laminar flow in plane channel with uniform unidirection injection 3−27486
- incompressible isotropic fluid, laminar free shear Hartmann flow, R-functions 3−37441
- incompressible micropolar fluid flow between parallel plates with fluid injection 3−46645
- inviscid transonic shear flow in three dimens. channel 3−12703
- isothermal creeping flow in rectangular channels 3−27601
- isothermal flow of gas and particle mixture in channel of variable section 3−7634
- Kelvin wave propagation from channel into semibounded tank 3−22475
- laminar and turbulent flow 3−42314
- laminar channel flow with separation, spectral method solns. 3−32708
- laminar flow, longitudinal-dispersion calc. by statistical anal. of mol. motions 3−32709
- laminar flow in open channel, thermal radiation by semitransparent fluid layer 3−56538
- laminar flow in parallel plate channel entrance region 3−17918
- laminar Z 3−42239
- large bubble flow characts., SMAC calcs. 3−42294
- laser Doppler anemometer, simultaneous backward-forward scatter meas., in open channel flow 3−51249
- linear jet array, hydraulics of channel 3−56597
- MHD flow through porous straight channel, Hall effect 3−46656
- MHD free and forced convective flow through porous media, Hall effects 3−12658
- MHD generator, channel flow, boundary layers, hydraulic models 3−37707
- microfluid flows, dispersion 3−56625
- micropolar fluid with chem. reaction, dispersion in channel flow 3−27603
- molten polymer flow into, within and out of ducts 3−46606
- natural convection in a rectangular cavity with wall temperature decreasing at a uniform rate 3−7586
- nonNewtonian power law fluid, laminar annular flow, unsteady thermal entrance heat transfer *(Chinese)* 3−2058
- nonstationary MHD-convection in vertical annular channel 3−37492
- open channel flow simulation, two-dimensional curvilinear grid model 3−51221
- open channel flows, turbulent stress and velocity distribution 3−46648
- open uniform channel flow over a shelf under gravity, numerical soln., Hilbert's method 3−56618
- oscillatory flow inside a square cavity, unsteady Navier-Stoker eqns. soln. 3−2081
- oscillatory flows at intermediate Strouhal number in asymm. channels 3−32803
- Oseen model for internal separated flows 3−17978
- parallel channels, cylinder-type turbulence promoters, flow patterns, heat transfer 3−16944
- parallel flows, three-dimensional disturbances for plane Poiseuille flow in channel 3−22426
- plate roughness and hydrodynamic drag 3−46512
- Poiseuille flow, stationary perturbation, eigenvalue calc. 3−7658
- polydisperse suspension, sedimentation in laminar channel flow 3−22512
- polyethylene, mica filled, hot rolling and forging, effect on mech. props. 3−29057
- polyethylene oxide, dil. soln., flow through converging channels 3−27559
- polymer solutions, flow, pressure fluctuations, high freq., struct. 3−27501
- potential, over a symm. convex profile 3−7656
- rarefied gas flow, Grad's eqns., self-similar solns. 3−37528
- rarefied gas flows, Monte Carlo calcs. 3−56574
- recirculating flow, highly turbulent, in 2D duct, meas. using laser Doppler velocimeter *(Chinese)* 3−37589
- rectilinear flow, bounds and estimates of second normal stress 3−51168
- return bend, heated convex wall, turbulent heat transfer charact. 3−51115

channel flow continued
- rheologically complex media in plane channel, temp. and press. influence 3−12772
- rod bundle, asymm., parallel flow, turbulence and vel. distrib. 3−41234
- secondary flow development, vorticity in curved ducts, cascades and rotors 3−51138
- secondary flow origins in straight noncircular ducts 3−51238
- seepage, free surface, from nonsymm. channels through homogeneous porous medium 3−12763
- semilinear heat eqns., channel and cylindrical flow of viscous fluids 3−51113
- slit-type quenching apparatus, high temp. heat exchange in gas flow 3−42309
- soler absorber convertor vacuum insolators, construction and importance on grounds of efficiency *(Czech)* 3−44144
- solute dispersion moments in pipes or channels 3−46649
- sphere in inclined channel, gravitational and zero-drag motion at low Reynolds number 3−22531
- steady state problem for flow in channel, down-stream boundary procedure for the Euler equations 3−12771
- stratified two-phase flow, in horizontal rectangular channel, turbulent characts. 3−12740
- swirling flows in annular channel 3−7597
- symmetric channel with smooth expansion, flow, finite element solns. 3−37574
- tracer releases into channel flows, higher order numerical scheme for scalar transport 3−2017
- transonic gas flow in a duct of varying area 3−12701
- turbulent Couette flow between concentric cylinders at large Taylor numbers 3−12639
- turbulent gas flow in slotted channel, fluctuation effect on heat coeffs. 3−22444
- two-phase channel flow, divergent-convergent, finite difference method *(French)* 3−12752
- two-phase flow in shallow channel, surface film effects 3−37565
- two-phase flow oscillation mode anal. in parallel multi-channels 3−46634
- uniform mean flow ducts, liner sound attenuation eigensolutions 3−56611
- unsteady flow in open channels 3−7661
- unsteady flow of a viscous fluid through an annulus 3−37568
- velocity fluctuation intensity meas. in turbulent plane Couette channel flow 3−12653
- viscoplastic media, MHD couette flow, channel wall influence on hydrodynamics 3−37491
- viscous fluid, peristaltic flow, numerical study 3−56617
- viscous fluid, slow creeping flow through axisymmetric duct expansion or contraction 3−22525
- viscous fluid, slow flow through axisymmetric duct expansion or contraction 3−22526
- viscous fluid in rot. ducts of rectangular cross section, laminar flow 3−2076
- viscous gas flows, enhanced accuracy difference method for computing *(Russian)* 3−46605
- viscous liquid flow in channel with sinusoidal walls 3−37572
- viscous supersonic gas flow in channel, deceleration calc. 3−27547
- visualisation of convection patterns in thin air channels, solar collectors appl. 3−51257
- water, flow, pressure fluctuations, high freq., struct. 3−27501
- water, liquid film flowing down heated surface, breakdown heat fluxes 3−27509
- water, nucleate boiling in vertical upflow and downflow 3−51230
- Al melts, inclusions precip. mechanism on active filter granules 3−7653
- He, liquid, channel flow in horizontal channel, heat transfer to near-critical state 3−51878
- He, liquid, two-phase flow in radial rotating duct 3−51879
- ^{3}He, superfluid, crit. mass current meas. in A and B phases 3−28181
- ^{4}He subcooled channel flow, heat transfer characts. obs. 3−38150
- ^{4}He, superfluid, cooling channel flow, heat transport mechanisms obs. 3−38149
- ^{4}He, superfluid, crit. vel. for self-sustaining vortex tangle 3−38143
- ^{4}He superfluid, pressurised, Gorter-Mellink constant associated with counterflow convection 3−38151
- Hg, slipping, in quartz microcapillaries during laminar flow 3−17975

channeling radiation *see channelling radiation*

channelling
- *see also energy loss of particles*
- atomic fast particles, ionisation prob. calc. *(Russian)* 3−2636
- atomic site and species determination using the channeling effect in electron diffraction 3−51461
- conference, Castle Hot Springs, Arizona, USA (Jan. 1982) 3−5492
- crystal assisted pair-creation process using channelling 3−57005
- crystal defect density magnitude assessment by selected area electron channeling pattern changes 3−13229
- crystal surface, microdiffraction, STEM imaging and ELS 3−7888
- dechannelling, solns. of diffusion model 3−2634
- dechannelling of particles, migration of light impurities, statistical 3−33512
- electron channelling, planar, quantum trajectories and crit. angles 3−47011
- electron density determ. by δ-electron yield 3−33324
- electron emission, channelled, theory based on particle radiation characts. in undulatory crystals 3−32283
- electron transverse energy levels, widening at axial channelling, quantum theory 3−57008
- high energy channelled particles, positive and negative, energy losses 3−33322
- interatomic interaction pot., atom relative motion energy effect 3−3900
- interfaces and epitaxial systems, Rutherford backscatt. and channelling analysis, review 3−8929
- ion beam technology, usable limit of new materials *(Japanese)* 3−39047
- ion scattering, study of radiation damage in metals and semiconductors 3−28958
- ion-atom potentials, determ. using semichannel focusing 3−28955
- materials analysis by ion channelling, book 3−54597
- modulation doped structs. using multi-step MBE and ion implantation 3−42630
- particle beam bending by channelling in bent crystal planes 3−11571
- planar channelling, diffusion eqn. approach 3−47009
- planar dechannelling theory, diffusion coeff. 3−28017
- polycrystalline target, sputtering yield, channelling fraction 3−47750
- propagation function of channelized positively charged particles 3−51681

channelling continued
relativistic electron channelling in Wigner-Seitz unit cell 3—33325
rocking crystal electron channelling patterns, backscatt. and transmission, review 3—13051
scanning ion microscopy with 60 keV Ga^+ probe, ion channelling effects 3—40723
SEM, electron channelling pattern meas., computer based technique 3—13052
semichannel focusing energy determ. from surface scatt. 3—28954
single crystals, high-energy γ-photon birefringence 3—51660
stability theorems for fast charged particles 3—37974
stopping power for high energy ions 3—22952
superposition criteria in charge densities and potentials 3—37975
ultrarelativistic channelled particles in cryst., zone spectrum 3—13292
Al, ion implanted and pure, laser irrad., impurity profiles and heat flow 3—27990
Al, pure and Sb implanted, laser irrad., AlSb precip. nucleation, lattice defects, TEM, ion beam anal. 3—56960
Al:N, 700-800 keV $^{15}N_2^+$ implantation, AlN layers formed, charact. 3—2582
Al-Cr-Mo, ion implanted metastable phase form by pulsed laser treatment 3—2604
Al-Cu, ion implanted, pulsed electron beam annealing and furnace annealing, RBS and channelling meas. 3—13257
Al_2O_3:Cr(Zr), ion implanted, surface struct. and props., annealing effects 3—2948
α-Al_2O_3:Cr(Zr)(Ti), ion implantation and thermal annealing, channelling, EPR and microhardness study 3—46972
Au epitaxial growth on Pd (111), transition from pseudomorphic to nonregistered state 3—47242
Cr thin film, sputter deposited on Cu, laser and ion beam mixing 3—57242
CraAs:Cr, semi-insulating, Cr lattice location, ion channelling and PIXE studies 3—56916
Cu, ion bombardment induced preferential orientation, influence of ion species 3—33319
Cu single cryst., Ar ion scatt., semichannel focusing energy 3—28954
Cu, single cryst., selected area electron channelling patterns 3—13229
Cu thin film on Zr, laser-pulse alloying, RBS, channelling, TEM, X-ray diffr. studies 3—57243
Fe, pure and Sn implanted, electron beam melted, slip, dislocations, SEM, TEM, RBS and channelling studies 3—56987
Fe-Si (3 wt.%), plane-matching grain boundaries, recrystallisation struct., electron channelling patterns 3—37933
GaAs, ion implanted, annealing characts., Rutherford backscattering-channelling study 3—33315
GaAs, ion implanted, non-planar solid phase epitaxial growth processes 3—3012
GaAs, ion implanted, radiation disorder depend. on type of ion 3—28005
GaAs, laser irrad., O incorporation, effect of O_2 pressure 3—22936
GaAs:Cr, Se, ion implanted, damage annealing, Rutherford backscatt. and TEM studies 3—33311
GaAs:Cr(S)(Si)(Se), lattice incorporation of n-type dopants 3—22924
Ge, channelled relativsitic particles, characteristic X-ray radiation 3—3855
Ge:Te^+, ion implanted, damage, cryst. orientation depend., TEM, RHEED and channelling studies 3—56999
Ge-GaAs superlattice, MBE grown, ion channelling studies 3—47225
$Hg_{1-x}Cd_xTe:B^+$, implantation damage, thermal pulse annealing, expt. study 3—8070
$LiNbO_3$:Ti optical waveguide fabrication using $(Ti_{0.65}Nb_{0.35})O_2$ as Ti diffusion source, Rutherford backscatt. study 3—41973
MgO single crystals, cathodoluminescence at frictional damage at channelling anal. 3—24025
Mo, channelling meas. using liq. He cooled two-axis goniometer 3—40722
Ni, field reversed ion rings in background plasma, stability 3—56914
Ni, self ion implanted, pulsed laser irrad., defect-impurity interactions 3—2599
Ni-Cr thin film, sputter deposited on Cu, laser and ion beam mixing 3—57242
Ni-Eu, ion implanted, pulsed laser irrad., defect-impurity interactions 3—2599
$NiSi_2$, epitaxial struct., channelling and backscattering studies 3—42981
Pd-Si (100) and (111), surface reaction, ion beam anal. and AES study 3—42857
Pd_2Si, epitaxial growth on Si substrate, electron beam annealing, Rutherford backscatt. and channelling studies 3—56988
Pd_2Si films, epitaxial growth by scanning electron beam annealing 3—8346
Pd_2Si, growth kinetics and diffusion mechanism on Si substrate 3—42975
Si (111)-$CaF_2(BaF_2)(SrF_2)$ heterostructures, epitaxial relations, ion channeling anal. 3—51967
Si, CVD VPE in $(Y_2O_3)_m(ZrO_2)_{1-m}$ insulating substrates, channelling and Rutherford backscatt. studies 3—52960
Si, channelled ion energy loss, charge-state depend. 3—3882
Si, electronic energy loss of channeled negative pions 3—42687
Si, epitaxial film growth on Y_2O_3-ZrO_2 substrates by CVD, struct. and elec. props. 3—42968
Si, field reversed ion rings in background plasma, stability 3—56914
Si film, on CaF_2/Si structs., cryst. quality improvement by ion implantation and solid phase recrystn. 3—51972
Si films, lateral nucleated epitaxy on amorphous insulators, electron backscatt. contrast and electron channelling study 3—34224
Si, implanted impurity electron states, hyperfine interaction and channelling studies 3—43076
Si, ion implanted, dopant redistribution by pulsed laser annealing, particle backscatt. and channelling study 3—33289
Si, ion implanted, laser annealing and damage, electron channelling pattern obs. 3—13052
Si, laser irrad., O incorporation, effect of O_2 pressure 3—22936
Si, neutron displacement cascades structure 3—42673
Si, resonance dechannelling of He and H at axial to planar transition 3—13296
Si single crystal, dislocations study by channelling 3—2569
Si:As(Sb), ion implanted, comparison of solubility limits and elec. activities, ion channelling meas. 3—2583
Si:As(Sb)(In)(Pb)(Tl)(Bi), ion implanted, metastable solid soln. form., backscatt. and channelling study 3—2588
Si:As.Pt struct., As redistrib. during Pd_2Si form., ion channelling and backscatt. study 3—8267
Si:B,P, ion implantation, diffusion, annealing 3—27962

channelling continued
Si:B(P)(Ar)(Ge)(As)(Bi), ion implanted, characterisation by ellipsometry and channelling 3—46977
Si:In(Sb), ion implanted, defects and solid solubility, solid phase epitaxial growth 3—2826
Si:In(Sb), ion implanted, solute segregation and solid phase crystallisation dynamics, ion channelling meas. 3—56950
Si:O, ion implanted, buried oxide layer, thermal annealing, ion channeling and Rutherford backscatt. study 3—27955
Si:P, ion implanted, enhanced dopant diffusion 3—13548
Si:P, ion implanted, pulsed electron beam annealing, SEM and TEM studies and computer simulation 3—51665
Si:P, ion implanted, solid soln. form. after solid phase epitaxial regrowth 3—57099
Si:P, planar dechannelling of energetic ions at edge dislocations 3—47007
Si:Sb, ion implanted, rapid annealing using radiant light source 3—56929
Si:Sb (100), ion implanted, metastable Sb doping, channelling study 3—33277
Si:Te, impurity redistribution after pulsed laser annealing, Rutherford backscatt. study 3—42641
SiC, cubic, large-area single-crystal wafers, CVD growth, electron channelling study 3—47757
SiC:Sn, lattice location of Sn impurity, channeling meas. *(Chinese)* 3—51645
Si_3N_4 low press. CVD films, Rutherford backscatt. spectrometry anal. 3—13648
UO_2, dechannelling of backscatt. protons, role of O sublattice 3—18357
UO_2, surface damage due to mech. polishing and ion bombardment, channelling meas. of thermal recovery 3—34510
V, electron beam irrad., channelling and X-ray anal. 3—56980
V metastable surface alloys by Ga, Se, Bi and In ion implantation 3—42636
W heteroepitaxial layers, cryst. perfection, TEM, X-ray and Rutherford backscatt. study *(German)* 3—13682
$ZnAl_2O_4$:Fe,Mn, cryst. struct. determ. by channelling effect in electron induced X-ray emission 3—8019
Zr thin films on metal substrates, laser-pulse alloying, RBS, channelling, TEM, X-ray diffr. studies 3—57243

channelling radiation
crystal, channelling radiation, at. and mol. physics, in 1 and 2 dimens. 3—42686
crystal with inversion centre, EM phonon conversion on relativistic positrons *(Russian)* 3—14379
diamond, band struct, initial level population, and channelling radiation 3—47012
diamond, high energy positron channelling study 3—37978
electrons and positrons, channelled, spectral-angular distribs. of Kumakhov, radiation 3—18356
electrons and positrons, channelling radiation from spiral channel in US irrad. cryst., theory 3—19223
Kumakhov radiation under planar positron and electron channelling 3—37977
relativistic electrons moving through crystal *(Russian)* 3—51682
relativistic positron radiation at refl. from at. plane 3—47010
single cryst., radiation from channelled relativistic positrons 3—28021
transverse electron energy levels, widening at axial channelling, quantum theory 3—57008
Au, band struct, initial level population, and channelling radiation 3—47012
CaF_2, Kumakhov radiation under planar positron and electron channelling 3—37977
Ge *(Russian)* 3—43658
Ge average electron density using MeV δ-rays from channelled projectiles 3—8113
Si average electron density using MeV δ-rays from channelled projectiles 3—8113
Si, band struct, initial level population, and channelling radiation 3—47012
Si, positron annihilation radiation and bremsstrahlung at 1 GeV *(Russian)* 3—43658

chaos *see random processes*

characteristic temperature *see Debye temperature*

characteristics measurement
see also headings for specific characteristics, e.g. gain measurement; viscosity measurement
current-voltage characts. plotting, bridge design for tunnel and microjunction spectroscopy appl. 3—45158
MOS structure, complete doping profile determ. using C-V characts. meas. 3—52269
MOS structure charge instability meas., accuracy improvement 3—45165
p-n junctions, large area, I-V characteristic, minority charge carrier lifetime and geometrical dimensions 3—8566
piezoelectric transducer characts., self-balancing digital photoelectric photometer appl. 3—49428
plasma probe characts. registration, using strobed integration method 3—18112
programmable DC current- and voltage-sources for transistor characts. and resistance meas. *(German)* 3—25891
semiconductor structure, photosensitive, current-voltage characts. meas. method and apparatus 3—5812
solar cells, automatic capacitance-voltage plotter 3—20874
superconducting tunnel junction, current-voltage characts. meas. cct. 3—5813

charcoal
see also carbon
adsorbers for radioiodine capture in nuclear power stations 3—19640
adsorption of H_2 and Ne, high-pressure isotherms, cryogenics appl. 3—33581

charge (electric) *see electric charge*

charge compensation
see also crystallography
CoO:Fe, Mossbauer study of excess charge compensation 3—33246
CoO:Sn, Mossbauer study of excess charge compensation 3—33246
GaAs, semi-insulating, deep levels and compensation, math. model 3—43062
$K_2ZnF_4:Cr^{3+}$, $Na^+(Li^+)$, EPR of Cr^{3+} centres, spin Hamiltonian parameters 3—43424
$ThO_2:Er^{3+}(Eu^{3+})$, site selective spectroscopy, fluoresc. and excitation spectra 3—19172

charge-coupled device arrays *see charge-coupled device circuits*

charge-coupled device circuits
Fairchild CCD area imager for minimum ionising particle detection 3−1147
hybrid focal plane device, noise/performance modelling 3−394
imagers for astronomical obs. 3−5115
laser beams registration, using CCD matrix 3−16414
monolithic solid state array detectors optimisation for X-ray scatt. position encoding 3−487
scanning microphotometer using CCD array for testing thermal imaging systems 3−1804
solid-state imaging arrays for X-ray detection 3−486
transversal filter for nucl. pulse shaping system 3−50218
TV camera interfacing to CCD for automatic processing of particle track images 3−50275
virtual phase CCD evaluation as imaging X-ray spectrometer 3−40739
X-ray radiation detectors using CCD 3−50176
PtSi Schottky-barrier IR 64×128 element CCD focal plane array, design and performance 3−54772
PtSi thin-film Schottky-barrier IR detector with optical cavity, photoresponse 3−27263

charge-coupled devices
see also charge-coupled device circuits
image sensor using 800×800 CCDs, Galileo project appl. 3−10209
image sensors advancements for astronomical spectroscopy 3−15847
image sensors and microcomputer for mag. domain obs. 3−25904
light receptor, for automatic focusing device *(German)* 3−45229
position sensitive ionising radiation detectors 3−50194
Si/SiO$_2$ CCDs optical carrier generation beyond fundamental absorption edge 3−28445

charge density waves
alkali metals, positron annihilation characts., effect of CDW 3−28924
collective Zener tunnelling in CDW systems, viscosity effect 3−47279
disordered system, one-dimensional CDW, dielec. susceptibility and correl. length, impurity forward scatt. case 3−43048
disordered system, weak, one-dimensional CDW, dielec. susceptibility and correl. length, impurity scatt. 3−43049
ferromagnetism, excitonic, coexistence of CDW and SDW phases 3−43380
frustration, fractional charge and soliton mobility 3−33653
Hall conductivity of two-dimensional electrons in a periodic potential 3−57370
Hubbard model, spin-less fermion Hamiltonian, specific heat and CDW parameters 3−23574
linear chain cpds., charge density wave transport, temp. and impurity effects 3−38373
one-dimensional CDW with disorder, low-frequency cond. and density of states, calcs., impurity scatt, study 3−43162
one-dimensional conductor, impurity scatt. and elec. cond. 3−43158
one-dimensional conductor, mag. susceptibility studies, review 3−8659
one-dimensional crystal, excitons with arbitrary electron-hole interaction 3−52037
one-dimensional electron-phonon system, distorted, CDW, dielec. function and cond. in precritical region 3−23298
one-dimensional fermion systems, Monte Carlo simulations 3−10743
one-dimensional many electron system, phase diagram, fluctuation effect 3−13754
polyacetylene, neutral and charged soliton defects, SCF calc. 3−42540
polyacetylene, vibronic states 3−47072
quasi one-dimensional conductors, Coulomb screening role 3−38374
quasi-one-dimensional electron system, ordered states 3−57296
semiconductor surface, mag. instabilities 3−47471
solitons near nonuniform state transition temp. 3−38326
superconductivity and CDW or SDW, mixed collective modes in coexistent state 3−47452
superconductor with struct. transition, collective excitations 3−3367
superconductors, amplitude collective modes, charge density waves 3−13949
superionic crystal, vibration spectrum near inhomogeneous state transition temp. *(Russian)* 3−3092
(TMTSF)$_2$ClO$_4$ quasi 1-D conductor, anomalous longitudinal magnetoresist. 3−57338
(TMTSF)$_2$X, itinerant antiferromag. and supercond., mag. reson. study 3−57790
(TMTTF)$_2$SCN, antiferromag. and struct. instabilities 3−23636
transition metal cpds., phonon anomalies, supercond. CDW system, Raman study, book contrib. 3−3745
transport in CDW systems, appl. of driven damped pendulum study 3−38554
two-dimensional electron system in strong mag. fields, CDW ground state and electron-hole symmetry 3−28287
two-dimensional magnetotransport in extreme quantum limit, CDW state form. 3−57369
Ag$_x$TaS$_2$, charge density wave commensurability 3−28288
Cu$_{0.4}$V$_2$O$_5$, quasi 1-D conductor, bipolaronic state of V^{4+} ion pair, NMR study 3−57294
n-GaAs, light-scatt. spectrum for single-particle excitations 3−38841
GaAs-Al$_x$Ga$_{2-x}$As heterostructure, magneto-quantum transport at low temp. 3−3306
K, impurity scatt., residual resist. and CDW hypothesis 3−3175
K, phason ht. capacity and low temp. sp. ht. 3−2837
K point contact device, nonlinear response, obs. of phasons 3−57412
K, sp. ht., 0.33 to 20K, absence of phason contrib. 3−23054
KHgC$_8$ intercolation cpd., stage 2, supercond. transition temp., press. depend. 3−18813
K$_{0.3}$MoO$_3$, CDW evidence, Raman scatt. meas. 3−38830
K$_{0.3}$MoO$_3$, nonlinear cond. and noise in semicond. CDW state 3−52164
K$_{0.3}$MoO$_3$, Peierls transition, X-ray diffuse scatt. and elec. cond. meas. 3−38309
K$_{0.3}$MoO$_3$, quasiperiodic noise voltage and metastability in CDW cond. 3−47358
K$_{0.9}$Mo$_6$O$_7$ single cryst., weak magnetism 3−52538
Li$_x$NbS$_2$, cryst. chemistry and superconductivity 3−23528
Li$_x$V$_2$O$_5$, quasi 1-D conductor, bipolaronic state of V^{4+} ion pair, NMR study 3−57294
Na$_{0.33}$V$_2$O$_5$, quasi 1-D conductor, bipolaronic state of V^{4+} ion pair, NMR study 3−57294
NbSe$_2$, amplitude collective modes, charge density waves 3−13949
NbSe$_3$, ^{93}Nb NMR study, rel. to CDW occurrence 3−3563
NbSe$_3$, CDW cond. study 3−28342

charge density waves continued
NbSe$_3$, CDW material, narrow band noise, spectral purity and phase coherence 3−18758
NbSe$_3$, discommensurate character 3−13193
NbSe$_3$, f$^{-\alpha}$ voltage noise meas., rel. to CDW lattice 3−23447
NbSe$_3$, non-local cond. by charge density waves 3−18712
NbSe$_3$, nonlinear AC dynamics of CDW condensate 3−43159
NbTe$_4$, CDW, X-ray and electron diffr. obs. 3−43045
Rb$_{0.3}$MoO$_3$, Peierls transition, X-ray diffuse scatt. and elec. cond. meas. 3−38309
TaS$_2$-2H, charge density wave commensurability 3−28288
TaS$_3$, broad band noise associated with current-carrying CDW state 3−57397
TaS$_3$, freq.-depend. cond., CDW transport 3−23368
TaS$_3$, monoclinic, nonlinear cond. and noise in semicond. CDW state 3−18710
TaS$_3$, nonlinear cond., CDW transport 3−23367
TaS$_2$(Se$_2$) (2H), NMR spin-echo studies, locally commensurate CDW 3−52667
TaSe$_2$ (2H), CDW states, discommensuration arrays, broken hexagonal symmetry 3−18635
TaSe$_2$ (2H), CDW state, commensurate-incommensurate transition 3−18636
TaSe$_2$ (2H), domains and dislocations in CDW state 3−22896
TaSe$_2$ (2H), elasticity, thermal expansion 3−28058
TaSe$_2$-2H, orthorhombic commensurate CDW phase, lattice vibrs. 3−18415
TaSe$_2$(2H), orthorhombic CDW parameters, temp. depend., ^{77}Se NMR study 3−8730
TaSe$_2$(2H), Raman scatt. from orthorhombic CDW state 3−52793
TaTe$_4$, CDW, X-ray and electron diffr. obs. 3−43045
Ti$_{50}$Ni$_{47}$Fe$_3$, premartensitic transform. behaviour, elec. resist. meas., TEM and electron diffr. studies 3−38053
Ti$_{50}$Ni$_{47}$Fe$_3$, premartensitic transform. behaviour, microstructural changes, CDW, electron diffr. study 3−38054
α-U, charge density waves, structural transition 3−18634
VS$_2$ (1T), phase transition, ^{51}V spin echo NMR spectrum 3−57814
VSe$_2$, electron irrad. induced defects, elec., mag., and lattice parameter meas. 3−18347
VSe$_2$-IT, periodic lattice distortion due to charge density wave 3−23296

charge exchange
for charge exchange in particle and nuclear physics see elementary particle interactions and nuclear reactions and scattering
see also charge transfer states; ionisation
acetonitrile-d$_3$, doped, photodetachment threshold of solvated electrons, luminesc. study 3−23998
acetylene, laser spectroscopy application 3−5865
anthracene A-(CH$_2$)$_n$-D type excited molecules, picosec. obs. of intramol. charge transfer processes 3−32198
1-(9-anthryl)-n-(p-N, N-dimethylaminophenyl) alkane, intramol. charge transfer processes, picosec. fluoresc. studies 3−50455
asymmetric ion-atom collisions in nonreson. laser fields, light scatt. 3−32164
atom+atom (ion) collisions, charge exchange and ionisation, impact parameter approx. 3−32197
atom+ion collisions, resonant transfer and excitation processes 3−56068
1-azacarbazole-7-azaindole heterodimers, excited-state double H$^+$ transfer 3−24493
benzenes, disubstituted, core-hole induced charge-transfer reactions 3−56064
conference, Arezzo, Italy (Sept. 1980) 3−30563
p-cyano-N,N-dimethylaniline, intramol. CT state reactivity with F$^-$(I$^-$)(Cl$^-$)(OH$^-$) 3−4260
cytochrome c, electron tunnelling 3−19656
3,6-di-t-butyl-pyrocatechol: 3,6-di-t-butyl-o-quinone, photoreduction, H and electron transfer, EPR study 3−48078
p-dimethylamino benzonitrile, twisted internal charge exchange, picosec. dynamics, solvent effects 3−26842
dimethylcobalt (DpnH), electron transfer far from equilib., free energy, reversibility 3−1472
electron beam probe for charge neutralization studies of heavy ion beam 3−31861
electron transfer reactions theory, biorthonormal electronic basis sets 3−32192
electron transfer relativity of coordination compounds used for photochemical splitting of water 3−19627
electron-transfer reactions of solvated electrons, electronic transmission coeff., free energy gap and temp. depend. 3−24491
electrostatic discharges, charge transfer and current flow meas. 3−7822
ethylene, laser spectroscopy application 3−5865
exciplex intramol. charge transfer dynamics and small-chain relax., picosec. fluoresc. obs. 3−21901
excited molecule+inorganic anion, charge transfer interaction, spin-orbit coupling 3−56062
exotic atoms, radiative Coulomb sum rules from a continuum-spectrum initial state 3−36884
fast ions traversing foils, K-shell charge exchange, equilibration lengths 3−42660
first order charge transfer theory, Schwinger variational principles 3−41675
glycine, aqueous soln., ultrafast proton-transfer reaction kinetics, acoustic spectroscopy 3−29294
glycine-water system, intermol. interactions in aq. soln., calcs. 3−1452
graphite intercalation compounds, charge transfer, bond lengths 3−21909
guanine-cytosine (-Mg^{2+}) systems, H-bonded, double proton transfer and charge transfer interactions calcs. 3−41495
heavy ion+atom collisions, MeV/u, single and double K-electron transfer 3−36838
hollow cathode ionic metal vapour laser *(Rumanian)* 3−17482
hot injected ion losses in Tokamak through multiple charge exchange 3−32850
intermolecular complexes, ionisation, electrostatic and relax. effects 3−55805
Io exosphere, charge exchange and knock-on processes 3−20285
ion thruster charge-exchange plasma flow 3−42375
linear dipolar molecule+ion, CT rate const., rot. Stark effect and asymptotic value effect 3−9313
metallic simple alloys, charge transfer 3−37839
methylamine+NH$_2$$^+$, charge and H$^+$ exchange, rate consts., branching ratio 3−39366

charge exchange continued
  molecular complex formation, electron density redistrib. anal. 3—14855
  molecular dimers, ionisation, electrostatic and relax. effects 3—55805
  β-naphthylamine, alkaline aq. soln., excited state H^{+} transfer reaction, red edge effect 3—39365
  naphthylamine-18-crown-6 protonated complexes, H^{+} transfer reactions in the excited state 3—24494
  one-dimensional many electron system, phase diagram, fluctuation effect 3—13754
  ornithine in gramicidin S in soln., ^{1}H and ^{14}N NMR study 3—45971
  $p+Li^{+}(Li^{2+})$, ionisation and charge transfer, coupled 3—1473
  pionic mols. in organic cpds., pion charge exchange reactions, mol. model 3—1511
  plasma, laser produced, infuence of charge transfer on ion probe of meas. 3—2287
  plasma, surface ionisation, production of ion beams, analysis charge exchange *(Dutch)* 3—51398
  plasma ion temp., charge exchange recombination radiation meas. 3—42439
  polar solvents, dynamics and electron transfer 3—31981
  poly-N-vinylcarbazole film, photocond., extrinsic carrier photogeneration, exciplex and charge transfer sensitisation 3—57384
  positronium$+O_2$, interaction in hexane, mag. quenching expt. 3—39363
  quaternary ammonium iodide-$POCl_3$, charge transfer complexes, visible, UV obs. 3—32093
  resonance charge exchange between diatomics, asymptotic theory 3—21906
  salt solns. in liquid alkali metals, elec. resist. and solvation enthalpy 3—2857
  solar wind absorption in magnetosheaths of Mars and Venus 3—59038
  transition metals, surface charge transfer and effective Coulomb interaction 3—33772
  voltage-induced shifting of charge transfer excitations, rel. to surface-enhanced Raman scatt. 3—57906
  μ^{+} charge exchange and muonium formation in low-pressure gases 3—12014
  $p+H(He^{+})(Li^{2+})$, excitation, ionisation and charge transfer 3—41661
  $Ar^{2+}+Ar$, symm. reson. charge transfer 3—11964
  Au foil$+$Si(Cl), equilibrium charge state distribs. of fast ions 3—32190
  BaO-FeO-P_2O_5 glasses, internal friction, torsion pendulum technique 3—51708
  $Be^{4+}+H$, charge transfer, molecular approach 3—17372
  C foil$+$Si(Cl), equilibrium charge state distribs. of fast ions 3—32190
  $C^{4+}+H_2$, electron capture to Rydberg states 3—21904
  $C^{6+}+H$, charge-exchange cross sections, semiclassical trajectory effects 3—26849
  $C_{8n}AsF_5$ stage 2 intercalation cpd., charge transfer and band struct. 3—23268
  $CN^{+}+$neutral molecule, reaction channels and rate coeffs., ICR meas. 3—58405
  $C_2N^{+}+$neutral molecule, reaction channels and rate coeffs., ICR meas. 3—58405
  $Ca+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3—32179
  ^{41}Ca detection by laser-selective enrichment of Ca II ion 3d-states, resonant charge exchange 3—26877
  $Cl_2+Ar^{+}(Xe^{+})$, adiabatic charge transfer 3—32191
  $Cr+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3—32179
  Cs^{+} collisions, charge transfer and ionisation 3—21888
  D^{+}, low energy, polarisation meas. method 3—1178
  $D^{-}+N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3—46059
  $F^{-}+Ar^{+}(Ne^{+})$, mutual neutralisation, Landau-Zener approx. 3—41673
  $Fe_{3-x}Ge_xO_4$, hyperfine fields and electron diffusion, Mossbauer study 3—14181
  H^{+}, low energy, polarisation meas. method 3—1178
  $H+C^{6+}$, continuum distorted wave capture into nth shell 3—11957
  $H+H^{+}$, charge transfer cross section, high energy behaviour, eikonal approx. 3—6763
  $H+H^{+}$, differential cross sections and charge exchange probabilities 3—56067
  $H+H^{+}$, impact ionisation and charge transfer cross sections, classical-trajectory Monte Carlo method 3—11961
  $H+H^{+}$, reson. charge transfer, total cross sections, impact parameter calcs. 3—50305
  $H+H^{+}(He^{2+})$ (Li^{3+}) (Be^{4+}) (B^{5+}) (C^{6+}) (O^{8+}) (Ne^{10+}) (Si^{14+}), partial cross section for charge transfer, report 3—21894
  H$+$ion collision, electron capture cross-sections by highly charged ions, charge exchange 3—56028
  $H^{-}+He(H_2)(N_2)$, charge exchange to shape reson., detached electron energy spectra 3—50495
  $H^{-}+N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3—46059
  $H^{+}+Cs$, charge transfer excitation, Lyman-alpha emission 3—41674
  $H^{+}+H(He^{+})(Li^{2+})$, excitation, ionisation and charge transfer 3—41661
  $H^{+}+Li$, charge exchange, mol. pot. model 3—41677
  H_2+O^{6+} charge exchange collisions at 60 keV, captured electron distrib. 3—32195
  $H_5O_2{}^{+}$ $+$ $H_3O_2{}^{-}$, neutralisation reaction, pot. energy hypersurface, polarisation model 3—9315
  $H(1s)+H(2s)$, ion pair production, absolute cross section meas. 3—6755
  $H(1s)+Li^{2+}(Li^{3+})$, ionisation and charge transfer, coupled 3—1473
  He-Cs VUV and soft X-ray lasing based on charge-exchange mechanisms 3—12119
  $He^{+}+H$, charge exchange and excitation, OEDM orbital appl. 3—26844
  $He^{+}+H$, excitation and charge transfer cross sections, impact parameter formalism 3—32196
  $He^{+}+Hg$, nonreson. charge exchange, quenching and excitation 3—21907
  $He^{2+}+H$, radiative charge transfer calcs. 3—26848
  $^{3}He^{2+}+C$, charge transfer reactions at 68, 99 and 130 MeV 3—21908
  I$+$Ar, $\gamma\gamma$ ang. correl. on-line acquisition, charge exchange cross section 3—50511
  $K+Kr^{3+}$, charge transfer meas. using effusive H target 3—30961
  $Kr^{q+}+$atom collisions, multiple electron transfer, statistical model 3—56065
  $Li^{+}+Li^{+}$, ionisation and charge exchange cross sections 3—1467
  $N^{+}+O_2$, product branching, IR chemiluminesc. of vibr. excited NO^{+} 3—39358
  N_2+H, electron loss and capture cross section meas. 3—6779
  N_2+O^{+} resonant charge exchange reactions in upper atmosphere 3—10106
  $NH_3+OH_2(SH_2)$, protonation reactions, basis set depend. 3—31951

charge exchange continued
  Na$+$I, charge transfer collision, electronic degrees of freedom, classical model 3—21900
  $Na^{+}+Na$ collisions near matching vel., CT final state distrib. 3—26843
  Ne-Cu discharge, formation of excited Cu II levels 3—36707
  $Ne^{10+}+$rare-gas targets, electron capture, selective final state population, energy gain spectroscopy 3—11970
  $Ne^{2+}+Xe$, charge exchange, transfer ionisation, translational spectroscopy 3—41676
  $Ne^{9+}+$rare-gas targets, electron capture, selective final state population, energy gain spectroscopy 3—11970
  $O^{2+}+H \rightarrow O^{+}+H^{+}$ in medium and high excitation planetary nebulae, charge exchange rate rel. to O III/O II problem 3—44814
  $O^{3+}+H \rightarrow O^{2+}+H^{+}$, charge transfer reaction in low energy collision 3—46063
  $O^{8+}+H(1s) \rightarrow O^{7+}(n,l)+H^{+}$, electron capture cross sections, perturbed stationary states calcs. 3—50513
  $O_2{}^{+}+H_2 \rightarrow O_2H^{+}+H$, $H_2{}^{+}+O_2$, state selected ion-molecule reactions by TESICO technique, vibronic-state depend. of cross sections 3—14849
  $O_2{}^{+}+O_2$, low energy electron transfer reactions, semiclassical energy conserving trajectory 3—41672
  $OH_2+NH_3(SH_2)$, protonation reactions, basis set depend. 3—31951
  $OH^{-}.H_2O+NO_2$, reaction cross sections, charge transfer and collisional dissoc. 3—19515
  PdH_x, H impurity electronic struct., tight-binding approx. calc. 3—52071
  Pt, adsorpt. of CO on (111) and (112) surface, chemisorptive interactions calcs. 3—8340
  $S^{13+}+Ar(He)$, resonant transfer and excitation processes 3—56068
  $SH_2+NH_3(OH_2)$, protonation reactions, basis set depend. 3—31951
  SO_2 complexes, in solid N_2, IR spectrosc. investig. 3—21761
  $Sc+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3—32179
  $Si^{11+}+He$, resonant transfer and excitation processes 3—56068
  TaS_2-2H intercalates, hyperfine spectroscopy, charge transfer, reaction kinetics 3—23342
  $Ti+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3—32179
  UO_2, molten, charge transfer, reaction free energy 3—2377
  $V+He^{2+}(N^{7+})$ collisions, K-shell vacancy production 3—32179
  W, adsorpt. of CO on (110) surface, chemisorptive interactions calcs. 3—8340

charge-injection device arrays *see charge-coupled device circuits*

charge-injection devices *see charge-coupled devices*

charge measurement
  see also electrometers
  charge sensitive preamplifiers *(Spanish)* 3—53462
  dielectrics, charge and polarization distrib. meas. by piezoelectrically-induced press. step waves 3—10864
  fluoroethylenepropylene thin films, spatial charge distrib. meas. 3—25897
  head for measuring surface charge density of dielectric materials 3—49401
  homogeneous dielectrics, nondestructive meas. of spatial charge or field distrib., press. waves methods, anal. 3—10866
  MOS structure charge instability meas., accuracy improvement 3—45165
  photovoltaic systems, battery state of charge meas. technique 3—9432
  polymer, irradiated films, trapped-charge profile meas. using laser-induced press. pulse 3—10865
  polymer films, irradiated, nondestructive laser method for measuring charge profiles 3—38764
  space charge meas., of electron beam irradiated dielectrics 3—45159
  submicron particles charge-to-radius meas. apparatus development 3—26614
  surface charge distribution meas. using probe systems, metrological parameters 3—49405
  wideband semiconductors, charge carrier conc. meas. using magnetic circular dichroism, NDT 3—58370
  Ge, wideband semiconductors, charge carrier conc. meas. using magnetic circular dichroism, NDT 3—58370
  Pb-acid battery, stationary, experience in photovoltaic power plants 3—34689

charge-ordered states
  Hubbard model, extended, electron charge ordering, infrared bound study 3—8440
  Hubbard model, Mott state and charge order in random potential 3—47313
  molten salt, simple, vel. and charge current autocorrel. functions 3—18206
  negative-U extended Hubbard model in intermediate correlation regime 3—52000
  superconductivity of charged-ordered state with localised pairing centres *(Russian)* 3—57447
  Fe_3O_4, Verwey transition, band effects on charge ordering 3—13731
  YFe_2O_4, stoichiometric, elec. cond. and sp. ht. anomalies at Verwey transition 3—13868

charge storage diodes
  No entries

charge transfer *see charge exchange*

charge-transfer device arrays *see charge-coupled device circuits*

charge-transfer devices *see charge-coupled devices*

charge transfer states
  alkali cyanides, optical absorption spectra of triplet mol. excitons 3—19156
  anthracene, charge transfer states, mag. modulation fluoresc. study 3—38882
  anthracene, cryst., charge transfer transitions, role in photocond. 3—52802
  anthracene-tetracyanobenzene cryst., CT complex, photoconductivity and fluoresc. 3—52194
  aromatic intramolecular exciplexes formation, electronic structures 3—4282
  carbazole-based polymers, phys. and chem. props., review 3—16104
  4-cyano-1-N,N-dimethylaminonaphthalene, spectroscopic studies of radiation interaction 3—1418
  p-cyano-N,N-dimethylaniline, intramol. CT state reactivity with $F^{-}(I^{-})(Cl^{-})(OH^{-})$ 3—4260
  p-dimethylamino-benzaldehyde soln., excited and ground state conformations, fluorescence study 3—50352
  p-dimethylaminoacetophenone soln., excited and ground state conformations, fluorescence study 3—50352
  dimethylaniline-anthracene complex selective laser excitation, intramolecular energy transfer 3—6692
  disordered semiconductors, elec. cond. theory 3—52158
  graphite-AsF_5, charge transfer, optical refl. study, 10 to 300K 3—57956

charge transfer states continued
  liquid alloys, charge transfer rel. to partial struct. factors 3—27828
  metallic simple alloys, charge transfer 3—37839
  molecular crystals, optical spectra of excitons with charge transfer 3—38876
  molecule, twisted intramol. CT state, microstruct. solvent interaction mode appl. to solvatochromism 3—1420
  organic compounds mixed stack, neutral-ionic transitions for varying hybridisation 3—33683
  organic nearly-one-dimensional conductors, short-range Coulomb effects 3—33712
  paramagnetic complexes, spin-lattice relax., role of charge-transfer states 3—28688
  paranitroaniline, N1s (NO_2) ESCA spectrum, multiple excitations and charge transfer 3—11876
  phthalocyanines, photocond. in near IR region 3—8526
  polyvinylfluoride films, I_2 doped, elec. cond. meas. 3—23520
  PVCz-TNF charge-transfer complex amorphous films, carrier drift mobilities *(Chinese)* 3—43298
  rare earth cpds., satellite lines in XPS spectra 3—39000
  synthetic metals, C based, charge transfer and maximum cond. 3—18691
  TCNQ dispersed radical anion salts, in poly(vinyl acetals) matrix, CT interaction and elect. cond. 3—13830
  3,3′,5,5′-tetrachloro-4,4′-diphenoquinone, oriented in nematic cryst., electronic absorpt. spectra 3—11814
  thiogallates, Er doped, photolum. and cathodolum. props. 3—3780
  transition metal cpds., satellite lines in XPS spectra 3—39000
  trimethylphosphine oxide interaction with proton donor, quantum-chem. study of H bond 3—45835
  TTF-chloranil, neutral-ionic phase transition, charge transfer absorpt., reflectance meas. 3—34084
  Ag surface, adsorbed ethylene, CT effects in surface enhanced Raman scatt. 3—19119
  Ag^+ π-donor complexes, structs., luminesc. behaviour *(German)* 3—34149
  Al 3—38279
  Al VI-X, C foil excited ions, lifetimes, charge state distrib., far-UV obs. *(French)* 3—32180
  $CsCl{:}Ag^+$, F-H centre production under light irrad. 3—56896
  CuCl, anomalous diamagnetism of charge transfer excitons 3—13742
  Cu_xZr_{1-x}, amorphous, electronic struct., linear muffin-tin orbital method 3—23247
  EuC_6, intercalation cpd., electronic and mag. props. 3—33690
  FeAl, local partial Al density of states, linear KKR study 3—38279
  $KClO_3$ cryst., charge transfer complexes, reson. Raman and IR spectrosc. obs. 3—57908
  $K_{1-x}M_xTi_{8-x}O_{16}$ (M=Mg, Ni, Al, Cr), hollandite cpds., photoelectrochem. and optical props. 3—53566
  $La_3WO_6Cl_3{:}Mo^{6+}(Bi^{3+})(Eu^{3+})(Sm^{3+})(Ce^{3+})(Tb^{3+})$, luminesc. studies 3—52837
  $LuFe_2O_4$, electron exchange between Fe^{2+} and Fe^{3+} 3—14182
  MnO_4^-, charge-transfer transitions optical spectrum, CI calcs. 3—41501
  $NaClO_3$, cryst., charge transfer complexes, reson. Raman and IR spectrosc. obs. 3—57908
  Ni II complex, N,N′-bis(salicylaldehyde)-o-diaminobenzene nickel(II), fluoresc., reson. Raman profile obs. 3—32089
  $NiNb_2O_6$ photoanode for H_2O photoelectrolysis 3—9327
  $NiTiO_3$ photoanode for H_2O photoelectrolysis 3—9327
  n-$NiTiO_3$:Nb electrode, sintered, photoelectrochem. props. 3—19593
  $PbFe_{12}O_{19}$, photoelectrochemical studies 3—52195
  $PbMoO_4$:Cr, ESR study of $[CrO_4Pb_8]$ centre 3—14122
  Pt complexes, Pt-pyrazine derivatives, UV, IR and PMR study 3—55964
  Ru complex, Ru(II)-bipyridine, reduced, ligand-ligand inter-valence CT absorpt. 3—24486
  Ru complexes, bridged binucl. complexes, charge transfer bands, reson. Raman excitation profiles 3—45949
  Ru II mixed ligand complexes, excited states, absorpt. and emission spectra, lifetimes 3—21670
  $(Y, In)_2O_3{:}Er^{3+}$, luminescence, host sensitization mechanism 3—3781
charge transfer transitions *see charge transfer states*
charged dislocations *see dislocation dipoles*
charging, contact *see static electrification*
charm particles
  see also D mesons; psi mesons
  bag model, extended applications, decay probabilities of c and b quarks, proton decay 3—26113
  charmonium, elec. dipole one-photon transition rates, relativistic corrections 3—16644
  charmonium fine structure and elec. confinement 3—49649
  charmonium spectrum study using nonrelativistic pot. model, Prufer transformation appl., report 3—20710
  decay, current expt. situation 3—11174
  fragmentation, MARK II results at PEP 3—36256
  hadronic charm production 3—21194
  hadronic production via flavour excitation 3—26073
  heavy quark production by hadrons 3—21067
  heavy quark-antiquark systems from exponential moments in QCD 3—585
  large x-intrinsic charm, higher twist, scale breaking, QCD anal. 3—6064
  lifetime measurements using monolithic Ge target and detector 3—45738
  long-range quarkonium pot., subdominant contrib. 3—21074
  new particles containing charm and beauty, role in fundamental building blocks 3—613
  nonleading single inclusive prod., phenomenological description 3—602
  production by hadrons and photons 3—36282
  quarkonium spectra and QCD 3—21077
  semileptonic decay, intermediate Higgs bosons, $\nu_e/\nu\mu$ universality breakdown 3—633
  valon model charm production and explanation of observed spectra 3—36204
  weak decays 3—40901
  weak decays 3—40902
  $\bar{C}C$, wave equation for superimposed pot., solns., charmonium spectroscopy 3—40846
  e^+e^- annihilation, 30 GeV CM, baryon prod. and charmed-quark fragmentation function 3—21145
  $\eta_c(\eta'_c)$ masses, Isgur-Karl quark shell model appl. 3—21098
  F, lifetime meas. after π^-p and pp interactions 3—49670
  F leptonic decay as source of prompt neutrino prod. in beam-dump expts. 3—49667
  F three body nonleptonic decay, spectator based pole model 3—49672
  F^+ meson lifetimes meas. in hybrid emulsion expt. 3—31201
charm particles continued
  $F^\pm$ meson lifetime meas. with electronic techniques 3—31203
  $F^\pm$ meson lifetimes, bubble chamber expts. 3—31200
  $\Gamma(^3S_1\rightarrow\pi^+\pi^-)/\Gamma(^3P_0\rightarrow\pi^+\pi^-)$ for exclusive decays of charmonium 3—21127
  $\gamma\gamma\rightarrow\eta_c$, charmonium sum rules 3—26175
  $\gamma N\rightarrow\Psi X(\Upsilon X)$, inelastic photoprod., QCD heavy quark contribs., charm subprocess 3—40917
  $\gamma p\rightarrow F^+F^-X$, 20-70 GeV, inclusive cross section, estimation from η decay channels 3—49690
  Λ_c mass in diquark model 3—612
  Λ_c^+ charmed baryon lifetimes meas. in hybrid emulsion expt. 3—31201
  Λ_c^+ inclusive nonleptonic decay in nonrelativistic quark model 3—36245
  Λ_c^+ lifetimes, bubble chamber expts. 3—31200
  $\Lambda_c^+\rightarrow\Lambda X$ in νd interactions, branching ratio 3—6094
  $\mu^+N\rightarrow2\mu(3\mu)$, 250 GeV, charm production, photon-gluon fusion model calcs. 3—45399
  $\nu(\bar{\nu})N\rightarrow\mu^+\mu^-X$, charm decay, strange-sea struct. function 3—6095
  νN, cross section for charm prod. 3—40894
  νN, D^0, D^+, F^+ and Λ_c^+ prod. study 3—40895
  $\nu N,\bar{\nu}N$, charm production, charged current couplings in six-quark model 3—607
  pN, 350 GeV, charm prod. meas. using prompt muons 3—31242
  pp, 360 GeV/c, charm meson production, lifetime meas. 3—49670
  $\bar{p}p$, charm production cross section at collider energies, QCD calcs. 3—21157
  $\bar{p}p$, large p_T strange or charmed baryon prod., higher power QCD mechanisms 3—49713
  pp$\rightarrow$charm particles, CERN ISR 3—21190
  π^-p, 360 GeV/c, charm meson production, lifetime meas. 3—49670
  $\pi^-p\rightarrow D^-\Lambda_c^+$, 15.4 GeV/c, associated charm production 3—45413
  $\bar{Q}Q$, short distance interaction, $\bar{c}c$ singlet p-wave state, confinement 3—6078
  $\Sigma^-N\rightarrow\Lambda K^-\pi^+\pi^+X$, narrow state at 2.46 GeV/c^2 obs., charmed strange baryon A^+ prod. 3—49705
Charpy testing *see dynamic testing*
charring *see combustion*
Chebyshev approximation
  Fourier-Chebyshev approximation for many term time series, celestial mechanics/lunar ephemerides appl. 3—30157
  Gauss-Chebyshev integration technique appl. to elastic layer with midplane crack, antiplane vibration 3—42173
  plane Couette flow for high Reynolds no., stability 3—42244
  single-mode fibres with arbitrary index profile, calc. of cutoff frequencies 3—22204
  weather forecasting, polynomials transform. into irregular grids *(Chinese)* 3—48652
chelates *see coordination complexes*
chemical analysis
  see also chemical analysis by nuclear reactions and scattering; chromatography; electrochemical analysis; electron probe analysis; ion microanalysis; mass spectroscopic chemical analysis; polarimetry; pollution detection and control; radioactive chemical analysis; spectrochemical analysis; thermal analysis; X-ray chemical analysis
  alcohol fuels production by fermentation of pawpaw 3—53590
  corrosion testing, high temp., gas anal. technique 3—29239
  EELS, detection limits, definition 3—34185
  flow-through phototransducer improvement for flow-injection analysis 3—40582
  gas anal. using solid state sensors *(German)* 3—16350
  gas analysers using displacement metering pumps to produce ref. gas mixtures *(German)* 3—29370
  gas discharge probes as elements of gas analysis meas. devices *(German)* 3—53471
  glass, optimum sample prep. condition for precise meas. of homogeneity by Shelyubskii's method *(Japanese)* 3—9385
  inert gases moisture content meas. using high temp. solid electrolyte galvanic cells 3—4329
  laboratory instrumentation and microcomputer systems for anal. chem. 3—14910
  magnetic content of small size samples, determ. using microcomputer based instrument 3—20879
  organic surface characterisation techniques, review 3—13607
  Orsat stack-gas analyser modifications for geochemical exploration 3—59127
  polar atmospheric aerosols, X-ray spectrometry 3—48589
  polymers identification by thermogravimetry and derivative thermogravimetry 3—34660
  power transformer gas-in-oil analysis as a guide to operational conditions 3—9386
  radioactive waste, leachate analysis deficiencies, chemical analytical methods 3—41112
  respiratory and anaesthetic gas analyser using flueric jet-edge resonator oscillators 3—44336
  Rutherford backscattering technique for atomic conc. determ. of binary compound thin films 3—52880
  steel, medium C, ultrahigh strength, heat treatment, fracture props. rel. to comp. 3—53240
  Tadami River area, Hukusima Prefecture, hot springs chemical study *(Japanese)* 3—39864
  Tama River, chemical study *(Japanese)* 3—39863
  trace matter in troposphere and stratosphere, anal. problems 3—48102
  BiSb, quantitative anal., electron backscatt. coeff. meas. 3—19541
  Br/Pb ratio in airborne particles, determ. method 3—48218
  $CaMgSi_2O_6$ diopside single crysts., Czochralski growth, $Ca_{0.92}Mg_{1.08}Si_2O_6$ comp. 3—34217
  CdS:Na crystal, microscopic Na impurity determ. by laser cascade photoionization of atoms 3—33292
  $CuGaSe_2(Te_2)$, CC thin films, flash evaporated, chem. comp., RBS study 3—47232
  $CuIn_{1-x}Ga_xSe_2$, CC thin films, flash evaporated, chem. comp., RBS study 3—47232
  $CuInS_2$, chem. comp. anal. 3—58465
  $CuInS_2$ elemental composition determ. by chemical anal. method 3—29354
  $CuInS_2$ trace elements determ. 3—29355
  $CuInS_2(Se_2)(Te_2)$, CC thin films, flash evaporated, chem. comp., RBS study 3—47232
  $CuIn_{2.0}Se_{3.5}$, CC thin films, flash evaporated, chem. comp., RBS study 3—47232

chemical analysis continued
  $Eu(H_2PO_4)_3$, preparation, chem. and X-ray crystallographic analyses 3—58058
  α-Fe_2O_3 ceramics, gas sensing props., effect of SO_4^{2-} ion 3—34659
  Fe_2O_3-PbO-B_2O_3 glasses, ^{11}B and ^{207}Pb NMR lineshape studies 3—52636
  Fe_3O_4-Fe_2O_3 film, prep. by reactive condensation, oxidation and coercivity 3—18954
  β-FeO(OH), thermal decomp. intermediate product, mag. props. 3—14089
  GaAsP, quantitative anal., electron backscatt. coeff. meas. 3—19541
  $Gd(H_2PO_4)_3$, preparation, chem. and X-ray crystallographic analyses 3—58058
  Hg determination in H_2O, various monitoring systems for direct determ. 3—53615
  K-Bi-O system, phase synthesis and characterisation *(French)* 3—19329
  MgO:Fe, grain boundary chem., analytical electron microscope study 3—46959
  NH_3 vapour reversible optical waveguide sensor 3—34759
  Na, impurity analysis, reactions, phase diagrams 3—14913
  Na-Bi-O system, phase synthesis and characterisation *(French)* 3—19329
  O_3 precursor monitor, automated operation 3—4441
  S_8+NiO, solid-state reaction, kinetics and mechanism, chem. anal., TGA and capillary diffusion studies 3—39374
  Se, determ. in environmental water, specification, conc. levels, review 3—4416
  Si, solar grade, impurity segregation at grain boundaries and other comp. inhomogeneities 3—51812
  SiC coatings, on nuclear fuel particles, identification of Si 3—6315
  Si_3N_4, dielec. props., impurities effect 3—23870
  SiO_x (SiN_y) ultrathin layers, stoichiometric comp. determ. by optical reflectivity 3—34661
  $Sm(H_2PO_4)_3$, preparation, chem. and X-ray crystallographic analyses 3—58058
  U, automated controlled-potential coulometric determ., report 3—6403
  UO_2 pellets, O/U ratio determ. by potentiometric titration method 3—21371

chemical analysis by mass spectrometry *see mass spectroscopic chemical analysis*

chemical analysis by nuclear reactions and scattering
  see also chemical effects of nuclear reactions and scattering; neutron activation analysis; radioactive chemical analysis
  activation analysis of probes, simple conveyer tube design 3—48105
  atmospheric particle light element anal. by gamma ray emission anal. 3—9531
  bibliography, Argentina, 1936-77 3—44912
  bibliography, Brazil, 1936-79 3—44915
  bibliography, France, 1936-77 3—44911
  bibliography, Japan, 1936-78 3—44916
  bibliography, Morocco, 1936-78 3—44914
  bibliography, S Africa, 1936-77 3—44913
  blood serum proteins, elemental anal. after pre-irradiation separation by gel filtration 3—9807
  bulk elemental anal. using γ-rays fron neutron inelastic scatt. 3—4326
  bulk sample assay by neutron inelastic scatt. by radioisotope neutron source 3—29361
  counting rate problems, analysis from pulsed neutron beams, multiple ADC system 3—50211
  diffusion of Au during low energy Ar^+ bombardment 3—2887
  Invar, heat treatment influence on C distrib. and microinhomogeneity 3—58141
  meteoritic debris, radiochemical search in atmospheric aerosols 3—30309
  multicomponent activation detectors, optimisation program in FORTRAN 3—41237
  myocardial lipids, prelabelled with radioiodinated fatty acids, radiochromatographic microanal. 3—53640
  neutron radiative capture rates for indicators in water 3—4338
  neutron-capture prompt gamma-ray spectrometry as a quantitative analytical method 3—1124
  nuclear analytical methods appl. to material anal. 3—24546
  practical applications of neutron-capture reactions and prompt gamma rays 3—795
  prompt nuclear analysis, direction and growth 3—29366
  soda-lime aluminosilicate glass, hydration and chemical interdiffusion 3—51869
  soda-lime silicate glass, hydration and chemical interdiffusion 3—51869
  surface analysis by means of nuclear methods *(Japanese)* 3—29352
  Al:N, 700-800 keV $^{15}N_2^+$ implantation, AlN layers formed, charact. 3—2582
  ^{10}B measurement in Al_2O_3-B_4C burnable poison by prompt gamma activation 3—26357
  $^{10}B(n,\alpha)^7Li$ reaction in borate glasses, Mossbauer spectroscopy 3—3615
  C adsorbed on Al, Ni, Cu surfaces, nuclear reaction meas. 3—19239
  C content determ. in thin layers, nuclear method 3—19552
  GaAs, laser irrad., O incorporation, effect of O_2 pressure 3—22936
  GaAs:Al, spatial distrib. profile of Al form $^{27}Al(p,\gamma)^{28}Si$ resonant reaction 3—46975
  H concentration measurements using nuclear reaction analysis 3—24477
  ^2H, activation analysis, determination of light elements 3—29353
  N depth distrib. in single seeds of wheat using $^{14}N(d,p_0)^{15}N$ 3—29790
  Nb, depth conc. profile of H 3—2595
  Nb, N impurity, lattice location using reaction $^{15}N(p,\alpha\gamma)^{12}C$ 3—57841
  O adsorbed on Al, Ni, Cu surfaces, nuclear reaction meas. 3—19239
  ^{210}Pb in sediment samples, direct anal. by γ-ray technique 3—48683
  Pt (110), adsorbate-induced phase transitions 3—2970
  Pt, adsorption of CO and O, saturation coverages nucl. microanal. and LEED 3—18559
  Si, laser irrad., O incorporation, effect of O_2 pressure 3—22936
  Si, self-diffusion, study by nucl. techniques 3—42830
  Si, simultaneous nucl. microanalysis of N and O 3—4327
  a-Si:H film, H conc. determ. by coincidence meas. of elastically scatt. 100 MeV $^3He^{2+}$ ions and recoil protons 3—2411
  SiO_2-Na_2O(-CaO) glasses, proton irrad., field-assisted Na migration 3—2895
  Ti, thin oxide film and O_2 chemistorption study by ellipsometry, nuclear reaction anal. and microgravimetry 3—14784
  TiN_xO_y, film on Si, composition and thickness determ. by X-ray and nuclear microanal. 3—42982
  TiO_2 photoanodes for photoelectrochemical cells, prep. and characterisation 3—48072
  Zr, anodic oxide film growth, ^{18}O nucl. microanal. and ionic cond. study 3—9227

chemical analysis by nuclear reactions and scattering continued
  Zr, anodic oxide film growth mechanism, ^{18}O tracer study 3—9228
  ZrO_2 film covered Si, plasma anodization, low temp., short range O migration and O exchange 3—9209

chemical association *see association*

chemical batteries *see cells (electric)*

chemical bonding *see bonds (chemical)*

chemical bonds *see bonds (chemical)*

chemical composition *see chemical analysis*

chemical diffusion *see diffusion*

chemical effects of nuclear reactions and scattering
  see also chemical analysis by nuclear reactions and scattering; radiation chemistry
  No entries

chemical effects of radiation *see radiation chemistry*

chemical elements *see elements (chemical)*

chemical energy conversion
  azobenzenes photochemical storage potential 3—53571
  bottled energy, elec. engineering and chemical energy storage, book 3—5471
  liquid phase thermochemical energy conversion systems—an application of Diels-Alder chemistry 3—39502
  oil shale retorting, nuclear fusion reactor appl., feasibility 3—48124
  photochemical/thermal energy storage using organic cations 3—34740
  solar energy conversion to electricity and fuels by chemical methods 3—53567
  solar-hydrogen energy system-model applied to isolated island 3—53593
  storage, optimisation of energy densities, based on solid-gas reactions *(French)* 3—44153
  thermochemical reactor, rotary kiln, focusing solar energy 3—44149

chemical engineering *see chemical technology*

chemical engineering computing
  see also computerised control; computerised instrumentation
  mass transfer and backmixing in extraction, description by quin diagonal algorithm 3—9346
  reactor model checking, thermodynamics appls. 3—48053
  H_2 thermochemical production, separation process modelling, computer program 3—48186

chemical equilibrium
  see also chemical reactions; reaction kinetics
  acetylene dication, struct. and stability ab initio MO theory 3—31925
  anomalous period-doubling bifurcations leading to chemical turbulence 3—186
  bacteriorhodopsin, light induced H^+ activation, H^+ transfer equilib. in phenol-carboxylate H-bonds 3—58585
  Belousov-Zhabotinsky reaction, chaotic transitions 3—39376
  binary liquid mixtures with fast chem. reactions, convective instabilities onset 3—53408
  chemical species stabilisation energies 3—39403
  complex dynamics in chemical reactions 3—16276
  concentration patterns in cross gradient free systems, solute reaction effects 3—29328
  coupled chemical equilibria, pulse perturbation, relax. response. anal. 3—29326
  1,4-cyclohexanedione oxidation by BrO_3^-/H^+ system, uncatalysed oscillatory chem. reactions 3—34611
  cyclohexylphosphine, proton affinity determ. 3—50328
  dissipative structures, sensitivity to external fields, propagating band formation 3—14841
  dissociation-recombination equilibria anomalies near crit. points 3—34645
  electrolyte contact condition near changed wall, density functional theory 3—39390
  1-isoquinolone, lowest excited singlet state, prototropic equilib., fluorescence study 3—53364
  malonic acid Belousov-Zhabotinskii system, excitable steady-state form. by O_2 inhibition 3—14846
  nonequilibrium solvation dynamics in solution reactions 3—58421
  oscillating system, 2-dimens., chem. waves 3—58395
  phases with chemical reactions, mol. quantities determ. from meas. on macroscopic systems 3—32242
  phenyl phosphine, proton affinity determ. 3—50328
  protein solution, dynamics and time-averaged chem. pot., role in oligomer assoc. 3—9544
  reversible chem. reactions, fluctuations 3—53358
  silicates, molten, acid-base reactions, equilib. consts. 3—44066
  As sulphides, reactions, equilib. consts., thermodynamic data 3—5510
  $BaCO_3$, free energy of formation and thermal stability 3—9347
  Br_2+Ar reactions, nonequilibrium effects in the energy distribution function 3—58420
  CO_2 absorption into aq. Na_2SO_3 solns., kinetics 3—51794
  $(Ce_{0.55}La_{0.45})Ni_{4.5}Al_{0.5}D_3$, equilibrium and kinetic props. of hydriding and dehydriding 3—48049
  $CrO_4^{2-}/Cr_2O_7^{2-}$ equilibrium in aq. soln., Raman study 3—48083
  Cu-histamine ternary complexes, stability consts. 3—9312
  Fe(II) sulphides, solubility consts., free enthalpies of form., reaction equilib. consts. 3—29327
  FeOCl-ferricinium intercalation cpds., oxidation and irreversible phase transitions, Mossbauer study *(German)* 3—29307
  $LaNi_5$, absorption of H_2 in presence of other gases 3—48086
  $LaNi_5D_3$, equilibrium and kinetic props. of hydriding and dehydriding 3—48049
  $MgSO_4+2KCl \rightleftharpoons K_2SO_4+MgCl_2$, equilib. system 3—34620
  Mo fluorides, electron affinities determ. by meas. equilib. const. of ion-mol. reactions involving negative ions 3—1509
  $NiCO_3$, solubility consts., free enthalpies of form., reaction equilib. consts. 3—29327
  SOF_2 isolated in inert gas matrices, temp.-reversible equilibria and exchange among trapping sites 3—6641
  Si, chemical equilibria of $SiCl_4$ reduction by hydrogen, low-pressure epitaxy *(Chinese)* 3—14497
  U nuclear waste immobilisation in borosilicate glasses, redox chemistry 3—899
  U nuclear waste immobilisation in Ti containing borosilicate glasses, redox equilib. 3—900

chemical exchanges
  see also ion exchange; isotope exchanges
  2-2-'hydroxylphenyl-benzoxazole, excited state H^+ transfer, picosec. fluoresc. obs. 3—39377

chemical exchanges continued
amines+$O(^3P)$, H-abstraction, mol. beam-laser induced fluoresc. expt. 3—4278
atom-diatom rearrangement collisions, coupled-channel Born approx. 3—34619
Bloch equations, exact soln. in case of n-site chem. exchange 3—45976
Carr-Purcell pulse sequences, transverse magnetisation, chem. exchange effects 3—54756
chronic granulocytic leukaemia, NMR investig. of H_2O exchange 3—44206
correlation time distrib., NMR lineshape anal. 3—14864
cyclohexylphosphine, proton affinity determ. 3—50328
guanine-cytosine (-Mg^{2+}) systems, H-bonded, double proton transfer and charge transfer interactions calcs. 3—41495
intermicellar exchange dynamics of solubilized reactants 3—4321
methylamine+NH_2^+, charge and H^+ exchange, rate consts., branching ratio 3—39366
2-naphthol, excited state proton transfer, reversibility detection by phase-modulation fluorometry 3—9311
β-naphthylamine, alkaline aq. soln., excited state H^+ transfer reaction, red edge effect 3—39365
non-aqueous media, thermodynamics, kinetics and mechanisms of solvation, solvolysis and substitution 3—53360
phenyl phosphine, proton affinity determ. 3—50328
positronium+O_2, interaction in hexane, mag. quenching expt. 3—39363
protamine-polynucleotide insoluble polyelectrolyte complex, interaction with polyphosphates *(Russian)* 3—53384
quadrupole nuclei, I=5/2, 7/2, chemical exchange, NMR line shapes and shifts 3—36778
rate determ. by magnetisation-transfer NMR 3—14863
reactive scattering, single coord. arrangement channels calcs. 3—14862
solvent reorganisation role in H^+ transfer and nucleophilic addition reactions 3—53376
substilisation, protonation, environmental effects, MO anal. 3—14842
unsaturated hydrocarbons+O, H-atom abstraction, chemical dynamics studied by mol. beam-laser induced fluoresc. expt. 3—4277
Ag, zone refining in presence of AgCl 3—39027
Ar+ArKr, atom exchange and dissoc. reaction mechanisms calcs. 3—29304
$C+D_2^+ \rightarrow CD^+ + D$, reaction dynamics, 0.002-14 eV 3—58406
CN^++neutral molecule, reaction channels and rate coeffs., ICR meas. 3—58405
C_2N^++neutral molecule, reaction channels and rate coeffs., ICR meas. 3—58405
$D+BrH \rightarrow DBr+H$, 3-dimens. rate coeffs., quantum sudden and var. transition state calcs. 3—44042
$F+D_2^+ \rightarrow FD^+ + D$, reaction dynamics, 0.002-30 eV 3—58407
$F+D_2 \rightarrow D+DF$, state-resolved ang. distrib., reactive IOS method calcs. 3—39356
$F+H_2 \rightarrow HF+H$, quantum dynamical IOS calcs. 3—58418
$F+HN_3$, N_3 radical form., vacuum UPS obs. 3—21820
F^-+HF, pot. energy hypersurface, force consts., SCF theory 3—53367
H isotope separation from water, dual-temperature system 3—6392
H^+ transfers, electron correl. effects, ab initio MO calcs. 3—58399
$H+BrH \rightarrow HBr+H$, 3-dimens. rate coeffs., quantum sudden and var. transition state calcs. 3—44042
$H+H_2$, chemical exchanges, BKLT eqns. soln. 3—44037
$H+H_2$ (MuH), light atom transfer reactions, classical anal. 3—44050
$H+H_2$ collinear reaction, density and flux anal. 3—4268
$H+H_2 \rightarrow H_2+H$, integral cross-sections, reduced dimens. quantum calcs. 3—39357
$(H_3NHOH_2)^+$, proton transfer, energetics and electronic rearrangements 3—58400
H_2O-N-methylacetamide, chemical exchange rates determ. by magnetisation-transfer NMR 3—14863
$H_5O_2^+ + H_3O_2^-$, neutralisation reaction, pot. energy hypersurface, polarisation model 3—9315
I+HI (MuI), light atom transfer reactions, classical anal. 3—44050
Kr+Ar_2, atom exchange and dissoc. reaction mechanisms calcs. 3—29304
Kr+Ar_2(NeAr), atom exchange and dissoc. reaction mechanisms calcs. 3—29304
Li+HF, pot. energy surface, quasiclassical trajectory calcs. 3—29305
LiF-K_2SO_4/KF-Li_2SO_4 charge-asymmetric reciprocal molten salt mixtures, excess enthalpies 3—4313
N^++CO, flowing afterglow, prod. state distrib. laser induced fluoresc. study 3—39386
NH_3 heterodimers and homodimers, proton transfers, ab initio MO calcs. 3—17210
O^-+HF, flowing afterglow, prod. state distrib. laser induced fluoresc. study 3—39386
OH_2 heterodimers and homodimers, proton transfers, ab initio MO calcs. 3—17210
Pt complexes, exchange processes, PMR study 3—55965
$UO_2^{2+}-H^+$ cation exchange equilibria 3—49944
Xe+Ar_2, atom exchange and dissoc. reaction mechanisms calcs. 3—29304

chemical industry
Borsod chemical plant's utilisation of waste hydrogen *(Hungarian)* 3—44154
chloro-alkali industry membrane cell technology, developments and effects on power utilisation 3—53496
electrokinetic thickening process details and industrial application 3—29314
open cycle MHD, integration with various chemical and metallurgical processes 3—29417
switchgear anticorrosive protection measures for operation in chemical works *(Rumanian)* 3—9202
synthetic fuels, developing technologies and commercial prospects 3—39437

chemical kinetics *see reaction kinetics*

chemical lasers
CW lasers with radial gas flow mixture using unstable resonators 3—56247
CW reaction-product chemical lasers, review 3—27026
HgBr/$HgBr_2$ dissociation laser, kinetic processes 3—27025
photodissociation laser, active medium optical quality, pyrolytic bleaching wave 3—1622
stimulated noncoherent radiation generation in light-scatt. media, exhibiting chem. reactions 3—17490
supersonic-supersonic ejection const. area, theoretical and expt. investig. 3—12707

chemical lasers continued
CO, CW, flame, CS_2-O_2-N_2O type, output characts. 3—27024
CS_2, $(a^3\pi_r)$ chemiluminesc., electronic transition chem. laser appls. 3—39371
CS_2-O_2 mixture, chemically active media in gasdynamic lasers 3—12128
D_2-F_2-CO_2 photoinitiated laser, high efficiency 3—1618
DF CW high energy laser diagnostics, review 3—41898
DF CW laser, spatially scanning gain meas. using simple arrangement 3—27119
DF, chemical laser, flowfield diagnostic expts. 3—56185
DF-CO_2 chemical laser, shortening of emitted pulses 3—7041
FeI_2 photodissociation laser 3—12134
H_2-F_2 laser parameters, initial electron beam initiation, influence 3—1621
H_2-HF laser, possibility of obtaining high specific lasing parameters using a chain reaction 3—1620
HF CW laser, specific energy characts., influence of translational and rot. relax. 3—37013
HF CW R-branch laser demonstration 3—46202
HF chemical laser, supersonic, multikilohertz pulsed operation 3—41816
HF high-power CW and pulsed lasers, dynamic saturation of optical transitions 3—22030
HF laser utilising a high-press. H_2-SF_6 mixture 3—1619
HF parallel-amplified multiline laser beams, active phase matching by Mach-Zehnder interferometer 3—27113
HF pulsed chemical laser, laser action during induction period of photoinitiated F_2/H_2 chain reactions *(Chinese)* 3—37011
HF pulsed high-press. laser with elec.-discharge initiation 3—27031
HF, pure source flow chemical laser, gasdynamic and kinetics study 3—56186
HF, refr. index meas. from 2.5 to 2.9 μm 3—22571
HF/DF laser small signal gain meas. system 3—41854
HF(DF) CW chemical lasers, choking anal. 3—12132
HgBr, bound-free emission 3—6691
HgBr laser spectrum study *(Chinese)* 3—41815
$^{200}HgBr^{81}$ photodissoc. lasers, spectroscopy and efficiency 3—56187
I chemical laser, I_2 dissociation kinetics meas. in presence of $O_2(^1\Delta)$ 3—29310
I, energy transfer from O_2, lasing due to spin-orbit transition 3—9344
I, Faraday cell for single-pulse photodissociation laser 3—56251
I high-efficiency photodissociation laser operating in free-lasing regime 3—27029
I laser, nanosecond pulse amplifier with 2 kJ single beam output energy 3—12180
I laser, pumping in power stage, radial distribution of excitation 3—12133
I laser gain profile width determ. using stimulated Brillouin scatt. 3—27030
I lasers, optical pumping efficiency improvement 3—56188
I, photodissociation laser, short pulse amplification 3—41817
I photodissociation laser, photolytically pumped, optical distortion due to gas-dynamic motion 3—56256
I photodissociation laser amplifier system, characts. *(Korean)* 3—12135
I photodissociative single-pulse laser, two-freq. lasing 3—1617
I-O_2, chemical laser, gain, output energy, numerical modelling 3—56190
I-O_2 chemical laser, transverse-flow, performance in low gas-flow velocity regime 3—50653
^{127}I, lasing in Zeeman inhomogeneous gain profile, spectral selection in $^2P_{1/2}$-$^2P_{3/2}$ transition region 3—27027
O_2-I active medium, kinetics of physical processes 3—6959
O_2-I CW chemical laser emitting at 1.315 μm, energetics analysis 3—27028
O_2+I chemical laser excitation mechanism, temp. depend. 3—22046
SF_6-H_2-He chem. laser, relativistic electron beam excitation using TEREK-1R system 3—6960
Tl I photodissociation laser, threshold at low press., meas. and computer simulation 3—37012
Tl photodissociation laser, emission spectrum characts. 3—56189
TlI photodissociation laser miniaturisation 3—22107
^{64}ZnI photodissoc. lasers, spectroscopy and efficiency 3—56187

chemical potential *see thermodynamic properties*

chemical reactions
see also association; atom-atom collisions; atom-ion collisions; atom-molecule reactions; atomic inelastic collisions; catalysis; charge exchange; chemical exchanges; chemically reactive flow; chemiluminescence; chemisorption; CIDEP; CIDNP; corrosion; dissociation; electrolysis; free radical reactions; heat of reaction; ion-molecule reactions; isomerisation; molecule-molecule reactions; oxidation; photochemistry; polymerisation; pyrolysis; radiolysis; reaction kinetics; reduction (chemical); solvation
N-acetyl-(l-alanine) methyl esters, volatilisation kinetics, freq. factors 3—33411
acid+base reactions at O, N and C, silyl and methyl group effects 3—45811
addition reaction, HCl to $C\equiv N$ triple bond, ab initio calcs. 3—31908
alkylbenzenes, chem. ions. mass spectra *(Japanese)* 3—48065
amidophosphite, bicyclic, constrained, hydrolysis and acidolysis, IR and NMR studies *(French)* 3—44053
amorphous materials, recomb. as continuous time random walk problem, chemical reactions framework 3—54682
atmospheric chemistry, kinetic and photochemical data tables 3—16094
atom+diatom reactive scatt., off-shell vibrorot. sudden approx. study 3—45916
Belousov-Zhabotinsky reaction, chaotic transitions 3—39376
binary copolymers, reactivity ratios, NMR triad data studies 3—56109
binary liquid mixtures with fast chem. reactions, convective instabilities onset 3—53408
binary solid compound, diffusion coupled with reaction 3—13513
biomass as monomer source, synthesis of 2-furyloxirane 3—48172
biomass as monomer source, synthesis of 2-vinylfuran 3—48171
chemical vapour deposition modelling, appl. to GaAs epitaxy 3—33594
chemical vapour deposition modelling 3—34240
chemiluminescence, excitation mechanisms 3—38928
chlorophyll-albumin complex, synthesis, spectral props., and comparison with pigment-protein complexes 3—6813
collinear chem. reactions, interference effects and resonances, hyperspherical adiabatic description 3—24482
comets, chemical reactions rel. to form. of NH^+ 3—10195
complex dynamics in chemical reactions 3—16276
coupled chemical equilibria, pulse perturbation, relax. response. anal. 3—29326

chemical reactions continued
p-cyano-N,N-dimethylaniline, intramol. CT state reactivity with $F^-(I^-)(Cl^-)(OH^-)$ 3—4260
cyclobutene cation radical→1,3-butadine cation radical, nonelectrocyclic path, MINDO and ab initio calc. 3—34618
diffusion-controlled reactions, boundary conditions, and reversibility 3—58408
diffusion-controlled reactions, cluster expansions 3—34605
diffusional reactions, pot. energy surface saddle point 3—44046
dynamic NMR spectroscopy, rate consts. for chemical reactions, book 3—47
electron spins, unpaired, in mol. phys. and chem. 3—55778
electron-transfer reactions of solvated electrons, electronic transmission coeff., free energy gap and temp. depend. 3—24491
ethylene, gaseous, ozonolysis, free radical detect., microreactor-matrix ESR spectrosc. 3—45985
exothermic reactive slab, thermal oscillation stability, reduction to Hill's eqn. 3—29331
fluctuations, fine-grained master eqn. theory 3—53359
fluctuations in reversible chemical reactions 3—53358
full optimised reaction space model, mol. electronic wavefunctions 3—1194
full optimised reaction space models, interpretation of configurational bases 3—1196
full optimised reaction space orbitals, invariance against nonsingular transformations 3—1195
Gatterman reaction, addition to C≡N triple bond, ab initio calcs. 3—31908
glass, synthesis from gels, problem of monolithic gels 3—24203
glass synthesis, comparison of gel pore vol. obtained by three methods 3—24204
global reaction, linear asymmetric kinetic networks, diffusion coupling 3—22550
graph theoretical classification and coding of chemical reactions with a linear mechanism 3—9304
graphite, electron bombardment enhanced reactivity with atomic H, temp. depend., methane yield 3—26445
graphite, erosion due to energetic ion bombardment, room temp. to 4000K 3—26449
graphite, implanted with D, trapped states, chem. sputtering, thermal desorption 3—26448
graphite, pyrolytic, reaction of atomic H, hydrocarbon form., synergistic effect of Ar ion bombardment 3—26447
graphite and TiC-coated graphite, methane prod. under electron and atomic H impact 3—26446
graphite intercalation compound with BrF_3, composition and struct. 3—13183
Houben-Hoesch reaction, addition to C≡N triple bond, ab initio calcs. 3—31908
3-hydrochromone, excited stae proton transfer, time-resolved and steady-state fluoresc. 3—1412
hydroxybenzoic acids, electronic spectra, struct., reactivity, CI-CNDO-PPP calcs. 3—11697
3-hydroxyflavone, excited stae proton transfer, time-resolved and steady-state fluoresc. 3—1412
inert gas+halogen atom, channels of atom and excitation transfer, pot. surfaces 3—11929
interstellar dense clouds, detailed chem. network and parameter var. effects 3—25316
interstellar deuterated molecules surface chemistry on dust grains 3—54224
interstellar medium, chemical reaction scheme rel. to mol. comp. of grain mantles 3—15973
interstellar medium, chemical reactions rel. to form. of NH^+ 3—10195
interstellar medium, effects of shock on molecular comp. of diffuse cloud 3—54479
interstellar molecular clouds chem. comp. and reactions, time depend. model 3—30474
ion photofragment spectroscopy, pot. curves, collision and reaction processes 3—5916
kinetic potential theory *(German)* 3—29298
laser chemistry *(Japanese)* 3—24519
laser radiation propag. in slow-response chem. nonlinearity medium 3—7086
liquid phase thermochemical energy conversion systems—an application of Diels-Alder chemistry 3—39502
low temp. reactions, stiffness of master equation 3—39352
malonic acid Belousov-Zhabotinskii system, excitable steady-state form. by O_2 inhibition 3—14846
methoxy radical, weakly exothermic rearrangement, pot. surface calcs. 3—44045
5-methylresorcinol-hexamethylenetetramine molecular complexes, struct. conversions on heating, chem. interactions 3—53371
microcomputer-controlled calorimetric apparatus for slow reactions 3—49376
moving boundary considered as wave propag. 3—51143
multiplicty change, $\Delta S=2$, point-group selection rules, appl. to catalysis and organo-transition metal reaction 3—50296
naphthylamine-18-crown-6 protonated complexes, H^+ transfer reactions in the excited state 3—24494
nitrite passivation wastewater, neutralisation 3—41117
oscillating system, 2-dimens., chem. waves 3—58395
phases with chemical reactions, mol. quantities determ. from meas. on macroscopic systems 3—32242
phenyl acetate, photofragmentation, cage processes, temp. depend. 3—34634
photoelectrochemical cells, based on photoinduced H abstraction reaction in soln. 3—9444
polymer melt, chemical reactions, diffusion controlled, kinetics 3—39380
polypropylene films, region accessible for low-mol. substances, orientation and annealing influence *(Russian)* 3—7924
principles of the description of reacting systems 3—14837
quasiclassical theory reaction scatt. AB+CD→AC+BD 3—44055
radical pair P^F state in bacterial photosynthesis, kinetics, decay time, mag. field depend. 3—9331
reaction-path interpolation models, for var. transition state theory 3—58392
reactive resonances, semiclassical SCF calcs. 3—9308
reactive scattering, multichannel DWBA calcs. 3—58391
reactive scattering, single coord. arrangement channels calcs. 3—14862
reactive tunnelling, vibrationally adiabatic models 3—29302
reactivity of one-electron and two-electron processes, comparison 3—58398

chemical reactions continued
scattering reson. widths from real stabilisation graphs 3—5622
Schiff base, nonionised, complexes Zn^{2+}, Cd^{2+} and Hg^{2+} cpds., synthesis, osc. obs. 3—6647
short-time description, stochastic noise methods 3—53357
sigmatropic rearrangements, orbital symmetry anal. 3—34614
silicates, molten, acid-base reactions, equilib. consts. 3—44066
solid state reactions, laser Raman study 3—4264
solutions, energy diffusion-controlled-reactions 3—4263
steel, carbon type, successive saturation with Al and B, effects on props. 3—24405
steel, nitriding, high-temp., math. model 3—24407
Stephen reaction, addition to C≡N triple bond, ab initio calcs. 3—31908
stimulated noncoherent radiation generation in light-scatt. media, exhibiting chem. reactions 3—17490
stochasticity and chaos, conf., Kyoto Univ., Japan, (Apr. 1982) 3—35776
strict Lindemann behaviour as a limiting form 3—48058
supersonic combustion, numerical study of staged fuel injection 3—12708
tautomeric reaction, water chain intervention 3—58397
thermal effects in infrared laser photochemistry and energy transfer experiments 3—4301
three-dimensional, reson. theory, Feshbach anal. and computational techniques 3—14860
three-dimensional, reson. theory, Feshbach projection operator theory appls. 3—14861
transition metal carbonyl clusters, bonding, chem. props., NMR 3—12030
triggering and hysteresis in two-dimens. systems 3—4284
two component bimolecular systems 3—48043
unimolecular, state selected, thermal analysis calcs. 3—58410
vibrational-kinetics methods, appls. to mol. lasers and laser chemistry 3—6769
vinyl chloride metabolites, mol. props., ab initio SCF-MO calcs. 3—31920
AlN, reactions with liq. Ni alloys 3—24383
α-Al_2O_3, dehydration prep., X-ray peak broadening due to twin form. 3—8059
$Ar.BCl_3$, van der Waals mol., vibr. predissoc., Monte Carlo calcs. 3—58410
As sulphides, reactions, equilib. consts., thermodynamic data 3—5510
C_3, proton affinity determ. by reactivity meas. 3—55879
C_3H^+, heat of formation, determ. by reactivity meas. 3—55879
$C_4H_8NO^+$ cations, form., struct. and rearrangements 3—1224
$CaCO_3$, shock induced chem. decomposition of calcite 3—19952
$CaO+SiO_2$ polycryst. pellets, interdiffusion behaviour, DC field effects 3—28165
$CrSi_2$-Cr_2O_3 interface, chem. reactions, XPS and Rutherford backscatt. study 3—42856
α-Fe, nitrided, surface Fe_xN form. under unfavourable thermochem. conditions, causes 3—14886
α-Fe_2O_3, dehydration prep., X-ray peak broadening due to twin form. 3—8059
α-Fe_2O_3, highly dispersed, in SiO_2 gel pores, interaction obs. using Mossbauer effect *(Russian)* 3—48093
H_3, hyperspherical diabatic and adiabatic representations for chemical reactions 3—24481
HCl, addition to C≡N triple bond, ab initio calcs. 3—31908
H_3O^-; gas phase, long-lived form., struct. and reactions 3—58403
H_nO^{x+}; n=1-3, x=1,2, struct., stability, adiabatic ionis. pots., multireference CI calcs. 3—45864
Kr^++Xe, excitation cross sections for ion energies below 100 eV 3—6762
$MgAl_2O_4$ spinel synthesis, F^- influence 3—24189
N_2-H_2O-O_2 battery system electrochemical thermodynamic and commercial aspects 3—53495
$NH_n{}^{x+}$, n=1-4, x=1,2, struct., stability, adiabatic ionis. pots., multireference CI calcs. 3—45864
NH_4NO_3+ZnO mixture, DTA, energy-dispersive X-ray diffr. study 3—58460
Na, impurity analysis, reactions, phase diagrams 3—14913
NiO with small B_2O_3 additions, sintering mechanism 973 to 1373K *(Russian)* 3—47806
NiO-Al_2O_3 catalysts, magneto-chemistry 3—38598
Os carbonyl clusters, struct., bonding, chem. props. 3—12029
$PH_n{}^{x+}$, n=1-4, x=1,2, struct., stability, adiabatic ionis. pots., multireference CI calcs. 3—45864
Ru carbonyl clusters, struct., bonding, chem. props. 3—12029
S_8+NiO, solid-state reaction, kinetics and mechanism, chem. anal., TGA and capillary diffusion studies 3—39374
a-Si:H films, deposition by glow discharge and reactive sputtering, H reactions 3—3951
Ti-ZrO_2 (ZrN)(ZrC)($ZrSi_2$), solid phase interactions 3—29039
TiC chem. sputtering yields on H^+ bombardment, methane prod. 3—26444
TiO_2 substrate reaction with methylsilanes and hexamethyldisilazane, IR absorpt. spectra 3—9355
YF_3, negative ion form. investigated by mass spectroscopy, enthalpies of reaction and form. 3—4330

chemical reactivity *see chemical reactions*

chemical relaxation
butadiene-methylstyrene elastomers, multiplicity of relax. transitions *(Russian)* 3—51517
polymers, amorphous, relax. freq. distrib., preexponential factors influence *(German)* 3—37815
rubber, butadiene-styrene, filled and unfilled, relax. transitions *(German)* 3—39189

chemical shift
see also isomer shift
acetone, liq., mol. interactions, reorientational motion, ^{17}O NMR chem. shifts and linewidths studies 3—45969
acetonitrile, chemical shift anisotropy, ^{13}C and ^1H NMR study 3—11835
AES for surface struct. and surface electronic struct. anal., review *(Chinese)* 3—43666
L-alanyl-L-tryptophan, conformation, dynamics, ^1H NMR study 3—11834
alkaline earth fluorides: $Er^{3+}(Ho^{2+})$, spin transfer, ^{19}F NMR shift 3—33995
ammonium d-tartrate, ^1H and ^{13}C NMR studies 3—52642
azobenzene, $^{15}N/^{14}N$ isotope effects on ^{13}C NMR chem. shifts 3—45974
benzo[c]cinnoline, $^{15}N/^{14}N$ isotope effects on ^{13}C NMR chem. shifts 3—45974
cellulose, regenerated, differing crystallinity, ^{13}C NMR studies 3—8733
cyano complexes, dimag., $^{13}C/^{12}C$ isotope effects on ^{15}N chemical shielding 3—11825

chemical shift continued
4-cyano-4′-n-pentylbiphenyl, nematic, ^{13}C chem. shift 3—38710
cyclo di[pro-o-nitroglycyl], conform. equilib., 2-dimens. NMR spectrosc. investig. 3—1384
cyclotetrasarcosyl, chemical shifts, configs., PMR study 3—15042
cytosines, PMR assignments by double quantum coherence 3—32111
deoxynupharidine methiodide, stereochemistry, chemical shift ^{13}C NMR study 3—50428
dibenz[c,e]azepine-5, 7-dione, 6-substituted, chemical shifts, ^{13}CNMR study 3—6680
dicyanocobalamin, isomers, struct., ^{1}H NMR 3—6673
dicyanocobinamide, isomers, struct., ^{1}H NMR 3—6673
diethylmethylamine, stereodynamics, dynamic PMR chemical shift study 3—32107
diketones, enol forms, solid, ^{13}C NMR shielding, intermol. hydrogen bonding effects 3—23818
p-dimethoxybenzene, chem. shift anisotropy, 2-dimens. Fourier transform CP/MAS NMR 3—57801
2,6-dinitroanisol, intramolecular hydrogen bond, NMR study with particular reference to phenyl protons spectrum *(Japanese)* 3—36780
2,6-dinitrophenol, intramolecular hydrogen bond, NMR study with particular reference to phenyl protons spectrum *(Japanese)* 3—36780
2,6-dinitrotoluene, intramolecular hydrogen bond, NMR study with particular reference to phenyl protons spectrum *(Japanese)* 3—36780
diphenic acid, chemical shifts, ^{13}CNMR study 3—6680
double reson. difference spectroscopy, Bloch-Siegert shifts and subtraction artifact suppression 3—30911
7-epideoxynupharidine methiodide, stereochemistry, chemical shift ^{13}C NMR study 3—50428
ethanol, NMR spectra with homonuclear decoupling 3—28719
ethylbenzene, ^{13}C-NMR chem. shifts *(German)* 3—50435
fluorobiphenyls, NMR chem. shift, substituent effects 3—6678
α-D-glucopyranose oligomers, 2-dimens. NMR, ^{13}C and ^{1}H chem. shift correl. maps 3—11827
glycyl-L-histidine, conformation, dynamics, ^{1}H NMR study 3—11834
hexachlorocyclotriphosphazene, ^{31}P NMR external reference for intact biological systems 3—48455
hexamethylbenzene, chem. shift anisotropy, 2-dimens. Fourier transform CP/MAS NMR 3—57801
hydrogenic like impurity states, chemical shift theory, press. depend. 3—33680
isoprenoid fragments, methylene groups, ^{13}C NMR chemical shifts 3—32115
lanthanide complexes, mol. struct. from NMR chemical shifts 3—32108
liquids, two-dimensional NMR, book 3—25706
metal halides, chem. shifts, X-ray K and L_{III} absorpt. edges, plasma oscills. theory of solids 3—57995
metal sulphides, chem. shifts, X-ray K and L_{III} absorpt. edges, plasma oscills. theory of solids 3—57995
2-methylthiobenzaldehyde in CCl_4, NMR planar conformation study 3—50423
N-methylthiourea, preferential solvation 3—53377
minerals, natural, with mag. centres, magic-angle sample-spinning lineshapes, NMR study 3—52643
molecular complexes, assoc. const., shift, NMR chem. shift meas. 3—50432
molecules, theory of mag. susceptibilities and NMR chem. shifts in terms of localised quantities 3—55969
monofluorotoluene, ^{13}C-NMR chem. shifts *(German)* 3—50435
nematogens, pretransitional behaviour, NMR study 3—47565
2-nitroresorcinol, intramolecular hydrogen bond, NMR study with particular reference to phenyl protons spectrum *(Japanese)* 3—36780
NMR, four-dimens., spatially resolved high resolution spectroscopy 3—45181
NMR chemical shift and nucl. screening, electron correl. effects 3—55961
2-norbornyl cation, high-field ^{1}H and ^{13}C NMR spectra 3—45972
organic dianions, ^{13}C and ^{17}O NMR investig. 3—21779
organic liquids, NMR spectra with homonuclear decoupling 3—28719
ornithine in gramicidin S in soln., ^{1}H and ^{14}N NMR study 3—45971
paradichlorobenzene single cryst., ^{35}Cl chem. shift anisotropy, Zeeman-split NQR study 3—8740
1-pentanol, ^{1}H-^{13}C chemical shift correl. NMR spectra 3—45993
phenylphosphonic dichloride, in liq. cryst. soln., ^{1}H, ^{31}P and ^{13}C NMR studies 3—50431
phosphazoalkane series, ^{31}P NMR chem. shifts, SCF MO and CNDO/2 calcs. 3—17311
phosphazoalkanes, struct. and $\delta^{31}P$ chem. shifts 3—45983
polyacetylene, undoped cis and trans, high resolution ^{13}C NMR states 3—57804
polyoxymethylene, ^{13}C NMR, isolation of amorphous and cryst. reson. and solid state conformations 3—52645
powdered solids, chem. shift anisotropy, 2-dimens. Fourier transform CP/MAS NMR 3—57801
proteins and nucleic acids, multinucl. approach and solid-state NMR 3—44357
quadrupolar spin system, Zeeman effect 3—14161
rare earth metals, oxides and silicides, X-ray emission L-spectra, chem. effects meas. 3—14392
relativistic theory of NMR chemical shifts 3—41592
D-ribose-Na^{2+} binding in aq. solns. using H^+ reson. shifts 3—26769
rotating solids, 2-dimens., time reversal effects in chem. shift-dipolar spectra 3—38705
salicyclic acid and derivatives, chemical shifts, ^{13}C NMR study 3—8734
sensitive point method for localised NMR spectroscopy 3—34940
solid state photoelectric and Auger transition, screening contrib. effect 3—28966
solvents, mol. oriented, spin-spin coupling const. and chem. shift anisotropies, NMR spectra 3—43447
thiobinupharidine methiodide, stereochemistry, chemical shift ^{13}C NMR study 3—50428
thioureas, ^{15}N chemical shifts, nucl. shielding, CNDO/S calcs. 3—17222
toluene, ^{13}C-NMR chem. shifts *(German)* 3—50435
transition metal dithiocarbamates, chem. shifts from IR and XPS spectroscopies 3—23931
triethylamine, stereodynamics, dynamic PMR chemical shift study 3—32107
trifluoromethyl cpds., F atom mag. nonequivalence 3—11828
trifluorotoluene, ^{13}C-NMR chem. shifts *(German)* 3—50435
ureas, ^{15}N chemical shifts, nucl. shielding, CNDO/S calcs. 3—17222
V-VI layered compounds, binding energies, valence bond density of states, photoemission 3—8930

chemical shift continued
XPS nonlinearities effect on calibration 3—25996
Al_2O_3 and other Al-O cpd., Auger and XPS data 3—24063
Al_2O_3-SiO_2-MgO (CaO) glass, Al ion co-ord. number and physical props. 3—33122
Be, Knight shift, chem. shift correction 3—38708
CO(II) dopamine complex, ^{1}H and ^{13}C paramag. shifts and ^{13}C mag. relax. rates 3—26765
CaF_2-LaF_3, defect phases, anion mobility, NMR study 3—13525
$CdSe_{0.65}Te_{0.35}$, chemical shift, XPS study 3—28964
Cu(110), adsorption of CO, dipole coupling and chem. shifts, IR refl. absorpt. spectra 3—38833
Fe (III) complex, tetraphenylporphyrin iron (III) halides, high spin, ^{13}C NMR 3—1392
Fe and Fe compounds, X-ray $L_{\alpha1,2}$ emission lines, chemical shifts meas., electron microprobe anal. appl. 3—8906
Ge (100), adsorption of O, thermal desorption, work function, AES and EELS studies 3—38224
H_2 spin-rotation interaction, isotope shift, nucl. mag. shielding function 3—45875
HBr, μ^+ substituted, isotope effect and solvent chemical shift 3—11886
HF, NMR chemical shift and nucl. screening, electron correl. effects 3—55961
H_2O, μ^+ substituted, isotope effect and solvent chemical shift 3—11886
K complexes with ionosphores, ^{39}K NMR chem. shifts., relax. times and quadrupole coupling consts. 3—55968
K_2PdCl_4, white line in Cl K X-ray absorpt. spectra 3—34169
K_2PdCl_6, white line in Cl K X-ray absorpt. spectra 3—34169
K_2PtCl_4, white line in Cl K X-ray absorpt. spectra 3—34169
K_2PtCl_6, white line in Cl K X-ray absorpt. spectra 3—34169
Ni (II) complex, dopamine, paramagnetic shift, relax. times, ^{13}C and ^{1}H NMR 3—6672
Pb cpds., chemical-state shifts, Auger line XPS study 3—28965
Pt catalyst, NMR spin relaxation 3—3578
Pt complexes, Zeise's salt substituted aniline derivatives, UV, IR and PMR study 3—55963
^{45}Sc in aqueous solns., NMR chem. shifts, linewidths and longit. relax. rates 3—55970
Si-Ge, amorphous, sputtered, XPS study 3—3913
SiO_2 and other Si-O cpds., Auger and XPS data 3—24063
$TlClO_4$, solid state, chemical shift, spin-lattice relax., NMR study 3—33994
UO_2, U_4O_9, and U_3O_8, XPS spectrum in low partial press. of O_2, nonstoichiometry effects 3—8942

chemical structure
see also bonds (chemical); crystal atomic structure; crystal chemistry; molecular configurations
chemical species stabilisation energies 3—39403
electron spins, unpaired, in mol. phys. and chem. 3—55778
information theory, struct. aspects 3—36641
layer lattice and intercalation compounds, neutron scatt. 3—53410
minerals, natural, with mag. centres, magic-angle sample-spinning lineshapes, NMR study 3—52643
poly-bis-isoprene phosphonates, opto-mech. props., thermal stability and chem. struct. *(Russian)* 3—47015
tetramethylsilane/O_2 prepared polymer films, glow discharge polymerised, elec. props. 3—8490
Al_2CH_2, model system of terminal vs. bridge bonding of methylene to metal systems 3—36697
^{73}As EC decay probability, influence of chemical state 3—31341
γ-Fe_2O_3, prep. from Fe_3O_4, coercivity, particle size depend., chem. struct. 3—23736

chemical technology
see also chemical industry; chemical variables control; chemical variables measurement
isotope separation, distillation method, mass exchange 3—41698
isotope separation, multiparametric optimisation of the process 3—32230
microsampling valves design, concentration-programmed gaseous streams generation 3—25861
packed-bed balance reactor for gas adsorption and gas-solid reactions under elevated pressures 3—4315
radioactive waste, organic, vol. reduction, pyrolysis pilot plant test 3—45591

chemical vapour deposited coatings *see CVD coatings*

chemical vapour deposition
see also vapour phase epitaxial growth
convection influence on growth by chem. vapour transport *(French)* 3—14453
conveyorised atmospheric CVD for optical coating prod. 3—19275
diamond particles, growth from methane-H_2 gas 3—19284
divinyl-benzene polymer, thin film deposition by electron and ion beam induced polymerisation 3—39042
fibre optics for telecommunications, fabrication *(French)* 3—37202
fibre waveguides, high-strength, made by CVD method 3—27259
fibre waveguides for optical links, fabrication and props. *(Czech)* 3—7205
fibres, low-OH, MCVD, without barrier layer using OH→OD-exchange substrate tubes 3—37195
fibres, single-mode, fabricated by OVD process, performance characts. 3—56340
fusion reactor first wall material, low-Z coatings development for JT-60 3—21527
glass fibre, light guide production, with small conc. of OH groups by gas phase chem. deposition 3—22251
hilly automatic process control system 3—47776
III-V semiconductors, MOCVD growth 3—52966
inorganic superconductors, synthesis and cryst. growth, book contrib. 3—14454
laser CVD using CW and pulsed lasers 3—19283
laser induced, apparent activation energies, rapid determ. 3—47778
low pressure CVD, plasma and photodeposition techniques, review 3—24146
low pressure CVD, review *(Hungarian)* 3—43745
low-pressure, mathematical model 3—8988
metal deposition by organometallic gases UV photodecomposition 3—47774
metallurgical coatings, universal CVD system 3—52971
MOCVD epitaxial growth, III-V semiconductors synthesis appl. 3—47777
modelling, appl. to GaAs epitaxy 3—33594
modelling process steps 3—34240

chemical vapour deposition continued
- multimode fibres, doped silica, improvement of existing production methods 3—7253
- optical double window VAD fibres and cables, mass prod. basis 3—37222
- optical F doped single mode and step index fibres prepared by low press. PCVD 3—37223
- optical fibre fabrication by outside vapour deposition method 3—7248
- optical fibre fabrication by VAD process, dehydration mechanism investigation 3—56359
- optical fibre fabrication processes, technical and economic aspects 3—37257
- optical fibre fabrication techniques by vapour-phase axial deposition, recent progress 3—7249
- optical fibre manufacturing process, modified CVD and drawing 3—22264
- optical fibre MCVD preforms, reduction of central dip and OH^- content 3—37259
- optical fibre preform prep., thermophoretic deposition, efficiency improvement 3—50801
- optical fibre preforms, deposition mechanism of fine glass particles in the VAD process 3—37260
- optical fibre preparation using low press. PCVD, deposition efficiency of GeO_2 doping 3—56357
- optical fibres, ultra-wide bandwidth, VAD fabrication, transmission characts. 3—37224
- optical fibres drawn from uncollapsed VCVD preforms, optical props. 3—37221
- optical fibres with Al_2O_3-SiO_2; Al_2O_3-P_2O_5-SiO_2 cores, MCVD fabrication 3—56356
- optical low loss and long length VAD fibre fabrication for 1.55 μm wavelength region 3—37258
- optical preforms fabricated by MCVD, rate of collapse and stability 3—37261
- optical single mode low loss fibres, optogeometrical parameters design, MCVD process 3—50783
- optical single mode MCVD fibres and preforms with depressed cladding, refr. index profiles 3—50780
- optical single-mode fibres, dispersion-free in 1.5 μm region, VAD fabrication, pulse broadening meas. 3—37188
- optical single-mode fibres, fluorine sources for fabrication by MCVD 3—17627
- optical single-mode fibres, VAD method for fabrication 3—46361
- optical technology appl. of CVD 3—14499
- optical waveguide fabrication techniques, review *(German)* 3—32509
- piezoelectric thin films, deposition methods and appls., review *(Japanese)* 3—28779
- Raman diagnostics of CVD systems, local temps. determ. 3—49460
- reactor, Raman scatt. for temp. and partial press. determ. 3—5891
- roll coating of optical thin film, planar magnetron sputtering and plasma assisted CVD 3—12371
- rotating disc reactor, heterogeneous kinetics and mass transfer 3—14502
- semiconductor, low-press. CVD, review 3—8992
- semiconductor, organometallic CVD, review 3—8993
- semiconductor materials, current growth techniques, material props., device fabrication, conf., Los Angeles, CA, USA (Jan. 1982) 3—16073
- Si_3N_4 films, low pressure CVD composition and oxidation resistance determ. *(Chinese)* 3—14498
- α-Si, microwave plasma CVD system for fabrication 3—43743
- single-mode single-polarisation fibre couplers fabrication using CVD technique 3—12339
- solar selective absorber development, high temp., coating methods 3—19603
- thermophoretic deposition efficiency for a nonuniform inlet particle concentration 3—39043
- thin film growth by vac. evaporation, sputtering, CVD and MBE 3—38269
- VAD preforms, particulate and sintered, for optical fibres, microstructure 3—37262
- VHSIC, double level metal interconnect technology using photo-CVD oxide process 3—39040
- VUV-CVD, low temp. deposition method for IC manufacture 3—24151
- wear resistant coatings, CVD on tool steel 3—43759
- Al film, MOCVD on quartz substrate 3—43748
- AlGaAs, metalorganic CVD growth, review *(Japanese)* 3—29015
- $Al_{0.5}In_{0.5}P$-$Ga_{0.5}In_{0.5}P$ DH lasers optically pumped at 90K, MO-CVD growth 3—46231
- $Al_{0.5}In_{0.5}P$-$Ga_{0.5}In_{0.5}P$ DH visible lasers, MOCVD growth and optical pumping at 90K 3—50657
- Al_2O_3, CVD, film struct., reactant gas partial press. efect 3—13680
- C thin films, diamondlike, deposited by ion activated techniques 3—14506
- $CdIn_2S_4$, time varying temp. profile CVD growth methods 3—8948
- CdS/Na_2S-NaOH-S/C cell formed by chemical deposition of CdS film, temperature effects on performance 3—29398
- CdTe film, CND on foreign substrates and minority carrier diffusion length meas. 3—43746
- Cr carbide coating deposition on diamond from gaseous phase 3—24382
- Cr film deposition by $Cr(CO)_6$ multiphoton dissociation 3—39041
- $CuGaS_2$, CVT growth assisted by vapour-liq.-solid mechanism, surface microtopography 3—42551
- $CuInS_2$, CVT growth, growth spiral characterisation by vapour-solid growth 3—42552
- $CuInS_2$, CVT growth assisted by vapour-liq.-solid mechanism, surface microtopography 3—42551
- $CuInS_2$, time varying temp. profile CVD growth methods 3—8948
- Cu_2S-CdS solar cell fabrication, Cu_2S film CVD on moving CdS substrate 3—51769
- Cu_3VS_4 formation by peritectic reaction, microhardness 3—58041
- Fe films, selected area deposition by laser CVD 3—52969
- GaAlAs multiple quantum-well heterostruct. laser development and characterisation for optical communication appls. 3—56239
- GaAlAs quantum well heterostructure laser uniformity 3—1625
- GaAlAs-GaAs wavelength division solar cells, MOCVD growth 3—53515
- $Ga_{1-x}Al_xAs$:Se(Zn), elec. resist., Hall effect meas., impurity energy levels 3—23510
- GaAs, epitaxial layers, conditions for MO-CVD growth at low temps. 3—33600
- GaAs, metalorganic CVD growth, review *(Japanese)* 3—29015
- GaAs photoconductive detectors, laser stimulated MOCVD fabrication 3—45201
- GaAs thin layers metalorganic CVD growth on W substrate 3—14496
- n^+-GaAs:S polycrystalline films, MOCVD growth using S_2Cl_2 dopant source, solar cell appl. 3—33278

chemical vapour deposition continued
- GaAs/AlAs DH narrow diffused stripe lasers for high speed integrated optical transmitters 3—22109
- GaAs/GaAlAs GRIN-SCH very low threshold laser structs. grown by MOCVD 3—56238
- $GaAs_{0.82}P_{0.18}$, high efficiency solar cells, MOCVD grown 3—24576
- GaP polycrystalline thin films, MO-CVD growth using $[Et_2Ga$-$PEt_2]_3$, Raman study 3—24150
- Ge, chem. vapour transport by GeI_4, convection influence on growth *(French)* 3—14453
- GeO_2-Sb_2O_3 glass optical fibres for 2 to 3 μm fabricaed by vapour phase axial deposition 3—46295
- HfC, whisker growth by CVD, 1000-1450°C 3—42985
- HfN, whisker growth by CVD, 1000-1450°C 3—42985
- InP, growth by chloride and hydride techniques, thermodynamic considerations 3—19282
- InP, metalorganic CVD growth *(Japanese)* 3—29016
- InP, oxidation in plasma enhanced CVD reactor 3—9210
- $LiNbO_3$:Ti waveguides, fabrication by Ti photodeposition using $TiCl_4$ photolysis 3—56312
- MoO_2(:Ti), crystal growth by chem. vapour transport 3—8949
- $PbTiO_3$, ferroelec. thin film, prep. by CVD 3—14501
- Si, amorphous, gap-state density determ. problems 3—23251
- Si amorphous films, microwave plasma CVD system 3—52961
- Si, CVD, linear flow reactor, SiH_4 conc. profiles, pulsed UV laser Raman spectroscopy 3—47773
- Si, CVD deposition onto alumina and sapphire, electron beam enhanced, partial epitaxy 3—8990
- Si, CVD film, in situ laser recrystallisation 3—57240
- Si enriched layer as protection against carburisation in HTGR 3—4208
- Si, epitaxial and polycryst. layers, vapour growth mechanism by dichlorosilane decomp. 3—42948
- Si, epitaxy from chlorosilanes, modelling of CVD, reaction kinetics 3—42946
- Si film, plasma enhanced CVD, deposited from 525 to 725°C, props. 3—8357
- Si film, plasma enhanced CVD, doped during deposition, props. 3—8358
- Si, grain boundary struct. rel. to growth technique and elec. props. 3—51626
- Si growth on SiO_2 by CVD epitaxial lateral overgrowth 3—24148
- Si, laser induced CVD single cryst. growth 3—47758
- Si, P^+-n-n^+ back surface field, with very large short circuit current densities 3—39487
- Si, polycrystalline, nucleation and deposition on amorphous Si_3N_4 layer, ellipsometry *(French)* 3—23193
- Si polycrystalline film deposition, nucleation and early stage growth depend. on substrate *(Chinese)* 3—13653
- Si, thin film formation by direct photochemical decomposition of Si_2H_6 3—43744
- Si:H, amorphous CVD film, electronic and optical props. meas. 3—29014
- Si:H,P(B), amorphous film, in situ doping during homogeneous CVD growth, charact. 3—52967
- Si:H amorphous film, CVD by direct S_2H_6 photolysis and elec. and optical props. 3—52962
- Si:P CVD film, struct., optical and elec. props. 3—42935
- Si:P polycrystalline film growth technology 3—24147
- Si-Ni ohmic contacts, interface struct., CVD doping *(Rumanian)* 3—47420
- SiC CVD for large area mirrors 3—7122
- SiC CVD mirror technology 3—7121
- SiC, cubic, large-area single-crystal wafers, CVD growth 3—47757
- SiC hot pressed, reaction bonded and CVD mirrors, fabrication and use for synchrotron radiation 3—7123
- SiN_x films, low press. CVD growth, comp. and struct. control, EPR, optical and He backscatt. studies 3—52970
- Si_3N_4 (SiO_xN_y) films, deposition on Si by electron beam activated reaction of SiO_2 film with NH_3 vapour 3—52965
- Si_3N_4 amorphous powder, piasma CVD using hybrid plasma torch 3—46702
- β-Si_3N_4 coating, CVD, surface morphology, X-ray diffr. obs. 3—43750
- α-Si_3N_4, EM window material, CVD, opt. props. 3—8789
- Si_3N_4 films, low pressure CVD using $SiCl_4$/SiH_4-NH_3 system *(Chinese)* 3—8987
- Si_3N_4 X-ray mask, low press. CVD deposition 3—24149
- Si_3N_4-TiN composites, CVD, microstruct. 3—23204
- SiO_2 glass films, undoped and P doped, step coverage during CVD 3—52963
- SiO_2, SiO_2-Al_2O_3 integral solar cell cover fabrication by plasma-activated source 3—14500
- SiO_2-Al_2O_3 VAD fibre fabrication, optical props. 3—50781
- SiO_xN_y films, low press. CVD growth, Rutherford backscatt., AES and optical study 3—52964
- TiB_2 thick coatings by CVD 3—3954
- TiC in-situ coating in JT-60 first wall 3—55603
- TiO_2, crystal growth by chem. vapour transport 3—8949
- W films, selected area deposition by laser CVD 3—52969
- YIG single crystal growth by chem. transport using $FeCl_3$ transporting agent, $YFeO_3$ source material 3—14452
- $Zn_{1-x}Cd_xS$, single crystal growth by iodine transport 3—14450
- ZnO film, prep. by plasma-enhanced organometallic CVD 3—8991
- ZnO thin films, highly c-axis oriented, prep. by CVD 3—2999
- ZnO, ultrafine powder prep. by CVD using Zn acetylacetonate *(Japanese)* 3—58088
- ZnS, single crystal growth by iodine transport 3—14450
- ZnS(Se) IR transmitting materials, CVD, developments and improvements 3—7094
- ZnSe chemically vapour deposited, bidirectional transmittance distrib. function meas. 3—28811
- ZrC-C binary alloys, thermal and temp. cond. at high temps. 3—2899

chemical variables control
- *see also pollution detection and control*
- CRISIS detector, recirculating gas system design 3—41447
- lithium hydrogen peroxide power cell system, microprocessor control of development system 3—29379

chemical variables measurement
- *see also chemical analysis; moisture measurement; pollution detection and control*
- biochemical O_2 demand using novel electrode configuration 3—9524
- combustible gas sensor, using semiconducting γ-Fe_2O_3 ceramics 3—30847
- crude oil water/gas contents measurement *(Norwegian)* 3—44083

chemical variables measurement continued
electrochemical O_2 partial pressure analyser with automatic temp. compensation 3−9367
gas chromatograph with advanced oven design, HP 5790A 3−39423
gas mixtures density, concentration and temp. meas., Rayleigh and Raman scatt. appl. *(German)* 3−45219
hydration of dextran, acoustic method investigations 3−2673
ion selective K^+ and Cl^- FET microelectrodes, prep. and elec. characts. 3−54726
ionisation chamber, electronegative impurity analyser for liq. Ar, conc. meas. using α-particle pulse amplitude distrib. 3−11607
metal/oxide/electrolyte system corrosion rate meas. using faradaic rectification and a.c. impedance meas. 3−58344
microprobe ISFET sensors for extracellular ion-activity meas., Na and K sensitivity 3−10943
sea ice, density and salinity from gamma-ray scattering method *(Russian)* 3−20150
sensor appl. of β''-Na_2O-Al_2O_3 3−13521
solid-state differential potentiometric sensors with LaF_3 membrane, construction and testing 3−54723
solvent impurities, meas. of concs. using laser IR spectroscopy *(French)* 3−9373
steam power station continuous emission measurements eval. *(German)* 3−39551
water, homogeneous nucleation rate meas. over wide range of temp. and nucleation rate 3−57072
CO sensitive MOSFET, Pd gate, design and IC sensor appl. 3−54727
$CaCO_3$, precipitation from aqueous soln., induction period rel. to supersaturation and impurities 3−33154
H_2 absorbed in metals, local meas. using laser technique 3−34571
H_2 electrochemical gas sensors, thin solid state devices, exptl. behaviour 3−10822
H_2 sensor, using Pd-SiO_x-Si structure 3−10821
NO_x chemiluminescent detector, modifications for high sensitivity 3−30092
Ni(s)-NiO(s) electrodes for high temp. solid oxide electrolyte galvanic cells, role of sintering time 3−58430
O_2 electrochemical gas sensors, thin solid state devices, exptl. behaviour 3−10822
SO_2 sensor using solid-sulfate electrolytes 3−15029
SiO_x (SiN_y) ultrathin layers, stoichiometric comp. determ. by optical reflectivity 3−34661

chemically reactive flow
active chemical medium, vortices with topological charge 2, 3 and 4 3−22474
chemical turbulence, diffusion coupling, chaos 3−37588
co-current flow with axial dispersion, chem. reactions, mass transfer 3−46623
detonations, shock and reaction front characterization 3−4290
dissociating gas, equilib. flow in turbine channels of nuclear power plants 3−42326
dissociating gases, plane pseudo-stationary flow behind curved shock wave 3−51160
fast particles, chemical reactions and heat exchange in flow 3−42324
flames, premixed, in large scale and high intensity turbulent flow 3−27614
fuel aerosuspension with oxidant, convective combustion theory 3−9320
gas, uniformly dissociated ionised radiating stream, coarse particle method calcs. *(Russian)* 3−32815
gas phase reactions in flow systems, photoelectron spectra *(German)* 3−9310
gas turbine combustion modelling, pollutant emission calcs. 3−53612
global reaction, linear asymmetric kinetic networks, diffusion coupling 3−22550
graphite body in hypersonic gas stream, thermochem. breakdown 3−46660
high-threshold reaction equilibrium kinetics disruption 3−32814
imperfect detonation flow field struct. *(Ukrainian)* 3−46589
injectant effect on ionisation level in boundary layer of blunt body and its wake 3−46572
laminar Stokes flow, reacting particle convective diffusion 3−7575
MHD chemically reactive flow, numerical simulation on vector computer 3−17983
microfluid flows, dispersion 3−56625
micropolar fluid with chem. reaction, dispersion in channel flow 3−27603
molecular mixing and chemical reactions in shear turbulent layer 3−27498
moving bubble, mass transfer during slow chem. reaction 3−37543
multicomponent chemically nonequilib. gas mixture in supersonic nozzle with porous walls, friction, injection effect 3−2138
packed-bed balance reactor for gas adsorption and gas-solid reactions under elevated pressures 3−4315
quasistationary flow of reacting fluid losing fluidity with high degrees of transform. 3−56626
reacting flow systems modelling 3−4288
reacting gas flow, endothermic, heat transfer in heated tube 3−2047
reacting particles, convective heat and mass transfer, at low Peclet numbers 3−42325
reactive particle, convective heat and mass transfer at low Peclet numbers 3−17985
relaxing mixtures, discontinuous flow study 3−37587
Soret driven instability of a reacting fluid in a porous medium 3−51060
submerged burners, in reactor bubble velocity in gas-liquid bed 3−56624
subsonic turbulent jet mixing flowfield, reactive recirculating in a combustor 3−56592
surface reaction of thermally conductive sphere moving in gas, heat liberation 3−32813
swirling flowfield prediction in axisymmetric combustor geometries 3−12641
tangential blowing of H_2 into a turbulent supersonic boundary layer 3−37459
two-particle regime, equilib. soln. bimodal Maxwellian distrib. 3−22566
vapour clouds, combustion, estimation of pressure fields 3−46659
VPE horizontal reactors, carrier gas flows and temp. profiles 3−43769
DF, chemical laser, flowfield diagnostic expts. 3−56185
$F+H_2$, supersonic chemically reacting jets, laminar mixing 3−37582
H-Cl mixture, detonation initiation 3−7608
HF, pure source flow chemical laser, gasdynamic and kinetics study 3−56186
N_2 oxidation in adiabatically expanding air flow 3−39375

chemically reactive flow continued
NO_2, chemically reactive turbulent pipe flow, heat and mass transfer 3−37586
N_2O_4, dissociative flow, free convection heat transfer study 3−37585
N_2O_4, dissociative turbulent pipe flow, heat transfer 3−37584

chemiluminescence
alkaline earth atoms+halogen cpds., chemiluminescence and reaction kinetics 3−53411
blood, rat serum, total-body irrad., spontaneous chemiluminesc. rel. to dose *(Russian)* 3−34898
crystals, O_2 mol. beam chemisorptive luminesc. 3−19217
excitation mechanisms 3−38928
laminar flames, quenching by turbulence 3−32714
lyoluminescence dosimetry, principles, review 3−48421
lyoluminescence dosimetry, state-of-the-art 3−48422
lyoluminescence spectra of typical dosimeter materials 3−48242
methylnitrite+Ca(Ba)(Sr), chemiluminescence, vibr. and bonding of product 3−29311
organic solutions, electrochemical luminescence using charge transfers *(German)* 3−24032
polymer blends, miscible, charact. techniques, review 3−38089
polymeric materials, tress chemiluminesc., appls. to ageing process 3−53309
tetramethyl-1,2-dioxetan-9,10-dibromoanthracene, triplet-singlet energy transfer, chemiluminesc. study *(German)* 3−52861
thin layer electrochemiluminescence cells current efficiency, EHD convection 3−34630
vibr. relax. rate consts. 3−4275
$BaNH_2+H_2O(N_2H_4)$, chemiluminescent reactions 3−45957
Bi+NF supersonic flow, Bi atoms electronic excitation by collisional transfer, chemiluminesc. study 3−41667
C+OSC, reaction at 300K, $CS(a^3\pi_r)$ chemiluminesc., laser appl. 3−39371
$C+SO_2$, reaction, $SO(A^3\Pi)$ chemiluminesc. 3−39359
CS_2, $(a^3\pi_r)$ chemiluminesc., electronic transition chem. laser appls. 3−39371
$CaNH_2+H_2O(N_2H_4)$, chemiluminescent reactions 3−45957
F+methane, rate determ., chemiluminescence study 3−19524
$F^-+H(D)$, associative detachment reactions, product vibr. state distrib. 3−44051
$HI+Br_2(Cl_2)$, slow chain reactions, IR chemiluminesc., deactivation rate coeff. 3−19516
H_2O_2 pollutant in Bombay region atom., India, concs. and photochemical form. mechanism 3−44171
$H_2S+CL(H)$, reaction rate constant determ. using reson. fluoresc. in discharge flow 3−48056
$N+N_3 \rightarrow N_2(B^3\Pi_g)+N_2(X^1\Sigma_g{}^+)$, reaction, emission investig. 3−39360
N^++O_2, product branching, IR chemiluminesc. of vibr. excited NO^+ 3−39358
NH, IR chemiluminesc. obs. 3−14872
NO_x chemiluminescent detector, modifications for high sensitivity 3−30092
$O+H_2$, $OH(X^2\Pi)$ prod., vibr. excitation 3−48057
O+vinyl radical, reaction, IR chemiluminesc. obs. 3−14857
P, chemiluminescence flame, cool green, UV light amplification, stimulated emission 3−19525
P, chemiluminescence flame, cool green, UV light amplification, focussing phenomenon 3−24509
$SO+O_2(O_3)$ reactions, rate coeff. determ. by SO_2 chemiluminesc. in temp. range 230 to 420K 3−34610
SO_2, electron impact dissociation and emission spectrum 3−50531
$SO(A^3\Pi)$ chemiluminesc. from $C+SO_2$ reaction 3−39359
$SbBr_3+O_2$, chemiluminesc. reaction, SbBr $b0^+ \rightarrow X_10^+$, X_21 IR emission prod. 3−26740
$SrNH_2+H_2O(N_2H_4)$, chemiluminescent reactions 3−45957
SrOH(D), laser excitation spectra, rot. anal. 3−46013

chemioception
Geman-Miller respiratory oscillator model, stretch and chemoreceptors feedback, reinvestigation 3−15116
odor receptor function in worker honeybee antennae, electrostatic enhancement 3−39660
olfaction and measurement of olfactory evoked potentials *(Japanese)* 3−39661
olfactory evoked potentials, human, for odorant stimuli synchronized with respiration, meas. 3−39662
review of colour vision and olfaction research at Osaka Branch *(Japanese)* 3−19703
taste bud membranes, bovine, radiation effects rel. to taste loss 3−29664

chemisorption
adsorption at gas-solid and liq., solid interfaces, symposium, Aix-en-Provence, France (Sept. 1981) 3−25692
Anderson-Newns Hamiltonian, Green's function formalism 3−18556
atoms, chemisorbed, photoemission spectrosc. appls. and theory 3−55906
binding energy nonperturbative calcs. 3−33572
catalytic reactions, chemisorption and bond cleavage, new approaches using ESCA 3−4317
crystals, O_2 mol. beam chemisorptive luminesc. 3−19217
electrochemistry, electrode reactions study by ellipsometry and surface EM wave excitation *(French)* 3−24510
ferromagnetic metal surfaces, electron spin polarisation techniques, review 3−28516
geometry determ. from angle-resolved core-level XPS 3−42919
graphite-alkali metal intercalation cpds., of H_2, ESR and elec. resist. investig. 3−51927
heat of chemisorption, perturbation LCAO MO calc. 3−8330
heterogeneous catalysis and chemisorption on single cryst. 3−38235
Huckel N-atom linear chain, noncanonical localised orbitals and chemisorption 3−2980
inner electron binding energies of chemisorbed atoms 3−2961
interfacial aspects of phase transformations, NATO Advanced Study Institute, Erice, Sicily (Aug.-Sept. 1981) 3−35777
magnetic surface, chemisorption energy 3−57208
metals on metals and semiconductors, review 3−38234
mirror electron microscopy in surface research, review 3−10963
molecular bond energies and vibr. freq. on surfaces, empirical eqns. 3−2956
physisorption and chemisorption, nature of adatom-substrate bond 3−38232
polymerised organic films, grafting and growing mechanism on metallic surfaces 3−13656

chemisorption continued
- quartz, chemisorption of H_2 under mech. activation, IR spectral study 3–14885
- statistical mechanics of adsorption, conf., Trieste, Italy (July 1982) 3–49083
- supported metals, chemisorbed CO, errors and artifacts in IR bands 3–8838
- surfaces, kinetics of elementary processes, review 3–38996
- thermodynamic equilib. in stressed systems, appl. to adsorption of gases 3–47222
- transition metal films, heat of chemisorption, LCAO calc. 3–23168
- transition metal surface, two-level adsorbate chemisorption, density of states calcs. 3–13879
- transition metals, chemisorptive bonds with H, O, N, and S, tight-binding parameters 3–52216
- two-dimensional phase transforms. 3–51942
- Ag surfaces, adsorption of O_2 and N_2O, reaction kinetics, ellipsometry 3–23158
- Al (111), of O, electronic struct., iterative EHT calc. 3–38453
- Al, positron surface states on clean and oxidized surfaces and in surface vacancies 3–38353
- Al surface, interaction with O, electron irrad. effect, AES study 3–18562
- Al-GaAs (110) interface structure on Al chemisorption, energy minimisation study 3–8328
- Al_2O_3, adsorption of aminophenyltrimethoxy silane, effects of high humidity 3–38226
- θAl_2O_3, chemisorbed pyridine, IR spectral study 3–8321
- Be, of H, on (000) surface, cluster model, convergence 3–41715
- $Be_{36}H$, cluster model for chemisorpt., convergence 3–41715
- Bi (0001), interaction with Cl_2, incipient $BiCl_3$ form. and decomp. 3–18563
- CO, photon stimulated dissoc. of gas phase and chemisorbed mols. 3–58437
- Co, oxidation at room temp., SIMS, AES, XPS, and work function study 3–43992
- Cr_2O_3, of NH_3 (amines)(pyridines), thermal desorpt. and IR absorpt. obs. 3–8320
- Cu (100), of S, angle-resolved photoemission study 3–43712
- Cu (111) and (100), of Te, surface struct., EXAFS study 3–33571
- Cu, of Co, on (100) surface, chemisorptive bond calcs. 3–8339
- Cu surfaces, adsorption of O_2 and N_2O, reaction kinetics, ellipsometry 3–23158
- Fe, H adsorption, work function-chemisorption study 3–51917
- α-Fe, nitrided, surface Fe_xN form. under unfavourable thermochem. conditions, causes 3–14886
- Fe, surface sensitive $M_{2,3}$ absorpt. edge shifts by refl. EELS 3–19236
- GaAs (100) and $(\bar{1}\bar{1}\bar{1})$, of H, LEED and photoemission study 3–33574
- Ge(111), pyridine chemisorption, UPS study 3–38201
- H_2 dissociative chemisorption on metal surfaces, Hubbard model calc. 3–13623
- In, ion bombard. during O_2 chemisorption, SIMS and multiphoton reson. ionisation study 3–52883
- Ir (110), of NO, UPS study NO chemisorption and decomposition, UPS study 3–2972
- Ir (110), or NO, σ and π orbitals, UPS study 3–2973
- MgO with chemisorbed O_2, adsorption-luminescence spectrum *(Russian)* 3–19196
- MoO_3, chemical reduction and H chemisorption, electron microscopy study *(French)* 3–9356
- NH_3 adsorbed on Fe and Ni, binding and valence photoemission *(German)* 3–38231
- Ni (100), chemisorbed O, phase diagrams, LEED and AES study 3–57220
- Ni (100), dissociative chemisorption of O_2, LEPS calc. 3–48084
- Ni (100), of O, SCF pseudopot. calc. 3–57211
- Ni (111), chemisorption of CO and O, adsorbate empty orbitals, inverse UPS study 3–24042
- Ni (111) surface, chemisorbed CO, NO, electronic struct., surface Penning ionisation electron spectra 3–43249
- Ni, of O_2, sticking coeff. and saturation coverage meas. 3–42915
- Ni, surface sensitive $M_{2,3}$ absorpt. edge shifts by refl. EELS 3–19236
- Ni surfaces, adsorption of O_2 and N_2O, reaction kinetics, ellipsometry 3–23158
- Ni with chemisorbed acetylene, extended Huckel studies 3–51931
- Ni_3Fe, of S, effect on surface composition of (100) and (110) faces *(French)* 3–28198
- NiO, chemical reduction and H chemisorption, electron microscopy study *(French)* 3–9356
- p-NiO, surface band bending, XPS study 3–24097
- Ni(100), chemisorbed $CO(N_2)(NO)$, absorption edge reson., core-hole screening and orientation 3–13631
- Pb (110), of HCl, role of preadsorbed O 3–38215
- Pd (111), of ethylene, EELS study 3–3887
- Pd particles, Al_2O_3 supported, chemisorbed acetylene, IETS study 3–42914
- Pt, chemisorption and growth of Ag and Au monolayers AES, desorption, and LEED study 3–8334
- Pt, of CO on (110) surface, chemisorptive interactions calcs. 3–8340
- Pt, of CO on (111) and (112) surface, chemisorptive interactions calcs. 3–8340
- Pt(111), of CO, angle-resolved photoemission study 3–58036
- Rh, coadsorption of CO, H_2, and NO 3–8332
- Ru (001), chemisorbed CO, chemisorbed and physisorbed N_2O, neutrals desorbed by electron impact 3–57213
- Si (111), Ag chemisorption sites, electronic struct. DV-$X\alpha$ calc. 3–3285
- Si (111) cleaved surface, of O_2, AES study 3–14400
- Si (111) with chemisorbed water, surface electronic states 3–28407
- Si (111)-(2×1), density of states, clean and H-covered surface 3–43256
- Si with adsorbed O_2, binding struct. calcs. 3–23167
- Si(111), pyridine chemisorption, UPS study 3–38201
- SnO_2, chemisorption of O, electron states, surface pot. meas. *(French)* 3–28401
- SnO_2, kinetic adsorpt. of O, work function meas. method *(French)* 3–28411
- Ti (0001), chemisorption of C, N, O, and F, discrete variational $X\alpha$ cluster method 3–52221
- Ti, surface sensitive $M_{2,3}$ absorpt. edge shifts by refl. EELS 3–19236
- TiO_2, of methylsilanes and hexamethyldisilazane, IR absorpt. spectra 3–9355
- Ti_2O_3, chemisorption of H_2O, role of d electrons and ligand geometry 3–38196

chemisorption continued
- W, chemisorbed H, D, Li, NA atom vibrations 3–28209
- W surface, adsorbed Ag, work function and field emission microscopy study 3–23186
- WO_2, thermally evaporated layer, xerogel struct. 3–18579
- W(110), chemisorbed H, core level spectroscopy study 3–57207

chemistry
- *see also atmospheric chemistry*
- synchrotron radiation, application to chemistry and biology, review 3–20963

chemistry, physical *see physical chemistry*

chemistry computing
- *see also computerised instrumentation; spectroscopy computing*
- chromatography, intelligent sample processor laboratory automation system interface 3–39420
- configuration interaction, fourfold and threefold excitations, knowledge engineering appls. 3–1260
- copolymer composition, microstructure and conversion, computer aided teaching method 3–25741
- cumulenes, SCF MO calcs. 3–1200
- diatomic molecules, Franck-Condon type integration, FORTRAN program 3–21742
- digital emulation of analogue computer tech. for kinetic system soln. 3–58394
- electron interaction matrix construction from super file 3–1212
- Fortrat diagrams of molecular rot. transitions and intensities 3–32032
- gas chromatograph with advanced oven design, HP 5790A 3–39423
- hydrogen atom coordinate calculation 3–2445
- microprocessor-controlled 3–48107
- molecular beams, RKKM unimolecular decomposition, Monte Carlo simulation program 3–4267
- molecular volume computation 3–1197
- molecule distance matrix, fast algorithm calcs. in PASCAL 3–55779
- open-ended SCF method, simulation technique for small computers 3–1200
- proteins, crystallography, restrained least squares refinement program 3–46810
- reacting flow systems modelling 3–4288
- reaction kinetics, microcomputer-controlled calorimetric apparatus for slow reactions 3–49376
- SEM/energy dispersive X-ray analysis and image analysis, alternative chem. file structures use 3–14908
- simple stereochemical structure code for organic chemistry 3–31904
- PbO_2 in concentrated H_2SO_4, behaviour study using linear sweep computer controlled methods 3–9326

Cherenkov counters
- anti-Cherenkov photomultiplier tube for modular calorimeter array 3–26585
- European Hybrid Spectrometer for multihadron events study in high energy interactions 3–41398
- large aperture counters for photoproduction expt., design and construction 3–26564
- large aperture ring imaging, for high p_t hadrons 3–45766
- lead-glass array and threshold gas Cherenkov counter in hyperon decay expts. 3–36608
- multicell type, for FRAMM-NA1 spectrometer 3–50127
- multichannel charge digitiser for hodoscopic recording system 3–11621
- photomultiplier of 20 inch diameter for water Cherenkov expts. 3–41427
- ring image detector, design for OMEGA spectrometer CERN 3–45767
- ring imaging, multistep proportional chamber, photon detection and localisation 3–41424
- ring imaging Cherenkov device, position sensitive photon detector system 3–45762
- scintillation-Cherenkov simultaneously prod. radiation separation, electronic circuit design 3–45765
- Sea Urchin, deep underwater muon and neutrino detector array development 3–30216
- threshold gas Cherenkov detector for π, K and p identification *(Chinese)* 3–41446
- total absorption counter and viewing shield using heavy liquids 3–21592
- UV photoionisation counter for high resolution spectrometer 3–50201
- wide-aperture gas-filled Cherenkov threshold counter 3–50181
- SiO_2 aerogel Cherenkov counter for TASSO 3–50187

Cherenkov detectors *see Cherenkov counters*

Cherenkov radiation
- *see also Cherenkov counters; electron radiation*
- accelerated charge radiation in vacuum, Sommerfeld-Cherenkov mechanism, tachyon contribution 3–5604
- anomalous radiation measurement in air 3–44981
- cosmic ray muons, detection, using Cherenkov radiation in sea 3–48828
- cosmic ray shower Cerenkov radiation emission 3–5075
- cosmic ray shower produced Cherenkov radiation 3–44630
- diffraction radiation of intense relativistic electron beam in the corrugated waveguide 3–17161
- EAS development, Cherenkov radiation meas. 3–10167
- electron accelerator diode, large area, high current, electron beam uniformity 3–45739
- electron Cherenkov heating under parametric instability in spatially inhomogeneous plasmas 3–22661
- exchangeless spin waves travelling along axis of ferromagnetic-dielec. circular cylinder 3–6867
- image of Cherenkov spot 3–44982
- line shape in X-ray region, stimulated radiation 3–30638
- microscopic theory of synchrotron-Cherenkov radiation 3–1533
- microwave Cherenkov radiation from intense REB from corrugated and iris waveguides 3–17160
- parametric optical oscills. in a double Fabry-Perot interferometer 3–37123
- relativistic Cherenkov generator of surface waves 3–17159
- relativistic muons, detection, using Cherenkov radiation in sea 3–48829
- stimulated Cherenkov interaction at optical wavelengths 3–32287
- stimulated Cherenkov optical klystron, gain and efficiency 3–56219
- synchrotron-cherenkov radiation, nonequilibrium statistical mech. study 3–30637

chilling *see cooling*

chip carriers *see integrated circuit technology*

chiral symmetries
- *see also SU_n theory*
- σ model, EM interaction effects on phase transition *(Chinese)* 3–36150

chiral symmetries continued
Abelian gauge theory, gauge dynamical symmetry breaking in 2-D 3−31089
asymptotic freedom, absolute in SUSY theories 3−31137
Backlund transforms. for chiral field eqn. 3−26023
bag model with spin 3−45367
bag models, chiral symmetry breaking length scale and g_A 3−40870
baryon masses, QCD sum rule calc., S mass, chiral symmetry breaking parameters 3−31193
baryons, magnetic moment correction from kaon cloud in SU(3)×SU(3) chiral bag model 3−45394
Bohr-Sommerfeld rules for anomalies, QCD and SU(5) applications 3−49593
breaking, confining potentials and Goldstone pion 3−49584
chiral invariant vacuum, instability due to gluon exchange 3−49635
composite field condensation and renormalisation group 3−16473
composite quarks and leptons, mass generation mechanism 3−11155
conference, from particles to nuclei, Varenna, Italy (June-July, 1980) 3−10512
confining pot., instability of chiral invariant vacuum 3−31141
cosmological inflation model in simple supergravity 3−59520
coupled Yang-Mills-matter-supergravity system with local supersymmetry 3−40754
CP^{n-1} models with fermions, decoupling, chiral transformations 3−31017
CP violation, soft or hard breaking, axions, composite models 3−11076
density multiplets, calculation for chiral and vielbein in SU_2 extended superspace 3−25800
dynamical symmetry breaking without fundamental scalars, dynamics and stability 3−49592
effective Lagrangians, U(1) axial anomaly in SU(3), QCD, symmetry breaking 3−26063
electroweak hadronic currents, single-sheet classical surface 3−574
Ernst equation as a chiral model 3−30710
fermion wave functions, finite extension in QCD, magnetic charge distribution 3−6068
fermion-boson metamorphosis in a chiral invariant theory 3−11064
fermions models, path integral formulation of Thirring and chiral-invariant Gross-Neveu models 3−16478
finite temp. QCD, critical behaviour 3−21243
fractional quantum numbers on solitons 3−40778
Gross-Neveu model, chiral-invariant, normalisation of Bethe-ansatz eigenstates 3−49547
hidden symmetries as canonical transformations for chiral model 3−21029
high temperature gauge theories, exact chiral invariance, effective fermion masses, QCD, GUT appls. 3−16499
instantons, dynamical mass generation, chiral Ward identities, topological charge correl. function 3−31136
interacting gauge theories, reduced large-N matrix and chiral models 3−16471
Kahlerian chiral model reduction, CP(2) model, gauge transformation method 3−11074
Kahlerian chiral models, nonlinear systems with exponential interaction 3−45307
Lagrangian formalism for massive vector superfields 3−525
lattice analogue for chiral gauge theories, technicolour mechanism and fermion generation 3−5942
lattice gauge theories, variational anal. 3−21011
lattice gauge theories in strong coupling limit, meson and baryon spectra 3−49537
locally supersymmetric grand unification 3−557
massive Schwinger model in external background field, local hamiltonian Monte Carlo study 3−49647
massive Schwinger model on lattice, background field, chiral symmetry and string tension 3−16479
massless chiral fermions from dimens. reduction of higher dimens. gravity 3−30743
meson exchange, quark pairing and chiral bag models 3−11251
multiplets with supersymmetric Yang-Mills interactions, coupling to N=1 supergravity 3−536
N=1 supersymmetric theories, Lagrangian approach, mass splitting, gluino and photino masses 3−26022
Nambu-Jona-Lasinio model, chiral symmetry and supersymmetry 3−584
nonlinear σ-models, local conservation laws and currents 3−16504
nonlocal infinitely conserved currents, Noether anal. with H-transform. 3−49596
nonperturbative aspects of quantum field theory, conference, St Felia de Guixols, Spain, (June 1982) 3−10508
nuclear many-body problem, pion propagator in relativistic quantum field theories 3−26223
nuclear matter saturating chiral field theory, eqn. of state, optical pot. 3−31322
one-gluon and one-pion exchange forces in chiral bag model 3−31165
pion-nucleus optical potential, Lorentz-Lorenz correction, chiral bag model 3−11343
potential, effective for nonconvex potentials in scalar QFT 3−40751
principal chiral models, hidden symmetry algebra extension 3−31072
QCD_2, zero-mass boson in 1/N expansion 3−11148
QCD, chiral Ward identities, effective actions and meson-glueball mixing, 1^+, 0^- mesons 3−45358
QCD, dynamical realisation of chiral symmetry, quark confinement 3−16605
QCD, light quark mass differences from Laplace-type sum rules 3−40857
QCD, restoration of chiral symmetry as temperature and chemical potential increase 3−26070
QCD, spontaneous breakdown of chiral symmetry, flavour-independent mechanism 3−36190
QCD, sum rules for spontaneous chiral symmetry breaking parameters 3−16604
QCD sum rules from vacuum expectation values, chiral symmetry breaking parameters, (SU) violation 3−5997
QCD Weinberg sum rules and the mass of composite quarks 3−26087
quark bag model, confinement by meson cloud, quarks in harmonic oscillator potential 3−40868
quark bag model, implications from deuteron asymptotic D-state 3−49653
quark bag model, mean field approx. 3−21097
quenched momentum prescription for large-N theories, quenched lattice and continuum theories, loop equations 3−10990
quenched reduced U(∞) chiral model, spontaneous symmetry breaking in weak coupling 3−31033
Reissner Nordstrom spacetime, chiral flux from black holes 3−40445

chiral symmetries continued
Riemann-Hilbert infinitesimal transformation, hidden symmetry of chiral fields 3−11063
rishon model, condensates, prediction of pseudos 3−49655
sigma model, 2-D, parallel arguments to gauge theories in 4-D 3−45279
sigma model, nonlinear, surface fluctuation in large N limit 3−45278
soliton bag model with SU(2)×SU(2) chiral dynamics 3−603
soliton surfaces, geometric unification of solvable nonlinearities 3−49549
spin(1,4) gauge model with Kaluza-Klein symmetry, unification of gravitation and electromagnetism 3−25795
straton composite model symmetry 3−45376
strong-coupling lattice gauge theories and composite models of quark and leptons 3−31182
SU_n internal symmetry, invariant Lagrangian for chiral superfields *(Korean)* 3−549
SU(2)×SU(2) chiral model, soliton states in QCD effective Lagrangian 3−49631
SU(2)⊗SU(2) chiral model, QCD effective Lagrangian, exotic levels 3−6069
SU(2) and SU(3) gauge theories, deconfinement and chiral symmetry restoration at finite temp. 3−40869
SU(3)×SU(3) chiral model, 2-dimens. spin systems, crossover, variant actions, scaling 3−31074
SU(4)×SU(4) broken chiral symmetry, quark mixing and Cabibbo angle 3−36206
SU(4)×SU(4) chiral symmetry for mesons and Weinberg-Salam model 3−54875
SU(n) chiral vacua with doubling, θ-depend. 3−31071
SU(N) metacolour gauge group, composite models without spectators 3−21105
superfields, supersymmetry breaking, pair condensate effects 3−31088
symplectic struct., Lagrangian, first integral involutiveness of principal chiral field eqn. 3−31070
toy model, supersymmetry breaking at intermediate energy 3−31113
two-body relativistic eqn. 3−21221
two-dimensional, Noether currents as nonlocal currents due to nonlocally transformed global symm. 3−552
U(1) meson nonet problem, chiral dynamics, QCD theory, meson spectrum 3−11075
weak interaction-strong interaction relation 3−16598
weak-interaction parameters, corrections in technicolour theories 3−31217
Wess-Zumino model, soft fermionic modes at positive temperature 3−21027
Wilson fermions, chiral transform. and lattice regularisation 3−40755
Yang-Mills-Higgs theories, dimensional reduction and flavour chirality 3−30983
$\eta'(960)$ hadronic decay, pseudoscalar glueball treatment, flavor SU(3) symmetry 3−6096
G(1440), chiral Ward identities, pseudoscalar mesons, gluonic bound state 3−26076
$\iota(1440)$ hadronic decay, pseudoscalar glueball treatment, flavor SU(3) symmetry 3−6096
N-Δ mass splitting to zeroth order in QCD due to chiral symmetry breaking 3−26114
N^*-Δ^*, mass splitting in negative parity N^* and Δ^* spectrum, chiral bag study 3−31211
np capture, chiral bag description 3−54889
πNN form factor, chiral symmetry breaking and three-pion reson. 3−54914
πNN form factor, nonlocality effects in pion quark coupling in chiral bag model 3−49681
$p \to \pi^0 e^+$, decay rate in SU(5), chiral symmetry and quark model consistency 3−11088

chlorine
see also nuclei with ......
adsorbed Cl, Cl_2 and HCl on O covered Fe(100), bonding and reactions, ASED MO study 3−23161
adsorbed on Ag (001), adsorption geometry from angle resolved photoemission 3−28217
adsorbed on Cu {001}$c(2\times2)$, CC at. struct., overlayer model, LEED anal. and photoemission meas. 3−13638
adsorbed superstructure on Mo (110), LEED and AES study 3−2945
adsorption on Bi (0001), incipient $BiCl_3$ form. and decomp. 3−18563
atom, inverse Lamb saturation dip obs. in laser mag. reson. spectrum, isotopic shift meas. 3−21680
atom, photoionis., ion yield curve 3−45910
atom, reson. fluoresc. kinetic meas. of Cl_2 photolysis, optical thickness effects 3−29320
atomic laser action obs. in hollow cathode discharge 3−12122
crystal struct., Cl_2-Cl_2 pair pot. anisotropy, intermol. bonding and lone pair effects 3−27915
crystal struct. and lattice dynamics, electrostatic and anisotropic atom-atom pots. 3−27914
crystals, interat. pot. model 3−2462
inhibition of carbon fibre growth, from naphthalene at 1100°C 3−24105
ion, specific adsorption on Ag electrochemical electrode 3−57223
ions, Cl V to Cl VIII, beam-foil excitation mechanism, 2 to 10 MeV 3−11960
molecule, angle-resolved photoelectron spectroscopy 3−36818
molecule, EM hyperpolarisability tensor from Verdet consts. 3−50448
molecule, photolysis, kinetic meas. by Cl reson. fluoresc., optical thickness effects 3−29320
neutron activation analysis, normal levels of total body Na and Cl in humans 3−53903
overlayer on Cu (001), atomic geometry and electronic struct. 3−23144
silicate rocks, S, Cl and F determ., X-ray fluoresc. anal. 3−15442
UV laser transitions *(Chinese)* 3−1611
Al/merocyanine:Cl/Au thin film photovoltaic cell, carrier photogeneration, depletion layer study 3−3335
CdS:Cl, luminescence, recombination flows *(Russian)* 3−24012
CdS:Cl, press. quenched, elec. behaviour and flux penetration, supercond. at high temps. 3−47453
CdS:Cu, Cl activated phosphors, luminescent centre form., photoluminescence study 3−43606
CdS:Cu,Cl, quenched phosphor, isochronal annealing, photochem. meas. 3−52846
CdTe:Cl, ion implanted, heat treated, defect reactions, cathodolum. and pulse laser annealing studies 3−56932
Cl I 1351 Å in chromospheric spectrum, line formation mechanism 3−54299

chlorine continued
- Cl III-VIII, vacuum UV spectra, beam-foil study 3—21870
- Cl ions, highly stripped, moving in solids, K-shell binding energies, radiative electron capture 3—56070
- Cl VII, VIII, 2-10 MeV, beam-foil excitation mechanism, 3p and 3d levels 3—21881
- Cl VIII, $2p^5 3s$, 3p and 3d configurations, beam-foil study 3—21869
- Cl XI, $2s^m 2p^n$-$2s^{m-1} 2p^{n+1}$ intersystem transitions 3—1299
- Cl XII, $2s^m 2p^n$-$2s^{m-1} 2p^{n+1}$ intersystem transitions 3—1300
- Cl XIII, intersystem lines, atomic spectra 3—11725
- Cl^- and solvent mol. interaction, SCF and CI computations 3—6548
- Cl^-, aq. soln., quadrupole relax., Monte Carlo simulation 3—18207
- Cl^- ISFET microelectrodes, prep. and elec. characts. 3—54726
- Cl^- in N_2, ion mobility rel, to inelastic energy loss 3—32840
- Cl^- ion mobility in N_2, mass spectrosc. meas. 3—56642
- Cl^-, ionic solution, struct. and dynamics 3—51472
- Cl^{15+}, plasma impurity in Alcator-C Tokamak, X-ray emission spectra 3—56755
- Cl+Au foil, equilibrium charge state distribs. of fast ions 3—32190
- Cl+C foil, equilibrium charge state distribs. of fast ions 3—32190
- $Cl+ClONO_2$ reaction, flash photolysis reson. fluoresc. investig. 3—44039
- $Cl+H_2$, rot. excitation effect on chemical reaction 3—48064
- $Cl+H_2S$, reaction rate constant determ. using reson. fluoresc. in discharge flow 3—48056
- $Cl+HNO_3$, rate consts., flash photolysis reson. fluoresc. 3—44036
- $Cl^- + Cl_2 \rightleftharpoons Cl_3^{-*}$, dynamics, quasiclassical trajectories calcs. 3—58412
- Cl^-+trichlorobromomethane, electron attachment cross sections in energy range 0-100 meV, pot. energy curves 3—6751
- $Cl^{16+}+Ar$ quasimol. X-ray prod. probability, interference effects 3—31995
- Cl_2, dissociative electron, attachment rate constants *(Chinese)* 3—41691
- Cl_2^+ RF discharge plasma etching, laser-induced fluoresc. study 3—2286
- $Cl_2+Ar^+(Xe^+)$, adiabatic charge transfer 3—32191
- Cl_2+HI, slow chain reactions, IR chemiluminesc., deactivation rate coeff. 3—19516
- ^{36}Cl fallout from nucl. bomb tests 3—29470
- ^{36}Cl radioactive fallout from bomb tests, Greenland ice core obs. 3—29460
- $Cl_3^{-*} \rightleftharpoons Cl^- + Cl_2$, dynamics, quasiclassical trajectories calcs. 3—58412
- H-Cl mixture, detonation initiation 3—7608
- He isoelectronic sequence, two-electron spectra, correls., MCHF calcs. 3—21646
- $Ne+Cl_2$ positive glow discharge column, electron energy distrib. functions and inelastic processes 3—2319
- $Ne+Xe+Cl_2$ mixture, exciton formation and fluorescence for display applications 3—21817
- Se:Cl(As,Cl), $Se_{1-x}Te_x$:Cl, amorphous xerographic photoreceptors, charge transport, time of flight expts. 3—3245
- Si:Cl,H, amorphous film, preparation, elec. and optical props. 3—28988
- a-Si:H, Cl, glow discharge prep., optical and elec. props. 3—23978
- a-Si:H, Cl, ion implanted, IR absorpt. spectra 3—47681
- Si:H, Cl amorphous film, photocond. meas. 3—43225
- a-SiH:$Cl^-(As^{n+})$, bond stability, IR absorpt. spectrosc. obs. 3—38809
- T 3—24698
- Zn/Cl_2 batteries, alternative design 3—19573
- ZnS:Cu,In,Cl phosphors, electroluminesc. 3—47714
- ZnS:In,Cl phosphors, electroluminesc. 3—47714
- ZnSe:Cl, photoluminescence and electron conc., defects effects 3—38885
- ZnTe:Cl, defect centres, EPR and ODMR study 3—43433
- ZnTe:Cl, ion implanted, donor related edge luminescence 3—52856
- ZnTe:Cl, laser-induced donor diffusion, photoluminesc. study 3—47158

chlorine compounds
- rechargeable solid electrolyte cells with Cu ion conductor, $Rb_4Cu_{16}I_{7-\delta}Cl_{13+\delta}$ and TiS_2 cathode 3—34684
- ClBS, electronic props., struct., ab initio SCF calcs. 3—11650
- ClBS, isomers, geometries and stabilities, STO calcs. 3—11649
- $Cl+ClONO_2$ reaction, flash photolysis reson. fluoresc. investig. 3—44039
- ClCN, vibrational self-relax. times 3—37311
- ClF, electron attachment rate const. meas. 3—1455
- ClF_3, binding energy calc. using multi-reference CI expansions 3—55862
- ClO+OH, rate consts., reson. fluoresc. meas. 3—44047
- ClO_x in atmospheres of Earth and Venus, role in catalytic processes 3—15597
- $ClONO_2$ photolysis, NO_3 prod. quantum yield 3—24514
- $ClONO_2$, stratospheric mol., far-IR torsional obs. 3—26745
- $^{35,37}ClO_2$ microwave spectroscopy, centrifugal distortion, spin rot. interaction and hyperfine interaction const. 3—6622
- $KCl_{1-x}Br_x(I_x)$, lattice dynamics calcs. 3—13364
- Li/Al electrode in molten LiCl-KCl, kinetics study using linear sweep voltammetry 3—34631

cholesteric liquid crystals
- aqueous lyotropic phrases, type II, synthesis and characts. 3—51481
- birefringence, periodical change in cholesteric compensate mixtures *(Rumanian)* 3—19109
- bistable cholesteric twist cell display, switching characteristics meas. 3—33076
- blue phase, director fields, numerical three-dimensional relaxation, FORTRAN program 3—13094
- blue phase, disclination lattice struct. 3—33084
- blue phase, light scatt. studies, theory *(Russian)* 3—2408
- Bragg phase matching, harmonic generation 3—56283
- buckling instabilities, light scatt. and optical spectroscopy study 3—33075
- cellulose triacetate solns., cholesteric props. 3—18218
- cholesteric-nematic transition, SAW on compensated cells 3—38067
- cholesterol esters, halogen substituted, orientational order parameter *(Russian)* 3—33072
- cholesteryl 2 (ethoxy-ethoxy) carbamate, electric field induced birefringence meas., Kerr effect *(Rumanian)* 3—19108
- cholesteryl acetate, elec. cond. mechanism *(Polish)* 3—3266
- cholesteryl alkanoates, halogen substituted, supramolecular struct. parameters *(Russian)* 3—22771
- cholesteryl caproate, thermodielectric effect, isotropic-liq. cryst. phase transition, current meas. 3—56818
- cholesteryl capronate, isothermal crystallization parameters 3—2800
- cholesteryl chloride-cholesteryl laurate-rhodamine 6G mixture, optical transmission, temp. and DC elec. field depend. 3—2397
- cholesteryl chloride-cholesteryl nonanoate mixture, optical rot. power meas., nematic state temp. 3—2407
- cholesteryl esters, liq. cryst., Costa Ribeiro effect 3—38752

cholesteric liquid crystals continued
- cholesteryl formate, autate, and capronate, viscosity, rel. to surface tension *(Polish)* 3—2866
- cholesteryl formate, elec. cond. mechanism *(Polish)* 3—3266
- cholesteryl n-alkanoates, cholesteric blue phases, Bragg reflections investig. 3—33083
- cholesteryl nonanoate, isothermal crystallization parameters 3—2800
- cholesteryl nonanoate, mol. polarisability, volume expansion coeff. *(Polish)* 3—2410
- cholesteryl propionate, mol. polarisability vs. mol. arrangement order *(Polish)* 3—2409
- cholesteryl-propionate, cholesteric liq. cryst. phase study 3—18210
- cholestoral pelargonate, polarisation in const. elec. field *(Russian)* 3—42516
- deformations induced by DC electric field in cholesteric liquid crystals 3—18211
- disodiumcromoglycate-water cholesteric lyomesophase, pitch determ. by NMR 3—14146
- dye lasers with distributed negative feedback and reflection based on cholesteric liquid crystals *(Russian)* 3—37079
- dye-cholesteric guest-host colour LCD, contrast ratio of planar-type phase change, theory 3—52768
- elastic consts. and continuum theory of liq. crystals, free energy density expansion 3—33082
- field induced cholesteric-nematic transition, influence of homeotropic and planar boundary conditions 3—2791
- IR radiation excited liq. cryst. cell used in visualiser, relax. processes 3—37781
- light propagation and scatt. 3—33085
- magnetic field-induced cholesteric-nematic transition in case of homeotropic boundary conditions 3—42517
- mesophase, helical twisting without mol. rotational vibr. anharmonicity *(Russian)* 3—2406
- 3-methyl-2,6-bis-(4-n-heptyloxybenzylidene)-cyclohexanone with 4-(β-cyanoethyl)-phenyl 4-n-alkyloxycinnamates, smectic A to reentrant cholesteric phase transition 3—47105
- mixed systems, induced blue phases 3—37773
- mixtures, pulsing EHD instability 3—56817
- nonlinear refl., mirrorless optical bistability 3—7063
- nonresonant optical hyperpolarisabilities of anisotropic mols. influence on liq. cryst. phase parameters 3—42514
- optical eigenmode study using stress plate modulators in tandem 3—30917
- optical eigenmodes, numerical calc. using 4×4 matrix method 3—22766
- optical phenomena in cholesteric liquid-crystal cells 3—3666
- phase-induced biaxiality, mag. field effects 3—33086
- polarisation light, double cut-off in hybrid cholesteric layer in mag. or elec. field 3—34079
- polarisers, circular, cholesteric liq. cryst. based, high power laser system appls. 3—7138
- poly-γ-ethyl-D-glutamate solution, lyotropic cholesteric liq. cryst., helical pitch, press. effects, laser diffr. study 3—7903
- screw sense, technique for determ. 3—2392
- selective IR transmission, direct determ. 3—8840
- solvent as mechanistic probe of fluoresc. quenching in N-N-dimethyl-4-[3-(1-pyrenyl)propyl] aniline 3—46011
- spin-lattice relax., influence of molecular self-diffusion 3—3577
- storage electrooptic effect response times in large pitch cholesterics 3—43515
- US fields visualisation in air 3—17747
- viscoelastic effects on core radius of dislocations 3—13084
- Eu(III) chelate-liq. cryst. mixture, electrochem. fluorescence quenching, electro-optical display appl. 3—47684

chondrites *see meteorites*

choppers (circuits)
- thyristor chopper for plasma equilibrium in TFR 600 Tokamak 3—55760

chopping *see cutting*

chromatic aberration *see aberrations*

chromatography
- automatic N_2 analyser 3—9365
- benzylidene aniline, p-p′-derivatives, liq. cryst. props., dipole moments, ESCA, EHT calc., and chromatography 3—56812
- coal, coal conversion products and petroleum, metal specification, nucl. techniques appl. 3—9381
- DNA, supramolecular, γ-irradiated, degradation, lipid composition, thin-layer chromatography *(Russian)* 3—34775
- energy measurement of fuel gases by process gas chromatography, computerised instrumentation package 3—4331
- ethylene-propylene copolymers, mol. wt. distrib., gel permeation chromatography study 3—17391
- flow controller and sensor for HP 5880A gas chromatograph 3—39425
- fluorophosphate glass, struct. study using thin layer chromatography *(French)* 3—13110
- Fourier transform IR spectroscopy appls. in chem. laboratory 3—9371
- gas chromatograph with advanced oven design, HP 5790A 3—39423
- gas chromatography, explanation of methods and equipment 3—39424
- geochemical carbohydrate (C_1-C_6) gas chromatograph (Geokhrom-275) *(Russian)* 3—59131
- HPLC, wavelength programming facility for UV detector 3—4335
- HPLC biomolecular appl., radioactivity detector design 3—9790
- HPLC radioactivity monitors, continuous flow regime 3—58461
- intelligent sample processor laboratory automation system interface 3—39420
- laser-based detectors, review 3—53455
- methylbiphenyls, mol. struct., gas adsorpt. chromatographic investig. 3—46098
- microprocessor-controlled high performance liquid chromatograph 3—48107
- multiplicative dichotomic Markov noise, appl. to electrodiffusion and chromatography 3—185
- myocardial lipids, prelabelled with radioiodinated fatty acids, radiochromatographic microanal. 3—53640
- neopentane, solid, radiolysis, chromatographic and ESR studies 3—34637
- polycyclic aromatic hydrocarbons, nitrated, in urban air particles, chemical anal. 3—34751
- polystyrene, molecular charm scission during crazing, gel permeation chromatography 3—47949
- polystyrene, static and dynamic dimensions, blob model and size-exclusion chromatography 3—37763
- polystyrenes, mol. wt. determ. using size exclusion chromatography interfaced with light scatt. photometer 3—1515

chromatography continued
- priority pollutant response factors comparison for triple and single mass spectrometers 3–53607
- rare earth fission products separation system 3–49963
- subtractive image restoration, practical appls. 3–6896
- terphenyls, mol. struct., gas adsorpt. chromatographic investig. 3–46098
- thermostats temp. meas. 3–306
- troposphere, hydroxyl radical spin trapping, for determ. by electron spin resonance, gas chromatography and mass spectrometry 3–53454
- TS-12 diacetylene crysts., polymerisation, cryst. structs. and spectrosc. investig. 3–18282
- urine, iodinated biomolecules and chlorinated pesticides determ. by neutron activation anal. 3–9808
- As-S(-Se) glasses, heat of soln. in alkaline solns. 3–33450
- As-Se glasses, heat of soln. in alkaline solns. 3–33450
- C, pyrolytic, form. on Mo substrate, DC elec. field effects, gas chromatography 3–34647
- γ-Fe_2O_3, behaviour of surface OH group, liq. chromatography study 3–23738
- Fe_3O_4, behaviour of surface OH group, liq. chromatography study 3–23738
- H isotope separation by gas chromatography, D_2-HD and H_2-HD-D_2 mixtures 3–1029
- SF_6, corona-induced decomposition, neutral decomp. product anal. by gas chromatograph mass spectrometer 3–13015

chromising *see surface hardening*

chromium
- *see also nuclei with ......*
- amorphous film, elec. cond., struct., mag. transition *(Russian)* 3–13927
- antiferromag. and paramag. phases, phase transition effects on Fermi surface 3–38615
- atom, Auger electron emission coeff. meas. 3–26719
- atom, photoabsorption and photoemission, VUV obs. 3–1293
- atoms, K_β/K_α X-ray intensity ratio, chem. sensitivity effect 3–26684
- band struct. in paramag. and antiferromag. phases, press. influence 3–3052
- chemisorbed O on (100) surface, LEED and photoemission obs. 3–23177
- condensates, brittleness threshold 3–34473
- corrosion in HCl and HCl-O_2 at high temp. 3–39284
- dendritic needle crystals FCC struct., electron diffr. and Auger study 3–3021
- depletion at grain boundaries in stainless steel, STEM spatial resolution for compositional anal. 3–7889
- dimer, ground state, bonding, dissoc. energies, local spin-density theory 3–45801
- electrodeposition from fused LiF-NaF-KF-CrF_3 electrolyte 3–3977
- electron-induced desorption of O^+ ions 3–23185
- electronic struct., effect of shear strains 3–52020
- epitaxial film sandwich, struct. change and supercond. transition temp. 3–13683
- etching characts. using planar type plasma reactor 3–29201
- EXAFS, fluorescence and transmission, meas. 3–24050
- ferromagnetism, excitonic, coexistence of CDW and SDW phases 3–43380
- film, gettering for fusion reactors 3–21520
- film, resistivity and TCR *(Russian)* 3–3338
- film, thermopower, thickness depend. and size effect 3–23504
- film, vacuum deposition at low temp., form. conditions and struct. 3–3962
- film agglomeration rel. to solar conversion device use 3–19600
- film deposition by $Cr(CO)_6$ multiphoton dissociation 3–39041
- film on glass dielectric substrate, radiowave ellipsometry, fundamental relations 3–20877
- films, photodeposited, elec. resist., reflectivity, stress and step coverage meas. 3–29017
- GaAs:Cr, semi-insulating, impurity centres study by measurement of photoconductivity spectra *(Czech)* 3–47285
- grain boundary diffusion of Sn and Cr in Fe, microautoradiographic obs. 3–57140
- ion plated protective coatings for silvered glass mirrors 3–17602
- ion source, multiply charged using heated cathode 3–16441
- island layers on Bi films, elec. resistance 3–43304
- liquid scintillation counter sample prep., combustion technique for ^3H, ^{14}C, ^{51}Cr sample 3–21596
- magnetic anomaly at Neel temp., spin density waves *(Russian)* 3–43374
- martensitic stainless steel, tempering process, quenching temp. effect *(Serbian)* 3–34359
- MIS polycrystalline Si solar cells composition anal. using ESCA and AES 3–29390
- needle crystals, growth on field electron emitter in $Cr(CO)_6$ vapour 3–52909
- nitride hardening and carbonitriding *(Italian)* 3–53258
- optical film, stress, adherence, hardness and density 3–13685
- paramagnetic, spatial mag. correlations, polarised neutron scatt. study 3–8647
- paramagnetic state, polarised neutron studies 3–57519
- phosphate:Cr^{3+} glass, energy level splitting, effective g value, ESR study 3–33971
- photoelectron spectra, two-electron resonances 3–52896
- plate on steel, fretting resist. improvement, optimum grinding parameters 3–58307
- plating in HSLA steel, low cycle fatigue rel. to coating conditions 3–43952
- pollutant elements in wastewater, anal. by DC Ar plasma emission spectroscopy 3–48220
- ruby:Cr^{3+}, spin Hamiltonian parameters, superposition model anal. 3–13779
- ruby:Cr, NMR spectrum, correlation effect influence on EM wave absorpt. spectra *(Russian)* 3–23988
- ruby : Cr^{3+}, ESR saturation, negative spin temp. 3–28697
- solid solubility in high-purity Si, NAA and antiCompton spectrometry study 3–28109
- spin density wave excitation, inelastic neutron scatt. study 3–14026
- spin fluctuations, NMR study 3–57626
- sputter deposited on steel ball, model rough surfaces in elastohydrodynamic lubrication 3–14745
- stopping ratios for 30-330 keV ions with $1\leq Z_1\leq 5$ 3–22950
- surface, (100), angle-resolved photoemission study 3–58031
- surface magnetic order and electron capture spectroscopy 3–57531
- surface oxide layer, elastic and inelastic electron scatt. anal. 3–13677

chromium continued
- TGS:Cr^{3+}, elastic and thermal props., nature of anomalies 3–8148
- thin film, sputter deposited on Cu, laser and ion beam mixing 3–57242
- Al_2O_3:Cr, burn-out of Cr during ruby cryst. growth by Verneuil method 3–39026
- Al_2O_3:Cr, γ-irrad., Cr^{2+} obs. by linear thermal expansion meas., 3 to 9K 3–42816
- α-Al_2O_3:Cr, ion implantation and thermal annealing, channelling, EPR and microhardness study 3–46972
- Al_2O_3:Cr, ion implanted, surface struct. and props., annealing effects 3–2948
- Al_2O_3:Cr^{3+}, Cr^{3+} axial symmetry sites, ESR spectra 3–47544
- Al_2O_3:Cr^{3+}, plastic deform., EPR and optical study *(French)* 3–43427
- Al_2O_3:V^{4+}, Cr^{3+}, Raman scatt. of high freq. phonons by spin states 3–34101
- Al_2O_3/Cr system, Fe^+ ion irrad. prep. of ceramic alloys, mech. props. 3–4000
- Al_2O_3/Cr/Al_2O_3/Cr sputter-deposited multilayer selective absorber coatings, thermal stability 3–8384
- Al_2O_3-Cr cermet insulators, thermal-shock-resistant, prep. and characteris. 3–24198
- $BeAl_2O_4$:Cr^{3+}, excited-state absorpt. temp. depend. 3–56200
- $Be_3Al_2(SiO_3)^6$:Cr^{3+} (emerald) tunable laser 3–12154
- BeF_2-AlF_3-MgF_2-BaF_2:Cr^{3+} glass, energy level splitting, effective g value, ESR study 3–33971
- CaO:Cr, APR study, dynamic Jahn-Teller effect 3–8721
- Cr I, excitation cross section meas. by electron collision 3–21925
- Cr I spectral line profile, fast-scanning Fabry-Perot interferometer 3–10890
- Cr II 1430 Å multiplets in solar active regions 3–20315
- Cr^{3+} axial symmetry sites, ESR spectra calc. 3–47544
- Cr^{5+}, photoabsorpt. oscillator strengths of $3p^6 3d^2 D \rightarrow 3p^5 3d^2$ $^2p^0$, $^2D^0$, $^2F^0$ transitions 3–21716
- Cr^{3+}:$BeAl_2O_4$, alexandrite-laser performance at high temperature 3–32367
- Cr^{3+}:$BeAl_2O_4$ (Alexandrite) laser, passive mode locking, 0.7-0.8 μm picosec. pulse generation 3–1641
- Cr^{3+}:$BeAl_2O_4$ laser, excited-state absorpt. temp. depend. 3–56200
- Cr^{3+}:GdScGa CW tunable room-temp. laser 3–50664
- Cr/Cu layer system, Ar ion implantation-induced intermixing, Cr precipitation 3–2622
- Cr/Pb-Bi layered films, flux pinning strength and upper crit. field 3–13977
- Cr-CdTe junction, CdTe surface oxidation effects 3–43282
- Cr-CrO_x film fabrication for practical solar selective absorpt. systems 3–19605
- Cr+C, $^3P_2$ and $^4P_{5/2}{}^0$ states lifetime meas. in He, Li-like Cr 3–26698
- Cr+He^{2+}(N^{7+}) collisions, K-shell vacancy production 3–32179
- Cr_2, cluster, rot. consts., two-photon ionisation 3–17396
- Cr_2, electronic struct. and vibr. freq., fluoresc. excitation spectrum 3–41605
- Cr_2, reson. and prereson. Raman spectra 3–17290
- Cr_3, reson. and prereson. Raman spectra 3–17290
- Cr_2O_3-Cr, chrome black coatings, improvement of optical performance, durability and economic feasibility *(Korean)* 3–37144
- Cr_2O_3-Cr, solar absorbing black chrome coatings, stability under high solar flux 3–19610
- Cr_2O_3-Cr black chrome solar selective films, sol-gel protective coatings 3–19611
- ^{48}Cr carrier free isotope prod., decay props. from $^{51}V(p,X)$ 3–21316
- ^{53}Cr, metastable at. states HFS meas. by laser RF double reson. 3–31991
- ^{53}Cr, prediction of isotopic anomaly in Allende meteorite resulting from sp-process 3–35416
- $Cr^3 4^+$, Nd^{3+}:Yag, solid-state lasers active media efficiency enhancement, luminesc. sensitisation 3–6989
- CraAs:Cr, semi-insulating, Cr lattice location, ion channelling and PIXE studies 3–56916
- Cu/Cr thin film, chemical change by plasma etching *(Japanese)* 3–4167
- GAs:Cr, deep impurity centre ionisation 3–28304
- GaAS:Cr, electrical conductivity and Hall effect meas., using two electrometers 3–45164
- GaAs:Cr, 3 inch diameter crystal growth by horizontal Bridgeman technique, characts. 3–24115
- GaAs:Cr, APR study, dynamic Jahn-Teller effect 3–8721
- GaAs:Cr, boat grown bulk, Cr level and EL2 electron traps, DLTS study 3–8443
- GaAs:Cr, carrier lifetime determ., dynamic phase grating method 3–18720
- GaAs:Cr, Cr-related intracentre photolum. 3–23994
- p-GaAs:Cr, epitaxial, photo-Hall effect and photocond. 3–18735
- GaAs:Cr, impurity trigonal sites, model for luminescence lines 3–42624
- GaAs:Cr, ion implanted, Cr redistribution at surface, elec. fields effects, thermodynamic model 3–46979
- GaAs:Cr, LEC grown, radiotracer determ. of Cr distrib. 3–13255
- GaAs:Cr, lattice incorporation of n-type dopants 3–22924
- GaAs:Cr, no-phonon photoluminescence spectra, energy level scheme 3–8877
- GaAs:Cr, O, steady-state photoconductivity response 3–18738
- GaAs:Cr, phonon spectroscopy using supercond. tunnel junctions 3–2695
- GaAs:Cr, photoinduced transient optical absorption of Cr^{4+} 3–23982
- GaAs:Cr, photolum., models 3–19171
- GaAs:Cr, positive identification of $Cr^{4+} \rightarrow Cr^{3+}$ thermal transition, Hall effect meas. 3–23409
- GaAs:Cr, Se, ion implanted, damage annealing, Rutherford backscatt. and TEM studies 3–33311
- GaAs:Cr, semi-insulating, nonuniformity and dislocations, photoluminesc. intensity study 3–38858
- GaAs:Cr, semi-insulating, thermal conversion, cathodoluminesc., photoluminesc. and SIMS study 3–43635
- GaAs:Cr, semi-insulating, Cr conc. distribution determination by illumination induced cond. changes 3–51647
- GaAs:Cr, thermal cond. stress depend. and tunnelling 3–47175
- GaAs:Cr, Zeeman spectroscopy meas. of absorption and luminescence lines 3–8807
- GaAs:Cr,Te, photoconductivity, defect struct. 3–28384
- GaAs:Cr S-diodes, current-volt. characts. and current instability in mag. field 3–38468
- GaAs:Cr substrate for $Al_xGa_{1-x}As$ epitaxial layer, elec. cond. and transfer doping effect 3–23509
- GaAs:Cr substrates, Cr conc. distrib., non-destructive determ. 3–33283

chromium continued
GaAs:Cr wafer, Si diffusion from thin film by pulsed laser irrad. 3—57145
GaAs:Cr^{2+}, vibronic coupling in trigonal field, luminesc. spectra 3—33685
GaAs:Cr^{2+} deep levels and Jahn-Teller effect 3—52095
GaAs:Si, Cr, multiply scanned electron beam annealing 3—56991
β-Ga_2O_3:Cr, thermoluminescence study *(Russian)* 3—43642
GaP:Cr epitaxial layers, MOCVD grown, high temp. resist., capacitance and I-V meas. 3—13930
$GdAlO_3$:Cr^{3+}, magnetic Franck-Condon effect 3—34142
$Gd_3Ga_5O_{12}$:Cr^{3+} crystals, luminesc. absolute quantum efficiency 3—38905
GdScGa:Cr^{3+}, fluoresc. lifetime and CW tunable room-temp. laser action 3—50664
$Gd_{3-x}Sc_xGa_5O_{12}$:Cr^{3+} crystals, luminesc. absolute quantum efficiency 3—38905
Ge:Cr, deep donor centres, H plasma passivation 3—47287
He isoelectronic sequence, two-electron spectra, correls., MCHF calcs. 3—21646
InAs:Cr, impact ionisation, I-V characts. 3—18713
InP:Cr, ion implant depth profile after annealing, SIMS study 3—8083
InP:Cr^{2+}, zero-phonon luminesc. study 3—43615
KH_2PO_4:Cr, local pseudo freeze out of impurity dynamics, EPR study 3—3527
K_2MgF_4:Cr^{3+}, EPR and ^{19}F ENDOR of Cr^{3+} impurity centres 3—14119
K_2ZnF_4:Cr^{3+}, EPR of Cr^{3+} impurity centres 3—14119
K_2ZnF_4:Cr^{3+}, $Na^+(Li^+)$, EPR of Cr^{3+} centres, spin Hamiltonian parameters 3—43424
$LiNbO_3$:Cr^{3+}, absorption spectra, crystal field and Racah B parameters 3—14326
$MgAl_2O_4$:Cr, optical absorpt. spectra and luminescence *(Russian)* 3—23989
MgO: Cr^{3+}, fluoresc. narrowing induced splitting of R line, effect of internal strains *(French)* 3—19182
MgO:Cr, $^4A_2 \rightarrow {}^2T_1$ zero-phonon transition, homogeneous and inhomogeneous broadening 3—24006
MgO:Cr, grain boundary diffusion of ^{51}Cr rel. to dopant conc. and dislocation orientation 3—57135
MgO:Cr^{3+}, Cr^{3+} axial symmetry sites, ESR spectra 3—47544
MgO:Cr^{3+}, origin of diffuse interstellar spectra features 3—40220
Nb:Cr, effective valence for electromigration 3—42860
Nd, Cr:$Gd_3Ga_5O_{12}$ lasing properties 3—1639
$PbMoO_4$:Cr, ESR study of $[CrO_4Pb_8]$ centre 3—14122
n-PbTe:Cr, thermoelec. props., current carrier conc. 3—47372
Pt/Cu/Cr and Cu/Cr thin films, mixing and interdiffusion by O reduction, backscatt. spectra 3—13559
Si:Cr, deep levels in energy band gap, transient capacitance anal. 3—38349
Si:Cr, diffusion, solubility and elec. activity, review 3—27966
Si:Cr, ion pairs between Cr and surface acceptors, DLTS study *(German)* 3—43074
Si:Cr, Sirtl etching, Cr diffusion at room temp. obs. 3—42847
Si:Cr, tight binding study of electronic struct. of transition ions and EPR spectra 3—47299
Si:Cr,B, charact. by EPR, DLTS, luminesc. and neutron activation anal. 3—47283
Si:Cr,B Cr-B pair photolum. 3—43612
Si:Cr,Fe,P, spin depend. carrier-impurity interactions, ESR studies 3—57765
Si/Cr struct., silicide form. by ion irrad. backscatt. and X-ray study 3—2629
SiC:Cr, ion implanted, amorphous struct. and mechanical props. 3—4138
$SrTiO_3$ photoanode, Cr-doped, Ru-oxide coating effects on water photooxidation performance 3—29399
$SrTiO_3$:Fe(Al)(Cr), acceptor-doped, high temp. defect struct. 3—8072
V_2O_3:Cr, cryst. struct., doping effects, metal-insulator transition 3—8002
V_2O_3:Cr, high temp. electronic transition, Raman scatt. study 3—43523
V_2O_3:Cr, high temp. metal-insulator transition, TEM study 3—28270
V_2O_3:Cr, metal-insulator transition, ^{18}O substitution effects, expt. study 3—3065
V_2O_3:Cr, polycryst., phase transform. triggered by external loading 3—38048
YAG:Cr^{3+}, ESR spectrum, computer calc. 3—3519
$Zn_{0.37}Mn_{0.58}Fe_2O_4$:Cr, hyperfine fields, Mossbauer study 3—47580

chromium alloys
see also chromium compounds
Astroloy, Ni-base superalloy, supersolidus sintered preforms, necklace struct. obtained by forging 3—9017
Chromel-Alumel thermocouple use under conditions of rapidly changing thermal processes from −196 to 900°C 3—16362
Co-Cr-perpendicular magnetic recording medium by vacuum deposition for mag. tapes *(Japanese)* 3—47531
er↑ar *(Russian)* 3—23716
Hastelloy X, carburization protection by Si enriched layers in HTGR 3—4208
IN100, Ni-base superalloy, high temp. low-cycle fatigue rel. to strain rate, in air and vacuum 3—53236
IN597, Ni-base superalloy, creep cavitation and prestrain-induced particle microcracking 3—53173
IN 738LC, Ni-base superalloy, cast, low cycle fatigue in air and hot corrosive environments 3—47941
IN-738, Ni-base superalloy, cast, fatigue, low cycle, high temp., effect of environment 3—4121
Incoloy 800, intergranular corrosion, Strauss test, electrochemical potentiokinetic reactivation and magnetic permeability meas. 3—39275
Inconel, corrosion behaviour of radioactive products in LWRs, fast neutron activation anal. 3—6362
Inconel 600, intergranular attack in lab. and in steam generators 3—53262
Inconel 600, mill-annealed, intergranular corrosion in PWR steam generator tubing 3—6365
Inconel 600 and 625, single-phase, hydrogen-assisted fracture 3—14719
Inconel 600/316-stainless steel Na-heated steam generator, cracks and deposits due to Na-to-water leak 3—6366
Inconel 617, materials qualification for appl. in advanced HTGR 3—898
Inconel 625, isothermal air oxidation behaviour, suitability for reactor cladding 3—6363
Inconel 625, thermal fatigue testing of low-Z coatings for Tokamak reactor 3—21526
Inconel 625 fusion reactor material, thermal shock testing of low-Z coatings 3—21525

chromium alloys continued
Inconel 718, Ni-base superalloy, coarsening of γ'- and γ''-precipitates 3—29084
Inconel 718, Ni-base superalloy, crack growth under fatigue, creep and combined loading, effect of microstruct. and environment 3—24339
Inconel 718, relationship between struct. and mech. props. *(French)* 3—47822
Inconel double-walled JET vacuum vessel, manufacture, testing and assembly prep. 3—55605
Inconel MA 6000, Ni-base superalloy, thermal softening 3—43860
Inconel threaded bolts, fatigue cracks detection and meas. by a.c. potential difference method, theoretical anal. 3—24460
Inconel X-750, SCC, effects of heat treatment and comp. 3—34540
MAR M 509, Co-base superalloy, low cycle fatigue, high temp., influence of oxidation 3—47939
MAR-M 509, Co-base superalloy, low cycle fatigue, influence of temp., 20-1100°C 3—47938
Nimonic 115, Ni-base superalloys, long-term service exposure, microstruct. changes 3—53063
Nimonic AP1, Ni-base superalloy, fatigue crack growth and surface damage 3—29152
Nimonic PE 16, Ni-base superalloy, microstruct. and mech. props., effect of long-term exposure at elevated temps. 3—47840
steel, Cr-Mo, for fusion reactor first wall and blank, review 3—26461
steel, ferritic, Cr-Mo, creep rupture design eqns., fusion reactor structural material assessment 3—6439
stellite, corrosion behaviour of radioactive products in LWRs, fast neutron activation anal. 3—6362
Udimet 500, Ni-base superalloys, long-term service exposure, microstruct. changes 3—53063
Waspaloy, fatigue, low cycle, crack propag. and substructs. 3—4118
Waspaloy, fatigue crack propag. process, phys. modelling 3—4119
Waspaloy, Ni-base superalloy, friction-welded, correl. between struct. and thermomech. treatment *(German)* 3—4132
Al-Cr, solid soln. extended by rapid quenching from melt, lattice parameter vs. conc. prediction 3—53094
Al-Cr-Mo, ion implanted metastable phase form by pulsed laser treatment 3—2604
Al-Cr(Cu)(Mg)(Fe)(Mn)(Zn), thermoelec. power at high temps., temp. and conc. depend. 3—3165
Al-Fe-Cr, rapidly solidified, struct., TEM and X-ray diffr. study 3—24219
Al-G and Al-Ni-Cr multicomponent coatings on steel St3, comp. struct. and corrosion resist. in S 3—24406
Al-Mg (2.6 wt.%), mech. strength, corrosion resist. optimisation, Cr and Si additions effect 3—43998
Al-Mg-Si-Cu-Cr-Fe-Mn (0.98, 0.68, 0.26, 0.2, 0.09, 0.05 wt.%), barrier anodized coating characts. 3—3018
AlCr, dilute, self-interstitial trapping at Cr atoms 3—13218
Au-Cr, spin glasses, resist. 3—13799
Co-base superalloy, 73C, directionally solidified, cyclic response 3—58251
Co-Cr alloy, mag. props. and anisotropy 3—57589
Co-Cr film, perpendicular magnetisation struct. 3—28665
Co-Cr film, sputtered, magnetisation reversal 3—28654
Co-Cr film, vac. deposited, mag. and struct. props. 3—38654
Co-Cr film deposition by opposing targets sputtering method, plasma effects 3—28992
Co-Cr layers, RF sputtered, for perpendicular mag. recording, struct. props. 3—51987
Co-Cr layers, RF sputtered, for perpendicular mag. recording, mag. props. meas. 3—52564
Co-Cr superalloys with CeO_2 thermal barrier coating, dip process 3—43996
Co-Cr-Mo, cast, heat treatment, corrosion resist. and fatigue, tensile props., orthopaedic appl. 3—39294
Co-Cr-Mo, twin-twin interaction and work hardening behaviour 3—19371
Co-Cr-Mo, Vitallium superalloy, precipitation under heat treatment, expt. study 3—9074
Co-Cr-Mo alloys, phase diagram calc., thermodynamic assessment of heat treatment 3—34279
Co-Cr(-Al), low temp. hot corrosion, morphology of reaction product 3—14773
CoCr based vertical recording materials, sputter deposited, mag. props. and microstruct. 3—57714
CoCr film, RF sputtered, magnetisation characts. 3—28655
$(Cr, Mo)_{23}C_6$, extracted from high temp. alloys, X-ray powder diffr. evidence for incorporation of Mo 3—7961
$(Cr, W)_{23}C_6$, extracted from high temp. alloys, X-ray powder diffr. evidence for incorporation of W 3—7961
Cr-Al, dil., mag. behaviour, US vel. meas. 3—52590
Cr-Al, dilute, spin density wave state, press. effects, neutron diffr. study 3—18853
Cr-Al, paramag. electronic density of states rel. to antiferromag., sp. ht. meas. 3—57599
Cr-B-Ni powder for wear resist. hard facing using laser, choice of paste binder *(Russian)* 3—58280
Cr-Be, paramag. electronic density of states rel. to antiferromag., sp. ht. meas. 3—57599
Cr-Co, dil., magnetoelastic behaviour, thermal expansion and elastic consts. meas. 3—52581
Cr-Co, dil., magnetoelastic behaviour, thermal expansion and elastic consts. meas. 3—57726
Cr-Co, dilute, spin density wave state, press. effects, neutron diffr. study 3—18853
Cr-Co, pulse plating prep., struct. phase 3—24164
Cr-Co films, elec. resist. meas. 3—23506
Cr-Fe, dil., relax. Mossbauer spectra and phase transitions *(Russian)* 3—38728
Cr-Fe, dilute, spin density wave state, press. effects, neutron diffr. study 3—18853
Cr-Fe, ferromagnet, crit. correlations, small angle neutron scatt. study 3—23644
Cr-Fe, high field magnetisation curves 3—52539
Cr-Fe, laser induced surface melting, mass transfer 3—22938
Cr-Fe, paramag. diffuse neutron scatt. 3—7875
Cr-Fe alloys, antiferromag., close to crit. conc. evolution of mag. order 3—38589
Cr-Fe alloys, evolution of mag. order, onset of ferromagnetism 3—38590
Cr-Fe alloys, evolution of mag. order, ferromagnetism close to crit. conc. 3—38591
Cr-Fe alloys, high field mag. susceptibility meas. 3—14017

chromium alloys continued

Cr-Fe-Co-based permanent magnets, production methods and mag. props. *(German)* 3—43405
Cr-Ga, dil., mag. phase diagram, neutron diffr. study 3—57598
Cr-Ge, dil., mag. phase diagram, neutron diffr. study 3—57598
Cr-Ge (0.5 at.%), spin density wave state, press. effects, neutron diffr. study 3—18854
Cr-Ge dilute alloys, mag. phase diagram, mag. susceptibility study 3—14020
Cr-Hf-H, local condensation of hydrogen on ^{181}Hf, PAC study *(French)* 3—28107
Cr-Mn, dilute, spin density wave state, press. effects, neutron diffr. study 3—18853
Cr-Mn compacts, sintering and interdiffusion processes *(French)* 3—24171
Cr-Ni (30 at.%), σ-phase form., X-ray obs. 3—53033
Cr-Ni alloys Kh5N20, martensitic transition *(Russian)* 3—34299
Cr-Ni-P-C electrophoretic sintered coatings on steel, disintegration on heating and extension 3—24411
Cr-Os, mag. transition, anomalous physical props. near triple point 3—3447
Cr-Ru, T-P-C state diagram, mag. transitions *(Russian)* 3—52488
Cr-Si, dilute, spin density wave state, press. effects, neutron diffr. study 3—18853
Cr-Si, thermodiffusion saturation of Ti-Al-V alloy 3—24419
Cr-Si resistive films, magnetoron-plasmatron sputtering prep. 3—13675
Cr-Te system, magnetisation isotherms 3—38650
Cr-W(Mo)(Fe), amorphous electrodeposited, corrosion resist. *(Japanese)* 3—24399
$CrBe_{12}$, mag. phase transitions under high press. 3—8669
$Cr_{0.98}V_{0.02}$, spin fluctuations, NMR study 3—57626
$Cr_{1-x}V_x$, antiferromag., spin fluctuations, NMR study 3—43449
$Cr_{30}Zr_{70}$, amorphous, electronic struct., band struct. calcs., UPS and XPS studies 3—28255
Cu-Al_2O_3-Cr, diffusion saturated, precipitation, struct. changes, elec. resist. and plastic deformation study *(Russian)* 3—34324
Cu-Cr, grain boundary enrichment, thermoelec. study 3—39185
Cu-Cr, metastable alloys, RF sputtering deposition ion-beam mixing effects 3—3955
Cu-Cr alloys, high temp. creep and fatigue rel. to microstruct., Mg and Zr addition effects 3—47928
Cu-Ni-Cr (30, 3.2 wt.%), spinodally decomposing alloys, high cycle fatigue strength rel. to ageing 3—53237
$(Fe,Cr)_2N$, ϵ phase, microhardness *(Italian)* 3—53258
Fe-C-Cr steel, microstructure, microhardness, austenite form., laser treatment, SEM and TEM studies 3—24342
Fe-C-Cr-Mn, Mn addition and solidification rate effects during directional solidification, on eutectic interphase distance and tensile strength *(Polish)* 3—47828
Fe-C-Cr-Ti, eutectics, struct. and mech. props., effect of Ti addition and solidification *(Polish)* 3—4023
Fe-Co-Cr, magnetisation props. and fine cryst. struct., TEM, Mossbauer and X-ray diffuse scatt. studies *(Russian)* 3—33927
Fe-Cr, dil., hyperfine field and mag. moment, NMR study 3—19000
Fe-Cr, dil. alloys, electronic struct. 3—3104
Fe-Cr, ferromagnetic, mag. correlations near crit. conc., neutron small-angle scatt. study 3—14055
Fe-Cr, ferromagnetism, antiferromagnetism and spin glass states 3—52465
Fe-Cr, hydrogen-induced cold work peak of internal friction 3—14643
Fe-Cr, Invar anomalies, magnetisation and thermal expansion meas. 3—57727
α-Fe-Cr, mag. order influence on Fe self-diffusion *(Czech)* 3—57666
Fe-Cr, oxidation at 600°C, influence of prior oxide film 3—19448
Fe-Cr, surface oxidation at elevated temps., laser Raman study 3—53278
Fe-Cr, surface oxide layer, elastic and inelastic electron scatt. anal. 3—13677
Fe-Cr, tempered, mag. trans. rel. to heat treatment *(French)* 3—52486
Fe-Cr, thermal expansion in range 4.2-300K 3—23063
Fe-Cr (15 to 80 wt.%), quenched, struct. developments *(French)* 3—47868
Fe-Cr (19 wt.%), precip. hardening, tensile testing and TEM study 3—24244
Fe-Cr (25 wt.%), high temp. oxidation of Cr_2O_3 forming alloys, influence of superficially applied oxide powders 3—14777
Fe-Cr (3 wt.%), high temp. oxidation 3—53292
Fe-Cr (3wt.%), oxidation, microstruct. invest. 3—34537
Fe-Cr (7-24 wt.%), electrochem. behaviour rel. to pitting corrosion 3—24397
Fe-Cr (8 wt.%), ferrite to austenite, isothermal transform. *(Japanese)* 3—9058
Fe-Cr alloys, sulphidation in H_2S-H_2 atmos. at 1073K 3—4195
Fe-Cr-Al, aqu. corrosion props. 3—39303
Fe-Cr-Al, sulphidation in H_2S, morphology of corrosion scales, rel. to non-equilibrium phenomena *(French)* 3—4181
Fe-Cr-Al alloys, corrosion protection in sulphidising environments by means of α-Al_2 3—4196
Fe-Cr-Al alloys, H permeation characts. 3—28155
Fe-Cr-Al-Ti-Y_2O_3, oxide dispersion strengthened, texture and microstruct. 3—34352
Fe-Cr-Al-Y (Y_2O_3), oxidation characts., 1073-1373K 3—34553
Fe-Cr-B amorphous systems, mag. permeability after-effect 3—28643
Fe-Cr-Co, at. distrib. in low-conc. solid solns. 3—9035
Fe-Cr-Co permanent mag. alloy, high temp. X-ray diffr. study, effect of ageing *(Chinese)* 3—27892
Fe-Cr-Co permanent magnet alloy, atom probe FIM, microstruct. and comp., coercivity mechanism 3—14559
Fe-Cr-Co-Si, cryst. struct., precipitation *(Russian)* 3—37851
Fe-Cr-Co-Si-V, cryst. struct., precipitation *(Russian)* 3—37851
Fe-Cr-Mo (9.5, 0.78 wt.%), cavity form., Ni^+ and He^+ irrad., TEM 3—37968
Fe-Cr-Mo magnet alloys, semi-hard, glass sealable, for remanent reed contacts 3—33936
α-Fe-Cr-N, activity coeffs. of N 3—58094
Fe-Cr-N, constitutional diagram *(Italian)* 3—53021
Fe-Cr-Ni, high temp. oxidation under tensile stress *(Japanese)* 3—58291
Fe-Cr-Ni, ternary system, correlation of thermodynamic and phase data; review 3—34280
Fe-Cr-Ni (15, 15 wt.%), shock wave response, effect of polycrystallinity 3—33362
Fe-Cr-Ni (18, 10 to 25 wt.%), paramagnetic, elec. resist. and thermal expansion meas. 3—23358
Fe-Cr-Ni (21,32 wt.%), cold prestrained, internal stress and struct. in creep at 975K 3—9088

chromium alloys continued

Fe-Cr-Ni surface, superlattice form. by interaction with H_2O, I_2 ans O_2 3—2942
Fe-Cr-Ni-Mn, mass transfer of N from N_2 H_2 atmos. during nitriding 3—33455
Fe-Cr-Ni-Mo, corrosion resist. in marine environments, review 3—39293
Fe-Cr-Ni-Mo-Mn sigma phase alloys average site occupation parameters, X-ray diffr. study 3—37848
Fe-Cr-Ti, high temp. oxidation, influence of small amounts of Ti *(Japanese)* 3—9236
Fe-Cr-(Al), high temp. oxidation under tensile stress *(Japanese)* 3—58291
Fe-Cr(Mo), nitrided,oxidation and corrosion resist. 3—4184
Fe-Mn-X, X=Ti, Cr, Co, Ni or Cu, phase equilibria in ternary Fe systems, review 3—58095
α-Fe-Mo-N, activity coeffs. of N 3—58094
Fe-Ni-Cr, Alloy 600, crevice corrosion at 288°C, pot./pH meas. 3—24391
Fe-Ni-Cr, austenitic, dislocation loops at twin boundaries, ion-irrad. effects 3—2565
Fe-Ni-Cr, Incoloy 800 heat exchange material, oxide films, SIMS anal. 3—14766
Fe-Ni-Cr, passive film form. in borate buffer soln., ellipsometric study 3—24390
Fe-Ni-Cr, superalloy, additive strengthening 3—9081
Fe-Ni-Cr powder, superalloys, rapidly solidified, characterisation 3—3986
Fe-Ni-Cr-B-Si amorphous ribbons, Cr conc. effects, magnetisation study 3—28616
Fe-Ni-Cr-C, butterfly martensite, morphology and substruct. 3—42794
Fe-Ni-Cr-Si-B metallic glass, resistivity and galvanomag. coeffs. 3—28325
Fe-Ni-Cr-Ti austenitic alloy for cryogenic use, Ti and ageing effects on strength and ductility *(Japanese)* 3—9161
Fe-Ni-Mn-Cr, α-γ phase equilib. 3—9033
Fe-Si(Mn)(Cr)(Ni)(Cu)(C), reaction with molten Al, form. of alloy layers 3—29060
Fe-W-Cr-V-C, mag. field induced first order phase transition 3—53051
FeCr, dilute, hyperfine field distribs., host and impurity, NMR spectra 3—52639
FeCr, mag. hyperfine fields, Curie temp. and mag. moments, Mossbauer study 3—52673
$Fe_{52}Cr_{48}$ sigma phase, atom distribs., X-ray diffr. study 3—37847
FeCrAlY, increased plasticity of alumina scale and formation mechanism of keying or pegging Y_2O_3 3—14775
$Fe_{80-x}Cr_xB_{20}$, metallic glass, crit. indices for ferromag. ordering and spin glass state 3—23650
$Fe_{34}(Cr_XCo_{1-x})_{66}$ alloys, mag. behaviour 3—8699
$(Fe_{1-x}Cr_x)_3Ga$, mag. moments, Mossbauer spectra 3—52418
$Fe_{5.53}Cr_{93.93}Mn_{0.54}$, thermal expansion in range 4.2-300K 3—23063
$Fe_{80-x}Cr_xP_{13}C_7$, amorphous, Invar effect, thermal expansion and mag. props. study 3—52582
$(Fe_{1-x}Cr_x)_{77}Si_{10}B_{13}$, amorphous, Invar effect, magnetostriction meas. 3—57738
$Fe_{0.56}Ni_{0.23}Cr_{0.21}$, stainless steel, short range order, neutron diffuse scatt. study 3—13162
$FeNi_{45}Cr_{20}Al_5Y_{0.02}$, austenitic alloy, oxidation kinetics, influence of struct. parameters 3—34534
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, struct. relax. by modulus meas. 3—9111
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$ metallic glass, elec. cond. in presence of mag. fields and tensile stresses 3—28326
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, crystn., effects of pre-annealing, TEM study 3—42529
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, amorphous, pre-yield microstrain, precision meas. 3—43913
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, amorphous, mag. hyperfine field distrib. 3—57835
$(Mn_{1-x}Cr_x)_3B_4$, mag. phase diagram, Curie temp. 3—52473
$Mn_{1-x}Cr_xSb$, Curie temp. and compressibility, high press. effects *(Russian)* 3—52462
Mo-Zr-Cr-B, microplastic deform., grain boundary segregation *(Russian)* 3—39206
Ni-base superalloy, gas turbine alloys, corrosion rel. to electrode pot. 3—53289
Ni-base superalloy, Nimonic 115, induced creep and creep-fatigue at ambient temps. 3—24347
Ni-Co-Cr, corrosion resist. in dil. H_2SO_4, rel. to phase comp., anodic polarisation curves *(Japanese)* 3—58293
Ni-Co-Cr-Ti-Al superalloys, corrosion in sulphate melt, 1173K, $NaCrS_2$ phase identification 3—53288
Ni-Cr, Alloy 600, anodic behaviour and pitting corrosion, SO_2 and pH effects 3—9232
Ni-Cr, electrical props. under high gaseous H_2 press. 3—38365
Ni-Cr, enhanced O diffusion during internal oxidation 3—28159
Ni-Cr, high temp. oxidation of Cr_2O_3 forming alloys, influence of superficially applied oxide powders 3—14777
Ni-Cr, ultrafine grain structures by recrystallisation annealing 3—34355
Ni-Cr (1-5 wt.%) alloy, high temp. internal oxidation, intergranular oxides 3—34521
Ni-Cr (20 wt.%), oxidation, scale growth, spalling, rel. to oxygen partial press. 3—29221
Ni-Cr (80, 20 wt.%), cast, melting conditions influence on struct. 3—9055
Ni-Cr alloys, thermodynamic studies and mag. ordering close to critical composition 3—8671
Ni-Cr composite thin films, vacuum deposition and struct. 3—18584
Ni-Cr electrolytic powders, prod. 3—24184
Ni-Cr superalloys with CeO_2 thermal barrier coating, dip process 3—43996
Ni-Cr thin film, sputter deposited on Cu, laser and ion beam mixing 3—57242
Ni-Cr-Al-Ti superalloy MA 6000E, oxide dispersion satrengthened, γ' effect on recrystallistion 3—14606
Ni-Cr-Al-Y_2O_3, oxide dispersion strengthened, texture and microstruct. 3—34352
Ni-Cr-Co, IN 738, high temp. low cycle fatigue, S containing environment effect 3—34480
Ni-Cr-Co, wrought superalloys, creep, 800°C, strengthening mechanisms 3—47922
Ni-Cr-Fe, Alloy 600, electrochem. impedance diagrams at active-passive transition pot. *(Japanese)* 3—29209
Ni-Cr-Fe superalloy, Alloy 600, SCC in oxygenated high temp. water, environmental factors effect 3—58316
Ni-Cr-Fe-Si-B self-fluxing coatings for stationary gas turbines, modification by Al_2O_3 protective scales 3—4211
Ni-Cr-Mo superalloy, creep strain and rupture, effect of environment 3—19386

chromium alloys continued
Ni-Cr-Mo superalloy, mech. props. effect of temp. and stress 3—19387
Ni-Cr-Mo-W, corrosion fatigue behaviour 3—19450
Ni-Cr-Nb-C eutectic alloy, in-situ composite, isothermal oxidation, 800 to 1300°C 3—58317
Ni-Cr-Ti-Mn, precip.-hardening, struct. transforms. 3—34341
Ni-Cr-W-Co-Mo-Ti-Al superalloy, investment cost, tensile props., stress-rupture, corrosion resist., rel. to B/C modification 3—58161
Ni-Cr-W-Co-Ti, chromoaluminised in vac., coating struct. 3—29213
Ni-Cr-W-Mo-Al-Ti-Nb, oxidation kinetics and mechanism in air 3—9237
Ni-Cr-W-Ti, cast superalloy, reversible reaction between MC and $M_{23}C_6$ *(Chinese)* 3—53061
Ni-Cr-(Sb, Zr) alloy, creep fracture, Sb and Zr traces effect 3—47964
Ni-CrAl-Zr, Al_2O_3 scale form., ^{18}O tracer studies 3—4204
Ni-Fe-Cr alloys, precip. reactions, effect of C and Mo 3—29085
Ni-P-Cr coatings deposited from soln., heated in vacuum, struct. and props. *(Russian)* 3—13667
$Ni_{1-x}Cr_x$, high-field mag. susceptibility meas. 3—52416
$Ni_{77}Cr_{16}Fe_7$, S atomic behaviour in grain boundaries, embrittlement *(French)* 3—29175
γ-$(Ni_{80-x}Cr_{20})Fe_x$, spin glass state and mag. transitions, neutron diffr. study *(Russian)* 3—23641
Pd-Si-Cr, amorphous, magnetisation, AC susceptibility, and Mossbauer meas. 3—57560
Pt_3Cr, ordered alloy, mag. excitations 3—57569
Pt_6MnCr, ordered alloy, mag. excitations 3—57569
Rh-Cr dilute alloys, hyperfine interactions, Knight shift, nuclear orientation study *(French)* 3—33691
Si-Ti-Cr-V, plasma-deposited coatings, oxidation and struct., V effect 3—39307
$Sm_2(Co,Fe,Cu,Zr,Cr)_{14.8}$ permanent mag., ferromag. coercivity 3—33937
Ti-Al-Cr-Mo-Si, mech. props., laminated struct. influence 3—19389
Ti-Al-Cr-Mo-V, VT22, β solid soln. precipitation, initial struct. effect *(Russian)* 3—29081
Ti-Al-Cr-Mo-Zr, hot deform., TEM study of struct. changes 3—19357
Ti-Al-Mo-Cr, CORONA 5, moderate strength, high fracture toughness alloy development 3—24365
β-Ti-Al-Mo-Cr, heat treated, polygonised struct. influence on props. 3—19356
Ti-Al-Mo-Cr-Fe, damping props. with layered metal coatings 3—14778
$\alpha+\beta$Ti-Al-Mo-Fe-Cr-Mn, hardened, embrittlement and spontaneous cracking during ageing 3—19422
Ti-Al-Mo-V-Cr-Fe, internal struct. of α-phase crysts. 3—14598
Ti-Al-Mo-V-Cr-Fe alloy, VT23, supercooled β-phase, precipitation *(Russian)* 3—34325
β-Ti-Al-V-Cr-Mo-Zr (75, 3, 8, 6, 4, 4 wt.%), thermomech. props., and stress corrosion 3—24277
Ti-Cr, alloying and annealing temp. effect on struct. state, internal friction obs. 3—14647
Ti-Cr, comp. and struct. influence on fracture features 3—14735
Ti-Cr, corrosion and electrochem. props., alloying effects 3—9257
Ti-Cr-C alloy, oxidation resist., comp. and temp. depend. 3—58288
Ti-Cr-Mo-C, sintered, struct. and phase transforms. during friction, Mo effect 3—39257
Ti-Cr-Mo-G, etching in acid soln., H_2 absorption 3—9261
β-Ti-Mo-Cr-Fe-Sn-La, behaviour, C effect 3—29091
Ti-Mo-V-Cr-Al metastable β system, deep hardenable alloy synthesis, design and props. 3—24250
$TiCr_{1.8}H_x$, proton NMR and mag. susceptibility 3—33993
V-Cr and V-Cr-Ti, stress-rupture strength, solid soln. hardening influence 3—58239
$V_{1-x}Cr_xD_{0.5}$, phase stability and struct. changes, sp. ht. and neutron diffr. studies 3—33393
$V_{1-x}Cr_xH_y$, soft X-ray emission spectra, metal-H bonding states 3—38962
$ZrCr_2$-based alloys, hydrides, calorimetric enthalpy of form., decomp., config. entropy 3—53442
$ZrCr_2H_x$, X-ray L-emission spectra 3—38963
$(ZrO_2$-$V_2O_3)$/(Ni-Cr-Al-Y) coating, air-plasma sprayed, behaviour in HTGR He 3—960
$(ZrO_2$-$Y_2O_3)$/(Ni-Cr-Al-Zr) thermal barrier coating, failure mechanism at high temp. 3—3020

chromium compounds
see also chromium alloys
bis(monomethylammonium)tetrachlorochromate(II), two-dimens. ferromag., heat capacity 3—23053
carbide coating deposition on diamond from gaseous phase 3—24382
chromate conversion coatings, struct. and surface comp., XPS and SEM obs. 3—19460
dichromate solution as ref. dosimeter in industrial irradiation plants 3—11534
MIS polycrystalline Si solar cells composition anal. using ESCA and AES 3—29390
tetraphenylporphyrins, fluoresc. and low-temp. phosphoresc. 3—1421
Al_2O_3-Cr_2O_3, dynamic Zeeman effect at microwave freq. 3—34077
$CdCr_{2x}In_{2-2x}S_4$, spin glass, EPR study 3—28695
$CdCr_2S_4$ (Se_4), lattice parameters and thermal expansion, 28 to 685°C 3—2501
$CdCr_2Se_4$, active electron-magnon interaction 3—52432
$CdCr_2Se_4$, carrier heating, thermal noise temp. meas. 3—28399
$CdCr_2Se_4$, ferromag. semiconductor, $P(Se_2)$-a(CdSe) phase diagram 3—42751
$CdCr_2Se_4$ vacuum deposited films, amorphous-cryst. transition 3—38257
$CdCr_2Se_4$:Ag, impurity effect on FMR spectra 3—57784
$CdCr_2Se_4$:In(Ag), magnetoconductivity study 3—43210
Cr complex, $[Cr(CN)_6]^{3-}$ in dimethylformamide soln., ^2E_g state quenching 3—57961
Cr complex, aqs. trans-$(Cr(en)_2NH_3F)^{2+}$, photoprod. form., quenching and doublet excited state absorpt. 3—9337
Cr complex, chromium dialkyldithiophosphato complexes, core-excited quantum yield spectra 3—24053
Cr III-hexafluoride complex, ESCA studies using an internal standard of calibration 3—6720
Cr-CrO_x film fabrication for practical solar selective absorpt. systems 3—19605
Cr-Te system, magnetisation isotherms 3—38650
$Cr_8{}^{4-}$, Hartree-Fock calcs., rel. to 10Dq 3—41483
$CrAs_{0.47}Sb_{0.53}$, electronic struct. mag. and structural phase transitions, press. study 3—18896
$Cr_3(^{11}B_{0.44}C_{0.56})C_{0.85}$, cryst. struct., neutron powder diffr. study 3—51578

chromium compounds continued
$CrBr_3$, layered ionic cpd., spin density distrib., polarised neutron diffr. study 3—13174
$CrBr_3$, magnetic domain wall resonance, temp. dependence meas. 3—28706
Cr_2C_2-Cu composite, sintered, anomalous behaviour of liq. metals in flat capillaries 3—58090
Cr_7C_3-Fe composite, phase constitution and chem. comp. of phases formed during sintering 3—58092
$Cr_3C(C_{0.52}N_{0.48})$, cryst. struct., neutron powder diffr. study 3—51578
$Cr_2(CH_3)_8{}^{4-}$, Cr-Cr multiple bonding, INDO calcs. 3—50313
$Cr(CN)_6{}^{3-}$ complexes, solid and solns., vibr., IR and Raman anal. 3—19116
$Cr(CO)_6$ thin film, decomposition induced by electron, ion and photon beams 3—4285
$Cr(CO)_6$: $Os(CO)_5{}^+$, EPR spectrum 3—3522
$Cr(CO)_6$:$Fe(CO)_5{}^-$, single cryst., γ-irrad., EPR spectrum 3—28690
$CrCl_3$, IR and Raman vibr. absorpt. spectra 3—14276
$CrCl_3$, layered ionic cpd., spin density distrib., polarised neutron diffr. study 3—13174
$Cr_2Cl_8{}^{4-}$, Cr-Cr multiple bonding, INDO calcs. 3—50313
$CrClO_3{}^{-1}$, vibr. anal., harmonic pot., compliance, Coriolis coupling and centrifugal distortion consts. 3—6805
$CrF_6{}^{3-}$, Hartree-Fock calcs., rel. to 10Dq 3—41483
$CrFO_3{}^{-1}$, vibr. anal., harmonic pot., compliance, Coriolis coupling and centrifugal distortion consts. 3—6805
$Cr_xFe_{1-x}S$, Mossbauer study, crystallographic α transition 3—14179
Cr(III) comlex, di-p-hydroxo-bis(tetramine Cr III) bromide, metal pair spectra and exchange coupling 3—17287
Cr(III)-polypyridyl complexes, photochem. solar energy conversion appls. 3—9443
$Cr_{1/3}NbS_2$, intercalation cpd., magnetisation and neutron diffr. studies 3—18871
CrO_2 acicular particles, remanent coercive force meas. 3—18943
CrO_2 powders, mag. props., vol. concentration dependence meas. *(German)* 3—28642
CrO_2 powders, stabilisation process, mag. tape material appl. 3—3979
CrO_2:^{57}Fe particles, mag. struct., Mossbauer spectra 3—18860
α-CrO_3 catalysts, heterogeneity of labile O, desorption study *(French)* 3—33558
$CrO_4{}^{2-}/Cr_2O_7{}^{2-}$ equilibrium in aq. soln., Raman study 3—48083
Cr_2O_3 particles in Ni-Cr alloy, high temp. internal oxidation 3—34521
Cr_2O_3 pyrolytic film optical filters, optical props. 3—56304
Cr_2O_3 whisker growth from Cr_2O_3/graphite/mullite powder mixture 3—51998
Cr_2O_3:$^{119}Sb^{5+}$, adsorbed ions, emission Mossbauer obs. 3—52674
Cr_2O_3-Cr, black chrome, electrodeposition on Sn, optical props., solar absorber appls. *(Russian)* 3—9003
Cr_2O_3-Cr, chrome black coatings, improvement of optical performance, durability and economic feasibility *(Korean)* 3—37144
Cr_2O_3-Cr, solar absorbing black chrome coatings, stability under high solar flux 3—19610
Cr_2O_3-Cr black chrome solar selective films, sol-gel protective coatings 3—19611
Cr_2O_3-$CrSi_2$ interface, chem. reactions, XPS and Rutherford backscatt. study 3—42856
Cr_2O_4-Al_2O_3 composites, fused refractories, struct. and props. 3—19317
$CrOHCr_2O_7.2H_2O$, dehydration and thermal decomposition, X-ray and IR spectra study 3—9314
$(Cr_{1-x}Pd_x)_2As$, mag. props. study 3—52474
CrS-CdS heterojunctions preparation by electrochemical treatment of polycrystalline CdS, for solar cells 3—43270
$CrS_{1.17}$:Mn(Te), ferrimagnetic-ferromagnetic transition 3—52475
Cr_2S_3, photoconductivity and optical absorption spectra 3—38427
Cr_2S_3-In_2S_3-CdS(COS)(HgS), phase relationships, X-ray diffr., thermal anal., and IR spectra 3—43795
Cr_xS, integral area AES meas., quantitative comparison with XPS studies 3—14403
$ITCrSe_2$, layered, electron-lattice interactions and struct. phase transitions, review *(Japanese)* 3—28099
$CrSi_2$ thin films on KCl, crystn. front perimeter 3—38254
$CrSi_2$-Cr_2O_3 interface, chem. reactions, XPS and Rutherford backscatt. study 3—42856
Cr_3Si, Raman-active phonons 3—14305
Cr_xTiSe_2, phase diagram, mag. props., DTA, X-ray and electron diffr. studies 3—38047
$CrZrF_6$, phase transitions, Mossbauer and EPR study of Jahn-Teller distortions 3—47101
$Cr(\eta^6$-$C_6H_6)_2{}^+$ layer intercalation cpd. with $ZnPS_3$, vibr. spectra 3—57914
$Cr(oxalate)_3{}^{3-}$, forbidden d-d transitions 3—51
$Cs_3Cr_2Br_9$, Cr^{3+} $(^4A_2\times{}^2T_1)$ exchange-coupled excited states, pair spectra 3—52774
$CsCrP_2O_7$, crystalline struct. 3—51561
$Cu_{2x}Cr_{2x}Sn_{2-2x}S_4$, spin-glass behaviours, antiferromagnetic frustrated lattice 3—43378
$CuCr_{2(1-x)}V_{2x}S_4$ solid soln., valence states of ions, NMR investig. 3—57792
$(Fe_{1-x}Cr_x)_{0.98}Si_{1.02}$, paramagnetic susceptibility meas. 3—52349
$HgCr_2Se_4$, photocond. spectra in intrinsic transition region 3—3249
$HgCr_2Se_4$:Ag, impurity effect on FMR spectra 3—57784
$KAl(SO_4)$:$Cr_2O_7{}^{2-}$, X-ray irrad. damage, optical absorption and ESR study 3—18344
K_2SO_4:$CrO_4{}^{2-}$, electronic struct. of $CrO_4{}^{3-}$, EPR and ENDOR study 3—18976
La_2S_3-Cr_2S_3 alloy synthesis and thermoelectric props. 3—14971
Li_nCrO_x cathodes in Li^+/organic electrolyte batteries, transport props. 3—44116
$LiNbO_3$:Cr, mag. susceptibility, 100-400K, effects of annealing *(Korean)* 3—38602
MgMnCr-ferrite, monocrystalline epilayer, bubble domains 3—23763
$Mg(NH_4)_2(SO_4)_2.6H_2O$:$CrO_4{}^{2-}$, radicals at paramag. defects in X-ray irrad. cryst., EPR study 3—23802
MgO-M_2O_3-silicate system (M=Al,Cr,Fe in binary mixture), solid solubility in periclase phase 3—34290
$Mn_{1.88}Cr_{0.12}Sb$, mag. phase transition 3—47497
$Mn_{1.97}Cr_{0.03}Sb$, spin wave dispersion relations 3—57566
$NH_4Al(SO_4)_2$:$Cr_2O_7{}^{2-}$, X-ray irrad. damage, optical absorption and ESR study 3—18344
$Na_xCr_xTi_{1-x}S_2$, ferro-antiferromagnet transition study 3—43370

chromium compounds continued
- $NiO-CrO_3$ system, calcining, surface non-stoichiometry effect on texture 3—18543
- $Si-CrSi_2$, directionally crystallised eutectic alloy, microstructure and crystallography 3—7980
- $(V_{1-x}Cr_x)BO_3$ ($0 \leq x \leq 0.5$), synthesis and mag. props. 3—14085
- $Yb_2O_3-Cr_2O_3-CoO(NiO)(CuO)(ZnO)$, phase diagrams, X-ray diffr. study 3—2745
- $ZnO-Cr_2O_3$ humidity sensor, recent trends and applications of ceramic sensors 3—35983
- $ZrCr_2D_{3.5}$, cryst. struct. determ 3—18265
- $ZrO_2-Y_2O_3-Cr_2O_3$, pseudoternary system, phase equilib. at 1600°C in air 3—14580

chromosomes *see cellular biophysics*

chromosphere
- active region flows in chromosphere-corona transition region, meas. in C IV line from narrow slit Dopplergrams 3—10278
- brightness oscillations of chromosphere in K and Hα, power anal. of time sequences 3—54302
- coronal arches footprints nature 3—20326
- electron density determ., O IV semiforbidden 1401 Å multiplet appl. 3—20250
- emerging flux regions, mag. and velocity fields obs. 3—10294
- evaporation in 1980 May 7 SB importance flare 3—20309
- fibrils morphology near filament, rel. to Rayleigh Taylor instability and 'spotless' two ribbon flares *(Chinese)* 3—40086
- flare impulsive heating of upper chromosphere and hard X-ray emission 3—40099
- flare loop radiative hydrodynamics, nonlocal radiative transfer effects 3—40077
- flare loop radiative hydrodynamics, thermal stability 3—40076
- flare loop radiative hydrodynamics 3—40075
- flares, spatial structure and dynamic processes, spectral manifestations 3—25400
- flares correlation with type I storms 3—25399
- flaring chromosphere conductive heat flux from linear polarisation obs. 3—54305
- flash spectrum colour movie, 16 Feb. 1980 eclipse record 3—59294
- heating, role of mag. field-related instabilities in surface layers of Sun 3—30163
- hydrodynamic shock waves, form. in solar chromosphere and corona during flares 3—10297
- internal gravity waves, radiative damping effects 3—20308
- ion fractionation and solar wind composition meas. 3—30144
- ionisation balance due to flare XUV radiation 3—5243
- jets, as manifestation of spicules, from UV spectral obs. 3—59280
- limb extensions in far IR during 1981 July 31 eclipse 3—30318
- magnetic loop response to flares, plasma heating and compression and chromosphere effects 3—48873
- microspicules, origin and two jet types 3—30326
- oscillations above sunspot umbrae, model 3—54331
- short period oscillations, nonuniform distrib. on solar surface and in time 3—54320
- soft X-ray flares, chromospheric evaporation *(Italian)* 3—15898
- spicules motion from visible obs. *(Russian)* 3—20319
- sunspot chromosphere, model based on OSO 8 obs. 3—5246
- sunspot chromosphere dynamics from umbra brightness oscills. in Hα/Ca II K-lines 3—40097
- sunspot transition region, EUV struct. and plasma characts. 3—40098
- sunspot transition region, longitudinal mag. fields, UV spectral obs. 3—40096
- temperature minimum region, spectral-spatial anal. of wave motions 3—54321
- transition region, C IV line widths and Doppler shifts, fluid motions 3—40078
- transition region, line intensities rel. to influence of divergent coronal geometry on solar wind 3—15889
- transition region electrons, LTE invalidity, Fokker-Planck results 3—54293
- transition region energy balance 3—25413
- transition region lines EUV emission, weakening by Lyman continuum absorpt. 3—40093
- transition region models, responses to mag. field geometry and downflow rels. 3—30311
- transition zone above faculae, density determ., comparison of methods 3—59308
- transition zone plasma motion, and heating of material entering solar wind 3—30344
- transition zone velocities and line broadening determ. by Double Dopplergram Determination 3—25343
- ultraviolet flux variability 3—35580
- wave heating and motions, review *(Italian)* 3—15895
- X-ray irradiated flaring chromosphere, self-consistent models 3—44722
- Z, interferometric obs. 3—35567
- CN 3883 Å filtergrams, brightness fluctuations rel. to new features of solar oscillation spectrum 3—5245
- Ca II K_{2V} spectral features, correl. with small scale photospheric mag. fields 3—20321
- Cl I 1351 Å in chromospheric spectrum, line formation mechanism 3—54299
- He I Lyman α line radiation press. and ^3He accel. 3—54294
- S I line during flare, impact linear polarisation, UV obs. 3—48870

chronographs *see chronometers*

chronometers
- Agat photochronograph, time sweep calibration 3—16338

CI calculations (atoms) *see atomic electron correlations*

CI calculations (molecules) *see molecular electron correlations*

CIDEP
- aliphatic ketone radicals, spin polarisation CIDEP behaviour 3—41595
- quinoxaline, ESR spectra, overlapping, separation by time-resolved spectroscopy, implications for CIDEP spectra 3—50439
- transient radicals, detect. by CIDEP and CIDNP of reaction products 3—19518
- vector model for CIDEP, role of exchange interaction 3—1393

CIDNP
- transient radicals, detect. by CIDEP and CIDNP of reaction products 3—19518
- transient radicals in liq. soln., nucl. reson. detection 3—45977

cinefilming *see cinematography*

cinematography
- *see also cameras; telefilming*
- 1KNK-M motion picture complex with TV facilities, equipment structure *(Russian)* 3—30950
- 35-mm projector five-element lens system design 3—27186
- A/D data conversion techniques for film or TV annotation 3—426
- audio-visual presentation and production, impact of microprocessors 3—30942
- Belorussian industry during 1976-1982 *(Russian)* 3—30956
- biomechanics cinematography, algorithm for minimising effect of LF errors in derived kinematic variables 3—4707
- biomechanics cinematography, calc. of derivatives from digital information 3—4708
- biomechanics cinematography, comparison with direct force meas. in pole vaulting 3—4523
- biomechanics cinematography, data editing 3—4711
- biomechanics cinematography, design of digital filter to eliminate HF noise from incontiguous film coord. data 3—4706
- biomechanics cinematography, determ. of sensitivity to error sources and target configuration of kinematic variables 3—4713
- biomechanics cinematography, dynamic film anal. system 3—4702
- biomechanics cinematography and high speed photography, conf., San Diego, USA (Aug. 1981) 3—10
- biomechanics cinematography and high-speed photography, timing signal generation and film annotation 3—4700
- biomechanics cinematography laboratory, light considerations 3—4698
- biomechanics cinematography laboratory development, human engineering considerations 3—4699
- biomechanics cinematography of reptiles, quadrupeds, and bipeds, review 3—4710
- camera-film, high-speed colour reversal 16 mm film, Eastman Ektachrome 7251 3—20920
- cameras for ultra-high speed cinematography, kinematic aberrations and constructional parameters 3—5904
- cineangiocardiographic image processing technique 3—15216
- coronary artery models, representation in angiographic films 3—24870
- coronary obstruction severity, computer aided quantitation from single view cineangiograms 3—24869
- data systems at the Naval Biodynamics Laboratory 3—4704
- deregulation message, audio-visual package appl. 3—54786
- dimethylphthalate sorption in cellulose-triacetate-based cine film *(Russian)* 3—444
- drawing-animated film production developments *(Hungarian)* 3—25969
- Eastman colour high-speed negative film 5293 3—20921
- EC-35 electronic cinematography camera, design *(Russian)* 3—30951
- film projection equipment, reliability and service requirements *(Russian)* 3—45237
- film projection equipment development, prospects *(Russian)* 3—30949
- film projector, design modernisation advantages *(Russian)* 3—50731
- front projection techniques 3—25966
- Gruziyafilm studio, development of film production in 1921-1982 time period *(Russian)* 3—30959
- HDTV standards considerations 3—36113
- high speed filming of free liquid films streaming by solid particles *(Russian)* 3—20930
- Kodak persulphate bleach ($Na_2S_2O_8$), Process ECN-2 appl. 3—20923
- left ventricular wall motion pattern clustering, cineangiographic sequence 3—24877
- light-in-flight recording, high-speed holographic motion pictures of ultrafast phenomena 3—36956
- Lithuanian cinematography, development in 1940-1982 time period *(Russian)* 3—30957
- Moldavian cinematography, development in 1940-1982 time period *(Russian)* 3—30958
- motion picture front projection techniques. II 3—10930
- motion picture front projection techniques. IV 3—30943
- motion picture projection equipment economy and efficiency *(Russian)* 3—442
- motion picture sound, history in years 1927-40 3—56411
- movie-camera part fabrication on automatic general-purpose bending presses 3—25976
- moving image perception rel. to eye optics and experience *(Russian)* 3—4510
- NMR, real time movie images, rabbit heart obs. 3—9689
- quality control, computer aided sensitometric control system 3—441
- quality control of processing and printing using a low-cost computer 3—440
- serial optical section recording with simple device, cell behaviour analysis 3—4730
- sound engineering for theatre and film 3—45226
- sound transmission through perforated screens [cinematography] 3—37277
- Soviet industry, history and development *(Russian)* 3—30955
- steam bubble growth obs. by bidirectional cinematography 3—27630
- synchronisation by automatic digital methods of 8 mm film projector and stereo tape recorder *(Russian)* 3—50732
- TV images recording on motion picture film, partial storage appl. *(Russian)* 3—45238
- Xe short arc lamps for film projection 3—56299

circuit breakers
- *see also circuit breaking arcs; gas blast circuit breakers*
- ohmic heating power supply system using DC thyristor cct. breaker for JT-60 3—55771

circuit-breaking arcs
- *see also circuit breakers; sparks*
- air-blast arc in nozzles under clogged conditions, exptl. obs. 3—27777
- electric arcs mathematical models qualitative anal. using Lyapunov theory 3—7819
- perturbation in turbulent N_2 gas flow 3—37713
- vacuum arcs, zero current passage during rapid commutation 3—27800

circuit oscillations
- *see also circuit resonance*
- No entries

circuit resonance
- *see also circuit oscillations*
- plasma equivalent circuit resonance and HF power absorption 3—56688
- UHF heating of dielec. materials, loss angle meas. at 2.45 GHz *(German)* 3—45167

circuit theory
see also filters; lumped parameter networks
eddy current calc. by network method, three-dimensional, using magnetic scalar potential 3−46125
RC network model of photographic development process *(Russian)* 3−20936

circuits *see networks (circuits)*

circular polarisation *see polarisation*

circular waveguides
EM field accompanying bunch of particles in waveguide with slightly perturbed wall *(French)* 3−41370
IR hollow waveguides, mode coupling analysis of bending losses 3−46288
IR hollow waveguides with metallic walls, status 3−46287
open-ended circular waveguide for diathermy applicator 3−34932
optical band plane and circular dielec. waveguides, theory of synthesis *(Russian)* 3−37184
particle bunch traversing waveguide with slightly perturbed wall, total energy loss *(French)* 3−41371
permittivity determ. at microwave frequencies, single-moded cylindrical waveguide filled with dielec. anal. 3−54745

circulators (microwave)
ferrites, low firing temp., for ferrimag. pastes, prep. and charact., microwave device appl. 3−14548
low loss, prep. by modified ceramic method 3−19311
YIG coupling circuit, 4-port cross-wire, eigenvalue anal. 3−46290
$Li_{0.5(1+x)}Ti_xFe_{2.5-1.5x-y}Mn_yO_4$, mag. and microwave data, appl. 3−33863
YIG, low loss, prep. by modified ceramic method 3−19311

circumstellar shells
see also stellar atmospheres; stellar winds
2A 0311−227 (EF Eridani), AM Herculis star, simultaneous IR and optical light curves rel. to accretion model 3−35672
A 0620−00, X-ray nova, eclipse of accretion disc 3−48952
2A 1822−371, X-ray binary, accretion disc model for UV, optical and IR light curve 3−10384
accretion discs, thin radiative, thermal and hydrostatic equilib. compatibility 3−10196
accretion discs around compact objects, nature 3−44738
accretion discs in close binary stars, numerical calcs. 3−40119
accretion discs in close binary systems, hydrodynamics calcs. method 3−15905
accretion discs in close binary systems, models from hydrodynamical calcs. 3−15906
accretion disks in stellar X-ray sources 3−10403
accretion tori orbiting black holes, evolution 3−59476
Algol-type binary systems, mass transfer and circumstellar matter rel. to evolution 3−15957
o Andromedae, evidence from radial vels. for gas stream in close system 3−59351
α Andromedae, Hg-Mn star, shell existence 3−35609
R Aquarii, IUE UV spectra of jet 3−20385
R Aquarii, symbiotic star, obscuration by dust cloud rel. to IR variability 3−59365
V1343 Aquilae (SS 433), mass transfer binary star, relativistic jets model and circumstellar ring model 3−40149
V1343 Aquilae (SS 433), red/blue shifts jitter, collimation mechanism and disc models 3−10338
V1343 Aquilae (SS 433), slaved bright accretion disc eclipsing binary *(Russian)* 3−44764
R Arae, eclipsing binary, IUE obs. of high speed gas stream 3−40201
R Arae, eclipsing binary, IUE obs. of peculiar variable spectrum rel. to gas stream 3−54427
ε Aurigae, evidence for circumstellar shell from IR photometry during eclipse ingress (April 1982 to January 1983) 3−35667
RW Aurigae, T Tauri star, implications of short-term spectral variability 3−44741
B-type stars in rapid rot., nonemission line objects, circumstellar shells search 3−54352
Be stars, Mg II h and k emission, shell nature, UV obs. 3−20372
Be stars, models for circumstellar discs rel. to presence of O I λ1302 emission 3−59371
close binary systems, Roche dimensions of rotating gaseous discs 3−15959
black hole, barytropic gas transonic accretion from disc 3−25510
black hole, circumstellar thin disc transonic accretion flow 3−25509
black hole, gravitating plasma disc in poloidal mag. field, nonlinear effects *(Russian)* 3−20237
black hole thick accretion disks models 3−35652
black holes, stationary spherical accretion, optically thin to optically thick transition 3−25512
VY Canis Majoris, long period variable, shell SiO isotopic maser emission 3−35616
GG Carinae, eclipsing binary, evidence for circumstellar electron cloud from photoelectric photometry 3−59405
η Carinae, obs. of vars. in dust thermal IR emission 3−59368
R Cassiopeiae, Mira variable circumstellar 86 GHz SiO maser emission 3−5301
cataclysmic binaries, UV and X-ray radiation field, accreted matter boundary layer 3−20386
cataclysmic binary, energy distributions, contrib. of accretion disc and secondary, spectrophotometric anal. 3−30380
cataclysmic variables, outbursts due to mass transfer rate variability onto disc 3−30360
SV Centauri, early-type contact binary, obs. of expanding circumbinary envelope 3−40196
close binary stars, accretion and inner excretion discs formation and rot. 3−10395
CoD−61°3326, yellow supergiant, dust shell discovery from near IR photometry and spectrum 3−10329
compact stars accretion discs, shock propag. and disc transient destruction 3−59209
cool giant and supergiant stars, dust shell models rel. to obs. at 20, 25 and 33 μm 3−20369
EM Cygni, dwarf nova, accretion disc pulsation model for rapid brightness oscills. 3−10365
59 Cygni, early-type Be star, envelope line profiles and expansion vel. 3−48916
V1057 Cygni, FU Ori star, spectral features after 1967 brightening and shell nature 3−59327
NML Cygni, H II region, due to outflow photoionisation by Cygnus OB2 assoc. stars radiation 3−59504

circumstellar shells continued
P Cygni, mass ejection rel. to generation of shock front emitting nonthermal radiation 3−48917
V1016 Cygni, nature, cool component dust shell nature and system luminosity 3−44770
V1329 Cygni, possible proto-planetary nebulae, model and spectral var. anal. 3−15932
CH Cygni, symbiotic star, circumstellar envelope model for blue-UV continuum 3−25466
CH Cygni, symbiotic star, circumstellar spectra in 1981, visible obs. 3−25442
CI Cygni, symbiotic star, giant viscous accretion discs evolution rel. to light vars. 3−5281
CH Cygni, symbiotic star, obs. of two circumstellar shells from high-dispersion spectra 3−59370
CH Cygni, symbiotic star, radial vel. during 1977 outburst (to 1981) 3−10341
CH Cygni, symbiotic star binary model and stable/unstable accretion disc, photometry anal. 3−54379
CI Cygni, symbiotic star mass transfer onto main sequence star via accretion disc. 3−30381
V1016 Cygni, UV shell formation obs. from IUE spectra 3−35613
V1668 Cygni (Nova Cygni 1978), time-dependence of IR spectrum 3−59364
Cygnus X-2, emission region nature, radiation mechanisms and accretion disc 3−40164
HR Delphini (Nova 1967), accretion disc nature and primary struct. 3−54394
HR Dephini (Nova 1967), accretion disc. struct. from UV spectrum obs. at different orbital phases 3−15922
disk structure growth in shearing, viscous media 3−40013
double-shell circumstellar dust shells, models for high optical depth Type II OH-IR-sources 3−5280
Elias 12, fuor line profiles and disturbed gas parameters 3−48898
ellipsoidal circumstellar plasma cavity at wind-ISM interaction medium, mag./fluid environment 3−40111
envelope expansion into surrounding vacuum, MHD solns. 3−5098
evolved late-type stars, H I content of circumstellar envelopes 3−54343
G-type star with circumstellar refl. nebula in Centaurus, polarisation characts. 3−59334
gaseous extended ionised envelopes, radio/IR emission and spectral models *(Italian)* 3−15912
U Geminorum, dwarf nova, accretion disc models rel. to UV light curves 3−10332
U Geminorum, dwarf nova, model spectra of accretion disc rel. to UV flux distrib. 3−40148
H 2252−035, UV and optical spectra anal. orbital modulation and accretion disc contrib. 3−40165
HD 139216 (τ Serpentis), irregular variable, circumstellar shell spectra peculiarities, visible obs. 3−25441
HD 152270, Wolf-Rayet binary system, electron scatt. model rel. to polarimetric determ. of orbital inclination 3−10368
HD 207739, interacting binary, F8 IIe+B star, nature, UV obs. 3−30421
HD 87643, forbidden-time Be star, spectrum of assoc. refl. nebula rel. to non-uniform atmosphere of central star 3−40232
HD 97048, premain sequence star circumstellar formaldehyde, IR obs. 3−40121
Herbig Ae-Be stars, near IR spectrum, JHKLM photometry 3−35601
Herbig-Haro objects 46 Herbig-Haro objects 46 and 47, model of accretion disc and bipolar ejection from young star 3−35692
Hercules X-1, accretion disc precession rel. to orbital phase depend. of X-ray turn-on times 3−10386
Hercules X-1, hard X-rays reprocessing by accretion disc rel. to Einstein Observatory pulse-shape spectroscopy 3−10387
HZ Herculis, light curve synthesis model with accretion disc to interpret UV data 3−30429
DQ Herculis (Nova 1934), shell nature and ionisation by central white dwarf UV radiation 3−15933
Herschel 36, O-type star, assoc. dust cloud extinction nature 3−25430
HH 100 IRS, southern Herbig-Haro object, circumstellar dust shell cooling rel. to IR brightness decrease 3−54484
HR 5999 (V856 Scorpii), bright young variable shell star, props. of circumstellar matter 3−5309
Hubble-Sandage (S Doradus) variables, mass outflow models for long-term light vars. 3−35603
HV 2379 variable C star in LMC, shell ejection, visible/IR obs. 3−40147
VW Hydri, dwarf nova, accretion disc models rel. to UV light curves 3−10332
VW Hydri, dwarf nova, disc instability model and eccentric disc model for outbursts 3−44745
VW Hydri, dwarf nova, model spectra of accretion disc rel. to UV flux distrib. 3−40148
IRC+10216, CO movements and outflow 3−25550
IRC+10216, methane ν_3 band and HCl fundamental vibr.-rot. lines at 3 microns 3−5315
IRC 10216, SiS maser emission SHF obs. 3−59505
17 Leporis, shell star, UV shell lines profiles vars. rel. to outburst 3−54376
long-period variable stars, optical polarisation rel. to IR excess, circumstellar dust shells anal. 3−59343
β Lyrae-type accretion discs, structural models 3−40120
M1-67, wind blown bubble around WR star 209 BAC, vel. and nature 3−25548
M-type giants and supergiants, circumstellar dust shell, IR emission and raditive transfer 3−40128
magnetic accretion disk, vertical structure 3−20351
magnetic fields direction and RF lines polarisation 3−59420
main-line OH maser emission from long-period variables and supergiants, Stokes polarimetry 3−25412
molecular self-shielding in outflows from late-type stars 3−35585
MR 111, WN star, mass loss, radius and shell emission from SHF obs. 3−20370
nova dust shells, time-dependence of IR spectra 3−59364
Nova Muscae 1983, expansion vels. expansion vels. from Balmer and Fe II emission lines 3−35633
Nova Sagittarii 1982, expansion vel. from spectroscopic obs. (1982 October 12) 3−10359
OH 26.5+0.6, radiative transfer model rel. to IR spectrum and interstellar grain comp. 3−49053
RZ Ophiuchi and accretion disc, extinction and uvby obs. anal. 3−30418

circumstellar shells continued
- ω Orionis, Be star, light and colour changes, February 1983, rel. to new shell episode 3−48929
- δ Orionis, Hα profile phase depend. var., orbit, radius, shell anal. 3−25423
- σ Orionis E, shell and photosphere parameters and model, from UV/IR obs. 3−25446
- AR Pavonis, eclipsing symbiotic star, detect of accretion shell from UV obs. 3−25468
- precessing accretion disc radiation polarisation by electron scatt., V1343 Aquilae appl. *(Russian)* 3−44659
- premain sequence stars in Chamaeleon dark cloud and star form. 3−20466
- protostars, IR line and radio continuum emission of circumstellar ionised regions 3−54478
- protostellar OH masers, astrometry and spectral feature positions and mag. fields 3−5279
- RX Puppis, symbiotic star, accretion disc model for UV spectrum 3−25469
- RX Puppis, symbiotic star, effects of circumstellar dust on IR variability 3−59366
- CP Puppis (Nova 1942), extended shell anal. 3−5299
- T Pyxidis, recurrent nova, extended shell anal. 3−5299
- radiative transfer in circumstellar dust shells, numerical simulation for spherical shells 3−15907
- radio pulsars, electrodynamics of disc surrounding rotating magnetised neutron star 3−54417
- red giants, O rich, chromosphere UV radiation effect on circumstellar shell comp. 3−59333
- S106, bipolar nebula, toroidal circumstellar shell model rel. to nebula kinematics 3−5387
- HM Sagittae, symbiotic star, spectrum and continuous emission and binary star model 3−25470
- ν^1 Sagittarii, accretion disc model for early-type component 3−10399
- MV Sagittarii, hot R CrB star, model involving shell ejection to secondary star 3−5312
- semi-regular stars, optical polarisation rel. to IR excess, circumstellar dust shell anal. 3−59343
- LW Serpentis (Nova 1978), time-dependence of IR spectrum 3−59364
- W Serpentis type binaries, evidence for accretion activity and obscured hot component from uvby photometry 3−10385
- supermassive stars, mass loss and mass gain of immersed stars rel. to quasars 3−10481
- symbiotic stars, contrib. of circumstellar nebula to spectrum 3−25457
- symbiotic stars, element abundances from nebular UV line emission spectra 3−25463
- symbiotic stars, evolution of viscous accretion discs rel. to brightness vars. 3−5281
- symbiotic stars, IR obs. of circumstellar dust assoc. with Mira components 3−25459
- symbiotic stars, models of accretion discs 3−25472
- symbiotic stars, props. from studies in optical region 3−25461
- symbiotic stars, radio emission from circumstellar shells 3−25458
- symbiotic stars, variable dust obscuration rel. to IR variability 3−59367
- T Tauri, intrinsic polarisation prod. in gaseous envelope 3−40132
- RY Tauri, T Tauri star, intrinsic polarisation prod. in gaseous envelope 3−40132
- T Tauri stars, shell dust, effect on UBVRI and Hα var. 3−35604
- RR Telescopii, heated circumstellar dust shell rel. to IR variability 3−48931
- thick accretion discs, instability 3−10308
- tilted accretion disks, time-depend., external torques 3−48894
- Trumpler 16, young open cluster, discovery of shell star 3−20442
- 4U 0115+63 (V635 Cassiopeiae), accretion disc model for 1980 outburst 3−54374
- ultracompact H II regions in circumstellar IR sources, form. and interactions 3−25564
- SU Ursae Majoris, dwarf nova, soft X-ray halo rel. to possible classical nova outburst 3−40152
- Vela X-1, circumstellar matter column density rel. to anomalous X-ray absorpt. spectrum 3−5341
- ER Vulpeculae, eclipsing variable, evidence for circumstellar material from spectroscopic investigation 3−15952
- NQ Vulpeculae (Nova 1976), time-dependence of IR spectrum 3−59364
- PU Vulpeculae (Nova 1979), veiling model rel. to spectroscopic obs. 3−10370
- W30H, protostellar maser source nature and spectral line obs. 3−5396
- WC9 star assoc. with C 1309−624 and C 1310−624, IR obs. 3−48922
- X-ray binaries, circumstellar plasma shell and radiative transfer, spatial and temporal effects 3−48943
- X-ray binaries, polarisation due to radiation scatt. by free electrons in accretion disc 3−44790
- X-ray pulsars, theory of accretion onto magnetised neutron stars with intermediate rot. rates 3−54426
- X-ray variables and bursters, millisecond oscills., pulsating accreting neutron stars models 3−30420
- C stars, circumstellar dust shells, radiative transfer model 3−40146
- C stars, dust shell model, pulsations anal. from photometric anal. 3−54378
- OH 231.8+4.2, dust grain mantles, 3 micron ice band 3−40224
- OH maser shells, photoproduction 3−35586
- SiO masers, vibrational-rotational transitions, collisional rates 3−35427
- SiO masers in O rich red giants circumstellar shells 3−59333

citation analysis *see information analysis*

civil engineering
- *see also architecture; building; dams*
- excavation site protection using groundwater freezing 3−44484

civil engineering computing
- *see also architectural CAD; town and country planning*
- railway tunnel cross-sections, photographic recording and computer data processing *(French)* 3−49486
- slope stability, Monte Carlo simulation methods 3−4981

cladding techniques
- No entries

claddings
- anisotropic waveguides with nonsymmetric isotropic claddings, TE_0-TM_0 mode degeneracy 3−32463
- fast reactor cladding, radial He profiles, origin and consequences 3−41133

claddings continued
- fuel-clad thermal gap conductance determ. by Kalman filter methods 3−891
- Inconel 625, isothermal air oxidation behaviour, suitability for reactor cladding 3−6363
- optical fibre, single mode, core-cladding concentricity meas. technique 3−46349
- optical fibres, single mode, quadruple-clad, with dispersion below 2 ps/km nm over 1.28 to 1.65 micron 3−22241
- radiation effects on materials, conf., Philadelphia, USA (June 1982) 3−5494
- single-mode fibres with graded-index profiles, transmission characts., depressed cladding effects 3−1769
- stainless steel, FBR cladding material Cs penetration behaviour in oxide film 3−55135
- steel, stainless, cladded Ag-In-Cd PWR control rods, predicted service life 3−6360
- steel, stainless, thin-walled nuclear fuel element cladding tubes, standardised procedure for eddy current testing 3−4244
- zircaloy plate, mixed convection laminar flow, Three Mile Island accident 3−27514
- Zircaloy-2 cladding, material condition effect on I_2 SCC susceptibility 3−19454
- zircaloy-clad PWR fuel rods, axial distribution of tritium 3−6314

classical algebra *see algebra*

classical field theory
- *see also classical mechanics; electromagnetic field theory; gravitation; special relativity*
- ϕ^4 field theory, nonlinear Hamiltonian systems far from equilibrium, intermittent behaviour 3−30634
- classical solutions, Yang-Mills theory with a source 3−30639
- degenerate systems canonical transformations 3−98
- Einstein eqns., Yang-Mills eqns. and classical field theory, compatibility conditions of linear eqns. 3−21007
- electrodynamics, conformal-invariant field theory, gradient model 3−5619
- electromagnetism, particles and anholonomy 3−100
- gravitons, comparison between classical and quantum theory on macroscopic scale 3−20737
- identical vanishing, Euler-Lagrange derivatives 3−31055
- Liouville field theory 3−31039
- local class field theory generalisation using K-groups 3−20649
- mean field critical point, perturbation 3−193
- radiation propagation and confinement in media of different refractive index 3−25772
- SU(2) Yang-Mills theory, multifurcations 3−45298
- unbounded Poisson and Helmholtz field problems, infinite element analysis *(Japanese)* 3−49177

classical mechanics
- *see also classical mechanics of continuous media; classical mechanics of discrete systems; classical theories of fluid structure*
- constants of motion 3−30599
- forms of energy and their transformations 3−20629
- Hamilton's law, space-time formulation 3−40358
- Hamilton-Jacobi eqn., appl. to solution of eqns. in quantum mechanics 3−40355
- Hamiltonian method application to analogous optics problems, optical fibre appl. 3−41986
- quantum mechanics correspondence 3−49197
- time as discrete dynamical variable 3−49585
- velocity phase space, upper bounds and definite paths 3−49154

classical mechanics of continuous media
- *see also elasticity; fluid mechanics; mechanical contact; plasticity*
- adhesion of solids *(French)* 3−32595
- aggregates of regular packings of uniform spheres, diffusion analogy const. calc. 3−1948
- anisotropic materials, stress function interface and boundary conditions 3−32603
- arc, trial function quality in quadratic isoparametric representation 3−37342
- arch problems, accuracy of finite element models 3−22313
- arch problems, approx. by straight beam elements 3−27378
- balance laws of continuum physics 3−35839
- bars, elastic, homogeneous, isotropic, pretwisted, extension and torsion 3−32602
- beam with curvilinear supporting surface, dynamic deform. 3−17792
- beam with microstruct., relaxed Saint-Venant problem with symm. stress tensor 3−50930
- beams, curvilinear, thin, dynamic theory 3−50935
- beams, elementary mech., new approach including shear lag 3−27377
- beams, multispan, continuous, under uniformly moving const. force, dynamic deflections 3−17831
- beams, viscous, homogeneous, impulsively loaded, geometrically nonlinear mode approxs. 3−32596
- bifurcation and limit load problem soln. in certain continuum mech. boundary-value problems *(German)* 3−42115
- Budiansky-Sanders shell model, penalty duality method 3−16133
- complementary energy functional for critical load 3−49161
- complex axisymmetric structures under arbitrary loads, nonlinear dynamics 3−56427
- composite components, stochastically reinforced, shrinkage stress determ. 3−50934
- composite laminates, wedge-shaped antisymmetric, singularities 3−42117
- composite materials in complex stress states, strength anal. 3−50933
- composite materials modelled as interpenetrating solid continua, one dimens. acceleration waves 3−27426
- composites, orthogonal fibre, as micromorphic materials, static linearly elastic theory 3−1954
- constitutive equations, inelastic, rel. to large deform. problems, finite element analysis 3−12535
- constitutive equations, inelastic time depend. and independ., in struct. mechanics, numerical implementation 3−12533
- continuum mechanics problems with large deformations, numerical modelling 3−16132
- Cosserat medium with thermal medium, thermoviscoelasticity eqns. 3−32619
- cupolas, optimal, of uniform strength, spherical M-shells and axisymmetric T-shells 3−42114
- discs, composed, anal. using boundary element method *(German)* 3−32598
- displacement finite elements, convergence, appl. to singularity problems 3−30615

classical mechanics of continuous media continued
dynamic structures, optimal corrections of mass and stiffness matrices 3—12507
elastic material, small strain accompanied by moderate rot., constitutive eqns. 3—32594
elastic system reduction to prescribed state using boundary force 3—20632
elastic systems, linear and nonlinear, dynamic instability, variable parameter incrementation method 3—32636
elastic systems, mixed variational formulation of problems 3—54623
elasticity 3D problem soln., 2D multiplane finite element technique 3—35847
elastodynamics, comparison of three boundary element method approaches 3—35846
EM, internal variables in EM continua, ferroelec. and ferromag. type microelastic solid theory 3—49174
Eulerian formulation of large deformation problems in statics and dynamics 3—44966
fibre reinforced composite, micromechanical fracture model 3—46488
finite deformation computational analyses, objectivity of incremental constitutive relations 3—44965
finite element anal. computer program, Lamcal, user manual 3—40369
finite elements in nonlinear mech., conf., Stuttgart, Germany (Aug. 1981) 3—16068
fluid, compressible, viscous, analogy using Navier-Stokes eqns. 3—20638
fluid-structure interaction, finite element methods with user-controlled meshes 3—10586
fluid-structure transient dynamic interactions, Lagrangian-Eulerian finite element method 3—10587
foundation model, generalised Vlasov-Jones, grade 4 foundation 3—46440
frames, viscous, homogeneous, impulsively loaded, geometrically nonlinear mode approxs. 3—32596
geometrically nonlinear structural problems, energy balancing method for large displacement analysis 3—22312
Hencky-Prandtl nets and constrained Michell trusses 3—42139
heterogeneous media, elasticity theory, hybrid integral transforms 3—20635
hinge-supported arch strip under press. 3—37345
inclusions, foreign, thin-walled, stress and displacement jump conditions *(Ukrainian)* 3—46439
inelastic large deformation analysis using nonlinear matrices 3—12532
infinite domains, discretisation using infinite elements *(Italian)* 3—5605
infinite domains, discretisation using infinite elements *(Italian)* 3—5606
Lagrangian hydrocode technology, large-scale finite element 3—10588
linear continuum mechanics; conservation theorems, Lagrangian functions and variational principles 3—35844
mass conserving second grade materials, symm. groups 3—49159
mass-point mechanics and continuum mechanics interrelation, nonstandard anal. 3—76
material frame-indifference principle, range of validity 3—49158
micropolar media mechanics, book 3—16062
multidimensional analog of sine-Gordon eqn., rigid body motion 3—35840
natural frequency calcs., errors using eigenvalue economisation 3—10556
Newtonian mechanics rel. to special theory of relativity mechanics 3—20619
nonconservative frame of divergence instability, linear and nonlinear anal. 3—12508
nonhomogeneous circular cylinder with spherical cavity torsion 3—12510
nonlinear elastic systems under nonconservative forces, static and dynamic stability, natural approach 3—17786
nonlinear evolution equations, with strong dissipation, soln. existence theories 3—20641
nonlinear mechanics, conf., Marseille, France (June 1980) 3—5483
nonlinear membrane theory 3—17787
nonlinear shell anal., soln. of finite element eqns. 3—27380
nonlinear structural problems, computational error estimates and adaptive processes 3—20630
nonlinear structural problems, large-scale, reduction method appl. 3—20631
optimisation of deformable elastic bodies, thin-walled structural elements 3—46453
plate, elastic, rectangular, energy criterion 3—17788
plate, elastic, with constraint on thickness function slope, optimal design 3—37356
plate, multilayer, bonding design to elastic nonhomogeneous foundation 3—17791
plate, rectangular, in nonuniform compression, stability 3—42118
plate, rectangular, stability under nonconservative and conservative forces 3—22349
plate, rectangular, thick, with free edges on an elastic foundation, Fourier series soln. 3—32599
plate, skew, deflection, block overrelaxation methods for non-rectangular co-ordinates 3—37343
plate, thick, large, with varying rigidity, torsion *(Russian)* 3—1953
plate bending, hybrid stress elements 3—12513
plate element, quadrilateral, with one-point quadrature, stabilisation of kinematic modes 3—56463
plate structure, finite strip method for geometrically nonlinear analysis 3—56429
plates, circular, on elastic foundations, large amplitude response 3—12509
plates, multilayered and thick, finite element formulation 3—27375
porous media, nonstandard anal. and balance eqns. 3—75
random media, bounds for non-local effective props. 3—7405
rings, cylindrical, long, radial displacements under action of mutually balanced radial forces *(Russian)* 3—56428
rod, compressed elastic, critical load increase problem 3—32612
rod, planar, elastic computational error estimater and adaptive processes 3—20630
rods and shells design, computer-aided anal. *(Russian)* 3—17789
shell, circular cylindrical, interaction between closely located large holes 3—22317
shell, closed, orthotropic, cylindrical, with longit. slits (cracks), stress state anal. 3—22316
shell, conical, variable modulus of elasticity, dynamic characts. 3—50931
shell analysis, curved isoparametric axisymmetric thick shell element, penalty functions appl. 3—1946
shell nonlinear analysis, mixed and reduced/selective integration displacement models 3—12512
shell theory, classical, influence of thickness strains and cross-section warping *(German)* 3—42113
shell-of-revolution model, nonlinear finite element, based on Reissner's shell theory 3—32600

classical mechanics of continuous media continued
shells, cylindrical, long, radial displacements under action of mutually balanced radial forces *(Russian)* 3—56428
shells, Marguerre equations 3—46441
shells, minimum weight design, dynamic programming 3—1949
shells, multilayer, anisotropic, state of stress numerical anal. according to hybrid model of finite elements 3—22314
shells, potential theoretic finite element method *(Chinese)* 3—17785
shells, regular, cylindrical, stability problems 3—22353
shells, sandwich, variable stiffness, with compressible core 3—22318
shells, spherical, three-layer, supporting power under dynamic loading *(Russian)* 3—17790
shells, two-dimens. finite-deform. theories, note 3—1947
shells and revolution, optimal, design by direct-search method 3—22319
shells of revolution, closed, analysis incl. physical nonlinearity under cyclic symm. loading 3—50932
shells of revolution, imperfect with discrete ribs, nonlinear equilib. eqns. *(Ukrainian)* 3—7404
shells of revolution under axisymmetric force load, dynamic effect optimisation 3—22315
shells with nondeformable transverse fibres, nonlinear model 3—32601
smectic-A liquid crystals, continuum theory 3—51488
structural shakedown and limit anal., kinematical approach exactness 3—42116
thick notched plate, stress conc. *(German)* 3—50954
thin-walled members, finite element model 3—37344
transversely isotropic materials, elastic-plastic constitutive eqns., appl. to perforated circular plate bending 3—27376
trusses, geometrically nonlinear, static behaviour under large deflections *(German)* 3—32597
trusses isostatic elastic stress limited, Pareto optimal set 3—1952
tube, elastic, thick-walled, axially compressed, bifurcation anal. 3—12511
zoned media with stress discontinuities, implementation of boundary element method 3—35845

classical mechanics of discrete systems
see also N-body problems
asymptotic stopping in presence of viscous friction 3—40351
autonomous system, carleman embedding and Lyapunov exponents 3—30605
autoparametric vibration absorber 3—5599
averaging in the neighborhood of stable periodic motions 3—30611
axisymmetric gravitational compression of a body, exact solns. 3—5597
ball-chain explanation 3—5545
billiard motion in annulus bounded by non-concentric circles 3—16122
body moving in viscous fluid, force acting on body 3—7540
Carnot-Ostrogradskii, theorems for systems with nonstationary constraints 3—20612
cellular structures, pattern selection in a slowly varying environment 3—46520
chaos in nonlinear driven oscillator with exact soln. 3—54679
completely integrable mechanical system 3—30609
composite rotating shell, liq. filled, optimisation 3—27373
conservation of conditionally periodic motions, Kolmogorov theorem estimates 3—20611
constant power equations of motion 3—25727
constraint problem of three bodies in noninertial reference system, math. model 3—71
coupled rods, boundary value two dimensional problems soln. method 3—40360
cylinder in steady stream of viscous fluid at low Reynolds number, force acting on body 3—7541
discrete model of solid 3—17784
dynamical theories of motions 3—16286
dynamics of mech. systems, generalised input appl. 3—35836
eastward deflection of falling object, inertial frame investig. 3—49109
elemental mechanical vibrating system equiv. network representation, coordinate transform. 3—27431
Enskog eqn. generalisation to case of steep resulsive pots. 3—16312
equilibrium problems, stability and convergence of solns. using Lyapunov functions 3—20613
exploding dynamical systems, appl. to celestial mechanics and astrodynamics 3—16233
finite dimensional maps invariant manifolds, appl. to averaging and celestial mechanics 3—16234
flexible coupling impact by rigid body, wave pattern of motion 3—50928
forced Lorenz system, routes to chaos from limit cycle 3—40490
forced pendulum, chaotic states and routes to chaos study 3—25747
frame-like structures, large, repetitive, effective constitutive relations 3—7395
Galilei invariance, implication of action-reaction principle and centre of mass theorem 3—40010
general mechanical systems, differential geometric structure from Lagrangian point of view 3—20616
geodesic of ellipsoid with three unequal axes *(French)* 3—16231
gyrohorizon compass, asymptotic stability in Newtonian gravit. field 3—7398
gyroscope, dynamically adjustable, accuracy, nonlinear effects influence 3—7397
gyroscope, electrostatic, with sampled-data control system, dynamics 3—45136
gyroscope, suported by flexible circular plate, dynamics 3—7402
gyroscopes with liq. suspension, dynamics, quasi-stationary method apl. 3—56424
gyroscopic system props. rel. to Hertz concept in mechanics 3—46438
gyroscopic systems, stability of resonant motions 3—56426
gyrostat, balanced, in Newtonian gravit. force field, Steklov case analogy *(Russian)* 3—37341
gyrostat systems, controlled, steady motions 3—32592
half space, transversely isotropic, internally loaded, statical Reissner-Sagoci problem 3—12505
Hamiltonian systems, linear differential eqns. with quadratic integrals, complete integrability 3—30608
Hamiltonian systems, noncanonical symmetries, relation to complete integrability 3—70
Hamiltonian systems, normal modes 3—44956
Hookes joint on cross shaped body, polhode and herpolode cones 3—22311
Hopf bifurcation, perturbation method for anal. of limit cycles 3—35835
horizontal deflection of falling object, exact soln. 3—49114
impact device design, spring with preload force *(Russian)* 3—17782

classical mechanics of discrete systems continued
  integration of Hamiltonian canonical equations by the generalized method of averaging *(French)* 3—44957
  interaction between conservative and gradient-like systems 3—30600
  isospectral representation of dynamical systems, Hamiltonian case 3—10561
  jump phenomenon under impulsive force 3—66
  lagrangians for spherically symmetric potentials 3—20673
  laminates, orthotropic, zero coupling effects 3—50926
  limit analysis of physical models 3—16127
  Lotka-Volterra model, constants of motion, connection with singular point anal. 3—40356
  mechanical system dynamics, second order design sensitivity anal. 3—16121
  momentum correspondence and connections for a momentum mechanics 3—49155
  Moon, classical Hill's eqn. discretisation 3—59188
  multibody dynamics, constraint eqns. 3—5600
  multifrequency excitation of self-excited two degree-of-freedom system, response calc. 3—10559
  N-particle relativistic dynamics, canonical formalism 3—40361
  natural frequency calcs., errors using eigenvalue economisation 3—10556
  nets, static, axisymm. 3—22309
  Newton's eqn., integration using stable algorithms 3—49124
  non-conservative systems, dynamic stability, sensitivity analysis 3—44959
  nonequilibrium dynamics for infinite harmonic oscillator system 3—16183
  nonintegrable difference eqns., analytic treatment 3—30604
  nonlinear differential eqn. soln. 3—40353
  nonlinear dissipative system, propagating pattern selection 3—40359
  nonlinear mechanical vibratory system identification by reson. method 3—44961
  nonlinear oscillators, broad-band random disturbances, survival probability 3—25746
  nonlinear resonance in vibrating strings 3—25726
  nonlinear system relaxation under coloured noise effect 3—10753
  nonlinearly elastic strings, equilibria 3—40354
  nonlinearly parametric mechanical systems, spectral synthesis 3—35837
  one-dimensional time depend. classical Hamiltonian, direct method for constructing invariants 3—30607
  oscillators, linear and coupled, reliability anal. 3—69
  particle chain, extensible, flexible, in-plane vibrs. appl. to thin curved rod 3—5598
  phase conjugation, mech. approach 3—10562
  plate response to a circularly orbiting mass 3—50925
  point mass motion in classical mechanics, use of relativistic spinor regularisation 3—65
  principle of least action, generalisations 3—30602
  programmed motion construction 3—30601
  pseudointegrable system, autocorrelation function, billiards systems 3—16273
  quasilinear differential systems, discontinuous solns. 3—20615
  random surfaces theory, effective action positivity 3—67
  relativistic action at a distance, conf., Barcelona, Spain (June, 1981) 3—10519
  relativistic Hamiltonian mechanics, constraints 3—30610
  relativistic Hamiltonian particle dynamics, separability problem 3—30613
  relativistic particle models with separable interactions 3—30612
  renormalised Lie perturbation theory 3—30606
  resonant growth in simple systems 3—35792
  restrained systems, stability study 3—22310
  rigid body, time-optimal kinematic control of helical displacement 3—54617
  rigid body angular vel. 3—10563
  rigid body dynamics, microcomputer animation instruction 3—40357
  rod, cylindrical, two-part, torsional stress anal. 3—50924
  rod, viscoelastic, translational-rot. motion in central Newtonian force field 3—56425
  self-oscillatory system with energy source under periodic, nonperiodic perturbations 3—54616
  simple harmonic motion generation 3—5593
  spatial four-bar mechanisms, dynamical behaviour, eqns. of motion *(German)* 3—7396
  spring mechanism used for precision movements of optical instrument elements, stiffness analysis 3—27209
  stability of stationary motions of mechanical systems in resisting media *(Russian)* 3—7403
  stable resonance motions, extremal props., differential eqn. system 3—20610
  stochastic systems, non-linear, exact steady-state soln. 3—1945
  strange attractors characterisation 3—40496
  stretched string, standing waves driven by loudspeakers and signal generators 3—5532
  string with dissipative mass-reactance end constraints, vibrs. 3—50929
  systems with singularities, averaging and stability 3—5602
  tensor virial theorem and orthogonal linear transformations 3—10557
  top motion on plane with friction, beating regime *(Russian)* 3—42112
  torsional pendulum, forced oscills. in nonequatorial orbit in Lenze-Thirring metric 3—20618
  two-body problem, three-dimens., eqns. of motion 3—5601
  unsymmetric piecewise-linear systems, forced vibrs., superharmonic reson. anal. 3—12504
  Van der Pol oscillator system, mutually coupled with coupling delay, mode anal. 3—10555
  vibration of system with cubic nonlinear damping and simultaneous periodic and random parametric excitation 3—7399
  vibration proofing systems with cyclical symm., vibr. separation 3—7400
  vibrational system with variable coeffs., stability of equilib. position 3—44955
  vibratory systems with two energy sources, resonances 3—7401
  Wick ordering of perturbations and freq. spectrum invariance 3—30598

classical theories of fluid structure
  see also kinetic theory; liquid theory
  dense fluids, mol. dynamics study 3—33058
  hard sphere fluid, statistical mechanics, test partial approach 3—42501
  hard-core-with-two-Kukawa-tails fluid, liq.-gas transition 3—42760
  hard-sphere fluid mixture, equilib. props. in the semiclassical limit 3—22748
  mean electrostatic pot. treatment of ion-dipole mixture or dipolar system 3—46821
  mixture, partial molar volume from hard-sphere model 3—53440

classical theories of fluid structure continued
  molecular liqs., irreversible phenomena described by means of classical mechanics 3—13056
  non-Gaussian velocity correlations in fluids 3—27808
  nonuniform fluids in grand canonical ensemble 3—33050
  Percus-Yevick approx., behaviour near critical point, Lennard Jones pot. 3—18195
  Percus-Yevick equation and structure functions, review 3—42498
  perturbation theory, square-well 3—42500
  two-fluid local composition expressions 3—2352

classification
  see also indexing
  close binary stars of short period, classification using light curve descriptor 3—15960
  chemical elements, cosmogeochemical classification rel. to periodic system 3—4833
  clusters of galaxies, morphological classification from Einstein images 3—25629
  galaxies, evidence for Hubble sequence of masses 3—44836
  galaxies, quantitative classification from digital surface photometry of Virgo cluster galaxies 3—10463
  galaxies in Revised Shapley-Ames Catalogue, luminosity classification 3—20499
  Landsat image data, multispectral classification rel. to higher-order components 3—39932
  optical image stabilisation methods and means, classification, review 3—6906
  radio galaxies, morphologies of large scale radio emission 3—25608
  stellar pulsations, short wavelength anal. and classification of normal modes of Bardeen discs 3—48892
  supergiant stars spectral classification obs. of metal-deficient O9-B0 supergiants in SMC 3—48897
  symbiotic stars, classification according to binary star modules 3—25471
  two-dimensional systems, second order phase transitions, classification 3—3023

classification, pattern *see pattern recognition*

clathrates *see molecules; organic compounds*

clay
  Cretaceous-Tertiary boundary clay, clay mineralogy 3—58971
  electrical anisotropy as indication of hydrocarbon trap productivity 3—35305
  fault gouges, clay rich, strain hardening and strength 3—15423
  suspensions, viscosity, positive and negative flow 3—27578
  H-montmorillonite surface, adsorbed thiophene, IR spectra study 3—26738

cleaning *see surface treatment*

cleanliness *see hygiene*

cleavage fracture *see brittle fracture*

Clebsch-Gordan coefficients
  see also elementary particle theory
  6j tensor, symmetry props. 3—49191
  classical statistics inherent in pure quantum states 3—30695
  complex Lie groups and Clebsch-Gordan coeffs., infinitesimal operators for representation 3—105
  Compton collisions, ejected-electron trajectories *(French)* 3—21929
  computation and tabulation of space group Clebsch-Gordan coefficients 3—118
  G_2 van der Waerden invariant 3—20668
  garnet, space group, coupling coeff. for irreducible representations 3—2452
  Lorentz algebra on parabolic basis, Clebsch-Gordan coeffs. calc. 3—49192
  overlap concept between coeff. and Racah lemma consts. 3—114
  point symmetry groups, Clebsch-Gordan coeff. in quantum chem. 3—36645
  point-group symmetries, monomial representation 3—45011
  SO(2,1) Lorentz group, Clebsch-Gordan coeff. in parabolic basis 3—5645
  SU_4 group, supermultiplet basis, one vector representation 3—31092
  SU(m/n) graded unitary group, isoscalar factors 3—30665
  symmetry and generating relations for Clebsch-Gordan coefficients 3—115
  ^{2}H quantum numbers, quark configurations S^6 and S^4P^2 in bag model 3—11257

climatology
  see also atmospheric humidity; atmospheric precipitation; sunlight; wind
  500 mb surface, geopotential climatology for N Hemisphere presented by empirical orthogonal functions *(German)* 3—35237
  aerosol influence on climate (fine dispersion aerosol) *(Russian)* 3—35254
  aerosol pollution causing change in climate *(Russian)* 3—35257
  air pollution caused changed in cloud albedo, model 3—15613
  N America, summer climate model involving ground moisture conditions 3—29981
  Antarctica, dry valleys and Little America V station microclimate, model 3—35213
  anthropogenic changes in the global climate 3—15616
  Arctic Ocean ice-cover, origin, nature and climate effect 3—25200
  Atlantic Ocean hurricane occurrence rel. to large scale circulation (1899-1978) 3—9983
  Atlantic Ocean hurricane trends (1899-1978) 3—9982
  N Atlantic Ocean tropical zone, Late Quaternary palaeotemperature fluctuations 3—48674
  autoregressive models fitting and climate prediction *(Chinese)* 3—48651
  NE Brazil, struct. and energetics, seasonal and interannual var. 3—59098
  Britain, snow and ice-sheet balance in present and Devensian times 3—20111
  British Columbia, pollen and macrofossil evidence rel. to lag of Fraser glacial maximum in Pacific Northwest Canada 3—48662
  broken cloudiness in climate model 3—10047
  budget parameters multi-year average=climate identity, appl. to general circulation models quality *(German)* 3—15615
  Canada, July temp. variability in AD 1943 to 1972 period 3—20113
  Canadian Prairies, droughts in AD 1941 to 1967 period 3—20112
  Cardington and Thurleigh, England, climatological records comp. 3—20110
  confidence intervals of a climatic signal 3—15610
  deep sea sediments, climatic records rel. to palaeomagnetic intensity, apparent correl. 3—4849
  deglaciation of Atlantic Canada, reconstruction from postglacial relative sea level 3—48578
  Devensian age ice southern limit in South Wales 3—15496
  drought period atmos. general circulation characts. 3—20096

climatology continued
drought statistics of USSR grain regions *(Russian)* 3—35255
early atmosphere, faint young Sun-climate paradox and volcano effects 3—48673
early Earth, stabilising effect of cloud feedback on climate 3—15598
Earth rotation, long-term stability of obliquity rel. to climatic vars. 3—4751
energy balance climate model with longwave flux parameterisation 3—30001
Florida peninsular, USA, rainfall and temp. records for past 50 years 3—25201
fluctuations due to deep ocean circulation 3—54054
geological boundary climate changes due to violent volcanism 3—44448
GFDL global spectral model 3—9954
glacial cycle climate model with delayed albedo feedback 3—10046
glacial cycles and ice-sheet modelling 3—29957
glaciation, pre-Pleistocene, on Earth, implications for climatic history of Mars 3—4950
glaciers used as indicators of climate and palaeoclimate *(Russian)* 3—35256
global insolation parameterized model under partially cloudy skies 3—25187
global temp. rel. to NE China summer cold disasters *(Chinese)* 3—59104
S Greenland, S Dome ice core, climatic variables analysis 3—30047
Hawaii, rainfall variability and responsible weather systems 3—44526
Holocene palaeotemperature and circulation over Canada 3—20113
Holocene rainfall for Rajasthan, India, pollen and deductions 3—54112
ice ages, appl. of climate models to astronomical theory 3—4951
ice core O isotope profiles, effect of wind scouring on climatic records 3—35196
ice sheet and climate modelling 3—30046
ice sheet collapse modelling 3—15492
India, climate areas based on human physiological response 3—25199
Indiana, temp. records for 1901-80 period at West Lafayette 3—30049
Indonesia volcano eruptions, stratosphere aerosols climatic impact 3—25057
internally generated long-period climate cycles, sea ice extent anal. 3—44543
central Iowa, July precipitation patterns (1930-78) 3—35219
IR outgoing radiation, parameterisation for climatic calcs., radiative transfer models 3—59107
Israel, model of climate and seasonal weather systems 3—44528
likelihood ratio calcs. in climate change studies 3—15614
Little Ice Age, assoc. changes in oceanic ^{14}C from meas. on banded corals 3—9938
Mauritius, winter rainfall characts. 3—20101
W Mediterranean, tides, circulation and climate *(French)* 3—35169
methane, biosphere production increase following global temp. rise 3—59029
multi-layer energy balance model, description+sensitivity to solar constant 3—59099
multi-layer energy balance model, sensitivity to CO_2 increases 3—59100
multiple interpolation method for climatological data anal. 3—20141
North Carolina, USA, solar energy climatology 3—44544
Northern Hemisphere, general circulation model for mean climate *(Russian)* 3—35225
Northern Hemisphere stratosphere, zonal mean climatology 3—59101
Northern Hemisphere surface temp. in AD 1891 to 1980 period 3—59057
ocean influences on atmosphere, review 3—44497
ocean weather and climate *(Russian)* 3—44532
ocean-atmosphere-ice system, one-dimensional model *(Russian)* 3—20114
optically anisotropic spheres, radiative props., climatic implications 3—10063
Ordovician glaciation in Crozon Peninsula (France), evidence from palaeomagnetism of Ordovician dolerites 3—39774
tropical Pacific trade winds, sea surface temp. and atmos. circulation 3—20075
N Pacific/North America, weather patterns, var. on decade time scale 3—59097
palaeoclimate, the faint young Sun-climate paradox 3—15612
palaeoclimate during last glacial max., humidity at sea level 3—10048
palaeoclimate from Dutch peat bog core isotope ratios 3—29986
palaeoclimate model, effect of variable ice albedo on climatic response of Earth to orbital vars. 3—4952
Palaeogene temp. and climate in Europe, reconstruction from polynological evidence 3—35266
Permian palaeoclimate from varved evaporite rocks of USA 3—15611
Pleistocene climate record in Greenland ice core 3—39902
Late Pleistocene glacial equilib.-line altitudes in Colorado Mts., USA 3—35200
Pleistocene ice ages, historical review of astronomical theory 3—4949
polar region climate change *(Russian)* 3—35259
Early Proterozoic climates and tectonic motion from Canadian geology 3—10049
PUKK, German North Sea coast, meso-scale expt. 3—39908
quasi-biennial rhythm of atm. and climate *(Russian)* 3—35226
quasi-periodic climate change on Mars and Earth, conference, Moffett Field, California (1981 February 24 to 26) Earth 3—13
quasi-triennial periodicities rel. to quasi-biennial and Southern oscillations and sunspot cycle 3—15534
Quaternary climate change, correlation to $CaCO_3$ percentage in loess profiles 3—48663
Queen Charlotte Is., BC, Canada, ice free conditions during glacial max. 3—29963
N Queensland, sea level drop during last 6000 yr 3—58981
radiative convective climate model, surface air temp. sensitivity anal. 3—15531
radiative convective models *(Russian)* 3—35253
radiative heating due to CO_2-H_2O overlap in 12-18 micron band 3—59102
radiative transfer scheme, for circulation and climate models 3—10052
rainfall statistical analysis in Barcelona, microwave link appl. 3—48609
satellite solar power systems, environmental impact of launching vehicles on middle atmosphere 3—48212
sea level during Holocene, analysis and interpretation 3—58980
seasonal, zonally averaged climate model 3—25202
seasonal response to air temp., CO_2 and transparency variations *(Russian)* 3—35252
solar constant fluctuation effects on climate 3—30050
solar variability causing weather and climate changes, review 3—44545
Southern Ocean during last glacial max., spring ice limits 3—4887

climatology continued
Southern Oscillation, sea surface temp. and wind, 1861-1960 data 3—35251
surface heating anomalies interaction with zonally symmetric and axisymmetric flows, climatic implications 3—15526
surface temp. of early Earth, CO_2 conc. increase effects 3—30051
surface thermal balance model *(Russian)* 3—35258
temperature records for E Massachusetts from 18th century diaries 3—30048
temperature trend determination method eliminating bias errors of daily temp. data 3—44579
topography of N hemisphere enhancing albedo-temp. feedback 3—48664
tropical cyclone track prediction, statistical-climatological technique using synoptic forcing EOF representation 3—59016
tropical drought and associated global circulation 3—20095
Ungava Peninsula, climatic changes since postglacial marine emersion *(French)* 3—29923
United States, 1895-1981 drought analysis 3—35218
United States, climate fluctuations rel. to variable snow cover 3—30045
western USA, rainfall patterns 3—15548
Venezuela, winds deduced from modern and Pleistocene beaches 3—29924
Wisconsin (USA), watershed alluvial processes during Holocene climate changes 3—54063
CO_2, atmos. conc. controlled by marine biological productivity 3—59103
CO_2 pollution of air, effects on climate 3—4954
CO_2 removal from atmos. due to the lake sediment organic C buildup 3—4953
CO_2-climate model with realistic geography 3—10050
$^{18}O/^{16}O$ in deep-sea sediments, diagenetic recrystallization effects 3—44440

climb, dislocation *see dislocation climb*

clinical equipment *see biomedical equipment*

clinical measurement *see biomedical measurement*

clock paradox *see special relativity*

clocks
see also atomic clocks; chronometers; time measurement
pendulum astronomical clock as precision gravitation instrument 3—48705
time interval meas. using multiphase clock 3—49332

closed circuit television
medical radiology CCTV digital noise reducer 3—4674

closed loop control systems *see closed loop systems*

closed loop systems
see also feedback
electro-optical modulator based apparatus for meas. of linear electro-opt. coeff. of polarising-opt. system 3—5825
microprocessor based feedback controller for mechanical ventilation 3—44345
phase-stabilised local-oscillator system, for synthesis radio telescope 3—10212
PWR power plant, optimal temperature controller design 3—6406

cloud chambers
microdosimetric properties of electron tracks measured in a low-pressure cloud chamber 3—41338
thermal diffusion cloud chamber, vapour nucleation, thermophoresis and diffusiophoresis 3—37601

cloud physics *see clouds*

clouds
see also atmospheric precipitation; sky
Abidjan region, cloud condensation nuclei conc. seasonal var., effect of rain 3—15533
aerosols (submicron) or marine air, size distribs. and meteorological processes *(Russian)* 3—9995
African monsoon, convective cloud struct. over Guinea Basin *(French)* 3—54096
atmospheric electric path length meas., optimum frequencies selection by satellite-borne microwave radiometers 3—48622
atmospheric radiation, effects of cloud on model-generated radiation fields and satellite meas. 3—10053
cap clouds at Great Dun Fell, Cumbria, effect of entrainment on microphysical struct. 3—15588
cirrus clouds ice needles and plate, EHF wave scatt. 3—25184
cloud/mesoscale model in 3-D, Colorado Univ. model 3—54094
condensation mechanism during monsoons, cosmogenic Cl radionuclide study 3—20093
condensation nuclei spectra in Montana, surface and cloud base meas. 3—30017
convective cells on GATE day 261, cloud interactions and merging processes 3—15512
convective clouds interactions with convective boundary layer and forested surface 3—9985
convective clouds merging, effect on rainfall 3—10027
convective storms anvil expansion rates determ. 3—10082
cover and clear sky radiance from IR scanner data 3—15553
cumulonimbus, vertical mass transport on Day 261 of GATE 3—59020
cumulonimbus cloud cluster long-term persistence 3—54111
cumulonimbus in mid-latit. squall lines, model of two-dimensional convection in non-constant shear 3—15580
cumulus, thermodynamic model 3—30004
cumulus cloud dynamic modification, numerical expts. from axisymmetric free convection problem 3—10042
cumulus clouds, droplet size distrib. near cloud base 3—15589
cumulus clouds, entrainment rel. to droplet size spectrum 3—15586
cumulus clouds, grouping in numerical cumulus convection model 3—9990
cumulus formation over mountains in New Mexico, USA 3—30006
cumulus model, entrainment, detrainment and turbulent transport 3—59050
cumulus vorticity mixing rel. to cyclone genesis mechanism *(Chinese)* 3—59088
deep moist convection, scale anal. theory 3—30005
diffuse radiation components estimation under partial cumulus cloud cover 3—20108
early Earth, stabilising effect of cloud feedback on climate 3—15598
East China Sea, mesoscale convection cells 3—20003
electric charge generation by riming mechanism in thunderclouds 3—4901
electric charge separation during droplet-ice collisions 3—15541
extratropical cyclones, variational theorem for circulation integrals appl. to inviscid symmetric flows 3—15584
fog microstructure, aerosol effect 3—54124
free radical chemistry of cloud droplets and rain composition 3—15550

clouds continued
frontogenesis and stratified cloud cover, numerical model 3—48643
giant salt nuclei over Xin An Jiang basin, China *(Chinese)* 3—59093
global cloud amounts in belt from 54°N to 45°S, results from satellite albedo meas. 3—10043
global insolation parameterized model under partially cloudy skies 3—25187
hail suppression by AgI seeding of storm clouds 3—15564
hail-producing cumulonimbus, structure and evolution 3—48645
hail-stone melting in mesosynoptic model *(French)* 3—54097
hailstone growth by droplet accretion, laboratory expts. 3—30011
He-Tao cyclones, precipitus stratiform cloud, precipitation characts. *(Chinese)* 3—48656
High Plains storms, USA, pot. graupel and hail embryos dev. rates 3—59054
hurricanes possessing polygonal eye walls and rainbands 3—29969
ice grain growth 3—54100
infrared emission from ocean surface with allowance for cloud effects 3—48670
outgoing IR radiation, tropical minima due to clouds and humidity 3—44552
IR radiative heat balance of Earth's surface, effect of clouds 3—59109
Lacq industrial area, SW France, cloud condensation nuclei obs. *(French)* 3—25160
lidar identification of droplet and crystal clouds *(Russian)* 3—20086
lightning light produced, transport within clouds 3—15532
marine boundary layer-ocean interaction, clouds devel. and evolution 3—59048
marine stratocumulus, aircraft obs. during JASIN expt. 3—15585
maritime cumuli, combined action of droplet coagulation, ice particle riming and splintering process 3—9989
measurement of CCN conc. by thermal diffusion chamber method 3—44580
mesosphere clouds formation, role of H_2O_2 3—10045
microwave noise temperature and attenuation, appl. to telecommunications for USA sites 3—25178
moist convection, parameterisation scheme 3—39889
monsoon circulation devel. in July, radiative heating, clouds, orography and initial conditions role 3—59012
mountain forest cloud droplet deposition (chem. and water) 3—39899
Great Nafud Desert, Saudi Arabia, appearing as cloud-like feature in satellite imagery 3—58972
noctilucent cloud particle alignment and light polarisation 3—59137
noctilucent clouds, formation, evolution and props. 3—20106
noctilucent clouds, review 3—30108
occult precipitation from clouds, rel. to pollutants transfer in upland regions 3—53606
Oklahoma, 1977 May 20 severe storms, cloud tops black body temp. and convective activity 3—9962
optical depolarisation of ice/water drop cloud 3—48669
planetary boundary layer, cloud convection model, assoc. with turbulence precipitation *(French)* 3—35210
polydisperse and randomly oriented nonspherical particle clouds, extinction at arbitrary wavelengths 3—54125
positive electric charges in thundercloud precipitation particles 3—15539
property determ. from two-dimensional histograms 3—25249
radiation propagation, contaminants effects computing, Electro-Optical Systems Atmospheric Effects Library 3—10056
radiation scheme for circulation and climate models, effects of multilayered clouds 3—10052
remote sensing of cloud cover characts. from archived data 3—54083
riming process leading to ice splinter production 3—44537
N Rockall Trough, cloud capped boundary layer, stratocumulus radiation and humidity 3—35245
N Rockall Trough boundary layer, mass/momentum/heat budgets, cloud effects (JASIN 1978) 3—35242
rocket exhaust generated cloud condensation nuclei 3—15573
rocket exhaust generated ground clouds 3—15574
seeding, dynamic and microphysical effects 3—59051
seeding of summer cumuli with AgI flares 3—15570
seeding opportunity determin. by microwave radiometry method 3—15571
seeding potential of Illinois cumuli 3—15572
SHF radiosignal depolarisation by ice crystals 3—15593
solar irradiation on inclined surfaces, prediction using clearness index probability density function 3—53582
convective storm drop size distrib. obs. and theory 3—4917
sunlight transmission, effect on various surface layers of cloud types and cover 3—35212
thermodynamic cloud models in saturation point coords. 3—30004
three-dimensional representation from satellite pictures and computer imagery 3—15578
thundercloud, lower layer outflow obs. 3—48630
thundercloud elec. charge structure obs. 3—48618
thundercloud elec. field and charge distrib. 3—15540
thundercloud electrification, time depend. model involving separation of charged precipitation particles 3—44489
thunderclouds, three dimensional cloud model incorporating ice phase rel. to thunderstorm electrification 3—15582
thunderclouds electrification, role of different charging mechanisms 3—44488
Tokyo hourly weather data-statistics anal. for 1960 to 1969 *(Japanese)* 3—59082
trace gases in localised cloud, remote Fourier transform IR detection limit 3—9525
tropical squall line downdrafts 3—29968
tropospheric effects of satellite power systems 3—15018
turbulent mixing of dry and cloudy air, diffusive model 3—15587
turbulent planetary boundary layer, higher-order models, cloud-ensemble relations 3—59043
twilight brightness, quantitative relationship with cloud amount *(German)* 3—35236
Typhoon Mac (1979), form., dissipation, movement and struct. from spiral cloud band anal. *(Chinese)* 3—48658
typhoons in W Pacific, assoc. cloud patterns *(Chinese)* 3—59090
Villanubla, Spain, statistical anal. of condensation nuclei obs. *(French)* 3—54095
Wichita Falls, Texas, 1979 April 10 tornadic storm cloud top struct. 3—20067
ice nucleation using AgI 37 model shells *(Chinese)* 3—59095

Clusius-Dickel columns *see isotope separation*

cluster analysis *see pattern recognition*

cluster approximation
alkali halides, F- and F_A-centres, HF cluster calculation 3—3116
alkali halides, F-centre absorption energy, temp. and press. depend. 3—23319
alloys, density of states calc. and localisation Monte Carlo method 3—13697
amorphous metal, local electronic density of states, direct space expansion 3—28252
density expansions of correlation functions 3—32838
diamond, muonium location and hyperfine interaction, HF SCF cluster calc. 3—57325
diffusion-controlled reactions, cluster expansions 3—34605
dilute ferromagnets, spin anisotropic interactions 3—33904
disordered system, exciton transport and trapping, cluster CPA and random walk calc. 3—57360
disordered systems with strong short range order and off-diagonal randomness, cluster theory of electrons 3—3122
electron gas, 2-D, particle-particle ladder diagrams, coupled cluster summation 3—43051
ferroelectric-antiferroelec. H-bonded systems, spin glass phase 3—3452
ferromagnetic-spin glass transition, cluster model, magnetisation and susceptibility *(Russian)* 3—52461
glass transition, cluster model, cluster size as order parameter 3—18457
graphite intercalation cpd. with O, elec. cond. reduction, tight-binding and cluster calcs. 3—28320
Hubbard model, electron correlation effects, local approach study 3—18637
β-hydroquinone clathrate formation theory 3—22956
III-V semiconductors, deep level defects, self-consistent cluster calcs. 3—47300
Ising model, cluster method, incl. 1st and 2nd nearest neighbour interactions 3—3468
lattice sums, direct calcs., rel. to cryst. field effects 3—18259
localised defects in solids, cluster-extended Green's function for electronic struct. 3—43095
metal, disordered, local electron densities, Green's function formalism 3—8459
metal, HCP, self-interstitial symm. configs. 3—13219
metal-sapphire interfacial strength, SCF Xalpha scattered wave cluster MO calc. 3—13903
percolation, site-bond correlated, Bethe cluster approx. in ferromag. and antiferromag. lattice gas 3—30801
Potts model, q-state, thermodynamics, cluster approx. study 3—35936
random alloys, cluster expansions and density of states, projection technique 3—23236
semiconductors, heavily doped, metal-nonmetal transition, HF pseudo-cluster calc. 3—43027
semiconductors, tetrahedrally bonded, electronic densities of states, bond rings effects, cluster-cactus lattice model *(Chinese)* 3—38277
spin glasses, dynamical props. of cluster model 3—23683
spin glasses, two-site cluster model 3—33900
square lattice, random-bond Ising model, spin-glass-ferromag. boundary 3—23678
squaric acid, cluster theory of ferroelastic phase transition 3—42768
superstructure choice when SRO is taken into account 3—18245
transition metal alloys, electronic struct. and density of states, cluster Xα calc. *(Russian)* 3—23252
transition metal monosulphides, electronic struct., Xα discrete variational calc. 3—52027
two-dimensional disordered systems, localised states, travelling cluster approx. and scaling theories 3—43112
Ag-fe, dil., localised mag. moments, finite cluster approach 3—23582
Al_2O_3 with adsorbed Ar, cluster model 3—13633
BeF_2, crystalline, electronic struct., ab initio cluster calcs. 3—43019
BeF_2, crystalline and vitreous, electronic struct., optical study 3—52032
CO adsorbed on Cu(111) surface, electronic struct., mol. cluster model anal. 3—13878
$Ca_{70}Mg_{30}$ metallic glass, atomic struct. and vibr. dynamics 3—42521
$Cd_{1-x}Mn_xTe$, paramagnet-antiferromag. transition, cluster model 3—28564
CdTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3—28248
Co-Mn-B amorphous alloys, elec. resist., p-d hybrids 3—28323
Cu dilute alloys, cluster model residual resistivities 3—33704
Cu small particles, electronic struct. and binding energy 3—52023
Fe, spin fluctuations rel. to photoemission line shape, cluster theory 3—57627
Fe-Co alloys, electronic and mag. struct. from SCF XαSW calcs. 3—38278
GaAs, vacancy deep levels, pseudo-atomic orbitals cluster model *(Chinese)* 3—38338
GaAs:Mn; impurity electronic struct., SCF multiple scatt. Xα calc. 3—8451
HBr, μ^+ substituted, isotope effect and solvent chemical shift 3—11886
H_2O, μ^+ substituted, isotope effect and solvent chemical shift 3—11886
H_2O, thermodynamic props., anomalous 3—51827
HgTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3—28248
KCl, X-ray absorpt. near edge struct. 3—28930
$LaFeO_3$, mag. hyperfine interactions calc. with model covalency parameter 3—43133
NH_3 adsorbed on Fe and Ni, binding and valence photoemission *(German)* 3—38231
NaCl:$Ag^+(Cu^+)$, electronic struct. and luminescent props., multiple scatt. Xα calc. 3—3060
Ni (001), photoelectron diffr., cluster calcs. 3—43709
Ni, spin fluctuations rel. to photoemission line shape, cluster theory 3—57627
Ni:H, electronic struct. of H impurity, LCAO and cluster calc. 3—8446
Ni:H, ferromagnetic, H props., multiple scatt. cluster-in-condensed-matter calc. 3—33666
Ni-Cu alloys, spin wave stiffness const., RPA and cluster CPA studies 3—38605
Ni-H, interstitial H bonding, CNDO, EHT and SW-Xα calcs. 3—33183
PbTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3—28248
Pd-Fe, dil., localised mag. moments, finite cluster approach 3—23582

cluster approximation continued
$(Pt(CN)_4^{2-})_n$, insulator-conductor transition studied using cluster model approach, SCF Xalpha Dirac calcs. 3−3062
Se, electronic struct. *(Russian)* 3−57263
Si (111), Ag chemisorption sites, electronic struct. DV-Xα calc. 3−3285
Si, cluster model calc. based on tight binding method *(Chinese)* 3−33619
Si, complex defects, divacancy and E-centre, mol. cluster study 3−47297
Si, deep level impurities, finite mol. cluster calcs. 3−47290
Si, LDOS of crystal, improvement of calc. by EHMO method *(Chinese)* 3−33620
Si, neutral-vacancy defect, embedded cluster theory, ab initio calc. 3−8448
Si, self-consistent electronic struct. for Al and Si interstitials, cluster extended Green's function technique 3−47294
Si, vacancy deep levels, pseudo-atomic orbitals cluster model *(Chinese)* 3−38338
Si:B, Si-B3 paramagnetic defect, extended Huckel theory calc. 3−38345
Si:O^-, electronic struct. calc. of O^-impurity 3−47298
SiO_x, electronic struct. and density of states, random bonding model 3−38305
SmS, point defect electronic struct., cluster model 3−18647
Ti (0001), chemisorption of C, N, O, and F, discrete variational Xα cluster method 3−52221
TiC (111) polar surface, electronic struct., DV-Xα calcs. 3−57399
V_2O_5, transition ot V_6O_{13}, APS and XPS study 3−58030
cluster model (nuclear) *see nuclear cluster model*
clustering, impurity *see segregation*
clustering, solute *see segregation*
clusters, atomic *see atomic clusters*
clusters, globular (stellar) *see globular star clusters*
clusters, metal *see metal clusters*
clusters, molecular *see molecular clusters*
clusters, stellar *see stellar clusters and associations*
clusters of galaxies
see also galaxies; intergalactic matter
0016+16, rich distant cluster of galaxies, discovery of assoc. QSO 3−35740
0024+1654, spectroscopy of galaxies in distant cluster 3−30477
1400+162, BL Lacertae object, obs. of assoc. group of galaxies 3−25617
A1139, A1775, positions and magnitudes of nearby quasar candidates from CFHT blue grens obs. 3−59235
Abell 115, galaxy distrib. rel. to X-ray surface brightness 3−35730
Abell 1367, diffuse/point X-ray emission nature and obs. 3−40267
Abell 1446 and 2220, curvature of radio jets and tails in intracluster media 3−30478
Abell 2029, evidence for anisotropic vel. profile in cD galaxy 3−54504
Abell 2255 compact galaxies and nearby compact galaxies, morphology and brightness profiles 3−44856
Abell 262, H I deficiency, 21 cm line obs. 3−20510
Abell 400, 576, 1767, 2124, X-ray galaxy clusters, vel. dispersion-X-ray luminosity relation 3−35732
Abell 520, extended X-ray emission detect. 3−5339
Abell clusters, CCD photometry, mags. and Z of brightest galaxies 3−35729
Abell clusters, complete X-ray survey by HEAO 1 satellite 3−54541
Abell clusters of distance class 3 and 4, WSRT radio obs. at 1.4 GHz 3−44857
angular momentum/mass relation 3−59182
autocorrelation function, effects of variable obscuration in Galaxy on observed galaxy clustering 3−30508
axions as dark matter, role in Universe struct. evolution 3−59518
3C 295, spectroscopy of galaxies in distant cluster 3−30477
CA 0340−538 in Horologium supercluster, X-ray emission anal. 3−59486
cD galaxies nuclei, props. implications for origin and evolution, visible obs 3−54533
CEDAG data centre *(French)* 3−5435
Centaurus cluster, discovery of optical filaments around (NGC 4696) 3−5427
cluster surrounding 3C 295, struct. and nature 3−49036
clustering, lognormal law *(Russian)* 3−16020
Coma, spatial density and radial vel. distrib. 3−5432
Coma cluster, appl. of diffuse X-rays to survey cluster gravit. mass distrib. 3−10470
Coma cluster, dynamics of cD galaxy NGC 4839 and elliptical galaxy (NGC 4889) 3−54514
Coma cluster, mass-to-light ratio and density of dark matter 3−5434
Coma cluster (Abell 1656), radio emission characts., VHF obs. 3−59484
Coma Cluster infall model, Hubble expansion and cosmological density parameter 3−16016
Coma field, QSO candidates, spectral obs. 3−25645
Coma supercluster, 408 MHz obs. of radio galaxies 3−44858
Coma-type radio halo clusters, X-ray morphology and intracluster gas heating by cosmic rays 3−5430
conference on galaxies origin and evolution and cosmology, at Erice, Silicy (May 1981) 3−35780
correlations, 4-point function in BBGKY hierarchy 3−20509
disc galaxies evolution in clusters, implications for S0 galaxies problem 3−10464
dissipationless clustering rel. to voids in galaxy distrib. 3−20511
elliptical galaxy moving in cluster medium, dynamical friction 3−40019
environment effect on active galaxies origin and evolution 3−25606
evolution towards equipartition of galaxies and dark matter, effect on virial M/L determ. 3−59485
faint rich cluster near NGC 2639, redshift meas. rel. to paired quasars in superclusters model 3−54545
formation, mass scales in universe of dust and blackbody radiation 3−59510
formation of clusters and supercluster, rel. to large-scale struct. of Universe *(Russian)* 3−40301
Fornax-Leo-Sculptor Stream, origin 3−20498
gravitational interactions between galaxies, review 3−54537
gravitational radii, correlation with vel. dispersion, cosmological significance for galaxy form. 3−30511
gravitational superclustering of collisionless particles, two-dimens. simulation 3−40269
Hercules Supercluster, distance meas. from inner ring structs. in galaxies rel. to Hubble const. 3−54500
Horologium supercluster and components, X-ray emission anal. 3−59486
clusters of galaxies continued
Hubble law correction behind clusters, perturbation of magnitude-redshift relation in homogeneous relativistic model 3−16041
Hydra I, spatial density and radial vel. distrib. 3−5432
induced ellipticity due to tidal extension of clusters co-expanding with Universe 3−40300
intergalactic matter in extended cluster/supercluster haloes, rel. to Faraday rot. of QSOs 3−5440
intracluster gas, effect on tailed radio galaxies 3−25609
intracluster gas accretion flow onto central galaxies, eventual star form. 3−20512
intracluster gas density, rel. to extended radio sources and X-ray emission 3−25620
intracluster gas mixing, effect of turbulent mixing of galactic wakes 3−16018
intracluster mag. fields survival and mag. monopole flux 3−44859
intrinsic redshift effect in inhomogeneous relativistic model, rel. to perturbation of magnitude-redshift relation 3−44838
Local Group, Virgocentric deviation from Hubble flow, dynamical models 3−30476
Local Group galaxies, near-IR transmission grating prism survey and spectrophotometry of C stars 3−30376
Local Group motion determ., effect of Local Supercluster extended low density region 3−30512
Local Supercluster, extended low density region effect on Local Group motion determ. 3−30512
Local Supercluster, orientation in space of spiral galaxies 3−44837
Local Supercluster, vel. field from IR magnitudes and H I vel. widths 3−44846
Lynx-Ursa Major supercluster, struct. from galaxy counts and redshifts distrib. 3−10468
M81/M82 group, new photometric data for dwarf galaxies 3−35717
mass-to-light ratio, large-scale vars. 3−20507
massive halo models, semi-degenerate equilib. configurations of collisionless self-gravitating Fermi gas 3−54222
massive neutrinos distribution 3−20225
Metacatalogue, data retrieval 3−5156
Metacatalogue and large scale structures in Universe 3−5155
missing mass and neutrinos 3−26032
missing mass problem, possible effects of neutrino rest mass *(Russian)* 3−30169
nearby groups distances and Tully-Fisher relation 3−40243
nearby rich clusters, apparent void 3−20508
nearly rich Abell clusters, R photometry of brightest galaxies 3−49037
nests of interacting galaxies, UBV obs. 3−44860
NGC 1961 group stability 3−40270
observational bias, distance effect 3−40268
pair correl. in astron. bound gravitating systems, appl. to Coma cluster 3−20440
peculiar galaxies in clusters of galaxies, optical and H I obs. 3−10449
peculiar motions, implications of IR absolute magnitude-H I rel. width-surface brightness relation for galaxies *(Russian)* 3−35724
Perseus supercluster, 408 MHz obs. 3−44858
Perseus supercluster, south west extension from galaxies redshift survey 3−5431
PKS 0812+02, QSO in cluster galaxy nucleus, optical/radio struct. 3−40283
poor non-Abell-Zwicky clusters containing 4C radiogalaxies, struct., SHF/UHF obs. 3−5408
Q 0028+003, QSO, assoc. galaxy cluster rel. to absorpt.-line system in QSO (Q 0029+003) 3−5444
quasars clustering at large redshifts, review 3−16031
radio galaxies in clusters, statistical survey of props. 3−54520
radio haloes, formation models 3−25626
radio sources, identifications with galaxy associations in distant cluster cores 3−5439
radio sources in rich galaxy clusters, morphology rel. to cluster collapse 3−59489
radiogalaxies, luminosity function evolution with red shift 3−16017
relaxation and tidal stripping in rich clusters of galaxies, evolution of mass distrib. 3−30510
normal relaxation modes in stellar systems, dynamical friction and thermalisation 3−54451
review 3−40271
rich clusters evolution, numerical simulation 3−10469
satellite galaxy orbital decay, numerical simulations 3−35675
scale-free clustering, gravitational evolution of struct. in scale-free universe 3−16047
Sculptor group, obs. of globular clusters in galaxy (NGC 55) 3−10443
Sculptor group, search for globular clusters in edge-on spiral galaxy (NGC 55) 3−30433
Shakhbazyan 1, 2, 5, 19, SHF obs. 3−16019
Shane-Wirtanen galaxy distribution, statistical anal. of filamentary struct. 3−35714
small groups, galactic content 3−30479
small groups of spiral galaxies, H I distrib. masses and motion 3−30492
spiral galaxies, relations between morphological type and quantitative measures in cluster environment 3−20501
stationary gravitating systems instantaneous virial mass fluctuation 3−44861
supercluster, cosmic ray protons, mean energy density 3−39976
superclusters, flattened, galaxies kinematics model 3−35733
superclusters, flattening of nondissipative pancakes 3−35731
superclusters, structure, Universe history 3−20513
superclusters formation, quasars Lyman-alpha absorption lines clustering rel. to galaxies in proto-superclusters 3−5445
superclusters formation, theory rel. to holes in cosmology 3−40297
transverse motion measured by influence on gravitational lens effect 3−59487
triple isolated systems, virial mass-luminosity ratios 3−44855
Ursa Major/Canes Venatici region, galaxy groupings, redshift and H I masses 3−20496
Virgo cluster, digital surface photometry of 20 galaxies rel. to quantitative classification 3−10463
Virgo cluster, gravitational effect on Local Group, deviation from Hubble flow 3−30476
Virgo cluster, middle UV photometry of galaxies 3−10435
Virgo cluster, observational constraints on galaxy-intergalactic medium interactions 3−30509
Virgo cluster centre, nearby galaxies membership questionability 3−25340
Virgo cluster distance modulus and Hubble ratio 3−5460

clusters of galaxies continued
Virgo cluster field, quasar candidates anal., appl. of two dimensional goodness-of-fit tests 3−40046
Virgo cluster galaxies, magnitudes, diameters and axis ratios, BVR obs. 3−5433
Virgo galaxy cluster, line-of-sight mag. fields of intracluster hot gas and M87 radio halo 3−10465
void-supercluster-void distribution 3−54507
voids, origin and nature 3−5454
voids in Bootes and Corona Borealis *(French)* 3−25671
X-ray clusters of galaxies, X-ray luminosity function slope evolution 3−16034
X-ray galaxy clusters, Fe line emission obs. via X-ray telescope with multilayer coatings 3−54240
X-ray imaging, cluster dynamics mass and gas 3−25628
X-ray sources, morphological classification from Einstein images 3−25629
V Zw 311, dynamical equilib. and frictional lifetime calcs., visible obs. 3−25625
Zwicky galaxies position cross-correlation with Shane Wirtanen galaxies 3−10461

clutches
see also drives
frictional adhesion, dynamic criteria 3−34604

clutter
see also radar clutter; radar interference
US correlation system, optimal operation 3−56403

c.m.o.s. integrated circuits *see field effect integrated circuits*

c.m.o.s.i.c. *see field effect integrated circuits*

CNDO calculations
acetone, pot. energy surface determ., nonrigidity effects 3−56018
acetone-Na$^+$ interaction, mol. pot. ab initio PCILO and CNDO/Z calcs. 3−11690
L-alanine, vibr. circular dichroism, Raman optical activity, CNDO calcs. 3−32123
aldehydic C-H force constant, ion-mol. collision, trans lone-pair effect, CNDO calcs. 3−55842
alkanes, polarisabilities and second hyperpolarisabilities, CNDO calcs. 3−6543
alkoxyaluminium catalysts, struct. and activity in alkylation of phenols 3−48067
alkylaminomethyl-phenols, geometry and intramol. interactions, CNDO calcs., X-ray diffr. obs. 3−1251
alloxan, low-lying electronic states, semiempirical calcs. and spectrosc. investig. 3−17231
2-aminopyridine, electronic struct., CNDO/2 and CNDO/CI calcs. *(Japanese)* 3−36680
benzene, core-hole-excitation spectrum, symm. adapted CNDO/S equivalent core study including spin-symm. breaking config. 3−21639
benzenoid hydrocarbons, vapour, triplet-triplet absorpt. spectra, CNDO/S calcs. 3−21775
benzocyclobutenes, substituted, thermal ring opening, orbital mapping anal. 3−21640
carbazole and carbazyl radical, in high excited triplet state, photodissoc., CNDO/s calc. 3−1243
CNDO calcs. 3−11713
cyclobutenes, substituted, thermal ring opening, orbital mapping anal. 3−21640
β-cyclodextrin-azanaphthalenes complexes, induced circular dichroism 3−45998
dialkylamino aryl complexes, solid state, core-hole XPs and CNDO/S-CI study 3−28963
diaryl sulphones, struct.-activity relationship calcs. 3−48231
diimines, ionisation pots., photoelectron spectra, comparison of semiempirical methods 3−17221
disiloxanes, electronic struct., photoelectron spectra and CNDO/2 calcs. 3−11696
ethyl radical-$d_0(d_2)(d_3)(d_5)$, matrix isolated IR spectra by normal coordinate calcs. 3−45937
ethylbenzene, ^{13}C-NMR chem. shifts *(German)* 3−50435
ethylene oxide, vibr. freqs. and intensities, IR and Raman spectra 3−21747
ethylene sulphide, vibr. freqs. and intensities, IR and Raman spectra 3−21747
fluorene derivatives, Si-, Gd- and Sn-containing, luminesc. spectra, quantum chem. study 3−45853
fluorocarbonylsulphenyl chloride, rot. barrier and valence force consts., CNDO calc. 3−41496
fluorophenyl retinal, cis and trans forms, electronic struct., XPS study 3−15041
formamide, internal rot., solvent effect, CNDO/2 solvaton 3−1249
formamide, Raman scatt. intensity CNDO calcs. 3−45850
hexafluorobenzene+benzene (p-xylene) specific interaction, CNDO/2 calcs. 3−31947
hydrazinecarbothioamide, basic and N-protonated, MO calcs. and NMR investig. 3−21782
hydroxybenzoic acids, electronic spectra, struct., reactivity, CI-CNDO-PPP calcs. 3−11697
imines, ionisation pots., photoelectron spectra, comparison of semiempirical methods 3−17221
localization of molecular orbitals 3−45851
localized molecular orbital energies within the CNDO/BW formulation 3−31945
N-methyl acrylamide, cis- and trans-, CNDO calcs. 3−11713
(+)-(3R)-methylcyclohexanone, vibr. circular dichroism, Raman optical activity, CNDO calcs. 3−32123
molecular struct., solvent effects, spectroscopic props., virtual-charge model, appl. to benzophenone 3−45848
monofluorobenzaldehydes internal rot., SCF MO studies 3−31942
monofluorotoluene, ^{13}C-NMR chem. shifts *(German)* 3−50435
o-naphthoquinonediazides, electron struct. and spectral props. 3−17225
paraterphenyl in different phases, spectral-luminesc. props. 3−41614
phenol, internal rot. spectrum, CNDO calc. 3−11693
phosphazoalkane series, ^{31}P NMR chem. shifts, SCF MO and CNDO/2 calcs. 3−17311
N-piperidyl-nitrobenzenes, XPS spectra, intense shake-up satellites 3−26787
N-piperidyl-nitrothiophens, XPS spectra, intense shake-up satellites 3−26787
PMDR spectra, quantum chem. calcs. 3−17317

CNDO calculations continued
polyacetylene, CNDO/S3 cryst. orbital model, definition and appl. 3−12018
polybenzobisoxazoles, cis and trans, nonplanar conformation, CNDO study 3−56108
polybenzobisthiazoles, cis and trans, nonplanar conformation, CNDO study 3−56108
polyenes, linear, valence excited states, RMS dipole moments, CNDO-STO calcs. 3−26721
polypyrrole, electronic struct., UV photoemission and optical absorpt., CNDO/S3 calcs. 3−12019
pyrrole oligomers, electronic struct., UV photoemission and optical absorpt., CNDO/S3 calcs. 3−12019
2-quinolones tautomerism, semiempirical MND and UV absorpt. studies 3−21643
quixotic molecules geometry-crit. examination by CNDO/2-INDO MO methods 3−6538
rhodamine solutions, electronic absorpt. spectrum and polarisation spectrum interpretation 3−1247
substilisation, protonation, environmental effects, MO anal. 3−14842
thioureas, ^{15}N chemical shifts, nucl. shielding, CNDO/S calcs. 3−17222
toluene, ^{13}C-NMR chem. shifts *(German)* 3−50435
Torasemide, crystal struct. refinement computer programs, effects on CNDO/2 calculation 3−46915
transition metal cpds., electrostatic potential calc. program 3−36682
trifluoroacetic acid-hydrogen halides complexes, IR matrix isolation and CNDO/2 studies 3−21765
trifluorotoluene, ^{13}C-NMR chem. shifts *(German)* 3−50435
ureas, ^{15}N chemical shifts, nucl. shielding, CNDO/S calcs. 3−17222
σ-bonded systems, fragments-in-mols. method appls. 3−55804
$AlCl_3$, catalyst, struct. and activity in alkylation of phenols 3−48067
Al_2Cl_6, catalyst, struct. and activity in alkylation of phenols 3−48067
$AlCl(OH)_2$, catalyst, struct. and activity in alkylation of phenols 3−48067
BaH_2, d orbitals effect on geometry CNDO/2 calcs. 3−46093
BaX_2, X=Cl, F, CNDO/2 calcs. bond angle 3−46094
C_3O_2, geometry, force consts., CNDO calcs. 3−17219
CaH_2, d orbitals effect on geometry CNDO/2 calcs. 3−46093
CaX_2, X=Cl, F, CNDO/2 calcs. bond angle 3−46094
H-bonded systems, CNDO/2H and MINDO/3H calcs. 3−31941
H_3OPO_4, cryst., proton cond., defects and impurities, SCRF-CNDO/2 calcs. 3−13512
$NO_2^-.(SO_2)_n$ complexes, gas-phase, thermodynamic props. 3−56639
$NO_3.^-(SO_2)_n$ complexes, gas-phase, thermodynamic props. 3−56639
Ni-H, interstitial H bonding, CNDO, EHT and SW-Xα calcs. 3−33183
OCS_2, singlet pot. energy surface, CNDO calcs. 3−6542
$RuNOCl_5^{2-}$ ion, electrostatic field in ground and excited states, CNDO-Cl calcs. *(Russian)* 3−45856
S_8, electronic states, CNDO/2 calcs. 3−45847
Se_8, electronic states, CNDO/2 calcs. 3−45847
Se_4S_4, electronic states, CNDO/2 calcs. 3−45847
Si, amorphous, electronic struct. CNDO calcs. 3−52018
Si, interstitial muons and H_2, self-consistent total energy surfaces calc. 3−46924
Si:H, amorphous, electronic struct. CNDO calcs. 3−52018
Si:H, F, amorphous, electronic struct. CNDO calcs. 3−52018
$SnCl_4$, electronic struct., ^{119}Sn isomer shifts, CNDO calcs. 3−11711
$SnCl_4$-organic ligand complexes, electronic struct., ^{119}Sn isomer shifts, CNDO calcs. 3−11711
SrH_2, d orbitals effect on geometry CNDO/2 calcs. 3−46093
SrX_2, X=Cl, F, CNDO/2 calcs. bond angle 3−46094

coagulation
aerosol, multicomponent radioactive, condensation, coagulation and deposition 3−997
aerosols, coagulation in plume from cross-wind line source 3−4423
Brownian and gravitational, distribution function rate of change, vol. conservation 3−44071
colloids, Smoluchowski's theory in Boltzmann-Grad limit 3−19539
electrocoagulation, intra-arterial electrolysis, pig expts. 3−48274
electroplating production, effluent purification and recycling by combined electrocoagulation and ion exchange *(Russian)* 3−53416
gelation transition, critical kinetics 3−24533
Laval nozzles, two-phase flow with coagulation and fragmentation 3−37541
liquid drops, gravitational coagulation effectiveness calc., allowance for internal circulation 3−42275
monodisperse coagulation eqn., solns. and critical times 3−48096
nonspherical clusters, diffusion-controlled colloidal growth rates 3−53448
particle size distrib. during coagulation 3−4320
post-gelation solns. for Smoluchowski's coagulation eqn. 3−29336
submicron aerosols rapid coagulation into filamentary three dimens. structs., electron microscopy study 3−32791
TiN, particle size distribution meas. during crystn. in plasma current from UHF discharge 3−27868
W, particle size distribution meas. during crystn. in plasma current from UHF discharge 3−27868

coal
see also mining
bituminous coal seam in Illinois, geochemical anal. 3−4865
catalytic hydrogenisation project using Kentucky no. 11 coal process development unit run no. 9 3−58471
closed cycle MHD, coal-fired, work at Eindhoven University, in Holland 3−29422
coal and synfuel processing, on-stream X-ray analysers 3−19554
combustion MHD power generation experiments with shock tube 3−29420
combustion processes evaluation using impulse holography *(Hungarian)* 3−53406
conversion processes using H_2 from nonfossil energy sources 3−48119
conversion products and petroleum, metal specification, nucl. techniques appl. 3−9381
delivery for combustion in a low temp. fluidised bed 3−7650
direct liquefaction of coal—accomplishments, status, and prospects 3−4354
drying methods, 14 MeV instrumental neutron activation anal. 3−9382
dust cloud, flame propagation in zero gravity, burning velocity, thickness, radiation heat loss 3−24537
dust clouds, ignition energy and flame quenching meas., quenching distance formula 3−24536
economic evaluation of nuclear and coal fired power plants 3−9407

coal continued
electrical generation costs from nuclear and coal plants in Germany and Switzerland 3—9406
engineering cost estimates and power plant final cost forecasts 3—34678
fluidised bed reactor for coal combustion, simulation procedure for mathematical modelling *(German)* 3—24506
fossil/nuclear fuels resources and reserves 3—4358
French energy policy since election of President Mitterand to office 3—4339
gasification, Fe-bearing phases, magnetisation and Mossbauer study 3—29301
gasification, HTGR, development aims and possibilities *(German)* 3—21494
gasification program at Cool Water 3—4351
Hat Creek coal deposit, BC, Canada, geophys. exploration 3—53475
internal friction spectrum, polymeric character 3—13335
levelised costs, inflation effects, worth-cost model for coal and nuclear plants 3—34679
MHD conversion, coal devolatisation and burn-out 3—29415
MHD conversion, coal properties, design influences 3—29411
MHD conversion test facility, direct coal fired 3—29402
MHD convertor combustor design, coal charact. effects 3—29410
MHD convertors, coal-fired combustors, single and two-stage, comparative study 3—29413
MHD generation, coal-fired, in China, prospects 3—29406
MHD generators, coal-fired, K-seed/ash interactions 3—29414
MHD plasma flow facility, coal-fired, for USA DOE, capabilities and test results 3—29403
MHD power generation, work in China on thermodynamic and electrophysical properties 3—29412
mineral identification in coal, multielemental anal. and multivariate statistical methods 3—10101
moisture content meas. by NMR method, systematic error anal. *(Russian)* 3—5824
natural, nonisothermal degradation, mathematical modelling 3—44052
NCB liquefaction process, premium transport fuel production 3—39529
neutron activation multielement anal. using NaI detector 3—29360
open-cycle, coal-fired, MHD, steam plant development 3—29421
peat, sounding by subsurface radar in Latvian SSR *(Russian)* 3—20154
performance predictions for Coal Fired Flow Facility (CFFF) low mass flow MHD generator at University of Tennessee, in USA 3—29428
power stations, dust and noise emissions prevention *(German)* 3—39550
pressurised fluidised-bed combustion facility, 1000 hr test programme, observations and analysis 3—34708
processing for synthetic fuels, production 3—4359
pulverised coal for MHD convertors, combustion and NO_x formation mechanisms 3—29419
seams, absorpt. effect on Love-type seismic waves 3—39816
Sunshine Project of Japan, current research and development status 3—4369
supply and demand at present and in future 3—4347
suspensions, radiant energy transfer, evaluation, numerical method 3—7389
synthetic fuels from coal and biomass resources in Midwest USA, land use planning issues 3—58467
technology for MHD power generation 3—29418
Texaco coal gasification process, economic evaluation 3—29457
thermoanthracites, C K-band X-ray emission 3—24056
US territories in Pacific, coal as option for power generation 3—44091
Utah char-oil project 3—4352
utilization of coal in Sweden *(Hungarian)* 3—48116
Wyoming subbituminous coal from Wyodak mine, in USA, processing by H-coal direct catalytic hydrogenation process 3—48120
Young's moduli and confined compressive strength meas. 3—43885
D/H isotope ratios of coal rel. to palaeolatitude of deposition 3—58915
H_2 production using U-GAS goal gasification process, pilot plant results, current status and economic projections 3—53594

coating processes *see coating techniques*

coating techniques
see also anodisation; cladding techniques; coatings; electrodeposition; electrophoretic coating techniques; encapsulation; epitaxial growth; metallisation; spray coating techniques; vapour deposition
conical element nomenclature, use, and metrology, fabrication, polishing and coating 3—27191
fabrication condition effects on adhesion strength of powder convering a substrate 3—4168
metal, high melting point, ion plating *(German)* 3—29018
non-Newtonian liquid blade coating process 3—51169
polyimide films, fabrication by spinning on soln. and curing up to 210°C, semiconductor technology appl. 3—24161
solar selective absorber development, high temp., coating methods 3—19603
SQUID sensor fabrication, Nb_3Sn coating appl. 3—25870
steel St3, with multicomponent coating, comp., struct. and corrosion resist. in dil. S 3—24406
surface treatment of electronic components, electroplating versus painting, criteria for choice *(German)* 3—53249
transparent heat insulating coatings on a polyester film 3—17596
Ni electroless plated mirror, fabrication on Alnico magnet 3—7229
Sb_2Se_3 thin films, chem. deposition 3—19290
Si polycrystalline film growth on liq. Sn layer, growth mechanism and elec. props. 3—58046
SiO_2 thin films, selective deposition in acid baths 3—3978

coatings
see also anodised layers; antireflection coatings; claddings; decorative coatings; electrodeposits; electrophoretic coatings; epitaxial layers; insulating coatings; protective coatings; spray coatings; sputtered coatings; vapour deposited coatings; varnish
alloy coatings, thickness and element conc. meas., simultaneous fluoresc. X-ray method 3—44079
chromate conversion coatings, struct. and surface comp., XPS and SEM obs. 3—19460
composite coatings, instrument for nondestructive control *(Russian)* 3—19475
diacetylene long-chain polymerizable mols., stable polar surface prep. 3—39270
friction, energy-based model of friction 3—2664
friction, energy-based model of friction 3—2665
glass, effect of metal-oxide coatings on strength 3—24384

coatings continued
hydroxyl coated SiO_2, struct. study by IR and mass spectroscopy 3—48092
magnetic-electrical strengthened, electron microscopy study *(Russian)* 3—53248
metallic coating, techniques and instruments for thickness meas. 3—10794
metallic coatings struct. for impurity control in MACROTOR 3—18077
parylene coating thickness meas., real-time, using optical reflectometry 3—262
phosphate coatings, nondestructive thickness meas. by IR absorption 3—54715
photothermal imaging and thermal surface waves as a NDT tool for coatings 3—48042
powder coatings on metal surfaces for laser treatment, absorptivity meas. *(Chinese)* 3—39280
preferential sputtering effects on surface coatings in fusion reactors 3—26481
pyrocarbon, depthwise structural inhomogeneity 3—8350
residual stress state, nondestructive mechanical obs. 3—44017
stainless steel solar collectors, production line and coating process 3—9488
thickness gauges checking facilities 3—49321
thickness gauges for thin coatings meas., simulation measures 3—49322
thickness measures 3—49320
transparent and semitransparent films, thickness meas. by light interference method 3—49315
vibration absorbing, on cylindrical shell, effectiveness rating 3—12432
wear analysis, SEM obs. *(German, English)* 3—43965
wire, galvanic coating thickness determ. using thermoelec. EMF 3—40556
Al_2O_3-SiO_2-BaO, refractory coating for vitroceramic (pyroceram) nuclear fuel elements 3—16861
Fe-Si, polycryst., with stress coating, demagnetization effects 3—33923
Mg_2SiO_4 coating effect on mag. props. and domain struct. of grain oriented Fe-Si (3 wt.%) 3—28601
Ni-P-Cr coatings deposited from soln., heated in vacuum, struct. and props. *(Russian)* 3—13667
Ni-SiC cermet coatings, mech., thermal and tribological props. 3—3019
Pd coated SAW delay line, H_2 sensor 3—49351
SiC, on nuclear fuel particles, identification of Si 3—6315
W_6CO_6C form. during coating of WC-Co with TiC_x or TiC_xN_{1-x} 3—14509
(ZrO_2-Y_2O_3)/(Ni-Cr-Al-Zr) thermal barrier coating, failure mechanism at high temp. 3—3020

coatings, protective *see protective coatings*

coaxial cables
cryostat terminal and heat sink arrangement 3—20859

coaxial lines *see coaxial cables*

cobalt
see also nuclei with ......
adsorbed on γ-Fe_2O_3, mag. and Mossbauer studies 3—57830
adsorbed on γ-Fe_2O_3 particles, ^{57}Co Mossbauer emission spectra 3—19030
adsorption in BWRs by TiO_2 3—6361
adsorption of O on (0001) surface, AES, work function and UPS studies 3—38222
adsorption onto magnetite in aqueous suspension 3—18553
anisotropy const., band model calcs. 3—52452
atom, multielectron, one-photon transition, line splitting and intensity 3—11744
atom, photon scatt. from K-shell, Compton cross sections 3—11750
atoms, gas-phase high temp. PES 3—26710
chemisorptive bonds with H, O, N, and S, tight-binding parameters 3—52216
coating, residual stress diagrams during electrodeposition and anodic dissolution 3—47792
corrosion product morphology, formed in Ar-O_2-Cl_2 atmos. 3—4200
Czochralski growth of single crystals 3—47762
electrodeposited, corrosion-electrochem. behaviour, effect of non-metallic inclusions *(Russian)* 3—4189
electronic band struct., Fermi surface, and optical props. under press. 3—3051
ferrofluid, form birefr., dichroism meas. 3—28829
ferromagnetic fine particle systems, Neel relax. study 3—52554
ferromagnetism, reversible ideal, dipole eqns. *(German)* 3—18838
film, electroplated, for perpendicular mag. recording, microstruct. and mag. props. 3—28227
films on non-magnetic substrates, mag. moment, anomalous Hall effect study *(German)* 3—52565
graphite formation on Co, effect of S monolayer 3—9357
HCP, rolled, microstruct. and texture, dynamic recrystn. 3—47856
heat of soln. and binding energy of H impurity 3—2806
ion-photon emission at polymorphic transform. 3—43637
isotropic ferromagnets, dynamical crit. behaviour 3—14061
liquid, thermodynamic props., Percus-Yevick phonon description 3—51474
LWR, Westinghouse-designed three and four loop power plants, Co sources 3—45650
magnetic moment struct. of ϵ-Co from neutron diffr. expt., electron theory 3—14009
magnetic thermogravimetry of Ni, De and Co using modified magnetic thermo-balance *(Japanese)* 3—54750
molten, surface tension meas. 3—28196
monolayer film, on Cu (111), exchange splitting and ferromag. order 3—38656
optical properties in IR and far IR 3—57868
oxidation at room temp., SIMS, AES, XPS, and work function study 3—43992
particles, ferromagnetic, crit. size calc. for uniaxial anisotropy 3—52553
particles in toluene, aggregation study using small angle neutron scatt. 3—52508
phosphate:Co^{2+} glass, effective g value, chem. bonding, ESR study 3—33972
photoelectron spectra, two-electron resonances 3—52896
positron annihilation, momentum density distribs., band. struct. calc. 3—28925
powder, prep. by low temp. hydrothermal reduction of metal hydroxides 3—3984
secondary electron high spin polarisation, photoemission study 3—8936
soft mag. props., ideal reciprocal ferromagnetism *(Polish)* 3—47524
solid solubility in high-purity Si, NAA and antiCompton spectrometry study 3—28109
spin wave theory, mag. moment and magnetisation study 3—33873
sulphidation-oxidation, reaction between metal and sulphate 3—14776

cobalt continued
surface, (11-20), clean, structure, LEED study 3−57193
surface, Ar^+ impact, SIMS study 3−38979
tensile strength, elongation, allotropic transformation effect 3−43919
TGS:Cu, polarised state stability, Barkhausen thermal effect study 3−23863
thermal transport props. near Curie point 3−8275
thin film recording medium on Cr, origin of coercivity and high squareness 3−18953
X-ray emission spectra, low energy $K\beta'$ plasmon satellite 3−58005
$AgGaS_2:Co^{2+}$, EPR study 3−3516
Au/Co multilayer system, metastable phase form. by ion beam mixing 3−57002
$BaTiO_3:Co$, electronic struct. calcs. 3−43094
$BaTiO_3:Co$ Remeika crysts., excitation energies and optical absorpt. spectra 3−38853
BeF_2-AlF_3-MgF_2-$BaF_2:Co^{2+}$ glass, effective g value, chem. bonding, ESR study 3−33972
$Bi_{0.88}Sb_{0.12}:Co$, elec. cond. and thermo-EMF, Co effect 3−38413
Co in toluene ferrofluid, aggregation, neutron study 3−38587
Co selective black coatings prep. and characterisation for application on solar absorber convertors 3−9481
Co^{2+}, in CaO, SrO and BaO, defect props. study 3−56923
Co/toluene ferrofluid, dilution induced instability obs. 3−28630
Co-Al_2O_3 cermet film, electron beam coevaporated, dielec. function meas. 3−8895
Co-Ge-Te system, isothermal cross section, microstruct., DTA and X-ray anal. 3−51749
Co-like ions, Y XIII to Ag XXI, $3d^9$-$3d^84p$ transitions in X-ray spectra 3−1295
^{57}Co Mossbauer source development for scatt. expts. on ^{57}Fe 3−26534
^{58}Co and ^{60}Co, release into PWR coolant system, major potential sources 3−50023
^{60}Co, in environmental samples, radiochem. determ. 3−4454
^{60}Co, internally deposited in adult Indian desert gerbils, oocyte depopulation pattern 3−9678
^{60}Co radioactive isotope thin target preparation by rapid methods 3−50094
^{60}Co removal from nuclear aq. waste using activated C 3−36471
Co(n,X), 14.6 MeV, activation cross sections leading to long lived reaction products 3−21501
α-Fe:Co, neutron irrad., Mossbauer study of point defects 3−57821
$FeCl_2:Co$, localised mag. modes, far IR absorpt. spectra 3−3770
γ-$Fe_2O_3:Co$, coercivity, rot. hysteresis, mag. recording appls. 3−23734
γ-$Fe_2O_3:Co$, epitaxial, orientation and dispersion, mag. recording appl. 3−23741
γ-$Fe_2O_3:Co$, prep., coercivity, mag. recording appl. 3−23735
γ-$Fe_2O_3:Co$ ferrite, epitaxial, coercivity, saturation magnetisation 3−23733
$Fe_3O_4:Co$, coercivity, rot. hysteresis, mag. recording appls. 3−23734
γ-$Fe_2O_3(:Co)$ fine particles, mag. anisotropy, ^{57}Fe Mossbauer study *(Chinese)* 3−18942
Ge:Co, deep donor centres, H plasma passivation 3−47287
$InP:Co^{2+}$, EPR study 3−43426
$InP:Co^{2+}$, g-value of $^4A_2$ ground state, EPR study 3−38684
KCl:Co crystals, elec. cond. study 3−57123
$LiNH_4SO_4:Co^{2+}$, optical absorpt. spectrum 3−43570
$MgO:Co^{2+}$, single cryst., dielec. const. meas, activation energies at low temps. 3−52706
$MgWO_4$:Co(II), electronic spectrum at 4.2K 3−8855
Nb:Co, effective valence for electromigration 3−42860
O activity coefficient in Pb, effect of Co 3−47128
Si:Co, diffusion, solubility and elec. activity, review 3−27966
Si:Co,B, impurity electron states, DLTS and Mossbauer studies 3−43081
Si:Co,B,Al,Ga, pairing reactions of interstitial Co and acceptors, Mossbauer study 3−42623
$SrTiO_3:Co$, electronic struct. calcs. 3−43094
Ti-Co, self-propagating high temp. synthesis products, structure and phase composition 3−9018
TiC-Co composite, sintered, anomalous behaviour of liq. metals in flat capillaries 3−58090
$V_2O_5:Co^{3+}$, doping effects on texture change, N_2 adsorpt. meas. 3−56918
$YAG:Co^{2+}$, ESR study of interstitial Co^{2+} 3−57760
YIG:Co epitaxial films, domain structure and magnetisation 3−28668
$ZnCs_2(SO_4)_2.6H_2O:Co^{2+}$, optical absorpt., impurity states 3−34126
ZnTe:Co, impurity effect on excitonic and mag. props. *(Russian)* 3−23580
$ZnWO_4$:Co(II), electronic spectrum at 4.2K 3−8855

cobalt alloys
see also cobalt compounds
Alnico, sintered magnetically hard materials 3−3988
Alnico 5 permanent magnets, non-metallic inclusions and mag. props. modification rel. to Mn content 3−52549
Alnico magnet, fabrication of electroless Ni plated mirrors 3−7229
Alnico magnets, fabrication of thin glass mirrors 3−7228
anisotropy const., band model calcs. 3−52452
Astroloy, Ni-base superalloy, supersolidus sintered preforms, necklace struct. obtained by forging 3−9017
C Co-In(Ag), hyperfine fields, nuclear orientation study 3−47318
Co-Cr-perpendicular magnetic recording medium by vacuum deposition for mag. tapes *(Japanese)* 3−47531
fission reactor components of high Co alloys, wear meas. methods 3−49948
glassy and crystalline, mag. moment variation, chem. bonding and local symm. model 3−23598
Hastelloy X, carburization protection by Si enriched layers in HTGR 3−4208
IN100, Ni-base superalloy, high temp. low-cycle fatigue rel. to strain rate, in air and vacuum 3−53236
IN597, Ni-base superalloy, creep cavitation and prestrain-induced particle microcracking 3−53173
IN-738, Ni-base superalloy, cast, fatigue, low cycle, high temp., effect of environment 3−4121
Kovar alloy, Fe-Ni-Co, SXAPS materials testing *(Chinese)* 3−20960
MAR M 509, Co-base superalloy, low cycle fatigue, high temp., influence of oxidation 3−47939
MAR-M 509, Co-base superalloy, low cycle fatigue, influence of temp., 20-1100°C 3−47938
MARM 509, Co-base superalloy, fatigue life prediction, fatigue-oxidation interaction 3−34467

cobalt alloys continued
Nimonic AP1, Ni-base superalloy, fatigue crack growth and surface damage 3−29152
Permag A-3290, Al-Ni-Co-Ti, thermomag. treatment for higher coercivity *(Czech)* 3−14615
rare earth alloys, RCo_2Si_2 (R=Pr, Nd, Tb, Ho, Er), collinear antiferromag. ordering, neutron diffr. study 3−43351
rare earth-Co alloys, sintered magnetically hard materials 3−3988
steel, Co, magnetic diffusion equation, one-dimensional, incl. hysteresis, complex permeability approach 3−52447
stellite, corrosion behaviour of radioactive products in LWRs, fast neutron activation anal. 3−6362
superalloy, quench rates in gas-atomised powders and melt-spun ribbons, microstruct. depend. 3−29030
tensile strength, elongation, allotropic transformation effect 3−43919
Waspaloy, fatigue, low cycle, crack propag. and substructs. 3−4118
Waspaloy, fatigue crack propag. process, phys. modelling 3−4119
Waspaloy, Ni-base superalloy, friction-welded, correl. between struct. and thermomech. treatment *(German)* 3−4132
Al-Co, solid soln. extended by rapid quenching from melt, lattice parameter vs. conc. prediction 3−53094
Al-Co-Fe, heat treatment effect on piezomagnetic props. 3−23773
Al-Cu-Co, sintered, struct. and mech. props., effect of rapid cooling on crystn. 3−34259
Al_9Co_2 eutectic alloy fibres, elec. resist. 3−43154
AlNiCo permanent magnet alloys, struct. and props. book contrib. 3−57708
BN-CO, cutting tool, wear resist. rel. to binder composition, EPMA obs. *(Japanese)* 3−39256
$(CO_{100-x}Mn_x)_{76}B_{24}$ amorphous alloy, mag., thermal and elec. props. 3−28524
$Ce_{1-x}Y_xCo_5$, absorption of H in 20-50°C range *(Russian)* 3−47212
$CmCO_5$, interatomic forces, effective, from one-particle cryst. field parameters 3−23339
Co $Ti_{1-x}Al_x$, NMR study of hyperfine coupling constants 3−57796
Co- B-Si metallic glasses, spin wave stiffness const., magnetisation study 3−28535
Co-B(C)(Si) film, amorphous ferromag. mag. props. 3−18955
Co-base alloys, low temp. hot corrosion, reaction mechanism 3−14774
Co-base powder metallurgy alloys, abrasive wear mechanisms using Al_2O_3 and diamond scratch tests 3−4145
Co-base superalloy, 73C, directionally solidified, cyclic response 3−58251
Co-base superalloy, gas turbine alloys, corrosion rel. to electrode pot. 3−53289
Co-Cr alloy, mag. props. and anisotropy 3−57589
Co-Cr film, perpendicular magnetisation struct. 3−28665
Co-Cr film, sputtered, magnetisation reversal 3−28654
Co-Cr film, vac. deposited, mag. and struct. props. 3−38654
Co-Cr film deposition by opposing targets sputtering method, plasma effects 3−28992
Co-Cr layers, RF sputtered, for perpendicular mag. recording, struct. props. 3−51987
Co-Cr layers, RF sputtered, for perpendicular mag. recording, mag. props. meas. 3−52564
Co-Cr superalloys with CeO_2 thermal barrier coating, dip process 3−43996
Co-Cr-Mo, cast, heat treatment, corrosion resist. and fatigue, tensile props., orthopaedic appl. 3−39294
Co-Cr-Mo, twin-twin interaction and work hardening behaviour 3−19371
Co-Cr-Mo, Vitallium superalloy, precipitation under heat treatment, expt. study 3−9074
Co-Cr-Mo alloys, phase diagram calc., thermodynamic assessment of heat treatment 3−34279
Co-Cr(-Al), low temp. hot corrosion, morphology of reaction product 3−14773
Co-Fe (1.2 at.%), field induced DHCP→HCP transform. and anisotropy change 3−57588
Co-Fe-B, solid soln. equilibrium distrib. *(Italian)* 3−53020
Co-Fe-B, ternary system behaviour at 1273K *(Italian)* 3−53019
Co-Fe-Ni-Mn-B-Si metallic glasses, near zero magnetostrictive, with very high saturation induction 3−28672
Co-Fe-Ni-Mo-B-Si glassy alloys, nonmagnetostrictive, mag. props. 3−28619
Co-Fe-Si-B, amorphous, short-range order, stability, and mag. props. *(Russian)* 3−37792
Co-Ga spin glass, equilibrium mag. behaviour 3−57563
Co-Gd amorphous film, long range order in struct. 3−2415
Co-Gd amorphous film, mag. anisotropy, electron microscopy study 3−57578
Co-Gd-B system, mag. moments and coercive forces 3−33919
Co-Gd-Mo amorphous film, long range order in struct. 3−2415
Co-metalloid alloys, chemical bonding, mag. moments and local symm. 3−42564
Co-Mn alloys, thermodynamic props. using CaF_2 and ThO_2-Y_2O_3 electrolytes 3−9034
Co-Mn liquid alloys, Mn activities meas. by isobaric method *(Japanese)* 3−9030
Co-Mn-B amorphous alloys, elec. resist., p-d hybrids 3−28323
Co-Mo, metastable electron cpd. form. by ion irrad. 3−42684
Co-Nb, martensitic $15R_1$ struct. 3−13170
Co-Nb based alloy films, amorphous, mag. props. 3−43414
Co-Nb-B, amorphous and microcryst., mag. moments and bonding 3−57561
Co-Nb-B metallic glass, mag. moment, magnetisation and Curie temp. 3−28523
Co-Nb-Mn(Fe)(Ni)(Ti)(Mo), amorphous, saturation magnetisation and magnetostriction, comp. depend. 3−33962
Co-Ni films, sputter deposited, struct. and high coercivity props., additional elements effects 3−23744
Co-Ni:N film, high coercivity and microstruct. 3−18947
Co-P alloys, amorphous, temp. depend. of exchange inhomogeneity characts., spin wave reson. 3−57791
Co-P films, amorphous, struct. and mag. props., effect of heat treatment and ion irrad. *(Russian)* 3−27843
Co-rare earth 17:2 permanent magnets, precipitation hardened, coercivity rel. to microstruct. 3−23728
Co-Si, cyclic voltammetric studies 3−39277
Co-Si, laser melting, phase segregation, SEM study 3−56962
Co-Si-B amorphous alloy, mech. props. and struct. 3−51685
Co-Sm-B system, mag. moments and coercive forces 3−33919
Co-Sn thin film, cryst. and amorphous, elec. and mag. props. 3−28454

cobalt alloys continued
Co-Ta thin films, amorphous, RF sputtered, mag. and thermal props. 3—28662
Co-Ti, energy of alloy formation calc. using model electron-density functional 3—51810
Co-V films for perpendicular recording 3—28993
Co-W alloy based electrolytic thin films, mag. props. and chemical composition *(Russian)* 3—14092
Co-W alloys, electrocrystallisation during this mag. film deposition *(Russian)* 3—14514
Co-W thin films, amorphous, RF sputtered, mag. and thermal props. 3—28662
Co-W-Mn alloy deposition, behaviour of sulphate and tungstate ions in H_2SO_4 electrolyte *(Russian)* 3—53415
Co-W-P alloys, electrocrystallisation during thin mag. film deposition *(Russian)* 3—14515
Co-Zr metallic glasses, superconductivity and spin fluctuations 3—57456
Co(-Fe)-O, liq., surface tension, effect of O, wettability of Al_2O_3 *(Japanese)* 3—8303
β'-CoAl, projected surface energy bands, Shockley surface states, stability and bonding 3—57398
CoAl, X-ray band spectra 3—38965
$Co_{100-x}B_x$, amorphous, effective mag. moment *(Korean)* 3—3423
$Co_{75}B_{25}$ amorphous alloy, melt temp. effect on thermal stability *(Korean)* 3—4063
$Co_{66}B_{30}Si_4$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3—33932
CoCr based vertical recording materials, sputter deposited, mag. props. and microstruct. 3—57714
CoCr film, RF sputtered, magnetisation characts. 3—28655
$Co_{58}Fe_5Ni_{10}Si_{11}B_{16}$, amorphous ribbon, power loss, annealing conditions effect 3—28649
$(Co_{0.94}Fe_{0.06})_{74.5}Si_{13.5}B_{12}$, amorphous, hyperfine field of Fe in precipitated Co 3—57834
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloy, induced anisotropy reorientation kinetics 3—28547
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$, metallic glass, properties and appl. test *(Polish)* 3—52543
$Co_{71}Fe_5Si_{15}B_9$, amorphous and recrystallised, absorpt of H_2 *(Russian)* 3—23044
CoGa, interaction energies, defect struct., thermodynamic props. 3—23058
β-Co_xGa_{1-x}, elec. resist. near Curie temp. 3—43153
Co_xGa_{1-x}, mag. clustering, aftereffect, neutron depolarisation study 3—52558
$Co_2Ga_{2-x}Fe_x$, mag. order, Mossbauer effect and magnetisation study 3—52525
$CoGa_{1-x}Nb_x$, mag. and struct. props. 3—52369
$Co_2MnZ_{0.98}Sn_{0.02}$, Z=Al, Ga, Si, Ge, Mossbauer study of Sn hyperfine fields 3—28743
$Co_{5.8}Ni_{10}Fe_5B_{16}Si_{11}$ amorphous alloy struct. changes during heating 3—51778
$Co_{42.9}Ni_{29.3}Fe_{7.8}Si_8B_{14}(Co_{50.2}Ni_{19.5}Fe_{7.8}Si_6B_{16})$, metallic glass, structure, X-ray diffr. study *(Chinese)* 3—18224
CoPd alloy films, equiatomic, struct. transitions *(Russian)* 3—33590
CoPt, ordering kinetics after heat treatment, Mossbauer study *(Russian)* 3—29073
CoPt type alloys, twin microstruct. effects on mag. props. 3—18932
$CoSi_2$, on Si substrate, thermal oxidation kinetics meas. 3—14753
$Co_{75}Si_{15}B_{10}$ amorphous alloys, mag. after-effects of H 3—23742
Co_5Sm permanent magnet, mag. domain struct. and microstruct., TEM and electron diffr. study 3—28603
$Co_{3n+5}Sm_{n+1}B_{2n}$, permanent magnets, substitution of Fe for Co, effect on mag. props. 3—47500
Co_xSn_{1-x} amorphous alloy mag. ordering, magnetisation study 3—28615
$CoTi_{1-x}Al_x(Ga_x)$, coexistence of ferromagnetic and nonmagnetic Co 3—52468
$Co_2Ti_{1-x}V_xSn$, mag. moment and Sn hyperfine field, magnetisation and Mossbauer studies 3—28315
$Co_{90}Zr_{10}$, glassy, saturation magnetisation and magnetic anisotropy meas. 3—23723
Co_xZr_{100-x}, metallic glasses, electronic struct. 3—52017
Cr-Al, low temp. hot corrosion, morphology of reaction product 3—14773
Cr-Co, dil., magnetoelastic behaviour, thermal expansion and elastic consts. meas. 3—52581
Cr-Co, dil., magnetoelastic behaviour, thermal expansion and elastic consts. meas. 3—57726
Cr-Co, dilute, spin density wave state, press. effects, neutron diffr. study 3—18853
Cr-Co, pulse plating prep., struct. phase 3—24164
Cr-Fe-Co-based permanent magnets, production methods and mag. props. *(German)* 3—43405
Cu-Al-Co alloys with noncoherent particles, mech. twinning and superelasticity *(Russian)* 3—53126
Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), superplastic, grain growth at low strain rates 3—34414
Cu-Be-Co (2.1, 0.2 wt.%), ageing, influence of rapid solidification 3—29095
Cu-Co, grain boundary enrichment, thermoelec. study 3—39185
Cu-Co, mag. clustering, aftereffect, neutron depolarisation study 3—52558
Cu-Co-Si, internal oxid. effect on mech. props. 3—9121
$Dy(Co, Ni)_2$, intrinsic mag. aftereffect mechanism 3—52557
$DyCo_5$, spin reorientation and spontaneous magnetisation 3—52494
$Dy_{57}Co_{43}$, amorphous, mag. props. 3—57701
$DyCo_2Si_2$, hyperfine interactions of ^{161}Dy and ^{57}Fe 3—13778
$ErCo_2$, magnetic excitation spectra and neutron differential scatt. cross sections 3—52434
Er_4Co_3, bulk amorphous alloy, mag. props. meas. 3—52456
$Er_{57}Co_{43}$, amorphous, mag. props. 3—57701
$ErCo_2Ge_2$, mag. props., magnetisation and neutron diffr. meas. 3—43352
$Er_2Co_{17-x}Zr_x$, mag. props., effect of substitution 3—28636
$Er_{2-y}Pr_yCo_{16.4}Zr_{0.6}$, mag. props., effect of substitution 3—28636
$F_5Co_{75}Si_{13}C_7$, amorphous, deform. and fracture, mech. props. and struct. regularities 3—53202
Fe-Co, dil. alloys, electronic struct. 3—3104
Fe-Co, electrodeposition from acid tartrate bath, effect of superimposed AC 3—47785
Fe-Co, FCC to HCP transformation, electron microscopy study 3—8190
Fe-Co, fracture and stress relax., effect of at. ordering *(Russian)* 3—24332
Fe-Co alloys, electronic and mag. struct. from SCF XαSW calcs. 3—38278

cobalt alloys continued
Fe-Co alloys, Fermi surface topology influence on kinetic props. 3—8405
Fe-Co base alloys, γ-α transition, texture formation *(Russian)* 3—39167
Fe-Co powders, mag. props., vol. concentration dependence meas. *(German)* 3—28642
Fe-Co-B-Si, amorphous, high-field magnetisation and spin wave const. meas. 3—23717
Fe-Co-Cr(V), magnetisation props. and fine cryst. struct., TEM, Mossbauer and X-ray diffuse scatt. studies *(Russian)* 3—33927
Fe-Co-Si ribbon, rapidly quenched, grain struct. and mag. props. 3—29110
Fe-Co-V, creep, constitutive laws, study using biaxial relax. tests 3—47896
Fe-Co-V, cubic centred high conc. solid solns., creep and stacking fault energy 3—58177
Fe-Co-V, mag. props. stability, thermomag. treatment effects 3—43411
Fe-Cr-Co, at. distrib. in low-conc. solid solns. 3—9035
Fe-Cr-Co permanent mag. alloy, high temp. X-ray diffr. study, effect of ageing *(Chinese)* 3—27892
Fe-Cr-Co permanent magnet alloy, atom probe FIM, microstruct. and comp., coercivity mechanism 3—14559
Fe-Cr-Co-Si, cryst. struct., precipitation *(Russian)* 3—37851
Fe-Cr-Co-Si-V, cryst. struct., precipitation *(Russian)* 3—37851
Fe-Mn-X, X=Ti, Cr, Co, Ni or Cu, phase equilibria in ternary Fe systems, review 3—58095
Fe-Ni-Al-Co high coercivity alloys, magnetisation curves and interaction domains *(Russian)* 3—28607
Fe-Ni-Co for cantilever-type displacement sensor using diffused silicon strain gauges 3—282
Fe-Ni-Si-Co, aging of martensite, Co influence *(Russian)* 3—53087
Fe-Ni-Ti-Co austenitic alloys, martensitic transformation and strength, mag. ordering effects *(Russian)* 3—53048
Fe-Ni(Co), liq., surface tension, wettability of Al_2O_3 *(Japanese)* 3—23136
FeCo, partly ordered, electron energy spectra and subbands *(Russian)* 3—52019
$(Fe_{1-x}Co_x)_2A$, A=Y, Zr, U, onset of magnetism, magnetisation 3—23720
$Fe_xCo_{80-x}B_{20}$, amorphous, elec. resistivity and thermopower 3—28327
$Fe_{67}Co_{18}B_{14}Si_1$, amorphous ribbons, with transverse or oblique mag. anisotropy, domain studies 3—28594
$(Fe_{1-x}Co_x)_3Ga$, mag. moments, Mossbauer spectra 3—52418
$(Fe_6Co_{88}Ni_3V_3)_{75}Si_{10}B_{15}$, amorphous soft mag. material with extra low core loss at HF, mag. props. 3—28589
$Fe_{1-x}Co_xSi$, ESR spectra 3—52607
FeCoSiB amorphous alloys, zero-magnetostrictive, disaccommodation elimination 3—28644
FeCoSiB amorphous alloy, zero-magnetostrictive, initial permeability produced by mag. annealing 3—28651
$(Fe_{0.05}Co_{0.95})_{78}Si_8B_{14}$, amorphous accommodation and disaccommodation effects 3—18946
$(Fe_{1-x}Co_x)_{77}Si_{10}B_{13}$, amorphous, Invar effect, magnetostriction meas. 3—57738
$Fe_5Co_{75}Si_{15}B_5$ metallic glass, resistivity and galvanomag. coeffs. 3—28325
$Fe_5Co_{75}Si_4B_{16}$, amorphous metallic glass, mag. annealing kinetics 3—28652
$Fe_{70.3}Co_{4.7}Si_{15}B_{10}$, metallic glass, induced anisotropy reorientation kinetics, isotropic behaviour 3—28546
$Fe_5Co_{70}Si_{15}Bi_{10}$, amorphous ferromagnet, mag. noise, Barkhausen effect 3—23697
$Fe_4Co_{66}V_2Si_8B_{20}$, amorphous, mag. props., mag. head appls. 3—33930
$(Fe_{1-x}Co_x)_{90}Zr_{10}$, amorphous, giant forced vol. magnetostriction 3—3503
$Fe_{34}(Cr_XCo_{1-x})_{66}$ alloys, mag. behaviour 3—8699
$Fe_{75}Sn_{25}$-$Co_{75}Sn_{25}$ alloys, metastable phases, X-ray and electron diffr. studies 3—37855
Gd-Co amorphous film, domain struct., SEM study technique 3—18964
Gd-Co amorphous film, elec. cond. 3—28455
Gd-Co amorphous film, perpendicular mag. anisotropy, influence of H_2 addition 3—28659
Gd-Co amorphous films, FMR linewidth contrib. 3—57786
Gd-Co amorphous films, nonpenetrating mag. domains 3—52576
Gd-Co amorphous films, tetrode sputtered, uniaxial anisotropy meas. 3—43360
Gd-Co amorphous sputtered films, prep. for thermomagnetic recording 3—52932
Gd-Co powders, amorphised by milling, magnetisation props. meas. *(Russian)* 3—33928
Gd-Fe-Co amorphous films, magneto-optic Kerr effect and Curie temp. 3—28841
Gd-Tb-Co film, amorphous, mag. props., magneto-optical recording appls. 3—57720
$Gd(Co,Cu)_5$, giant Barkhausen jumps and domain boundary displacement 3—23713
GdCo amorphous films with large area uniformity and written bit stability, RF sputtering prep. 3—33942
GdCo film, amorphous, sputtered, compositional variation, mag. props. 3—18956
$GdCo_2$, magnetic anisotropy meas. 3—33887
$GdCo_5$, mag. props., H_2 absorption effects 3—52537
$Gd_{1-x}Co_x$ film, amorphous ferrimag., Tsuya-Wangsness formula 3—18957
Gd_3Co, zero gravity solidification expts. and mag. props. 3—38033
Gd_4Co_3, bulk amorphous alloy, mag. props. meas. 3—52456
$Gd(Co_xAl_{1-x})$, mag. susceptibility and EPR study 3—3424
$Gd(Co_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3—52421
$Gd(Co_{1-x}Ni_x)_5$, metallographic study of stability and decomposition mechanism *(German, English)* 3—24208
$Gd(Fe_{1-x}Co_x)_3H_y$, NMW spin-echo study 3—52666
$Gd(Rh_{1-c}Co_c)_2$, mag. props., magnetisation meas. 3—18936
$(Gd_xY_{1-x})Co_2$, thermal expansion and forced vol. magnetostriction 3—52589
$Gd_xY_{2-x}Co_{17}$, saturation mag., electron exchange *(Russian)* 3—47494
$Gd_{1-x}Y_x(Fe_{1-z}Co_z)_2$, CC ^{59}Co NMR study 3—28711
$HfCo_2(HfCo_3)(Hf_6Co_{23})(HfCo_7)$ and amorphous $Hf_{1-x}Co_x$, magnetic moments meas. 3—23597
Ho-Co sputtered thin films, magnetisation distrib. of submicron bubbles 3—52574
Ho-Co thin films, magnetisation distribs. in bubbles and domains, HVEM study *(Japanese)* 3—18960
HoCo amorphous films, thermal Hall hysteresis loops 3—18797
$HoCo_2$, elastic moduli in mag. field, 4 to 200K 3—23777
$HoCo_2$, mag. excitation spectrum 3—3430
$HoCo_2$, magnetic excitation spectra and neutron differential scatt. cross sections 3—52434
$HoCo_3$, mag. anisotropy and magnetisation curves *(Russian)* 3—38610

cobalt alloys continued
$HoCo_5$, magnetisation and mag. anisotropy meas. 3−3439
$HoCo_2Ge_2$, magnetic structure, neutron diffr. study 3−14003
$Ho(Co_{1-c}Ni_c)_2$, mag. phase transition, magnetisation and spin echo NMR study 3−28563
$HoCo_2Si_2$, mag. ordering, neutron diffr. study 3−43353
$(Ho_xY_{1-x})Co_2$, spin reorientation temp. 3−18893
$Ho_xY_{1-x}Co_{5+0.5x}$, mag. moments and magnetisation curves *(Russian)* 3−28520
La-Co permanent magnets, mag. props., composition depend. 3−8702
La-Co-Cu-Mg permanent magnets, mag. props., composition depend. 3−8702
$LaCo_5$ powder, diffusion coeffs. determ. from H absorpt. 3−24464
$LaCo_{5-x}Al_x(Ga_x)$, hydriding property modification by partial substitution, X-ray study 3−2809
$LaCo_2Ni_3$, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399
$LaNi_4Co$, cryst. struct., deuterisation effects, neutron diffr. studies 3−42572
Mn-Ge(-Fe)(Co)(Ni), Vocoloy, antiferromag., influence of Fe, Co and Ni *(Japanese)* 3−9197
$Mn_{1-x}Co_xSb$ thin films, mag. props., ferromag. and spin wave resonance studies 3−43440
$NbCo_2(NbCo_3)$ and amorphous $Nb_{1-x}Co_x$, magnetic moments meas. 3−23597
$NdCo_2$-Fe, hyperfine struct. anisotropy, ^{57}Fe Mossbauer meas. 3−52684
$NdCo_5$ anisotropic ferromagnet, magnetic refrigeration appl. 3−33897
$NdCo_5$, Nd ground state, reduced 4f moment 3−52399
$NdCo_2Ge_2$, mag. props., magnetisation and neutron diffr. meas. 3−43352
$(Nd_xY_{1-x})Co_2$, spin reorientation temp. 3−18893
Ni, superalloy MAR-M247, Co effect on microstruct. 3−14618
Ni superalloy MAR-M247, Co effect on tensile and stress rupture props. 3−14713
Ni-Al-Co (35.2, 1wt.%) martensite, reordering and new ordered phase after ageing 3−43870
Ni-base superalloy, gas turbine alloys, corrosion rel. to electrode pot. 3−53289
Ni-base superalloy, Nimonic 115, induced creep and creep-fatigue at ambient temps. 3−24347
Ni-Cl-Zn alloy electrodeposition from borate bath, addition agents effects 3−19297
Ni-Co superalloys with CeO_2 thermal barrier coating, dip process 3−43996
Ni-Co thin films, spin wave resonance obs. 3−57782
Ni-Co-Cr, corrosion resist. in dil. H_2SO_4, rel. to phase comp., anodic polarisation curves *(Japanese)* 3−58293
Ni-Co-Cr-Ti-Al superalloys, corrosion in sulphate melt, 1173K, $NaCrS_2$ phase identification 3−53288
Ni-Co-Fe (21, 15 wt.%) film with low-coercivity channels, mag. struct. study *(Russian)* 3−38586
Ni-Co-Ti, corrosion resist. in dil. H_2SO_4, rel. to phase comp., anodic polarisation curves *(Japanese)* 3−58293
Ni-Cr-Co, IN 738, high temp. low cycle fatigue, S containing environment effect 3−34480
Ni-Cr-Co, wrought superalloys, creep, 800°C, strengthening mechanisms 3−47922
Ni-Cr-W-Co-Mo-Ti-Al superalloy, investment cost, tensile props., stress-rupture, corrosion resist., rel. to B/C modification 3−58161
Ni-Cr-W-Co-Ti, chromoaluminised in vac., coating struct. 3−29213
Ni-Fe-Co-Ti foils, containing nonmag. precipitates, magnetisation processes, TEM study 3−52572
Ni-Fe-Co-Ti thick foils, mag. domain struct., TEM study 3−52573
$(Ni_{1-x}Co_x)_2MnSn$ Heusler alloys, ferromagnetic and paramagnetic props. 3−3422
$NpCo_2Si_2$, magnetic props. under high press. 3−18850
Pd-Co, dil., Curie temp., vol. depend., tight-binding calc. 3−52472
Pd-Co, magnetocrystalline anisotropy and magnetostriction 3−57582
Pd-Co alloys, hydrogenated, spin glass type mag. transitions obs. *(French)* 3−14047
PdCo alloy, ferromag., quadrupole interaction for Co, nucl. orientation study 3−3598
$(PdCuSi)_{90}Co_{10}$, amorphous spin glass, evidence for existence of mag. two level system 3−47510
$Pr_2(Co_{1-x}Fe_x)_{17}$, magnetostriction and magnetisation 3−23771
Si-^{57}Co, supersaturated soln., annealing and precipitation, Mossbauer study 3−43474
Sm-Co, axially magnetised, magnetic thickness gauging of small components 3−25850
Sm-Co films, ferromagnetic, direct synthesis by selectively thermalised sputtering 3−28663
Sm-Co permanent magnets, coercivity mechanisms, production processes and aging behaviour *(German)* 3−43404
Sm-Co thin films prepared by oblique incidence method, mag. props. 3−14091
Sm-Co-Cu-Fe-Zr magnets, sintered, phase comp. and struct. 3−4043
Sm-Zr-Co-Cu-Fe-epoxy resin metalloplastic permanent magnets 3−3487
$Sm(Co, Cu, Fe, Ti)_7$ magnets, cryst. struct., polymorphism and hard mag. props. 3−51542
$Sm_2(Co, Cu, Fe, Zr)_{17}$ magnets having high intrinsic coercive force and maximum energy product 3−14088
$Sm(Co,Fe,Cu,Hf)_{7.25}$ permanent mag., mag. domains 3−33921
$Sm_2(Co,Fe,Cu,Zr,Cr)_{14.8}$ permanent mag., ferromag. coercivity 3−33937
$Sm(Co,Fe,Cu,Zr)_{7.22}$ permanent mag., mag. domains 3−33921
Sm(Co, Fe, Ni) system, mag. props. 3−14024
$SmCo_5$, Barkhausen jumps, anisotropy of field 3−23714
$SmCo_5$, exchange and hyperfine fields on dil. ^{153}Eu 3−52676
$SmCo_5$, form. by electromag. containerless reaction of Sm with Co 3−14525
$SmCo_5$, mag. anisotropy of Sm^{3+} near lattice defects 3−57591
$SmCo_5$, magnetisation reversal, 80 to 300K 3−52550
$SmCo_5$ powder and sintered compact, mag. props. rel. to milling medium 3−47526
$SmCo_5$ sintered permanent magnet, cryst. struct. and coercive force 3−43401
Sm_2Co_{17}, mag. anisotropy of Sm^{3+} near lattice defects 3−57591
Sm_4Co_3, bulk amorphous alloy, mag. props. meas. 3−52456
$Sm(Co\text{-}Cu\text{-}Fe\text{-}Ti)_{6.8}$ sintered magnet, magnetisation reversal at very low temp. 3−52540
$SmCo_{3.5}Cu_{1.5}$, magnetisation reversal at very low temp. 3−52540
$Sm_2(Co_{1-x}Fe_x)_{17}$, exchange and hyperfine fields on dil. ^{153}Eu 3−52676

cobalt alloys continued
$Sm_2Co_xFe_y(Cu_y)(Zn_y)(Zr_y)$, exchange and hyperfine fields on dil. ^{153}Eu 3−52676
$SmCo_{2.5}Ni_{2.5}$, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399
$(Sm_xY_{1-x})_2Co_{17}$, mag. anisotropy, conc. depend. *(Russian)* 3−23622
$TaCo_2(TaCo_3)$, magnetic moments meas. 3−23597
$TbCo_2$, X-ray study of cryst. deform. 3−51541
$TbCo_2Ge_2$, magnetic structure, neutron diffr. study 3−14003
$TbCo_{2-x}Ni_x$, unit cell parameters and magnetoelastic interaction *(Russian)* 3−38665
$TbCo_2Si_2$, mag. ordering, neutron diffr. study 3−43353
$Tb_{0.23}(Fe_{1-y}Co_y)_{0.77}$, amorphous, mag. and magneto-optical props. 3−57897
$Tb_xY_{1-x}Co_5$, neutron study of mag. struct., anisotropy and magnetisation *(Russian)* 3−33859
Ti-Ni-Co system, mutual diffusion coeffs., temp. depend. *(Russian)* 3−38115
TiC-Co sintered composites, mass transport of molten metals 3−39086
$TmCo_2$, first order mag. phase transition and mag. struct., Mossbauer study 3−18892
$TmCo_3$, ^{169}Mossbauer spectra, cryst. field calcs. 3−52675
$TmCo_3$, mag. anisotropy and magnetisation curves *(Russian)* 3−38610
UCo_2, electronic struct. calcs. 3−18608
$U(Fe_xCo_{1-x})_2$, magnetisation and susceptibility meas. 3−57554
$U(Fe_xCo_{1-x})_2$, paramag. and ferromag. props., magnetisation and susceptibility meas. 3−33866
$U(Fe_{1-x}Mn_x)_2$, electronic struct. calcs. 3−18608
$U(Ni_xCo_{1-x})_2$, magnetisation and susceptibility meas. 3−57554
$V_{62}Co_{38}$, sigma phase ordering 3−2518
W-Co-P, sintered, components interactions 3−39098
WC-(TiC)-Co, hard metals, induction sintering 3−47797
WC-CO, reaction with O_2 to form CO, 1300 to 2100K *(German)* 3−29299
WC-Co, cemented carbide prod., influence of trace elements 3−3999
WC-Co, cemented carbide spatial relationship between WC and Co 3−47842
WC-Co, crack resist. testing, 20-2000°C 3−58329
WC-Co, diamond filled composites, cracking resist. determ. 3−39321
WC-Co, intergranular cracking, appl. of von Mises criterion 3−53172
WC-Co, microstructure, processing effects 3−29050
WC-Co, sintered, compressive strength, effects of press. and temp. 3−9267
WC-Co cement, fracture toughness, effects of nonstoichiometric C contents 3−4106
WC-Co hard metal, oxidation at high temp. and low press. 3−24181
WC-Co hardmetal, indentation and compressive creep tests equivalence 3−24427
WC-Co powder pressing using US vibr. press with vibr. die 3−1893
Y-Co systems, mag. and supercond. phases, phase diagram study 3−4005
$Y_2(Co, M)_x$ (M=Al, Cu, Fe), cryst. growth by Bridgman method 3−19263
YCo_3 amorphous films, mag. props., effect of incorporated O_2 3−57721
YCo_5, mag. props., H_2 absorption effects 3−52537
$Y_{1-x}Co_x$, amorphous, magnetic moments meas. 3−23597
Y_2Co_{17} and YCo_5, cryst. growth by Bridgman method 3−19263
$Y_{36}Co_{28}$, superconducting and mag. props. 3−3353
Y_4Co_3, magnetic and superconducting props. 3−23601
Y_4Co_3, phase transitions of ferromag. and supercond. 3−3359
Y_9Co_7, magnetism and supercond., influence of impurities 3−57696
Y_9Co_7, supercond. and mag. props. at high press. and high mag. field 3−47450
$Y_4(Co_{1-x}Ni_x)_3$, weak ferromag., supercond., magnetisation meas. 3−57469
$Y(Fe_{1-x}Co_x)_2$, H_2 absorption effects on mag. props. 3−52423
$Y(Fe_xCo_{1-x})_2$, mag. clustering, aftereffect, neutron depolarisation study 3−52558
$Y(Fe_xCo_{1-x})_2$, thermal expansion and forced vol. magnetostriction 3−52589
$Y(Fe_{1-x}Co_x)_3H_y$, NMW spin-echo study 3−52666
$(Y_{1-x}Gd_x)_2Co_{17}$, Y and Co hyperfine fields, Gd contrib., NMR study 3−19012
$Yb_2Co_{17-x}Zr_x$, mag. props., effect of substitution 3−28636
$Zr_{1-x}Co_x$, amorphous superconductor, upper critical fields 3−3393
Zr_8Co_2, crystallisation, DSC, X-ray diffr. and Mossbauer studies 3−51494
$ZrMn_2Co_{0.8}$, hydride, calorimetric enthalpy of form., decomp., config. entropy 3−53442
$ZrMn_2Co_{0.8}$, nonstoichiometric, unit cell dimensions and hydriding characts. 3−37859
$Zr(V_xCo_{1-x})_2$:H, Laves phase, H interstitials study 3−38340

cobalt compounds
see also cobalt alloys
C $CoBr_2.6(0.48D_2O, 0.52H_2O)$, spin flop system with coupled order parameters, intermediate phase, crit. neutron scatt. 3−14050
chelate complex, temporal stability in reducing geochemical environments 3−41120
$CoFe_xAl_{2-x}O_4$, solid solution, Mossbauer and high field magnetisation studies 3−34019
$Fe_{1-x}Co_xCl_2$, site-random solid soln. mag. props. from DC mag. susceptibility and elastic neutron diffraction 3−33888
ferrite thin film form. by solid state $CsO+Fe_3O_4$ reaction 3−19266
films supported by Al substrate, emissivity measurement and comparison with theoretical results 3−34719
formate.$2H_2O$, antiferromag., staggered mode, dynamical critical phenomena 3−57632
glycerol phosphoryl glycerol-Co complex, ^{31}P NMR freq. shift 3−1386
monochloroacetates, IR spectra, correlation with cryst. struct. 3−14307
oxalate, low energy plasmon satellite of $K\beta_{1,3}$ X-ray emission spectra 3−58005
oxides, local struct., EXAFS obs. 3−14390
phosphatidyl glycerol bilayer membrane-Co complex, ^{31}P NMR freq. shift 3−1386
phthalocyanine, dielec. props., temp. and freq. depend. 3−28751
rare earth compounds, $RCoSi_2$, antiferromag. and paramag. props., susceptibility study 3−23604
trimethylammonium cobalt trichloride, AC susceptibility as mag. probe 3−23599
Al-Co mixed oxide spinel phase, surface texture, X-ray, DTA and N sorption obs. 3−47202

cobalt compounds continued
β''-Al_2O_3-Na_2O-CoO, dopant effects on H_2O sorption, TGA and DTA study 3−8324
$CO(CN)_2$, low energy plasmon satellite of $K\beta_{1.3}$ X-ray emission spectra 3−58005
CO(II) dopamine complex, ^1H and ^{13}C paramag. shifts and ^{13}C mag. relax. rates 3−26765
(Co, Mg)O, mixed cryst., cations and vacancy defect diffusion coeff. 3−28147
(Co,Mn)O, activities of CoO and cluster form., EMF meas. at 900-1450K 3−24230
Co (II) complexes, bis (ketone thiosemicarbazonato) chelates, mag. and spectrosc. obs. 3−50396
Co (111) complex with phthalocyanine, energy band struct., EHT calcs. 3−13718
Co complex, $[(pyridine\text{-}N\text{-}oxide)_6Co](ClO_4)_2$, Raman spectrum 3−47641
Co complex, cobalt dialkyldithiophosphato complexes, core-excited quantum yield spectra 3−24053
Co complex, diacetylmonoxime methyldithiocarbohydrazone Co(III), quantum chem. calcs. 3−21623
Co complexes, Co(II) porphyrins, Co-O_2 and O-O stretching vibrs., resonance Raman obs. 3−53618
Co ferrite, prep. by ageing and precipitation 3−39022
Co oxide glasses, local struct., EXAFS obs. 3−14390
Co-Mo-W-C, phase equilibria, incipient melting *(German)* 3−9038
Co-Zn ferrites, elec. cond., Seebeck coeff. meas., mag. props. 3−3190
CoAsS, cobaltite, cryst. struct., electron microprobe and X-ray study 3−2494
$Co_{77}B_{23}$, metallic glass, positron annihilation study 3−19226
$Co(BF_4)_2.6H_2O(D_2O)$, mag. susceptibility and anisotropy, dielec. const., struct. transitions, ligand field parameters, bond ordering 3−57558
$CoBr_2$, trigonal layered antiferromag., mag. excitations 3−57565
$Co(CN)_6^{3-}$ complexes, solid and solns., vibr., IR and Raman anal. 3−19116
$CoCO_3$, antiferromagnet, Mandelstam-Brillouin scatt. from magnons and phonons 3−28870
$CoCO_3$, synthetic single crysts., optical absorpt. spectra 3−52806
$CoCO_3$, thermal cond., phonon-magnon scatt. 3−51877
$Co(CO)_4H$, Koopmans' defects, many-body INDO calcs. 3−1244
$Co(CO)_3NO$, Auger line shape investig. 3−21831
$Co(CO)_3NO$ fragment ions, gas phase chem., appl. as chem. ionis. reagents 3−58402
$CoCl_2$ intercalated graphite, thermal cond. and thermopower at mag. transition 3−47324
$CoCl_2$ intercalation cpd. with graphite, mag. transitions, susceptibility and spontaneous magnetisation studies 3−57611
$CoCl_2$, low energy plasmon satellite of $K\beta_{1.3}$ X-ray emission spectra 3−58005
$CoCl_2$, trigonal layered antiferromag., mag. excitations 3−57565
$CoCl_2$, X-ray absorpt., near edge, multielectron contrib. 3−14387
$CoCl_2$:Fe, localised mag. modes, far IR absorpt. spectra 3−3770
$CoCl_2(Br_2)$, thin films, IR spectra 3−47723
$CoCl_2$.2 pyridine, one-dimensional magnet, mag. excitations, ESR study 3−57752
$CoCr_2O_4$, chem. transport, thermodynamic anal. and cryst. growth 3−28971
$CoCr_2O_4$, cone struct., NMR studies at high mag. fields 3−14151
$CoCr_2S_4$, vapour pressure, temp. depend., tensimetric investig. 3−57101
CoF_2, low energy plasmon satellite of $K\beta_{1.3}$ X-ray emission spectra 3−58005
CoF_2, nucl. polarisation obs., neutron scatt. expts. 3−57324
$CoFe_{2-x}Al_xO_4$ ferrite, polar Kerr rotation and Faraday effect 3−28842
$CoFe_{2-x}M_xO_4$ (M=Mn, Cr, Al) ceramic, magneto-optic Kerr effect 3−28840
$CoFe_2O_4$ ferrite, crystal growth by vapour phase reaction method 3−24106
$CoFe_2O_4$, LPE grown, mag. and magneto-optical props. 3−14095
$Co_xFe_{3-x}O_4$ ferrite, polar Kerr rotation and Faraday effect 3−28842
$Co_xFe_{3-x}O_4$, particle growth by air oxidation of aqueous suspensions and mag. props. 3−52986
$Co_{1-x}Fe_xTiO_3$ single crystals, floating zone growth method, controlled atm. 3−52925
$Co_yFe_{1-y}5$, metastable coexistence of high and low-temp. states, Mossbauer study 3−3611
$Co(H_2PO_4)_2.2H_3PO_4$, sp. ht. meas., 100 to 373K 3−42806
CoI_2, electronic and mag. props. of ^{57}Fe, Mossbauer spectroscopy study 3−19019
Co(II) complex, low-spin, nucl. quadrupole coupling, EPR study 3−14120
Co(II) complex with 1-benzoyl-2-monothiobiuret, spectrophotometric study 3−41591
Co(II) complexes, structure, mag. moments visible and visible spectra 3−52786
$Co_{1-x}Mg_xO$ solid solution, elec. cond., Seebeck coeff., hole mobility, 900-1200°C, comp. depend. 3−43169
$CoMnAlO_4$, spinel, structural, mag., elec. props., ionic config. 3−13180
$Co_{0.1}Mn_{1.7}Fe_{1.2}O_4$, ferromag. reson., mag. anisotropy and magnetisation for multi-domain struct. *(Russian)* 3−18993
$(Co_{1-x}Mn_x)_2P$, Curie temp., press. depend., AC susceptibility meas. 3−43364
$Co_2Mo_3O_8$, spontaneous magnetisation meas., mag. anisotropy 3−52367
$Co(NH_3)_6Cl_3$, cryst. struct. and polymorphism, X-ray diffr. study 3−2509
$Co(NH_3)_6Cl_3$, mol. motion and rotational tunnelling, NMR study 3−52646
$Co(NH_3)_6Cl_3$, X-ray K absorpt. edge struct. of ligand Cl ion 3−57997
$Co(NH_3)_4Cl_2Cl$, X-ray K absorpt. edge struct. of ligand Cl ion 3−57997
$Co(NH_3)_5ClCl_2$, X-ray K absorpt. edge struct. of ligand Cl ion 3−57997
$Co(NH_3)_6I_3I_4$, cryst. struct. *(German)* 3−51550
$Co(NH_4)_2(SO_4)_2.6H_2O$, host lattice effects on EPR of VO^{2+} 3−57756
$Co(NO_3)_2.nH_2O$, cryst. struct. and co-crystallisation 3−27881
$CoNa(H_2PO_3)_3$, cryst. struct., H bonds 3−2487
$Co_{0.37}Na_{0.14}Pt_3O_4$, elec. cond. and mag. susceptibility 3−3191
CoO, defect props. 3−56875
CoO film, chem. composition and struct., Auger and electron microscopy study 3−8351
CoO, reduction, external mag. field effects 3−53369
CoO selective absorber coatings high temp. degradation 3−53588
CoO:Fe, Mossbauer study of excess charge compensation 3−33246
CoO:In, grain boundary segregation 3−24235
CoO:Sn, Mossbauer study of excess charge compensation 3−33246
CoO-Al_2O_3-SiO_2 (20, 40 wt.%) glass, spin-glass, photomag. effects 3−38624

cobalt compounds continued
CoO-P_2O_5-Fe_2O_3 system, amorphous, hereditary mag. props. and stability 3−57703
$Co_{1-\delta}O$, elec. cond. mechanism 3−23378
$Co_{1-x}O$, transitory creep, rel. to point defect diffusion 3−28037
Co_3O_4, reduction, external mag. field effects 3−53369
$(CoO)_x(2B_2O_3.K_2O)_{1-x}$ glasses, mag. props. 3−23577
$CoPt_3O_6$, elec. cond. and mag. susceptibility 3−3191
$CoPt_3O_6$, hydrothermal crystal growth, electrical conductivity 3−34210
CoS, electronic struct., $X\alpha$ discrete variational calc. 3−52027
CoS-Cr_2S_3-In_2S_3, phase relationships, X-ray diffr., thermal anal., and IR spectra 3−43795
CoS_2, EPR and ferromagnetic resonance study 3−18996
CoS_2, magneto-optical spectrum and electronic struct. 3−57889
CoS_2, metallic electronic struct. calc. 3−18611
Co_9S_8, bulk and supported, mag. susceptibility meas. 3−3410
$CoSO_4.7H_2O$, low energy plasmon satellite of $K\beta_{1.3}$ X-ray emission spectra 3−58005
$Co(S_{1-x}Se_x)_2$, specific heat and low field mag. props. meas. 3−23662
$Co(S_xSe_{1-x})_2$, mag. resonance study 3−52631
$CoSi_2$, epitaxial, formation and struct. 3−3010
$CoSi_2$, epitaxial film on Si, form. and struct. 3−3009
$CoSiF_6.6H_2O$, IR absorption studies 3−19123
$CoSiF_6.6H_2O$, IR spectra changes during struct. phase transition 3−38808
$CoSiF_6.6H_2O$, photoacoustic study of phase transition 3−33422
$CoSi_2Si(111)$ interface struct., determ. by ultrahigh resolution electron microscopy 3−8343
Co_2SnO_4, cryst. growth by flux method 3−8955
$CoTiF_6.6D_2O$, phase transitions, ^2D NMR quadrupole coupling const. and elec. field gradient studies 3−42765
$CoTiF_6.6H_2O$, IR spectra changes during struct. phase transition 3−38808
$CoTiO_3$, magnetic anisotropy 3−14045
Co_2TiO_4, semi-spin glass behavior 3−8652
$Co_3V_2O_8$, mag. props., neutron diffr. study 3−57541
Co_xVS_2, cryst. struct., mag. and elec. props. 3−7997
$Co_{1-x}Zn_xF_2$, antiferromagnet, dilute, mag. susceptibility and transition temp. 3−57557
$Co_{0.5}Zn_{0.5}Fe_2O_4$, elec. cond. mechanism, Fe deficiency effects 3−23383
$Co(\eta^5\text{-}C_5H_5)_2^+$ layer intercalation cpd. with $ZnPS_3$, vibr. spectra 3−57914
Cs_3CoBr_5, $CoBr_4^{2-}$ ion spin density and bonding, magnetic structure factors, polarised neutron diffraction study 3−8651
$CsCoCl_3$, one-dimensional magnet, mag. excitations, ESR study 3−57752
$Cs_2(CoCl_4)$, X-ray K absorpt. edge struct. of ligand Cl ion 3−57997
Cs_3CoCl_5, $CoCl_4^{2-}$ ion spin density and bonding, polarised neutron diffraction data, HF calc. or magnetic structure factors 3−8650
$CuCo_2S_4$, mag. props. study 3−3425
$ErCo_2Si_2$, antiferromag. struct., neutron diffr. study 3−52368
$Er(Rh_{1-x}Co_x)_4B_4$, supercond. and magnetism 3−57495
$EuCo_2P_2$, Mossbauer studies 3−57823
Fe-Co-B-O particles, with super high coercivity, surface struct. 3−57182
$Fe_{1-x}Co_xCl_2$, random mixture with competing spin anisotropy, phase diagram 3−28567
$Fe_{1-x}Co_xCl_2.2H_2O$, random mixture with orthogonal spin anisotropies, Mossbauer study 3−43468
$Fe_{1-x}Co_xSO_4.7H_2O$, cooperative Jahn-Teller effect, ^{57}Fe Mossbauer effect 3−52692
$FeCo_{1.5}Ti_{0.5}O_4$, mag. struct., neutron study 3−52389
$Fe_xCo_{1-x}TiO_3$, random mixture, competing spin anisotropies, Mossbauer and neutron scatt. studies 3−14170
Ga_2S_3-CoS system, phase diagram, DTA, metallography and X-ray diffr. studies *(French)* 3−38032
Ga_2Se_3-CoSe system, phase diagram, DTA, metallography and X-ray diffr. studies *(French)* 3−38032
GeTe-Co_2Ge system, polythermal cross section, microstruct., DTA and X-ray anal. 3−51749
$H_3Co(CN)_6$, Raman spectra 3−47649
$K_3Co(CN_5)X$, X=CN, NO_2, N_3, I, Cl, Br, electronic struct. *(Russian)* 3−23271
$KCoF_3$ Heisenberg antiferromagnet, 3D, linear birefringence, crit. behaviour 3−8798
$K_3Co_{1-x}Fe_x(CN)_6$, phase transition and soft mode 3−43493
Li-Co(-Mn) ferrite, mag. anisotropy, order-disorder effects 3−33886
Li-Zn-Ni-Co-Mn ferrites, microstruct. and memory core characts., effect of composite fluxes 3−14549
Li_xCoO_2 ($0< x\leq 1$): a new cathode material for batteries of high energy density 3−14937
$Mn_{1-n}Co_nF_2$, mag. susceptibility and sublattice magnetisation 3−18864
$Mn_{0.8}Co_{0.2}Sb$ films, polar Faraday rot. and optical absorpt. coeff. 3−8803
β''-Na_2O-Al_2O_3-CoO, ionic cond., doping effects 3−42834
(Ni, Zn, Co)Fe_2O_4, low temp. oxidation, TEM study 3−58262
(Ni, Zn, Co)$_2Fe_{16}O_{27}$:Ba, topotactic grain boundaries, TEM study 3−8057
Ni-Co ferrites with negative temp. coeff. of permeability 3−14083
Ni-Cu-Co ferrite, magnetoelastic surface wave vel. 3−18968
Ni-Mn-Co-Cu ferrites, piezomag., mag. hysteresis of elastic moduli and internal friction 3−14106
NiZnCo ferrites for particle accelerators, high freq. mag. losses, microstruct. effects 3−11594
Rb_2CoF_4, uniaxial antiferromag., magnon side band under high mag. field 3−57890
$Rb_2Co_cMg_{1-c}F_4$, mag. susceptibility and random-field effects 3−33864
Si-$CoSi_2$, directionally crystallised eutectic alloy, microstructure and crystallography 3−7980
TiB_2-CoB, boride additives effect on mech. props. 3−24323
$TmCo_3H_x$, press.-comp. isotherms, Debye-Scherrer X-ray study 3−2808
$Y_3Fe_{5-2x}Co_xGe_xO_{12}$, broad mag. transitions from Mossbauer spectra 3−33895
Yb_2O_3-Cr_2O_3-CoO, phase diagrams, X-ray diffr. study 3−2745
Yb_2O_3-Ga_2O_3-CoO, phase diagrams, X-ray diffr. study 3−2745
$Zn_{0.99}Co_{0.01}O$ solid soln., elec. cond., influence of sintering 3−3180

cochlea *see ear*

codes
see also encoding; error correction codes
hydrometeorological data transmission, new international code 3−10070

coding *see encoding*

coefficient of thermal expansion *see thermal expansion*

coercive force
see also magnetic hysteresis
alloys, hard, standard samples, measurement by automated reference instrument 3−45169
automatic measurement, for mag. steel quality control *(German)* 3−29240
chromite remanence hysteresis props. 3−48540
coercimeter with attachment for monitoring thermal processing quality 3−48020
coercivitimeter, electronic, for amorphous ribbon toroids 3−25903
ferrite, rectangular-loop, explosive working effect on EM and strength props. 3−53004
ferromagnet, magnetisation, statistical theory *(Russian)* 3−28606
ferromagnetic material, coercivity, domain level modelling, using numerical mode pushing 3−28602
ferromagnetic tape cores, mag. switching and flicker noise 3−23706
fine magnetic powders with super high coercivity, surface struct. 3−57182
garnet epitaxial films, induced coercivity study 3−33938
inspection of components of high inductions using coercimeter and attached electromagnet with ferrosensor 3−29270
loops, dynamic and quasi-static, improved meas. techniques *(German)* 3−40653
magnetic film, stripe domain struct., nucleation field, wall coercivity influence 3−18965
magnetic hysteresis, domain boundary random pot. influence *(Russian)* 3−38645
measurement of soft mag. components using vibr. sample magnetometer 3−5820
MnAl evaporated films for magnetic recording media 3−18958
multiple acicular particles comprising tape coating, coercivity 3−43409
orthoferrites, single cryst., induced coercivity study 3−33938
Permalloy films, vacuum evaporated, $^+H_2$ ion implantation effects on coercive force and magnetoresist. 3−38492
permanent magnet materials, efforts to reduce Co consumption 3−47523
permanent magnets, theory, book contrib. 3−57707
powder, coercivity, particle interactions and volume packing factor 3−28638
powders, mag. props., vol. concentration dependence meas. *(German)* 3−28642
rare earth compounds, $R_3Ni_7B_2$, mag. and struct. characts., magnetisation and Mossbauer studies 3−33934
rare earth-Fe alloys, rapidly quenched, permanent mag. props. 3−33935
rare earth-transition metal alloys, amorphous, magnetisation processes *(Russian)* 3−28609
rare earth-transition metal compounds, mag. anisotropy 3−8665
steel, Al, highly-coercive, electron microscope study 3−34328
steel, C type, 20k, brittle fracture susceptibility eval., nondestructive magnetomech. method, hot rolling and ageing effects 3−48017
steel, low alloy type 25Kh1MF, fastener blanks, magnetic inspection of hardness 3−48019
steel, stainless, forgings of 03Kh12K12D2-VD, mag. and mech. props. 3−29129
steel, type 38KhGNM, quenching and tempering effect on mag., elec., and mech. props. 3−58142
two-phase particulate mag. composites, phase distrib. sensitive mag. props. 3−23730
Al-Ni-Co-Ti, Permag A-3290, thermomag. treatment for higher coercivity *(Czech)* 3−14615
AlNiCo permanent magnet alloys, struct. and props. book contrib. 3−57708
Ba ferrite film with perpendicular magnetisation, form. by targets-facing sputtering 3−28994
Ba ferrite particles, perpendicular mag. recording props. 3−28641
Ba hexaferrites, substituted M-type, mag. props. and microstruct. 3−14086
Bi-MnBi, irreversible magnetisation processes 3−23718
$CdCr_2Se_4$, ferromag. semicond. film, delayed Barkhausen jumps and mag. struct. 3−23705
$CdCr_2Se_4$ film, synthesis, chem. composition, elec. and mag. props. 3−58050
Co ferrite thin film form. by solid state $CsO+Fe_3O_4$ reaction 3−19266
Co thin film recording medium on Cr, origin of coercivity and high squareness 3−18953
Co-B(C)(Si) film, amorphous ferromag. mag. props. 3−18955
Co-Cr film, sputtered, magnetisation reversal 3−28654
Co-Cr film, vac. deposited, mag. and struct. props. 3−38654
Co-Cr perpendicular magnetic recording medium for mag. tapes *(Japanese)* 3−47531
Co-Fe-Ni-Mo-B-Si glassy alloys, nonmagnetostrictive, mag. props. 3−28619
Co-Fe-Si-B, amorphous, short-range order, stability, and mag. props. *(Russian)* 3−37792
Co-Gd-B system, mag. moments and coercive forces 3−33919
Co-Ni films, sputter deposited, struct. and high coercivity props., additional elements effects 3−23744
Co-Ni:N film, high coercivity and microstruct. 3−18947
Co-rare earth 17:2 permanent magnets, precipitation hardened, coercivity rel. to microstruct. 3−23728
Co-Sm-B system, mag. moments and coercive forces 3−33919
Co-Ta(W) thin films, amorphous, RF sputtered, mag. and thermal props. 3−28662
$Co_{66}B_{30}Si_4$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3−33932
CoCr film, RF sputtered, magnetisation characts. 3−28655
$Co_xFe_{3-x}O_4$, particle growth by air oxidation of aqueous suspensions and mag. props. 3−52986
Co_5Sm permanent magnet, mag. domain struct. and microstruct., TEM and electron diffr. study 3−28603
$Co_{3n+5}Sm_{n+1}B_{2n}$, permanent magnets, substitution of Fe for Co, effect on mag. props. 3−47500
CrO_2 powders, mag. props., vol. concentration dependence meas. *(German)* 3−28642
Cu-Ni compositionally modulated thin films, mag. props. 3−23746
$Dy_{57}Co_{43}(Fe_{43})$, amorphous, mag. props. 3−57701
$Er_{57}Fe_{43}(Co_{43})$, amorphous, mag. props. 3−57701
EuS epitaxial films, ferromag. domains, magneto-optical study 3−18963
Fe alloys, sintered, soft magnetic, props. and appl. 3−39065
γ-Fe O powders, mag. props., vol. concentration dependence meas. *(German)* 3−28642

coercive force continued
Fe particles, prep. for mag. recording tapes, coercive force, saturation magnetisation, grain props. 3−23739
Fe, porous sheet material, mag. props. 3−14749
Fe powder, reduced from α-FeOOH, coercive force 3−18944
Fe powders, sintered mag. cores, coercive force 3−47527
Fe-B-Si, amorphous, casting, max. melt spun thickness, composition effect 3−29027
Fe-B(c)(Si) film, amorphous ferromag. mag. props. 3−18955
Fe-based metal pigments for mag. recording tapes, coercivity, porosity and particle size depend. 3−23740
Fe-C magnetic films, RF reactively sputtered, phys. props. and struct. 3−52563
Fe-Co powders, mag. props., vol. concentration dependence meas. *(German)* 3−28642
Fe-Co-Cr(V), magnetisation props. and fine cryst. struct., TEM, Mossbauer and X-ray diffuse scatt. studies *(Russian)* 3−33927
Fe-Co-Si ribbon, rapidly quenched, grain struct. and mag. props. 3−29110
Fe-Cr-Co permanent magnet alloy, atom probe FIM, microstruct. and comp., coercivity mechanism 3−14559
Fe-Ni-Al-Ti mag. alloy, semi-hard, struct. and mag. props. 3−58145
Fe-Pd, permanent magnet alloy, isothermal heat treatment, phase transform. mag. props. 3−58119
Fe-Pd permanent magnet alloys, isothermal heat treatment and phase diagram *(Japanese)* 3−9032
Fe-Pd-Ag, coercive force, residual flux density, Ag conc. depend. 3−57706
Fe-Si (6.5 wt.%) ribbon, rapidly quenched, mag. props., thickness depend. 3−28656
Fe-Si (<4 wt.%) ribbons, high flux density 3−28612
Fe-Si cryst. ribbons, rapidly quenched, coercive force and mag. losses 3−52542
Fe-Si-Al-Ni, super Sendust films, mag. props., recording appls. 3−33943
$Fe_{75}B_{25}$ ribbons and sputtered films, ion bombardment amorphisation and props. 3−2416
$(Fe_yB_{1-y})_{1-2x}R_xLa_x$ alloys, amorphous, low field mag. props. 3−28545
FeBSi amorphous alloys, microstructurally depend. mag. props. 3−28620
$Fe_{78}B_{13}Si_9$ metallic glass, accelerated ageing, 60 Hz appl. 3−29109
$Fe_{70.5}B_{15.5}Tb_7La_7$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3−33932
$(Fe_xB_{1-x})_{0.9}Tb_{0.05}La_{0.05}$, crystallized, coercive force and microstruct., composition depend. 3−33931
$Fe_4Co_{66}V_2Si_8B_{20}$, amorphous, mag. props., mag. head appls. 3−33930
$FeGaO_3$, noncryst. ferromag., cond. and mag. props. 3−28660
$Fe_{16}N_2$, metastable, reactively sputtered, high saturation magnetisation meas. 3−28628
Fe_4N power, synthesis and mag. props., mag. tape appl. 3−23729
γ-Fe_2O_3, partial reduction to produce high coercivity particulate mag. media 3−28635
γ-Fe_2O_3 particles, SiO_x adsorbed, high coercive force, ESCA study 3−23737
γ-Fe_2O_3, prep. from Fe_3O_4, coercivity, particle size depend., chem. struct. 3−23736
γ-Fe_2O_3:Co, coercivity, rot. hysteresis, mag. recording appls. 3−23734
γ-Fe_2O_3:Co, prep., coercivity, mag. recording appl. 3−23735
γ-Fe_2O_3:Co ferrite, epitaxial, coercivity, saturation magnetisation 3−23733
γ-Fe_2O_3-Fe_3O_4 solid solutions, coercivity, effect of vacancies 3−38646
Fe_3O_4:Co, coercivity, rot. hysteresis, mag. recording appls. 3−23734
Fe_3O_4-Fe_2O_3 film, prep. by reactive condensation, oxidation and coercivity 3−18954
γ-Fe_2O_3(:Co) fine particles, mag. anisotropy, ^{57}Fe Mossbauer study *(Chinese)* 3−18942
$Fe_{78}Si_{10}B_{12}$ amorphous alloy, struct. relax., elec. and mag. study 3−27847
Gd, magnetic hysteresis near Curie temp. 3−52541
Gd-Co amorphous sputtered films, prep. for thermomagnetic recording 3−52932
Gd-Tb-Co film, amorphous, mag. props., magneto-optical recording appls. 3−57720
La-Co permanent magnets, mag. props., composition depend. 3−8702
La-Co-Cu-Mg permanent magnets, mag. props., composition depend. 3−8702
$LaCo_2Ni_3$, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399
Mn-Al-C, domain struct. and magnetisation processes, TEM study 3−52514
Mn-Al(-C), domain struct. and magnetisation processes, effect of cryst. defects 3−52513
Mn-Zn ferrite, polycryst. high B, hot isostatic press prep., mag. props. 3−14550
Mn-Zn ferrite film, on $MnGa_2O_4$ substrate, LPE growth and props. lattice match influence 3−14517
Mn-Zn ferrites, defects, grain boundary segregation, and secondary phases rel. to mag. props. 3−13240
Mn-Zn ferrites, hysteresis loop under compressive stress 3−14108
Ni-Co-Fe (21, 15 wt.%) film with low-coercivity channels, mag. struct. study *(Russian)* 3−38586
Ni-Fe-B alloys, chemically deposited, mag., elec., mech. props. 3−52985
Ni-Fe-Co-Ti foils, containing nonmag. precipitates, magnetisation processes, TEM study 3−52572
Ni-Zn ferrite, fast neutron irradiation, changes in mag. props. 3−14072
Ni-Zn ferrites, hysteresis loop under compressive stress 3−14108
$(Pr_{80}Ga_{20})_{100-x}Fe_x$ metallic glass, mag. props. and crystallisation 3−28618
SbSI, single crystal, elec. and optical props. *(Korean)* 3−3653
Sm-Co permanent magnets, coercivity mechanisms, production processes and aging behaviour *(German)* 3−43404
Sm-Co thin films prepared by oblique incidence method, mag. props. 3−14091
Sm-Zr-Co-Cu-Fe-epoxy resin metalloplastic permanent magnets 3−3487
$Sm_2(Co, Cu, Fe, Zr)_{17}$ magnets having high intrinsic coercive force and maximum energy product 3−14088
$Sm(Co,Cu,Fe)_76$, permanent magnets, struct. phase transitions obs. during heat treatment *(Russian)* 3−33417
$Sm_2(Co,Fe,Cu,Zr,Cr)_{14.8}$ permanent mag., ferromag. coercivity 3−33937
$SmCo_5$, magnetisation reversal, 80 to 300K 3−52550
$SmCo_5$ powder and sintered compact, mag. props. rel. to milling medium 3−47526
$SmCo_5$ sintered permanent magnet, cryst. struct. and coercive force 3−43401

coercive force continued
  $Sm(Co-Cu-Fe-Ti)_{6.8}$ sintered magnet, magnetisation reversal at very low temp. 3−52540
  $SmCo_{3.5}Cu_{1.5}$, magnetisation reversal at very low temp. 3−52540
  $SmCo_{2.5}Ni_{2.5}$, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399
  $(SmLuCa)_3(FeVSi)_5O_{12}$ garnet film for ion implanted bubble devices, prep. and high temp. bubble propagation 3−38659
  Sr ferrite, mag. props., H_3BO_3 and SiO_2 additions effect 3−14087
  Sr hexaferrites, substituted M-type, mag. props. and microstruct. 3−14086
  $SrFe_{12}O_{19}$, defects, grain boundary segregation, and secondary phases rel. to mag. props. 3−13240
  $SrO.xFe_2O_3$ anisotropic magnets, optimum prep. conditions and mag. props. *(Japanese)* 3−57705
  Tb-Fe alloy thin films, amorphous, RF-sputtered, thickness depend. of mag. hysteresis props. 3−28661
  $TbFe_2$, amorphous, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399
  Tb_xFe_{1-x} sputtered amorphous alloy, magneto-optical props. 3−28838
  $(TmBi)_3(FeGa)_5O_{12}$ films, domain wall dynamics, effect of elevated coercivity 3−38662
  $(YBiCa)_3(FeSi)_5O_{12}$ epitaxial garnet films, mag. props. 3−33945
  $Y_{1-x}Fe_x$ amorphous melt-spun alloy, magnetic props. and crystn. kinetics 3−18934

coercivity *see coercive force*

coexistent superconductors *see magnetic superconductors*

coherence
  see also light coherence
  acoustic jet noise, source coherence effects 3−51182
  acoustic measurements, appl. of coherence coeff. meas. system 3−42082
  acoustic microscopy, coherent, approx. materials characterisation 3−27333
  ionosphere EM wave propag., mutual coherence function for transionospheric radiowaves 3−10135
  light propagation, mutual coherence funct. in spinor wave optics 3−50614
  longitudinal coherence in neutron interferometry 3−45003
  microwave tunable coherent spectroscopy for 0.1 to 1 THz region 3−40694
  multipath coherence function for uncorrelated underwater channels 3−7277
  photolithographic projection system construction, degree of coherence evaluation *(Russian)* 3−20931
  solar oscillations, coherence times of individual normal modes in period range from 2 hr to 10 min 3−54316
  sound backscattering by bodies new disturbed surface, coherent effects 3−27288
  thermal neutron beam longit. coherence length direct meas. 3−45002
  underwater sound, phase and amplitude fluctuations at hydrophones spaced 1/2 to 2 wavelengths apart 3−20024

coherence distance *see coherence length*

coherence length
  A15 compounds, disorder effects on density of states, Fermi vel. and Drude plasma freq. 3−3370
  inductance, kinetic and internal field, nonlocal relationship between mag. field and current 3−52301
  superconducting filament, matching regions adjacent to core of phase-slip centre 3−3372
  surface impedance and tunnelling, data compilation, 1957-76 period 3−5504
  C_8KHg, pressure effect on superconductivity 3−3361
  C_8RbHg, pressure effect on superconductivity 3−3361
  Zr-Gl, amorphous binary alloys, superconducting props. 3−23523

coherent accelerators *see collective accelerators*

coherent antiStokes Raman scattering
  adsorbed mol. monolayers, detect. using nonlinear optical techniques 3−12244
  benzene, liq., CH stretching mode, high resolution CARS obs. 3−55942
  benzene, liq., coherent Raman scatt. from symm. ring vibrs., two-photon absorpt. excitation 3−11801
  broadband CARS probe using the picosecond continuum 3−25962
  chrysene, reson. CARS and Shpolskii spectra, mol. geom., vibr. freq. and relative intensities calcs. 3−26756
  combustion probing using CARS 3−45216
  cyanine dyes, linear and nonlinear CARS 3−1362
  gas and flame temperature measurement using laser induced radiation *(Japanese)* 3−40604
  inhomogenously broadened media, saturation effects in resonant CARS 3−1702
  liquid two-component medium, coherent anti-Stokes Raman spectroscopy 3−8839
  molecular mixed crystal, picosec. photon echo and CARS obs. of dephasing 3−34119
  organic dye solutions, resonant coherent active Raman spectroscopy 3−37121
  polarisation active Raman spectroscopy, control of line profile and S/N ratio 3−5868
  polyatomic molecules in liquids, picosec. lifetimes and efficient decay channels of vibr. models 3−34118
  spectrometer using two synchronously mode-locked CW dye lasers 3−30937
  trimethylene oxide (-dn), high resolution CARS appl. to ring puckering progressions in C-H stretching region 3−11804
  turbulent flames, instantaneous CARS thermometry 3−30854
  C_2 radical, reson. enhanced coherent anti-Stokes Raman scatt. 3−36769
  $CaCO_3$, calcite, coherent anti-Stokes and Stokes Raman scatt., higher-order spectra 3−22163
  H_2 atmospheric trace concentration detect. using coherent active Raman spectroscopy 3−58580
  H_2 high-order anti-Stokes stimulated Raman scatt. ang. distrib. 3−32083
  N_2, broadband CARS from methane-N_2O flame 3−21767
  N_2O, broadband CARS from methane-N_2O flame 3−21767
  SF_6, CARS spectra of ν_1-band 3−26754
  SiH_4 glow discharge plasma, neutral species detection by CARS 3−51377
  SiH_4 plasma, neutral species detection using CARS 3−42440
  UF_6, CARS spectra of ν_1-band 3−26754

coherent optical transients *see optical coherent transients*
coherent potential approximation *see CPA calculations*
cohesive energy *see binding energy*
coils
  see also inductors; solenoids; windings
  air-cored ellipsoidal coils for uniform mag. field production 3−41718
  EM forces, static, 3D, equivalent dipole modelling 3−50581
  equiradial circular coils for producing uniform magnetic field 3−26907
  FM coil sensor for magnetic suspensions, position control appl. 3−20841
  heavy-ion collective accelerator component development, mechanical aspects *(German)* 3−36583
  helical coil system to perturb mag. surfaces at Tokamak boundary 3−55626
  magnetic deflection system, finite coil thickness effects 3−50594
  magnetic field three-axis test station, low cost, high-performance 3−30906
  stray magnetic fields removal, computer-controlled method 3−30907
  superconducting, NbTi-Cu-CuNi superconducting stranded cables stability obs. 3−31830
  superconducting Japanese LCT coil, construction and cool-down test 3−36571
  superconducting poloidal coils for Reacting Plasma Project, AC loss and stability obs. 3−37669
  superconducting poloidal coils for Reacting Plasma Project, performance test of model coil under 200 T/sec pulsing rate 3−41320
  superconducting poloidal conductors, high current, at JAERI, advances 3−41319
  superconducting Tokamak development, Nb_3Sn test module coil for cluster test program 3−36569
  Al wire, anodization for UHV EM coils 3−4191
  Nb_3Sn coil, large high current, for fusion research 3−55668
coincidence circuits
  see also counters
  fast four-input coincidence unit using MECL ICs for scintillation counters 3−50231
  multichannel electronic equipment, logic components and adapters 3−11616
  nanosecond, controlled and majority types 3−1171
  scintillation counter, NE 102A plastic type, particle identification and coincidence meas. 3−50234
  time measurement unit for deriving partial coincidence curves in nucl. expts. 3−1180
  wind-speed laser meas. system, coincidence tracker appl. 3−15632
  Ge four-detector system, for γ-γ angular correl. studies 3−50233
  Si(Au) semiconductor counter, particle identification and coincidence meas. 3−50234
cold-cathode tubes
  see also counting tubes; photomultipliers; phototubes
  No entries
cold rolling
  amorphous polymers, crack growth under static and fatigue loading, cold rolling effects 3−19407
  brass, cold rolled, nucleation and recrystn. texture 3−47850
  Elinvar, magnetic anisotropy, uniaxial 3−33885
  metal strip, cold rolled, flatness, work rolls shape thermal modification 3−47848
  rolls hardened by commercial frequency currents and multiple preheatings, magnetic inspection 3−29264
  steel, austenitic stainless, microstruct., quench and deform. induced. TEM and electron diffr. study. 3−24309
  steel, cold-rolled rimmed, recrystallisation annealing, microstructure and texture changes during grain growth *(Russian)* 3−9083
  steel, deep-drawing, texture control, review 3−39169
  steel, low C alloy, cold rolled, splitting, effect of ageing *(Korean)* 3−39181
  steel, low C alloy, cold-rolled, microstruct. and strength, effect of ageing *(Korean)* 3−39180
  steel, Si, grain oriented, high permeability, 0.23 mm thick 3−34350
  steel, Si, grain oriented, secondary recrystn., effect of second stage cold reduction *(Korean)* 3−39172
  steel, stainless, wire reinforced Cu, cold rolled, deform. 3−34379
  thermomechanical response of solids at high strains, natural approach 3−19347
  Al alloy, high-strength V95 sheet, struct., fracture and mech. props. w.r.t. impurity content 3−58233
  Al alloys, powder metallurgy, fatigue crack propag., effect of Al_2O_3 particles and precipitate type 3−34482
  Al, cold rolled, microstruct. and deform. mechanisms in polycryst. samples 3−43929
  Al, high purity crystals, expt. assessment of X-ray diffr. theory 3−2339
  Al, pure, cold rolled, microhardness and yield stress at very high deform. 3−53145
  Al-Al_3Ni eutectic, strengthening by mech. thermal treatment 3−43854
  Al-Zn-Mg alloys, SCC, influence of cold rolling *(German)* 3−4213
  Al(-Mn), cold rolled, substruct. strengthening 3−43866
  Co, rolled, microstruct. and texture, dynamic recrystn. 3−47856
  Cu, cold rolled, recrystn. kinetics, neutron diffr. study 3−58323
  Cu, polycryst., cold rolled, influence of deform. parameters on stored energy *(German)* 3−29104
  Cu, rolled, spatial arrangements of orientations 3−34351
  Cu-SiO_2 single crystals, microstruct. study, annealing 3−9087
  Cu-Zn-Ni, German silver alloy, cold rolled, change in struct. and props. 3−47852
  Cu(-Al_2O_3), cold rolled, deform. struct., effect of dispersed phase 3−47914
  Fe, pure, cold rolling and annealing textures, effect of grain boundaries 3−29103
  Fe-Ni, soft mag. alloys, phys. props. 3−3482
  Fe-Ni-Al-Ti mag. alloy, semi-hard, struct. and mag. props. 3−58145
  Fe-Si (3 wt.%), secondary recrystn., effect of C content *(Korean)* 3−29100
  Fe-Si-B, high C, texture, effect of cold work *(Korean)* 3−53081
  Fe-Si(3wt.%) alloys, asymmetric cold rolling, texture formation characts. *(Russian)* 3−34346
  Mo single cryst., complex texture form. during deformation *(Russian)* 3−24254
  Mo wire reinforced Cu, cold rolled, deform. 3−34379
  $Nb_{50}Zr_{35}Si_{15}$ amorphous alloy, supercond. props., effect of cold rolling 3−33819
  Ni wire reinforced Cu, cold rolled, deform. 3−34379
  Ti alloy, nonsymmetric rolling in sheet prod. 3−14610

cold rolling continued
- Ti alloy, sheet rolling parameters development 3—14623
- Ti-Al, recrystn. texture form. 3—24263
- Ti-Al(Sn), stacking fault energy and texture changes during polygonisation *(Russian)* 3—33273
- α-Ti-Sn(Al), stacking fault energy, rel. to texture and strain mechanism 3—9091
- W wire reinforced Cu, cold rolled, deform. 3—34379
- Zn, rolled, microstruct. and texture, dynamic recrystn. 3—47856

cold shortness *see brittleness*

cold working
- *see also bending; cold rolling; plastic deformation; slip; work hardening*
- irradiated solids, microstructure evolution, dislocation and void populations *(French)* 3—27978
- metallic materials, viscoplastic flow during cold drawing *(Rumanian)* 3—19369
- metals, microbands in cold-worked metals 3—47916
- passivation behaviour under mech. working influence by impacting-solid bodies in neutral phosphate electrolyte *(German)* 3—39308
- polyethylene, struct. deform. during cold drawing 3—24297
- polyethylene, ultra-high modulus linear, crystalline thickness meas., effect of draw temp. 3—47851
- steel, austenitic stainless, cold worked, irrad. creep, effect of flux and temp. gradients 3—28011
- steel, austenitic stainless, cold worked, irrad. creep, stress and stress transient effects 3—28009
- steel, austenitic stainless, elevated temp. transient isotropic hardening, microstruct. based eqn. 3—47919
- steel, austenitic stainless, internal friction peak due to α' martensite, low temp. deform. 3—9110
- steel, austenitic stainless, internal friction peak due to stress-induced α' martensite 3—43878
- steel, austenitic stainless, isotropic hardening, separate roles of subgrains and forest dislocations 3—24256
- steel, austenitic stainless AISI 304, annealed and cold worked, notch effect on low-cycle fatigue 3—58246
- steel, austenitic stainless cold-drawn, heavy ion irrad., radiation-induced recrystn. 3—28010
- steel, cold-drawn wire, X-ray residual stress meas. 3—14605
- steel, low C, rimmed texture form. during cold plastic deform. *(Russian)* 3—9084
- steel, Nb microalloyed 3—29080
- steel, predeformed, fracture toughness determ. from stretch zone width meas. 3—4239
- steel, solution-treated, cold-worked, and aged, void swelling due to C^+ ion bombardment 3—22947
- steel, TiC CVD coated, scratch test adhesion 3—14836
- steel bars, cold twisted, tensile props. 3—47915
- visual aid slide set for work hardening and welding *(French)* 3—54602
- Zircaloy-4, stress relaxation in bending at 673K, rel. to cold work 3—53104
- Ag, high-purity, cold-worked, plastic flow at low temp. 3—47903
- Al alloy, preliminary plastic deform. influence on fatigue props. of semifinished products 3—19419
- Al, polycryst., thermal softening during hydrostatic extrusion 3—24258
- Al-Cu-Mg-Mn (4.42, 0.27, 0.46 wt.%), strengthening rel to thermomechanical treatment 3—43851
- Al-Zn alloys, cold working effect on damping charact. *(Japanese)* 3—9086
- Co and alloys, cold worked, tensile strength, elongation, allotropic transformation effect 3—43919
- Cu, cold worked single crystal, SEM in situ obs. of grain boundary migration during recrystn. 3—14608
- Cu, grain growth, irregular, nucleus-free mechanism 3—29102
- Cu, polycryst., recovery and recrystn. during hydrostatic extrusion 3—24257
- α-Cu-Zn, grain growth, irregular, nucleus-free mechanism 3—29102
- Fe, fatigue crack propag., near threshold, effect of grain size and cold work 3—29181
- Fe-Cr-Ni (21,32 wt.%), cold prestrained, internal stress and struct. in creep at 975K 3—9088
- Fe-Si-B-C-Mn-S-N, secondary recrystn., cold work and C role 3—34348
- N_2-Ar solid mixtures, specific heat and $\alpha\rightarrow\beta$ transition 3—38100
- Nb, H Cottrell cloud form. at dislocations 3—51655
- Ni, grain growth, irregular, nucleus-free mechanism 3—29102
- Ni-W (1.2 at.%), cold worked, irrad. creep, stress and stress transient effects 3—28009
- Ni_3Fe, electron irrad. and cold worked, mag. disaccommodation 3—23743
- NiO powders, cold pressing mechanism *(Serbian)* 3—34266
- NiTi, martensitic, cold worked, mech. props. 3—39221
- NiTiCu, martensitic, cold worked, mech. props. 3—39221
- Pd, H Cottrell cloud form. at dislocations 3—51655
- Si, bending gettering of cryst. defects 3—19348
- Ta, work hardening and plastic eqn. of state 3—58129
- Te, cold worked, lattice defects, X-ray diffr. line breadth anal. 3—18290
- Ti, corrosion, power plant appls. 3—29224
- Ti-Al-Mo-V, shot blast treated, residual stresses in surface layers 3—43995
- β-Ti-Al-V-Cr-Mo-Zr (75, 3, 8, 6, 4, 4 wt.%), thermomech. props., and stress corrosion 3—24277
- Zn wire, creep characts., pre-torsional deform. effects 3—19380
- Zr-Nb (2.5 wt.%) alloy pressure tubes, tensile props. rel. to post-extrusion thermomech. treatment 3—43921

collagen *see proteins*

collections of physical data
- 1983 Astronomical Almanac 3—41
- A=102 nuclear data sheets, levels, transitions, J^π, β-decay 3—20588
- A=114 nuclear data sheets, levels, J^π, transitions 3—10531
- A=126, nuclear data sheets, levels, J^π, transitions 3—35783
- A=127, nuclear data sheets, levels, J^π, transitions 3—10529
- A=138, nuclear data sheets, levels, J^π, transitions 3—49097
- A=18-20, energy level compilation, energies, decays and J^π 3—30568
- A=190 nuclear data sheets, levels, transitions, J^π, β-decay 3—20589
- A=232, nuclear data sheets, levels, J^π, transitions 3—49098
- A=236, nuclear data sheets, levels, J^π, transitions 3—49098
- A=69, nuclear data sheets, levels, J^π, transitions 3—10528
- A=80, nuclear data sheets, levels, J^π, transitions 3—35782
- A=96, Nuclear Data Sheets, level and decay schemes, $J\pi$ assignments, experimental data 3—10530
- atmospheric chemistry, kinetic and photochemical data tables 3—16094

collections of physical data continued
- beta-ray dose distributions in water, air and other media, tables and graphs 3—54592
- buoyant convection, vorticity and stream function formulation calcs. 3—2057
- collision stopping power of elements and compounds for electrons and positrons 3—44907
- diatomic species, electronic states radiative lifetimes, data compilation 3—26792
- ENDF/B-V reference and guide-book, cross-section plots 3—20591
- engineering alloys, Young's moduli, temp. behaviour 3—19359
- ethanol, mol. consts., microwave space, data tables 3—16092
- ethylene, critical region, thermodynamic surface 3—49099
- exciplex lasers, a review 3—27013
- F, G and K field stars in Fe/H catalogue, tabulation of parameters rel. to evolutionary status 3—54365
- high energy accelerator materials, radiation damage test data compilation 3—35786
- interstellar molecules, vertical valence ionis. energies, Green's function calcs. 3—5502
- ion impact desorption cross sections, data compilation and eval. 3—21518
- JANAF thermochemical tables, 1982 supplement 3—25704
- magnetospheric micropulsations recorded in Finland 3—54207
- molten salts, single and multi-component systems, diffusion coeffs., data tables 3—25703
- nonelectrolyte binary liq. mixtures, vap. liq. equilib., heat of mixing and vol. change of mixing data 3—25705
- nuclear data sheets, recent references, May-August 1982 3—16095
- optical properties of Al, Co, Cu, Au, Fe, Pb, Ni, Pd, Pt, Ag, Ti and W in IR 3—57868
- photon mass attenuation and energy-absorption coeffs., 1 keV to 20 MeV 3—44908
- plastics, non-reinforced, dynamic mech. data compilation 3—47877
- propionitrile, mol. consts., microwave space, data tables 3—16092
- δ Scuti stars in open clusters, luminosities spectral types and periods rel. to cluster ages 3—30386
- Skay Catalogue 2000.0, volume 1, stars to mag=8.0 3—16097
- solar altitude frequency tables 3—48803
- space astronomy and astrophysics data handbook 3—54591
- superconducting AC losses, data compilation 3—5507
- superconducting critical field, data compilation, up to 1975 3—5508
- superconducting transition temperature, press. depend., data compilation, 1971-6 period 3—5509
- superconductivity, surface impedance and tunnelling, data compilation, 1957-76 period 3—5504
- superconductors, electronic sp. ht. and electron-phonon coupling const., data compilation 3—5505
- superconductors, sp. ht. and thermal cond., data compilation 3—5506
- surface data for fusion devices, progress report by US, Japanese and IAEA data centres 3—21517
- synchrotron radiation intensity for 50 MeV to 50 GeV electrons 3—44905
- Al-like ions, oscillator strengths, transition probabilities, data tables 3—25702
- α-Al_2O_3, sapphire, synthetic, enthalpy and heat capacity standard reference material, 10 to 2250K 3—2847
- As sulphides, reactions, equilib. consts., thermodynamic data 3—5510
- Cu isoelectronic sequences, oscillator strengths and wavelengths 3—44906
- H halides, vibr. energy transfer rate coeffs. 3—26825
- H-like atoms, transition probabilities and branching ratios for elec. dipole transitions 3—44904
- H^++atoms, (Z=1-92), energy loss, time-of-flight, inelastic collision probability data tables 3—10527
- HDO, (001), (110) and (030) bands, line positions and strengths 3—55997
- $H_2{}^{16}O$, $H_2{}^{17}O$, $H_2{}^{18}O$, HDO, secondary wave-number standards, 1066 to 2296 cm^{-1}, Fourier-transform spectrosc., ν_2 bands 3—36748
- MgF_2, update and summary of optical props. 3—1728
- Xe II, new spectroscopic results 3—1294
- Xe III, new spectroscopic results 3—1294
- Xe IV, new spectroscopic results 3—1294
- Zn isoelectronic sequences, oscillator strengths and wavelengths 3—44906

collective accelerators
- accelerating cell with optimal use of high-frequency source power 3—26506
- beat wave accelerator, simulations 3—18131
- charged beam propag. stability through a relativistic hollow electron beam 3—12867
- collective focussing ion accelerators, radial electric field 3—1098
- EAGLE, pulse power research 3—17123
- electron ring collective accelerator study by means of synchrotron radiation 3—26507
- electron ring formation and accel. by heavy ions 3—17118
- electron-ion fluxes in transport channels and in diodes with mag. isolation, steady states 3—6464
- electron-ring collective accelerator, high freq. props. of electron ring in adhesator 3—50067
- explosive shock tube based on cellular high-explosive charges, applic. 3—51151
- heavy ion collective acceleration, charge state meas. by Thomson spectrometer 3—45740
- heavy-ion collective accelerator component development, mechanical aspects *(German)* 3—36583
- high-current ion beams in Novosibirsk Institute of Nucl. Phys. 3—6466
- ion accel. by IREB, one-dimensional simulation code 3—17117
- ion accel. studies, theoretical considerations 3—17119
- ion acceleration in neutral gas, threshold charact. 3—50070
- ion acceleration under laser plasma expansion 3—22676
- ion beam measurements in cylindrical ion implosion fusion facilities 3—12990
- ions, collective accel. using intense 1.5 MeV linear electron beam 3—1119
- laser driven, longit. dynamics, plasma/laser interaction, qualitative design 3—17104
- laser-driven accelerator, using plasma waves 3—17103
- magnetic flashover inhibited insulator for EAGLE facility 3—17125
- magnetoplasma erosion compressor, plasma focusing, dynamics, microscopic struct. and stability 3—51401
- negative ion beam acceleration system optimisation 3—22731
- PBFA I pulsed power driver for ICF 3—17122
- plasma accelerator, closed electron drift and extended zone of accel., basic features of operation 3—1092

collective accelerators continued
plasma beat wave particle accelerator, expts. 3−17102
proton accel. by nonlinear space charge wave propagation on relativistic electron beam 3−1097
proton and heavy ion acceleration when high current electron beam traverses dielec. channels 3−6465
protons and heavy ions accel. in vacuum dielectric channels 3−17121
relativistic electron beam pulse-periodic microwave generators 3−17130
relativistic electron beam simulation of collective ion acceleration 3−31856
He ion beam, collectively accelerated, diagnostics by solid-state nuclear track detector 3−11554
collective states, nuclear *see nuclear collective states and giant resonances*
collimators (optical) *see optical collimators*
collision processes
see also atom-surface impact; atomic inelastic collisions; charge exchange; chemical reactions; elastic scattering of atoms and molecules; elastic scattering of electrons by atoms and molecules; electron attachment; electron impact; elementary particle interactions; intermolecular mechanics; ion-surface impact; molecular inelastic collisions; molecule-surface impact; negative ions; Penning ionisation; plasma collision processes; potential energy surfaces for collision processes; quantum field theory; quasimolecules; radiation quenching
1980 S 1, 1980 S 3, co-orbital satellites, evidence from crater numbers for impact-induced fragmentation 3−48853
asteroids, complete fragmentation of parent bodies of Themis, Eos and Koronis families 3−59248
asteroids, M and CMEU types, catastrophic impacts rel. to unusual rot. props. 3−5196
asteroids, structures as outcomes of catastrophic collisions 3−59247
ball-chain explanation 3−5545
galactic collisions, numerical simulation techniques 3−16015
galactic nuclei, distrib. of stars around black hole from numerical soln. of kinetic eqn. with collisions 3−10380
galaxies, hierarchical merging rel. to struct. of elliptical galaxies 3−49001
general three-body problem, families of periodic collision orbits 3−48807
Hyperion, Saturnian satellite, evidence from crater numbers for impact-induced fragmentation 3−48853
interacting galaxies, literature review and computer simulations 3−16014
molecular collisions, adiabatic to diabatic electronic state transformation 3−50469
multitrajectory eikonal cross sections 3−49213
neutral nonresonant collisions, effect on atomic spectral lines, review 3−6579
NGC 5430, barred spiral galaxy, collision model rel. to Wolf-Rayet stars and extraordinary star-forming region 3−20500
particle-rigid rotor scatt. problem, exact soln. 3−56017
QSO-galaxy interactions, colour imaging of 1229+204 and (0351+026) 3−5446
quantum collision theory with phase-space distributions, review 3−45018
scattering kernels of finite rank, test particle diffusion with external conservative fields, Ohm's law deviations 3−5660
solar nebula, accumulation and fragmentation in protoplanetary and protosatellite systems 3−15857
solid bodies, high velocity collisions, hydrodynamic model 3−16124
spectral line profiles, collision processes influence, conf., Orleans, France (Sept. 1981) 3−40307
stellar collisions in centre of Galaxy, rel. to origin of ionised gas clouds 3−49032
thunderclouds, hail particles collisions in three-dimensional model rel. to thunderstorm electrification 3−15582
trends in physics, conf., Istanbul, Turkey, Sept. 1981 3−30555
H, spin-polarised, collision integrals, transport coeffs. calcs. 3−32833
H-^{3}He(^{4}He), collision integrals, transport coeffs. calcs. 3−32833
collision sequences, focused *see sputtering*
colloid chemistry *see colloids*
colloids
see also Brownian motion; coagulation; electrophoresis; electroviscous effect; emulsions; gels; magnetic fluids; thixotropy
bacteriopheophytin, solubilisation site in cationic micelles, heavy-atom enhanced intersystem crossing 3−6694
BCC-FCC, melting and reentrant transitions in colloidal crystals 3−13398
birefringence and dichroism meas., in liquids and colloids 3−25912
4-bromobutyric acid solns., pre-micellar association, IR and Raman spectra 3−1352
cluster form., diffusion controlled, in 2-6 dimensional space 3−58454
coagulation, Smoluchowski's theory in Boltzmann-Grad limit 3−19539
concentrated hard sphere dispersions diffusion, two and three particle mobilities 3−38106
crystals, monodispersity, physical props., struct. transitions 3−37539
crystals, phonon dispersion curves, lattice dynamics, photon correl. spectroscopy 3−13376
diffusion, sedimentation and friction in soln. 3−58449
electrolytes, highly asymm. primitive model for strongly interacting colloidal systems 3−14890
ferromagnetic colloids, thermodynamic stability 3−38103
graphite, fine powder suspensions, non-Newtonian flow props. *(Japanese)* 3−56577
heterogeneous, magnetosedimentation of particles 3−34651
hexaethyleneglycol dodecyl ether, elec. birefringence studies 3−55981
intermicellar exchange dynamics of solubilized reactants 3−4321
lipids, in micellar solns., aggregated symmetry, time-resolved luminesc. appl. 3−44070
lithium dodecyl sulphate anionic micelles in aqueous soln., small-angle neutron scatt. obs. of struct. 3−53449
magnetic fluid state instability as a result of internal rotation 3−32811
micellar aq. solns., luminesc. of organoluminophores 3−36790
micellar solutions, frozen, photoionisation of tetramethylbenzidine, ESR and electron spin echo studies 3−53427
micellar system, Monte Carlo study of electrostatic interaction, cell model test 3−56790
microparacrystals, solid state physics 3−18358
nonspherical clusters, diffusion-controlled colloidal growth rates 3−53448
PMMA colloidal particles in conc. suspension, short-time self-mobility 3−51834
polydisperse solution, light scattering and sedimentation of hard-sphere mixtures 3−39413
polymer monolayer, colloid, diffusion kinetics of small mols. 3−38133
polystyrene particle thin colloidal crystals, struct. sequences 3−58453
polyvinyl acetate, dielectric behaviour rel. to mol. wt. 3−38756
colloids continued
reverse micelles, hydrated electrons appls. 3−14889
sedimentation in high mag. field 3−34650
small-angle X-ray scatt., book 3−44
sodium dodecyl sulphate aq. micellar solns., positronium lifetime meas. 3−48100
sodium octanoate micelles, conc. dependent struct. meas. 3−24532
surface charge density/surface potential relationship, double layer potential distrib. 3−39412
transition metal oxide gels and colloids, review 3−9363
tris(2,2′-bipyridyl)ruthenium(II) in sodium dodecyl sulphate solns. below crit. micelle conc., fluoresc. and cluster model 3−48095
Ag, colloidal, adsorbed halide ions, surface enhanced Raman spectroscopy 3−57932
Ag, colloidal, adsorbed halide ions, surface enhanced Raman spectra 3−57933
Ag colloidal particles, adsorpt. of dyes, surface enhanced Raman spectra 3−8826
Al_2O_3, deposition in monolayers and multilayers 3−38265
Au colloidal particle deposition in monolayers and multilayers 3−38265
Au colloidal particles, adsorpt. of dyes, surface enhanced Raman spectra 3−8826
Co ferrite, prep. by ageing and precipitation 3−39022
Cs colloids in additively coloured CsF, annealing, IR spectra, precip. and ripening obs. 3−28881
Fe_3O_4-Fe_2O_3 colloids, defect spinel struct. 3−27930
SiO_2 colloidal particle deposition in monolayers and multilayers 3−38265
SiO_2, spherical particles, self-diffusion, conc. depend., photon correl. spectrosc. obs. 3−28130
Te-Sn Cl_2 turbid soln., Te trace amount detection by laser-induced photoacoustic spectroscopy 3−14893
WO_2, thermally evaporated layer, xerogel struct. 3−18579
ZnS colloidal particle deposition in monolayers and multilayers 3−38265
colorimeters
see also colorimetry
colour measuring techniques, development at Osaka Branch of Electrotechnical Laboratory *(Japanese)* 3−36056
photoelectric, systematic error sources and their estimation 3−45188
photographic colorimeter Minolta II, description and characteristics *(Russian)* 3−446
colorimetry
see also colorimeters; spectrochemical analysis; spectrophotometry
chromatic adaptation correcting methods comparison used for colour rendering specification 3−39637
colour television cameras, fidelity classification 3−16400
fluorescent film radiance factor and chromaticity coordinates, calculator assisted evaluation 3−10880
fluorescent material colorimetry, interior and exterior daylight illuminants 3−5833
fluorescent standards for colorimetric and photometric appls. 3−5832
gamut of reproduced colours obtainable by combination of subtractive colour dyes, practical constraints 3−437
history of colour-circle diagrams 3−5582
quality control, standardised inspection *(German)* 3−19479
retroreflectance, CIE system of geometrical coordinates 3−36061
retroreflection measurement, CIE activities 3−5830
retroreflection measurement assurance program of NBS, proposed standards 3−5831
retroreflective material daytime colorimetry, spectrophotometer or colorimeter calibration 3−36060
retroreflector photometry using computer-controlled four-axis goniometer 3−36063
spectral coefficient of retroreflection definition and use, spectroradiometric meas. 3−36062
uniform colour spaces used for colour rendering specification, subjective evaluation 3−39636
$In_{2-x}Sn_xO_{3-y}$ transparent and heat-reflecting films, MgF_2 coated, colour props. 3−49425
colour
see also colour vision
difference measurement, units and methods *(Hungarian)* 3−16401
fluorescence lamp spectral power distribution rel. to correl. colour temp. and general colour-rendering index *(Japanese)* 3−50726
history of colour-circle diagrams 3−5582
multiple-aperture three-dimensional image construction utilising fringe-modulated speckle patterns 3−32329
ocean colour experiment on space shuttle, initial anal. of OSTA-1 imagery 3−29964
polariser/retarder systems, colour contrast 3−7139
quartz, cathodolum. colours, causes 3−14361
K_2O-BaO-Nd_2O_3-Pr_6O_{11}-SiO_2 glasses, colour and absorpt. spectra, effect of added Mn^{3+}, Co^{2+}, Ni^{2+} 3−34130
Ti, oxidation colour interpretation rel. to oxide thickness 3−47989
colour blindness *see colour vision; vision defects*
colour cameras, television *see colour television cameras*
colour centre lasers *see solid lasers*
colour centres
see also F-centres; OH^--centres; paramagnetic resonance of colour centres; U-centres; V-centres
alkali halide crystals, photoionisation of like ions, excitation in A and C absorpt. bands 3−47705
alkali halides, radiation-induced processes, cation impurities role, review 3−2600
aromatic hydrocarbon crystals, radiation induced colour centres, optical and ESR spectra 3−51596
fibre waveguides, γ-irrad., colour centre distrib. investigation 3−1795
glass fibre, germania doped, radiation induced, colour centres photobleaching 3−41936
LiF cryst., colour centres prod. by H^+ bombardment, lasing action 3−32368
non-radiative processes, evaluation by semiclassical approx., inclusion of neighbouring paths 3−47696
optical fibres, gamma-ray irrad. characts. ^{60}Co source, colour centre form., losses 3−42008
quartz:Ge(Li)(Fe), short-lived optical absorption, influence of pulsed electron irradiation 3−14324
quartz, smoky, Al^{3+} impurity related colour centres 3−18298
Cs halides, self trapped exciton and V_k centre, small polaron model 3−56897

- **colour centres** continued
  - GaAs, Schottky-barrier diodes, γ-ray irrad., thermal annealing of E3 centres, elec. field effects 3—18657
  - KBr(I), electron irrad., O_2^- ion form., luminesc. study 3—19207
  - KCl, exciton decay into F, H and α-I pairs, luminesc. study 3—23279
  - $KCrO_3Cl$, γ-irrad., pseudo-V_k centre, EPR study 3—47549
  - KF(Cl)(Br)(I):Cd, colloidal colour centre optical props. 3—3771
  - KI, laser irrad. defect form., V_k and H-centres 3—56892
  - $KMg_3(AlSi_3O_{10})F_2:Ti^{3+}$, neutron irrad., struct. defects, optical ad ESR study 3—8105
  - NaCl(F)(Br)(I):Cd, colloidal colour centre optical props. 3—3771
  - NaF, 6070 Å colour centre, high-resolution Stark spectroscopy 3—56886
  - Si, CW laser annealed, quenched-in E-centres, vacancy diffusion model 3—46995
  - Si, complex defects, divacancy and E-centre, mol. cluster study 3—47297
  - Si, diffusion of donors, high conc. and nonequilib. defect effects 3—47163
  - Si:B, Si-B3 paramagnetic defect, extended Huckel theory calc. 3—38345
  - SiO_2, electron irrad. induced E'' centres, ESR study 3—3531
  - SiO_2, vitreous, defect electron states, tight-binding and recursion method calc. 3—57315
  - SiO_2:Ge(P) graded-index optical fibres, γ-ray-induced loss and colour centre conc. 3—32481
  - WO_2 electrochromic thin film, amorphous, oscillator strength of colour centres 3—24035
  - WO_3 electrochromic thin film, amorphous, oscillator strength of colour centres 3—24035

- **colour display tubes, television** *see colour television picture tubes*

- **colour filters** *see optical filters*

- **colour model**
  - 1/N expansion for scalar matrix models and QCD 3—36193
  - $^3S_1(Q\bar{Q})\to\gamma+{}^3P_1(q\bar{q})$, transition rate and helicity structure 3—31216
  - $^3S_1(Q\bar{Q})\to GGGG(GGq\bar{q})$, orthoquarkonium decays, nonplanar 4-jets as probe for 3-gluon coupling 3—40897
  - Abelian bag model, gluonic mass spectrum 3—610
  - Abelian gauge theory, gauge dynamical symmetry breaking in 2-D 3—31089
  - Alder-Bell-Jackiw anomaly, pseudo-scalar gauge invariant operators 3—26020
  - algebra, colour properties of quarks and leptons 3—40847
  - Altarelli-Parisi eqns., optimisation 3—26080
  - anisotropic chromodynamics, strong interaction dynamics, meson spectrum 3—21068
  - anomalous nuclei colour model 3—54885
  - asymptotic dispersion relation for six-particle amplitude 3—11165
  - asymptotically free QCD at large N, reduction to random matrix model 3—6057
  - atomic parity violation, radiative corrections in $SU(2)_L\times U(1)$ 3—36872
  - axion mass raising in hypercolour sideways interaction model 3—16610
  - bag formation in three-quark chromostatics 3—45368
  - bag model, quarks in spherically shaped square well potential 3—45366
  - baryon masses, QCD sum rule calc., S mass, chiral symmetry breaking parameters 3—31193
  - baryons, semirelativistic QCD, inc. SU_3 flex-tube dynamics, asymptotic freedom 3—26068
  - Bethe-Salpeter equation with relativistic harmonic oscillator kernel, nonexistence of discrete bound states 3—5972
  - Bohr-Sommerfeld rules for anomalies, QCD and SU(5) applications 3—49593
  - broken QCD and photon-photon collisions 3—40862
  - Casimir effect on solid ball with $\epsilon\mu=1$, QCD gluonic bag appl. 3—11117
  - central region inclusive spectra, colour tube, pomeron quark-gluon struct. 3—6060
  - charm hadronic production via flavour excitation 3—26073
  - charmonium, elec. dipole one-photon transition rates, relativistic corrections 3—16644
  - chiral bag models, chiral symmetry breaking length scale and g_A 3—40870
  - chiral bag with spin 3—45367
  - chiral invariant vacuum, instability due to gluon exchange 3—49635
  - chiral invariant vacuum instability for confining pot. 3—31141
  - chiral symmetry breaking, confining potentials and Goldstone pion 3—49584
  - chromo string dynamics, recent progress 3—11141
  - chromostatics, colour-singlet confinement 3—49643
  - classical coloured particle concept limitations, particle in nonAbelian gauge field 3—36184
  - classical coloured particle with spin in external Yang-Mills field 3—20969
  - classical Yang-Mills eqns. with weak external sources 3—16468
  - collective phenomena, conf., Moscow, USSR (April 1981) 3—5484
  - coloured scalars and new hadrons 3—11127
  - coloured spinning classical particle in external SU(2) gauge field 3—537
  - composite quarks and leptons, generation labels and mass matrices 3—16621
  - composite quarks and leptons, mass generation mechanism 3—11155
  - conference, from particles to nuclei, Varenna, Italy (June-July, 1980) 3—10512
  - continuum QCD, reduced large-N model 3—590
  - coupling constant $g_{\omega\rho\pi}$ from QCD sum rules 3—49628
  - CP violation, soft or hard breaking, axions, composite models 3—11076
  - deep inelastic scatt., parameterisation for Q^2 depend. parton distrib. function 3—16649
  - deep inelastic scatt., QCD anomalous dimens., gluonic Regge singularities, perturbative pomeron 3—592
  - deep inelastic scatt., QCD mass effects, parton distribution p struct. function 3—31166
  - deep inelastic scatt., small-x limit, perturbative QCD anal., gluon lines 3—49636
  - deep inelastic scattering at small x, QCD gluon ladder diagram 3—40852
  - disordered QCD, quark confinement for supersymmetric model 3—31145
  - Drell-Yan cross-section, cancellation of long distance contributions 3—49638
  - Drell-Yan pair ang. distrib. and probe of hadronic wave functions 3—21082
  - Drell-Yan process 3—21160
  - effective Lagrangians, U(1) axial anomaly, renormalisation, meson spectrum η, η' gluon content 3—26064
  - effective Lagrangians, U(1) axial anomaly in SU(3), QCD, symmetry breaking 3—26063
  - Eguchi-Kawai model weak coupling phase, U(1) breaking 3—5960

- **colour model** continued
  - electromagnetism-QCD unification and monopole with Dirac mag. charge 3—26055
  - electroweak hadronic currents, single-sheet classical surface 3—574
  - electroweak interactions and QCD, introduction 3—45328
  - extended technicolour models with horizontal $U(2)_L\otimes U(2)_R$ flavour symmetries, spontaneous CP violation 3—49598
  - extended Z(4) lattice gauge theory, massless phases and confinement 3—45297
  - external SU(2) gauge field, wave packet motion, coloured particle classical mechanics 3—538
  - families, the invisible axion, and domain walls, instantons in hypercolor 3—591
  - fermion wave functions, finite extension in QCD, magnetic charge distribution 3—6068
  - finite dimensional quark model, quantum logic, colour, Hamiltonians 3—21061
  - finite temp. QCD, critical behaviour 3—21243
  - finite-temperature QCD, dimensional reduction 3—45350
  - five-preon composite models, anomaly and decoupling constraints 3—21104
  - flavour changing decays, GIM at one loop level 3—36175
  - flavour changing processes, effective weak nonleptonic Hamiltonians 3—6022
  - flavour violation, scalar particles and leptoquarks 3—11081
  - four-dimensional field theory, Borel summability 3—26013
  - fractional elec. charge in broken QCD model 3—31151
  - fractionally charged particles and 1 Dirac charge mag. monopole, compatibility 3—31142
  - fractionally charged particles search 3—31133
  - free gluon propagator in temporal gauge, Gauss's law appl. 3—11128
  - fundamental interactions, summer school, Cargese, Corsica, France (July 1981) 3—44902
  - gauge independence of renormalised mass 3—40768
  - gauge-invariant regularisation of non-Abelian fields, Lee-Nauenberg probability for gluon scattering 3—20972
  - glueball and $q\bar{q}$ pseudoscalar mixing in MIT bag model, SU(3) violation 3—40850
  - glueball mass, estimation, plaquette-plaquette correlation in lattice gauge theory 3—26062
  - glueball mass estimate from strong coupling series in lattice QCD 3—11144
  - glueball mass from lattice gauge theory 3—5964
  - glueball mass from variant actions in lattice Monte Carlo simulations 3—40872
  - glueball mass in SU(2) lattice gauge theory 3—36145
  - glueball mass ratios, strong coupling expansion parameters, SU(3) lattice gauge theory 3—40851
  - glueball mass spectrum, SU(3) lattice Monte Carlo calc. 3—6058
  - glueball mass spectrum in lattice QCD, Monte Carlo calc. 3—31155
  - glueball masses, 0^+ and 2^+ in SU(2) compatibility with the renormalisation group behaviour 3—26071
  - glueball masses from lattice QCD, SU(2) and SU(3) appl., Monte Carlo simulation 3—40858
  - glueball mixing and spin dependence in meson spectroscopy, $\theta(1640)$ state 3—11146
  - glueball states in reduced large- N Hamiltonians 3—20996
  - glueballs, bound states of gluons 3—6063
  - glueballs, bound states of massive gluons, study with Schrodinger eqn. 3—36202
  - glueballs and $q\bar{q}$ mesons interplay, 0^{-+} and 2^{++} mesons study 3—54887
  - gluino's, effect on structure functions by scaling violation analysis 3—31101
  - gluon and quark propagators, infrared asymptotic forms. 3—31140
  - gluon condensation parameters from instanton gas model, probe for QCD vacuum struct. 3—45349
  - gluon fragmentation function, extraction from jet events in e^+e^- annihilation 3—31157
  - gluon magnetic mass in Hartree-Fock approximation of QCD 3—587
  - gluon self-energy non-transversality and Dokshitzer-Dyakonov-Troyan anal. 3—36191
  - gluon spin, parton-parton scatt. amplitudes 3—36211
  - gluons, charge parity 3—595
  - hadron leptoproduction, transverse momentum effects and ang. energy flow 3—11143
  - hadron mass spectrum in lattice QCD, numerical estimates, Monte Carlo calc. 3—26096
  - hadron mass spectrum in lattice QCD, numerical estimates, Monte Carlo in SU_3 3—26097
  - hadron multiplet construction, comparison between stable-particle and integrally-charged models 3—623
  - hadron spectrum, evidence for size problems on lattice 3—40886
  - hadron spectrum calculations at strong coupling in lattice QCD 3—45354
  - hadron structure function model in QCD frame work 3—16641
  - hadron wave functions and pion decay constant 3—16642
  - hadron-quark transition, effective dielectric theory 3—606
  - hadronisation model with on-shell unitarity in hard scatt., QCD results 3—36198
  - hard and soft processes, total cross section linking through analyticity in Q^2 and sum rules 3—36270
  - hard hadron phenomenology 3—36284
  - hard processes, confining colour field topological props. in QCD 3—11137
  - heavier hadron masses with color hyperfine interaction 3—49640
  - heavy ion collisions, quark-gluon plasma formation, quarkochemistry, quark matter 3—45541
  - heavy quark potential, calcs. by Monte Carlo in SU_2 lattice gauge theory 3—31054
  - heavy quark production 3—40859
  - heavy quark systems, spin pot., effective action approach 3—26060
  - heavy quark systems 3—45363
  - heavy quark-antiquark systems from exponential moments in QCD 3—585
  - heavy quarkonia hadronic decay widths, light coloured particles contribs. 3—36201
  - hierarchical scales, electroweak breaking, compositeness, in unification 3—40814
  - high energy density states expts. 3—21244
  - high energy physics conf., Paris, France, (July, 1982) 3—35771
  - high p_T particle hadroprod. QCD review 3—26061
  - high temperature gauge theories, exact chiral invariance, effective fermion masses, QCD, GUT appls. 3—16499

colour model continued
hot quark-gluon plasma, photon emission, quark mass singularity shielding 3−40855
hot SU(N) gluon matter, possible soln. to plasmon problem 3−49626
hot SU(N) gluon matter, thermodynamic props. 3−36343
hyperons, magnetic moments, total cross-section, QCD flavour depend., additive model, SU(3) 3−49678
instantons, dynamical mass generation, chiral Ward identities, topological charge correl. function 3−31136
jet model, quark fragmentation function, hadron probability distribution, quark clusters 3−45364
jet models and fragmentation functions 3−6065
jet multiplicity and soft gluon factorization in perturbative QCD 3−16608
jet production and fragmentation 3−40861
large E_t hadronic processes, very high energies, gluon jets in perturbative QCD, hadron source 3−40936
large transverse momentum hadrons interactions, QCD anal. 3−21079
large x-intrinsic charm, higher twist, scale breaking, QCD anal. 3−6064
lattice analogue for chiral gauge theories, technicolour mechanism and fermion generation 3−5942
lattice and continuum QCD, gauge theory coupling, implications of change in lattice actions 3−11132
lattice gauge theories, mean-plaquette method for energy and coupling calcs. 3−16475
lattice gauge theories, Monte Carlo results, lattice QCD, string tensions 3−11041
lattice gauge theories with matter fields, order parameter 3−45287
lattice QCD$_2$, $\langle \det U_p \rangle$ evaluation, weak coupling 1/N expansion 3−6061
lattice QCD, boundary effects and hadron mass fluctuations 3−49559
lattice QCD, hadron spectroscopy, u, d and s quark masses 3−11119
lattice QCD, non-abelian monopole condensate construction 3−45348
lattice QCD, plaquette formulation 3−16480
lattice QCD, trilinear gluon condensation parameter, SU(2) theory 3−26065
lattice QCD with SU(3) gauge, hadronic masses and decay constants 3−31154
lepton-hadron scattering, nonsinglet struct. functions, moments, minimum sensitivity principle 3−45343
light quark mass, finite energetic sum rules calc., π radial excitations mass spectrum 3−54866
linear potential with relativistic kinematics, eigenfunctions asymptotic behaviour 3−521
long-range quarkonium pot., subdominant contrib. 3−21074
loop space Hamiltonians for large-N gauge theories and 3−45265
low-lying mesons, baryons and glueball masses in MIT bag model 3−54899
low-mass hadron spectrum, self-consistent fragmented flux-tube calc. 3−36228
magnetic moments for nucleons and Ω^-, μ 3−637
mass matrices in extended technicolour theories 3−599
massive μ pair prod. in association large momentum hadron, recombination model anal. 3−667
meson exchange, quark pairing and chiral bag models 3−11251
meson wave functions and SU(3) symmetry breaking, QCD sum rules, two particle decay 3−586
metacolour schemes and supermetacolour 3−16602
modular quantisation, Fock representation with U(m) symmetry 3−31161
multiparticle dynamics, recent developments 3−21087
multiple hadron prod., SPS collider energies, pomerons as quark-gluon strings 3−11126
Nambu-Jona-Lasinio model, chiral symmetry and supersymmetry 3−584
neutral 2^+ mesons mixing model 3−54879
neutron structure in QCD 3−49685
non-Abelian gauge theories, loop-space formulation 3−31043
nonAbelian monopole internal structure 3−16540
nonperturbative aspects of quantum field theory, conference, St Felia de Guixols, Spain, (June 1982) 3−10508
nonperturbative effects and QCD sum rules 3−40848
nonrelativistic quark model, quarks with Q^2 depend. effective masses as confinement effect 3−54888
nonrelativistic sum rules for QCD$_2$, QED and QCD$_4$ 3−54877
nucleon axial vector coupling constant and mag. moments in bag model, gluon exchange currents 3−45398
one gluon exchange pot., nonstatic effects, helicity representation 3−45347
one-plaquette Hamiltonian lattice QCD with mixed fundamental-adjoint pot., exact phase structure 3−21072
one-plaquette lattice QCD with fermions in 1/N topological expansion, phase structure 3−11131
optimal analytic continuation from finite set of interior data points, phys. structures on boundary 3−54880
oscillatory scaling violations and QCD Coulomb 3−21080
p-wave nonleptonic hyperon decay amplitude and positive-parity excited baryons 3−16636
parity violation, occurrence if squarks are not mass degenerate, SUSY bounds 3−49637
parton model in QCD, power corrections to deep inelastic lepton-hadron scattering 3−11145
partons in soft-hadronic processes, conf., Erice, Italy (March 1981) 3−5499
Peccei-Quinn axion props., strong CP problem 3−31134
perturbative QCD, 't Hooft and Adler transformations of running coupling constant 3−26066
perturbative QCD, absence of free quarks 3−54878
perturbative QCD, consistency anal. in renormalisation scheme depend. 3−11121
perturbative QCD, factorisation and renormalisation scheme depend. 3−36189
perturbative QCD, fastest apparent convergence criterion and principle of minimal sensitivity 3−31148
perturbative QCD, inclusive proton production in quark and gluon jets, recombination model calcs. 3−26067
perturbative QCD, large corrections from gluon bremsstrahlung 3−598
perturbative QCD, leading q$\bar{q}$ Regge singularities 3−21076
perturbative QCD, renormalisation prescription ambiguity 3−11134
perturbative QCD, theoretical aspects 3−45374
perturbative QCD and low-p_T physics 3−6070
perturbative QCD for hadronic processes at low-p_T 3−21078
photon structure function, second order QCD anal., small-x behaviour 3−49677
photon-photon collision 3−6126

colour model continued
photons within family of gauge vector bosons 3−45327
plasma, quarks-gluons, particle radiation in qualitative model 3−36205
polarised photon structure functions, QCD leading behaviour 3−16639
polarised photon-photon collisions, large transverse momentum jets prod. 3−16629
preon model constraints, supergroups, hypercolour solns. 3−16620
preon models, 4, 5 or 6 flavours, analysis by constraints, SU$_n$ 3−26089
pseudoscalar mesons EM form factors in anisotropic chromodynamics 3−40909
pure Yang-Mills theory, lattice action with improved continuum limit behaviour 3−40747
QCD$_2$, zero-mass boson in 1/N expansion 3−11148
QCD, 2-dimens., gauge invariant treatment in large-N limit 3−16606
QCD, β-function, interpolation formula 3−45352
QCD, θ problem and composite quarks 3−16619
QCD, a SU(3,C) gauge field theory 3−11139
QCD, BRS transformation and colour confinement 3−593
QCD, chiral Ward identities, effective actions and meson-glueball mixing, 1^+, 0^- mesons 3−45358
QCD, dynamical realisation of chiral symmetry, quark confinement 3−16605
QCD, elementary particles and field theory review *(Rumanian)* 3−11029
QCD, ferromagnetic state, coloured dielectric props. 3−31146
QCD, gauge theories, confinement and phase transitions 3−5945
QCD, gluon condensation and field strength formulation 3−11122
QCD, hadron coupling to Goldstone bosons 3−45345
QCD, infrared asymptotic behavior of gluon Green's functs. 3−54881
QCD, KNO scaling function in leading log model 3−45360
QCD, light quark mass differences from Laplace-type sum rules 3−40857
QCD, Lorentz-non-invariant counter terms, Slavnov-Taylor solutions in general axial gauge 3−10989
QCD, mag. flux condensation, scale-dependent anal. 3−31147
QCD, many-parton distrib. and fragmentation functions, appl. to hadron jets 3−36220
QCD, moment ratios as upper bounds to ground state of hamiltonian 3−49627
QCD, non-Abelian gauge theory, arbitrariness in perturbation series 3−5944
QCD, nonperturbative confinement, Mandelstam's gluon propagator 3−11120
QCD, numerical study 3−11142
QCD, operator product expansion and vacuum instability 3−45299
QCD, operator product expansion at short distance, quark propagators in gluon field 3−11118
QCD, perturbative cross section for quark scatt. in hadronic interactions 3−49641
QCD, planar approx., bounds on particle mass 3−54882
QCD, product of two gauge-invariant currents, light-cone expansion 3−31135
QCD, quark degrees of freedom in nuclei 3−49794
QCD, quarkonium and baryon spectra from nonrelativistic q$\bar{q}$ pot. 3−21069
QCD, quenched reduction for topological limit 3−21070
QCD, renormalisation group and compositeness conditions 3−6056
QCD, renormalisation scheme, β function 3−31149
QCD, renormalisation-group functions, gauge depend. 3−11133
QCD, restoration of chiral symmetry as temperature and chemical potential increase 3−26070
QCD, running coupling const., IR behaviour 3−589
QCD, spontaneous breakdown of chiral symmetry, flavour-independent mechanism 3−36190
QCD, sum rules for spontaneous chiral symmetry breaking parameters 3−16604
QCD, tests from Q^2 evolution of deep inelastic structure functions 3−31143
QCD, topological origin of flavours and topological gluon mass generation 3−36188
QCD aided parton model, factorisation prescriptions, applications, structure function calc. 3−11150
QCD and origin of nuclear forces *(Russian)* 3−49752
QCD and Regge intercept 3−40863
QCD and string dynamics, Wilson loops 3−11138
QCD charmonium sum rules, vacuum corrections, $O(G^2)$, $O(G^3)$ 3−45357
QCD confinement, DTU model and hadron-nucleus collisions 3−6066
QCD confronts experiment 3−40849
QCD expectations for high-energy hadronic collisions 3−11149
QCD Hamiltonian and nonlinear quantum mechanics 3−26059
QCD jets, hadron multiplicity and distrib., next-to-leading effects 3−45344
QCD planar diagram summation, reduced model, translation invariance 3−11123
QCD scale parameter and quarkonium hyperfine splittings 3−21075
QCD scaling violations in singlet, nonsinglet and glue distrib. functions, Altarelli-Parisi resolution 3−31138
QCD structure functions with next to leading order effects, HEVOL2 program 3−16638
QCD sum rules from vacuum expectation values, chiral symmetry breaking parameters, (SU) violation 3−5997
QCD tests in large transverse momentum hadron photoproduction 3−6067
QCD vacuum, confinement and mag. condensation for N→∞ 3−16607
QCD vacuum, perturbative ground state 3−11140
QCD vacuum angle resolution, grand unification in simple supergravity 3−40830
QCD vacuum as glueball condensate 3−11135
QCD vacuum boxes, Casimir energy calcs. 3−49625
QCD Weinberg sum rules and the mass of composite quarks 3−26087
QCD with vanishing quark mass, invariance props. under space-time inversion 3−6029
quantum geometry and strings, quantum Yang-mills Schwinger functions 3−21004
quark amplitudes with flavour exchange, double logarithmic asymptotics and Regge singularities 3−45378
quark bag model, confinement by meson cloud, quarks in harmonic oscillator potential 3−40868
quark deconfinement; liberation above critical temperature, SU(2) lattice gauge theory 3−26072
quark dynamic mass in QCD using Dyson-Schwinger eqn. 3−21084
quark gas, statistical mechanics in 1-D, SU$_2$ model 3−31183

colour model continued
  quark jet structure from deep inelastic lepton scatt. 3-21065
  quark weak decay rate, mass effects in QCD corrections 3-49642
  quark-gluon plasma formation and obs. 3-21242
  quark-hadron phase transition in early universe, from perturbative QCD and resonance gas model 3-20545
  quark-plasma phase, thermodynamic limits 3-21073
  quarkonia multijet decays, three-gluon vertex testing 3-11171
  quarkonium and gluonic mesons, new particle spectroscopy 3-40860
  quarkonium decays, leading relativistic corrections in QCD 3-54886
  quarkonium spectra and QCD 3-21077
  quarks, asymptotic behaviour of dynamical mass in quantum chromodynamics 3-594
  quarks, review 3-6071
  quartic confinement, QCD and nucleon-nucleon interaction 3-21071
  quenched master field eqns., variational method 3-40781
  quenched master fields, algebraic equation for N-matrix theory 3-30986
  quenched momentum prescription for large-N theories, quenched lattice and continuum theories, loop equations 3-10990
  realistic quark masses and mixing angles without scalars, extended technicolour 3-11129
  reduced infinite colour QCD_2 props. 3-21009
  reduced QCD in Veneziano limit, meson and baryon amplitudes 3-36192
  renormalisation group eqns., asymptotic freedom and infrared problem, Landau-gauge gluon propagator 3-49570
  rotating strings, glueballs and exotic mesons 3-6089
  S O(18) grand unified models with fractionally charged color singlet particles 3-40811
  Savvidy symmetrised chromomagnetic vacuum, Fock space construction, one-loop contributions to effective Lagrangian 3-6062
  semi-inclusive deep inelastic scatt., azimuthal asymmetry calc. 3-26121
  singlet cluster size of emitted partons in QCD jets 3-11130
  small transverse momentum physics 3-21085
  SO(10) grand unified theory, minimum conditions for uniqueness 3-21043
  SO(14) grand unification model with confining model of weak interactions 3-569
  soliton bag model with SU(2)×SU(2) chiral dynamics 3-603
  spin structures, self consistant, meson amplitudes, bootstrapping, CPT invariance 3-31184
  spinor fields, to formulate lattice approximation of fermions 3-26019
  static source, interaction of nonlinear field 3-31051
  strange hadrons in lattice QCD 3-11147
  string models at finite temp. and deconfinement, general props. 3-31170
  SU(2)×SU(2) chiral model, soliton states in QCD effective Lagrangian 3-49631
  SU(2)×U(1) Weinberg-Salam symmetry dynamical breaking by colour forces 3-45322
  SU(2)⊗SU(2) chiral model, QCD effective Lagrangian, exotic levels 3-6069
  SU(2) gluon dynamics, classical eqns. of motion, gluon condensation 3-45351
  $SU(3)_{HC} \times SU(6)_L \times SU(6)_R$ model, composite quarks and leptons for restricted anomaly matching 3-620
  SU(3), algebraic gauge theory, quarks and leptons 3-45320
  SU(3) gauge theory in four dimensions, numerical studies of Wilson loops 3-11026
  SU(3) lattice QCD with fermions 3-40761
  $SU(4)_{colour}$ gauge boson mass limit from $K_L \rightarrow \mu e$ exptal. bound 3-49610
  SU(5) GUT, non-definition of global colour rotations, dyon classification 3-54870
  SU(5) metacolour group as preon representation, reduction of tensor products with permutation symmetry 3-30997
  SU(5) monopoles and dyons, excitations, colour hypercharge 3-54869
  SU(7) ground unified model, fractionally charged particle as evidence for supersymmetry 3-11087
  SU(8) extended technicolour model, technicolour unification without catastrophe 3-45353
  SU(8) grand unified theory 3-21037
  SU(N) hypercolour and extended hypercolour models, fermion masses, rare processes, CP violation 3-49632
  SU(N) metacolour gauge group, composite models without spectators 3-21105
  supersymmetric extended technicolour scale, fermion mass formula 3-40854
  supersymmetric lattice gauge theory 3-45286
  SUSY GUTs, Higgs sector, colour octets and triplets, SU(3)×SU(2) singlets 3-16578
  SUSY GUTs, super B prod., matter stability and gauge hierarchy, cosmological baryon asymmetry 3-49613
  symmetry as a clue to the physics of elementary particles 3-6020
  technicolor, extended-technicolor and tumbling 3-16600
  top jet and QCD jet differentiation using energy flow 3-31144
  two-body Dirac equation for semirelativistic quarks 3-21096
  two-dimensional QCD, gauge inequivalence in coloured sector 3-16603
  two-dimensional QCD with flavour, bosonisation 3-40853
  two-loop corrections, deep inelastic scattering 3-31158
  U(1) meson nonet problem, chiral dynamics, QCD theory, meson spectrum 3-11075
  U(1) problem and QCD 3-11136
  ultra-relativistic heavy ion collisions, phys. conditions 3-21334
  ultrarelativistic nucleus-nucleus collisions, quarkgluon plasma 3-45502
  unextended hypercolour unified theories, mass hierarchies 3-49633
  unified field theory of elementary particles, symp., Munchen, Germany (July 1981) 3-10516
  unified lepton-hadron field model with composite bosons 3-21106
  vacuum alignment by broken gauge interactions 3-16601
  van der Waals potentials, irregular solns. of s-wave radial Schrodinger eqn. 3-49753
  virtual-photon, pion and kaon pair production rates, numerical correspondence with QCD 3-26093
  weak vertex, nonrenormalisation in gauge theories with integrally charge quarks 3-40836
  weak-interaction parameters, corrections in technicolour theories 3-31217
  Witten's model, nosonomy of upside down hierarchy model 3-31103
  XY model, two-dimensional, variational estimates for mass gap 3-36159
  Yang Mills eqns. with external sources, static solns., SU_2, SU_3, SU_n solns. 3-16500
  Z_2 lattice gauge theory with radially varied Higgs field, Monte Carlo study of phase structure 3-542

colour model continued
  $b \rightarrow c l^- \bar{\nu}$, charged lepton spectrum, first order QCD corrections for B decay 3-632
  $b \rightarrow c l^- \bar{\nu}_l$, charged lepton energy distrib. in QCD 3-40856
  $B \rightarrow K_n X$, K multiplicities, hadronic and semileptonic decays, branching ratio 3-26109
  $B \rightarrow lX$, decay of B meson into states with single lepton 3-36237
  B meson decay to kaons without charge and top-charm mass 3-11173
  B semileptonic decay, charged lepton spectrum 3-16631
  D semileptonic decay, charged lepton spectrum 3-16631
  $D^0(D^+)$ decay to PP and PV final states in hybrid model 3-40896
  E(1425), $J^{pc}=0^{-+}$ assignment confirmation 3-36195
  $e^+3^- \rightarrow$ hadrons, effects in bag-model of $qq\bar{q}\bar{q}$, s*(980), $\sigma(980)$ 3-26133
  ee scattering, high energy fixed angle, amplitude calculations 3-31127
  $e^-e^+ \rightarrow q\bar{q}g$, gluon spin ang. distrib., beam polarisation 3-11196
  e^+e^-, baryon prod., gluon jet props. from KUV calculus and recombination 3-31156
  $e^+e^- \rightarrow 4$ jets, gluon self coupling test 3-26078
  e^+e^- annihilation, charged hadrons correl. in quark and gluon jets in perturbative QCD *(Russian)* 3-21142
  e^+e^- annihilation, charged-particle inclusive cross section anal. including QCD higher-order correction 3-40918
  e^+e^- annihilation, differential three-jet cross section, QCD and abelian vector theory predictions 3-21144
  e^+e^- annihilation, energy-energy correlation; $O(\alpha_s)^2$ calc. in QCD framework 3-26125
  e^+e^- annihilation, evolution of short distance phase space quanta into hadron jets 3-16654
  e^+e^- annihilation, hadron prod., single gluon contrib. 3-646
  e^+e^- annihilation, inclusive hadron prod., scale breaking obs. 3-11194
  e^+e^- annihilation, inclusive hadron prod., 2nd order QCD effects obs. in PETRA 3-31224
  e^+e^- annihilation, neutral current effects in QCD four-jet prod. 3-54919
  e^+e^- annihilation, parton shower production, QCD model 3-45404
  e^+e^- annihilation, strings and energy-energy correlation, QCD test 3-11161
  e^+e^- annihilation, three-jet events in hadronic final states 3-36261
  $e^+e^- \rightarrow e^+e^- M\bar{M}$, heavy meson prod. cross section in perturbative QCD 3-36200
  $e^+e^- \rightarrow e^+e^- +$ hadrons, photon structure function in high Q^2 region 3-40908
  $e^+e^- \rightarrow e^+e^- \gamma\gamma \rightarrow e^+e^- +$ twojets $+ X$, broken colour gauge analysis 3-36263
  $e^+e^- \rightarrow e^+e^- q\bar{q}(e^+e^- g\bar{g})$, two-photon jet expts. anal. in integer charge quark model 3-21093
  $e^+e^- \rightarrow ggg$, differential and total cross-sections and Z^0 decay into three-gluons 3-650
  $e^+e^- \rightarrow gg\lambda$, gluon jets prod. via Z^0 reson. 3-16653
  $e^+e^- \rightarrow \gamma^* \rightarrow \psi X$, production rate calcs., 3-36262
  $e^+e^- \rightarrow h$ describing QCD jets in leading logarithmic approximation for transitions 3-26132
  $e^+e^- \rightarrow$ hadrons, comparison with $\bar{p}p$ annihilations into charged particles 3-16672
  $e^+e^- \rightarrow$ hadrons, energy-energy correl. function, perturbative QCD correction 3-21081
  $e^+e^- \rightarrow$ hadrons, $Q^2 \rightarrow A\sqrt{s}$ scaling law at high energies 3-16655
  $e^+e^- \rightarrow$ hadrons, scaling violations, quark fragmentation, perturbative QCD 3-26130
  $e^+e^- \rightarrow$ hadrons, total cross section higher corrections, electro-strong model, scalar quarks 3-6110
  $e^+e^- \rightarrow$ hadrons $(\mu^+\mu^-)$, R value calc. in anisotropic-chromodynamics 3-26079
  $e^+e^- \rightarrow$ hadrons $+ \gamma$, direct photon prod. cross section, angle and energy depend. 3-16650
  $e^+e^- \rightarrow$ jets, Lund Monte Carlo method, computation and comparison with expt. 3-54917
  $e^+e^- \rightarrow$ jets, pol. beams., ang. distribs., broken colour gauge theory 3-11214
  $e^+e^- \rightarrow q\bar{q} + Ng$, plausability of hadron spectra to produce parton bremsstrahlung 3-26131
  $e^+e^- \rightarrow$ two jets, cross section in QCD 3-11193
  $e^+e^- \rightarrow VX$, associated heavy vector meson prod. 3-649
  e^+e^- annihilation, strong coupling constant variation from jet energy spread meas. 3-45405
  $eN \rightarrow e\gamma^*(Z^0)X \rightarrow el\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3-40910
  η EM form factors in VDM and QCD 3-36249
  $\eta_c \rightarrow \gamma\gamma$, QCD multipole expansion, soft gluon effects in quarkonium decays 3-49629
  $\eta'(960)$ hadronic decay, pseudoscalar glueball treatment, flavor SU(3) symmetry 3-6096
  η'-η-G(1440) mixing, scheme on QCD mass formula including axial-anomaly 3-45359
  G(1440), chiral Ward identities, pseudoscalar mesons, gluonic bound state 3-26076
  $G \rightarrow X$ scaling dependence of M_G, decay rate singularity 3-49639
  $gq\bar{q}$ annihilation in $\bar{K}N$ scatt., lower limit of effective gluon mass in baryons 3-609
  $\gamma g \rightarrow q\bar{q}$, linearly polarised photon asymmetry in $q\bar{q}$ prod. 3-16647
  $\gamma\gamma \rightarrow p\bar{p}$, distribution amplitudes, angular dependence in QCD 3-31153
  $\gamma N \rightarrow \Psi X(\Upsilon X)$, inelastic photoprod., QCD heavy quark contribs., charm subprocess 3-40917
  $\gamma p \rightarrow \gamma X$, deep-inelastic Compton scatt., QCD corrections 3-645
  $\gamma q \rightarrow gq$, QCD Compton process up to Tevatron energies 3-644
  $hd \rightarrow pX$, fast backward N prod., confinement forces, colour flux tub model 3-6120
  hh, large transverse energy events, gluon bremsstrahlung effects in QCD 3-36199
  $hh \rightarrow l^+l^-X$, transverse momentum distributions in massive quark model, QCD comparison 3-26163
  $h_1h_2 \rightarrow l^+l^-X$, perturbative QCD calc., soft gluon effects, K-factor 3-54883
  $h_1h_2 \rightarrow l^+l^-x$, lepton pair prod., role of soft gluons 3-16609
  $h_1h_2 \rightarrow \mu^+\mu^-X$, lepton pair prod. at large transverse momentum in second order QCD 3-31152
  hN, 150-250 GeV, dimuon transverse momentum meas., differential cross sections, QCD anal. 3-11213
  $\iota(1440)$ hadronic decay, pseudoscalar glueball treatment, flavor SU(3) symmetry 3-6096
  $\iota(1440) \rightarrow \pi\delta$, glueball nature, SU(3) flavour symmetry determination of coupling constants, QCD 3-11172

colour model continued
  $J/\psi\to f\gamma\to\pi\pi\gamma$, ang. anal. in lowest order QCD 3−36240
  K weak decay, Nambu-Goldstone nature, quark-tadpole transitions, $\Delta I={}^1/_2$ rule 3−26110
  $K^0\to\pi^+\pi^-$ long-distance effects and $\Delta I={}^1/_2$ rule 3−36241
  K^0-$\bar{K}^0$ mixing in six quark model, QCD leading log approx. 3−49630
  $K^-d\to K^+$+miss,ing mass 1.4 GeV/c, search for dibaryons with S=−2, Q=−1 3−26141
  KN sigma terms from kaon-nucleus scatt. lengths 3−660
  K^-p, 4.5, 5.6, 14.3 GeV, planar features of hadronic final states, e^+e^- and μp comparison 3−11210
  lh, deep inelastic scatt. structure functions, first power corrections 3−40911
  lN, deep inelastic scatt., hadron ang. distribs., T odd asymmetry in QCD 3−26105
  lN, deep inelastic scatt. structure functions, slow rescaling variable 3−40912
  lN, nonperturbative effects, deep inelastic scattering, structure functions 3−26119
  $\mu D\to\mu\Upsilon X$, 250 GeV, cross section and branching ratio meas., photon-gluon fusion and QCD models 3−45403
  μN deep inelastic scatt., scaling violations 3−36235
  μN deep inelastic scatt., structure function moments, QCD anal. 3−11191
  $\mu N\to\mu J/\psi X$, 250 GeV, cross section and branching ratio meas., photon-gluon fusion and QCD models 3−45403
  $\mu N\to\mu\gamma^*(Z^0)X\to\mu l\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3−40910
  $\mu N\to\mu\psi' X$, 250 GeV, cross section and branching ratio meas., photon-gluon fusion and QCD models 3−45403
  μp, 280 GeV, deep inelastic scatt., hadrons transverse momentum balance 3−21140
  n magnetic moment, lattice QCD Monte Carlo calc. 3−6098
  N-Δ mass splitting to zeroth order in QCD due to chiral symmetry breaking 3−26114
  NN, 10^{13}-10^{16} eV, scaling violations in Pamir-ANI expts. and in QCD 3−16673
  NN, Drell-Yan mechanism, muon pair prod. rate 3−673
  NN interaction, short range part, equiv. local pots. from quark exchange kernels 3−31367
  NN→jets, ultrahigh, energies in Pamir-ANI expts., QCD predictions 3−16674
  NN potentials in QCD motivated quark models 3−45346
  $\nu(\bar{\nu})N$, charged-current interactions, nucleon structure function and gluon distrib. 3−54902
  $\nu(\bar{\nu})N$, Gross-Llewellyn Smith sum rule as function of q^2 3−36233
  νN deep inelastic scatt., scaling violations 3−36235
  νN→X, hadron multiplicities, explanation parton mechanism, comparison e^+e^- annihilation 3−36234
  $\bar{\nu}_\mu N$, charged weak currents of quarks, V, A structure study 3−26106
  p-n isospin breaking mass differences from QCD 3−6059
  pp, 300 GeV/c, transverse energy trigger for large p_T jets, gluon bremsstrahlung 3−26153
  pp, 45 GeV, jet cross section meas., energy depend. 3−54933
  $p\bar{p}$, 540 GeV, high transverse energy events, jet cross section and mass distrib. meas. 3−54932
  pp, 63 GeV CM parton-parton scatt. amplitude, gluon spin 3−45415
  $\bar{p}p$, charm production cross section at collider energies, QCD calcs. 3−21157
  pp, fixed angle elastic scatt., Landshoff corrections, chromo-Coulomb phase shift 3−11124
  pp, high energy, transverse hadronic energy, multigluon soft emission in hard scatt. 3−40940
  $\bar{p}p$, large p_T strange or charmed baryon prod., higher power QCD mechanisms 3−49713
  pp, $Q^2\to A\sqrt{s}$ scaling law at high energies 3−16655
  $\bar{p}p\to(\gamma^*,2^0)X\to l^+l^-X$, soft gluon emission effects from QCD quark form factor 3−26074
  $\bar{p}p$ annihilations into charged particles, comparison with $e^+e^-\to$hadrons and $e^+e^-\to\Psi,\Upsilon\to$hadrons 3−16672
  $\bar{p}p\to\gamma X$, prompt photon polarisation at large p_T, perturbative QCD test 3−674
  $pp\to\gamma X$, QCD subprocess in direct γ and l^+l^- production 3−21086
  $pp\to\gamma\gamma X$, $\sqrt{s}=63$ GeV, massive photon pair prod. at CERN ISR 3−26168
  $pp\to K(\pi)+X$, large P_T, qualitative comparison with QCD 3−36203
  $\bar{p}p\to MMX$ 3−36200
  $pp(\bar{p})$, squark and gluino production, fusion model calcs., gluino mass 3−45312
  $\bar{p}p(pp)$, 31, 63 GeV CM, hadron and hadron-pair prod. at large transverse momentum 3−45416
  $pp(\bar{p}p)$, 62, 800 GeV cm, photon and π^0 prod., QCD calcs. 3−31256
  $\bar{p}p(pp)$, large p_T quarkonium prod., perturbative QCD anal. 3−16667
  $pp(\bar{p}p)\to\gamma X$, 53 GeV CM, direct prod. at large p_T, longit. spin-spin asymmetry, QCD calc. 3−21159
  $pp\to\Pi^\pm X$, 63 GeV, inclusive cross section meas. of high transverse momentum pions, QCD comparison 3−16666
  $\bar{p}p\to Z^0X$, transverse hadronic energy accompanying weak bosons 3−672
  π, form factors, sum rules in QCD 3−40905
  π EM mass difference from asymptotic QCD 3−45393
  π form factor asymptotics, enhanced power correction 3−11182
  π-$p\to K^+K^-n$, inclusion of Okubo-Zweig-Iizuka rule forbidden processes, glueball mixing, SU(3) predictions 3−26075
  π^0 EM form factors in VDM and QCD 3−36249
  $\pi+n\to K^+K^-p$, inclusion of Okubo-Zweig-Iizuka rule forbidden processes, glueball mixing, SU(3) predictions 3−26075
  $\pi N\to\psi\psi X$, evidence for B-meson prod. 3−36289
  $\pi^-N\to\psi\psi X$, cross section calcs. from quark-antiquark annihilation in QCD 3−31254
  πNN form factor, nonlocality effects in pion quark coupling in chiral bag model 3−49681
  $\pi p\to l^+l^-$, polarisation distribution of quarks, perturbative QCD, weak asymmetries 3−21088
  π^-p, 300 GeV/c, transverse energy trigger for large p_T jets, gluon bremsstrahlung 3−26153
  $\pi^-p\to K(\pi)+X$, large P_T, qualitative comparison with QCD 3−36203
  $\pi^-p\to\phi\phi n$, 22 GeV/c, evidence for glueballs 3−21155
  $\pi^-p\to\phi\phi n$, higher statistics study, glueball evidence 3−36274
  $\psi\to e^+e^-$, QCD multipole expansion, soft gluon effects in quarkonium decays 3−49629
  $\psi\to\gamma+$meson, P state quarkonia production using two gluon mechanism 3−36251

colour model continued
  $\psi\to\gamma f$, helicity structure, f as (gg) state M=1220 MeV in QCD 3−26077
  $\psi(\psi')$ radiative decays involving $q\bar{q}$ scalar-meson final states 3−16645
  ψ radiative decay to pseudoscalar meson, QCD and heavy quark mass expansion 3−49669
  $\psi\to\rho\pi(K^*\bar{K})$, anomalous decays, vector gluonium as possible explanation 3−45388
  $\psi'\to\rho\pi(K^*K^-)$, anomalous decays, vector gluonium as possible explanation 3−45388
  qg, infrared divergences, Bloch-Nordsieck theorem 3−45356
  Q^3G, hermaphrodites, ground state spectrum in MIT bag model with QCD forces 3−54893
  $qh\to l\bar{l}X$, Drell-Yan process in QCD, two-loop graphs, spectator partons 3−6121
  qq, infrared divergences, Bloch-Nordsieck theorem 3−45356
  $Q\bar{q}$ heavy flavoured mesons, exclusive processes in QCD, form factors 3−11125
  $q\bar{q}$ static potential, unifies asymptotic freedom and quark confinement 3−26069
  $Q\bar{Q}G$, hermaphrodites, ground state spectrum in MIT bag model with QCD forces 3−54893
  $q\bar{q}g$ hermaphrodite mesons in MIT bag model, report 3−21101
  $\rho^-\to\pi^-\gamma$, radiative decay width and coherent prod. 3−26116
  Σ^+-Σ^- isospin breaking mass differences from QCD 3−6059
  θ(1640), search for glueball identification 3−21083
  $\theta(1640)\to\eta\eta(\eta\eta')$, effective Lagrangian framework satisfying QCD, glueball config. 3−49671
  $\theta(1670)\to p\bar{p}(\gamma\gamma)(\gamma V)$, glueball nature of θ, comparison with dynamical factors from f and f′ decays 3−21123
  $\theta\to E\pi^0$, isospin violation possibility, branching ratio calcs. 3−36242
  $V\to P\gamma$ decay rate suppression by spin-spin force in QCD 3−49687
  $W^\pm$boson mass determ. in $\bar{p}p$ collisions 3−45418
  Ξ^0-Ξ^- isospin breaking mass differences from QCD 3−6059
  $Z\to q\bar{q}$, β′β fourth generation possibilities and ultraheavy quark spectrum 3−36176
  $Z^0\to4$ jets, gluon self coupling test 3−26078
  $Z^0\to gg\gamma(ggg)$, massive quarks, top quark mass, branching ratios, electroweak test 3−26049
  Fe(μ,X), deep inelastic scatt., quark distrib. in nuclei 3−36214
  ^2H quantum numbers, quark configurations S^6 and S^4P^2 in bag model 3−11257
  $^2H(\mu,X)$, deep inelastic scatt., quark distrib. in nuclei 3−36214
  p magnetic moment, lattice QCD Monte Carlo calc. 3−6098
  pN, beam dump expt., bounds on supersymmetric particles 3−45412

colour perception *see colour vision*

colour photography
  acid sensitive, film, colour changing process 3−45235
  additive-colour automatic photographic printer, optimum zonal filter selection method 3−1756
  astronomy, direct photographic image enhancement 3−10224
  camera with dynamic cross-colour-suppression and automatic convergence adjustment *(German)* 3−30945
  camera-film, high-speed colour reversal 16 mm film, Eastman Ektachrome 7251 3−20920
  digital image recording systems using positive and negative proceses, contour distortion visibility 3−438
  dye stabilisation by UV screening agent, for instant colour prints 3−39396
  Eastman colour high-speed negative film 5293 3−20921
  electrophoretic recording of color images 3−45230
  enlargers, colour print, construction principles, review 3−36112
  ENT photography using Surgery Microscope Model 212 3−34936
  film, 3M Color Negative 100, comparison with Kodacolor II film 3−5895
  film, 3M Color Reversal 400, review 3−40708
  film granularity dependence on optical density *(Russian)* 3−54795
  fundus oculi examination using multispectral and multitemporal techniques 3−34938
  gamut of reproduced colours obtainable by combination of subtractive colour dyes, practical constraints 3−437
  Kodacolor VR 1000 colour negative film, review 3−16431
  Kodak colour negative films, testing for astrophotography 3−35449
  negative layer splitting into separate fast and slow components, effect on granularity 3−5901
  photochromic papers containing Mo(VI) cpds., colour image characts., moisture content effect *(Russian)* 3−20932
  prints, image dye stability, effect of O_2 insulation, alkylhydroquinone behaviour as antioxidants 3−4302
  reversal colour process, silver and colour images granularity, investigations *(Russian)* 3−30953
  reversal films, market survey rel. to ideal TV news film 3−10931
  Sakuracolor 400 colour negative film, review 3−49475
  solar eclipse multicolour photometry appl. 3−59296
  transmission dielectric grating use in colour and black-and-white reproduction 3−56136
  Ag halide tabular grain emulsions 3−54780

colour picture tubes, television *see colour television picture tubes*

colour television cameras
  fidelity classification 3−16400
  ophthalmoscopy and fluoroscopy of fundus oculi 3−34939

colour television picture tubes
  wide-angle electron deflection, electron optics 3−26930

colour vision
  see also eye
  achromatising lens, modified, for optometry 3−19848
  adaptation studies *(Japanese)* 3−39634
  binocular phase suppression phase altering colour vision 3−29546
  bipolar cells, carp, double colour-opponent receptive fields 3−58659
  brightness luminous-efficiency functions for 2° and 10° fields 3−29545
  chromatic adaptation correcting methods comparison used for colour rendering specification 3−39637
  chromatic induction as a function of wavelength of inducing stimulus 3−39639
  chromatic induction rel. to inducing stimulus luminance 3−39640
  chromatic induction rel. to spatial variables, element-contribution function derivation 3−39641
  cone-system contributions to responses of colour-opponent neurones in monkey lateral geniculate 3−15081
  deficiency tests on a group of boys, comparative evaluation *(Spanish)* 3−19704

colour vision continued
- dichromatic teleost fish, Perca fluviatilis, photopic spectral sensitivity 3—9590
- discharge light sources, spectral distribution effect on visual performance 3—48292
- discrimination, rel. to ergo-ophthalmology 3—4504
- discrimination perimetry, achromatic and chromatic limits in periphery 3—9588
- display evaluation, psychophysics appl. 3—24734
- equal-luminance light brightness 3—9593
- evoked potentials in men, chromatic responses *(Japanese)* 3—19695
- Farnsworth 100-hue test performance, effect of reduced visual acuity 3—58664
- horizontal cells of carp retina, colour coding mechanisms *(Japanese)* 3—19692
- image intensities and material changes 3—34850
- masking interactions between chromatic and luminance gratings 3—34856
- matching colours for saturation and brightness, relationship to luminance 3—9592
- measurement of colour appearance by magnitude estimation technique *(Japanese)* 3—39635
- opponent colour responses of visually evoked potentials in monkey brains 3—39626
- perceived colour, changes rel. to chromatic interactions 3—9599
- purity discrimination: successive vs simultaneous comparison method 3—24721
- reaction time to spatial frequencies using yellow and luminance-matched neutral goggles 3—53670
- red-green ratio, variation with refractive error 3—53671
- red/green colour opponency at detect. threshold 3—48291
- retina, goldfish, convergence of signals from red-sensitive and green-sensitive cones onto L-type horizontal cells 3—58658
- retinal disease, chromatic and luminosity processing 3—34832
- retinal rivalry in viewing anaglygh stereo material, SEM appl. 3—53680
- retroreflective material daytime colorimetry, spectrophotometer or colorimeter calibration 3—36060
- review of colour vision and olfaction research at Osaka Branch *(Japanese)* 3—19703
- spatial frequency response rel. to retinal location 3—19705
- spatiotemporal colour contrast, sensitivity in the peripheral visual field 3—24726
- spectral coefficient of retroreflection definition and use, spectroradiometric meas. 3—36062
- statistical correlation between colour vision, age and sex *(Italian)* 3—4503
- Stiles's π_4 mechanism, adaptation of one class of cone 3—9589
- techniques for colour meas., development at Osaka Branch of Electrotechnical Laboratory *(Japanese)* 3—36056
- uniform colour spaces used for colour rendering specification, subjective evaluation 3—39636
- Von Kries chromatic adaptation, necessary and sufficient conditions for colour constancy 3—58666
- within-species variations in visual capacity among squirrel monkeys 3—44247

columbium *see niobium*

coma *see aberrations*

combination scattering spectra *see Raman spectra*

combustion
- *see also explosions; flames; heat of combustion; reaction kinetics*
- aerosol particles, combustion processes in EM field 3—53396
- buoyant turbulent diffusion flame, with low Froude number, spectral characts. of aerodynamic field *(French)* 3—22437
- cellular flame structure and turbulent combustion 3—14871
- chamber, convectively cooled, thermal state calcs. 3—12498
- chromatographic automatic N_2 analyser 3—9365
- coal combustion processes evaluation using impulse holography *(Hungarian)* 3—53406
- coal delivery for combustion in a low temp. fluidised bed 3—7650
- coal technology for MHD power generation 3—29418
- coke, combustion temp. in fluidised bed, heat transfer 3—7649
- composite system containing ferromagnetic additives, mag. field influence on burning rate 3—53399
- condensed system with fixed reaction product temp. combustion instability 3—53394
- diffusion flame, transient combustion state anal. 3—53385
- dust clouds of C, coal, Mg, Al, flame propagation in zero gravity, burning velocity, thickness, radiation heat loss 3—24537
- energy and materials recovery from waste: limits and prospects *(Italian)* 3—48173
- fluidised bed reactor for coal combustion, simulation procedure for mathematical modelling *(German)* 3—24506
- FM-9 solutions, rheology rel. to flammability 3—27565
- fuel aerosuspension with oxidant, convective combustion theory 3—9320
- fuel/O_2 mixtures, CO_2 laser induced ignition 3—44061
- gas combustion dynamics in spherical vessel 3—39388
- gas flow behaviour in MHD generator boundary layer 3—51243
- gas suspension, lower autoignition conc. limit, approx. calc. method 3—53387
- gas-free system, stationary combustion, effects of boundary kinetics 3—53397
- gas-permeable fuel, basic combustion parameters 3—53390
- heterogeneous deflagration waves, nonlinear dynamics 3—53407
- hexane-air mixture, homogeneous, combustion at high press., C black form. 3—53395
- inflow disc MHD convertor feasibility and performance calc. 3—53569
- IR temperature meas. of combustion gases *(Chinese)* 3—10843
- light combustion waves, fast and slow, existence and characts. 3—53401
- liquid fuel gaseous suspension ignited by flame jet, pulsative combustion 3—29309
- liquid layer exposed to flow of gaseous oxidiser, thermal combustion regime analysis 3—53391
- metal particle ignition in high-temp. flow behind shock 3—53386
- metal powder layer, lower autoignition conc. limit, approx. calc. method 3—53387
- methane-air flame, two-line at. fluoresc. temp. meas. 3—19522
- methanol as boiler fuel for electric power generation, test and economics 3—29372
- MHD combustor oxidiser high temperature preheating by direct combustion of fuel 3—44135
- MHD conversion, coal devolatisation and burn-out 3—29415
- MHD convertor axial field breakdown threshold voltage obs. 3—51394

combustion continued
- oscillatory systems, phase relations 3—53400
- plane porous radiators with surface combustion 3—32589
- polymer, combustion at low pressure under natural convection conditions 3—53393
- pressurised fluidised-bed combustion facility, 1000 hr test programme, observations and analysis 3—34708
- probing using CARS 3—45216
- propane-O_2 mixture, detonation wave suppression accompanying spontaneous ignition, expt. study 3—22490
- pulverised coal for MHD convertors, combustion and NO_x formation mechanisms 3—29419
- shock layers, limit behaviour and existence 3—9323
- soot radiation, soot shape effect 3—50913
- subsonic turbulent jet mixing flowfield, reactive recirculating in a combustor 3—56592
- superheating instability in planar layer, heat exchange effect 3—50919
- supersonic airflow, parallel H_2 injection into const. area, high enthalpy jets 3—12709
- supersonic combustion, numerical study of staged fuel injection 3—12708
- supersonic combustion around a truncated cone 3—53409
- supersonic flow, combustion stabilisation, flameout and ignition boundaries in annular groove 3—53392
- thermal ignition in a reactive slab with unsymmetric boundary temperatures 3—40536
- thermoacoustics, acoustic wave generation and amplification 3—27297
- thermonuclear plasma with movable boundary, thermal instability, control system 3—51317
- utilization of coal in Sweden *(Hungarian)* 3—48116
- vapour clouds, combustion, estimation of pressure fields 3—46659
- wave, slow laser-supported, acceleration 3—34627
- zone charact. in turbulent flows of premixed propane air homogeneous mixt. 3—14869
- Al_2O_3:Cr, burn-out of Cr during ruby cryst. growth by Verneuil method 3—39026
- C_2 radical anal. in combustion diagnostics, CARS 3—36769
- Cu cathode thermionic emission in K-seeded LPG combustion products 3—51393
- H_2-O_2-Ar flat flames, temp. meas. by two-line laser saturated OH fluoresc. 3—9319
- H_2O vibr. relax. and emission during shock heating of low-density gas mixture 3—56576
- NO_x formation in coal-fired MHD power plant simulation facility 3—53568
- Na combustion, reaction with containment materials, extinguishers 3—11398
- Na fires, ignition and combustion, consequences 3—11472
- O_2 detection for combustion control and regulation 3—58455
- Ti, heating by intense laser beam, oxide optical consts. changes effect 3—19230
- Ti, ignition and combustion in oxidising medium under CO_2 laser irrad. 3—9324
- Ti-Ni(Co), self-propagating high temp. synthesis products, structure and phase composition 3—9018

comets
- 1983a, discovery and precise positions of possible comet (1983 January 5 to 9) 3—35542
- Arend-Roland (1957 III), tail brightness profiles and dust characteristics *(Chinese)* 3—40071
- P/ Ashbrook-Jackson, orbital investigation, mechanical energy and planetary perturbations 3—35536
- asteroid close approach predictions, calc. technique 3—30223
- atmosphere-solar wind interaction, review 3—25273
- δ Aurigid meteor stream hourly rate, orbital elements and parent comet 3—35547
- Austin (1982g), elliptical orbital elements and ephemeris (1982 September 28 to 1983 March 7) 3—5232
- Austin (1982g), fine-error-sensor magnitude and UV spectrum from IUE obs. 3—15875
- Austin (1982g), total visual magnitude estimate, (1982 November 16) 3—20298
- Austin (1982g), total visual magnitude estimates (1982 September 24 to October 27) 3—10267
- Bennett (1970 II), dynamic coma models from visible obs. 3—10262
- bibliography 3—54601
- Bowell (1980 b), H_2O ice identified by far IR spectra obs. 3—44711
- Bowell (1980b), frosts search, IR obs. 3—35535
- Bowell (1980b), grain nature from visible/IR obs. 3—35534
- Bowell (1980b), struct., light of occulted stars absorpt. anal. 3—20296
- Bowell (1980b), total visual magnitude estimate (1982 August 20) 3—20297
- Bowell (1980b), UBV photometry (1982 July 24 and 26) 3—25382
- Bowell-Skiff (1983c), discovery and precise positions, (1983 February 11 and 15) 3—44706
- P/Bowell-Skiff (1983c), precise positions, (1983 February 20 and 21) 3—44709
- P/Bowell-Skiff (1983c), precise positions, orbital elements and ephemeris 3—44708
- Bradfield (1974 III), anal. of plasma tail flaring 3—10261
- Bradfield (1980 XV), spectrum line identification and anal., obs. 3—20294
- capture into Solar System, three-body processes efficiency 3—48861
- catalogue of orbits, fourth edition 3—16098
- CCD scanning of close-to-Earth objects 3—25368
- P/ Chernykh (1978 IV) IR obs. 3—35540
- P/Churyumov-Gerasimenko, (1982f), total visual magnitude estimates and ephemeris 3—44705
- /Churyumov-Gerasimenko (1981f), light from occulted stars absorpt. anal. 3—20296
- P/Churyumov-Gerasimenko (1982f), ephemeris (1982 Nov.-1983 Feb.) 3—35538
- P/Churyumov-Gerasimenko (1982f), improved orbital elements and non-gravitational parameters 3—15875
- P/Churyumov-Gerasimenko (1982f), total visual magnitude estimates (1982 October 11 to 27) 3—15874
- P/Churyumov-Gerasimenko (1982f), total visual magnitude estimates and tail lengths, (1982 November 8 to 20) 3—20299
- P/Churyumov-Gerasimenko (1982f), total visual magnitude estimates (1982 November 22 to December 8) 3—25384

comets continued
P/Churyumov-Gerasimenko (1982f), total visual magnitude estimates and obs. of tail (December 1982) 3—35543
P/Churyumov-Gerasimenko (1982f), total visual magnitude estimates (1983 January 1 to 22) 3—35546
P/Churyumov-Gerasimenko (1982f), total visual magnitude estimates, (1983 February 15 to March 16) 3—59270
P/Churyumov-Gerasimenko Churyumov-Gerasimenko (1982f), orbital elements and ephemeris (1982 September 28 to 1983 February 15) 3—5233
comae, photochemical heating theory for H_2O and CO-rich comets 3—35532
P/ d'Arrest (1976 XI), H prod. rates from Lyman α obs. 3—48856
P/d'Arrest (1982e), total visual magnitude estimates, (1982 November 6 to 15) 3—20300
p/d'Arrest (1982e), total visual magnitude estimates (1982 Aug.-Sept.) 3—5234
deep-space missions, review of Mariner Mark II concept 3—59179
dust collection and chem. anal. instrumentation for spacecraft 3—48820
dusty atmosphere photochemistry and dynamics 3—20301
dynamical evolution and disintegration 3—25386
P Encker (1980 I), 10 μm feature and dust albedo, IR obs. 3—35540
far-IR and submillimetre astronomy 3—30295
formation, implication of CO_2 rich coma model appl. to Comet West (1976 VI) 3—30298
P/Halley, 1981/82 opposition search to 25.8 mag., albedo and radius constraints 3—5230
P/ Halley, 1985/6 apparition, orbit, and observational possibilities 3—10269
P/Halley, historical perspective and proposed space missions *(Russian)* 3—5236
P/Halley, in 14th Annual Meeting of Division for Planetary Sciences of American Astronomical Society (Boulder, Colorado, 1982 October 19 to 22) 3—5477
P/Halley, plans for 1986 obs. 3—25387
P/ Halley, theoretical IR spectra and detectable molecules 3—35541
P/Halley (1910 II), magnetic field of tail 3—20302
P/Halley (1982i), confirmation of recovery, posns. and mag. 3—10268
P/Halley (1982i), improved orbital elements and non-gravitational parameters 3—35545
P/Halley (1982i), precise geocentric positions (1982 October 16 to November 16) 3—25383
P/Halley (1982i), precise position, 1982 December 10, and approximate V-magnitude 3—30303
P/Halley (1982i), precise position and apparent visual magnitude (1983 January 14) 3—44704
P/Halley (1982i), precise position and V-magnitude, (1982 December 13) 3—48859
P/Halley (1982i), recovery, semi-accurate positions and magnitude, (1982 October 16) 3—5235
helical wave in type I comet tails, Kelvin-Helmholtz instability 3—20303
ice composition, UV spectra anal. 3—54289
ice-covered surfaces, effects of fast ion bombardment 3—30264
impact on planets, craters form. and nature 3—20273
interstellar origin in globules through dust grain sedimentation, orbit anal. 3—59265
ionosphere interaction with solar wind, charge exchange effects 3—10180
Jupiter encounter, effects on orbit 3—25374
P/ Kearns-Kwee (1981h), IR obs. 3—35540
Kohler (1977 XIV), light curve from ALPO obs. 3—20295
Kohoutek (1973 XII), anal. of plasma tail flaring 3—10261
P/Kopff (1982k), ephemeris (1983 March 27 to November 22) 3—48860
P/Kopff (1982k), recovery and semi-accurate positions (1982 December 20) 3—30302
P/Kopff (1982k), total visual magnitude estimate (1983 March 16) 3—59267
P Levell, ejected particles in 1770, motion and perturbations at 1779 encounter with Jupiter 3—30305
magnitudes, coma and tail parameters for five objects (1982 May-Nov.) 3—35539
magnitudes, coma dia. and tail details for nine objects (1953-82) 3—10265
mm-wave expts. rel. to origin of life 3—15877
Mrkos (1957 V), striated tail, particle fragments dust population 3—35533
nature, historical perspective and proposed space missions *(Russian)* 3—5236
nuclei, role of electrostatic charging 3—15838
Oort cloud, giant molecular cloud effects 3—25553
Oort cloud, total mass 3—44702
Oort cloud inner core as planetary perturber 3—59271
orbits, new original and future reciprocal semimajor axes 3—48857
origin, dynamical aspects 3—5229
P/Bowell-Skiff (1983c), ephemeris continuation (1983 April 16 to July 5) 3—59268
P/d'Arrest (1982e), total visual magnitude estimates, (1982 October 5 to 20) 3—10266
Panther (1981 II), grain nature from visible/IR obs. 3—35534
periodic comets, light curves anal. 3—54288
photometric parameters of 1948-1954 perihelion comets 3—30304
plasma tails flaring, anal. of hypersonic pressure balance with solar wind 3—10261
P/Pons-Winnecke (1983b), recovery, precise and semi-accurate positions (1983 January 12 to 20) 3—35544
precise positions on Minor Planet Circulars 7725-7790 for 16 objects 3—59249
precise posns. on Minor Planet Circulars 7279-7394 for six objects 3—15867
precise posns. on minor Planet Circulars 7395-7514 for six objects 3—25366
precise posns. on minor Planet Circulars 7515-7628 for 16 objects 3—54269
precise posns. on Minor Planet Circulars 7629-7724 for six objects 3—54270
radio observations and anal., review 3—5231
P/Schorr (1918 III), improved orbital elements and search ephemeris 3—10263
P/Schwassmann-Wachmann 1, mags. during 1982 outbursts 3—10264
P/Schwassmann-Wachmann 1, total visual magnitude estimates, (1983 February 19 and 20) 3—44710
P/ Shajn-Schaldach (1979 I), positions meas. during September 1978 with ESO Schmidt telescope 3—44696

comets continued
short-period comets pre-discovery encounters with Jupiter, Keplerian approx. estimation 3—25381
solar wind effect on comets, comparison with solar wind-magnetosphere interaction *(Swedish)* 3—44703
P/ Stephan-Oterma (1980 X), 10 μm feature and dust albedo, IR obs. 3—35540
P/ Stephan-Oterma (1980 X), grain nature from visible/IR obs. 3—35534
P Stephan-Oterma (1980 X), molecule prod. rates and backscattering props. 3—5228
Sun-grazing, Kreutz family orbits and observations *(French)* 3—30299
sungrazers seen in 1981 AD, coronagraphic obs. 3—15876
P/Swift Tuttle (1862 III), obs. during 1862 apparition, relation to Perseid meteors and return date *(French)* 3—30300
P/Tempel 1 (1982j), ephemeris, (1983 March 37 to September 3) 3—44707
P/Tempel 1 (1982j), recovery, semi-accurate and approximate positions, and spectrum 3—30301
P/Tempel 1 (1982j), total visual magnitude estimates, (1983 March 3 to 21) 3—59269
P/ Tuttle (1980 XIII), 10 μm feature and dust albedo, IR obs. 3—35540
type I comet tails, compressible plasma waves and K-H instability 3—54290
ultraviolet spectroscopy 3—25385
visual obs. (160-77) of 48 objects 3—35537
VJHK colorimetry of remote comets, asteroids and satellites, implications for surface materials 3—59266
West (1976 VI), H prod. rates from Lyman α obs. 3—48856
West (1976 VI), neutral coma, appl. of CO_2 rich coma model 3—30298
H_2 production from solar wind interactions 3—48858
NH^+, candidate molecule for comets and interstellar space, anal. of optical and near IR spectra 3—10195
O I forbidden lines in nine comets, visible obs. 3—54287

commensurate-incommensurate transformations
adsorbate solid, dislocation interaction free energy near commensurate-incommensurate transition 3—8049
adsorbed layer, commensurate-incommensurate transition and melting 3—51953
adsorbed monolayers, lattice gas models with competing interactions, phase diagrams 3—51943
adsorption, statistical mechanics, conf., Trieste, Italy (July 1982) 3—49083
axial next-nearest-neighbour Ising model, perturbation expansions, phase transitions 3—43384
bis-propylammonium manganese tetrachloride, incommensurate-reentrant high symm. phase transition 3—2776
cholesteryl 2,2,3,3-tetrafluoropropionate, single cryst., incommensurate phase transition 3—18436
classical condensed matter, devil's staircase and order without periodicity 3—37819
critical phenomena in two dimensions, theoretical models and phys. realisations 3—38028
discrete linear chain, renormalisation 3—33389
disorder-incommensurate transition systems, phase diagrams 3—47080
ferroelectric, incommensurate, phase transitions, solitons and phasons 3—19078
ferroelectric A_2BX_4-type crysts., shear stiffness in incommensurate phase 3—8116
Frenkel-Kontorowa model with deformable substrate, ground state and excitation spectrum 3—35950
graphite, physisorbed N_2, struct. and orientational ordering, LEED study 3—51946
graphite with physisorbed N_2, uniaxial incommensurate phase obs. 3—13635
graphite-Br intercalation cpd., $C_{28}Br_2$, commensurate-incommensurate transition, X-ray scatt. study 3—13435
graphite-Br intercalation cpds., dil., commensurate-incommensurate transition and disordering 3—8193
graphite-$SbCl_5$ intercalation cpd., commensurate-incommensurate transition, TEM and elec. resist. meas. 3—13437
incommensurate crystals, anal. 3—37818
incommensurate epitaxial layer, first and second order transition to superstructures, discrete maps 3—57059
incommensurate structures, neutron scatt. studies 3—51738
incommensurate systems, classical and non-classical behaviour, secondary order parameter susceptibility 3—18425
Ising model, inhomogeneous, correlations, diagonally layered models on square lattice 3—52501
long range interaction influence on commensurate-incommensurate transition 3—51784
modulated structures, of phase transitions 3—47100
one dimens. chains, T→0 limit of Gibbs state 3—42746
one-dimensional lattice gas and the universality of the Devil's staircase 3—45084
parameter-dependent critical exponent in two-dimensional model 3—47079
phase-amplitude soliton lattice and the lock-in transition 3—19083
quantum asymmetric clock model, commensurate-incommensurate transitions and Lifshitz point 3—38056
quantum model for commensurate-incommensurate transitions 3—35948
quasi-one-dimensional systems, kink form., continuum approx. 3—13699
quasi-one-dimensional systems, polarisation energy fluctuations and commensurate-incommensurate cond. 3—3170
soliton structures in a discrete chain 3—8164
superionic crystal, vibration spectrum near inhomogeneous state transition temp. *(Russian)* 3—3092
tetrafluoromethane, adsorbed on graphite, commensurate-incommensurate transitions and melting 3—38198
tetrafluoromethane, adsorbed on graphite, phase transitions, role of walls and dislocations 3—51952
tetragonal system, ferroelastic, phase transition, incommensurate phase appearance, theory 3—18453
tetramethyl tin adsorbed monolayers, melting, phase transitions and diagrams, Mossbauer study 3—23166
tetramethylammonium: copper tetrachloride, paraelastic-ferroelastic transition, hardness meas. 3—18449
tetramethylammonium cobalt tetrachloride, ferroelectric-incommensurate transition, photoacoustic study 3—51779
tetramethylammonium copper tetrachloride, ferroelastic transitions, thermal and spectral studies 3—33424

commensurate-incommensurate transformations continued
- tetramethylammonium zinc tetrachloride, Mn^{2+} doped, phase transitions, EPR, DSC studies 3−57085
- thiourea, elastic const., C_{33}, in elec. field, Brillouin scatt. study 3−3753
- two dimensional sine-Gordon system, commensurate-incommensurate transition, Bethe ansatz calc. 3−57056
- weakly bound chains, soliton statistics, mapping to Ising model 3−45082
- XY model, magnetostrictive, quasi-one-dimensional, structural lifshitz point 3−18913
- Ar-Xe mixture physisorbed films on graphite, synchrotron X-ray diffr. study 3−51949
- $Cd_2Nb_2O_7$, phase transition, 4 to 230K, Raman scatt. and permitt. meas. 3−8821
- $Hg_{3-\delta}AsF_6$, incommensurate phases, hydrodynamics 3−46848
- Ho, helimagnetic phase, commensurate effects 3−52476
- K_2SeO_4 crystal, incommensurate phase, phase soliton effect ESR line shape of VO^{2+} 3−28699
- K_2SeO_4, incommensurate phase transition, optical SHG obs. 3−22162
- K_2SeO_4, normal-incommensurate transition, amplitude mode, uniaxial stress effects, Raman study 3−13433
- K_2SeO_4, phase mode in incommensurate phase, Raman scatt. study 3−47633
- Kr monolayer, adsorbed on graphite, behaviour near commensurate-incommensurate transition 3−23163
- Kr monolayer, adsorbed on graphite, weakly incommensurate phase, mol. dynamics simulation 3−28214
- $LiAlSiO_4$, modulated structures, of phase transitions 3−47100
- $NaNO_2$, incommensurate antiferroelectric, phase transition, Brillouin scatt. study 3−19147
- $NaNO_2$, modulated structures, of phase transitions 3−47100
- $NiBr_{2-x}Cl_x$, incommensurate mag. phase, neutron diffr. and magneto-optical study 3−14010
- Pb monolayers on Cu (110), melting transition, X-ray diffr. study 3−8323
- $Pb_5Ge_3O_{11}$, domain struct., existence of incommensurate phase *(Russian)* 3−19087
- Pd adsorbed layer on Nb(110), atomic and electronic struct., and commensurate-incommensurate transition 3−33773
- $RbH_3(SeO_3)_2$, transverse acoustic wave propag. near struct. phase transitions 3−18403
- Rb_2ZnBr_4, X-ray study on successive phase transitions 3−28788
- Rb_3ZnBr_4, Rb_3ZnBr_5 impurity effects, ^{81}Br NQR study 3−23836
- $Rb_2ZnBr_4(Cl_4)$, incommensurate phase, second order quadrupole shift, NMR study 3−52101
- Rb_2ZnCl_4, soliton density behaviour at phase transition, ^{87}Rb NMR study 3−19002
- SbCl-graphite intercalation cpd., thermal transport props., commensurate-incommensurate transition 3−2904
- $TaSe_2$ (2H), CDW states, discommensuration arrays, broken hexagonal symmetry 3−18635
- $TaSe_2$ (2H), CDW state, commensurate-incommensurate transition 3−18636
- $TaSe_2$ (2H), elasticity, thermal expansion 3−28058
- $TaSe_2$(2H), orthorhombic CDW parameters, temp. depend., ^{77}Se NMR study 3−8730
- $Ti_{50}Ni_{47}F_3$, martensitic transform., electron microscopy study 3−39125
- $Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, microstructural changes, CDW, electron diffr. study 3−38054
- $Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, incommensurate and commensurate phases 3−39124
- VS_2 (1T), phase transition, ^{51}V spin echo NMR spectrum 3−57814

commerce
- *see also marketing*
- coal and oil mix as power station fuel, market potential and preparation cost 3−58470
- synthetic fuels, developing technologies and commercial prospects 3−39437

commissioning
- *see also installation*
- solar power plant installation, commissioning and operational results in Almeria, southern Spain 3−14997

communication networks
- *see also computer networks; telephone networks*
- junction networks, optical fibres use, technical and economic prospects 3−10497
- optical fibres, angular division multiplexing 3−42029

communication systems *see telecommunication systems*

communication theory *see information theory*

communications applications of computers *see communications computing*

communications computer control
- *see also communications computing*
- audio-visual presentation and production, impact of microprocessors 3−30942
- automatic alignment of fiber optical components using Elektronika-60 microcomputer 3−37211

communications computing
- *see also communications computer control*
- Earth-ionosphere waveguide model, computation of complex roots of modal eqns. 3−30109
- human body, effect on antenna radiation patterns 3−58719
- sonar nonstationary reverberation simulation, using linear spectral prediction 3−42060
- sound engineering for theatre and film 3−45226

community planning *see town and country planning*

compacting *see densification*

comparators (circuits)
- DC current measurer, accurate wideband, for stabilisation of power supplies to charged particle storage devices 3−10854

compasses
- *see also navigation*
- gyrohorizon compass, asymptotic stability in Newtonian gravit. field 3−7398

compensation
- *see also error compensation*
- displacement transducer, magnetoresistor, temp. error compensation with temp. depend. elements in core 3−40587
- distance meas. by laser, microprocessor compensation of amplitude-dependent phase nonlinearity 3−37109

compensation continued
- electrochemical O_2 partial pressure analyser with automatic temp. compensation 3−9367
- electronic hydrometer for stationary lead-acid battery electrolyte 3−34690
- EM transducer with temp. compensating shield 3−20844
- force balance devices with improved damping 3−35977
- glitches compensation in EXAFS data collection 3−26683
- holographic scanner, eccentricity compensation 3−41791
- laser beam thermal defocusing compensation by means of phase conjugate adaptive systems 3−22143
- magnetic field meas. of cellular action currents, using superconducting magnetometer 3−29802
- optical scanning head with homogeneously illuminated image plane, photochromic compensation of light intensity variations 3−32432
- optical test head flare compensation 3−32431
- photovoltaic battery charger with state-of-charge estimator and controller 3−34693
- strain gauge for use in pressurised water environment, self-press.-compensating technique and waterproofing 3−20837
- temperature compensation, electrical conductivity in conductometric apparatus *(Polish)* 3−36041
- temperature meas. with thermocouples, reference junction temp. influence, characts. linearisation *(German)* 3−311

compensation, charge *see charge compensation*

compilers (program) *see program compilers*

compiling programs *see program compilers*

complementarity
- No entries

complementary metal-oxide-semiconductor integrated circuits *see field effect integrated circuits*

complete computer programs
- *see also subroutines*
- anharmonicity estimation from a Morse potential, program in Fortran 3−46046
- BASIC program to predict satellite positions 3−39987
- binary diffusion finite difference solution, FORTRAN programs 3−29902
- biostratigraphic data, seriation, FORTRAN program 3−4978
- celestial mechanics, general precompiler for algebraic manipulation of Poisson series in FORTRAN IV 3−48806
- emergency radiological dose calculations using a pocket-sized computer 3−34982
- equivalent isotropic thermal parameter calculation, program for HP-41C calculator 3−46873
- fast algorithm calcs. for mol. distance matrix in PASCAL 3−55779
- fine grained materials, electron probe microanalysis, inclusions effects in FORTRAN 3−29903
- Galilean satellite positions, computer program *(French)* 3−35504
- gap-containing data, correlation coeff. matrix program, in FORTRAN, geochemical example 3−276
- geochemistry, regional interpreting, using optimal interpolation, FORTRAN program 3−4977
- geological map digitisation, graphic cell method, FORTRAN program 3−4979
- hydrogen atom coordinate calculation in FORTRAN IV and for HP 41C 3−2445
- particle size analysis using Mie scattering, effect of refr. index and collecting solid angle *(Japanese)* 3−36938
- plastic deformation texture simulation, generalised computer program 3−44954
- RETICENT, command language for spectrophotometric data reduction 3−10226
- rock dilatancy, split shear-wave arrival interpretation, FORTRAN program 3−4779
- spin-lattice relax. times, iterative linear method calcs. 3−11833
- stellar photoelectric photometry, simple and accurate on-line data acquisition program in BASIC 3−48832
- stiffness matrices for C_0 continuous tetrahedra in FORTRAN 3−27381
- stratigraphic event scaling algorithms in FORTRAN 3−4980
- Sun and Moon on the Apple program in BASIC 3−40044
- TI-59 calculator program for determining the gravity anomaly of a 2-D geologic body 3−29810
- TI-59 pocket calculator magnetic modeling program 3−29820
- topological reson. energy computation, in PASCAL 3−6516
- transient heat conduction, boundary integral eqn. calc. method, FORTRAN program 3−37317
- tropospheric absorption and dispersion of millimeter and submillimeter waves, in extended BASIC 3−54085
- Voigt profile calc. using a programmable hand held-calculator HP-34C 3−26790

complex angular momentum plane
- *see also angular momentum theory; Pomeranchuk poles and trajectories; Regge poles and trajectories*
- dinucleon poles, M-matrix formalism 3−26091

compliance constants *see elastic constants*

composite insulating materials
- bismaleimide triazine modified epoxy with Nomex, LOCA simulation and gamma-radiation, elec. and mech. props. 3−13279
- Edelmans opto-electric dilatometer for thermal length changes measurement of dry transformer epoxide insulation *(Slovak)* 3−16333
- fluid-solid dielectric interfaces, determ. of elec. field distrib. using schlieren technique 3−1745
- glass fabric filled epoxy resins, flexural and compressive strength, gamma irradiation effect 3−34386
- Al_2O_3-Cr(Pt) cermet insulators, thermal-shock-resistant, prep. and characteris. 3−24198

composite materials
- *see also cermets; composite insulating materials; composite superconductors; concrete; eutectic alloys; fibre reinforced composites; fibres; filled polymers; laminates*
- acceleration waves, one dimens., in composite materials modelled as interpenetrating solid continua 3−27426
- anisotropic composite sandwich plates, thermoelastic stress analysis 3−56439
- anisotropic materials, modelling local defects, discrete lattices appl. 3−27449
- beams, rheonomic, crit. time and loss of longit. stability criterion 3−32634
- binary mixtures, optical dielec. constants, extremal values 3−19096
- boundary value problems 3−17798

composite materials continued
capillary and cracked materials, sections 3—32679
capillary and cracked materials, statistical representation 3—27445
cathode materials with inclusions of emission-active phase, prep. 3—58073
cell structure composites, bounds for non-local effective props. 3—7405
ceramic, two-phase, dilatant transformation toughening, continuum theory 3—46491
ceramic matrix, with elliptical inclusions, shear moduli 3—57012
coatings, instrument for nondestructive control *(Russian)* 3—19475
combinations under conditions of three-dimensional stress state 3—32628
conductor-insulator composites, charging phenomena, SEM study 3—40726
cylindrical panels, expt. investigation of instability 3—7460
deformation and fracture determ. by speckle-holographic interferometry 3—29249
development trends 3—43716
diamond filled WC-Co composites, cracking resist. determ. 3—39321
dielectric materials, crack development kinetics, and polarisation effects 3—28755
dispersed inclusions, crack initiation in immediate vicinity of sharp edges 3—51015
dynamics and stability, three-dimens. formulation, review 3—22355
elastic, finite ridigity element reinforced, nonlinear micropolar continuum model, motion eqns., constitutive rels. 3—42121
elastic, finite rigidity element reinforced, nonlinear micropolar continuum model, stability of compression 3—42122
elastic end effects, Saint-Venant's principle 3—50941
elastic moduli of 3-D two-component composite, Clausius-Mossotti-type approx. for elastic moduli 3—13306
elastic-plastic matrix, fracture during compression 3—17889
elastostatic resonances, effective elastic consts. calc. of composites 3—7421
EM volumetric wave geometric dispersion and damping in layered composite *(Ukrainian)* 3—46131
epoxy-glass composite, laser drilling, photoacoustic signal monitoring 3—27327
failure determ. in plane stressed state by mech. luminesc. method 3—53328
fatigue strength anisotropy estimation 3—29247
flaw growth imaging by computerised US scanning system 3—19505
fracture mechanics of composites in compression along cracks 3—53215
fracture studies using AES, review 3—14827
fracture toughness of multiphase materials 3—57020
fuel system containing ferromagnetic additives, mag. field influence on burning rate 3—53399
fusion reactor in-vessel components, advanced materials development, review 3—21519
glass matrix/glass particle composites, hot pressed, Young's modulus rel. to microcracks *(Japanese)* 3—58154
glass shell, spherical composite, joint imperfections effect on bearing capacity 3—17794
granular composites with different types of grains, microstress fields 3—53102
granule-based, thermal conductivity, appl. to radioactive waste 3—8277
graphite powder composite, Cu clad, high-speed shaping 3—24199
graphite-polymer composites, positron annihilation rates, moisture depend. 3—3856
graphite-PVC composite for loudspeaker diaphragm *(Japanese)* 3—37313
graphite-quartz sand dispersed mixture, elec. cond. 3—43246
graphitic heat shield coatings, dispersity of microparticles effect on radiation attenuation in hypersonic layer 3—54217
hard ferrites and plastoferrites, book contrib. 3—57709
head, human, composite physical model 3—35047
heterogeneous layered material, effective thermal diffusivity 3—42827
impulsive Reissner-Sagoci problem in bi-material elastic half-space 3—56462
interphasal layer, mech. model 3—37380
Kevlar-polyester composite, charging characts. under electron beam irrad. 3—18768
Kramers-Kronig relations and wave propagation 3—46363
laminated composites, fatigue fracture damage 3—4107
laminated composites, with bonds, longit. elastic wave propag. 3—27418
laminates, orthotropic, zero coupling effects 3—50926
laser and electron beam interactions with solids, conf., Boston, MA, USA (Nov. 1981) 3—54582
layered, nondispersive SH wave propag. 3—1996
layered, three-material, periodic wave propag. normal to layer direction 3—37413
layered, volumetric shear wave propag. 3—37411
linear thermoelasticity of composite materials using homogenisation method 3—56432
linear viscoelastic composites, modelled as interpenetrating solid continua, shock wave propag. 3—22363
manufacture by liquid-phase method, ultrasound effect or reinforcement distrib. 3—24169
metal particle composite, far IR absorpt. mechanisms 3—3724
metalloceramic plasma sputtered coatings on Al alloy AK4, adhesion, glow discharge appl. *(Russian)* 3—4188
multilayer anisotropic shells, stress state with var. parameters 3—32609
multilayer cylinders, thick-walled, end effects 3—32610
multilayer medium, longit. harmonic wave problem, elasticity theory 3—50949
multilayer plates, nonohomogeneous, design to elasticity theory three-dimens. problem 3—37366
multiphase solids, abrasive wears resist., Khruschov's rule 3—34489
N-constituent composite materials, multi-continuum theory, variational principles *(Chinese)* 3—17795
nonlinear, rel. between tensile and bending props. 3—8122
nonuniform., comp. variations analysis using electron microscope images 3—24430
optical, thermal shock testing techniques 3—9264
particulate composite, brittle, crack bowing, fracture toughness prediction 3—42706
particulate reinforced composites, microvoids struct., X-ray scatt. 3—33239
periodic structure composites, overall elastic moduli 3—4068
plane viscoelastic wave propag. 3—22385
plastically incompressible elastoplastic medium with reinforcement, plastic deform. upon shear shock wave interaction 3—47048
plate, multilayer, locally heated, thermoelastic equilib. 3—27385
plate reinforced with a stringer, elasticity, averaging method appl. 3—7410

composite materials continued
plates of reinforced materials, equilib. eqn. general soln. 3—50966
plates with nonlinear transverse shearing strains, flexure eqns. 3—42155
plates with notches, orthotropic rectangular, natural vibr. freq., boundary conditions effect 3—27429
polycrystalline aggregate, EPR line shape in presence of Jahn-Teller effect 3—28687
polycrystalline aggregates, anisotropic, texture, US vel. studies, theory 3—19474
polymer composite-water system, viscoelastic behaviour and relax. processes *(Russian)* 3—46460
polymers, mechanics problems in technological processing 3—53014
polyurethane foamed matrix piezoelectric composite with 3-1 connectivity 3—38767
polyurethane-polyurethane ionomer interpenetrating networks, mol. movement study by NMR spectroscopy *(Russian)* 3—8729
porous composites, US transmission spectra 3—51723
porous media, fluid saturated, acoustic wave propag. 3—51722
powder aggregates, thermal conductivity 3—8274
powder composites, conductivity, effect of diffusion of components of limited intersolubility 3—14748
pressure enhancement by conically convergent shocks in composite cylinders, appl. to shock recovery expts. 3—27425
radiation field determ. from transport problem solns. 3—20806
rare earth metal, permanent magnet, anisotropic, behaviour under excitation in two perpendicular directions 3—52551
reinforced conical shells, stability 3—1980
rigid inclusions system, plane periodic problem 3—56494
rod with viscoelastic layer, thermomech. behaviour 3—42179
rotating shell, liq. filled, optimisation 3—27373
sandwich annular plate, var. thickness, bending, splines technique appl. 3—42146
self-lubricating, for extreme environmental appls. 3—24373
shell, closed toroidal, stability 3—50969
shell, cylindrical, vibr. immunity characts. optimisation 3—32654
shells, cylindrical, stability under creep conditions 3—32633
shells, cylindrical laminar, crit. stability parameters, kinematic heterogeneity effect 3—32632
shells, stiffened composite, instability anal., bending, pre-buckling displacement 3—37382
shells, structurally orthotropic cylindrical, travelling waves 3—37412
shells, three-layer transversely isotropic, upper and lower bounds and eigenfreqs. density 3—32655
singularities in wedge-shaped antisymemtric composite laminates 3—42117
sphere, core and cladding, visoelastic analysis of thermal stresses 3—42149
static testing methods, review 3—24432
steel, C, -Cu multilayer composite, mech. props. 3—39250
steel, low C strip, Al-45 wt.% Zn alloy coated, sandwich-composite, strength and ductility 3—43917
steel, stainless/C composite layers, C bonding AES lineshape anal. 3—58007
steel laminates, soft soldered, fracture toughness in high vacuum 3—53239
stochastically bonded composite with initial stresses, reduced dynamic characts. 3—50987
stochastically reinforced composite components, shrinkage stress determ. 3—50934
strength evaluation of composite with acute-angled inclusions 3—51019
strength of composite materials in complex stress states 3—50933
test apparatus, for three-dimens. stressed state 3—29250
transition metal carbide-boride system, eutectic struct. form., cooling rate effect 3—24186
two-component mixture, percolation cond. anisotropy 3—13795
two-phase particulate mag. composites, phase distrib. sensitive mag. props. 3—23730
unidirectional composite materials, failure under axial compression 3—53204
unidirectional fibre reinforced elastic composites, 3-dimens. fibrous flaws, stresses 3—51021
viscoelastic composite materials, fatigue crack development 3—17893
viscoelastic-elastic composites, anal. of bead seals 3—7447
Al alloy-graphite, cast, partially dispersed, dispersive power and surface roughness rel. to wear 3—34519
Al infiltrated graphite, elec.-discharge sintering 3—24200
Al-Al_2O_3(SiC), composites, abrasive wear 3—9195
Al-Si coconut shell char particulate composite, prep. and props. 3—3989
Al-si-Mg-ZrO_2, particulate composite, abrasive wear 3—34486
AlN-(Al_2O_3)-phosphate binder composites, physicochem. processes on heating 3—39085
β''-Al_2O_3, Li stabilised, transform. strengthening with tetragonal ZrO_2 3—58124
Al_2O_3-Al_2TiO_5 refractory composites, sintering, struct. and props. 3—29052
Al_2O_3-B_4C composite ceramics, sintering, densification, microstruct. development 3—47807
Al_2O_3-B_4C composite pellets, moisture adsorption, microstruct. 3—47221
Al_2O_3-ZrO_2, ZrO_2 tetragonal particles in ceramic matrices, stability 3—39120
Al_2O_3-ZrO_2 composites, critical microstruct. for microcracking 3—39240
Al_2O_3-ZrO_2 composites, K_{Ic} values, comparison of notched-beam and indentation strength technique 3—53313
C, fibre, wetting props., manufacture of composites *(French)* 3—33539
C-PVC composite, random stick-like conducting particles, percolation 3—8494
C-PVC composites, elec. cond. and permittivity 3—8479
Cu-Al composite wire, hot drawing sintering fabrication, elec. resist., diffusion zone growth 3—52999
Cu-Fe multifilamentary composites, in situ formed, permanent mag. props. meas. 3—28629
Fe-Ni-Mo sintered alloy impregnated with Nylon 11, sliding wear charact. *(Japanese)* 3—9196
Fe-TiC magnetoabrasive powder, struct. effect on service life in metal polishing 3—24370
In-In_2O_3 thin film composite, reactively sputtered, struct. phase transition study 3—28989
Mg based pressed powder composite, creep under uniaxial tension and compression 3—53139
$MoSi_2$-Y_2O_3 granular laminar composite material in fuel slag, corrosion stability 3—4156
NbC-graphite composites, strength with force and thermal loading 3—14726
NbC-Nb_2C-Nb heating elements, furnace, props. and struct. 3—24357

composite materials continued
Ni coated alumina and mullite, magnetic orientation of fine particles 3—47814
Pb-Zn(Al_2O_3)(PbO) particulated composite, prep. by powder metallurgy techniques, high temp. creep 3—34264
SiC reinforced Al alloy whisker and particle reinforcement, corrosion fatigue in salt laden moist air 3—53256
SiC-AlN composites, thermal diffusivity and conductivity, effect of hot pressing temp. 3—57151
Si_3N_4-(Al_2O_3)-phosphate binder composites, physicochem. processes on heating 3—39085
Si_3N_4-C, amorphous, composite, CVD, d.c. elec. cond., 250-950°C 3—38387
Si_3N_4-TiN composites, CVD, microstruct. 3—23204
Sm-Zr-Co-Cu-Fe-epoxy resin metalloplastic permanent magnets 3—3487
Sn alloy-graphite, cast, partially dispersed, dispersive power and surface roughness rel. to wear 3—34519
Ti and Ti alloy composites, multilayered, prod. and strength props. 3—29037
Ti-ZrO_2 (ZrN)(ZrC)($ZrSi_2$), solid phase interactions 3—29039
TiB_2-Ni ceramic, struct. and comp., analytical electron microscopy obs. 3—14900
TiC-Ni(Co) sintered composites, mass transport of molten metals 3—39086
V_2O_5-P_2O_5-Bi_2O_3 glass-metal particulate composite, elec. cond. switching, obs. and theory 3—18755
W-Cu-Si(Zr) pseudoalloy, fractographic study, Si and Zr effects 3—24358
WC-Co, diamond filled composites, cracking resist. determ. 3—39321
ZnO-Al_2O_3-SiO_2 glass-ceramic, particulate, indentation hardness 3—4111
Zn_2SiO_4 glass-ceramic, He diffusion, density, refractive index, thermal expansion coeff., thermal history depend. 3—56827
ZrC-C binary alloys, thermal and temp. cond. at high temps. 3—2899
ZrC-graphite composites, strength with force and thermal loading 3—14726
ZrO_2 tetragonal particles in ceramic matrices, stability 3—39120
ZrO_2 toughened Al_2O_3, X-ray microanal. and electron microscopy of ZrO_2 particles 3—39160

composite models of elementary particles
see also composite models of hadrons
asymptotic freedom sum rules and $\sin^2\theta_W$ in nearby composite models 3—31180
composite model, leptons and quarks, SU(2) gauge, subcomponent symmetry, SU(2)×U(1) model 3—31178
composite models for quarks and leptons 3—622
composite models of the weak interactions 3—40874
composite quarks and leptons, mass generation mechanism 3—11155
composite supersymmetric model of quarks and leptons 3—40876
confining model with composite left-handed and unconfined right-handed particles 3—11156
CP violation, soft or hard breaking, axions, composite models 3—11076
Dirac supermultiplet, Di and Rac fields, supersymmetric interactions 3—5973
elementary particle interactions unification 3—10708
fermion-boson composite model of quarks and leptons, masses, flavour mixing angles 3—31179
five-preon composite models, anomaly and decoupling constraints 3—21104
four-dimensional HP_1 σ-model, functional integration around one-instanton solns. 3—523
gauge theories of weak interactions, review 3—6052
generation labels and mass matrices of composite quarks and leptons 3—16621
geometrical rishon model, lepton and quark generations 3—40875
gravity and supergravity from supersymmetry nonlinear realisations 3—40464
GUT minimality and supersymmetry—dynamical symmetry breaking through preons 3—40820
hadron mass formula based on rishon hypothesis 3—16625
hierarchical scales, electroweak breaking, compositeness, in unification 3—40814
Higgs boson, compositeness resolution in $e^+e^- \to Z \to H\mu^+\mu^-$ 3—49601
Higgs models, 3-dimens., topological mass term dynamical generation, composite fermions 3—11012
high energy physics conf., Paris, France, (July, 1982) 3—35771
lepton bag model 3—16622
metacolour schemes and supermetacolour 3—16602
mixing model, 0^{+-} glueball and $q\bar{q}$ meson, existence of both at 1440 MeV 3—36222
multidimensional unified theories, tight binding 3—54872
nonstandard weak bosons and standard electroweak gauge model 3—26031
parity and time reversals, conservation 3—36166
pre-preons, supersymmetric theory, preons in supergravity, considerations 3—49656
preon model, three fermions, three generation quarks and leptons 3—36223
preon model constraints, supergroups, hypercolour solns. 3—16620
preon models, 4, 5 or 6 flavours, analysis by constraints, SU_n 3—26089
preons, subconstituents of quarks and leptons, gauged transforms 3—26088
pure spinor model with composite gluons 3—617
QCD, θ problem and composite quarks 3—16619
QCD Weinberg sum rules and the mass of composite quarks 3—26087
quark composite structure from anomalous mag. moment meas. in e^+ e 3—49657
quark substructure, particle physics, personal perspective, problems, puzzles and prospects 3—31095
quarks, review 3—6071
rishon, chiral symmetry breaking, condensates, prediction of pseudos 3—49655
rishon model, quark mass matrix struct., CP violation, Cabibbo angle 3—40878
rishon model of composite quarks and leptons 3—11157
rishondynamics without elementary gauge bosons 3—11154
SO(14) grand unification model with confining model of weak interactions 3—569
SO(14) unified model with elementary electron, muon families and composite γ family 3—571
SO(18) grand unified theory 3—21047
straton composite model symmetry 3—45376

composite models of elementary particles continued
strong-coupling lattice gauge theories and composite models of quark and leptons 3—31182
$SU(3)_{HC}\times SU(6)_L\times SU(6)_R$ model, composite quarks and leptons for restricted anomaly matching 3—620
SU(5) metacolour group as preon representation, reduction of tensor products with permutation symmetry 3—30997
SU(N) metacolour gauge group, composite models without spectators 3—21105
subquark model, quark and lepton form factor structure 3—36221
substructure of quarks and leptons, observable consequences for collider tests 3—54894
superstring theory, review 3—26052
supersymmetric subconstituent models 3—616
topological compositeness of quarks leptons and electroweak bosons 3—621
two flavour preon model, spin 1/2 states, quark and lepton generation stability 3—618
unification of nongravitational interactions constraints 3—40818
unification or substructure *(Polish)* 3—16574
unified field theory of elementary particles, symp., Munchen, Germany (July 1981) 3—10516
unified lepton-hadron field model with composite bosons 3—21106
unified models of particles and interactions 3—40824
weak interactions composite model 3—31128
weak interactions in the confining phase 3—45373
Yukawa theory, finite temp. effect on compositeness condition 3—31181
p decay, one generation rishon model anal., B-L violation 3—26086
τ composite structure from anomalous mag. moment meas. in e^+e^- 3—49657
W dominance and weak boson mass bounds 3—40877
W-boson properties in electroweak subconstituent models, quantum haplodynamics 3—45377
Z^0 multiphoton and multigluon decay modes, composite model test 3—619

composite models of hadrons
see also parton model; quark models
baryon mass spectra from relativistic composite model 3—36227
fermions-antifermions relativistic bound states 3—16494
internal symmetries, description and interpretation as exchange symmetry 3—6076
many-body forces and hadron structure 3—31171
non-potential interaction and inseparable constitutents of hadrons 3—31129
e^+e^- annihilations, multiple prod. phenomena, existence of jets, quark and quark-gluon models 3—40873
pp, multiple prod. phenomena, existence of jets, quark and quark-gluon models 3—40873
pp elastic scatt. polarisation at high energy, impact-picture description 3—663

composite particles
see also alpha-particles; deuterons; nuclei with mass number 1 to 5; tritons
three-cluster system, cpd. resonances 3—31317

composite superconductors
AC composite superconductors, resistive zone propag. 3—43342
circular wires, single core and multifilament, self field losses 3—33841
coupling losses, effect of respective positions of filament bundles and stabilising Cu 3—8640
fine multifilamentary superconductors, decay-time const. of induced current 3—33836
flux jumps in multifilament superconducting composites in a high dB/dt time dependent magnetic field 3—43323
glass matrix composite supercond. film prod., transition temp. 3—23531
multifilamentary supercond. wire, inhomogeneous, voltage-current characts. 3—3398
multifilamentary superconducting wire, coupling loss in normal metal core 3—33843
multifilamentary superconductor, I-V characteristics and supercond. state stability, theory 3—18810
rectangular multifilamentary superconducting composite, coupling losses 3—8639
tapes, dynamic stability, taking account of stress effects *(Chinese)* 3—13981
transient heat transfer for normal zone propag., He cooled 3—8618
Cr/Pb-Bi layered films, flux pinning strength and upper crit. field 3—13977
Cu/CuNi mixed-matrix NbTi multifilamentary cable, poloidal coils for Reacting Plasma Project 3—37669
Cu-Nb_3-Sn microfilamentary composite supercond., crit. current meas., supercond. magnet appl. 3—52321
Cu-Nb(Nb_3Sn) superconducting composite, in situ prepared, sp. ht. meas. 3—52302
Nb-Nb_3Sn multifilamentary superconductor formed by low temp. liquid infiltration method 3—57445
Nb-Ti multifilamentary supercond. magnet for whole body NMR-imaging 3—34947
Nb_3Sn composite superconductor, flux pinning by supercond.-normal boundaries 3—3394
Nb_3Sn microcomposite, powder metallurgical prep. and supercond. props. 3—52322
Nb_3Sn, monofilamentary, solid-state diffusion prep., growth kinetics 3—58076
Nb_3Sn, multifilamentary, martensitic transforms. and effect on supercond. 3—39137
Nb_3Sn multifilamentary superconductors, diffusion layer thickness calc., mathematical model *(Chinese)* 3—13982
Nb_3Sn multifilamentary superconductors, solid-liquid diffused, crit. currents and temps. meas. 3—23556
Nb_3Sn multifilamentary supercond. wires, submicron, fabrication by powder metallurgy 3—47463
Nb_3Sn multifilamentary wires, bronze processed, supercond. current densities, metallurgical factors 3—43341
Nb_3Sn, polycryst., anomalous elastic softening below martensitic transform. temp. 3—39138
Nb_3Sn:Ga multifilamentary superconductor, external-diffusion processing, Ga effects 3—52320
NbTi composite superconductor, dynamic quench in pressurised ^4He 3—3399
NbTi composite supercond., transition temp. and sp. ht. in mag. field 3—47444

composite superconductors continued
NbTi supercond. wire without Cu cladding, AC flux jumps rel. to quenches 3—43336
NbTi superconductors, crit. currents, 1.8-4.2K and in high mag. fields 3—8638
NbTi/Cu multifilament supercond. composite, optimum crit. current density *(Chinese)* 3—13979
NbTi-Cu, superconducting composite magnet, AC losses 3—33842
NbTi-Cu coated with polyvinyl formvar film, heat transfer to liquid He 3—33825
NbTi-Cu-CuNi, superconducting composite magnet, AC losses 3—33842
Ni-Ti alloy composite supercond., crit. current depend. on non-monotonic field depend. 3—47465
Pb-Zn very dil. composites, proximity-effect induced supercond. 3—38522
Th-Nb small-filament eutectic composite, supercond. props. 3—3358
Ti-Nb-Ta-Zr multifilamentary superconductor, precipitation, time-of-flight neutron small-angle scatt. 3—19342
V$_3$Ga microcomposite, powder metallurgical prep. and supercond. props. 3—52322
V$_3$Ga, monofilamentary, solid-state diffusion prep., growth kinetics 3—58076

composite systems *see large-scale systems*

composition measurement *see chemical analysis*

compressibility
see also compressibility of gases; compressibility of liquids; compressive strength
composite 3-D two-component, Clausius-Mossotti-type approx. for elastic moduli 3—13306
composite material with elastic-plastic matrix, fracture during compression 3—17889
composites in compression along cracks, fracture mechanics 3—53215
cylinder, elastic, of finite height, mixed problem of compression by dies on the ends 3—7429
cylinder, spray quenching temp. and stress fields 3—39186
cylindrical layer, finite deform. of compressible elastic medium 3—46454
elastic foundation, compressible elastica 3—7454
elastica, compressible, on elastic foundation, higher buckling loads and critical modes 3—7469
erythrocyte compressibility, US vel. meas. 3—19674
ferrite powders, compressibility, evaluation, for classical die pressing appl. 3—14546
fluorite compounds, thermophysical and anharmonic props. calc. 3—51536
graphite, polycrystalline, pressure-dependent volume strain, under fast neutron irradiation 3—21367
graphite, structural and elastic props., density-functional approach 3—51537
hard triatomic mol. systems, Monte Carlo simulation 3—46819
metals, yield behaviour, press. depend. 3—22965
misfit dislocation occurrence at grain boundaries under high press. 3—2558
N-nitrodimethylamine, displacive phase transition, neutron inelastic scatt. studies 3—57053
optical fibre, nylon jacketed, with compressive strain, characts. and fabrication 3—42000
P, black, lattice dynamics, force const. model 3—8157
panel, cylindrical sandwich, subjected to axial compression, dynamic stability 3—50967
plane deformation of compressible materials 3—24315
plane strain compression test, expt. study of friction test rel. to transfer layers in boundary lubrication 3—34600
plates, free vibration in fluid anal. using finite and infinite elements 3—22367
PMMA, mol. orientation development in plane strain compression 3—51503
PMMA, multiply loaded, one-dimensional isentropic compression meas. 3—13338
polymer crystals, compressibility study 3—2654
polymers, yield behaviour, press. depend. 3—22965
powder rolling, friction influence 3—24173
rectangular box-shaped structures under transverse uniform compressive loading 3—50965
shell, cylindrical, nonaxisymm. buckling under axial dynamic compression 3—46467
shells, ribbed, compressed imperfect, stability and critical loads 3—42163
shot peening and residual stresses 3—53295
solids in compression along cracks, fracture mechanics 3—37425
solids in compression along cracks, fracture mechanics 3—42194
steel, residual stresses after pulsed laser annealing *(Russian)* 3—39209
stishovite (SiO$_2$), elastic moduli 3—4855
Au, volume dependence of spin-orbit splitting in d-band 3—3135
CO$_2$, solid, compression at 296K to 10GPa, X-ray diffr. obs. 3—28030
CaCO$_3$ (aragonite), shock compression expts. and eqn. of state 3—4856
CdIn$_2$S$_4$, phonon density of states, heat capacity, thermal expansion and compressibility calc. 3—51734
CdIn$_2$S$_4$, thermal props. and moments of phonon spectra 3—28121
CePb$_3$, thermodynamic and mag. props. 3—47512
CeSn$_3$, thermodynamic props. study 3—2838
Cu, pseudopotential calc. 3—2703
EuB$_6$, high pressure X-ray powder diffraction anal. 3—28031
Fe, fine electrolytic powders with organic coatings, reduction annealing, micropowder prep. 3—58066
In, micropores, deformation healing, effect of size *(Russian)* 3—57183
LaB$_6$, high pressure X-ray powder diffraction anal. 3—28031
LaPb$_3$, thermodynamic and mag. props. 3—47512
LiH, thermophysical props., anharmonic lattice calc., H isotope effects 3—8227
Mn$_{1-x}$Cr$_x$Sb, Curie temp. and compressibility, high press. effects *(Russian)* 3—52462
Mo crystals, compressed, localised macroscopic shear *(Russian)* 3—34382
NaI, ionic cond., bulk modulus and specific heat of vacancies 3—13531
Ni(NH$_3$)$_6$I$_2$, rotational ground state tunnel splitting, neutron diffr. study 3—27863
PbS, anal. of effective compressibilities 3—42700
PbSe, anal. of effective compressibilities 3—42700
PbTe, anal. of effective compressibilities 3—42700
SnTe, anal. of effective compressibilities 3—42700
TaSe$_3$, linear-chain layered cpd., anisotropic compressibility meas. 3—18370

compressibility continued
Ti-Al(Sn), stacking fault energy and texture changes during polygonisation *(Russian)* 3—33273
Tm$_{1-x}$Eu$_x$Se, intermediate valence cpd., elec. resist., vol. change, compressibility, energy gap meas. 3—52080

compressibility of gases
see also high pressure phenomena and effects
bubbles, adiabatic compression in non-compressible viscous liq. 3—51162
bubbles, shock compression in ideal compressible liq. 3—51163
electric arc, quenching by shock compression using explosives 3—2327
fluid-gas mixture in porous medium, compressibility behaviour 3—2179
gas flows, compressible, nonideal, hydraulic analogy 3—46590
multicomponent gaseous mix., approx. eqn. of state 3—51264
polytropic gas, centred compression wave and its disintegration 3—51161
Kr, dense gas, eqns. of state 3—22565
N$_2$, compressed gases, streamer mechanism validity 3—7830
SF$_6$ compressed gases, streamer mechanism validity 3—7830
Xe, dense gas, eqns. of state 3—22565

compressibility of liquids
n-alkanes, eqn. of state based on relative dielec. permittivity meas. 3—28076
4-trans-(4-alkyl)-cyclohexyl-benzonitriles, nematic viscosity-pressure behaviour 3—47143
p-anisal-p-phenetidine, nematic liq. cryst., pre-transitional effects, US, density, and compressibility study 3—13451
benzene, shock-compressed, backward stimulated Raman scatt. 3—47650
bromobenzene-alcohol mixtures, US studies 3—28051
carbon tetrachloride-benzene (phenol) (toluene) (aniline) mixtures, mol. interaction, US study 3—28050
1-chlorobutane-1-alcohols binary mixtures at 303.15K, ultrasonic studies 3—37979
m-cresol binary liq. mixtures, excess free vol. and thermodynamic props., US meas. 3—2843
cylinders, right circular, subjected to attractive pot., nematic-isotropic transition, scaled particle theory 3—27836
p-n-decyloxybenzoyl-p-cresol, polymesomorphic liq. cryst., pre-transitional effects, US, density, and compressibility study 3—13451
electrolytes, symmetrical, vol. change on ion-pairing 3—48069
formamide, (p,V,T) behaviour, 288-323K and 0.1-280MPa 3—57055
gas cavity in liquid, linear and nonlinear acoustical excitation 3—12391
N(p-n-heptyloxy benzylidene)p-n-butyl aniline, phase transitions, ultrasonic vel. studies 3—23041
N-(p-n-hexyloxy benzylidene) p-n-butyl aniline, liq. cryst. phase transitions, US vel. meas. 3—38064
liquid mixtures, compressibility and crit. characts. calc. 3—13303
metals, struct. factors, compressibility, and elec. resist. 3—22763
nitrobenzene-n-hexane crit. mixture, low freq. and ultrasonic obs. 3—51712
organic liquid bulk props., hard-sphere model, ultrasonic studies 3—37754
N-(p-n-pentyloxy benzylidene) p-toluidene, liq. cryst., molar vol., US vel. var., phase transition study 3—38065
polyamic acid solutions, differing mol. structs., ultrasonic vels. and Rao formalism 3—33365
polyethylene glycol, aq. soln., US absorpt. and vel. 3—8139
polymer solns., thermodynamic props., computer simulation *(Russian)* 3—47126
polystyrene-methylcyclohexane soln., crit. amplitudes, osmotic compressibility and correl. length 3—13301
water, liquid, thermal and thermodynamic props., Monte Carlo simulation convergence 3—18200
Yukawa fluid crit. behaviour in mean spherical approx. 3—51466
Yvon-Born-Green and similar integral eqns., criticality 3—56795
CdCl$_2$, molten, hypersonic vel. and compressibility 3—18394
He-p-H$_2$ mixtures, quantum liquid, US velocity and adiabatic compressibility at high press. *(Russian)* 3—57155
^{3}He-^{4}He liq. mixture, compressional cooling and liq.-solid phase transition 3—13417
Hg, expanded, metal-nonmetal transition, electronic and thermodynamic props. 3—43023
NH$_4$NO$_3$ in non-aqs. media, molal compressibilities, ultrasonic study 3—8140
Na-Cs, liquid, thermodynamic props. meas. 3—22762
Pb-Sn, semisolid dendritic alloys, deform. behaviour, effect of strain rate 3—14666
N-(p-n-pentyloxybenzylidene) p-n-ethylaniline, nematic-smectic G transition, US vel. and density study 3—57029
Se-Te liquid mixture, sound vel., adiabatic compressibility, density-density correl. function 3—33364

compressible flow
see also compressibility
axisymmetric gas motion, stability analysis 3—56564
boundary layer, laminar to turbulent flow transition, acoustic disturbance effect 3—51078
boundary layer flow at 3-dimens. stagnation pt. with massive blowing 3—12693
boundary-layer flow stability over a spring mounted piston 3—32722
far field boundary conditions, acceleration of convergence to steady state 3—22483
gas cloud explosion calc. program GASEX2 3—56565
gas flow, turbulent separation, friction, heat transfer, boundary layer eqns. 3—37457
gas flows, compressible, nonideal, hydraulic analogy 3—46590
micropolar fluid, uniqueness in arbitrary bounded region 3—27541
mixture of two viscous fluids, homogenization theory appl. *(French)* 3—42252
non-stationary flow, Navier Stokes eqn. 3—22485
parabolic flows, three-dimensional, streamwise computation 3—37516
pipe orifices, flow characts. and calc. methods, for rapid flow 3—51156
rotating compressible flow due to nontorsionally oscillating disk 3—2073
rotating flows with internal sources and sinks 3—51133
similarity porous media systems, two phase compressible fluid flow 3—32800
slightly compressible fluid, periodically varying flow, numerical anal. 3—12770
stagnation point flows, 3D laminar, with mass transfer, compressible 2nd order boundary layers 3—2026
stellar atmospheres, two-dimensional turbulent compressible convection in deep atmosphere 3—30351
subsonic flow past convex corner with free streamline, nonlinear eqns. 3—42254

compressible flow continued
- subsonic potential flow past a circle and the transonic controversy 3—42255
- subsonic rectangular jet development, Mach number effect 3—56588
- three-dimensional supersonic viscous flow over a cone, Navier-Stokes eqns. 3—12710
- turbulence, cascading in nonlinear interaction of random modes 3—59198
- turbulent flow, three. dimens. boundary layer, numerical simulation 3—22435
- two-dimensional subsonic flow of compressible medium, theory 3—42253

compressive strength
- *see also compressibility*
- bone, tibia, mech. props. nonuniformity, effect of functional adaptation 3—34874
- brass, deformation, high temp. flow stress oscills., recrystallisation and dislocation mechanisms *(Polish)* 3—47878
- coal, Young's moduli and confined compressive strength meas. 3—43885
- composite compression test, reusable sandwich beam composite 3—9282
- composite cylindrical shell, reinforced plastic, load-carrying capacity under combined thermal and mech. loading 3—17793
- composite with acute-angled inclusions, strength evaluation 3—51019
- concrete, gypsum, mixed with sand and cement, strength and hardening condition *(Japanese)* 3—58060
- diamond, CB-type, polycrystalline, physicomech. and physicochem. props. 3—14599
- fibre reinforced plastic, bulk molding compound, flow state during compressive molding *(Japanese)* 3—58169
- glass, optical, devitrified, type SO-115M, axial compression, bending strength, influence of surface conditions 3—14761
- glass, technical grade, strengthening by deep etching in acid influence on strength in axial tension 3—19441
- glass fabric filled epoxy resins, flexural and compressive strength, gamma irradiation effect 3—34386
- glass fibre reinforced epoxy, uniaxially aligned, compressive failure and kinking under hydrostatic press. 3—29157
- glass fibre reinforced polyester composite, compressive fatigue behaviour, 77K and 300K 3—58191
- glass shell, spherical composite, joint imperfections effect on bearing capacity 3—17794
- jute-glass hybrid fibre reinforced epoxy, compressive strength rel. to vol. fraction 3—53125
- Kevlar/E-glass fibre reinforced phenolic resin, reusable sandwich beam composite for compressing testing 3—9282
- limestone, porous, powder compacts, porosity effect on compressive strength 3—58061
- metals, equation of state, strengths and elastic constants, physico-mech. calc. *(Chinese)* 3—19358
- pellets, green and dry, compressive strength determ., automatic unit 3—58334
- plane strain compression test, expt. study of friction test rel. to metallurgy of die and sheet 3—34599
- polystyrene powder compact, triaxial compression and extensional props. *(Japanese)* 3—19378
- powder compacts, porosity effect on compressive strength 3—58061
- pressed powder mixtures, density and strength *(Japanese)* 3—19301
- refractories, acoustic emission under compression 3—29258
- rigid circular disk, in infinite plate, tensile and compressive stress, friction effects 3—17796
- sintered powder compacts, porosity effect on compressive strength 3—58061
- solids, compression failure along cracks 3—7501
- steel, C, medium and low, cracked plate, fatique crack growth, effect of residual stress field *(Japanese)* 3—19399
- steel, cylindrical specimens, stress-strain behaviour in compression, effect of specimen size 3—14828
- steel, sintered, powder compacts, porosity effect on compressive strength 3—58061
- unidirectional composite materials, failure under axial compression 3—53204
- VHTR core support, testing of thermal insulation materials, C, Si_3N_4, SiO_2 *(Japanese)* 3—11377
- Al-Si coconut shell char particulate composite, prep. and props. 3—3989
- Al_2O_3-MgO spinel based refractory, prep. and props. 3—29041
- B_2O_3-Na_2O, glass, retarded elasticity rel. to viscosity, compressive method *(Japanese)* 3—4076
- C fibre reinforced plastic laminate, cross ply, edge effects in uniaxial compression testing 3—9129
- Cu, deformation, high temp. flow stress oscills., recrystallisation and dislocation mechanisms *(Polish)* 3—47878
- Cu-Al martensitic alloys, single crystal, deform. behaviour 3—43824
- Mg based pressed powder composite, creep under uniaxial tension and compression 3—53139
- MgO-CaO-SiO_2-P_2O_5-CaF_2 glass-ceramics for prosthetic appl. 3—53123
- Ni-Ti diffusion welds, pore collapse in monaxially compressed solid 3—51589
- Pb-Sn, semisolid dendritic alloys, deform. behaviour, effect of strain rate 3—14666
- SiC, reactive sintered, props. rel. to fractional comp. 3—47813
- SiO_2-Na_2O, glass, retarded elasticity rel. to viscosity, compressive method *(Japanese)* 3—4076
- TiB_2, refractory abrasive powders, comminution and classification, physiocomechanical props. 3—47904
- TiC, refractory abrasive powders, comminution and classification, physiocomechanical props. 3—47904
- TiN, refractory abrasive powders, comminution and classification, physiocomechanical props. 3—47904
- WC-Co, sintered effects of press. and temp. 3—9267

compressors
- centrifugal He compressors development 3—30877
- H_2SO_4 manufacture *(German)* 3—25889
- heat pump systems capacity control methods and problems *(German)* 3—29434
- JET gas leaking and cooling plant 3—55616
- plasma compressor, multichannel cumulative discharge, I_2 laser optical pumping appl. 3—22120
- solar powered for third world refrigeration 3—48148
- He refrigerator system, with low-temp. centrifugal compressors 3—30878

Compton effect
- Al target, H^+ collision, secondary electron emission, Compton profile 3—34187

Compton effect continued
- atoms, electronic and muonic, polarisability effects 3—32252
- atoms, K- and L-shell Compton defects, electronic struct. study 3—32006
- bound atomic polarised electron, Compton scatt., quasirelativistic case 3—32008
- circularly polarised light Compton scatt. 3—11113
- Compton scatter effects in CT reconstructions 3—29705
- deep inelastic Compton scatt. in integer and fractionally charged quark models 3—21138
- ejected-electron, trajectories, kinematical study of angular deflection *(French)* 3—21929
- ejected-electron cross sections and Compton profiles: an unitary formalism 3—3852
- electron kinetic equations for Comptonization by isotropic photons 3—48811
- Fourier transformed Compton profile, Fermi momentum determ., electron correlations effect 3—42998
- free electron laser, axial magnetic guide field effect, linear gain in Compton regime 3—22098
- free electron laser, single-pass Compton-regime variable-parameter, MM wave generation 3—22092
- free-electron laser with axial electric field, design considerations 3—32370
- free-electron lasers, nonlinear saturation mechanisms and improvement 3—32371
- graphite, localised Compton scatt. using EELS 3—24041
- hard and soft processes, total cross section linking through analyticity in Q^2 and sum rules 3—36270
- hydrogenic state, s and p, Compton defect behaviour *(French)* 3—50326
- M87, inverse Compton scatt. rel. to rel. to high resolution X-ray obs. 3—10440
- massless Compton scattering, twistor diagram representation 3—45317
- medical imaging, Compton tomography, multiple scatt. contamination at 90°, detailed Monte Carlo study 3—19802
- multipole moment calcs., low energy theorems to high order 3—31218
- pion Compton effect, π^--meson polarisability meas. 3—45561
- pion Compton effect, sum rule estimation of pion polarizabilities from dispersion relations 3—26230
- polyatomic molecules, interatomic forces and Compton profiles 3—36824
- proton Compton scatt. dispersion theory, optimal inequalities for subtraction functions 3—54915
- radio sources, variable, low freq. vars. rel. to inverse Compton problem 3—25636
- relativistic electron beam, gamma-ray prod. by interaction with two interfering laser fields 3—26990
- scattering cross sections for increased accuracy in diagnostic radiology, energy broadening of Compton-scatt. photons 3—29706
- Seyfert galaxies, Compton heating of accreting gas rel. to broad emission lines 3—54509
- surface plasma waves, coherent excitation mechanisms 3—46719
- trabecular bone mineral content meas., coherent/Compton scatt. method employing an X-ray tube 3—58796
- $e^{\pm}N \rightarrow e^{\pm}\gamma X$, inelastic scatt., γ-quanta emission, Compton mechanism in quark-parton model 3—21139
- $\gamma p \rightarrow \gamma X$, deep-inelastic Compton scatt., QCD corrections 3—645
- $\gamma p \rightarrow \pi^+ n\gamma$, pion Compton effect, cross sections 3—45401
- Ag, photon scatt. from K-shell, Compton cross sections 3—11750
- Al, Compton profile, stopping power, X-ray scatt., HF wavefunctions 3—6581
- Al, polycrystalline, γ-ray Compton profile meas. using ^{241}Am Compton spectrometer 3—19222
- Au, L-shell integral Compton scatt. cross-section meas. 3—3850
- Be, Compton profile, electron struct. 3—14383
- Bi, L-shell integral Compton scatt. cross-section meas. 3—3850
- C, amorphous, localised Compton scatt. using EELS 3—24041
- C impact, H^+ collision, secondary electron emission, Compton profile 3—34187
- Ce, γ- and α-phases, band struct., cohesive props. and Compton profile 3—57268
- Co, photon scatt. from K-shell, Compton cross sections 3—11750
- Cu, momentum density and Compton profile, band struct. calc. 3—3050
- Cu, photon scatt. from K-shell, Compton cross sections 3—11750
- Ge, photon scatt. from K-shell, Compton cross sections 3—11750
- H_2, interatomic forces and Compton profiles 3—36824
- He, Compton scatt., impulse approx. 3—32007
- Hg, L-shell integral Compton scatt. cross-section meas. 3—3850
- Mg, Compton profiles, pseudopot. calc. 3—43656
- Mo, photon scatt. from K-shell, Compton cross sections 3—11750
- Nb, photon scatt. from K-shell, Compton cross sections 3—11750
- Ne, Compton profile, electron energy loss spectra investig. 3—56080
- Pb, L-shell integral Compton scatt. cross-section meas. 3—3850
- $^{208}Pb(\gamma,\gamma)$, nucl. Compton scatt. study 3—26234
- β-SiC, Compton profile and valence electron profile 3—28922
- TiB_2, Compton profile 3—52689
- TiN, Compton profile study of bonding 3—47729
- U, L-shell integral Compton scatt. cross-section meas. 3—3850
- V, Compton profiles and electron density distributions 3—38949
- VB_2, Compton profile 3—52689
- VN, Compton profile study of bonding 3—47729
- W, L-shell integral Compton scatt. cross-section meas. 3—3850

Compton profile *see Compton effect*

Compton scattering *see Compton effect*

computability and decidability
- numerical modelling of electric fields, optimal discretisation *(Polish)* 3—17424

computation *see calculation*

computer-aided analysis
- *see also analogue simulation; CAD; control system analysis computing; digital simulation; electric machine analysis computing; hybrid simulation; power system analysis computing*
- anisotropic beam theory and applications 3—22328
- atomic collisions, coupled linear differential eqns., Runge-Kutta methods 3—36839
- atomic structure, Slater integral calcs. 3—36644
- Auger transitions, allowed and forbidden effects, LS calculations, computer models 3—36735
- beam, simply supported, nonlinear vibration analysis, finite element formulation 3—1985
- beams with thin walled cross sections, finite element formulation 3—1964
- collector/storage type solar water heater, theoretical and experimental studies 3—24627

computer-aided analysis continued
- combustor linear analysis 3—17872
- composite laminates, free edge stresses, finite element method 3—22331
- composite plates postbuckling, energy theory 3—22346
- composite structures, nonlinear FEM 3—22334
- computer model to simulate solar and solar-dehumidification lumber drying 3—14932
- conjugated hydrocarbons, Kekule structure computing 3—1503
- contact problems with friction in general purpose finite element computer programs 3—17898
- containment structive analysis, using impulse functions 3—16843
- crash simulation, triangular plate bending finite element 3—22345
- cubic isoparametric rolling/travelling finite elements 3—22330
- cylindrical shells, nonlinear analysis 3—17832
- diagnostic US, computer anal. and diplay modes 3—15172
- ECG, automated analysis, mixed approach 3—24903
- EPR spectra, iterative computer anal. of bandshapes in fast motional region 3—50438
- eye movement analysis, computerised method based on electronystagmography 3—24905
- FIDAP: a fluid dynamics analysis program 3—12617
- fine grained materials, electron probe microanalysis, inclusions effects 3—29903
- geothermal heating, variables affecting viability 3—53483
- ground temperature remote prediction and distribution mapping in Australia, application to earth covered/undergound housing 3—58480
- Hall measurement in semiconducting materials, numerical data processing method *(Russian)* 3—40635
- infinite elastic solid, planar crack occupying finite doubly connected region 3—1999
- laminated structures, dynamic finite element model 3—17814
- Lanczos eigenvalue algorithm for large structures on a minicomputer 3—22358
- large strain analysis of an inflating membrane 3—22333
- mechanics, modelling and analysis 3—17812
- metal hydride hydrogen storage beds space-time dependent temp. and composition props. determ. using RET 1 computer code 3—53595
- microwave atmospheric attenuation, 30 to 300 GHz propagation models using RADTRAN and MWTRAN 3—39893
- microwave cavity lens primary (second-order) aberration calc., computer-aided methods 3—26928
- musical pitch curve construction and anal., computer aided 3—12449
- numerical study of plasticity models and finite element types 3—27393
- ocular fundus image recognition, computer method 3—9698
- optical thermal analysis using ACCOS V macro file 3—1738
- passive motion resistance, computer based instrument for anal. 3—15310
- plate bending analysis element 3—27394
- plates, multilayered and thick, finite element formulation 3—27375
- pretensioned spare structures, nonlinear vibration modelling 3—22359
- primary cells, CC Zn electrode types, electrochemistry 3—58493
- quadrilateral finite difference plate element for nonlinear transient analysis of panels 3—22329
- rings, deflection and buckling, straight and curved finite elements 3—1976
- rods and shells design, computer-aided anal. *(Russian)* 3—17789
- sandwich strips, stress propagation, St. Venant's appl. 3—22322
- shell analysis, curved isoparametric axisymmetric thick shell element, penalty functions appl. 3—1946
- shell triangular finite elements, bending trial functions approx. 3—27392
- single-mode, propag. charact. improvement with computer-aided anal. using wave eqn. techniques 3—1784
- skew plates, elastic limit loads 3—27390
- solar absorber convertors, flat-plate, conditions for optimal collection of solar energy 3—14995
- solar hot water system overall performance parametric anal. 3—24629
- solar-hydrogen energy system-model applied to isolated island 3—53593
- SOLTRAN 5 solar spectral model availability 3—59085
- spectral radiance model utilisation for determ. of downwelling IR irradiance, LOWTRAN 5 appl. 3—59084
- stable crack growth, plastic deformation 3—22332
- stiffness matrices for C_0 continuous tetrahedra 3—27381
- stress analysis strategy using FEM 3—27391
- structural design, nonlinear analysis 3—17836
- Symposium on Advances and Trends in Structural and Solid Mechanics, conf., Washington, DC, USA (Oct. 1982) 3—16067
- terrestrial solar spectral modeling using SOLTRAN and BRITE 3—24601
- thick beams of bimodulus materials, bending 3—1963
- Ti alloys, welded structures, nonoxidative zonal induction heat treatment 3—14627

computer-aided design *see CAD*

computer-aided instruction
- *see also education*
- copolymer composition, microstructure and conversion, computer aided teaching method 3—25741
- finite element method, interactive processor for teaching 3—25739
- Fourier series, graphical CAI programme 3—40335
- nuclear power plant full scope training simulator, software development, maintenance and portability 3—55255
- rigid body dynamics, microcomputer animation instruction 3—40357

computer architecture
- Experimental Computer Network for control of scientific experiments and research into network architecture 3—5774
- ICP data management using mainframe computers 3—4324
- tomography, hardware architecture for data acquisition and processing 3—53819

computer equipment evaluation *see computer selection and evaluation*

computer evaluation *see computer selection and evaluation*

computer-generated holography
- aspheric optics, diamond turned, testing using computer-generated holographic interferometry 3—7111
- aspheric wavefront testing using electron-beam written computer-generated holograms 3—6925
- coherent-optical pattern recognition optimisation method optimisation using digital holographic filters, theory, computer modelling 3—12090
- complex digital holograms form, reconstruction of optical images 3—12099
- focusing elements, cineform, for CO_2 laser, computer synthesised 3—36969
- lens design, aberration-free, efficient, in presence of construction/reconstruction wavelength shift 3—6926
- medical applications 3—29699

computer-generated holography continued
- optical element testing appl. *(German)* 3—46181
- optical pattern recognition using circular harmonic expansion 3—17446
- optical testing with computer holograms 3—6924
- optimum circular symmetrical filter in character recognition system, digital and optical anal. 3—46168
- phase errors in computer generated holograms *(Chinese)* 3—22007
- survey of holographic techniques and appl. 3—26977
- synthetic holograms, product- and sum-type multli-exposure, Fourier spectrum and diffraction efficiency 3—26981

computer graphics
- *see also curve fitting; interactive systems*
- clouds, three-dimensional representation from satellite pictures and computer imagery 3—15578
- color imaging of a passive microwave sensor output for marine oil surveillance *(Japanese)* 3—39567
- computer graphics teaching aid, time-depend. Schrodinger eqn. soln. 3—5530
- conference, MICRO-DELCON, Newark, DE, USA (March 1983) 3—54589
- FIDAP: a fluid dynamics analysis program 3—12617
- Fortrat diagrams of molecular rot. transitions and intensities 3—32032
- Fourier series, graphical CAI programme 3—40335
- interference contour computer-aided surface reconstruction 3—25846
- intervertebral disc, computer graphics illustration of operation 3—4525
- left-ventricular contraction mechs., computer graphics anal. 3—4533
- moving image perception, from multi-CRT display, eye movement role 3—15099
- redundant coding assessment, signal detection paradigm appl. 3—15100
- remote sensing of Earth, digital image processing systems 3—54141
- restrained least-squares method with computer graphics for protein struct. refinement 3—53628
- rigid body dynamics, microcomputer animation instruction 3—40357
- synthetic battery cycling techniques application in space vehicles 3—48140
- three-dimensional heart wall motion tracking, graphics method for cineangiography 3—15196
- two-dimensional eddy current and mag. field problems, interactive graphic soln. 3—36908
- underground geology, LITHO expert system *(French)* 3—39849
- vision systems, real-time automatic ranging algorithm 3—20948

computer installation
- *see also distributed processing*
- noise, acoustic and RF, European regulations, rel. to computer installations 3—24652

computer interfaces
- *see also CAMAC; computer peripheral equipment; data communication equipment*
- bit-slice processor 168/E as stand alone computing facilities, memory interface 3—17185
- chromatography, intelligent sample processor laboratory automation system interface 3—39420
- FASTBUS, hardware interface design, possible applications 3—50263
- FASTBUS, software development, progress, future plans 3—50264
- FASTBUS, software routines for PDP-11 RT-11 system 3—50265
- FASTBUS active segment extender and high density prototyping (kluge) card 3—50268
- FASTBUS at KEK, status report 3—50273
- FASTBUS at the front end 3—50277
- input/output register to FASTBUS interface 3—50272
- microcomputer, AEI/Kratos electron spectrometer, data acquisition and processing 3—35969
- nuclear material storage, computer network for monitoring 3—31518
- software controlled analogue signal input to Nairi K computer 3—49339
- TR-1894 printer to 15 VCM-5 and Elektronika DZ-28 computers 3—10814

computer internal arrangement *see computer architecture*

computer networks
- *see also distributed processing*
- ASTRONET for astronomical data analysis and retrieval in Italy 3—5131
- CERN SPS accelerator distributed control system 3—6471
- Comanche Peak emergency response facility computer system 3—36547
- conference, MICRO-DELCON, Newark, DE, USA (March 1983) 3—54589
- controlled nuclear fusion, local-area networks for research 3—41321
- Ethernet-compatible fibre-optic local area network 3—37204
- Experimental Computer Network for control of scientific experiments and research into network architecture 3—5774
- JT-60 fusion reactor control system, safety design 3—55650
- laboratory instrumentation and microcomputer systems for anal. chem. 3—14910
- nuclear material storage, computer network for monitoring 3—31518
- nuclear power plants, hierarchical computer complex concept appl. 3—55566
- particle accelerator, process computer system with distributed intelligence *(German)* 3—26515
- sodium loop safety facility, expt. P4, data acquisition 3—55549
- UK Starlink computer network 3—5130

computer operator training *see training*

computer performance evaluation *see computer selection and evaluation*

computer peripheral equipment
- *see also data communication equipment; keyboards; printers*
- automatic data collection peripheral *(Spanish)* 3—10817
- Compuvoice speech synthesiser, Votrax vocabulary 3—37294
- flow meas. device as pocket calculator peripheral *(German)* 3—37595

computer peripherals *see computer peripheral equipment*

computer printers *see printers*

computer programs, complete *see complete computer programs*

computer programs (listings) *see complete computer programs*

computer selection *see computer selection and evaluation*

computer selection and evaluation
- conference, MICRO-DELCON, Newark, DE, USA (March 1983) 3—54589

computer software
- *not used for applications software for which see specific applications*
- *see also software engineering*
- conference, MICRO-DELCON, Newark, DE, USA (March 1983) 3—54589
- international standards for software structures in astronomy 3—5136

computer software continued
  real-time software for nuclear plant safety appls., validation 3—45655
  SPORA software package for astronomical research in USSR 3—5141
computer storage devices *see digital storage*
computer subroutines *see subroutines*
computer testing
  conference, MICRO-DELCON, Newark, DE, USA (March 1983) 3—54589
computerised communications control *see communications computer control*
computerised control
  see also chemical engineering computing; communications computer control; computerised materials handling; electrical engineering computing; mechanical engineering computing; nuclear engineering computing; power system computer control
  5 MW research reactor computerised power controller 3—45636
  ACEC industrial electronic fail-safe systems *(French)* 3—41257
  advanced nucl. reactor control and protection system *(Japanese)* 3—41207
  automatic γ-activity meas. in CAMAC system for VVER fuel elements *(Czech)* 3—49942
  automatic diagnosis of multiple alarms for reactor control rooms 3—16993
  biomedical equipment, portable US linear scanner *(Japanese)* 3—4581
  CERN SPS accelerator distributed control system 3—6471
  eddy current probe, multisegment, for flaw detection of bolted structures 3—39341
  electron beam thin film deposition, Al and Al alloy sources 3—29000
  eucentric specimen stage for the SEM through computer control 3—10965
  Experimental Computer Network for control of scientific experiments and research into network architecture 3—5774
  far-infrared and submillimeter appls. of mirrors and lenses, microcomputer-controlled fabrication 3—1819
  fast breeder reactor shut-down system, safety oriented, microprocessor appl. 3—26434
  fluorography, digitally controlled beam attenuator development 3—53883
  fuel cell test facility, distributed data acquisition system 3—29381
  fusion device, thyristor phase control system development 3—55773
  greenhouse heating using heat pump controlled by programmable logic controllers *(Norwegian)* 3—53572
  ground-based optical observatory for obs. of airglow and thermospheric dynamics, remote computer control 3—54179
  heat pump system, microcomputer controlled, performance data *(Japanese)* 3—44139
  heliostat control system for central receiver test facility 3—24554
  heliostat operation at the Central Receiver Test Facility, 1978-1980 3—14999
  holographic matched spatial filters fabrication, using one-board microcomputer controlled system 3—12095
  interfacing TR-1894 printer to 15 VCM-5 and Elektronika DZ-28 computers, low-temp. meas. appl. 3—10814
  JET neutral injection cryopumps, LHe and LN_2 cryosupply and distribution system 3—36567
  laser absolute dilatometer, with digital data processing unit *(German, English)* 3—20820
  laser fusion facility, processing system, hardware and software 3—50063
  lithium hydrogen peroxide power cell system, microprocessor control of development system 3—29379
  mass spectrometer with specimen introduction in modulated mol. beam form, automated recording system 3—450
  MBE, minicomputer controlled substrate and effusion cell operation *(German)* 3—34234
  microprocessor controlled system for air shower data collection 3—44671
  microprocessor-based nuclear reactor safety systems, failure detection and reliability prediction 3—998
  Mil-Spec computers in nuclear power applications 3—16994
  modular Fabry-Perot interferometry system for H II regions imagery and spectrometry 3—25338
  multi-channel low temp. monitoring system, microprocessor based 3—16365
  neonatal ventilator eye support system, fail safe microprocessor controller 3—29783
  nuclear demagnetisation refrigeration, microcomputer automation system *(Japanese)* 3—25883
  nuclear demagnetisation refrigerator, with temp. control, appl. of microcomputer 3—315
  nuclear reactor computer control of power, signal validation methodology 3—55225
  photographic darkroom computer, used for Philips PCS 200, 135/150 enlargers 3—36106
  photoresistor matrix, microcomputer controlled line mapping of radiation beams, radiotherapy appl. 3—40736
  photovoltaic concentrating system for meeting large building energy needs 3—58521
  photovoltaic solar energy, conf. Stresa, Italy (May 1982) 3—54583
  power transient control system for the Engineering Test Reactor 3—16951
  powerplant plane heliostat transfer function and regulation 3—9469
  proton synchrotron magnet power supply, high accuracy control 3—6478
  pulsed muscle stimulation, computer-controlled movement for patients *(German)* 3—15275
  radiotherapy by 4-MeV linear accelerator, computer controlled conformation technique *(Japanese)* 3—48390
  refrigeration, reciprocating expansion engine performance with electronic control valves 3—36000
  scanning systems for quantitative particle track meas. 3—55757
  solar cell array, simulation using microprocessor based controller 3—24611
  Solar Pilot Test Facility modelling group final report (1982) 3—53589
  tele-Co unit, computer controlled 3—44322
  tomography, linear orientation system, microprocessor control 3—53808
  US testing of aircraft structures 3—14791
  vacuum pumping system control, microcomputer appls. 3—36029
  ventilation, mechanical, microprocessor based feedback controller 3—44345
  water and wastewater treatment processes 3—4442
  X-ray apparatus, high voltage generator *(Japanese)* 3—491
  X-ray diffractometer, computer-controlled, for quantitative texture analysis 3—24431
  Zimmer nuclear plant emergency response facilities system development 3—16996
computerised instrumentation
  see also astronomy computing; astrophysics computing; automatic test equipment; biology computing; chemical engineering computing; chemistry computing; computerised monitoring; computerised spectroscopy; computerised tomography; electrical engineering computing; electronic engineering computing; geophysics computing; nuclear engineering computing; physics computing
  abdominal surgery, microcomputer system for US incision plane documentation *(German)* 3—58760
  AC magnetic properties meas. using phase-sensitive voltmeter and microprocessor 3—30905
  accelerator synchronisation device, within CAMAC standard 3—11620
  acoustic measurements, minicomputer system *(Japanese)* 3—17741
  acoustic measuring system, microcomputer controlled *(Japanese)* 3—17742
  acoustic noise statistical analyser, microcomputer-based 3—17750
  acoustic signal generator for room acoustic evaluation, CMOS microprocessor based *(Japanese)* 3—17749
  acoustics, computer assisted measurements *(Japanese)* 3—17740
  analytical instruments incorporating microprocessor systems, reliability 3—25859
  arterial blood pressure, signal from analysis *(German)* 3—39743
  atomic-beam set-up for 0.5 MHz absolute frequency stabilisation of CW dye laser 3—12199
  automated flaw inspection system, computer processing of results 3—34595
  automated flow microfluorometer and cell sorter incorporating nuclear electronics 3—53894
  automated laboratory general physics expt., interactive mode of operation *(Russian)* 3—16341
  automated processing of flaw inspection results 3—34596
  automatic γ-activity meas. in CAMAC system for VVER fuel elements *(Czech)* 3—49942
  automatic complex permittivity meas. method for 200 MHz-18 GHz range, appl. to anisotropic fluids 3—30892
  automatic expt. experiment using small computers and CAMAC apparatus, input/output software 3—10813
  balances, microcomputer interfacing 3—5769
  biomedical, American Optical SR-IV programmed subjective refractor: principles of design and operation 3—24833
  body surface ECG mapping system, microprocessor based, for pot. patterns dynamic obs. 3—35007
  body surface potential mapping system with microprocessor, potential pattern dynamic obs. *(Japanese)* 3—58855
  bone, US transmission imaging, digital enhancement 3—48354
  Brinell hardness automatic meas. system using laser and microcomputer *(Japanese)* 3—58345
  BWR core instrumentation concept and signal processing *(German)* 3—49987
  C-CD image sensors and microcomputer for mag. domain obs. 3—25904
  calibration channel unit, 16 channel data acquisition module with autonomous memory 3—1187
  calibration of precision pressure transducers for use in safeguarding special nuclear materials 3—21444
  calorie measuring device, microcomputer-controlled, human basal metabolism and exercise appl. 3—4741
  calorimetric apparatus for slow reactions, microcomputer controlled 3—49376
  cardiac catheter including manometers and velocity probe, computerised anal. 3—29780
  CATY, BASIC-like language for expt. control, data collection, display and anal. 3—1184
  chromatography, intelligent sample processor laboratory automation system interface 3—39420
  coincidence circuits, nanosecond, controlled and majority types 3—1171
  Crawford-cell exposure system automation, for laboratory animals irradiation (225-500 MHz) 3—9800
  cytology, computer assisted scanning microscopy 3—29698
  Daisy 12 system for stimulation signals and for acquisition of analogue data rel. to nerve impulses *(French)* 3—39751
  DATEP, photomultiplier HV regulator 3—17177
  densitometer, single- or two-dimensional, for use with Apple II+ computer 3—36065
  densitometer for gas-phase electron diffraction, Z8 microprocessor appl. 3—50548
  diagnostic US, computer anal. and diplay modes 3—15172
  digital fluoroscopy Unit of Georgetown Univ. 3—15227
  digital waveform memorizer, signal sampling and storage, operation, product trends and appls. 3—35982
  distance meas. by laser, microprocessor compensation of amplitude-dependent phase nonlinearity 3—37109
  distance measurement, instruments, data anal., digital cartography, mining appls. 3—10798
  Doppler US computerised blood flowmeter, noninvasive cardiac output meas. appl. 3—4575
  drift chamber, data registration system design 3—1160
  ECG Holter tape anal., multiprocessor system 3—4673
  electrochemical instrumentation, cybernetic control 3—9364
  electrogoniometry system using a microprocessor for clinical use 3—9766
  electron microscope, on-line image processing system *(Japanese)* 3—49504
  electron microscope automatic focusing and astigmatism correction system for the SEM and CTEM 3—473
  electrosurgery simulation, programmable variable waveshape modulator 3—9777
  EM calorimeter photomultipliers linearity and stability tests with two-stage amplifiers 3—26571
  EMG, microcomputer-based signal anal. instrument 3—4669
  EMG surface signals, acquisition and processing with a low-cost microprocessor based system 3—24902
  encodable real time interval counter, CAMAC module to control time resolved meas. 3—1186
  energy measurement of fuel gases by process gas chromatography 3—4331
  fast multichannel analyser in CAMAC format 3—1166
  FASTBUS active segment extender and high density prototyping (kluge) card 3—50268
  FASTBUS at KEK, status report 3—50273
  FASTBUS controller module using multibus MPU 3—50269
  Fizeau interferometer based computer-controlled laser radiation wavelength meter for 500-650 nm range 3—381
  flowmapping system, intracardiac appl. 3—15174
  flowmeter, dragforce, microcomputer-based 3—22559
  Fluoroderm XRF-100, microprocessor based X-ray fluorescence meas. of thickness 3—54712
  fluorometer, laser, ISOT-0310 minicomputer control *(Bulgarian)* 3—41468

computerised instrumentation continued
force meas., automated system for static calibration 3−20850
gas chromatograph with advanced oven design, HP 5790A 3−39423
gas chromatography, flow controller and sensor for HP 5880A unit 3−39425
gas ultrasonic flowmeter, microcomputer based correcting type *(Chinese)* 3−42329
geophysical measurement and computing complex based on Elektronika-60 microcomputer *(Russian)* 3−59130
geophysical measuring system microcomputer control *(Hungarian)* 3−35287
geophysics, multipurpose research ships, integrated research automation systems 3−20126
goniometer, computer controlled four-axis, for photometry of retroreflectors 3−36063
ground-based optical observatory for obs. of airglow and thermospheric dynamics, remote computer control 3−54179
haemofiltration, microcomputer-aided processor 3−15270
human joint vibration capture and analysis using a microcomputer 3−48440
impulse calibration of seismometers 3−30068
in-flow chromosome fluorescence meas., improved accuracy by digital processing of multi-parameter flow data 3−58892
interface for on-line acquisition of $\gamma\gamma$ ang. correl. 3−50511
interfacing TR-1894 printer to 15 VCM-5 and Elektronika DZ-28 computers, low-temp. meas. appl. 3−10814
laboratory instrumentation and microcomputer systems for anal. chem. 3−14910
Langmuir film balance, microprocessor-controlled, for isotherm and isobar meas. 3−35958
laser absolute dilatometer, with digital data processing unit *(German, English)* 3−20820
laser beam analyser, microcomputer-controlled 3−1680
laser Doppler anemometry, eventoscope (transient recorder) appl. *(German)* 3−37592
laser interferometer for strain measurement, fully automated system *(Russian)* 3−19465
laser metrology system with microprocessor calibration *(French)* 3−30836
liquid flow rate meas., working standards calibration automation, statistical processing algorithm 3−2152
liquid scintillation spectrometer, microcomputer supplementation 3−50124
liquids, relative optical index meas. by interferometry *(French)* 3−378
LMFBR core cooling, microelectronic based surveillance *(German)* 3−49990
LOFT expt., real time analysis and display of reactor system mass inventory 3−21455
lung ventilation system, differential, microcomputer-based 3−9782
LWR, on-line recording and evaluation of measured core data *(German)* 3−49991
magnetic content of small size samples, determ. using microcomputer based instrument 3−20879
magnetic domain detector, appl. to Fe-Si magnetised sheets 3−52509
Mapsat, automated mapping satellite system description 3−10186
Mapsat, detectors tracking and description 3−10187
material testing machines summary *(Japanese)* 3−34582
MBE, minicomputer controlled substrate and effusion cell operation *(German)* 3−34234
measuring instruments, microprocessor based *(Japanese)* 3−293
medical cathlab of the present and future 3−29779
metal heart marker position, recognition and storage from biplane X-ray images, microcomputer-based instrument 3−39708
metallic thin film, resistance meas. by radiotelemetry system during sputtering 3−34230
Michelson interferometer active calibration, for plasma density meas. 3−45193
microcomputer as a real-time digital autocorrelation 3−25720
microcomputer based apparatus for muon mean lifetime meas. 3−5527
microcomputer based seismic processing system 3−44560
microcomputer-based eddy current equipment for nondestructive testing of tandem mill rolls 3−19476
microcomputer-controlled cardio-vascular measuring place in nuclear-medical functional diagnostics *(German)* 3−39713
microcomputer-controlled vacuum adiabatic calorimeter for 4.2-300K 3−313
microfluorometer, computer-controlled, laser illum., lectin-erythrocyte interaction study appl. 3−35038
microprocessor based CAMAC isolated digital output module 3−50213
microprocessor controlled phase measurement system for 2856 MHz pulses at Stanford linear accelerator 3−349
microprocessor-based scanning microdensitometer and signal processing system 3−16403
microprocessor-controlled 3−48107
microscope, digital readout photoelec. FEM-1Ts, operating principle 3−36081
microscope photometer, computer controlled 3−39705
microwave hygrometer, microprocesor appl. 3−326
mining, brokenness of rock masses, seismic investigation using microcomputer 3−20142
mirror stereophotogrammetry, human movements anal., spatial localisation with multiple perspective views 3−35046
modular Fabry-Perot interferometry system for H II regions imagery and spectrometry 3−25338
multi-channel low temp. monitoring system, microprocessor based 3−16365
multichannel amplitude analyser in CAMAC standard, design and operation 3−11617
multichannel dynamic radiograph, microprocessor controlled, cardiac appl. 3−19810
multimeters, technological trends in analogue and digital instrumentation, computer appls. 3−49394
multiparameter multichannel anal. system 3−1188
multipurpose portable radiation monitor, computer controlled 3−50058
multiwire detector for high counting rate X-ray expts. 3−1132
MWPC area detector for synchrotron X-radiation diffr. and scatt. 3−1135
NAC accelerator computer-based control system 3−26516
nanosecond pulse form measurement system on-line with computer, for heavy ion accelerator automated control system 3−1170
NDT instruments, based on microprocessors 3−34598
neutron multiplication meas. unit, computer controlled 3−50244
noise measuring station, microcomputer controlled 3−39568

computerised instrumentation continued
noise meter, HP 8970A, microprocessor control, operation and appls. *(German)* 3−45166
nuclear plant simulators, fluid velocity determ., pulsed neutron activation technique 3−21493
nuclear reactor fault detection and isolation methodology 3−50020
nuclear reactor water loop operation *(Czech)* 3−11405
oil/gas prospecting, laser resonance optoacoustic atmospheric spectrometer *(Russian)* 3−35291
on-line digital phase sensitive detector in the range 2 mHz-2 kHz 3−49412
particle accelerator, process computer system with distributed intelligence *(German)* 3−26515
Particle Beam Fusion Accelerator data handling and recording facility 3−17066
passive motion resistance, computer based instrument for anal. 3−15310
photographic darkroom computer using 6502 microprocessor, 2716 EPROM, 6532 RAM, I/O, timer 3−427
photometer, microcomputer controlled, for astronomical use, hardware and software 3−10218
physical field automated investig. system, CAMAL multichannel analogue input complex *(Russian)* 3−16340
physiological signals, online method for reliable detection of waveforms and event estimation 3−15294
PION installation with NAIRI-2 computer, data buffering and interrupt scheme 3−15850
PION installation with NAIRI-2 computer, data output to ATsPU-128 printer 3−15851
planimeter, digital, computer-controlled 3−271
pneumotachometer characteristics computerised determ. using calibrated syringe 3−19856
pocket neutron REM meter 3−50060
portable pulse train anal. instrument using number-oriented microprocessor 3−50222
proportional chamber, data registration system based on hybrid IC 3−1161
propyne, high-resolution ν_1 spectrum using microcomputer-controlled IR-acoustic colour centre laser spectrometer 3−415
psychoacoustic measurement, microcomputer controlled system *(Japanese)* 3−19849
psychrometric chart plotting program, eqns. and procedures 3−35272
pulmonary functions meas. instrument, microprocessor-based, for critically-ill newborn infants 3−15253
pulse height analysers, stabilisation scheme 3−1167
pulse method to measure the impedance of semi-natural soils 3−12454
pulsed laser data acquisition system 3−30844
pulsed-Doppler echocardiography, microprocessor sample-vol. tracker and light-pen 3−15175
PWR pressure vessel, leak inspection using acoustic emission *(French)* 3−21460
radiotherapy by 4-MeV linear accelerator, computer controlled conformation technique *(Japanese)* 3−48390
real-time holographic interferometry for microcomputer based vector displacement meas. 3−56157
real-time wavemeter for laser wavelength meas. 3−20891
recorded, hybrid, microprocessor based *(Japanese)* 3−292
resonance in an air column, automatic measurement 3−44945
rheogoniometer from Sangano Schlumberger 3−2140
roughness meas. and evaluation 3−45111
roundness and geometry meas., computer controlled instrument 3−30837
roundness measuring instrument, data processing by microprocessor *(Chinese)* 3−40548
scanning microscope photometer, digital transfer function 3−10883
scanning systems for quantitative particle track meas. 3−55757
segment ancillary logic developments for FASTBUS 3−50271
SEM, microprocessor-based special form scan 3−49510
SEM and particle analyser design for space applic. 3−15815
semiconductor transient processes nanosecond pulsed meas. with digital accumulation of signals 3−45160
SILUND linear induction accelerator, automatic synchronisation of modulators 3−50066
SLAC SNOOP diagnostic module for FASTBUS 3−50270
soft magnetic materials, disaccommodation meas., automatic 3−10869
software for managing multicrate FASTBUS systems 3−50274
Solar Mesosphere Explorer, microcomputer based satellite examining ozone layer 3−25161
sound power measurement, automated measuring system 3−12455
speckle pattern interferometry, computer-aided 3−36074
STEM detector configured logically within digital image framestore 3−474
stepping motor-encoder positioning subsystem with standard asynchronous serial line interface 3−50281
stray magnetic fields removal, computer-controlled method 3−30907
stress-strain meas. by laser holographic interferometer, data monitoring system *(Russian)* 3−19466
tele-Co unit, computer controlled 3−44322
temperature distribution measurement in steel mill using silicon photoiode arrays connected to computer system *(Japanese)* 3−40612
testing, automatic data collection and presentation 3−4224
thin-film thickness indicator, automatic, using Z-80 microcomputer 3−35970
time resolved meas., data acquisition system 3−4695
titration calorimeter, microcomputer controlled 3−25880
tomography, linear orientation system, microprocessor control 3−53808
turbulent flow meas., using automatic data acquisition as educational tool 3−25860
TV camera interfacing to CCD for automatic processing of particle track images 3−50275
two-dimensional wire chambers, localisation method 3−1140
US imaging system, holographic, for nondestructive evaluation of industrial materials 3−39312
ventilator system, servo, microcomputer-controlled 3−4689
voltmeter, low-frequency sampling, microprocessor based 3−25896
waveform computerised recording system for particle beam fusion accelerator, calibration techniques 3−5775
work function dynamic meas., desorption kinetics determ. 3−49508
X-ray Argus multichannel diffractometer 3−33043
X-ray diffractometer, computer-controlled, for quantitative texture analysis 3−24431
X-ray position detector, data collection using fast digital memory *(Japanese)* 3−35959

computerised instrumentation continued
- X-ray position sensitive detector with delay line readout, direct time digitising 3—1185
- GaAs-(AlGa)As multilayer structures, automated conductivity profiles 3—346
- Ge, conductivity and Hall coeff. meas., microcomputer-controlled expt. 3—40331

computerised manufacturing control *see manufacturing computer control*

computerised materials handling
- power plants, automatic refueling platform system and control rod drive remote handling system 3—55231

computerised monitoring
- Antares pulse power system fibre-optic monitoring 3—17534
- arrhythmia monitoring systems, review 3—15254
- calibration system for hadron calorimeter array 3—50242
- cardiac arrhythmia continuous monitoring by ECG comparison with regular sample *(Spanish)* 3—39740
- CCU arrhythmia monitor system, computerised, performance 3—15252
- composite material, flaw growth imaging by computerised US scanning system 3—19505
- crack detection in electroslag welds by acoustic emission 3—24480
- EDP for Cardio tocographical supervision *(German)* 3—39745
- heart monitoring, microprocessor-based systems 3—48438
- heart-rate variability monitor, microcomputer-based 3—48430
- irradiated fuel assemblies unloading operations automatic monitoring at La Hague reprocessing facility *(French)* 3—16884
- K 1510 microcomputer employed in intensive therapy *(German)* 3—39744
- LWR, on-line recording and evaluation of measured core data *(German)* 3—49991
- microprocessor based safety monitoring system, software design approach 3—55369
- microprocessor-based nuclear reactor safety systems, failure detection and reliability prediction 3—998
- nuclear material storage, computer network for monitoring 3—31518
- nuclear power plant performance characts. monitoring using minicomputers 3—41256
- nuclear power plants, computerised dosimetry monitoring and management system 3—55228
- nuclear power plants, hierarchical computer complex concept appl. 3—55566
- on-line automated gamma spectrometer for coolant at LOFT facility 3—55224
- opencast mine groundwater lowering automation *(German)* 3—39859
- physical field automated investig. system, CAMAL multichannel analogue input complex *(Russian)* 3—16340
- pulmonary blood flow monitor, modelling and design 3—15264
- PWR, microprocessor-based acoustic leak monitoring instrumentation 3—55226
- PWR waste disposal systems, digital control and monitoring system *(Japanese)* 3—41209
- radionuclide dilution and clearance curves, analogue recording, error estimation 3—9703
- remote monitoring system for nuclear facilities, microcomputer-based design 3—6460
- respiratory function monitoring system using impedance pneumography, microprocessor-based 3—4667
- SLAC SNOOP diagnostic module for FASTBUS 3—50270
- stress-strain meas. by laser holographic interferometer, data monitoring system *(Russian)* 3—19466
- thin-film thickness indicator, automatic, using Z-80 microcomputer 3—35970
- water and wastewater treatment processes 3—4442

computerised navigation
- geophysics, multipurpose research ships, integrated research automation systems 3—20126

computerised pattern recognition
- automatic X-ray testing of castings based on local feature operator and flexible image matching 3—24479
- biological cell motions, image sequence interpretation system 3—15052
- biological dosimetry by aberration scoring using POLYP 3—29765
- biomedical images, software for interactive processing 3—29672
- body motions, image sequence anal. methods 3—15306
- carotid wave interpretation using knowledge based system 3—19872
- cell image acquisition system 3—19874
- cell image anal., Fourier transformation for chromatin texture and shape 3—29809
- chromatin structure of cell nuclei, eval. by 3-D light microscopic image processing 3—29807
- clinical routine EEG, syntactic pattern recognition appl. 3—29776
- computer vision, book 3—6908
- dental radiographs appl. 3—29729
- dicentric chromosomes, automatic detection system 3—29808
- ECG, QRS detection using automata theory in a battery-powered microprocessor system 3—4671
- ECG classification based on Karhunen-Loeve expansion and discriminant anal. 3—15271
- ECG recognition, feature extraction scheme 3—35010
- EEG, epileptic seizures, automatic recognition method 3—35001
- EEG spectral patterns anal., for recognition of patients 3—15257
- electronic speckle pattern interferometers, new developments in design and appl. 3—45196
- EMG recordings, detection and classification of single motor unit potentials 3—29538
- femur medullary canal edge detect., Bayesian approach 3—15222
- global chord functions, hybrid optical digital computation 3—6897
- hot steel, 3-dimensional shape measurement, appl. of Moire topography 3—7307
- human acid-base state, computer-aided recognition 3—24908
- image compression and restoration incorporating prior knowledge 3—1585
- interferometric data evaluation by opto-digital computing 3—46179
- machine perception, book 3—15098
- mammographic examinations, quantitative eval. of screen film combinations, comparison by ROC analyses 3—29725
- MOSA for molecular shape anal. 3—29493
- ocular fundus image recognition appl. 3—9698
- ocular fundus images, pattern recognition of blood vessel networks 3—29697
- optimum circular symmetrical filter in character recognition system, digital and optical anal. 3—46168
- PHENIX LMFBR, surveillance appl. 3—16964

computerised pattern recognition continued
- radiographic image anal., computer aided diagnosis 3—29728
- random-signal recognition system, determ. of parameters in presence of noise *(Russian)* 3—5915
- real time image registration based on the Cauchy-Schwarz inequality 3—6914
- rotation-invariant digital pattern recognition using circular harmonic expansion 3—17445
- scanning microscope photometer, digital transfer function 3—10883
- seismic discrimination using syntactic pattern recognition 3—35088
- seismic hydrocarbon exploration using pattern recognition methods 3—35284
- sleep EEG anal. and sleep stages, human, computerised pattern recognition approach 3—48433
- solid-liquid interface morphology in freezing solutions, image anal. 3—33408
- spiral galaxies, automatic classification 3—30506
- surgical abdomen diseases, single stage versus multistage classification 3—24909
- tomography, white/grey matter segmentation by texture based clustering algorithm 3—15272
- twinned mineral grains, boundary detection using polarizing microscopy, appl. of stripe discrimination 3—30101
- US pulse-echo RF waveform anal. for breast cancer detection, pattern recognition technique 3—24822

computerised picture processing
- *see also computer-generated holography*
- 3D digital subtraction angiography 3—19803
- angiography, 3D digital subtraction, dye-edge tracking algorithm appl. 3—4647
- angiography, clinical results of digital tracing technique, high quality hard copy prod. on film 3—53789
- angiography, comparison between film subtraction and digital video subtraction 3—53793
- angiography, fluoroscein, using image scanner, OSIRIS, still photo sequence functional imaging 3—24872
- arteriography, digital subtraction, present and future trends 3—53783
- Astronomical Image Display and Analysis system at Tubingen for IUE images, echelle orders width 3—20248
- astronomical image enhancement, digital filtration methods 3—20257
- astronomical images, Faint Object Camera of Space Telescope 3—48836
- automatic photometry system for half-tone images, avalanche photodiode with operational amplifiers *(Russian)* 3—16399
- automatic X-ray testing of castings based on local feature operator and flexible image matching 3—24479
- autoradiographic grain counting by fully automated image analysis 3—9805
- B-scan ultrasonographic images, noisy, recursive restoration scheme 3—15176
- background pattern removal by power spectral filtering 3—50620
- beam line mapping by microcomputer controlled photoresistor matrix, microcomputer controlled, line mapping of radiation beams, radiotherapy appl. 3—40736
- bilinearly distorted image restoration, finite impulse response linear digital filtering 3—32312
- biological cell motions, image sequence interpretation system 3—15052
- biological dosimetry by aberration scoring using POLYP 3—29765
- biological objects tomographic image reconstruction, coherent microwave diffraction data application 3—29693
- biology, cell dynamics, computerised anal. of cell structure changes 3—19676
- biomedical image anal., video array processor 3—24940
- biomedical image blurred due to defocusing, restoration technique 3—24843
- biomedical images, software for interactive processing 3—29672
- body motions, image sequence anal. methods 3—15306
- cardiac imaging, centralised digital picture processing system 3—34955
- cardiac scintigram sequence analysis 3—29726
- cardiac ventricles, algorithm for 3D reconstruction from orthogonal radiographic projections 3—29735
- cartography and remote sensing 3—24949
- cell image acquisition system 3—19874
- cell image anal., Fourier transformation for chromatin texture and shape 3—29809
- cervical epithelium image sorting for cancer diagnosis *(Chinese)* 3—26956
- chest radiograph enhancement using the weighted unsharp mask 3—24867
- chest radiograph image enhancement using local statistical information 3—24873
- chest radiographs of pneumoconiosis, ILO standard, computer anal. 3—29731
- chromatin structure of cell nuclei, eval. by 3-D light microscopic image processing 3—29807
- chromosomes, high resolution banded, image restoration and iterative processing 3—24844
- complex shaped object, digital synthesis of radiographic image 3—58371
- composite material, flaw growth imaging by computerised US scanning system 3—19505
- computer vision, book 3—6908
- coronary arterial segments, reconstruction from two projections, network flow algorithm 3—15219
- coronary artery models, representation in angiographic films 3—24870
- coronary obstruction severity, computer aided quantitation from single view cineangiograms 3—24869
- CT, tissue densitometry, scan images, computer analysis 3—53805
- CT image reconstruction from X-ray projections, penalty method, inverse matrix *(Japanese)* 3—48406
- dental radiographs appl. 3—29729
- diagnosis improvement of medical images by combination of computer measurements and visual judgements 3—24883
- digital cartography system at Defense Mapping agency Aerospace Center, using digital image technology 3—24950
- digital image filtering, effect on automatic chromosome classifier 3—19871
- digital image processor for biological cell structures 3—39755
- digital subtraction angiography 'road map' 3—53814
- digital video radiography, gastrointestinal and intravenous pyelogram exam. appl. 3—53812
- ECG classification based on Karhunen-Loeve expansion and discriminant anal. 3—15271

computerised picture processing continued
echocardiographic images, 3D reconstruction using the rot. method 3−29685
echocardiographic images, sector-scan, digitising and processing 3−4573
EEG spectral patterns anal., for recognition of patients 3−15257
electron microscopy, high resolution, on-line image processing 3−476
fluorography, digital, hybrid subtraction technique 3−53787
fluorography, quantitative digital, two low contrast phantom types 3−53785
fluoroscopy, digital, operational aspects 3−58780
Fourier phase problems, computational examples for two dimens. 3−1580
gamma camera image, automatic boundary identification of region 3−4635
gated blood pool nuclear imaging, smoothing, thresholding and contour extraction 3−24879
halftone images, visual model-based algorithms 3−1573
hidden line ruled surface display 3−25345
Himawari remote sensing data processing system *(Japanese)* 3−44553
horizon sensor errors calculated by computer models, comparison with measured orbit performance 3−5089
horizon sensor performance analysis computing using Earth atmosphere model 3−4959
human hepatic disease detection, computerised image processing method *(Japanese)* 3−9718
image processing techniques in astronomical research 3−48831
interference contour computer-aided surface reconstruction 3−25846
internal organ imaging with computer-aided diagnosis *(German)* 3−34952
IR false-colour thermography picture prod., appls. *(German)* 3−20852
iterative image restoration by means of optical-digital hybrid system 3−32309
left ventricle angiography, variable thresholding 3−24880
left ventricular wall motion pattern clustering, cineangiographic sequence 3−24877
liver scintigrams, system for automated discrimination into assigned number of classes *(Russian)* 3−29700
lunar surface albedo rel. to polarization, digital image processing appl. 3−44680
lung, photofluorograms, computer-aided screening, software system, abnormal lesions detection 3−15220
machine perception, book 3−15098
mammographic examinations, quantitative eval. of screen film combinations, comparison by ROC analyses 3−29725
medical acoustic imaging, appls. of computerised control 3−7314
medical images, structured noise removal by 2D FIR digital filter 3−24823
medical imaging and image interpretation, conf., Berlin, Germany (Oct. 1982) 3−20575
medical US B-scan images, proposed method for evaluation of numerical image anal. 3−29689
microcomputer-based image analysis system for quantitative area measurements 3−49325
minimal radiographs, digital processing for exposure reductions 3−53815
minimal radiographs, logical consideration of digital imaging process 3−53817
motion analysis of 3-dimensional left ventricle from 2-dimensional echocardiograms 3−48443
multiple grey level analysis, for automated cell counting in tissue sections 3−4725
multiple image integration method in biological electron microscopy 3−4726
myocardial perfusion abnormalities, ^{201}Tl scintigrams, computer quantitation location 3−24878
NMR under nonlinear field gradients 3−25908
nuclear medicine, enhancement of images and optimisation of ionising radiation usage 3−9753
nuclear medicine conf., Budapest, Hungary (Sept. 82) *(Hungarian)* 3−15
nuclear medicine imaging, data processing developments, review *(Hungarian)* 3−4625
optical phase contrast microscopy, phase recovery using image reconstruction algorithm 3−49444
photographs, image processing system for enhancement and de-blurring 3−46176
pneumothorax detection, digital enhancement of chest radiograph 3−24876
positron emission tomography, cranial, attenuation correction, contour-finding algorithm 3−53775
processor-oriented methods for quantitative image analysis applied to cytology and radiology 3−24884
proteins electrophoretograms, two dimensional, quantitative anal. by shape fitting 3−29371
RACAPS, semiautomated chromosome karyotyping system 3−29695
radiograms, flexible method of stomach region extraction 3−29727
radiographic digital image processing system 3−53788
radiographic image anal., computer aided diagnosis 3−29728
radiographic image sequences, processing and anal., cardiac and haemodynamic appl. 3−29724
radiography, digital, technology overview 3−53784
radiography digital system, noise props. characterisation and meas. 3−53786
remote sensing of Earth, digital image processing systems 3−54141
sarcomere, individual, length determ. from isolated cardiac cells using optical microscopy and image processing 3−35035
scanning microscope photometer, digital transfer function 3−10883
scintigrams, computer processing to reveal foci of abnormal accumulation of radiopharmaceuticals *(Russian)* 3−58771
scintigraphic image filtering, median filter design and evaluation 3−24868
scintigraphic images, digital, spatial calibration 3−9730
scintillation gamma-chamber data processing *(Hungarian)* 3−15202
self-scanning linear diode array digital radiography 3−44326
SEM and STEM images processing 3−49515
smeared aerial photographic image restoration algorithm additional correction method 3−32321
software packages for image processing and photogrammetry 3−48460
solid-liquid interface morphology in freezing solutions, image anal. 3−33408
spatial filter synthesis for coherent radiation transverse mode composition anal. appls. 3−56301
speckle pattern interferometry, computer-aided 3−36074
specklegram automated analysis using 2-D Fourier transform, stress and strain contouring map appls. 3−46178
spiral galaxies, automatic classification 3−30506

computerised picture processing continued
stenosis angiographic quantitation by digital image processing 3−24871
stress analysis using computerised half-fringe photoelasticity system 3−22409
structural analysis of scanning electron micrograph, using scanning densitometer and microcomputer 3−49512
synthetic aperture focusing in ultrasonics, parameter study 3−48034
TEM negative, automatic image analysis of radiation induced bubbles 3−20958
terrestrial exploration from space by digital image processing 3−35164
tomography, development and experiences from military hospital *(Czech)* 3−48405
tomography, white/grey matter segmentation by texture based clustering algorithm 3−15272
tone scale interactive enhancement 3−6901
TV camera interfacing to CCD for automatic processing of particle track images 3−50275
TV microscopy of sub-cellular particles, computer vision and sampling 3−24935
twinned mineral grains, boundary detection using polarizing microscopy, appl. of stripe discrimination 3−30101
US images, synthesis in real-time, new digital approach 3−24827
video eye position detector, noise tolerance 3−9811
video-image real time correlator *(French)* 3−50626
vision systems, real-time automatic ranging algorithm 3−20948
Weber's law appl., teleological view 3−53674
X-ray computer tomography picture processing for medical diagnostics 3−48442
X-ray images, blood vessel boundary estimation 3−53851

computerised power station control *see power station computer control*

computerised power system control *see power system computer control*

computerised process control *see process computer control*

computerised signal processing
see also biology computing; computerised pattern recognition; computerised picture processing; medical diagnostic computing
acoustic multichannel FFT analyser for signal processing 3−12470
ambulatory ECG, Pathfinder system, computer assisted data anal. *(German)* 3−24895
biomedical equipment, portable US linear scanner *(Japanese)* 3−4581
biomedical signal processing, multiple microprocessor system 3−19827
carotid wave interpretation using knowledge based system 3−19872
Daisy 12 system for stimulation signals and for acquisition of analogue data rel. to nerve impulses *(French)* 3−39751
dyadic conversations, data acquisition device for computer analysis 3−32549
ECG, signal processing for recovery of cardiac conducting system activity 3−29773
ECG baseline wander removal system using digital FIR filtering 3−15255
ECG Holter tape anal., multiprocessor system 3−4673
ECG waveforms, appl. of variant of split and merge algorithm 3−35009
electrogastrography in dogs, waveform anal. by coherent averaging 3−34826
EMG, microcomputer-based signal anal. instrument 3−4669
EMG surface signals, acquisition and processing with a low-cost microprocessor based system 3−24902
filtering processor for ECG-EEG signals 3−24904
FIR digital filtering programs for automatic processing of biological signals 3−4660
foetal ECG, cross-correlation techniques appl. 3−58859
hybrid optical-digital signal processing applied to an optimal nonlinear phase estimator 3−50623
IUE high resolution spectra, interactive procedure for background subtraction problems, appl. to image SWP 4616 3−25341
Mapsat, automated mapping satellite system description 3−10186
microcomputerised biomedical signal processing, ECG, EEG waveform analysis *(Korean)* 3−19834
microprogrammable signal processing system and appl. to multichannel EEG anal. 3−9762
mining, brokenness of rock masses, seismic investigation using microcomputer 3−20142
NMR image reconstruction 3−30915
physiological signals, online method for reliable detection of waveforms and event estimation 3−15294
radiotelescopes, stable algorithms of signal detection for primary data processing systems *(Russian)* 3−54249
S-100/Z80 microprocessor-based microdensitometer and signal processing system 3−16403
satellite remote sensing *(Spanish)* 3−39939
Sheffield respiration analysis system using ECG and impedance pneumography 3−29774
synthetic aperture radar digital signal processing 3−48707
US array beam pattern simulator for parasitic lobe suppression 3−4586
US blood velocity meas., fast dedicated microprocessor for real-time freq. anal. 3−19789
US echographic signal online deconvolution algorithm 3−4598
US non-destructive inspection, generalised synthetic aperture, focused transducer, pulse echo, US scan data processing 3−29283
visual evoked potentials, enhancement by adaptive processing 3−24937
NaI detector, computerised response funct. generation *(Japanese)* 3−55753

computerised spectroscopy
see also spectroscopy computing
AI-1024-4 analyser, data acquisition and storage 3−50226
Auger electron spectrometer, control and data acquisition using Apple II personal computer 3−31870
Auger microprobe techniques, computerised, for chemical mapping of rough surfaces 3−44076
collision induced scatt. spectrum, data acquisition system *(French)* 3−21771
diode laser spectrometer, IR spectroscopy of transient molecules appl. 3−49473
electron spectrometer, AEI/Kratos, interfacing with microcomputer, data acquisition and processing 3−35969
EPR spectroscopy complex, automated problem-oriented system *(Russian)* 3−16382
ESR spectrometer, versatile microprocessor based interface 3−5822
Eurocard microcomputer in multi-channel analysis *(German)* 3−5913
flames, automated mass spectrometer complex for struct. investig. and thermal anal. *(Russian)* 3−40714
fluorescence spectroscopy, microcomputer appls. 3−10918

- **computerised spectroscopy** continued
  - fluorescence spectroscopy detection system, with microprocessor data collection system 3−25958
  - Fourier transform spectrograms using a microcomputer in an advanced undergraduate laboratory 3−5548
  - Fourier transform spectrometer for high resolution meas. of semiconductor laser static, dynamic spectra 3−20907
  - gas and liquid spectra analysis, microprocessor based instruments 3−45241
  - ICP data management using mainframe computers 3−4324
  - ion cyclotron resonance software 3−448
  - ion cyclotron spectroscopy software 3−449
  - IR, laboratory computer system for the analysis of high-resolution spectra 3−45223
  - IR, microprocessor and computer appls. 3−10929
  - mass spectrometer, metastable ion mapping and linked scanning 3−5909
  - mass spectrometer with specimen introduction in modulated mol. beam form, automated recording system 3−450
  - microcomputer aided microwave spectrometer controlled by a larger computer 3−49418
  - microcomputer controlled microwave-microwave double reson. spectrometer construction with crossed Fabry-Perot resonators 3−49419
  - microcomputer controlled Mossbauer spectrometer 3−40735
  - microdensitometer for spectrographic data anal. 3−25857
  - microprocessor appl. to control and data handling 3−10816
  - microprocessor-based multiscaler for Mossbauer spectroscopy 3−17178
  - multichannel analyser appl. *(German)* 3−40697
  - NMR, transient radical detection in liq. soln., computer-controlled device 3−45977
  - on-line automated gamma spectrometer for coolant at LOFT facility 3−55224
  - personal computer control system for X-ray crystal spectrometer 3−27804
  - photon-counting spectrofluorometer, microprocessor-controlled, protein/polymer films obs. appl. 3−49472
  - PIXIE-spectra, HEX program modifications for fast automatic resolution 3−14911
  - quadrupole mass spectrometer, UTI 100C model, microcomputer controlled 3−49492
  - spark emission spectroscopy, computer control 3−27753
  - spectrometer 20050, radiation measuring equipment *(German)* 3−11624
  - spectrophotometer, microcomputer controlled *(Japanese)* 3−370
  - spectrum analyser, Apple II computer controlled, Fourier spectra of notes of oboe and violin 3−37299
  - spin spectrometer parallel processor 3−50266
  - Stark modulation spectroscopy, ICN direct 1 doublet transitions obs. 3−6688
  - three-level microwave double reson. spectra, spectroscopic appl. 3−50445
  - Ar arc discharge with small addition of mol. gas, nonequilib. plasma computerised spectroscopy *(Russian)* 3−51423
  - Au, monitoring in carbon-in-pulp process, online flameless atomic absorpt. spectrometer 3−48112
  - ^{13}C NMR spectral data, computer assisted anal. 3−40657
- **computerised test equipment** *see automatic test equipment*
- **computerised tomography**
  - absorbed doses at CT and urography 3−9741
  - acoustic imaging, 10th International Symposium, Cannes, France (Oct. 1980) 3−29
  - associative memory, appls. to CT-scan imagery 3−15228
  - automated performance test of Somatom-2 scanner using phantom 3−53802
  - autostereoscopic viewing device for tomographic scans 3−58775
  - B-scan image tomographic reconstruction by integration or convolution 3−4599
  - B-spline interpolation program, CT appls. 3−4676
  - blood-brain barrier permeability changes, evaluation using ^{82}Rb and positron emission tomography in man and monkey 3−48383
  - bone density, quantitative meas. using γ-ray CT 3−58778
  - brain, human infant, density resolution artifacts, use of phantom 3−53806
  - brain, visual evoked potentials and PET mapping of regional cerebral blood flow and cerebral metabolism 3−15085
  - cardiac CT images, comparision of information between gated and nongated images 3−58773
  - cardiac motion, CT scanning appls. 3−29744
  - cardiac pathology, contrib. of conventional and computerised nuclear medicine, review *(Hungarian)* 3−4626
  - cardiac tomography, quadrant slant-hole collimator 3−4631
  - cardio-CT, future prospects 3−4633
  - cardiovascular CT, quantitative, baseline subtraction 3−58801
  - cardiovascular imaging, conf., London, England (Feb. 1982) 3−4
  - cerebral blood flow, and rapidly exchangeable water vol., positron emission tomography *(French)* 3−48393
  - cerebral blood flow, regional, calc. from emission CT of inert gas concs. 3−48379
  - cerebral blood flow, regional, meas. using continuous inhalation of $C^{15}O_2$ using positron emission tomography *(French)* 3−15205
  - cerebral blood flow, regional, positron emission tomography *(French)* 3−48392
  - cerebral blood flow meas., conf., Toulouse, France (Sept. 1981) 3−10504
  - charged particle stopping powers, rel. to X-ray CT numbers, radiotherapy treatment planning appl. 3−34965
  - chemical microscopy, combined tomographic-NMR spectroscopic technique 3−16389
  - coherent Doppler tomography for microwave imaging 3−49458
  - collimator effects in high resolution X-ray CT 3−19799
  - Compton scatter effects in CT reconstructions 3−29705
  - conference, medical imaging and image interpretation, Berlin, Germany (Oct. 1982) 3−20575
  - conference, optical instrumentation appl. in medicine, New Orleans, LA, USA (May 1982) 3−49072
  - conference on the future in radiology, London, England (Feb. 1982) 3−10499
  - diffraction tomography, filtered backpropagation algorithm 3−24865
  - dimensional information through industrial computerized tomography 3−29245
  - display of medical images, contrast transmission 3−24866
  - dual sensors, seven pinhole, orthogonal detectors, 3-D imaging 3−53833
  - dynamic spatial reconstructor, 3D spatial, density and temporal resolution 3−58777
  - ECAT III, positron tomography, design considerations 3−53839
  - ECG gated multiplanar cardiac CT 3−15215
- **computerised tomography** continued
  - EMI CT5005 whole body scanner, radiation dose reduction using a Cu wedge 3−15229
  - emission computed axial tomography, reconstruction method, corrections 3−53823
  - emission computed tomography with gamma camera *(Hungarian)* 3−24855
  - emission CT, local statistical noise estimation 3−19801
  - filter functions used in image reconstruction from projections, effect on motion artifacts 3−46166
  - fixed-angle emission tomographic cardiac imaging systems, phys. comparison 3−34964
  - Fourier transform Nuclear Magnetic Resonance tomographic imaging, computer simulations, imaging methods 3−15184
  - gated scanning, myocardial infarction study appls. 3−29742
  - hardware architecture for data acquisition and processing 3−53819
  - head, multipositional CT with emphasis on sagittal plane 3−24858
  - HEADTOME-II circular detector array hybrid ECT *(Japanese)* 3−4638
  - HIDAC, electron avalanche chamber with wire chamber for positron emission tomography 3−53825
  - holographic display of 3D digital data 3−26979
  - image anal., review 3−29242
  - image quality prediction using contrast detail diagrams for X-ray CT 3−39707
  - image reconstruction, limited angle, for missing scans 3−53831
  - image reconstruction by eigenvector decomposition, limitations and appls. 3−9710
  - image reconstruction from X-ray projections, penalty method, inverse matrix *(Japanese)* 3−48406
  - image sequence anal., recent progress *(Japanese)* 3−15209
  - imaging via wave equation inversion 3−17463
  - industrial use of filtered back projection and maximum entropy reconstruction algorithms 3−29246
  - inverse fan beam CT system, redundant ray projection completion method, cardiac appl. 3−53780
  - larynx, high resolution thin sectioned CT 3−34967
  - limited angle CT reconstruction using a priori information 3−29737
  - linear motion, response characts. 3−39709
  - liver, power spectral density as a texture meas., cirrhosis detect. appl. 3−4621
  - lung, regional extravascular density meas. using positron emission and transmission tomography 3−48382
  - lung density meas. by CT, implications for radiotherapy 3−9716
  - maximum entropy method for image reconstruction 3−29736
  - maximum likelihood reconstruction for emission tomography 3−19798
  - microplasmas, laser produced, X-ray imaging, radial multi-slit coding 3−37703
  - microwave, image reconstruction from coherent diffr. data 3−29693
  - microwave diffraction tomography for biomedical applications 3−34931
  - Monte Carlo techniques, ring sensitivity-aperture response, circular tomograph 3−53829
  - morphofunctional tomography, techniques *(Italian)* 3−39706
  - MTF, rel. to image quality 3−15214
  - multi-image echo tomography 3−34920
  - multiplanar CT, image techniques 3−9729
  - multiplanar reconstruction as a method of streak artifact elimination 3−48387
  - multiple parallel CT images, identification of optimal orientation of oblique sections 3−48384
  - neuroanatomical structure size, shape and position, quantitation in positron emission CT 3−48380
  - neutron and gamma-ray tomographic imaging of LMFBR SAREF-program safety-test fuel assembly 3−26415
  - NMR image reconstruction 3−30915
  - NMR tomography, 3-D interpolation technique, total volume imaging 3−53760
  - noise characteristics, projection reconstruction, 2-D Fourier transforms, NMR imaging 3−53761
  - nonlinear parameter tomography, active incoherent imaging and adaptive imaging 3−29690
  - nuclear fuel bundles, neutron tomography 3−29244
  - nuclear medicine conf., Budapest, Hungary (Sept. 82) *(Hungarian)* 3−15
  - nuclear medicine imaging instrumentation, review *(Hungarian)* 3−4624
  - nuclear science and power systems, conf., Washington DC, USA (Oct., 1982) 3−44890
  - optical scanner as an aid in simulating treatment with CT data 3−58761
  - optimal technique for tomographic image reconstruction from curved ray projections 3−17462
  - organ volume determination by single-photon emission CT 3−24856
  - organic glass rules for determ. of level correl. between computerised tomograms and standard roentgenograms *(Russian)* 3−58770
  - PANGIOMAX system for cerebral and abdominal stereoscopic magnification angiography *(Japanese)* 3−4640
  - phantom for mapping slice thickness in X-ray CT 3−15195
  - polynomial based algorithms for computed tomography 3−58810
  - polynomial theory *(Japanese)* 3−19811
  - position emission computerised tomography for nuclear medicine *(Japanese)* 3−4637
  - positron computed tomography, multilayer scanner, image forming performance analysis 3−53774
  - positron CT, double-tracer technique 3−4630
  - positron emission, 5 slice whole body detector, performance 3−53840
  - positron emission, count loss prediction 3−53838
  - positron emission, engineering developments at UBC-TRIUMF 3−53834
  - positron emission, quantisation of time of flight meas., signal to noise ratio 3−53837
  - positron emission, time of flight, effect of timing window 3−53835
  - positron emission, time of flight, reconstruction image error estimates 3−53836
  - positron emission, time of flight, whole body camera, results 3−53841
  - positron emission CT, anatomical localisation using a specially designed headholder 3−58772
  - positron emission CT, quantitation, nonuniform resolution effect 3−58774
  - positron emission tomography, anal. of signal amplification using small detectors 3−53779
  - positron emission tomography, BGO crystal−photosensor combinations, assessment 3−53827
  - positron emission tomography, cranial, attenuation correction, contour-finding algorithm 3−53775
  - positron emission tomography, image reconstruction improvement with time-of-flight information 3−34960

computerised tomography continued
- positron emission tomography, radiation absorbed dose estimates for the ^{38}K, ^{81}Rb, ^{82}Rb and ^{130}Cs 3—48389
- positron emission tomography, sampling props. of stationary and half-rotation rings 3—48381
- positron emission tomography, sensitivity gain rel. to time-of-flight information 3—34962
- positron emission tomography data handling, dual processing system 3—53820
- positron emission tomography ring camera, single-slice design, Monte Carlo simulation 3—48407
- positron emission tomography using C^{15}O, ^{11}CO and CO^{15}O, absorbed dose estimates 3—24889
- positron imaging, reconstruction of 3-D from 2-D, improved performance 3—53832
- positron rotating CT, image reconstruction 3—53822
- positron tomograph, BGO scintillation camera 3—53826
- positron tomography, high resolution system, BGO crystal, HI$_2$ photodetector 3—53828
- positron tomography, photomultiplier 3—50167
- positron-emission CT unit, for head imaging, performance and calibration 3—53824
- pulmonary blood flow distrib., radioisotope CT obs. 3—58705
- pulmonary density and blood vol., meas. with positron emitting isotopes *(French)* 3—58791
- pulmonary modules, CT densitometry, phantom study 3—53773
- pulmonary nodules, solitary, factors influencing quantitative CT meas. 3—58776
- pulmonary nodules, solitary, quantification of Ca using single- and dual-energy CT 3—29718
- quality assurance program 3—53801
- quantitative TOF imaging for NDE of computerised US tomography 3—48033
- radiation therapy simulator use to localise anatomical level of CT slices 3—48378
- radiation therapy treatment planning, current and future developments 3—34953
- Range: a technique for lumbar CT 3—48386
- reconstruction from limited projection angles 3—53804
- reconstruction of images from incomplete projections 3—29738
- reconstructive US tomography based on time-of-flight projections 3—4601
- review of methods using different information carriers *(French)* 3—4634
- risk analysis in computerised tomography and other diagnostic radiology procedures 3—24850
- rotary positron tomography, POSITOLOGICA II, quad-detect. arrangement and sampling characts. 3—19800
- satellite remote sensing appl. 3—30084
- scanner, contrast-detail-dose and object-detectability curves, energy depend. 3—53777
- scanner quality assurance protocol 3—48399
- scanners, practical method to meas. MTF 3—9724
- SCT-200N CT scanner *(Japanese)* 3—4639
- Siemens SOMATOM 2 CT scanner, acceptance tests and patient dose meas. 3—4618
- signal detection problems *(Russian)* 3—24851
- simulation images generated from CT, clinical merit 3—29722
- single photon emission computed tomography with attenuation effect, analytical approach 3—44317
- single photon emission tomography, attenuation compensation 3—48388
- single photon tomographic imaging of a standard heart phantom with ^{201}Tl 3—15198
- single photon tomographic system, rotating conventional gamma camera, physical performance 3—48377
- single-photon emission tomography, comparison of data collection protocols 3—29719
- single-photon emission tomography and cerebral blood flow *(French)* 3—15208
- soft X-ray tomography in JIPP T-II stellarator 3—2273
- spectral factor approach, energy dependence of photoelec. coeffs. 3—53855
- splines interpolation for image reconstruction 3—29734
- SPRINT, stationary detector single photon ring tomograph for brain imaging 3—9712
- square wave response function determ. using phantom 3—53803
- stereotactic system, improved, for CT aided neurosurgery 3—29741
- stereotactical neurosurgery, CT-images as the basis of operation planning 3—24881
- structured noise, effects of periodic error sources 3—9722
- support device for obtaining direct coronal scans of the pelvis and lower abdomen 3—15217
- synthetic aperture tomography imaging systems 3—15177
- thermometry noninvasive, using a clinical CT scanner 3—9721
- tissue densitometry, scan images, computer analysis 3—53805
- tomographic alogorithms for general line integrals 3—15269
- tomography, white/grey matter segmentation by texture based clustering algorithm 3—15272
- TV system for the positioning correl. between computed tomographs and conventional radiographs 3—58781
- two-dimensional image field generation from one-dimensional scans 3—4600
- ultrasonics, inverse source and scatt. problems 3—56367
- uniformity artifacts in SPECT, reduction by noncircular orbits 3—53856
- US attenuation tomography, accuracy enhancement strategies evaluation, computer simulation 3—48351
- US computed tomography, reduction of multipath propag. effects 3—7304
- US computed tomography, transmission and reflection type 3—58351
- US computerised tomography, attenuation imaging, energy ratio methods 3—48346
- US computerised transmission tomography 3—48345
- US echo tomography, image quality improvements 3—4603
- US imaging by various modes 3—29691
- US tomography, corrections for refraction 3—4576
- US tomography, multipath artifact corrections 3—4582
- US tomography, vel. and attenuation, ray refr. correction, perturbation approach 3—1834
- US tomography by ring array electronic scanning and steering 3—4602
- video patient repositioning system for computed tomography and radiation therapy 3—53778
- video-fluoroscopic CT scanner for dynamic vol. imaging of moving organs 3—9709
- viewing system, 3D, for tomographic scan interpretation 3—29721

computerised tomography continued
- whole-body computerised tomography scanner, Model TCT-80A, resolution, detectability 3—34971
- X-ray computer tomography picture processing for medical diagnostics 3—48442
- X-ray medical diagnostic appl., development and experiences *(Czech)* 3—48405
- X-ray transmission, appl. synchrotron radiation, critical absorption 3—53782
- X-ray transmission, application of synchrotron radiation 3—53781
- CsF scintillators for time-of-flight positron tomography, timing props. 3—44313

computing applications to aerospace engineering *see aerospace computing*

computing applications to architectural design *see architectural CAD*

computing applications to astronomy *see astronomy computing*

computing applications to astrophysics *see astrophysics computing*

computing applications to biology *see biology computing*

computing applications to biomedical engineering *see medical computing*

computing applications to business *see administrative data processing*

computing applications to chemical engineering *see chemical engineering computing*

computing applications to chemistry *see chemistry computing*

computing applications to civil engineering *see civil engineering computing*

computing applications to communications engineering *see communications computing*

computing applications to control system analysis *see control system analysis computing*

computing applications to control system design *see control system CAD*

computing applications to education *see educational computing*

computing applications to electric machine analysis *see electric machine analysis computing*

computing applications to electrical engineering *see electrical engineering computing*

computing applications to electronic engineering *see electronic engineering computing*

computing applications to engineering *see engineering computing*

computing applications to finance *see financial data processing*

computing applications to geophysics *see geophysics computing*

computing applications to history *see history*

computing applications to legal research *see social and behavioural sciences computing*

computing applications to linguistics *see linguistics*

computing applications to manufacturing *see manufacturing data processing*

computing applications to mathematics *see numerical analysis*

computing applications to mechanical engineering *see mechanical engineering computing*

computing applications to medical administration *see medical administrative data processing*

computing applications to medical diagnostics *see medical diagnostic computing*

computing applications to medicine *see medical computing*

computing applications to music *see music*

computing applications to natural sciences *see natural sciences computing*

computing applications to nuclear engineering *see nuclear engineering computing*

computing applications to physics *see physics computing*

computing applications to police *see police data processing*

computing applications to power system analysis *see power system analysis computing*

computing applications to power system design *see power system CAD*

computing applications to psychology *see psychology*

computing applications to social and behavioural sciences *see social and behavioural sciences computing*

computing applications to town and country planning *see town and country planning*

concentration measurement *see chemical analysis; chemical variables measurement*

concrete
- acoustic emission analysis *(German)* 3—58355
- acoustic emission and source mechanisms, waveform anal. 3—50834
- asphalt-concretes, effect of water on mechanical props. 3—14835
- behaviour mathematical description 3—6285
- biological shield for fusion reactor neutron transport anal. 3—11533
- buried steel bar, detection with EM impact driving method 3—4233
- cement-concrete, anelastic props., elastic-plastic constitutive eqns. 3—51710
- colemanite-baryte frit and polymer impregnated concrete as shielding materials 3—26322
- flexural fatigue, deterioration assessment 3—39249
- gypsum, mixed with sand and cement, strength and hardening condition *(Japanese)* 3—58060
- long term interactions of molten UO$_2$, FBR safety appl. 3—55506
- microcrack development eval. using US phase method 3—53342
- microfracturing, influence of coarse aggregate, appl. of fracture mapping 3—4101
- microstresses in granular composites with different types of grains 3—53102
- neutron attenuation length in concrete shielding *(Chinese)* 3—31467
- neutron inelastic scatt., 14 MeV, γ-ray ang. distrib. 3—55713
- nondestructive evaluation of water content by low energy gamma backscattering 3—45701
- plane, fracture toughness eval. *(Japanese)* 3—58230
- Portland cement mortars, fracture toughness eval. *(Japanese)* 3—58230
- rail transit system, concrete elevated struct., ground vibr. estimation and control 3—9523
- steel fibre reinforced concrete, effect of superplasticisers *(Japanese)* 3—58059
- steel fibre reinforced concrete, folded plate ridges under bending moment, ultimate strength *(Japanese)* 3—58231
- steel fibre reinforced concrete, fracture toughness eval. *(Japanese)* 3—58230
- steel fibre reinforced concrete beams, bending-torsion interaction 3—58175
- structures, elastic-plastic fracture anal., finite element method 3—37416

concurrency (computers) *see multiprocessing systems*

condensation
see also clouds; drops; fog
aerosol, multicomponent radioactive, condensation, coagulation and deposition 3−997
alkali halide crystal condensation and evaporation by mol. beam methods 3−13143
annular-to-wavy flow pattern transition during condensation inside horizontal tubes 3−2106
atomically rough surface growth, solid-on-solid model of cryst.-vapour interface 3−33160
benzene, condensation by homogeneous nucleation in shock tube 3−53450
binary vapour condensation simulation, mass transfer 3−37546
carbon tetrachloride, condensation by homogeneous nucleation in shock tube 3−53450
condensation nuclei counters, supersaturation and expansion ratios 3−35822
convective storms, condensation rate determ. method 3−10082
cylindrical condensed phase, kinetic theory of evaporation and condensation 3−57073
ethanol condensation by homogeneous nucleation in shock tubes 3−13423
filmwise condensation inside vertical tube, effect of waves on vapour side heat and mass transfer, experimental investig. 3−50922
fins, rectangular and triangular, condensation, heat transfer, temp. distrib. 3−50923
freon-11, condensation by homogeneous nucleation in shock tube 3−53450
freons, non-azeotropic binary mixtures, condensing heat transfer in vertical tube *(Japanese)* 3−37330
grooved tubes in heat exchangers, heat transfer improvement by turbulisation 3−22445
heat transfer meas. near dropwise condensation 3−56419
heat transfer on horizontal tubes in condensation of descending vapour flow 3−27519
homogeneous, small parameters of macroscopic theory *(Russian)* 3−47084
interface role in heat transfer processes 3−51763
laminar film condensation on plane and axisymmetric bodies, integral method 3−37329
liquid, bubble-containing, shock wave struct. 3−12419
liquid metal vapour condensation, influence of wall-condensate interface resistance 3−50921
liquid surface temp. meas. under evaporation or condensation 3−54733
liquid-vapour system, mol. exchange, vapour phase diffusion effects 3−47093
methane-CO_2 mixture, contaminated natural gas, heat of condensation meas., expt. apparatus 3−38096
methane-CO_2 mixture, contaminated natural gas, heat of condensation meas., expt. apparatus 3−38097
methanol-water, condensation on flat plate, heat transfer 3−37325
Nusselt-type condensation on triangular fluted surface, anal. 3−22302
polyethylene terephthalate, polycondensation process with thermal degradation, math. model 3−23026
n-propanol, condensation by homogeneous nucleation in shock tubes 3−13423
sintering, microstruct. evolution, role of evaporation/condensation 3−47794
slit-throat nozzle, cluster beam prod., classical condensation theory 3−46616
submerged vapour jets in subcooled liqs. condensation 3−37537
supersaturated vapour, isothermal condensation, determ. of molecular cluster parameters 3−46115
swimming pools, indoor heated, energy conservation without condensation, heat pump appl. 3−58545
thin films, nucleation theory considering small cluster mobility, root function soln. 3−23225
tube flow, forced convection boiling and condensation heat transfer coeff. 3−27515
vapour, supersaturated, steady homogeneous condensation, kinetics of establishment 3−47096
vapour condensation on plate during horizontal motion of coolant 3−37479
vapour flux laminar flow in condensation region of heat tubes 3−51226
vapour-gas mixture, evaporation and condensation, kinetic anal. 3−22304
vapour-liq. equilibria expt. methods, dew-and bubble-point method 3−18430
water, subcooled pool boiling, heat transfer in transition boiling 3−2038
water condensation on insoluble particles without drop form. 3−51765
water vapour condensation and clouds form. in mesosphere, role of H_2O_2 3−10045
water vapour condensation and heat transfer from humid air to horizontal tubes arranged in-line in bank *(Japanese)* 3−32587
Au film on pure NaCl surfaces, nucleation data 3−23224
CO_2, microcluster growth, transition from successive monomer addition to coagulation 3−28087
$CdCr_2Se_4$ film, synthesis, chem. composition, elec. and mag. props. 3−58050
Cr condensates, brittleness threshold 3−34473
Cr film, resistivity and TCR *(Russian)* 3−3338
$FeCr_2S_2$ film, ferrimag. semicond., prep. and props. 3−58049
H_2O, condensation by homogeneous nucleation in shock tube 3−53450
Mg-SiO-H_2, vapor phase nucleation study 3−47078
NaF, two-dimens. condensation of water and alcohols 3−2964
Sc film, resistivity and TCR *(Russian)* 3−3338

condensers (electric) *see capacitors*

condensers (steam plant)
PWR nuclear power stations, pipe connections *(German)* 3−6394

condensing *see condensation*

conductance, electric *see electric admittance*

conductance, electric, measurement *see electric admittance measurement*

conductance measurement, electric *see electrical conductivity measurement*

conducting materials
see also bimetals; electrolytes; metals; semiconductor materials; superconducting materials
No entries

conduction, heat *see heat conduction*

conduction bands
see also Fermi level; semiconductor materials
alkali halide crystals, photoionisation of like ions, excitation in A and C absorpt. bands 3−47705

conduction bands continued
n-alkanes, solid, conduction band struct. by electron-transmission spectra 3−47253
ferromagnetic semiconductor, conduction electron self-energy effects 3−52031
graphite intercalation cpds. with Li, K, Rb, Cs, cond. bands, low energy photoelectron spectroscopy study 3−28968
metal valence fluctuators, electron-phonon scatt. 3−28317
metal-Te liq. alloys, dil., resist. and thermoelec. power 3−3149
n-type crystals, energy band parameters, heavy doping effects 3−13701
niobium dichalcogenides intercalated with 3d transition metals, optical refl. spectra, cond. band broadening 3−19154
noble metals, electron-fluid shell models 3−42731
polydiacetylene cryst., energy levels of ionised states, photoemission study 3−24086
rare earth dodecaboride phases, elec. resist. and thermoelec. coeff. *(Russian)* 3−3159
semiconductor, donor-acceptor pair transitions under reson. capture of highly excited electrons 3−14350
semiconductors, narrow band gap, cond. electrons, elec. susceptibility, quadrupole hyperfine interaction in cond. with reson. levels 3−43108
semiconductors, quantum oscillations of photoconductivity 3−47388
semiconductors and semimetals, mag. field. induced impurity bands and cond. bands 3−52008
tantalum dichalcogenides intercalated with 3d transition metals, optical refl. spectra, cond. band broadening 3−19154
transition metal dichalcogenide intercalation compounds, electronic props. 3−23386
zinc-blende semiconductors, orthonormal local orbitals constructions 3−38284
$Al_xGa_{1-x}As$:Te, impurity states, electron mobility 3−33681
$CdCr_2Se_4$, energy band struct. in atomic sphere approx. 3−57272
CdF_2, band struct., photoemission spectra study 3−38997
$Cd_{0.2}Hg_{0.8}Te$, density of states distrib. in valence and cond. bands, UPS study 3−14433
$Cd_{1-x}Mn_xF_2$, valence and conduction band struct., UPS study 3−23269
CdS, photocurrent temp. depend. irreproducibility 3−28388
Ce compound, photoemission, core and valence spectra in limit of large degeneracy 3−47753
Cu, conduction band gap at L point, photoemission and electron refl. meas. 3−8404
p-$CuInSe_2$ surface, clean and O contaminated, EELS studies 3−38976
EuS, feromagnetic semiconductor, conduction electron self-energy effects 3−52031
EuTe, antiferromagnetic semicond., electronic excitation spectrum calc. 3−8407
GaAs, (110) bound and resonant surface states 3−28406
GaAs:H, passivation of dominant deep level EL2 3−23308
$Ga_{0.29}In_{0.71}As_{0.61}P_{0.39}$/AnP laser diode, Auger recomb., free-carrier losses 3−12144
GaP, indirect exciton, lineshape and electron-phonon coupling 3−38313
GaP:Ni, photoconductivity, impurity states 3−23427
GaP(Sb), (110) bound and resonant surface states 3−28406
n-GaSb:Te, electron mobility, elec. cond. Hall effect 3−8506
$GdAl_2$, band struct. changes on mag. ordering, NMR anal. 3−28722
$Hg_{3-\delta}AsF_6$, quasi-one-dimensional incommensurate cpd., conduction bands calc. 3−23241
HgMnTe, threshold scatt. of conduction electrons 3−38378
HgSe and $Hg_{1-x}Mn_xSe$, mag. breakdown and spin-split cond. band 3−57260
InAs-GaSb superlattices, electronic props. 3−23262
$In_{1-x}Ga_xAs_yP_{1-y}$, optical props. from 1.5 to 6.0 eV 3−38844
InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3−18721
n-InSb, intra-conduction band magneto-optical studies, cyclotron reson. harmonics, photocond. techniques 3−57899
InSe, effective mass and conduction band parameters, cyclotron resonance study 3−8402
Kr, fluid, free electrons and excitons, photocond. excitation and VUV refl. spectra 3−23437
La-H, self-consistent band struct. calcs. and optical props. 3−38298
La_2CuO_4, metallic, mag. props. study 3−28500
LiF, excitons and interband processes, configuration interaction method 3−57288
$Mg_xHg_{1-x}Se$, zero gap semiconductor-ordinary semiconductor transition *(Russian)* 3−3204
$MoS_2(Se_2)$, cond. band struct. from g-values of excitons 3−28250
$NaWO_3$, bronze, band struct., photoemission study, applicability of rigid band model 3−18610
Ni (110), spin-depend. electron-hole pair excitations in spin-polarised secondary electron emission 3−34183
Ni complex, porphyrinatonickel(II), band struct., INDO cryst. orbital approach 3−33618
n-$NiTiO_3$:Nb electrode, sintered, photoelectrochem. props. 3−19593
PbTe heteroepitaxial films, band. struct., magnetoresistance oscill. study 3−28266
Si, clean and adsorbed Cs, conduction band density of states, secondary electron emission study 3−24067
Si:As(B), laser annealed, surface electron props. 3−57408
Si:H,P, amorphous, gap state profiles, photoacoustic spectroscopy studies 3−23250
a-Si:H and a-Si:H, P, gap-state profiles, below-gap optical absorpt. meas. 3−3844
SiO_2, electron attenuation in cond. band, Monte Carlo calc. 3−43171
SmS, electronic struct., relativistic KKR calcs. 3−47262
SnI_2 film, optical consts. meas., cond. band min. and valence band max. 3−3846
SnO_2:Sb, conduction band density of states, UPS, XPS and EELS study 3−23237
Te, magnetophonon oscill. of thermoelec. power in cond. band 3−23413
$WS_2(Se_2)$, cond. band struct. from g-values of excitons 3−28250
Xe film, elastic and inelastic mean free paths 3−28464

conduction electron spin resonance *see CESR*

conduction in solids, ionic *see ionic conduction in solids*

conductivity, electrical *see electrical conductivity*

conductivity, thermal *see thermal conductivity*

conductors (electric)
see also bimetals; wires (electric)
eddy current distribution, alternating magnetic field calc. for two high permeable cylinders *(German)* 3−41720

conductors (electric) continued
  magnetic field analysis by first order integral equations when a marked skin effect is present *(Russian)* 3−17403
  nonlinear conducting media, inhomogeneous anisotropic, electrodynamic and electrophysical phenomena *(Ukrainian)* 3−21957
  vector pot. of EM fields 3−17405
configuration interactions (atoms) *see atomic electron correlations*
configuration interactions (molecules) *see molecular electron correlations*
confinement, plasma *see plasma confinement*
connecting *see joining processes*
connectors (electric) *see electric connectors*
conservation laws
  see also C invariance; CP invariance; CPT invariance; elementary particle symmetry; P invariance; T invariance
  ν_α-ν_β oscillations, $\alpha,\beta=e,\mu,\tau(\alpha s\neq\beta)$, associated mixing in $SU(2)\times SU(2)_R\times U(1)$ guage theory 3−26054
  Auger transitions, allowed and forbidden effects, LS calculations, computer models 3−36735
  B-L number conservation, as broken local symmetries 3−31119
  charged particle, general form of eqn. of motion 3−35896
  cosmological fermion number violation, appl. of spectral asymmetry 3−10700
  curved space-time, conservation theorems 3−20727
  double beta-decay, constraints on lepton number nonconservation and Majorana neutrino mass 3−40813
  elasticity, linear, conservation laws based on divergence transformations 3−25750
  flavour violation, scalar particles and leptoquarks 3−11081
  gauge geometrodynamics, conceptual development, study of properties, review 3−40791
  gravitation and unified covariant formalism of classical gauge fields in equiaffine space 3−5680
  group structure and derivation 3−54863
  hyperbolic conservation laws, upstream differencing and Godunov-type schemes 3−49168
  matter tensor orthonormalisation in a given gravitational field *(German)* 3−30709
  matter-antimatter transition operators 3−49604
  minimal Weinberg-Salam model, suppression of lepton number violation 3−21041
  nonlinear σ-model on symmetric coset spaces, Backlund transformation, conservation laws 3−21017
  nonlinear σ-models, local conservation laws and currents 3−16504
  nuclear structure, conf., Amsterdam, Netherlands (Aug.-Sept. 1982) 3−49078
  proton decay, conservation laws 3−49676
  proton decay, two-quark annihilation vs. three-quark fusion 3−49674
  proton decay in models with intermediate scale supersymmetry breaking 3−40831
  proton decay in SU(5) grand unified theories and translational invariant bag model *(Chinese)* 3−40900
  proton decay structure in SO(n) family unification schemes 3−565
  quark-monopole scatt. cross section in grand unified SU(5), fermion mass and axial anomaly 3−49611
  SO(10) grand unification and neutron-antineutron oscills. 3−26051
  spinning test particle in external geometric fields, presymplectic dynamics in free case, pole approx., and pole-dipole approx. 3−20725
  symmetries, conservation laws and least action 3−5575
  symmetry conservation law duality, Runge-Lenz vector 3−44960
  thermodynamics, symmetrisation of conservation laws with entropy 3−35951
  topology of quantised flux fields 3−16596
  two-parameter Backlund transformation for Boussinesq eqn. 3−89
  Universe, Majorana neutrinos, nucleosynthesis and lepton asymmetry 3−35763
  $e^+e^-\rightarrow\mu^+e^-$, muon number conservation in models with majorana neutrinos *(Russian)* 3−6017
  $\gamma e^\pm\rightarrow\Delta^{\pm\pm}e^\mp$, Δ=double charged Higgs boson, B-L violation 3−36294
  $\mu\rightarrow e\gamma$, muon number conservation in models with majorana neutrinos *(Russian)* 3−6017
  n-ñ oscillations, astrophysical consequences 3−25311
  $\pi^0\rightarrow\mu e$, upper limit for branching ratio 3−16634
  $\theta\rightarrow E\pi^0$, isospin violation possibility, branching ratio calcs. 3−36242
  ^{76}Ge double β-decay, lepton nonconservation, massive ν and righthanded current limits 3−40829
  ^{76}Ge, neutrinoless double beta decay, new limits for ν mass and lepton conservation 3−49815
  ^{A}Te, A=128, 130, double beta decay, rejection of evidence for nonzero neutrino rest mass 3−45490
  ^{A}Te$\rightarrow$^{A}Xe, A=128, 130, double beta decay, neutrino rest mass determ. 3−31353
constant current modulation *see amplitude modulation*
constant current sources
  cryogenic Pt and semiconductor resistance thermometers supply 3−45139
constant voltage diodes *see avalanche diodes; Zener diodes*
constants
  see also elastic constants; gravitational constant; lattice constants; optical constants
  fine structure constant, high precision determ. using quantum Hall effect *(Polish)* 3−10793
  laser-fluorescence mass spectroscopy 3−45244
  numerical values, principle of antropy *(Russian)* 3−16058
  precision measurements rel. to basic metrological standards *(Japanese)* 3−10792
  GaAs-$Al_{0.3}Ga_{0.7}As$, quantised Hall resist., fine struct. consts. 3−23411
constituent interchange model *see quark models*
constitution diagrams *see phase diagrams*
construction *see building*
constructional engineering *see civil engineering*
contact (mechanical) *see mechanical contact*
contact angle
  see also capillarity; surface tension; wetting
  capillary systems, static solid-liquid friction, one-parameter model 3−12775
  fluid, bridge between solid plates in gravitational field, contact angle 3−2932
  interfacial tensions and contact angles from sessile and pendant drop shapes 3−51895
contact angle continued
  nucleation, heterogeneous, theoretical anal., line tension effects 3−8307
  pendent drop, inclined, stability 3−13592
  PMMA, tacticity effects on electron resist. appls. 3−17390
  polymers, surface tension values, contact angle study 3−57177
  polymers, surface transformation by HF discharge plasma 3−12983
  porosimetry, mercury, influence of pore potential on hysteresis and entrapment 3−35962
  rough surfaces, dynamic contact angles, effect of interface rel. 3−13594
  sessile drops, inclined, stability 3−13593
  transition zone between thin film and bulk liq., wetting and line tension 3−2931
  wetting transitions, first or second order 3−23134
  wetting transitions, first or second order 3−42884
  Al surface, boehmitised, corrosion and chem. props. 3−9246
  C, fibre, wetting props., manufacture of composites *(French)* 3−33539
contact e.m.f. *see contact potential*
contact lenses
  Bioptic-contact lens telescopic system 3−39746
  cellulose acetate buterate contact lenses, flexure and residual astigmatism on toric corneas 3−19844
  shells, uniform-thickness design, rel. to gas permeability 3−19845
contact potential
  see also contact resistance
  experimental setup for meas. contact potential differences in vacuum 3−16372
  liquid metals, Volta effect, contact method meas. 3−8560
  metals, X-ray photoemission spectroscopy excitation distrib. 3−3919
  Hg, liq., Volta effect, contact method meas. 3−8560
  Hg-In amalgams, Volta effect, contact method meas. 3−8560
  Mo (112), adsorption of La, struct., work function and stability, LEED study 3−33576
contact resistance
  see also contact potential
  cracking onset determ., by monitoring electrical contact resistance 3−53333
  metal-semiconductor interfacial contact resistance, direct meas. method 3−8580
  thermal contact resistance in thermophysical meas. 3−33526
  Au-Ge ohmic contacts to GaAs, role of Ge 3−33793
  CdTe/CuAu low resistance elec. contact, vacuum deposition prep. 3−18783
  Cu-Nb point contacts, metallic to tunnelling transition 3−38552
  Cu_xS thin layers, specific contact resist. and noise calc. 3−23467
  p-GaAs lasers, PtTi ohmic contact formation using ion-beam sputtering technology 3−41870
  n-GaAs ohmic contacts, specific contact resistance, model for N_D^{-1} depend. 3−13902
  n-GaAs, thin highly doped layer creation for ohmic contact form. 3−18781
  GaAs:Cr wafer, Si diffusion from thin film by pulsed laser irrad. 3−57145
  GaP:Te (2n), inhomogeneous distrib. of doping elements 3−8080
  InGaAsP/InP layers, struct. study of alloyed Au metallisation contacts 3−23188
  p-InP, Au-Be alloyed ohmic contact exam. 3−13904
  ρ-InP/Au-Zn, ohmic contacts, alloy deposition by electroplating 3−38478
  KI complex, α cyclodextrin-KI-$I_2.4H_2O$, elec. resist. 3−38389
  Pd mated to noble metals, fretting of elec. contacts 3−4148
  Pd-Si:As interface, Pb_2Si formation, As redistribution, elec. study 3−47169
  Pd_2Si-AlCuSi system, contact resist. behaviour rel. to VLSI technology 3−18784
  Ru, electroplated, with thin Au covering, contact and wear resistance 3−43991
  Si, thin highly doped layer creation for ohmic contact form. 3−18781
  n-Si-Al:Si small-area contacts, resist. increase due to heat treatment 3−52248
  Si-poly Si interconnections, contact resistance 3−28419
contacts, electrical *see electrical contacts*
content-addressable storage
  CT-scan imagery, appls. of associative memory 3−15228
continuous creation hypothesis *see cosmology*
continuum hypothesis *see set theory*
continuum mechanics *see classical mechanics of continuous media*
contours, surface *see surface contours*
contrast transfer function *see optical transfer function*
control facilities
  fission reactor, control room, design and operation, operator viewpoint 3−55352
  fission reactors, control room, human factors, conf., Toronto, Canada (June 1982) 3−54588
  nuclear reactor control centre design, human factors role 3−55355
control gear, electric *see electric control equipment*
control rooms, radio *see radio studios*
control system analysis
  see also correlation methods; frequency response; linearisation techniques; perturbation techniques; piecewise-linear techniques; poles and zeros; sensitivity analysis; stability; state-space methods; step response; transfer functions
  disturbance analysis in nuclear power plants 3−55356
control system analysis computing
  fission reactors, simulation of main control circuit on hybrid computer *(Hungarian)* 3−36500
control system CAD
  fission reactors, control system parameters, auto tuning method, dynamic simulator 3−41229
  nuclear power plant, feedwater control system design 3−36498
control system computer aided design *see control system CAD*
control system synthesis
  see also correlation methods; frequency response; linearisation techniques; perturbation techniques; piecewise-linear techniques; poles and zeros; sensitivity analysis; stability; state-space methods; step response; transfer functions
  liquid metal fast breeder reactor, power control system design 3−6407
  neutron flux control system design using inverse Nyquist array method 3−49998
  proton synchrotron magnet power supply, high accuracy control 3−6478

control system synthesis continued
  PWR power plant, optimal temperature controller design 3—6406
  solar testing system, optimal control system 3—9405
  Tokamak plasma position control, feedback controller synthesis 3—12923
  Tokamaks, optimal control for maintaining plasma equilibrium 3—56709

control theory
  see also adaptive control; control system analysis; control system synthesis; observability; optimal control; proportional control; stability; two-term control
  core design, reloading optimality 3—36447
  pulmonary gas exchange, effect of local blood flow control, control theory analysis 3—39669

controllers
  see also cryostats; instruments; servomechanisms; thermostats
  5 MW research reactor computerised power controller 3—45636
  gas chromatography, flow controller and sensor for HP 5880A unit 3—39425
  mass spectroscopic thermal analysis, analog temp. regulator for pyrolyzer 3—53465
  neonatal ventilator eye support system, fail safe microprocessor controller 3 -29783
  Ontario Hydro nuclear power plant programmable controller system development 3—36561
  Pfeiffer turbomolecular pump, fail-safe automatic vent control circuit 3—20864
  photovoltaic battery charger with state-of-charge estimator and controller 3—34693
  proportional water bath temperature controller 3—10827
  semiconductor production processes, programmable vacuum system controller 3—49391
  spacecraft power conditioning, conf., Noordwijk, Netherlands, November 1982 3—44897
  Tokamak plasma position control, feedback controller synthesis 3—12923

convection
  see also convection in liquids
  advection-diffusion problems, comparison of current numerical methods 3—46564
  air bounded by rigid conducting wall, Benard convection, transition to turbulence 3—2055
  air conditioning system, open-cycle, solar powered, regenerating type solar collector performance simulation 3—34726
  air convection from hot surface, vel. meas. in vortex model 3—37483
  all-glass vacuum tubular collectors, vacuum production, maintenance and lifetime *(Chinese)* 3—9477
  arbitrary Prandtl number effect on forced convection in laminar separation 3—2065
  atmosphere, axisymmetric problem of free convection rel. to dynamic modification of cumulus cloud 3—10042
  atmosphere, clouds grouping in numerical cumulus 3—9990
  atmosphere, deep convection triggering by Morning Glory bore in N Australia 3—15590
  atmosphere, two-dimensional convention in non-constant shear rel. to model of mid-latit. squall lines 3—15580
  atmosphere boundary layer, convective stability, rel. to electrode effect over snow 3—4924
  atmospheric motion, existence of Hadley convective regimes 3—44681
  axial convection velocity profile determ. 3—51283
  axisymmetric buoyant plume, mixed convection 3—46549
  axisymmetric free convection porous cavities at small Rayleigh numbers 3—12663
  axisymmetric meridional laminar flow, azimuthal rot. due to current source 3—51128
  axisymmetric pipe flow, turbulent convection, weak undulations effects 3—22529
  axisymmetric thermal convection in spheres/spherical shells, stability, appl. to planet interiors 3—42223
  bidimensional nonstationary conduction in wall under uniform radiative flux 3—2066
  bifurcation of steady 2-D convection 3—7576
  binary alloy melts, hydrodynamic stability during solidification 3—57067
  binary fluid mixture in porous medium, amplitude eqn. near polycrit. point for convective instability 3—32798
  binary liquid mixtures with fast chem. reactions, convective instabilities onset 3—53408
  binary mixture in porous medium, nonlinear effects in convective instability 3—37561
  binary mixture with thermal diffusion, convective flow stability 3—42231
  Boussinesq fluid of infinite Prandtl number, steady three dimensional convection 3—51110
  brain tissue, isotopic anal. of diffusion and convection 3—29490
  bronchial-tree models, convective exchange in oscillatory flow 3—24763
  building thermal environmental control by evaporative cooling and variable ventilation 3—58481
  buoyancy-driven circulation in free-surface channels 3—2053
  buoyancy-driven convection, integral equation formulation 3—27503
  buoyancy-thermocapillary instability, interfacial deformation in one- and two-component fluid layers 3—27518
  buoyant convection, vorticity and stream function formulation calcs. 3—2057
  buried pipe, heat losses from flowing fluid 3—12774
  ceramic, brittle, thermal stress resist., quenching method, effect of spatial variation of heat transfer coeff. 3—44004
  charged fluid layer systems, convecting, metastable states relative stability, computer simulation 3—32584
  chemical vapour transport, convection influence on growth behaviour *(French)* 3—14453
  co-planar slat-like surfaces, forced convection, flow visualisation 3—27512
  combined free and forced convection between horizontal parallel planes 3—46555
  combined free convection and radiation heat transfer in parallelogram shaped enclosure 3—17935
  combustion chamber, convectively cooled, thermal state calcs. 3—12498
  compressed real gas, natural convection 3—2168
  conjugate heat-transfer problem for a moving continuous plate in a fluid flow 3—2045
  constant flow solar pond collector/storage system, periodic anal. of heat extraction process 3—53579
  convection dominated flows, streamline upwind/Petrov-Galerkin formulation with incompressible Navier-Stokes eqns. 3—17936
  convective rolls, phase dynamics 3—32585

convection continued
  convective turbulence in moderate Prandtl number fluids 3—17946
  cumulus clouds, entrainment rel. to droplet size spectrum 3—15586
  cyclone dust separator, convective heat exchange 3—7384
  o-dibromobenzene, diffusion coeff. in air 3—37602
  o-dichlorobenzene, diffusion coeff. in air 3—37602
  diffusion and convection process simulation by standard finite difference schemes and influence schemes 3—17937
  diffusion convection equation soln. 3—49297
  diffusion dominated by convection, combination of method of characts., finite element and finite difference procedures 3—16316
  directed crystallisation of melts, props. under weightlessness conditions 3—52918
  double diffusive convection by coupled mol. diffusion 3—51084
  droplet thermocapillary migration, appl. to controllable heat valve 3—37530
  ducts, natural convective flow, appl. to reactor cooling after pump failure 3—16941
  Earth crust/mantle, large Prandtl number finite-amplitude thermal convection with Maxwell viscoelasticity 3—29871
  Earth mantle, viscous fluid convection theory rel. to temp. profile 3—9872
  Earth mantle layered convection numerical anal., marginal stability and finite stability anal. 3—25036
  electrically conducting rarefield gas, oscillatory flow past porous plate, hydromag. free convection 3—42237
  Eurelios solar power plant dynamic modelling and simulation 3—44150
  fibrous heat insulating materials, effective thermal conductivity evaluation *(Japanese)* 3—17771
  films supported by Al substrate, emissivity measurement and comparison with theoretical results 3—34719
  finite container above convective thresholds, phase winding solutions 3—51111
  finned surfaces, convecting and radiating, heat conduction anal. 3—46435
  flames, convection jets, the slot fire, and fire safety 3—5563
  flames, premixed, in large scale and high intensity turbulent flow 3—27614
  flat-plate solar-energy collectors, universal curves for natural convection heat transfer coefficients 3—48170
  floating zone, cylindrical, forced convection due to cryst. and feed rotation, computational studies 3—8970
  flow, slow induced, instability and supercritical convection motions 3—2044
  flow of fluid around inner surfaces of cylindrical tank, convective heat transfer *(Russian)* 3—17941
  flow past vertical oscillating plate, effects of free convection currents and mass transfer 3—56530
  fluid, double-diffusive cellular convection onset due to lateral heat flux 3—37498
  fluid filling a half-space, stability of thermocapillary convection 3—46544
  fluid flow in heated vertical channel, heat transfer in entry region 3—27513
  fluid layer of slowly increasing depth, Rayleigh-Benard convection onset 3—32738
  fluidised beds, heat transfer, coupled gas convection-unsteady conduction effects, single particle model 3—22456
  forced convection, fin geometry for minimum entropy generation 3—37494
  forced convection heat transfer in low Prandtl number turbulent flows: influence of axial conduction 3—2043
  forced convection heat transfer over a semi-infinite plate 3—12668
  forced convection in a rapidly rotating annulus 3—2054
  forced convection laminar flow in inclined channel, vortices, ionic mass transfer stability 3—51125
  forced convection on heated bottom surface of cavity 3—51114
  forced convection with constant vorticity over an infinite wedge 3—37489
  forced convective boiling, thermal hysteresis 3—50903
  forced convective nucleate boiling from horizontal surface, heat transfer, void fraction meas. *(Japanese)* 3—2067
  forced convective nucleate boiling from horizontal surface, eqns. for determ. bubble layer thicknesses *(Japanese)* 3—2068
  Fourier space, convection pattern Doppler scanning 3—27521
  free and forced laminar convection between parallel plates, vortex effect 3—27527
  free convection flow for porous vertical plate in Stokes problem 3—22533
  free convection flow on rotating nonisothermal plate under nonuniform gravity 3—51101
  free convection flow past a vertical flat plate embedded in a saturated porous medium 3—56541
  free convection from a disk rotating in a vertical plane 3—46560
  free convection from a point heat source in a stably stratified medium 3—42230
  free convection from cone with closed end, Navier-Stokes eqns. 3—37485
  free convection in infinitely stacked parallelogram shaped enclosure 3—17934
  free convection in porous medium adjacent to heated surface, asymptotic expansions 3—51096
  free convective flow over heated sphere, collision phenomena 3—22464
  free-convective boundary layers, unsteady collisions 3—46570
  fuel aerosuspension with oxidant, convective combustion theory 3—9320
  g-jitter induced, in space environment 3—2042
  gas bubble motion, Marangoni convection induced *(German)* 3—51116
  gas flow in cooled ducts, combined radiative-convective heat transfer 3—51092
  gas in vertical cylindrical tube, natural convection numerical study 3—12671
  gaseous-solid suspension, forced convective heat transfer at high temp. 3—51204
  grey fluids in vertical cavities, combined radiation-convection 3—37493
  heat and mass transfer, bibliography, Soviet works, 1980-82 3—44910
  heat shield materials reflectance under radiant-convective heating 3—37324
  hexagonal lattice, bifurcation and planar Benard problem 3—49285
  homeotropic nematics heated from above under magnetic fields: convective thresholds and geometry 3—46839
  horizontal cylinder within confining walls, natural and mixed convection heat transfer 3—7583
  horizontal fluid layer, convective transitions, varying aspect ratio effects 3—32737
  Hubble-Sandage (S Doradus) variables, convection cells overturning rel. to long term light vars. 3—35603
  hydromagnetic convection in moving conducting vertical channel, radiation effect 3—51241

convection continued
instabilities, analytic soln. of Lorenz model 3—46557
insulated boundaries in tilted square cavity, induced convection 3—56544
integral compact solar water heater thermal performance anal. 3—53586
ionosphere, plasma convection spread rel. to equilib. motion of quiet auroral arcs 3—15678
Jupiter atmosphere, ratio of lighting energy dissipation to convective energy flux 3—59252
Jupiter atmospheres, convective model 3—20288
Jupiter magnetosphere, solns. to eqns. for corotating magnetospheric convection 3—10251
laminar forced free convection in horizontal tubes of varying cross-section at low Rayleigh numbers 3—2051
laminar free convection flow over horizontal and inclined surfaces, vortex instability 3—37442
laminar free convection heat transfer of heat generating fluids in vertical channels with heavy walls 3—42239
laminar heat exchange, bilateral case soln. *(Russian)* 3—17940
laminar heat transfer from surface of rot. disk 3—12677
laminar mixed convection in isothermal horizontal tube, heat transfer correl. 3—12665
laminar pipe flow, convection, viscous dissipation effect anal. 3—51051
laminar Stokes flow, reacting particle convective diffusion 3—7575
latent heat transport in nucleate forced boiling 3—51103
layers with tilted rot. vectors, three dimens. simulations 3—48628
linear solar concentrator-receiver system performance anal. under different flow regimes 3—48168
liquid bridge, non-Newtonian, heat transport due to Marangoni convection 3—7665
liquid column flow, time-oscillatory temp. gradients, Marangoni effect vel. distrib. 3—46543
liquid columns, steady and oscillatory thermocapillary convection 3—51109
LMFBR, subassembly accident initiation, Na boiling and flaw, clad melting 3—55275
low gravity convection phenomena of importance in space processing of materials 3—2040
low gravity simulation methods 3—2159
low-temperature solar water heaters heat receiver thermal contact temp. difference computation 3—9472
LPE horizontal slider system, slider-induced convection simulation 3—34249
RR Lyrae stars, convection and stability anal. rel. to pulsations 3—10335
magnetic field non-linear interaction in three-dimens. motion 3—15836
magnetoconvection equations, anal. of perturbations of magnetic field configurations 3—10192
massive binary stars, convective overshooting rel. to prod. of binary Wolf-Rayet stars 3—35594
MHD, free convection with vertical and horizontal temp. gradients 3—2131
MHD combustor oxidiser high temperature preheating by direct combustion of fuel 3—44135
MHD flow past porous plate with suction velocity step function change, free convection effects 3—2129
MHD free and forced convective flow through porous media, Hall effects 3—12658
MHD free convective flow and mass transfer through porous media 3—46639
MHD laminar free convection flow with Hall effects past a porous vertical plate 3—42319
mineral melt, vertically incident jet, cooling, thermal radiation and convection influence 3—7393
mixed convection boundary layer flow, 3-dimens., numerical solns. 3—7582
mixed convection flow over inclined surfaces, thermal instability 3—7584
mixed convection over vertical zircaloy plate with oxidation 3—27514
mixed convection plume above horizontal line source in forced convection approach flow 3—46552
mixed correction boundary layer eqns., comparison between expt. and numerical soln. 3—2063
model convection-diffusion eqn., discrete weighted mean approx. 3—27505
multicellular natural convection in a vertical slot 3—46558
multilayer thermal trap collectors, heat withdrawal analysis 3—53587
multimode convection eqns., time depend. solns. 3—32731
Multiple Layer Solar Collector, characts., comparison with selective flat plate collector 3—53585
natural convection, 3-dimens., in confined porous medium with internal heat generation 3—46553
natural convection, laminar and turbulent flow in annulus between concentric cylinders 3—37496
natural convection driven by osmosis 3—46569
natural convection fluid flow from heated plate-attached cylinder interaction 3—37500
natural convection from horizontal cylinders in interacting flow fields 3—51097
natural convection from vertical fin arrays vibr. effect 3—37488
natural convection heat transfer in low aspect ratio enclosures 3—56536
natural convection in a rectangular cavity with wall temperature decreasing at a uniform rate 3—7586
natural convection in concentric and eccentric horizontal cylindrical annuli 3—37495
natural convection in enclosure between vertical cylinders 3—27358
natural convection loop, stability and transient behaviour, numerical analysis 3—2050
natural convective flow in closed rectangular area, hydrodynamic and thermal structs. *(Russian)* 3—17942
natural free convection from horizontal cylinder at small Grashof numbers 3—46565
natural free convection in isothermal open cavities 3—46563
neutron star atmosphere, entropy of free particle gas rel. to neutrino emission and convective stability criterion 3—10199
non-Newtonian fluids thermal convection, volumetric heating and boundary layer scaling, planet interior appl. 3—15835
nonisothermal viscous flow, droplet motion, thermocapillary convection effects 3—46607
nonstationary convective heat and mass transfer in fluid at high Peclet numbers 3—2056
nonstationary MHD-convection in vertical annular channel 3—37492
numerical method for convection-diffusion equation with small viscosity coefficient 3—7573
ocean, diurnal thermocline due to buoyant convection 3—15483

convection continued
one dimensional phase change with radiation-convection 3—37333
oscillatory convective dispersion in a branching tube network 3—24782
oscillatory flow past infinite moving vertical isothermal plate, free convection and mass transfer effects 3—2037
paraffin wax storage subsystem models using liquid heat transfer media, comparisons 3—24639
passive scalar diffusion, scalar closures appl. 3—22428
passive space heating concepts thermal performance anal. 3—34724
period-doubling system, periodic perturbation 3—46568
phase change thermal energy storage in shell and tube heat exchangers, preliminary model 3—9495
plane-parallel flow, instability of combined convection 3—37471
plate, flat, free convection boundary layer due to small surface temp. fluctuations, asymptotic anal. 3—22462
plate, flat, partially absorbing, cyclic thermal radiation heating, convection cooling, thermal stresses 3—37360
porous medium, convection problem *(French)* 3—32794
porous medium, rotating, setting up of currents, variable viscosity effect 3—27516
porous medium, three-dimensional natural convection, vertical curved insulation layer *(Japanese)* 3—982
power law fluids, gap flow, laminar forced convection, pressure drops 3—37529
power-law fluid flow over two dimens. or axisymmetrical bodies, heat transfer 3—51098
pulsating stars, nonlinear hydrodynamical theory of convection 3—10309
radiative transfer in moving fluid, theory of flux-limited diffusion with relativistic corrections 3—54220
Rayleigh-Benard, period-doubling bifurcations in 1-dimens. transformations with two extrema 3—16123
Rayleigh-Benard convection, direct numerical simulation, spatial resolution needs 3—51107
Rayleigh-Benard convection, routes to chaos 3—46567
Rayleigh-Benard convection, time evolution in rectangular box 3—32736
Rayleigh-Benard convection cell, onset of turbulence, simple stochastic model 3—17944
reacting particles, convective heat and mass transfer, at low Peclet numbers 3—42325
rock bin thermal storage system dynamic temp. response simulation using mathematical model 3—9494
rotating gas medium, flame extinction mechanism, free convection influence 3—53388
rotating spherical shells, convection onset 3—46559
rotationally distorted convection cell, helicity and α-effect 3—48814
δ Scuti stars, effects of convection on theoretical blue edges of instability strip 3—59342
seasonal heat storage in water saturated soils, ground water flow heat losses determ. using mathematical model 3—58561
silicic magma chamber, thermal boundary layer convection, temp. depend. rheology, thermogravitational chem. fractionation 3—35134
softwood, vacuum contact drying, heat and mass transfer *(French)* 3—22458
solar absorber convertor with convection suppressing honeycomb, radiative-conductive heat flux loss approximation 3—34729
solar absorber convertors convection suppression devices solar transmittance 3—15003
solar absorber-convertors, selective material coated, with vacuum thermal insulation, thermotechnical characts. anal. 3—9464
solar air heater for drying cereal grains, heat transfer characts. 3—48169
solar convection zone structure, consistency of mixing length theory 3—10193
solar energy concentrators, trough-type, optical and thermal anal. 3—53486
solar flat-plate collectors with diathermanous covers, heat loss coefficients and effective $\tau\alpha$ products 3—53583
solar greenhouse with transparent buffer insulation, thermal processes anal. 3—9394
solar interior, convection rel. to mag. neutral sheets and form of solar corona 3—35565
solar interior, convection zone depth rel. to low-l five-minute oscill. 3—10282
solar photosphere, shear motion of flux tubes rel. to induced mass and wave motions in lower solar atmosphere mass and wave motions in lower solar atmosphere 3—54298
solar water heating system, ‘once-through’ type comparison with natural circulation type 3—24630
solar-induced turbulent flows in passive air collectors, two-dimens. model 3—44147
Soret driven instability of a reacting fluid in a porous medium 3—51060
Space Shuttle boundary-layer transition, due to distributed roughness and surface cooling 3—12647
space-charge formation in weakly conducting media 3—21963
spherical annulus heat exchanger, forced convection heat transfer 3—37499
spherical shells, convection pattern anal. 3—12491
stability criteria for convection at small Prandtl numbers 3—32730
star interiors, penetrative convection, nonlinear modal anal. 3—30357
stationary diffusion convection eqn. with degenerate parabolic boundary layer *(German)* 3—22467
Steamboat Springs, Colorado, geothermal power exploration using helium and ground temp. surveys 3—53482
stellar atmospheres, two-dimensional turbulent compressible convection in deep atmosphere 3—30351
stellar interiors, convective energy transport rel. to differential rot. on lower main sequence 3—54347
stiff and convection-diffusion eqns. solved by adaptive spline function 3—49163
suddenly cooled vertical flat surface in saturated porous medium, heat transfer 3—22461
Sun, convection rel. to differential rot. 3—44721
Sun, obs. of global-scale photospheric Fraunhofer line shifts rel. to large-scale convection cells 3—35570
Sun, velocities and energy flux in overshoot layer at convection zone base rel. to mag. flux storage 3—5244
surface reaction of thermally conductive sphere moving in gas, heat liberation 3—32813
surface tension induced, at reduced gravity 3—2041
suspension, convective mass transfer between solid spherical particle and fluid at large Peclet numbers 3—56603
swirl growth in curved circular pipes 3—51136

convection continued
Taylor Covette flow, Rayleigh-Bernard convection, turbulent transition 3—37448
thermal convection, ring-type heat source, numerical anal. and expt. 3—20087
thermal Marangoni convection in floating zone, μ g expt. *(German)* 3—7591
thermally stratified environment, buoyancy-induced two-dimens. vertical flows 3—32727
thermoelectric generator temp. spatial and temporal distrib., transient analysis 3—14973
thin layer electrochemiluminescence cells current efficiency, EHD convection 3—34630
thin vertical fluid layer, heated from below, oscillatory Hele-Shaw convection 3—51108
three dimensional jets expanding in confined convecting flow, integral characts. 3—42282
time dependent convection under reduced gravity *(German)* 3—7589
time dependent free convective heat transfer from solid sphere 3—12662
time dependent Marangoni convection under microgravity conditions *(German)* 3—7590
transient boiling heat transfer under forced convection 3—51104
transient reemergent order in convective spatial chaos 3—42238
Trombe-wall passive systems thermal performance under Aegean sea climatic conditions 3—34730
turbulent convection transition, flatness change 3—46556
turbulent free convection boundary layer in air along vertical plate, expt. study using laser Doppler velocimeter 3—51086
turbulent heat transport in rotating convective zones, appl. to solar and stellar interiors 3—35431
turbulent onset in convecting layers 3—22465
two dimens. convective perturbations in horizontal layer 3—22450
two-dimensional secondary flow regime between heated rotating cylinders 3—7595
unsteady forced convection from a flat plate to oscillating air flow 3—56539
unsteady forced convection from hot film in reversing and nonreversing shear flow 3—51102
unsteady free convective flow through a porous medium 3—42299
unsteady free-convection boundary layer, singularity 3—27487
unsteady heat transfer in rectangular pipes under Neumann boundary conditions 3—2046
unsteady heat transfer to cylinder in transverse air flow 3—22453
unsteady low-Grashof number natural convection about a sphere, temp. dependence 3—27359
unsteady natural convection around a heated isothermal cylinder 3—22451
various types, industrial energy efficiency 3—37323
vertical cylindrical annuli filled with porous medium, convective heat transfer 3—12666
vertical mixed convection flow, stability and disturbance-amplification characteristics 3—51112
viscoelastic fluid, free convection flow 3—37470
viscous fluid, local swirling by screw swirlers, convective heat transfer, intensification 3—7596
visualisation of convection patterns in thin air channels, solar collectors appl. 3—51257
VPE horizontal reactors, carrier gas flows and temp. profiles 3—43769
wake downstream from asymm. heated plate, thermal field evolution 3—54105
water, laminar boundary layer, natural convection flow adjacent to flat surface, multiple steady-state solns. 3—2027
water, stratified layers, heating cooling, energy transfer 3—51190
water saturated porous medium, thermal convection and boiling 3—37545
CO_2 buoyancy-dominated turbulent flow, heat transfer coeff., pressure drop 3—22452
H_2O, convection flow at 4°C through porous medium bounded by a vertical surface 3—2064
^{4}He, superfluid, forced-convective heat transfer 3—33532
N_2O_4, dissociative flow, free convection heat transfer study 3—37585
NiS films supported by Al substrate, emissivity measurement and comparison with theoretical results 3—34719

convection in liquids
adsorption-desorption equilib., nonlinear diffusion-convection eqn. 3—28215
all-plastic flat-plate solar collector modelling and analysis 3—39524
Benard convection onset and breakdown, holographic interferometry meas. 3—46674
binary mixtures, evaporation at reduced press. interfacial stability 3—51766
closed vertical column, Soret diffusion and convective instability 3—8237
compacted spent fuel storage pool, natural convection 3—6390
cryogenic fluid heat and mass transfer, laser Doppler anemometry appl. 3—40617
cryogenic fluids, laser Doppler anemometry appl. to boundary layer flows 3—37596
dielectric liquids in long pipes, elec. current generation by turbulent flow 3—3293
diffusive layers in thermohaline convection, single-mode theory 3—35178
double diffusive convection in heated fluid with added salt 3—27504
double-diffusive convection with large variable gradients 3—34722
drop, liquid, freely floating, Marangoni-convection due to axial temp. field 3—32728
floating zone crystal growth, thermal Marangoni convection *(German)* 3—2451
forced convection heat transfer from submerged surface to liquid helium 3—30875
free convective flow in vertical gaps 3—27517
glycerol-water soln. for simulation of crystal growth solns., forced convection 3—37490
heat exchanging system, elec. convection of liq., transient behaviour 3—27525
horizontal cavity, free convection with variable longitudinal temp. gradients, theory 3—51089
hydrodynamics simulation in high temp. soln. for crystal growth, free convection 3—47760
interferometric study of combined forced and natural convection 3—7577
laminar pipe flow, heat convection, complementary variational principles 3—17943
liquid films, viscous, heated by Gaussian laser beam, competition between capillary and gravity forces 3—2052

convection in liquids continued
liquid flow in heated cube cell, turbulent convection study 3—27508
LMFBR core meltdown, natural convection in confined flow geometry 3—41264
LPE system for semicond. heterostructure laser growth, slider induced convection 3—24160
materials processing in space, conf., Bangalore, India (Sept. 1979) 3—8
metal droplets, potentiostatic study of diffusion layer, natural convection case 3—53423
metals, thermal convection instability in MHD and crystal growth 3—56535
natural and forced convection from heated cylinders to flowing liquids 3—27507
natural convection in evaporating minute drops 3—37548
nematic liquid cryst., thermal instability in rotating annulus 3—51482
Rayleigh-Benard convective structures in a cylindrical container 3—51106
reactive particle, convective heat and mass transfer at low Peclet numbers 3—17985
salt-gradient solar pond surface convective layer model 3—39519
silicone oil, phase space diagrams through Poincare sections in prechaotic and chaotic regimes 3—22466
solidification phenomena, use of heat flow modelling 3—4031
thermocapillary convection in liquid under high-power laser irrad. 3—7585
thermocapillary MHD convection in cylindrical liq. layer under conditions of weightlessness 3—22541
transient Marangoni convection for rot. about vertical axis, theory 3—2039
tube flow, forced convection boiling and condensation heat transfer coeff. 3—27515
viscoelastic fluid, natural convection 3—27522
viscoelastic liquid, laminar free convection stagnation heat transfer from isothermal cylinder 3—17945
viscoelastic liquids, convection currents, interferometry *(German)* 3—56585
visualisation of evaporative convection in minute drops, by laser shadowgraphy 3—32823
water, around density max., hysteresis loop *(French)* 3—22440
water, evaporation and thermal struct. in free and forced convection, organic surface film effects 3—12661
water, free convection over vertical porous plate 3—37501
water, transient natural laminar convection flow adjacent to flat surface 3—37497
H liquid, convection-boiling boundary, press. and underheating effects 3—7578
He 1 turbulent tube flow, heating and coding, forced convective heat transfer coeff. 3—22447
He, liquid, convection-boiling boundary, press. and underheating effects 3—7578
^{3}He-^{4}He normal liq. mixtures, Rayleigh-Benard instability, convective heat transfer 3—2920
^{4}He subcooled channel flow, heat transfer characts. obs. 3—38150
^{4}He, supercritical, natural convection heat transfer, constant wall heat flux conditions 3—32729
^{4}He superfluid, pressurised, Gorter-Mellink constant associated with counterflow convection 3—38151
^{4}He, superfluid, subcooled, axial heat transport, channel restrictions 3—42868
N_2, liquid pool, convective heat transfer enhancement by secondary heat sources 3—32726
NaCl stratified solar pond gradient zone constraints 3—39518

convergence
see also convergence of numerical methods
insulators, superconvergent sum rules 3—52050
intermolecular energies, convergent perturbation theory 3—36834
mechanics, equilibrium problems, stability and convergence of solns. using Lyapunov functions 3—20613
metals, superconvergent sum rules 3—52050
quasi-variational inequation approximation convergence *(French)* 3—17968

convergence of numerical methods
atmospheric motion, existence of Hadley convective regimes 3—44681
axially symmetric plasmas, free boundary equilibria computation, nonconvex methods 3—7769
convection diffusion equation, numerical solution 3—49297
degenerate nonlinear diffusion problem, stabilisation of solns. 3—30815
elasticity, approx. of general arch problems by straight beam elements 3—27378
elasticity theory, convergence of difference schemes for second boundary-value problem *(Ukrainian)* 3—20633
filtration problem, up-wind finite element method 3—22524
fluid dynamics, stable integrators for simulation 3—51046
gas dynamics, stable boundary approxs. for implicit time discretisation 3—27543
Green's function, spectral series, rate of convergence, EM wave diffr. problems appl. 3—46142
image iterative restoration methods 3—17457
iterative method, static, elastoplastic and eigenvalue problems, finite element analyses, convergence behaviour 3—17816
iterative methods, mode pushing, appl. to coercivity calc. for ferromag. material 3—28602
layered anisotropic composite plates, dynamic transient analysis 3—46448
long waves in shallow water, numerical anal. of problem *(French)* 3—42249
magnetic material, soft, hysteresis and **B-H** modelling for finite element calcs. 3—52547
model convection-diffusion eqn., discrete weighted mean approx. 3—27505
Navier-Stokes eqns., higher order accurate fully discrete Galerkin approx. 3—22413
plasma MHD stability, operator spectrum approx. 3—22601
plate, thin, 12 degrees of freedom quadrilateral bending elements 3—17821
Ritz penalty method for solving the control of a diffusion equation 3—50900
stationary Navier-Stokes eqns., Galerkin-Lagrange Multiplier method 3—17914
Stefan problem, multidimensional two-phase, error estimates 3—22303
subsonic potential flow past a circle and the transonic controversy 3—42255
torus, elastic, difference scheme for equilib. problem 3—81

conversion electron spectra
conversion electron Mossbauer spectroscopy, film plastic scintillator-sumcoincidence system 3—24543

conversion electron spectra continued
- Mossbauer backscatter electron counter for low temp. 3—40733
- steel, tool and stainless, ion irrad.-induced Sn diffusion, Mossbauer study 3—13561
- ^{228}Ac decay, internal conversion coeff. meas. 3—36356
- ^{207}At levels, β- and γ-decay schemes from spectra and coincidence data 3—36345
- ^{140}Ce γ-transition energies and intensities, ICE spectra, levels from ^{140}La and ^{140}Pr decay 3—36359
- Fe films, 7.3 keV electrons energy distribs. with depth selective Mossbauer spectrometer 3—40720
- $(Gd,Bi)_3(Fe,Ga)_5O_{12}$ epitaxial film, nuclear tracks from Xe and U ion irrad. 3—3493
- GdIG epitaxial film, nuclear tracks from Xe and U ion irrad. 3—3493
- ^{145}Gd excited states study from (^{3}He,2n) 3—49807
- ^{147}Gd, coexistence of spherical and oblate config., high-spin isomer decay study 3—11233
- ^{147}Gd, particle octupole multiplet study by in-beam γ-ray and conversion-electron spectroscopy 3—31276
- ^{128}I level scheme, transitions, ICE spectra from ^{127}I(n,γ) 3—36326
- ^{78}Kr excited state lifetimes and γ-ray energies from ^{159}Ho β^+-decay 3—36360
- ^{140}La γ-transition energies and intensities, ICE spectra, levels from ^{140}Ba β-decay 3—36359
- ^{206}Po levels, transitions and ICE spectra from ^{206}At EC decay 3—36361
- ^{207}Po γ- and internal conversion electron spectra, e-γ coincidences from ^{207}At β^+-decay 3—31329
- ^{208}Po ICE and γ spectra, transition multipolarities from ^{208}At β^+-decay 3—31328
- ^{A}Pt(α,4n)^{A}Hg A=192,194,196, Hg isomeric state decay, meas. from electron conversion spectra 3—54976
- ^{181}Ta(^{14}N,5n)^{190}Hg, Hg isomeric state decay, meas. from electron conversion spectra 3—54976
- ^{205}Tl, 204 keV transition, penetration effects in internal conversion process 3—11289
- YIG epitaxial film, nuclear tracks from Xe and U ion irrad. 3—3493
- $(YSmLuCa)(FeGe)O_{12}$, surface-spin orientation, Mossbauer spectroscopy determ. 3—52685
- ^{163}Yb high spin states, band crossing and signature splitting from ^{149}Sm(^{18}O, 4n) 3—36305

convertors
- *see also analogue-digital conversion; digital-analogue conversion; direct energy conversion; frequency convertors; image convertors; magnetohydrodynamic convertors; magnitude convertors; power convertors; solar absorber-convertors*
- displacement-to-frequency, based on emitter coupled timing multivibrator *(Chinese)* 3—40581
- laser viewer, LV-3M, based on receiving camera with confocal attachment 3—46226
- pressure-to-frequency, based on emitter coupled timing multivibrator *(Chinese)* 3—40581
- signal-to-frequency convertor for strain gauge 3—49345
- temperature-to-frequency convertors, thermistor output linearisation 3—49358
- $LiNbO_3$:Ti long wavelength waveguide electro-optic TE⇌TM convertor 3—32462
- W single crystal, reciprocal conversion of sound and electromagnetic waves under conditions of Doppler-shifted cyclotron resonance 3—3540

conveyors
- irradiated samples transportation, conveyer tube for quick activation analysis of probes 3—48105

cooling
- *see also Joule-Thomson effect; low-temperature production; magnetic cooling; quenching (thermal); refrigeration; supercooling*
- above-ambient temp. regulation, heat sink conductance reduction by thermoelectric cooler 3—12503
- aniline, rot. cooling, in axis-symmetric and planar pulsed supersonic expansions 3—55912
- arc spots, thermal runaway prevention 3—18177
- benzyl radicals, free jet cooled, laser-induced fluoresc. spectra 3—55983
- boiling liquids, meas. of intensity of heat exchange *(Russian)* 3—54739
- boundary shape determ. for coolant flow through porous region 3—37563
- building thermal environmental control by evaporative cooling and variable ventilation 3—58481
- combustion chamber, convectively cooled, thermal state calcs. 3—12498
- compressor, solar powered for third world refrigeration 3—48148
- cracks, thermally self-driven, numerical modelling, thermoelastic fracture solns., singular influence function distribs. 3—27437
- cyclopentadienyl radicals, free jet cooled, laser-induced fluoresc. spectra 3—55983
- dilution refrigerators, large, design, construction, test results, appls. 3—36007
- Doublet III, divertor plate heat flux reduction by remote radiative cooling 3—42459
- exergy conservation in parallel thermal insulation systems 3—46546
- flat plate, three dimens. film cooling 3—27360
- gas blanket injection into developed turbulent boundary layer 3—37464
- gas column, cylindrical, with distributed heat sources, thermal boundary layer computation 3—56542
- gas mixture in jet cooling of plate, equilib. temp. 3—12502
- gelatin, conform. transformations in aq. solns., high resolution NMR obs. *(Russian)* 3—6817
- glass form., continuous cooling diagrams and critical cooling rates 3—33107
- glasses, critical cooling rates from melt and defects 3—37783
- graphite fibre reinforced cross-ply epoxy laminates and adhesive joints, optimal cooling 3—33473
- heat extraction from targets in high current electron beams 3—26527
- INTOR Tokamak reactor, divertor collector plate cooling 3—55627
- IR detector, cryogenic heat pipe for coupling to cooler 3—40614
- JET gas leaking and cooling plant 3—55616
- JT-60 vacuum vessel, cooling and heating system model tests 3—55618
- laboratory techniques, cooling components with chilled tap water 3—16342
- leak detection of cooling water, monitoring and control unit 3—16343
- linear jet array, hydraulics of channel 3—56597
- liquid half space solidification rate in semi-infinite region with Newton cooling at the boundary 3—42752
- metal strip, cold rolled, flatness, work rolls shape thermal modification 3—47848
- metals, amorphous, critical cooling rates from melt and defects 3—37783
- meteor trails, electrons cooling time 3—15670
- MHD channel cooling by boiler feedwater, end effects on performance 3—39495
- mineral melt, vertically incident jet, cooling, thermal radiation and convection influence 3—7393
- moving gas, kinetic cooling, relax. time determ. 3—46052
- natural draught cooled container for radioactive materials, calc. model for thermodynamic anal. *(German)* 3—31516
- ocean, surface cooling rel. to diurnal thermocline due to buoyant convection 3—15483
- phosphor, electroluminescent, Destriau-type, long-living, emission intensity-time depend. 3—19203
- photovoltaic power systems, balance-of-system assessment 3—9404
- plastics processing waste heat recovery by utilisation of electric powered heat pump *(German)* 3—29439
- plate with heat generation, transient nonlinear heating and cooling 3—27354
- polymers, structuring, nonisothermal processes calc. *(Russian)* 3—42537
- power station waste heat utilisation, pilot plant measurements *(German)* 3—19569
- radiative cooling of surfaces, computations for model atmospheres 3—25204
- radwaste repository mine drift, forced cooling, scoping anal. 3—55145
- rod-plate liq. cryst. mixture, phase diagram behaviour 3—13447
- semiconductor laser element temperature vs. optical freq., transient heating behaviour, cooling method 3—37042
- solar absorption cooling systems parasitic power and operational control criteria 3—34721
- solar energy collector and control systems *(German)* 3—53487
- solidification phenomena, use of heat flow modelling 3—4031
- Space Shuttle boundary-layer transition, due to distributed roughness and surface cooling 3—12647
- spaceborne detectors, Joule-Thomson miniature refrigerator stability and noise, obs. 3—36003
- steel, low-alloy, dual phase sheet, development 3—39175
- steel, low-alloy, structural, struct. and props. after deform. in intercrit. temp. range 3—34363
- steel, Mn-Si, dual phase sheet, development 3—39175
- steel, Mu-Si-C, solubility of S in austenite and S precip. on cooling *(French)* 3—29087
- steel, rapidly cooled from liq. state, struct. and electrophys. props. 3—8472
- steel, solidification of semicontinuously cast ingot, computer simulation 3—9054
- steel 5KhNM, electroerosion shaped, cooling rate and surface microstruct. *(Russian)* 3—4186
- steel coatings, directional solidification *(Russian)* 3—19331
- superconducting Japanese LCT coil, construction and cool-down test 3—36571
- superconducting magnet, He cooling system, axial heat transport, channel restrictions 3—42868
- TEXTOR vacuum vessel heating and cooling system using organic heat transfer fluid 3—55609
- thermoelectric heat pumps for instrument cooling 3—301
- three-layer system, heat transfer props., computer calc. *(Russian)* 3—17778
- $(TMTSF)_2ClO_4$, solid, supercond. props., cooling rate influence 3—13956
- transition metal carbide-boride system, eutectic struct. form., cooling rate effect 3—24186
- vacuum discharge, cathode processes, numerical simulation 3—18178
- vinoxy radicals, free jet cooled, laser-induced fluoresc. spectra 3—55983
- water, stratified layers, heating cooling, energy transfer 3—51190
- (Al, Ga)As DH lasers, cooling rate effect on short-time LPE growth of active layers 3—9005
- Al-Cu-Co, sintered, struct. and mech. props., effect of rapid cooling on crystn. 3—34259
- As_2Se_3, glassy, crystallized vol. fraction determ. at different cooling rates 3—56823
- B_2O_3-Na_2O, glass form., crit. cooling rates and liquidus viscosities *(Japanese)* 3—39088
- Bi-Se melt, crystn. 3—57063
- Bi-Te(Cd)(Pb), eutectic possibility of use in production of cooling elements based on bismuth and antimony chalcogenides 3—9047
- $Cu_{0.5}Fe_{2.5}O_4$-$ZnFe_2O_4$, initial permeability increase 3—14079
- Fe meteorites, group IVA, cooling rates and nucleation histories from local bulk Ni and P var. 3—59275
- Fe-Mo-C, M_6C carbide crysts. morphology 3—39158
- Fe-Ni-based superalloys, γ'-phase precip., yield strength improvement, heat treatment study *(Chinese)* 3—34335
- He 1 turbulent tube flow, heating and coding, forced convective heat transfer coeff. 3—22447
- ^{3}He-^{4}He liq. mixture, compressional cooling and liq.-solid phase transition 3—13417
- ^{4}He and ^{4}He-^{3}He mixtures, cooling effects in vortex cooler 3—37338
- ^{4}He space cooling system, phase separator instabilities obs. 3—30881
- ^{4}He subcooled channel flow, heat transfer characts. obs. 3—38150
- ^{4}He, superfluid, cooling channel flow, heat transport mechanisms obs. 3—38149
- ^{4}He, superfluid, heat transfer performance, for use in superconducting magnet technology 3—38148
- $^{24}Mg^+$, single laser-cooled ion in RF trap, linewidth 3—50354
- NbTi superconducting dipole magnet installed in pressurized He II cooling bath 3—31858
- steel, V, dual phase sheet, development 3—39175
- Ti-Al-Zr-Mo(W), rapidly cooled from liq. state, struct. and electrophys. props. 3—8472
- ZrF_4-BaF_2-GdF_3-AlF_3 glass, Rayleigh scatt., melt cooling rate effects 3—38840

cooling, splat *see splat cooling*

cooling towers
- *see also water supply*
- natural draft water losses *(Slovak)* 3—19629
- Plant Gaston, Alabama, obs. on modelling of mechanical-draught cooling tower plume 3—4420
- solar heat-generating simulation and expt. performance 3—39522

Cooper Hewitt lamps *see mercury vapour lamps*
Cooper pairing *see Cooper pairs*
Cooper pairs
  see also BCS theory; Josephson effect
  characteristics, role in supercond. 3−43319
  dirty superconducting film, pair breaking parameter, fluctuation cond. 3−33830
  Ginzburg-Landau expansion for states with correlated Cooper pairs, appl. to spin glasses 3−28576
  one dimensional conductor, quasi-superconductivity, Cooper pairs and transition temp. 3−57467
  organic superconductors, coexistence of superconductivity and spin density waves 3−28472
  proximity-effect sandwich systems with Kondo impurities, transition temp. 3−8625
  superconducting metals, Cooper pair form. rel. to exchange interaction 3−43320
  superconductor, transition temp. rel. due to mixed valence impurities 3−38523
  superexchange, correlation with superconductivity 3−3365
  Al, plastic deform. near superconducting T_c 3−28032
  Al, superconducting strip, crit. pair breaking current far below T_c 3−3392
  Al/Nb normal-supercond. bilayers, Cooper-limit-like behaviour at crit. fields 3−13970
  $CeCu_2Si_2$, heavy fermion supercond., crit. fields 3−13974
  Mg/Nb normal-supercond. bilayers, Cooper-limit-like behaviour at crit. fields 3−13970
coordination complexes
  inorganic complexes are indexed under the appropriate metal compound headings
  EXAFS spectra, non-aqueous solvents, conf., Nantes, France (July 1982) 3−49079
  non-aqueous solutions, EXAFS spectroscopy 3−50422
  structure, mag. moments visible and visible spectra 3−52786
copolymerisation *see polymerisation*
copolymers *see polymers*
copper
  see also nuclei with ......
  (001) film, self-consistent electronic struct. calcs. 3−43250
  (001) with adsorbed O_2, surface struct. determ. 3−33573
  (100) surface, current image diffr. patterns 3−42493
  absorbed CO on (111) surface, band struct., multielectron excitations, photoelectron spectra 3−52217
  AC impedance data, recording and anal., for corrosion studies 3−19469
  acoustic anisotropy, polarised US wave birefr. study 3−2688
  adsorbed Ar and Xe, excited states, EELS and UPS study 3−47399
  adsorbed Cl on {001}$c(2\times2)$ surface, CC at. struct., overlayer model, LEED anal. and photoemission meas. 3−13638
  adsorbed methanol on (100) surface, IR spectra study 3−24530
  adsorbed monolayers of Pb on (110) surface, melting transition, X-ray diffr. study 3−8323
  adsorbed O_2 and N_2, electron energy loss study 3−14408
  adsorbed S monolayer on (110) surface, struct. model from LEED diagram, Monte Carlo simulation *(French)* 3−18564
  adsorbed Tl chains on (100) surface, one-dimens. band struct., photoelectron spectra and LCAO calc. 3−39006
  adsorption, of Co, on (100) surface, chemisorptive bond calcs. 3−8339
  adsorption, of pyridine, surface enhanced Raman scatt., excitation profiles and temp. depend. 3−42918
  adsorption and oxidation of HCN on O-covered (111) surface, AES, EELS, and thermal desorption study 3−23172
  adsorption of CO, N_2, Shockley surface states investig. 3−38188
  adsorption of CO on (110) surface, dipole coupling and chem. shifts, IR refl. absorpt. spectra 3−38833
  adsorption of He and H_2 3−23176
  adsorption of I on (111) surface, adatom-adatom interactions, XPS and LEED study 3−14439
  adsorption of O on stepped surfaces, RHEED study 3−13639
  adsorption of water on clean and O-covered (110) surfaces, UPS, LEED, EELS, and work function meas. 3−2969
  annealed, cyclic deform., dislocation dynamics anal. 3−4079
  atom, Ar matrix isolation, spin-orbit and Jahn-Teller interactions, MCD and absorpt. spectra 3−55890
  atom, Auger electron emission coeff. meas. 3−26719
  atom, electron impact excitation, cross sections for transitions from Beutler states 3−50523
  atom, modified effective core pot. 3−21653
  atom, one-electron studies, pseudopot. method 3−50297
  atom, photon scatt. from K-shell, Compton cross sections 3−11750
  atom-Ar ion interaction potential, semichannel focusing energy calc. 3−3901
  atomic, intermodulated optogalvanic Zeeman spectroscopy in hollow cathode discharge 3−5867
  atoms, excited states, Gaspar unviersal potential, quantum numbers 3−26671
  atoms, K_β/K_α X-ray intensity ratio, chem. sensitivity effect 3−26684
  atoms, matrix isolated, d→p transition, MCD and synchrotron radiation absorpt. study 3−31987
  backscatter of diagnostic X-rays from metals 3−53850
  backscattering, of low energy $^{20}Ne^+$ ions, shade effects *(French)* 3−34189
  band struct. calc. by linear muffin-tin method 3−8397
  bar, Ag electrodeposited film, Ar^+ and N^+ implanted, temp. evolution, model calcs., energy loss 3−57010
  bar, round, tensile deform., localised neck initiation delay 3−4080
  Bauschinger effect, internal stress meas. 3−43932
  bicrystals, galvanomagnetic phenomena near internal grain boundary, expt. study 3−23363
  bicrystals, local plastic heterogeneities, anal. using Kossel technique 3−46947
  Blanca Bay, Argentina, Cu, Cd and Zn in surface sediments 3−29468
  boiling liquids, meas. of intensity of heat exchange *(Russian)* 3−54739
  cascade region evolution during thermal spike 3−33306
  cathode arc spot movement, random walk anal., crater form., erosion rate determ. 3−27779
  cathode thermionic emission in K-seeded LPG combustion products 3−51393
  chemisorption of S on (100) surface, angle-resolved photoemission study 3−43712
  chemisorptive bonds with H, O, N, and S, tight-binding parameters 3−52216
copper continued
  clad graphite powder composite, high-speed shaping 3−24199
  cladding, on Nb wire, proximity effect, appl. to thermometry in mK region 3−36008
  clusters, binding energies, configs., diatomics in mols. approx. 3−17397
  coating on steel wire, scanning Auger anal. 3−3877
  coatings, instrument for nondestructive control *(Russian)* 3−19475
  cold rolled, recrystn. kinetics, neutron diffr. study 3−58323
  cold worked single crystal, SEM in situ obs. of grain boundary migration during crystn. 3−14608
  cold-worked, differential resistivity meas. for monitoring annealing 3−53324
  compact, sintering, fractographical-statistical analyses, struct. rel. to particle size *(Slovak)* 3−34257
  concentration in Amazon plume rel. to salinity 3−25103
  conduction band gap at L point, photoemission and electron refl. meas. 3−8404
  conduction electron scatt. by stacking fault 3−33716
  conduction spin density, Knight shift and Fermi surface, MAPW formalism 3−38707
  corona discharge O_3 production, influence of nature of electrode material 3−9358
  corrosion inhibition by naturally occurring substances, aqueous extracts of leaves and fruit peel in acids 3−14770
  crossed gratings, doubly-periodic, surface roughened, solar absorptivity improvements 3−1558
  current-time behaviour for electro-deposition, anal. based on surface diffusion model 3−9009
  cyclic stress-strain response, low stress amplitudes 3−29135
  defect states, Green's function Fourier coeff. evaluation 3−23228
  deflection effects on flow pattern in plane-strain compressions with laboratory testing equipment 3−51035
  deformation, high temp. flow stress oscills., recrystallisation and dislocation mechanisms *(Polish)* 3−47878
  deformed, evidence against μ^+ trapping above room temp., μSR study 3−28750
  deformed in torsion, dynamic recrystn. obs. using SEM channelling contrast and TEM 3−47855
  density meas. up to 1400°C *(Japanese)* 3−49329
  diffraction and adsorption of He on (110) surface, electronic density profile study 3−38988
  diffraction of He from (110) surface, coupled channels method anal. 3−38989
  diffusion of Al, low temp., grain boundary migration and recrystn. 3−38141
  dislocation density in single cryst., selected area electron channelling patterns 3−13229
  dislocation etch pits on (111) surface, morphology 3−42616
  dislocation motion in annealed and neutron irrad. single crysts. 3−37930
  dislocation struct. of [321] crystals grown by Bridgman method 3−13230
  dislocation struct. under action of static and ultrasonic stresses *(Russian)* 3−37912
  disordered, mol. dynamics, constant-press. and constant-vol. simulations 3−2850
  dissolution of solid cylinders in Pb-Sn alloys under dynamic conditions 3−2810
  EBBA:Cu, orientation during crystallisation in a temp. gradient field, EPR study 3−2400
  elastic consts., determ. from elastic moduli of polycryst. samples *(Russian)* 3−51686
  electrical resist., quadratic temp. depend. 3−33706
  electrical resist., temp. and size depend., surface contribs. 3−52111
  electrical resist. and thermoelec. power, resonant dislocation scattering effects, theory *(Russian)* 3−33715
  electrical resist. at low temp., deviations from Matthiessen's rule 3−33702
  electrical resist. at low temp., effect of electron-dislocation scatt. 3−33703
  electrical resistivity for dislocation 3−3140
  electrode, C coating, arc conditioned 3−3015
  electrode, C surface pollution enhanced by electron bombardment 3−19463
  electrodeposition, current-time behaviour, surface diffusion model 3−9010
  electrodeposition coating techniques, review 3−3974
  electroless soln., plating appl. *(Polish)* 3−47786
  electrolyte 3−29105
  electron stopping power, 11-127 keV 3−13297
  electron-fluid shell models 3−42731
  electronic relax. rates, anomalous surface impedance study 3−23365
  electroplating, high-speed selective, with single circular jets 3−24163
  electroplating of sintered Fe compacts with Cu, Ni and Zn 3−19461
  EXAFS and EXELFS above $M_{II,III}$ edges 3−58004
  excited atom emission, ion bombard. 3−38993
  fast neutron induced defects, dose depend. 3−42675
  fatigue, low amplitude, at room temp., in single crystals 3−53224
  fatigue, low amplitude, role of surface in failure of single crysts. 3−53174
  fatigue crack growth, near-threshold, influence of oxide-induced crack closure 3−14688
  fatigue crack growth, near-threshold 3−4125
  fatigue hardening, multicryst. foil specimens 3−14709
  Fermi surface, eight-cone model 3−42996
  Fermi surface, uniaxial strain derivatives 3−57258
  film, ageing characts., effect of electrode annealing, elec. resist. meas. 3−18796
  film, disordered, spin-orbit interaction and electronic conduction 3−13928
  film, interaction effects in weakly localised regime 3−43127
  film bounded by InSb, propag. const. enhanced nonlinearity of surface plasma wave 3−7059
  flat, 50 mm dia., ultraprecision machining of optics at Los Alamos 3−7232
  foil, 7 MeV H^+ impact, energy loss, geometrical effect, computer simulation 3−51679
  foil, bursting diaphragm as a fast-acting valve mechanical testing appl. 3−42203
  foil, electron energy loss calc. 3−26605
  foils, electron irrad., growth of dislocation loops 3−18349
  forming limit diagram, new model, appl. to expts. 3−47898
  grain boundaries, asymmetrical tilt boundary struct. 3−46964
  grain boundaries, Stoneley waves 3−42905
  grain boundaries, symmetrical tilt boundary struct. 3−46963
  grain growth, irregular, nucleus-free mechanism 3−29102
  grain growth 3−4046
  grain size prediction using acoustic attenuation measurements 3−58384

copper continued
Green's function Fourier component determ. method 3—23229
hardness response of single cryst., time depend. 3—4223
hardness test methods, microindentation, comparison using Cu, 52100 steel and amorphous Pd-Cu-Si alloy 3—48000
heat of soln. and binding energy of H impurity 3—2806
high purity, H uptake during heat treatment effect on yielding behaviour 3—29122
high temperature air, Cu contaminated, elec. and thermal cond., enthalpy 3—27755
hole generation during dislocation decay, mechanoluminescence *(Russian)* 3—52859
hollow cathode, He-Ne laser line generation in 1.15 to 1.20 microns range 3—22031
impacted by hard spheres, erosion by melting obs. 3—19423
impurity states, selfconsistent electronic struct. calcs., application of complex energy integration 3—18595
input-output cable for Josephson appl., electrical props. obs. 3—16344
interface with liq. ^{4}He, enhanced thermal conductance in presence of acoustic streaming 3—28178
interlayered butt joints, tensile testing, flow stress, finite element analysis 3—50958
ion bombard. induced surface topography, depth resolution, electron microscopy study 3—8924
ion bombarded, sputtering yield data, 25 to 100 keV, fusion reactor material relevance 3—21515
ion implantation, improvement of surface friction and wear 3—43700
ion implanted with He, investigs. using monoenergetic positrons 3—24046
ion irradiated with He$^+$ and D$^+$, depth distrib. of bubbles and fracture 3—21511
ion irradiation, defect production, binary-collision simulations 3—33312
ion source, multiply charged using heated cathode 3—16441
irradiated by 200 keV D$^+$, ring of blisters, stress distrib. 3—37967
irradiated thin foils, interstitial loop growth 3—18294
isoelectronic sequences, oscillator strengths and wavelengths 3—44906
Lake Huron, USA, heavy metals in Saginaw Bay 3—58995
lake sediments, Quebec, Canada, heavy meal pollution 3—54084
laser bombardment, dynamic response, surface roughness effect 3—13272
laser irradiated foils, plastic deform. study *(Russian)* 3—37983
laser-induced damage at 492 nm 3—18337
lattice dynamics, phenomenological model 3—2702
layer formation, shock-wave appl. of powder on C steel 3—24412
LF internal friction, due to dislocations oscillating in lattice 3—37920
liquid, struct. meas. by neutron scatt., Placzek correction 3—56806
low energy electron reflectance spectra and band struct. 3—23257
metallic films, resistivity depend. of 1/f noise 3—43243
microcutting, plastic deformation rel. to cutting speed 3—29143
microstructure and mech. props. of heavily deformed specimens 3—47858
microstructure and texture of heavily deformed specimens 3—47859
mirror micromachined surface from high speed diamond fly cutting, surface finish meas. 3—46271
molecule, bond length, ab initio SCF CI calcs. 3—26644
molecule, dissoc. energy, ionisation pot. ab initio MRD CI calcs. 3—11712
molten, boiling fragmentation in sodium 3—26424
molten, surface tension meas. 3—28196
momentum density and Compton profile, band struct. calc. 3—3050
multislip tests, junction hardening effect 3—13231
muon diffusion, positive muon depolarisation meas. 3—3623
neutron irradiated, slip bands, heterogeneous form. 3—42678
nuclear mag. ordered phases, combined Ruderman-Kittel and dipole-dipole interaction 3—14048
nuclear ordering study down to 50 nK 3—43349
nuclear spin system of metallic Cu, mag. phase transition at nanokelvin temps. 3—14049
optical properties in IR and far IR 3—57868
optical surface angle resolved light scatt. meas. in 75 to 750 eV range 3—7125
oxide layer, spectral emissivity *(Japanese)* 3—42822
particles, internal potential, contrib. of excess charge and image forces 3—8914
phonon anomalies, Fermi surface and dispersion relations 3—33623
phonons, pseudopot. calc. 3—2703
photons multiple backscattering, saturation depth Z-dependence 3—47577
physisorption of H$_2$, APFIM study 3—51939
plasma, pulsed supersonic stream from erosion accelerator, interaction with plane dielectric barrier *(Russian)* 3—27670
point defect drift-diffusion in dislocation strain fields, saddle point anisotropy effects 3—51847
point defect form. energy and charge density oscillations around impurities *(German)* 3—27935
polarisable sphere, adsorbed mol. enhanced Raman scatt., EM aspects 3—19122
pollution of soils by ore smelter, Sudbury, Ontario, Canada 3—39542
polycrystal X-ray struct. study of neutron irrad. sample *(Russian)* 3—33310
polycrystalline, cold rolled, influence of deform. parameters on stored energy *(German)* 3—29104
polycrystalline, fatigued, dislocation struct., surface slip 3—53234
polycrystalline, large-grained, random strain cycling 3—14672
polycrystalline, oxidation, ESCA study 3—14897
polycrystalline, recovery and recrystn. during hydrostatic extrusion 3—24257
positive muon low temp. mobility 3—28158
powder, prep. by low temp. hydrothermal reduction of metal hydroxides 3—3984
powder compact, hot extrusion, flow pattern *(Japanese)* 3—58065
rechargeable solid electrolyte cells with Cu ion conductor, $Rb_4Cu_{16}I_{7-\delta}Cl_{13+\delta}$ and TiS$_2$ cathode 3—34684
recrystallisation, energy and kinetics invest. *(German)* 3—24259
recrystallisation and recovery, dynamic, in ⟨111⟩ single crysts. 3—47847
rippled surface, surface electromagnetic wave resonant conversion 3—38323
rolled, spatial arrangements of orientations 3—34351
rolling, stored energy, hardness and texture, influence of feed angle 3—4066
rough Cu deposit, surface height and slope distribs. 3—5764
ruby:Cu glasses, short range order and optical absorption edges 3—33121
secondary recrystallisation kinetics meas. *(Russian)* 3—34345
self-interstitials, energy 3—51737
single crystals, single-slip oriented, persistent slip band struct. 3—13232
sintered submicron powders, rel. to low temp. heat exchangers 3—56416

copper continued
small particles, electronic struct. and binding energy 3—52023
solidification, containerless under microgravity conditions, external and internal structs. 3—14582
spalling fracture resistance 3—53302
specific heat, S-electron effective thermal mass, electron-electron and electron-phonon interaction *(Chinese)* 3—51816
specific heat meas. at 4.2-300K using vacuum adiabatic calorimeter 3—313
specimens subjected to cyclic loading, method for direct recording of stress-strain hysteresis curve *(German)* 3—4250
stacking fault energy, determ. from X-ray peak shift 3—22923
steel, C, -Cu multilayer composite, mech. props. 3—39250
steel, stainless, wire reinforced Cu, cold rolled, deform. 3—34379
strain hardening law, latent hardening and multislip tests 3—37926
strained crystal, vacancy formation and migration energies, computer simulation 3—38118
stress relaxation studies using servohydraulic machine in strain and stroke control 3—24312
substrate for Ni film, mag. and electronic props. 3—28634
substrate for Ti deposition by cold-plasma technique 3—19286
surface, (001), geometry and electronic struct. of Cl overlayer 3—23144
surface, (100), angle-resolved photoemission, single-step-model anal. 3—14435
surface, (110), H$_2$O coadsorbed with O$_2$(Br$_2$), work function changes 3—43262
surface, (111), adsorbed CO, electronic struct., mol. cluster model anal. 3—13878
surface, (111), angle-resolved photoemission, evidence for broadening mech. 3—47752
surface, Ar ion scatt., semichannel focusing energy 3—28954
surface, charge state distrib. of scattered fast ions, contaminating layers influence 3—19239
surface, finely-textured, light diffr. in quasi-static limit 3—17437
surface, He and D ion bombardment, energy reflection coeffs. 3—43688
surface, ion bombarded by Ar$^+$, cone formation, SEM study 3—42679
surface, laser produced plasma, compound formation obs., surface treatment appl. 3—24388
surface, trapping of H$_2$ via translational-rotational energy conversion 3—38197
surface {100}, cone indented Laue spots, asterisms, slip systems 3—37922
surface (001), inverse photoemission spectra, image-pot. states and energy loss satellites 3—47730
surface (001), k-resolved inverse photoelectron spectroscopy 3—3853
surface (110), adsorbed CO, satellite peaks in photoelectron spectrum 3—28960
surface (110), local density of states probed by deexcitation of metastable noble gas ats. 3—43686
surface (111), dislocation etching, potentiostatic electrolysis *(Japanese)* 3—56906
surface (111), electron self-energy meas. from beam threshold effect in LEED 3—37748
surface (111), local exchange-correlation pot. for LEED 3—47197
surface (111) and (100), Te chemisorption, surface struct., EXAFS study 3—33571
surface (111) electron states, Chodorow pot. 3—43257
surface ion bombardment induced preferential orientation, influence of ion species 3—33319
surface phonon focusing 3—51915
surface scatt., ion focusing and blocking effects for grazing angle 3—47749
surface structure anal. by low energy ions multiple scatt. 3—28199
surfaces, (100) and (111), low energy positron and electron diffr. 3—42895
surfaces, adsorption of O$_2$ and N$_2$O, reaction kinetics, ellipsometry 3—23158
surfaces, stepped, RHEED study 3—23149
surfaces (100) and (111), angle-resolved polarisation depend. photoemission spectra 3—39012
target, Ar$^+$ sputtering, excited atom form., kinetic energy distrib. 3—8922
technical powders, sintering, determ. of activation energies of shrinkage process 3—24172
tensile strength props. rel. to microstruct., dispersion strengthening effect 3—43850
TGS:Cu, polarised state stability, Barkhausen thermal effect study 3—23863
thermal and fast neutron irrad., isochronal recovery spectra 3—42674
thermal cond. and elec. resist. in intense mag. fields at low temps. 3—3156
thermal diffusivity measurements for solid sample utilizing the photoacoustic effect *(Korean)* 3—8470
thermally stimulated exoelectron emission after low energy electron excitation 3—8945
thin film, laser induced oxidation 3—42658
thin film, localisation and scatt. times, magnetoresist. study 3—43297
thin film, localisation phenomena, resistivity and scatt. time study 3—43058
thin film, microwave transmission coeff. phase meas. 3—28935
thin film, N$_2^+$ and Ar$^+$ ion bombarded, elec. cond. 3—28457
thin film, roughness spectrum and surface plasmons 3—43650
thin film on Zr, laser-pulse alloying, RBS, channelling, TEM, X-ray diffr. studies 3—57243
three layer struct.; transmitted phonon drag effect, temp. depend. 3—8469
transient creep, ultrasound effects *(Russian)* 3—53128
transition radiation, interband contrib., emission spectra studies 3—14377
vacancy form. and migration energies, pair pot. calc. 3—42598
vacuum arcs, high-current, time resolved charact. of erosion products 3—27793
vacuum arcs, macroparticles vel., in situ determ. 3—27795
valence band XPS spectrum, surface effects 3—8938
vapour, laser design for high average power *(Bulgarian)* 3—46199
vapour arc, low-current, cathode spots, analytical model 3—51418
vapour laser, multisection transverse-discharge, time spread 3—7018
vapour laser, sealed-off high repetition rate *(Chinese)* 3—12173
vapour lasers, interpulse kinetics 3—37003
VPE on vacuum cleaved mica 3—13679
waveguide tubes, chem. and electrochemical oxidation 3—58428
whiskers, longit. magnetoresist. size effect, influence of real Fermi surface 3—18687
whiskers, stress-strain curve and lattice struct., influence of internal oxidation 3—29144

copper continued
wire, electrodeposition of Pb, supercond. solenoid manuf. 3—9001
wire, grain boundary anelasticity, triple contacts and internal friction *(Russian)* 3—51709
wire, second stage drawing texture, mech. props. *(Japanese)* 3—58132
wire, thermal diffusivity meas. by thermal wave propag. 3—16356
wire coils, dislocation elasticity *(Russian)* 3—33340
wires, electroplated with Ni, thermo EMF meas. 3—18688
X-ray emission spectra, systematic struct. in K emission bands 3—38966
X-ray $K\alpha_1$ emission line, wavelength, energy shape and structure 3—24058
Ag/Cu mirror on glass, electroless Ni, and ion-plated protective coatings 3—17602
Ag-Cu rotating electrical contacts, wear debris analysis 3—52229
Ag-Cu-Ag targets, Cu foreign atoms depth profile parameters determ. 3—29339
BaS:Cu, Bi phosphor, radiolum., radiative recomb. phenomena, thermolum. comparison 3—14356
BaS:Cu, dielect. props. 3—34030
CaS:Cu,Ce phosphors, photoluminesc. and electroluminesc. 3—47683
$CdCr_2Se_4$:Cu, dislocation patterns, rel. to elec. cond., hardness and doping 3—27947
CdP_2:Cu, impurity effect on elec. cond. type *(Russian)* 3—47350
CdS:Cu, Cl activated phosphors, luminescent centre form., photoluminescence study 3—43606
CdS:Cu, orange luminescence struct. 3—38897
CdS:Cu, photoacoustic spectra, using piezoelec. transducers 3—2684
CdS:Cu,Cl, quenched phosphor, isochronal annealing, photochem. meas. 3—52846
$CdS_{1-x}Se_x$:Cu, photoconducting props., solid-state image intensifier appl. 3—52196
$CdS_{1-x}Se_x$:Cu in polystyrene binder layers, electrophotographic characts. 3—28379
CdSe:Cu, defect structure from conductivity and solubility meas. 3—33280
$CdSnAs_2$:Cu, n- and p-type, carrier lifetime, optical energy gap, photocond. study 3—18743
CdTe:Cu, excited states, photoluminescence and IR absorption study 3—8450
CeTe:Cu, impurity distrib., spectrally resolved cathodoluminesc. in SEM 3—43636
Cr/Cu layer system, Ar ion implantation-induced intermixing, Cr precipitation 3—2622
Cr_2C_2-Cu composite, sintered, anomalous behaviour of liq. metals in flat capillaries 3—58090
Cu I, II segmented plasma recomb. lasers employing foil electrodes 3—12125
Cu I isoelectronic sequences, beam-foil spectroscopy 3—21873
Cu I line, wavelength standards in vacuum UV 3—41948
Cu I vapour, transition probabilities, lifetimes, Ar collisional destruction 3—6577
Cu II CW IR laser using water-cooled helical hollow cathode device 3—32382
Cu II lines, wavelength standards in vacuum UV 3—41948
Cu^{2+} EPR param. and ground state wavefunctions in single crysts. and complexes 3—38683
Cu^{2+}, in Li_2O-Na_2O-Al_2O_3-SiO_2, mixed alkali glasses, EPR and optical spectroscopy 3—46864
Cu^{2+}, ionic solution, struct. and dynamics 3—51472
Cu:He, diffusion during deform. at low temp. 3—28161
Cu/Al film system, short- and long-range ion-beam mixing, influence of interfacial oxide 3—37966
Cu/Al system, B ion implantation, mechanical props. 3—2647
Cu/Au thin layer system, ion irrad.-induced atomic mixing 3—2623
Cu/Cr thin film, chemical change by plasma etching *(Japanese)* 3—4167
Cu/Ni thin film couples, low temp. interdiffusion 3—57148
Cu/W thin layer system, ion irrad.-induced atomic mixing 3—2623
Cu-Al composite wire, hot drawing sintering fabrication, elec. resist., diffusion zone growth 3—52999
Cu-Al thin film couple, intermetallic form. and grain boundary diffusion 3—8269
Cu-Al thin film couple, phase form., X-ray anal. 3—18589
Cu-Al_2O_3, <001> single crystal, high temp. deform. *(Japanese)* 3—47894
Cu-C clusters electronic struct., XPS, AES studies 3—43251
Cu-Ga(In), metal clusters, vaporisation, laser induced fluoresc. study 3—32125
Cu-Mo bond, low thermal barrier, effective joining technique 3—29022
Cu-Nb point contacts, metallic to tunnelling transition 3—38552
Cu-Nb_3-Sn microfilamentary composite supercond., crit. current meas., supercond. magnet appl. 3—52321
Cu-Nb(Nb_3Sn) superconducting composite, in situ prepared, sp. ht. meas. 3—52302
Cu-Ni compositionally modulated thin films, mag. props. 3—23746
Cu-Ni ore fields of northern area of central Siberia, geological and tectonic factors 3—4864
Cu-PbI_2 system sensitometric characts. in case of physical development in negative photographic process *(Russian)* 3—54793
Cu-Ru surface, interaction with H, pairwise-additive model 3—23170
Cu-sapphire interfacial strength, SCF Xalpha scattered wave cluster MO calc. 3—13903
Cu-SiO/B_2O_3-Cu MIM structs., vacuum evap. prep., thermal-voltage memory effects 3—3331
Cu-SiO_2, granular films, temp. depend. elec. resistivity meas. 3—3261
Cu-Sn binary diffusion couple, anal. of inert marker motion for Cu_6Sn_5 growth 3—33517
Cu-W bond, low thermal barrier, effective joining technique 3—29022
Cu-W divertor plates for INTOR fusion reactor, expt. tests 3—55624
Cu+^{4}He ion, K-shell ionisation cross sections 3—6774
Cu+C, heavy ion excitation, visible radiation study 3—50503
Cu+H^+, K-shell ionis. cross-section meas. 3—41670
Cu^{4+}+Au(Pb), K- and L-vacancy production in asymmetric 1 MeV/N collisions 3—11954
Cu_2, electronic struct., localised d hole, ab initio SCF calcs. 3—41712
Cu_2, one-electron studies, pseudopot. method 3—50297
Cu_2^+ $3d\sigma_u$ hole states, symmetry-adapted wavefunction, short CI expansion calcs. 3—6552
Cu_3, electronic struct., localised d hole, ab initio SCF calcs. 3—41712
Cu_3, matrix isolated, ESR spectrum 3—55974
Cu_5 cluster, ESR spectrum 3—46113

copper continued
Cu(Nb) industrial media, two-channel transducer for rapid X-ray fluoresc. anal. 3—44087
CuNi compositionally modulated structs., mag. props., linear muffin-tin orbital band calcs. 3—23571
CuXVIII, $3s^2\ ^1S_0$-$3s3p\ ^3P_1$ Mg sequence intercombination lines obs. in PLT tokamak 3—2292
^{63}Cu, muonic, 3d-2p transition HFS splitting meas. 3—32251
Cu(111)-S surface, positron work function 3—3290
Cu(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
GaAlAs DH laser, long-lived, Cu identification by SEM, cathodoluminesc., EBIC and electron probe anal. 3—50661
GaAs:Cu, deep impurity centres, Jahn-Teller effect suppression under uniaxial press. 3—28307
n-GaAs:Cu, electron irrad., photoluminesc. meas. 3—3798
GaAs:Cu, electron irrad., defect interaction with Cu atoms, photoluminescence study 3—37949
GaP:Cu, interband excitation induced absorption by deep impurities 3—57960
Ge:Cu, impurity states, piezospectroscopy 3—3118
GeTe-Cu, solid soln. form., X-ray diffr. and XPS investig. 3—57092
InP:Cu, quasipoint acceptor impurity clusters, charge and concentration 3—18333
$Li_2B_4O_7$:Cu, composite thin-element TLD, construction using an optical-heating method 3—6451
$LiH_3(SeO_2)_2$:Cu^{2+}, EPR spectra in X-band 3—3521
$LiNbO_3$:Cu, photovoltaic tensor meas. 3—3242
Mo wire reinforced Cu, cold rolled, deform. 3—34379
$(NH_4)_2Cd_2(SO_4)_3$:Cu^{2+} single cryst., ESR and optical absorpt. obs 3—23790
NaCl:Cu^+, electronic struct. and luminescent props., multiple scatt. $X\alpha$ calc. 3—3060
Na_2O-B_2O_3-SiO_2:Cu^{2+} glass, optical absorpt. and ESR spectra 3—33119
Nb/Cu superlattices, prep. by sputtering, struct., and phys. props. 3—14491
Nb-Cu superconducting microcontacts, excess current 3—3384
Nb-Cu superlattices, supercond. tunnelling and phonon dispersion 3—57492
NbTi-Cu, superconducting composite magnet, AC losses 3—33842
Ne-Cu discharge, formation of excited Cu II levels 3—36707
Ni wire reinforced Cu, cold rolled, deform. 3—34379
O-free, high cond., long-term creep at cryogenic temps. 3—14670
PbBi/Cu proximity effect junctions, resist. transition 3—13969
PbI_2:Cu, optical props. of photochemical transform. products *(Russian)* 3—3678
Pt/Cu/Cr and Cu/Cr thin films, mixing and interdiffusion by O reduction, backscatt. spectra 3—13559
SRO:Cu^{2+}, impurity states, EPR spectra 3—43428
Si:Cu, deep level defects prod. by quenching, DLTS study 3—57309
Si:Cu, deep level states, DLTS study 3—52060
Si:Cu, diffusion, solubility and elec. activity, review 3—27966
Si:Cu, impurity diffusion during activation, neutron activation analysis systematic errors 3—28157
Si:Cu, model of Cu impurity levels 3—33679
Si:Cu/Au Schottky diodes, I-V and photoelec. meas. 3—47422
SiO_2 particles in Cu, coarsening and dissoln. model 3—33453
$Sr_{0.5}Ba_{0.5}Nb_2O_6$:Cu ceramics, ageing study, photovoltaic meas. 3—8524
W helical fibre reinforced Cu, tensile fracture *(Japanese)* 3—9162
W wire reinforced Cu, cold rolled, deform. 3—34379
WC-Cu composite, sintered, anomalous behaviour of liq. metals in flat capillaries 3—58090
Zn complex, $Zn(pyO)_6(ClO_4)_2$:Cu, exchange interactions, EPR study 3—23793
ZnO:Cu, IR luminesc. characts., magnetooptical data 3—43616
ZnS:Cu, AC electrolum. lines, intermittent arrays and segments 3—19199
ZnS:Cu, electroluminesc. and elec. cond., temp. and field dependence meas. 3—14358
ZnS:Cu, impurity diffusion, two-sample luminescence study 3—18513
ZnS:Cu, Sm(Eu)(Pb)(Tm) crysts., bulk emission in const. elec. field 3—8867
ZnS:Cu,In,Cl phosphors, electroluminesc. 3—47714
ZnS:Cu,Mn^{2+} hexagonal-cubic transition, EPR powder anal. 3—57755
ZnSe: Cu, impurity diffusion and luminescence centres 3—23096
ZnSe:Cu, donor and acceptor levels, photocond. and Schottky diode studies 3—18661
ZnSe:Cu, nonlinear absorpt. and linear circular dichroism spectra 3—19163
ZnSe:Cu, two-photon absorption coeff., deep level impurity effects 3—3776
ZnTe:Cu, ion implanted, donor related edge luminescence 3—52856

copper alloys
see also brass; copper compounds
binary systems, equilib. distrib. coeffs. of admixtures *(Czech)* 3—58097
brass, Cu-graphite, Cu-W, electrode erosion rate in spark gaps for pulsed power systems 3—7846
bronze, phosphor, friction and wear behaviour, effect of ion implantation 3—34491
bronze, pitting limit, influence of lubrication 3—39258
bronze, technical powders, sintering, determ. of activation energies of shrinkage process 3—24172
bronze BrAZhNMts 9-4-4-1, superplastic deform. study *(Russian)* 3—39208
bronze-steel-bronze multilayer struct., fracture during high-temp. extension *(Russian)* 3—39236
CDA 638, Cu-base alloy, superplastic deform., metallographic study of cavitation 3—53155
Constantan, physisorption of ^{3}He, mean field theory, desorption kinetics 3—13630
Cu-Zn, new etchant for study of grain boundary-induced migration 3—48001
dilute, cluster model residual resistivities 3—33704
dilute, spin-orbit scatt. of cond. electrons 3—52096
dilute Hume-Rothery alloys, Fermi surfaces, de Haas-van Alphen study 3—8400
FCC, sliding wear, comparative study 3—58259
grain boundary segregation and diffusion, AES and scanning radioactive anal. 3—47115
graphite fibre reinforced Sn-Sb-Cu alloy, Babbitt pin-steel ring sliding system, spherical wear particle formation 3—29195

copper alloys continued
lattice distortion at impurity atoms, EXAFS study *(German)* 3–13245
lCc Pb-Cu-Ag-S, thermodynamic behaviour of dil. solns. of S 3–29063
melting mechanisms and surface structures in crystals, impurity depend. 3–33409
rare earth alloys $\mathrm{RCu_2Ge_2}$, X-ray spectroscopic study 3–57998
rare earth alloys $\mathrm{RCu_2Si_2}$, X-ray spectroscopic study 3–57998
rare earth alloys $\mathrm{RCu_2Sn_2}$, R=La, Ce, Pr, Nd, Sm, cryst. struct. and mag. props. *(Russian)* 3–27896
Young's modulus temp. behaviour of Cu-based alloys 3–19359
Ag-Cu alloys, phase stability of overlapping melt trails produced by continuous laser melt quenching 3–24211
Ag-Cu directional eutectic alloy, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3–24424
Ag-Cu film, vacuum deposited, elec. and mechanical props. 3–14495
Ag-Cu foils, dil., CESR linewidth 3–3534
Ag-Cu welded joints chemical analysis, proton beam excited X-rays characts. 3–39427
AgCu-CuAg, ellipsometry, two-phase surfaces model 3–20889
$\mathrm{(Ag_{0.5}Cu_{0.5})_{1-x}Mg_x(Al_x)(Ge_x)}$ amorphous films, electron transport props., extended Ziman theory 3–3150
Al-Cr(Cu)(Mg)(Fe)(Mn)(Zn), thermoelec. power at high temps., temp. and conc. depend. 3–3165
Al-Cu, 2021, fatigue crack growth, effect of environment 3–29149
Al-Cu, cast and extruded, cyclic behaviour, fatigue crack propag. 3–58193
Al-Cu, cast and extruded, cyclic behaviour, electron fractographic study 3–58194
Al-Cu, elastic consts., effect of solute content and heat treatment *(Japanese)* 3–58152
Al-Cu, etched and anodised, surface anal. 3–39302
Al-Cu, fast H^+ energy loss and straggling, nuclear resonant reaction study 3–51680
Al-Cu, fatigue, fracture of constituent particles 3–14708
Al-Cu, flow stress, strain rate sensitivity, Portevin-Le Chatelier effect region, dislocation-precipitate interaction *(Japanese)* 3–39212
Al-Cu, ion implanted, pulsed electron beam annealing and furnace annealing, RBS and channelling meas. 3–13257
Al-Cu, moving dislocations, NMR and TEM obs., correls. with ageing induced structures 3–38718
Al-Cu, precip. hardening, invest. by sound wave vel. and US attenuation 3–43845
Al-Cu (0.5%) fine-grained evaporated thin films, pulsed current induced electromigration transport mobility 3–42859
Al-Cu (0.5%) fine-line thin film conductors, electromigration induced failure by edge displacement 3–42858
Al-Cu (4 wt.%), porosity and fracture development during superplastic flow *(Russian)* 3–39205
Al-Cu (4.5 wt.%), powder, technique for obs. of rapid solidification and annealing in TEM 3–53042
Al-Cu (6-10 wt.%), hypoeutectic, rheocast, microstruct. 3–24220
Al-Cu (6%), flow stress, in warm working range 3–53124
Al-Cu alloy, elastoplastic deform., prior residual deform. effect 3–43901
Al-Cu alloy D16T sheets, temp. to which heated determ. from struct. and props. 3–24275
Al-Cu alloys, phonon dispersion relations, Guinier-Preston zone form., neutron scatt. study 3–23000
Al-Cu alloys, struct. of Guinier-Preston I zones 3–9071
Al-Cu alloys, struct. of Guinier-Preston zones 3–9072
Al-Cu directional eutectic alloy, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3–24424
Al-Cu ion plated protective coatings for silvered glass mirrors 3–17602
Al-Cu melt, X-ray struct. study *(Russian)* 3–46833
Al-Cu-Co, sintered, struct. and mech. props., effect of rapid cooling on crystn. 3–34259
Al-Cu-Li-Mn-Cd, alloy 2020, ductility, influence of grain struct. 3–34397
Al-Cu-Mg, AA2036, serrated flow, influence of thermomech. treatment 3–47899
Al-Cu-Mg, Cu/Mg ratio effect on precipitation *(Korean)* 3–4042
Al-Cu-Mg, fracture toughness rel. to struct. nonuniformity in AK4-1 alloy rolled plates 3–58331
Al-Cu-Mg (4.45, 1.34 wt.%), melt spin alloy, tensile props. rel. to soaking times 3–39200
Al-Cu-Mg alloys, acoustic emission during plastic deform. 3–34391
Al-Cu-Mg-Mn, wrought, props., comp. and struct. influence 3–34471
Al-Cu-Mg-Mn (4.42, 0.27, 0.46 wt.%), strengthening rel to thermomechanical treatment 3–43851
Al-Cu-Mg-Si, corrosion resist., improvement by ageing 3–34542
Al-Cu-Mn, large slabs, struct. and mech. props. 3–34404
Al-Cu-Mn-Mg-Si, heat-resist., struct. and mech. props., Si effect 3–34403
Al-Cu-Mu-Zr-Fe-Si, struct. and props., Fe and Si additions influence 3–39248
Al-Cu-(Si), powder compaction and sintering, effect on props. 3–39066
Al-$\mathrm{CuAl_2}$ eutectic alloys, heat pipe solidification, microstruct., mech. props. 3–58162
Al-Li-Cu (2.7, 2.3 wt.%), fracture behaviour and tensile props., effect of grain struct. 3–29182
Al-Mg-Si-Cu-Cr-Fe-Mn (0.98, 0.68, 0.26, 0.2, 0.09, 0.05 wt.%), barrier anodized coating characts. 3–3018
Al-Mg-Zn-Cu, precip. hardening alloy, flow stress-grain size relationship 3–43923
Al-Pb-Sn-(Sb)-(Mg)-Cu, antifriction, produced by compensation of gravit. segregation by electromag. forces 3–34261
Al-Si-Cu alloy, dry sliding friction, test of rule of mixtures 3–4150
Al-Zn-Mg-Cu, 7075, fatigue crack growth near threshold rel. to microstructure, ageing treatment 3–34479
Al-Zn-Mg-Cu, 7075-T6, small fatigue crack growth rel. to localized microplasticity 3–29154
Al-Zn-Mg-Cu, ageing conditions and impurity content influence on struct. and fracture 3–34541
Al-Zn-Mg-Cu, alloy plate, comparison of engng. props. 3–58192
Al-Zn-Mg-Cu, ingot and powder processed, deform. and fracture at elevated temps. 3–53159
Al-Zn-Mg-Cu, metallurgical factor influence on fracture toughness *(French)* 3–24356
Al-Zn-Mg-Cu, pressed semifinished products, softening schedules for ageing 3–34365
Al-Zn-Mg-Cu alloy, design strength 3–43955
Al-Zn-Mg-Cu special purity high-strength alloy for forgings, props. 3–34401

copper alloys continued
Al-Zn-Mg-Cu-Zr plates, Zr effect on mech. and corrosion props. 3–34402
Al-Zn-Mg-Zr(-Cu), strength and stress corrosion resist. improvement, role of Zr 3–14622
Al-Zu-Mg-Cu, high-temp. thermomech. treatment 3–4065
AlCu dilute alloys, ^{65}Zn diffusion coeffs., enhancement effects 3–47150
AlCu, dilute alloys, electric field gradient calcs. 3–52091
AlZnCu dilute alloys, ^{65}Zn diffusion coeffs., enhancement effects 3–47150
$\mathrm{(Au,Cu)_3Zn}$, domain struct., periodic lattice twinning 3–2828
Au-Cd-Ag-Cu, Ag and Cu additions, order and quenched-in defect effects on martensitic transform. 3–43832
Au-Cu, quantitative AES, backscatt. factor, preferential sputtering exam. 3–14902
Au-Cu, surface conc. of Au during low temp. sputtering 3–13604
Au-Cu (4.5 wt.%), static strain ageing, strain depend. 3–47882
Au-Cu films, electroless autocatalytic deposition 3–9004
Au-Cu-Ge solder for cantilever-type displacement sensor using diffused silicon strain gauges 3–282
Au-Cu-Zn alloys, anharmonicity and martensitic phase transition, elastic consts. determ. 3–29076
$\mathrm{AuCu_3}$, anharmonicity in ordered phase, neutron diffr. study 3–18407
C fibre reinforced Al-Cu-Ti, fabrication, graining process, alloying effect on wettability *(Japanese)* 3–58078
$\mathrm{Ce_{72}Cu_{28}}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3–57336
$\mathrm{CeCu_2Si_2}$, effect of composition on superconductivity 3–57455
$\mathrm{CeCu_2Si_2}$, heavy fermion systems, gapless supercond. and transition temp. variation 3–52294
$\mathrm{Ce_{1-x}La_xCu_2Si_2}$, elec. cond., transition from Kondo lattice to Kondo impurity 3–43163
$\mathrm{CeNi_{5-x}Cu_x}$, H storage and desorption, hydride heat of form. 3–24641
Co-Cu-Mg system, glass form. and crystn. 3–22789
Cr-Co films, elec. resist. meas. 3–23506
Cu base alloys, shape memory stability, grain size refinement, optical refl. obs. 3–43836
Cu/CuNi mixed-matrix NbTi multifilamentary cable, poloidal coils for Reacting Plasma Project 3–37669
Cu-3d transition metal dil. alloys, magnetoresistance calc. 3–38369
Cu-Ag, liq. phase sintered, low energy grain boundaries 3–2576
Cu-Ag (5 wt.%), discontinuous precip., effect. of press. 3–24238
Cu-Ag(Au) film, disordered, spin-orbit interaction and electronic conduction 3–13928
Cu-Ag(Ti)(Zr)(Hf), thermochem. at 1373K 3–4007
Cu-Al, Bauschinger effect, internal stress meas. 3–43932
Cu-Al, cubic centred high conc. solid solns., creep and stacking fault energy 3–58177
Cu-Al, dil., Dingle temp. and Fermi surface changes, charge transfer effects 3–52009
Cu-Al, dil., low temp. lattice sp.ht., Green's function theory 3–13480
Cu-Al, dislocation etch pits on (111) surface, morphology 3–42616
Cu-Al, dislocation struct. of [321] crystals grown by Bridgman method 3–13230
Cu-Al, single cryst. solid soln., plastic deform., twinning *(French)* 3–53150
Cu-Al, solute segregation to dislocations, internal friction study 3–39152
Cu-Al, two-phase materials, strength/ductility-microstruct. relationship 3–43926
Cu-Al (10 at%) single cryst., role of conjugate slip in deform. 3–37914
Cu-Al (10 wt.%), quenched martensitic alloy, internal friction, tensile props., hardness, heat treatment effect 3–43920
Cu-Al (15 at.%), quenched, prop. changes due to development of short-range order state 3–9104
Cu-Al (15.1 wt.%), martensitic transform., room temp. 3–43819
Cu-Al (3 to 8 wt.%), polycrystalline alloy, work hardening, room temp. deform., dislocation struct. 3–53082
Cu-Al (4.6 at.%), evidence of short-range order state using DTA, elec. resist. and electron microscopy 3–9105
Cu-Al (7 at.%), plastic deform., kinetics of stress jumps 3–14653
Cu-Al compacts, liq.-phase sintering, vol. changes 3–39073
Cu-Al film, vacuum deposited, elec. and mechanical props. 3–14495
Cu-Al martensitic alloys, single crystal, deform. behaviour 3–43824
Cu-$\mathrm{Al_2O_3}$, cold rolled, deform. struct., effect of dispersed phase 3–47914
Cu-$\mathrm{Al_2O_3}$ polycrystals, dispersion hardened, strengthening mechanisms 3–43850
Cu-$\mathrm{Al_2O_3}$-Cr, diffusion saturated, precipitation, struct. changes, elec. resist. and plastic deformation study *(Russian)* 3–34324
Cu-Al-Be, ternary system, shape memory effect, elec. resist., internal friction, Young's Modulus, temp. depend. 3–43835
Cu-Al-Co alloys with noncoherent particles, mech. twinning and superelasticity *(Russian)* 3–53126
Cu-Al-Mn system, diffusion redistrib. of alloying elements, surface struct. during deform. by friction 3–24206
Cu-Al-Ni, (hhl) habit planes in martensite growth wave models 3–47835
β- Cu-Al-Ni, heat treated Bridgeman grown crystals, thermal diffuse scattering of X-rays 3–51544
β-Cu-Al-Ni, martensitic interface mobility kinetics 180-410K 3–34317
Cu-Al-Ni, shape memory alloy, matrix-martensite interface, TEM 3–34320
Cu-Al-Ni, shape memory alloy ribbons, melt spun, martensite transform., grain size 3–47831
Cu-Al-Ni, shape memory bicrystals, intergranular fracture 3–43946
Cu-Al-Ni, single crysts., US vel. near martensitic transform. temp. 3–43816
Cu-Al-Ni (14, 3.3 wt.%), shape memory alloy, two-way effect, high temp. appl. 3–58164
Cu-Al-Ni alloy, rel. between martensite morphology and shape memory effects *(Chinese)* 3–4037
Cu-Al-Ni shape memory alloys, polycryst., fatigue and fracture characts. 3–14727
Cu-Al-Ni-Fe (10, 5, 5wt.%), crystallography of martensite 3–43826
Cu-Al-Ni-Ti, shape memory alloy, grain refinement rel. to Ti addition, transform. hysteresis 3–47832
Cu-Al-O, ion implanted, mechanical and struct. props. 3–4051
Cu-Al-Si-Co, superplastic flow, role of grain boundary dislocations 3–53156
Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), superplastic, grain growth at low strain rates 3–34414
Cu-Al-Zn, martensitic transform. and physicochem. props., heat treatment effect *(Russian)* 3–24226

copper alloys continued
- Cu-Al-Zn alloys, anharmonicity and martensitic phase transition, elastic consts. determ. 3−29076
- Cu-Al-Zn-V, shape memory alloys, β-grain size and mech. props. rel. to V addition 3−43888
- Cu-Al(Ga)(Si)(Sn), binary alloys, rapidly quenched, struct. and props. 3−19381
- α-Cu-As, thermodynamic activity from quasiisopiestic meas. 3−47818
- Cu-Au, diffusion coeff. using molten salt electrolyte, chronoamperometric determ. 3−47153
- Cu-Au, dilute, low temp. sp. ht., Green function theory 3−28116
- Cu-Au (14-25 at.%), Zener relax. 3−53101
- Cu-Au alloys, stability of $L1_0$ ordered phase *(Japanese)* 3−24210
- Cu-Au composition modulated foils, biaxial elastic modulus meas. 3−47016
- Cu-Au dilute alloy, thermal and fast neutron irrad., isochronal recovery spectra 3−42674
- Cu-Au dilute alloys, fast neutron induced defects, dose depend. 3−42675
- Cu-Be, precipitation kinetics *(Japanese)* 3−9065
- Cu-Be (1.35 at.%), microstruct. evolution under electron irrad. in HVEM 3−27996
- Cu-Be strip, stress relaxation in bending 3−39192
- Cu-Be-Co (2.1, 0.2 wt.%), ageing, influence of rapid solidification 3−29095
- Cu-Bi alloys, liq., activity of O 3−9036
- Cu-Cd(Mg), dil., yield and flow stress 3−4088
- Cu-Co, mag. clustering, aftereffect, neutron depolarisation study 3−52558
- Cu-Co-Si, internal oxid. effect on mech. props. 3−9121
- Cu-Cr, metastable alloys, RF sputtering deposition ion-beam mixing effects 3−3955
- Cu-Cr alloys, high temp. creep and fatigue rel. to microstruct., Mg and Zr addition effects 3−47928
- Cu-Fe, coherent Fe particles, ion irrad., martensitic transformation and mech. wave formation obs. 3−53049
- Cu-Fe, dil., solute segregation and boundary struct. changes during grain growth 3−53057
- Cu-Fe, internal friction caused by diffusion around second phase particle 3−53100
- Cu-Fe, Kondo and spin glass states, elec. and mag. studies *(Russian)* 3−28512
- Cu-Fe multifilamentary composites, in situ formed, permanent mag. props. meas. 3−28629
- Cu-Fe-Ni system, phase equilibria calc. 3−14565
- Cu-Fe-Sn(Si)(Be), precip. processes, influence of addition of third element 3−47845
- Cu-Ga, massive transform., nucleation, correl. between transform. temp. and cooling rate 3−39110
- Cu-Ga (23.7 at.%), $\beta \rightarrow \zeta_m$ massive transform., crystallography 3−39109
- Cu-Ge, dil., Dingle temp. and Fermi surface changes, charge transfer effects 3−52009
- Cu-Ge, rolled alloys, deform. mechanism, microstruct., grain orientation 3−53165
- Cu-Ge (7 and 15 wt.%), struct. form. on solidification 3−4032
- Cu-Hf, amorphous, positive Hall coeffs., 4.2 to 270K 3−28340
- Cu-Li, dil., spin-orbit scatt. of cond. electrons 3−52096
- Cu-Mn, dil., spin glass transition phenomena, Monte Carlo simulation 3−23654
- Cu-Mn, spin glass, magnetic relaxation disappearance obs. 3−23646
- Cu-Mn, spin glasses, resist. 3−13799
- Cu-Mn (16.7 at.%) spin glass, small-angle neutron scatt. study 3−3454
- Cu-Mn alloys, magnetoresist., theory and expt. 3−38368
- Cu-Mn spin glass, crit. exponent, elec. resist. study 3−23355
- Cu-Mn spin glasses, anisotropy from torque meas. 3−14060
- Cu-Mn spin glasses, anisotropy energy meas. 3−23652
- Cu-Mn spin glasses, neutron polarisation analysis of spin struct. 3−57547
- Cu-Mn spin glasses, transverse magnetoresist. and Hall resist. 3−38371
- Cu-Mn spin glasses, zero-field NMR spin echo study of satellite lines 3−19011
- Cu-Mn-Al ternary system, Cu-$MnAl_6$ section of phase diagram *(French)* 3−47823
- Cu-Ni, accelerated corrosion in sulphide polluted seawater 3−43980
- Cu-Ni, band struct., angle-resolved photoemission study 3−28962
- Cu-Ni, binary alloy form by ion implantation, surface composition and sputtering 3−2587
- Cu-Ni, Cu-rich, diffusion behaviour *(German)* 3−8244
- Cu-Ni, electronic struct. rel. to supermodulus effect 3−3047
- Cu-Ni, fatigue hardening, multicryst. foil specimens 3−14709
- Cu-Ni, forming limit diagram, new model, appl. to expts. 3−47898
- Cu-Ni, phase equilib., thermodynamic anal. 3−39092
- Cu-Ni, surface and interface segregation, core-level binding energy shift study 3−47211
- Cu-Ni, surface tension isotherm calc. *(Russian)* 3−28210
- Cu-Ni, Σ=27 coincidence grain boundary 3−22907
- Cu-Ni alloy electrodeposition from solns. containing L-asparagine 3−19295
- Cu-Ni composition modulated foils, biaxial elastic modulus meas. 3−47017
- Cu-Ni film, compositionally modulated, struct. and mag. props. 3−57713
- Cu-Ni S, ternary melts, extension of assoc. sol. model 3−4006
- Cu-Ni surface comp., sputtering effects, XPS, SIMS and atom probe FIM study 3−24074
- Cu-Ni system, ultrafine powders, diffusional homogenisation 3−58072
- Cu-Ni-Al, shape memory alloy, melt spinning, transform. temp., DSC 3−43834
- Cu-Ni-Cr (30, 3.2 wt.%), spinodally decomposing alloys, high cycle fatigue strength rel. to ageing 3−53237
- Cu-Ni-Fe, corrosion product film form., temp. effects, corrosion in well aerated seawater 3−39273
- Cu-Ni-Fe, ferromagnetic inclusions, phase transitions, AC susceptibility studies 3−33941
- Cu-Ni-Fe, influence of mag. field on transition temp. to superferromagnetic state *(Russian)* 3−33890
- Cu-Ni-Sn spinodal alloys for connectors, powder metallurgy 3−47803
- Cu-Ni-Ti, TEM specimen prep., Cu_2O epitaxial film growth and identification 3−29204
- α-Cu-Ni-Zn, ternary phase diagram, invest. with elec. resist. meas. 3−14562
- Cu-Ni-Zn system, FCC+tetragonal two phase region, X-ray diffr. study 3−37853
- Cu-Ni-Zn-Mn alloys, heat treated, B effect on order-disorder transform. 3−24221

copper alloys continued
- Cu-Ni-Zn(-Mn), α/β microduplex, superplastic flow, cavitation and cavity growth 3−4089
- Cu-Ni(Al)(Si)(Mn)(Sn)(Ge)(Mg), solid soln. and neutron irrad. hardening 3−34337
- Cu-O eutectic system, solidified from drop of melt, surface topography *(German)* 3−23150
- Cu-P, dil., Dingle temp. and Fermi surface changes, charge transfer effects 3−52009
- Cu-Pb, two-liquid miscibility gap, calc. using bisection technique 3−33395
- Cu-Pd-Si, liq. alloy system, mixing enthalpies determ. at 1600K 3−34286
- Cu-Pt, surface segregation, sputtering ang. distrib. meas. 3−38985
- Cu-Sb, dilute, secondary recrystallisation kinetics meas. *(Russian)* 3−34345
- Cu-Sb, limited solubility system, adsorption thermodynamics at grain boundaries *(Russian)* 3−33440
- Cu-Sb (0.5 at.%), bicrystals, segregation, obs. of fracture surface chem. 3−34332
- Cu-Sb solid soln., slip band growth and crack form. *(Russian)* 3−24294
- Cu-Si, dil., Dingle temp. and Fermi surface changes, charge transfer effects 3−52009
- Cu-Si (0.8 to 10.9 wt.%), sulphidisation in liq. S, reaction rate *(Hungarian)* 3−58268
- Cu-Si (8.01 at.%), extended dislocation width, Suzuki segregation to stacking fault, electron micrograph study 3−38078
- Cu-Si liquid thermodynamic props. 3−13457
- Cu-SiO_2, grain boundary sliding, particle blocking and assoc. internal friction 3−37931
- Cu-SiO_2 single crystals, microstruct. study, annealing 3−9087
- Cu-Sn, cubic centred high conc. solid solns., creep and stacking fault energy 3−58177
- Cu-Sn, very dil., displacement around disordered Sn impurity, EXAFS study 3−13168
- Cu-Sn (3.1 at.%), substitutional alloy, model for flow stress and strain rate sensitivity 3−47883
- Cu-Sn alloy, appl. of mass spectrometry to activities determ. 3−40715
- Cu-Sn films condensing in vac., growing surface struct. 3−38256
- Cu-Sn shape memory effect, ageing effects 3−14617
- Cu-Sn system, disorder in ordered β-brass phase *(German)* 3−29064
- Cu-Sn-Ni (8, 8 wt.%), prep. by powder metallurgy, rel. between microstruct. and strength 3−58075
- Cu-Sn-Ti film, high temp. behaviour *(Chinese)* 3−42937
- Cu-Sn(Zn), shape memory alloy ribbons, melt spun, martensite transform., grain size 3−47831
- Cu-Ti, amorphous, elec. resist. and crystn. 3−3147
- Cu-Ti, amorphous, positive Hall coeffs., 4.2 to 270K 3−28340
- Cu-Ti, liq. alloys, thermodynamic mixing functions 3−4015
- Cu-Ti (4 at.%), spinodally decomposing alloys, high cycle fatigue strength rel. to ageing 3−53237
- Cu-Ti (4 wt.%), deform. twinning at cryogenic temps. *(Japanese)* 3−29127
- Cu-Ti(Cr)(Mu)(Fe)(Co)(Ni), grain boundary enrichment, thermoelec. study 3−39185
- Cu-Ti(Si) film, high temp. behaviour *(Chinese)* 3−42937
- Cu-Ti(4at.%), spinodally decomposed single cryst. and polycrysts., cyclic deform. 3−4087
- Cu-Zn, (hhl) habit planes in martensite growth wave models 3−47835
- Cu-Zn, creep constitutive laws, study using biaxial relax. tests 3−47896
- Cu-Zn, cubic centred high conc. solid solns., creep and stacking fault energy 3−58177
- Cu-Zn, dil., Dingle temp. and Fermi surface changes, charge transfer effects 3−52009
- Cu-Zn, martensitic transform., interface structures, computer simulation 3−34318
- β-Cu-Zn, precip. of α-rods, associated relief effects 3−53058
- Cu-Zn, residual resist. and thermopower rel. to short range order 3−33707
- α-Cu-Zn, short-range ordering kinetics, heterogeneous microstruct., elec. resist. meas. 3−51814
- Cu-Zn (20 wt.%), creep cavitation meas., two techniques 3−39198
- Cu-Zn (39.3 wt.%) alloy, martensite nucleation, BCC to 9R transform., HVEM obs. 3−34306
- Cu-Zn alloy, FCC and BCC, pair interchange energies, order-disorder transition enthalpy 3−34307
- Cu-Zn system, electron phase stability, pseudopot. calc. 3−43056
- Cu-Zn-Al, bicrystal, transform. strain coherency at grain boundary, fracture 3−43839
- Cu-Zn-Al, β⇌2H martensitic transform., enthalpy and acoustic emission meas. 3−43818
- Cu-Zn-Al, faulted martensite, stacking fault form. 3−42620
- Cu-Zn-Al, hexagonal transform. of single crystal to 2H martensite 3−43825
- Cu-Zn-Al, internal friction of single and polyvariant martensites 3−43829
- Cu-Zn-Al, martensite stabilisation after ageing 3−43869
- Cu-Zn-Al, martensitic transform., acoustic emission 3−43817
- Cu-Zn-Al, martensitic transform., internal friction meas. and thermodynamical anal. 3−43828
- Cu-Zn-Al, martensitic transform., thermoelastic, effect of thermal cycling *(Chinese)* 3−53047
- Cu-Zn-Al, premartensitic state, neutron diffr. meas. 3−43815
- Cu-Zn-Al, rel. between surface, thin foil and bulk martensite 3−43813
- Cu-Zn-Al, shape memory alloys, fatigue props. rel. to grain refinement and texture 3−43945
- Cu-Zn-Al, thermal treatment effect on martensitic transform. 3−43831
- Cu-Zn-Al, thermoelastic alloy, dynamic fatigue curves, −196 to 40°C 3−43944
- Cu-Zn-Al (26, 4 wt.%), shape memory alloy, stress-strain response rel. grain size 3−43889
- Cu-Zn-Al (29.8, 6.1 at.%) alloy, stress induced bainitic transform., habit plane obs. 3−43802
- β-Cu-Zn-Al alloy, helical coil springs, force-displacement characts., temp. depend. 3−43890
- Cu-Zn-Al martensite, ageing effects 3−43868
- β'_1-Cu-Zn-Al martensite, lesser known planar defects 3−42621
- Cu-Zn-Al martensitic alloys, damping charact. evolution with time and temp., peaking effect 3−43879
- Cu-Zn-Al shape memory alloys, martensitic transform. cycling effects 3−34322
- β-Cu-Zn-Al single crystal, stress dependency of latent heat of transform. 3−58120

copper alloys continued
Cu-Zn-Al-Ni, Ni and Al content effect on martensitic start temp., M_s 3—43823
Cu-Zn-Al(Ga), stress induced martensitic transform. 3—43822
Cu-Zn-Al(Si), shape memory alloy ribbons, melt spun, martensite transform., grain size 3—47831
Cu-Zn-Ni, German silver alloy, cold rolled, change in struct. and props. 3—47852
Cu-Zn-Ni alloy, superplastic microduplex, compressive deform., cavitation and cavity sintering 3—29131
β-Cu-Zn(-Al), surface martensite transform. and microstruct., electron microscopy study 3—43812
Cu-Zn(-Al), surface martensite, surface relax. as possible origin 3—43814
Cu-Zn(-Ni), SCC, role of strain-induced dealloying 3—24404
Cu-Zr, amorphous, positive Hall coeffs., 4.2 to 270K 3—28340
Cu-Zr, metallic glass, prep. by melt-spinning technique 3—52994
Cu-Zr (45 at.%), glassy powder, technique for obs. of rapid solidification and annealing in TEM 3—53042
Cu-Zr glasses, struct. and vibr. spectra 3—27853
Cu-Zr metallic glass, struct., X-ray diffr. study 3—7912
Cu-Zr metallic glasses, superconductivity and spin fluctuations 3—57456
Cu-Zu-(Al), single-phase, annealing kinetics and vacancy conc. 3—4064
$Cu_{1-x}Al_x$, equation of state, pseudopot. calc. 3—13396
CuAlNi, pseudoelastic alloys, stress-induced martensite, thermal effects 3—43821
CuAu/CdTe low resistance elec. contact, vacuum deposition prep. 3—18783
Cu_3Au alloy, crit. behaviour and scaling law in ordering process kinetics 3—34297
Cu_3Au Ising spin system, ordered cluster evolution from disordered state 3—57082
Cu_3Au, ordered and disordered, electron irrad. damage 3—13283
Cu_3Au, ordering and disordering, HVEM study 3—13282
Cu_3Au, point-contact spectra of electron-phonon interactions *(Russian)* 3—13380
CuAuMn, spin glass behaviour 3—57658
$CuAu_{14-y}Pd_y$ quasibinary alloy, $L1_0$-type, lattice parameters, axial ratio change 3—13164
CuBe, electronic struct. and density of states, cluster Xα calc. *(Russian)* 3—23252
$Cu_{98}Be_2$, thermal degration, preferential surface migration, ESCA study 3—14897
CuMn RKKY spin glass, nuclear spin relaxation and low temp. excitations 3—57656
CuMn, specific heat, spin-glass ordering effect 3—57647
CuMn spin glass, dilute, mag. relaxation, field and temp. depend. 3—57650
CuMn spin glass, existence and subsequent breakdown of triad dynamics, ESR meas. 3—47511
CuMn spin glass, mag. susceptibility, anomalous time depend. 3—57654
CuMn spin glass, magnetoresistivity, thermal and field cycling effects 3—28339
CuMn spin glass, spin waves, neutron scatt. obs. 3—57653
CuMn spin glass, virial expansion for sp. ht. and mag. susceptibility 3—43389
CuMn, spin glass transition, μSR investig. 3—57660
Cu_3Mn, disordered, local ordering and mag. props. 3—52493
Cu_2MnAl, optical absorpt. spectra from band struct. 3—28874
$Cu_2MnAl(In)(Sn)$ amorphous films, disorder-induced spin glass state 3—38627
$Cu_2MnAl(Sn)$, Heusler alloys, dynamic spin susceptibility calcs. 3—52415
Cu_2MnSn, Heusler alloy, struct. and mag. props., effect of rapid quenching 3—34022
CuNi, impurity influence on muon diffusion 3—3627
CuNi, modulated struct., electronic struct. and magnetism 3—57267
Cu_2NiZn, $L1_2$ ordered struct., superlattice dislocations and stacking faults 3—46944
Cu_2NiZn, ordering alloy, stress-strain, 77-343K, yield stress rel. to dislocation sources 3—43922
CuPd, order-disorder transform. under 148 MeV neutron and 1.8 MeV electron irradiations 3—55576
Cu_cPd_{1-c}, band struct. effects on Auger spectra 3—34178
CuPdMn, spin glass behaviour 3—57658
CuPtMn, spin glass behaviour 3—57658
$Cu_{1-x}Sn_x$, equation of state, pseudopot. calc. 3—13396
$Cu_{95}Sn_5$, core level binding energy shifts, XPS study 3—14441
Cu_xSn_{1-x}, amorphous, crystn. temp., elec. resist., comp. depend. 3—18679
$Cu_{45}Ti_{55}$ amorphous ribbon, H_2 diffusion 3—47160
$Cu_{50}Ti_{50}$, amorphous, short-range ordering, elect. resist. meas. 3—33134
CuZn, electronic struct. and density of states, cluster Xα calc. *(Russian)* 3—23252
$Cu_{1-x}Zn_x$, equation of state, pseudopot. calc. 3—13396
CuZnAl, pseudoelastic alloy, prototype heat engine using martensitic transform. in single cryst. rods 3—44137
CuZnAl shape memory alloys, austenite microstruct. effects on martensitic transform. 3—43830
CuZnSn, pseudoelastic alloys, stress-induced martensite, thermal effects 3—43821
$Cu_{0.46}Zr_{0.54}$, supercond. glossy, struct. relax., sp.ht. and X-ray diffr. meas. 3—22791
$Cu_{0.6}Zr_{0.4}$, amorphous and microcryst. powders, prep. by US gas atomisation 3—34258
$Cu_{0.6}Zr_{0.4}$, metallic glass, vibr. state density, neutron inelastic scatt. study 3—13385
$Cu_{1-x}Zr_x$ amorphous alloy, resistivity and thermopower 3—43151
$Cu_{1-x}Zr_x$, metallic glasses, elec. cond. meas. 3—47326
$Cu_{57}Zr_{43}$, amorphous, elec. resist., press. depend., 1.5 to 300K 3—33698
$Cu_{57}Zr_{43}$, amorphous, pre-yield microstrain, precision meas. 3—43913
$Cu_{60}Zr_{40}$, amorphous, acoustic low-temp. behaviour 3—3369
$Cu_{60}Zr_{40}$, amorphous, possible metallic glass-ceramic, crystn., effect of O doping 3—51498
$Cu_{60}Zr_{40}$ metallic glass, relax. under tensile stress, dilatometric meas. 3—53105
$Cu_{60}Zr_{40}$, supercond. disordered metal, low temp. elastic props., acoustic meas. 3—47052
Cu_xZr_{1-x}, amorphous, electronic struct., linear muffin-tin orbital method 3—23247
Cu_xZr_{100-x} amorphous alloys, ^{91}Zr and ^{63}Cu-NMR meas., short range order 3—3566
Cu_xZr_{100-x}, metallic glasses, electronic struct. 3—52017

copper alloys continued
Dy-Cu, amorphous, random anisotropy effects, sp. ht. and spontaneous magnetisation study 3—23623
Dy-Cu, phase diagram study *(Chinese)* 3—4004
Dy-Cu system, intermediate phase form., cryst. struct. and phase diagrams 3—22853
$DyCu_2$, Neel temp., magnetisation and RKKY model 3—52481
$DyNi_2Cu_2$, hyperfine interactions of ^{161}Dy and ^{57}Fe 3—13778
$Dy_xY_{1-x}Cu_2$, Neel temp., magnetisation and RKKY model 3—52481
$ErCu_2$, Neel temp., magnetisation and RKKY model 3—52481
Fe, cast, nodular, alloyed with Cu, Ni, and Mo, investment cast method *(French)* 3—43800
Fe-Cu, dil. alloys, electronic struct. 3—3104
Fe-Cu, dissolution in molten Al 3—29222
Fe-Cu bearing material containing $MnO.xP_2O_3$, sintered material prep., antifriction props. 3—58256
Fe-Cu-B amorphous systems, mag. permeability after-effect 3—28643
Fe-Mn-X, X=Ti, Cr, Co, Ni or Cu, phase equilibria in ternary Fe systems 3—58095
Fe-Mo-Cu-P, sintered, case carburising behaviour of P-containing compacts 3—53291
Fe-Ni-Cu-P, sintered, case carburising behaviour of P-containing compacts 3—53291
Fe-Si(Mn)(Cr)(Ni)(Cu)(C), reaction with molten Al, form. of alloy layers 3—29060
FeCu dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
$Gd(Al_{1-x}Cu_x)_2$, thermoelec. power, exchange interaction, partial wave expansion 3—3164
$Gd(Co,Cu)_5$, giant Barkhausen jumps and domain boundary displacement 3—23713
$GdCu_{1-x}Ga_x$, cryst. struct. transforms. and mag. ordering phenomena 3—38595
Hg-Ag-Cu-Sn-Zn dental alloy amalgams, in vitro corrosion 3—47992
$HoCu_2$, Neel temp., magnetisation and RKKY model 3—52481
$Ho(Cu_{1-x}Ni_x)_2$, mag. struct., neutron study 3—52388
La-Co-Cu-Mg permanent magnets, mag. props., composition depend. 3—8702
$La_{70}Cu_{30}$, amorphous, elec. and thermal cond., superconducting T_c 3—18680
$LaNi_5$-$LaCu_5$ system, phase equilib. and H absorpt. *(Chinese)* 3—53025
$LaNi_{5-x}Cu_x$ hydrides, bonding, rel. to H storage materials, photoemission and band struct. calc. studies 3—27889
Mg-Al(Ga)-Cu, phase diagrams and cryst. struct. 3—4011
$Mg_{80.4}Cu_{19.6}$, amorphous, quenched, electron transport props. 3—3153
$Mg_{85.5}Cu_{14.5}$, metallic glass, struct. factors, neutron and X-ray diffr. 3—46867
γ-Mn-Cu, antiferromagnetic, single-domain FCT, magnetic struct. and spin waves, neutron diffr. study 3—14002
γ-Mn-Cu, magnons, 100 to 520K, inelastic neutron scatt. study 3—52431
γ-MnCu, elastic anomalies near Neel temp. 3—51830
γ-$Mn_{0.82}Cu_{0.18}$, mag. excitations, inelastic neutron scatt. study 3—52430
NbTi-Cu coated with polyvinyl formvar film, heat transfer to liquid He 3—33825
NbTi-Cu-CuNi, superconducting composite magnet, AC losses 3—33842
NbTi-Cu-CuNi superconducting stranded cables stability in pulsed field obs., Tokamak reactor appl. 3—31830
Ni-Cu, ferromag., sp. ht., crit. exponent anal. 3—57614
Ni-Cu, ferromag., sp. ht., data anal. with correction terms 3—57615
Ni-Cu, ion irrad., subsurface composition changes at high temp. 3—2621
Ni-Cu, spin waves, neutron inelastic scatt. study 3—52429
Ni-Cu (35 wt.%), cyclic creep deform., effect of stress amplitude and friction stress *(Korean)* 3—39215
Ni-Cu alloys, spin wave stiffness const., RPA and cluster CPA studies 3—38605
Ni-Cu rough hot selective surfaces produced by electroless, electrolytic methods 3—19609
Ni-Cu-Pd spinodal alloy, superparamagnetic behaviour 3—52555
$Ni_{1-x}Cu_x$, high-field mag. susceptibility meas. 3—52416
$Ni_{40}Cu_{60}$, laser irrad., positron annihilation *(Russian)* 3—24049
$Ni_{71}Cu_4Sn_{25}$, martensitic and massive transforms. 3—43841
NiTiCu, martensitic, cold worked, mech. props. 3—39221
Pb-Cu-S, dil. soln. of S, thermodynamics 3—39095
Pd-Cu-H, solid soln., thermodynamics 3—47817
Pd-Cu-Si alloy, amorphous microindentation hardness, comparison of test methods 3—48000
Pd-Si-Cu glasses, US attenuation, amplitude depend. at low temps. 3—13347
$Pd_{1.4}Cu_{0.6}MnIn$, mag. moment meas. in paramagnetic phase 3—52358
$Pd_{78}Cu_6S_{16}$, serrated flow in amorphous alloys, model mechanics 3—39193
$Pd_{77.5}Cu_6Si_{16.5}$, amorphous alloys, stress relax. kinetics, effect of pre-annealing 3—24287
$Pd_{77.5}Cu_6Si_{16.5}$, amorphous, elec. resist., H doping effects 3—52107
$Pd_{77.5-x}Cu_6Si_{16.5}Fe_x$ amorphous alloy, hyperfine field distrib., Mossbauer spectra 3—43471
$(PdCuSi)_{90}M_{10}$, (M=Mn, Fe, Co), amorphous spin glass, evidence for existence of mag. two level system 3—47510
Pd_2Si-AlCuSi system, contact resist. behaviour rel. to VLSI technology 3—18784
$Pd_{0.775}Si_{0.165}Cu_{0.06}$, amorphous, thermal expansion, 1.5 to 350K 3—42818
$Pd_{80}Si_{20-x}Cu_x$, glass formability in Cu-Pd-Si system 3—34286
$PrCu_5$, enhanced nucl. ordering, neutron diffr. study 3—3416
$PrCu_5$, paramagnetic, cryst. elec. field, inelastic time-of-flight neutron spectra *(Russian)* 3—47475
Pt-Cu dilute alloy, neutron irrad. and annealed, recovery spectra, resistivity method 3—42676
Rh-Cu cluster struct., EXAFS study 3—37852
Sm-Co-Cu-Fe-Zr magnets, sintered, phase comp. and struct. 3—4043
Sm-Zr-Co-Cu-Fe-epoxy resin metalloplastic permanent magnets 3—3487
$Sm(Co, Cu, Fe, Ti)_7$ magnets, cryst. struct., polymorphism and hard mag. props. 3—51542
$Sm_2(Co, Cu, Fe, Zr)_{17}$ magnets having high intrinsic coercive force and maximum energy product 3—14088
$Sm(Co,Cu,Fe)_76$, permanent magnets, struct. phase transitions obs. during heat treatment *(Russian)* 3—33417
$Sm(Co,Fe,Cu,Hf)_{7.25}$ permanent mag., mag. domains 3—33921
$Sm_2(Co,Fe,Cu,Zr,Cr)_{14.8}$ permanent mag., ferromag. coercivity 3—33937
$Sm(Co,Fe,Cu,Zr)_{7.22}$ permanent mag., mag. domains 3—33921
$Sm(Co$-Cu-Fe-$Ti)_{6.8}$ sintered magnet, magnetisation reversal at very low temp. 3—52540
$SmCo_{3.5}Cu_{1.5}$, magnetisation reversal at very low temp. 3—52540

copper alloys continued
  $Sm_2Co_xCu_y$, exchange and hyperfine fields on dil. ^{153}Eu 3—52676
  Sn-Cu, amorphous, elec. props., effect of average electron conc. 3—43149
  Sn-Sb-Cu, Babbitt pin, sliding with steel ring, spherical wear particle formation 3—29195
  $TbAgCu_4$, mag. struct. study 3—23587
  $TbAgCu_4$, mag. susceptibility and magnetisation meas. 3—57552
  TbAuCu, mag. susceptibility and magnetisation meas. 3—57552
  $Tb(Cu_{1-x}Ni_x)_2$, mag. struct., neutron study 3—52388
  $Tb_{0.23}(Fe_{1-y}Cu_y)_{0.77}$, amorphous, mag. and magneto-optical props. 3—57897
  $Tb_xY_{1-x}Cu_2$, magnetisation and susceptibility meas. at low temps. 3—3486
  $Tb(Zn_{1-x}Cu_x)$, hyperfine interactions, ^{156}Gd TDPAC study 3—52681
  $Tb(Zn_{1-x}Cu_x)^{156}Gd$, hyperfine field of ^{156}Gd, γ-γ perturbed angular correlation study 3—14165
  Te-Sn(Pb)(Ge)(Cu), chalcogenide glasses, obtained by rapid cooling from liq., crystn., morphological aspects 3—7913
  Ti-Cu, amorphous, thermal stability, crystn. behaviour 3—46854
  $Ti-Ti_5Si_3-Ti_2Cu$ system, phase diagram construction 3—14570
  $Ti(Be_{1-x}Cu_x)_2$, g value, spin-flip relax., ESR study 3—14121
  $Ti_{1+x}Cr_{2-y}Mn_y$, hydrogen storage props. 3—48181
  W-Cu powder mixture, liquid phase sintering, article size effect 3—47800
  W-Cu-Si(Zr) pseudoalloy, fractographic study, Si and Zr effects 3—24358
  Y-Cu-Cd(Pr)(Eu), dilute amorphous alloy, crystal field, neutron diffr. study 3—23337
  $Y_2(Co, Fe, Cu)_{17}$, cryst. growth by Bridgman method 3—19263
  Zn-Al-Cu bearing alloys, creep behaviour 3—47907
  Zr-Cn, amorphous film, electronic density of states, superconducting props. 3—38281
  Zr-Cu-Gd, amorphous, mag. interactions, AC susceptibility meas. 3—23620
  $Zr_{1-x}Cu_x$, amorphous superconductor, upper critical fields 3—3393
  $Zr_{50}Cu_{50}$, amorphous, crystn. kinetics using US and microhardness meas. 3—7921
  $Zr_{50}Cu_{50}$, amorphous, elec. resist. meas., mag. interf. effect 3—43152
  $Zr_{70}Cu_{30}$, amorphous, elec. and thermal cond., superconducting T_c 3—18680
  $Zr_{70}Cu_{30}$, amorphous, elec. cond., Kondo-like model 3—18681
  $Zr_{70}Cu_{30}$, amorphous, phonon thermal cond. 3—57152
  Zr_8Cu_2, crystallisation, DSC, X-ray diffr. and Mossbauer studies 3—51494
  $ZrMn_2Co_{0.8}$, nonstoichiometric, unit cell dimensions and hydriding characts. 3—37859
  $ZrMn_2Cu_{0.8}$, hydride, calorimetric enthalpy of form., decomp., config. entropy 3—53442

copper compounds
  see also copper alloys
  bis-methylammonium copper (II) tetra(chloride bromide) mixed cryst., Cu nuclear spin Hamiltonian variations 3—52663
  bronze plate, plastic stress intensity factors for small scale yielding in antiplane shear by caustics 3—32680
  catena-hexane-dionebis (thiosemicarbon copper (II)), spin-Peierls transition, magnetisation and susceptibility meas. 3—23630
  chalcogenides, diffusion phenomena, mixed cation-electronic cond. 3—8242
  4-chloroanilinium copper chloride (bromide), phase transitions, ^{35}Cl NQR and mag. susceptibility study 3—47571
  copper manganese oxides, $ACu_3Mn_4O_{12}$, ferromag., synthesis and mag. characterization 3—14462
  Cu-Ca-S-Sn, solid-liquid equilibria, crystalline solids at liquidus surface 3—33404
  dibarium copper formate tetrahydrate, ligand field behaviour, EPR spectra 3—23789
  halide lasers, interpulse kinetics 3—37003
  halide solutions, emission spectra, base cations influence *(Russian)* 3—3817
  halide-PbI_2 film layer sensitivity during physical development *(Russian)* 3—54804
  halides, K absorption edge, electronic transitions 3—14389
  halides, strain derivatives of dielec. const., photoelastic behaviour and polarisation 3—34029
  phthalocyanine, binder resin system sensitised by poly-N-vinylcarbazole, photoconduction study 3—28390
  phthalocyanine oligomer, elec. resist., temp. depend., solvent washing effect, IR characts. 3—38382
  plancheite, absorption spectra of Cu^{2+} and EPR meas. 3—28875
  polyimide: Cu complex films, etching and elec. props. 3—57443
  porphyrins, ESR and opt. absorpt. obs. of homo and hetero dimers 3—47543
  rechargeable solid electrolyte cells with Cu ion conductor, $Rb_4Cu_{16}I_{7-\delta}Cl_{13+\delta}$ and TiS_2 cathode 3—34684
  shattuckite, absorption spectra of Cu^{2+} and EPR meas. 3—28875
  α-$ZrCu(PO_4)_2.4H_2O$, EXAFS, dehydration and calcination effects on bond lengths 3—8903
  β''-Al_2O_3-Na_2O-CuO, dopant effects on H_2O sorption, TGA and DTA study 3—8324
  $CaO-CuO-P_2O_5-CuI$ glasses, memory switching 3—43239
  $CdS:H(Zn)(In)-Cu_2S$ solar cell, role of impurities 3—44131
  CdS/Cu_2S solar cell arrays, test structures use in production, electrical parameters 3—24596
  $CdS-Cu_2S$ solar cells, mechanisms and fabrication research *(Chinese)* 3—14941
  $CdS-Cu_2S$ stable thin film solar cells fabrication by inhibiting vertical junction formation 3—53548
  $CdS-Cu_2S$ thin film photovoltaic cells 3—14957
  $CeCu_2Si_2$, heavy fermion supercond., crit. fields 3—13974
  $CeCu_2Si_2$, single cryst., supercond. obs. under high press. 3—38525
  $Co(NH_3)_6CuCl_5$, cryst. and mol. struct., single cryst. X-ray and neutron diffr. data 3—7977
  $CsCuCl_3$, EPR line broadening, cooperative Jahn-Teller effect 3—52610
  Cu $(CN_6)Fe_2O_4$, appl. to Cs removal from liquid waste 3—41135
  Cu (II) complexes, bis (ketone thiosemicarbazonato) chelates, mag. and spectrosc. obs. 3—50396
  Cu (I) 2-aminobenzothihazole complexes, conductometric and IR investig. 3—17284
  Cu complex, $(CH_3NH_3)_2Cu(Cl_{1-x}Br_x)_4$, nuclear spin Hamiltonian, NMR, hyperfine field *(Japanese)* 3—3560
  Cu complex, azurin problem, conformational heterogeneity of Cu binding site, fluorescence spectra 3—53626
  Cu complex, bis-(N-phenylsalicylaldiminato) Cu II, ESR obs. 3—47542

copper compounds continued
  Cu complex, bis(N,N′-dimethylethylenediamine) Cu II thiocyanate, polycryst., ESR studies 3—38682
  Cu complex, bis(N-2(hydroxyethyl)ethylenediamine) Cu II sulphate, polycryst., ESR studies 3—38682
  Cu complex, bis(N-methylethylenediamine) Cu II thiocyanate, polycryst., ESR studies 3—38682
  Cu complex, bis(acetylacetonato)Cu(II), gas phase mol. struct., electron diffr. obs. 3—36859
  Cu complex, bis(ethylenediamine)copper(II) thiocyanate, solid, mol. motion, PMR study 3—52635
  Cu complex, bis(salicylaldoximato)copper (II), double-quantum transitions in ENDOR induced by RF fields 3—50441
  Cu complex, β:bis(N-methyl salicylaldimine) copper (II), g-shift and exchange interaction, EPR study 3—52604
  Cu complex, Cu-phthalocyanine-iodine, ESR, dielec. function and elec. cond. 3—18980
  Cu complex, $Cu(2,2'$-bipyridene$)(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3—8656
  Cu complex, dichloroacrylonitrile copper (II), cryst. struct., X-ray anal. 3—33219
  Cu complex, hexakis pyridine-N-opxide copper(II), Jahn-Teller distorted, EPR studies 3—28694
  Cu complexes, $CuCl_2(\gamma$-picoline$)_2$ and $CuCl_3$(4-benzylpiperidinium), linear Heisenberg chains with alternating exchange, susceptibility and magnetisation study 3—23600
  Cu complexes, Cu(II) bis (ethyl- and phenylethylsalicylaldimine), magnetism and EPR 3—52602
  Cu complexes, in soln. and solid state, axial interactions, EPR study 3—57758
  Cu halide vapour lasers, output parameters, influence of electron heating during Cu recomb. 3—32352
  Cu I complexes, acetonitrile adducts, vibr., IR and Raman study 3—34112
  Cu I complexes, methacrylonitrile adducts, vibr., IR and Raman study 3—34113
  Cu II porphyrins, adduct form. reactions, ESR spectrosc. obs. 3—3517
  Cu^{2+}, spectral absorption, in $Li_2O(Na_2O)-K_2O-B_2O_3$, mixed alkali effect 3—47676
  Cu-histamine ternary complexes, stability consts. 3—9312
  Cu-Ni ferrites, phase transition and cond. mechanisms, DC resist. and thermopower meas. 3—13820
  Cu-S system, thermodynamic stability of Cu_2S, EMF meas. at 1000-1450K 3—24214
  Cu-Te, amorphous film, crystn., bending contours, electron microscopy study 3—2412
  $Cu_{1-x}Ag_xGaSe_2$, energy gap, lattice consts., and transmission spectra *(Korean)* 3—13721
  $Cu_3AsS_3(Se_3)$, magnetic susceptibility 3—57511
  $Cu_x(As_{0.4}Se_{0.6})_{100-x}$, amorphous, bonding of Cu impurity, EXAFS study 3—24055
  $Cu_3B_7O_{13}Cl$, low freq. dielec. relax. in paraelec. and ferroelec. phases 3—52716
  CuBr, exciton and biexciton states, mag. field effects, hyper-Raman scatt. study 3—57289
  CuBr, many-exciton systems, boson description 3—47274
  CuBr, phase factor in EXAFS 3—43662
  CuBr, phonon dispersion and density of state, bond-bending force model 3—18412
  CuBr, picosec. spectroscopy of excitonic mols. and electron-hole plasma 3—38908
  CuBr vapour laser, output power, service life 3—56237
  $CuBr_2$ aq. solns., vibr. dynamics, inelastic light scatt. study 3—3709
  $CuBr_2-MBr_2$ mixed electrolytes, (M=Sr, Zn), aqueous solns., local order and vibr. dynamics 3—47631
  CuCl, anomalous diamagnetism of charge transfer excitons 3—13742
  CuCl, anomalous wave interference at Z_3-exciton resonance 3—18624
  CuCl, band struct. and density of states, UV reflectivity study 3—43017
  CuCl, band struct. and optical props., angle-resolved secondary electron emission study 3—47743
  CuCl, biexciton lineshape, at low temp., Bose-Einstein statistics *(French)* 3—43579
  CuCl, elastic Debye temperature, elastic const. calc. 3—42740
  CuCl, elec. and optical props. at high press. and from 400°C to liq. N_2 temps. 3—13816
  CuCl, emission system in red region 3—55950
  CuCl, exciton polaritons in spatially dispersive region, two photon polarisation spectra 3—57955
  CuCl films, excitonic molecules, Bose-Einstein statistical props., optical study 3—52041
  CuCl, four-wave mixing, hyper Raman scatt. 3—22158
  CuCl, highly excited, picosec. time-resolved spectroscopy 3—38909
  CuCl, induced absorpt. spectra from excitonic polaritons, additional boundary conditions 3—43558
  CuCl, induced polariton branch, hyper-Raman scatt. study 3—57931
  CuCl, many-exciton systems, boson description 3—47274
  CuCl, phonon dispersion and density of state, bond-bending force model 3—18412
  CuCl, picosec. dynamics of excitonic polariton 3—38835
  CuCl, possible excitonic supercond. state, theoretical studies 3—38527
  CuCl pulsed high-gain laser oscillator and amplifier, high-resolution lineshape anal. 3—56173
  CuCl, quantum size effect in optical spectra 3—28877
  CuCl, reson. coherent scatt. from biexcitons, interference of 4-wave and 6-wave mixing 3—12219
  CuCl, valence band struct., angle-resolved UPS study 3—14431
  CuCl vaporisation rate, math. model, appl. to Cu_2S-CdS solar cell fabrication 3—51769
  CuCl vapour laser, sealed-off, with self-heated design *(Chinese)* 3—22108
  CuCl:N crystal, excitons bound to ionised donor-acceptor pairs, optical absorption 3—52810
  CuCl-CuI-RbCl system, highly disordered solid, thermoelec. power study 3—18510
  CuCl-KCl-LiCl, molten, excess free energy and activity coeffs., EMF meas. 3—42814
  $CuCl_2$ intercalated C fibres, metallic cond., air stability and mech. props. meas. 3—38363
  $CuCl_2$ intercalation cpd. with graphite, pitch-based fibre, elec. and mechanical props. 3—52106
  $CuCl_2$, quadratic antiferromag., mag. sp. ht. 3—23660
  $CuCl_2.2H_2O$, X-ray K-absorption edge study 3—19227

copper compounds continued
$CuCl_2.2H_2O(D_2O)$ antiferromag. single cryst., diagram of corresponding states 3–57610
$CuCo_2S_4$, mag. props. study 3–3425
$Cu_nCr^+_p$ clusters, secondary ionic emission study 3–46114
$CuCr_2O_4$, semicond., elec. cond. and phase transition 3–3192
$CuCr_2S_4(O_4)$, ESR line width and line broadening 3–33978
$CuCr_2Se_4-Cu_{0.5}M_{0.5}Cr_2Se_4$, (M=In, Ga), spin glass state suppression by indirect exchange 3–52498
$Cu_{2x}Cr_{2x}Sn_{2-2x}S_4$, spin-glass behaviours, antiferromagnetic frustrated lattice 3–43378
$CuCr_{2(1-x)}V_{2x}S_4$ solid soln., valence states of ions, NMR investig. 3–57792
CuF, electronic spectrum, rot. struct. 3–11785
CuF, excited states, spin-orbit interaction 3–11669
$CuFe_2O_4$ ferrite, mag. anisotropy, magnetisation and ferromag. resonance study 3–18883
$CuFe_2O_4$, Jahn-Teller struct. phase transition, ferromag. resonance and mag. study 3–18446
$Cu_{0.5}Fe_{2.5}O_4$-$ZnFe_2O_4$, initial permeability increase 3–14079
$CuFeO_2(AlO_2)(GaO_2)$, NQR studies 3–23834
$CuFeS_2$ crystal, electrochemically reacting, thin secondary product films, electron diffr. studies 3–4295
$Cu(GaCl_4)_2$, synthesis, Raman spectrum and crystal struct. *(French)* 3–22844
$CuGa_{0.7}In_{0.3}Se_2$-ZnSe heterojunction, electroluminesc. and I-V characteristics meas. 3–3821
$CuGa_xIn_{1-x}Se_2$ solid solns., optical absorpt. spectra in fundamental absorpt. band edge region 3–19153
$CuGaS_2$, CVT growth assisted by vapour-liq.-solid mechanism, surface microtopography 3–42551
$CuGaS_2$, Faraday effect in optically active crystals with birefringence inversion 3–38803
$CuGaSe_2$, CC thin films, flash evaporated, chem. comp., RBS study 3–47232
$CuGaSe_2$ crystals, bound exciton low-temp. luminesc. 3–14344
$CuGaSe_2$ films, epitaxial growth on GaAs and GaP {100}-oriented substrates, RHEED study 3–47233
$CuGaSe_2$, nonstiochiometry and elec. props. 3–47341
$CuGaTe_2$, CC thin films, flash evaporated, chem. comp., RBS study 3–47232
$Cu_2Ge_{1.55}Se_3$, superlattice struct., X-ray powder diffr. study 3–7979
CuH, one-electron studies, pseudopot. method 3–50297
$CuHf_2S_4$, mag. props. study 3–3425
Cu_2HgI_4, superionic conducting transition, sp. ht. study 3–2783
CuI, $E^1\Sigma$ state, mol. consts. calcs. 3–11776
CuI, phonon dispersion and density of state, bond-bending force model 3–18412
Cu(II) complex with 1-benzoyl-2-monothiobiuret, spectrophotometric study 3–41591
Cu(II) complexes, distorted tetrahedral, cryst. field theory and EPR parameters 3–18671
Cu(II) complexes with hexamethylenetetramine, ESR and photoacoust. spectrosc. obs. 3–21787
CuII compounds, EPR spectra for determ. of perpendicular mag. params. 3–23788
Cu(II)-tetracycline-amino acid mixed ligand complexes, polarographic obs. 3–53361
$Cu_{0.5}In_{0.5}Cr_2Se_4$, semicond., spin glass ordering obs. 3–18914
$CuIn_{1-x}Ga_xSe_2$, CC thin films, flash evaporated, chem. comp., RBS study 3–47232
$CuIn_{0.3}Ga_{0.7}SeTe$ solid solution, variable range hopping cond. 3–3189
$CuInS_2$, CVT growth, growth spiral characterisation by vapour-solid growth 3–42552
$CuInS_2$, CVT growth assisted by vapour-liq.-solid mechanism, surface microtopography 3–42551
$CuInS_2$, chem. comp. anal. 3–58465
$CuInS_2$ elemental composition determ. by chemical anal. method 3–29354
$CuInS_2$ films, prep. using mol. beam deposition and annealing two-stage process 3–24139
$CuInS_2$ thin film, prod. by spray pyrolysis, structural, optical and elec. props. 3–47244
$CuInS_2$, time varying temp. profile CVD growth methods 3–8948
$CuInS_2$ trace elements determ. 3–29355
$CuInS_2$:Fe, defect electron levels, elec. cond. and Mossbauer studies 3–52062
$CuInS_{2x}Se_{2(1-x)}$, solid solns. phonon energies, IR study 3–19127
$CuInS_{2x}Se_{2(1-x)}$, thermal cond., thermoelec. power and thermal expansion meas. 3–23111
$CuInSe_2$, band struct. calcs. 3–3027
$CuInSe_2$, CC thin films, flash evaporated, chem. comp., RBS study 3–47232
$CuInSe_2$, oxidation and oxide interface obs. using AES and XPS, comp. 3–14762
$CuInSe_2$, single cryst., elec. props. *(Korean)* 3–13838
$CuInSe_2$ single cryst., elec. resist. and Hall effect 3–57351
$CuInSe_2$ solar cells, thin film, review 3–44124
p-$CuInSe_2$ surface, clean and O contaminated, EELS studies 3–38976
$CuInSe_2$, thin film photovoltaic technologies, review 3–9441
$CuInSe_2$-ZnSe-In_2Se_3 system, phase diagram and phase structs. *(French)* 3–28079
$CuIn_{2.0}Se_{3.5}$, CC thin films, flash evaporated, chem. comp., RBS study 3–47232
$CuInTe_2$, CC thin films, flash evaporated, chem. comp., RBS study 3–47232
$CuInTe_2$, electron effective mass. carrier mobility anal. 3–43001
$CuInTe_2$, low energy electron loss peaks 3–3881
$CuInTe_2$, polycrystalline thin film, elec. transport props., H_2 effect, grain boundary scatt. 3–52282
$CuK_2(SO_4)_2$ $6H_2O$/liq. ^3He-^4He interface, mag. coupling at very low temps., thermal boundary resist. 3–57161
$Cu_{1-x}Li_{x/2}Al_{2+x/2}O_4$, solid soln. form., X-ray and elec. cond. studies 3–47116
$Cu_nMn_p{}^+$ clusters, secondary ionic emission study 3–46114
$Cu_{1-x}Mn_xFe_2O_4$, Mossbauer study in external mag. field 3–34014
$Cu_2Mo_3O_{10}+(1/2)O_2$, solid-state reaction kinetics and mechanism 3–19519
$Cu_xMo_6S_8$, supercon. transition temp. and upper critical field 3–8633
$Cu(NH_3)_4{}^{2+}$ complex, shock and thermally induced reactions, EPR study 3–24499

copper compounds continued
$Cu_2(NO_2)$, paramag., susceptibility, exchange interactions, extended Huckel calcs. 3–57515
$Cu(NO_3)_2.2.5$ H_2O, atlernating linear-chain antiferromag., specific heat and mag. props. meas. 3–33917
$Cu(NO_3)_2.2.5H_2O$, cryst. struct. and co-crystallisation 3–27881
$Cu_nNi_p{}^+$ clusters, secondary ionic emission study 3–46114
CuO anodised films, IR spectral absorptance and emittance, solar absorber appl. 3–53581
CuO, low energy electronic states, MC SCF and valence CI calcs. 3–21653
CuO, X-ray K-absorption edge study 3–19227
CuO-CaO-P_2O_5 glasses, annealing, effect on properties 3–39178
CuO-MnO-B_2O_3-K_2O glasses, Cu^{2+}-Mn^{2+} interaction, EPR and mag. susceptibility study 3–23792
CuO-P_2O_5 glasses, addition of $CuCl_2$ during prep. to control electrical conductivity 3–38120
CuO-PbO-TeO_2 glasses, mag. props. and EPR spectra 3–23603
Cu_2O crystals, spatial dispersion of light near the quadrupole absorpt. line 3–23912
Cu_2O, elec. cond., switching phenomena, temp. depend. 3–18709
Cu_2O, elec. field gradient at Cu position and electronic charge density anal. 3–43134
Cu_2O, excitonic absorpt. lines, isotopic shift 3–14328
Cu_2O giant cryst., laser assisted growth in oxidizing atmosphere 3–19265
Cu_2O, K absorption edge, electronic transitions 3–14389
Cu_2O, paraexciton, stress depend., luminescence study 3–47271
Cu_2O, resonant valence band satellites and polar fluctuations 3–14437
Cu_2O Schottky barrier solar cells, characterisation 3–39482
Cu_2O, Schottky solar cell, effects of electric annealing on photovoltaic props. *(Korean)* 3–39478
Cu_2O, thin epitaxial film growth and identification during Cu-Ni-Ti alloy TEM specimen prep. 3–29204
Cu_2O type crystalline systems, multiphonon selection rules 3–23001
Cu_2O-Al_2O_3-SiO_2-M_xO_y (M=Na, Ca, Fe, B, Ge, P) glass, thermal expansion, comp. depend. 3–42817
$Cu_2(OH)_3NO_3$, orthorhombic, cryst. struct. study 3–37865
Cu_3PS_4, vibrational spectra and DTA study *(German)* 3–43551
$CuRh_2S_4(Se_4)$, mag. props. study 3–3425
$CuRh_2Se_4$, selenospinel, mag. props. from liq. N_2 to room temp. *(Korean)* 3–3411
CuS, X-ray K-absorption edge study 3–19227
CuS_2, metallic electronic struct. calc. 3–18611
Cu_2S, free energy of form. meas. using $CuZr_2(PO_4)_3$ 3–42841
Cu_2S/(Zn,Cd)S heterojunction solar cells, chemiplated, comp. depth profiles meas. 3–53540
$Cu_2S/Cd_{1-x}Zn_xS$ solar cells prepared by solution reaction method, junction geometry 3–58505
Cu_2S/CdS solar cells, sintered, having spherical grain structure, experimental confirmation of theory 3–39481
Cu_2S/CdS solar cells prepared by solution reaction method, junction geometry 3–58505
Cu_2S-CdS, solar cells, dry form., X-ray diffr. obs. 3–48155
Cu_2S-CdS solar cell fabrication, Cu_2S film CVD on moving CdS substrate 3–51769
Cu_2S-CdS solar cells, electrochem. prep. and conditioning of Cu_2S 3–53553
Cu_2S-CdS system, phase diagram 3–58107
Cu_2S-Ni_3S_2 system, molten, thermodynamic quantities, meas. using thermal anal. *(Japanese)* 3–29069
Cu_2S-PbI_2 system sensitometric characts. in case of physical development in negative photographic process *(Russian)* 3–54793
Cu_2S-$Zn_xCd_{1-x}S$ heterojunctions electrical and photoelectric properties, application in solar cells 3–43269
(Cu_2S+Au)-PbI_2 system sensitometric characts. in case of physical development in negative photographic process *(Russian)* 3–54793
Cu_xS, elec. cond. and chem. diffusion coeff., rel. to stoichiometric changes, solar cell appls. 3–52159
Cu_xS, evaporated films, effect of thermal treatment on optical and elec. props. 3–38503
Cu_xS film, evaporated, optical absorpt. behaviour 3–14376
Cu_xS, integral area AES meas., quantitative comparison with XPS studies 3–14403
Cu_xS thin film solar cells prep. by electroconversion of CdS 3–4294
Cu_xS thin films, transport props., heat treatments effects 3–38502
Cu_xS thin layers, specific contact resist. and noise calc. 3–23467
Cu_xS-$Cd_{1-y}Zn_yS$-CdS evaporated thin film solar cells 3–53550
Cu_xS-CdS heterojunctions, evaporation and sputtering prep., solar cell characts. 3–53551
Cu_xS-CdS solar cell, heat treatment effects 3–39475
Cu_xS-CdS solar cells, assessment using cathodoluminesc. 3–58527
Cu_xS-metal contacts, I-V characts., rel. to solar cell appls. 3–52159
CuSCN, insulator to semicond. transition, press. induced 3–28396
$CuSO_4$ aqueous ionic solns., 1/f cond. fluctuations 3–28132
$CuSO_4.5H_2O$, proton relax. and spin dynamics 3–14069
$CuSO_4.5H_2O$, X-ray K-absorption edge study 3–19227
Cu_2S-Zn $Cd_{1-x}S$ solar cells, prod. by deposition from H_2 stream 3–29388
$Cu_3SbS_3(Se_3)$, magnetic susceptibility 3–57511
Cu_2Se, thin film photovoltaic technologies, review 3–9441
Cu_2Se-Cu_2Te-Si junctions, photovoltaic props., solar cell appls. 3–53514
$Cu_{2-x}Se$, superionic, dilatometric anisotropy thermal dilation meas. 3–2853
$CuSeO_4.5H_2O$, proton relax. and spin dynamics 3–14069
$Cu_{2-x}Te$ systems, thin films by vapour phase epitaxial growth, superstruct., electron diffr. technique 3–8349
$Cu_{2-x}Te$-CdS heterojunctions preparation by electrochemical treatment of polycrystalline CdS, for solar cells 3–43270
CuTeBr, ionic conductivity, rel. to cryst. struct. 3–2877
CuTeBr, ionic conductor, phase transitions and phase diagram 3–38049
$CuTi_2S_4$, mag. props. study 3–3425
$Cu_{0.4}V_2O_5$, quasi 1-D conductor, bipolaronic state of V^{4+} ion pair, NMR study 3–57294
CuV_2S_4, mag. props. study 3–3425
Cu_3VS_4 formation by peritectic reaction, microhardness 3–58041
$Cu_xZn_{1-x}Cr_2Se_4$ $(0\leq x\leq 0.1)$, mag. props., phase transition, mag. struct., neutron powder diffr. study 3–38596
$Cu_xZn_{1-x}Fe_2O_4$, cation distrib., magnetisation, elec. switching 3–38648
$Cu_{0.9}Zn_{0.1}SiF_6.6H_2O$, phase transition, effects of heating *(Russian)* 3–18454

copper compounds continued
$CuZrF_6$, phase transitions, Mossbauer and EPR study of Jahn-Teller distortions 3—47101
$CuZr(PO_4)_2$, bond lengths, EXAFS 3—8903
$CuZr_2(PO_4)_3$, prep., ionic cond., and lattice parameters 3—42841
$CuZr_2S_4$, mag. props. study 3—3425
Cu(II) complexes, porphyrin aggregates, solutions, ESR, luminesc. and visible spectra 3—43585
$Cu_{15}[(B_2O_5)_2|(BO_3)_6|O_2]$, cryst. struct. determ. 3—22831
$Fe_{0.3}Cu_{0.7}Cr_2S_4$, mag. semicond., mag. props. and cryst. struct. 3—14018
$Fe_xCu_{1-x}Rh_2Se_+$, crystallographic transition from spinel to monoclinic struct. *(Korean)* 3—38050
GeTe-Cu_2Te, solid soln. form., X-ray diffr. and XPS investig. 3—57092
InSe-$CuInSe_2$ isotypic n-n heterojunctions, elec. and photoelec. props. 3—3309
K_2CuF_4:Zn^{2+}, hyperfine interactions 3—19015
$K_2Cu_xMn_{1-x}F_4$, two-dimensional random system, EPR study 3—52612
$K_2Cu_xZn_{1-x}F_4$, two-dimensional random system, EPR study 3—52612
$NaCa_2Cu_xZn_{2-x}V_3O_{12}$, garnet, Jahn-Teller effect, X-ray diffr. and Young's moduli meas. 3—18672
β''-Na_2O-Al_2O_3-CuO, ionic cond., doping effects 3—42834
Ni-Cu-Co ferrite, magnetoelastic surface wave vel. 3—18968
Ni-Cu-Zn(-Co) ferrites, particle accelerator appls. 3—11595
Ni-Mn-Co-Cu ferrites, piezomag., mag. hysteresis of elastic moduli and internal friction 3—14106
$Ni_{1-x}Cu_xFe_2O_4$, lattice vibr. freq., Jahn-Teller distortion, IR spectra study 3—28066
$Rb_4Cu_{16}I_7Cl_{13}$, ionic conduction under press. *(Chinese)* 3—2878
Ti-Cu hydrides, amorphous, proton NMR study of H diffusion and electronic struct. 3—34003
Ti-Cu hydrides, proton NMR study of H diffusion and electronic struct. 3—34003
Yb_2O_3-Cr_2O_3-CuO, phase diagrams, X-ray diffr. study 3—2745
Yb_2O_3-Ga_2O_3-CuO, phase diagrams, X-ray diffr. study 3—2745
$Zn_xCu_{0.1}Fe_{2.9-x}O_4$, ferrite, mag. relaxation, Mossbauer spectroscopy study 3—14184
ZnS-Cu:Sm(Eu)(Pb)(Tm), bulk electroluminesc. intensity, temp. depend. 3—19202

copper zinc alloys *see brass*

copying *see reproduction (copying)*

Corbino effect
see also Hall effect
polyacetylene:I, magnetoresist. and Corbino resist. 3—57371
Ge, electron-hole plasma drift in inhomogeneous mag. field 3—18734

core levels *see localised electron states*

core stores (magnetic) *see magnetic core stores*

Coriolis force
see also rotation
equatorial atmosphere, effect of Earth's rotation on westward air flow in central Pacific 3—10044
atmospheric radiowave interference, space-time vel. distrib. of tidal motions including Coriolis force *(Russian)* 3—44531
benzene, sub-Doppler high-resolution spectra, anomalous obs. in channel three region 3—46039
electric dipole moment derivatives, relative signs, Coriolis perturbations analysis 3—50366
linear XYZ-type mols., mol. consts. calcs. 3—45918
methyl chloride, Coriolis reson. combination bands, IR obs. 3—17272
methylgermane-$d_0(-d_3)$, IR and Raman vibr. spectra 3—6652
prismatic tube laminar flow, Coriolis factor and max. partial-average velocity ratio *(Russian)* 3—42307
solar convection zone, Coriolis force rel. to mag. flux storage in overshoot layer 3—5244
student presentations at elementary level, simple problem 3—44947
trifluoromethyl radical, ν_3 band, IR diode laser spectrosc. 3—55935
X_3SiNCY molecular types, vibr. anal. 3—50362
DO_2, LMR spectra tuned by Coriolis-induced avoidance of Zeeman level crossings 3—1394
$GeXH_3(D_3)$, X=F, Cl, Br, I, vibr. anal., kinetic consts. method 3—36737
HCO, electronically excited state mol. consts. 3—45823
H_2Ne, vibr.-rot. spectrum, ab initio calcs., close-coupling approach 3—17260
He, liq., transient fluid behaviour in rotating frames at high tip speeds, thermometer development 3—40609
KCN, vibr.-rot. spectrum, ab initio calcs., close-coupling approach 3—17260
$^{28}SiF_4$, pot. consts. and IR spectrum 3—11794

cornea *see eye*

corona
see also electric breakdown; flashover; solar corona
acoustic pulses due to corona discharge on a metallic protrusion 3—42476
air, corona discharge study, electrostatic precipitators positive polarity operation 3—27784
air, dry and moist, positive switching impulse breakdown of sphere-plane gap 3—7840
air, laboratory, wind-blown positive corona development in point-plane gap 3—27790
air, positive corona current, DC and pulse components, interacting needles-to-plane discharge 3—7834
air, pulseless corona, space charge field and pot. distrib. for coaxial cylinders 3—33000
air coronas, medium press., low energy ion extraction and mass spectroscopic anal. 3—7833
air gap, corona inception and breakdown in nonuniform field with insulating support 3—27785
anomalous absorption and fast particles generation in laser-plasma interaction experiments at wavelength of 0.53 μm and 1.06 μm 3—22674
DC line-to-plate gap with DC high voltage, electric field and ion current profile obs. 3—51406
digital processing of switching surge impulse corona discharge 3—42477
dispersed plasma corona, laser radiation nonlinear absorpt. 3—7712
effect of recombination on ion density in alternating current corona discharge 3—7817
effectiveness of breakdown of negative ions in sheath of avalanche corona discharge 3—7816
electric breakdown in gases, space charge effects 3—17995
electric breakdown of gases, corona and space charges occurrence 3—27642

corona continued
electrostatic field computation, effect of grounded enclosure on the field distribution of rod-plane gaps 3—13016
electrostatic precipitators, current density meas. 3—27783
electrostatic separator for corona research 3—7843
heat transfer from a horizontal fine wire and cylinders in a corona wind 3—18147
influence of humidity on variation of ion mobility with life time in atmospheric air 3—56766
insulator charging phenomena in air under nonuniform fields with DC voltages 3—19055
large sphere-gaps in air, particulate matter influence on DC breakdown 3—7841
laser plasma corona hydrodynamics influence of radiative losses 3—32938
laser radiation interaction efficiency with corona 3—22591
metal body in aerosol flow with solid disperse phase, electrification in presence of corona discharge 3—56114
pion-acoustic instability of reversed current in target plasma corona *(Russian)* 3—22654
polymer powder layers, corona charge decay, model for electrophotographic plates 3—8561
positive corona and atm. negative ion density under repetitive impulse conditions 3—27788
positive corona discharge, ionizing and conducting regions, equivalent differential resist. calc. 3—51421
positive corona discharge, primary streamer location 3—27787
power overhead transmission line space charge model for study of corona during surges 3—33008
probe meas. methods 3—51379
rail gap switches, triggered by UV radiation from corona discharge 3—7852
spherical target, H^+ bombardment, plasma corona prod. and heating 3—2249
steam, corona discharge, expt. study 3—22734
Trichel type discharges in gases, simple theory, stepped-leader phenomena appl. 3—2326
Xerographic copier, corona caused by superimposed AC and DC voltage 3—25982
CO corona discharge, chemical reactions 3—42463
H^+ beam heating and corona dynamics 3—22662
O_3 production, influence of nature of electrode material 3—9358
SF_6, corona-induced decomposition, neutral decomp. product anal. by gas chromatograph mass spectrometer 3—13015
SF_6 gas, corona and breakdown in coaxial-electrode geometry 3—7832
SF_6 gas, DC breakdown voltage and current press. dependence 3—7835
SF_6 gas electrical breakdown phenomena in non-uniform fields, application in gas blast circuit breakers 3—37717
SF_6, impulse breakdown strengths, HV insulation systems 3—7838
SF_6/N_2 binary mixtures, impulse breakdown strengths, HV insulation systems 3—7838
SF_6/N_2 gas mixtures, corona and breakdown in coaxial-electrode geometry 3—7832
SF_6/N_2 mixtures under impulse conditions, corona stabilization, optical multichannel anal. 3—7831
SF_6/N_2/perfluorocarbon ternary mixtures, impulse breakdown strengths, HV insulation systems 3—7838

coronagraphs
see also solar corona
focal-plane coronagraph, appl. to imaging of Uranus and Neptune 3—5222
historical aspects 3—30339
large telescopes coronographic mode 3—30187
UV obs., Shuttle contamination effects determ. 3—10210

corpuscular streams *see cosmic rays; solar wind*

correlation methods
see also correlators
aerosol inhomogeneity sounding, correlation anal. applicability *(Russian)* 3—44557
atmosphere circulation, power spectra and autocorrel. functions for geopotential climatology of 500 mb surface *(German)* 3—35237
digital polar correlation meas. system for distance and flow transducers *(Chinese)* 3—45124
dual-wavelength correlation meas. with airborne pulsed CO_2 lidar system 3—35300
electrooptic grating array uses, integrated optical light modulator 3—17639
flow detection, US correlation system evaluation 3—29228
galaxies clustering, effects of variable obscuration in Galaxy on observed autocorel. function 3—30508
galaxy distribution, correl. functions rel. to gravitational evolution of struct. in scale-free universe 3—16047
heart left ventricular wall motion assessment, cross correlation technique 3—53797
intensity correlation techniques for passive optical device detection 3—6889
Maximum Entropy Spectral Analysis, characteristic correl. time as estimate of optimum filter length 3—39909
measurement techniques for collection of system functions in time range *(German)* 3—25844
molecular fluorescence, cross-correl. analysis for spectra identification 3—53458
NDT by optical correlation 3—48028
noncontacting level meas. of irregular surfaces, using coded ultrasound, comments 3—20826
noncontacting level meas. of irregular surfaces, using coded ultrasound, reply to comments 3—20827
optical biasing on quasi-interferometry with coded correlation filtering 3—12078
optical fields in optoacoustic interaction, correl. anal. 3—50628
optimal image filtering problems, correlation response parameters 3—36950
photoacoustic spectroscopy 3—16418
real time image registration based on the Cauchy-Schwarz inequality 3—6914
solar astronomy, correlation tracking method for improvement of imaging quality of ground-based solar telescopes 3—54250
spaceborne SAR signals modelling and correlation algorithms 3—35285
synchronous luminesc. spectroscopy, correl. techniques for scan param. selection 3—49465

correlation methods continued
transit time flowmeter, using direct and cross-correlation methods 3—56635
underwater sound, meas. of acoustic correl. in ocean with high frequency echo-sounder 3—48568
US correlation system, optimal operation 3—56403

correlation theory
see also correlators; information theory
acoustic waveguide with statistically rough wall, correl. characts. 3—37276
fibre optic pulse compression concept for processing wide bandwidth radar signals 3—26958
mutual correlation functions, refinement of statistical meas. error formula 3—45104
random process correlation functions, errors in determ. of derivatives *(Russian)* 3—10789
speckle translational and boiling motion, correlation distance 3—26942
stationary processes, laws of distrib. of evaluations of correl. functions *(Russian)* 3—49150
velocity meas. by cross correlation method, time delay estimation and filtering 3—5773

correlators
see also correlation methods; correlation theory; information theory
acoustooptic correlators, time integrating, fine delay estimation 3—12079
analogue-pulse correlator, multichannel, for correl. spectroscopy of liq. cryst. 3—406
autocorrelator, rapid-scanning, oxazine 1 dye laser pulse rapid time monitoring appls. 3—54764
coherence requirement for partially coherent correlation detection 3—26957
coherent optical correlator, light utilisation 3—32445
data processing using the two beams of an interference correlator 3—6907
digital holographic filters to optimise methods for coherent-optical pattern recognition 3—36966
distortion-free real-time optical pulse correlator for ultrashort pulse anal. 3—16396
holographic and refractive optical elements, equivalence *(Russian)* 3—41785
modulo-2 filter for ^{226}Ra identification and assay 3—41453
multiple filter storage for optical correlators 3—17606
multiplex holographic filtering through contact screens 3—17466
optical, effect of injection laser radiation spectral characts. on output signal form *(Russian)* 3—41770
optical, using injection laser, radiation coherence effect on output signal shape *(Russian)* 3—41769
optical correlators, incoherent, for automated alignment using registration fiducials 3—5776
optical matched spatial filter correlator, image quality effects 3—1749
photon counter-correlator to illustrate light statistics funds. 3—5549
RF electronic signal processing appl. of four-wave acoustoelectronic interactions 3—23443
UV laser beam, picosecond pulsewidths meas. using electrical autocorrelator 3—41894
video-image real time correlator *(French)* 3—50626

correspondence principle
spinor field, correspondence rule with fermions on coherent Bose domains 3—45270
Weyl correspondence rule, positive quantum joint distribs. in phase space 3—40399

corrosion
see also corrosion protection; corrosion testing; electrochemistry; stress corrosion cracking; surface chemistry
alkaline solutions, Pt catalyst corrosion 3—24401
borosilicate nuclear waste glass, corrosion, Rutherford backscatt. study 3—43974
brass, corrosion in 1% H_2SO_4, effect of pyridine and its derivatives 3—39278
α-brass, corrosion rate in aerated or oxygenated H_2SO_4 3—19445
α-brass, dealloying in aq. electrolytes, As addition effects 3—9229
brass, dezincification and inhibitive efficiency of some azoles rel. to corrosion in H_2SO_4 3—14771
brass, dezincification in conc. NH_3 3—9218
brass, electrodeposited and cast, containing 1-4% Sn, Mossbauer study of composition and corrosion behaviour 3—4205
α-brass, oxidation and dezincification, ESCA study 3—14897
BWR fuel channel lifetime, limiting factors 3—6374
cathode modified, corrosion and passivity 3—9253
ceramics, corrosion resistant materials, prep. and characts. *(French)* 3—53008
corrosivity measurement for high temp. water in fission reactors 3—50011
electrochemistry, conf., Detroit, USA, 1982, Oct. 3—30561
fracture, description using logistic eqn. 3—29184
glass, chem. durability 3—34511
glass 3—13462
grain boundary corrosion, initiation processes and testing 3—47978
Incoloy 800, intergranular corrosion, Strauss test, electrochemical potentiokinetic reactivation and magnetic permeability meas. 3—39275
Inconel 600, intergranular attack in lab. and in steam generators 3—53262
IR photothermal deflection spectroscopy for surface studies 3—10923
Japan material testing reactor, water loop, corrosion product deposition 3—41177
metal, classification and coating 3—47983
metallic materials qualification for appl. in advanced HTGR 3—898
metals, corrosion embrittlement in gaseous medium, influence of mass and heat transfer 3—29218
metals, ion implantation-modified, mech. props., Dept. of Defence appl. 3—2589
metals, ion implanted or laser irrad., corrosion and electrochemical behaviour 3—29215
metals and alloys, morphology of corrosion scales, rel. to non-equilibrium phenomena *(French)* 3—4181
minerals, refractive index meas., scaling and corrosion products 3—24461
nuclear waste glass, durability, inhibition of leaching by chemisorption 3—6317
open-cycle, coal-fired, MHD, steam plant development, aspects 3—29421
optical glass, integral antireflective surface production 3—7251
passive metal, surface, pitting developments kinetics 3—9243
prediction using EMF-pH diagrams 3—58276

corrosion continued
PWR boilers, corrosion removal from boiler secondary, electrochemical meas., Fe ions behaviour 3—50006
PWR fuel rods, corrosion behaviour obs. and anal. 3—31590
PWR secondary systems, O_2 induced corrosion, minimisation by design of balance-of-plant systems and components, in USSR 3—11372
PWR secondary water chemistry guidelines for corrosion reduction in steam plant 3—45633
rate meas. and calc., error limits and transport effects 3—43968
SEM fractography, preservation and cleaning of fractures 3—14826
slagging MHD generators, electrochemical charact. 3—29427
steatite ceramics, microstruct. and deterioration 3—53254
steel, atm. corrosion, Mossbauer study 3—19444
steel, austenitic, thermodynamic properties rel. to corrosion 3—2851
steel, austenitic stainless, carburisation during oil quenching, method of prevention *(Japanese)* 3—29211
steel, austenitic stainless, containing stress-induced martensite, corrosion by hydrogenation *(Japanese)* 3—24400
steel, austenitic stainless, corrosion by Cr+Li_3N reaction, X-ray powder diffr. study 3—58289
steel, austenitic stainless, corrosion in H_2-H_2O-H_2S gas mixtures, study at constant temp. and fixed O_2 potential 3—53279
steel, austenitic stainless, corrosion resist. and mech. props., influence of Mn:Ni ratio 3—9244
steel, austenitic stainless, corrosion resistance, after high temp. thermomech. working 3—29219
steel, austenitic stainless, crevice corrosion in sea water service conditions *(Japanese)* 3—58295
steel, austenitic stainless, cyclic recrystallisation after deformation 3—29101
steel, austenitic stainless, sintered powder metallurgy, corrosion resistance, methods of improvement 3—9213
steel, austenitic stainless, Ti, pitting during anodic polarisation in methanolic-H_2O solns. 3—19446
steel, austenitic stainless, type 10Kh18N9, strength, creep and heat resistance in alkali liquid Na 3—14673
steel, austenitic stainless, type 304, review of intergranular corrosion 3—14772
steel, austenitic stainless, unstressed, erosion or penetration by molten Zn, Zn vapour or ZnO 3—39295
steel, austenitic stainless 18-10, corrosion resistance, P content effect *(French)* 3—47988
steel, CC Mn, hydrogen absorption and evolution in acidified NaCl soln. 3—53266
steel, constructional, corrosion and low-cycle corrosion fatigue resist., boric regulation influence 3—58305
steel, galvanic corrosion in NaCl soln. 3—39291
steel, galvanised sheet and tinplate, passivation study by SIMS, AES and XPS *(French)* 3—9248
steel, grain boundary segregation of P, intergranular embrittlement, alloying element effect 3—58247
steel, haematite particle adhesion and removal at 22 and 210°C 3—39288
steel, impact loading, specimen size factor in surface active media 3—29255
steel, low alloy, caustic cracking and local corrosion, thermodynamics 3—29217
steel, mild, anodic protection in HNO_3 3—53263
steel, mild, coated, simulated underfilm corrosion using artificial blister 3—53270
steel, mild, corrosion, effect of hydrolysis of elemental S in water 3—14769
steel, mild, corrosion in acid medium, Mossbauer study 3—24408
steel, mild, dissolution inhibition by halide ions in H_2SO_4 3—39285
steel, stainless, Al rich coating, high temp. corrosion under S_2/SO_2 atm. *(French)* 3—58299
steel, stainless, corrosion and pitting in dil. acidic geothermal brines, goethermal power plant appl. *(Japanese)* 3—47987
steel, stainless, corrosion resist. and mech. props., effect of Cr substitution 3—24402
steel, stainless, corrosivity of elastomeric cmpds., quantitative eval. 3—24395
steel, stainless, crevice corrosion by rubber sealing materials, prevention by Zn filler *(Japanese)* 3—58296
steel, stainless, duplex 329, corrosion resistance, effect of heat treatment between 400 to 700°C 3—39276
steel, stainless, forgings of 03Kh12K12D2-VD, mag. and mech. props. 3—29129
steel, stainless, hot vacuum pressed powder, corrosion reistance, mech. props. 3—47802
steel, stainless, type 316, salt uptake from high press. superheated steam, radiotracer obs. 3—34522
steel, stainless, type (G)X-5 CrNiMo 16 5, casting and forging, props. and possible appls. *(German)* 3—47873
steel, stainless, weld joints, corrosion damage in seawater 3—58309
steel, stainless martensite-austenitic, corrosion electrochem. props., potential polarisation evaluation method *(Czech)* 3—58298
steel lower strength, fatigue crack propag., near threshold and higher growth rates, environmentally influenced 3—24350
steels, resistant to H_2S cracking, influence of Si alloying additions 3—29183
three-point method for evaluating corrosion current and Tafel slopes from a single polarization curve 3—39263
transition metal silicide powder reaction with liq. corrosive media, chem. props. and decomp. 3—24381
transition metals and alloys, electrodeposited, corrosion-electrochem. behaviour, effect of non-metallic inclusions *(Russian)* 3—4189
^{60}-containing alloys in LWRs, fast neutron activation anal. 3—6362
Ag solar reflectors made from metallo-organic resinatres, accelerated corrosion tests 3—17601
Al alloy, high-strength V95 sheet, struct., fracture and mech. props. w.r.t. impurity content 3—58233
Al alloys, corrosion characteristics in HNO_3 3—9223
Al alloys, corrosion rate and H evolution in reactor containment spray solutions 3—34526
Al alloys, microbial corrosion mechanism 3—39290
Al, corrosion in saturated $Ca(OH)_2$ soln. containing NaCl *(Japanese)* 3—58297
Al, corrosion rate rel. to surface coverge and tunnelling spectra of organic inhibitors 3—14765
Al, film form. in aq. soln., Rutherford backscattering spectroscopy study 3—9219

- **corrosion** continued
  - Al foil in NaCl solutions, pitting corrosion effect investigation *(Polish)* 3—47990
  - Al, oxidation by water, evidence for mol. intermediate, X-ray and UV photoelectron spectroscopy 3—19452
  - Al-Al_2O_3, powder metallurgy, prep. and props. 3—34260
  - Al-Cu-Co, sintered, struct. and mech. props., effect of rapid cooling on crystn. 3—34259
  - Al-Mg, struct., plastic deformation and corrosion resistance *(Russian)* 3—24292
  - Al-Mg (2.6 wt.%), mech. strength, corrosion resist. optimisation, Cr and Si additions effect 3—43998
  - Al-Mn alloys, intergranular corrosion mechanism *(Japanese)* 3—9235
  - Al-Ni-Fe-Ti, oxide phase hardened, heat and corrosion resist. 3—34543
  - Al-Zn-Mg, single crysts., environmentally assisted cracking 3—4105
  - Al-Zn-Mg-Cu, pressed semifinished products, softening schedules for ageing 3—34365
  - Al-Zn-Mg-Cu special purity high-strength alloy for forgings, props. 3—34401
  - Al-Zn-Mg-Cu-Zr plates, Zr effect on mech. and corrosion props. 3—34402
  - AlN, reactions with liq. Ni alloys 3—24383
  - Al_2O_3-MgO spinel based refractory, prep. and props. 3—29041
  - B fibres, bare and SiC coated, mech. props. temp. depend. 3—34408
  - BaO-Na_2O-SiO_2 glass, hydrated, microstruct., small angle X-ray scatt. study 3—53253
  - BaO-SiO_2-TiO_2 glass fibres, alkaline durability *(Japanese)* 3—4175
  - BaO-TiO_2-SiO_2 glasses, alkaline durability 3—34513
  - $CdIn_2S_4$, photoelectrochemistry 3—24613
  - Co, corrosion product morphology, formed in Ar-O_2-Cl_2 atmos. 3—4200
  - Co, sulphidation-oxidation, reaction between metal and sulphate 3—14776
  - Co-base alloys, low temp. hot corrosion, reaction mechanism 3—14774
  - Co-base superalloy, gas turbine alloys, corrosion rel. to electrode pot. 3—53289
  - Co-Cr(-Al), low temp. hot corrosion, morphology of reaction product 3—14773
  - Co-Si, cyclic voltammetric studies 3—39277
  - ^{59}Co-containing alloys in LWRs, fast neutron activation anal. 3—6362
  - ^{60}Co radioactive corrosion product in BWRs, adsorption by TiO_2 3—6361
  - Cr, corrosion in HCl and HCl-O_2 at high temp. 3—39284
  - Cr-Al, low temp. hot corrosion, morphology of reaction product 3—14773
  - Cr-W(Mo)(Fe), amorphous electrodeposited, corrosion resist. *(Japanese)* 3—24399
  - Cu, polycrystalline, oxidation, ESCA study 3—14897
  - Cu-Ni, accelerated corrosion in sulphide polluted seawater 3—43980
  - Cu-Ni-Fe, corrosion product film form., temp. effects, corrosion in well aerated seawater 3—39273
  - Cu-Si (0.8 to 10.9 wt.%), sulphidisation in liq. S, reaction rate *(Hungarian)* 3—58268
  - $Cu_{98}Be_2$, thermal degration, preferential surface migration, ESCA study 3—14897
  - Fe, corrosion behaviour, H evolution reaction in nonaqueous formic acid 3—19447
  - Fe powder, electrodeposited, oxidation processes during prep., washing and drying 3—47991
  - Fe, salt film form. during passivation in acid solns. 3—24389
  - Fe surfaces, corrosion processes Mossbauer spectroscopy study 3—4177
  - Fe-Al-(Cr), aqu. corrosion props. 3—39303
  - Fe-Cr (7-24 wt.%), electrochem. behaviour rel. to pitting corrosion 3—24397
  - Fe-Cr alloys, sulphidation in H_2S-H_2 atmos. at 1073K 3—4195
  - Fe-Cr-Al, sulphidation in H_2S, morphology of corrosion scales, rel. to non-equilibrium phenomena *(French)* 3—4181
  - Fe-Ni alloys, corrosion behaviour in HCl and HCl-O_2 gas mixtures 3—29220
  - Fe-Ni-Cr, Alloy 600, crevice corrosion at 288°C, pot./pH meas. 3—24391
  - Fe-Si, cyclic voltammetric studies 3—39277
  - GaAs, surface and redox reactions in various electrolytes 3—52245
  - Hg-Ag-Cu-Sn-Zn dental alloy amalgams, in vitro corrosion 3—47992
  - Li_2O-2SiO_2, glass and glass ceramic, aqueous durability 3—34499
  - Mg-Li and Mg-Li-Al alloy, anode constitution and fabrication for use in primary batteries 3—29029
  - Mo, corrosion high temperature behaviour in humid H_2 atmosphere *(German)* 3—58283
  - $MoSi_2$-Y_2O_3 granular laminar composite material in fuel slag, corrosion stability 3—4156
  - Na_2O-SiO_2 glass, hydrated, microstruct., small angle X-ray scatt. study 3—53253
  - Na_2O-SiO_2-MgO(CaO)(SrO)(PbO)(BaO)(ZnO), glasses, chem. durability in water 3—9205
  - Na_2O-ZnO-B_2O_3-SiO_2 glass, surface layer form. during aq. attack 3—43975
  - $NbMo_2Zr$, intermetallide strengthening effects on corrosion 3—53276
  - NbW_2Zr, intermetallide strengthening effects on corrosion 3—53276
  - Ni alloys, thermodynamic properties rel. to corrosion 3—2851
  - Ni, corrosion behaviour in HCl and HCl/O_2 gas mixture, 400-700°C 3—4183
  - Ni, corrosion product morphology, formed in Ar-O_2-Cl_2 atmos. 3—4200
  - Ni, electrochem. meas. of H transport, Joule heating effect 3—9240
  - Ni, electrochem. meas. of H transport, Joule heating effect 3—9241
  - Ni, sulphidation-oxidation, reaction between metal and sulphate 3—14776
  - Ni-base superalloy, gas turbine alloys, corrosion rel. to electrode pot. 3—53289
  - Ni-Co-Cr, corrosion resist. in dil. H_2SO_4, rel. to phase comp., anodic polarisation curves *(Japanese)* 3—58293
  - Ni-Co-Cr-Ti-Al superalloys, corrosion in sulphate melt, 1173K, $NaCrS_2$ phase identification 3—53288
  - Ni-Co-Ti, corrosion resist. in dil. H_2SO_4, rel. to phase comp., anodic polarisation curves *(Japanese)* 3—58293
  - Ni-Cr, Alloy 600, anodic behaviour and pitting corrosion, SO_2 and pH effects 3—9232
  - Ni-Cr-Nb-C eutectic alloy, in-situ composite, isothermal oxidation, 800 to 1300°C 3—58317
  - Ni-Cr-W-Co-Mo-Ti-Al superalloy, investment cost, tensile props., stress-rupture, corrosion resist., rel. to B/C modification 3—58161
  - PbO-B_2O_3 glasses, water corrosion mechanism 3—34512
  - PbO-SiO_2-P_2O_5, glass, acid corrosion, surface cryst. form., effect of phosphate doping 3—9206
  - Pd-Ir-P amorphous alloys, anodic characts. in hot NaCl soln. 3—53277
  - SO_2 sensor using solid-sulfate electrolytes 3—15029
  - Si, photoelectrochemical cell using n(p)-Si/acetonitrile system 3—9448
- **corrosion** continued
  - SiO_2 fibres, large flaw strength and fatigue 3—42046
  - SiO_2-Na_2O glass melt, corrosion of vitreous SiO_2 under weightless conditions 3—39269
  - Tc, liquid nuclear residues conc., corrosion resistance, radioactive source, review *(French)* 3—11582
  - Ti alloy AT-3, corrosion resistance in dil. H_2SO_4 soln. at elev. temps. 3—9255
  - Ti alloys, corrosion in agressive mediums rel. to nonferrous and ferrous metallurgical prod. equip. 3—14782
  - Ti alloys AT-3 and AT-6, corrosion resistance and mech. props., prolonged oxidation effect 3—9256
  - Ti, corrosion, power plant appls. 3—29224
  - Ti, passive film formed in dil. HCl soln. at elev. temp. 3—9250
  - Ti tubed surface condensers for nuclear steam generators 3—16863
  - Ti, Z 3—39287
  - Ti-Al-V alloy, VT5L, rare earth additions effect on mech. props. and thermal stability 3—24367
  - Ti-Fe(Cr)(Al)(Si), corrosion and electrochem. props., alloying effects 3—9257
  - Ti-Mo (15 and 30 wt.%), H_2 evolution reaction kinetics in deaerated sulphuric soln. 3—9252
  - Ti-Mo-Nb-Zr alloys, corrosion resistance in acid soln. 3—9254
  - Ti-Ni-Zr (95.5, 2.5, 2.0 wt.%), for appl. in hot NaCl solns., heat treatment and props. 3—29225
  - Ti-Pd (0.16 wt.%), passive film formed in dil. HCl soln. at elev. temp. 3—9250
  - $Ti_3Al(Sn)$, and Ti_3Al-Ti_3Sn, oxidation, structural and kinetic study, protection against high temp. gas corrosion 3—14787
  - TiC thick films, vapour deposited, appl. and props. 3—29226
  - TiN thick films, vapour deposited, appl. and props. 3—29226
  - W, corrosion high temperature behaviour in humid H_2 atmosphere *(German)* 3—58283
  - ZnSe-electrolyte interface, photocorrosion study to photothermal deflection spectroscopy 3—9335
  - Zr, anodically formed ZrO films, dissolution kinetics in HCl soln., revealed by impedance and potential meas. 3—39279
  - ZrF_4-BaF_2-AlF_3-LaF_3-LiF optical glass, aqueous corrosion, IR and SEM study 3—1731
  - ZrO_2 thermal barrier coating, plasma sprayed, laser glazed, cyclic oxidation and corrosion 3—4173
- **corrosion control** *see corrosion protection*
- **corrosion fatigue** *see stress corrosion cracking*
- **corrosion fatique testing** *see corrosion testing*
- **corrosion prevention** *see corrosion protection*
- **corrosion protection**
  - *see also anodisation; corrosion; corrosion protective coatings; pH control*
  - acid corrosion inhibitors development and introduction 3—58308
  - brass, corrosion inhibition in dil. nitric acid, haloacetic acid effect 3—58274
  - Dilex process—surface alloying in a lead medium 3—4047
  - effective methods, overview 3—47980
  - electron beam surface melting practical implications 3—34536
  - feedwater material corrosion in PWR steam plants, release rates 3—50008
  - hydroelectric plant forced shaft shielding anticorrosive measures checking and maintenance *(Rumanian)* 3—9221
  - ion implantation, practical applications, improvement in wear and corrosion resistance 3—9233
  - laser beam surface melting, practical implications 3—34536
  - phosphate precipitation, reaction mechanism 3—53267
  - PWR power station boilers, EM and graphite high-temp. filter tests 3—55238
  - PWRs, corrosion damage reduction by improved steam purity 3—36497
  - rotary vane backing pump, oil-filled, for corrosive and hazardous gases 3—40625
  - SCC and hydrogen induced blister cracking in H_2S environment, alloy additions effect 3—58273
  - steel, aq. corrosion inhibition, effect of molybdate, citrate and phosphate 3—9245
  - steel, austenitic stainless, rate in warm $MgCl_2$ solns., quantitative approach *(French)* 3—24386
  - steel, carbon type, successive saturation with Al and B, effects on props. 3—24405
  - steel, corrosion fatigue in sea water 3—24415
  - steel, corrosion inhibition by naturally occurring substances, aqueous extracts of leaves and fruit peel in acids 3—14770
  - steel, low alloy, sea water corrosion behaviour *(German)* 3—53294
  - steel, nitrated petroleum protective layer, fatty acids effect on inhibition 3—34525
  - steel, stainless, crevice corrosion by rubber sealing materials, prevention by Zn filler *(Japanese)* 3—58296
  - steel, stainless 316L, Al, Ti and Sc ion implantation effect on resist. to crevice corrosion 3—58312
  - steel St3, with multicomponent coating, comp., struct. and corrosion resist. in dil. S 3—24406
  - switchgear anticorrosive protection measures for operation in chemical works *(Rumanian)* 3—9202
  - turbomolecular pump, for corrosive and hazardous gases 3—40625
  - Vacuum Group, Institute of Physics, conf., Chester, England (March 1982) 3—40318
  - Al, corrosion inhibition by naturally occurring substances, aqueous extracts of leaves and fruit peel in acids 3—14770
  - Al surface, boehmitised, corrosion and chem. props. 3—9246
  - Cu, corrosion inhibition by naturally occurring substances, aqueous extracts of leaves and fruit peel in acids 3—14770
  - Fe, corrosion resistance, ion beam mixing and bombardment diffused coatings 3—28167
  - Fe, ion implanted, surface layer characts. 3—56919
  - Fe-Cr-Al alloys, corrosion protection in sulphidising environments by means of α-Al_2 3—4196
  - Ni, corrosion resistance, ion beam mixing and bombardment diffused coatings 3—28167
  - Zn, corrosion inhibition, immersion and potentiostatic tests *(Japanese)* 3—58292
  - Zn, corrosion inhibition by naturally occurring substances, aqueous extracts of leaves and fruit peel in acids 3—14770
- **corrosion protective coatings**
  - aluminised Fe, interdiffusion in Fe-Al system 3—33519
  - aluminoboronizing of carbon steel, effects on props. 3—24405
  - electroplating of sintered Fe compacts with Cu, Ni and Zn 3—19461

corrosion protective coatings continued
galvanised and tinplated steel, passivation study by SIMS, AES and XPS *(French)* 3−9248
ion plating, material modification techniques 3−43700
materials and methods, overview 3−47980
nitrated petroleum layer on steel, corrosion inhibition rel. to fatty acid content 3−34525
polymeric, corrosion protective performance, math. models 3−29203
steel, C, wires, thin high-strength, material and Zn coating influence on props. 3−47886
steel, cathodic protection levels under disbonded coatings 3−39289
steel, chelating-polymer adsorption effects and corrosion 3−43987
steel, Si, grain oriented, laser irradiated, characts. 3−34174
Al electrophoretic coatings on steel 3−24413
Al, heat-resistant, cracking conditions 3−58310
Al rich coating on stainless steel, high temp. corrosion under S_2/SO_2 atm. *(French)* 3−58299
Al-G, Al-Ni and Al-Ni-Cr multicomponent coatings on steel St3, comp., struct. and corrosion resist. in S 3−24406
Al-Zn (45 wt.%), hot-dipped coating on low C steel strip, ductility, cracking, tensile testing 3−43917
α-Al_2O_3, protection of Fe-Cr-Al alloys in sulphidising environments 3−4196
BN film, hard, ion beam sputter deposited, prep. and props. 3−13673
C film, hard, ion beam sputter deposited, prep. and props. 3−13673
Cu-Ni alloy electrodeposition from solns. containing L-asparagine 3−19295
$FeAl_3$ and Fe_2Al_5 pack-aluminide coatings on steel, kinetics 3−4201
$Mn_{H5}(PO_4)_4$ coatings on steel, form. and thermal props., study using Mossbauer spectrometry 3−24398
Ni P electrolytic composition coatings, coating technique and properties *(Russian)* 3−58056
Ni, passivation films, modulated UV-visible reflection spectroscopy *(Japanese)* 3−39299
Ni-Cr-Fe-Si-B self-fluxing coatings for stationary gas turbines, modification by Al_2O_3 protective scales 3−4211
Si enriched layer as protection against carburisation in HTGR 3−4208
^{99}Tc recovery from nuclear waste, appl. as corrosion inhibitor 3−21394
TiCN protective coatings, obtained from organic N cmpds. 3−47984
Zn,on thin high-strength C steel wires, influence on props. 3−47886
$(ZrO_2$-$V_2O_3)$/(Ni-Cr-Al-Y) coating, air-plasma sprayed, behaviour in HTGR He 3−960

corrosion testing
AC impedance data, recording and anal., for corrosion studies 3−19469
alloys, high performance, localised corrosion resistance, accelerated laboratory tests comparison 3−53304
atmospheric corrosion testing system, polymer permeation as corrosive gas source 3−34567
fatigue crack propag. testing, using Krak-Gage 3−58326
fatigue life estimation, review of methods 3−44005
harmful gas influence on contact components and materials in communication technology, testing *(German)* 3−43999
high temp., gas anal. technique 3−29239
material testing system for corrosion in high-temperature water under high pressure *(Japanese)* 3−34584
metal/oxide/electrolyte system corrosion rate meas. using faradaic rectification and a.c. impedance meas. 3−58344
nuclear reactor pressure vessel steels 3−55148
potentiodynamic technique, electrode scan rate, uncompensated resist. effect 3−58321
small perturbation non-linearity, harmonic anal. 3−53303
steel, austenitic stainless, stress corrosion cracking detect. using continuous modulus meas. 3−53305
steel, C type, corrosion fatigue tests in nucl. reactor coolant water 3−58338
steel, constructional, corrosion crack resist. rating 3−58300
steel, corrosion crack initiation, method for determ. under biaxial tensile stress 3−9277
steel, low alloy, hardenability, sulphide stress cracking resist., fracture toughness, suitability for oil pipes 3−53268
steel, mild, coated, simulated underfilm corrosion using artificial blister 3−53270
steel, mild, corrosion meas. derived from small perturbation non-linearity, harmonic anal. 3−53303
steel, stainless, structural material regenerated cold trap, destructive testing 3−897
steel, stainless martensite-austenitic, corrosion electrochem. props., potential polarisation evaluation method *(Czech)* 3−58298
structural barriers for high-level nuclear waste containment 3−6355
three-point method for measuring corrosion rates 3−19470
Al alloy, D16-T and V95-T1, fatigue crack growth in tests in NaCl solns. 3−58302
Li-Al-N ceramics in liq. Li, thermodynamic stability 3−55645
Li-Al-O ceramics in liq. Li, thermodynamic stability 3−55645
Ti alloys, corrosion testing, environmental cracking and embrittlement, use for high-level waste barriers 3−6356

corundum
see also ruby; sapphire
abrasion-resistant ceramic development for drawing microwires 3−24193
cast materials prod. using ethyl silicate binders, thermal shock resist. 3−24192
crystal growth by Vermeuil technique, theory and expt. 3−14466
dehydration prep., X-ray peak broadening due to twin form. 3−8059
electrical conductivity 3−52141
film, core excitons, soft X-ray absorpt. spectra 3−3867
local strain and inner elasticity 3−13316
mullite-corundum masses, thermal shock resist. 3−19366
thermal expansion, temperature dependence, approximation models 3−51828
thermal shock resistance improvement using additives 3−24194

cosmic background radiation
see also radiofrequency cosmic radiation
angular momentum of cosmic background radiation, reply to comment 3−49060
angular momentum of cosmic background radiation 3−49059
diffuse galactic 2.4 μm radiation enhancement region (l=355°, b=−1°) from M-type stars anal. 3−16033
diffuse galactic IR emission from late type stars, near IR multicolour obs. 3−16032
distortions in microwave background spectrum, origin 3−20561

cosmic background radiation continued
extragalactic background light at 440 nm 3−54550
Galaxy gamma-ray emission, anal. of diffuse gamma radiation of local spiral arm *(German)* 3−54523
diffuse gamma-ray background, contrib. of active galaxies 3−54551
gamma-rays in energy range 4 to 100 MeV, spark chamber meas. of diffuse cosmic radiation 3−10485
gravitational radiation background upper limit from pulsar timing anal. 3−49055
gravitational waves background in Universe from PSR 1237+25 pulse arrival times 3−49054
heat death and oscillation in model universes containing interacting matter and radiation 3−20535
IR relict radiation distortion due to H_2 form. (in epoch $40\leq z\leq 200$) 3−35745
microwave background radiation, anisotropy meas. and cosmological implications 3−20533
neutrino background, theory of massive neutrino halos in expanding universe 3−16040
polarisation, expt. in 1 to 1.4 mm range 3−20534
slow monopoles and quarks search 3−15790
UV background, spectrum at different galactic latitudes 3−30530
UV background and neutrinos 3−26032
UV sky background radiation observed with space expt. 'Galaktika', possible interpretation 3−59509
X-ray ≥ 2 keV background, contrib. of sources beyond confusion limit 3−5450
X-ray background, contrib. of hot intergalactic medium 3−25620
X-ray background, galaxy clusters contrib. from HEAO 1 survey of complete Abell catalogue 3−54541
X-ray background, implications of X-ray and optical obs. of quasars 3−25653
X-ray background, QSO contrib. 3−44866
X-ray background, quasar contrib. 3−44871
X-ray background, spatial distrib. and spectral characts. of diffuse soft X-ray emission 3−40295
X-ray background above 0.8 keV, spectrum 3−10486

cosmic dust
see also meteoroids
abnormal extinction and dust props. toward reddened early-type stars within H II regions 3−40229
active galaxies, broad emission-line regions, dust heating sources 3−25588
active galaxies, radiation press. from nucleus sweeping gas/dust out of galaxy 3−59457
active galaxies, thermal re-radiation by dust rel. to absence of rapid X-ray variability 3−30490
active galaxies origin and evolution, dust effects 3−25606
R Aquarii, symbiotic star, obscuration by dust cloud rel. to IR variability 3−59365
ϵ Aurigae, evidence for circumstellar shell from IR photometry during eclipse ingress (April 1982 to January 1983) 3−35667
bibliography of articles in database at Lunar and Planetary Institute Library (May to October 1981) 3−30571
BN object, dust grains, 3 micron ice band 3−40224
book describing the members of the solar system 3−10542
η Carinae, obs. of vars. in dust thermal IR emission 3−59368
CG 1, age and struct., star evolution and form. 3−59440
charged dust particle, electron bound states calc. 3−25554
circumstellar dust shells, numerical simulation of radiative transfer in spherical shells 3−15907
CoD−61°3326, yellow supergiant, dust shell discovery from near IR photometry and spectrum 3−10329
Comet Arend-Roland (1957 III), tail brightness profiles and dust characteristics *(Chinese)* 3−40071
Comet Bowell (1981b) grain nature from visible/IR obs. 3−35534
comet dust collection and chem. anal. instrumentation for spacecraft 3−48820
P/ Comet Encke (1980 XI), 10 μm feature and dust albedo, IR obs. 3−35540
Comet Mrkos (1957 V), striated tail, particle fragments dust population 3−35533
Comet Panther (1981 II), grain nature from visible/IR obs. 3−35534
P/ Comet Stephan-Oterma (1980 X), 10 μm feature and dust albedo, IR obs. 3−35540
P/Comet Stephan-Oterma (1980 X), grain nature from visible/IR obs. 3−35534
P/ Comet Tuttle (1980 XIII), 10 μm feature and dust albedo, IR obs. 3−35540
cool giant and supergiant stars, dust shell models rel. to obs. at 20, 25 and 33 μm 3−20369
V1016 Cygni, nature, cool component dust shell nature and system luminosity 3−44770
dark clouds, HCN and CO densities, dust density and brightness temp., EHF obs. 3−44829
dark clouds in NGC 224, NGC 2841 and NGC 7331, apparent size distribs. rel. to galaxies distances 3−35716
dirty silicate grain models, rel. to IR spectra of hot-centred interstellar clouds 3−5397
double-shell circumstellar dust shells, models for high optical depth Type II OH-IR-sources 3−5280
in elliptical like galaxies with dust lanes, stellar and gaseous rot. axes 3−30499
galaxies, dust layer widths 3−5418
GC-IRS 7, IR source, interstellar grains IR spectrum anal. 3−20450
Giotto spacecraft, dust protection system 3−39994
in H II regions, effect on IR fine struct. line ratios rel. to excitation conditions determ. 3−44818
Herschel 36, O-type star, assoc. dust cloud extinction nature 3−25430
HR 5999 (V856 Scorpii), bright young variable shell star, props. of circumstellar matter 3−5309
IC 2165, planetary nebula, grains comp. from 8 to 13 μm spectrum 3−59444
ice-covered dust grains, effects of fast ion bombardment 3−30264
intergalactic suprathermal dust grains accelerated to $>10^{18}$ eV 3−20189
interplanetary charged dust grains, Lorentz scatt. due to solar wind/mag. field 3−20293
interplanetary dust, spatial distribution maintenance and sources 3−48855
interplanetary dust grains, role of electrostatic charging 3−15838
interplanetary grains in Jupiter 2/1 resonance, Poynting-Robertson drag and gravit. interaction 3−35531

cosmic dust continued
- interstellar diffuse bands towards stars with low colour excess, origin in molecular grain mantles 3−5390
- interstellar dust clouds, radiative transport code DUSTCD 3−54491
- interstellar dust map out to 300 pc, A/F-type stars anal. 3−44819
- interstellar dust scale height determ. from UV objects catalogue anal. 3−30242
- interstellar dust thermal emission and submillimeter surveys 3−30475
- interstellar grain growth through accretion, effect on normalised linear polarisation curve 3−25543
- interstellar grain mantles, model calcs. of mol. comp. 3−15973
- interstellar grains, obs. of anomalous diffuse absorpt. features in dust-embedded stars 3−59443
- interstellar grains, rot. spin-up by inverse Cerenkov effect 3−54487
- interstellar grains composition, implications of IR spectrum of OH-IR star (OH 26.5+0.6) 3−49053
- interstellar grains sedimentation and comets form. in globules 3−59265
- interstellar magnetic clouds, quasistatic contraction due to plasma drift, grain friction effect 3−40241
- interstellar matter, deuterated molecules surface chemistry 3−54224
- interstellar medium, characts. of peculiar UV extinction from low-resolution IUE obs. 3−54480
- interstellar medium, gas-to-dust ratio towards Puppis Window of Milky Way from H I obs. 3−35696
- interstellar molecular clouds, C depletion on dust grains in turbulent cloud cores 3−10413
- interstellar polarisation of Seyfert galaxies, results from optical linear polarisation meas. 3−54510
- interstellar polarisation of supernova light, rel. to meas. of deviation from spherical symmetry 3−30396
- interstellar reddening within 100 pc from late F-type stars uvbyβ obs. 3−35688
- ionised nebulae dust albedo at Hα, effect on extinction determ. 3−59418
- L1551 IRS5, dust grain scatt. model for IR polarisation 3−54483
- LMC supergiant OBA stars, interstellar reddening 3−40126
- long-period variable stars, optical polarisation rel. to IR excess, circumstellar dust shells anal. 3−59343
- in M31, dust pattern in central region from CCD photometry 3−54518
- M51 and NGC 5195 system, starlight reradiation by dust and star form. props. 3−5406
- M-type giants and supergiants, circumstellar dust shell, IR emission and raditive transfer 3−40128
- Markarian 1050 and 1044, Seyfert 1 galaxies, dust content visible/IR obs. 3−40255
- Markarian 3 and 6, Seyfert galaxies, intrinsic reddening and nonstellar continuum 3−40245
- Mars, effects of global dust storms on atmospheric circulation 3−5192
- Mars, seasonal dust cycle rel. to quasi-periodic climate changes 3−5190
- Mars, stratigraphic relationships within polar cap deposits from Viking Orbiter images 3−5187
- Mars great dust storms, review 3−5191
- NGC 2346, planetary nebula, central star, dust cloud model for unprecedented light vars. 3−48947
- NGC 5128 (Centaurus A), emission characts. and dust lane, 2.2 μm obs. 3−30502
- NGC 595, H II region in M33, dust content and extinction 3−54489
- in NGC 7023, grain characts. in reflection nebula 3−25557
- NGC 7023, reflection nebula of HD 20075, dust grain scatt. props. 3−5378
- NGC 7027, planetary nebula IR obs. 3−35690
- NGC 7331, Sb galaxy, near IR colour spatial var. due to interstellar dust 3−25602
- NGC 7635 (Bubble Nebula), dust distrib. and temp. from far IR obs. 3−15976
- nova dust shells, time-dependence of IR spectra 3−59364
- OB associations, Auriga OB-2 and Scorpius OB-1 UV extinction, obs. 3−25533
- ρ Ophiuchi dark cloud, temp. of dust assoc. with far-IR emission 3−49040
- Orion Nebula, dust distrib. and temp. and ionisation struct. 3−40218
- planetary magnetosphere, motion of charged dust grain 3−40056
- protoplanetary cloud, dense solid particles form. and dust grain effects 3−20473
- RX Puppis, symbiotic star, effects of circumstellar dust on IR variability 3−59366
- pyroxene whiskers and platelets in interplanetary dust: evidence of vapour phase growth 3−40072
- radio galaxies, scatt. model for relation between optical polarisation position angle and radio source axis 3−5428
- in radio galaxies, thermal IR emission from interstellar dust 3−25614
- S237, S254-S257, small H II regions, dust distrib. from V-band and Hα maps 3−59429
- Saturn, spokes due to charged dust dynamics 3−5214
- semi-regular stars, optical polarisation rel. to IR excess, circumstellar dust shell anal. 3−59343
- Serpens dark cloud, dust luminosity implications for H II regions/stellar winds 3−25546
- Serpens Nebula, reflection nebula, magnetically aligned dust grains rel. to optical polarisation 3−48995
- Sharpless 156, W II region, optical polarisation and dust component rel. to blister model 3−30454
- in SMC, IUE obs. of Sk 143, SMC star with galactic type UV interstellar extinction 3−10423
- symbiotic stars, IR obs. of circumstellar dust assoc. with Mira components 3−25459
- symbiotic stars, variable dust obscuration rel. to IR variability 3−59367
- T Tauri stars, shell dust, effect on UBVRI and Hα var. 3−35604
- RR Telescopii, heated circumstellar dust shell rel. to IR variability 3−48931
- SU Ursae Majoris, dwarf nova, X-ray scatt. from interstellar grains rel. to soft X-ray halo 3−40152
- Venus cloud layer, new data on aerosol from study by (Venera 14) *(Russian)* 3−35493
- W3, correl. between formaldehyde 6 cm absorpt. and silicate IR absorpt. 3−5398
- WC9 star assoc. with C 1309−624 and C 1310−624, dust shell+extinction 3−48922
- zodiacal light dust particles, light scatt. model 3−25380
- C stars, circumstellar dust shells, radiative transfer model 3−40146
- C stars, dust shell model, pulsations anal. from photometric anal. 3−54378

cosmic dust continued
- OH 0739−14, bipolar nebula, 2.2 μm polarisation maps, dust grains anal. 3−40236
- OH 231.8+4.2, dust grain mantles, 3 micron ice band 3−40224

cosmic radiation *see cosmic background radiation*

cosmic radiations, radiofrequency *see radiofrequency cosmic radiation*

cosmic radio waves *see radiofrequency cosmic radiation*

cosmic ray absorption *see cosmic ray propagation*

cosmic ray alpha-particles and helium nuclei
- primary cosmic rays at high energies, integral energy spectrum 3−5072

cosmic ray apparatus
- *see also particle detectors*
- CALOR code for calorimetry design for high-energy particle detection 3−11631
- Cherenkov detector Sea Urchin, deep underwater muon and neutrino detector array development 3−30216
- electron spectrometer for 7 to 40 MeV range, appl. to Prognoz-4 meas. of cosmic ray electron spectra 3−15788
- GG-2M gamma ray spectrometer on Kosmos 856 and 914, description 3−35443
- hodoscope, fine grained scintillator, shower position measurement 3−50141
- ionisation chamber for cosmic ray variations, rigidity responses 3−54248
- ionisation-calorimeter method to study low-intensity cosmic rays 3−40038
- microprocessor controlled system for air shower data collection 3−44671
- neutron monitor, multiplication factor distrib. rel. to particles energy spectra 3−35444
- PION installation with NAIRI-2 computer, data buffering and interrupt scheme 3−15850
- PION installation with NAIRI-2 computer, data output to ATsPU-128 printer 3−15851
- pure single particle detecting counter telescope for fractionally charged particle search in cosmic-rays 3−5118
- scintillation counter, spontaneous, for registration of $\bar{\nu}$ fluxes from collapsing stars and high-energy muon interaction obs. 3−15849
- scintillation counter hodoscope for slow monopoles and quarks search 3−15790
- scintillation hodoscope element with scintillators up to 7 m long, design 3−1159
- scintillation hodoscope recording system, multichannel charge digitiser appl. 3−11621
- surface barrier detector cosmic ray event and spectrometer algorithms, Si detector 3−6503
- X-ray spectrograph with ang. resolution for cosmic bursts and sources obs. 3−54242

cosmic ray composition
- *see also cosmic ray alpha-particles and helium nuclei; cosmic ray deuterons; cosmic ray electrons; cosmic ray mesons; cosmic ray muons; cosmic ray neutrinos; cosmic ray nuclei; cosmic ray photons*
- Crab pulsar cosmic ray showers, production mechanisms 3−54212
- EAS, nuclear composition, inverse problem method 3−10166
- galactic, nuclei comp. from satellite obs. 3−20191
- galactic cosmic rays, steady state transport perpendicular to galactic plane 3−20190
- heavy nuclei, solar flare and ancient, nature from meteorite nuclear track anal. 3−10170
- heavy nuclei composition, origin inferences 3−10162
- magnetic monopole flux meas. using underground Soudan-1 expt. 3−48778
- massive magnetic monopole, slowly moving, search using plastic scintillation counters 3−48777
- primary cosmic rays, comp. from deep underground muon anal. 3−59176
- shower primary cosmic rays, $6\times10^{15}-2\times10^{18}$ eV, mass composition 3−30135
- solar flare noble gases, isotopic comp. 3−54210
- ultraheavy nuclei, propag. and source comp. 3−30132
- WH nuclei, path meas. in meteorites *(Russian)* 3−10165
- Fe nuclei, 10^{14} eV detection by balloon expt. 3−30136
- ^{20}Ne/^{22}Ne ratio in solar flare particles, determ. from spacecraft meas. meteorites and lunar samples 3−54210

cosmic ray deuterons
- No entries

cosmic ray effects and interactions
- *see also high-energy cosmic ray interactions*
- antiproton flux, atmospheric correction factor 3−44627
- Coma-type radio halo clusters, X-ray morphology and intracluster gas heating by cosmic rays 3−5430
- EM interactions of muons, pair production and bremsstrahlung 3−44632
- ice-covered surfaces, effects of fast ion bombardment 3−30264
- interstellar clouds, electron energy spectra, propag. and interactions, bremsstrahlung γ-ray luminosity 3−20188
- interstellar medium, cosmic ray electron density rel. to gamma-ray colour of Milky Way 3−49027
- interstellar medium, cosmic rays interaction rel. to diffuse gamma radiation of local spiral arm *(German)* 3−54523
- meteorite (Abee), pre-atmos. mass and cosmic ray irrad. history 3−35552
- meteorite (Estacado), cosmogenic ^{26}Al distrib. 3−15886
- meteorite cosmogenic nuclides indicating cosmic ray solar modulation 3−15787
- meteorite isotope anomalies due to cosmic-ray irradiation 3−20307
- meteorite nuclear tracks as indicator of meteorite origin and ancient cosmic ray history 3−10170
- meteorites and lunar sample tracks used for cosmic ray var. 3−48784
- natural radiation environment inside spacecraft 3−40003
- nuclei fragmentation parameters in nucl. photoemulsion 3−5063
- Saturn, cosmic ray secondaries injection into inner magnetosphere 3−54277
- Fe meteorites, exposure ages and meteoroid size 3−48867

cosmic ray electrons
- air showers, longitudinal development of muons and electrons 3−44631
- Crab Nebula relativistic electrons diffusion coeffs. determ. 3−48999
- EAS, nuclear composition, inverse problem method 3−10166
- energy spectra in 7 to 40 MeV range, results from Prognoz-4 meas. 3−15788
- flux in local interstellar medium from γ-ray emission 3−54466
- galactic cosmic rays, electron density from gamma-ray colour of Milky Way 3−49027
- interstellar clouds, electron energy spectra, propag. and interactions, bremsstrahlung γ-ray luminosity 3−20188

cosmic ray electrons continued
interstellar density fluctuations due to shock wave random deflection *(Russian)* 3—20469
Jupiter electron fluxes in interplanetary space and solar wind plasma interactions 3—48781
low energy electrons and ions, meas. during long-lived solar particle events 3—10163
primary electron spectrum, astrophysical aspect 3—5073
primary electron spectrum, expt. data 3—5074
propagation and production in bright spiral galaxies 3—25600
QSOs, electron energy losses rel. to simultaneous visual-IR polarimetry 3—49048
relativistic electrons in Seyfert galaxy X0459+034 from radio/X-ray spectra 3—30527
solar flare electrons, accel. and energy spectra during explosive phase *(Chinese)* 3—59282
solar flare loops electrons producing X-ray/20 cm emission 3—59306
solar flare microwave burst, electron velocity distrib. 3—10301
solar flare particles propagation in September to November 1973, effects of struct. of interplanetary medium 3—15785
solar particles fluxes and energy spectra in magnetosheath 3—15786
solar particles interplanetary propag. and solar wind interactions 3—59174
X-ray binaries, polarisation due to radiation scatt. by free electrons in accretion disc 3—44790

cosmic ray energy spectra
air-shower primaries, giant, energy estimation 3—35392
antiproton equilib. spectrum calcs., leaky-box and closed-galaxy models 3—35391
electron spectra in 7 to 40 MeV range, results from Prognoz-4 meas. 3—15788
galactic 3-30 MeV neutrinos effect on solar neutrino detector meas. 3—44634
galactic antiprotons, origin, production, detection methods *(French)* 3—39977
gamma ray spectra for galactic centre region 3—35443
diffuse gamma-ray background, energy spectrum rel. to contrib. of active galaxies 3—54551
gamma-ray diffusion >100 MeV middle/high galactic latitude radiation 3—48780
gamma-rays in 100-4000 MeV range, Cosmos satellite meas. *(Russian)* 3—15789
hadron energy spectra at Mt. Kambala 5500 m above sea level *(Chinese)* 3—44629
heavy nuclei, solar flare and ancient, nature from meteorite nuclear track anal. 3—10170
intensity, dependence on declination with primary energies $\approx 10^{16}$ eV 3—25270
interstellar clouds, electron energy spectra, propag. and interactions, bremsstrahlung γ-ray luminosity 3—20188
low energy electrons assoc. with long-lived solar particle events, power-law spectrum 3—10163
momentum spectra for galactic cosmic ray nucleons 3—20190
muon energy spectra, prompt muons effect 3—20194
muon spectrum derivation from transferred energy spectrum of bursts 3—44628
neutrinos from collapsing degenerate stellar core, emission spectra and interactions 3—40115
neutron monitor, multiplication factor distrib. rel. to particles energy spectra 3—35444
Perseus OB2 association SNR, cosmic rays accel. evidence 3—54465
primary cosmic rays at high energies, integral energy spectrum 3—5072
primary electron spectrum, astrophysical aspect 3—5073
primary electron spectrum, expt. data 3—5074
protons in supercluster, mean energy density 3—39976
solar electron fluxes and energy spectra in magnetosheath 3—15786
solar flare electrons, accel. and energy spectra during explosive phase *(Chinese)* 3—59282
solar flare particles, time-integrated spectrum of shock-accelerated energetic particles 3—10178
solar flare protons and electrons, accel. and energy spectra during explosive phase *(Chinese)* 3—59282
solar flare relativistic protons, possible evidence for rigidity-dependent release from solar corona 3—10164
solar neutrons, power law spectrum of neutrons from flare (0118 UT on 1980 June 21) 3—35389
super high energy primary cosmic rays energy spectra obs. 3—59175
X-ray photons transport at balloon altitudes, second order scatt. approx. 3—35390
Fe nuclei, 10^{14} eV detection by balloon expt. 3—30136

cosmic ray geophysical effects *see geophysical aspects of cosmic rays*

cosmic ray jets *see cosmic ray showers and bursts*

cosmic ray mesons
galactic cosmic rays intensity var., effect of two high speed solar streams types 3—39978

cosmic ray muons
air showers, longitudinal development of muons and electrons 3—44631
Cherenkov detector Sea Urchin, deep underwater muon and neutrino detector array development 3—30216
cosmic-ray interactions in Homestake underground detector, multiple muon prod. 3—59177
deep underground muon anal. 3—59176
detection, using Cherenkov radiation in sea 3—48828
detection, using Cherenkov radiation in sea 3—48829
detector, photomultiplier-amplifier combination, for intense magnetic fields 3—50170
EAS, nuclear composition, inverse problem method 3—10166
EAS muons 10^{17}-10^{18} eV, arrival time distrib. 3—15792
EM interactions of muons, pair production and bremsstrahlung 3—44632
energy loss effects on high energy muon inelastic scatt. 3—50245
extensive air showers, large, imaging of muon cascade, computer simulation 3—15791
high-energy cosmic rays, prompt muons effect 3—20194
high-energy interaction obs. using spontaneous scintillation counter 3—15849
ionisation chamber for cosmic ray variations, rigidity responses 3—54248
muon spectrum derivation from transferred energy spectrum of bursts 3—44628
vertical spectra in atmos. at superhigh energy 3—30137

cosmic ray neutrinos
atmospheric neutrino recording using underwater Cherenkov detector 3—10169
bursts from supernovae, as triplet majoron model test 3—54556
Cherenkov detector Sea Urchin, deep underwater muon and neutrino detector array development 3—30216
cosmic neutrinos, role in primordial nucleosynthesis 3—54561
cosmological neutrinos, theory of massive neutrino halos in expanding universe 3—16040
flux from collapsing star, precise timing with coordinated time meas. system 3—35966
galactic 3-30 MeV neutrinos effect on solar neutrino detector meas. 3—44634
galaxy haloes acquisition 3—44850
massive neutrinos in galaxies and clusters, distrib. 3—20225
neutron star formation and initial neutrino loss 3—5322
production and diffusion from supernova shocks 3—25493
solar flare neutrino flux correl. with particle flux 3—40104
solar neutrino oscills. and cosmological implications 3—26032
solar neutrino problem, mag. monopoles effect 3—48881
stellar collapsing degenerate core, neutrino emission spectra and interactions, Monte Carlo anal. 3—40115
$\bar{\nu}$ fluxes from collapsing stars in Milky Way, registration using spontaneous scintillation counter 3—15849
^{81}Br solar neutrino detection feasibility 3—31350

cosmic ray neutrons
energy spectrum at sea level 3—48782
galactic cosmic rays intensity var., effect of two high speed solar streams types 3—39978
ionisation chamber for cosmic ray variations, rigidity responses 3—54248
solar neutrons, direct. obs. following flare (0118 UT on 1980 June 21) 3—35389

cosmic ray nuclei
see also cosmic ray alpha-particles and helium nuclei; cosmic ray neutrons; cosmic ray protons
energetic nuclei interactions with meteorites and lunar rocks 3—48784
galactic, comp. from satellite obs. 3—20191
heavy nuclei, solar flare and ancient, nature from meteorite nuclear track anal. 3—10170
heavy nuclei composition, origin inferences 3—10162
super high energy primary cosmic rays energy spectra obs. 3—59175
ultraheavy nuclei, propag. and source comp. 3—30132
Fe nuclei, 10^{14} eV detection by balloon expt. 3—30136

cosmic ray-nucleus reactions
for inelastic cosmic ray-nucleus scattering, see "cosmic ray-nucleus scattering"
Pb(N,X), inelasticity coeff. distrib., inverse problems solution 3—6124

cosmic ray-nucleus scattering
No entries

cosmic ray origin
see also cosmology; element origin
10^{18} eV and above, origin with intergalactic suprathermal dust grains accel. 3—20189
antiproton equilib. spectrum calcs., leaky-box and closed-galaxy models 3—35391
Crab pulsar cosmic ray showers, production mechanisms 3—54212
electrons in bright spiral galaxies, propag. and prod. 3—25600
galactic antiprotons, origin, production, detection methods *(French)* 3—39977
gamma ray discrete sources, molecular cloud nature and irradiation by cosmic ray electrons/nuclei 3—25655
heavy nuclei composition, origin inferences 3—10162
neutrino production and diffusion from supernova shocks 3—25493
Perseus OB2 association SNR, cosmic rays accel. evidence 3—54465
quasars, origin of relativistic particles and gamma-rays 3—49047

cosmic ray photons
see also cosmic ray X-rays; solar cosmic ray photons
galactic gamma-ray emission, rel. to reddening estimation at low galactic latits. from Lick galaxy counts 3—48993
Galaxy gamma-ray emission, anal. of diffuse gamma radiation of local spiral arm *(German)* 3—54523
gamma ray measurements from Kosmos 856 and 914, anal. 3—35443
gamma rays, spark chamber meas. of cosmic and atmospheric gamma radiation in energy range 4 to 100 MeV 3—10485
diffuse gamma-ray background, contrib. of active galaxies 3—54551
gamma-ray burst source in Dorado, new manifestation of activity, (1981 and 1982) *(Russian)* 3—35744
gamma-ray bursts, experimental data in favour of heliospheric origin 3—16035
gamma-ray colour of Milky Way, rel. to cosmic ray electron density 3—49027
gamma-ray diffusion >100 MeV middle/high galactic latitude radiation 3—48780
gamma-rays in 100-4000 MeV range, Cosmos satellite meas. *(Russian)* 3—15789
gamma-rays in atm., quasiperiodic var. due to internal gravity waves effects, solar oscill. link 3—54211
gamma-rays rel. to interstellar gas density 3—15781

cosmic ray propagation
acceleration by shock waves, scattering wave modification effects 3—59203
acceleration in accretion flows 3—141
acceleration in plasma, time depend. props. from random walk model 3—35386
antiproton equilib. spectrum calcs., leaky-box and closed-galaxy models 3—35391
atmospheric propagation simulation from hadron-hadron interactions at 10^{15}-10^{16} eV *(Chinese)* 3—44633
charged particle scatt. in plasma with MHD turbulence, correl. function calcs. 3—39975
Coma cluster of galaxies (Abell 1656), relativistic particles intergalactic reacceleration 3—59484
Crab Nebula relativistic electrons diffusion coeffs. determ. 3—48999
Cygnus X-3, pulsar in close binary model, gamma ray emission and particle accel. 3—5264
diffusion in solar wind with ellipsoidal modulation region 3—15780
diffusion tensor in interplanetary mag. field, nonisotropic turbulence effect 3—15783
diffusive shock acceleration including scatt. wave field, accel. particles back-reaction on plasma flow 3—30131

- **cosmic ray propagation** continued
  - double radiosources, collimated beam model involving electron-positron showers of black hole origin 3–16023
  - drift velocities in interplanetary mag. field 3–15782
  - electrons in bright spiral galaxies, propag. and prod. 3–25600
  - energetic particles drift motion and vertical diffusion in interplanetary mag. field 3–5076
  - flare particles parallel diffusion in interplanetary mag. field from 1-5 AU 3–5066
  - Forbush decrease, model of energy spectra 3–54208
  - galactic cosmic rays, steady state transport perpendicular to galactic plane 3–20190
  - galactic cosmic rays anisotropy in heliomagnetosphere, modulation, average sidereal daily motion 3–5065
  - galactic non-decaying cosmic rays, age distrib. and lifetime, galactic wind effects 3–25269
  - heliosphere, shock accel. of energetic particles 3–10178
  - impulsive cosmic ray point source, diffusion-convection function 3–54209
  - intensity increase of Sept. 17 to 18 1979 due interplanetary structs. 3–30133
  - interplanetary propagation of solar low energy electrons and ions, effects on pitch angle distribs. 3–10163
  - interplanetary structs. responsible for Sept. 1979 intensity increase 3–30133
  - interstellar clouds, electron energy spectra, propag. and interactions, bremsstrahlung γ-ray luminosity 3–20188
  - local interstellar gas traced by gamma-ray obs. 3–20461
  - neutrino production and diffusion from supernova shocks 3–25493
  - north-south anisotropy and variations due to interplanetary propagation 3–35388
  - particle transport in interplanetary medium, effects of interplanetary shock waves 3–10177
  - Perseus OB2 association SNR, cosmic rays accel. evidence 3–54465
  - protostars, energetic particles fluxes and propag., and ionisation rate 3–15913
  - semi-diurnal anisotropy and interplanetary propagation 3–35387
  - shock acceleration in presence of self-excited MHD waves 3–48779
  - solar cosmic rays of corotating events 3–5067
  - solar electrons, interplanetary propag. and solar wind interactions 3–59174
  - solar flare particles propagation in September to November 1973, effects of struct. of interplanetary medium 3–15785
  - solar flare particles transport in corona 3–54308
  - solar flare protons and electrons, accel. and energy spectra during explosive phase *(Chinese)* 3–59282
  - solar flare protons propag. in corona, rel. to interplanetary consequences of flares in (McMath plage 15266) 3–10300
  - solar flare relativistic protons, possible evidence for rigidity-dependent release from solar corona 3–10164
  - ultraheavy nuclei, propag. and source comp. 3–30132
  - X-ray photons transport at balloon altitudes, second order scatt. approx. 3–35390
  - ^{3}He enrichment in flare particles, selective accel. by chromosphere He Lyman α radiation press. 3–54294

- **cosmic ray protons**
  - air-shower primaries, giant, energy estimation 3–35392
  - antiproton equilib. spectrum calcs., leaky-box and closed-galaxy models 3–35391
  - antiproton flux, atmospheric correction factor 3–44627
  - antiprotons, sub-GeV excess, neutron oscillation source 3–5107
  - decay search using Soudan 1 tracking calorimeter 3–45389
  - extragalactic protons in supercluster, mean energy density 3–39976
  - galactic antiprotons, origin, production, detection methods *(French)* 3–39977
  - protons from flares with weak impulsive phases, acceleration mechanism 3–35571
  - solar flare particles propagation in September to November 1973, effects of struct. of interplanetary medium 3–15785
  - solar flare protons, accel. and energy spectra during explosive phase *(Chinese)* 3–59282
  - solar flare protons, development of energetic particle sources within background mag. fields 3–10299
  - solar flare protons, rapid accel. rel. to direct obs. of solar neutrons following flare (1980 June 21) 3–35389
  - solar flare relativistic protons, possible evidence for rigidity-dependent release from solar corona 3–10164
  - solar proton integrated flux forecasting from cosmic ray event initial characts. 3–35451
  - solar protons, radio burst characts. of proton flares 3–10280
  - Sun, proton active region, SHF slowly varying component, spectral characts. *(Chinese)* 3–59281
  - super high energy primary cosmic rays energy spectra obs. 3–59175

- **cosmic ray showers and bursts**
  - *see also cosmic ray electrons; cosmic ray X-rays*
  - air showers, longitudinal development of muons and electrons 3–44631
  - air-shower primaries, giant, energy estimation 3–35392
  - Cerenkov radiation from large inclined EAS 3–5075
  - Cherenkov radiation meas., EAS development 3–10167
  - Cherenkov time profile width, relation to distance to air shower max. 3–44630
  - Crab pulsar cosmic ray showers, production mechanisms 3–54212
  - double radiosources, collimated beam model involving electron-positron showers of black hole origin 3–16023
  - EAS, nuclear composition, inverse problem method 3–10166
  - EAS muons 10^{17}-10^{18} eV, arrival time distrib. 3–15792
  - extensive air showers, large, imaging of muon cascade, computer simulation 3–15791
  - high-energy interactions, semi-inclusive model 3–35393
  - intensity, dependence on declination with primary energies $\approx 10^{16}$ eV 3–25270
  - microprocessor controlled system for air shower data collection 3–44671
  - muon vertical spectra in atmos. at superhigh energy 3–30137
  - observation in high-energy cosmic rays 3–54935
  - shower primary cosmic rays, $6\times10^{15}-2\times10^{18}$ eV, mass composition 3–30135
  - slow monopoles and quarks search 3–15790

- **cosmic ray solar modulation**
  - ellipsoidal modulation region, effect on cosmic ray intensity and diffusion 3–15780

- **cosmic ray solar modulation** continued
  - flare modulating effect on cosmic ray intensity for 20th solar cycle 3–20193
  - Forbush decrease and precursory increase, model 3–5071
  - galactic cosmic rays anisotropy in heliomagnetosphere, modulation, average sidereal daily motion 3–5065
  - galactic mesons/neutrons intensity var. effect of two high speed solar streams types 3–39978
  - interplanetary electrons from Jupiter, effect of solar wind plasma 3–48781
  - meteorite cosmogenic nuclides indicating cosmic ray solar modulation 3–15787
  - north-south anisotropy and variations due to interplanetary propagation 3–35388
  - three-dimensional model including diffusion, drift effects 3–39979
- **cosmic ray variations**
  - *see also geomagnetism*
  - 13 day oscillation at boundary crossing of interplanetary magnetic field sectors 3–20192
  - anisotropy at boundary of high speed solar wind stream 3–15784
  - daily anisotropy, near-weekly vars. 3–5069
  - diurnal variation, phase and amplitude variations 3–44626
  - Forbush decrease, model of energy spectra 3–54208
  - Forbush decrease and precursory increase, model 3–5071
  - galactic cosmic rays diurnal variation, distrib. function kinetic eqn. soln. 3–35385
  - galactic mesons/neutrons intensity var. effect of two high speed solar streams types 3–39978
  - gamma-rays in atm., quasiperiodic var. due to internal gravity waves effects, solar oscill. link 3–54211
  - intensity increase before Forbush effect 3–5068
  - intensity increase of Sept. 17 to 18 1979 due interplanetary structs. 3–30133
  - intensity variation, modulating effect of flare induced solar wind shocks 3–20193
  - ionisation chamber for cosmic ray variations, rigidity responses 3–54248
  - Jupiter electron fluxes in interplanetary space and solar wind plasma interactions 3–48781
  - meteorite cosmogenic nuclides indicating cosmic ray solar modulation 3–15787
  - north-south anisotropy and variations due to interplanetary propagation 3–35388
  - semi-diurnal anisotropy and interplanetary propagation 3–35387
  - solar cosmic rays past fluxes from meteorite and lunar rock tracks anal. 3–48784
  - solar electron fluxes and energy spectra in magnetosheath 3–15786
- **cosmic ray X-rays**
  - diffuse soft X-ray background, spatial distrib. and spectral characts. 3–40295
  - diffuse X-ray background, contrib. of hot intergalactic medium 3–25620
  - diffuse X-ray background, implications of X-ray and optical obs. of quasars 3–25653
  - soft X-ray background, correl. with UV sky background radiation observed with space expt. 'Galaktika' 3–59509
  - transport at balloon altitudes, second order scatt. approx. 3–35390
- **cosmic rays**
  - *see also cosmic ray apparatus; cosmic ray composition; cosmic ray effects and interactions; cosmic ray energy spectra; cosmic ray origin; cosmic ray propagation; cosmic ray showers and bursts; cosmic ray solar modulation; cosmic ray variations; galactic cosmic rays; geophysical aspects of cosmic rays; high-energy cosmic ray interactions; primary cosmic rays; solar cosmic ray particles*
  - fractional charged particles, tachyons and massive particles in cosmic rays 3–31222
  - High Energy Astrophysics Panel of Astronomy Survey Committee, recommendations 3–30243
  - interstellar magnetic monopoles 3–30412
  - local interstellar gas traced by gamma-ray obs. 3–20461
  - magnetic monopoles in solar interior and solar neutrino problem 3–48881
  - quarks, tachyons and massive particles in cosmic rays, expt. limits 3–5064
  - Saturn, cosmic ray secondaries injection into inner magnetosphere 3–54277
- **cosmic X-rays** *see cosmic ray X-rays*
- **cosmogony** *see cosmology*
- **cosmology**
  - *see also black holes; element origin; general relativity; red shift*
  - abundance variation during galactic evolution and cosmological models test 3–44813
  - active galaxies origin and evolution 3–25606
  - angular momenta of astronomical systems, role of cosmic turbulence 3–10488
  - anisotropic homogeneous cosmologies, stability 3–16048
  - anisotropic inverses, Grand Unified reactions and dissipation 3–30531
  - apparent cosmological constant 3–16061
  - axion, very weakly interacting, cosmological aspects, domain walls, decay constant 3–35757
  - B-L violating proton decay and late cosmological baryon prod. 3–558
  - Banach space for dynamic systems, bulk viscosity perturbation of Friedman models 3–10491
  - bargain density upper limit from primordial (Jupiter) D/H ratio 3–20287
  - baryon asymmetry, SU(5) model, spontaneous CP violation and invisible axion 3–26040
  - baryon asymmetry of Universe, implications of existence of barytinos 3–59200
  - baryon density of realistic universe, limits from ^{4}He and D prod. by primordial nucleosynthesis 3–59516
  - baryon production and asymmetry, grand unification, review 3–16059
  - Bianchi type I solns. with cosmological const. 3–20541
  - Bianchi type-I Universes, linearly expanding, Feynman propagators and particle creation 3–35762
  - Bianchi type-V cosmological models from Einstein-Cartan theory, effective energy-momentum tensor 3–20548
  - big bang, gravitation and phase transitions, baryosynthesis, monopole production 3–16050
  - big bang, pregeometric origin, gravity effective action 3–59514
  - Big Bang nucleosynthesis, EM corrections, finite temp. field theory 3–16051
  - black hole temperature, cosmological constraints 3–49126
  - black holes, density fluctuations in early Universe, evaporation 3–35753

cosmology continued
black holes, second law, violation by tachyons 3–40433
book, Open Universe, an argument for indeterminism 3–20587
book, Quantum Theory and the Schism in Physics 3–20586
Brans-Dicke equations with cosmological constant, solutions in spatially flat Robertson-Walker metric 3–20546
Brans-Dicke scalar field theory with variable cosmological term 3–5456
broken supersymmetry, cosmological constraints, electroweak theory, Higgs mass, photinos 3–25666
bubble evaporation, cosmological creation by first order phase transition 3–35752
chronometric cosmology and fundamental fermions 3–49065
classical singularities and black holes life, quantum gravity effects 3–10699
cluster radiogalaxies, luminosity function evolution with red shift 3–16017
conference, Trieste, Italy, (July, 1979) 3–5496
conference on galaxies origin and evolution and cosmology, at Erice, Silicy (May 1981) 3–35780
conference on grand unified theories, Kyoto, Japan (June-July 1981) 3–10509
conformal Minkowski space-time, cosmological model, red shift formulae 3–44877
cosmic density wave, galaxy distrib., quasar absorption-line redshifts 3–20530
cosmic density wave, observable effects on quasar redshifts and galaxies large-scale distrib. 3–10492
cosmic microwave background, search for small scale anisotropy 3–16039
cosmic neutrinos, role in primordial nucleosynthesis 3–54561
cosmological models and the statistical distribution of quasars 3–20553
curvature collineations in certain cosmological space-times 3–16042
de Sitter space, vacuum state 3–10693
de Sitter space time geodesic 3–5468
de Sitter stage, quasistability *(Russian)* 3–16055
de Sitter Universe, geodesic coordinates 3–49066
deceleration parameter, determ. from quasars Hubble diagram and relation to QSOs luminosity evolution *(Chinese)* 3–40288
deceleration parameter measurement from gravit. lens obs. 3–20537
density fluctuations produced by pregalactic radiation sources 3–49064
density of compact objects and high-z quasar props. 3–30532
density perturbations in zero-pressure cosmology, contrib. of weakly nonlinear effects 3–59515
Dirac cosmology, unification with general relativity, single time-scale 3–45038
distance determination expressed as Hubble ratio, use of supernovae 3–25500
distances to spiral and lenticular galaxies using inner ring structure diameter 3–49022
distortions in microwave background spectrum, origin 3–20561
domain walls, axion models 3–31118
dust filled Universe, stability and instability 3–16043
E_6 grand unified model with invisible axions, cosmic domain walls 3–21034
early Universe, cosmological constant and absence of particle creation, gravitons 3–59519
early Universe, creation of structure by Lepton Brusselator 3–20539
early Universe, impurity effects in first-order phase transitions 3–49068
early Universe, particle no. growth and ultimate temp., superunification 3–5464
early Universe, perturbations of Coleman's bubble, appl. to phase transitions 3–45291
early Universe, phase transitions, grand unification and hot big bang 3–30533
early Universe, stable massive particles survival density 3–20538
early Universe dynamics and scalar fields 3–5458
early Universe galaxies, ang. momentum origin, gravit. interactions/tides effects 3–10450
early Universe inhomogeneity and primordial black holes form. 3–44872
Einstein's equations, slice theorem for space of solns. 3–16202
Einstein's evolution equations, nonlinear approximation scheme 3–16195
Einstein's vacuum and electrovac field eqns., general soln. 3–40430
Einstein equations, globally regular solns., review 3–132
Einstein field eqns. with cosmological constant, type D vacuum solns. 3–20720
Einstein-Cartan theory, static cosmological model 3–5457
Einstein-Cartan theory and relativistic kinetic theory, unification 3–54555
Einstein-de Sitter space, conformal hyperbolicity 3–35892
Einstein-Dirac eqns., exact soln. for anisotropic cosmological space-time 3–30711
Einstein-Maxwell field equations, Bianchi-Kantowski-Sachs solns. for stiff matter and dust 3–40451
electric charge in the Kruskal space-time and the Jeans conjecture, matter from white holes 3–40299
electroweak interactions, conf., Schladming, Austria (February-March 1982) 3–25675
Ellis-Maartens-Nel static spherically symmetric cosmologies 3–35749
empty Bianchi type IX model, fluctuations produced by cosmological const. 3–5455
ether theory and etheron elementary particles *(Rumanian)* 3–16057
expanding Universe, photon creation mechanism 3–11004
expansion of Universe, implications of IR absolute magnitude-H I rel. width-surface brightness relation for galaxies *(Russian)* 3–35724
extragalactic distance scale, appl. of H I 21 cm line width of galaxies as distance indicators 3–44835
extragalactic distance scale, Malmquist bias and Hubble const. 3–30535
extragalactic distance scale and Hubble constant, review 3–20540
extragalactic radio source and evolving Universe, review 3–54544
extragalactic radiosources role 3–54557
extragalactic structure from object separation meas. *(Russian)* 3–20506
fermion number violation, appl. of spectral asymmetry 3–10700
first-order phase transition and baryon-monopole problem 3–44880
five dimensional unified theory combining Kaluza's and Weyl's theories, cosmological models 3–35903
flat spectrum radiosources evolution, 10.7 GHz anal. 3–54543
flatspace instability and conformal fluctuations origin 3–30536
free quarks in early Universe 3–35425
Friedman universe, singularity avoidance by particle prod. 3–35747
Friedmann cosmology with torsion 3–25665
Friedmann models, appl. to apparent size-redshift relations for double radio sources 3–10473
Friedmann Universe, quantum tachyon scalar wave eqn. 3–16044

cosmology continued
Friedmann Universe, spin $^1/_2$ field vacuum energy density 3–40429
fundamental constants, numerical values, principle of antropy *(Russian)* 3–16058
fundamental frames of reference of momentum mechanics 3–54657
fundamental questions in terms of elementary particles *(French)* 3–16056
galaxies, origin and evolution 3–54538
galaxies clustering, effects of variable obscuration in Galaxy on observed autocorel. function 3–30508
galaxies formation, implications of kinematic props. of faint elliptical galaxies 3–54503
galaxies formation, role of massive neutrinos in large-scale gravit. clustering 3–30489
galaxies in nearby rich cluster, apparent void 3–20508
galaxy angular correlation function estimates 3–49031
galaxy cluster, Hubble expansion and cosmological density parameter effects 3–16016
galaxy clusters, dark matter and galaxies equipartition evolution, effect on virial M/L detem. 3–59485
galaxy correlations, 4-point function in BBGKY hierarchy 3–20509
galaxy distribution, statistical anal. of filamentary struct. in Shane-Wirtanen galaxy distrib. 3–35714
galaxy formation, significance of galaxy clusters gravit. radii correl. with vel. dispersion 3–30511
galaxy formation collapse phase, collision free N-body simulation 3–20492
galaxy formation from adiabatic and isothermal modes 3–40303
galaxy formation from adiabatic linear density perturbations growth in variable-G cosmologies 3–40305
galaxy voids, origin and nature 3–5454
gauge theories in conformally flat space, trace anomaly 3–40748
gauged N=4 supergravity theory with scalar pot. 3–54662
gauged supergravity, stability supersymmetry and cosmological contribution 3–20748
general relativity, Palatini variational principle modification 3–45031
general relativity and matter, book 3–54590
general relativity with non-vanishing cosmological constant, stability props. 3–10710
general-relativistic cosmological and stellar models, role of shear 3–54226
generalised quaternions and space-time symmetries 3–11057
giant voids in the Universe 3–25627
Godel's Universe, geodesic motion and confinement 3–49067
Godel-type universe, perfect fluid and scalar field 3–30719
Gowdy $S^1 \otimes S^2$ and S^3 inhomogeneous cosmological models 3–35748
grand unification, supersymmetric, near Kaluza-Klein scale 3–30737
grand unified big-bang model, primeval fermion degeneracy 3–30537
grand unified model, fractional charges, monopoles, and peculiar photons 3–40826
grand unified theories, baryon number from collapsing cosmic strings 3–21035
grand unified theories, phase transitions, universe supercooling 3–6025
grand unified theories and cosmology 3–49615
grand unified theories review, cosmic baryons, superheavy fermions, neutron dipole moment 3–11102
gravitation, field theory with minimal coupling, pseudo-Euclidean spacetime 3–10694
gravitational evolution of struct. in scale-free universe, appl. to galaxies correl. props. 3–16047
gravitational superclustering of collisionless particles, two-dimens. simulation 3–40269
gravitational theories with variable-G, cosmological tests *(Polish)* 3–48817
gravitational waves in isotropic background Universe 3–40306
gravitino mass in inflationary universe, nucleosynthesis restraints 3–20542
GUTs, SUSY GUTs and super GUTs, cosmological probes 3–31096
Hamiltonian cosmology and gravitational solitons, variational outlook 3–30749
heat death and oscillation in model universes containing interacting matter and radiation 3–20535
hierarchical cosmology, rel. to cosmic plasma physics 3–59512
holes in cosmology, theory 3–40297
homogeneous cosmology, action-principle surface terms, geometrical perturbation theory 3–20719
homogeneous isotropic cosmological model in scalar-tensor theory 3–35764
homothetic gauge field, cosmological consequences 3–25669
hot Friedmann Universe, absence of particle creation 3–59521
Hubble constant, determ. using inner ring structs. in galaxies as distance indicators 3–54500
Hubble constant, Virgo cluster infall and nearby galaxies distance scale effects 3–40243
Hubble constant interpretation from MERLIN observations of superluminal radio sources 3–16027
Hubble flow, Virgocentric deviation of Local Group, dynamical models 3–30476
hyperdimensional Universe 3–5462
inertial motion theory in const. curvature space-time 3–20554
inflationary inverse model, Hawking radiation 3–20544
inflationary scenario in standard SU(5) model, broken supersymmetry 3–25668
inflationary Universe, density perturbation spectrum 3–5463
inflationary universe, superheavy bosons and baryon asymmetry 3–5465
inflationary Universe, supersymmetric, fluctuations 3–35759
inflationary universe and cosmology, baryon prod. 3–10495
inflationary Universe model and implications for time asymmetry 3–44876
inflationary universe scenario, phase transition dynamics, perturbation generation 3–16052
inflationary universe scenario, role of scalar held fluctuations in exponentially expanding universe 3–5466
inflationary-Universe based on SU(5) grand unified theory and monopole with Dirac mag. charge 3–26055
inhomogeneous cosmological models in general relativity 3–44875
inhomogeneous cosmological models with flat slices generated from Einstein-de Sitter universe 3–35746
inhomogeneous models containing homogeneous inner hypersurface geometry, Bianchi type changes 3–5452
inhomogeneous relativistic cosmological model, redshift effect intrinsic to clusters of galaxies 3–44838
interior NUT solution, cosmological models 3–20722

cosmology continued
invisible axions, prod. in early Universe, $U(1)_{PQ}$ symmetry breaking 3—35756
invisible axions in strong CP puzzle, cosmology, Universe dark matter 3—35755
Jordan-Brans-Dicke theory, astrophysical consequences 3—44885
Kaluza-Klein cosmology theory, Jordan-Brans-Dicke theory, supergravity 3—30534
Kepler's cosmological theories, their agreement with observation 3—20602
Kerr-Newman metric in Robertson-Walker Universe background 3—5453
BL Lacertae objects, local volume density from Einstein X-ray obs. 3—54508
Large Number hypothesis 3—25674
large number theory, modification for constant G 3—49251
large scale structures and Metacatalogue of galaxies 3—5155
large-scale stability of the Universe 3—20560
laser probes of general relativity, cosmology and quantum mech. 3—7054
lattice universe geometry, black hole models 3—40298
left-right symmetric theories, spontaneous breaking, vacuum domain wall and string formation 3—11084
Lemaitre cosmology and protogalaxy form. 3—35825
light element nucleosynthesis in early Universe 3—54562
light nuclei primordial abundances in bouncing Universes 3—25659
local Hubble flow, implications of rot. vels. and central vel. dispersions for sample of S0 galaxies 3—49004
Mach's principle, cosmological testing *(German)* 3—35428
Mach's principle, exptl. test using Earth's inertial mass determ. *(German)* 3—10487
Mach's principle and microwave background 0.1% anisotropy 3—10490
magnitude-redshift relation in homogeneous relativistic model, correction to Hubble law behind clusters 3—16041
Majoron, massless boson, universe missing mass, left handed γ mass 3—26035
mass distribution large scale fluctuation, scale invariant primeval perturbations effects 3—25662
mass scales in universe of dust and blackbody radiation, rel. to evolution of density inhomogeneities 3—59510
mass-to-light ratio, large-scale vars. 3—20507
massive neutrino halos in expanding universe, theory 3—16040
massive neutrinos and cosmology, semi-degenerate equilib. configurations of collisionless self-gravitating Fermi gas 3—54222
massive neutrinos distribution in galaxies and clusters 3—20225
massive pregalactic stars, evolution during H and He burning stages 3—54449
massive pregalactic stars, nucleosynthesis in pair creation supernovae rel. to pregalactic metal enrichment 3—54450
massive pregalactic stars, thermalised radiation contrib. to microwave background, theory constraints 3—30516
massive scalar field generation by conformal transformation 3—5467
massive vector field in Friedmann matric, regularisation and renormalisation 3—522
massless spin-two particle exchange 3—20745
matter creation and gravitational constant evaluation, rotation expts., precision rotors 3—10715
matter distribution in Universe, evidence from edge-on galaxies distrib. 3—44834
mean density estimation from deep galaxy samples 3—20536
metastable state decay widths, improved WKB approx. 3—49207
microcanonical entropy of a cosmological model 3—20555
microwave background, small-angle anisotropy in adiabatic theory 3—49056
microwave background radiation, anisotropy meas. and cosmological implications 3—20533
Minkowski quantum unstable vacuum, evolution towards big-bang singularity 3—35758
model with compact space sections and low mass density 3—35750
modified Robertson-Walker metric, matter-antimatter asymm. 3—54553
monopole searches, review of expt. status 3—16560
monopoles in present and early Universe 3—16588
N=8 supergravity, UV finiteness, spontaneously broken by dimensional reduction 3—20754
N-extended supersymmetric unification, supersymmetry breaking, gravitino mass, early Universe 3—16577
neutrino background in early Universe and temp. fluctuations 3—44884
neutrino mass and cosmological aspects *(Japanese)* 3—59202
neutrino masses, neutrino oscills. and cosmological implications 3—26032
neutrino number of realistic universe, limits from ^{4}He and D prod. by primordial nucleosynthesis 3—59516
neutrino perturbations in perfect fluid spacetimes, Godel universe, Taub spacetime, cosmological models 3—20547
neutrinos, massive, formation of halos in Gamow cosmology 3—49062
neutrinos in Universe, neutrino/photon temp. and conc. ratio, neutrino rest mass and contrib. to missing mass *(Russian)* 3—30169
neutron properties, effect on Universe 3—54559
neutron role in cosmological models 3—54228
neutrons in the early Universe 3—54560
Newton-Cartan theory with preferred vector field and perihelion shift 3—44878
Newtonian cosmology; gravit. Debye-Huckel theory 3—59511
one-dimensional inhomogeneous cosmologies, wave propag. 3—16045
open Universe soln. of Einstein's eqns. coupled to quantum scalar field 3—54656
particle creation in EM field, quasi-Euclidean model 3—54558
particle physics and cosmology, decaying neutrino investig. 3—10547
perfect-fluid-filled Kantowski-Sachs cosmological models, Hamiltonian formulation and canonical quantisation 3—35761
permanent quark confinement, cosmological temperature, quark interactions 3—16046
perturbation generation by first-order phase transition 3—44879
perturbations growth in isotropic Universe, nonzero neutrino rest mass 3—44883
phase transition, slow nucleation of bubbles in early Universe 3—44874
physics of stellar evolution and cosmology, book 3—10545
Population III star of low mass, evolution models, interior struct. and processes 3—48962
pregalactic phase evolutionary sequence and modern galaxy props. 3—44849
pregalactic supermassive stars in clusters, contrib. to microwave background distortion 3—20532
pregalactic very massive objects 3—30431

cosmology continued
pressureless inhomogeneous spheroids gravit. collapse, cosmological implications 3—59208
primeval magnetic field, effect on cosmological models and galaxy form. models 3—40304
primordial abundances of He and D, hot-big-bang model, neutrino effects 3—16049
primordial black holes, abundance from cosmological first-order phase transition 3—44881
primordial black holes, cosmological mass density rel. to gravitationally lensed Seyfert nuclei model for quasars 3—44865
primordial black holes form./mass spectrum in Universe with maximally hard eqn. of state 3—59513
primordial inflation model in simple supergravity 3—59520
primordial irregularities, origin 3—44882
primordial nucleosynthesis including radiative, Coulomb, and finite-temperature corrections to weak rates 3—20550
primordial Universe physics, consequences of gravit. theory based on non-symmetric $g_{\mu\nu}$ 3—40031
QSO space density (beyond z=3.5) 3—10479
QSOs, evidence for cosmological evolution from radio-selected samples 3—25654
quadratic Poincare gauge field theory, vacuum solns. with double duality props. 3—10698
quantum field theories and relativistic cosmology 3—20556
quantum field theory and cosmology 3—45046
quantum Universe with scalar field, conformal fluctuations 3—16054
quark hard core evidence independ. of bootstrap model, early cosmology 3—45365
quark-hadron phase transition, connection with microwave background radiation temp. 3—44870
quark-hadron phase transition in early universe, from perturbative QCD and resonance gas model 3—20545
quasar clustering search at South Galactic Pole 3—59508
quasar counts, cosmological evolution evidence and selection effects 3—40286
quasar counts dependence on redshift and spectra index distrib. in chronometric/Friedmann cosmologies 3—59503
quasar density around companion galaxies 3—25651
quasar evolution in luminosity-cosmic time frame 3—10493
quasar spatial distribution in two 25 square degree areas, clustering anal. 3—59495
quasars, X-ray emission, cosmological evolution 3—20527
quasars evolution and deficit at low red shift 3—59494
quasars near companion galaxies, Arp's statistics 3—25650
radio galaxies, evidence for cosmological evolution from radio-selected samples 3—25654
radio galaxies evolution, optical colours and radio luminosity function at high redshifts 3—25619
radio sources, evolution of linear sizes 3—25639
radio sources, extragalactic VLA source counts at 6-cm wavelength rel. to cosmological models 3—49044
radio sources evolution, implications of spectral indices of 4.755 GHz sources 3—48837
radio sources linear size evolution, implications of ang. size distrib. at low flux densities 3—25638
radiogalaxies evolution in luminosity-cosmic time frame 3—10493
radiosources, extragalactic, found in metre-wave surveys, spectral index-flux density relation 3—5437
red shift time evolution, q_0 determ., effect of galaxies peculiar accelerations 3—10489
redshift-distance laws and influence of local extragalactic effects 3—20487
relativistic cosmologies, principles 3—40302
relativistic kinetic theory and conformal transformation 3—40441
relativistic mixmaster Universe chaos, nonlinear difference eqns. 3—35754
relativistic Robertson-Walker world models rel. to steady state Hoyle cosmology 3—25660
relaxation terms and entropy prod. in leptonic period of Universe 3—25663
relic neutrinos, detection by coherent scatt. 3—54227
review *(Polish)* 3—59517
rich clusters evolution, numerical simulation 3—10469
Robertson-Walker universes, choice of vacuum states 3—16053
Robertson-Walker Universes, finite temp. effective pot. for $\lambda\phi^4$ theory 3—59522
Sandage-Tammann extragalactic distance scale re-examination 3—5460
scalar particles, creation in early stage of Friedmann closed universe 3—35751
scalar-invariant scalar-tensor theory, gravitational constant and particle mass origins 3—16208
scale covariant cosmology and astrophysical applications 3—20552
scale invariant cosmology with and without variable G 3—5461
scale invariant primeval perturbation effect on microwave background and mass distrib. fluctuations 3—25662
shock wave in expanding Universe, struct. and expansion law 3—49061
singularities in self-similar cosmologies 3—25673
space-time cosmological model, product struct. existence 3—25664
spacetimes with constant vacuum energy density and conformal Killing vector 3—49230
spatial curvature probed by microwave polarisation 3—25670
spatially closed Friedman universes with cosmological constant and radiation pressure 3—25661
spatially homogeneous cosmology, variational principles 3—20557
spontaneously compactified D=11 supergravity, cosmological constant 3—45049
stable heavy negatively charged leptons as relics of Big Bang 3—35435
steady state Hoyle cosmology rel. to relativistic Robertson-Walker world models 3—25660
structure formation, use of superclusters 3—20513
$SU(2)_L \times SU(2)_R \times U(1)$ left-right symmetric model, cosmological bounds, neutrino interactions 3—555
$SU(5) \times SU(5)$ unification, avoiding cosmological domain walls 3—20543
SU(5) Coleman-Weinberg theory, phase transition, Higgs boson coupling constants 3—563
SU(5) grand unification model in Coleman-Weinberg mode, supercooling and Ginzburg fluctuations 3—11096
SU(5) model, Peccei-Quinn symmetries without domains 3—11098
SU(5) model phases, $SU(3) \times [U(1)]^2$ and $[SU(2)]^2 \times [U(1)]^2$ intermediate phases 3—6040
superclusters, flattening of nondissipative pancakes 3—35731
superheavy mag. monopole density limits 3—20238

cosmology continued
superheavy particle dominance era and big bang nucleosynthesis 3—20551
supernovae as cosmological distance indicators, effects of deviation from spherical symmetry 3—30396
supersymmetric grand unified models, monopole suppression and baryon production 3—6024
supersymmetric unified models and renormalisation group, scale fixing by dimensional transmutation 3—31100
supersymmetry breaking scale bounds from stellar evolution and Universe mass density 3—550
SUSY GUTs, super B prod., matter stability and gauge hierarchy, cosmological baryon asymmetry 3—49613
symmetry breaking in early universe and accelerated frames 3—31077
Szekeres cosmological models, singularities and evolution 3—35760
thermo field dynamics and condensed states, book 3—10535
thermodynamics, nonminimally coupled scalar field effects, cosmological model and second law applications 3—16190
time symmetric bouncing cosmological model, trace anomaly *(Chinese)* 3—44873
time variant gravit. constant, cosmologies 3—49250
triplet majoron model test using neutrino bursts from supernovae explosions 3—54556
twisted Goldstone models 3—20987
unified field theory of elementary particles, symp., Munchen, Germany (July 1981) 3—10516
unified gauge theory and cosmology, correlations 3—30168
Universe, invisible mass, dead stars, black holes and cosminos *(French)* 3—25672
Universe, Majorana neutrinos, nucleosynthesis and lepton asymmetry 3—35763
Universe age determ. from Os neutron capture cross section meas. 3—44649
Universe baryon density from primordial Li values 3—25426
Universe closure impossibility with gravit. waves alone, pulsar anal. 3—49054
universe creation from nothing by quantum tunnelling 3—10494
Universe dark matter and axions 3—49069
Universe density parameter from supercluster galaxy kinematics anal. 3—35733
Universe existence from principle of indetermination 3—49063
Universe expansion and tidal extension of galaxies and clusters 3—40300
Universe gross parameters rel. to elementary particle parameters 3—40296
Universe He abundance from neutron decay finite temperature radiative corrections 3—31212
Universe isotropic gravitational radiation background upper limit from pulsar timing anal. 3—49055
Universe large scale struct. determ., method 3—40045
Universe large-scale struct., discovery of Lynx-Ursa Major galaxy supercluster 3—10468
Universe large-scale structure, origin and evolution *(Russian)* 3—40301
Universe mean density, determ. from galactic and intergalactic Faraday rotation of radio sources 3—5440
Universe size, in expanding big bang Friedmann models 3—54552
Universe specific entropy in self consistent cosmological history 3—20558
Universe structure evolution, quasars Lyman-alpha absorption lines clustering rel. to galaxies in proto-superclusters 3—5445
Universe structure evolution and axions 3—59518
vacuum energy and large-scale struct. of Universe *(Russian)* 3—5469
vacuum first-order phase transition, cosmological consequences, monopoles, review 3—16060
very early Universe, first-order phase transitions, bubble nucleation and collisions, primordial black hole formation 3—20549
very large gauge model cosmology 3—31117
voids in Bootes and Corona Borealis *(French)* 3—25671
voids in galaxy distribution, anal. of space distrib. of Markarian galaxies 3—54507
X-ray active galactic nuclei, luminosity function and cosmological evolution 3—54548
X-ray clusters of galaxies, X-ray luminosity function slope evolution 3—16034
zero energy-momentum cosmological principle 3—20559
zero-helicity gravitational waves in relativistic expanding medium, dispersion relations 3—5459
$\nu_H \rightarrow 3\nu_L(\nu_L\gamma)$, cosmological bound on heavy neutrinos 3—45392
$\nu\bar{\nu} \rightarrow \gamma\gamma$, annihilation process with massive neutrinos in cosmology 3—16630
H_2 formation in cosmological epoch $40 \leq z \leq 200$, effect on IR background radiation 3—35745
He and D abundances on Jupiter and Saturn, cosmological implications 3—54554
$^4He(\bar{p},X)$, annihilation, antimatter in early Universe, GUT cosmology 3—25667
Li primordial abundance from old halo dwarf stars anal. 3—25426
N production as primary element in early Universe 3—25429
cosmotrons
No entries
Costa Ribeiro effect *see dielectric phenomena; phase transformations*
Cotton-Mouton effect *see birefringence; magneto-optical effects*
Cottrell atmospheres
Al, pure ultrafine-grained, Luders deform. 3—24305
Fe-Co-Cr(V), magnetisation props. and fine cryst. struct., TEM, Mossbauer and X-ray diffuse scatt. studies *(Russian)* 3—33927
Nb, H Cottrell cloud form. at dislocations 3—51655
Pd, H Cottrell cloud form. at dislocations 3—51655
Cottrell locking *see Cottrell atmospheres*
Couette flow
see also jets
binary fluid mixture under shear, struct., non-Newtonian effects, computer simulation 3—42265
cellular structures, pattern selection in a slowly varying environment 3—46520
circular with variable inner cylinder speed, stability 3—12629
concentrated suspensions of large spherical particles, shear stress meas. during rapid shear between concentric cylinders 3—46632
dissolved macromolecules, cross-stream migration, hydrodynamically induced 3—51207
dusty fluid, Couette flow between two parallel plates 3—42220
dusty gas oscillatory Couette flow wave struct. 3—46621
electrically conducting fluid in rot. system, MHD Couette flow and heat transfer 3—2136
Couette flow continued
fluid in nonequilib. steady state, plane Couette flow, light scatt. calc. 3—43554
ideal fluid with constant vorticity nonlinear stability of two-dimens. steady flow 3—7548
impulsively initiated Couette flow for both axisymm. and nonaxisymm. disturbances, strong stability 3—32807
MHD, between thick conducting plates in rotating system, effect of Hall currents 3—46658
polyacrylamide soln., viscoelastic tangential annular flow, three parameter model 3—42272
polymer melts, stratified liquids interfacial stability, shear thinning effect 3—32770
polymer solutions, dilute, dynamic props., meas. using laser-Doppler velocimeter 3—27627
protein precipitates, disruptions during laminar Couette shear 3—27479
resistance to turbulent flow between rotating cylinders 3—7559
rigid/hardening solids, steady Couette-type flow 3—22511
sphere in inclined channel, gravitational and zero-drag motion at low Reynolds number 3—22531
stability of plane Couette flow for high Reynolds no. 3—42244
stratified power-law liquids, stability in Couette flow 3—27564
Taylor-Couette flow, time depend. motion transition, laser Doppler velocimetry meas. 3—42245
turbulent Couette flow between concentric cylinders at large Taylor numbers 3—12639
two-dimens., of nonhomogeneous viscous fluid 3—12778
velocity fluctuation intensity meas. in turbulent plane Couette channel flow 3—12653
viscoelastic fluids, plane Couette flow, unsteady-state development 3—56579
viscoplastic media, MHD couette flow, channel wall influence on hydrodynamics 3—37491
counter accessories
see also counting circuits
gas discharge detectors, discharge-quenching circuit using transistors in avalanche mode 3—11622
counters
see also Cherenkov counters; counting tubes; fission counters; Geiger counters; proportional counters; scintillation counters; semiconductor counters; spark counters
hybrid detector for ion counting, conversion of Daly type detector 3—451
radiation counters, noise limitations computation 3—55774
counters (circuits) *see counting circuits*
counting circuits
see also coincidence circuits; pulse height analysers; scaling circuits
elemental analysis, rate problems, pulsed neutron beams, multiple ADC system 3—50211
gas discharge detectors, discharge-quenching circuit using transistors in avalanche mode 3—11622
portable pulse counter for gas-discharge ionising radiation detectors 3—50230
ratemeter response time definition 3—45786
counting tubes
see also dekatrons
No entries
country planning *see town and country planning*
county planning *see town and country planning*
coupled superconductor devices *see superconducting junction devices*
couplers (electric connectors) *see electric connectors*
couplers (waveguide) *see waveguide couplers*
coupling (process) *see joining processes*
CP invariance
axion mass raising in hypercolour sideways interaction model 3—16610
conference on grand unified theories, Kyoto, Japan (June-July 1981) 3—10509
electric dipole moment, single quark in Kobayashi-Maskawa model 3—36178
electroweak interactions, conf., Schladming, Austria (February-March 1982) 3—25675
extended technicolour models with horizontal $U(2)_L \otimes U(2)_R$ flavour symmetries, spontaneous CP violation 3—49598
fermions scatt. by monopole in presence of CP nonconservation 3—45280
flavour violation, scalar particles and leptoquarks 3—11081
grand unified theories review, cosmic baryons, superheavy fermions, neutron dipole moment 3—11102
ground unified theories, strong CP problem and axion invisibility 3—26041
GUTs with invisible axion for strong CP puzzle 3—561
higher symmetry in strong interaction and its effects to weak interaction process 3—36207
invisible axions, prod. in early Universe, $U(1)_{PQ}$ symmetry breaking 3—35756
invisible axions in strong CP puzzle, cosmology, Universe dark matter 3—35755
neutrinos mass and CP eigenvalues in SO(10) models, consequences for neutrinoless double-β decay 3—26046
Peccei-Quinn axion props., strong CP problem 3—31134
QCD, θ problem and composite quarks 3—16619
rishon model, quark mass matrix struct., CP violation, Cabibbo angle 3—40878
rishondynamics without elementary gauge bosons 3—11154
six quark model, upper limit to Δm, dilepton asymmetry 3—36169
SO(10) model, superlight axion and neutrino masses 3—49614
soft or hard breaking, axions, composite models 3—11076
standard unified model, supersymmetric extension, CP violation and R invariance 3—40834
$SU(2) \times U(1)$ gauge model, CP nonconservation in weak interactions 3—26034
$SU(2) \times U(1)$ gauge theory, CP nonconservation superweak model 3—21046
$SU(2) \times U(1)$ theory, CP violation in lepton sector 3—21040
$SU(2) \otimes U(1) \otimes S_4$ model, t-quark mass, ν mass and mixings, CP nonconservation 3—11105
$SU(5) \times SU(5)$ unification, avoiding cosmological domain walls 3—20543
SU(5) model, Peccei-Quinn symmetries without domains 3—11098
SU(5) model, spontaneous CP violation and invisible axion 3—26040
SU(n) chiral vacua with doubling, θ-depend. 3—31071

CP invariance continued
- SU(N) hypercolour and extended hypercolour models, fermion masses, rare processes, CP violation 3−49632
- supersymmetric gauge theory, CP violation problem 3−31029
- violation in $\Delta S=1$ Hamiltonian, Weinberg's Higg's-boson exchange model, Kobayashi-Maskawa model 3−11070
- weak CP nonconservation in terms of quark mass hierarchies 3−49606
- K^0-$\bar{K}^0$, CP violating mass difference, leptoquarks and supersymmetric particle constraints 3−583
- K^0-$\bar{K}^0$, spontaneous CP violation, right-handed current anal. 3−54861
- K^0-$\bar{K}^0$ system interaction with external fields 3−636
- $K_L \to \mu^+ \mu^-$, longit. muon polarisation 3−54905
- K_L^0 decay, CP violation origin 3−40804

CPA calculations
- alloys, amorphous, Auger spectra, effect of electron correlations in filled narrow bands 3−38969
- alloys, random binary, charge fluctuations, CPA perturbation theory 3−3130
- cluster form., diffusion-limited, mean field theory 3−57102
- density of states calc., modified CPA calc. for materials with complex cryst. structs. 3−18597
- disordered alloys, electronic props., single site approxs. 3−23231
- disordered alloys, thermoelec. power, Chen-Weisz-Sher model, CPA calcs. 3−23364
- disordered diatomic linear chain having diagonal and off-diagonal randomness, CPA 3−57251
- disordered system, elec. cond. of three-dimens. Anderson model 3−43141
- disordered system, exciton transport and trapping, cluster CPA and random walk calc. 3−57360
- matter, structure and props., book 3−40326
- molecular chain, vibrations, intramolecular interacting excitations, soliton soln. *(Russian)* 3−12004
- molecular crystal, exciton Green's function calc. from two-site dynamical CPA model 3−23274
- organic crystals, electronic energy transfer, incipient Anderson transition 3−23273
- random alloys, cluster expansions and density of states, projection technique 3−23236
- substitutionally disordered systems, self consistent pot. calc., KKR-CPR method 3−42995
- tight-binding quasiparticle motion in Poisson correlated discrete stochastic pot., density of states calc. 3−3025
- transition metal alloys, disordered electron-phonon interaction 3−13381
- transition metals, disordered local moments and thermodynamic props. of Hubbard model 3−33854
- two-dimensional disordered systems, localised states, travelling cluster approx. and scaling theories 3−43112
- Ag_cPd_{1-c}, band struct. effects on Auger spectra 3−34178
- Au_xNi_{1-x}, electronic struct. and density of states, KKR CPA calc. 3−43004
- Au_cPt_{1-c}, electronic struct., relativistic theory 3−3049
- Au_cPt_{1-c}, $N_{6,7}$ soft X-ray emission spectra, electronic struct. 3−3870
- Cu-Ni, band struct., angle-resolved photoemission study 3−28962
- Cu_cPd_{1-c}, band struct. effects on Auger spectra 3−34178
- Fe, electronic struct. and magnetism above Curie temp. 3−28498
- Fe, magnetism and thermodynamic props. above Curie temp. 3−52356
- Fe-Cr, ferromagnetism, antiferromagnetism and spin glass states 3−52465
- $Ga_{1-x}In_xAs$, vibrations and optical props., coherent pot. approx. 3−33370
- $Ga_{1-x}In_xSb$, vibrations and optical props., coherent pot. approx. 3−33370
- $Hg_{1-x}Cd_xTe$, density of states, virtual cryst. approx. breakdown, UPS and CPA study 3−8389
- $Hg_{1-x}Te$, electronic struct., CPA and tight-binding calc. 3−43016
- Nb-Mo, Fermi surface and electron-phonon mass enhancement 3−3037
- Ni-Cu alloys, spin wave stiffness const., RPA and cluster CPA studies 3−38605
- Ni_cPt_{1-c}, paramag., electronic struct., relativistic KKR CPA calc. 3−52021
- $PdD_x(H_x)$, lattice dynamics study 3−22986
- Se, electronic structure, cluster approach *(Russian)* 3−57263
- SmS, valence transition, CPA calcs. 3−13773
- $Ta_{0.5}W_{0.5}$ alloy, electronic density of states and Fermi surface calc. 3−23232
- $TiFeH_x$, substoichiometric, electronic struct. 3−38296
- Zr-Nb, Fermi surface and electron-phonon mass enhancement 3−3037
- $(Zr_{1-x}Hf_x)Fe_2$, electronic struct., magnetisation and isomer shift 3−3048

CPT invariance
- Einstein-Podolsky-Rosen correl., Lorentz and CPT invariances 3−54646
- Kaluza-Klein manifolds, PCT invariance, orientability, O(2) gauge theory 3−21028
- Majorana neutrino EM props. 3−640
- Stuckelberg formalism for spin-1 particles interacting with external EM field *(Russian)* 3−11115
- weak interaction-strong interaction relation 3−16598

crack detection
- *see also cracks*
- acoustic emission method, consolidated system for materials and strength testing 3−9270
- acoustic emission signal source location in three coordinates, instantaneous determ. 3−29260
- acoustic emission technique appl. to electroslag welds testing, using computerised monitoring system 3−24480
- acoustic flaw detector, low frequency AD-60S 3−22296
- acoustic imaging, two-dimensional arrays 3−48038
- acoustically imaged defects, schlieren visualisation 3−46402
- alloys, positron annihilation in nondestructive testing, fatigue damage and defect distrib. 3−48027
- automated flaw inspection system, computer processing of results 3−34595
- automated processing of flaw inspection results 3−34596
- automatic US system for fatigue crack development anal. under nonstationary loading 3−58367
- bimetallic structures, surface crack detection, US techniques, reliability eval. 3−44031
- bimetals, structural, methods for fracture toughness characts. determ., review 3−9274
- bolt, threaded, crack shape evolution, AC field meas. 3−58327
- circular target, US echo flaw size determ., cepstral domain zero point anal. 3−9290
- component identification using ultrasonic signature analysis 3−58352

crack detection continued
- composite material, flaw growth imaging by computerised US scanning system 3−19505
- concrete, microcrack development eval. using US phase method 3−53342
- crack opening displacement as a fracture mechanics parameter in eddy current NDE 3−39334
- current pulse generator for flaw detection 3−34590
- DC potential probe method for fatigue crack propag. meas. *(German)* 3−53323
- defect classification using singularity expansion method 3−29291
- defect detection, surface and below rough surface by US head waves 3−29262
- diffusion bonded specimens, images from flaws using phased array system 3−48039
- digital acoustic flaw detector, fluoropolymer products testing appl. 3−4241
- digital inverse filters, synthesis by nonlinear programming 3−53337
- digital nonrecursive inverse signal filtration in NDT 3−53336
- dimensional information through industrial computerized tomography 3−29245
- eddy current calcs., EM field formulation 3−34570
- eddy current flaw detection, theoretical considerations using superposed transducers, rigorous mathematical soln. of two dimensional problems 3−24465
- eddy current flaw detection by superposed transducers, two-dimens. fields analysis 3−29268
- eddy current impedance changes produced by a crack in a plane surface 3−39339
- eddy current inspection with superposed transducers, theory, approx. calc. of two dimensional models 3−53345
- eddy current meas., systems anal. 3−39340
- eddy current probe, multisegment, for flaw detection of bolted structures 3−39341
- eddy current transducer interaction with multilayered spherical product, electrodynamic problem soln. 3−29267
- elastic wave excitation in layer by disk-shape radiator of finite dimension, defectoscopy appl. 3−22974
- elastic wave propagation and scattering theory, advances in num. models 3−25768
- elastic wave scattering by circular crack, direct integral equation solutions 3−18386
- elastic wave scattering from bulk flaws, expt. confirmation of model calcs. 3−29288
- elastic wave scattering from flaws near surfaces, Fourier elastodynamics appl. 3−56468
- elastic wave scattering theory, Born series and matrix variational Pade approximant method 3−25764
- elastic wave scattering theory, Eikonal approx. weak scatt. approx. 3−25765
- elastic wave scattering theory, inverse scatt. in long wavelength limit 3−25789
- elastic wave scattering theory, method of equiv. inclusion extension to dynamic case 3−25767
- elastic wave scattering theory, multiple scatt. formalism and appl. to scatt. by two spheres 3−25769
- elastic wave scattering theory, unimoment method appl. 3−25766
- electrothermal inspection of conducting materials 3−24474
- fastener hole, crack detection using elec. current perturbation method 3−39342
- fatigue, electrochem. detection, effect of oxide thickness 3−4242
- fatigue crack closure effect on acoustic detection probability 3−39335
- fatigue cracks, electrochem. detection in steel 3−24444
- feedwater nozzles in BWR, residual stress effects on ultrasonic detectability of surface cracks 3−50029
- fibre reinforced composite, flawed fibre array, elastodynamic backscatter, time-domain results 3−58387
- flaw charact., quantitative, by means of scanning laser acoustic microscope 3−48036
- flaw detection and imaging by high-resolution synthetic pulse holography 3−4253
- fluorescent penetrant process, overremoval propensities of prewash hydrophilic emulsifier 3−58350
- glass fibre reinforced plastic, structural integrity assessment using liquid crystal kit 3−58348
- graphite fibre reinforced epoxy, appl. of US testbed to defect sizing and location 3−39327
- graphite fibre reinforced epoxy, fatigue life predictions from US detected laminar defects 3−39328
- graphite fibre reinforced epoxy parts, acceptance testing using AE monitoring 3−24457
- height meas., eval. of accuracy of US timing methods 3−24458
- hollow imperfections in solid medium, elastic wave scattering, US 3−48011
- holographic nondestructive evaluation on-line acquisition and analysis 3−29251
- in-reactor fatigue crack propagation testing 3−55544
- inclined flaw size determ., US, use of max. flaw response 3−14790
- integrated circuit inspection via acoustic microscopy 3−42084
- intergranular SCC classification, physically modeled feature based US system 3−44007
- inversion algorithms for crack-line flaws, US technique 3−44023
- inversion of scattering data of the shadow region of discontinuities 3−44024
- length determination, calibration of elec. pot. drop technique, comparison of theoretical and expt. methods 3−17906
- liquid crystal thermography quantitative geometric charact. of two-dimensional flaws 3−58347
- magnetographic inspection, result documentation 3−48018
- metal welds, cracks detection and identification, US refl. characts. 3−14798
- metallic spherical conducting bodies with flaws, electromagnetic fields of transfer and superposed eddy current transducers 3−50580
- metallised glass fibre, automated flaw inspection 3−53343
- metalworking damage, three-dimensional, isotropic, US echo method of estimation 3−4245
- near surface cavity and inclusion interaction with Rayleigh waves 3−44015
- nonmagnetic materials, theory of eddy current NDT for cracks 3−39336
- nuclear power station, flaw detector for pipe inside surfaces 3−45648
- optical flaw detector 3−34593

crack detection continued
optical surface flaw inspection, analogue compensation for scanned laser beam intensity 3—7051
passive contactless system of information pickup for a magnetographic flaw detector 3—48016
photothermal wave transmission for stereoscopic depth anal. 3—47994
piezoelectric ceramic acoustic radiators flaw detection using thermovisor 3—48022
plate, optical probing of resonant US scattering from machined flaws 3—44027
plate, surface crack sizing using SH waves 3—39323
plates and diaphragms, defect detection using split-lens speckle shearing interferometer 3—24459
pressure vessel, spherical axisymmetrically flawed, expt. and computer simulated holographic inspection 3—48032
pressure vessel integrity inspection, Marshall report (1976) assessment 3—21370
probability, model 3—44030
quality control, NDT mech. and electron-optical methods *(German)* 3—14811
quantitative measurement techniques, state-of-the-art and future trends, review 3—29287
radiometric flaw detection of articles of complex profile, struct. and parameters of automated system 3—24473
reactor pressure vessels, surface flaw assessment, current methods overview 3—55375
real time synthetic aperture acoustic images, quantitive eval. 3—48037
real-time NDE of flaws using a digital acoustic imaging system 3—29243
refractories, acoustic emission under compression 3—29258
residual magnetic field above surface of heavy body, normal component, NDT appl. 3—21970
reversing DC electrical potential method for crack extension meas. 3—50026
ring cracking onset determ., monitoring by electrical contact resistance 3—53333
rock microfractography quantification, digital multi-image anal. 3—39844
sapphire, crystal growth from melt at high temps., acoustic-emission flaw detection technique 3—28982
scatter imaging using X-ray fan beam and pinhole camera 3—9289
sectional struct., torsion box, fatigue damage, detection and effect on damping 3—53344
shadow inspection method, misaligned US transducer effect 3—53339
signal detection and estimation, main components in NDT 3—34592
steel, damage assessment during thermal cycling, appl. of AE 3—39311
steel, elastic wave refl. by infinitely long ribbon crack 3—4230
steel, mild, fatigue crack propag., AE detection 3—53348
steel, pearlitic, defect detection, surface and below rough surface by US head waves 3—29262
steel, Rayleigh spectroscopy for characterizing surface cracks 3—44026
steel, stainless, intergranular SCC classification, physically modeled feature based US system 3—44007
steel, stainless, thin-walled nuclear fuel element cladding tubes, standardised procedure for eddy current testing 3—4244
steel, stainless and mild, defects produced by fusion welding, AE eval. 3—4243
steel, tool, fatigue crack propag., AE detection 3—53348
steel wire ropes NDT, by magnetic method 3—9295
structural components, determ. of degree of defectiveness using natural vibration period 3—29259
structural element fatigue life, cracks, acoustic emission appl. 3—44019
subsurface flaw obs. with scanning acoustic microscope 3—2939
subsurface hole location and sizing, quantitative use of Rayleigh waves 3—44021
superposed eddy-current transducer, calc. of signal created by crack 3—29263
surface detects, mag. powder method, crack shape effect *(German)* 3—53322
threaded bolts, Ti and Inconel, fatigue cracks detection and meas. by a.c. potential difference method, theoretical anal. 3—24460
three dimensional defects, response prediction in eddy current NDT 3—44006
three dimensional flaws, US inspection, dimension measuring method 3—48010
tip with elec. current flowing around, magnetic field strength rel. to electromagnetic inspection 3—29265
turbine blade, in situ crack inspection with endoscope and eddy current probe *(German)* 3—34577
ultrasonic crack detection for railtracks, Netherlands Railways system 3—39316
US, corner reflector detection with irrad. angles near crit. 3—29276
US C-scan system, microcomputer controlled 3—44011
US correlation system evaluation 3—29228
US flaw characterisation, quantitative, parameter estimation/system identification appl. 3—29292
US flaw detection performance potential and procedures 3—44009
US flaw detector test results, reproducibility improvement method 3—34564
US flaw image evaluation for synthetic aperture focusing technique, nuclear reactor appl. 3—19504
US imaging system, holographic, for nondestructive evaluation of industrial materials 3—39312
US inspection system for testing nuclear components, fully automated eleven-axis system 3—19503
US inspection using acoustic fields of elastic wave scattering by defects, liquid model 3—24470
US inspection with head waves 3—53340
US phase method 3—53342
US pulse echo testing, transit time-locus curves, internal flaws detection *(German)* 3—58353
US pulse generator for US flaw detector 3—48013
US reference, test sample prep. 3—39331
US scattering data, inverse Born approx. appl. 3—29290
US testing, recent trends 3—4227
wave shape change on refl. at a corner, defect detect. appl. 3—4229
Al alloy, acoustic emission during plastic deform. and crack growth in 2024 and 2124 specimens 3—39348
Al alloy 2024-T6, crack closure effects for real part-through fatigue cracks, US eval. 3—44025
Al alloy 7075-T651, long wavelength Rayleigh wave scattering from microscopic surface fatigue cracks 3—44029

crack detection continued
Al alloys, high strengths, fatigue cracks, gel electrode imaging, bending and torsional testing 3—34572
Al castings, scatter imaging using X-ray fan beam and pinhole camera 3—9289
Al, US bulk and surface wave scattering from surface breaking cracks 3—44022
Al_2O_3, crack extension from inherent flaws, dye penetrant, SEM 3—58343
Fe, cast, grey, US attenuation by graphite, flaw detection 3—34563
Fe, grey cast, NDT of cracks and welding quality, white light hologram reconstruction *(Chinese)* 3—14792
SiC structural ceramics, defect detection, appl. of NDT techniques 3—39325
SiN_4 bearing surfaces, fluorescent dye penetrant inspection 3—39324
Si_3N_4, acoustic method of crack detection 3—44032
Si_3N_4 flaw detection, 50 MHz US three-dimensional synthetic focus system 3—4254
Si_3N_4, longitudinal wavelength meas. of surface cracks, SAW reflection 3—44028
Si_3N_4, probabilistic failure prediction, rel. to near surface cracks 3—44033
Si_3N_4, tensile testing, optical and SEM obs. 3—39326
SiO_2 glass, spectral density of AE signals, crack detection appl. 3—58364
α-Ti, acoustic emission during plastic deform. and microcracking *(Chinese)* 3—4077
Ti alloys, US bulk and surface wave scattering from surface breaking cracks 3—44022
YAG, crystal growth from melt at high temps., acoustic-emission flaw detection technique 3—28982

crack-edge stress field analysis
see also penny-shaped cracks
acoustoelastic meas. using acoustic wave birefringence 3—53346
anisotropic elasticity, boundary integral equations 3—51003
anisotropic materials, modelling local defects, discrete lattices appl. 3—27449
bar, torsion crack with ring sections, third stress intensity factors 3—12588
beam, dynamic fracture under tensile loading 3—12590
beam or plate in pure bending, dynamic fracture, axial force effect 3—7504
bimaterial interface, stress behaviour in vicinity of approaching crack 3—32672
boundary conditions for crack tip stress 3—50999
branched cracks at small angles 3—32675
brittle failure energy conditions, nonuniform loading with plastic strain *(Russian)* 3—51018
brittle materials under flexure, surface flaws, fracture statistics, Weibull specific risk function 3—12585
ceramics, brittle fracture theory 3—51701
ceramics, Knoop and Vickers indentation, controlled flaws, residual stress field, fracture analysis 3—53312
ceramics, two-phase composite, dilatant transformation toughening, continuum theory 3—46491
circular and rectangular configuration, weight function calc., stress intensity factors 3—51022
circular bar, nonuniform stress field, finite element technique appl. to stress intensity factor calc. 3—7495
classical crack problem in plane and antiplane elasticity, new singular integral eqn. 3—46494
closure behaviour of small fatigue cracks *(Japanese)* 3—56492
compact tension specimen, crack tip growth, elastic-plastic finite element analysis 3—27406
composite elastic plane weakened by slit periodic system, deform. 3—22320
composite with acute-angled inclusions, strength evaluation 3—51019
conference, Sheffield, England (Jan. 1982) 3—54568
conic-section simulation model of crack surface, use of finite element method for determ. of stress intensity factors 3—17883
core-region topography around cracks under modes I, II and III of fracture 3—46490
crack opening displacement formula, recalc. of γ values 3—17882
crack-line loaded specimens, stress intensity factor 3—22404
creep crack growth, eqns. for steady state motion 3—17878
critical curvature radii evaluation in stress conc. zones, fatigue fracture similitude theory 3—43950
CS specimen, plastic zone size and COD by Dugdale's model 3—7496
cuspidal crack, contact problem 3—2011
cylinder, hollow, containing radial crack, stress intensity factor 3—27438
cylinder, infinite, with circumferential crack, torsional impact response 3—2007
cylinder, non-isotropic, containing row of cracks, stress anal. 3—32671
cylindrical vessel walls, temp. stress intensity coeffs. calc. for fissured defects *(Russian)* 3—42183
disc sample with centre crack, loading device design influence on stress intensity factor 3—58361
dislocation densities and stress intensity factors, bounds 3—17877
dissimilar elastic materials, appl. of M-integral to cracks 3—7498
double cantilever beam specimen, crack initiation, propag., arrest, two-dimens. elastodynamic anal. 3—17874
double slip plane crack model 3—50995
elastic bodies, cracked, frictionless contact 3—56498
elastic body with initial stress, 3-dimens. static problem for cracks 3—2006
elastic layer with midplane crack, antiplane vibration 3—42173
elastic media, general solution of mixed boundary value crack problem 3—27435
elastic wave scattering from flat cracks, calc. 3—42195
elastic-ideally plastic solids, growing plane strain tensile cracks, asymptotic analysis 3—17887
elastic-perfect plastic material, modelling of process region at crack growth 3—46495
elastic-plastic behaviour of materials, deform. energy constancy, fractographic analysis 3—53166
elastic-plastic finite element analyses of short cracks 3—27434
elastic-plastic finite element analysis of dynamic fracture 3—12593
elastic-plastic fracture mechanics, finite element part of Lamcal program 3—17894
elastodynamic crack propagation, use of path-independent integrals 3—56476
enriched fracture element, high precision, influence of forcing conforming boundaries 3—42182

- **crack-edge stress field analysis** continued
    - extension of elastic half-space with crack perpendicular to its surface 3−7487
    - external planar crack problem 3−7499
    - fatigue crack growth, linear elastic fracture mechanics and residual stress 3−51024
    - fatigue crack growth, phys. principles, models and expt. results, review 3−13325
    - fatigue crack growth parameters, strain intensity and cyclic J integral 3−56488
    - fatigue crack propagation rates, plastic zone size determ. by photogrid technique 3−22403
    - fatigue cracks, extension of J-integral concept 3−17879
    - fatigue cracks, path-dependent nature 3−12595
    - fibre reinforced composite, micromechanical fracture model 3−46488
    - fibre reinforced composites, stress concentration at circular hole 3−27446
    - finite body, cracked, bounding theorems for stress intensity factors 3−32669
    - flat annular crack in finite elastic cylinder, torsional impact response calc. 3−12599
    - fluid-filled crack, pressure at tip, exact eqns. 3−2002
    - fracture mechanics, fundamental basis 3−32670
    - fracture mechanics concepts, a summary 3−51016
    - fracture mechanisms, boundary element and Green's function methods 3−42181
    - fracture process zones and singularity dominated zones, modelling 3−56471
    - Griffith crack propagation in an orthotropic material 3−42184
    - Griffith crack shielded by dislocation pile-up 3−51007
    - growth equation for short fatigue cracks 3−56487
    - heat-conducting crack tip, stress intensity calc. 3−56493
    - high strength materials, elastic-plastic fracture toughness, prediction using mech. model 3−14699
    - infinite body, crack opening displacement of penny-shaped crack 3−27443
    - infinite elastic conductor with penny shaped crack in mag. field, sudden twisting 3−22392
    - infinite solid containing flat elliptical crack, finite element-alternating method 3−7497
    - infinitely long elastic strip, shear wave interaction with Griffith crack 3−42187
    - inhomogeneous elastic medium, model of point defects in mechanics 3−56436
    - inhomogeneous media, crack in interface between dissimilar half planes, path-independ. integrals 3−32677
    - kinking and curving of cracks, stress intensity factors, energy release rate 3−2000
    - laminates cross plied and ±45 angle plied, non-selfsimilar crack propag. *(Chinese)* 3−17869
    - layered composites, moving cracks, stress wave interaction 3−2001
    - material interfaces, crack propag., expt. on mode interaction 3−7519
    - membrane and torsion crack problems, boundary element method 3−46486
    - metals, BCC, temp. and strain rate sensitive, double slip plane crack model appl. 3−28040
    - micromorphic conditions at singular crack-borders as a consequence of frame-indifference 3−51000
    - mixed mode dynamic fracture mechanics, path-independent integrals of near-tip fields 3−56475
    - mixed mode fracture, caustic form created by stress singularities 3−46481
    - moire fringe patterns of crack-tip displacement fields 3−46493
    - orthotropic elastic plane region, stress in neighbourhood of corner point 3−46444
    - orthotropic strip, finite width, central ductile crack 3−51012
    - peripheral edge crack around a spherical cavity under uniaxial tension field 3−37419
    - photoelastic model, Mode I stress intensity factors 3−32690
    - plane isotropic elastic medium, stress field determ., optical method of caustics 3−51034
    - plane ring shaped region, single crack problem, elasticity soln. *(Chinese)* 3−51001
    - plane sections method, determ. of stress intensity factors 3−17909
    - plastic deformation role in plane strain crack propag. 3−37991
    - plastic medium, crack propag. and arrest 3−50998
    - plastic stress intensity factors for small scale yielding in antiplane shear by caustics 3−32680
    - plastic zone size rel. to thickness, dislocation distribution, fracture theory 3−42186
    - plate, circular, with a crack, bending, stress intensity factors 3−37427
    - plate, cracked, optimization for evaluating complex stress intensity factors from isopachics 3−17908
    - plate, cracked, subjected to bending, twisting and shear, finite element anal. 3−12584
    - plate, dynamic fracture under tensile loading 3−12590
    - plate, elastic, anisotropic, weakened by curvilinear cracks and strengthened by ribs., numerical calcs. 3−46498
    - plate, infinite, dynamic stress intensity factors around rectangular crack under impact load 3−56482
    - plate, internally cracked, Dugdale problem 3−56473
    - plate, large, crack perpendicular to welding bead, stress intensity factor due to residual stress 3−51009
    - plate, thin, cracked, tearing mode of fracture, analytical and expt. study 3−12587
    - plate with crack and two round holes, stresses when loaded by tensile forces 3−27451
    - plate with part-through crack under extension and bending, elastic-plastic problem 3−7493
    - plates, cracked, stress intensity factors under different loadings, Mohr-circle graphical method 3−56504
    - plates, cracked thick, three-dimens. finite element analysis in bending 3−46492
    - plates, stress intensity factor when subjected to bending, influence of crack closure, 3D finite element anal. 3−32673
    - plates with equal and unequal parallel edge cracks, stress intensity factors 3−17886
    - plexiglass plate, cracked, optimization for evaluating complex stress intensity factors from isopachics 3−17908
    - power hardening media, mode-III crack, steady growth, asymptotic near-tip soln. 3−51011
    - quasi-static elastic crack growth, energy release rate and work done by surface traction 3−37421
- **crack-edge stress field analysis** continued
    - relaxation technique for stress intensity factors evaluation by finite element method 3−37422
    - resilient body with cylindrical crack, axially symm. problem soln. *(Ukrainian)* 3−7491
    - section method for calc. of stress intensity factors 3−56484
    - shear lip size before notch root radius, apparent fracture toughness *(Czech)* 3−34450
    - shell, shallow spherical, crack interaction, singular integral eqn. 3−46499
    - shells, three-ply, fatigue failure, variation of stiffness of honeycomb filler 3−42193
    - shells under skew-symmetric loading, crack anal. 3−12597
    - short crack growth, linear elastic fracture mechanics 3−27433
    - short cracks, anomalous behaviour 3−56489
    - single edge notched bend specimens, displacement and rotational factors 3−7494
    - slant crack, closed-form soln., under biaxial loading 3−12589
    - soda-lime glass plate, stress distrib. effects on crack-branching 3−53176
    - solid, elastic, containing annular crack, axisymm. thermal stress distrib. 3−2003
    - solid, infinite isotropic elastic, problem of two coplanar cracks 3−37423
    - spontaneous cracking of brittle matrix due to presence of thermoelastic stresses 3−46482
    - stable crack growth under increasing load 3−7492
    - steel, low C, dual-phase, fatigue crack path, high mean stress, ferrite selection ratio *(Japanese)* 3−39241
    - steel, stainless, type 304, fatigue crack growth, welding stress effect 3−29191
    - strain hardening material, linear, field radial nonuniformity near moving crack tip 3−7503
    - stress concentration analysis on body surface, energy method appl. 3−12602
    - stress distribution near a crack, by energy and direct methods, finite element anal. 3−37426
    - stress intensity factor calc. of 3D surface cracks with EPAS-J1 program, connection elements 3−22393
    - stress intensity factors, direct numerical determ. based on Gauss-Chebyshev method 3−2004
    - stress intensity factors for two cracks emanating from two holes and approaching each other 3−12596
    - stress intensity factors in elastic cracks, finite element method computation 3−17873
    - stress wave loading, dynamic crack-tip stresses, comparison of theory and expt. 3−17885
    - strip, anisotropic, elastic, weakened by an array of Griffith cracks 3−37417
    - thermally self-driven cracks, numerical modelling, thermoelastic-fracture solns., singular influence function distribs. 3−27437
    - thermoelastic fracture solutions using singular influence function distribs., crack stress fields, dislocation distrib. 3−27436
    - thermoelastic problem for crack between dissimilar anisotropic media 3−37420
    - transversely isotropic elastic medium, external thermal crack problem 3−42185
    - unidirectional fibre reinforced elastic composites, 3-dimens. fibrous flaws, stresses 3−51021
    - viscoelastic crack in field of pure bending 3−7500
    - weld-induced residual stress fields, numerical simulation of crack growth 3−51023
    - Al alloy, fatigue crack front fragmentation 3−33353
    - Al, crack tips, stress intensity factors, acoustoelastic meas. using acoustic wave birefringence 3−53346
    - Al-Mg-Si alloy, crack extension micromechanisms, dispersoid effect 3−58205
    - Fe, cleavage crack growth, cyclic, quantitative fractography 3−39228
    - Fe-Si(Ni), cleavage crack growth, cyclic, quantitative fractography 3−39228
- **crack inspection** *see crack detection*
- **crack-tip stress field analysis** *see crack-edge stress field analysis*
- **cracking** *see cracks; fracture*
- **cracking, stress corrosion** *see stress corrosion cracking*
- **cracking, thermal stress** *see thermal stress cracking*
- **cracks**
    - *see also crack detection; crack-edge stress field analysis; crazing; fatigue cracks; penny-shaped cracks; stress corrosion cracking; thermal stress cracking*
    - antiplane deformation, slip-bands emanating from crack tip 3−17881
    - arrest experiments, finite element anal. 3−51004
    - beam in pure bending, effect of shear and rotary inertia on dynamic fracture 3−32682
    - blistering behaviour during ion beam heating of solids 3−28015
    - brittle elastic solids, compressed, containing crack arrays, surface instability and splitting 3−32681
    - brittle material, cracked, bending and tensile strength, fracture mech. theory 3−53180
    - brittle material, time-depend. failure, fracture probability analysis 3−51010
    - brittle materials, elastic stress fields caused by indentations 3−4093
    - brittle materials, fracture toughness testing, crack formation in test piece 3−58332
    - brittle materials, machining damage anal. 3−34477
    - BWR stainless piping, repair work by electric utilities, organisation aspects 3−6373
    - capillary and cracked materials, statistical representation 3−27445
    - ceramic discs, crack branching, biaxial flexure 3−43942
    - ceramic materials, subcritical crack extension, combination with statistics 3−13332
    - ceramics, brittle polycrystalline, role of cracks in creep deform. 3−34384
    - ceramics, Knoop and Vickers indentation, controlled flaws, residual stress field, fracture analysis 3−53312
    - collinear pressurised line crack problem in two-dimens. infinite elastic solid 3−12598
    - column, cracked, follower and vertical loads, flutter instability 3−46466
    - composites, dispersed inclusions, crack initiation in immediate vicinity of sharp edges 3−51015
    - composites, with elliptical inclusions, shear moduli 3−57012
    - composites in compression along cracks, fracture mechanics 3−53215
    - creep, effect of cavities 3−57018
    - crystallites, joints of boundaries, elastic stresses, self-distortion effects 3−46450

cracks continued
deflection processes, expt. 3—50997
deflection processes, theory 3—50996
diacetylenes, amphiphilic, multilayer films, polymerization 3—39384
diamond: N(B)(C), ion implanted, mechanical props. enhancement 3—4154
dielectric materials, crack development kinetics, and polarisation effects 3—28755
disc, rotating, mixed-mode crack anal., finite element method 3—56481
double cantilever beam specimen, crack initiation, propag., arrest, two-dimens. elastodynamic anal. 3—17874
earthquake focus, crack models 3—29841
edge dislocation interaction with elliptical inhomogeneity, shape effects 3—51600
elastic bodies with initial stresses, moving crack problems, exact solns. 3—17892
elastic media, propagation at transonic velocity 3—12601
elastic solids with unknown anisotropy, inverse ray tracing 3—50807
elastic wave, mode conversion on free surface and reflection by corner, computer simulation, motion picture 3—51706
elastic wave reflection by corner or crack having corner on surface, numerical expts. 3—57026
elastic wave reflection by crack or elliptic cylinder, numerical expts. 3—50994
elastic wave reflection by defects, computer simulation, motion picture 3—51705
elastic-plastic analysis of surface flaws using simplified line model 3—56486
elastic-viscoplastic transition zone, fast Mode I fracture arrest 3—56480
elevated temperature creep crack growth: state-of-the-art review and recommendations 3—29176
embedded elliptical and elliptical surface cracks, subjected to arbitrary loading, analytical soln. 3—12594
epoxide resin, substances contributing to generation of osmotic press. 3—34427
epoxy cracks and bond failures, heat generation 3—9144
estimating singularity powers with finite elements 3—56469
exterior crack with contact zones 3—37418
external axisymmetric interface crack with heat flow 3—27450
fibre composites, designing for maximum toughness 3—34425
fibre reinforced composites, unidirectionally oriented, stiffness change due to crushing of fibres 3—33338
fibrous silica material, transversely isotropic, fracture, double-cantilever beam testing 3—44003
finite brittle solid, crack branching and curving, solution method 3—42189
flat cracks, elastic wave scatt. theory 3—37993
flaw size distrib. in welds 3—16815
fracture resistance, effect of crack shape 3—56474
frictionless contact of cracked elastic bodies 3—56498
geometrical characterisation by combined use of time-domain and freq. domain scatt. data 3—37428
Giant's Causeway, columnar basalt, vertical crack propag. model 3—54025
glass, crack growth, effect of water and other dielectrics 3—22972
glass, crack healing, using double torsion loading config. 3—39247
glass fibre reinforced composite, cross-ply, crack propag., theoretical and expt. study 3—32674
glass fibre reinforced plastics, flawed, AE under accelerated weathering and falling weight impact tests *(Japanese)* 3—19402
glass fibre reinforced polyester, long-term strength in dil. sulphuric acid 3—24335
glass fibre reinforced polyester laminate, substances contributing to generation of osmotic press. 3—34427
glass matrix/glass particle composites, hot pressed, Young's modulus rel. to microcracks *(Japanese)* 3—58154
glass surfaces used in precision optics, crack layer study *(French)* 3—4117
graphite fibre reinforced epoxy, model composite, crack initiation and propagation 3—39237
Griffith crack, nonlocal stress field in plate 3—56470
IN597, Ni-base superalloy, creep cavitation and prestrain-induced particle microcracking 3—53173
infinite elastic solid, planar crack occupying finite doubly connected region 3—1999
interacting surface flows, arbitrary shape, growth and stability 3—12591
interface propagation between two viscoelastic solids, Mode III 3—51008
inverse scattering from rough cracks 3—56467
isolated crack, new integral eqn. model of US scattering rel. to US testing 3—42091
isotropic bidimensional bars, characteristic relations *(Italian)* 3—50955
J-integral anal. for cracks emanating from elliptical holes *(Japanese)* 3—56491
Kevlar fibre reinforced epoxy composites, transverse tensile props., moisture effect 3—47892
key curve analysis of crack-growth-resistance curves 3—17876
kinking and curving of cracks, stress intensity factors, energy release rate 3—2000
laminates cross plied and ±45 angle plied, non-selfsimilar crack propag. *(Chinese)* 3—17869
lateral crack system, elastic-plastic indentation damage in ceramics 3—27444
length determination, calibration of elec. pot. drop technique, comparison of theoretical and expt. methods 3—17906
LWR pressure boundary safety and fracture conf. Stuttgart, Germany (Oct. 1981) 3—20569
materials with initial stresses, brittle fracture criterion 3—17888
metal, plane strain-crack growth resistance J_I-R curve determ., tentative procedure 3—29234
metal, plastic, crack growth during creep, thermal fluctuation mechanism *(Russian)* 3—24331
micromechanics of defects in solids, eigenstrain method, book 3—27941
microstructure and mechanisms of fracture 3—58248
model of failure in ideal elastoplastic media 3—42709
multiphase materials, fracture toughness 3—57020
near-surface, diffr. of plane SH waves soln. 3—37429
non-ageing materials, continuous damage parameter 3—12592
nozzle corner crack, elastic-plastic FEM anal., fracture mechanics concept 3—24456
particulate composite, brittle, crack bowing, fracture toughness prediction 3—42706
plane crack located in infinite isotropic solid, boundary value problem soln., improved dislocation approach 3—22323

cracks continued
plane cracks in elastic medium, singular integral eqns., finite-part integrals appls. 3—1998
plane ring shaped region, single crack problem, elasticity soln. *(Chinese)* 3—51001
plane strain crack growth, under small-scale yielding conditions, effect of work hardening 3—51006
plastic rotational factor and J-COD relationship in three-point bend specimen 3—56479
plastic zone of crack tip, distrib. of defects, positron annihilation study 3—33357
plasticity, path-dependent, discrete dislocation anal. 3—56446
plate, finite, internally cracked, investigation of stress intensity factor using variational method 3—32668
plate, large, crack perpendicular to welding bead, stress intensity factor due to residual stress 3—51009
plate, normal edge cracks, horizontally polarized shear wave diffr. 3—46474
plate, stretched, with cracks, stability under biaxial load, theoretical and expt. invest. 3—17890
plate in pure bending, effect of shear and rotary inertia on dynamic fracture 3—32682
plate with crack, slip bands initiation, discrete model 3—56455
plates, of complex shape weakened by cracks, limiting state 3—42207
plates, thin, crack, propag. in bending *(French)* 3—12586
PMMA, bending and tensile strength, crack propagation 3—53180
PMMA, cone indentation and deep punching 3—43943
PMMA, erosion by repeated impacts with single particle *(Japanese)* 3—4140
poly(2,6-dimethyl-1,4-phenylene oxide) and polystyrene blends, crack propagation 3—19404
polycarbonate bisphenol, ductile fracture, expt. study of T-criterion 3—32687
polyester castings, substances contributing to generation of osmotic press. 3—34427
polymer, filled, rocket propellant, damage field near crack tips 3—9147
polymeric materials, spall, temp. effect 3—34448
polymers, crack length meas. during crack propag., elec. method 3—53331
polystyrene, and poly(2,6-dimethyl-1,4-phenylene oxide) blends, crack propagation 3—19404
PVC, crack growth anal. 3—53216
PWR core melt probability, vessel rupture contrib. 3—16971
quartz containing porcelain subjected to low rate thermal changes, acoustic activity 3—53085
quartz glass, slow propagation cracks, acoustic emission and fracture mechanics studies 3—34444
R curve approach to crack initiation toughness testing 3—56505
R-curves, numerical representation 3—27441
Rayleigh surface wave at surface crack, refl. and transmission 3—4228
reactor materials, fracture mechanisms, concept, tensile and notch impact bend test 3—24454
reactor pressure vessels reliability, pre/in-service inspection and tests influence 3—16825
rectangular three-dimensional crack subjected to shear loading 3—22390
rock microcrack kinetics by statistical model 3—44442
rocks, compression-induced nonplanar crack extension with application to splitting, exfoliation and rockburst 3—15426
rubber, natural, filled and unfilled, crack vels. 3—9154
rupture crack tip, microdiscontinuities in plastic zone 3—28042
scattering of SH-waves by cylindrical inclusions, interfacial cracks *(French)* 3—50972
second phase layers on deforming metals, deform. and cracking at elevated temps. 3—29214
Serrania de Varas, Fe meteorite, alternative view of cracking history 3—10273
sheet material, biaxial loading, limiting equilib. and crack growth, fracture meas. method 3—44016
sheets, centre-cracked, fracture load, influence of load biaxiality 3—27439
shell, closed, orthotropic, cylindrical, with longit. slits (cracks), stress state anal. 3—22316
shells, cracked shallow, with transverse shear effects, stress intensity factors *(Chinese)* 3—51002
silicate glasses, gas formation during fracture 3—18382
slant cracks in biaxially loaded disc, optically exact eqns. of caustics 3—46483
slow crack growth, rel. between power and exponential laws 3—13331
solid, cracked, under alternating loads, nonlinear viscoelasticity with hardening *(French)* 3—7489
solids, compression failure along cracks 3—7501
solids with microcracks, overall moduli, load-induced anisotropy 3—57022
stable crack growth, plastic deformation 3—22332
steel, alloy, 20 MnMoNi 5 5, fracture initiation and fracture opening under light water reactor conditions 3—24353
steel, alloy, 22 NiMoCr 3 7, fracture initiation and fracture opening under light water reactor conditions 3—24353
steel, alloy, SCC, plastic zone at crack tip, subcritical growth 3—53293
steel, alloy HY 130, plane strain-crack growth resistance J_I-R curve determ., tentative procedure 3—29234
steel, alloy HY 130, plane strain-crack growth resistance J_I-R curve determ., tentative procedure eval. by round robin tests 3—29235
steel, alloyed, surface crack growth rate calcs. 3—9181
steel, austenitic stainless, slow crack growth, effect of H conc. 3—14714
steel, austenitic welds, hot cracking, influence of primary and secondary structs. 3—19408
steel, C, crack propag. transition temp. determ. method 3—24429
steel, C, normalised, crack resist. rel. to macrofractographic features of fracture 3—29188
steel, C-Mn weld metal, microstruct. and toughness, effect of reheating 3—47943
steel, cold worked, TiC CVD coated, scratch test adhesion 3—14836
steel, Cr-Ni-Mo-V medium alloys, hot cracks within welding process affected zones *(Czech)* 3—58140
steel, cyclic crack growth through weld heat affected zone microstruct. effect of high temp. water environments *(Japanese)* 3—9175
steel, high strength, hydrogen embrittlement, role of MnS inclusions 3—29173
steel, HSLA tempered martensitic, adiabatic shear bands, projectile impact loading, electron microscopy 3—34375
steel, local stressed condition, determ. of crack resist. by criteria of similarity 3—29256

cracks continued
steel, low alloy, caustic cracking and local corrosion, thermodynamics 3—29217
steel, maraging, ultrahigh strength, delayed failure *(Japanese)* 3—24338
steel, Mn-Mo-Ni, low alloy, temper and H embrittled, acoustic emission, indentation loading studies 3—24348
steel, Ni-Cr-Mo, crack initiation, propag. and branching in delayed failure, effect of biaxial load *(Japanese)* 3—4115
steel, spheroidised, plastic instability in U-notched bend specimens 3—34461
steel, stainless, H induced martensitic transform. and twin form. 3—43806
steel, structural, fracture resist. as characterised by strength of plastic stress singularity 3—17907
steel, structural weldable, elastoplastic failure concepts limits *(German)* 3—53175
steel, ultra-high strength, H induced delayed cracking for type III cracks *(Chinese)* 3—34422
steel type 20KhN3A, flake growth kinetics, acoustic emission study *(Russian)* 3—34432
steels, austenitic, LMFBR materials, fracture mechanisms evaluation, cracks 3—24455
stress intensity factor calc. of 3D surface cracks with EPAS-J1 program, connection elements 3—22393
structural strength, in presence of cracks 3—17891
structure eigenfrequency changes due to cracks, notches and geom. changes 3—7479
submerged crack, antiplane shear wave scatt. 3—22365
surface crack-screw dislocation elastic interaction, two-dimens. theory 3—33252
T-criterion applied to ductile fracture 3—27442
thin object, two dimens., elastic wave scatt. and wave momentum 3—1997
tip, work for plastic deform. in localised area 3—28035
unidirectional fibre reinforced elastic composites, 3-dimens. fibrous flaws, stresses 3—51021
uniqueness for elastic crack and punch problems 3—2010
viscoelastic body fracture, quasistatic crack growth 3—22388
welded joint, fillet, defects and crack shape development 3—29150
Ag-Cu directional eutectic alloy, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3—24424
Al alloy, fracture parameters, variation during process of subcrit. crack growth 3—14697
Al, crack tips, dislocation emission, TEM obs. 3—19394
Al-Cu(Fe), directional eutectic alloy, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3—24424
Al-Zn (45 wt.%), hot-dipped coating on low C steel strip, ductility, cracking, tensile testing 3—43917
Al_2O_3 bend specimens, slow crack growth, increase of crack resist. 3—34442
β''-Al_2O_3-Na_2O (Ag_2O), ionic conductor, crack propag. under electrolytic conditions 3—58206
BaO.6Fe_2O_3 permanent magnet, oriented, fracture toughness and anisotropy 3—14741
C fibre reinforced polyamide 66, stress-strain curve prediction 3—9120
CaF_2, cleavages, surface distortion features 3—51908
Cu-Al-Zn-V, shape memory alloys, β-grain size and mech. props. rel. to V addition 3—43888
Cu-Sb solid soln., slip band growth and crack form. *(Russian)* 3—24294
$\alpha-$ Fe, (001) plane two-dimens. crack simulation, using new boundary scheme 3—14716
Fe, H adsorption, work function-chemisorption study 3—51917
FeTi-based alloys containing β-Ti, hydrogenation 3—42569
Li_2O-Al_2O_3-SiO_2 glass ceramic, flaw growth, indentation-produced 3—19393
Li_2SO_4, monoclinic, ionic cond., prep. condition effects 3—42836
Na-concrete reactions, cracking modeling 3—1015
Na_2O-SiO_2 glasses, mech. props., effect of dissolved water 3—9159
Ni cathodically hydrogenated bright electrodeposited coatings, spiral cracking 3—47790
Ni electrolytically deposited bright coatings, internal stresses and hydrogenation rel. to cracking 3—47789
Ni-base superalloys, post-weld heat-treatment cracking, review 3—58202
β-NiS, structural transform. during paramag. metal-antiferromag. semicond. transition 3—2784
$PbO-B_2O_3$ glasses, microcrack-branching and fracture toughness 3—34445
Si, laser induced backside damage, characterization for gettering 3—56973
Si wafers, backside laser irrad., microcracks, thermal annealing 3—27984
Ti alloys, crack propag., in situ electron microscopy obs. 3—9189
α-βTi alloys, fracture toughness, role of microstruct. 3—34458
Ti, welded joints, stress concentrator effect on bend ductility 3—14685
Ti-Al-V (6, 4 wt.%), stable crack growth during fracture toughness testing *(Japanese)* 3—29164
TiFe and alloys, hydride form., rel to hydrogen storage *(Korean)* 3—53597
UO_2, PWR fuel pellet, cladding interaction, mechanical modelling with finite element codes 3—26288
$(U_{0.8}Pu_{0.2})O_2$, fracture surface energy, Hertzian indentation technique 3—34443
W-Mo alloys, grain boundary fracture and cracks, energy characts. *(Russian)* 3—53185
WC-Co, crack resist. testing, 20-2000°C 3—58329
WC-Co, intergranular cracking, appl. of von Mises criterion 3—53172
Y_2O_3-ZrO_2, plasma sprayed layers, vertical cracking, surface oxidation, densification under laser treatment 3—53247
Zn, dislocation assisted crack propag. 3—2662
ZnS, static and impact loading, comparisons 3—14702

cranking model *see nuclear cranking model*

crazing
see also stress corrosion cracking
Dugdale or craze zone, length and displacement 3—32683
growth and interactions 3—39265
PMMA, bending and tensile strength, crack propagation 3—53180
PMMA, craze branching, surface banded struct. 3—47974
PMMA, crosslinked, water effect on crazing 3—14754
PMMA, glassy, fracture processes, appl. of acoustic emission technique *(Japanese)* 3—58264
poly(2,6-dimethyl-1,4-phenylene oxide) and polystyrene blends, crack propagation 3—19404
poly(xylenol ether), impact modified, fracture morphology 3—34478
polycarbonate, epsilon plastic zone of fatigue crack tip 3—19403

crazing continued
polycarbonate, fatigue fracture 3—53209
polyethylene, environmental stress cracking, role of liq. 3—29199
polyethylene, high-density, slow stable crack growth phenomena 3—53206
polyethylene terephthalate, glassy, forced rubbery strain and stretching *(Russian)* 3—14677
polyethylene terephthalate, mech. characts. during deform., adsorption-active media effect *(Russian)* 3—47959
polymer crazing behaviour, time-depend. viscoelastic two-dimensional model 3—13330
polymer mixtures, rubber particle dispersion, toughening mechanism 3—43856
polymeric solids, unoriented glassy and semicryst., craze formation criterion 3—19439
polymers, crazing, stress-induced, time dependent small-angle X-ray scatt. study 3—47929
polymers, fatigue crack layer propag. law 3—53208
polymers, glassy, mech. props., liq. organic media effects *(Russian)* 3—8128
polymers, time-dependent failure, energy considerations 3—33143
polystryene-polyphenylene oxide blends, fracture toughness and fatigue 3—53210
polystyrene, and poly(2,6-dimethyl-1,4-phenylene oxide) blends, crack propagation 3—19404
polystyrene, craze struct., small angle electron scattering, comparison of thin film and bulk materials 3—58265
polystyrene, impact, environmental stress cracking 3—43977
polystyrene, molecular charm scission during crazing, gel permeation chromatography 3—47949
polystyrene, polyethylene-toughened, stress-strain behaviour modelling 3—43934
polystyrene tensile yield, H_2O effect 3—4092
polysulphone, epsilon crack tip plastic zone obs. during discontinuous fatigue crack growth 3—53183
PVC, broken fibrils at fatigue fracture, SEM obs. of fibril struct. rel. to craze size 3—19391
rubber-modified thermoplastics, surface embrittlement, impact and tensile tests 3—34514
Al-Si binary alloys, wear rates, role of transfer and back transfer of material 3—34487

creation hypothesis, continuous *see cosmology*

creation of electron pairs *see electron pair production*

creep
see also creep fracture; creep testing; diffusion creep; elastic aftereffect; irradiation induced creep; recovery-creep; stress relaxation
ageing materials, creep kernels 3—42153
$3Al_2O_3.2SiO_2$-Mo, mullite based composite, high temp. creep, diffusion-viscous flow 3—9118
alloys, creeping, intergranular cavitation, fracture 3—47952
alloys, dislocation creep, solute drag influence 3—2555
anisotropic, after plastic prestraining, theory 3—13321
anisotropic materials, secondary and tertiary creep, material constitutive eqns. *(German)* 3—32626
Astroloy, superalloy, fatigue crack propag., frequency and hold time effect 3—53230
bronze-steel-bronze multilayer struct., fracture during high-temp. extension *(Russian)* 3—39236
cavitation, mechanistic models and interrelationship 3—47902
cavities, effect on creep 3—57018
cavity growth mechanisms 3—47038
cavity nucleation, continuous, creep fracture 3—47042
cavity nucleation and growth, mechanisms 3—47039
ceramic materials, ratio of compression and tension creep rates, struct. effect 3—43902
ceramics, brittle polycrystalline, role of cracks in creep deform. 3—34384
ceramics, creep, mech. charact., review 3—34383
combustor linear analysis 3—17872
composite cylindrical shells, stability under creep conditions 3—32633
constitutive equations, inelastic time depend. and independ., in struct. mechanics, numerical implementation 3—12533
constitutive laws, study using biaxial relax. tests 3—47896
Cosserat medium with thermal medium, thermoviscoelasticity eqns. 3—32619
crystalline materials, void growth, micromechanism and kinetics 3—42595
cyclic creep and endurance of material with curved loading paths under plane-stress conditions 3—42705
cyclic plasticity with a nonhardening strain region, constitutive model 3—32629
Day's information theory, creep function symm., monotonicity and concavity 3—57017
disk, orthotropic rotating, nonsteady creep anal. 3—7452
dislocation-incoherent particle interactions, high temp. 3—33268
drag coefficients of a slowly moving sphere in nonNewtonian fluids 3—56582
elastic-plastic-creeping solids loaded below and above the shakedown limit, bounding principles 3—17823
elastoplastic post-buckling analysis, load path tracing creep type strategy 3—17815
elongation flow, stress growth, creep, constitutive eqn. 3—27461
epoxy resin, photoviscoelasticity, test equipment and techniques *(German)* 3—53321
eutectic, directionally crystallised, creep and fracture modelling *(Russian)* 3—53186
fatigue, variable amplitude, design against using cyclic stress-strain response 3—58250
fatigue failure process, microinitiation, micropropagation and damage *(French)* 3—47950
finite deformation computational analyses, objectivity of incremental constitutive relations 3—44965
fracture toughness for plane stress system correl. with mech. props. 3—24334
geomaterials and porous media, elastic-plastic dilatant deform. 3—48539
glass fibre reinforced Al, produced by powder metallurgy, mech. props. 3—43925
glassy state, vol. compliance investig. *(Russian)* 3—14676
grain boundary sliding, role in deform. and meas. 3—42697
graphite fibre reinforced Al, creep anal. 3—9127
graphite fibre reinforced epoxy tubes, fatigue, static axial and shear props. under completely reversed load controlled loading 3—9126

creep continued
- high temperature, division from point of view of dislocation struct. 3—14671
- high temperature, flow law, role of strain history 3—24303
- IN597, Ni-base superalloy, creep cavitation and prestrain-induced particle microcracking 3—53173
- Inconel 718, Ni-base superalloy, crack growth under fatigue, creep and combined loading, effect of microstruct. and environment 3—24339
- Inconel MA 754, dispersion strengthened Ni alloy 3—53137
- inhomogeneous viscoelastic media, Boltzmann type waves 3—12578
- kinetic equation for damage parameter change, variation 3—18378
- Maryland diabase, high temp. creep to fracture 3—15424
- metal, plastic, crack growth during creep, thermal fluctuation mechanism *(Russian)* 3—24331
- metallic materials, cyclic creep, dislocational models *(Czech)* 3—34388
- metallic materials, cyclic creep, phenomenological models *(Czech)* 3—13322
- metals, creep behaviour, influence of fatigue stress 3—47885
- metals, fracture criteria under nonisothermal loading, endurance eval. from damage summation 3—14722
- metals, irradiated, relation between creep and swelling *(Russian)* 3—33348
- metals, plastic equation of state, creep and stress relax. curves, scaling relationship 3—53131
- metals, plastic-creep deform., unified self-consistent theory 3—32630
- metals, polycryst., mech. description of creep damage state, expt. verification 3—42702
- metals, polycryst., tensile creep accel., by superimposed torsional strain 3—34394
- metals, post-yield creep at room temp. 3—9116
- metals, pure, deform. at high temp. 3—58184
- metals, strength and endurance calculation in creep 3—13323
- metals, stress factor in creep eqns. *(Russian)* 3—8129
- metals, stretching, cogging and drawing with heating, energetic forces estimation *(Russian)* 3—19351
- microplastic deformation and yield strength of polycrystals 3—47030
- modelling steady state and transient deform. at high temp. 3—33350
- multiaxial loading, correl. between creep, cavitation and dilation 3—47036
- net-stress analysis in creep mech. 3—42145
- nonuniformly ageing body with variable boundary, creep theory 3—42704
- olivine, deform., appl. to lunar and planetary interiors 3—54265
- orthotropic viscoelastic half-plane, rigid stamp motion along boundary 3—46501
- particulated composite, prep. by powder metallurgy techniques, high temp. creep 3—34264
- plastic structures, stability, anisotropic hardening and cyclic loads 3—12536
- plate, circular, subjected to bending, nonsteady-state creep 3—17829
- plates, prestressed, nonlinear anal. 3—22339
- polycarbonate, deformed, variation of dynamic mech. props. 3—53143
- polycarbonate deformation monitoring by dielec. relax. spectroscopy 3—52722
- polycrystalline materials, structural superplasticity 3—2658
- polyester, unsaturated, photoviscoelasticity, test equipment and techniques *(German)* 3—53321
- polyethylene, linear, ultrahigh mol. wt., uniaxial tensile creep behaviour, high-energy radiation effect 3—51700
- polymer materials, deform. and fracture processes, simplified rheological rules use 3—57019
- polymers, glassy, kinetic parameters of deform. process, dislocation models 3—18375
- polymrs, life-prediction methodology using crack growth kinetics 3—8132
- polystyrene, conc. lattices, viscoelastic props. investig. 3—7527
- PVC, photoviscoelasticity, test equipment and techniques *(German)* 3—53321
- second-order fluid, creep 3—2126
- sheet, uniformly heated, cylindrical bending under conditions of creep *(Russian)* 3—56449
- shell, cylindrical, stability under pure bending 3—46469
- shells, cylindrical, stability under creep conditions 3—32633
- shells of zero Gaussian curvature, steady-state creep with allowance for shear stresses 3—22343
- solar boiler tubes, cyclic thermal loading in elastic-plastic range, long term behaviour *(French)* 3—42140
- solid solution alloys, deform. at high temp. 3—58184
- steel, austenitic and ferritic, creep and elongation, low cycle fatigue tests *(German)* 3—4095
- steel, austenitic Cr-Ni-Mo, steady state creep meas. *(Czech)* 3—58172
- steel, austenitic stainless, creep, tensile and fracture props. 3—34395
- steel, austenitic stainless, creep behaviour, pre-ageing effect 3—47927
- steel, austenitic stainless, creep deformation and fracture, small angle neutron scatt. and TEM study 3—53153
- steel, austenitic stainless, creep limit, effect of reactor irrad. 3—43905
- steel, austenitic stainless, creep rate, effect of grain size, invest. at 873 and 973K 3—47900
- steel, austenitic stainless, creep resist. reactor irrad. effect 3—43898
- steel, austenitic stainless, cyclic recrystallisation after deformation 3—29101
- steel, austenitic stainless, elevated temp. transient isotropic hardening, microstruct. based eqn. 3—47919
- steel, austenitic stainless, He embrittled, modelling high temp. mech props, 3—19398
- steel, austenitic stainless, reactor irrad., low cycle strain with holding 3—43904
- steel, austenitic stainless, transient creep, 873 to 1023K *(Czech)* 3—14656
- steel, austenitic stainless, transient creep, dislocation on structure, electron microscopy *(Czech)* 3—34389
- steel, austenitic stainless, type 10Kh18N9, strength, creep and heat resistance in alkali liquid Na 3—14673
- steel, austenitic stainless 3—34417
- steel, austenitic stainless steel, type 304, fatigue fracture and creep with cracks *(Japanese)* 3—39195
- steel, Cr-Mo, creep cavitation and fracture, segregation effects 3—14717
- steel, Cr-Mo-V, creep ductility, effect of P and S 3—34390
- steel, Cr-Mo-V, cyclic creep under push-pull loading with different mean stresses *(German)* 3—9142
- steel, Cr-Ni, creep strength, effect of Co and Mo *(Japanese)* 3—53129
- steel, durability, under thermal cycling, based on creep results 3—13320
- steel, early stage solidification, thermal stresses, numerical calc. 3—39104
- steel, ferritic, cavity growth, chemical driven 3—46918
- steel, low alloy, growth of creep cavities 3—14664
- steel, low-alloy, cyclic creep resist., alternating low-cycle loading 3—43899

creep continued
- steel, rapidly quenched, transform. behaviour and mech. props. 3—43910
- steel, stainless, CC Ni-Cr-Nb, low cycle fatigue behaviour, cycle wave-shape effect, 650°C 3—58198
- steel, stainless, type 304, creep deform. damage, small angle neutron scattering exam. 3—24317
- steel, stainless creep behaviour, effect of prior fatigue 3—4083
- steel, structural, fracture criteria under nonisothermal loading, endurance eval. from damage summation 3—14722
- steel structures behaviour at elevated temperatures 3—17808
- steels, heat-resistant, creep-fatigue props. for high temp. service 3—24360
- strength, long-term, prediction for given temp. range 3—43903
- strength and longevity under creep, appl. of modified Lepin model 3—19385
- stress relaxation around grain boundary particles, relevance to high temp. cavity nucleation 3—2572
- stress-cycle asymmetry factor effect on progress of fatigue and quasistatic fracture under low-cycle loading 3—43949
- structural alloys, radiation effects 3—13289
- structural material, recovery of ductile props., inclusion of microplastic inhomogeneity 3—43906
- sucrose, creep enhanced by liquid phase 3—47037
- superplastic flow, activation energy eval. 3—28028
- tertiary, particle coarsening 3—47880
- theory, small parameter method appls. 3—46457
- thick walled cylinders and spheres, relaxation 3—1971
- threshold stresses in materials containing dispersed particles 3—28039
- triacetylcellulose films, chem.-mech. failure, crit. strain *(Russian)* 3—43938
- VHTR core support, testing of thermal insulation materials, C, Si_3N_4, SiO_2 *(Japanese)* 3—11377
- visco-elastoplastic strip containing a hole, creep stress redistribution 3—27403
- viscoelastic functions, linear, approx. method 3—32624
- Zircaloy fuel sheaths, deform. and failure under LOCA conditions 3—45660
- Zircaloy-4, creep and stress relaxation, constitutive eqns. in plasticity 3—47920
- Zircaloy-4, stress relaxation in bending at 673K, rel. to cold work 3—53104
- Ag, high-purity, cold-worked, plastic flow at low temp. 3—47903
- Ag-Cd(Zn), cubic centred high conc. solid solns., creep and stacking fault energy 3—58177
- Al (99.5% wt.), biaxial creep test at high temp., stationary flow pot. identification *(French)* 3—24313
- Al alloy AK4-1T, thermoforce creep surface under simple stress conditions 3—13324
- Al alloy design, fundamentals of strengthening, review 3—58127
- Al alloys, short-term creep and failure, kinetic eqns. *(Russian)* 3—43884
- Al, high purity, creep behaviour, effect of stress and subgrain size 3—53120
- Al, steady state creep under press. *(Russian)* 3—33349
- Al-Cu (4 wt.%), porosity and fracture development during superplastic flow *(Russian)* 3—39205
- Al-Cu-Mn-Mg-Si, heat-resist., struct. and mech. props., Si effect 3—34403
- Al-Mg (3.3, 4.5 at.%), solid solns., creep, breakdown in viscous glide, at high stress levels 3—14652
- Al-Mn-Mg (1, 1 wt.%), strip-cast, thermomech. treatment, creep response 3—24301
- Al-Ni-Fe-Ti, oxide phase hardened, heat and corrosion resist. 3—34543
- Al-Zn (2.1 at.%), steady-state creep rate, influence of prior creep deform. 3—14654
- Al_2O_3:Fe,Ti, Nabarro-Herring diffusional creep, dopant conc. depend. 3—53136
- Al_2O_3-SiO_2 mullite bodies, low thermal expansion ceramics 3—8230
- alloys, heat-resistant, cyclic creep in multicycle loading 3—43908
- Ar, solid, plastic deformation during creep, subboundary migration, etching study 3—13319
- C fibre reinforced plastic, transverse tensile strength, time and temp. depend. *(Japanese)* 3—19377
- Cd-Zn, single crysts., creep, crit. resolved shear stress, conc. depend at low temps. *(Czech)* 3—14658
- $Co_{1-x}O$, transitory creep, rel. to point defect diffusion 3—28037
- Cu, O-free, high cond., long-term creep at cryogenic temps. 3—14670
- Cu, transient creep, ultrasound effects *(Russian)* 3—53128
- Cu wire, grain boundary anelasticity, triple contacts and internal friction *(Russian)* 3—51709
- Cu-Al_2O_3, <001> single crystal, high temp. deform. *(Japanese)* 3—47894
- Cu-Al(Sn)(Zn), cubic centred high conc. solid solns., creep and stacking fault energy 3—58177
- Cu-Cr alloys, high temp. creep and fatigue rel. to microstruct., Mg and Zr addition effects 3—47928
- Cu-Zn (20 wt.%), creep cavitation meas., two techniques 3—39198
- $Cu_{60}Zr_{40}$ metallic glass, relax. under tensile stress, dilatometric meas. 3—53105
- Fe, commercial purity, H attack, effect of stress *(Japanese)* 3—9163
- Fe-Co-V, cubic centred high conc. solid solns., creep and stacking fault energy 3—58177
- Fe-Cr-Ni (21,32 wt.%), cold prestrained, internal stress and struct. in creep at 975K 3—9088
- Fe-Si (1 to 4 wt.%), oxidation characts. rel. to creep, 973-1073K 3—53287
- Ge, intrinsic, effective creep, cryst. orientation effects *(French)* 3—42703
- KCl, creep enhanced by liquid phase 3—47037
- Lab_6-Ni powder, hot pressing, densification kinetics rel. to Ni additon 3—47812
- LiF, low-temp. creep, 1.6-300K, temp. depend., Peierls barrier contrib. 3—37990
- Mg alloys, short-term creep and failure, kinetic eqns. *(Russian)* 3—43884
- Mg based pressed powder composite, creep under uniaxial tension and compression 3—53139
- Mg-Y-Zn-Nd-Zr alloys, creep resist., ageing, strength 3—47926
- Mn-Zn ferrite, polycryst., creep deform. 3—14687
- Mo-base alloys, containing Hf and C, re-evaluation of mech. props. 3—53138
- Mo-W (5 wt.%) alloy, creep resist., stress and microstruct. depend. 3—47921
- Mo-W (5wt.%), thermomech. treatment effect on fracture mode and creep 3—47863

creep continued
- NaCl, deformed under dynamic recrystn. conditions, struct. and props. 3−2657
- NaCl, dislocation motion mechanism at high temps., creep study 3−22905
- NaCl, substruct., large- and small-angle misorientations under creep 3−2660
- Ni alloys, heat-resistant, cyclic creep in multicycle loading 3−43908
- Ni superalloy MAR-M247 single crystals, orientation effect on stress rupture props. 3−14711
- Ni-base alloy, IN 597, atom plating due to cavity growth during creep 3−29136
- Ni-base superalloy, Nimonic 115, induced creep and creep-fatigue at ambient temps. 3−24347
- ni-base superalloys, gas turbine component, creep and fatigue interactions 3−47963
- Ni-Cr-Co, wrought superalloys, creep, 800°C, strengthening mechanisms 3−47922
- Ni-Cr-Mo superalloy, creep strain and rupture, effect of environment 3−19386
- Ni-Cu (35 wt.%), cyclic creep deform., effect of stress amplitude and friction stress *(Korean)* 3−39215
- Ni-Mo(W), solid solns., creep meas. of struct. parameters 3−14668
- Pb, adhesion kinetics, between clean surfaces, 77 to 300K *(Russian)* 3−58390
- Si-O-N-M (M=Mg, Y, Ca, Be or Zr,) reaction bonded and hot pressed ceramics, phase equilib. and mech. props. 3−58112
- SiC fibres, creep, temp. depend. 3−39201
- α-Si_3N_4 powders, hot pressing, strength, oxidation and creep props. 3−34269
- Si_3N_4-MgO materials, compressive creep, activation energy, high temp. obs. 3−29126
- Sn, creep, 1.5 to 78K *(Russian)* 3−24293
- Sn, creep, high temp., X-ray diffr. of subgrain misorientation in single crysts. 3−34400
- Ti alloy, high-temp. strength improvement methods 3−24251
- Ti alloys 685 and 5524 S, thermal stability *(French)* 3−47951
- Ti, deformation maps 3−34415
- Ti-Al-Sn-Zr-Nb (5.5, 3.5, 3, 1 wt.%), fretting fatigue strength, temp. depend. 3−58197
- Ti-Al-V (6, 4 wt.%), enhanced superplasticity in modified alloys 3−53160
- Ti-Al-V-Sn-Zr alloy, high-strength alloy development 3−24249
- Ti-Al-Zr alloy, creep resist. and thermal stability in air and vac., Si additions influence 3−24322
- Ti-Al-Zr-Mo-Si, heat treatment effect on microstruct. and props 3−24281
- UO_2, primary creep, effect of amorphous grain boundary phases 3−19374
- V and V alloys, creep and creep rupture props. 3−4085
- W wire, tensile strength and creep behaviour, short-term, up to 1100°C 3−9117
- W-base alloys, containing Hf and C, re-evaluation of mech. props. 3−53138
- W-Ti(Zr)(HF)(V)(Nb)(Ta)(Cr)(Mo), creep, alloying element influence *(Russian)* 3−19373
- Zn wire, creep characts., pre-torsional deform. effects 3−19380
- Zn-Al (1.1 wt.%) superplastic alloy, creep, strain rate sensitivity parameter *(Czech)* 3−58173
- Zn-Al (22 wt.%) alloy, creep, grain growth kinetic eqns. 3−47893
- Zn-Al-Cu bearing alloys, creep behaviour 3−47907
- Zr, deformation maps 3−34415

creep fracture
- alloys, creeping, intergranular cavitation, fracture 3−47952
- alloys, second phase particle hardened, microstruct. model of high temp. strength and rupture life time *(German)* 3−24361
- cavitation, mechanistic models and interrelationships 3−47902
- cavity nucleation, continuous, creep fracture 3−47042
- cavity nucleation and growth, mechanisms 3−47039
- ceramics, brittle polycrystalline, role of cracks in creep deform. 3−34384
- coupled power law creep and diffusion under multiaxial stress 3−9179
- crack growth, eqns. for steady state motion 3−17878
- crack growth rate under creep, fatigue, creep-fatigue interaction at high temps., parametric representation 3−56497
- elevated temperature creep crack growth: state-of-the-art review and recommendations 3−29176
- fracture mechanics concepts, a summary 3−51016
- Inconel 718, Ni-base superalloy, crack growth under fatigue, creep and combined loading, effect of microstruct. and environment 3−24339
- Inconel MA 754, oxide dispersion strengthened, creep fracture processes 3−34464
- metal, kinetic fracture criteria for combined low-cycle and quasistatic loading 3−19411
- metals, polycryst., mech. description of creep damage state, expt. verification 3−42702
- metals, rupture strain depend. on stress, creep strength model 3−33354
- rupture life, effect of notches and cracks 3−58318
- steel, austenitic, fatigue and creep crack propag. at elevated temps. *(Czech)* 3−58227
- steel, austenitic Cr-Ni, hot embrittlement in heat affected zone of welded joints *(German)* 3−53097
- steel, austenitic stainless, creep deformation and fracture, small angle neutron scatt. and TEM study 3−53153
- steel, austenitic stainless, creep-fatigue interaction in notched specimens, 500°C *(Japanese)* 3−58211
- steel, austenitic stainless, type 316 base and weld metals in LMFBR, creep behaviour 3−55159
- steel, CC Nb-Mo, pressure vessel, creep rupture strength rel. to Mo addition 3−47962
- steel, Cu-Cr, weather resist., stress rupture behaviour 3−47961
- steel, ferritic, Cr-Mo, creep rupture design eqns., fusion reactor structural material assessment 3−6439
- steels, austenitic and ferritic, creep crack growth tests 3−4135
- strength, long-term, prediction for given temp. range 3−43903
- tertiary, particle coarsening 3−47880
- Zircaloy, creep fracture processes 3−29160
- Zircaloy-4 tubing, I-induced SCC failure above 500°C, creep rupture test 3−39297
- Al alloys, short-term creep and failure, kinetic eqns. *(Russian)* 3−43884
- Al_2O_3, temp. depend. of strength ionisation, relationship with structure *(Russian)* 3−14706
- α-Fe-Sn, intergranular creep fracture, high temp., enhanced by grain boundary migration 3−53219

creep fracture continued
- Mg alloys, short-term creep and failure, kinetic eqns. *(Russian)* 3−43884
- Ni superalloys, fatigue and creep fatigue deform. at 650°C 3−14712
- Ni-Cr-Mo superalloy, creep strain and rupture, effect of environment 3−19386
- Ni-Cr-(Sb, Zr) alloy, creep fracture, Sb and Zr traces effect 3−47964
- V and V alloys, creep and creep rupture props. 3−4085
- ZrO_2-Y_2O_3 (15 wt.%), temp. depend. of strength ionisation, relationship with structure *(Russian)* 3−14706

creep-recovery *see recovery-creep*

creep testing
- basic refractories, high temp. testing in non-oxidising atmosphere 3−47996
- biaxial dip tests, high temp. plastic flow, internal stresses 3−48040
- high-temperature cyclic creep test installation 3−19491
- loading device with ampul accommodating two specimens for tests inside reactors 3−19494
- misalignment in creep test, anal. of effect 3−14829
- photoviscoelasticity, test equipment and techniques, appl. to soft plastics *(German)* 3−53321
- plastics testing, thermo-mechanical rheology appl. 3−34580
- rupture life, effect of notches and cracks 3−58318
- steel, creep resisting, multiaxial stress rupture testing and compendium of data 3−14831
- WC-Co hardmetal, indentation and compressive creep tests equivalence 3−24427

crestatrons *see travelling-wave-tubes*

crimping
- No entries

critical constants, thermal *see critical points*

critical current density (superconductivity)
- circular wires, single core and multifilament, self field losses 3−33841
- inductive meas., in thin-film superconductors 3−30894
- Josephson junctions, neutron induced permanent changes in critical current density 3−38543
- polyvinyl stearate Langmuir-Blodgett films as barrier layers in Josephson tunnel junctions 3−38557
- superconductors with anisotropic defects, crit. currents, magnetisation and resistive meas. 3−47464
- type II superconductors, flux line cutting losses 3−3396
- volume pinning force for small defect densities 3−33837
- Al, superconducting strip, crit. pair breaking current far below T_c 3−3392
- $(Mo_{0.6}Ru_{0.4})_{82}B_{18}$, glassy, superconducting, surface flux pinning obs. 3−23555
- Nb-Nb_3Sn multifilamentary superconductor formed by low temp. liquid infiltration method 3−57445
- Nb-Nb_xO_y-Pb tunnel junctions for microwave receiving devices 3−3385
- NbN, B1 struct. supercond., crit. current and crit. field, effects of strain 3−13978
- NbN superconducting film, flux pinning and crit. current *(Chinese)* 3−13975
- NbNm-C film, superconducting props., struct., deposition 3−13945
- Nb_3Sn microcomposite, powder metallurgical prep. and supercond. props. 3−52322
- Nb_3Sn multifilamentary superconductors, solid-liquid diffused, crit. currents and temps. meas. 3−23556
- Nb_3Sn multifilamentary supercond. wires, submicron, fabrication by powder metallurgy 3−47463
- Nb_3Sn multifilamentary wires, bronze processed, supercond. current densities, metallurgical factors 3−43341
- Nb_3Sn, superconducting, four-dimensional crit. surface including crit. strain 3−43326
- Nb_3Sn tape with high crit. current, liquid-phase diffusion fabrication 3−14527
- Nb_3Sn:Ga multifilamentary superconductor, external-diffusion processing, Ga effects 3−52320
- NbTi, supercond., with anisotropic defects, crit. currents, magnetisation and resistive meas. 3−47464
- NbTi/Cu multifilament supercond. composite, optimum crit. current density *(Chinese)* 3−13979
- $Nb_{50}Zr_{35}Si_{15}$ amorphous alloy, supercond. props., effect of cold rolling 3−33819
- Pb alloy Josephson junctions, high J_c, fabrication and props. 3−43329
- PbInAu, Josephson tunnel junction, fabrication and basic props. *(Japanese)* 3−38550
- Ti-Nb-Ta-Zr multifilamentary superconductor, precipitation, time-of-flight neutron small-angle scatt. 3−19342
- $Ti_{55}Nb_{30}Si_{15}$, amorphous alloy, supercond. props., stress effects 3−13943
- V_3Ga microcomposite, powder metallurgical prep. and supercond. props. 3−52322
- V_3Ga, superconducting, four-dimensional crit. surface including crit. strain 3−43326
- Zr-Gl, amorphous binary alloys, superconducting props. 3−23523
- Zr-Nb-Ge alloys, amorphous, supercond. props. 3−28473
- Zr-Nb-Si amorphous alloys, supercond. props. 3−33815

critical currents
- *see also critical current density (superconductivity); flux creep; flux flow; flux pinning*
- current-carrying type II superconductors, mixed state in longitudinal mag. field 3−43338
- high-current superconductors, critical current meas. by induction method 3−49396
- high-current superconductors, short specimen investig. using instrument with superconducting transformer 3−49397
- Josephson SNS structure, proximity effect *(Russian)* 3−13964
- microbridges, variable thickness, static current-phase relation *(Chinese)* 3−13962
- microwave-stimulated supercond., nonlinear electrodynamics 3−52304
- multifilamentary superconductor, I-V characteristics and supercond. state stability, theory 3−18810
- superconducting films, thermal propag. and stability 3−38567
- superconducting junction geometry, effect on crit. current in microwave field 3−18831
- superconducting wire, multifilamentary, inhomogeneous, voltage-current characteristics 3−3398
- superconductor-ferromagnetic metal-superconductor junction, crit. current oscills., exchange field depend. 3−8627
- superconductor-semimetal-superconductor junctions, stationary Josephson current, effect of exciton coupling *(Russian)* 3−38542
- superconductors, spontaneous breaking of reflectional symm. 3−57466

critical currents continued
- superconductors with anisotropic defects, crit. currents, magnetisation and resistive meas. 3−47464
- thin film ternary compounds, critical fields, flux pinning and Fermi surfaces, book contrib. 3−8635
- weakly coupled struct. on semicond. surface, critical currents 3−33840
- Al film, microwave enhancement of order parameter, supercurrent depend. 3−38537
- Cu-Nb_3-Sn microfilamentary composite supercond., crit. current meas., supercond. magnet appl. 3−52321
- $HoMo_6S_8$ type mag. supercond., critical current, mag. field and current effects *(Russian)* 3−3397
- In microbridges, coupled supercond. weak links, crit. current pulling and differential resist. 3−23550
- $LaMo_6S_8$ supercond. thin film, transition temp., critical fields and currents 3−43312
- $(Mo_{0.6}Ru_{0.4})_{82}B_{18}$ metallic glass, annealing effect on struct. 3−37790
- Nb-Sn blob-type Josephson junctions, anomalous I-V characts. 3−38547
- Nb_3Ge A15 superconducting films, high T_c, electron beam codeposited, tunnelling, resist. and crit. currents meas. 3−33813
- Nb_3Ge microbridges, vortex behaviour 3−57486
- NbN variable-thickness microbridges, I-V characts. under microwave irrad. 3−38549
- NbN-Nb Josephson tunnel junction fabrication 3−23542
- NbTi, supercond., with anisotropic defects, crit. currents, magnetisation and resistive meas. 3−47464
- NbTi superconducting tapes, crit. currents with anisotropic defects, theory 3−52319
- NbTi superconductors, crit. currents, 1.8-4.2K and in high mag. fields 3−8638
- Ni-Ti alloy composite supercond., crit. current depend. on non-monotonic field depend. 3−47465
- Pb, electrodeposition on Cu wire, supercond. solenoid manuf., crit. current 3−9001
- Pb-Ag sandwich struct., current-voltage characts., layer thickness depend. 3−43334
- PbBi/Cu proximity effect junctions, resist. transition 3−13969
- $Pb_{60}In_{40}$, double-pinning force maxima for single pinning mechanism, crit. current meas. 3−33838
- V strips, controlled pinning during diffusion implantation of gases 3−43340
- V superconducting columnar films, crit. currents *(Russian)* 3−18836

critical field, superconducting *see superconducting critical field*

critical fluctuations
- *see also fluctuations in superconductors*
- alkyloxy-p′-pentylphenylthiolbenzoates, octyl-heptyl mixture, nematic-smetic C transition, X-ray scatt. study 3−33436
- antiferromagnets with weak spin anisotropy, multicrit. behaviour, renormalised field theory 3−57637
- dissipative structures, dynamic rearrangement 3−40538
- electric quadrupole-quadrupole interaction in two-dimens., fluctuation effects with zero substrate pot. 3−5745
- ferromagnetic film, crit. indices, Valenta model 3−18949
- fluid-fluid interface, elec. and mag. susceptibilities 3−34046
- Ginzburg-Landau model, two-depend., quantum-classical crossover in critical dynamics 3−49305
- glass transition, cooperatively rearranging regions, correl. lengths 3−42775
- graphite intercalation cpd., LiC_6, first-order phase transition, elastic neutron scatt. and DSC study 3−23037
- incommensurate systems, classical and non-classical behaviour, secondary order parameter susceptibility 3−18425
- isobutyric acid-water binary liq. mixture, coupling of vel. and comp. fluctuations, light scatt. obs. 3−28088
- isotropic ferromagnet, dynamic critical props. 3−28570
- liquid crystals, nematic and smectic, mol. orientational correls. in isotropic phase 3−51789
- 3-methylpentane-nitroethane, critical conc. fluctuations, time depend. 3−47082
- multicritical phenomena in structural phase transitions 3−23013
- 4-n-pentylphenylthiol-4′-heptyloxybenzoate and mixtures with octyloxy analogue, light scattering above the nematic-to-smectic- C transition 3−47108
- β-picoline-water solution, light scatt. study of fluctuation kinetics 3−43553
- polymer molecule crit. density fluctuations 3−12023
- smectic A−nematic transition, lattice model, duality maps 3−47111
- surface fluctuations, crit. exponent, field-theoretic model 3−35937
- thermodynamic fluctuation theory, local correlations, path integrals 3−45102
- transient phenomena near instability point, unified formulation using Fokker-Planck eqn. 3−30830
- CeBi, crit. neutron scatt. near antiferromag. ordering temp. 3−18909
- Fe, paramagnetic, ferromag. correls., polarised neutron scatt. study 3−28507
- Fe whiskers, low field FMR near T_c 3−57783
- MnAs, high-field magnetisation, spin fluctuations 3−52533
- $Mn_xZn_{1-x}F_2$, random field effects, spin waves 3−23609
- Ni-Cu-Pd spinodal alloy, superparamagnetic behaviour 3−52555
- UN, spin correls. near Neel temp., neutron scatt. study 3−23663

critical mixtures
- alkyloxy-p′-pentylphenylthiolbenzoates, octyl-heptyl mixture, . nematic-smetic C transition, X-ray scatt. study 3−33436
- aniline-cyclohexane binary mixture, elec. and mag. susceptibilities 3−34046
- benzyl alcohol+n-octane, crit. mixture, US absorpt. meas. 3−18392
- binary liquid mixtures, multiple phase separations, thermodynamic props. and phase diagrams 3−42781
- binary mixture in equilibrium with its vapour, surface adsorption isotherm, conditions of phase separation 3−38194
- binary mixtures, sound vel. meas. 3−2676
- BMOAB-isooctane liq. mixture, crit. point, light scatt. and extinction study *(Russian)* 3−3755
- isobutyric acid-water binary liq. mixture, coupling of vel. and comp. fluctuations, light scatt. obs. 3−28088
- liquid-vapour interface, suppression of fluctuations 3−2763
- liquids, stimulated thermal acoustic scattering, theory 3−51714
- multicomponent fluid, shear viscosity meas. near tricritical point 3−33477
- nitrobenzene-n-hexane crit. mixture, low freq. and ultrasonic obs. 3−51712

critical mixtures continued
- polyethylacrylate-polyvinylidene fluoride mixtures, phase diagrams, press. effects 3−18465
- polystyrene based mixtures, struct. and props. within phase transition region 3−33138
- H-Cl mixture, detonation initiation 3−7608
- Kr-Xe, vapour-liquid equilib., crit. line, Gibbs energy, phase compositions 3−33397

critical opalescence
- BMOAB-isooctane liq. mixture, crit. point, light scatt. and extinction study *(Russian)* 3−3755
- Mandelstam-Brillouin scatt. by optically linear media 3−57948
- organic salts, aqueous/hydrocarbon system, phases and interfacial tensions, opalescence studies 3−47188

critical phenomena
- *see also critical fluctuations; critical mixtures; magnetic transitions; phase equilibrium; phase transformations; renormalisation*
- ϕ^3 field theories, crit. behaviour in three dimens. 3−5743
- adsorption, renormalisation group approach 3−38199
- Banach algebras and Kadanoff transformation 3−16329
- binary mixture in equilibrium with its vapour, surface adsorption isotherm, conditions of phase separation 3−38194
- Bose fluid, interacting, renormalisation group theory of crit. props. 3−10740
- Bose gas, ideal relativistic, with pair production, surface props. 3−20760
- conduction in honeycomb random site lattice, crit. exponents 3−20790
- correction-to-scaling critical exponent for fluids to order ε^3 3−234
- correlated site-bond percolation in two-dimensions, droplets study 3−20780
- dimensional crossover in selective site percolation 3−16290
- discrete dynamical systems, linear and nonlinear response, periodic attractors 3−49259
- dynamic bootstrap percolation, crit. slowing down 3−16291
- excitonic phase transition system, crit. behaviour 3−38315
- finite temp. QCD, critical behaviour 3−21243
- fluid, critical behaviour in Percus-Yevick eqn. for Lennard-Jones pot. 3−10787
- fluid criticality near walls and between plates 3−37611
- fluids, critical correl. and square gradient theory 3−40537
- free energy for Ising model on closed Cayley tree 3−49303
- $g|\phi|^4$ theory in four dimensions and polymers 3−36143
- gas-liquid bubble suspensions, waves and critical phenomena 3−22508
- gases, nonlocal gravity-induced density profiles near crit. point 3−20810
- gases, nonpolar, third virial coefficient, correl. using T_c, P_c and ω parameters 3−49298
- gelation transition, critical kinetics 3−24533
- heat flux density in open channels cooled by superfluid ^{4}He 3−12493
- Heisenberg chain, dilute, scaling treatment of critical and ‘chaotic’ dynamics of the dilute Heisenberg chain 3−33916
- Heisenberg model, classical, high temp. susceptibility 3−23688
- Heisenberg model, classical n-component, block spin renormalisation group in large-n limit 3−38576
- Heisenberg model in three dimensions, classical, extended high temp. series 3−23687
- Heisenberg XY quantum lattice systems, thermodynamics and ground state props., renormalisation approach 3−38640
- n-hexane-nitrobenzene, critical phenomena, viscosity and light scatt. meas. 3−47083
- indices calc. by rational approx. method 3−201
- infinite-range random Ising model, limit distrib. 3−202
- Invar, local environment effect, ferromagnetic instability 3−52529
- Ising chain, one-dimensional, with competing interactions, residual entropy 3−23562
- Ising correlated site percolation, test of universality 3−20781
- Ising ferromagnet, correl. inequalities for truncated two-point function 3−28492
- Ising ferromagnet, Griffiths-Hurst-Sherman inequality improvement 3−33848
- Ising model, compressible dilute, crit. behaviour, Monte Carlo study 3−18924
- Ising model, linear defects, depinning transition and nonuniversal behaviour, unified renormalisation group study 3−49277
- Ising model inhomogeneous, correlations, horizontally layered models on square lattice 3−28580
- Ising zero temperature triangular antiferromagnet, roughening transitions 3−8682
- lattice and continuum QCD, gauge theory coupling, implications of change in lattice actions 3−11132
- lattice compact QED, universal critical behaviour 3−576
- Lennard-Jones systems, very large, mol. dynamics simulation 3−20812
- living polymers, crit. and tricrit. phenomena 3−39379
- mean field critical point, perturbation 3−193
- methanol-cyclohexane, near critical system, multiple light scatt. 3−47666
- multiple phase coexistence from scaling transform. of critical phenomena, Potts models appl. 3−49279
- nitrotoluene, crit. and far pre-critical solns., nonlinear dielect. effect 3−47581
- one-dimensional mapping, period-adding phenomena at freq. locking 3−10754
- period doubling cascades, universal props. 3−16325
- polymer molecule crit. density fluctuations 3−12023
- Potts model, extended scaling relations for mag. critical exponents 3−38331
- Potts model, one-dimens. dynamical, Monte Carlo study 3−35941
- propane, supercritical, electron mobility meas. as function of density and temp. 3−13815
- pseudo-spin system, second order treatment, transverse-field Ising model 3−18841
- QCD, numerical study 3−11142
- quantum chemistry, condensed matter theory, and propagator methods, conf., Flagler Beach, FL, USA (March 1982) 3−30542
- quantum critical phenomena in large-n limit and renormalisation group 3−49256
- quantum mech. n-vector model, finite lattice calc. 3−20663
- quantum model for commensurate-incommensurate transitions 3−35948
- quantum spins at T=0 order and disorder lines in systems with competing interactions 3−28587
- quenched disorder, long-range correlated, in second order phase transition, percolation of triangular Ising model 3−33388

critical phenomena continued
random lattice, renormalisation group study of self-avoiding walks 3—45083
real space renormalisation group methods 3—30789
real space renormalisation group transforms, a question of exactness 3—16178
relativistic ideal Bose gas with pair production, critical behaviour 3—5707
renormalisation group and free energy calcs. 3—3465
renormalisation group eqns., analytical soln. *(Russian)* 3—224
self-consistent correlated percolation *(Chinese)* 3—40502
square lattice, random-bond Ising model, spin-glass-ferromag. boundary 3—23678
sterically interacting lines, mean-field theory of statistical assemblies 3—25823
superconductor, type II, hard, single phase, crit. surface eqn. 3—23541
surface crit. exponents, three-dimens., in 1/n expansion 3—54702
surfaces, multicritical behaviour 3—51744
thermal ignition in a reactive slab with unsymmetric boundary temperatures 3—40536
thermodynamic critical fluctuation theory 3—40495
thermodynamic models with exact solutions, review 3—49306
Thom system, scaling phenomena, catastrophe theory *(Chinese)* 3—16320
three-dimensional Z(N) lattice gauge models at large N 3—509
tricritical behaviour, effect of surfaces, surface energy calcs. 3—33386
tricritical points and bifurcations in a quartic map 3—16328
two dimensions, crit. phenomena, theoretical models and phys. realisations 3—38028
two-dimensional self-avoiding random walks, crit. behaviour anal. 3—5713
two-dimensional systems, phase boundaries and crit. props., Monte Carlo renormalisation group studies 3—51945
U(1), Z(N) and SU(N) gauge theories, critical behaviour at finite temp. confinement transitions 3—20976
universality, irrelevant surface operators, and corrections to scaling in systems with free surfaces and defect planes 3—49304
wall perturbations, scaling and renormalization group calcs. 3—20813
XY model, spectrum and phase struct., critical props., variational study 3—20981
Yang-Lee edge singularity dynamics and directed branched polymer crit. behaviour 3—18198
Yvon-Born-Green and similar integral eqns., criticality 3—56795
Ge, electron-hole liquid, ground state props., thermodynamics and systematics 3—43033
Ni, critical phenomena, μSR studies 3—57845
Si, electron-hole liquid, ground state props., thermodynamics and systematics 3—43033

critical phenomena, magnetic *see magnetic transitions*

critical points
see also boiling point; melting point
^{3}He-^{4}He mixtures, phase separation, tricritical slowing down 3—47179
Abelian Higgs model, disorder version, Ginzburg Landau param., superconductive tricritical point 3—23533
alkyloxy-p′-pentylphenylthiolbenzoates, octyl-heptyl mixture, nematic-smetic C transition, X-ray scatt. study 3—33436
antiferroelectric phase transitions, elec. field induced tricritical points 3—38774
antiferromagnets with weak spin anisotropy, multicrit. behaviour, renormalised field theory 3—57637
binary fluid films, critical temp. shifts 3—42891
binary fluid mixture in porous medium, amplitude eqn. near polycrit. point for convective instability 3—32798
binary mixtures, sound vel. meas. 3—2676
chemical dissociation-recombination equilibria anomalies near crit. points 3—34645
circle maps, fixed points, renormalisation group transforms 3—20811
classical fluid, freq. depend. critical viscosity 3—56797
critical point singularities. III. Three order parameters, order parameters and generalised susceptibilities, ordered phase 3—30831
4-cyano-4′-n-heptylbiphenyl, turbulence at nematic-isotropic phase transition, high elec. field study 3—28103
4(4-n-decyloxybenzoyloxy)-benzylidene-4′-cyanoaniline, liq. cryst., new multicritical point, high press. study 3—18455
4-n-decylphenyl-3′-methyl-(4″-cyanobenzoyloxy)benzoate, smectic A transition, layer spacing, X-ray study 3—18456
disordered magnetic lattice gas 3—57641
ethylene, critical region, thermodynamic surface 3—49099
fermion lattice gas, phase transition with infinite ranged interactions 3—30806
fluid-fluid interface, elec. and mag. susceptibilities 3—34046
fluids critical parameters determ. 3—33414
geometrical statistical d-dimens. model, majority rule, finite size scaling 3—54687
Ginzburg-Landau model, two-depend., quantum-classical crossover in critical dynamics 3—49305
high pressure gas adsorpt. on solid surface, temp. effect 3—28213
interacting hard squares on lattice, tricritical points 3—5737
Ising model, anisotropic three-dimens., dynamics in transverse field 3—38778
Ising model, spin 1/2, thermodynamic props., approximation method 3—38570
Ising model with competing interactions, renormalisation group anal. in mag. field 3—57677
Ising system, S=3/2, phase diagram and tetracritical point 3—23682
Ising type model, 2-D, critical indices determ., symmetry and size effects 3—14066
isobutyric acid-H_2O mix., surface tension near its crit. soln. point 3—23133
lattice gas model, critical phenomena, iterative perturbative approach 3—20795
Lennard-Jones fluid, binary, liq.-vapour interface, three-phase region and Cahn wetting transition 3—42889
Lennard-Jones fluid, binary, liq.-vapour interface, two-phase region, struct. and surface tension 3—42888
liquid crystal phase diagram universality near nematic/smectic-A/smectic-C multicritical point 3—33437
liquid mixtures, compressibility and crit. characts. calc. 3—13303
liquid-gas interface, intrinsic density profile near crit. point 3—13426
liquid-vapour phase change, geometry 3—13403
mathematical physics nonlinear variational problems, compactness and topological methods 3—16327
melting, van der Waals theory in two and three dimens. 3—57064

critical points continued
melting and crystallisation in systems with surface coating, theory 3—42753
metallic fluids, expanded, metal-nonmetal transition, electronic and thermodynamic props. 3—43021
metals interpolation equations of state 3—51741
metamagnet tricritical point meas., random field effects 3—8668
3-methylpentane-nitroethane, critical conc. fluctuations, time depend. 3—47082
microemulsions, crit. behaviour and percolation phenomena, US absorpt. study 3—18396
mixtures, binary, liquid-liquid phase equilib., miscibility gap with upper or lower crit. point 3—47098
mixtures, binary, phase equilib., miscibility gap with two crit. temps. 3—47099
molecular crystals, organic, structural phase transitions, novel spectroscopic method 3—47695
molecular fluids liq. vap. interface, surface anisotropy, optical determ. 3—2933
Mott Anderson metal insulator transition in n orbital models 3—43020
multicritical phenomena in structural phase transitions 3—23013
multicriticality of wetting, prewetting, and surface transitions 3—23139
nucleation theory, Tolman correction for droplet surface tension, effect on reduced supercooling 3—42747
O(N) model in two dimens., crit. point and crit. indices 3—49289
O(n) models in 2-dimens., exact critical point and critical exponents 3—218
Ornstein Zernike differential eqn., derivation from Bogoliubov-Born-Green-Kirkwood-Yvon hierarchy 3—2364
4-n-pentylphenylthiol-4′-heptyloxybenzoate and mixtures with octyloxy analogue, light scattering above the nematic-to-smectic- C transition 3—47108
Percus-Yevick approx., behaviour near critical point, Lennard Jones pot. 3—18195
polydisperse homopolymer solutions, three-phase equilib. in ternary and quasiternary systems 3—13400
polymer blends, phase stability, molecular equation of state theory 3—38021
polystyrene-poly(dimethylsiloxane)-propylbenzene soln., interfacial tension meas. 3—33541
polyvinylidene fluoride-isotactic polyethyl methacrylate blends, lower critical soln. temp., eqn. of state theory 3—38022
Potts model, 3-state, phase equilibria, scaling transformation 3—5730
Potts model, q-state, thermodynamics, cluster approx. study 3—35936
Potts model on hierarchical lattices, first-order transitions in defect structs. at second-order crit. point 3—10767
quantum asymmetric clock model, commensurate-incommensurate transitions and Lifshitz point 3—38056
rarefaction shock wave near the critical liquid-vapour point 3—46602
simple fluids, spectral line broadening near liquid-gas crit. point 3—47095
smectic A phases, Lifshitz point associated with polarisation wave 3—38062
spin systems, phase transitions far from thermal equilib. under spin reson. conditions 3—23783
spin systems with random transverse fields tricritical point, classical n-vector model 3—52504
statistical props. of crysts., partition function, dislocation effects on density correl. functions, solid to liq. phase transition study 3—42748
structural phase transitions in crystals with coupled softening modes 3—23008
surface phase transitions, crit. phenomena 3—23226
systems coupled with external noise, nonlinear stochastic diff. eqn. soln., critical points 3—16267
TBBA homologous series, smectic A-smectic C transition line, tricrit. line 3—2799
tricritical points and bifurcations in a quartic map 3—16328
triple point, water cells, Korean Standards Research Institue *(Korean)* 3—252
two-dimensional classical jellium, critical points 3—25802
two-dimensional melting, crit. region, scaling form for correl. length 3—23023
two-dimensional system, statistical theory of phase transitions 3—23011
wetting transitions, first or second order 3—23134
Al_2SiO_5 triple point for geothermometry and geobarometry 3—15377
Ar, bulk viscosity near triple point, acoustic attenuation meas. 3—57118
Ar-methane solid solutions, thermodynamics and phase separation 3—57109
CO_2, pressure derivatives near crit. point, specific heat data anal. 3—2764
Ce, Kondo vol. collapse and γ to α transition 3—3413
Ce, phase diagram and three phases with FCC structure 3—47089
Cr-Os, mag. transition, anomalous physical props. near triple point 3—3447
$CrAs_{0.47}Sb_{0.53}$, electronic struct. mag. and structural phase transitions, press. study 3—18896
$CuCl_2.2H_2O(D_2O)$ antiferromag. single cryst., diagram of corresponding states 3—57610
CuTeBr, ionic conductor, phase transitions and phase diagram 3—38049
$Er_{1-x}Ho_xRh_4B_4$, ferromag. and supercond. crit. behaviour, mean field study 3—18824
Fe_3Al, neutron irrad., anomalous behaviour at order-disorder transformation, X-ray study 3—33309
FeF_2, spin flop field, temp. depend. 3—57608
$Fe_xZn_{1-x}F_2$, randomly diluted, H-T phase diagram 3—57609
Ga-Pb system, liq.-liq. interfacial tension between monotectic and crit. temps. *(French)* 3—18531
^{3}He, HCP-FCC phase transition 3—13586
^{3}He, superfluid, strong-coupling corrections and polarization potentials 3—2917
^{3}He-^{4}He liq. mixtures, metastability and nucleation near tricritical point 3—13581
^{3}He-^{4}He mixture, thermal cond. meas. near liquid-vapour crit. point 3—23131
^{3}He-^{4}He mixtures, Rayleigh light scatt. and gravity effects near gas-liq. crit. point 3—2919
^{4}He, high press. melting curve, 220 to 360K 3—8295
^{4}He, liq., crit. phenomena near upper λ point, sp. ht. meas. 3—23115
^{4}He, liq. films, third sound damping and crit. vel., nonlinear effects 3—8285
^{4}He, supercritical, natural convection heat transfer, constant wall heat flux conditions 3—32729

critical points continued
Hg, liquid, expanded, metal-nonmetal transition, electronic and thermodynamic props. 3—43023
Hg, vapour, compressed, charged thermodynamically stable heterophase fluctuations, IR dielectric const. 3—7686
K_2Cs, critical point at 258K 3—38025
KH_2PO_4, order parameter near ferroelec. tricritical point, X-ray diffr. investig. 3—2737
Kr, bulk viscosity near triple point, acoustic attenuation meas. 3—57118
NaCl aq. solns., sp. ht. near critical point, corresponding-states theory 3—13473
$NaNO_2$, phase diagram in appl. elec. field, neutron diffr. study 3—47612
Nb:H, critical point temp., phase diagram, lattice-gas model 3—33385
Nb-V:H, critical point temp., phase diagram, lattice-gas model 3—33385
$Nb_3Sn_{1-x}Sb_x$ A15 pseudobinary alloy, tetragonal-to-tetragonal phase transition 3—38055
O_2, thermal cond. and diffusivity in crit. region, Rayleigh scatt. study 3—8273
PdH_x thin films, crit. point lowering 3—38076
Si:P, electrical conductivity meas. near metal-insulator crit. pt. 3—57394
SnS, electroreflectance and thermoreflectance spectra 3—38799
Tl-Se mixtures, liq., metal-nonmetal transition 3—43023
Xe, bulk viscosity near triple point, acoustic attenuation meas. 3—57118
critical temperature, superconducting *see superconducting transition temperature*
CRO *see cathode-ray oscilloscopes*
crocidolite *see asbestos*
crops *see farming*
cross-sections (nuclear) *see nuclear reactions and scattering*
crossed-field tubes *see microwave tubes*
crosstalk
acoustic noise, narrow band, amplitude modulation threshold *(German)* 3—12422
fibre optic crosstalk temperature sensor 3—37192
integrated optical switches, polarisation-independ., with multiple $\Delta\beta$ reversal sections and Gaussian taper function 3—12367
microstrip input-output cable for Josephson appl., electrical props. obs. 3—16344
nonmechanical optical switch for single-mode fibres 3—27264
optical core-ring guides, variational approach to modes and crosstalk 3—32468
system optical cross talk 3—1575
wavelength division multiplexing couplers 3—22255
InSb, proton damage isolation effect, IR detector responsivity and crosstalk problems *(Chinese)* 3—8107
$LiNbO_3$ strip waveguide phase modulators, electrical and acoustical crosstalk obs. 3—12366
crowdions
TiO_2, rutile, radiation damage, mol. dynamics simulation 3—27933
CRT *see cathode-ray tubes*
crushing
quartz grains, mechanically processed, dislocation in $NaOH_2$ X-ray and electron microscope studies 3—38073
Gd-Co powders, amorphised by milling, magnetisation props. meas. *(Russian)* 3—33928
Ni-W-Al alloy, dispersion strengthened, prod. by mech. alloying, characteris. 3—58071
Ti filters, powder metallurgical prep., mech. and hydraulic characts. 3—58070
crushing strength *see compressive strength*
cryobiology *see biothermics*
cryoelectric stores
see also cryotrons; superconducting devices
vortex file memory, reading and writing scheme 3—47462
cryogenic cables *see superconducting cables*
cryogenic pumps *see cryopumping*
cryogenics
see also cryoelectric stores; cryopumping; cryoscopy; cryostats; cryotrons; Joule-Thomson effect; low-temperature production; low-temperature techniques; magnetic cooling; refrigeration
8 GeV/c pion beam line at KEK, with four superconducting magnets 3—36606
adsorption of H_2 and Ne on activated charcoal, high-pressure isotherms 3—33581
benzene-d_6 in cryogenic soln., absorpt. and emission spectra, intermolecular Franck-Condon shifts 3—6746
blood plasma membranes, low-temp. alteration of permeability due to dehydration 3—34805
boiling onset and bubble departure, quasi-static conditions anal. 3—42758
cells and tissues cryopreservation, heat transfer from warm plates to liquid N_2 obs. 3—35051
chilling of cryogenic pipe array by uniflow stream 3—35995
condensates, molecular, polarized, electric domains obs. at low temp. 3—43261
conference, Kobe, Japan (May 1982) 3—30557
cryobiology, broken symmetry problems 3—34767
cryocoolers, small, reliability, noise and low temp. limit, prospects for improvement 3—36018
cryomicrotomy appl. to rapid-freeze deep-etch replica method for unfixed tissues and cells 3—15297
cryosurgery, design philosophy of simple instruments 3—35020
cryosurgical apparatus, design and technical features 3—35021
cryoultramicrotomy, recognition of artifacts, biological appl. 3—53905
current leads, overload behaviour 3—49385
current stabiliser design, for cryogenic Pt and semiconductor resistance thermometers supply 3—45139
DC SQUID vortex 0.1K thermometer 3—40616
diamond-anvil cell equipped with a worm gear intensifier for pressure generation at low temperature 3—20866
diode, magnetically insulated; intense pulsed ion beam extraction 3—16445
epoxies, Delta Bond 152 and EPO-TEK H20E, specific heat at low temp. 3—51818
epoxy-resin, electron irradiated, thermal cond. and dielec. props. at low temp. 3—51875
Fermilab energy doubler, large cryogenic systems development 3—36587
flow calibration system, performance test of head type flowmeters 3—36015
cryogenics continued
flowmeters, ultrasonic and gyroscopic, evaluation at cryogenic temps. 3—32830
fluids, cryogenic, laser Doppler anemometry appl. to boundary layer flows 3—37596
gas, supercritical, elec. breakdown with partial discharge in short gaps, cable insulation appl. 3—42465
Heliotron E NBI fusion apparatus, cryogenic system design with closed-loop He refrigerator 3—36568
helium liquifier systems, closed cycle, considerations on burst disk use 3—325
IR detector, cryogenic heat pipe for coupling to cooler 3—40614
IR space telescope, extended lifetime, hybrid cryogenic cooling system 3—40005
Kerr electro-optical effect obs. set-up, for meas. in variable electric field 3—16371
Krioelektronika-1 cryogenic dental unit 3—58864
level-measuring calibration system with thermal stabilisation of transducer mounting 3—10850
liquefaction and extraction processes, universal plant 3—30876
liquid, heat transfer at forced flow boiling in tubes 3—7574
liquid flow in horizontal cavity, free convection with variable longitudinal temp. gradients, theory 3—51089
liquid mixtures, surface tension prediction 3—8298
liquids, breakdown characts. and mechanisms 3—43490
liquids, cryogenic, isobaric storage, hazardous variations in boil-off 3—36020
low temperature condensation apparatus with quick vapour *(Chinese)* 3—49380
low temperature physics, progress, book 3—20592
low temperature physics research in China 3—320
magnetic fusion energy and its cryogenic applications 3—32975
magnetothermodynamic method for absolute thermodynamic temp. determ. in liq. He region 3—323
materials, thermal radiative properties 3—8234
mica powder, thermal cond., appl. to cryogenic insulation 3—28171
microstrip input-output cable for Josephson appl., electrical props. obs. 3—16344
multilayer insulation for cryogenic liquid transfer lines, thermal characts. 3—36005
multiple layer radiation screen insulation, simple evaluation technique 3—36004
pipe freezing, basic mech. of plug formation 3—30884
polymers, crystalline, anomalous US attenuation at 4.2K 3—57032
porcelain, insulator temp., flashover voltage meas. procedure in vacuum 3—8766
pulsating machine modelling *(Russian)* 3—54741
safety manual, and hazard situations 3—30885
Space Shuttle IR radiance instrumentation, contamination effects obs. 3—10085
Space Shuttle liq. O_2 servicing system, selected thermodynamic and fluid flowdata 3—40007
spaceborne superfluid He containment, motor-operated valve development 3—30880
superconducting solenoid operating in transportable Dewar, 1 kA current lead-ins 3—5797
superheated and subcooled cryogenic liquids, vapour bubble size and motion, theory 3—32786
surgical applications, review 3—29782
thermal insulators, outgassing props. 3—5800
thermometry, review covering 1969-1981 3—302
thermonuclear fusion energy prospects, demands imposed on cryotechnology *(German)* 3—45688
thin-film cryogenic accelerator targets 3—26525
toroidal fusion expt., flexible cryogenic transfer lines 3—31829
tube-in-tube type exchanger, performance for cryogenic appl. 3—30866
turboexpanders with gas bearings development 3—30879
Wood's metal, specific heat at low temp. 3—51818
X-band ferrite phase shifter/attenuator 3—30870
Zerodur, glass-ceramic, thermal props. at low temp. 3—8226
Ar flow boiling, fouling phenomena obs. 3—32590
ArF excimer laser gas mixture cryogenic purification and lifetime extension 3—56230
CO_2 cryodeposits, optical constants and thermal radiative props. 3—36011
CO_2-N_2(CF_2Cl_2) and CO_2-N_2-CF_2Cl_2, vapour-liquid equilibria, high press. low temp. data 3—33412
$DyVO_4$-$Gd_3Ga_5O_{12}$, composite material to achieve mag. refrigeration using cycle with internal heat transfer 3—8670
H, target, liq. in streamer chamber, design 3—11576
H_2O, cryodeposit instability, influence of fog sublayer formation 3—51920
H_2O cryodeposits, optical constants and thermal radiative props. 3—36011
He cryogenic system for fusion technology development 3—31828
He II Dewar subsystem performance obs., for Spacelab 2 IR telescope 3—35442
^{4}He and ^{4}He-^{3}He mixtures, cooling effects in vortex cooler 3—37338
^{4}He space cooling system, porous plug performance obs. 3—30882
K_2CuF_4, ^{19}F NMR, ultralow temp. anomaly 3—52668
KrF excimer laser gas mixture cryogenic purification and lifetime extension 3—56230
N_2, liquid pool, convective heat transfer enhancement by secondary heat sources 3—32726
Pt resistance thermometers, industrial-grade, calibration and interpolation, 77 to 273K 3—30855
Ti-Al, low temp. thermocycling and plastic deformation, defect struct., TEM obs. 3—53086
XeF excimer laser gas mixture cryogenic purification and lifetime extension 3—56230

cryopumping
cryogenic pumps, new developments *(German)* 3—25889
cryogenic pumps, review 3—20862
Heliotron E NBI fusion apparatus, cryogenic system design with closed-loop He refrigerator 3—36568
high capacity cryopump system for JET neutral beam test-bed 3—55622
JET neutral injection cryopumps, LHe and LN_2 cryosupply and distribution system 3—36567
light gases, using large dilution refrigerator 3—36007
neutral beam injector, prototype, for JT-60, cryopumps and cryogenic systems 3—36014
open structure cryopump, experimental performance 3—40624
radiometric test chamber for Earth-looking sensors 3—54771

cryopumping continued
- regeneration studies of cryosorption pump 3—20863
- sorption pumping, recent developments, review 3—40623
- Tokamak de Varannes, divertor pumping systems comparison 3—55612
- ultrahigh vacuum units, series-connected magnetic discharge and cryogenic pumps 3—49392
- vacuum technology, book 3—35765

cryoscopes *see cryoscopy*

cryoscopy
- No entries

cryosorption *see sorption*

cryostats
- automatic filling with solid CO_2 3—5798
- connectors and heat sink arrangement 3—20859
- continuous flow He cryostat for magnetic meas. 3—319
- cryothermostat for ptical use at 77 to 400K 3—5794
- design for thin film transport props. meas. 3—25881
- far-IR detector cooling for fusion research 3—36019
- fluorescent spectrophotometer, crystat attachment for −150 to +150°C meas. of organic solutions 3—49426
- gravitational radiation detection, Nb antenna sensitivity 3—10718
- horizontal dilution cryostat for dynamic deuteron polarisation meas. 3—26616
- Janis supervaritemp cryostat, for PAR Foner-type vibrating sample magnetometer 3—40651
- liquid He, high voltage heavy current leads 3—5793
- microcomputer-controlled vacuum adiabatic calorimeter for 4.2-300K 3—313
- optical cryostat, rare-earth-metal thin film in situ prod. and investigation, transmission spectra determ. *(Russian)* 3—8983
- positron annihilation, on-line, perturbed angular correlation techniques, cryogenic irradiation facility 3—30867
- production and ejection, of D_2 filaments 3—316
- scanning electron microscope, liq. ^{4}He cooled sample stage for cryogenic applications 3—16448
- scattered electron Mossbauer measurements at 77.3K with a He-CO proportional counter 3—30970
- sealing material using Be foil and polyethylenephthalate film combination 3—16463
- small flow type, for spectral, magnetooptic and microscopic use 3—5795
- stress induced meas. on mol. crystals, press. system design and construction 3—54744
- superfluid experiment in zero gravity aboard a rocket, IR telescope development appl. 3—35441
- T-15 Tokamak, main characts., EM system 3—55602
- thin film investig. in ultrahigh vacuum, cryostat with liquid metal seal, 2-673K temp. range 3—49384
- He, liquid bath cryostat. for multipulse NMR expts. *(German)* 3—45174
- He rotating cryostats, He thermodynamic state calc. 3—49381
- ^{3}He cryostat with charcoal sorption pump 3—30864
- ^{4}He, liq., isotropic purification cryostat, without superleak 3—317
- ^{4}He phase separators flow characts. 3—35998

cryotrons
- No entries

crystal atomic structure
- *see also crystal atomic structure of alloys; crystal atomic structure of elements; crystal atomic structure of inorganic compounds; crystal atomic structure of organic compounds; electron diffraction crystallography; lattice constants; neutron diffraction crystallography; space groups; superlattices; X-ray crystallography*
- algorithm for selecting reflections in struct. anal. 3—7933
- atom to plane distance, standard deviation 3—13131
- Bravais lattice, bond percolation theory, connection with lattice Green function and Polya random walk 3—30798
- channelling effect in electron diffraction, ALCHEMI method appl. 3—51461
- classical condensed matter, devil's staircase and order without periodicity 3—37819
- classification principle, enumeration of species in genus ABC, AB_2 and A_3 3—7939
- Cochran cyclotomic sets with a multiple-of-three period 3—37821
- coloured lattices and lattice preservation 3—33169
- computational group theory in crystal physics: a review 3—7946
- crystal structure anal. using electron energy loss spectra 3—5920
- disordered crystals, multimode atomic probability densities, statistical description 3—33146
- enumeration of species in genus ABCD, ABC_2, AB_3, A_2B_2, and A_4, unit cell atomic arrangements 3—7940
- equivalent isotropic thermal parameter calculation, program for HP-41C calculator 3—46873
- FCC structures, cryst. growth and forms, Monte Carlo study *(Russian)* 3—51524
- ferroelectric crystals, euclidean space E^4, crystallographic and polar groups *(French)* 3—22811
- Fourier syntheses interpretation in presence of pseudosymmetry 3—33174
- Fourier synthesis, use of Sim weight *(Chinese)* 3—27803
- generalised lattice correspondence 3—27862
- hydrogen atom coordinate calculation 3—2445
- improper point groups, classification and basis functions 3—51531
- incomplete Patterson function with multiple fragments, probabilistic characteristics 3—18244
- inner compliance, internal strain tensors in cryst. structures, stress depend. 3—51520
- integrity bases for corepresentations of magnetic crystal point groups 3—7948
- invariants and covariants of corepresentations of magnetic point groups 3—7950
- isoscalar factors for anti-unitary point groups 3—7949
- magnetic symmetry and the electrical conductivity tensor 3—8467
- neutron diffraction, wavelength-ratio method for extinction-free determ. of mag./nuclear struct. factor ratio 3—51456
- Patterson function, regularised contrasting method 3—7853
- phenacite type struct. formation model 3—2457
- point groups, general projective representations, space group appl. 3—51530
- powder diffr. Rietveld refinements, estimation of standard deviations 3—56771
- SCF statistical theory 3—5732
- Shubnikov point groups, general corepresentations 3—51532
- sigma phase ordering 3—2517

crystal atomic structure continued
- superstructure choice when SRO is taken into account 3—18245
- tetrahedral A X_2 structures, classes and topology 3—37833
- time reversal and magnetic reversal in crystal physics 3—7947
- vibration representation, crystal constructed by induction from representations *(French)* 3—22812
- Wigner crystal, ground state in mag. field, HCP struct. 3—43044
- X-ray diffr. method of investigating cryst. structs. with unresolved diffr. multiplets 3—33042
- X-ray powder diffr. intensity ratios, determination of atomic parameters 3—46813

crystal atomic structure of alloys
- A_6B_{23} type, preferred H sites and hydride stoichiometry, model 3—37834
- BCC lattice, ordered structures of interstitial solutes 3—56849
- binary σ-phase alloys, atomic distribs., rel. to unit cell dimensions 3—22824
- brass, β-γ, space group and struct., electron diffr. and microscopy study 3—13161
- heat of formation, struct. information from Miedema's theory 3—44067
- hydride systems, review 3—48178
- intermetallic compounds, A_6B_{23} type, preferred H sites and hydride stoichiometry, model 3—37834
- martensitic Ni-Mn steel, cryst. struct. determ. 3—7964
- rare earth alloys, $R_2Ni_2Ga(Al)$, mag. and crystallographic props. *(Russian)* 3—28503
- rare earth alloys, $RNiGa_2$, magnetic susceptibility and cryst. structure *(Russian)* 3—47474
- rare earth alloys RCu_2Sn_2, R=La, Ce, Pr, Nd, Sm, cryst. struct. and mag. props. *(Russian)* 3—27896
- rare earth intermetallics, R_5T_3, (R=rare earth, KT=Rh,Ir), cryst. struct., X-ray diffr. study 3—2470
- rare earth ternary silicides, RRh_3Si_5, superconductivity, mag. props. and cryst. struct. 3—3350
- rare earth-iron alloys, cryst. struct. and mag. props., review *(Polish)* 3—13167
- rare earth-transition metal alloys, RM_2Si_2, cryst. struct. and mag. props. 3—22826
- steel, high C, martensite crystal lattice struct. 3—13169
- transition metal alloys, $L1_2$ and $D0_{22}$ ordered structures, electronic struct. and relative stabilities 3—43007
- transition metal alloys, MGa and MGe, phase analysis, high press. and temp. 3—18475
- transition metal-metalloid alloys, crystalline and glassy, atomic vol. 3—33150
- Zircaloy-2, second-phase particles, morphology and comp. 3—29082
- Al-Ru (10, 15 wt.%), vapour deposited, metastable phases 3—19324
- Al-Zn-Mg, M′ transition phase, X-ray crystallographic and TEM study *(French)* 3—18261
- Au-Mg (20 at.%), double hexagonal superstructure, high resolution HVEM study 3—56851
- Au-Mn (25-28 at.%), ordered structs., HVEM study 3—2469
- $AuAl_2$ alloys, struct., correlation with heat of form. *(German)* 3—22825
- $Au_{2+x}Cd_{1-x}$, two-dimensional antiphase-domain struct., modulated struct. anal. 3—38092
- Be-Fe-C, heterophasal, atomic ordering *(Ukrainian)* 3—13165
- $Be_2ZrH_{1.5}(D_{1.5})$, neutron scatt. investig. 3—46887
- $Bi_{1-x}Sb_x$, lattice parameters, X-ray study 3—13163
- CaAg, cryst. struct. 3—2471
- CaAu, cryst. struct. 3—2471
- $CeGa_6Ni_{1-x}$, cryst. struct. 3—33190
- Co-Mo, metastable electron cpd. form. by ion irrad. 3—42684
- Co-Nb, martensitic $15R_1$ struct. 3—13170
- $CoGa_{1-x}Nb_x$, mag. and struct. props. 3—52369
- $(Cr, Mo)_{23}C_6$, extracted from high temp. alloys, X-ray powder diffr. evidence for incorporation of Mo 3—7961
- $(Cr, W)_{23}C_6$, extracted from high temp. alloys, X-ray powder diffr. evidence for incorporation of W 3—7961
- Cu-Au alloys, stability of $L1_0$ ordered phase *(Japanese)* 3—24210
- Cu-Ni-Zn system, FCC+tetragonal two phase region, X-ray diffr. study 3—37853
- Cu-Sn system, disorder in ordered β-brass phase *(German)* 3—29064
- Dy-Cu system, intermediate phase form., cryst. struct. and phase diagrams 3—22853
- $DyGa_2Ni$ and $DyGa_4Ni$, synthesis and struct. 3—37857
- $ErGa_2Ni$ and $ErGa_4Ni$, synthesis and struct. 3—37857
- Fe-Co-Cr(V), magnetisation props. and fine cryst. struct., TEM, Mossbauer and X-ray diffuse scatt. studies *(Russian)* 3—33927
- Fe-Cr-Co-Si, cryst. struct., precipitation *(Russian)* 3—37851
- Fe-Cr-Co-Si-V, cryst. struct., precipitation *(Russian)* 3—37851
- Fe-Cr-Ni-Mo-Mn sigma phase alloys average site occupation parameters, X-ray diffr. study 3—37848
- Fe-Ni alloys, long- and short-range atomic order, neutron diffr. study *(Russian)* 3—51538
- Fe-Si-V ternary system, phase equilib., critical evaluation 3—19323
- Fe_3Al, neutron irrad., anomalous behaviour at order-disorder transformation, X-ray study 3—33309
- $Fe_{52}Cr_{48}$ sigma phase, atom distribs., X-ray diffr. study 3—37847
- $Fe_{0.56}Ni_{0.23}Cr_{0.21}$, stainless steel, short range order, neutron diffuse scatt. study 3—13162
- FeTi-based alloys containing β-Ti, hydrogenation 3—42569
- $GdCu_{1-x}Ga_x$, cryst. struct. transforms. and mag. ordering phenomena 3—38595
- $GdGa_4Ni$, synthesis and struct. 3—37857
- $GdIn_xAg_{1-x}$, cryst. struct. and mag. props. 3—28530
- Hf-Sc-Ga, isothermal sections of phase diagrams at 800°C 3—4013
- Hf-Ti-Ga, isothermal sections of phase diagrams at 750°C 3—4013
- $HoGa_2Ni$ and $HoGa_4Ni$, synthesis and struct. 3—37857
- La-Ga, phase diagram and phase structs., X-ray diffr. and DTA studies *(Chinese)* 3—42750
- $LaGa_6Ni_{1-x}$, cryst. struct. 3—33190
- $LaNi_4Co$, cryst. struct., deuterisation effects, neutron diffr. studies 3—42572
- β-$LaNi_5H_x$, Haucke cpd., struct., statistical thermodynamics approach 3—42568
- Li_3Ga_4, cryst. struct., X-ray diffr. study 3—27893
- $LuGa_2Ni$ and $LuGa_4Ni$, synthesis and struct. 3—37857
- Mg-Al(Ga)-Cu, phase diagrams and cryst. struct. 3—4011
- $Mn_{1+x}Sb_{1+x}Sn_x$ alloys, mag. props., struct. and Mossbauer spectra, temp. effects 3—18938
- Mo-W-Ir(Rh), struct. form., electron conc. role 3—37858

crystal atomic structure of alloys continued
- Nb-H, atomic displacements close to H, X-ray meas. 3–42571
- $Nb_3Al_{0.75}$ $Ge_{0.25}$, A15 struct., possible ordering struct. from X-ray struct. factors *(Chinese)* 3–33187
- $Nb_3Al_{1-x}B_x$, struct. and supercond. props. 3–2472
- Nb_3Si, synthesised by shock loading, superconducting props. and X-ray anal. 3–52291
- $Nb_{1-y}Ti_yH_x$, struct., X-ray and ^{1}H-NMR studies *(German)* 3–47825
- Ni-Al system, struct., correlation with heat of form. *(German)* 3–22825
- Ni-Mo, metastable electron cpd. form. by ion irrad. 3–42684
- Ni-Nb, metastable electron cpd. form. by ion irrad. 3–42684
- Ni-Si phase diagram, Ni-rich region, study using DTA and X-ray diffr. 3–34285
- $Ni_2Mn_xV_{1-x}Sn$, Heusler alloy single cryst., chem. order study via elastic neutron diffr. 3–56850
- Pd-Al, phase equilibrium and structural study *(German)* 3–13408
- Pd-Ni-H system, phase diagram, cryst. struct., mag. and supercond., props. 3–33392
- Pd-T system, solubility, phose diagram, and struct. props. *(German)* 3–18473
- Pd-Ti (0 to 30 wt.%), lattice spacings, hardness and mag. susceptibilities 3–27897
- Pt-Al system, struct., correlation with heat of form. *(German)* 3–22825
- PtFeSb, Heusler alloy, struct., mag. and magneto-optical props. and ^{57}Fe Mossbauer spectra 3–57898
- Rh-Cu cluster struct., EXAFS study 3–37852
- Sm(Co, Cu, Fe, Ti)$_7$ magnets, cryst. struct., polymorphism and hard mag. props. 3–51542
- Sm(Co,Cu,Fe)$_7$6, permanent magnets, struct. phase transitions obs. during heat treatment *(Russian)* 3–33417
- Sm(Co, Fe, Ni) system, mag. props. 3–14024
- $SmCo_5$ sintered permanent magnet, cryst. struct. and coercive force 3–43401
- $SmGa_4Ni$, synthesis and struct. 3–37857
- SrZn, cryst. struct. 3–2471
- Ta-H, atomic displacements close to H, X-ray meas. 3–42571
- Ta_3Ge, phase transform., X-ray powder diffr. data 3–2774
- $TbCo_2$, X-ray study of cryst. deform. 3–51541
- $TbCo_{2-x}Ni_x$, unit cell parameters and magnetoelastic interaction *(Russian)* 3–38665
- $TbGa_2Ni$ and $TbGa_4Ni$, synthesis and struct. 3–37857
- Tb_2Pt, mag. props. and cryst. struct. 3–18859
- Ti-Al, alloy VT3-1, heat treatment influence on phase and struct. transform. *(Russian)* 3–34296
- Ti-Au metastable electron cpd. form. by ion irrad. 3–42684
- Ti-M solid solns., M=transition metal, quenched, metastable phase obs. 3–14575
- TiB_2-Fe-Mo cermet, sintering, effect of TiB_2 fine struct. 3–24201
- Ti_7Ga, ordered phase form. and struct. 3–4010
- $Ti_{50}Ni_{47}Fe_3$, martensitic transformation, electron microscopy study 3–47834
- $Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, elec. resist. meas., TEM and electron diffr. studies 3–38053
- $Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, microstructural changes, CDW, electron diffr. study 3–38054
- $Ti(V_{0.40}Mn_{0.60})_{1.87}(-D_{2.36})$, struct. determ. by neutron scatt. *(German)* 3–42570
- $TmGa_2Ni$ and $TmGa_4Ni$, synthesis and struct. 3–37857
- V-Al, struct. characts. rel. to elec. resist. anomalies, electron microscope study *(Russian)* 3–37850
- V-H, atomic displacements close to H, X-ray meas. 3–42571
- V-I, solubility, phase diagram, struct. props. and diffusion *(German)* 3–18473
- V_3Ge, valence electron density distrib., X-ray diffr. study 3–7963
- VSi_x fine particles, gas evaporated, cryst. struct. and morphology, electron micrcroscopy study 3–37849
- V_3Si, stoichiometric, electron density distribution map meas. 3–27895
- W-Co-P, sintered, components interactions 3–39098
- YGa_2Ni and YGa_4Ni, synthesis and struct. 3–37857
- $Y_6Mn_{23}D_{18}$, A_6B_{23} type, preferred H sites and hydride stoichiometry, model 3–37834
- $YbGa_2Ni$ and $YbGa_4Ni$, synthesis and struct. 3–37857
- Zr_4Al_3, superstruct., electron and X-ray diffr. study 3–18262
- $ZrMn_2T_{0.8}$, (T=Mn, Fe, Co, Ni and Cu), nonstoichiometric systems, unit cell dimensions and hydriding characts., anomalies 3–37859
- ω-$Zr_{0.8}Nb_{0.2}$, characterisation from Bragg reflection integrated intensities 3–56852

crystal atomic structure of elements
- alkaline earth metals, struct. phase transitions, cryst. struct. sequences 3–28094
- diamond, structural anal. from Bragg reflex phases *(German)* 3–51447
- inert gas crystals, FCC struct. and pair interaction pot. 3–46886
- metals, single cryst. growth, modification of Kapitza and Bridgman apparatuses, defect form., depend. on cryst. parameters 3–47761
- rare earth particles, struct. and mag. props. 3–18260
- semiconductors, band theory and transport processes, book 3–39
- transition metals, cold brittleness 3–33355
- Al, oxidation, TEM study 3–29223
- Au small particles, electron microdiffr. patterns 3–46817
- C, fibre, ESR and struct. 3–33980
- C, struct. and reactivity, from carbon black to carbon composites 3–24527
- Cr dendritic needle crystals, FCC struct., electron diffr. and Auger study 3–3021
- Cs, electronic transitions under high press., X-ray diffr. study 3–27891
- Cu, polycryst., X-ray struct. study of neutron irrad. sample *(Russian)* 3–33310
- Cu whiskers, stress-strain curve and lattice struct., influence of internal oxidation 3–29144
- Fe, neutron powder diffr. by white source transmission meas. 3–7959
- Gd, martensitic transition to cubic phase, electron diffr. study 3–37846
- Ge, hexagonal crystal structure in polycrystalline matrix 3–42566
- Ge microcrystals, Raman study 3–3727
- In thin film, optical props. and struct. 3–19221
- Mn, electronic and cryst. struct. *(Russian)* 3–33186
- Mn electronic and crystal structure peculiarities *(Russian)* 3–47256
- N_2, solid, high press. phase, lattice energy calc. 3–23036
- β-N_2, solid, orientationally disordered, neutron scatt. study 3–13036
- Na stable modification, total energy, pseudopotential calc. 3–47281
- Ni particles, struct. and morphology *(French)* 3–42567

crystal atomic structure of elements continued
- Pr, crystal structure of high press. phase, X-ray diffr. data anal. 3–37845
- Si, absolute struct. factor determ. for (222) reflection using γ-rays 3–2467
- Si crystal struct. electron microscopy determ., Scherzer resolution limit 3–7884
- Si:B, lattice constants meas. using X-ray double crystal method 3–13028
- Te, cold worked, lattice defects, X-ray diffr. line breadth anal. 3–18290
- W heteroepitaxial layers, cryst. perfection, TEM, X-ray and Rutherford backscatt. study *(German)* 3–13682

crystal atomic structure of inorganic compounds
- A15 compounds, electron charge density distributions and Debye temps. 3–56863
- alkali cyanides, density functional theory 3–2497
- alkali halide, U activated crystallophosphors, synthesis and luminescent props., matrix prop. effects 3–52838
- alloy hydrides, AB_5-type, cryst. struct., rel to press.-composition isotherm plateau length 3–33199
- almondine garnet, O positional parameters, X-ray powder diffr. intensity ratio study 3–46813
- andalusite-kanonaite series, lattice and optical parameters 3–13178
- anharmonic temperature factor, with hexagonal wurtzite structure and least squares refinement for intensity 3–22828
- calcite:PO_4^{3-}, ionic cond. in high-pressure polymorphs 3–33496
- ceramic *(German)* 3–43402
- ceramics, fine polycryst., review *(Japanese)* 3–47810
- chemical bonding and struct. diagrams in A^NB^{10-N} cpds. *(French)* 3–42580
- cobalt monochloroacetates, IR spectra, correlation with cryst. struct. 3–14307
- copper manganese oxides, $ACu_3Mn_4O_{12}$, ferromag., synthesis and mag. characterization 3–14462
- ferrites, hexagonal, ferroxplana-type, props., book contrib. 3–57550
- fluorides, mixed, $M_2M'_3F_{11}$, MM'_2F_7, and MM'_3F_{10}, structural relations with U_3O_8 *(French)* 3–42581
- Friauf-Laves phase alloy, hydrides struct. and phase relations, neutron diffr. studies 3–33197
- graphite intercalation compound with BrF_3, composition and struct. 3–13183
- graphite intercalation compound with Li, structural and elastic props., in-plane density 3–33213
- graphite intercalation cpds., stage 2, orientational in-plane ordering and phonon dispersion 3–56862
- graphite intercalation cpds., structural phase transitions, X-ray diffr. studies, review 3–13201
- graphite-alkali metal intercalation cpds., higher stage, relaxed incommensurate struct. of intercalant layer 3–22858
- graphite-$FeCl_3$ intercalation cpd., interplanar distance, low temp. X-ray diffr. study 3–33193
- graphite-Rb intercalation compound, STEM of multiphases 3–22848
- humite family structs., twinning, rel. to leucophoenicite structs. 3–37861
- hydrates, H_2O mol. geometry and environment, neutron diffr. study 3–2476
- ice, Ih, cryst. struct. effects 3–27826
- III-V semiconductors, sphalerite structure, dynamic atomic displacements, X-ray study 3–27919
- intercalation materials susceptible to reduction in non-aqueous media, electrochemical reversibility and structure 3–58431
- leucophoenicite family struct., twinning, rel. to humite structs. 3–37861
- magnesium monochloroacetates, IR spectra, correlation with cryst. struct. 3–14307
- manganese monochloroacetates, IR spectra, correlation with cryst. struct. 3–14307
- metal hydrate crystallohydrates, $M(NO_3)_2.nH_22O$ salts, cryst. struct. and co-crystallisation 3–27881
- metal hydrides, props. and appls., conf., Toba, Japan (May 1982) 3–30547
- mica, polytype structures, influence of stacking faults on spiral growth 3–33162
- micas, Mg^{2+} and Fe^{2+} distrib. around OH groups, PMR study 3–47560
- nickel monochloroacetates, IR spectra, correlation with cryst. struct. 3–14307
- olivine to spinel phase transform. mechanism, structs. rel. to spinel and β-phase 3–7954
- osumilite. cryst. struct. and site occupancy refinement 3–51576
- oxide spinels, book contrib. 3–57548
- oxides, AB_2O_4, struct. relationships and polymorphism 3–27912
- oxides, anion coordination, cation packing and phase transitions 3–7987
- paulingite struct. as invariant transform. of gismondine struct. 3–51563
- phosphorus oxides, cryst. struct. relations *(German)* 3–2529
- pyrophyllite, polymorphism, computer simulation and electron microscopy study 3–42577
- quartz, alpha to beta transition, struct. parameters, X-ray diffr. study 3–27887
- α-quartz, phase transition study from neutron irradiation 3–28003
- rare earth 3–22857
- rare earth cobaltites, local struct., EXAFS obs. 3–14390
- rare earth compounds, $R_3Ni_7B_2$, mag. and struct. characts., magnetisation and Mossbauer studies 3–33934
- rare earth cpds., RNi_4B (R=Eu, Gd, Tb, Dy, Ho, Er, Tm, Kb, Lu), prep. and X-ray crystallography 3–56854
- rare earth cpds., RWO_4Cl, (R=Eu, Tb, Dy, Ho, Er, Tm, Y) cryst. struct., luminescence and Raman spectra 3–37881
- rare earth diortho(pyro)silicates, $R_2(Si_2O_7)$, Czochralski grown, struct. and physical props. 3–51560
- rare earth ferrites, $R_2Fe_4O_9$, $R_4Fe_6O_{15}$, trivalent Fe, obtained by air oxidation, cryst. struct. *(French)* 3–42574
- rare earth halo tungstates, RWO_4Cl (R=La to Sm), struct., luminescence and Raman spectra 3–33204
- rare earth niobates, $LnNbO_4$, (Ln=La, Sm, Gd, Ho, Yb), struct. changes along series 3–22870
- rare earth oxyfluorides, ROF, ionic radii, ionic charges and isoelectronic anions *(French)* 3–2486
- rare earth ternary sulphides, AB_2S_4 type, opt. window materials for 8 to 12 μm airborne applic., development 3–7091
- rare earth titanates, R_2TiO_5, polymorphism and stability diagrams 3–7953
- semiconductors, band theory and transport processes, book 3–39
- silicates, defect structs., electron microscopy electron diffraction and X-ray emission spectra study 3–8068

crystal atomic structure of inorganic compounds continued
spinels, AB_2X_4 (X=0,S,Se,Te), electronic struct. and dielec. props., crystallographic concepts 3–18281
spinels, crystallographic parameters, cation radii end distrib., lattice energies 3–46888
standard representation, based on simple and loose packings 3–2515
sulphospinels, magnetic semiconductors, book contrib. 3–57551
superionic conductor, review 3–8021
ternary chalcogenides, $M_xMo_6X_8$ 3–8022
ternary compounds, superconductivity, struct., electronic and lattice props., book 3–5515
ternary supercond. cpds., cryst. struct. and bonding, book contrib. 3–8023
$TiO_{1.9985}$, disorder when rapidly cooled, electron microscopic examination 3–8039
transition metal complex carbides, cryst. struct., transitions and phase relationships 3–7998
transition metal complexes, solid, crystal struct., X-ray powder diffr. study 3–18267
transition metal fluoroniobates, $MNbF_6$, cryst. struct., visible and UV spectra *(French)* 3–2508
transition metal monogermanides, polymorphism under high press. and temp. 3–13154
transition metal MX and MX_2 cpds., cryst. chem., electronic struct. considerations 3–37876
transition metal oxides, X-ray absorption near edge spectra, cryst. struct. depend. 3–28931
transition metal oxides and related cpds., cryst. and defect struct., pentagonal columns 3–7988
transition metal ternary hydrides, review 3–2960
zeolite networks, constituent units and framework conformations 3–7989
zeolites, structural chem., X-ray and magic-angle-spinning NMR studies 3–37873
zinc monochloroacetates, IR spectra, correlation with cryst. struct. 3–14307
α-$ZrCu(PO_4)_2.4H_2O$, EXAFS, dehydration and calcination effects on bond lengths 3–8903
β-$A\text{-}_2O_3\text{-}Li_2O.nH_2O$, cryst. struct., neutron diffr., IR absorpt. and Raman scatt. 3–14282
$AgClO_3$, tetragonal to cubic transition, enthalpy change 3–51773
$AgF\text{-}BiF_3$ system, ionic cond. and struct. props. of phases 3–42844
$AgInSe_2\text{-}AgSbSe_2$ ($AgBiSe_2$) systems, homogeneous quenchable high press. phases *(German)* 3–47087
$AgNO_3$, struct. of high temp. phase, powder diffr. study *(French)* 3–7965
Ag_3PO_4, relation between struct. and low temp. ionic cond. *(French)* 3–13540
$Ag(PS_4,P_2S_7)$ monoclinic, cryst. struct., X-ray diffr. study *(French)* 3–2484
Al oxides, local at. arrangements from electron energy loss near edge struct. 3–14414
$Al_xGa_{1-x}N$ MBE films, struct., elec. and optical props 3–8355
$Al(IO_3)_3.2HIO_3.6H_2O$, cryst. struct., X-ray and neutron diffr. study 3–2527
α-Al_2O_3, dehydration prep., X-ray peak broadening due to twin form. 3–8059
β-Al_2O_3, single cryst. struct. and ^{27}Al NMR spectra 3–57807
$Al_2O_3\text{-}AlN\text{-}Si_3N_4$, sialon structure, obtained by nitridation of kaolin 3–13181
β-$Al_2O_3\text{-}Na_2O$, far IR absorption, rel. to struct. and ionic cond. 3–19121
$Al_2O_3\text{-}Na_2O\text{-}La_2O_3(Nd_2O_3)$, cryst. struct., ESR and visible spectra 3–46914
β-$Al_2O_3\text{-}Na_2O.nH_2O$, cryst. struct., neutron diffr., IR absorpt. and Raman scatt. 3–14282
$Al_2O_3\text{-}SiO_2\text{-}BaO$, refractory coating for vitroceramic (pyroceram) nuclear fuel elements 3–16861
γ-$AlO(OH)$, boehmite, H position in cryst. lattice, IR investig. 3–18276
As trihalides, cryst. struct. and polymorphic transitions 3–7986
$Ba(A_{1/4}Nb_{3/4})O_3$ (A=Li, Na), prep., thermal change and dielec. props. 3–29044
$Ba(A_{x/4}Nb_{3x/4}Ti_{1-x})O_3$ (A=Na,Li), cubic perovskite, prep., cryst. struct. and dielec. props. 3–52708
$BaAl_2Te$, crystal structure, X-ray diffr. study *(German)* 3–13198
$Ba_2Cd_3Bi_4$, prod. and cryst. struct. *(German)* 3–2500
$BaCe(CO_3)F$, Huanghoite, cryst. superstructure determ., direct solutions *(Chinese)* 3–18264
$Ba_{11}Cr_4F_{34}$, anion-excess fluorite related superstructures *(French)* 3–27905
$BaCrO_3$, 4H polytype, cryst. struct., X-ray powder diffr. study 3–2506
$BaFe_{1-x}Ru_xO_{3-y}$, cryst. struct. of polytypes, cond. props. *(German)* 3–18272
$Ba_{1+x}Fe_2S_4$, vernier struct., electron diffr. and microscopy study 3–27906
$Ba_{11}Ga_4F_{34}$, anion-excess fluorite related superstructures *(French)* 3–27905
$BaGa_2S_4(Al_2S_4)$, cryst. struct., X-ray study *(German)* 3–2514
$BaGeO_3$, $BaGe_2O_5$, $Ba_2Ge_5O_{12}$, high press. transforms., X-ray powder diffr. data 3–19327
$BaIn_2Te_4$, crystal structure, X-ray diffr. study *(German)* 3–13198
Ba_2LaRuO_6, mag. props. and cryst. struct., neutron diffr, studies 3–46912
$BaMg_2(VO_4)_2$, cryst. struct. determ. 3–8013
$Ba(NO_2)_2.H_2O$ pyroelec. cryst., nuclear positions and spontaneous polarisation 3–28756
$Ba_4Nb_2S_9$, cryst. struct., X-ray diffr. anal. 3–51570
$BaNi_2(PO_4)_2$, synthesis and crystallisation, X-ray diffr. struct. obs. 3–14473
$Ba_3Te_4O_{11}$, cryst. struct. study 3–51556
$Ba_{1.17}Ti_{5.04}Al_{2.1}O_{16}$, SYNROC B, hollandite phase struct., 20 to 1060°C, neutron diffr. obs. 3–18270
$BaUO_{3+x}$, cryst. struct. determ. 3–22830
$Ba_2Zn_3P_{10}O_{30}$, cryst. struct., X-ray diffr. and Fourier anal. 3–27907
Bi trihalides, cryst. struct. and polymorphic transitions 3–7986
$Bi_{12}GeO_{20}$, cryst. struct., chem. bonds, and natural vibrs. 3–27916
$Bi_4(GeO_4)_3$, refinement of crystal struct. *(French)* 3–22846
$Bi_4Ge_3O_{12}$ and $Bi_4Si_3O_{12}$, cryst. struct., neutron diffr. and EPR study 3–8009
$Bi_2(H_2O)_2(SO_4)_2(OH)_2$, cryst. struct. determ. 3–22841
$(Bi_2O_3)_{0.8}(Er_2O_3)_{0.2}$, struct. and ionic cond., neutron diffr. study 3–33201
$Bi_2O(OH)_2SO_4$, cryst. struct. determ. 3–22842
$Bi_xSb_{2-x}Sn_2S_5$, cryst. struct. determ. 3–27903
$Bi_{12}SiO_{20}$, cryst. struct., chem. bonds, and natural vibrs. 3–27916
Bi_2Te_3, doping effects and impurity elec. activity 3–13251

crystal atomic structure of inorganic compounds continued
$Bi_2Te_3\text{-}Sb_2Te_3(Bi_2Se_3)$ alloy, doping effects and impurity elec. activity 3–13251
$Bi_{10}Ti_3O_{30}$, solid-phase form. in $Bi_4Ti_3O_{12}\text{-}Bi_2WO_6$ system, struct. 3–8205
$Bi_{12}TiO_{20}$, cryst. structure, X-ray diffr. study 3–22856
$Bi_7Ti_5O_{20}F$, synthesis, cryst. struct. and thermal props. 3–8001
$Bi_5Ti_2WO_{14}F$, synthesis, cryst. struct. and thermal props. 3–8001
$C_{8.4}HOTeF_5$ intercalate, cryst. struct. *(German)* 3–22864
CI_4, cryst. and mol. struct. determ. *(German)* 3–2524
$Ca_3(AsO_4)_2.xH_2O$, cryst. struct. and phaunouxite→Rauenthalite topotactic dehydration 3–37860
CaB_6, X-ray diffr. approach to fine crystallographic features determ. 3–56864
$Ca_{10-2x}Bi_xNa_x(PO_4)_6F_2$, struct., charge balanced substitution study, X-ray powder diffr. anal. 3–51569
CaF_2 C1 struct., rel. to $CdCl_2$ C19 struct. 3–27909
$CaF_2{:}Gd^{3+}$, F atom structural position, proton backscatt. study 3–22866
$Ca_3Ga_2Ge_4O_{14}$, cryst. struct. study 3–37885
$CaK_3H(PO_4)_2$, cryst. struct. 3–51553
$CaKNd(PO_4)_2$, cryst. struct., X-ray diffr. study 3–2475
$CaK_2[B_4O_5(OH_4)]_2.8H_2O$, cryst. struct., H-bonds 3–2488
$Ca_{1-x}La_xFeO_3$, preparation, crystallographic and mag. characterization 3–13775
$Ca_2LaFe_3O_8$, microdomain texture and O excess, TEM and electron diffr. anal. 3–42793
Ca_2LaRuO_6, mag. props. and cryst. struct., neutron diffr. studies 3–46912
$Ca_{3.18}M_{2.20}(Ti_{0.43}Fe_{0.37}Al_{0.31})B_{4.04}(Si,Al)_4O_{22}$, M=transition metal, cryst. struct. determ. 3–33216
$CaMnO_x$, O deficient cpd., reduction prep., cryst. struct. and characterisation 3–7994
$CaMnO_x$, struct. determ., X-ray and neutron diffr. studies 3–33203
$CaNa[B_5O_7(OH)_4].3H_2O$, probertite, cryst. struct. determ. 3–27904
$CaO\text{-}Ta_2O_5$ system, phase equilibria and structures, X-ray diffr. study 3–8167
$Ca_7Sb_{12}O_{36}F_2$, formed from cubic $KSbO_3$, cryst. struct., X-ray study *(French)* 3–2513
Ca_3TeO_6, cryst. struct. study, compared to Cd_3TeO_6 *(German)* 3–2493
$Ca_2V_2O_7$, cryst. growth, struct., elec. and dielec. props. 3–24110
$Ca_{14}Y_5F_{43}$, tveitite, cryst. struct., X-ray diffr. study 3–7992
$Ca_2Zn_4Ti_{16}O_{38}$, cryst. struct., X-ray diffr. study 3–46908
$CdCl_2$ C19 struct., rel. to CaF_2 C1 struct. 3–27909
$Cd_xHg_{1-x}Te$, epitaxial layer struct. 3–3007
CdI_2, polytype cryst. struct. determ. 3–27902
CdI_2, polytype identification and struct. 3–27901
CdI_2-type cpds., polytypes, the $\alpha\beta\gamma$-notation 3–2531
$Cd_2In_6Sn_3Te_5$, $Cd_6In_2SnTe_7$, RMS displacement of Sn atoms in anion sublattice, Mossbauer effect 3–34024
$(Cd_{1-x}Mn_x)_3As_2$, semimagnetic semicond., prep. cryst. struct., X-ray powder diffr. study 3–46891
$CdMnCaO_4$, X-ray study of struct. and ionic config. 3–37866
$Cd_{1-x}Mn_xTe$, semimagnetic, cryst. struct. imperfections, X-ray diffr., etching and optical transmission studies 3–33194
$Cd_4Na(VO_4)_3$, dielec., thermal expansion and plastic deformation props. 3–38772
$CdPS_3$, intercalated with amines, cryst. struct. and semiconducting props. 3–51573
$Cd_7Sb_{12}O_{36}F_2$ formed from cubic $KSbO_3$, cryst. struct., X-ray study *(French)* 3–2513
$CdSnP_2$, lattice consts. and thermal expansion, high temp. X-ray study 3–18483
Cd_3TeO_5, cryst. struct. study, compared to Ca_3TeO_6 *(German)* 3–2493
$CdY_4Mo_3O_{16}$, cryst. struct., X-ray diffr. study 3–2483
$CeBa(CO_3)_5F_2$, cebaite, cryst. struct., electron diffr. and lattice image study *(Chinese)* 3–18263
$Ce_2(MoO_4)_2(Mo_2O_7)$, cryst. struct., X-ray and Fourier anal. study 3–8000
$CeVO_4$, neutron powder diffr. study, bond distances determ. 3–7971
Cl_2 crystal struct., $Cl_2\text{-}Cl_2$ pair pot. anisotropy, intermol. bonding and lone pair effects 3–27915
Cl_2 crystal struct. and lattice dynamics, electrostatic and anisotropic atom-atom pots. 3–27914
Co oxides, local struct., EXAFS obs. 3–14390
CoAsS, cobaltite, cryst. struct., electron microprobe and X-ray study 3–2494
$CoMnAlO_4$, spinel, structural, mag., elec. props., ionic config. 3–13180
$Co(NH_3)\ _6CuCl_5$, cryst. and mol. struct., single cryst. X-ray and neutron diffr. data 3–7977
$Co(NH_3)_6Cl_3$, cryst. struct. and polymorphism, X-ray diffr. study 3–2509
$Co(NH_3)_6I_3I_4$, cryst. struct. *(German)* 3–51550
$CoNa(H_2PO_3)_3$, cryst. struct., H bonds 3–2487
CoO film, chem. composition and struct., Auger and electron microscopy study 3–8351
Co_xVS_2, cryst. struct., mag. and elec. props. 3–7997
$Cr_3(^{11}B_{0.44}C_{0.56})C_{0.85}$, cryst. struct., neutron powder diffr. study 3–51578
$CrBr_3$, layered ionic cpd., spin density distrib., polarised neutron diffr. study 3–13174
$Cr_3C(C_{0.52}N_{0.48})$, cryst. struct., neutron powder diffr. study 3–51578
$CrCl_3$, layered ionic cpd., spin density distrib., polarised neutron diffr. study 3–13174
Cs intercalated graphite, nonhexagonal superlattice observation, STEM study 3–42586
$CsBa_2(N_3)_5$, cryst. struct., X-ray diffr. study *(German)* 3–2526
$Cs_5Bi(MoO_4)_4$, cryst. struct., X-ray anal. 3–33218
$CsCrP_2O_7$, crystalline struct. 3–51561
$CsEr(PO_3)_4$ structural type IV crysts. 3–56853
$CsF\text{-}ErF_3(YbF_3)$ systems, phase diagrams and X-ray powder data *(French)* 3–19330
$Cs_2FeF_5.H_2O$, hydrothermal synthesis, cryst. struct., mag. props. 3–33220
$Cs_{10}Ga_6Se_{14}$, centrosymmetric crystal, X-ray crystallography using expt. phases with direct method 3–33191
$Cs_{10}Ga_6Se_{14}$, structural anal. from Bragg reflex. phases *(German)* 3–51447
$Cs_4Nb_6O_{17}$, cryst. struct. and hydration mechanisms, X-ray study, Fourier Patterson anal. *(French)* 3–2511
$CsNbOP_2O_7$, cryst. struct. study 3–37883
$CsTa_2(PO_4)_2P_3O_{10}$, cryst. struct. study 3–37884
Cs_xVF_3, cryst. struct., high resolution TEM study 3–27911
$Cs_3V_{1.5}Mo_{0.5}O_3F_6$, cryst. struct. and Raman vibr. spectra 3–22852
$Cs_3V_2O_4F_5$, cryst. struct. and Raman vibr. spectra 3–22852

crystal atomic structure of inorganic compounds continued
$Cs_2(VOF_4(H_2O))$, green and blue phases, cryst. struct. and optical spectra 3−33211
$Cs_3[UO_2(NCS)_5]$, cryst. struct. determ. 3−22837
Cu complex, dichloroacrylonitrile copper (II), cryst. struct., X-ray anal. 3−33219
$CuFeO_2(AlO_2)(GaO_2)$, NQR studies 3−23834
$Cu(GaCl_4)_2$, synthesis, Raman spectrum and crystal struct. *(French)* 3−22844
$Cu_2Ge_{1.55}Se_3$, superlattice struct., X-ray powder diffr. study 3−7979
$Cu_2(OH)_3NO_3$, orthorhombic, cryst. struct. study 3−37865
CuTeBr, ionic conductivity, rel. to cryst. struct. 3−2877
$CuZr(PO_4)_2$, bond lengths, EXAFS 3−8903
$Cu_{15}[(B_2O_5)_2|(BO_3)_6|O_2]$, cryst. struct. determ. 3−22831
$DuO_2AsO_4.4D_2O$, cryst. struct., powder neutron diffr. study 3−51551
$ErFe_2H_x$, cryst. struct. and props. 3−8007
$ErPO_4$, cryst. struct. determ. 3−46901
Er_5Si_3Cx, superstructure and order-disorder phenomena, X-ray diffr. study 3−13192
$Er_{10}W_2O_{21}$, cryst. struct. determ. 3−27899
Eu_2As_2, lattice const. and bulk modulus, high press. X-ray study 3−22854
$Eu(H_2PO_4)_3$, preparation, chem. and X-ray crystallographic analyses 3−58058
Fe CO_3, asymmetric quadrupole double in Mossbauer spectrum 3−45996
ϵ-Fe_3C, valence electron struct. anal., spatial distrib. of bonds, mech. strength depend. *(Chinese)* 3−33177
$FeCl_3$ intercalated graphite, ferric and ferrous ion arrangement, Mossbauer study 3−18278
$Fe_{0.3}Cu_{0.7}Cr_2S_4$, mag. semicond., mag. props. and cryst. struct. 3−14018
$Fe_xCu_{1-x}Rh_2Se_4$, crystallographic transition from spinel to monoclinic struct. *(Korean)* 3−38050
$Fe_{15}Ge_8O_{36}$, cryst. struct. *(German)* 3−51549
$Fe_{3.2}Ge_{1.8}O_8$, cryst. struct. *(German)* 3−51548
$Fe_2Ge_xSi_{1-x}O_4$, mag. props., struct. depend. 3−52414
FeM_2O_4, M=Al, Cr, oxidation, elec. cond. meas., Fe^{2+} ion availability in defect phase γ, DTG anal. 3−39373
$FeNbO_4$, cryst. struct. and elec. cond., relationship to $FeWO_4$ 3−7996
$FeNb_3Se_{10}$, X-ray diffuse scatt. study 3−33212
α-Fe_2O_3, dehydration prep., X-ray peak broadening due to twin form. 3−8059
α-Fe_2O_3:Al^{3+}, aluminous hematite, Mossbauer study 3−34018
Fe_3O_4, electronic superstruct. and cryst. struct. 3−13734
Fe_3O_4, ionic configurations and electron ordering 3−56860
Fe_3O_4, low-temp. phase, anti-phase struct. 3−56911
Fe_3O_4, magnetite, low temp. cryst. struct. deduced from diffuse electron scatt. 3−13202
FeOCl-Li intercalate, struct., NMR and Mossbauer study 3−22860
$Fe_2P_2O_7$, cryst. struct. study 3−2528
$Fe_x(PO_4)_yO_z$, phase relations and structs. *(French)* 3−47088
$FeRh_2Se_4$, cryst. struct., mag. susceptibility and Mossbauer spectra 3−8008
FeS, cryst. struct. and ferrimag.-antiferromag. transition 3−51559
$Fe_{13}S_{16}$, synthetic smythite, formation and struct. 3−33214
Fe_3S_4, monoclinic, formation and struct. 3−33214
$FeSiO_3$, high-temp. polymorph, cryst. struct. study 3−46894
Fe_xVS_2, cryst. struct., mag. and elec. props. 3−7997
$Fe_xV_{3-x}S_4$, Mossbauer study of Fe, V site distrib. 3−3617
$FeWO_4$, cryst. struct. and elec. cond., relationship to $FeNbO_4$ 3−7996
$Ga_{1-x}In_xAs$, atomic-scale struct., EXAFS study 3−14388
$Ga_{0.5}Mo_2S_4$, sp. ht. meas., cryst. struct. and mag. props., low temp. study 3−8655
GaPAsSb quaternary single cryst. growth from binary component alloyed mixture 3−34216
GaS, high press. polymorph, cryst. struct. 3−18277
β-Ga_2Se_3, cryst. struct. of superstructural phase, X-ray diffr. study 3−2510
GaSe(S), ionicity, effective charges, bond angles, optimised bond orbital model 3−13156
$GdAl_3(BO_3)_4$, cryst. struct. determ. 3−8010
$Gd(H_2PO_4)_3$, preparation, chem. and X-ray crystallographic analyses 3−58058
Ge, interatomic bonds, vacancy formation potential at diffusion temp. 3−8043
$Ge_{38}As_8I_8$, clathrate semicond., prep., struct. and elec. props. 3−13814
$Ge_{0.03}Fe_{2.97}O_4$, doped magnetite, mag. and elec. props. *(Korean)* 3−38733
GeO film, heat treatment effect on struct. and props. 3−14612
GeS:In filamentary crysts., prep., morphology, elec. and photoelec. props. 3−57344
$(H_3O)_2Sb_2(SO_4)_4$, cryst. struct. 3−51547
$Hf_4Co_7Ge_6$, crystal struct., lattice parameter *(Ukrainian)* 3−22850
$HfFeSi_2$, cryst. struct., single cryst. X-ray diffr. study *(French)* 3−13188
$HfMnSi_2(Ge_2)$, cryst. struct., single cryst. X-ray diffr. study *(French)* 3−13188
HfO_2 in internally oxidised alloys based on Nb and Mo, crystal structure 3−42588
$Hg_{3-\delta}SbF_6$, cryst. struct., X-ray diffr. study 3−2473
$HoFe_2H_x$, cryst. struct. and props. 3−8007
$HoNi_3D_{1.8}$, cryst. struct., neutron diffr. anal. 3−33222
$(HoS)_2Te_{1.34}$ substructure and order-disorder transformation *(French)* 3−33209
$(HoS)_2Te_{1.34}$, superstruct., order-disorder transitions and twin domains *(French)* 3−33210
Ho_2ScNbO_7, crystal structure, X-ray diffr. study 3−27917
β-$In_{2.47}Al_{22}O_{34}$, cryst. struct. and thermal stability, X-ray study 3−2504
$In_6La_{10}O_6S_{17}$, cryst. struct., X-ray diffr. study, Fourier anal. *(French)* 3−2481
In_2O_3-ZrO_2 solid soln., heat treatment, elec. resist. and struct. 3−58136
InP_3, synthesis, cryst. struct. and metallic conduction 3−46913
InS, IR reflectivity and cryst. struct. 3−47634
$In_{2.01}S_3(Se_3)(Te_3)$, cryst. struct., X-ray diffr. anal. 3−42579
$In_3Sb_5O_{12}$, single cryst., exhibiting electroacoustic echo, growth, phys. and chemical props. 3−14228
InSe, ionicity, effective charges, bond angles, optimised bond orbital model 3−13156
K intercalation into graphic, real time γ-ray diffr. study 3−42584
K-Bi-O system, phase synthesis and characterisation *(French)* 3−19329
KAg_4I_5 fast ionic conductor, prep. and characterisation 3−24190
$K_5Ag(IO_5OH)_2.8H_2O$, cryst. struct. and chem. prep. 3−8003
$K_3AlB_8O_{15}$, crystal struct., grown from melt *(Japanese)* 3−2522
$KBa(NH_2)_3$, cryst. struct. and IR spectra, X-ray diffr. study *(German)* 3−22851

crystal atomic structure of inorganic compounds continued
$K_2Ba(NO_2)_4$, ferroelastic, cryst. struct., neutron diffr. study 3−27922
$(KCN)_x(KBr)_{1-x}$, static disorder and its rel. to dynamical props. studied by mol. dynamics calcs. 3−8151
K_2ErF_5, cryst. struct. investig. 3−37879
$KFeBr_3$, cryst. and mag. struct. 3−22829
$K_3Fe_2(PO_4)_3$, cryst. struct. study *(French)* 3−46897
$KFe_3(SO_4)_2(OH)_6$, jarosite structure, thermal disintegration, IR spectra and X-ray diffraction 3−13182
$K(H_{0.05}D_{0.95})_2PO_4$, cryst. struct. P-T depend. 3−2498
KH_2PO_3, cryst. struct. study 3−51558
KH_2PO_4, cryst. struct. P-T depend. 3−2498
$K_2H_2P_2O_7$, cryst. struct. determ. *(French)* 3−46896
$K_3HP_2O_7.Te(OH)_6.H_2O$, cryst. struct. determ. 3−46903
$KLiMS_2$, M=Mn, Fe, Zn, cryst. struct., X-ray powder diffr. study 3−37869
$K_2Mg(CO_3)_2$, cryst. struct., X-ray powder diffr. study 3−37871
$K_{1.33}Mg_{3.11}Sb_{4.89}O_{16}$, hollandite-type struct., supercell ordering, X-ray, electron diffr., and HREM studies 3−51571
$K_4Nb_6O_{17}$, cryst. struct. and hydration mechanisms, X-ray study, Fourier Patterson anal. *(French)* 3−2511
K_2NiF_4-type oxides, cryst. and mag. struct., antiferromag. props. 3−7993
$K_xP_4O_8(WO_3)_{2m}$, cryst. struct., electron microscopy, electron and X-ray diffr. study 3−2505
$K_xP_2W_4O_{16}$, bronze with tunnel struct. 3−18273
$K_2(PtCl_4)$, electron density distrib. and bond lengths, X-ray and neutron diffr. studies 3−37863
$K_3Pt(SO_3)_2HBr_2.H_2O$, cryst. struct. determ. 3−27900
$KSbF_2(HPO_4)$, prep., struct. and vibr. spectrum *(German)* 3−46911
K_2TaT_7, IR, Raman, NMR and X-ray study 3−47635
$K_2Te_2O_5.3H_2O$, cryst. struct. 3−51546
$KTi_6Nb_5O_{25}$, chemically twinned rutile oxide, cryst. struct., X-ray study 3−51572
$KTl(CrO_4)_2$. $2H_2O$, synthesis, crystallography and IR studies *(French)* 3−7975
K_xVF_3, cryst. struct., high resolution TEM study 3−27911
$LaAlO_3$-$LaFe_3O_3$, solid solutions, crystal prep. by zone refining 3−14476
$LaAlO_3$-$SrTiO_3$ solid solution, phase diagram, X-ray diffr. and DSC study 3−53037
LaB_6, X-ray diffr. approach to fine crystallographic features determ. 3−56864
$La_2Cu_{1-x}Ni_xO_4$ solid solns., cryst. symm. study by X-rays 3−37867
$La_{0.5}Na_{0.5}Fe_{12}O_{19}$ ferrite, structural props., X-ray and Mossbauer studies *(Russian)* 3−13200
$LaNi_4AlD_{4.1}$, cryst. struct. determ. 3−8017
$LaNi_5D_6$, cryst. struct. determ. 3−18265
β-$LaNi_5H_x$, struct., entropy and enthalpy calcs., statistical thermodynamical approach 3−2499
$LaNi_5H_6(D_6)$, cryst. struct. and dynamics, elastic and inelastic neutron scatt. 3−51562
$LaTaO_4$-$LnTaO_4$, (Ln=Nd, Sm-Dy, Yb), solid solns., formula vol., X-ray study 3−22869
$LaWO_4Cl$, orthorhombic, struct., luminescence and Raman spectra, X-ray diffr. study 3−33204
$La_3WO_6Cl_3$, cryst. struct. and optical props., X-ray powder diffr. study 3−7995
$Li_2Cr_{3-x}M_xSbO_8$, (M=Al, Fe, Ga), hexagonal to spinel transition and cryst. struct., X-ray and IR spectra study 3−8187
$LiFe_5O_8$, ferrite, cryst. struct. and cation ordering 3−13203
$LiGaO_2$, dielec. props., relation to crystallographic polarity, ion surface scatt. and chem. etching studies 3−38766
$LiGeO_3$, dielec. props., relation to crystallographic polarity, ion surface scatt. and chem. etching studies 3−38766
γ-$LiIO_3$, cryst. struct. phase transitions, X-ray diffr. study 3−7983
$LiKSO_4$, pyroelec., cryst. struct. study 3−46905
$Li_2M^{4+}Fe_6O_{12}$ (M=Ti, Sn, Ge, Si) spinel ferrites, cryst. chem. 3−13204
$LiMnFeF_6$, diamorphism, cationic ordering and $\alpha \rightarrow \beta$ transition 3−33207
$LiNa_2AlH_6$, prep., struct. and thermal stability, X-ray diffr. study 3−37880
Li_xNbSe_2, intercalated, struct., phase diagram 3−2519
$Li_2NpW_3O_{12}$, prep. in $Np(WO_4)_2$-Li_2WO_4 system, struct. *(French)* 3−13194
$Li_4NpW_4O_{16}$, prep. in $Np(WO_4)_2$-Li_2WO_4 system, struct. *(French)* 3−13194
$LiOH.H_2O$, deform. electron density, X-ray and neutron diffr. studies 3−7967
$LiOH.H_2O$, theoretical electron density 3−7968
$LiReO_3$ and Li_2ReO_3, cryst. struct., neutron powder diffr., use of Pearson type VII distrib. 3−7974
$Li_{3.75}Si_{0.75}P_{0.25}O_4$, cryst. struct. and ionic cond., X-ray diffr. study 3−7990
Li_2SnO_3, cryst. struct., neutron powder diffr. refinement 3−27908
Li_2TeO_3, cryst. struct., OD interpretation 3−46890
$LiTi_2O_4$, structure, mag. props., superconductivity 3−22863
Li_2UCl_6, cryst. struct., multiphase powder neutron diffr. profile refinement 3−56857
Li_2VSe_2, cryst. struct. and mag. props. 3−22862
$Li_{0.1}Zn_{0.8}Fe_{2.1}O_4$ ferrite, low temp. reconstructive transition, neutron diffr. study 3−38052
Li_2ZrO_3, cryst. struct., neutron powder diffr. refinement 3−27908
Li_xZrS_2 intercalation cpd., structural and semicond.-metal transition obs. 3−52036
$Li_6[Al_2(BO_3)_4]$, cryst. struct. determ. 3−2520
LuB_2C, prep. and cryst. struct., X-ray diffr. study 3−13190
Mg oxides, local at. arrangements from electron energy loss near edge struct. 3−14414
Mg-Fe olivine, crystal size location of Fe and trace elements via new crystallographic technique 3−10100
Mg-Fe-Ni olivines, synthetic, cation distrib. study 3−13176
$MgCl_2$, layer struct. with Cl hexagonal close packing, X-ray powder diffr. study 3−2530
$MgGa_2O_4$, cryst. struct. 3−8020
Mg_2NiH_4, low temp. cryst. struct. and phase transition 3−33198
$MgSiO_3$, orthoenstatite to protoenstatite transition and cryst. struct. 3−51579
Mg_2SiO_4, forsterite, at. charges fitted to thermoelastic and struct. props. 3−33178
γ-Mg_2SiO_4, spinel polymorph crystal struct. 3−13186
$MnAs_{1-x}P_x$, relation between struct. and mag. props. 3−13185
MnF_2, cryst. struct., reliability of intensity variances by χ^2 distrib. 3−51575

- **crystal atomic structure of inorganic compounds** continued
  - $MnGa_2O_4$, cryst. struct. 3−8020
  - $MnHP_2O_7$, cryst. struct. determ. *(French)* 3−22843
  - Mo_3Co_2, sigma phase ordering 3−2517
  - MoO_3, orthorhombic, red. to MoO_2, electron diffr. study 3−19521
  - MoO_x-TiO_2 system, structural and mag. studies 3−56865
  - $Mo_{0.2}Ta_{0.2}Ta_{0.8}Se_2$, cryst. struct. determ. 3−2521
  - N trihalides, cryst. struct. and polymorphic transitions 3−7986
  - $ND_4UO_2PO_4.3D_2O$, cryst. struct. rel. to proton cond. 3−51552
  - NH_4NO_3 phase III, cryst. struct., neutron diffr. study 3−2474
  - $NH_4Tl(CrO_4)_2O$, synthesis, crystallography and IR studies *(French)* 3−7975
  - $(NH_4)_2ZnCl_4$, twinning by pseudomerohedry, cryst. struct. at room temp. 3−46899
  - $(NH_4)_2[Er_2UMo_{12}O_{42}].22H_2O$, cryst. struct. determ. 3−8015
  - Na-Bi-O system, phase synthesis and characterisation *(French)* 3−19329
  - NaA-In, zeolite-metal ultradisperse system, struct. and optical props. 3−42587
  - $Na_3AlBeSi_2O_8$, cryst. struct. refinement 3−33221
  - $Na_{92}Al_{92}Si_{100}O_{348}$, cryst. struct., neutron profile refinement 3−8004
  - $Na_8Al_6Si_6O_{24}(OH)_2.2H_2O$ 3−46895
  - $Na_{12}Al_{12}Si_{12}O_{48}.27H_2O$, space group, comparison of X-ray and NMR data 3−13173
  - $Na_2CO_3.NaHCO_3.2H_2O$, cryst. struct. determ. 3−22839
  - $Na_2CO_3.7H_2O$, cryst. struct. determ. 3−22836
  - $NaCa(NH_2)_3$, cryst. struct. and IR spectra, X-ray diffr. study *(German)* 3−22851
  - NaCl, deformed under dynamic recrystn. conditions, struct. and props. 3−2657
  - $Na_5DySi_4O_{12}$, cryst. struct. and ionic cond. 3−18279
  - $NaFeNp_3F_{15}$, cryst. struct., X-ray diffr. study *(French)* 3−7970
  - $NaFeP_2O_7$, cage cryst. struct., X-ray study 3−37874
  - $NaGdGeO_4:Nd^{3+}$, stimulated emission, $^4F_{3/2} \rightarrow ^4I_{11/2}$ and $^4F_{3/2} \neq ^4I_{13/2}$ transitions 3−8851
  - $Na_3H(SO_4)_2$, cryst. struct. and hydrogen bonds 3−22835
  - $Na_5HoSi_4O_{12}$, cryst. struct. and ionic cond. 3−18279
  - $NaMnF_3$, hyperfine interaction and cryst. struct., NMR study 3−28715
  - $Na_6Mo_{10}O_{33}$, cryst. struct., X-ray diffr. anal. 3−51564
  - $NaNH_2SO_3$, anhydrous, cryst. data 3−2532
  - $Na_2(NO_3, NO_2)$, proof of existence, crystalline struct. at 200°C *(French)* 3−42576
  - Na_3NO_3, low-temp. forms, Guinier photographic obs. *(German)* 3−33224
  - $NaNbO_3$-$PbTiO_3$, ferroelec. solid solns. composition-struct.-props. relationship 3−18280
  - $NaNp_3F_{13}$, cryst. struct. determ. *(French)* 3−51555
  - Na_2O-Al_2O_3-SiO_2-H_2O, VSZ-3 zeolite crystal, hydrothermal synthesis and charact. 3−8951
  - $(NaPO_3)_n$, Kurrol salt, cryst. struct. determ. 3−22833
  - $NaPO_4$-$Na_3Eu(PO_4)_2$, phase structures, emission spectra studies 3−51567
  - $Na_3PO_4.{}^1/_2H_2O$, cryst. struct. and H-bonding, X-ray diffr. study 3−46910
  - $Na_3PO_4.8H_2O$, cryst. struct. model *(French)* 3−46898
  - $NaRBi_2O_6$, (R=La, Nd, Gd, Y), prep. and cryst. struct., X-ray, IR and mag. susceptibility study 3−13197
  - $Na_2Si_4O_8(OH)_2.4H_2O$, synthetic makatite, cryst. struct. study 3−2523
  - $Na(Sr,Ba)[PO_4].9H_2O$, cryst. struct. determ. 3−8011
  - $NaSrPO_4$-$Na_3Eu(PO_4)_2$, phase structures, emission spectra studies 3−51567
  - $Na_xTiS_2(Se_2)$ intercalate, struct. and phase relations 3−22861
  - Na_2UCl_6, cryst. struct., multiphase powder neutron diffr. profile refinement 3−56857
  - $NaYF_4$, cryst. growth, lattice parameters, X-ray powder diffr. 3−37864
  - $Na_5YSi_4O_{12}$, cryst. struct. determ., ionic cond. 3−8012
  - $Na_5YSi_4O_{12}$, cryst. struct. and ionic cond. 3−18279
  - $Na_4Yb(OH)_7.nH_2O$, cryst. struct., X-ray diffr. study 3−22865
  - $Na_2ZrGe_2O_7$, cryst. struct. determ. 3−33215
  - $Na_4ZrSi_3O_{10}$, ionic cond. and cryst. struct. 3−42840
  - $Na_3[B_5O_9].H_2O$, cryst. struct. determ. 3−27898
  - $Na_6[Cu_2\{B_{16}O_{24}(OH)_{10}\}]12H_2O$, cryst. struct. study 3−46900
  - Nb-Si-C, structural study 3−7981
  - $Nb_x(CO)$, cryst. struct. and lattice constants, high temp. X-ray diffr. study *(French)* 3−13187
  - β-$Nb_4Fe_3Si_5$, cryst. struct., single cryst. X-ray diffr. study *(French)* 3−13189
  - NbO_x, cryst. struct. and lattice constants, high temp. X-ray diffr. study *(French)* 3−13187
  - Nb_2O_5 amorphous film, vacuum annealing influence on props. 3−13661
  - Nb_2O_5, with long-period superlattice, lattice interference images, cryst. struct. 3−8018
  - Nb_2O_5-WO_3, system, crystallographic shear phase, X-ray diffr. and TEM study 3−7991
  - NbS_2-2H intercalation cpd. with ethylenediamine and trimethylenediamine, cryst. struct. and thermogravimetric study 3−33206
  - $NbSe_3$, discommensurate character 3−13193
  - NdB_6, single cryst. growth from Al flux; characteris. *(Japanese)* 3−8957
  - $NdFeO_3$, cryst. and mag. struct. refinement 3−13175
  - $Nd_2Ge_2O_7$, cryst. struct., X-ray diffr. study *(French)* 3−37872
  - $(NdO)_4Ga_2S_5$, cryst. struct., X-ray diffr. study, Fourier anal. *(French)* 3−2482
  - $Nd_{0.71}Rh_{3.29}B_2$, cryst. struct., single cryst. X-ray diffr. studies 3−46909
  - $Nd_2Sr_3(BO_3)_4$, cryst. struct. refinement, photographic and X-ray studies 3−37887
  - Ni-Fe olivines, cation ordering, Mossbauer spectroscopy study 3−13177
  - $NiAl_2O_4$-Ni_2SiO_4 system, high press. and temp. phase relations 3−8168
  - NiAsS, gersdorffite, cryst. struct, electron microprobe and X-ray study 3−2495
  - $NiMoO_4$, cryst., IR and Raman vibr. spectra 3−8817
  - $NiPS_3$, intercalated with amines, cryst. struct. and semiconducting props. 3−51573
  - $NiSb_{1-x}Te_x$, phase diagram, cryst. struct. and polymorphic transformations 3−2740
  - Ni_xVS_2, cryst. struct., mag. and elec. props. 3−7997
  - $Np(OH)_2SO_4$, synthesis, struct. and optical spectra 3−27910
  - OsP_4, cryst. struct. of α and β modifications 3−2502
  - P trihalides, cryst. struct. and polymorphic transitions 3−7986
  - $P_4W_{10}O_{38}$, cryst. struct. 3−18271
  - $PbBPO_5$, $PbBAsO_5$, synthesis and characterisation *(French)* 3−22845
  - $PbBi_2TiNbO_8F$, synthesis, cryst. struct. and thermal props. 3−8001
  - $PbBi_2TiTaO_8F$, synthesis, cryst. struct. and thermal props. 3−8001
  - $Pb_{1-x}In_xF_{2+x}$; solid soln., prep. and cryst. struct., X-ray diffr. study *(French)* 3−13196

- **crystal atomic structure of inorganic compounds** continued
  - Pb_2InF_7, prep. and cryst. struct., X-ray diffr. study *(French)* 3−13196
  - $Pb_7In_5F_{29}$, prep. and cryst. struct., X-ray diffr. study *(French)* 3−13196
  - $PbLaTh(VO_4)_3$, dimorphism, X-ray diffr. and IR spectra study 3−33208
  - $Pb_3(PO_4)_2$ ferroelasticity and ferroelastic transformations, rel. to cryst. structs. 3−2653
  - $Pb_5(PO_4)_3F$, cryst. struct., X-ray study 3−37886
  - $Pb_{1-x}Sn_xTe$ photosensitive films, phase composition, struct. and O_2 adsorption effects 3−52193
  - $Pb_{1-x}Sr_xGe_4O_9$, struct., dielec. optical props. and phase transition 3−8824
  - $PbZrO_3$, antiferroelectric, cryst. struct., X-ray and neutron powder diffr. profile anal. 3−18266
  - $PbZr_{0.9}Ti_{0.1}O_3$, ferroelec., cryst. struct., X-ray and neutron diffr. study 3−56856
  - $Pb(Zr_{1-x}Ti_x)O_3$:Nb, 95/5 PZT ceramics, cryst. and domain struct., TEM study 3−23894
  - β-Pd(II)-trans-diglycinate complex, cryst. struct., X-ray diffr. obs. 3−37877
  - $PdPb_{0.2}As_{0.8}$, cryst., struct., X-ray powder diffr. study 3−56859
  - PrB_6, single cryst. growth from Al flux, characteris. *(Japanese)* 3−8957
  - $PrFeO_3$, cryst. and mag. struct. refinement 3−13175
  - $PrVO_4$, neutron powder diffr. study, bond distances determ. 3−7971
  - $Pt(NH_3)_4PtBr_2(NH_3)_4\ (HSO_4)_4$, cryst. struct. determ. 3−22834
  - Rb-graphite intercalation cpd. 3−42585
  - $RbBa(NH_2)_3$, cryst. struct. and IR spectra, X-ray diffr. study *(German)* 3−22851
  - $RbEu(NH_2)_3$, cryst. struct. and IR spectra, X-ray diffr. study *(German)* 3−22851
  - $RbHo(PO_3)_4$ structural type IV crysts. 3−56853
  - $RbNO_3$ phase IV, cryst. struct. and polymorphic transition, neutron diffr. study 3−2479
  - $Rb_4Nb_6O_{17}$, cryst. struct. and hydration mechanisms, X-ray study, Fourier Patterson anal. *(French)* 3−2511
  - $Rb_xP_4O_8(WO_3)_{2m}$, cryst. struct., electron microscopy, electron and X-ray diffr. study 3−2505
  - $Rb_{1.74}P_8W_{28}O_{100}$, cryst. tunnel struct., X-ray diffr. study 3−2477
  - $RbSr(NH_2)_3$, cryst. struct. and IR spectra, X-ray diffr. study *(German)* 3−22851
  - Rb_2TeI_6, cryst. struct. and tetragonal-cubic phase transition 3−18275
  - $RbTl(CrO_4)_2$, synthesis, crystallography and IR studies *(French)* 3−7975
  - $RbTm(PO_3)_4$ structural type IV crysts. 3−56853
  - Rb_xVF_3, cryst. struct., high resolution TEM study 3−27911
  - $Rb_2(ZnCl_4)$, cryst. struct. study 3−51554
  - Rb_2ZnCl_4, disordered cryst. struct. study in paraelec. phase 3−46906
  - ReO_3, charge density determ., X-ray struct. anal. and DV-Xα cluster calc. 3−42578
  - ReP_3, cryst. struct. determ. 3−22832
  - Re_2Te_5, cryst. struct. and semicond. props. 3−42582
  - Rh_2O_3, elec., mag. and crystallographic props. 3−38411
  - RuP_4, cryst. struct. of α and β modifications 3−2502
  - $RuTe_2$, low temp. marcasite type modification *(German)* 3−2503
  - SF_6, solid, orientationally disordered, neutron scatt. study 3−13036
  - $(SN)_x$ crystals, struct., SEM, TEM and X-ray diffr. study 3−7984
  - $S_6(NH)_2$-S_8, cryst. struct. study *(French)* 3−51545
  - Sb trihalides, cryst. struct. and polymorphic transitions 3−7986
  - Sb_2MoO_6, cryst. struct., X-ray powder and neutron diffr. studies 3−37870
  - ScB_2C, prep. and cryst. struct., X-ray diffr. study 3−13190
  - $Sc(H_2PO_4)_3$, cryst. struct. determ. 3−8016
  - $Sc(PO_3)_3$, cryst. struct. determ. 3−8014
  - $Sc_3Sb_5O_{12}$, single cryst., exhibiting electroacoustic echo, growth, phys. and chemical props. 3−14228
  - $Sc_2(Si_2O_7)$, Czochralski grown, struct. and physical props. 3−51560
  - Sc_2TiO_5, polymorphism and stability diagrams 3−7953
  - $ScVO_4$, neutron powder diffr. study, bond distances determ. 3−7971
  - Se-Te system, X-ray study 3−42524
  - Si eutectic alloys, directionally crystallised, microstructure and crystallography 3−7980
  - Si, interatomic bonds, vacancy formation potential at diffusion temp. 3−8043
  - Si:P CVD film, struct., optical and elec. props. 3−42935
  - $Si_{6-z}Al_zO_zN_{8-z}$, β-sialons, IR absorpt. spectra study 3−8820
  - α-SiC, dislocations, etching and X-ray study *(Chinese)* 3−42605
  - SiC polytypes, cryst. struct. determ. *(Chinese)* 3−42573
  - SiC polytypes, direct struct. imaging by electron microscopy 3−33192
  - SiC polytypes, lattice parameters and degree of hexagonality, X-ray study 3−27921
  - SiC polytypes, simplified method of generating layer sequences 3−18268
  - SiC polytypes, simplified method of generating layer sequences, appl. to determ. of new polytypes 3−18269
  - SiC, polytypic structures, X-ray diffractometric anal. 3−27920
  - Si_3N_4-SiO_2-AlN β-sialons, mol. and cryst. struct., IR absorpt. spectra obs. 3−23929
  - α-SiO_2, cryst. struct. and thermal expansion, neutron diffr. data 3−7972
  - SiO_2, crystalline and vitreous, Si-O-Si bond angle distribution, steric theory 3−33195
  - α-siO_2, quartz, cryst. struct. and thermal expansion at low temps. 3−13184
  - $SmAlO_3$, ferroelasticity and ferroelastic transformations, rel. to cryst. structs. 3−2653
  - $Sm(H_2PO_4)_3$, preparation, chem. and X-ray crystallographic analyses 3−58058
  - $Sm_4S_3Si_2O_7$, cryst. struct. determ. 3−22838
  - Sm_2ScTaO_7, crystal structure, X-ray diffr. study 3−27917
  - $Sn(HPO_4)_2.xH_2O$ insoluble acid salt, prep. and characts. *(Russian)* 3−47756
  - $Sn(MPO_4)_2.xH_2O$ (M=alkali metal or H), double phosphate prep. and characts., phase transforms. *(Russian)* 3−47104
  - Sn_2OSO_4, cryst. struct., bond lengths, X-ray diffr. study 3−2480
  - SnSe-Sb_2Se_3 system, X-ray studies, lattice parameters, space group densities determ. 3−7978
  - $Sr(A_{1/4}Nb_{3/4})O_3$ (A=Li, Na), prep., thermal change and dielec. props. 3−29044
  - $Sr(A_{x/4}Nb_{3x/4}Ti_{1-x})O_3$(A=Na,Li), cubic perovskite, prep., cryst. struct. and dielec. props. 3−52708
  - $Sr_3Al_2(OH)_{12}$, cryst. struct. study 3−37882
  - α'-$Sr_{1.9}Ba_{0.1}SiO_4$, cryst. struct. study 3−46904
  - $Sr_{10-2x}Bi_xNa_x(PO_4)_6F_2$, struct., charge balanced substitution study, X-ray powder diffr. anal. 3−51569
  - $SrBr_xI_{2-x}$, prep., cryst. struct., X-ray powder diffr. anal. 3−51566
  - $Sr_{0.5}Ca_{0.5}Fe_{12}O_{19}$ ferrite, structural props., X-ray and Mossbauer studies *(Russian)* 3−13200

crystal atomic structure of inorganic compounds continued
$SrFeO_{3-x}$, electronic state of Fe^{4+} 3−14185
$Sr_3Fe_2(OH)_{12}$, cryst. struct. study 3−37882
$SrGa_2Te_4$, crystal structure, X-ray diffr. study *(German)* 3−13198
$Sr_3(GeO_3)_3$, polytype symbolism construction 3−18256
$SrIn_2Te_4$, crystal structure, X-ray diffr. study *(German)* 3−13198
$Sr_{0.5}La_{1.5}Li_{0.5}Co_{0.5}O_4$, synthesis, mag. characts., stabilisation of Cl^{IV} *(French)* 3−23576
$SrLaTh(VO_4)_3$, dimorphism, X-ray diffr. and IR spectra study 3−33208
$Sr_2Nb_2O_7$, incommensurate struct., high resolution electron microscopy study 3−13172
$Sr_3Sb_4S_9(Se_9)$, cryst. struct., SbS_3-ψ-tetrahedra and SbS_5-ψ-octahedra *(German)* 3−13195
β-Sr_2SiO_4, twinned, cryst. struct. study 3−46904
$Sr(UO_2(OH)CrO_4)_2.8H_2O$, cryst. struct., X-ray diffr. obs. 3−37878
$Sr_2V_2O_7$, cryst. struct. 3−22868
Ta oxide layer form. conditions and struct., electron diffr. study 3−33223
Ta_2ISe_8, cryst. struct. determ. 3−22840
Ta_2O_5-WO_2, system, crystallographic shear phase, X-ray diffr. and TEM study 3−7991
TaS_2-1H intercalation cpd. with ethylenediamine and trimethylenediamine, cryst. struct. and thermogravimetric study 3−33206
TbB_4, struct. and mag. props., neutron diffr. study 3−14007
TcP_3, cryst. struct. determ. 3−22832
TcP_3, prep. and cryst. struct., X-ray diffr. study 3−7999
Tc_3P, prep. and cryst. struct., X-ray diffr. study 3−7999
$Te_2Se_2O_8$, crystal struct. determ. *(French)* 3−42575
ThB_6, X-ray diffr. approach to fine crystallographic features determ. 3−56864
$ThNb_4O_{12}$, vacancy ordering and microdomain form. electron and X-ray diffr. study 3−13171
Th_2S_5, cryst. struct., X-ray study, heavy atom method 3−2490
α-TiA_2Cl_8 cryst. struct., determ. by vibr. correl. and powder diffraction 3−8818
TiB_2-Ni ceramic, struct. and comp., analytical electron microscopy obs. 3−14900
$TiCr_{1.8}H_{5.3}$, FCC phase existence and phase diagram, X-ray and neutron diffr. studies 3−33200
$TiFeSi_2$, cryst. struct., single cryst. X-ray diffr. study *(French)* 3−13188
$TiMnSi_2$, cryst. struct., single cryst. X-ray diffr. study *(French)* 3−13188
TiN films, neg. temp. coeff. of resist., struct. anal. 3−47442
$TiNb_2O_7$, cation coordination, and mol. vibr., Raman spectroscopy study 3−28857
TiO_2, cryst. struct. and covalent bonding, X-ray charge density study 3−51577
TiO_{2-x}, defect energetics, point and extended defects, computer simulation 3−8040
γ-Ti_3O_5, cryst. struct. at 297K, X-ray diffr. 3−7969
Ti_xO_{2x-1}, cryst. struct. refinement, X-ray diffr. study 3−8005
Ti_xO_{2x-1}, Magneli phase, cryst. struct., body centred triclinic cell model 3−2507
TiS_2 intercalation cpd. with ethylenediamine and trimethylenediamine, cryst. struct. and thermogravimetric study 3−33206
$Ti_{1+x}S_2$, Ti atom and vacancy order, electron and X-ray diffr. studies 3−37862
$Ti_{1-y}V_yH_x$, solid soln., struct., X-ray diffr., ^1H and ^{51}V NMR studies 3−51565
$TlFeBr_3$, cryst. struct., distortion of 2L hexagonal perovskite type *(French)* 3−27913
$TlSb_3S_5$, synthetic, cryst. struct. study 3−2525
Tl_xVF_3, cryst. struct., high resolution TEM study 3−27911
TmH_x, phase struct. and deuteride lattice parameter 3−13191
$TmPO_4$, cryst. struct. determ. 3−46901
U complex, UO_2(1,1,1,5,5,5-hexafluoro-2,4-pentanedione)$_2NH_3$, struct. changes near melting point 3−13155
U_2F_9, crystallographic parameters, multiphase refinement of neutron powder data 3−37875
α-UH_5, crystallographic parameters, multiphase refinement of neutron powder data 3−37875
U_3O_8, structural relations with mixed metal fluorides, $M_2M'_3F_{11}$, MM'_2F_7, and MM'_3F_{10} *(French)* 3−42581
$UO_2(ClO_4)_2 \times nH_2O$, UO_22+hydrated ion coord. symm. by MCD 3−23919
$UO_2DAsO_4.4D_2O$, powder neutron diffr. study at 4K 3−7966
$V_{62}Co_{38}$, sigma phase ordering 3−2518
VF_2, cryst. struct., intensity variances, χ^2 distribs. calcs. 3−2516
V_2O_3 nonstoichiometry, cryst. struct. and defects, TEM study 3−8058
V_2O_3:Cr(Ti), cryst. struct., doping effects, metal-insulator transition 3−8002
$VOPO_4.2D_2O$, cryst. struct. determ. 3−22859
$VOSO_4.xH_2O$, thermal dehydration and struct. models 3−33205
W bronzes, order and disorder, electron microscopy study 3−8006
$W_{0.25}Nb_{0.75}Se_2$, cryst. struct. determ. 3−2521
WSe_{2-x} series layer compounds, direct vapour transport growth, cryst. struct. parameters 3−13139
$W_{0.1}Ta_{0.9}Se_2$, cryst. struct. determ. 3−2521
$WV_2O_{7.5}(W_{0.2}V_{2.8}O_7)$ positive electrochem. electrodes, Li insertion reactions study 3−44115
YOF, ionic radii, ionic charges and isoelectronic anions *(French)* 3−2486
YPd_2Si, cryst. struct., X-ray diffr. study 3−2491
$Y_3Pd_2Si_3$, cryst. struct. determ. 3−2492
$Y_3Rh_2Si_3$, cryst. struct. determ. 3−2492
$Y_x(Si, Al)_{12}(N, O)_{16}$ α-sialon, struct. refinement from X-ray powder diffr. data 3−22847
$Y_2(Si_2O_7)$, Czochralski grown, struct. and physical props. 3−51560
Y_2TiO_5, polymorphism and stability diagrams 3−7953
$Y_{10}W_2O_{21}$, cryst. struct. determ. 3−27899
YbB_6, X-ray diffr. approach to fine crystallographic features determ. 3−56864
$YbPO_4$, cryst. struct. determ. 3−46901
$ZnAl_2O_4$:Fe,Mn, cryst. struct. determ. by channelling effect in electron induced X-ray emission 3−8019
$Zn_5Fe_{10}Ge_8O_{36}$, cryst. struct. 3−19328
$Zn(H_2O)_6(ClO_4)_2$, high temp. struct. transition, X-ray diffr. and DTA study 3−57074
$ZnIn_2S_4$ (III), layered cryst., anisotropic cond., and comp. faults, expt. study 3−3197
$ZnLu_2S_4$, cryst. struct., neutron diffr. study 3−2489
γ-$(Zn_{0.75}Mn_{0.25})_3(PO_4)_2$, cation ordering among 5- and 6-coord. sites 3−7976
$Zn(PO_3)_2$, cryst. struct. study *(French)* 3−46902

crystal atomic structure of inorganic compounds continued
ZnS:Eu, Gd, single cryst., struct., impurities effects 3−2512
ZrBrH, crystal struct., Guinier powder X-ray determ. 3−46907
$ZrBrH_{0.5}$, crystal struct., Guinier powder X-ray determ. 3−46907
ZrClH, crystal struct., Guinier powder X-ray determ. 3−46907
$Zr_4Co_7Ge_6$, crystal struct., X-ray powder data *(Ukrainian)* 3−22850
α-ZrF_4, cryst. struct., X-ray diffr. study *(French)* 3−2478
$ZrFeSi_2$, cryst. struct., single cryst. X-ray diffr. study *(French)* 3−13188
$ZrMnSi_2$, cryst. struct., single cryst. X-ray diffr. study *(French)* 3−13188
ZrO_2 in internally oxidised alloys based on Nb and Mo, crystal structure 3−42588
ZrO_2 on α-Zr$[11\bar{2}0]$, electron diffr. anal. 3−28201
ZrO_2-Nd_2O_3 solid solns., cryst. struct. and elec. cond. 3−2496
ZrO_2-Y_2O_3:Nd^{3+}, composition study by activation-autoradiographic method 3−9375

crystal atomic structure of organic compounds
acenaphthene, thermodynamic functions, cell model 3−33470
acetyl picriafeltarragenin, cryst. struct. *(Chinese)* 3−27925
acetylacetonatodiphenylboron, cryst. and mol. structs. 3−33227
3-acetylamino-2-thiolanone, cryst. struct., X-ray investig. 3−22874
aconitine, cryst. struct. and conform. 3−2535
3-(7-adeninyl)propionamide monohydrate, cryst. struct., elementary patterns in protein-nucleic acid interactions 3−48237
alkylammonium hexahalometallates, cryst. struct. and charge arrangements 3−27909
p-alkylbenzenes, electronic spectra, cryst. struct. effect 3−23278
aminoethanethioltriacetic acid, cryst. and mol. struct., X-ray diffr. obs. 3−22881
ammonium bis-[2,2′-butylamino-bis-8-quinolinolato (2-)-N^2, O^8, $N^{1'}$, $O^{8'}$]-yttriate (1−)hydrate, cryst. and mol. structures, X-ray anal. 3−33234
ammonium picrate, complex with o-phenanthroline, cryst. struct., conformation and bonding 3−56866
antazoline hydrochloride, cryst. struct. determ. 3−2536
armillarine, cryst. struct. study *(Chinese)* 3−2539
barium cadmium formate single cryst., struct., X-ray and IR spectra studies 3−46916
benzene metal tricarbonyls, metal=Cr,Mo,W, IR and Raman studies 3−34093
benzenediazonium tetrafluoroborate, cryst. struct. 3−33226
α-benzoyl-2-furanmethanol, cryst. struct., X-ray powder diffr. study 3−37892
biopyriboles, defects and superlattice structures 3−8041
biphenyl, modulated struct., neutron diffr. study 3−37890
4,4′-bipyridine molybdenum trioxide, cryst. struct. determ. 3−22883
bis(4′-p-nonyloxybenzylidene)-1,4-phenylenediamine, liq. cryst., cryst. struct., X-ray anal. 3−33236
bis(α-L-alaninato)cadmium(II) trihydrate and dehydrated, cryst. struct., X-ray powder diffr. study 3−56870
bis(α-L-alaninato)nickel(II) tetrahydrate, cryst. struct., X-ray powder diffr. study 3−56870
bis(ethylene)(tetrafluoroethylene) platinum, cryst. and mol. struct., X-ray and neutron diffr. studies 3−46917
bis(malato)copper(II) dihydrate, cryst. struct. X-ray determ. 3−22878
bis(monomethylammonium) tetrabromomercurate, cryst. struct., low temp. phase transition, X-ray powder diffr. study *(French)* 3−37893
bis(n-propylanmonium) tetrachloromanganate(II), modulation vector, X-ray study 3−56873
bis-(3-nitro-1,2,4-triazoyl-5) dihydrate, mol. and cryst. structures, thermal, deform. and optical props. 3−33233
(Z)-1-bromo-2-(p-chlorophenyl)-1,2-di(p-methoxy-phenyl)-ethylene, cryst. struct. anal. *(Chinese)* 3−2537
butyl-bis-(8-hydroxy-2-quinolyl)amine, mol. and cryst. structures, X-ray anal. 3−33235
calcium tartrate tetrahydrate, cryst. struct. determ. 3−2533
carboxylic acids, packing characts., atom-atom pot. anal. using electron density distribs. 3−2541
catalase, bacterial, EPR crystallography, g-contour mapping method of analysis 3−48244
catena-μ-iodo-(1,2-cyclohexanedionedioxime)copper(I), cryst. and mol. struct. 3−33230
p-chlorobenzoyl piperidine, cryst. struct., X-ray and Fourier anal. *(Chinese)* 3−42590
chlorodimethylalkanes, IR and Raman spectra, conform. anal. 3−17279
16α, 17α-cyclobutenoprogesterone, cryst. and mol. struct. 3−33238
α-cyclobutyl tricyclic enone, cryst. struct. 3−51581
cyclohexylsilanetriol, struct. by X-ray diffr. 3−22873
16α, 17α-cyclopentenoprogesterone, cryst. and mol. struct. 3−33238
Des-Phe B1 bovine insulin, cryst. struct. determ. 3−27924
1,2-diacetyl-1,2-dihydrobenzo[c]cinnoline, conformations, cryst. struct. study 3−33225
1,4-diacetyl-1,4-dihydroquinoxaline, conformations, cryst. struct. study 3−33225
4-4’ diamino diphenyl sulphone, cryst. and mol. struct. 3−56868
2,2′-diamino-1,1′-dinaphthyl, cryst. struct., X-ray anal. 3−33232
dicalcium lead propionate, high-temp. paraelec. phase, cryst. struct. and ferroelec. transition, X-ray study 3−18284
dicalcium strontium propionate, ferroelec. phase, partially disordered struct. study 3−27926
2,2-dichloro-3-trichlorosilyl-2-sila-1-oxa-1,2-dihydronaphthalene, cryst. and mol. struct., X-ray diffr. obs. 3−22882
trans-dichlorobis (L-ethylphenyl-alanate) platinum, cryst. struct. anal. *(Chinese)* 3−42589
trans-1,4-dicyanocyclohexane, conformation and vibr. spectra 3−34090
1,3-diethylbicyclobutane-exo,exo-2,4-dicarboxylic acid, charge density distribs. 3−37889
2,2′-dihydroxy-1,1′-dinaphthyl, cryst. struct., X-ray anal. 3−33232
dimethoxyethane, intercalation cpd. with KC_{24}, struct., X-ray diffr., thermogravimetric and dilatometric study 3−42591
N,N′-dimethyl-2-imidazolidinethione, cryst. struct. 3−51583
2-(4,6-dimethyl-2-pyridyliminomethyl)phenol, cryst. struct. 3−56869
9-(RS)-10-(RS)-dimethyl-3(RS)-acetoxy-5-(RS)-(2-nitrophenylthio)-tetracyclo$[4.4.0.0^{2,8}0^{4,7}]$ decane, cryst. struct. 3−37894
2,2-diphenyl-2-sila-1-oxa-1,2-dihydronaphthalene 3−22882
docosane, rotator phase, X-ray obs. 3−42542
eicosane, rotator phase, X-ray obs. 3−42542
enniatin B, LDLLDL stereoisomeric analog, cryst. and mol. struct. 3−8038
ethylene oxide cryst., phonon spectra and struct. at 77K 3−28850
ethylene sulphide cryst., phonon spectra and struct. at 77K 3−28850

crystal atomic structure of organic compounds continued
exo-endo-3,4,5,6-tetrachlorotricyclo $(6,2,1,0^{2,7})$-undeca-3,5-diene-dicarboxylic-9,10 acid, cryst. and mol. struct. 3—8036
ferrous porphyrin complexes, mol. packaging anal. 3—33180
formaldehyde cryst. ion polymerisation, mechanism calc. 3—29308
glycogen phosphorylase, cryst. struct., X-ray diffr. study using synchrotron radiation 3—39584
guanidinium perchlorate, cryst. struct. and mol. dynamics 3—2544
hexacosane, rotator phase, X-ray obs. 3—42542
hexamethylenetetramine, at. charges, X-ray structural anal. 3—33237
β-hydroquinone-SO_2 clathrate cryst. struct. refinement, X-ray method 3—22879
m-hydroxybenzoic acid, cryst. struct. determ. 3—8035
3H-5-hydroxyindole, cryst. struct., X-ray investig. 3—22875
2-hydroxymethyl-2-nitro-1,3-propanediol, struct., order-disorder transformations 3—13207
1-p-hydroxyphenylthiophanium perchlorate, cryst. struct. determ. 3—8033
iron trinuclear trifluoroacetate complex, cryst. struct. 3—18288
5-isopropyl-thiobarbituric acid, cryst. and mol. struct. 3—18287
β-lactamase, cryst. struct., X-ray diffr. study using synchrotron radiation 3—39584
larusan, cryst. struct., X-ray anal. 3—33231
lead acetate trihydrate, cryst. struct. and H bonding 3—51586
lead phthalocyanine, monoclinic modification, quasi-one-dimensional, metal with charact. order of mol. dipoles 3—8028
lead phthalocyanine, unit cell parameters, X-ray diffr. 3—37891
lysozyme, hen egg white, cryst. struct. refinement at 2.5 Å resolution, conformational variability 3—53629
magnesium phthalocyanine, unit cell parameters, X-ray diffr. 3—37891
methoxy-formyl-trichloroacetyl-methylene-phosphorus, cryst. struct. study *(Chinese)* 3—2538
2-(4-methyl-2-pyridyliminomethyl)phenol, cryst. struct. 3—56869
methyl-(2,4-dinitrophenyl)-aminopropanoate crytals, nonlinear-optical props., struct. depend. 3—1694
4-methylpyridine molybdenum trioxide, cryst. struct. determ. 3—22883
microbial ribonuclease, RNase St, 3D cryst. struct. 3—4463
naphthalene, X-ray powder diffr. anal. up to 0.5 GPa 3—8025
naphthidine (4,4′-diamino-1,1′-binaphthyl), cryst. struct. 3—51582
nickel trichloroacetate+aromatic amines, attachment products, X-ray cryst. struct. obs. 3—22877
cis-2-(m-nitrophenyl)cyclopropanecarboxylic acid, struct. and conformation study 3—51580
octadecane, rotator phase, X-ray obs. 3—42542
octamethylenetetrathiafulvalene, charge transfer complexes and ion-radical salts, electron and cryst. struct. and elec. cond. 3—52121
organic halides and pseudohalides, quasi-one-dimensional, struct. features 3—8029
1,3,2-oxazaphospholans, 2,3,5-substituted isomer cryst. anal. mol. struct. 3—8034
PET-polytetramethylene terephthalate blends, characterisation of extruded films 3—42983
1-phenyl-2-methylcyclopropene-3-carboxylic acid, struct. and conformation study 3—51580
4-phenylpyridine molybdenum trioxide, cryst. struct. determ. 3—22883
2-phenylsulphonylimino-1,2-dihydrothiazole and N-phenylmercury derivative, X-ray struct. obs. 3—22876
poly(tetramethylene terephthalate) model cpds., IR spectra 3—19130
polycaproamide, cryst. lattice parameters, loading and temp. effects *(Russian)* 3—51514
polymers, helical, cryst. struct., intermol. interactions effects 3—51584
potassium 3,5-dichlorosalicylalthiosemicarbonatoferriate (III) sesquihydrate, cryst. struct. determ. 3—8037
potassium tetroxalate, cryst. struct. determ. 3—22872
proteins, cryst., single crystal neutron diffr. technique 3—24669
proteins, stereochemistry, constrained-restrained least-squares macromolecular model building computer program, appl. to lysozyme 3—39585
pyrazine-2-carboxyamide, cryst. and mol. struct., H bonding 3—56867
pyridine molybdenum trioxide (tungsten trioxide), cryst. struct. determ. 3—22883
rare earth-nickel dithio-oxalates, synthesis and cryst. chemistry study *(French)* 3—2540
ribonuclease C_2, spatial struct. 3—19662
solid solutions, lattice distortions, X-ray diffr. meas. 3—56871
spiropyran, cryst. and mol. struct., X-ray diffr. study 3—22884
spiropyran, cryst. and mol. struct. 3—18289
sulpholane, mesomeric plastic phase, X-ray diffr. study 3—46875
TCNQ salt, $(HMTSF)_2$ TCNQ, cryst. struct. 3—27928
TCNQ salt, NBP-$TCNQF_4$, cryst. and mol. struct. and ESR spectra 3—33228
TCNQ salt, TCNQ-S, charge-transfer complex cryst. and mol. struct., X-ray diffr. study 3—27918
TCNQ scatt., $(DEPA)(TCNQ)_4$, cryst. struct., stoichiometric variation and elec. cond. 3—56872
tetrabromomethane, solid, orientationally disordered, neutron scatt. study 3—13036
tetrachlorocyclopentene-1,3-dione, cryst., ^{35}Cl NQR Zeeman spectrum 3—38720
tetracosane, rotator phase, X-ray obs. 3—42542
tetraiodophthalic anhydride, polymorphism, mol. and cryst. struct. 3—33229
tetraisoamylphosphonium bromide polyhydrate, cryst. struct. determ. 3—8031
tetramethyl ammonium mercury bromoiodide, polar struct., multiple phase transition 3—18283
tetraphenyltetrathiafulvalene, charge transfer complexes and ion-radical salts, electron and cryst. struct. and elec. cond. 3—52121
thallium triacetate monohydrate, cryst. struct. refinement 3—2534
thiamine dichloride monohydrate, cryst. and mol. struct., X-ray diffr. study 3—13208
S_5-thiogalactopyranoside 6-azauracil, cryst. and mol. struct. 3—24670
thiourea, electron density distrib., charge-cloud model 3—8027
thiourea, electron density distrib., comparison with urea mol. 3—8026
$(TMTSF)_2ClO_4$, cryst. struct. determ. 3—22871
$(TMTSF)_2ReO_4$, cryst. struct. determ. 3—22871
$(TMTSF)_2X$, $(X=ClO_4^-, PF_6^-, AsF_6^-)$, low temp. X-ray cryst. structs. 3—18286
$(TMTTF)_2X$ series of cpds., cryst. struct. correlations *(French)* 3—2543
Torasemide, crystal struct. refinement computer programs, effects on CNDO/2 calculation 3—46915
2-(2-tosylamino-5-methylphenyl)benzoxazole, cryst. and mol. struct., X-ray diffr. obs. 3—22880
3,3,3-trichloropropyl N,N-diethyldithiocarbamate, cryst. and mol. struct. determ. 3—8032
trimethylammonium cadmium trichloride, struct. phase transition sequence anal. 3—2771
3,3,3-triphenyl-3-phosphorus-1,3-dihydro-1-oxoisobenzofurfuran, cryst. struct. determ. 3—8030
triphenylene hexa-n-dodecanoate, disk-like mol., cryst. and liq. cryst. struct. 3—22767
tris(ethylene)platinum, cryst. and mol. struct., X-ray and neutron diffr. studies 3—46917
tris(ethylenediamine)nickel(II)sulphate, struct. determ. in presence of twinning 3—27923
tris (2,2′-bipyridine) metal (II) complexes, optical resolution by d-tartrate 3—3680
tropolonatodiphenylboron, cryst. and mol. structs. 3—33227
troponin C, cryst. struct., X-ray diffr. study using synchrotron radiation 3—39584
TS-12 diacetylene crysts., polymerisation, cryst. structs. and spectrosc. investig. 3—18282
TTF-TCNQF4, solvated charge transfer salt, cryst. struct. 3—27927
$TTT_2I_{3+\delta}$, I sublattice struct., temp. depend., X-ray and neutron diffr. *(French)* 3—8024
valinomycin-sodium picrate complex, anion effects on cryst. struct. 3—2542
voltage-gated ion channel model, inference from cryst. struct. of alamethicin at 1.5 Å resolution 3—24667
KC_{24}-tetrafuran, cryst. struct. stoichiometry *(French)* 3—23051
KC_{24}-tetrahydrofuran, cryst. struct. stoichiometry *(French)* 3—23051
tetramethyl ammonium trichloromercurate, cryst. struct. and ferroelec. transitions 3—51585

crystal binding
see also binding energy; lattice energy
alkali halides, interionic forces, quantum mechanical theory 3—2464
alkali halides, ion pair pots., appls. to liq. struct. and point defect props. 3—33181
alkali metal halides, Tosi-Fumi ionic radii, optimisation 3—33182
alkaline earth oxides, cryst. binding and Gruneisen parameter 3—13157
ammonium halides, cryst. binding anal. 3—22817
anthracene TCNQ, enthalpy of form. and binding energies 3—58446
binary alloys, struct. stability, role of electrons per atom ratio 3—37840
covalent and ionic crysts., electronic response to valence modifications 3—56848
cubic crystals, rel. between bond strength and interatomic distance, semi-empirical approach 3—27890
electronic structure and cohesion, review 3—37844
graphite, binding between layers, Thomas-Fermi-Kirzhnits method calc. 3—18258
halides, insulator, cryst. cohesion, effects of electron retention and spin pair bonding 3—27888
interstitial solid soln., elastic stability, self-consistent harmonic approx. 3—7957
ionic radii, ionic charges and electrostatic bond strengths, iterative calc. *(French)* 3—2485
micas, tetrasilicon synthetic, IR spectra absorpt. bands rel. to ion charge in octahedral coord. *(Ukrainian)* 3—14277
naphthalene TCNQ, enthalpy of form. and binding energies 3—58446
organic solid solns., lattice distortions, X-ray diffr. meas. 3—56871
oxides, insulator, cryst. cohesion, effects of electron retention and spin pair bonding 3—27888
point charge crystal, electrostatic pot. and lattice sums 3—13159
point-ion lattices, electrostatic pot. 3—13158
pyrazine crystal, electrostatic mol. interactions and mol. quadrupole moments calc. from X-ray diffr. data 3—32156
quantum-chemical calculations of models of solids, accounting for Coulomb interaction 3—46883
quinone derivatives, monolayers, H-bonded, at liq. interfaces 3—51929
rare earth monopnictides, ionic bond energies and effective charges 3—51535
semiconductors, grain boundary struct. *(French)* 3—22908
semicondutors, grain boundary energy 3—22913
solid solutions with cubic symmetry, elastic interaction pot. 3—42696
star-tetrahedron transformation, crystal-mother phase boundary, bond energies calc. 3—42561
1,4,5,8-tetrachloronaphthalene, phosphoresc. spectrum, environmental effects 3—19176
TMPD, enthalpy of form. and binding energies 3—58446
TMPD TCNQ enthalpy of form. and binding energies 3—58446
transition metals, volume effects on alloying, ionic effects 3—13464
trichloroethylidene trichlorolactic ester, C-Cl bonds, ^{35}Cl NQR investig. 3—38719
urea crystal with H-bonded mol. units, nonlinear optical props. 3—1689
van de Waals molecules, rel. to condensed phases 3—50481
Van der Waals potentialities, spatial distrib. *(French)* 3—46045
Yukawa-Wigner solid, electrostatic structural transitions 3—33430
Ag halides, cryst. binding and Gruneisen parameter 3—13157
BaO, defect props., rel. to cryst. pots. 3—56874
CaO, defect props., rel. to cryst. pots. 3—56874
Cl_2 crystal struct., Cl_2-Cl_2 pair pot. anisotropy, intermol. bonding and lone pair effects 3—27915
CoO, defect props. 3—56875
Cs halides, cryst. binding and Gruneisen parameter 3—13157
Fe-Ni-C austenite, interatomic binding and Debye temp., Mossbauer study *(Russian)* 3—34012
FeO, defect props. 3—56875
Ge, pressure induced phase transition, cryst. stability 3—23035
Li compounds, two-component, binding two-correlations model 3—46885
MnO, defect props. 3—56875
Ni-H, interstitial H bonding, CNDO, EHT and SW-Xα calcs. 3—33183
NiAl, bond energy and long-range order, alloying influence 3—37843
NiO, defect props. 3—56875
Si, lateral twin boundaries, struct. and crystallograpy 3—22914
Si, pressure induced phase transition, cryst. stability 3—23035
SrO, defect props., rel. to cryst. pots. 3—56874
β-Ti-Mo(V) alloys, amplitude depend. internal friction, O-dislocation binding 3—14646
TiO_2, cryst. struct. and covalent bonding, X-ray charge density study 3—51577
UTe(Bi), electronic struct., relativistic calcs. 3—18609

crystal binding continued
V_2O_3, specific heat, temp. depend. and interatomic binding *(Russian)* 3-51820
$Zr(V_xCo_{1-x})_2$:H, Laves phase, H interstitials study 3-38340
crystal chemistry
see also crystallography
inhomogeneous linear structs. composed of fragments of different struct. types, cryst. chem. and symm. 3-33175
inorganic compounds, A^NB^{10-N}, struct. diagrams and chem. bonding *(French)* 3-42580
organic solid solns., lattice distortions, X-ray diffr. meas. 3-56871
oxide spinels, book contrib. 3-57548
rare earth-nickel dithio-oxalates, synthesis and cryst. chemistry study *(French)* 3-2540
transition metal MX and MX_2 cpds., cryst. chem., electronic struct. considerations 3-37876
zeolites, structural chem., X-ray and magic-angle-spinning NMR studies 3-37873
AlAs-GaAs superlattice intermixing by Zn diffusion 3-18518
$Ce_{1-x}Y_xO_{2-x/2}$ ceramic, impedance, AC and DC, inhomogeneity contrib. 3-3188
$Cr_3(^{11}B_{0.44}C_{0.56})C_{0.85}$, cryst. struct., neutron powder diffr. study 3-51578
$Cr_3C(C_{0.52}N_{0.48})$, cryst. struct., neutron powder diffr. study 3-51578
$CsNi_{1-x}Cd_xF_3$, cryst. chemistry and trimeric mag. interactions, neutron diffr. study 3-3415
GaAs, LEC grown, twin form., melt stoichiometry effect 3-8056
InSb:Bi, doping during LPE, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3-33603
$KSbO_3$, host struct. for Ca^{2+} (Cd^{2+}) ions, X-ray study *(French)* 3-2511
$Li_2M^{4+}Fe_6O_{12}$ (M = Ti, Sn, Ge, Si) spinel ferrites, cryst. chem. 3-13204
OsP_4, cryst. struct. of α and β modifications 3-2502
RuP_4, cryst. struct. of α and β modifications 3-2502
Si-Ge, amorphous, sputtered, XPS study 3-3913
SiC polytypes, natural superstructs., cryst. chem. prop. changes 3-22867
TiC sputter deposited film, adhesion to steel substrate, interfacial chem effects 3-13646
TiC_x single crystals, floating zone prep., C content control 3-43724
crystal classes *see crystal symmetry*
crystal cleavage *see brittle fracture*
crystal defects
see also Cottrell atmospheres; crowdions; crystal inclusions; crystal microstructure; defect electron energy states; disclinations; dislocations; grain boundaries; impurity-defect interactions; phonon-defect interactions; point defects; stacking faults; twinning
AC Kelvin double bridge technique, for impurity (defect) concentration levels monitoring 3-49402
acoustic microscope, subsurface defect characterization, fringe pattern recognition and contrast enhancement by digital colour encoding 3-46416
alkali halides, cryst. defect form. mechanisms 3-56876
alkaline earth fluorides, defect struct. and defect-defect interactions, Gd^{3+} EPR study 3-38691
alloy, diffusion-limited form. of multicomponent cpd. at defects *(Russian)* 3-23072
alloys with B2(CsCl) struct., thermodynamics and defect struct. 3-23060
amorphous metals, deform., atomistic study 3-10104
biopyriboles, defects and superlattice structures 3-8041
crystals with polarised defects, thermodynamic props. near phase transition 3-28121
diamond, defect study by electron microscopy, Scherzer resolution limit 3-7884
diamond type lattices, native defects 3-51595
dynamical properties of defects in solids, review 3-13240
elastic wave reflection by defects, computer simulation, motion picture 3-51705
elasto-plastic strain mechanics, structural representations appl. 3-7414
electron diffraction absorpt. distances, dynamical theory 3-18103
ferrites, electron microscopy studies of microstructure-property relations 3-13054
ferroelectric transitions, independent defect approx. 3-23884
II-VI compounds, defect formation kinetics 3-13210
impact-collision ion scatt. spectroscopy *(Japanese)* 3-28040
internal field distrib. due to random defects, contrib. of nearest defect 3-17806
ionic crystals, localized optical modes induced by point and extended defects 3-18419
ionic materials, mixed lattice disorder, defect energies study 3-13220
laser and electron beam interactions with solids, conf., Boston, MA, USA (Nov. 1981) 3-54582
laser diode, heating, energy characts. 3-41836
materials, fast neutron irrad., radiation study *(Japanese)* 3-2614
metal, electrical noise produced by lattice defects 3-18757
metallic materials, fatigue life distrib. rel. to surface defect distrib. 3-10300
metals, single cryst. growth, modification of Kapitza and Bridgman apparatuses, defect form., depend. on cryst. parameters 3-47761
morphology and correlation with defects 3-18338
oxide, EXAFS, exam. of local atomic arrangements 3-38055
oxide powders, diluted, defects and mag. anisotropies conflict 3-28640
phonon-defect coupling near phase transition point in crystals 3-13383
polycrystalline materials, 3-37714
polyethylene crystals, lattice parameters, elastic consts., computer simulation 3-51588
quartz, neutron irrad., lattice const. changes, amorphous and X-ray scatt. studies 3-33308
quartz grains, mechanically processed, dislocation in $NaOH_2$ X-ray and electron microscope studies 3-38071
quartz SAW bandpass filter performance, cryst. growth seed plane effect 3-42507
quartz synthetic crystal, plate-like defects obs. by light scatt. tomography, X-ray topography 3-13212
quartz thermoluminescence, Z 3-34156
quasi one-dimensional cryst. with defects, elastic anisotropy, X-ray and thermal neutron scatt. 3-2347
rare earth fluorides, RF_3, defect struct. and defect-defect interactions, Gd^{3+} EPR study 3-38691
rare earths and intermetallics, crystal lattice perfection, X-ray topography study 3-18262
recombination induced defect form., conf., Urbana-Champaign, USA (June 1982) 3-54473
crystal defects continued
semiconductor, radiation defect formation mech. during ion bombardment 3-8109
semiconductors, electron scatt. by localised defect pot. and space-charge regions 3-47336
sintering, inhomogeneity effects, defect development 3-14518
solid electrolyte, mass-action law appl. *(French)* 3-47156
SOS wafer, microscale electronic characterization by scanning photovoltage meas. 3-23426
steel, plain low C, thermomech. treatment, effect on struct. and mech props. 3-43874
surface flaws, interacting, arbitrary shape, growth and stability 3-12501
surface structural defects, LEED anal. 3-8311
thermo field dynamics and condensed states, book 3-10535
thin film conductors, electromigration induced damage, metal and passivation defects role 3-8377
$TiO_{1.005}$, disorder when rapidly cooled, electron microscopic examination 3-8030
transition metal oxides and related cpds., cryst. and defect struct., pentagonal columns 3-7988
tunnelling recombination by defect motion, diffusion, hopping and mixed mechanisms, review 3-33741
type II superconductors, defect clustering effect on volume pinning force, statistical theory 3-38565
type II superconductors, flux pinning by thin planar defects 3-8636
X-ray oscillating slit and film techniques for lattice defect study 3-42489
zeolites, structural chem., X-ray and magic-angle-spinning NMR studies 3-37873
Au, heavy ion bombarded, thermal spike effect in sputtering 3-33316
Ag, ion irradiation, defect production, binary-collision simulations 3-33312
Ag_3AsS_3, proustite, nonlinear optics and homogeneity, Twyman-Green interferometry study 3-37104
Al film, ion-irradiated, defect production, residual resist. 3-33312
Al, pure and Sb implanted, laser irrad., AlSb precip. nucleation, lattice defects, TEM, ion beam anal. 3-56960
Au film, (111) surface struct. and inclined planar defects, electron microscopy 3-8373
BaO, defect props., rel. to cryst. pots. 3-56874
BaO-transition metal oxide-Fe_2O_3 ferrite, microsyntactic intergrowth and composition fluctuation 3-13475
$BaTiO_3$, 180° domain walls, interaction with defects, electron and optical microscopy studies 3-38783
$Bi_{12}SiO_{20}$, sillenite type struct., single crystals, formation of defects 3-13211
CaF_2-LaF_3, defect phases, anion mobility, NMR study 3-13525
CaO, defect props., rel. to cryst. pots. 3-56874
$CdGa_2S_4$, connection between emission centres and intrinsic defects 3-16104
$Cd_xHg_{1-x}Te$, local degree of imperfection, electroreflection study 3-14756
CdS:Cu, defect structure from conductivity and solubility meas. 3-33280
CdTe:In(Cl), ion implanted, heat treated, defect reactions, cathodolum. and pulse laser annealing studies 3-56932
CoO, defect props. 3-56875
CsBr, excitons, luminesc., self-localisation, and decay to defects 3-38875
Cu, ion irradiation, defect production, binary-collision simulations 3-33312
Cu, thermal and fast neutron irrad., isochronal recovery spectra 3-42674
Cu-Au dilute alloy, thermal and fast neutron irrad., isochronal recovery spectra 3-42674
Cu_3Au, ordering and disordering, HVEM study 3-13282
$Dy(Fe_{1-x}Al_x)_2$ Laves phases, mag. struct. and moments, neutron diffr. study 3-52375
Fe complex, $Fe(1,10\text{-phenanthroline})_2(NCS)_2$, spin transitions, hysteresis and cryst. quality effect 3-33025
Fe complex, $Fe(2,2'\text{-bipyridine})_2(NCS)_2$, spin transitions, hysteresis and cryst. quality effect 3-33025
$Fe_{1-x-y}Mn_yO$, Mossbauer study 3-34016
FeO, defect props. 3-56875
$Fe_{1-x}O$, Mossbauer study 3-34016
GaAs, antisite defect form. during plastic deform., EPR and photoluminescence study 3-2553
GaAs, crystal growth from solution under microgravity conditions, defects 3-42594
GaAs, electron irrad., anisotropic defect production, electron and hole traps 3-42667
GaAs epitaxial films, structural imperfections and their effect on Schottky barrier characts. 3-13671
GaAs, high pressure structural transitions, planar defects, X-ray diffr. study 3-2769
GaAs, ion implanted, annealing characts., Rutherford backscattering channelling study 3-33415
GaAs, lattice defects in quenched and irradiated single crysts. 3-2613
GaAs, native point defects and dislocations, effect on devices, review 3-13216
GaAs, plastically deformed As antisite defects as main electron traps, DLTS meas. 3-52655
GaAs Schottky barriers, γ-irrad., radiation defect accumulation, DLTS study 3-14278
GaAs:Te, microdefects and microprecipitates investig. *(Chinese)* 3-8050
GaAsP, electron beam annealing of defects during SEM meas. 3-42665
$GaAs_{1-x}P_x$-$GaAs_{1-y}P_y$ superlattices stimulated emission and photoluminescence 3-43564
GaP, high pressure structural transitions, planar defects, X-ray diffr. study 3-2769
GaP-$GaAs_{1-x}P_x$ superlattices, stimulated emission and photoluminescence 3-43564
Ge, ion irrad., defect accumulation, magnetoconcentration effect study 3-13291
Ge:H, reduction in γ-ray damage, DLTS study 3-18345
GeTe, cryst. and glassy, imperfections, positron annihilation study 3-18226
H_3OPO_4, cryst., proton cond., defects and impurities, SCF-CNDO/2 calcs. 3-13512
^4He, superfluid film, US third sound interaction with substrate surface defects 3-33575
InP avalanche photodiode with VPE grown p^+-n junction, imperfections effect 3-18574

crystal defects continued
  InSb highly homogeneous single crysts., growth and characterisation for IR imaging devices 3—34215
  KBr:I, localised exciton relax., luminescence and defect form. 3—56877
  KCl:I, localised exciton relax., luminescence and defect form. 3—56877
  $KH_3(SeO_3)_2$, deuteration and defect influence on elastic props. 3—28024
  $K_2(PtCl_4)$, electron density distrib. and bond lengths, X-ray and neutron diffr. studies 3—37863
  $LaNi_5H_x$ solid soln., H dissolution and partial molar volumes 3—23046
  $LiNbO_3$ crystal defects, optical imaging using polarizing filters and laser source 3—42596
  Li_2SO_4, monoclinic, ionic cond., prep. condition effects 3—42836
  Mn-Al(-C), domain struct. and magnetisation processes, effect of cryst. defects 3—52513
  Mn-Zn ferrite, struct. defects, degree of inversion, X-ray and Mossbauer studies 3—46919
  MnO, defect props. 3—56875
  $NaNbO_3$ antiferroelec. cryst., real domain struct. 3—43500
  $Na_3Zr_2Si_2PO_{12}$, NASICON type cpds., struct. defects rel. to phase transitions 3—38057
  $Nd_xLa_{1-x}P_5O_{14}$ crystal laser, flash lamp pumped, relationship between laser output and cryst. homogeneity *(Chinese)* 3—41845
  NiO, defect props. 3—56875
  β-NiS, structural transform. during paramag. metal-antiferromag. semicond. transition 3—2784
  $PbTiO_3$ single crystals, planar defects 3—8063
  $PbZrO_3$, permittivity and ferroelec. transitions, defect conc. effect 3—38779
  $PbZrO_3$ single crystals, planar defects 3—8063
  Pt, neutron irrad. and annealed, recovery spectra, resistivity method 3—42676
  Pt-Au dilute alloys, neutron irrad. and annealed, recovery spectra, resistivity method 3—42676
  Pt-Cu dilute alloy, neutron irrad. and annealed, recovery spectra, resistivity method 3—42676
  RhOOH, paramagnetic species, EPR and X-ray diffr. studies 3—47547
  Si, amorphous laser quenched from melt, prep. and charact. 3—56944
  Si, damage, induced by picosecond laser pulse irradiation 3—56955
  Si, dangling bonds at line defects, electronic props. 3—47295
  Si, defect struct. transitions induced by Q-switched laser annealing 3—46994
  Si, dislocation free, Schottky barriers, microdefects *(Russian)* 3—23464
  Si epitaxial layer, <100> oriented, defect evaluation by wet chem. etch 3—2997
  Si, float zone crystals, swirl defects study 3—46938
  Si, heat treatment studies of O defect-impurity interactions 3—2598
  Si heavily doped wafers, behaviours of thermally induced microdefects 3—42592
  Si, microdefects, triple cryst. diffractometer studies with Laue-case diffr. 3—18293
  Si, neutron bombarded, defect formation kinetics, self-consistent electric field allowance 3—51669
  Si, neutron irrad., annealing kinetics of defects, elec. cond. study 3—13290
  Si, positron spectroscopy of defects 3—3861
  Si, quenched, thermal defects, photocond. study 3—37898
  Si ribbon, EFG, Cu precipitates morphology characterizing lattice imperfections 3—37897
  Si, swirl defects revealed by Cu decoration etching *(Chinese)* 3—13209
  Si, thin film, recrystallisation on glass substrate, correlated elec. and microstructural studies, TEM 3—57241
  Si wafers, heavily doped, thermally induced microdefects obs., intrinsic gettering appl. 3—51587
  Si:As, B, ion implanted and incoherent light annealed, characterisation 3—56922
  Si:In(Sb), ion implanted, defects and solid solubility, solid phase epitaxial growth 3—2826
  Si:O wafer, Czochralski grown, defect engineering, VLSI substrate development 3—42593
  SiC crystals grown from vapour phase, defect structure, X-ray topographic obs. 3—42611
  Si_3N_4 film patterns, fabricated on Si wafer, defect eliminating method 3—22885
  SiO_2 amorphous film, AC hopping conduction model 3—43177
  SiO_2 RF sputtered films, bipolaron and single polaron contrib. to AC cond. 3—28463
  $SmCo_5$, mag. anisotropy of Sm^{3+} near lattice defects 3—57591
  Sm_2Co_{17}, mag. anisotropy of Sm^{3+} near lattice defects 3—57591
  SrO, defect props., rel. to cryst. pots. 3—56874
  Te, cold worked, lattice defects, X-ray diffr. line breadth anal. 3—18290
  β-Ti-Mo and Ti-V, stable and metastable, internal friction studies 3—19367
  TiO_2 photoanodes for photoelectrochemical cells, prep. and characterisation 3—48072
  TiO_{2-x}, defect energetics, point and extended defects, computer simulation 3—8040
  UO_2 crystals, α-irradiated thermal recovery of lattice defects 3—56996
  V, electron beam irrad., channelling and X-ray anal. 3—56980
  W, defect prod., computer simulation of surface effects 3—13265
  $W_{18}O_{49}$, cryst. defects, SEM, TEM, X-ray powder diffr., and optical microscopy studies 3—37935
  $W_{18}O_{49}$, oxidised, cryst. defects, X-ray powder diffr. and TEM studies 3—37936
  YAG:Nd^{3+}, struct. imperfection by EPR linewidth study 3—18983
  YAG:Nd^{3+} single cryst., thermostimulated luminesc. and thermostimulated cond. 3—8893
  YIG single crystal, polarized neutron scatt., Pendellosung effect 3—51455
  ZnS:Ag, single cryst., photolum. and cathodolum. studies 3—19193
  ZnSe, struct. defects rel. to p-type cond. 3—43175
crystal dislocations *see dislocations*
crystal electron states *see electron energy states (condensed matter)*
crystal energy *see lattice energy*
crystal etching *see etching*
crystal faces
  ice, polyhedral, vapour phase growth, morphological stability 3—33155
  potassium hydrogen phthalate single crystals, {010} faces, surface morphology, optical microscopy 3—33544
  AgBr, tetradecahedral monodisperse microcrystals, equilib. and steady forms 3—48097
  $CaSO_4.2H_2O$, selenite, cleavage faces dehydration, expt. study 3—14843
crystal faces continued
  $KAl(SO_4)_2.12H_2O$, growth from aq. soln., growth rates of (111), (100) and (110) faces 3—27883
  K_2SO_4 crystal growth by silica gel technique 3—14455
  Ni_4Mo alloy emitters, thermal faceting, FIM study 3—7960
  Rb_2ZnBr_4, incommensurate, bands of faces 3—56861

crystal field interactions
  see also crystal hyperfine field interactions
  alkaline earth compounds, MF_2:Mn^{2+}, superionic, high temp., EPR studies 3—57763
  benzo[h]quinoline, ESR of phosphorescent state 3—38673
  bis-methylammonium tin hexahalides:Re^{4+} 3—57958
  chrysene cryst., emissive states, absorpt. and fluoresc. spectra 3—28888
  dibarium copper formate tetrahydrate, ligand field behaviour, EPR spectra 3—23789
  $4f^n$ ions in cubic sites, spin-phonon Hamiltonians 3—47316
  f electron indirect interaction with ligands through empty d shells 3—28312
  ferrichrome A, classic relaxing paramagnet, Mossbauer study 3—52690
  ferroelectric to pseudospin dipole glass phase transition, crit. phonon damping induced 3—3655
  hexachlorobenzine, EFG tensor asymmetry parameter determ. using NQR 3—23831
  HF calcs. on periodic systems, low order elec. moments cancellation 3—38356
  ionic crystal, elec. field gradient calc. for triclinic crystal lattice *(Ukrainian)* 3—7955
  Jahn-Teller glass form. in randomly doped crysts. 3—52093
  lanthanide 4f→4f intensity param., anisotropic ligand polarisability 3—57318
  lattice sums, direct calcs., rel. to cryst. field effects 3—18259
  metal, electronic struct. of H impurity, jellium model 3—13763
  micas, biotite and lepidomelane, paramag. props. and antiferromag. transition 3—47470
  molecular cryst. spectra, vibronic struct., hypochromic and hyperchromic effects, dimer model 3—47059
  monopnictides, MZ:Ce(Yb) (M=Sc, Y, La; Z=As, Sb, Bi), cryst. field splitting and single-ion exchange, elec., mag., and ESR study 3—18985
  NQR line splitting in structural phase transitions *(Russian)* 3—34008
  one dimensional rotor in crystal fields of various symmetry, dynamic susceptibility calc. 3—7932
  open-shell systems, spin-correlated cryst. field props. 3—47466
  oxalic acid, α and β phase, IR and Raman vibr. spectra, normal coord. calcs. and intermol. forces 3—34083
  perturbed angular correlations, appl. to materials research, review 3—54821
  physical props., theory, book 3—54596
  plancheite, absorption spectra of Cu^{2+} and EPR meas. 3—28875
  quantum theory of magnetism, multiparticle systems, approx. integrals of notion estimation 3—5709
  quartz, internal elec. fields determ. using relax. magnetoelec. effect 3—28702
  rare earth alloys, crystal field interactions systematics 3—52088
  rare earth complexes, f-f transition probabilities, cryst. field and ligand polarisation contrib. 3—38355
  rare earth compounds, electrostatic cryst. field parameters, contrib. to K-even parameters 3—23341
  rare earth compounds, induced electric dipole transitions, electron transfer 3—18673
  rare earth doped-compounds, electrostatic cryst. field parameters, contrib. to K-even parameters 3—23341
  rare earth intermetallic cpds., RRh_4B_4 (R=Pr, Nd, Tb-Tm), elec. and mag. props. from cryst. field parameters 3—28311
  rare earth intermetallics, quadrupolar interactions, third-order paramag. susceptibility study 3—52357
  rare earth uranium sulphide, $R_4U_5S_{16}$, paramag. susceptibility, exchange interaction and cryst. field effects 3—52347
  rare earth uranium tellurides, R_2UTe_5, paramag. susceptibility, exchange interaction and cryst. field effects 3—52347
  rare-earth ions scalar crystal field strength parameter 3—38357
  reentrant superconductors, tunnelling in paramag. phase, order parameter and condensation energy 3—52315
  ruby:Cr^{3+}, spin Hamiltonian parameters, superposition model anal. 3—13779
  ruby, natural, optical absorpt. spectrum Cr^{3+} 3—57954
  shattuckite, absorption spectra of Cu^{2+} and EPR meas. 3—28875
  transition metal complexes, covalency, polarised neutron diffr. studies 3—56847
  transition metal compounds, pressure induced spin state transition, discontinuous vol. change 3—47320
  transition metal fluoroniobates, $MNbF_6$, cryst. struct., visible and UV spectra *(French)* 3—2508
  transition metal ion complexes, many electron systems, intermediate coupling scheme 3—8429
  trimethyl ammonium cobalt chloride:Mn, impure Ising linear chain, Mn^{2+} ESR 3—14118
  A-zeolites, tetrahedrally coordinated Cu^{2+} ion, EPR and electron spin echo studies 3—38686
  $AgGaS_2$:Co^{2+}, EPR study 3—3516
  Ag_3PS_4, vibrational spectra and DTA study *(German)* 3—43551
  Al dilute alloys, electric field gradient calcs. 3—52091
  BaF_2:Eu^{2+}, zero-field splitting 3—23335
  $BaFe_{12-2x}Co_xTi_xO_{19}$ ceramic, magneto-optic Kerr effect 3—28840
  Be, distorted core effect on electric field gradient 3—3132
  $Bi_{12}SiO_{20}$:Ho^{3+}, Er^{3+}, impurity IR absorption spectra, Stark levels 3—19165
  $Ca_2Al_3Si_3O_{12}(OH)$:Mn, EPR and optical absorption studies 3—43423
  $CaCl_2$:Eu^{2+} single crystals of low symm., luminesc. of Eu^{2+} centres 3—34141
  CaF_2:Ce^{3+}, level splitting, odd parity cryst. field effects 3—52090
  CaF_2:Er, transverse Zeeman effect, optical absorpt. and fluoresc. spectra 3—3691
  CaF_2:Eu^{2+}, zero-field splitting 3—23335
  CaF_2:Nd(Ce), Zeeman IR spectra, optical absorption and fluorescence meas. 3—19124
  $Ca_2NaMg_2V_3O_{12}$, photoinduced reduction of V^{4+} ESR signal, photocond. and refl. meas. 3—38685
  $Ca(OD)_2$:$^{109}Ag^{2+}$, EPR spectrum 3—47546
  $CaWO_4$:Eu^{3+}, energy transfer between ions, obs. and calcs. 3—14336
  Cd, nuclear orientations of ^{109}Cd and ^{115m}Cd 3—38360

crystal field interactions continued
$CdCl_2:Ni^{2+}$, optical absorpt. and emission spectra 3—23984
$CdGa_2S_4:Fe(III)$, EPR spectra, crystal field interactions, twinning characteristics *(German)* 3—3520
$Cd_{1-x}Mn_xSe$, sp.ht. and mag. susceptibility at low temp. 3—52500
$Cd_{1-x}Mn_xTe$, $x>0.4$, absorpt. edge pinning 3—14329
$CeAl_2$, bound state between cryst. field excitation and phonon 3—23338
CeBi(Sb), mag. props., cryst. field splittings, mixing mechanism 3—52326
$Ce_xLa_{1-x}Sb$, reverse magnetostriction effects in [001] shape magnetostriction 3—8708
$Ce_{1-x}La_xSb(Bi)$, anomalous mag. and transport props. 3—52591
CeTe, mag. form factors, polarised neutron diffr. study 3—57542
$CmCO_5$, interatomic forces, effective, from one-particle cryst. field parameters 3—23339
$Co(BF_4)_2.6H_2O(D_2O)$, mag. susceptibility and anisotropy, dielec. const., struct. transitions, ligand field parameters, bond ordering 3—57558
$CoFe_{2-x}Al_xO_4$ ferrite, polar Kerr rotation and Faraday effect 3—28842
$CoFe_{2-x}M_xO_4$ (M=Mn, Cr, Al) ceramic, magneto-optic Kerr effect 3—28840
$Co_xFe_{3-x}O_4$ ferrite, polar Kerr rotation and Faraday effect 3—28842
CoI_2, electronic and mag. props. of ^{57}Fe, Mossbauer spectroscopy study 3—19019
$CoTiO_3$, magnetic anisotropy 3—14045
$CrZrF_6$, phase transitions, Mossbauer and EPR study of Jahn-Teller distortions 3—47101
$CsCaCl_3:Sn^{2+}$ crystals, luminesc. props. 3—19183
$Cs_2CrCl_5.4H_2O$, mag. susceptibility, exchange and cryst. field effects 3—52426
$CsMgCl_3:V^{2+}$, single cryst. absorpt. and emission spectra 3—19173
$CsVCl_3$, single cryst. absorpt. and emission spectra 3—19173
Cu complexes, in soln. and solid state, axial interactions, EPR study 3—57758
Cu(II) complexes, distorted tetrahedral, cryst. field theory and EPR parameters 3—18671
Cu_3PS_4, vibrational spectra and DTA study *(German)* 3—43551
$CuZrF_6$, phase transitions, Mossbauer and EPR study of Jahn-Teller distortions 3—47101
$DyAl_2$, magnetisation and magnetocryst. anisotropy 3—3488
$Dy(OH)_3$, mag., optical, thermal and crystal field props. 3—33867
$Dy_2(SeO_4)_3$, selenite vibr. and cryst. field effects Raman and IR study 3—3703
$ErBe_{13}$, cryst. field parameters, magnetisation and susceptibility meas. 3—52089
$ErGa_2$, metamagnetism, magnetisation and neutron diffr. study 3—23631
Eu (III) in cryst. environments of octahedral, near-octahedral, and trigonal symm., comparison of $^7F_J \leftarrow {}^5D_0$ emission spectra 3—57950
Eu complex, $Na_3[Eu(oxydiacetate)_3].2NaClO_4.6H_2O$, chiroptical luminesc. spectra of Eu^{3+} 3—3788
EuSe, mag. props., ^{153}Eu NMR study 3—52638
$Eu_xY_{1-x}P_5O_{14}:Eu^{3+}$, energy transfer between ions, obs, and calcs. 3—14336
Fe complexes, sodium pentacyano substituted ferrate(II) complexes, Mossbauer and IR studies 3—57843
Fe compounds, pressure-induced high spin-low spin transition, mag. props. 3—52532
$Fe(BF_4)_2.6H_2O(D_2O)$, mag. susceptibility and anisotropy, dielec. const., struct. transitions, ligand field parameters, bond ordering 3—57558
$FeRh_2Se_4$, energy level splittings of Fe ions, Mossbauer spectra study *(Korean)* 3—14173
$GaAs:Cr^{2+}$, vibronic coupling in trigonal field, luminesc. spectra 3—33685
$GaAs:Fe^{2+}$, photons and phonons stimulated emission study 3—52809
Gd^{3+}, ground state splitting of $^8S_{7/2}$ state 3—18669
$Gd_2O_2SO_4:Eu^{3+}$, prep., fluoresc. spectra, and cryst. field anal. 3—43594
$Gd_{1-x}R_xAl_2$, mag. susceptibility and elec. resist., random cryst. elec. field effect 3—38376
$GdRh_4B_4$, mag. supercond., muon spin relax. mechs. 3—57844
$Gd_2(SmO_4)_3$, selenite vibr. and cryst. field effects Raman and IR study 3—3703
Ge:As; laser processed, ^{73}Ge Mossbauer effect 3—57839
$HoAl_2$, spin dynamics, inelastic neutron scatt. study 3—57528
$HoCo_2$, elastic moduli in mag. field, 4 to 200K 3—23777
$HoRh_4B_4$, mag. supercond., muon spin relax. mechs. 3—57844
$(Ho_xY_{1-x})Co_2$, spin reorientation temp. 3—18893
$InAs:Mn^{3+}$, Jahn-Teller distortions, mag. susceptibility 3—38358
$InP:Co^{2+}$, g-value of $^4A_2$ ground state, EPR study 3—38684
$KBr:Eu^{2+}$ single cryst., precipitated phases, optical absorpt. and fluoresc. 3—3807
$KCaCl_3:Sn^{2+}$ crystals, luminesc. props. 3—19183
$K_2ZnF_4:Cr^{3+}$, $Na^+(Li^+)$, EPR of Cr^{3+} centres, spin Hamiltonian parameters 3—43424
La-Al-Nd(Tb)(Dy)(Ho)(Er), crystal field parameters from neutron spectra 3—13780
$La_2O_2SO_4:Eu^{3+}$, prep., fluoresc. spectra, and cryst. field anal. 3—43594
$La_{1-x}Sr_xCo_{1-y}Ti_yO_3$, electron transport and mag. props. 3—47348
$La_{0.99}Tb_{0.01}Ag$, magnetostriction meas., single-ion model anal. 3—14103
$LiNbO_3:Cr^{3+}(Ni^{2+})$, absorption spectra, crystal field and Racah B parameters 3—14326
$LiNbO_3:Eu^{3+}$, energy transfer between ions, obs. and calcs. 3—14336
$LiTb_xY_{1-x}F_4$, model singlet ground state system, spin dynamics, inelastic neutron scatt. 3—23591
$LiYF_4:Gd^{3+}$, zero field splittings, ESR studies 3—57770
$LnVO_4$, nuclear electric quadrupole interaction 3—57813
Mg, distorted core effect on electric field gradient 3—3132
$MgCl_2:Eu^{2+}$ single crystals of low symm., luminesc. of Eu^{2+} centres 3—34141
MgO: Fe^{2+}, excited states, Raman study 3—14309
$Mn(BF_4)_2.6H_2O(D_2O)$, mag. susceptibility and anisotropy, dielec. const., struct. transitions, ligand field parameters, bond ordering 3—57558
$MnCO_3$, magnetoabsorption meas. 3—23925
$Mn_xCd_{1-x}Se$, electroreflectance spectra, 1.2 to 2.7 eV 3—57887
MnF_2, d orbital theory for Mn^{2+} ions 3—13777
α-MnS, mag. struct., Mossbauer study and cryst. field model 3—38588
MnSe, mag. struct., Mossbauer study and cryst. field model 3—38588
NaCl:Ca, Eu, precipitation of Ca, Eu^{2+} fluorescence studies 3—51806
$NaCl:Mn^{2+}$, Suzuki and dipolar phases photostimulated luminesc. study 3—34137
$Na_2Zn(SO_4)_2.4H_2O:VO^{2+}$, optical absorpt. spectrum, cryst. field and mol. orbital coeffs. 3—43574
Nd, magnetic excitations, inelastic neutron scatt. study 3—18876
$NdBe_{13}$, cryst. field parameters, magnetisation and susceptibility meas. 3—52089

crystal field interactions continued
$NdCo_5$, Nd ground state, reduced 4f moment 3—52399
NdPt, magnetisation and mag. struct. study 3—23593
$(Nd_xY_{1-x})Co_2$, spin reorientation temp. 3—18893
Ni complex, tetraza porphin nickel(II), band struct., semiempirical HF SCF cryst. orbital calcs. 3—52029
$Ni(BF_4)_2.6H_2O(D_2O)$, mag. susceptibility and anisotropy, dielec. const., struct. transitions, ligand field parameters, bond ordering 3—57558
$NiBr_2$, electronic and mag. props. of ^{57}Fe, Mossbauer spectroscopy study 3—19019
$NiCl_2$, electronic and mag. props. of ^{57}Fe, Mossbauer spectroscopy study 3—19019
NiI_2, electronic and mag. props. of ^{57}Fe, Mossbauer spectroscopy study 3—19019
Ni(II) complexes of different symms., cryst. field parameters 3—18670
Ni(II) cpds., tetrahedral, spectrum, spin allowed ligand field bands, distortion effects 3—8833
$Ni(NH_3)(NO_2)_2$, spin and charge distribs., polarised neutron, X-ray diffr., ab initio calcs. 3—57320
$NpAs_2$, mag. form factor meas., cryst. field wave function anal. 3—57546
$NpAs_2$, magnetic form factor and cryst. field model 3—23589
$PaCl_4$, crystal field splitting pattern of f-f region *(German)* 3—8461
$PbF_2:Mn^{2+}$, superionic, high temp., EPR studies 3—57763
PbFCl, NQR study of electric field gradient 3—23830
Pr-Nd alloy, excitations of Nd ions, inelastic neutron scatt. study 3—57526
PrAg, mag. props. and quadrupolar interactions 3—8653
$PrAl_2$, magnetostriction and magnetoelastic consts., point charge model 3—43419
$PrAl_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3—8233
$PrCu_5$, paramagnetic, cryst. elec. field, inelastic time-of-flight neutron spectra *(Russian)* 3—47475
$Pr(La, Y)Al_3$, cryst. elec. field effects, inelastic neutron scatt. 3—23340
$PrP_{0.9}$, neutron scatt. study of crystal electric field levels, comparison with $PrP_{1.0}$ 3—33907
PrPt, magnetisation and mag. struct. study 3—23593
$PrRu_2(Rh_2)(Ir_2)(Pt_2)$, cubic cpd., mag. props., neutron diffr. results 3—14005
$Pr_{0.25}Y_{0.75}Al_3$, effect of paramagnetic ion substitution on crystalline electric field *(Russian)* 3—52094
Sc-Gd dil. alloy single crystals, ESR study of dynamics of local moments and cond. electrons 3—38690
Si:As, Ge, laser processed, ^{73}Ge Mossbauer effect 3—57839
$SmBe_{13}$, cryst. field parameters, magnetisation and susceptibility meas. 3—52089
$Sm_xLa_{1-x}Sb$, reverse magnetostriction effects in [001] shape magnetostriction 3—8708
SmS, valence transition, CPA calcs. 3—13773
$Sm_2(SeO_4)_3$, selenite vibr. and cryst. field effects Raman and IR study 3—3703
$SrBr_2:Eu^{2+}$ single crystals of low symm., luminesc. of Eu^{2+} centres 3—34141
$SrCl_2:Mn^{2+}$, superionic, high temp., EPR studies 3—57763
$SrF_2:Ca^{3+}$, level splitting, odd parity cryst. field effects 3—52090
$SrF_2:Eu^{2+}$, zero-field splitting 3—23335
SrF_2:Nd(Ce), Zeeman IR spectra, optical absorption and fluorescence meas. 3—19124
$Sr_xLa_{2-x}Li_{0.5}Ni_{0.5-x}Fe_xO_4$, coexistence of 6-coordinated high-spin Fe^{IV} and low-spin Nc^{III} *(French)* 3—23336
Tb complex, $Na_3[Tb(oxydiacetate)_3].2NaClO_4.6H_2O$, polarised luminesc. spectra of Tb^{3+} 3—3789
$TbAl_2$, magnetostriction and magnetoelastic consts., point charge model 3—43419
Th-Pr, supercond. under press. and low temp. sp. ht. 3—3360
$ThBr_4:Gd^{3+}$, EPR study 3—18984
$ThBr_4:Pa^{4+}$ crysts., optical spectrosc. and EPR obs. 3—57959
$ThCl_4:Pa^{4+}$, crystal field splitting pattern in f-f region *(German)* 3—8461
$ThCl_4:Pa^{4+}$ 3—57959
$TmAl_2$, cryst. field transitions, diffuse neutron scatt. 3—7875
$TmAl_2$, spin-lattice relax., ^{169}Tm Mossbauer spectroscopy study 3—19023
UAs(P), two-ion anisotropic interaction from band of electron hybridisation 3—28497
UF_6Cs, electrostatic cryst. field parameters, contrib. to K-even parameters 3—23341
UGa_2, U^{4+} mag. form factor, polarised neutron diffr. study 3—57544
V complex, hexakisurea vanadium (III) triiodide, normal and γ-irrad., mag. props., EPR study 3—57757
Y-Cu-Cd(Pr)(Eu), dilute amorphous alloy, crystal field, neutron diffr. study 3—23337
Y-Er(Gd) anisotropic spin glasses, susceptibility and magnetisation meas. 3—14062
YAG:Nd, nonradiative relax. kinetics from upper active level 3—28902
$YAlO_3:Nd^{3+}$, absorpt. spectrum, Stark effect *(Chinese)* 3—3769
$Y_{3-x}Nd_xFe_5O_{12}$ system, mag. anisotropy and lattice consts. 3—28549
$Y_2O_2SO_4:Eu^{3+}$, prep., fluoresc. spectra, and cryst. field anal. 3—43594
$Y_2(SeO_4)_3$, selenite vibr. and cryst. field effects Raman and IR study 3—3703
Zn_3As_2, film and crystal, band struct., optical absorpt. and reflectivity study 3—8812
Zn_3P_2, absorpt. edge calcs. 3—14318
$ZnS:Tm^{3+}$, energy levels and cryst. field parameters, fluorescence and cathodoluminesc. study 3—43066
$Zr(Fe_{1-x}Al_x)_2$, Mossbauer and proton NMR studies 3—57824
$ZrMn_2Fe_{0.8}$, Mossbauer and proton NMR studies 3—57824

crystal field splitting *see crystal field interactions*

crystal field theory *see crystal field interactions*

crystal fields *see crystal field interactions*

crystal growth
see also crystal growth from melt; crystal growth from solution; crystal growth from vapour; crystal purification; crystallisation; dendrites; epitaxial growth; nucleation
bibliography update of material published during 1981 3—49102
binary crystals, non-random distribs., from order to total disorder 3—22929
complex temp. fields generation for cryst. growth by high temp. elec. resistance oven 3—50918
crystallisation nuclei in liq. in a sound field 3—51525
diamond, synthesis, formation mechanism 3—37825
diamond, synthesis, internal growth by C^+ implantation 3—47766

crystal growth continued
diffusion controlled growth, influence of homogeneous chemical reactions 3–2450
diffusion couples, thin film and bulk, growth kinetics 3–8268
FCC structures, cryst. growth and forms, Monte Carlo study *(Russian)* 3–51524
gravity and surface tension effects on freely growing crystals 3–33151
growth rate with bulk, surface, and linear diffusion 3–33165
ice, crystal growth in H_2O supercooling in forced pipe flow 3–17976
ice, freezing kinetics light scatt. study *(German)* 3–7938
inorganic superconductors, synthesis and cryst. growth, book 3–10534
inorganic superconductors, synthesis and cryst. growth, book contrib. 3–14454
interfacial aspects of phase transformations, NATO Advanced Study Institute, Erice, Sicily (Aug.-Sept. 1981) 3–35777
kinetics evaluation from desupersaturation curve 3–27865
kinetics of coverage of one-dimensional lattice, nucleation-growth-collision model 3–42546
laser aided surface treatment *(Japanese)* 3–24380
ledge growth kinetics, multistep interactions 3–8169
Lennard-Jones liquid, crystallisation rates, mol. dynamics method study 3–13147
materials processing in space, conf., Bangalore, India (Sept. 1979) 3–8
mechanism for growth in centrifugal field 3–33163
metal $(N+2)$-atomic clusters, cryst. growth, HMO method 3–18248
mica, polytype structures, influence of stacking faults on spiral growth 3–33162
minerals, crystal growth, TEM studies, review 3–7937
nonlinear crystal growth near the roughening-transition 3–18251
nucleus, two-dimensional, size and shape, depend. of interfacial tension 3–47190
optimisation with diffusion 3–27867
pattern emergence and selection 3–56842
quartz SAW bandpass filter performance, cryst. growth seed plane effect 3–42597
rare earth materials, spcimen prep. and cryst. growth 3–19303
rare earths and intermetallics, crystal lattice perfection, X-ray topography study 3–18292
semiconductors, defects, conf. Amsterdam, Netherlands (Aug.-Sept. 1982) 3–44894
solvent effects in crystallisation processes, review, book contrib. 3–13150
star-tetrahedron transformation, crystal-mother phase boundary, bond energies calc. 3–42561
thin film growth processes, review *(Japanese)* 3–28232
$(TMTSF)_2ClO_4$, organic supercond., chemistry and cryst. growth, review *(Japanese)* 3–3932
∝-Al_2O_3, from alum-derived γ-Al_2O_3 3–7936
CdO whiskers, growth and morphology 3–38273
Cr_2O_3 whisker growth from Cr_2O_3/graphite/mullite powder mixture 3–51998
Cu_2O giant cryst., laser assisted growth in oxidizing atmosphere 3–19265
He single cryst. growth, dislocation form., surface mechanism *(Russian)* 3–47182
^4He crystal, critical slowing down near roughening transition 3–46877
MgO and MgO:Al single crystal growth method, lowering of OH^- and cation impurities *(Russian)* 3–58040
Mo thin single crystal, recrystallisation growth and struct. quality 3–8370
$NiSi_x$ growth mechanism on Si, radioactive Ni* tracer study 3–8374
Si, crystal growth angle determination, in vacuum and in Ar atm. *(French)* 3–42556
Si eutectic alloys, directionally crystallised, microstructure and crystallography 3–7980
Si, thin film, recrystallisation on glass substrate, correlated elec. and microstructural studies, TEM 3–57241
Si wafer processing and production, quality control and testing for photovoltaic industry 3–24597
$Sn(HPO_4)_2.xH_2O$ insoluble acid salt, prep. and characts. *(Russian)* 3–47756
$Sn(MPO_4)_2.xH_2O$ (M=alkali metal or H), double phosphate prep. and characts., phase transforms. *(Russian)* 3–47104

crystal growth from gel
cadmium oxalate trihydrate, gel grown, elec. cond. and dehydration 3–33720
calcium oxalate monohydrate, fine surface obs. by SEM 3–51528
calcium-strontium tartrate tetrahydrate, mixed crystals, gel growth, lattice parameter, density, Fe content 3–39023
single crystal, growth mechanism and nucleation, review 3–52911
sodium oxalate, crystal growth from gel, optimization 3–8952
$Ca_5(PO_4)_3OH$, hydroxyapatite, cryst. growth in gel 3–19260
Co ferrite, prep. by ageing and precipitation 3–39022
$KClO_4$, single crystal, growth in ion-exchanged Na-free SiO_2 gel 3–3938
K_2SO_4 crystal growth by silica gel technique 3–14455
$LaMoO_4$ spherulites, growth mechanism and morphology 3–18252
$RbClO_4$, single crystal, growth in ion-exchanged Na-free SiO_2 gel 3–3938

crystal growth from melt
see also liquid phase epitaxial growth; zone melting
actinides and actinide cpds., specimen prep. and cryst. growth 3–19304
alkali halides, Czochralski growth, crystal morphology studies by bubble method 3–22808
alloy, binary, dil., solid-melt interface stability, thermodynamic criterion *(French)* 3–52920
analog system for monitoring crystal growth by the Czochralski method 3–19264
binary alloy, dilute interfacial stability during growth, thermodynamic approach 3–33158
corundum, crystal growth by Vermeuil technique, theory and expt. 3–14466
crystal-liquid interfacial roughening rel. to structure difference 3–33156
crystal-melt, crystal-amorphous and liquid-vapor interfaces, struct. and thermodynamic props. 3–37826
Czochralski crystal growth system, melt level control 3–58043
Czochralski growth with radial thermal symm., segregation behaviour 3–8962
dibenzyl:tolan, impurity distrib. macroperiodicity during growth from melt 3–33291
dilute binary alloys, unidirectional growth from melt, thermodynamic stability of solidification front 3–8965
directed crystallisation of melts, props. under weightlessness conditions 3–52918

crystal growth from melt continued
eutectic alloy, laminar crystallisation process, kinetic consts. 3–33410
fundamental aspects of melt growth 3–37828
GaAs:B, elec. cond., impurity effects 3–23398
gradient optical wave guides, form. in glass substrates 3–32476
graphite, grown from Ni-C melts, morphology, effect of doping elements 3–22805
heat eqn. with mixed nonlinear boundary conditions 3–17776
high temp. solvent for garnet growth; O ion concentration and melt struct. 3–43719
high-temperature soln. growth, developments 3–42555
horizontal ribbon, morphologically stable, quasi steady-state heat flow anal. 3–34218
ice, US attenuation near melting point 3–2683
III-VI layered crystal, growth and charact., review 3–43723
impurity striations, boundary layer approx. 3–22809
inorganic superconductors, synthesis and cryst. growth, book contrib. 3–14454
kinetic models of cryst. growth from fluid nutrient phase near equilib. 3–37827
liquid semiconductor, substrate confined, in situ crystn. 3–13420
metals, single cryst. growth, modification of Kapitza and Bridgman apparatuses, defect form., depend. on cryst. parameters 3–47761
metals, thermal convection instability in MHD and crystal growth 3–56535
nonsteady state, striations of kinetic origin 3–8173
rapid crystal growth from undercooled melts, roles of heat transport and interfacial rearrangement 3–13138
rare earth trichlorides, RCl_3 (R=Gd, Tb, Dy, Ho), polymorphism, phase equilib. and cryst. growth meas. 3–18274
refractory oxide single crystal fibres, pedestal growth and characterisation 3–42041
ruby element quality effect on single-mode laser operation 3–1683
salol, cryst. growth from melt, gas inclusion form., bubble capture kinetics 3–33164
salol, freezing kinetics, light scatt. study *(German)* 3–7938
sapphire, crystal growth by Stepanov method, axial temp. gradient and supercooling meas., optical pyrometric technique 3–28981
sapphire, crystal growth from melt at high temps., acoustic-emission flaw detection technique 3–28982
self-oscillatory conditions, melt-crystallisation 3–2749
semitransparent crystals, growth from melt, radiative instability of plane crystallisation front 3–50916
semitransparent crystals, growth from melt, radiative supercooling 3–50915
shaped melt lowering technique, appl. to compound semicond. crystals 3–34214
solid-state line scanner camera for advanced crystal diameter control during crystal growth 3–54728
solute transport regimes in ideal Czochralski config. 3–42550
space experiments, review 3–3941
transition metal refractory oxides, growth by direct induction melting 3–14469
transparent crystals, radiative cooling, Stefan problem soln. 3–18254
two dimensional Stefan problem, analytic soln. 3–18253
US vibrations effects on liquid flow patterns 3–42545
Verneuil technique, crystn. process, theory 3–14465
Al_2O_3:Cr, burn-out of Cr during ruby cryst. growth by Verneuil method 3–39026
$Ba_2MgGe_2O_7$, isotypic with melilite, cryst. growth by Czochralski method *(German)* 3–3946
Ba_2NaNbO_{15} crystals of different comps., optical and harmonic generation props. 3–28878
$BaNi_2(PO_4)_2$, synthesis and crystallisation 3–14473
BaR_2F_6:R'^{3+} (R,R′=Y, Dy, Ho, Er, Tm, Yb, Lu) single cryst., prep., spectroscopy and stimulated emission 3–52919
$Ba_2ZnGe_2O_7$, isotypic with melilite, cryst. growth by Czochralski method *(German)* 3–3946
$Bi_{12}GeO_{20}$, sillenite type struct., single crystals, formation of defects 3–13211
γ-$6Bi_2O_3.SiO_2$ and γ-$6Bi_2O_3.GeO_2$, monocryst. growth by temp.-gradient furnace technique using double crucibles *(Japanese)* 3–8966
$Bi_{12}SiO_{20}$, sillenite type struct., single crystals, formation of defects 3–13211
Bi_2Te_3-Sb_2Te_3-Sb_2Se_3 thermoelectric ingot preparation and characterisation 3–14475
$BiVO_4$, single crysts., acousto-optical props. 3–34071
$CaMgSi_2O_6$ diopside single crysts., Czochralski growth 3–34217
$Ca_2MgSi_2O_7$, isotypic with melilite, cryst. growth by Czochralski method *(German)* 3–3946
CaO-SiO_2, crystal growth of silicates, historical review 3–8954
$Ca_2V_2O_7$, cryst. growth, struct., elec. and dielec. props. 3–24110
$Ca_2ZnSi_2O_7$, isotypic with melilite, cryst. growth by Czochralski method *(German)* 3–3946
$Cd_{0.95}Mn_{0.05}Se$ crystals, Bridgman growth and elec., optical and mag. props. 3–52921
Co, Czochralski growth of single crystals 3–47762
β- Cu-Al-Ni, heat treated Bridgeman grown crystals, thermal diffuse scattering of X-rays 3–51544
Cu(-Al), dislocation struct. of [321] crystals grown by Bridgman method 3–13230
$CuInS_2$ elemental composition determ. by chemical anal. method 3–29354
GaAs, 3 in. diam. LEC grown cryst., dislocation density and distrib. 3–42610
GaAs bulk-crystal growth technology, Bridgman and LEC techniques 3–3940
GaAs IR windows for high-speed airborne applic., development 3–7093
GaAs, LEC crystals, doped and undoped, EL2 deep donor level distribution 3–47282
GaAs, LEC grown, twin form., melt stoichiometry effect 3–8056
GaAs, low dislocation density single crysts. substrates, liq. encapsulated Czochralski growth 3–28977
GaAs, purification by isovalent doping during liq. phase growth 3–34219
GaAs, semi-insulating substrate, spatially resolved cathodolum. study 3–8888
GaAs:Cr, 3 inch diameter crystal growth by horizontal Bridgeman technique, characts. 3–24115
GaAs:Cr, LEC grown, radiotracer determ. of Cr distrib. 3–13255
GaAs:In(Sb), Czochralski grown, doping effect on struct. perfection 3–33281

crystal growth from melt continued
GaAs:N dislocation-free cryst. growth by N doping 3−8964
GaP, computer controlled LEC growth, struct. and elec. props., LED appls. 3−14464
GaP, crystal growth by Czochralski method with reduced dislocation density 3−28983
GaP, synthesis solute diffusion technique, Zn impurity conc. 3−39025
GaPAsSb quaternary single cryst. growth from binary component alloyed mixture 3−34216
GaSb:Te, LEC growth with uniform carrier conc. distrib. 3−14470
GaSb(:Te), shaped melt lowering growth technique, photoluminesc. and Hall meas. 3−34214
Ge, Czochralski growth, uniform radial segregation, pronounced dopant striations 3−8962
Ge:Ga, growth rate depend. of interface distrib. coeff. in Ge-Ga system 3−13144
Ge:Sb, Czochralski growth, uniform dopant distrib., Faraday effect study 3−2593
HgCdTe, directionally solidified, one-dimens. analysis of segregation 3−33157
InP crystals, LEC grown, dislocation generation and propagation, X-ray topography study 3−46936
InP, in-situ synthesis and growth method in Czochralski puller 3−8963
InSb highly homogeneous single crysts., growth and characterisation for IR imaging devices 3−34215
$K_3AlB_8O_{15}$, crystal struct., grown from melt *(Japanese)* 3−2522
$KNbO_3$, cryst. growth, for laser radiation modulation 3−3945
$KNbO_3$, single-domain, IR refl. spectra in tetragonal phase 3−38812
$KTa_{1-x}Nb_xO_3$, $(0<x\leq 0.04)$, solid soln., crystal growth by slow-cooling method 3−8959
LaB_6 emitters, crystal growth from melt 3−24111
LiF-ErF_3 system, cryst. growth, phase constitution, microstructure, DTA 3−56841
LiF-LuF_3 system, cryst. growth, phase constitution, microstructure, DTA 3−56841
LiF-YF_3 system, cryst. growth, phase constitution, microstructure, DTA 3−56841
$LiNbO_3$:Ti(Fe), growth by Czochralski method, phys. props. *(Korean)* 3−3943
$Mn_xHg_{1-x}Te$ mixed crystals grown by Bridgman-Stockbarger technique 3−14474
$(MnO)_x(ZnO)_y(Fe_2O_3)_z$ single cryst. growth method for VRT heads *(Japanese)* 3−47763
MnZn ferrite crystals, composition controlled Bridgman growth, VCR mag. head appl. 3−24114
$Na_4Ge_9O_{20}$, cryst. growth, optical props. rel. to those of vitreous samples 3−19262
$NaNO_3$ single crystals, growth from soln. and melt. and cryst. defects 3−37824
NbC, crystal growth by low temp. electrosynthesis from molten salt soln. 3−43763
Nd^{3+}:$LaMgAl_{11}O_{19}$ laser, Czochralski crystal growth 3−56202
NdF_3-RF_3 systems (R=rare earth), partition coeffs. for melt crystn., energetic anal. 3−18426
$Nd_3Ga_5O_{12}$ garnet, crystal growth by Czochralski method, crystn. front shape obs. 3−28980
$NiBr_2(Cl_2)(I_2)$:Fe^{2+}, single crystal growth by Bridgman-Stockbarger technique 3−14471
Pb particles on graphite, cryst. growth, melting and oxidation SEM study 3−27866
$PbZr_{1-x}Ti_xO_3$ $(x<0.1)$, phase diagram 3−53034
$Rb_2Cr_{1-x}M_xCl_4$ (M=Mg, Mn, V or Fe), solid soln. growth by Bridgman-Stockbarger, Czochralski methods 3−14472
SbSI, single crystal, elec. and optical props. *(Korean)* 3−3653
$Se_{0.95}Bi_{0.05}$ alloy, crystallisation, calorimetric investig. 3−3944
Si crystal, Czochralski growth, defect formation, annealing effect 3−43722
Si crystal growth, Czochralski method increased C content for carrier lifetime and yield improvement 3−14468
Si crystal growth, Czochralski process, low C content product 3−24109
Si crystal growth, Czochralski method, melt rotation interrupt and O conc. control 3−28978
Si, Czochralski growth, C contamination 3−33153
Si, Czochralski growth, mag. control of O content 3−58042
Si, Czochralski growth in vertical mag. field 3−3942
Si, edge defined film fed growth ribbon, effect of heat treatment on bulk diffusion length 3−52179
Si, grain boundary struct. rel. to growth technique and elec. props. 3−51626
Si, implanted or Czochralski grown, rod-like defects, faults and loops, independent form. 3−46968
Si memory materials, U and Th content determ. by high fluence neutron activation anal. 3−29343
Si, multicrystalline, growth methods for solar cell appls. 3−24112
Si, polycrystalline, Bridgman growth, crystallographic anal., photovoltaic appls. 3−22807
Si, polycrystalline ingot, crystallographic orientation study after directional solidification *(French)* 3−13148
Si polycrystalline sheet, continuous growth on C shaper by ribbon-against-drop process, solar cell appls. 3−52922
Si ribbon, edge-defined film-fed growth, electron irrad. effects 3−42665
Si, ribbon cryst. pulling, raw material continuous feeding, solar cell substrate fabrication 3−52923
Si ribbon growth method development *(French)* 3−24113
Si ribbons, Stepanov growth, SiC inclusion form. 3−2547
Si, sheet, semicontinuous edge-supported pulling, solar cell appl. 3−8960
Si, sheet crystal growth, edge-supported pulling, filament materials 3−34213
Si single crystal growth by Czochralski method, O incorporation and precipitation 3−14467
Si solar cells, edge-defined film-fed grown, H_2 passivation of defects, EBIC studies 3−58498
Si, swirl defects form. mechanism, growth rate and temp. gradient influence 3−8044
Si, temp. oscill. at growth interface 3−42554
Si wafer, Czochralski grown, multistep repeated annealing, O and induced defect behaviour 3−4060
Si:C, crystal growth by Czochralski technique, quantitative model for C incorporation 3−46876
Si:O, Czochralski grown, as-grown, oxide micro-precipitates study 3−33443

crystal growth from melt continued
Si:O, Czochralski growth, O segregation obs. 3−51803
Si:O wafer, Czochralski grown, defect engineering, VLSI substrate development 3−42593
SiB_x $(x=2.8\text{-}4)$, cryst. growth in Cu melt 3−28979
$SrMgGe_2O_7$, isotypic with melilite, cryst. growth by Czochralski method *(German)* 3−3946
$Sr_2MgSi_2O_7$, isotypic with melilite, cryst. growth by Czochralski method *(German)* 3−3946
$Sr_2ZnGe_2O_7$, isotypic with melilite, cryst. growth by Czochralski method *(German)* 3−3946
TaC, crystal growth by low temp. electrosynthesis from molten salt soln. 3−43763
α-TeO_2, dislocation distribution and exterior morphology 3−33262
TeO_2, paratellurite single crysts. grown by Czochralski technique, impurity microdistrib. 3−13256
TeO_2 single crystals, Czochralski grown, gas-bubble entrapment 3−8961
Tl_3VS_4, crystal growth, impurity behaviour 3−52924
Y-Co based alloys, cryst. growth by Bridgman method 3−19263
YAG, crystal growth from melt at high temps., acoustic-emission flaw detection technique 3−28982
$YAl_3(BO_3)_4$, solubility and cryst. growth from solution in melt 3−22810

crystal growth from solution
see also crystal growth from gel; liquid phase epitaxial growth
actinides and actinide cpds., specimen prep. and cryst. growth 3−19304
alkaline phosphates, mixed, Me_2O-Nd_2O_3-P_2O_5 system (Me=Li,Na,K,Rb,Cs), phase formation, hydrothermal synthesis 3−47086
chalcogenide glass films, spin-coated 3−19289
copper manganese oxides, $ACu_3Mn_4O_{12}$, ferromag., synthesis and mag. characterization 3−14462
crystallisation from solution, mass transfer motive forces, thermodynamic anal. 3−13146
crystallizer temp. stabilization with pulse heating fluid bath *(Polish)* 3−3939
Cu-Ca-S-Sn, solid-liquid equilibria, crystalline solids at liquidus surface 3−33404
diacid pairs, syncrystn., random and correlated substitution *(French)* 3−52914
diamond, synthetic, growth condition for dodecahedral form 3−33161
electrolytes crystallising from aqueous soln., theory 3−27870
ethylene-butene-1 copolymer model, soln. grown crysts. 3−13118
glycerol-water soln. for simulation of crystal growth solns., forced convection 3−37490
high temp. solvent for garnet growth; O ion concentration and melt struct. 3−43719
high-temperature soln. growth, developments 3−42555
holographic interferometry appls. 3−37832
hydrodynamics simulation in high temp. soln. for crystal growth, free convection 3−47760
ice, purification of crystals grown from sucrose and NaCl aq. solns. 3−28975
impurity effects in crystal growth from solution 3−37831
impurity effects in crystallisation processes 3−27872
industrial crystallisation, conf., Budapest, Hungary (Sept. 1981) 3−25700
interfacial aspects of crystal growth in aqueous solutions 3−37829
isothermal batch crystalliser pulse response analysis for growth rate and dispersion estimation 3−33166
kinetic models of cryst. growth from fluid nutrient phase near equilib. 3−37827
lithium formate crystals, growth kinetics in normal and heavy water solns. 3−13140
mass crystallisation out of soln. and gas phases, thermohydrodynamic eqns. 3−2449
microgravity environment, review 3−3935
non-aqueous soln. growth 3−37830
on-line growth meas. technique for free suspended single cryst. 3−28974
percolation-theory description of nucleation phenomena 3−27876
polyethylene fibres, shish-kebab, lamellar overgrowth, small angle X-ray scatt. and TEM study 3−22806
trans-1,4-polyisoprene, crystallisation 3−2438
potassium hydrogen phthalate single crystals, {010} faces, surface morphology, optical microscopy 3−33544
precipitation processes, role of additives 3−27873
protein single cryst. growth in micro gravity field *(German)* 3−8958
quartz, growth and appls. 3−52915
quartz, hydrothermal growth, super saturation dependence, physical studies 3−39021
quartz, synthetic, cultivation and evaluation methods, recent trends 3−8956
quartz crystals, monoquartzite nutrients for hydrothermal growth 3−8950
quartz growth with high Al conc. 3−14458
quartz hydrothermal single crystal growth rate, effects of $LiNO_2$ and $LiNO_3$ dopants and conventional baffle 3−52913
quartz resonator crystals grown with $LiNO_2$ and $LiNO_3$ dopants, mech. Q, IR absorpt. obs. 3−52912
quartz synthetic crystal, plate-like defects obs. by light scatt. tomography, X-ray topography 3−13212
rate of growth estimation rel. to mass transfer and surface rates 3−27877
seed crystals, population density function behaviour during batch crystn. 3−18250
stearic acid, crystal growth from solution, polymorphism effects 3−51523
stearic acid single crysts., soln. growth, effect of polymorphism 3−33152
surface microrelief and cryst. growth under mass crystallisation conditions, effect of collisions 3−27880
TGS single crystals, ferroelec. domain morphology rel. to growth parameters 3−57867
triglycine fluoroberyllate-selenate, deuterated, crystn. from aq. soln., elec. props. 3−14457
AgBr crystal deposition on polymer film by silver alginate reaction with hydrobromic acid 3−52916
AgBr system, cryst. growth rates in double-jet precipitation, interparticle effect 3−52917
AgCl nucleation from aqueous solns., multichannel spectrophotometric study 3−51527
β-Ag_2S, monoclinic, single cryst. prep. from supercritical H_2S-$(C_2H_5)_3N.HCl$ soln. 3−14460
$BaCd(HCO_2)_4$, cryst. growth, morphology and defects, etching study 3−37823
$BaMoO_4$, crystallisation kinetics from LiCl melts 3−24107

- **crystal growth from solution** continued
  - $BaPb_{1-x}Bi_xO_3$, single cryst. growth from PbO_2-Bi_2O_3-$BaPbO_3$ soln., supercond. props. 3—3936
  - $Be_3Al_2Si_6O_{18}$, beryl, high pressure hydrothermal synthesis, crystal size and shape 3—14461
  - $CaCO_3$, precipitation from aqueous soln., induction period rel. to supersaturation and impurities 3—33154
  - CaO-SiO_2, crystal growth of silicates, historical review 3—8954
  - $Ca_5(PO_4)_3OH$, hydroxyapatite, relay crystallisation from supersaturated aq. soln. 3—28973
  - $CaSO_4.2H_2O$, gypsum crysts. in suspension inhibitor conc. influence on growth rate 3—27874
  - CdI_2, polytypic growth from soln., elec. field effect on crystn. 3—37822
  - $CdPt_3O_6$, hydrothermal technique 3—34210
  - CdSe(Te), crystal growth from soln. and photoluminesc. *(Japanese)* 3—39020
  - CeO_2, crystn. and cryst. growth under hydrothermal conditions, mineralisers effect 3—19261
  - Co ferrite, prep. by ageing and precipitation 3—39022
  - $CoPt_3O_6$, hydrothermal crystal growth, electrical conductivity 3—34210
  - Co_2SnO_4, cryst. growth by flux method 3—8955
  - Fe_2O_3-TiO_2 system in flux environment, cryst. growth 3—28972
  - GaAs, crystal growth from solution under microgravity conditions, defects 3—42594
  - $Gd_{1-x}La_xAlO_3$, mixture of solvents for cryst. growth 3—43720
  - GeO_2, cryst. growth, optical props. rel. to those of vitreous samples 3—19262
  - α-HgI_2, tetrahydrofurane as solvent for soln. growth 3—43721
  - InP, high purity polycryst., in situ vacuum baking to improve purity 3—14459
  - InSb growth by controlled solidification, liq. state diffusion processes influence *(Russian)* 3—19287
  - $In_3Sb_5O_{12}$, single cryst., exhibiting electroacoustic echo, growth, phys. and chemical props. 3—14228
  - K inorganic salts, heats of dissolution and crystallisation in water at 298.15K 3—27879
  - $KAl(SO_4)_2.12H_2O$, growth from aq. soln., growth rates of (111), (100) and (110) faces 3—27883
  - KBr single cryst. growth from aqueous soln. in presence of PbI_2 impurity 3—51526
  - $KBrO_3$, homogeneous nucleation, soln. thermal history effect 3—27869
  - KCl, control of crystallisation from soln., mag. field and hydrodynamic conditions influence 3—28976
  - $K_2Cr_2O_7$ {001}, growth spiral and hillock form. during growth from soln. 3—18249
  - KH_2PO_4 crystals, growth phenomena rel. to internal struct., hydrodynamic influence 3—13141
  - KH_2PO_4, viscosity of eq. soln. rel. to temp. and conc. *(Polish)* 3—2865
  - K_2SO_4, contact nucleation inhibition and secondary nuclei growth in mixed solute solns. 3—27871
  - K_2SO_4 crystal growth in fluidized bed crystallizer, Peclet number determ. 3—47759
  - K_2SO_4-$(NH_4)_2SO_4$-H_2O system, crystallisation kinetics, solid phase comp. effect 3—27878
  - $LaCrO_3$, hydrothermal synthesis and sintering 3—14463
  - $LaFeO_3$ crystals, hydrothermal synthesis *(Japanese)* 3—39024
  - $LiH_3(SeO_3)_2$, ferroelec., soln. crystal growth using cylindrical seeds 3—34212
  - Mg_2SnO_4, cryst. growth by flux method 3—8955
  - $Mn_{1-x}Pt_{3-x}O_6$, hydrothermal crystal growth, electrical conductivity 3—34210
  - NH_4Cl, thermal depolarisation meas. rel. to cryst. growth conditions 3—19041
  - NH_4Cl-$NiCl_2$-H_2O system crystal growth, etching, optical and X-ray obs. 3—27882
  - NKO_3 aqueous soln., primary nucleation, crit. supercooling estimation by stochastic model 3—27875
  - NaCl, crystal growth rate meas. method 3—28974
  - NaCl, crystallisation kinetics rel. to impeller draft tube clearance 3—33167
  - NaCl, secondary nucleation rate in evaporative crystalliser 3—18247
  - NaCl solubility in water, crystal growth rate from equeous soln. 3—33159
  - $NaClO_3$, cryst. growth rate, soln. flow direction influence on morphology 3—42553
  - $NaClO_3$, X-ray topographic obs. of dislocations in soln. grown crystals 3—33259
  - $NaGdGeO_4$:Nd^{3+}, cryst. growth from soln. in melt, IR laser radiation prod. 3—34124
  - $NaNO_3$ single crystals, growth from soln. and melt. and cryst. defects 3—37824
  - Na_2O-Al_2O_3-SiO_2-H_2O, VSZ-3 zeolite crystal, hydrothermal synthesis and charact. 3—8951
  - $NaYF_4$, cryst. growth, lattice parameters, X-ray powder diffr. 3—37864
  - NdB_6, single cryst. growth from Al flux, characteris. *(Japanese)* 3—8957
  - $PbBPO_5$, $PbBAsO_5$, synthesis and characterisation *(French)* 3—22845
  - PrB_6, single cryst. growth from Al flux, characteris. *(Japanese)* 3—8957
  - PrP_5O_{14}, $Pr_{0.9}La_{0.1}P_5O_{14}$ crystal growth by high temp. soln. method *(Chinese)* 3—14456
  - β-PtO_2, hydrothermal crystal growth, electrical conductivity 3—34210
  - $Sc_3Sb_5O_{12}$, single cryst., exhibiting electroacoustic echo, growth, phys. and chemical props. 3—14228
  - SnO_2, cryst. growth by flux method 3—8955
  - TeO_2, crystal growth and solubility 3—3937
  - $YAl_3(BO_3)_4$, solubility and cryst. growth from solution in melt 3—22810
  - YIG, crystal growth on seed from soln. in melt 3—8953
  - YIG crystals, isothermal growth by PbF_2-B_2O_3 solvent evaporation, phase diagram determ. 3—24108
  - ZnO crystals grown in molten hydrous alkali solns., morphology 3—13145
  - ZnO, single crystal precip. from molten hydrous KOH solns. 3—34208
  - ZnSe(Te), crystal growth from soln. and photoluminesc. *(Japanese)* 3—39020
  - Zn_2SiO_4, willemite, molten solns., nonstoichiometry, Mn content, and phosphorescence 3—34209
  - Zn_2SnO_4, cryst. growth by flux method 3—8955
  - ZrO_2, macrocrystalline monoclinic, growth by ZrF_4-LiF-NaF melt, hydrolysis 3—34211

- **crystal growth from vapour**
  - *see also vapour phase epitaxial growth*
  - actinides and actinide cpds., specimen prep. and cryst. growth 3—19304

- **crystal growth from vapour** continued
  - alkali halide crystal two-dimens. nucleation temporal development on KCl 3—13143
  - atomically rough surface growth, solid-on-solid model of cryst.-vapour interface 3—33160
  - carbon fibre, from naphthalene at 1100°C, inhibitive effect of halogens 3—24105
  - chemical vapour transport, convection influence on growth behaviour *(French)* 3—14453
  - diphenyl, negative crystals, spontaneous transformation, surface roughness and kinetics meas. 3—13427
  - ice, polyhedral crystal, morphological stability 3—33155
  - ice crystal growth from vapour, air velocity influence on habit 3—13142
  - inorganic superconductors, synthesis and cryst. growth, book contrib. 3—14454
  - mass crystallisation out of soln. and gas phases, thermohydrodynamic eqns. 3—2449
  - neopentane, plastic single crystal, crystallinity and orientation, X-ray diffr. 3—34205
  - surface growth process study by ellipsometry, vapour growth systems *(French)* 3—24104
  - transition metal trichalcogenides, growth techniques 3—43718
  - CdS, vapour-grown, interface morphology and sub-grain struct. obs. 3—7935
  - CdTaI crystals, verticle unseeded vapour growth, high resistivity 3—34206
  - $CoCr_2O_4$, chem. transport, thermodynamic anal. and cryst. growth 3—28971
  - $CoFe_2O_4$ ferrite, crystal growth by vapour phase reaction method 3—24106
  - Cr needle crystals, growth on field electron emitter in $Cr(CO)_6$ vapour 3—52909
  - CsH particles, laser-produced from Cs-H_2 vapour, size distrib., light scatt. study 3—22804
  - $CuGaS_2$, CVT growth assisted by vapour-liq.-solid mechanism, surface microtopography 3—42551
  - $CuInS_2$, CVT growth, growth spiral characterisation by vapour-solid growth 3—42552
  - $CuInS_2$, CVT growth assisted by vapour-liq.-solid mechanism, surface microtopography 3—42551
  - Cu_3VS_4 formation by peritectic reaction, microhardness 3—58041
  - GaAs, gas-phase deposition, equilib. distrib. of Te and Zn 3—8082
  - Ge, chem. vapour transport by GeI_4, convection influence on growth *(French)* 3—14453
  - $Ge_{38}As_8I_8$, clathrate semicond., prep., struct. and elec. props. 3—13814
  - GeS(Se)(Te), vapour phase crystal growth under microgravity environment 3—3933
  - HgI_2, high purity synthesis and vapour phase growth *(Chinese)* 3—43717
  - In particles condensed from vapour, equilibrium shape, TEM study and surface energy calc. 3—22803
  - LiF, (100) surfaces, desorption fluxes, molecular beam impingement 3—42548
  - LiF, Li_2F_2, Li_3F_3, condensation and evaporation kinetics using mol. beam methods 3—42549
  - LiF molecular beam interaction with (100)LiF surface, molecular relaxation times 3—42547
  - Mo, preparation from halides by sublimation and vac. reduction 3—3985
  - MoO_2(:Ti), crystal growth by chem. vapour transport 3—8949
  - NH_4Cl single crystal, growth from vapour phase in vertical furnace 3—52908
  - NH_4Cl, thermal depolarisation meas. rel. to cryst. growth conditions 3—19041
  - $NiCr_2O_4$, chem. transport, thermodynamic anal. and cryst. growth 3—28971
  - $NiFe_2O_4$ ferrite, crystal growth by vapour phase reaction method 3—24106
  - α,β-PbO smoke particles, struct. and coalescence growth from metal combustion in Ar-O_2 3—7934
  - $Pb_{1-x}Sn_xTe$ large crystal vapour phase growth in sealed tube 3—14451
  - $Pb_{1-x}Sn_xTe$ solid solns., elec. active point defects formation 3—46929
  - PbTe large crystal vapour phase growth in sealed tube 3—14451
  - RuO_2, cryst. growth by vapour transport technique, struct. and elec. props. 3—19259
  - Si, crystal grown from at. beam in vacuum, doping characts. 3—22928
  - Si, crystal growth as oriented thin film on metal patterned amorphous planar substrate 3—34232
  - Si, deposition of single crystal bars directly from vapour phase 3—34207
  - Si, laser induced CVD single cryst. growth 3—47758
  - Si, polycrystalline, low temp. prep. from $SiCl_4$ and charact. 3—3934
  - SiC (4H) crystals grown from vapour phase, variable composition, expt. study 3—18255
  - SiC, cubic, large-area single-crystal wafers, CVD growth 3—47757
  - SiC, defect structure, X-ray topographic obs. 3—42611
  - SnO(SnO_2) smoke particles, struct. and coalescence growth from metal combustion in Ar-O_2 3—7934
  - TiN, particle size distribution meas. during crystn. in plasma current from UHF discharge 3—27868
  - TiO_2, crystal growth by chem. vapour transport 3—8949
  - W, particle size distribution meas. during crystn. in plasma current from UHF discharge 3—27868
  - WO_3 and Bi_2O_3 smoke particles coalescence, high resolution electron microscopy study 3—51522
  - WSe_{2-x} series layer compounds, direct vapour transport growth, cryst. struct. parameters 3—13139
  - YIG single crystal growth by chem. transport using $FeCl_3$ transporting agent, $YFeO_3$ source material 3—14452
  - Y_2O_3, crystal growth by chem. transport method 3—52910
  - $Zn_{1-x}Cd_xS$, single crystal growth by iodine transport 3—14450
  - $ZnDe_2O_4$ ferrite, crystal growth by vapour phase reaction method 3—24106
  - ZnS, single crystal growth by iodine transport 3—14450

- **crystal habit** *see crystal morphology*

- **crystal hyperfine field interactions**
  - acrylonitrile-vinylferrocene copolymer, hyperfine interactions, Mossbauer study 3—14167
  - alkaline earth compounds, MF_2:Mn^{2+}, superionic, high temp., EPR studies 3—57763
  - alkaline earth fluorides, defect struct. and defect-defect interactions, Gd^{3+} EPR study 3—38691
  - bis-methylammonium copper (II) tetra(chloride bromide) mixed cryst., Cu nuclear spin Hamiltonian variations 3—52663

crystal hyperfine field interactions continued

- C Co-In(Ag), hyperfine fields, nuclear orientation study 3−47318
- diamond, muonium location and hyperfine interaction, HF SCF cluster calc. 3−57325
- diamond, P2 centre, ^{13}C hyperfine interaction, ESR study 3−3528
- electric quadrupole-quadrupole interaction in two-dimens., fluctuation effects with zero substrate pot. 3−5745
- ferrichrome A, classic relaxing paramagnet, Mossbauer study 3−52690
- ferrites, conference, Kyoto, Japan (Sept.-Oct. 1980) 3−10520
- ferrites, hyperfine fields, new physics frame 3−13781
- ferrites, hyperfine interactions and electron diffusion 3−13782
- graphite-$InCl_3$ intercalation cpd., TDPAC study 3−47579
- Heisenberg antiferromagnet, semi-infinite, surface nucl. spin waves 3−3429
- hydroxamic acid radicals, X-irrad., hyperfine coupling consts. determ. 3−14134
- internal field distrib. due to random defects, contrib. of nearest defect 3−37896
- iron oxalate dihydrate, Mossbauer study below Neel temp. 3−3596
- Kondo alloys, dil., spin-lattice relax. time meas. by CW NMR, quadrupolar splitting effect 3−3573
- magnetic hyperfine field meas., conversion to const. vol. 3−3136
- nuclear motion in octahedral cage with reorienting elec. field grad., Mossbauer calc. 3−14176
- organic solids, ^{13}C NMR, mol. and struct. information from ^{14}N-^{13}C dipole couplings 3−14142
- perturbed angular correlations, appl. to materials research, review 3−54821
- polyvinylferrocene, hyperfine interactions, Mossbauer study 3−14167
- positronium hyperfine interaction, environmental effects in condensed matter 3−57991
- potassium hydrogen furan-3,4-dicarboxylate, H-bonds, ^{17}O quadrupole double reson. study 3−34006
- potassium hydrogen oxydiacetate, γ-irrad., ENDOR study of free radicals 3−47572
- pyromellitic and dihydrate(-d_n), H_2O motion identification and charact. by PMR 3−3571
- α-quartz, X-irrad., trapped $^{1,2}H$, spin Hamiltonian parameters, EPR study 3−52623
- rare earth alloys, charge and spin density, electronic struct., Mossbauer study 3−28749
- rare earth compounds, $RCoO_3$, NMR study of spin state equilibria in $RCoO_3$ systems 3−14147
- rare earth fluorides, RF_3, defect struct. and defect-defect interactions, Gd^{3+} EPR study 3−38691
- rare earth rhodium borides, RRh_4B_4, mag. supercond., NMR study 3−57476
- semiconductors, luminesc. in conditions of optical cooling of nucl. spin system 3−38879
- semiconductors, narrow band gap, cond. electrons, elec. susceptibility, quadrupole hyperfine interaction in cond. with reson. levels 3−43108
- semiconductors, nuclear spin system reson. cooling on optical orientation of electrons, theory *(Russian)* 3−3139
- singlet ground state systems, electronic and nucl. magnetism 3−38568
- steel, Fe-Cr-Mn-C, electron interactions, Mossbauer sub-spectra interpretation 3−8743
- steel, Fe-Cr-Mn-N, electron interactions, Mossbauer sub-spectra interpretation 3−8743
- steel, Fe-Cr-Ni-C, electron interactions, Mossbauer sub-spectra interpretation 3−8743
- steel, mild, corrosion in acid medium, Mossbauer study 3−24408
- steel type U7, deformation influence on Mossbauer spectrum hyperfine struct. *(Russian)* 3−34011
- 1,2,4,5-tetrachlorobenzene, triplet spin dephasing in impurity-induced traps, proximate nuclear spins detuning 3−43461
- transition metals, HCP, nucl. spin-lattice relax., contact interaction, relativistic correction 3−52098
- tryptamine hydrochloride, irrad. effects, H-addition radicals, ENDOR study 3−57815
- Ag dilute alloys, impurity interaction and elec. field gradients, PAC study 3−38731
- Ag, matrix isolated, absorpt. spectra, inner shell excitation 3−55884
- Al-H, dil., impurity electronic struct., energy and metal-impurity interaction 3−43070
- Ca-Fe, dilute, positive mag. hyperfine field for impurities, perturbed angular distrib. obs. 3−57836
- CaF_2:Tm^{2+}, ligand hyperfine interaction, optical detection of ENDOR 3−52670
- $CdPS_3$:Mn II impurity centres, ESR anal. 3−52603
- Co $Ti_{1-x}Al_x$, NMR study of hyperfine coupling constants 3−57796
- CoF_2, nucl. polarisation obs., neutron scatt. expts. 3−57324
- Co(II) complex, low-spin, nucl. quadrupole coupling, EPR study 3−14120
- $Co_2MnZ_{0.98}Sn_{0.02}$, Z=Al, Ga, Si, Ge, Mossbauer study of Sn hyperfine fields 3−28743
- $CoTiF_6.6D_2O$, phase transitions, ^2D NMR quadrupole coupling const. and elec. field gradient studies 3−42765
- $Co_2Ti_{1-x}V_xSn$, mag. moment and Sn hyperfine field, magnetisation and Mossbauer studies 3−28315
- $CrZrF_6$, phase transitions, Mossbauer and EPR study of Jahn-Teller distortions 3−47101
- $Cs_2FeCl_5.H_2O$, Mossbauer study of hyperfine field variation 3−57826
- $CsFeS_2$, quadrupolar and mag. hyperfine anisotropy, Mossbauer study 3−38738
- $CsMnFeF_6$, ^{57}Fe Mossbauer spectra 3−3618
- $Cs_2NaHoCl_6$, quadrupolar ordering in Γ_3 doublet system, NMR study 3−28713
- $Cs_2NaYbCl_6$, spin-spin relax., Mossbauer study 3−19025
- $CsNiFeF_6$, ^{57}Fe Mossbauer spectra 3−3618
- $Cs_2NpO_2Cl_4$, Mossbauer study, spin fluctuations 3−19026
- $Cs_2Zn_3S_4$:Mn^{2+}, zero field splitting, site distortions, EPR study 3−47545
- Cu complex, $(CH_3NH_3)_2Cu(Cl_{1-x}Br_x)_4$, nuclear spin Hamiltonian, NMR, hyperfine field *(Japanese)* 3−3560
- Cu complex, bis-(N-phenylsalicylaldiminato) Cu II, ESR obs. 3−47542
- Cu complex, β:bis(N-methyl salicylaldimine) copper (II), g-shift and exchange interaction, EPR study 3−52604
- Cu complex, Cu(2,2′-bipyridene)$(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3−8656
- Cu, conduction spin density, Knight shift and Fermi surface, MAPW formalism 3−38707
- Cu^{2+} EPR param. and ground state wavefunctions in single crysts. and complexes 3−38683

crystal hyperfine field interactions continued

- $Cu_{1-x}Mn_xFe_2O_4$, Mossbauer study in external mag. field 3−34014
- Cu_2O, elec. field gradient at Cu position and electronic charge density anal. 3−43134
- $CuZrF_6$, phase transitions, Mossbauer and EPR study of Jahn-Teller distortions 3−47101
- D_xMoO_3, attachment and motion of D, ^2D NMR study 3−38704
- $DyCo_2Si_2$, antiferromag. struct. and Neel temp., neutron diffr. and Mossbauer studies 3−38594
- $DyCu_2Si_2$, antiferromag. struct. and Neel temp., neutron diffr. and Mossbauer studies 3−38594
- $Dy(Fe, Rh)_2$, hyperfine interactions, Mossbauer study 3−19022
- Dy_2Fe_{17}, mag. props., ^{161}Dy and ^{57}Fe Mossbauer spectroscopy 3−14171
- DyM_2Si_2, M=Mn, Fe, Co, Ni, Cu, hyperfine interactions of ^{161}Dy and ^{57}Fe 3−13778
- $DyPO_4$, nucl. polarisation obs., neutron scatt. expts. 3−57324
- $Dy_{1-x}Y_xAl_2$, Mossbauer study of mag. hyperfine fields 3−57820
- DyZn, indirect multipolar interactions, ab initio calc. 3−52099
- $ErNi_2$, quadrupolar pair interactions, spontaneous magnetisation meas. 3−52422
- EuC_6, intercalation cpd., electronic and mag. props. 3−33690
- EuO, transferred hyperfine interactions, transfer mechanisms 3−52100
- EuO(S), isotropic ferromagnets, dynamical crit. behaviour 3−14061
- EuS(Se)(Te), mag. hyperfine fields, high press., high field, ^{151}Eu Mossbauer effect study 3−52683
- EuS(Se)(Te), Mossbauer study of mag. hyperfine interaction press. depend. *(German)* 3−52694
- EuS(Se)(Te), transferred hyperfine interactions, transfer mechanisms 3−52100
- $Eu_xSr_{1-x}S$, mag. hyperfine fields, high press., high field, ^{151}Eu Mossbauer effect study 3−52683
- Fe, amorphous, atomic mag. moment study 3−47483
- Fe, amorphous, hyperfine field and atomic mag. moment 3−43132
- Fe complex, $(Fe(2\text{-pic})_3)Cl_2.EtOH$, spin transition in crossover region, Mossbauer spectroscopy and mag. susceptibility meas. 3−3409
- Fe complex, Fe(2,2′-bipyridene)$(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3−8656
- Fe, electron irrad., muon trapping at monovacancies 3−52701
- Fe, isotropic ferromagnets, dynamical crit. behaviour 3−14061
- Fe, light impurities, hyperfine fields and adiabatic pot. 3−52064
- Fe mixed valence trinucl. clusters, Mossbauer spectra 3−28748
- Fe:^{152}Sm, hyperfine mag. fields 3−3138
- α-Fe:Co, neutron irrad., Mossbauer study of point defects 3−57821
- Fe-$^{115}In(^{75}As)$, dil., hyperfine fields of impurity nucl., press. depend., NMR study 3−43445
- α-Fe-Al-Si-Sn-V, dilute spin and charge density changes on substitution 3−52382
- Fe-Co alloys, electronic and mag. struct. from SCF XαSW calcs. 3−38278
- Fe-Cr(V), dil., hyperfine field and mag. moment, NMR study 3−19000
- Fe-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3−14038
- Fe-Pd-H system, mag. props., Mossbauer emission spectra study 3−28742
- Fe-Si, spin and charge density changes, effect of Si, Mossbauer study 3−19021
- Fe-Si-B amorphous alloys, Mossbauer spectra, hyperfine fields and mag. props. 3−28740
- Fe-V film, multilayered, ^{51}V NMR obs. 3−28735
- $Fe_{1-x}Al_x$, disordered, Mossbauer meas. of critical behaviour 3−14177
- $\alpha(Fe_{1-c}Al_c)_2O_3$, Morin transition, Mossbauer study 3−52677
- $Fe_{40}B_{60}$ amorphous sputtered film, magnetism, Mossbauer study 3−28657
- $Fe_{82}B_{18}$-Al_2O_3 amorphous granular film, Mossbauer study 3−43466
- $Fe_{80}B_{20}Sb_x$ amorphous alloy, Sb impurity hyperfine field, Mossbauer study 3−14168
- $Fe_{75.4}B_{14.2}Si_{10.4}$, amorphous ferromagnet, hyperfine field distrib. *(Korean)* 3−38735
- FeCr, dilute, hyperfine field distribs., host and impurity, NMR spectra 3−52639
- FeCr, mag. hyperfine fields, Curie temp. and mag. moments, Mossbauer study 3−52673
- $Fe_{0.3}Cu_{0.7}Cr_2S_4$, mag. semicond., mag. props. and cryst. struct. 3−14018
- $Fe_{3-x}Ge_xO_4$, hyperfine fields and electron diffusion, Mossbauer study 3−14181
- FeGe(Sn), elec. field gradient sign in paramag. state, Mossbauer study 3−23848
- Fe(III) porphyrins, low temp. magnetisation study 3−38599
- $Fe_{1-x}M_xSO_4.7H_2O$ (M=Mg, Ni, Zn, Co), cooperative Jahn-Teller effect, ^{57}Fe Mossbauer effect 3−52692
- $Fe_{1-x}Mn_xBe_2$, inhomogeneous magnetism, hyperfine interaction meas. 3−33892
- $Fe_{1-x-y}Mn_yO$, Mossbauer study 3−34016
- Fe_xNb_{100-x} sputtered amorphous alloy, mag. props., resistivity and Mossbauer spectra 3−28658
- $Fe_{1-x}O$, Mossbauer study 3−34016
- Fe_3O_4, electronic superstruct., Verwey transition, review 3−13734
- Fe_3O_4, low temp. phase, Fe^{3+} and Fe^{2+} hyperfine fields, NMR study 3−14150
- $Fe(OH)_3$, Mossbauer effect study of Fe ions *(Korean)* 3−14174
- α-FeOOH, goethite, Mossbauer spectra, hyperfine field interactions 3−3595
- FeP, mag. struct., Mossbauer study 3−28517
- $Fe_7Si_8O_{22}(OH)_2$, grunerite, mag. behaviour from Mossbauer spectroscopy 3−52686
- $FeTiO_3$ II, disordered, high temp. synthesis, mag. props. 3−14053
- Fe_2TiO_5, spin glass, Mossbauer study 3−28744
- FeV, dilute, hyperfine field distribs., host and impurity, NMR spectra 3−52639
- FeV(Mn), NMR freq. temp. depend. on local environments 3−52637
- ^{57}Fe Mossbauer spectra for tetrahedral cage hopping with correlated elec. field gradient reorientation 3−57842
- $GdAl_2$, quadrupole interaction, pulsed NMR study 3−28736
- $Gd(Fe, Rh)_2$, hyperfine interactions, Mossbauer study 3−19022
- $GdFe_2$-Tb(Nd), hyperfine struct. anisotropy, ^{57}Fe Mossbauer meas. 3−52684
- $Gd(Fe_{1-x}Co_x)_3H_y$, NMW spin-echo study 3−52666
- GdIG:Ho, hyperfine interation, NMR spin echo study 3−19013
- $Gd_{1-x}Y_x(Fe_{1-z}Co_z)_2$, CC ^{59}Co NMR study 3−28711
- Ge, anomalous muonium hyperfine parameters, temp. depend. 3−38741
- Ge:^{129}I (^{125}Te), nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3−8464

crystal hyperfine field interactions continued
Ge-Si-P alloys, ESR spectrum and g-factor, hyperfine components 3−14131
GeO_2:$Nb^{4+}(Mo^{5+})(W^{5+})$, nd^1 ions, superhyperfine interactions, EPR study 3−13789
$HfFe_2$, γ-γ perturbed angular correlation study 3−52687
HfS_2, ^{181}Ta nucl.-quadrupole freq. doubling, TDPAC study 3−8746
Ho(Fe, Rh)$_2$, hyperfine interactions, Mossbauer study 3−19022
HoIG, hyperfine interation, NMR spin echo study 3−19013
In surface, elec. quadrupole hyperfine interaction, PAC study 3−23343
$KCaF_3$:Yb^{3+}, paramagnetic centre struct., ESR study 3−14126
$KCdF_3$:Yb^{3+}, paramagnetic centre struct., ESR study 3−14126
KCl, F centres, hyperfine interactions, electron spin-echo study 3−33979
KCl:Eu^{2+}, ODMR study of $4f^65d$ excited state 3−34010
KCl:Tl^+, ESR spectrum anal. 3−38675
K_2CuF_4:Zn^{2+}, hyperfine interactions 3−19015
KD_2PO_4-KH_2AsO_4, X-ray irrad., ferroelec. switching times, ESR study 3−57863
K_2FeF_5, soliton broadening in Mossbauer spectra 3−57825
$K_2Zn(XO_4)_2.6H_2O$:Mn^{2+} (X=S, Se), spin Hamiltonian parameters and ESR spectra 3−38687
$LaAg_{1-x}In_x$, muon Knight shift study 3−52695
LaF_3:Pr^{3+} $^1D_2$-$^3H_4$ level hyperfine struct. by photon echo modulation spectroscopy 3−3133
$LaFeO_3$, mag. hyperfine interactions calc. with model covalency parameter 3−43133
$LaGd_3$, γ-γ perturbed angular correlation study 3−52687
$La_{1-x}Pr_xAl_2$, γ-γ perturbed angular correlation study 3−52687
Li ferrites, substituted, hyperfine fields relaxation, temp. effect, Mossbauer study 3−13784
$Li_{0.5-x/2}Zn_xFe_{2.5-x/2}O_4$, hyperfine field distribs. and spin canting, Mossbauer study 3−34013
$LuFe_2$-Tb, hyperfine struct. anisotropy, ^{57}Fe Mossbauer meas. 3−52684
$LuPO_4$:R^{3+}, (R=Ce, Nd, Dy, Er, Yb, U), hyperfine parameters, EPR 3−33975
$MgAl_{2-x}Fe_xO_4$, Mossbauer recoilless fraction 3−14183
$MgCO_3$:Fe^{2+}, slow spin relax, Mossbauer study 3−38730
$Mg(NH_4)_2(SO_4)_2.6H_2O$:CrO_4^{2-}, radicals at paramag. defects in X-ray irrad. cryst., EPR study 3−23802
MgO:Li, H, X-ray irrad., Li-H complex, ESR study 3−43432
MnAs, ^{55}Mn and ^{75}As NMR study 3−23816
MnF_2, dynamic recovery of magnetism in collision cascades after ion implantation, PAD study 3−57667
$MnSn_2$, ^{119}Sn hyperfine fields, Mossbauer spectra study 3−14178
$MnTe_2$, mag. props. study by thermal expansion, Mossbauer effect and X-ray diffr. *(Japanese)* 3−33861
MoS_2, alkali metal intercalates, ESR spectra and NMR Knight shift 3−14130
$(NH_4)_3HfF_7$, quadrupole interaction and elec. field gradient, γ-ray study 3−13788
$(NH_4)_2SnF_6$:Re^{3+}, linear polarised absorpt. spectra 3−57958
$(NH_4)_3VO_2F_4$, gamma-irrad., mol. dynamics and phase transition, EPR spectra 3−8717
$NaMnF_3$, hyperfine interaction and cryst. struct., NMR study 3−28715
$NaNO_2$, ferroelectric, ^{14}N nuclear quadrupole resonance, elec. field gradient tensor 3−14160
$NaNO_3$, molten, ^{23}Na NMR and elec. field gradients 3−3548
$NdCo_2$-Fe, hyperfine struct. anisotropy, ^{57}Fe Mossbauer meas. 3−52684
Ni complex, Ni(2,2′-bipyridene)$(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3−8656
Ni, critical phenomena, μSR studies 3−57845
Ni, isotropic ferromagnets, dynamical crit. behaviour 3−14061
Ni, single cryst., quadrupole interactions at different ion implanted probe ions, β-γ TDPAC study 3−3599
Ni:^{152}Sm, hyperfine mag. fields 3−3138
Ni:H, ferromagnetic, H props., multiple scatt. cluster-in-condensed-matter calc. 3−33666
Ni-Fe (0.5 at.%), Mossbauer spectra, room temp. to Curie point 3−52678
Ni-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3−14038
NiMn, NMR freq. temp. depend. on local environments 3−52637
$(Ni_{1-x}Pd_x)_2MnSn$, Heusler alloys, Sn mag. hyperfine field crossover 3−23842
$NpAs_2$, magnetic behaviour, Mossbauer study 3−23843
$NpO_3.2H_2O$, Mossbauer study, spin fluctuations 3−19026
$PbBr_2$, elec. field gradient at Br sites, NQR study 3−3589
PbF_2:Eu^{2+} single cryst., EPR, superhyperfine struct. 3−52621
PbF_2:Mn^{2+}, superionic, high temp., EPR studies 3−57763
Pd-Co, magnetocrystalline anisotropy and magnetostriction 3−57582
Pd-Fe, dil., localised giant magnetisation, hyperfine mag. field *(German)* 3−18851
$Pd_{77.5-x}Cu_6Si_{16.5}Fe_x$ amorphous alloy, hyperfine field distrib., Mossbauer spectra 3−43471
$PrNi_5$, nuclear mag. ordering, magnetization and susceptibility in small fields 3−52640
$PrPb_3$, mag. and quadrupolar props. 3−28508
$PrPt_2(Rh_2)(Ir_2)(Ru_2)(Ni_2)$, mag. props. at low temps., neutron diffr. study 3−14023
$Pr_xSm_{1-x}Fe_2$ Laves phases, mag. props., Mossbauer and magnetisation studies 3−52454
$PrVO_4$, NMR of ^{51}V, paramagnetic shifts 3−3545
$PrVO_4$, nuclear electric quadrupole interaction 3−3584
$Pr_{0.25}Y_{0.75}Al_3$, effect of paramagnetic ion substitution on crystalline electric field *(Russian)* 3−52094
Pt, trapping of C impurity at ^{181}Hf probe atoms, TDPAC study 3−57840
PtFeSb, Heusler alloy, struct., mag. and magneto-optical props. and ^{57}Fe Mossbauer spectra 3−57898
$R(OH)_3$:Gd^{3+}, (R=La, Sm, Eu, Tb, Ho, Y), host lattice effects, zero field splitting, EPR study 3−18982
$RbMnCl_3$, ^{87}Rb NMR, hyperfine, quadrupole and dipole-dipole interactions 3−28716
$RbNO_3$, molten, ^{87}Rb NMR and elec. field gradients 3−3548
$Rb_2ZnBr_4(Cl_4)$, incommensurate phase, second order quadrupole shift, NMR study 3−52101
Re, nucl. quadrupole interaction and Knight shift, nucl. acoustic reson. study 3−28709
Re:^{184,185}Ir, low temp. elec. quadrupole orientation, elec. field gradient 3−13787
Rh-Cr dilute alloys, hyperfine interactions, Knight shift, nuclear orientation study *(French)* 3−33691
Sb−^{181}Ta, quadrupole interaction, temp. depend., TDPAC study 3−3604

crystal hyperfine field interactions continued
$ScPO_4$:R^{3+}, (R=Ce, Nd, Dy, Er, Yb, U), hyperfine parameters, EPR study 3−33975
Si, implanted impurity electron states, hyperfine interaction and channelling studies 3−43076
Si:^{125}Te (^{129}I), nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3−8464
p-Si:Al, negatively charged vacancy, hyperfine interactions and ENDOR meas. 3−43459
Si:C, irradiated, luminescence, 0.97 eV line origin 3−43611
SiC:B, paramag. defects, ESR study 3−3533
$Si_{1-x}N_x$, g-value, ESR linewidth and hyperfine struct. const. 3−38696
SiO_2-$Li_2O(Na_2O)(K_2O)$, glass, Cu ion, exchange diffusion layers, ESR and optical study 3−52605
Sm-Co based alloys, exchange and hyperfine fields on dil. ^{153}Eu 3−52676
$Sm_2(Co,Fe,Cu,Zr,Cr)_{14.8}$ permanent mag., ferromag. coercivity 3−33937
$SnBr_2$, elec. field gradient at Br sites, NQR study 3−3589
SnO_2:$Nb^{4+}(Mo^{5+})(W^{5+})$, nd^1 ions, superhyperfine interactions, EPR study 3−13789
SnU, tetragonal, lattice dynamics and Mossbauer lattice temp. 3−57838
$SrCl_2$:Mn^{2+}, superionic, high temp., EPR studies 3−57763
SrO:Pb^{3+}, impurity centres, light or X-ray irradiation, EPR spectra *(Russian)* 3−57771
$(Sr_{1-x}Sm_x)FeO_3$, synthesized under high O_2 pressure, Mossbauer studies 3−23846
TaS_2-2H intercalates, hyperfine spectroscopy, charge transfer, reaction kinetics 3−23342
Tb isotopes, hyperfine interactions, nuclear orientation study *(French)* 3−33691
$Tb(Zn_{1-x}Cu_x)$, hyperfine interactions, ^{156}Gd TDPAC study 3−52681
$Tb(Zn_{1-x}Cu_x)^{156}$Gd, hyperfine field of ^{156}Gd, γ-γ perturbed angular correlation study 3−14165
TeSn, hyperfine interaction, perturbed angular distrib. meas. 3−14166
Ti-Cu hydrides, proton NMR study of H diffusion and electronic struct. 3−34003
TiO_2:$Nb^{4+}(Mo^{5+})(W^{5+})$, nd^1 ions, superhyperfine interactions, EPR study 3−13789
$^{192}Tl(8^-)$ nuclei in hexagonal Tl and tetragonal In, electric quadrupole interaction, TDPAD study 3−18674
$TmCo_2$, first order mag. phase transition and mag. struct., Mossbauer study 3−18892
Tm_6Mn_{23}, Mossbauer effect, mag. props., and lattice consts., effect of H_2 absorpt. 3−52679
$TmNi_3(Co_3)$, ^{169}Mossbauer spectra, cryst. field calcs. 3−52675
V_3Ga, NMR line breadth, spin-spin relax., and spin echo *(Russian)* 3−52649
VO^{2+} in tutton salts, EPR, host lattice effects 3−57756
V_2O_5 crystals, impurities and electron localisation, EPR study 3−52599
V_2O_5, free and bound polarons, ESR and DC cond. meas. 3−23293
Y(Fe, Rh)$_2$, hyperfine interactions, Mossbauer study 3−19022
$Y(Fe_{1-x}Co_x)_2$, H_2 absorption effects on mag. props. 3−52423
$Y(Fe_{1-x}Co_x)_3H_y$, NMW spin-echo study 3−52666
$Y(Fe_{1-x}Mn_x)_2$ mag. props. and Mossbauer spectra, absorbed H effects 3−28631
$(Y_{1-x}Gd_x)_2Co_{17}$, Y and Co hyperfine fields, Gd contrib., NMR study 3−19012
YIG, pure nucl. reflexes and combined hyperfine interactions, Mossbauer study 3−43465
YIG:Ho, hyperfine interation, NMR spin echo study 3−19013
YPO_4:R^{3+}, (R=Ce, Nd, Dy, Er, Yb, U), hyperfine parameters, EPR study 3−33975
$(YSmCaTm)_3(FeGe)_5O_{12}$ films, H_2^+ ion implanted, conversion electron Mossbauer spectroscopy study 3−57831
$YbVO_4$, NMR of ^{51}V, paramagnetic shifts 3−3545
$YbVO_4$, nuclear electric quadrupole interaction 3−3584
Zn ferrites, hyperfine fields 3−13783
$Zn_{0.37}Mn_{0.58}Fe_2O_4$:Cr(In), hyperfine fields, Mossbauer study 3−47580
$ZnTiF_6.6D_2O$, phase transitions, ^{2}D NMR quadrupole coupling const. and elec. field gradient studies 3−42765
$(Zr_{0.5}Hf_{0.5})Fe_2$, hyperfine mag. field, TDPAC study 3−23845
ZrS_2 (Se_2), alkali metal intercalates, ESR spectra and NMR Knight shift 3−14130

crystal imperfections *see crystal defects*

crystal inclusions
alloys, model for plane strain ductile fracture toughness 3−53238
Alnico 5 permanent magnets, non-metallic inclusions and mag. props. modification rel. to Mn content 3−52549
cathode materials with inclusions of emission-active phase, prep. 3−58073
composite, rigid inclusions system, plane periodic problem 3−56494
composite with acute-angled inclusions, strength evaluation 3−51019
composites, granular, with different types of grains, microstress fields 3−53102
composites, with elliptical inclusions, shear moduli 3−57012
composites with periodic structure, overall elastic moduli 3−4068
diamond, ion implanted, X-ray diffr. contrast, wavelength depend. 3−37736
diamond, natural polycrystal, microstruct. of carbonado and ballas type UHVEM study 3−33260
diphenyl, negative crystals, spontaneous transformation, surface roughness and kinetics meas. 3−13427
elastic wave scattering theory, Born series and matrix variational Pade approximant method 3−25764
elastic wave scattering theory, inverse scatt. in long wavelength limit 3−25789
elastic wave scattering theory, method of equiv. inclusion extension to dynamic case 3−25767
elastic waves, inverse scatt. problem from inclusions with unknown boundaries 3−56466
elastic-plastic material, stress singularity at ribbon-like rigid inclusion end 3−2650
elastic-plastic problem, doubly periodic, rigid inclusion effect on plastic zone propag. 3−46459
ferroelectric, first order transition theory, calc. of elastic and electrostatic energies of inclusion 3−38024
half-space with thin inclusion, axisymm. elastic problem 3−46451
inhomogeneous media with nonellipsoidal inclusions, elec. cond. 3−33696
lithium formate crystals, growth kinetics in normal and heavy water solns. 3−13140
magnetic leakage fields from prolate and oblate spheroidal inclusions, theory 3−38649

crystal inclusions continued
melting mechanisms and surface structures in crystals, impurity depend. 3−33409
metallic materials, fatigue life distrib. rel. to surface defect distrib. 3−19390
micromechanics of defects in solids, eigenstrain method, book 3−27941
nonmetallic, assessing size and shape distrib. 3−24448
piezoelectric, first order transition theory, calc. of elastic and electrostatic energies of inclusion 3−38024
salol, cryst. growth from melt, gas inclusion form., bubble capture kinetics 3−33164
steel, alloy type, fracture kinetics at final deform. stage 3−19412
steel, antifraction bearing, surface fatigue, study of nonmetallic inclusions, microcracks and pitting 3−29145
steel, austenitic stainless, powder, hot ductility and recrystn., effect of oxide inclusions 3−58159
steel, Cr-Mo-V, fatigue crack initiation and growth rate in superheated steam environment *(Japanese)* 3−9176
steel, fatigue strength and toughness *(German)* 3−34424
steel, high strength, ductility and impact energy, effect of vol. fraction and shape of sulphide inclusions 3−34396
steel, high strength, hydrogen embrittlement, role of MnS inclusions 3−29173
steel, HSLA, submerged arc welds, acicular ferrite nucleation rel. to inclusion comp. 3−53015
steel, HSLA, weld metals, struct. and props., effect of inclusions 3−43959
steel, low alloy, fatigue strength for cyclic load, degree of purity and surface condition influence *(German)* 3−53218
steel, low alloy, low C, weld metal, role of O rich inclusions rel. to microstruct. 3−22906
steel, low alloy, powder-forged, fracture, effect of inclusions 3−53207
steel, maraging, cleaned, 3.5 GPa grade, fatigue strength *(Japanese)* 3−24337
steel, martensitic stainless, tempered, SCC in Na_2SO_4 soln., effect of temp. 3−34528
steel, Mu-Si-C, solubility of S in austenite and S precip. on cooling *(French)* 3−29087
steel, Ni-Cr-Mo, Ca, rare earth metal treated, impact energy, effect of sulphide inclusion shape control *(Korean)* 3−29169
steel, normalised, C-Mn, mech. prop. anisotropy, effect of sulphide inclusion morphology and pearlite bonding 3−53197
steel, oxide inclusions formation during diffusion of O_2 3−38138
steel, structural, crack-tip ductility 3−53222
US scattering data, inverse Born approx. appl. 3−29290
Al alloy, acoustic emission during plastic deform. and crack growth in 2024 and 2124 specimens 3−39348
Al alloy, fine grained, type 7475, microstruct. obs. of superplastic cavitation 3−14663
Al alloy, high-strength V95 sheet, struct., fracture and mech. props. w.r.t. impurity content 3−58233
Al alloys, nonmetallic macroinclusion morphology, nature and comp. *(Rumanian)* 3−19314
Al-Cu-Mg alloys, acoustic emission during plastic deform. 3−34391
Al-Cu-Mg-Mn, wrought, props., comp. and struct. influence 3−34471
Al-Zn-Mg-Cu, ageing conditions and impurity content influence on struct. and fracture 3−34541
$Bi_{12}GeO_{20}$, sillenite type struct., single crystals, formation of defects 3−13211
$Bi_{12}SiO_{20}$, sillenite type struct., single crystals, formation of defects 3−13211
$Cd_{0.2}Hg_{0.8}Te$, free-carrier IR absorpt. spectra 3−43526
CdTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3−33441
Co_5Sm permanent magnet, mag. domain struct. and microstruct., TEM and electron diffr. study 3−28603
Cr condensates, brittleness threshold 3−34473
Cu-Ni-Fe, ferromagnetic inclusions, phase transitions, AC susceptibility studies 3−33941
Fe, cast, spheroidal graphite, identification of inclusions *(French)* 3−24423
Fe:He, D, ion implanted, D surface permeation and defect trapping obs. 3−33500
n-GaAs, etching under laser illum., cryst. defects study 3−42612
GaAs, microinclusion-induced mech. prop. degradation 3−57023
KH_2PO_4 crystals, growth phenomena rel. to internal struct., hydrodynamic influence 3−13141
MnS inclusions in steel, coarsening and dissoln. model 3−33453
$NaNO_3$ single crystals, growth from soln. and melt. and cryst. defects 3−37824
Si ribbons, Stepanov growth, SiC inclusion form. 3−2547
SiC:Al(B), sintered, microstruct., inclusions, comp., STEM, AES, X-ray analysis 3−39077
Si_3N_4 hot pressed dielectric material, quality control 3−24195
SiO_2 particles in Cu, coarsening and dissoln. model 3−33453
TeO_2, paratellurite single crysts. grown by Czochralski technique, impurity microdistrib. 3−13256
Ti-Al-V (6,4 wt.%), sintered, characterisation of fracture surface, pores and inclusions 3−24237
ZnTe, impurity segregation and self-compensation effects on cathodolumincsc. and cond. props. 3−33441

crystal internal fields *see crystal field interactions*

crystal interstitials *see interstitials*

crystal lattice structures *see crystal atomic structure*

crystal microphones *see microphones*

crystal microstructure
for microstructural changes, see also phase transformations, hardening, heat treatment, metalworking
see also crystal defects; crystal inclusions; crystallites; dendritic structure; domain boundaries; domains; electron microscope examination of materials; eutectic structure; grain boundaries; grain size; Guinier-Preston zones; mosaic structure (microstructure); noncrystalline state structure; precipitation; segregation; subboundary structure; superlattices; texture; X-ray diffraction examination of microstructure
alloy, powder, rapid solidification 3−9052
alloys, ultrafine grain structures by recrystallisation annealing 3−34355
Alnico 5 permanent magnets, non-metallic inclusions and mag. props. modification rel. to Mn content 3−52549
bronze BrAZhNMts 9-4-4-1, superplastic deform. study *(Russian)* 3−39208

crystal microstructure continued
carbides, M_7C_3, microstructure and planar defects, electron diffr. and microscopy study *(French)* 3−38093
ceramic, polycryst., for opt. components, light scatt. coeffs. w.r.t. relative density of medium 3−8841
ceramic materials, ratio of compression and tension creep rates, struct. effect 3−43902
eutectic, directionally crystallised, creep and fracture modelling *(Russian)* 3 53186
Fe-Ni(25wt.%), supercooled, nucleation and grain refinement, relationship in absence of gravitational field *(Croatian)* 3−51761
ferrite, porous, microstruct. and mag. props. 3−43395
ferrites, conference, Kyoto, Japan (Sept.-Oct. 1980) 3−10520
ferrites, electron microscopy studies of microstructure-property relations 3−13054
glass fibre reinforced PET, microstruct. and fracture 3−19406
graphite fibres, effects of intercalation on microstructure 3−33459
irradiated solids, microstructure evolution, dislocation and void populations *(French)* 3−27978
magnetic thin film, magnetisation and perpendicular anisotropy, effect of columnar microstruct. 3−23747
maraging steel based on Fe-Ni, influence of alloying elements on recrystallisation *(Russian)* 3−34343
metals, discrete microstructural changes investigation using resonance method 3−24285
metals, FCC, critical strain hardening, grain growth, dislocation struct. *(French)* 3−58133
nuclear fuels, porous, thermal conductivity bounds 3−55139
optical ceramic, toughened materials selection rationale 3−7097
particle size distribution in opaque matrix, intercept length distribution of rectangular prisms 3−34277
plastic deformation texture simulation, generalised computer program 3−44954
second-phase particles, nonregular dispersions use of Dirichlet tessellation for characterising and modelling 3−47816
steel, alloy, heat-resistant, props. rel. to struct. 3−29130
steel, alloy, high-strength, quenched and tempered, low-temp. behaviour 3−47887
steel, alloy, melt spun ultra high strength, microstruct. study 3−9097
steel, alloyed with graphitising elements, damping and mech. props. 3 4072
steel, austenite temp. and degree and deform. rate effect on carbide phase morphology *(Ukrainian)* 3−14611
steel, austenitic, dispersion hardening, shock loading effect on struct. and props. 3−53074
steel, austenitic, fatigue fracture, at 293 and 11K, influence of microstructure 3−4104
steel, austenitic Cr-Ni, hot embrittlement in heat affected zone of welded joints *(German)* 3−53097
steel, austenitic stainless, Cr-Ni-Mo-Ti, shaped castings, intermetallic phases struct. and props. 3−29114
steel, austenitic stainless, H embrittlement, tempering effect, austenite content 3−34449
steel, austenitic stainless, internal stresses rel. to hydrogen cathodic charging, X-ray obs. 3−39232
steel, austenitic stainless, unstressed, erosion or penetration by molten Zn 3 39295
steel, Bauschinger effect rel. to cementite content and morphology, tension-compression test 3−43916
steel, carburised, retained austenite effect on fatigue strength *(Japanese)* 3−19400
steel, cold-rolled rimmed, recrystallisation annealing, microstructure and texture changes during grain growth *(Russian)* 3−9083
steel, Cr, microstructure, microhardness, austenite form., laser treatment, SEM and TEM studies 3−24342
steel, Cr low alloy, hardened, tempered, radiation embrittlement rel. to struct. 3−43951
steel, Cr-Al, ferritic, heat resistance, strength and embrittlement increase by thermal stress 3−47861
steel, Cr-Mo-V, low-alloy, structs. identification and morphology after hear treatment 3−39176
steel, Cr-Ni-Si, ferritic-austenitic, heat resistance, strength and embrittlement increase by thermal stress 3−47861
steel, Cu-Cr, weather resist., stress rupture behaviour 3−47961
steel, H trapping, permeation meas. effect of microstruct. 3−33504
steel, hot rolling, model to calc. struct. development and mech. props. *(Czech)* 3−14614
steel, HSLA, hot-rolled, ferrite grain refinement 3−43877
steel, ion nitrided, struct. characterization 3−4209
steel, low allow, high strength, V-containing microstruct. and retained austenite, influence of cooling rate 3−24245
steel, low alloy, dual phase struct., fracture and necking rel. to nonferritic phase comp. 3−53179
steel, low alloy, low C, weld metal, role of O rich inclusions rel. to microstruct. 3−22906
steel, low alloy, ultrahigh strength, grain boundary phase obs. in laser heat treated samples 3−22919
steel, low C, austenite-ferrite structs., hot torsion deformation 3−43915
steel, low C, dual-phase, fatigue crack path, high mean stress, ferrite selection ratio *(Japanese)* 3−39241
steel, low-alloy, containing V and B, struct. and failure resist. 3−4128
steel, low-alloy, dual phase sheet, development 3−39175
steel, low-alloy, structural, struct. and props. after deform. in intercrit. temp. range 3−34363
steel, low-alloy constructional, lath martensite struct., TEM obs. *(Polish)* 3−47841
steel, low-C martensitic structural, design for high strength and toughness, struct.-prop. relations 3−39162
steel, maraging, ageing, hardening, precipitate size and distrib. *(Japanese)* 3−58139
steel, medium C, impact toughness in different struct. states, complex dynamic loading effect 3−34475
steel, medium C, ultrahigh strength, heat treatment, fracture props. rel. to comp. 3−53240
steel, Mn-(Nb), yield and impact strength, plate gauge depend., cooling rate effect 3−43914
steel, Mn-Al, high-alloy, struct. and mech. props., room and cryogenic temps. 3−39244
steel, Mn-Si, dual phase sheet, development 3−39175
steel, Mu-Si-C, solubility of S in austenite and S precip. on cooling *(French)* 3−29087

crystal microstructure continued
steel, rapidly cooled from liq. state, struct. and electrophys. props. 3—8472
steel, stainless, Cr-Ni, castings, excess phase struct. and comp. 3—29083
steel, stainless, DC planar-magnetron sputtered film microstruct., Ar press. effect 3—3001
steel, stainless, hot vacuum pressed powder, corrosion reistance, mech. props. 3—47802
steel, stainless, structure and props. 3—34333
steel, stainless, type Kh17N10T, neutron irradiated, structural changes during strength tests *(Russian)* 3—39235
steel, stainless, wire reinforced Cu, cold rolled, deform. 3—34379
steel, steel, maraging, age hardening, 773K, microstruct., TEM and electron diffr. obs. *(Japanese)* 3—39165
steel, structural, struct. and props., thermal hardening and thermomechanical treatment effects *(Russian)* 3—24243
steel, two phase, fatigue crack growth, microstruct. effects 3—34437
steel, ultrasonic effects on Mn phosphating, microstruct. and wear resist. 3—58314
steel 5KhNM, electroerosion shaped, cooling rate and surface microstruct. *(Russian)* 3—4186
steel 65G, fatigue crack growth resist., struct. influence 3—58234
steel type St.3sp, plastically deformed, resistance to fracture *(Russian)* 3—34431
steels, sintered, mech. props., review 3—24326
TCNQ salt, $Cs_2(TCNQ)_3$, low dimensional semicond., EPR, anisotropy *(Korean)* 3—8711
transition metal alloys, MGa and MGe, phase analysis, high press. and temp. 3—18475
visual aid slide set for work hardening and welding *(French)* 3—54602
Ag-Cu directional eutectic alloy, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3—24424
Ag-Cu(Al) film, vacuum deposited, elec. and mechanical props. 3—14495
Al (99 wt.%), household foil, tensile deform., texture and thickness effects 3—43918
Al alloy, acoustic emission during plastic deform. and crack growth in 2024 and 2124 specimens 3—39348
Al alloy, fine grained, type 7475, microstruct. obs. of superplastic cavitation 3—14663
Al alloy, high-strength V95 sheet, struct., fracture and mech. props. w.r.t. impurity content 3—58233
Al alloy, stress corrosion reinstant, high strength, type 7075, microstruct. study, TEM obs. 3—9096
Al alloy AK4-1, fatigue crack propag. kinetics, Al_9FeNi insoluble phase particles effect 3—34472
Al alloy castings, mech. strength rel. to porosity 3—34377
Al alloy castings, mech. strength rel. to porosity 3—34378
Al, anomalous and constant substructs. creep transients 3—47923
Al cryst., dynamic loading, strain-rate history affects and microstruct. aspects 3—33345
Al electrophoretic coatings on steel 3—24413
Al-Cu alloy D16T sheets, temp. to which heated determ. from struct. and props. 3—24275
Al-Cu-Co, sintered, struct. and mech. props., effect of rapid cooling on crystn. 3—34259
Al-Cu-Mg, fracture toughness rel. to struct. nonuniformity in AK4-1 alloy rolled plates 3—58331
Al-Cu-Mg-Mn, wrought, props., comp. and struct. influence 3—34471
Al-Cu-Mn, large slabs, struct. and mech. props. 3—34404
Al-Cu-Mn-Mg-Si, heat-resist., struct. and mech. props., Si effect 3—34403
Al-Cu-Mu-Zr-Fe-Si, struct. and props., Fe and Si additions influence 3—39248
Al-Cu(Fe), directional eutectic alloy, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3—24424
Al-Mg, struct., plastic deformation and corrosion resistance *(Russian)* 3—24292
Al-Pb-Sn-(Sb)-(Mg)-Cu, antifriction, produced by compensation of gravit. segregation by electromag. forces 3—34261
Al-Si (22 wt.%) alloy, subsurface damage during dry sliding wear 3—24369
Al-Si alloy, chill castings, supersaturation method influence on precip. hardening 3—29093
Al-Zn-Mg alloys, struct. of precipitation free zone after heat treatment 3—43872
Al-Zn-Mg-Cu, ageing conditions and impurity content influence on struct. and fracture 3—34541
Al-Zn-Mg-Cu alloy, 7075, fatigue crack growth near threshold rel. to ageing treatment 3—34479
Al-Zr, ion implanted, struct. and mech. props. 3—4051
AlNiCo permanent magnet alloys, struct. and props. book contrib. 3—57708
Al_2O_3, CVD, film struct., reactant gas partial press. efect 3—13680
Al_2O_3 ceramics, intergranular phases, SEM, TEM and EPMA study 3—14552
α-Al_2O_3, liquid phase sintered, grain boundary microstruct., TEM study 3—46966
Al_2O_3/graphite mixture, microstructure development during carbothermic reduction 3—39079
Al_2O_3-B_4C composite ceramics, sintering, densification, microstruct. development 3—47807
Al_2O_3-B_4C composite pellets, moisture adsorption, microstruct. 3—47221
β''-Al_2O_3-Na_2O ceramics, Li_2O stabilised membrane, for Na-S cell, sintering process 3—14538
Al_2O_3-ZrO_2 composites, critical microstruct. for microcracking 3—39240
As-Ge-Se chalcogenide glasses, controlled crystallisation in nucleated system 3—33123
As_2Te_3-$Tl_5As_2Te_3$-As system, phase diagram anal. 3—58104
BaAl 48 alloy, intensively cooled, anomalous segregation anal. *(Polish)* 3—19333
BaO-transition metal oxide-Fe_2O_3 ferrite, microsyntactic intergrowth and composition fluctuation 3—13472
$BaO.6Fe_2O_3$ permanent magnet, oriented, fracture toughness and anisotropy 3—14741
$BaTiO_3$, anomalous grain growth below eutectic temp. *(German, English)* 3—47862
$Ba_2Ti_9O_{20}$, phase equilibria, 1100°-1400°C 3—43794
Be films, physical vapour deposition and microstruct., atomic incident angles effects 3—24135
Be-B, ion implantation prep., wear resistance and microstructure 3—4152

crystal microstructure continued
Bi-Te(Cd)(Pb), eutectic possibility of use in production of cooling elements based on bismuth and antimony chalcogenides 3—9047
BiTe-TlTe system, phase diagram, X-ray microstruct. and DTA studies *(French)* 3—33394
C fibre as example of self-reinforced composite, amorphous-cryst. struct. 3—53073
C, porous and fibrous, microstructure and properties, TEM study 3—8212
$Ca_{3-x}R_xSi_xP_{2-x}O_8$, (R=rare earth), sintered, phase composition and props. 3—8210
Cd-Ni-As system, reactions 3—58106
Cd-Zn, unidirectionally solidified eutectic alloy, compressive deform., metallography 3—53133
CdS, vapour-grown, interface morphology and sub-grain struct. obs. 3—7935
CeO_2 thermal barrier coating on superalloys, dip process 3—43996
Co film, electroplated, for perpendicular mag. recording, microstruct. and mag. props. 3—28227
Co superalloy, quench rates in gas-atomised powders and melt-spun ribbons, microstruct. depend. 3—29030
Co-Cr perpendicular magnetic recording medium for mag. tapes *(Japanese)* 3—47531
Co-Ge-Te system, isothermal cross section, microstruct., DTA and X-ray anal. 3—51749
Co-Ni:N film, high coercivity and microstruct. 3—18947
Co_5Sm permanent magnet, mag. domain struct. and microstruct., TEM and electron diffr. study 3—28603
Cr condensates, brittleness threshold 3—34473
Cr-Ni-P-C electrophoretic sintered coatings on steel, disintegration on heating and extension 3—24411
Cr_2O_4-Al_2O_3 composites, fused refractories, struct. and props. 3—19317
Cu-Al film, vacuum deposited, elec. and mechanical props. 3—14495
Cu-Al_2O_3 polycrystals, dispersion hardened, strengthening mechanisms 3—43850
Cu-Al-O, ion implanted, mechanical and struct. props. 3—4051
Cu-Cr alloys, high temp. creep and fatigue rel. to microstruct., Mg and Zr addition effects 3—47928
Cu-Ge, rolled alloys, deform. mechanism, microstruct., grain orientation 3—53165
Cu-Ge (7 and 15 wt.%), struct. form. on solidification 3—4032
Cu-Zn, rolled alloys, deform. mechanism, microstruct., grain orientation 3—53165
α-Cu-Zn, short-range ordering kinetics, heterogeneous microstruct., elec. resist. meas. 3—51814
Cu_2NiZn, ordering alloy, stress-strain, 77-343K, yield stress rel. to dislocation sources 3—43922
Cu_2S-CdS system, phase diagram 3—58107
CuZnAl shape memory alloys, austenite microstruct. effects on martensitic transform. 3—43830
Er_2O_3-ZrO_2 solid solutions, sintering *(Japanese)* 3—39084
EuV_2S_4 thin film, prep. and elec. props. 3—14493
Fe alloys, sintered, plain-mixed, detrimental effect of Mo on ductility 3—19368
Fe, cast, remelted ductile, microstructure transforms., metallographic study 3—39102
Fe, Cast, tensile strength, effects of Al and Cu additions *(Korean)* 3—39161
Fe, cast, vermicular graphite, morphology and graphite formation *(Chinese)* 3—19332
Fe, cast, white, cementite transform. into austenite 3—24222
Fe, cast, white, mischmetal effect on microstructure and mech. props. 3—24327
Fe, white cast, solidification kinetics, mech. vibration effect *(French)* 3—58114
Fe, white cast powders, rapidly solidified, microstruct., annealing effect 3—39062
Fe-C, US attenuation, microstruct. and ductile to brittle transition temp. 3—58228
Fe-C-Si alloy, isothermal austenitising, dissolution of graphite *(Polish)* 3—47860
Fe-Cr-Co permanent magnet alloy, atom probe FIM, microstruct. and comp., coercivity mechanism 3—14559
Fe-Cr-Co-Si, cryst. struct., precipitation *(Russian)* 3—37851
Fe-Cr-Co-Si-V, cryst. struct., precipitation *(Russian)* 3—37851
Fe-Mo alloys, microstruct. changes near coherent spinodal line *(Japanese)* 3—9100
Fe-Ni (30 wt.%), stress induced martensitic transformation, in situ microscopy *(Japanese)* 3—58121
FeBSi amorphous alloys, microstructurally depend. mag. props. 3—28620
$(Fe_xB_{1-x})_{0.9}Tb_{0.05}La_{0.05}$, crystallized, coercive force and microstruct., composition depend. 3—33931
GaAs:Te, microdefects and microprecipitates investig. *(Chinese)* 3—8050
Ga_2Te_3-Fe, solid solubility 3—57091
Gd_3Co, zero gravity solidification expts. and mag. props. 3—38033
GeTe-Co_2Ge system, polythermal cross section, microstruct., DTA and X-ray anal. 3—51749
HfN coatings on cemented carbide tools, PVD and CVD, interrupted cutting tests 3—14763
Li ferrite, mag. props., Bi_2O_3 and Nb_2O_3 additives effects 3—43396
Li-Zn-Ni-Co-Mn ferrites, microstruct. and memory core characts., effect of composite fluxes 3—14549
LiF cryst., dynamic loading, strain-rate history affects and microstruct. aspects 3—33345
Li_2O-MgO-Al_2O_3-SiO_2, Fe_2O_3 doped, transparent glass ceramic, microstruct. and crystallisation 3—2423
Mg alloy, fatigue crack nucleation and growth, struct. state depend. 3—19413
Mg Zn ferrites, mech. strength, density and grain growth depend. 3—14740
Mg-Y-Zn-Cd, nature of solidification 3—39106
$MgAl_2O_4$, layer struct., recrystallisation during pressing 3—8211
Mo wire reinforced Cu, cold rolled, deform. 3—34379
Mo-Zr-Cr-B, microplastic deform., grain boundary segregation *(Russian)* 3—39206
NaCl, substruct., large- and small-angle misorientations under creep 3—2660
NaCl-KCl mixed crystals, thermal diffusion, decomp., microstructure studies by etching 3—13469
Nb-based superconductor, bronze route fabrication and props. 3—29028
Nb-V-Ge system, isothermal cross section of phase diagram at 1123K 3—13407

crystal microstructure continued
Nb_3Ge A15 supercond. film, TEM study of microstruct. *(Chinese)* 3—51968
Nb_2O_5-WO_3 microstruct., crystallographic shear phase, on annealing at 1173K 3—8062
Nb_3Sn supercond. layer, struct. and crystallographic orientation, X-ray and SEM studies 3—42974
Nb_3Sn-Nb_3Ge-Zr solid solns., hardness, elec. cond. and physicochemical anal. 3—14701
Ni alloys, ultrafine grain structures by recrystallisation annealing 3—34355
Ni base superalloy IN-100, powder consolidated, microstruct. changes during superplastic determ. 3—9131
Ni superalloy, quench rates in gas-atomised powders and melt-spun ribbons, microstruct. depend. 3—29030
Ni, superalloy MAR-M247, Co effect on microstruct. 3—14618
Ni wire reinforced Cu, cold rolled, deform. 3—34379
Ni-base alloy, heat resistant, fatigue resist., 873-1073K, struct. effect 3—43953
Ni-Ce-Y-C, graphite morphology and microdistrib. of Ce and Y modifying agents 3—39108
Ni-Cr, ultrafine grain structures by recrystallisation annealing 3—34355
Ni-Cr (80, 20 wt.%), cast, melting conditions influence on struct. 3—9055
Ni-Cr-W-Co-Mo-Ti-Al superalloy, investment cast, tensile props., stress-rupture, corrosion resist., rel. to B/C modification 3—58161
Ni-W-Al alloy, dispersion strengthened, prod. by mech. alloying, characteris. 3—58071
Ni-Zn ferrite, mag. props., Bi_2O_3 and Nb_2O_3 additives effects 3—43396
Pb-Bi-Au Josephson junction counterelectrodes, film microstructure and thermal stability 3—47238
Pb-Sn, eutectic, periodic lamellar substructure, investigation by laser beam diffr. 3—24441
PbTe-FeTe system, phase diagram and elec. props. 3—2739
Pd-Fe solid solutions, proton irradiation damage, dislocation loops, voids, TEM 3—37969
$PrVS_3$ thin film, prep. and elec. props. 3—14493
Si eutectic alloys, directionally crystallised, microstructure and crystallography 3—7980
Si, laterally seeded, on SiO_2, microstruct. 3—18306
Si plasma sprayed film, microstruct. and elec. props. 3—23213
Si/SiO_2 struct., ion implantation form., microstructure, TEM and SEM study 3—2992
Si-Ti-Cr-V, plasma-deposited coatings, oxidation and struct., V effect 3—39307
SiC, reactively sintered, processing factor influence on struct. and elec. characts. 3—24196
SiC whisker reinforced Al composite, hot rolling effect on microstruct. and tensile props. 3—53181
SiC:Al(B), sintered, microstruct., inclusions, comp., STEM, AES, X-ray analysis 3—39077
Si_3N_4, hot pressed, microstruct. rel. to heat treatment, air and Ar atmospheres 3—53005
Si_3N_4, hot-pressed, electron microscopy obs. of microstruct., grain boundary struct. 3—51612
Si_3N_4 powders, high press. hot pressing, densification, α to β phase transform., hardness, fracture toughness, temp. depend. *(Japanese)* 3—58084
Si_3N_4-TiN composites, CVD, microstruct. 3—23204
Si_3N_4-Y_2O_3-Al_2O_3-Mg-O, sintered compacts, hot isostatic pressing, density, flexural strength *(Japanese)* 3—58083
Si(100) with adsorbed Ni, diffusion layer microstructure 3—13634
Sm-Co-Cu-Fe-Zr magnets, sintered, phase comp. and struct. 3—4043
Sm(Co, Fe, Ni) system, mag. props. 3—14024
Sn-Sb-O system, microstruct., high resolution electron microscopy study 3—18474
steel, V, dual phase sheet, development 3—39175
Ta_2O_5-WO_3 microstruct., crystallographic shear phase, on annealing at 1173K 3—8062
$TaSe_2$ (2H), CDW states, discommensuration arrays, broken hexagonal symmetry 3—18635
Te-As_2Te_3-$Tl_5As_2Te_3$ system, phase diagram anal. 3—58103
$\alpha+\beta$-Ti alloy, fracture toughness, strength and microstruct. 3—14734
α-β Ti alloy, microstructural effect on susceptibility to internal H_2 embrittlement 3—14710
Ti alloy, plane strain fracture toughness parameter, comp. and struct. depend. 3—14833
Ti alloy 662, two-phase, microstruct., US factors and fracture toughness interrelation 3—58229
Ti, dispersion hardening 3—29098
Ti, shock wave loading, $\alpha \rightarrow \omega$ transform. mechanism and struct. 3—14592
β-Ti-Al-Mo-Cr, heat treated, polygonised struct. influence on props. 3—19356
Ti-Al-Sn(Mn) and Ti-Al-Cr(Zr)-Mo-Si, mech. props., laminated struct. influence 3—19389
$\alpha+\beta$ Ti-Al-V, mech. props., heat treatment influence 3—24279
Ti-Al-V, powder metallurgical, prod. and mech. props. 3—29035
Ti-Al-V (90, 6, 4 wt.%), fatigue strength, heat treatment effect 3—24280
Ti-Al-V alloy, annealed microstructures, fatigue failure 3—14736
Ti-Al-V alloy, cast, heat treatment processes and microstructures, mech. props. 3—24282
Ti-Al-V alloy, VT5L, rare earth additions effect on mech. props. and thermal stability 3—24367
β-Ti-Al-V-Cr-Mo-Zr (75, 3, 8, 6, 4, 4 wt.%), thermomech. props., and stress corrosion 3—24277
Ti-Al-V-Sn (86, 6, 6, 2 wt.%), annealing behaviour and strengthening 3—24278
Ti-Al-V-Sn alloy, slack quenching and tempering, microstruct. and mech. props. 3—14629
Ti-Al-V-Sn-Zr (2, 12, 2, 6 wt.%), microstruct. transform., heat treatment, tensile mech. props. 3—43849
Ti-Al-Y (8, 4 at.%), dispersion strengthened, laser surface melting, microstruct. EM obs. 3—43852
Ti-Al-Zr-Mo-Si, heat treatment effect on microstruct. and props 3—24281
Ti-Al-Zr-Mo(W), rapidly cooled from liq. state, struct. and electrophys. props. 3—8472
Ti-Al(Cr)-Mo-Zr, hot deform., TEM study of struct. changes 3—19357
Ti-Al(Cr)(V) alloys, comp. and struct. influence on fracture features 3—14735
β-Ti-Mo-Zr-Su, dispersion hardening 3—29098
Ti-V alloys, β-quenching, morphology, martensitic transformation 3—39119

crystal microstructure continued
Ti-V-Zr-Fe Transage Ti 129, transform characts., structures produced on ageing 3—14589
β-Ti-Zr-Mo-Sn, heat treated, polygonised struct. influence on props. 3—19356
TiC coatings on cemented carbide tools, PVD and CVD, interrupted cutting tests 3—14763
TiC-Ni microlaminate condensate, microstruct., phase anal. and tensile tests 3—14600
TiN coating, hard friction-reducing, high rate sputtering on to tools 3—14484
TiO_2 ceramic pellets with asymmetrical elec. cond. unusual microstruct. 3—27972
V-TiN(ZrN)(HfN), long-time hardness 3—24246
W wire reinforced Cu, cold rolled, deform. 3—34379
W-C coating, wear resistant, controlled nucleation thermochemically deposited, microstruct. evaluation 3—3014
W-P elements, P conc. effect on props. 3—47119
WC-Co, cemented carbide spatial relationship between WC and Co 3—47842
WC-Co, microstructure, processing effects 3—29050
YIG, polycryst., spinwave linewidths 3—33870
ZnO, ceramic semicond., nonlinear cond., potential barriers, voltage contrast imaging in secondary electron microscope 3—52162
ZnO, microstructure, plastic deform., microhardness anisotropy, SEM study 3—37992
Zr-Nb, sintering, solid-state electron-configuration model 3—9015
Zr-Nb (2.5 wt.%) alloy pressure tubes, tensile props. rel. to post-extrusion thermomech. treatment 3—43921
ZrO_2 powder, tetragonal to monoclinic phase transformation, water vapour effect 3—58118
ZrO_2-MgO, subeutectoid aged alloys, microstructural development 3—39156

crystal morphology
crystal growth in gel media, review 3—52911
diamond, synthetic, growth condition for dodecahedral form 3—33161
ethylene-butene-1 copolymer model, soln. grown crysts. 3—13118
FCC structures, cryst. growth and forms, Monte Carlo study *(Russian)* 3—51524
galvanostatic electrocrystallisation, morphological instability, growth mode of surface irregularities 3—23201
heteroepitaxial films, electron beam polishing technique 3—57198
horizontal ribbon crystal growth, morphologically stable, quasi steady-state heat flow anal. 3—34218
ice, polyhedral, vapour phase growth, morphological stability 3—33155
ice crystal growth from vapour, air velocity influence on habit 3—13142
martensitic phase transformation, symmetry and morphology 3—34301
poly-N-vinylcarbazole, morphology, small-angle light scatt. obs. 3—19097
polymorphic transformations in crystals, domain wall motion anal. 3—42560
quartz, hydrothermal growth, super saturation dependence, physical studies 3—39021
reciprocal morphological lattice, Fourier transform study 3—37835
steel, Cr-Mo-V, low-alloy, structs. identification and morphology after hear treatment 3—39176
surface damage caused by friction 3—34485
Ag, galvanostatic electrocrystallisation, morphological instability, SEM image anal. 3—23202
Ag-Si, eutectic alloy, unidirectionally solidified, morphology study 3—47829
Al epitaxial films on GaAs(100), cryst. orientation and surface morphology 3—33595
Al-Mg-Si-Cu-Cr-Fe-Mn (0.98, 0.68, 0.26, 0.2, 0.09, 0.05 wt.%), barrier anodized coating characts. 3—3018
Al-Rh thin films, vapour deposited, solid soln. decomp., annealing, TEM and electron diffr. studies 3—28244
Au particles, vacuum evaporated, icosahedral, STEM study 3—28239
Au-Cd, (hhl) habit planes in martensite growth wave models 3—47835
$BaCd(HCO_2)_4$, cryst. growth, morphology and defects, etching study 3—37823
$Be_3Al_2Si_6O_{18}$, beryl, high pressure hydrothermal synthesis, crystal size and shape 3—14461
Bi_2Te_3-Sb_2Te_3-Sb_2Se_3 thin film thermoelectric generator design and fabrication 3—14967
CdS, vapour-grown, interface morphology and sub-grain struct. obs. 3—7935
Cu-Al-Ni, (hhl) habit planes in martensite growth wave models 3—47835
Cu-Zn, (hhl) habit planes in martensite growth wave models 3—47835
Cu-Zn-Al (29.8, 6.1 at.%) alloy, stress induced bainitic transform., habit plane obs. 3—43802
Fe-C, (hhl) habit planes in martensite growth wave models 3—47835
Fe-C system, martensite growth, habit planes description in two-wave scheme 3—42774
Fe-Ni, (hhl) habit planes in martensite growth wave models 3—47835
Fe-Ni system, martensite growth, habit planes description in two-wave scheme 3—42774
Fe_3S_4, monoclinic, formation and struct. 3—33214
GeS:In filamentary crysts., prep., morphology, elec. and photoelec. props. 3—57344
In films, vacuum evaporated, crystn., cryst. morphology and orientation, X-ray diffr. study 3—28238
InP:Fe, semi-insulating, eutectic precipitates 3—8207
K_2SO_4 crystal growth by silica gel technique 3—14455
$LaMoO_4$ spherulites, growth mechanism and morphology 3—18252
Li-Al electrode in fused salt electrolytes, morphological studies 3—48130
$NaClO_3$, cryst. growth rate, soln. flow direction influence on morphology 3—42553
$Na_2SO_4.10H_2O$ (Glauber's salt) crystal size effect on thermal energy storage capacity 3—34737
Nb_3Sn supercond. layer, struct. and crystallographic orientation, X-ray and SEM studies 3—42974
Ni, plate deposited in butynediol presence, morphology and props. 3—47787
Pb particles on graphite, cryst. growth, melting and oxidation SEM study 3—27866
Pd particles on NaCl and mica substrates, morphology, electron diffr. and TEM studies 3—28246
Rb_2ZnBr_4, incommensurate, bands of faces 3—56861
RuO_2, cryst. growth by vapour transport technique, struct. and elec. props. 3—19259

crystal morphology continued
- Si, damage, induced by picosecond laser pulse irradiation 3—56955
- Si:C CVD layers, polycryst., morphology and resist. 3—23209
- Si:In(Sb)(Ga)(Bi), ion implanted, morphological instability and cell form. during pulsed laser annealing 3—8093
- TeSe amorphous thin films, crystallisation and growth morphology 3—8353
- Ti-V alloys, β-quenching, morphology, martensitic transformation 3—39119
- Ti_xC_{1-x} magnetron sputtered films on Mo, ductility, internal stresses and diffusion 3—58179
- VSi_x fine particles, gas evaporated, cryst. struct. and morphology, electron microscopy study 3—37849
- ZnO crystals grown in molten hydrous alkali solns., morphology 3—13145

crystal orientation
- apparatus for orientation and cutting of single crystals *(Japanese)* 3—13031
- deformation texture, prediction using phys. principle of conservation 3—4055
- electron microscopy, quantitative, review 3—24446
- electrooptic spatial light modulators, amplitude and phase responses rel. to crystallographic orientation 3—37173
- ESR spectroscopy, orientation modulated, description and appl. 3—49422
- grain boundaries, coincidence geometrical approach 3—46949
- interfacial props. of crystals, symm. constraints on orientation depend. group of Wulff plot 3—46879
- Kikuchi patterns for cryst. orientation determ., computer method 3—13053
- Laue diffraction pattern method for rapid orientation determ. 3—56770
- Laue patterns, interpretation and simulation using interactive program 3—56777
- $LiTaO_3$, thermal diffusivity, relation to phase transition and crystal orientation 3—47174
- metals, single cryst. growth, modification of Kapitza and Bridgman apparatuses, defect form., depend. on cryst. parameters 3—47761
- nematic liquid cryst., oblique orientation on obliquely deposited films 3—2404
- neopentane, plastic single crystal, growth from vapour, crystallinity and orientation, X-ray diffr. 3—34205
- neutron diffr., single cryst. refls., location and integration using area multidetectors 3—7865
- polyethylene, high density, epitaxial crystallisation on KCl substrates, growth habit 3—51969
- rotation in crystals, matrix anal. 3—42558
- single crystal plate, cubic lattice, nonuniformly doped, equilib. states *(Russian)* 3—13244
- single crystal plates, nonuniformly doped, equilib. states *(Russian)* 3—13243
- texturised sample, orientation distrib. function from pole figure meas. 3—14607
- two-dimensional polycrystals, X-ray and electron diffr. intensities, orientation and thickness corrections 3—42490
- Al epitaxial films on GaAs(100), cryst. orientation and surface morphology 3—33595
- $BaTiO_3$, monocrystalline film, thermal evaporation in vacuum 3—8984
- Cd bicrystals, slip deform., grain boundary sliding 3—13233
- Cu-Ag, liq. phase sintered, low energy grain boundaries 3—2576
- Cu-Ga (23.7 at.%), $\beta \rightarrow \zeta_m$ massive transform., crystallography 3—39109
- Cu(-Al), dislocation struct. of [321] crystals grown by Bridgman method 3—13230
- Fe alloys, martensitic transform., theory and mechanisms 3—4036
- Fe-Ni (32.8 wt.%), thin foils, martensitic transforms. 3—9063
- GaAs, first-order Raman line intensity ratio, rel. to lattice perfection scale 3—43524
- In films, vacuum evaporated, crystn., cryst. morphology and orientation, X-ray diffr. study 3—28238
- Si epitaxial film on Al_2O_3, crystallographic misorientations during epitaxy 3—57238
- Si eutectic alloys, directionally crystallised, microstructure and crystallography 3—7980
- Si, polycrystalline, Bridgman growth, crystallographic anal., photovoltaic appls. 3—22807
- Si, polycrystalline ingot, crystallographic orientation study after directional solidification *(French)* 3—13148
- Sn-Pb-Cd ternary eutectic, crystallographic orientation relationship 3—33188
- Ti-Al, textured, magnetic anisotropy 3—14042
- TiC, single cryst., oxidation, TEM obs. of early stages 3—14759
- WC-Co, sintered, orientation of contiguous WC, determ. from slip line traces 3—24443

crystal oscillators *see crystal resonators*

crystal properties
- *see also crystal chemistry*
- real-space formulation in closed form using cyclic matrices 3—22800

crystal purification
- *see also zone refining*
- actinides and actinide cpds., specimen prep. and cryst. growth 3—19304
- ice, purification of crystals grown from sucrose and NaCl aq. solns. 3—28975
- rare earth materials, spcimen prep. and cryst. growth 3—19303
- semiconductors, molten zone thermal migration, 2-dimens. control using elec. current 3—28984
- InP, high purity polycryst., in situ vacuum baking to improve purity 3—14459
- MoO_3 purification by volatilisation process 3—14449
- Si, crystallisation methods for terrestrial photovoltaics appls. 3—52907

crystal resonant gamma-ray interactions *see Mossbauer effect*

crystal resonators
- *see also piezoelectric oscillations*
- dynamometer appl., multicomponent 3—20849
- pressure detector for pressure meas. to 600 Pa 3—16345
- quartz, fluoride-based etchants 3—34509
- quartz, growth and appls. 3—52915
- quartz, vibr. cryst., SEM patterns, γ-irrad. effect 3—14222
- quartz plate, dielec. const. and loss tangent meas. using quasi-optical open resonator, 75 GHz 3—5817
- quartz resonator, optoacoustic oscillator 3—50751
- quartz resonator crystals grown with $LiNO_2$ and $LiNO_3$ dopants, mech. Q, IR absorpt. obs. 3—52912
- quartz sensor for precision, pressure meas., rugged design 3—20845

crystal resonators continued
- quartz thin crystal plates, plane elastic waves anal. 3—8135
- reflection coefficient association frequency, frequency meas. appl. 3—49400
- SAW resonators, fine tuning by thin film deposition techniques 3—17766
- US viscometer for liquids, using quartz transducer 3—2154
- vibrating beam accelerometer, strapdown inertial systems applications 3—30849
- $Ba(Zn_{1/3}Nb_{2/3})O_3$-$Sr(Zn_{1/3}Nb_{2/3})O_3$ solid solution ceramics with temperature-stable high dielectric constant and low microwave loss 3—34025
- $Pb_{1-x}R_xTi_{1-y}Mn_yO_3$ ceramics, R=rare earth, electromech. props. and transducer appl. 3—14217
- ZnO piezoelectric sputtered film, c-axis inclined, ZnO/Si composite shear wave resonator fabrication 3—47605
- ZnO-Si layered medium, SAW resonators 3—46399

crystal structure
- *see also crystal atomic structure; crystal microstructure; crystal morphology; crystal orientation; crystal symmetry; crystallography; granular structure; polymorphism*
- bifurations of lattice structures 3—45075
- ionic radii, ionic charges and electrostatic bond strengths, iterative calc. *(French)* 3—2485
- tetragonal d^3 systems, differential orbital expansion 3—3028
- Cu-Ni-Cr (30, 3.2 wt.%), spinodally decomposing alloys, high cycle fatigue strength rel. to ageing 3—53237
- Cu-Ti (4 at.%), spinodally decomposing alloys, high cycle fatigue strength rel. to ageing 3—53237

crystal surface and interface vibrations
- adsorbates, Debye-Waller factor for molecule-surface scatt. 3—42908
- adsorption, statistical mechanics, conf., Trieste, Italy (July 1982) 3—49083
- alkali halide single crystal, surface phonon dispersion curves by He atom time-of-flight spectrosc. 3—18548
- alkali halides, small crystals, IR absorption of surface phonon modes *(Japanese)* 3—3736
- anisotropic media, surface elastic wave topological feautres 3—33557
- azulene, monolayer on Pt(111), struct. energy, force field calcs. 3—8319
- n-butane, adsorbed monolayers on graphite, lattice vibrs., neutron spectrum 3—8316
- dielectric sphere two-dimens. array, enhanced Raman scatt. 3—3722
- elastic solid, surface phonon focusing 3—51915
- film, supported, Brillouin scatt. from surface acoustic phonons 3—57945
- film-substrate interface superstruct., soft phonon theory 3—18547
- gas+surface scatt., elastic and inelastic, semiclassical wave packet model 3—14428
- gas-surface inelastic collisions, classical collision theory, using Langevin eqn. 3—47748
- gas-surface interactions, dynamics, International School, Erice, Italy (July 1981) 3—32
- graphite (0001), adsorbed Xe, surface vibrs., H scatt. study 3—42917
- insulator-insulator boundary, boundary layer struct. and temp. discontinuity 3—18550
- ionic crystals, simple model for surface energy 3—23157
- lattice dynamical spectral density functions at large wave vector 3—57204
- lattice models, perturbed surface waves, long wave limit 3—28208
- local frequency distribution function of a crystal with adsorbed atoms 3—57201
- metal surface, inhomogeneous, collective mode dispersion, specular refl. model 3—18549
- metal surface impurities, reflectivity modulation, Raman scatt. calcs. 3—3717
- metal surfaces, scatt. of Ar, Kr and Xe low-energy atoms, energy and momentum transfer 3—38991
- metal-insulator boundary, boundary layer struct. and temp. discontinuity 3—18550
- metals, BCC, surface (100), adsorbed H, pot. surface and diffusion 3—42910
- multilayer physisorption mean-field theory, desorption kinetics 3—13630
- multiphonon relax. of vibr. excited adatom, general formulation 3—57202
- polaritons, weakly nonlinear p-polarised, perturbation theory 3—23291
- quartz, piezoelectric surface generation of high freq. phonons 3—42728
- rough surface, dipole radiation, surface polaritons 3—23289
- semiconductor small crystals, IR absorption of surface phonon modes *(Japanese)* 3—3736
- surface polaron discontinuity 3—33650
- surface-gas interactions, dynamics, International School, Erice, Italy (July 1981) 3—32
- thin film phonon injector, temperature 3—2952
- two-sphere system, surface mode freqs. 3—2951
- Ag electrode in aqueous Cl^- electrolytes, surface enhanced Raman scatt., evidence for adatoms 3—38829
- Ag film, adsorption of SF_6, IR-laser photoacoustic spectroscopy and XPS 3—23164
- Al (111), adsorption of O, surface site determ., EELS spectra and lattice dynamical model 3—3884
- Al-Al_2O_3-benzoic acid-P6-junctions, IETS study, effect of junction roughness 3—38488
- Cu, surface phonon focusing 3—51915
- Fe (110), adsorption of acetylene and ethylene, EELS study 3—3889
- n-GaAs surface, doped, EELS calc., multiple losses and gains 3—19237
- GaP microcrystals, Raman scatt. from surfaced phonon mode 3—34108
- GaP, reson. Raman scatt. from surface phonons 3—47658
- Ge, surface phonon focusing 3—51915
- He, liquid, interface with real solid, Kapitza cond. enhancement at 0.32 meV phonon energy 3—28175
- ^4He film, superfluid, surface excitations, inelastic neutron scatt. study 3—51888
- KCl, Rayleigh surface phonon dispersion curves, He beam TOF spectra 3—57203
- LiF (001), inelastic scatt. of ^{20}Ne 3—3897
- LiF, Rayleigh surface phonon dispersion curves, He beam TOF spectra 3—57203
- LiF(001) surface, quasi-elastic scatt. of Ne 3—58021
- LiF(001) with adsorbed He, resonant energy transfer between and adsorbed atom and surface Rayleigh phonons 3—13632
- MgO single crystal, surface phonon dispersion curves by He atom time-of-flight spectrosc. 3—18548
- N_2 adsorbed layer on metals, vibr. struct. of electron resonances 3—57214
- NaCl, surface phonon focusing 3—51915

crystal surface and interface vibrations continued
NaF, Rayleigh surface phonon dispersion curves, He beam TOF spectra 3−57203
Ni (100) surface, phonon dispersion meas. by inelastic electron scatt. 3−47209
Ni (111) , ordered overlayer 3−57215
Pd (100), adsorbed p(2×2)O and c(2×2)H, vibr. excitations, EELS study 3−3886
Si (111) inversion layer, hot electron effect at low temps. 3−28439
Si, free surface, diffusive scatt. of HF phonons 3−28207
Si surfaces, high freq. acoustic phonon scatt. study 3−18546
Si:H, amorphous hydrogenated, intrinsic surface phonons, theoretical study 3−33556
SiO_2 film, Brillouin scatt. from surface acoustic phonons 3−57945
SiO_2, silica particles, ultrafine hydroxylated, observation of small-particle excitation by inelastic neutron scattering 3−13616
Si(111) and (100) surfaces, initial stages of oxidation, vibr. study 3−39261
W, chemisorbed H, D, Li, NA atom vibrations 3−28209
W surface, adsorbed CO, H, O, surface vibr. excitation cross section EELS study 3−3890
W(100), clean and with adsorbed H, surface reconstruction, surface lattice dynamics approach 3−57191
ZnTe, surface phonon polaritons, Raman scatt. study 3−38831

crystal symmetry
see also crystallography; group theory
algorithm for selecting reflections in struct. anal. 3−7933
anharmonic temperature factor, with hexagonal wurtzite structure and least squares refinement for intensity 3−22828
anisotropy, theory based on non-analytic free energy 3−22813
bicrystallography, framework and methodology 3−47228
brass, β-γ, space group and struct., electron diffr. and microscopy study 3−13161
carbides, M_7C_3, microstructure and planar defects, electron diffr. and microscopy study *(French)* 3−38093
classical condensed matter, devil's staircase and order without periodicity 3−37819
coloured lattices and lattice preservation 3−33169
convergent beam electron diffr., translation symm. 3−7880
crystallographic colour groups, appl. to Landau theory of phase transitions 3−27884
cyclic regions and symmetry coordinates, unique labelling 3−7941
equilibrium configurations of N particles, stability of symmetries 3−42557
four-dimensional crystal classes, graphic representation and nomenclature 3−33170
Fourier syntheses interpretation in presence of pseudosymmetry 3−33174
grain boundaries, geometrical models 3−46950
heavy-atom method applicability limits 3−33173
imperfect crystal physics, group theoretical methods, struct. phase transitions 3−33171
impurity interaction, localised state theory near point-symm. centre *(Ukrainian)* 3−23310
incommensurate crystals, anal. 3−37818
inhomogeneous linear structs. composed of fragments of different struct. types, cryst. chem. and symm. 3−33175
interfacial props. of crystals, symm. constraints on orientation depend. group of Wulff plot 3−46879
ion pair states in crystals, symmetry analysis 3−7951
labelling, combinatorial enumeration and group representations 3−7942
magnetic crystals, anti-identity operations and props. tensors 3−16292
martensitic phase transformation, symmetry and morphology 3−34301
methyl-(2,4-dinitrophenyl)-aminopropanoate crytals, nonlinear-optical props., struct. depend. 3−1694
modulated structs., point symmetry, 4-D groups *(French)* 3−13151
one-dimensional crystal, space groups, irreducible band representations 3−2455
partition function, dislocation effects on density correl. functions, solid to liq. phase transition study 3−42748
phenacite type struct. formation model 3−2457
Pierre Curie symm. principle generalisation 3−33172
piezoelectric thin film-half space system, SAW dispersion relations 3−13612
rotational symm. and tensor props. of crystals 3−51529
single crystal plate, cubic lattice, nonuniformly doped, equilib. states *(Russian)* 3−13244
single crystal plates, nonuniformly doped, equilib. states *(Russian)* 3−13243
space groups, non-zero value of odd-mixed moments in intensity statistics 3−13152
space groups irreducible band representations 3−2455
superconductors, cubic, upper crit. field anisotropy effects, symm. considerations 3−13972
tetrahedral $A\ X_2$ structures, classes and topology 3−37833
texturised sample, orientation distrib. function from pole figure meas. 3−14607
transition metal binary compounds, diagrammatic separation scheme, Machlin-Loh method 3−2456
Ag_3AsS_3, cryst. symm., transitions, Raman study 3−43545
$CsCaCl_3:Gd^{3+}$, paramagnetic resonance and displacive transitions 3−18987
Li_2TeO_3, cryst. struct., OD interpretation 3−46890
Ni(II) complexes of different symms., cryst. field parameters 3−18670
Rb_2ZnBr_4, incommensurate, bands of faces 3−56861

crystal vacancies *see vacancies (crystal)*

crystal whiskers *see whiskers (crystal)*

crystalline-amorphous transformations *see amorphisation*

crystallisation
see also crystal growth; dendrites; heat of crystallisation; nucleation
acoustic emission methods development for materials processing 3−39345
alkali oxide-WO_3 systems, rapidly quenched glasses prep. and characteris. 3−29054
alloy, crystallisation reactions, systematics and nomenclature 3−33103
alloys, amorphous, magnetic props. and stability, review 3−18862
amorphous alloys, struct. changes during crystallisation, interatomic binding *(Russian)* 3−51493
amorphous film, explosive crystn., kinetic parameters 3−38258
basalt glass-ceramic, nucleation and crystallisation, small-angle neutron scatt. obs. 3−46859

crystallisation continued
binary alloys, prediction of glass-forming ability using temp.-comp. map 3−34282
binary systems, order-disorder transition during crystallisation 3−56845
biological-systems, crystals and crystallisation 3−39577
cellulose triacetate films, crystallisation, IR study 3−8828
cholesterin esters, smectic liq. cryst. to solid transition, elec. cond., electron emission and luminesc. meas. 3−18488
cholesteryl capronate, isothermal crystallization parameters 3−2800
cholesteryl nonanoate, isothermal crystallization parameters 3−2800
crystal growth rate with bulk, surface, and linear diffusion 3−33165
crystal-melt, crystal-amorphous and liquid-vapor interfaces 3−37826
crystallizer temp. stabilization with pulse heating fluid bath *(Polish)* 3−3939
desheptapeptide B24-30 insulin, crystallisation in organic solvents 3−48238
diacid pairs, syncrystn., random and correlated substitution *(French)* 3−52914
diaplectic labradorite glass, from Manicouagan impact order, phys. props. 3−35168
EBBA:Cu, orientation during crystallisation in a temp. gradient field, EPR study 3−2400
electrocrystallization 3−38030
electrolytes crystallising from aqueous soln., theory 3−27870
eutectic alloy, laminar crystallisation process, kinetic consts. 3−33410
ferrites, amorphous ferromag., hereditary mag. props. and stability 3−57703
galvanostatic electrocrystallisation, morphological instability, growth mode of surface irregularities 3−23201
glass, crystallisation, activation energy from DDTA curves 3−7914
glass, heterogeneities, small angle scatt. studies 3−13106
glass, non-isothermal crystallisation, kinetic study by thermal anal. 3−2421
glass research and development, China 3−33113
glass-ceramics, crystn., microstructure, heat treatment effects, elec. resist. and thermal anal. 3−33116
glass-forming materials, crystn. kinetics, Avrami exponent determ. by non-isothermal anal. 3−42526
heat eqn. with mixed nonlinear boundary conditions 3−17776
hydrate salt crystals, inclusion of isomorphous admixtures 3−27885
ice, purification of crystals grown from sucrose and NaCl aq. solns. 3−28975
impurity effects in crystallisation processes 3−27872
industrial crystallisation, conf., Budapest, Hungary (Sept. 1981) 3−25700
interfacial aspects of phase transformations, NATO Advanced Study Institute, Erice, Sicily (Aug.-Sept. 1981) 3−35777
kinetics of coverage of one-dimensional lattice, nucleation-growth-collision model 3−42546
Lennard-Jones liquid, crystallisation rates, mol. dynamics method study 3−13147
liquid semiconductor, substrate confined, in situ crystn. 3−13420
liquid solidification in rotating cylinder, heat exchange *(Ukrainian)* 3−23017
macromolecular imaging, 2D crystn. technique, antigen-antibody-complement complexes appl. 3−35048
magnetic thermogravimetry of Ni, De and Co using modified magnetic thermo-balance *(Japanese)* 3−54750
mass transfer motive forces, thermodynamic anal. 3−13146
melt crystallization in self-oscillatory conditions 3−2749
melting and crystallisation in systems with surface coating, theory 3−42753
metal hydrate crystallohydrates, $M(NO_3)_2.nH_22O$ salts, cryst. struct. and co-crystallisation 3−27881
metallic discontinuous films, crystallisation, electron diffr. study 3−23214
metallic glasses, fusion vol. effect on formation kinetics by liq. quenching *(French)* 3−18226
metallic glasses, structure, defects, crystallisation and glass transition temp. 3−33108
N-methylmorpholine-N-oxide-water-cellulose system, phase behaviour, melting point/comp. diagram 3−13414
nuclei in liq. in a sound field 3−51525
poly(oxymethylene), melt-crystallised, Regime III crystallisation, variable cluster model of chain folding 3−46868
poly-4-methyl-pentene-1, ultraquenched glass, chain mobility and crystallisation 3−13127
poly-L-lactic acid, crystn., kinetics, growth rate eqn., morphology 3−51513
poly-L-lactic acid, eutectic crystn. behaviour, diluent conc. depend. 3−51512
poly-N-vinylcarbazole, morphology, small-angle light scatt. obs. 3−19097
polybutene-1, isotactic, high press. effect on melting and crystn. behaviour, solid-solid transition 3−51511
polyethylene, annealing under high press., recrystallisation *(Russian)* 3−13149
polyethylene, high density, epitaxial crystallisation on KCl substrates, growth habit 3−51969
polyethylene, linear, isothermal crystn., crystallite size distrib. 3−33141
polyethylene, low density, relaxational spectrometry *(Russian)* 3−7930
polyethylene, melt-crystallised, Regime III crystallisation, variable cluster model of chain folding 3−46868
polyethylene, quenched, mixtures of fractions, crystallisation 3−2751
polyethylene fibres, shish-kebab, lamellar overgrowth, small angle X-ray scatt. and TEM study 3−22806
polyethylene melt, crystallisation at high supercooling 3−4030
polyethylene melt, crystallisation at low supercooling 3−4029
polyethylene terephthalate, struct. changes from thermal treatment in glass transition region *(German)* 3−38070
polyethylene terephthalate, thermally crystalised, optical props. 3−19151
trans-1,4-polyisoprene, crystallisation 3−2438
polymer, stretched network, crystallisation under stress, theory 3−37804
polymer, stretched network, stress-induced crystallisation theory, crystallite growth, mobile crosslinks 3−37803
polymer crystallisation, macrokinetics 3−46870
polymer crystallization, zippering process, growth rate and lamellar thickness 3−13119
polymer melts, nucleation during crystallisation, defective boundary layer effects *(Russian)* 3−51762
polymeric solids, unoriented glassy and semicryst., craze formation criterion 3−19439
polymers, crystallizable, compatibility 3−42792
polymers, crystn. description using macrokinetic eqn. *(Russian)* 3−13117

crystallisation continued
polymers, structuring, nonisothermal processes calc. *(Russian)* 3—42537
polyoxy-2,2′-dimethylazoxybenzene-4,4′-diyloxydodecanedioyl, phase transitions, DSC, optical microscopy 3—38063
polyoxymethylene, epitaxial morphologies, deposition energetics on alkali halide (001) surfaces 3—18236
polyoxymethylene, epitaxial morphologies, electron microscopy obs. 3—18235
polypivalolactone, ultraquenched glass, chain mobility and crystallisation 3—13127
polypropylene, mesomorphic state, X-ray diffr. study 3—2398
polypropylene, syndiotactic, crystallisation kinetics 3—37812
polyurethane elastomers, thermoelastic props., scanning calorimetry study *(Russian)* 3—51695
polyvinylidene fluoride crystallization from soln., substrate effects, optical/SEM obs. 3—14516
quartz synthetic crystal, plate-like defects obs. by light scatt. tomography, X-ray topography 3—13212
rare earth amorphous alloys, stability and mag. props. 3—18935
rare earth metal trialuminides, binary and ternary, occurrence of modulated phases 3—47241
rare earth-based amorphous alloys, struct. characterisation, appl. to H storage 3—33095
$\alpha(\beta)$- resorcinol, linear crystallisation vel. meas. on microscale using photometer equipped polarisation microscope 3—49442
rubber, natural, optical and calorimetric anal. of stress induced crystallisation 3—2435
seed crystals, population density function behaviour during batch crystn. 3—18250
semiconductor, laser processing, review 3—8099
semiconductors, laser beam irradiation 3—22937
semitransparent crystals, growth from melt, radiative instability of plane crystallisation front 3—50916
solid-state reaction, kinetic theory, DTA appl. 3—38023
solvent effects, book 3—10534
solvent effects in crystallisation processes, review, book contrib. 3—13150
star-tetrahedron transformation, crystal-mother phase boundary, bond energies calc. 3—42561
surface coated specimens, melting and crystallisation theory 3—38040
surface microrelief and cryst. growth under mass crystallisation conditions, effect of collisions 3—27880
three dimensional nucleation from melt 3—38029
transition metals and metalloids, amorphous particles produced by spark erosion 3—3980
triglycine fluoroberyllate-selenate, deuterated, crystn. from aq. soln., elec. props. 3—14457
XLPE solidification kinetics 3—13130
Ag, galvanostatic electrocrystallisation, morphological instability, SEM image anal. 3—23202
AgI-Ag_2O-B_2O_3 glassy electrolytes, struct. and glass transition 3—22783
Al-Cu-Co, sintered, struct. and mech. props., effect of rapid cooling on crystn. 3—34259
$Al_xGa_{1-x}Sb$ solid solns., production of heterostructures by LPE *(Russian)* 3—13662
β-Al_2O_3, powder processing and crystallisation 3—53000
Al_2O_3-SiO_2-Li_2O-ZnO glasses, β-eucryptite solid soln. form. during crystn. 3—2432
As-Ge-Se chalcogenide glasses, controlled crystallisation in nucleated system 3—33123
As-Te film, amorphous, fabrication, comp. and physicochem. props. 3—8995
As_2Se_3, glassy, crystallized vol. fraction determ. at different cooling rates 3—56823
As_2Te_3-$Tl_5As_2Te_3$-As system, phase diagram anal. 3—58104
As_xTe_{1-x} glasses, crystallisation and local order, X-ray, Mossbauer and DSC study 3—13114
Au thin films on KCl, crystn. front perimeter 3—38254
Au/a-Se/Al struct., aging effect of capacitance and photoelec. characts. 3—33802
Au/Ag epitaxial struct., metastable phase form. by pulsed beams and ion beam mixing 3—2627
B:C ion implantation form. of B_4C, TEM and electron diffr. study 3—27959
B_2O_3-SiO_2-PbO glass, crystn., TEM study 3—27854
BaAl 48 alloy, intensively cooled, anomalous segregation anal. *(Polish)* 3—19333
$BaNi_2(PO_4)_2$, synthesis and crystallisation 3—14473
Be, neutron scatt. and crystallisation, appl. as neutron monochromator *(German)* 3—7878
Bi island films, nucleation, small particle crystallisation 3—3006
Bi-H amorphous film, elec. props., supercond. props. and crystallisation 3—33817
Bi-Se melt, crystn. 3—57063
C:B, ion implantation form. of B_4C, TEM and electron diffr. study 3—27959
CaO-P_2O_5 glass-ceramics, high strength, prep. by unidirectional crystn. 3—29055
$CaO(-ZnO)$-Al_2O_3-SiO_2 glass, surface crystallised, high strength, characterisation by electron microscopy 3—4162
$Ca_5(PO_4)_3OH$, hydroxyapatite, relay crystallisation from supersaturated aq. soln. 3—28973
$CaSO_4.2H_2O$, gypsum crysts. in suspension inhibitor conc. influence on growth rate 3—27874
Cd-Ni-As system, reactions 3—58106
$CdCr_2Se_4$ vacuum deposited films, amorphous-cryst. transition 3—38257
CdF_2-BaF_2-ZnF_2 system glasses, prep. and optical props. *(French)* 3—18228
$CdGeAs_2$, glass crystallisation, determ. of activation energy from thermal anal. 3—37795
$CdGe_{1-x}Si_xAs_2$ glassy alloys, phase stability, microstruct. and glass form. 3—27855
CdI_2, polytypic growth from soln., elec. field effect on crystn. 3—37822
CeO_2, crystn. and cryst. growth under hydrothermal conditions, mineralisers effect 3—19261
Co-Cu-Mg system, glass form. and crystn. 3—22789
Co-Fe-Si-B, amorphous, short-range order, stability, and mag. props. *(Russian)* 3—37792
Co-Si-B amorphous alloy, mech. props. and struct. 3—51685
Co-Ta(W) thin films, amorphous, RF sputtered, mag. and thermal props. 3—28662

crystallisation continued
$Co_{75}B_{25}$ amorphous alloy, melt temp. effect on thermal stability *(Korean)* 3—4063
$(Co_{0.94}Fe_{0.06})_{74.5}Si_{13.5}B_{12}$, amorphous, hyperfine field of Fe in precipitated Co 3—57834
CoO-P_2O_5-Fe_2O_3 system, amorphous, hereditary mag. props. and stability 3—57703
$CrSi_2$ thin films on KCl, crystn. front perimeter 3—38254
Cu-Te, amorphous film, crystn., bending contours, electron microscopy study 3—2412
Cu-Ti, amorphous, elec. resist. and crystn. 3—3147
Cu-Ti, amorphous, solubility and diffusion of H_2 3—47114
Cu-Zr (45 at.%), glassy powder, technique for obs. of rapid solidification and annealing in TEM 3—53042
Cu_xSn_{1-x}, amorphous, crystn. temp., elec. resist., comp. depend. 3—18679
$Cu_{60}Zr_{40}$, amorphous, possible metallic glass-ceramic, crystn., effect of O doping 3—51498
Fe, cast, vermicular graphite, morphology and graphite formation *(Chinese)* 3—19332
Fe:C, ion implanted form. of Fe_3C, TEM and electron diffr. study 3—27959
Fe-Al-P, ternary amorphous alloys, mech. props., thermal stability, Al content depend. 3—47937
Fe-Au-B sputtered amorphous alloys, high mag. moment 3—28521
Fe-B-Si(-C) amorphous ribbons, mag. props. limited by surface crystn. 3—28200
Fe-C magnetic films, RF reactively sputtered, phys. props. and struct. 3—52563
Fe-P amorphous alloys, crystallisation, energy dispersive X-ray diffr. study 3—13103
Fe-Ti-S melts, rhythmic growth of dendritic branches 3—39105
Fe-Zr amorphous thin films, crystallisation, TEM and electron diffr. studies 3—27849
$Fe_{80}B_{20}$, metallic glass, crystn. kinetics 3—2425
$Fe_{87}B_{11}Au_2$ amorphous ribbons, high mag.moments and magnetisation 3—28522
$Fe_{78}B_{13}Si_9$, Metglas 2605 S2, magnetomechanical props. 3—23767
$Fe_{79}B_{16}Si_5$, Metglas 2605S3, magnetomechanical props. 3—23767
$Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glass, crystallisation, Mossbauer spectra study 3—56829
$Fe_{81}B_{13.5}Si_{3.5}C_2$ ribbons, Metglas 2605SC, Mossbauer study 3—34020
$(Fe_xB_{1-x})_{0.9}Tb_{0.05}La_{0.05}$, crystallized, coercive force and microstruct., composition depend. 3—33931
$(Fe_{1-x}Ni_x)_{80}B_{20}$ amorphous alloy, crystallisation, elec. resist. and X-ray diffr. studies 3—27848
$Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. props., Mossbauer study 3—19027
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, crystn., effects of pre-annealing, TEM study 3—42529
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, crystn. kinetics 3—2425
$Fe_{40}Ni_{38}Mo_4B_{18}$ metallic glass, crystallisation, size effect, high voltage electron microscopy obs. 3—3236
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, crystn. by eutectic reaction, kinetics and mechanism *(French)* 3—13104
$Fe_{40}Ni_{40}P_{14}B_6$, crystn., stability, effect of electron irrad. *(French)* 3—51662
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, CW laser annealing, effects on magnetostriction and Young's modulus 3—37956
$Fe_{40}Ni_{40}P_{16}B_4$, metallic glass, crystn., effects of pre-annealing, TEM study 3—42529
Fe_2O_3-BaO-B_2O_3 glass, mag. and struct. props., ^{57}Fe Mossbauer spectra 3—3601
$Fe_{78}Si_{10}B_{12}$ amorphous alloy, struct. relax., elec. and mag. study 3—27847
$Fe_{83-x}V_xB_{14}Si_3$ amorphous N_2 containing alloy, thermal and mag. props. 3—28552
$Fe_{90}Zr_{10}$, amorphous alloy, stability and crystn. behaviour 3—22797
Ga island films, melting and crystn., electron diffr. study 3—3005
GaAs, electroliquid epitaxy, mass transfer effects 3—33604
GaP amorphous thin film, crystallisation using laser beam annealing 3—37957
GaSe amorphous film, flash evaporated, spherulite growth during crystn. 3—51974
GaSe films, spherulite growth by heating in vac. 3—33589
Gd_3Co, zero gravity solidification expts. and mag. props. 3—38033
Ge, amorphous, crystallisation processes in multipulse low power laser irradiation 3—57088
Ge amorphous film, short pulsed laser irrad., crystn. mechanism 3—13688
a-Ge film, transient effects in electron pulse annealing, time-resolved TEM 3—7910
Ge film, vapour-deposited, struct. as function of substrate temp. 3—23200
Ge/GaAs epitaxial heterostructures prep. by scanned CW laser annealing 3—57248
Ge-Te amorphous film, transient effects in electron pulse annealing, time-resolved TEM 3—7910
GeO_2-PbO-$Bi_2O_3(Tl_2)$, glass-forming systems, study using X-ray diffr., DTA and thermomech. anal. 3—13108
$GeSe_2$ glass and evaporated films, switchable microcrystallisation near threshold in laser annealing 3—56941
GeTe, amorphous film, local struct., crystn. and thermal annealing effects, UPS and XPS study 3—14438
H_3PO_4-H_2O eutectic mixture, liq., separation effect near crystn. point 3—2811
^4He solid-superfluid interface, charge-induced instability, light interf. obs. 3—28188
In films, vacuum evaporated, crystn., cryst. morphology and orientation, X-ray diffr. study 3—28238
$In_x(Si_{01}Se_{0.9})_{1-x}$-$In_{2-x}Sn_xO_{3-y}$ photo-induced microcryst. solar cell 3—24585
$In_x(Si_{0.1}Se_{0.9})_{1-x}$-$In_{2-x}Sn_xO_{3-y}$ solar cells, effects of photo-induced microcrystn. 3—53511
$In_{20}Te_{80}$, metallic glass, crystn., X-ray diffr. and XPS study 3—33105
KCl, control of crystallisation from soln., mag. field and hydrodynamic conditions influence 3—28976
$KH_4B_5O_{10}.2H_2O$, twinning concretions on crystn. from aq. solns. 3—33272
K_2O-Nd_2O_3-P_2O_5-H_2O system, phase formation and crystallisation 3—8165
K_2SO_4-$(NH_4)_2SO_4$-H_2O system, crystallisation kinetics, solid phase comp. effect 3—27878
$LaMoO_4$ spherulites, growth mechanism and morphology 3—18252
$Li(Nb_{0.8}P_{0.2})O_3$ glass, roller quenched, struct. and ionic cond. 3—33126

crystallisation continued
- $Li_2O-Al_2O_3-P_2O_5-SiO_2-TiO_2$ system devitrified glasses, melt viscosity and crystn. 3−37798
- $Li_2O-BaO-Nb_2O_5$, quenched glasses, prep. and props. 3−27851
- $Li_2O-MgO-Al_2O_3-SiO_2$, Fe_2O_3 doped, transparent glass ceramic, microstruct. and crystallisation 3−2423
- $MgO-Al_2O_3-SiO_2-TiO_2$ glass, crystallisation and phase separation, thermal history effects 3−33125
- $MgO-CaO-SiO_2-P_2O_5-CaF_2$ glass-ceramics for prosthetic appl. 3−53123
- $MgO-FeO-Al_2O_3-SiO_2$ glass-ceramics with coal stone as main raw material 3−34275
- $MgO-NiO-Al_2O_3-SiO_2$ glasses and glass-ceramics, coordination of Ni^{II}, spectroscopic study 3−42528
- Mn-Ga amorphous films, crystn. and mag. domain struct., electron microscopic study 3−8704
- MoO_3 electrochromic thin films, IR and Raman spectroscopy studies *(French)* 3−47724
- $(Mo_{0.6}Ru_{0.4})_{82}B_{18}$ amorphous film, magnetron sputter deposited, struct. and thermal anal. 3−8348
- Na-S batteries, melting-crystallisation properties of S electrolyte 3−58495
- Na_2-SiO_2 glass prep. by gel-glass transformation, IR reflection spectra study 3−34271
- $NaBr-KBr-CdBr_2$ system, melting diagram, comp. and temps. of crystn. *(Russian)* 3−47092
- NaCl, crystallisation kinetics rel. to impeller draft tube clearance 3−33167
- NaCl, secondary nucleation rate in evaporative crystalliser 3−18247
- $NaCl-KCl-ThCl_4$ system, glass forming region, DTA and IR spectra study 3−22786
- $Na_2O-Fe_2O_3-NiO-B_2O_3-P_2O_5$ glass ceramics, crystallised, mag. and elec. props. *(Japanese)* 3−58144
- Nb-O, quenched, amorphous phase crystallisation and phase transitions 3−7909
- Nb_2O_5 amorphous film, vacuum annealing influence on props. 3−13661
- NdF_3-RF_3 systems (R=rare earth), partition coeffs. for melt crystn., energetic anal. 3−18426
- Ni, electrocrystallisation, effects of additives 3−19298
- Ni/Si struct., metastable phase form. by pulsed beams and ion beam mixing 3−2627
- Ni-Al-P, ternary amorphous alloys, mech. props., thermal stability, Al content depend. 3−47937
- Ni-Ce-Y-C, graphite morphology and microdistrib. of Ce and Y modifying agents 3−39108
- $Ni_{50}Nb_{50}$, amorphous, crystn. behaviour on continuous heating 3−42530
- $Ni_{60}Nb_{40}$ metallic glass, crystallisation, DSC, elec. resist., X-ray diffr., TEM 3−53016
- $NiSiO_3.nH_2O$, synthetic, struct. transformations upon heating 3−57077
- Pb island films, nucleation, small particle crystallisation 3−3006
- $Pb_5Ge_{3-x}Si_xO_{11}$ glass-ceramic prep. with high transparency, permittivity and Curie temp. 3−53001
- $PbO-B_2O_3-Al_2O_3-Fe_2O_3-Y_2O_3$ glass-ceramics, mag. props. 3−57833
- $PbO-SiO_2$, spherulitic crystal growth from P_2O_5-nucleated lead silicate glasses, morphology rel. to growth temp. 3−33102
- $PbO-SiO_2-P_2O_5$, glass, acid corrosion, surface cryst. form., effect of phosphate doping 3−9206
- Pd-Ge, rapidly solidified, transform. behaviour of metastable phases 3−37793
- Pd-Si-Gd, amorphous, EPR, crystallisation studies 3−52619
- $Pd_{82}Si_{18}$ amorphous alloy, thermal stability and crystn. behaviour under H press. 3−22779
- $(Pr_{80}Ga_{20})_{100-x}Fe_x$ metallic glass, mag. props. and crystallisation 3−28618
- Pt_2Si_3 amorphous films, struct., crystallisation and diffusion 3−8352
- Sb film, amorphous, on Ag film, crystn. 3−3013
- Sb films, amorphous, deposition in ultrahigh vacuum, crystn., optical microscopy study 3−28236
- Sb_2O_3 glass, thermal props. 3−13479
- Se, amorphous film, crystn., bending contours, electron microscopy study 3−2412
- Se amorphous thin film, crystallisation parameters, optical microscopy study *(French)* 3−42520
- Se, glassy, crystn. kinetics, Avrami exponent determ. by non-isothermal anal. 3−42526
- Se, glassy, spherulite crystallisation, secondary dimer nucleation mechanism 3−13102
- Se, vapour deposition, correlation between electrophotographic props. and original material props. 3−16437
- Se-Te, amorphous film, crystn., bending contours, electron microscopy study 3−2412
- Se-Te alloy, amorphous, crystn. and elec. cond., temp. and conc. depend., Avrami eqn. 3−51500
- $Se_{0.95}Bi_{0.05}$ alloy, crystallisation, calorimetric investig. 3−3944
- Si, amorphised ion implanted single cryst., laser annealing, explosive crystn. obs. 3−42655
- Si, amorphized by ion implantation, fast scanned electron and laser beam induced explosive crystn. 3−56821
- Si, amorphous, crystallization on glass substrate, uniform and directed 3−57247
- Si, amorphous, laser annealing, explosive crystn., implantation effects 3−42654
- Si amorphous layers, polycentre crystallisation in pulse annealing 3−18221
- Si, amorphous thin film, furnace and laser annealed, different crystallisation states, evidence 3−29075
- Si, CVD films, struct. and electronic props. near crystn. temp. 3−23208
- Si, crystalline to amorphous boundary, laser induced solid phase epitaxy 3−57239
- Si, crystallisation methods for terrestrial photovoltaics appls. 3−52907
- Si eutectic alloys, directionally crystallised, microstructure and crystallography 3−7980
- Si film, explosively crystallized on glass, optical, struct. and elec. characts. 3−57246
- Si, ion implanted, discharge annealing, optical reflectivity study 3−56993
- Si, ion implanted, explosive liq. phase crystallisation 3−18222
- Si, ion implanted, light absorpt. effects on Nd laser annealing 3−56951
- Si, laterally seeded, on SiO_2, microstruct. 3−18306
- Si microcrystalline film, plasma transport growth, in situ Raman spectroscopy study 3−23206
- Si, polycryst., recrystn. by laser and electron beam annealing *(French)* 3−24121

crystallisation continued
- Si, semicrystalline ingot prod. by unidirectional crystn., solar cell appls. 3−52989
- a-Si, struct. order parameters, Raman scatt. study 3−56820
- Si, swirl defects form. mechanism, growth rate and temp. gradient influence 3−8044
- Si thin films, explosive liquid-phase crystn. during laser pulse heating 3−33601
- Si, thin films, flash-lamp-induced crystal growth an amorphous substrates 3−33602
- Si:H, amorphous, crystallisation and nucleation kinetics meas. 3−33094
- Si:H amorphous glow-discharge coating on glass, CW laser crystallisation 3−18581
- a-Si:H and a-Si:H,F, struct. order parameters, Raman scatt. study 3−56820
- Si:H photoconductive alloys, reactive sputtering in the He-containing atm. *(Japanese)* 3−19267
- Si:P CVD film, struct., optical and elec. props. 3−42935
- $Si:P^+$, ion implanted, refl. dynamic interf. effect by CW CO_2 laser annealing *(Chinese)* 3−38789
- Si_3N_4, direct crystn. from amorphous to β-phase under high press. 3−14531
- SiO_2, thermally grown films, topography induced preferential crystallisation 3−33599
- $SiO_2-Al_2O_3-ZnO-ZrO_2$ glass, crystallisation and phase separation, thermal history effects 3−33125
- Sn island films, nucleation, small particle crystallisation 3−3006
- Ta_3Sn, crystallisation at high press., A15 struct., superconducting state 3−14523
- Te, liq., semicond.-metal transition, cond. and thermoelec. power meas. 3−13867
- Te-Sn(Pb)(Ge)(Cu), chalcogenide glasses, obtained by rapid cooling from liq., crystn., morphological aspects 3−7913
- TeO_2, crystal growth and solubility 3−3937
- TeSe amorphous thin films, crystallisation and growth morphology 3−8353
- Ti-Cu, amorphous, thermal stability, crystn. behaviour 3−46854
- $Ti_{50}Be_{40}Zr_{10}$, Metglas 2204, thermoelec. power anomalies, resist. meas., press. study 3−28341
- TiN, particle size distribution meas. during crystn. in plasma current from UHF discharge 3−27868
- $Ti_{1-x}Ni_x$ amorphous alloy, crystallisation, stability and elec. transport props. 3−43150
- $TiSi_2$ amorphous thin film, elec. resist. and crystallisation 3−3187
- $Tl_5Te_3-Tl_5As_2Te_3-Tl$ system, phase diagram anal. 3−58105
- V_2O_5 thin films, amorphous, quenched, elec. and thermal props. 3−8599
- $V_2O_5-TeO_2$ glasses, elec. threshold switching in sandwich geometry 3−52153
- W, particle size distribution meas. during crystn. in plasma current from UHF discharge 3−27868
- WO_3 electrochromic thin films, IR and Raman spectroscopy studies *(French)* 3−47724
- Y-Si-Al-O-N glass, crystn. and characterisation 3−27852
- $Y_{1-x}Fe_x$ amorphous melt-spun alloy, magnetic props. and crystn. kinetics 3−18934
- YIG crystallisation in $Na_2O-SiO_2-Y_2O_3-Fe_2O_3$ glass system, effect of nucleating agents 3−29196
- YIG film, stoichiometric, prep. by sputtering 3−19270
- YIG single crystal growth by chem. transport using $FeCl_3$ transporting agent, $YFeO_3$ source material 3−14452
- ZnO single cryst., solid-state impurity crystn. 3−2817
- Zr-Gl, amorphous binary alloys, superconducting props. 3−23523
- Zr-K-Li fluorophosphate glasses, crystallisation and glass struct. model 3−2427
- Zr-M-Si, M=IV-VII group transition metals, amorphous alloys, thermal stability and crystallisation 3−22781
- $Zr_{50}Cu_{50}$, amorphous, crystn. kinetics using US and microhardness meas. 3−7921
- $ZrF_4-BaF_2-BaCl_2$ glass, IR and Raman vibr. spectra and struct. 3−22785
- Zr_8M_2 (M=Cu, Ni, Co, Fe, Rh, Ir), crystallisation, DSC, X-ray diffr. and Mossbauer studies 3−51494

crystallite texture *see texture*

crystallites
- *see also crystal microstructure*
- graphite discs, hot pressed, crystallite orientation *(Japanese)* 3−39083
- joints of boundaries, elastic stresses, self-distortion effects 3−46450
- polyacetylene, cis-trans thermal isomerization, structural study 3−58423
- polycrystalline target, sputtering yield, channelling fraction 3−47750
- polyethylene, linear, radiation induced destruction of crystallinity, mechanism 3−13263
- polyethylene, ultra-high modulus linear, crystalline thickness meas., effect of draw temp. 3−47851
- polyethylene crystallites, lattice longit. vibrs. amplitude temp. depend. *(Russian)* 3−51739
- solar cells, polycrystalline, crystallite shape and size effects on performance 3−39481
- Al film, obliquely evaporated, optical props. 3−14374
- Al films, evaporated, struct., elec. cond. and optical density meas. 3−24140
- Cu, VPE on vacuum cleaved mica 3−13679
- Cu_2S/CdS solar cells, sintered, having spherical grain structure, experimental confirmation of theory 3−39481
- $Cu_xS-Cd_{1-y}Zn_yS-CdS$ evaporated thin film solar cells 3−53550
- Fe-Si (3 wt.%), sheet, primary recrystallised, surface texture, crystallite orientation distrib. 3−58130
- Gd, martensitic transition to cubic phase, electron diffr. study 3−37846
- MoS_2 film, sputtered, morphological and frictional behaviour 3−13687
- Na zeolite crystallites, mol. diffusion, propagator representation, spin echo NMR study 3−47161
- $Na_2O-Al_2O_3-B_2O_3-SiO_2$ photochromic glasses, precipitation of Ag(Cl, Br), crystallite size 3−33130
- Ni, plate deposited in butynediol presence, morphology and props. 3−47787
- Ni/Au films, vacuum deposited on Si (111) substrate, interfacial phenomena, SEM study 3−33516
- Pb crystallites, time-depend. melting and superheating 3−2754
- Si film, on SiO_2 substrate, arc lamp zone melting and recrystn. 3−8999
- Si film, polycryst., amorphisation by Si ion implantation, annealing behaviour 3−51982

crystallites continued
- Si, thin films, flash-lamp-induced crystal growth an amorphous substrates 3−33602
- Si:C CVD layers, polycryst., morphology and resist. 3−23209
- Si:H, microcrystalline, glow discharge deposition, crystallite size and orientation control 3−52974
- Si:H, microcrystalline glow discharge deposited, wide range control of crystallite size 3−42943
- SnTe film, noncryst., struct. analysis, disordered microcrystallites 3−13655
- SnTe films, vacuum deposited, substrate temp. effects on microstruct. and elec. props. 3−24137
- ZnO powder, crystallite shapes, sizes, size distribs., X-ray diffr. line-broadening anal. 3−56772

crystallographic shear
- ice, artificial, torsion, deform. effects, shear 3−18369
- nematic liquid cryst., soliton propagation 3−13097
- nonstochiometry of shear structures, theory 3−51631
- oxides, extended defect form., atomistic computer simulation study 3−8066
- shear lip size before notch root radius, apparent fracture toughness *(Czech)* 3−34450
- single crytals, ductile, shear band bifurcations 3−57015
- smectic A phase, confocal parabola lattice form. under shear *(French)* 3−27841
- Co_5Sm permanent magnet, mag. domain struct. and microstruct., TEM and electron diffr. study 3−28603
- $K_xP_4O_8(WO_3)_{2m}$, cryst. struct., electron microscopy, electron and X-ray diffr. study 3−2505
- Nb_2O_5-WO_3, system, crystallographic shear phase, X-ray diffr. and TEM study 3−7991
- Nb_2O_5-WO_3 microstruct., crystallographic shear phase, on annealing at 1173K 3−8062
- $PbTiO_3$ single crystals, planar defects 3−8063
- $PbZrO_3$ single crystals, planar defects 3−8063
- $Rb_xP_4O_8(WO_3)_{2m}$, cryst. struct., electron microscopy, electron and X-ray diffr. study 3−2505
- Ta_2O_5-WO_2, system, crystallographic shear phase, X-ray diffr. and TEM study 3−7991
- Ta_2O_5-WO_3 microstruct., crystallographic shear phase, on annealing at 1173K 3−8062
- TiO_2, rutile, point defect form. energy, correl. with permitt. 3−33244
- V_9O_{17}, nonstoichiometry and crystallographic shear defects, TEM study 3−8067
- $W_{18}O_{49}$, oxidised, cryst. defects, X-ray powder diffr. and TEM studies 3−37936
- $WV_2O_{7.5}(W_{0.2}V_{2.8}O_7)$ positive electrochem. electrodes, Li insertion reactions study 3−44115
- ZrO_2-Y_2O_3 solid soln., stabilised, hydrostatic press. depend. of elastic behaviour and stability against shear 3−14633

crystallography
- *see also crystal atomic structure; electron diffraction crystallography; gamma-ray diffraction; isomorphism; lattice constants; neutron diffraction crystallography; space groups; X-ray crystallography*
- complex structures, random phase refinement techniques 3−51433
- E value modification, use of correctly oriented mol. fragments 3−13019
- file struct., crystallographic, standard 3−51434
- fracture surfaces, facet orientation, method of determ. 3−24442
- Gaussian disorder model, optical diffr. appl. 3−51436
- generalised lattice correspondence 3−27862
- holographic camera for phase problem soln. in crystallography *(German)* 3−56162
- holographic interferometry appls. 3−37832
- intensity statistics, non-zero value of odd-mixed moments 3−13152
- inversion procedure using self-consistent statistical geometric approach based on information theory 3−33034
- macromolecular configurations, X-ray, crystallography, phase incorporation in least-squares approx. 3−32253
- optical microscopy, used for crystallographic meas. 3−24447
- phase problems, information theory 3−33035
- polydisperse dilute particle ensemble, small angle scatt., diagrams 3−13017
- powder statistics, line profile calc. using sampling line method 3−13018
- protein crystallography, phase extension and refinement by electron density modification 3−34770
- RANTAN calculation procedure for large structures and fragment development 3−33032
- subcentric distrib., dispersion effects, generalised intensity statistics 3−51435
- Si thin cryst., X-ray scatt. method for struct. perfection meas. 3−7856

crystals
- *see also bicrystals; crystal structure; crystallography; dendrites; epitaxial layers; liquid crystals; plastic crystals; whiskers (crystal)*
- No entries

Curie point *see Curie temperature; ferroelectric Curie temperature*

Curie point writing *see thermomagnetic recording*

Curie temperature
- *see also ferroelectric Curie temperature*
- amorphous ferromagnet, Curie temp. change incorporating effective field fluctuations 3−43369
- Curie-Weiss low spin susceptibility, electron-phonon interaction effect 3−52345
- dielectrics and semiconductors, ferromag., mag. meas. using AM freq. detector 3−10867
- dilute ferromagnetic alloy, Curie temp., influence of isostructural nucleation of second phase *(Russian)* 3−33891
- ferrites, amorphous ferromag., hereditary mag. props. and stability 3−57703
- ferrites, mag. and elec. props., Curie temp. about 0°C *(Rumanian)* 3−8695
- ferrites, W-hexagonal, superexchange interaction paths 3−33884
- ferromagnet, amorphous, Curie temp., Bethe-Peierls-Weiss approximation 3−38614
- ferromagnet, isotropic, longit. fluctuation spectrum in hydrodynamic crit. region below Curie point 3−52443
- ferromagnet, morphic effect, magnetostriction and Curie temp. *(Russian)* 3−23764
- ferromagnetic film, crit. indices, Valenta model 3−18949
- ferromagnetic film, spin correl. time rel. to mag. susceptibility in crit. region 3−18948

Curie temperature continued
- ferromagnetic plate, mag. domain lattices near Curie temp. 3−3481
- ferromagnetic thin films, spin correlation time near Curie point 3−23749
- ferromagnets, amorphous A_cB_{1-c} alloys, Curie temp., short range at. order study 3−23681
- Heisenberg ferromagnet, anisotropic, with biquadratic exchange, Green function theory 3−28586
- magnetic thermogravimetry of Ni, De and Co using modified magnetic thermo-balance *(Japanese)* 3−54750
- metallic glasses, structural relax kinetics, model 3−51707
- MnAl evaporated films for magnetic recording media 3−18958
- phyllosilicates, 2:1 layer minerals mag. props. 3−33860
- rare earth alloys, $R_2Ni_2Ga(Al)$, mag. and crystallographic props. *(Russian)* 3−28503
- rare earth alloys, R_5In_3 (R=Gd, Tb, Dy, Ho, Er, Tm, Y), mag. susceptibility, Neel temp. and Curie temp. 3−33865
- rare earth antimonides, R_5Sb_3 (R=Nd, Sm, Gd, Tb, Dy, Ho), elec. props. 3−3203
- rare earth compounds, RRh_3B_2, R=La to Gd, NMR, mag. and superconducting studies 3−23819
- rare earth Fe garnets, pressed powders, mag. susceptibility, ferrimag. behaviour 3−3427
- rare earth intermetallics, RNi (R=Sm,Gd,Dy,Ho,Er), electrical resistivity and magnetic transitions, expt. study 3−18685
- rare earth iron garnets, amorphous, Mossbauer spectra and magnetisation meas. 3−57832
- rare earth-3d transition metal alloys, vol. depend. of Curie temp. 3−38613
- rare earth-iron alloys, cryst. struct. and mag. props., review *(Polish)* 3−13167
- rare earth-Pt alloys, R_2Pt, mag. props. 3−57616
- rare earth-transition metal metallic glases, $(R_{80}Gas_{20})_{1-x}T\$xH_y$, mag. props., H effects 3−28553
- singlet ground state systems, electronic and nucl. magnetism 3−38568
- small amorphous particles produced by spark erosion, mag. behaviour 3−43367
- TGSe:L-α alanine, admixture influence on dielectric props. 3−34041
- transition metal-Sn Heusler alloys, $M_2M'Sn$, mag. and magneto-optical props. 3−52527
- transition metals, Curie-Weiss law and band struct. parameters 3−28511
- transition metals, disordered local moments and thermodynamic props. of Hubbard model 3−33854
- Au-Fe (19 at.%), spin canting and ferromag., Mossbauer and susceptibility meas. 3−14012
- $Ba_{1-x}Ce_x(La_x)Fe_{18}O_{27}$ ferrites, mag. props. and Mossbauer spectra 3−57604
- $BaZn_2Fe_{16-x}In_x(Sn_x)O_{27}$, cation distrib., mag. props. and Mossbauer spectra 3−18868
- $Ba(Zn_{1-x}Mn_x)_2Fe_{16}O_{27}$ hexaferrite, Mossbauer and mag. characterisation 3−57602
- Bi-MnBi, irreversible magnetisation processes 3−23718
- $Bi_xTm_{3-x}Fe_yGa_{5-y}O_{12}$ films, mag. props. 3−33949
- $CdCr_2Se_4$ single cryst., elec. cond. and magnetoresist. in alternating elec. fields 3−28361
- $CeAg_{1-x}In_x$, elec. and mag. props. 3−52419
- CeCd, mag. and struct. phase transitions, at high press. 3−51781
- $Ce_{1-x}La_xAg$, elec. and mag. props. 3−52419
- Co, thermal transport props. near Curie point 3−8275
- Co- B-Si metallic glasses, spin wave stiffness const., magnetisation study 3−28535
- Co-Cr alloy, mag. props. and anisotropy 3−57589
- Co-Fe-Ni-Mn-B-Si metallic glasses, near zero magnetostrictive, with very high saturation induction 3−28672
- Co-Nb-B metallic glass, mag. moment, magnetisation and Curie temp. 3−28523
- Co-Zn ferrites, elec. cond., Seebeck coeff. meas., mag. props. 3−3190
- CoCr based vertical recording materials, sputter deposited, mag. props. and microstruct. 3−57714
- β-Co_xGa_{1-x}, elec. resist. near Curie temp. 3−43153
- $(Co_{1-x}Mn_x)_2P$, Curie temp., press. depend., AC susceptibility meas. 3−43364
- CoO-P_2O_5-Fe_2O_3 system, amorphous, hereditary mag. props. and stability 3−57703
- $(CoO)_x(2B_2O_3.K_2O)_{1-x}$ glasses, mag. props. 3−23577
- $Co(S_{1-x}Se_x)_2$, specific heat and low field mag. props. meas. 3−23662
- $Co_{3n+5}Sm_{n+1}B_{2n}$, permanent magnets, substitution of Fe for Co, effect on mag. props. 3−47500
- Cu-Ni film, compositionally modulated, struct. and mag. props. 3−57713
- CuAuMn, spin glass behaviour 3−57658
- CuO-PbO-TeO_2 glasses, mag. props. and EPR spectra 3−23603
- CuPdMn, spin glass behaviour 3−57658
- CuPtMn, spin glass behaviour 3−57658
- $Cu_xZn_{1-x}Fe_2O_4$, cation distrib., magnetisation, elec. switching 3−38648
- Cy, thermodynamic props., 7-300K, mag. transition temps. determ. 3−57104
- Er_4Co_3, bulk amorphous alloy, mag. props. meas. 3−52456
- $Er_2Co_{17-x}Zr_x$ and $Er_{2-y}Pr_yCo_{16.4}Zr_{0.6}$, mag. props., effect of substitution 3−28636
- $(EuLaCa)_3(FeGeAl)_{5O12}$, garnet films, LPE grown, mag. props., growth atm. effects 3−23753
- EuO, spin dynamics at high temp., neutron scatt. meas. and theoretical models 3−57564
- EuS epitaxial films, ferromag. domains, magneto-optical study 3−18963
- EuS films on Si substrate, MBE growth and mag. props. 3−18951
- Fe, critical dynamics above Curie point, polarised neutron study 3−52496
- Fe, critical dynamics at Curie point, role of spin-nonconserving forces 3−3456
- Fe, critical scattering of polarised neutrons above T_c 3−52394
- Fe, electronic struct. and magnetism above Curie temp. 3−28498
- Fe, ferromagnetic antiresonance transmission meas. of critical exponent β 3−28704
- Fe, left-right asymmetry of polarised neutron scatt. above T_c 3−52395
- Fe, thermal transport props. near Curie point 3−8275
- Fe-Au-B sputtered amorphous alloys, high mag. moment 3−28521
- Fe-C system, carbides and diamond formation under high temp. and press., mag. study 3−18390
- Fe-Cr, tempered, mag. trans. rel. to heat treatment *(French)* 3−52486
- Fe-Ni, electronic and mag. structure evolution during ferromagnetic ordering *(Russian)* 3−28263
- Fe-Ni, magnetovolume effect, magnetostriction and thermal expansion anomalies 3−52584

Curie temperature continued
Fe-Ni, rapidly quenched, mag. props. rel. to at. short-range order 3−52526
Fe-Ni, soft mag. alloys, phys. props. 3−3482
Fe-Ni Invar alloys, mag. props., neutron irrad. effects 3−52471
Fe-Ni-Cr-B-Si amorphous ribbons, Cr conc. effects, magnetisation study 3−28616
Fe-Ni-P-B amorphous ribbons, electron and proton irrad. effects on mag. props. 3−28554
Fe-Pt, mag. and magnetovol. props. around γ-α phase boundary 3−52585
Fe-Si, ferromagnetic antiresonance transmission meas. of critical exponent β 3−28704
Fe-Si-B amorphous alloys, Mossbauer spectra, hyperfine fields and mag. props. 3−28740
Fe-Ti sputtered alloys, magnetovolume effects 3−23770
Fe_3Al order-disorder system, mag. props., magnetisation and susceptibility study 3−28561
$Fe_{78}B_{13}Si_9$, Metglas 2605 S2, magnetomechanical props. 3−23767
$Fe_{79}B_{16}Si_5$, Metglas 2605S3, magnetomechanical props. 3−23767
$Fe_{81.5}B_{14.5}Si_4$ amorphous particles, Curie temp. and ferromag. resonance 3−43441
$Fe_4Co_{66}V_2Si_8B_{20}$, amorphous, mag. props., mag. head appls. 3−33930
$(Fe_{1-x}Co_x)_{90}Zr_{10}$, amorphous, giant forced vol. magnetostriction 3−3503
FeCr, mag. hyperfine fields, Curie temp. and mag. moments, Mossbauer study 3−52673
Fe_4N power, synthesis and mag. props., mag. tape appl. 3−23729
Fe_xNb_{100-x} sputtered amorphous alloy, mag. props., resistivity and Mossbauer spectra 3−28658
$Fe_{40}Ni_{38}$, mag. hyperfine field, effects of B and Mo additions *(Korean)* 3−38734
$Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. props., Mossbauer study 3−19027
$Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. phases study by EPR 3−43430
$Fe_{40}Ni_{38}Mo_4B_{18}$, amorphous, Mossbauer study and mag. props. *(Korean)* 3−14172
$Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous alloy, hydrogenation effects on mag. props. 3−28555
$Fe_{40}Ni_{38}Mo_4B_{18}$, mag. props. compared to $Fe_{40}Ni_{38}$ *(Korean)* 3−38734
Fe_2O_3-rare earth oxide systems, amorphous, Mossbauer spectra and magnetisation meas. 3−57832
$Fe_{78}Si_{10}B_{12}$ amorphous alloy, struct. relax., elec. and mag. study 3−27847
$Fe_{1-x}Ti_x$, sputtered alloys, metastable BCC and amorphous phases, X-ray diffr. and magnetisation 3−51990
$FeTiO_3$ II, disordered, high temp. synthesis, mag. props. 3−14053
$Fe_{83-x}V_xB_{14}Si_3$ amorphous N_2 containing alloy, thermal and mag. props. 3−28552
$Ga_{0.5}Mo_2S_4$, sp. ht. meas., cryst. struct. and mag. props., low temp. study 3−8655
Gd, magnetic hysteresis near Curie temp. 3−52541
Gd, spin dynamics at high temp., neutron scatt. meas. and theoretical models 3−57564
Gd, transport props., spontaneous magnetisation, in crit. temp. region 3−57331
Gd-Tb-Fe amorphous films, magnetic and magneto-optic props., magneto-optical disc memory appl. 3−23927
Gd_4Co_3, bulk amorphous alloy, mag. props. meas. 3−52456
$GdCu_{1-x}Ga_x$, cryst. struct. transforms. and mag. ordering phenomena 3−38595
$GdIn_xAg_{1-x}$, cryst. struct. and mag. props. 3−28530
$Gd_xLa_{1-x}Mg_2$, mag. props., spin echo NMR study 3−28738
$GdMg_2$, mag. props., NMR and Mossbauer study 3−28738
$Gd(Rh_{1-c}M_c)_2$ (M=Mn, Fe, Co), mag. props., magnetisation meas. 3−18936
$Gd_xY_{2-x}Fe_{17}$, mag. props. and exchange interactions 3−38608
$Gd_xY_{1-x}Rh_4B_4$, supercond. and magnetism 3−3357
$Ge_{0.03}Fe_{2.97}O_4$, doped magnetite, mag. and elec. props. *(Korean)* 3−38733
$Hg_{1-x}Zn_xCr_2Se_4$ single cryst., mag. phase transition temp., heat treatment effect 3−57597
$(Ho_{0.6}Er_{0.4})Rh_4B_4$, re-entrant superconducting-ferromagnetic transition, specific heat 3−3444
$(Ho_xEr_{1-x})Rh_4B_4$, mean field behaviour of reentrant superconducting-ferromagnetic transition 3−43365
HoIG, mag. props. in high mag. field, optical absorpt in IR region 3−28604
$(Ho_xLu_{1-x})Rh_4B_4$, mean field behaviour of reentrant superconducting-ferromagnetic transition 3−43365
HoNi single cryst., magnetisation and elec. resist. 3−28623
KDP-DKDP, mixed cryst., electro-optical props., depend. on Curie temp. 3−28835
$La_xBa_{1-x}Fe_{12-x}Zn_xO_{19}$ ferrites, mag. props. and high temp. composition 3−57698
$La_xBa_{1-x}Zn_xFe_{12-x}O_{19}$ ferrite, high temp. comp. and mag. props. study *(Chinese)* 3−18887
$(LaLuSmGd)_3(FeGa)_5O_{12}$, very thin films, Curie temp. and anisotropy fields 3−57715
MgO:Fe, magnesioferrite form., mag. resonance and electron diffr. 3−8726
MnAs, elec., galvanomag., and mag. props. 3−28360
$Mn_{1-x}Cr_xSb$, Curie temp. and compressibility, high press. effects *(Russian)* 3−52462
$(Mn_{1-x}M_x)_3B_4$, M=Cr, Mo, Ta, W, mag. phase diagram, Curie temp. 3−52473
$Mn_2Mo_3O_8$, spontaneous magnetisation meas., mag. anisotropy 3−52367
$Mn_{1+x}Sb_{1+x}Sn_x$ alloys, mag. props., struct. and Mossbauer spectra, temp. effects 3−18938
$Mn_{1-x}Ti_xAs$, interatomic exchange interaction, Curie temp. 3−52449
MnZn ferrite crystals, mag. props. meas., VTR mag. head appl. 3−23726
Na_2O-Fe_2O_3-NiO-B_2O_3-P_2O_5 glass ceramics, crystallised, mag. and elec. props. *(Japanese)* 3−58144
Ni, ferromagnetic, deviations from Stoner theory behaviour, polarised neutron scatt. demonstration 3−38603
Ni, interband transitions and exchange splitting, EELS study 3−43677
Ni, nonresonance absorption near Curie temp., EPR and FMR obs. *(Russian)* 3−8718
Ni, spin dynamics at high temp., neutron scatt. meas. and theoretical models 3−57564
Ni-Cr alloys, thermodynamic studies and mag. ordering close to critical composition 3−8671
Ni-Cu, ferromag., sp. ht., crit. exponent anal. 3−57614
Ni-Cu-Pd spinodal alloy, superparamagnetic behaviour 3−52555
Ni-Zn ferrite, mol. field approx. 3-sublattice 3−13987

Curie temperature continued
Ni_3Al, weak ferromagnet, mag. props., small angle neutron scatt. study 3−28537
Ni_xAl_{1-x}, weak itinerant ferromagnetism, disorder effects, spin fluctuation theory 3−57625
$(Ni_{1-x}Co_x)_2MnSn$ Heusler alloys, ferromagnetic and paramagnetic props. 3−3422
Ni_3Fe, configurationally disordered, mag. heat capacity 3−8673
Ni_3Fe, slip-induced mag. anisotropy annealing effects near T_c 3−57586
$Ni_3Fe(Mn)$, critical behaviour of elec. cond. temp. derivative 3−28335
$NpTe_2$ $(Te_{1.8})$, mag. and elec. props. 3−18937
PbO-B_2O_3-Al_2O_3-Fe_2O_3-Y_2O_3 glass-ceramics, mag. props. 3−57833
Pd-Fe, elec. and mag. props., order-disorder transition temp. effects *(Russian)* 3−23354
Pd-Fe-Au, elec. and mag. props., order-disorder transition temp. effects *(Russian)* 3−23354
Pd-Fe(Co)(Ni), dil., Curie temp., vol. depend., tight-binding calc. 3−52472
Pd-Si-Fe(Mn)(Cr), amorphous, magnetisation, AC susceptibility, and Mossbauer meas. 3−57560
PdNi, mag. correlations near critical conc. 3−23585
$PrRu_2(Rh_2)(Ir_2)(Pt_2)$, cubic cpd., mag. props., neutron diffr. results 3−14005
$PtMn_x(Sn)(Sb)$, exchange striction and press. effect on Curie temp. 3−52470
Sc_3In, sp. ht. in high mag. fields, 1.3 to 20K spin fluctuation quenching 3−52492
Sc_3In, spin fluctuation quenching in high mag. fields 3−57624
Sm(Co, Fe, Ni) system, mag. props. 3−14024
Sm_4Co_3, bulk amorphous alloy, mag. props. meas. 3−52456
$(SmLuCa)_3(FeVSi)_5O_{12}$ garnet films, mag. props. 3−33947
$(SmLuCa)_3(FeVSi)_5O_{12}$ garnet film for ion implanted bubble devices, prep. and high temp. bubble propagation 3−38659
$SrFe_{1-x}Co_xO_3$, ferromagnetism and helical spin configurations, neutron diffr. study 3−57603
Tb, critical fields and commensurate turn angle effects 3−52534
Tb-Fe alloy thin films, amorphous, RF-sputtered, thickness depend. of mag. hysteresis props. 3−28661
Tb_xFe_{1-x} sputtered amorphous alloy, magneto-optical props. 3−28838
$Tb_{0.23}(Fe_{1-y}M_y)_{0.77}$ (M=V, Mn, Co, Cu), amorphous, mag. and magneto-optical props. 3−57897
Tb_2Pt, mag. props. and cryst. struct. 3−18859
Tb_5Sb_3, mag. props. meas. 3−23725
$Tb(Zn_{1-x}Cu_x)$, hyperfine interactions, ^{156}Gd TDPAC study 3−52681
Tm_6Mn_{23}, Mossbauer effect, mag. props., and lattice consts., effect of H_2 absorpt. 3−52679
UFe_2, ferromagnetic critical phenomena, itinerant-electron magnetism 3−57507
$U(Fe_xCo_{1-x})_2$, paramag. and ferromag. props., magnetisation and susceptibility meas. 3−33866
$U(Fe_{1-x}Mn_x)_2$, Mossbauer study of onset of magnetism, elec. cond. 3−19024
US, neutron fission damage, mag. disorder and mag. transition temp. 3−52480
US, neutron irrad. effects 3−16853
$Y_{3-x}Bi_xFe_5O_{12}$ single cryst., Curie temp. and Mossbauer spectra *(Chinese)* 3−43463
$Y_{3-x}Ca_xFe_{5-x}Ti_xO_{12}$ garnet, mag., elec. and thermoelec. props. 3−28352
$Y_{6-x}Er_xFe_{23}$, hydrides, mag. props., structural props., X-ray diffr. anal. 3−52524
$(YEuLuCa)_3(FeGe)_5O_{12}$ garnet films, LPE grown, mag. props., growth atm. effects 3−23753
$Y_{1-x}Fe_x$ amorphous alloy, hydrogenation effects on mag. props. 3−28555
$Y(Fe_{1-x}Mn_x)_2$ mag. props. and Mossbauer spectra, absorbed H effects 3−28631
YIG, very thin films, Curie temp. and anisotropy fields 3−57715
$Y_{3-x}Nd_xFe_5O_{12}$ system, mag. anisotropy and lattice consts. 3−28549
YNi_3, magnetovolume effects, thermal expansion meas. 3−23779
$(YSmLuCa)_3(FeGe)_5O_{12}$ garnet film for 1.5 μm bubble devices, mag. props. 3−38660
$(YSmLuGd)_3(FeGa)_5O_{12}$ garnet film for 1.5 μm bubble devices, mag. props. 3−38660
$Yb_2Co_{17-x}Zr_x$, mag. props., effect of substitution 3−28636
$ZnFe_2O_4$, order-disorder transition, mag. props. 3−28097
Curie-Weiss law *see magnetic susceptibility; paramagnetic properties of substances; paramagnetism*
curium
see also nuclei with ......
X-ray energies, natural widths and intensities meas. 3−11737
^{244}Cm, administration to mongrel female rats, tumour incidence *(Russian)* 3−34904
^{244}Cm purification and separation from Al and other impurities in radwaste 3−49959
curium compounds
$Cm(PO_3)_3$, Raman spectra 3−47646
$CmPO_4$, Raman spectra 3−47646
current (electric) *see electric current*
current algebra
see also elementary particle theory; hadron current; light cones; quantum field theory
effective Lagrangians, U(1) axial anomaly, renormalisation, meson spectrum η, η' gluon content 3−26064
effective Lagrangians, U(1) axial anomaly in SU(3), QCD, symmetry breaking 3−26063
higher symmetry in strong interaction and its effects to weak interaction process 3−36207
invariant, on light cone, deep inelastic electron-hadron scatt. appl. 3−54864
Noether currents as nonlocal currents due to nonlocally transformed global symm. 3−552
nonlinear σ-model on symmetric coset spaces, Backlund transformation, conservation laws 3−21017
nonlinear σ-models, local conservation laws and currents 3−16504
nonlocal infinitely conserved currents, Noether anal. with H-transform. 3−49596
nucleon axial vector coupling constant and mag. moments in bag model, gluon exchange currents 3−45398
products on light cone at short distances, asymptotic expans. 3−54865
QCD, product of two gauge-invariant currents, light-cone expansion 3−31135

- **current algebra** continued
  - QCD, sum rules for spontaneous chiral symmetry breaking parameters 3—16604
  - QCD sum rules from vacuum expectation values, chiral symmetry breaking parameters, (SU) violation 3—5997
  - regularized functional integral for fermions and anomalies, current divergences 3—16566
  - second class currents and supersymmetric U-boson, common footing 3—36171
  - threshold pion photoproduction from trinucleon 3—45510
  - U(1) problem and QCD 3—11136
  - weak vertex, nonrenormalisation in gauge theories with integrally charge quarks 3—40836
  - $K^0 \rightarrow \pi^+\pi^-$ long-distance effects and $\Delta I = {}^1/_2$ rule 3—36241
  - K^0-$\bar{K}^0$ mixing, $\Delta S = 2$ matrix element 3—36248
  - $K_L{}^0 \rightarrow \gamma\gamma$ in relativistic quark model 3—21133
  - $K\bar{N}$ sigma terms from kaon-nucleus scatt. lengths 3—660
  - $\Lambda \rightarrow N\pi$, nonleptonic decay, final-state interaction from current algebra and PCAC 3—40899
  - $\bar{p}p \rightarrow K^+K^-3\pi^0$ $(K^+K^-\pi^0)$, soft-pion study using current algebra and PCAC hypothesis 3—16656
  - $\bar{p}p \rightarrow \pi^+\pi^-\pi^0 + 2\pi^0$, soft pion emission, partially conserved axial vector current approach 3—36267
  - $\pi \rightarrow e\nu(e\nu\gamma)(e\nu_e e^+e^-)$ decays and related processes 3—16635
  - U boson, supersymmetric, coupling to quarks, parameter X constraints 3—11066
  - ^{76}Ge double β-decay, lepton nonconservation, massive ν and righthanded current limits 3—40829
  - ^{3}H, pair current in constituent quark model 3—45444
  - ^{3}He, pair current in constituent quark model 3—45444
- **current control, electric** *see electric current control*
- **current-controlled current sources** *see active networks*
- **current-controlled voltage sources** *see active networks*
- **current density**
  - *see also critical current density (superconductivity); electron density*
  - air, laboratory, wind-blown positive corona development in point-plane gap 3—27790
  - capacitive HF discharge, current density effect at moderate pressure 3—42482
  - collisionless plasma, radiation energy current density 3—40384
  - deuteron beam, pulsed, collected from grid-fixed plasma boundary, density distrib. 3—11573
  - eddy current distribution and losses in multiple solid plates due to parallel current filament 3—21979
  - electrostatic precipitators, current density meas. 3—27783
  - high di/dt particle beam accelerator current meas. by piezoelectric gauges 3—17153
  - p^+-n-n^+ semiconductor structs., diffusion p-n junctions, I-V charact. at large current density 3—8567
  - p-n-p-n structures, turn-on process in strong elec. fields at high current density 3—3304
  - plasmatron, reciprocal polarity, current and heat flow density on anode 3—42458
  - SEM expansion, scattering object, class 1 coupling coefficient performance 3—46117
  - semiconductor of varying comp., charge carrier transport eqns. 3—18718
  - spacecraft, space charging currents and effects 3—20201
  - streaming current in pipe, conductivity dependence *(Japanese)* 3—46654
  - transient electromagnetic processes in interaction of an impulsive magnetic field with a cylindrical conductor *(Russian)* 3—21959
  - two-dimensional two-phase materials, elec. cond. props. 3—43139
  - two-phase material with chequer-board geometry, current distribs. 3—43140
  - $Al_xGa_{1-x}As$/GaAs multiple quantum well junction laser, MBE grown, performance 3—17495
  - Cu cathode thermionic emission in K-seeded LPG combustion products 3—51393
  - GaInAsP-InP:Be DH laser diodes, Be implantation fabrication 3—37038
  - InGaAsP/InP distributed feedback lasers, lasing characts. in 1.5 μm range, temp. depend. 3—32358
  - Pb/acid cell, tubular positive plate formation, factors affecting 3—19575
- **current distribution**
  - *see also current density*
  - 50 MW_{th} diagonally-connected MHD generator loading schemes 3—39494
  - eddy current distribution, alternating magnetic field calc. for two high permeable cylinders *(German)* 3—41720
  - eddy current distribution and losses in multiple solid plates due to parallel current filament 3—21979
  - EM wave scattering from imperfectly conducting objects, field generation from soln. of perfectly conducting object 3—32268
  - Josephson junctions, current distrib. and inhomogeneity, laser scanning method 3—33833
  - transient electromagnetic processes in interaction of an impulsive magnetic field with a cylindrical conductor *(Russian)* 3—21959
  - Zn/Ag secondary cell porous electrode discharge current evaluations *(German)* 3—44107
- **current fluctuations**
  - *see also noise*
  - electron microscope field emission gun, beam current stabilisation 3—10945
  - two-dimensional two-phase materials, elec. cond. props. 3—43139
  - Ge, hot hole noise at liq. He temps., expt. and Monte Carlo calc. 3—13874
  - Si film, elec. oscills., surface recomb. waves 3—18805
- **current measurement, electric** *see electric current measurement*
- **current-mode logic** *see emitter-coupled logic*
- **current transients** *see transients*
- **currents algebra** *see current algebra*
- **curvature measurement**
  - plate, flexed, interferometric determ. of curvatures 3—32697
  - reflection grating method, slope and curvature meas. appl. 3—40547
  - roundness and geometry meas., computer controlled instrument 3—30837
  - roundness measuring instrument, data processing by microprocessor *(Chinese)* 3—40548
  - shearing moire deflectometry, optical second differentiation 3—45105
- **curvature of field** *see aberrations*
- **curve fitting**
  - decay curves, non-iterative method for fitting 3—31882
  - double exponential decays, non-iterative linear fitting 3—1176
- **curve fitting** continued
  - multicomponent exponential signal anal., technique for resolution improvement 3—40576
  - OTF, numerical calc. using least squares curve fitting and Gaussian integration *(Chinese)* 3—41772
  - resistance thermometer response linearisation, comment and reply 3—30856
  - selfconsistent fit of spectra, perturbation calc. 3—25858
  - smoothing of experimental data, computer appl. 3—54718
- **cutting**
  - *see also machine tools; machining*
  - laser cutting, review 3—43984
  - metals, contact processes under friction and cutting, fundamental regularities *(Ukrainian)* 3—8134
  - steel, microcutting, plastic deformation rel. to cutting speed 3—29143
  - Syalon ceramics development, fabrication and engng. applics. 3—29048
  - tool hardening by ion implantation 3—19346
  - underwater cutting method for nuclear reactor decommissioning 3—41233
  - wedge plane elastic contact with friction, stressed state singularities near wedge corners 3—7513
  - Cu, microcutting, plastic deformation rel. to cutting speed 3—29143
  - HfN coatings on cemented carbide tools, PVD and CVD, interrupted cutting tests 3—14763
  - TiC coatings on cemented carbide tools, PVD and CVD, interrupted cutting tests 3—14763
  - Zn, microcutting, plastic deformation rel. to cutting speed 3—29143
- **CVD** *see chemical vapour deposition*
- **CVD coatings**
  - fusion reactor first wall material, low-Z coatings development for JT-60 3—21527
  - phosphosilicate glass film, CVD, on Si substrate, thermal stress study 3—47239
  - polycrystalline, laser annealed, thermal oxides characterization 3—57435
  - SiO_2 film, laser deposited, conformal step coverage 3—2998
  - Al_2O_3, CVD, film struct., reactant gas partial press. efect 3—13680
  - C_{ZZ} 3—21526
  - Fe, epitaxial growth on GaAs (100) by MOCVD, LEED, Auger and FRM studies 3—13652
  - Fe_3O_4-Fe_2O_3 film, prep. by reactive condensation, oxidation and coercivity 3—18954
  - GaAs MO-CVD film, residual donor impurities, far IR magneto-optic study 3—2592
  - GaAs-GaAlAs graded barrier single quantum well lasers, CVD grown, threshold current densities 3—12143
  - $GaAs_{0.4}P_{0.6}$-GaP strained-layer superlattice, photocurrent spectroscopy 3—43273
  - GaP:Cr epitaxial layers, MOCVD grown, high temp. resist., capacitance and I-V meas. 3—13930
  - HfN coatings on cemented carbide tools, PVD and CVD, interrupted cutting tests 3—14763
  - Mo, chemically deposited, He ion irrad. 3—28013
  - Si, amorphous CVD film, solid phase epitaxy on cryst. Si 3—8972
  - Si, amorphous CVD films, elec. props. and ESR, plasma hydrogenation effects 3—52154
  - Si CVD film, solid-phase-recrystallised, on fused SiO_2, thin film transistors fabrication 3—43727
  - Si CVD films, polycryst., enhanced grain boundary diffusion 3—23094
  - Si CVD films, polycryst., grain boundary induced deep levels, transport props. meas. 3—23316
  - Si, CVD films, struct. and electronic props. near crystn. temp. 3—23208
  - Si, CVD grown, laser beam annealed, optical characts. 3—57879
  - Si, CVD grown, laser irrad., grain enlargement, optical microscopy, SEM studies 3—56968
  - Si, CVD grown, P doping and oxidation effects on grain growth, TEM study 3—51624
  - Si, CVD grown on amorphous substrate, shaped beam laser recrystallised, structural and elec. characts. 3—57244
  - Si, CVD grown on fused SiO_2, laser crystn. 3—56969
  - Si, CVD layer, grain boundaries, HREM obs. 3—51619
  - Si, electron beam pulse processing 3—56990
  - Si thin film, CVD deposited and laser beam annealed, optical characts. 3—28917
  - Si:As, ion implanted polycryst. low press. CVD film, As lateral diffusivity meas. 3—38125
  - Si:As CVD film, reduced press. deposited, diffusion source for Si-SiO_2 interface heavy doping 3—51852
  - Si:C CVD layers, polycryst., morphology and resist. 3—23209
  - Si:H, amorphous HOMOCVD film, efficient visible photoluminesc. obs. 3—47682
  - Si:H amorphous films, $0.2<x<0.5$, HOMOCVD prep., broadband visible photoluminesc. 3—8860
  - Si:N, amorphous CVD film, optical and electrical props. meas. 3—8484
  - Si:P, heavily doped polycryst. film, thermal oxidation 3—9351
  - Si:P CVD coatings, incoherent light annealing, elec. cond. study 3—42646
  - Si:P film, segregation of P at grain boundaries, STEM X-ray microanal. study 3—13456
  - Si_xC_{1-x}:H amorphous coatings, CVD gram, XPS and Raman spectroscopy studies 3—51988
  - Si_3N_4 film, antireflection coating for solar cell efficiency improvement 3—53508
  - Si_3N_4 low press. CVD films, Rutherford backscatt. spectrometry anal. 3—13648
  - Si_3N_4 plasma CVD films, comp. and chem. bonds, optical props. 3—51971
  - Si_3N_4 thermal films, LPCVD, characterization by optical methods 3—28914
  - SiO_2 film, CVD, on Si substrate, thermal stress study 3—47239
  - SiO_2, plasma enhanced CVD, gate insulator for InSb MOS struct. 3—13917
  - SiO_2:B films, dopant conc.-depth SIMS study 3—27967
  - Sn on glass, CVD of hot-end coatings from $SnCl_4$ 3—34237
  - SnO_2 films, CVD, structural studies 3—51981
  - SnO_2 films, elec. resist., high temp. annealing effects, X-ray and electron diffr. studies 3—28459
  - SnO_2 films, laser-induced damage, electro-optic modulator electrodes appl. 3—41901
  - TiB_2 thick coatings by CVD 3—3954
  - TiC CVD coating on steel, scratch test adhesion 3—14836
  - TiC chem. sputtering yields on H^+ bombardment, methane prod. 3—26444

CVD coatings continued
TiC coated materials, outgassing characts. w.r.t. fusion device ultrahigh vac. environment 3−21528
TiC coatings on cemented carbide tools, PVD and CVD, interrupted cutting tests 3−14763
TiC low-Z coatings for fusion reactor, surface erosion and re-emission behaviour under H and He ion bombardment 3−21524
TiC-coated graphite, outgassing characteristics meas. 3−49388
TiC_x CVD layer on cemented carbides, microhardness and texture 3−14700
TiC(N) low-Z coatings for JT-60, thermal shock testing 3−21525
TiC(N) low-Z coatings for Tokamak reactor, thermal fatigue testing 3−21526
TiN CVD coating effect on high speed steel tool life 3−19462
ZnS:Mn CVD film electroluminescence, AC and DC coupled devices appl. 3−24021
ZnSe:N, binding energy of shallow acceptor 3−52076
ZrC-C system, chemical gas-phase deposited, specimens high temp. electrical resistivity, temp. dependence 3−52137
CVD epitaxial growth *see vapour phase epitaxial growth*
CVD thin films *see CVD coatings*
cyanogen, C_2N_2 *see carbon compounds*
cyclopentadienylides *see organometallic compounds*
cyclotron resonance
for ion cyclotron resonance spectroscopy see mass spectroscopy; for ion cyclotron resonance heating see plasma heating
see also diamagnetism; dopplerons
charged particle pot. scatt. in strong mag. field, perturbation theory of cyclotron reson. 3−44993
charged particles pot. scatt. in strong mag. field, resonant collision 3−44994
charged particles reson. interaction with wave packets, drift theory 3−40383
electron stream in waveguide with crossed fields and secondary emission wall, avalanche multiplication 3−12059
extraordinary wave nonlinear polarisation, electron thermal motion effect 3−7747
magnetic semiconductor, magnon instability by radiation field and strong DC mag. field 3−3433
magnetic semiconductors, free carrier, laser-cyclotron reson. effect on magnon damping 3−43439
metal, electron gas, high-frequency wave propag., symmetry anal. 3−8430
metal, HF cond. of nonideal surface in mag. field *(Russian)* 3−18763
metals, Fermi-liquid cyclotron-doppleron waves *(Russian)* 3−3035
metals, short-wavelength cyclotron waves in quantising mag. fields 3−43218
plasma heating, quadrupole and wraparound antennas comparison 3−18090
Raman-type free-electron laser, electron cyclotron resonance effects *(Japanese)* 3−50667
semiconductor, atomic cyclotron resonance linewidth oscillations 3−23804
semiconductor, optical phonon damping, laser-cyclotron resonance effect 3−18991
semiconductor, parrametric resonance theory 3−47554
surface cyclotron waves excitation in solid-state plasma by charged-particle beams 3−52187
Wigner crystal, two-dimensional, cyclotron resonance theory 3−23803
CdTe, cyclotron resonance of electrons and holes, optical detection 3−18603
GaInAs-AlInAs heterojunctions, quantum transport, intersubband scatt. effect 3−3305
Ge, subharmonic transit resonance, carrier cyclic motion effects on harmonic generation 3−8521
$Ge_{0.9}Si_{0.1}$, energy band parameter study 3−52030
InAs MBE layers confined between GaSb, hybrid cyclotron intersubband reson. 3−8724
InAs-GaAs synthesised superlattices, mag., optical, elec., magneto-optical props. and cyclotron reson. 3−13899
n-InSb, intra-conduction band magneto-optical studies, cyclotron reson. harmonics, photocond. techniques 3−57899
InSb MOS struct., magneto-polarons in two-dimens. electron inversion layer 3−52263
InSe, effective mass and conduction band parameters, cyclotron resonance study 3−8402
Mo, Doppler-shifted acoustic cyclotron reson. *(Russian)* 3−28394
Si inversion layer, cyclotron effective mass, plasmon and impurity effects 3−3329
Si, oriented superlattices, electronic phenomena 3−13896
Si wafers, virgin and implanted, laser beam annealed, point defects, EPR, cyclotron reson., DLTS meas. 3−56957
Si/SiO_2 interface, 2-D electron gas, cyclotron resonance, memory function and random pot. 3−23497
W, Doppler-shifted acoustic cyclotron reson. *(Russian)* 3−28394
W, EM and sound waves mutual transform. under doppleron-phonon reson. *(Russian)* 3−3036
W single crystal, reciprocal conversion of sound and electromagnetic waves under conditions of Doppler-shifted cyclotron resonance 3−3540
cyclotrons
see also microtrons; synchrocyclotrons
beam energy meas. by time of flight facility 3−26537
Chalk River cyclotron, mag. field meas. 3−45747
charged particles, automatic spectrum measurement *(Russian)* 3−17184
heavy ion beams at INS SF cyclotron 3−36586
history of development *(Dutch)* 3−54610
medical proton accelerator, energy necessary for choroidal melanomas treatment 3−58787
MEDICYC cyclotron, 150 kV DC dry feedthrough 3−17137
Milan superconducting cyclotron, RF cavity electronic controls, conceptual design, report 3−11566
NAC accelerator computer-based control system 3−26516
neutron sources for fast neutron therapy 3−44323
Oak Ridge 86 inch cyclotron, remote target removal system 3−17152
relativistic accelerator, anomalous Doppler effect 3−50075
RF cavities, constant cross section and three-dimensional form, CAVIT and CAV3D programs 3−6468
Rose's shim method anal. for magnetic field homogeneity improvement 3−26514
Stanford supercond. electron recyclotron, regenerative beam breakup, standing wave model 3−36584
superconducting cyclotrons, axial injection feasibility 3−45725
cytology *see cellular biophysics*
Czochralski method *see crystal growth from melt*
D-layer *see D-region*
D mesons
leptonic decay as source of prompt neutrino prod. in beam-dump expts. 3−49667
lifetime meas. after π^-p and pp interactions 3−49670
lifetimes, particle physics conf., Nashville, TN, USA (May 1982) 3−30539
semileptonic decay, charged lepton spectrum 3−16631
SU(N) hypercolour and extended hypercolour models, fermion masses, rare processes, CP violation 3−49632
three body nonleptonic decay, spectator based pole model 3−49672
D,E$\rightarrow\delta\pi$, δ(980) as a broad $q\bar{q}q\bar{q}$ state 3−31168
D$\rightarrow$hadrons, multiplicity distrib. calc. 3−49701
D$\rightarrow\bar{K}\pi(\bar{K}\pi\pi)$, nonleptonic charm decays, flavour symmetry model 3−49668
D^0(1860) photoproduction at 20-40 GeV, upper limits from mass spectra 3−6107
$D^0(D^+)$ decay to PP and PV final states in hybrid model 3−40896
$D^+(D^0)$ lifetimes meas. in hybrid emulsion expt. 3−31201
D^+ lifetime and nonleptonic decay rate, identical $\bar{d}$ interference semileptonic branching ratio 3−21124
$D^\pm(D^0)$ lifetimes, bubble chamber expts. 3−31200
$D^\pm(D^{*\pm})$ meson lifetime meas. with electronic techniques 3−31203
D*(2010) production at CESR 3−36255
D* production MARK II results at PEP 3−36256
$D^{*\pm}$ production, TASSO results from PETRA 3−36258
e^+e^- annihilation, 3.8-6.7 GeV CM, D-meson prod. cross section 3−16651
$K^-p\rightarrow K_s{}^0K^\pm\pi^\mp\Lambda(K_s{}^0K^\pm\pi^\mp\Sigma^0)$, 4.2 GeV/c, evidence for $K^*\bar{K}$ state at 1.530 MeV 3−26144
νN, D^0, D^+, F^+ and $\Lambda_c{}^+$ prod. study 3−40895
pp, 360 GeV, charm D-meson production, comparison with π^-p 3−54931
π^-p, 360 GeV, charm D-meson production, leading quark effects 3−54930
$\pi^-p\rightarrow$DX, leading+central production 3−36282
$Q\bar{q}$ like mesons, Dirac mass spectra in power law pot., D, F, B, Ψ, Υ, q masses 3−45381
D-region
electron density profile, estimation from knowledge of VLF refl. coeffs. 3−48764
electron density variations, effect on mesosphere turbulence radar echoes 3−59141
EM wave scatt. mechanism involving electron detachment 3−48753
energy loss of electrons in inelastic collisions with mols., MF sounding 3−39955
heating by high-power microwave beam, simulation using HF ionospheric modification expts. 3−10137
heating of auroral ionosphere by LF/MF transmissions 3−10128
HF radiowave partial refl. at 2 and 6 MHz 3−10124
ionisation ledges in night-time D-region, identification by LF/VLF obs. during meteor shower 3−5027
lower atmosphere influences on D-region parameters 3−20170
MF partial reflection profiles rel. to electron density meas. 3−10129
night-time absorption during and after magnetospheric storms, from auroral to middle latits. 3−5024
positive ion chemistry, temp. and solar zenith angle control 3−10134
radio wave absorption, dominant role of solar Lyman-α radiation 3−5029
radiowave heating expt. (UHF) causing electron temp. increase 3−5022
recombination processes (post-flare and post-sunset decay) 3−48735
solar eclipse effects on 2.2 MHz radio absorpt. and phase height 3−59155
solar eclipse electron loss coeffs. study 3−59170
solar eclipse time negative ion, electron density and electron loss coeffs. 3−59171
VLF atmospherics propagation and absorpt. by lower D-region 3−48734
VLF transmission, mode conversion and winter anomaly effects 3−44607
winter anomaly and stratosphere sudden warming obs. 3−20173
winter anomaly explained by thermosphere NO photochem. model 3−15726
winter anomaly scale analysis 3−15733
NO seasonal variations of D-region from electron density obs. 3−20159
D/A conversion *see digital-analogue conversion*
dairying
milk production near nuclear reprocessing plant, ^{129}I determ. 3−58566
damage, radiation *see radiation effects*
damming *see dams*
damping
see also dislocation damping; internal friction
ab initio molecular SCF, dynamical damping factor calc. method 3−26628
air near ground surface, additional damping *(German)* 3−27292
autoparametric vibration absorber 3−5599
beam, thin walled, dynamic stability under travelling follower load systems 3−37386
beam and plate, thermorheologically simple viscoelastic, mech. vibrations 3−7444
beam Rayleigh-Timoshenko, damped second-order vibr. in space, dynamic member stiffness matrix 3−56464
coal, internal friction spectrum, polymeric character 3−13335
composite rod with viscoelastic layer, thermomech. behaviour 3−42179
cylindrical shells, cantilevered and clamped-clamped, ovalling oscillations in cross-flow 3−12561
cylindrical shells, clamped-clamped, ovalling oscillations in cross flow 3−12562
double plates, vibration damping due to air or liquid layers *(German)* 3−7470
DPPH, free radical, solid soln. in paraffin wax, internal mag. viscosity induced by paramag. centres 3−28501
Earth-pointing structures with hybrid control system, dynamics 3−48796
elastic spherical shell submerged in compressible viscous fluid, natural frequencies 3−1838
fatigue crack propag., resonance controlled 3−33352
ferrite plate, damping of surface magnetostatic waves propagating along rough surfaces 3−28541
fibre reinforced composite structural members, damping capacity 3−12580
fibre reinforced composites, damping props., anisotropy 3−42714

damping continued
- fibre reinforced polymers, aligned discontinuous fibres, complex moduli 3—24286
- force balance devices, compensation techniques 3—35977
- garnet films, mag. bubbles with high mobility and max. vel. 3—23759
- glass fibre reinforced vinyl ester resin, high strength sheet moulding cpd., fatigue damage 3—24328
- graphite fibre reinforced polymers, dynamic mech. meas., fibre surface effect 3—19365
- impurity centre, transient spectra, meas. scheme influence *(Russian)* 3—13382
- magnetic damper, optimal shape for largest force 3—12034
- materials for noise and vibration control 3—12435
- mechanical system dynamics, second order design sensitivity anal. 3—16121
- modulus defect and intrinsic damping, calc. 3—51711
- nonisolated structures, vibr. damping 3—27303
- overhead power lines, wind-excited vibrations, damped, calcs. 3—1842
- passive and active seismic isolation for gravitational radiation detectors and other instruments 3—161
- pendulum, Newtonian damping, response 3—10560
- plate response to random loads, finite difference analysis 3—1986
- plates, free vibration in fluid anal. using finite and infinite elements 3—22367
- plates, nonproportionally and continuously damped, receptance calc. by reduced dampers method 3—22377
- radiative damping of acoustic-gravity waves in non-isothermal atmosphere *(Russian)* 3—20084
- ring, two-layered, on periodic radial supports, vibr. 3—12575
- sandwich beam, damped, flexural vibr., differential eqns. 3—7480
- sectional struct., torsion box, fatigue damage, detection and effect on damping 3—53344
- semiconductors, mag., magnon damping, intense laser field effect 3—28540
- shock mounts, dual phase damping, performance anal. 3—10835
- skin damping in whales during active swimming, self-adjustment *(Russian)* 3—24741
- solar 160-minute oscillation, period struct. rel. to damping time 3—54311
- spin waves, parametrically excited, damping *(Russian)* 3—3436
- spring, damped pneumatic, complex dynamic stiffness 3—37395
- steel, alloyed with graphitising elements, damping and mech. props. 3—4072
- steel, Cr-Ni-Mn, unstable, damping power, vibr. fatigue strength 3—19420
- stress relaxation prediction by damping meas. 3—53319
- string with dissipative mass-reactance end constraints, vibrs. 3—50929
- structural components, determ. of degree of defectiveness using natural vibration period 3—29259
- structural vibration damper for corrosive or high-temperature gaseous environments 3—55365
- vibration absorber, broadband linear passive dynamic 3—12415
- vibration damping by segmented wavelength-thick vibration absorption coating 3—56377
- vibration of system with cubic nonlinear damping and simultaneous periodic and random parametric excitation 3—7399
- vibrations, active damping of continuous bodies, mechanical anal. 3—50976
- Al-Zn alloys, cold working effect on damping charact. *(Japanese)* 3—9086
- $CaCO_3:Mn^{2+}$, internal mag. viscosity induced by paramag. centres 3—28501
- Cu-Zn-Al, internal friction of single and polyvariant martensites 3—43829
- Cu-Zn-Al martensitic alloys, damping charact. evolution with time and temp., peaking effect 3—43879
- KCl, internal mag. viscosity induced by paramag. centres 3—28501
- Ti-Al-Mo-Si and Ti-Al-Mo-Cr-Fe, damping props. with layered metal coatings 3—14778

dams
- *see also civil engineering; hydroelectric power stations*
- Antwerp, Belgium, dam site seismic surveying obs. 3—48486
- arch dam, tangential and radial vibr. meas., laser interferometric method 3—12608
- China, reservoir induced earthquakes 3—25018
- Earth's hydroelectric potential and methods of utilisation 3—4361
- Monticello Reservoir, S Carolina, USA, induced seismicity mechanisms 3—19935
- Monticello Reservoir site, S Carolina, USA, geology and seismic risk 3—19962
- Monticello Reservoir site, S Carolina, USA, induced seismicity and tectonic stress 3—19934
- nonlinear hydrodynamic pressure on an accelerating plate 3—53950
- Oroville Lake, earthquakes caused by reservoir filling 3—4797
- Toktogul reservoir, Tien Shan, USSR, seismic transmission and lake filling 3—4794

dark space *see discharges (electric)*

DASD *see magnetic disc and drum storage*

data acquisition
- *see also CAMAC; data handling; indicators; recorders*
- A/D data conversion techniques for film or TV annotation 3—426
- acoustic imaging by wave field extrapolation, methods 3—1868
- AI-1024-4 analyser, data acquisition and storage 3—50226
- Antares pulse power system fibre-optic monitoring 3—17534
- astrolab, photoelectric, automatic data acquisition *(French)* 3—25324
- atmospheric long-term field data logging, remote stations appl. 3—35294
- Auger electron spectrometer, control and data acquisition using Apple II personal computer 3—31870
- automatic data collection peripheral *(Spanish)* 3—10817
- automatic photometry system for half-tone images, avalanche photodiode with operational amplifiers *(Russian)* 3—16399
- avalanche photodiodes, detectors in optical communication systems, computer-based characterisation 3—40686
- biological dosimetry by aberration scoring using POLYP 3—29765
- Brayton cycle solar central receiver experimental system 3—29374
- calibration channel unit, 16 channel data acquisition module with autonomous memory 3—1187
- calibration of precision pressure transducers for use in safeguarding special nuclear materials 3—21444
- CAMAC interface module for data acquisition from multiple ADCs 3—45799
- cardiac muscle, isolated, data acquisition and on-line anal. of expts. with a PDP-12/PDP-11 system 3—19865

data acquisition continued
- cardiac scintigram sequence analysis 3—29726
- Casino nuclear weapon effect simulator diagnostic data acquisition and calibration 3—17070
- CATY, BASIC-like language for expt. control, data collection, display and anal. 3—1184
- CERN UA1 data-acquisition system 3—50279
- cinematography data systems at the Naval Biodynamics Laboratory 3—4704
- collision induced scatt. spectrum, data acquisition system *(French)* 3—21771
- controlled nuclear fusion, local-area networks for research 3—41321
- Daisy 12 system for stimulation signals and for acquisition of analogue data rel. to nerve impulses *(French)* 3—39751
- diagram processing technique, effects on meas. accuracy in certifying methods of executing meas. 3—40540
- diffractometer, single cryst. time-of-flight, data collection and anal. 3—7861
- dyadic conversations, data acquisition device for computer analysis 3—32549
- electron spectrometer, AEI/Kratos, interfaced with microcomputer 3—35969
- electronic flash in data acquisition, biomechanics photography appl. 3—4701
- encodable real time interval counter, CAMAC module to control time resolved meas. 3—1186
- event selection processors, status at CERN 3—50278
- event trigger for MARK-III detector at SPEAR 3—50114
- FASTBUS, software routines for PDP-11 RT-11 system 3—50265
- FASTBUS active segment extender and high density prototyping (kluge) card 3—50268
- FASTBUS at KEK, status report 3—50273
- FASTBUS controller module using multibus MPU 3—50269
- finite aperture sample-and-hold systems, freq. response 3—50215
- flow meas. device as pocket calculator peripheral *(German)* 3—37595
- fuel cell test facility, distributed data acquisition system 3—29381
- geophysics, multipurpose research ships, integrated research automation systems 3—20126
- geothermal modelling and data acquisition using VAX-11/780 computer 3—15661
- high luminosity spectrometer for deep inelastic muon scatt. expts. 3—36609
- holographic laser scanners using generalised zone plates, POS scanner appls. 3—32324
- holographic nondestructive evaluation on-line acquisition and analysis 3—29251
- input/output register to FASTBUS interface 3—50272
- interface for on-line acquisition of $\gamma\gamma$ ang. correl. 3—50511
- laser fusion facility, processing system, hardware and software 3—50063
- magnetisation measurements on superconductors, automatic device 3—40645
- metallic thin film, resistance meas. by radiotelemetry system during sputtering 3—34230
- MHD instabilities in noncircular Tokamak obs., data acquisition and mode analysis 3—27675
- microcomputer controlled Mossbauer spectrometer 3—40735
- microprocessor controlled system for air shower data collection 3—44671
- Mossbauer spectrum acquisition and use of derivatives 3—45253
- multi-channel low temp. monitoring system, microprocessor based 3—16365
- multiparameter multichannel anal. system 3—1188
- multiplexers for acquiring data in molecular beam laser depletion experiments 3—32238
- multiwire linear detector, X-ray diffraction using synchrotron radiation, muscle obs. 3—50152
- multiwire proportional drift chamber and data acquisition system for X-ray scatt. studies 3—1133
- neutron diffractometer, single cryst. time-of-flight, data collection and anal. 3—7861
- nuclear fusion technology, symp., Julich, Germany (Sept. 1982) 3—54577
- nuclear material storage, computer network for monitoring 3—31518
- nuclear power plants, computerised dosimetry monitoring and management system 3—55228
- nuclear science and power systems, conf., Washington DC, USA (Oct., 1982) 3—44890
- optical two-dimensional transients acquisition and processing, using video tape recorder 3—10815
- photography, high speed, light and lighting considerations for data acquisition 3—425
- photon-counting spectrofluorometer, microprocessor-controlled, protein/polymer films obs. appl. 3—49472
- proportional chamber, data registration system based on hybrid IC 3—1161
- pulsed laser data acquisition system 3—30844
- Raman spectrometer with digital and analog normalization 3—45210
- reactor self powered flux detectors, high speed data acquisition system 3—1190
- safety parameter display system, data concentrator requirements 3—55217
- scanning microscope photometer, digital transfer function 3—10883
- segment ancillary logic developments for FASTBUS 3—50271
- SLAC SNOOP diagnostic module for FASTBUS 3—50270
- sodium loop safety facility, expt. P4, data acquisition 3—55549
- soft magnetic materials, disaccommodation meas., automatic 3—10869
- software for managing multicrate FASTBUS systems 3—50274
- Solar Mesosphere Explorer, microcomputer based satellite examining ozone layer 3—25161
- sound power measurement, automated measuring system 3—12455
- spin spectrometer parallel processor 3—50266
- stellar photoelectric photometry, simple and accurate on-line data acquisition program in BASIC 3—48832
- stress-strain meas. by laser holographic interferometer, data monitoring system *(Russian)* 3—19466
- systolic radiation monitoring system for nucl. reactor 3—41206
- temperature measurements in the production of glasses under conditions of microgravitation 3—45144
- thermoelectric power meas. of small samples using minicomputer *(French)* 3—10860
- time resolved meas., data acquisition system 3—4695
- tomography, hardware architecture for data acquisition and processing 3—53819
- tomography, positron emission, count loss prediction 3—53838

data acquisition continued
trigger processors for hadron colliders 3—50280
Tritium Systems Test Assembly, redundant control system 3—26488
turbulent flow meas., using automatic data acquisition as educational tool 3—25860
two channels random acoustics simulation and multichannel data acquisition 3—17722
two-dimensional wire chambers, localisation method 3—1140
uncertain data, reduction by fuzzy set theoretic estimation 3—54720
US correlation system, optimal operation 3—56403
ventilation system, noise regeneration, data acquisition by decaying flow technique 3—56379
X-ray detectors for synchrotron radiation, conf., Hamburg, Germany (Nov. 1980) 3—6
X-ray diffraction, experiment control and data acquisition system 3—53892
X-ray diffractometer for macromolecular crystallography based on spherical drift chamber 3—2335
X-ray position detector, data collection using fast digital memory *(Japanese)* 3—35959
X-ray position sensitive detector with delay line readout, direct time digitising 3—1185
NaI(Tl) Crystal Box detector at LAMPF, signal processing 3—50267

data communication equipment
see also computer peripheral equipment; telemetering equipment
multichannel amplitude analyser in CAMAC standard, design and operation 3—11617
PION installation with NAIRI-2 computer, data buffering and interrupt scheme 3—15850
PION installation with NAIRI-2 computer, data output to ATsPU-128 printer 3—15851
semiconductor spectrometer, four-channel, data output system 3—11597

data communication systems
see also computer peripheral equipment
atmospheric EHF window transparencies near 35, 90, 140 and 220 GHz 3—48621
Electron Linac control data transmission, optical fiber datalinks for Nuclear Instrument Modules 3—6510
Ethernet-compatible fibre-optic local area network 3—37204
hydrometeorological data transmission, new international code 3—10070
optical data transmission systems, signal distrib. at photodetector output 3—12364
submarine communications, transmission sequence estimation *(French)* 3—17688

data compression
see also information theory
polar sampling theorems of use in optics 3—41773

data conversion
see also analogue-digital conversion; digital-analogue conversion
acoustic measurements, computer subroutine program for converting data to decibels 3—17744

data dictionaries *see database management systems*

data handling
see also data reduction and analysis
bit-slice processor 168/E as stand alone computing facilities, memory interface 3—17185
counting rate problems, analysis from pulsed neutron beams, multiple ADC system 3—50211
magnetisation curves, interactive modelling for CAD 3—33929
Particle Beam Fusion Accelerator data handling and recording facility 3—17066
positron emission tomography data handling, dual processing system 3—53820
storage for astronomy, new developments 3—5132

data loggers
acoustic noise statistical analyser, microcomputer-based 3—17750
radionuclide dilution and clearance curves, analogue recording, error estimation 3—9703
seismic processing system with microcomputer 3—30103

data processing (administrative) *see administrative data processing*

data reduction and analysis
see also data acquisition
astronomical time series analysis, statistical aspects of spectral anal. of unevenly spaced data 3—30218
Auger electron spectrometer, control and data acquisition using Apple II personal computer 3—31870
CATY, BASIC-like language for expt. control, data collection, display and anal. 3—1184
diagram processing technique, effects on meas. accuracy in certifying methods of executing meas. 3—40540
dielectric measurement by frequency response analysers, data processing 3—52726
electrochemical sensors, measurement techniques *(French)* 3—16352
EXAFS data collection, glitches compensation 3—26683
Fisher distrib. statistical anal. and application to geomag. secular variations 3—54154
Fourier transform IR spectroscopy, condensed phase, precision in determ. of spectral parameters 3—5875
Fourier transform NMR, two-dimensional reconstructions from one-dimensional data by maximum entropy 3—30914
gap-containing data, correlation coeff. matrix program, in FORTRAN, geochemical example 3—276
geomagnetic anomalies, satellite-derived data, optimal processing 3—35071
high luminosity spectrometer for deep inelastic muon scatt. expts. 3—36609
His bundle activity, external recording, digital filtering process appl. 3—15243
holographic nondestructive evaluation on-line acquisition and analysis 3—29251
incremental deconvolution, algorithm development and assessment 3—26604
Infrared Astronomical Satellite data processing at JPL/SDAS 3—35454
IR spectra, microcomputer system 3—45223
IRAS data analysis at OCC 3—35453
laser interferometry, iteration parameters for data anal. *(Chinese)* 3—40672
Lorentzian profile width determ., w.r.t. shot noise 3—49462
microprocessor-based scanning microdensitometer and signal processing system 3—16403

data reduction and analysis continued
multicomponent exponential signal anal., technique for resolution improvement 3—40576
neutron diffractometer, single cryst. time-of-flight, data collection and anal. 3—7861
neutron nondestructive assay, time recording and time correl. anal. system 3—45122
nuclear demagnetisation refrigerator, with temp. control, appl. of microcomputer 3—315
optical fibre transducer results, in meas. two-phase flow *(Chinese)* 3—10824
photoelastic expts., two-dimensional, automatic data-processing *(Chinese)* 3—23916
photometry, narrow band, data reduction technique 3—30919
positron lifetime spectra, reliability of multi-component anal. 3—47731
procedure for correction and detection of errors of measured data 3—15638
PROM simulator and word generator for microprogrammable high speed processor development 3—17186
radioactivity counting, calculating decision level 3—50236
regression technique to remove temporal effects from geomag. survey data 3—20146
reliability and accuracy improvement of data processing, in motion and acceleration meas. 3—49336
resistance thermometer response linearisation, comment and reply 3—30856
ROSE seismic data storage and exchange facility 3—35270
roundness measuring instrument, data processing by microprocessor *(Chinese)* 3—40548
smoothing of experimental data, computer appl. 3—54718
Space Telescope, Faint Object Camera, data analysis facility 3—5139
speckle photography fringes, digital analysis, processing of expt. data 3—376
spectra self consistent fit, perturbation calc. 3—25858
spectral anal. method for evaluating noisy voltage records 3—44555
SPORA software package for astronomical research in USSR 3—5141
strain gauge rosette, result interpretation, graphical method *(Bulgarian)* 3—7525
systems of standards 3—256
thermodynamic model, parameter estimation, successive reduction of data sets 3—2844
times series correlation by inverse method 3—4992
UK Starlink computer network 3—5130
uncertain data, reduction by fuzzy set theoretic estimation 3—54720
water flow vel. meas. in pipe, positron annihilation coincidence detection and digital data anal. 3—51255

data structures
multidimensional data structure analysis 3—5133

data tables *see collections of physical data*

data transmission equipment *see data communication equipment*

data transmission systems *see data communication systems*

database management systems
Astronet National Convention 1982, conference, Rome, Italy (1982 April 1 to 2) *(Italian)* 3—16078
coastal environmental reference service 3—10069
CREDO, Centralised Reliability Data Organisation, system and status, reactor data 3—36524
DATATRAN data base and executive program for nuclear utility use 3—36519
Dearborn Observatory stellar data file 3—5362
digital mapping, Canadian National Digital Topographic Data Base 3—4750
ICP data management using mainframe computers 3—4324
IEEE 500, composite of nuclear reactor electrical and mechanical reliability data 3—36526
In-Plant Reliability Data System, commercial nuclear power plant component database 3—36521
information management system for charged particle nuclear reaction data 3—16760
irradiated nuclear-pressure vessel steel database 3—11391
IUE data distribution 3—5128
Kanazawa Data Center, astronomical data management 3—5126
low-level waste management data base system 3—921
magnetisation curves, interactive modelling for CAD 3—33929
mass spectroscopic data processing, formula assignment to expt. masses 3—54806
mass spectroscopic data processing, formula assignment to expt. masses, FZM program 3—54807
MATPRO: a handbook of LWR core materials properties models 3—31555
multidimensional data structure analysis 3—5133
NPRDS, Nuclear Plant Reliability Data System, importance to nuclear industry 3—36523
nuclear power plant technical database transfer, important step to configuration control 3—31663
nuclear reactor Equipment Qualification Data Bank 3—1008
Nuclear Regulatory Commission, Div. of Accident Evaluation, reactor safety research data bank 3—36525
oRNL-ICRP dosimetric data base 3—36579
SACRD, data base for fast reactor safety computer codes 3—36520
Sequence Coding and Search System, nuclear licencing database, conceptual development 3—36522
spent fuel and radwaste inventories, characts. and projections, integrated database 3—36472
Tennessee Valley Authority power plants, data base application 3—31650

dating, Earth *see geochronology*

dating, radioactive *see radioactive dating*

Davydov splitting
aromatic hydrocarbon films, absorpt. spectra in vacuum UV region 3—3757
naphthalene, internal vibr., reson. energy transfer, motional narrowing and vibr. dephasing 3—38814
PbI_2, Raman spectra, phonon state Davydov splitting 3—3733
SnS_2, Raman spectra, phonon state Davydov splitting 3—3733

Davydov states *see Davydov splitting*

dawn *see twilight*

dawn chorus *see atmospherics*

- **dayglow** *see airglow*
- **DBR lasers** *see distributed Bragg reflector lasers*
- **d.c. amplifiers**
  - ulatra-low-drift DC amplifier for use with photomultipliers in astronomical photometers 3—54246
- **d.c. motors**
  - feedback controlled, used in variable speed light chopper 3—41969
  - magnetostriction generation of acoustic noise in yoke 3—1847
- **d.c. sputtering**
  - d.c. plasmatron discharge study using optical emission spectrometry 3—14488
  - electron microscope specimen coating techniques, review 3—10957
  - magnetic material sputtering, high rate, gap type target 3—28991
  - magnetron sputtering for optical coatings 3—1817
  - magnetron sputtering system with versatile substrate table 3—52938
  - supported discharges, plasma potentials influence on sputtered film purity 3—52939
  - Al, film, deposited in d.c. and r.f. magnetron systems 3—43733
  - AlO_x, deposited in d.c. and r.f. magnetron systems 3—43733
  - Al_2O_3 film, preparation and optical props. 3—14490
  - Au-MgO selective cermets optical props., application in solar absorber-convertors 3—29451
  - Cd-Sn-O, thin films, reactively DC magnetron sputtered, comp. control, sheet resist. determ. 3—8978
  - Cd_2SnO_4 thin films, reactively DC magnetron plasmatron sputtered, press. ratio 3—8977
  - Cd_2SnO_4 thin films obtained by DC reactive sputtering of Cd-Sn alloys 3—52284
  - In-Sn-O thin films, reactively DC magnetron sputtered, comp. control, sheet resist. determ. 3—8978
  - Mg-Zn_3P_2 thin film solar cells, prep. and characts. 3—53556
  - Mo film, DC magnetron sputtering, internal stresses and reactive ion etching 3—34226
  - Si:H amorphous films, sputtering under reduced pumping speed, cond. and photocond. props. 3—58047
  - W/Au DC magnetron-sputtered film coating on Si substrate, diffusion barrier props. 3—14482
- **d.c. to a.c. invertors** *see invertors*
- **DDC** *see direct digital control*
- **de Broglie waves** *see wave mechanics*
- **de Haas-van Alphen effect**
  - *see also diamagnetic properties of substances; diamagnetism*
  - Green's function at T=0 for electrons in quantising mag. field, integral representation 3—57250
  - metals, electron-dislocation interaction effect on de Haas-van Alphen effect 3—3045
  - metals electron spectra meas., de Haas-van Alfven effect based instrument 3—45183
  - Al, Fermi surface props. from phase shift parametrisation 3—13703
  - CeB_6, de Haas-van Alphen study 3—8401
  - CeSb, de Haas-van Alphen effects, p-f mixing theory 3—52011
  - Cs, Fermi surfaces, press. depend., de Haas-van Alphen study 3—42997
  - Cu-Al(Si)(P)(Zn)(Ge), dil., Dingle temp. and Fermi surface changes, charge transfer effects 3—52009
  - Cu-based dilute Hume-Rothery alloys Fermi surfaces, de Haas-van Alphen study 3—8400
  - K, inhomogeneities in single crystals revealed using de Haas-van Alphen effect 3—38094
  - LaAg, magnetoacoustic oscills. and Fermi surface 3—18602
  - LaB_6, de Haas-van Alphen study 3—8401
  - LaSb, de Haas-van Alphen effects, band struct. calcs. 3—52011
  - Mg-Sc dilute alloy, H_2 absorpt. and electronic struct. 3—38195
  - Mg-Y dilute alloy, H_2 absorpt. and electronic struct. 3—38195
  - NdB_6, de Haas-van Alphen study 3—8401
  - Pd-Ni, Stoner factor, field depend., de Haas-van Alphen study 3—23243
  - PdH_x, normal and deuterated, electronic, struct., de Haas-van Alphen study 3—23244
  - PrB_6, de Haas-van Alphen study 3—8401
  - Pt, conduction-electron Zeeman splitting 3—43131
  - Pt, g-factor, conduction electron, cyclotron orbit, meas. 3—52012
  - Rb, Fermi surfaces, press. depend., de Haas-van Alphen study 3—42997
  - $TiBe_2$, de Haas-van Alphen spectra and induced magnetism 3—3038
  - $ZrZn_2$, Fermi surface, field depend., de Haas-van Alphen study 3—33622
- **Debye-Huckel theory**
  - alkali metal halides, solid, free energy based on $H_2{}^{0}{}_{98}$ 3—38101
  - alkali metals in liq. phase, entropy calc. from consideration of ionic atm. 3—2842
  - exponential Deby-Huckel theory-formal mathematical legalisation 3—34629
  - Kukawa potentials, analytic phase shifts 3—36331
  - virial expansion, in equilibrium and nonequilibrium statistical mechanics 3—30824
- **Debye-Scherrer cameras** *see cameras; X-ray crystallography apparatus*
- **Debye temperature**
  - *see also specific heat*
  - A15 compounds, electron charge density distributions and Debye temps. 3—56863
  - A15 compounds, heat-capacity anal. 3—38099
  - alkali metals, mean-square displacement and Lindeman's criterion for melting 3—42742
  - fluorides, heat capacity, low temp. 3—57105
  - glass, elastic moduli, three-band theory and characteristic temps. 3—33337
  - hexagonal cryst., X-ray Debye temp., elastic consts. 3—13391
  - II-VI semiconductors, elastic Debye temperature, elastic const. calc. 3—42740
  - III-V semiconductors, elastic Debye temperature, elastic const. calc. 3—42740
  - ionic crystals, diatomic, lattice props. calc. using short-range Rydberg pot. function 3—22819
  - light interstitials, transition between coherent and stochastic motion 3—33514
  - P, black, lattice dynamics, force const. model 3—8157
  - thin film phonon injector, temperature 3—2952
  - zincblende-type semiconductors, lattice statics, interionic pot. model 3—22818
  - AgBr(Cl), vibr., optical and thermodynamic props., three body force shell model 3—38007
  - AgTlS(Se), specific heat, 1 to 50K 3—57106
- **Debye temperature** continued
  - Al, lattice vibrs. and thermophysical props. 3—47063
  - Ar solid, vacancy-induced thermal cond. 3—42867
  - B_2O_3-Na_2O-MgO-Fe_2O_3-SnO_2, vitreous, coordination of Fe^{3+} and Sn^{4+} 3—37794
  - $Ba_{1.17}Ti_{5.04}Al_{2.1}O_{16}$, SYNROC B, hollandite phase struct., 20 to 1060°C, neutron diffr. obs. 3—18270
  - $(CO_{100-x}Mn_x)_{76}B_{24}$ amorphous alloy, mag., thermal and elec. props. 3—28524
  - Ca, FCC, heat capacity, entropy Debye temp. up to 450K 3—47120
  - $Cd_2In_6Sn_3Te_5$, $Cd_6In_2SnTe_7$, RMS displacement of Sn atoms in anion sublattice, Mossbauer effect 3—34024
  - CdS lattice, characteristic temp. and mean square displacement, X-ray study 3—18421
  - CeF_3, elastic props., Brillouin scatt. study 3—47021
  - CsSCN, room temp. elastic constants meas. 3—51684
  - CuCl, elastic Debye temperature, elastic const. calc. 3—42740
  - $CuInS_{2x}Se_{2(1-x)}$, thermal cond., thermoelec. power and thermal expansion meas. 3—23111
  - CuX (X=Br, Cl, I), phonon dispersion and density of state, bond-bending force model 3—18412
  - Fe-Ni-C austenite, interatomic binding and Debye temp., Mossbauer study *(Russian)* 3—34012
  - Fe-P, amorphous, elec. resist. and magnetoresist., conc. depend. 3—28329
  - $Fe_xCo_{80-x}B_{20}$, amorphous, elec. resistivity and thermopower 3—28327
  - GaSe(s), SCL cond., two-barrier model, I-V characts. 3—18715
  - H_2 solid melting criterion below Debye temp. 3—8296
  - ^3He, solid paramag., thermal props., role of spin and phonon excitations 3—38158
  - HfC, lattice dynamics, Debye temp. and phonon dispersion relations 3—8154
  - In, body-centred tetragonal, lattice dynamical study 3—57042
  - InSe, SCL cond., two-barrier model, I-V characts. 3—18715
  - K, phason ht. capacity and low temp. sp. ht. 3—2837
  - Kr solid, vacancy-induced thermal cond. 3—42867
  - LaF_3, elastic props., Brillouin scatt. study 3—47021
  - LaH_3, normal and deuterated, phase transitions and polymorphism, sp. ht. study 3—51533
  - LiH, thermal expansion and zero-point displacement, effect of isotopic substitution 3—42820
  - $MgAl_{2-x}Fe_xO_4$, Mossbauer recoilless fraction 3—14183
  - MgO, press. depend. to 100 kbar of phonons, vibronic spectra, Debye temp. contrib. 3—33367
  - $Mo_{8-x}Ge_x$ (x=2, 3), heat capacity meas. on irrad. and nonirrad. samples 3—18821
  - $Na_xV_2O_5$, sp. ht. between 0.5 and 50K 3—42805
  - NdF_3, elastic props., Brillouin scatt. study 3—47021
  - Ni-B amorphous alloys, sp. ht., elec. resist. and Debye temp. 3—28114
  - Ni-Zr, amorphous, sp. ht., 0.8 to 40K, supercond. props. 3—57473
  - Ni-Zr alloys, band struct., specific heat, mag. props. 3—13715
  - $PbMg_{1/3}Nb_{2/3}O_3$, ceramic, elastic moduli, Debye temp. and specific heat 3—51690
  - $PbTiO_3$, amorphous and cryst., sp. ht. at low temps. 3—38098
  - $PbZrO_3$, ceramic, elastic moduli, Debye temp. and specific heat 3—51690
  - PrF_3, elastic props., Brillouin scatt. study 3—47021
  - $Pt_6(NH_3)_{10}Cl_{10}(HSO_4)_4$, partially oxidised Magnus green salt, quasi-one-dimens. conductor, expt. study 3—18689
  - SrF_2, heat capacity, low temp. 3—57105
  - Tl_3AsSe_3, specific heat, 1 to 50K 3—57106
  - Tl_3SbS_3, specific heat, 1 to 50K 3—57106
  - V_2O_3, magnetic susceptibility and sp. ht. 3—3461
  - $V_2Zr_{0.5}Hf_{0.3}Ta_{0.2}$, C-15 supercond., sp. ht. meas. at low temps. *(Chinese)* 3—13954

- **Debye-Waller factors**
  - *see also lattice dynamics*
  - adsorbates, Debye-Waller factor for molecule-surface scatt. 3—42908
  - alkaline earth oxides, Debye-Waller factors and mean square displacements 3—38019
  - equivalent isotropic thermal parameter calculation, program for HP-41C calculator 3—46873
  - gas+surface scatt., elastic and inelastic, semiclassical wave packet model 3—14428
  - graphite (0001), adsorbed Xe, surface vibrs., H scatt. study 3—42917
  - HF incoherent neutron scatt., appl. to mol. modes and Debye Waller factor 3—37743
  - physisorbed overlayers, at. beam scatt. study 3—52888
  - Rayleigh scatter of Mossbauer radiation in substances with strong conformational mobility 3—29498
  - zinc blende structure materials, lattice dynamical anal. 3—33379
  - Al, lattice vibrs. and thermophysical props. 3—47063
  - BaF_2 powder, Debye-Waller factors of Ba^{++} and F^- ions, temp. variation meas. by X-ray diffr. 3—28073
  - $Cd_2In_6Sn_3Te_5$, $Cd_6In_2SnTe_7$, RMS displacement of Sn atoms in anion sublattice, Mossbauer effect 3—34024
  - $CsPbCl_3$, Debye-Waller factor near ferrodistortive transition, soft modes 3—13389
  - He surface, liq., two-dimens. Wigner lattice mobility, weak coupling theory 3—38161
  - He surface, liq., two-dimens. lattice, phonon linewidths, weak coupling theory 3—38162
  - n-InSb, X-ray-diffraction studies of acoustoelectrically amplified phonons 3—51735
  - KH_2PO_4, Debye-Waller factor and thermal expansion coeff., logarithmic anomaly at ferroelec. phase transition 3—19072
  - LiF(001) surface, quasi-elastic scatt. of Ne 3—58021
  - NbH_x, Debye-Waller factor due to static displacement around H 3—28072
  - NbH_x, static and thermal displacements around H, X-ray diffr. study 3—57051
  - NbH_x, static Debye-Waller factor, X-ray diffr. study 3—57050
  - Xe solid thin films, struct. temp. depend., electron transmission spectra 3—8913
  - ZnS, lattice dynamics, deform. dipole model study 3—38017

- **decay periods (radioactive)** *see radioactive decay periods*

- **decay schemes (radioactive)** *see radioactive decay schemes*

- **decay theory (nuclear)** *see nuclear decay theory*

decidability *see computability and decidability*

decision theory *see decision theory and analysis*

decision theory and analysis
see also Bayes methods; dynamic programming
lung tumours, X-ray edge detection, decision function classifiers 3−15221
nuclear power plant, seismic safety, decision anal. 3−16985
nuclear power plants, decision methods in risk anal. 3−16826
nuclear power plants, seismic risk anal. and decisions 3−16986
PHENIX LMFBR, surveillance, pattern recognition appl. 3−16964
sequential detection of moving object in measuring instrument at random instant, rep. by random signal stream 3−35957

decoding
see also demodulation
acoustic-phonetic decoding and adaptation 3−32561

decomposition
microstructure features and processes only; for other aspects see dissociation and pyrolysis
see also spinodal decomposition
binary alloy, theory of conc. profile at surface 3−8209
multicomponent systems, invariant phase equilib., nomenclature and geometrical representation *(German)* 3−14554
peritectical reaction, solidus and liquidus curves analysis *(Czech)* 3−33405
polymer blends, thermal stability 3−42791
solid solution, irradiated, long-range periodic decomposition 3−38077
steel, austenitic, decomposition of residual austenitic, rel. to H liberation 3−34276
steel, low allow, high strength, V-containing microstruct. and retained austenite, influence of cooling rate 3−24245
steel, peritectic, primary struct., alloying effect 3−39107
Al-Mg-Zn, cast, struct. changes during ageing 3−9103
Al-Rh thin films, vapour deposited, solid soln. decomp., annealing, TEM and electron diffr. studies 3−28244
Al-Zn-Mg (5, 1 wt.%), GP zones, reversion, calorimetry and thermal anal. study 3−29089
Al-Zn-Mg-Cu, ageing conditions and impurity content influence on struct. and fracture 3−34541
Al-Zu, two-phase, strength, preliminary deform. effect 3−9135
Al_2O_3-SiO_2-Li_2O-TiO_2-ZrO_2 glasses, phase decomp. 3−2819
Cu-Al (10 wt.%), quenched martensitic alloy, internal friction, tensile props., hardness, heat treatment effect 3−43920
Cu-Ge (7 and 15 wt.%), struct. form. on solidification 3−4032
Cu_2S-CdS system, phase diagram 3−58107
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, crystn. by eutectic reaction, kinetics and mechanism *(French)* 3−13104
Fe_2O_3 needles prep. by decomp. of iron salt 3−39054
InSb, ion implantation, enthalpy of formation and stability 3−42637
Ni-Si (12.5 at.%) alloy, decomposition, elec. resist. and small angle neutron scatt. studies 3−14594
Ni-Si phase diagram, Ni-rich region, study using DTA and X-ray diffr. 3−34285
Sm-Co-Cu-Fe-Zr magnets, sintered, phase comp. and struct. 3−4043
Ti alloys, metastable structures, decomposition during quenching 3−14556
Ti alloys, two-phase martensitic, β-solid soln. isothermal decomp. mechanisms 3−29074
β-Ti alloys, unstable, transform., step ageing influence 3−19337
βIII-Ti-Mo-Zr-Sn, decomp. 3−19338
Ti-V alloys, isothermal transformations α-phase and ω-phase formation 3−39155
TiD_x thin film, thermal decomposition 3−47245
$ZrMn_{2+x}$, hydride formation and decomposition, kinetics and thermodynamics 3−42810
ZrO_2-MgO, subeutectoid aged alloys, microstructural development 3−39156
ZrO_2-Y_2O_3 system, subsolidus phase equilibria, ordering, eutectoid reactions, DTA obs. 3−43793
$Zr_{1-x}Ti_xMn_2$, hydride formation and decomposition, kinetics and thermodynamics 3−42810

decomposition, spinodal *see spinodal decomposition*

decomposition, thermal *see pyrolysis*

decorative coatings
electroplating of sintered Fe compacts with Cu, Ni and Zn 3−19461

deep level transient spectra *see deep level transient spectroscopy*

deep level transient spectroscopy
see also deep levels
capacitance spectroscopy measurements of deep defect state in semiconductors 3−18643
confidence interval estimation of DLTS, numerical simulation *(French)* 3−28302
insulator, transient charging in DLTS expts. 3−43067
method using lock-in amplifier for measuring capacitance second harmonic *(French)* 3−20872
nonexponential transients, method for detection 3−23311
signals analysis, automatic deconvolution 3−47311
solar cells characts. meas., automatic capacitance-voltage plotter 3−20874
Al-SiO_2-Si(n), semiconductor-insulator interface, electronic processes, deep-level transient current spectroscopy 3−3321
$Al_xGa_{1-x}As$: Si, MBE growth, effect of H_2 on elec. and optical props. 3−51973
$Al_xGa_{1-x}As$:Si, doped and undoped, MBE grown, elec. and optical props., effect of growth conditions and alloy comp. 3−43596
$Ga_{1-x}Al_xAs$, electron irrad., electron trap optical ionisation cross-sections, DLTS meas. 3−43092
GaAs, E3 trap annealing, DDLTS study 3−3117
p-GaAs, electron irradiated, deep levels, DLTS and deep level optical spectroscopy study 3−33664
GaAs, MBE grown, deep states and surface processes, DLTS study 3−43068
GaAs MBE layer, capless and Si_3N_4 encapsulated annealing, photoluminescence and DLTS study 3−8441
GaAs, p-conductivity study, intrinsic double acceptor evidence 3−3178
GaAs, plastically deformed As antisite defects as main electron traps, DLTS meas. 3−52055
GaAs, Schottky-barrier diodes, γ-ray irrad., thermal annealing of E3 centres, elec. field effects 3−18657
GaAs surface barrier diodes, deep level mobility in elec. field, DLTS study 3−8271
GaAs, VPE and LPE grown, electron traps, DLTS and C-V meas. 3−43069

deep level transient spectroscopy continued
GaAs, VPE grown, deep-level defects vs. growth param., electron traps meas. 3−33670
GaAs, VPE grown using novel $AsCl_3$ reactor, photoluminescence, elec., DLTS meas. 3−19276
GaAs:Cr, boat grown bulk, Cr level and EL2 electron traps, DLTS study 3−8443
GaAs:Ge, doped and undoped, MBE grown, elec. and optical props., effect of As vapour species 3−43595
GaAs:Ge, homojunction interfaces, carrier compensating centres, luminescence and DLTS study 3−3273
GaAs:H, passivation of dominant deep level EL2 3−23308
GaAs:O, DLTS anal. using lock-in amplifier *(French)* 3−20872
n-GaAs:O-Au Schottky barrier diode, deep level studies 3−18646
$GaAs_{1-x}P_x$, VPE, deep level electron traps, transient capacitance spectroscopy study 3−52054
GaP:Zn, as-grown and electron irrad., defect study by DLTS and EPR 3−43087
Ge, laser-induced defects, H_2 passivation, DLTS study 3−46993
Ge n^+p diodes, reverse biased, mobility of γ-ray induced defects 3−18650
Ge:Cr(Co)(Cd)(Te)(S)(Se)(Zr)(Ti), deep donor centres, H plasma passivation 3−47287
Ge:Ga(In)(As)(Sb), electron irrad., hole trapping defects, DLTS study 3−43083
Ge:H, reduction in γ-ray damage, DLTS study 3−18345
Ge:Ni, Ni-related defect acceptor level, H passivation, DLTS study 3−43065
Ge:O_2, donor deep level transient spectra 3−18652
Ge:Pb(Sn), γ-ray irrad., deep level defects, DLTS study 3−13764
InGaAsP LPE layers, electron irrad., defect states, DLTS study 3−57304
InGaAsP/InP p^+n diodes, deep level electron and hole traps, DLTS study 3−47414
InP, electron irradiated, deep levels study 3−3107
p-InP, electron irradiation induced deep levels, DLTS study 3−13758
InP epilayers, process-induced defects, photoluminesc. and DLTS study 3−43089
InP:Fe, defect state induced by ion irrad. or annealing, optical transient current spectroscopy study 3−43090
Si, CW laser annealed, quenched-in E-centres, vacancy diffusion model 3−46995
p-Si, DLTS studies of neutron damage 3−13288
Si, dislocation energy levels, DLTS study 3−3111
Si, donor level, H-defect complex behaviour, elec., optical and DLTS meas. *(Chinese)* 3−33658
n-Si, electron-irradiated, heavily compensated, deep levels, photo-DLTS study 3−43063
Si, laser crystallised thin film, deep levels, capacitors 3−3271
Si, lattice vacancy, negative-U props. 3−43077
Si, neutron irrad., charge transient spectroscopy 3−23307
p-Si, neutron irradiated, current DLTS with bipolar rectangular weighting function 3−52057
Si, p^+ implanted, defect annealing, DLTS *(Chinese)* 3−43060
Si, polycrystalline p-type, density of states and trapping states, DLTS study 3−33661
Si, reactively ion etched, deep levels, DLTS study using p^+-n diode arrays 3−52056
Si ribbon, edge-defined film-fed growth, electron irrad. effects 3−42665
Si surface, reactively ion etched, DLTS study 3−33770
Si, surface defect form. under laser irrad., DLTS study 3−18340
Si, trace contamination, capacitance transient spectroscopy 3−3103
Si, trap centres in wafers containing A-swirl defects, annealing behaviour, DLTS study 3−13760
Si wafers, virgin and implanted, laser beam annealed, point defects, EPR, cyclotron reson., DLTS meas. 3−56957
Si:Al(B), point defect recombination-induced migration 3−57141
Si:Au, electric field enhanced electron emission from acceptor level and A-centre 3−43073
Si:Au, H, deep level passivation study 3−33676
Si:Au reverse-biased n^+-p junction diodes, Ag donor level motion, DLTS study 3−28293
Si:Au(Ag)(Fe)(Cu)(Ni), deep level defects prod. by quenching, DLTS study 3−57309
Si:B, As, ion implanted and CW laser annealed, Fe-related defect centres 3−47304
Si:B,As, CW laser annealing, quenched-in defects 3−57313
Si:Co,B, impurity electron states, DLTS and Mossbauer studies 3−43081
Si:Cr, ion pairs between Cr and surface acceptors, DLTS study *(German)* 3−43074
Si:Cr,B, charact. by EPR, DLTS, luminesc. and neutron activation anal. 3−47283
Si:Cu(Ni), deep level states, DLTS study 3−52060
Si:Ga, electron irrad., defect studies and minority carrier lifetime, DLTS studies 3−57306
a-Si:H, light-induced metastable effects 3−23392
Si:H, reduction in γ-ray damage, DLTs obs. 3−18346
Si:O, heat treated, donor states, DLTS studies 3−43078
Si:P, CW laser induced deep level defects 3−57314
Si:T, thermal emission rates and majority carrier capture cross-sections in p^+n and n^+n junctions 3−33678
Si-SiO_2 MOS structure, overlapping polycryst. Si gates, interface state density, constant capacitance DLTS study 3−38483
TiO_2:Nb, electronic deep levels, DLTS study 3−43075

deep levels
see also deep level transient spectroscopy
adsorbed layers, electronic photoexcitation and discharging of deep traps in dielec. substrate 3−3228
confidence interval estimation of DLTS, numerical simulation *(French)* 3−28302
deformable lattice, electron, hole and exciton instabilities 3−57047
disordered systems, probability of electron localization at deep levels 3−18663
DTS signals analysis, automatic deconvolution 3−47311
excitation spectroscopy techniques, review *(French)* 3−33671
III-V semiconductors, deep level defects, self-consistent cluster calcs. 3−47300
III-V semiconductors, deep levels related to transition metal impurities, ionisation energy meas. 3−3105
impurity polar semiconductor, secondary radiation at deep levels 3−52077
organic photoconductor with deep traps, photo-induced memory effect, charging characts. 3−52198

deep levels continued
semiconductor, amorphous, localised state density, field effect study 3−8391
semiconductor, electron induced lattice relaxations and defect reactions 3−47070
semiconductor, narrow band-gap, two-band Kane model, large polaron bound states 3−28286
semiconductor electrochem. electrodes with deep impurity level, characterisation method 3−8574
semiconductor film, quantised, diamag. susceptibility of one-electron deep impurity centres 3−23317
semiconductors, carrier density depend. of dynamic multiphonon nonradiative recomb. through deep levels 3−47698
semiconductors, deep impurities props. 3−23320
semiconductors, deep impurity centres, Jahn-Teller effect suppression under uniaxial press. 3−28307
semiconductors, deep level associated optical cross sections 3−14325
semiconductors, deep level concentration profiling technique, theory 3−13765
semiconductors, deep level defects, lattice relax. and motion, DLTS study 3−57311
semiconductors, deep levels, Fourier photoadmittance spectroscopy technique 3−23312
semiconductors, elemental, deep levels due to isolated single and pair vacancies 3−13761
thermal ionisation energy of deep centres from ESR data 3−38689
AlGaAs, metalorganic CVD growth, review *(Japanese)* 3−29015
$Al_{0.3}Ga_{0.7}As$ LPE layer, grown-in deep level defects, thermal annealing effect 3−18799
AlN epitaxial film, cathodoluminescence after irrad. with fast electrons 3−14360
$CdF_2:Eu^{2+}$ crystal, thermal ionisation energy of deep centres from ESR data 3−38689
CdTe:In, solution-grown, cathodoluminesc., effect of Cd-vapour and Te-vapour heat treatments 3−3826
Cs_3Bi_2 $(Sb_2)Cl_9$, luminescence props. and α-β transformation 3−47692
$EuGa_2S_4$ single cryst., dark current relax., trapping levels 3−8493
$Ga_xAl_{1-x}As_yP_{1-y}$, vacancy and antisite defect deep levels, alloy composition effects 3−43097
GaAs, antisite defect electron energy states, Green's function calc. 3−47306
GaAs, deep donor band in photoluminesc. spectrum 3−3805
GaAs, deep level point defects, annealing behaviour 3−43085
GaAs, deep levels, EL2 level, impurity superlattice model and DLOS results 3−18645
GaAs, EL2 emission band, photoluminescence and photoluminescence excitation spectroscopy 3−43589
GaAs, impurity deep levels, electronic props. and stability 3−52072
GaAs, ion implanted, EL2 center, defect formation chem. study 3−33663
GaAs, LEC crystals, doped and undoped, EL2 deep donor level distribution 3−47282
GaAs, LEC grown, deep levels and dislocations, photoluminescence study 3−43086
GaAs LPE layer, grown-in deep level defects, thermal annealing effect 3−18799
GaAs, MBE layers, defect deep levels, optical excitation study 3−47307
GaAs, metalorganic CVD growth, review *(Japanese)* 3−29015
GaAs, neutron transmutation doping, ESR study 3−3532
GaAs Schottky-barriers, γ-irrad., radiation defect accumulation, DLTS study 3−13278
GaAs, semi-insulating, deep levels and compensation, math. model 3−43062
GaAs, semi-insulating, point defects and impurities assessment 3−22931
GaAs, semi-insulating, undoped, EL2 deep level, direct obs. by IR absorpt. 3−57305
GaAs surface barrier diodes, deep level mobility in elec. field, DLTS study 3−8271
GaAs, VPE grown, deep-level defects vs. growth param., electron traps meas. 3−33670
GaAs, vacancy deep levels, pseudo-atomic orbitals cluster model *(Chinese)* 3−38338
GaAs:B, ion implanted, compensation mechanisms, study 3−33665
$GaAs:Cr^{2+}$ deep levels and Jahn-Teller effect 3−52095
GaAs:Cu, deep impurity centres, Jahn-Teller effect suppression under uniaxial press. 3−28307
GaAs:Fe VPE layers, deep level activation energy and optical cross section 3−47286
GaAs:O, deep level, photoluminec. study 3−14331
$GaAs_{1-x}P_x$, VPE, deep level electron traps, transient capacitance spectroscopy study 3−52054
GaP, impurity deep levels, electronic props. and stability 3−52072
GaP:Cu, interband excitation induced absorption by deep impurities 3−57960
GaP:N, deep electron trap 3−43088
GaP:N epitaxial film, deep level electron trap, absolute energy, DLTS and I-V charact. study 3−43072
GaS:Yb, single cryst., isothermal relax. currents 3−43202
Ge:Cr(Co)(Cd)(Te)(S)(Se)(Zr)(Ti), deep donor centres, H plasma passivation 3−47287
Ge:O, γ-irrad. and quenched, deep donor levels 3−43101
Ge:Pb(Sn), γ-ray irrad., deep level defects, DLTS study 3−13764
GeAs:Ge, MBE growth, elec. and photolum. props. 3−33807
$Hg_{1-x}Cd_xTe$ p-n junctions, field ionisation of deep levels, theory 3−38467
InAs:Cr, impact ionisation, I-V characts. 3−18713
$In_{0.53}Ga_{0.47}As$ high-purity LPE layers, postgrowth heat treatment effects on elec. characts. 3−52278
InP, CVD epitaxial films, elec. props. of doped and undoped material 3−19278
p-InP, deep levels study by diode admittance spectroscopy 3−33660
InP, photoluminescence from deep levels meas. for bulk and LPE samples 3−23996
InP:Fe, defect state induced by ion irrad. or annealing, optical transient current spectroscopy study 3−43090
InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3−18721
InP-chemical oxide interface states study in MIS struct. 3−23487
InSb, deep impurity level, Hall coeff. study 3−38346
n-InSb, deep levels, oscillatory magnetophotoconductivity study 3−23424
p-InSb:Au, deep acceptor impurities, magneto-optical detection 3−14260
γ-La_2S_3 single crystals, photoelectric and luminesc. prop. investigation 3−28903

deep levels continued
Li_2O-GeO_2 glasses, electrical conductivity and optical absorption meas. 3−23384
Na_2O-GeO_2 glasses, electrical conductivity and optical absorption meas. 3−23384
P, amorphous, deep level luminesc., appl. of time resolved photolum. technique 3−20900
Si CVD films, polycryst., grain boundary induced deep levels, transport props. meas. 3−23316
Si, deep defects, photolum. characterization 3−43609
Si, deep level impurities, finite mol. cluster calcs. 3−47290
Si, electron beam recrystallised, cathodoluminescence and minority carrier lifetime 3−47718
Si, impurity deep levels, electronic props. and stability 3−52072
Si MIS structs., ion implantation radiation damage, density of surface states study 3−28446
Si, substitutional chalcogen donors, shallow-deep instabilities 3−3114
Si, vacancy deep levels, pseudo-atomic orbitals cluster model *(Chinese)* 3−38338
Si:As(P)(Sb), substitutional defect pairs, electronic energy levels 3−3115
Si:Au, temperature fluctuation method for direct determ. of thermal activation energy of deep levels 3−57307
Si:Au, zero-phonon photoluminescence study 3−43624
Si:Cr, deep levels in energy band gap, transient capacitance anal. 3−38349
Si:Cr,Fe,P, spin depend. carrier-impurity interactions, ESR studies 3−57765
Si:Cu, model of Cu impurity levels 3−33679
Si:Fe,B, interstitial-substitutional pairs, electronically controlled reactions 3−43079
Si:Fe,B,Al,Ga, deep impurity levels, photocapacitance photocond. and Hall effect studies 3−43080
a-Si:H n^+-i-n^+ sandwiches, SCL currents under AC conditions 3−47357
Si:In(Tl), isoelectronic bound excitons, photoluminescence obs. 3−19168
Si:O, Se, S, impurity binding energies and screening 3−43100
Si:Pt(Si:Pd), elec. props. *(Chinese)* 3−3217
Si/SiO_2 interface, hole capture by deep levels 3−28448
α-$SiC:Al^+$, LED, ion implanted, radiative recomb., electrolum. study 3−57978
SiO_2, vitreous, defect electron states, tight-binding and recursion method calc. 3−57315
SiO_2/Si system, elec. cond. and elec. breakdown of SiO_2 3−3345
$(Y, In)_2O_3:Er^{3+}$, luminescence, host sensitization mechanism 3−3781
ZnSe, deep centres, electrolum., barrier capacitance relax. study 3−18654
ZnSe:Cl, photoluminescence and electron conc., defects effects 3−38885
ZnSe:Cu, two-photon absorption coeff., deep level impurity effects 3−3776
ZnTe:Cl, defect centres, EPR and ODMR study 3−43433

defect electron energy states
see also colour centres; deep levels
adhesion level calculation, from maxima of TSC and photocond. 3−13829
alkali halides, F_2^+-centre spectrum, comparison with H_2^+ using one-electron model 3−13762
amorphous semiconductors, elec. cond., field depend., rel. to electronic struct. 3−43186
amorphous semiconductors, physics and chemistry, review 3−33625
chalcogenide glasses, photostructural transforms., defect levels 3−22787
conference, Perpignon, France (Sept. 1982) 3−20568
deformable lattice, electron, hole and exciton instabilities 3−57047
diamond, distorted defects, optical meas. 3−47678
diamond, local density of states at defects calc. 3−47293
diamond, P2 centre, ^{13}C hyperfine interaction, ESR study 3−3528
diamond, partial dislocations, electron states, first principles calc. 3−3110
disordered systems, electronic correls. and transient effects 3−23328
ferroelectrics with charged defects, photovoltaic effects 3−47390
grain boundaries, elec. props. in metals, semiconductors and insulators, review 3−46961
III-V semiconductor thin films, prep., defects, and appls. 3−23210
III-V semiconductors, antisite and vacancy electron states, local density of states 3−43096
III-V semiconductors, deep level defects, self-consistent cluster calcs. 3−47300
insulators, thermally stimulated electron excitation from deep traps 3−52069
local-density theory, off-diagonal occupation numbers 3−3113
localised defects in solids, cluster-extended Green's function for electronic struct. 3−43095
molecular crystals, luminesc. spectra in presence of impurities and defects 3−38874
nonradiative multiphonon capture of free carriers by deep level of defects 3−52074
poly-(p-phenylene) chains, electronic struct., ab initio HF study 3−23239
polyacetylene, photoexcited gap states, photoinduced optical absorpt. dynamics 3−23980
polyacetylene, vibronic states, energy levels calc. 3−47072
quartz, gamma-ray irrad., adhesion levels, TSC study 3−52059
quartz, internal elec. fields determ. using relax. magnetoelec. effect 3−28702
quartz, smoky, elec. dipole echoes, 5 to 25 mK 3−14231
semiconductor, impurity and defect clusters, charge and distrib., photoelec. and galvomag. study 3−13258
semiconductor, recomb.-enhanced reactions, review 3−8511
semiconductors, deep level defects, lattice relax. and motion, DLTS study 3−57311
semiconductors, disordered and semimagnetic, electron localization on defects and optical nuclear polarization 3−43115
semiconductors, doped, dislocation mobility theory 3−2559
semiconductors, electrical conductivity due to dislocations 3−47338
semiconductors, energy spectra, dependence of limiting solubilities of impurities 3−8444
semiconductors, enhancement of defect reactions by tunnelling between defect potential curves 3−47291
semiconductors, grain boundary energy states 3−23314
semiconductors, radiation defects electronic struct. 3−38350
semiconductors, trapped electron thermal release by multiphonon processes 3−52176
TCNQ salt, $(NMP)_x(Phen)_{1-x}TCNQ$, solitons, mag., elec., and X-ray scatt. meas. 3−3168
transition metals, BCC, atomic and electronic structs. of tilt grain boundaries 3−33269

defect electron energy states continued
  zinc blende semiconductors, distortion symmetries near vacancies, classification scheme 3—47292
  Al, electronic struct. of vacancies and H-trapped vacancies rel. to positron lifetime calc. 3—28296
  $Al_{0.3}Ga_{0.7}As$ LPE layer, grown-in deep level defects, thermal annealing effect 3—18799
  As_2S_3 glass, atomic tunnelling spectrum, optically induced gap 3—14445
  As_2Se_3, amorphous, spectral distrib. of steady-state photocond. 3—43231
  BeF_2, crystalline and vitreous, electronic struct., optical study 3—52032
  C amorphous film prep. from Ag-C films 3—52929
  CdS, Cd interstitial electron states, luminescence study 3—28306
  CdS, ideal vacancy electronic states and band struct., Green's function calc. 3—43099
  Cu, conduction electron scatt. by stacking fault 3—33716
  Cu, defect states, Green's function Fourier coeff. evaluation 3—23228
  $CuInS_2$:Fe, defect electron levels, elec. cond. and Mossbauer studies 3—52062
  GaAs, 0.8 eV luminesc. band, annealing behaviour, As_{Ga} antisite detect. 3—28884
  GaAs, anion antisite defects and electron traps 3—42603
  GaAs, antisite defect electron energy states, Green's function calc. 3—47306
  GaAs, antisite defect form. during plastic deform., EPR and photoluminescence study 3—2553
  GaAs bicrystal, grain boundaries, elec. characterisation 3—52061
  GaAs, deep level point defects, annealing behaviour 3—43085
  GaAs, dislocation glide, recombination enhanced, cathodoluminesc. microscopy study 3—42609
  GaAs, electron irrad. damage, elec. cond. and defect levels 3—42666
  GaAs, grain boundary energy states 3—23314
  GaAs LPE layer, grown-in deep level defects, thermal annealing effect 3—18799
  GaAs, MBE layers, defect deep levels, optical excitation study 3—47307
  GaAs, polycrystalline, grain boundary passivation by H plasma, surface barrier diode appl. 3—43064
  GaAs, VPE grown, deep-level defects vs. growth param., electron traps meas. 3—33670
  GaAs, vacancies and anti-struct. defects, electronic density of states 3—47301
  GaAs:Be MBE layers, impurity and defect levels 3—3102
  GaAs:Cr,Te, photoconductivity, defect struct. 3—28384
  GaAs:Ge, doped and undoped, MBE grown, elec. and optical props., effect of As vapour species 3—43595
  GaAs:H, passivation of dominant deep level EL2 3—23308
  GaAs-oxide interface electron state theory 3—43255
  GaP, electron or neutron irrad., band edges modification by defects, optical absorpt. and photocond. study 3—23975
  GaP, ODMR study of antisite related luminescence 3—19185
  GaP, triplet antisite centre, spin depend. form. and decay, ODMR study 3—43462
  GaP:H(He), ion implanted, photoelectrochemical meas. 3—42627
  GaP:Zn, as-grown and electron irrad., defect study by DLTS and EPR 3—43087
  n-Ge, charged grain boundaries, electronic struct. 3—22917
  n-Ge, electron irrad., electron traps, ionisation free energy emission rates and capture cross sections 3—28300
  Ge, grain boundary energy states 3—23314
  Ge, laser-induced defects, H_2 passivation, DLTS study 3—46993
  Ge n^+p diodes, reverse biased, mobility of γ-ray induced defects 3—18650
  Ge:Ga(In)(As)(Sb), electron irrad., hole trapping defects, DLTS study 3—43083
  a-Ge:H, B(P), ESR spectra and transport props. 3—43435
  Ge:H,B(P), amorphous, elec. cond. and thermoelectric power 3—23393
  Ge:Ni, Ni-related defect acceptor level, H passivation, DLTS study 3—43065
  Ge:Pb(Sn), γ-ray irrad., deep level defects, DLTS study 3—13764
  Ge-Si alloy, electron and X-ray irrad.-induced acceptors, elec. cond. study 3—18653
  $Ge_{40-x}Sb_xS_{60}$ glasses, refr. index and DC elec. cond. 3—28813
  $GeSe_2$, cryst. and amorphous, electronic struct., optical and photoemission props. 3—23265
  Ge(111)-(2×1) surface, dangling-bond band, angle-resolved photoemission 3—47402
  InGaAsP LPE layers, electron irrad., defect states, DLTS study 3—57304
  InP epilayers, process-induced defects, photoluminesc. and DLTS study 3—43089
  InP:Si, ion implanted, and semi-insulating transport props. and defects 3—28383
  InSb, electron-irradiated, nature of radiation induced defects 3—13281
  InSb, localised defect states, electron capture and emission 3—8449
  $LiNbO_3$, F^+-centre energy levels, point-ion-lattice calc. 3—23318
  $LiNbO_3$, F^+-centre wave functions, transition energies in absorpt. spectra 3—43071
  $LiTaO_3$, F^+-centre energy levels, point-ion-lattice calc. 3—23318
  $LiTaO_3$, F^+-centre wave functions, transition energies in absorpt. spectra 3—43071
  MgO single cryst., DC elec. cond. and thermal hysteresis effects 3—52142
  MoS_3, amorphous, defects, bipolaronic ground state 3—23329
  $Na_2O.3SiO_2:Tb^{3+}$, glass, tunnel recombination luminesc. 3—24010
  Nb:H, diffusion model, small polaron models 3—33505
  NbC, vacancy band in electronic struct., DV-Xα cluster calc. 3—38306
  NbN, vacancy band in electronic struct., DV-Xα cluster calc. 3—38306
  NbO, vacancy band in electronic struct., DV-Xα cluster calc. 3—38306
  PbSe(Te)($Se_{1-x}Te_x$), narrow gap semicond., bound defect and impurity states, review 3—23309
  $Pb_{1-x}Sn_xSe$, nonstoichiometric defect levels, Hall coeff. study 3—18656
  n-Si *(Chinese)* 3—33659
  Si, 30° partial dislocations, geometric and electronic struct. 3—22900
  Si (111) surface dangling bonds, many-body effects 3—28405
  Si, amorphous, electronic defects, laser and electron beam crystn. obs. 3—56956
  Si, complex defects, divacancy and E-centre, mol. cluster study 3—47297
  Si, dangling bonds at line defects, electronic props. 3—47295
  Si, deep defects, photolum. characterization 3—43609
  Si, defect triplet states, photoexcited, optical nuclear polarization 3—43460
  a-Si, defects, bipolaronic ground state 3—23329
  Si, dislocation core variable reconstruction, photocond. and Hall effect meas. 3—37921
  Si, dislocation effect on radiation defect annealing process 3—27993

defect electron energy states continued
  Si, dislocation energy levels, DLTS study 3—3111
  Si, distorted defects, optical meas. 3—47678
  p-Si, divacancies, hole capture cross sections, isothermal capacitance relax. study 3—43107
  Si, elec. activity of cryst. defects, combined SEM, EBIC and TEM obs., review 3—13770
  Si, electronic and struct. props. of grain boundaries 3—23315
  Si, electronic props. of dislocations, Shockley partials, and stacking fault ribbons 3—47305
  Si, g-tensor for defects with dangling bonds 3—47296
  Si, grain boundary barrier height and interface states, laser beam photocond. study 3—38335
  Si, grain boundary energy states 3—23314
  Si, interstitial muons and H_2, self-consistent total energy surfaces calc. 3—46924
  Si, irradiated, defects determining Fermi level stabilisation 3—33674
  Si, laser crystallised thin film, deep levels, capacitors 3—3271
  Si, lattice vacancy, negative-U props. 3—43077
  Si, local density of states at defects calc. 3—47293
  Si, multivacancies, interstitials and self-interstitial migration 3—47289
  Si, neutral-vacancy defect, embedded cluster theory, ab initio calc. 3—8448
  Si, neutron irrad., charge transient spectroscopy 3—23307
  Si, photoconductivity meas. by microwave cavity method *(Japanese)* 3—57378
  Si, polycrystalline, grain boundaries, electronic props., photoelec. study *(French)* 3—23430
  Si, self-consistent electronic struct. for Al and Si interstitials, cluster extended Green's function technique 3—47294
  Si, trap centres in wafers containing A-swirl defects, annealing behaviour, DLTS study 3—13760
  Si:Al, enhanced interstitial migration, electronic struct. calc. 3—51859
  p-Si:Al, negatively charged vacancy, hyperfine interactions and ENDOR meas. 3—43459
  Si:Er, γ-ray irrad., photocond. and elec. props. 3—43235
  Si:Ga, electron irrad., defect studies and minority carrier lifetime, DLTS studies 3—57306
  Si:H, amorphous, dangling bond defects, trapping parameters, photoconductivity study 3—28367
  Si:H, amorphous, radiative recomb., ODMR study 3—19016
  Si:H, amorphous, radiative recomb., ODMR waveform meas. 3—19017
  Si:H, amorphous, transport props., temp. depend. *(Korean)* 3—38412
  Si:H, amorphous film, interface and surface states, optical absorpt. spectra, photothermal deflection spectroscopy study 3—34125
  a-Si:H, doping and Fermi energy, Mott 8-N rule 3—8456
  a-Si:H, elec. and optical props., effect of prolonged illum. 3—23441
  a-Si:H, light-induced metastable effects 3—23392
  a-Si:H, luminesc. fatigue and light-induced ESR 3—24011
  a—Si:H, spin-depend. photocond., ESR study, illum. effects 3—3248
  Si:H amorphous film, dangling bond correlation energy 3—8437
  Si-SiO_2, ion implanted, defect study 3—28444
  Si-SiO_2 MIS struct., Si^+ ion implantation defect energy levels meas. 3—3322
  SiO_2 amorphous film, AC hopping conduction model 3—43177
  SiO_2, vitreous, defect electron states, tight-binding and recursion method calc. 3—57315
  $SiO_2:O^{2-}$, amorphous, defect study 3—38347
  SmS, point defect electronic struct., cluster model 3—18647
  WO_3, amorphous, defects, bipolaronic ground state 3—23329
  ZnO(S), ideal vacancy electronic struct. 3—47309
  ZnS:Ag, doped and undoped, luminesc. spectra, effect of intrinsic defect and impurity hole cond. 3—38869
  ZnS:I(O)(Ag), defect creation by impurity doping, luminesc. and ESR study 3—43617
  ZnSe:Cl, photoluminescence and electron conc., defects effects 3—38885
  ZrC, effect of reactor irradiation on mag. props. 3—13998

defectoscopy *see crack detection*

defects, crystal *see crystal defects*

defibrillators
  see also patient treatment
  battery operated monitor/defibrillator used for prehospital care, eval. 3—15277
  design and development, review 3—44346
  paddles, resistance of electrode-gel interface 3—15280

deformation
  see also bending; cold working; creep; drawing (mechanical); elastic deformation; elongation; ferroelasticity; plastic deformation; shape memory effects; thermomechanical treatment
  beam and cable structures, geometrically nonlinear analysis 3—56443
  beams with axial constraints, deform., efficient pulse shapes 3—7407
  beams with thin walled cross sections, finite element formulation 3—1964
  box profiles, anal. of deform. in bending process *(Polish)* 3—2648
  BWR fuel channel deformation, large channel bowing 3—6358
  circular tube, elastic-plastic, subjected to internal press. and axial force, bifurcation 3—42150
  complete 3-D deformation anal. in the white light speckle method 3—37433
  composite materials interphasal layer, mech. model 3—37380
  composite structures, nonlinear FEM 3—22334
  creep, high temp., division from point of view of dislocation struct. 3—14671
  creep theory, small parameter method appls. 3—46457
  crystalline instability, stress tensor representation 3—8124
  cyclic deformation in nonlinear viscous power-law fluid flow 3—42268
  diffuse object deformation meas. using computer-aided speckle pattern interferometry 3—36074
  diffusing object in-plane deform. meas. using holographic interferometry, fringe visibility 3—27458
  diglycine sulphate, anhydrous, deformation study 3—51693
  4,4-diphenylmethane diisocyanate elastomer films, segmental orientation during deform. *(Russian)* 3—51515
  dunite, deform. mechanisms, results of high temp. testing 3—54023
  energy relationships for deformation of specimen with crack 3—42712
  Ganymede, crustal deform. model rel. to evolution of tectonic features 3—59254
  garnet bubble films, ion implanted, strain distrib. using X-ray dynamical theory 3—47532
  glass fibre reinforced polyoxymethylene, modulus development 3—24283

deformation continued
granular material strength, expt. micromech. evaluation, particle rolling effects 3−29124
1,6-hexamethylene diamine elastomer films, segmental orientation during deform. *(Russian)* 3−51515
inspection, using Moire fringes *(French)* 3−39315
insulating film, thickness meas. by meas. tip, local deformation effect 3−264
laminated composites, free-edge stress under uniform extension, logarithmic singularity 3−7406
large strain analysis of an inflating membrane 3−22333
membranes, approx. method for study of large deforms. 3−12514
metals and alloys, recrystallization following mech. deform. 3−38031
mylonites of Alpine Fault, New Zealand, high stress deform. and shear heating assoc. with fault movement 3−35132
oligotetramethylene glycol elastomer films, segmental orientation during deform. *(Russian)* 3−51515
olivine, deform., appl. to lunar and planetary interiors 3−54265
optical fibre, single mode, cabled, strain meas. 3−46344
optical measurement using inverse transformation *(Chinese)* 3−51032
partly winkled membranes, finite element anal. 3−32605
piston pressure gauges, allowance for piston pairs deformation 3−10836
polycarbonate deformation monitoring by dielec. relax. spectroscopy 3−52722
polyethylene films, oriented, gas permeability *(Russian)* 3−53152
polyethylene terephthalate orientation, molar mass and nucleating agents effect 3−33142
polymers, glassy, mol. mechanisms 3−9130
polymers, rheological props. at high strain rates 3−32611
polystyrene melts, styrene-butadiene copolymer modified, rheological props. under shear and uniaxial stretching *(Russian)* 3−51041
polyurethane elastomer, dielectric tan δ meas. during deform. 3−52723
polyurethaneurea elastomer films, segmental orientation during deform. *(Russian)* 3−51515
PVC and blends with rubber modifier, mech. behaviour and deformation *(Russian)* 3−14678
quadrilateral finite difference plate element for nonlinear transient analysis of panels 3−22329
rings, deflection and buckling, straight and curved finite elements 3−1976
rock deformation, mechanisms of nappe emplacement at southern margin of Damara Orogen (Namibia) 3−35162
rock deformation processes in tectonics, conference, Glen Helen, Northern Territory, Australia, (1981 August 9 to 15) 3−30553
rocks transformation plasticity 3−15425
rolled slabs, three-dimensional strains, photoplastic simulation 3−32689
rubber, unvulcanised cmpds., high-rate start-up behaviour 3−56515
rubbers, elastic properties, effect of deform. during crosslinking *(Russian)* 3−53111
self-consistent Einstein model, continuum approx., eqns. for thermoelasticity and lattice vibr. 3−16295
shells with nondeformable transverse fibres, nonlinear model 3−32601
solids, shock wave deform., bifurcation theory *(German)* 3−28047
vibration-frequency transducer for pressure with a broad measuring range, sensitivity analysis 3−290
wave propagation, inhomogeneous statical initial deformation *(Russian)* 3−12582
Al foil, point defect nature determ. from dislocation loops *(Russian)* 3−37902
Al, laser bombardment, dynamic response, surface roughness effect 3−13272
CaF_2, cleavages, surface distortion features 3−51908
$Cd_xHg_{1-x}Te$ crystal, deform. twinning 3−56910
CdTe crystal, deform. twinning 3−56910
Cu, annealed, cyclic deform., dislocation dynamics anal. 3−4079
Cu, laser bombardment, dynamic response, surface roughness effect 3−13272
Fe, laser bombardment, dynamic response, surface roughness effect 3−13272
Fe ore, Precambrian rich of Minas Gerais, Brazil, tectonic structs. 3−9897
$LiVO_3$-$NaVO_3$ system, isomorphic miscibility, thermoradiographic investig. 3−51801
$NaNO_3$, calcite struct., deform., in compression 3−51698
$NaNbO_3$-$PbTiO_3$, ferroelec. solid solns. composition-struct.-props. relationship 3−18280
Nb_3Sn, superconducting, four-dimensional crit. surface including crit. strain 3−43326
NiO powders, cold pressing mechanism *(Serbian)* 3−34266
Pb-Sn, semisolid dendritic alloys, deform. behaviour, effect of strain rate 3−14666
V_3Ga, superconducting, four-dimensional crit. surface including crit. strain 3−43326

deformation lines *see Luder's bands*

degenerate semiconductor materials *see degenerate semiconductors*

degenerate semiconductors
see also heavily doped semiconductors; superconducting semiconductors
excitons, many-particle complexes, variational calc. 3−23285
Hall factor for isotropic media, mag. field dependence 3−43206
III-V degenerate p-type semiconductors, high electron mobility and impurity scatt., theory 3−52133
MIS structures, high-frequency capacitance, degeneration and nonparabolicity effects, theory 3−23495
n-InSb, longit. cond., effect of nonparabolicity for transverse in strong mag. fields 3−8539
n-InSb, metallic, magnetoresist. calc. for weakly localised regime 3−13836
Si:Cu, model of Cu impurity levels 3−33679

dekatrons
No entries

delay circuits
see also delay lines; phase shifters
multichannel electronic equipment, logic components and adapters 3−11616

delay elements (circuits) *see delay circuits*

delay lines
see also acoustic delay lines
correlation Stokes polarimeter using a dual channel SAW Fourier analyser 3−16404
magnetostatic wave delay line, guided optical wave diffr. 3−50762
optical fibre recirculating delay line 3−22237

delay lines continued
optical fibre trapped delay line as 1-Gbit/s code generator and matched filter 3−56344
single mode fibre-optic variable delay lines, evanescently coupled taps fabrication 3−17621
Thomson scattering apparatus, background plasma light subtraction by delay line techniques 3−22720
Ni-Cu-Co ferrite, magnetoelastic surface wave vel. 3−18968
YIG strip, magnetostatic forward volume wave propag. 3−43358
YIG-Ga.YIG layered films, LPE growth, appls. 3−19299

delayed neutrons
(4Z−A) dependence of delayed neutron yields 3−16831
delayed neutron spectral calculation using augmented ENDE/B-V data 3−16830
Sr short-lived precursors, β-delayed neutron emission probability (Pn) 3−21264
Ba, short-lived precursors, β-delayed neutron emission probability (Pn) 3−21264
^{87}Br, β-strength function, semiempirical method, delayed neutron emission probabilities 3−45489
^{137}I, β-strength function, semiempirical method, delayed neutron emission probabilities 3−45489
La, short-lived precursors, β-delayed neutron emission probability (Pn) 3−21264
Y short-lived precursors, β-delayed neutron emission probability (Pn) 3−21264

delayed protons
A=94-100 very neutron deficient isotopes, β-delayed proton activities 3−735
^{117}Ba, β-strength function resonance struct., β-delayed particle emission 3−21256
^{A}Cs, A=114,116, β-strength function resonance struct., β-delayed particle emission 3−21256
^{A}I, 110,112, β-strength function resonance struct., β-delayed particle emission 3−21256
^{151}Lu, proton emission, half life from quasi-stationary model 3−31345
^{87}Mo, $T_z=3/2$ β-delayed proton precursor decay, levels, branching ratios 3−45488
^{26}P, $T_z=-2$ isotope from $^{28}Si(^{3}He,p4n)$, beta-delayed proton decay 3−54996
$^{91}Ru^{M}$, $T_z=3/2$ β-delayed proton precursor decay 3−45488
^{147}Tm, proton emission, half life from quasi-stationary model 3−31345
^{113}Xe, β-strength function resonance struct., β-delayed particle emission 3−21256
^{83}Zr, $T_z=3/2$ β-delayed proton precursor decay, mass excess and levels 3−45488

delays
see also delay circuits; distributed parameter systems
mode and time delay estimation of NDE systems 3−9302

demagnetisation
see also magnetisation
Alnico 5 permanent magnets, non-metallic inclusions and mag. props. modification rel. to Mn content 3−52549
chemisorption energy on a magnetic surface 3−57208
ferrite, polycrystalline, mag. cryst. anisotropy const. and effective porosity meas. 3−18885
ferrite, porous, microstruct. and mag. props. 3−43395
ferromagnetic object with finite dimens., inspection in mag. fields and under elastic stresses, demagnetisation effects 3−29269
refrigeration, diluting, ultralow temp., using ^{3}He-^{4}He mixture *(Japanese)* 3−45146
rocks, magnetic orientation in demagnetised states 3−9914
steel, low alloy and C, type 45, 50, 40Kh and 30KhN2MPA, tempered, remanent magnetism, induction under alternating mag. field 3−58143
steel, type 38KhGNM, quenching and tempering effect on mag., elec., and mech. props. 3−58142
Co-V films for perpendicular recording 3−28993
$Co_{66}B_{30}Si_4$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3−33932
$Dy_2Ni_{17-x}Al_x$, double demagnetisation and ferrimag. order-order transition 3−52535
Fe-Si, polycryst., with stress coating, demagnetization effects 3−33923
Fe-Si grain oriented sheet, bending effect on domain configurations and losses 3−33964
$Fe_{70.5}B_{15.5}Tb_7La_7$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3−33932
Gd, magnetic hysteresis near Curie temp. 3−52541
$Mg_{1-x}Mn_xFe_2O_4$, FMR lineshift and line-width studies 3−38699
$MnCl_2.4H_2O$ Ising antiferromag., critical behaviour crossover in transverse field 3−57670
$RbFeCl_3$, triangular XY-like antiferromagnet, ^{35}Cl pulsed NMR 3−52669
$Sm_2(Co, Cu, Fe, Zr)_{17}$ magnets having high intrinsic coercive force and maximum energy product 3−14088
$SmCo_5$ powder and sintered compact, mag. props. rel. to milling medium 3−47526
$Sm(Co$-Cu-Fe-$Ti)_{6.8}$ sintered magnet, magnetisation reversal at very low temp. 3−52540
$SmCo_{3.5}Cu_{1.5}$, magnetisation reversal at very low temp. 3−52540
$Tb_{0.27}Dy_{0.73}Fe_2$, magnetisation process and domain struct., X-ray topography study 3−3480
$Y_2Ni_{17-x}Al_x$, double demagnetisation and ferrimag. order-order transition 3−52535

demagnetisation, adiabatic *see magnetic cooling*

Dember effect
GaAs film, Dember EMF theory 3−28387

demodulation
see also demodulators; modulation
array heterodyne detection using holographic local-oscillator beam multiplexing 3−56158
electrostatic voltage sensor using surface acoustic waves 3−49406
fibre interferometric sensors using laser freq. switching, demodulation scheme 3−37197
fibre optic sensors, homodyne demodulation scheme using phase generated carrier 3−7196
heterodyne detection through rain, snow, and turbid media 3−54136
laser beam heterodyne detection 3−7048
laser heterodyne spectroscopy, principles and appl. 3−10913
passive demodulation of optical interferometric sensors 3−5845
time-domain reflectometry in single-mode fibre at 1.5 micron using heterodyne detect. 3−5837

demodulation continued
visible radiation heterodyne detection by MIM diodes, 2.5 THz freq. difference measurements 3—36082
Ag halide fibres, IR heterodyning 3—46297

demodulators
see also demodulation; discriminators
EMGs of pathological tremors, demodulator for clinical use 3—53878
pulse counting frequency demodulator for LDV movement meas. system 3—20833

demonstrations
includes student experiments
see also student laboratory apparatus
apparatus for metallic thin film deposition 3—5543
artificial kidney, laboratory exercise for medical students 3—5551
atmospheric humidity measurement, graph use 3—40618
band gap meas. technique using p-n diode for Si and Ge 3—35805
circularly polarised waves, mech. demonstration 3—35821
data collection in physics laboratory expts., AIM 65 microcomputer appls. 3—35791
dense thin films, acoustic transmission, time domain anal. 3—5558
experimental apparatus for direct meas. of muonic neutrino helicity 3—5537
frustrated total internal reflection expt. 3—5568
interference display in highly convergent linearly polarised white light 3—5566
light statistics fundamentals illustration using a correl. photon counter 3—5549
light velocity meas., minimal apparatus for first-year course demonstration 3—25729
magnetic anisotropy, experimental determination in undergraduate laboratories 3—35801
mathematical modelling in physics and engng., power from windmills exercise 3—40333
mechanical toy use in physics teaching 3—40338
mechanics, audio-tutorial laboratory at Michigan Tech. University 3—35797
mirage production using a laser 3—49119
nuclear energy teaching 3—44944
octave-band filters for laboratory and demonstration expts. in acoustics 3—5565
optical diffraction pattern demonstration 3—5542
overhead optical projector simple modification for vertical formats 3—44942
paramagnetism and antiferromagnetism, advanced student expts. 3—5569
photographic recording of laser light, rel. to diffraction 3—49127
physics games, role in teaching 3—40337
Planck's const. determ. 3—35820
solar cells I-V characts., undergraduate expt. 3—35803
soliton concept, simple student expt. 3—40336
spark recording paper for moving object position obs. 3—25738
stretched string, standing waves driven by loudspeakers and signal generators 3—5532
superconductor mag. behaviour, advanced laboratory expt. 3—35794
thermal conductivity meas. using transistor probe 3—25737
thermodynamic second law demonstrations using a vortex tube 3—5572
uncertainty principle demonstrated by means of oscilloscope expt. 3—49111
visual observation, physical and psychological optics 3—5567
wave motion using EM-driven string vibrator 3—25736
$Cr(oxalate)_3^{3-}$, forbidden d-d transitions 3—51
OH radical, IR emission spectrum 3—52

dendrites
see also crystal growth
crystal growth, rapid, from undercooled melts, roles of heat transport and interfacial rearrangement 3—13138
ice crystal growth from vapour, air velocity influence on habit 3—13142
randomly branched aggregates, form. kinetics, renormalisation group approach 3—45068
solidification, nonlinear system, mode selection 3—33612
Ag_2Se-Se-metal thin film sandwiches, polarized memory switching effects 3—13869
Cd dendritic growth rel. to Ni-Cd cell 3—53494
Cr dendritic needle crystals, FCC struct., electron diffr. and Auger study 3—3021
$CuGaS_2$, CVT growth assisted by vapour-liq.-solid mechanism, surface microtopography 3—42551
$CuInS_2$, CVT growth assisted by vapour-liq.-solid mechanism, surface microtopography 3—42551
FeBSi amorphous alloys, microstructurally depend. mag. props. 3—28620
$LaMoO_4$ spherulites, growth mechanism and morphology 3—18252
ZrC dendritic growth on Zr surface, prod. by spark machining 3—34538

dendritic crystals *see dendrites*

dendritic structure
crystal growth, rapid, from undercooled melts, roles of heat transport and interfacial rearrangement 3—13138
eutectics, zone melting studies, review 3—24117
metals and alloys, solidification and diffusion kinetics under microgravity environment 3—4025
solidification, math. modelling 3—2747
solidification, space environment expts., review 3—4026
solidification phenomena, use of heat flow modelling 3—4031
spherolites, dendritic growth mechanisms 3—53017
steel, cast, Mn-Ni-Mo-Cu, dark facet fracture, AlN and Ti precip., SEM study *(Chinese)* 3—34420
steel, duplex stainless welds, precip., STEM/EDS study 3—34327
steel, peritectic, primary struct., alloying effect 3—39107
Ag, containerless solidification under microgravity conditions, external and internal structs. 3—14582
Al-$CuAl_2$ eutectic alloys, heat pipe solidification, microstruct., mech. props. 3—58162
Al-Mg (5%), solidification, conc. changes in electromag. mould *(Czech)* 3—14584
Al-Mg-Si-Sr, microstruct. after prolonged soln. treatment, quantitative metallography 3—24276
Al-Zn-Cu-Mg, dendritic segregation, effect of Cu and Mg *(Polish)* 3—4040
Cd-Zn eutectic melts, undercooled, solidification 3—4028
Co superalloy, quench rates in gas-atomised powders and melt-spun ribbons, microstruct. depend. 3—29030

dendritic structure continued
Cu, containerless solidification under microgravity conditions, external and internal structs. 3—14582
Cu-O eutectic system, solidified from drop of melt, surface topography *(German)* 3—23150
Fe-base alloys, unidirectionally solidified, dendrite morphology 3—34292
Fe-Ni-Cr powder, superalloys, rapidly solidified, characterisation 3—3986
Fe-Ti-S melts, rhythmic growth of dendritic branches 3—39105
Ni superalloy, quench rates in gas-atomised powders and melt-spun ribbons, microstruct. depend. 3—29030
Ni-base superalloys, growth of γ' precip., electron diffr. study 3—47836
Pb-Sn, primary dendrite spacing 3—9049
Pb-Sn, semisolid dendritic alloys, deform. behaviour, effect of strain rate 3—14666

dense fluids, theory *see liquid theory*

densification
see also density; powders; sintering
agglomerated materials, compaction and mech. props. 3—29025
alloy, powder, rapid solidification 3—9052
amorphous ferromagnetic metal powders, mechanical and magnetic props. after compaction 3—9022
Astroloy, Ni-base superalloy, supersolidus sintered preforms, necklace struct. obtained by forging 3—9017
ceramic pellets prod. with close shape tolerances, hot impact densification 3—969
ceramics, hot isostatic pressing effect on porosity, sound velocity meas. eval. 3—9293
chalcogen and related alloy films, photocontraction effect 3—7919
granules, compaction process and deformability 3—29026
metal powder compact, density and press. distrib. 3—47799
metallic powders, bonding processes during dynamic compaction 3—43779
nuclear fuel, densification during sintering, statistical analysis 3—36462
plasticity criteria for porous metals 3—58067
porous materials, densification in rigid conical and cylindrical dies 3—39057
porous solid under pressure at fractional nonlinearity indices, kinetics 3—24175
porous solids, biaxial deform. in densification process 3—14520
powder composites, conductivity, effect of diffusion of components of limited intersolubility 3—14748
powder metallurgy compacts of complex configuration, limiting equilib. eqns. 3—39058
powdered materials, densification, two-dimens. stochastic model 3—14521
pressing, transverse, press. distrib. in seat of classification 3—58064
sintering, liquid-phase and activated, progress and problems 3—58063
steel, C, compacted particle core, AC mag. characts. 3—43397
steel, high-speed, powder, compressibility and sinterability vel. to particle size 3—47798
US vibration powder press with vibr. die 3—1893
Al electrophoretic coatings on steel 3—24413
Al-Zn-Mg-transition metal alloy billets, granulated, hot rolling 3—14620
AlN, densification kinetics during hot pressing 3—9024
Al_2O_3, hot isostatic pressing effect on porosity, sound velocity meas. eval. 3—9293
Al_2O_3, hot isostatically pressed, fabrication and fracture toughness for prosthetic use 3—29049
Al_2O_3-B_4C composite ceramics, sintering, densification, microstruct. development 3—47807
$BaTiO_3$, semiconducting, porous, factors, affecting positive temp. coeff. of resist. *(Japanese)* 3—3206
C, fibre, wetting props., manufacture of composites *(French)* 3—33539
$Ca_9H(PO_4)_6.(OH).3.3H_2O$, densification by hot isostatic pressing 3—58089
Fe_2O_3, acicular powder, sintering, pore struct., densification 3—58079
Fe_2O_3 powder specimens, charact. and sintering 3—14545
GeSe films, ion beam induced densification, species and deposition angle depend. 3—13647
$(La_{1-x}Ca_x)CrO_3$ ceramics, hot isostatic pressing and props. *(Japanese)* 3—3997
Lab_6-Ni powder, hot pressing, densification kinetics rel. to Ni additon 3—47812
$MgAl_2O_4$-LiF, polycryst. spinel densified with LiF additions, morphological changes in intergranular thin film 3—14613
Mo powder, isostatic pressing, shrinkage 3—9016
Na_2-SiO_2 glass prep. by gel-glass transformation, IR reflection spectra study 3—34271
NbC_x, hot isostatic pressing 3—3992
Ni base superalloy IN-100, powder consolidated, microstruct. changes during superplastic determ. 3—9131
NiO, cold pressing mechanism 3—24188
Pb-Al_2O_3, powder metallurgical composites, consolidation and technical props. 3—52996
Pb-Zn, powder metallurgical composites, consolidation and technical props. 3—52996
Si_3N_4, α- and β-phase, densification under press. 3—14529
Si_3N_4 powders, high press. hot pressing, densification, α to β phase transform., hardness, fracture toughness, temp. depend. *(Japanese)* 3—58084
α-Si_3N_4 powders, hot pressing, strength, oxidation and creep props. 3—34269
Si_3N_4, reaction bonded, prep. and additives effect on vitrification of grain boundary phases 3—29040
Si_3N_4-Y_2O_3-Al_2O_3-Mg-O, sintered compacts, hot isostatic pressing, density, flexural strength *(Japanese)* 3—58083
Ti filters, powder metallurgical prep., mech. and hydraulic characts. 3—58070
Ti-Fe powder mixtures, sintering of compacts, diatometric investig., intermetallic form. 3—58069
TiC-Fe, Ni cermet with different binder concs. in alternating layers, prod. and struct. form. 3—58091
WC-Co powder pressing using US vibr. press with vibr. die 3—1893
YIG:Ca, V, densification mechanism 3—19302
Y_2O_3-ZrO_2, plasma sprayed layers, vertical cracking, surface oxidation, densification under laser treatment 3—53247
ZnS, doped powder, compaction kinetics 3—9012
Zr-Nb system, sintering process investig. w.r.t. config. model *(Russian)* 3—47796
ZrO_2-CaO-B_2O_3, densification with borate additions 3—53007

densimeters *see densitometry*

densitometers *see densitometry*

densitometry
- *see also photometry*
- air shock, Mach-130, pseudo-three-dimens. isodensity and density profiles from fibre optic output 3—2141
- autocovariance functions for polished optical surfaces 3—37143
- computerized research microdensitometer for spectrographic data analysis 3—25857
- coronary obstruction severity, computer aided quantitation from single view cineangiograms 3—24869
- fluorography, quantitative digital, two low contrast phantom types 3—53785
- gamma densitometry for bulk measurements, review 3—29362
- Idaho National Eng. Lab. thermal reactors, in-core instrument capabilities 3—55329
- metallic deposits, rough, surface height and slope distribs. 3—5764
- microprocessor-based scanning microdensitometer and signal processing system 3—16403
- microprocessor-controlled densitometer for electron diffraction 3—50548
- plasmoids produced in high frequency plasma discharge, equidensitometrical analysis 3—12904
- pulmonary modules, CT densitometry, phantom study 3—53773
- radiographic screen-film noise power spectrum, microdensitometer meas., calibration and intercomparison 3—481
- radiography, linearity, film density and exposure 3—58782
- Roentgen densitometer as a noninvasive means for infant intracardiac shunts detect. 3—53843
- single- or two-dimensional, for use with Apple II+ computer 3—36065
- soot concentration in axisymmetric flames meas., using scanning optical densitometer 3—10879

density
- *see also atmospheric pressure and density; density measurement; density of gases; density of liquids; density of solids*
- Earth density model, primary geodynamical parameters for Standard Earth Model 3—39769
- interstellar clouds, mag. field strength scaling rel. to gas density 3—30447
- interstellar clouds, relation between mag. field and gas density from 21 cm and continuum obs. 3—30446
- Lennard-Jones systems, corrective modes, density fluctuations 3—42499
- nebulae density of fluctuations, dynamical effects of hypersonic stellar winds 3—15917
- neutron, probe by $(\pi^+,\pi^+p),(\pi^-,\pi^-n),(\pi^+,\pi^0p)$ 3—41060
- NGC 1566, spiral galaxy, surface mass density rels. to IR mapping and UBVRi photometry 3—49003
- planetary nebulae, medium to high excitation, density distrib. rel. to O III/O II problem 3—44814
- Universe, weakly non-linear interactions between density perturbations in zero-pressure cosmology 3—59515

density, atmospheric *see atmospheric pressure and density*

density, vapour *see density of gases*

density measurement
- *see also hydrometers*
- acoustic microscope, elastic constants meas. 3—46417
- air shock, Mach-130, pseudo-three-dimens. isodensity and density profiles from fibre optic output 3—2141
- atmospheric gases, laser beam meas. *(German)* 3—34762
- axisymmetric flows, density distrib., by superposing spectral interferograms 3—32828
- balance for liquid and vapour density meas., up to critical temp. 3—25852
- blood density, continuous recording, cardiovascular dynamics study appl. 3—9772
- bone density, quantitative meas. using γ-ray CT 3—58778
- excess molar volumes in very dilute liq. mixtures, using tilting dilatometer 3—10800
- gamma ray absorption based technique 3—272
- gas density measurement by an acoustic method *(German)* 3—49330
- gas mixtures density, concentration and temp. meas., Rayleigh and Raman scatt. appl. *(German)* 3—45219
- lead-acid battery electrolyte, ultrasonic technique for specific gravity meas. 3—56392
- liquid density measurement, isotope based instrument *(Polish)* 3—10802
- lung, regional extravascular density meas. using positron emission and transmission tomography 3—48382
- lung density meas. by CT, implications for radiotherapy 3—9716
- metals, up to 1400°C, apparatus based on Sessile drop method *(Japanese)* 3—49329
- porous materials volume and density meas., weighing method using gas pycnometer 3—275
- positron annihilation technique for thickness and density meas. by gamma-ray absorption 3—49314
- pulmonary density and blood vol., meas. with positron emitting isotopes *(French)* 3—58791
- sea ice, density and salinity from gamma-ray scattering method *(Russian)* 3—20150
- steam, by IR technique 3—25853
- $NaCl-UCl_3-ThF_4$, combination mixtures, density measurement of melts, argon bubble method 3—41191
- Si, density meas. using submersible servo-controlled balance, reference standard appl. 3—35964

density of gases
- binary gas mixture, diffusion slipping at moderate density along flat surface 3—51166
- excited particle density meas. in gas discharges, light interferometry *(Dutch)* 3—51424
- gas density distrib. in vortex system near model of delta wing at angle of attack for $M_\infty=2$ 3—2071
- liquid-vapour interfacial thickness, estimation from surface energies 3—38167
- measurement up to critical temp., using automatic balance 3—25852
- methane-CO_2 mixture, volumetric and thermodynamic props., BWR equation of state 3—37597
- motion about blunted body, gas density and pressure rel. to particle presence *(Russian)* 3—42303
- quantum density corrections to mobility and dispersion law for electrons in a medium of disordered scatterers 3—12812
- Rayleigh problem in BGK model, density perturbation at wall 3—27635
- shear interferometry of axisymmetric gasdynamic object, shock wave interaction 3—42342

density of gases continued
- vapour-liquid equilibrium, volumetric props., static method using variable volume cell without sampling *(French)* 3—20851
- He bubbles in Al and Ni films, press. and density determ. 3—8381

density of liquids
- *see also hydrometers*
- n-alcohols, H bond energies, US velocity and density study 3—18391
- n-alkanes, eqn. of state based on relative dielec. permittivity meas. 3—28076
- 4-trans-(4-alkyl)-cyclohexyl-benzonitriles, nematic viscosity-pressure behaviour 3—47143
- alkyl derivatives, refr. index-density rels. 3—52756
- ammonium acetate, aqueous soln., density and US vel., temp. dependence meas. 3—18393
- p-anisal-p-phenetidine, nematic liq. cryst., pre-transitional effects, US, density, and compressibility study 3—13451
- aprotonic solvents, viscosity and density expt. determ. 3—28139
- benzene, heat of vaporisation and thermodynamic props. in liq. and gaseous phase 3—8213
- benzene-n-propylbenzene (n-butylbenzene), density meas. 3—28023
- Bose gas, nonideal, superfluidity over impure substrate *(Russian)* 3—47177
- Boyle line and density of fluids 3—33327
- bromobenzene-alcohol mixtures, US studies 3—28051
- bromobenzene-alcohols binary liq. mixtures, mole fraction and excess vol. 3—8114
- cholesterol esters, halogen substituted, orientational order parameter *(Russian)* 3—33072
- m-cresol binary liq. mixtures, excess free vol. and thermodynamic props., US meas. 3—2843
- cyanobiphenyls, nematic, Zvetkow twist viscosity, reduced density depend. 3—56811
- cylinders, right circular, subjected to attractive pot., nematic-isotropic transition, scaled particle theory 3—27836
- p-n-decyloxybenzoyl-p-cresol, polymesomorphic liq. cryst., pre-transitional effects, US, density, and compressibility study 3—13451
- density anomaly polymerisation transition 3—42691
- 4,4′-dialkylazoxybenzenes/4-pentyl-4′-cyanobiphenyl mixture, induced smectic phase, density meas. 3—13302
- diphenyl-diphenyl oxide mixture, heat of vaporisation and thermodynamic props. in liq. and gaseous phase 3—8213
- electrolytes, symmetrical, vol. change on ion-pairing 3—48069
- electrolytes based on aprotonic solvents, viscosity and density expt. determ. 3—28139
- electron autolocalization near a neutral impurity in liquid *(Russian)* 3—3126
- electronic hydrometer for stationary lead-acid battery electrolyte 3—34690
- Fe-Sn melts, density and surface tension 3—8305
- four component liquid systems, density and viscosity meas., eqn. of state 3—8240
- H_pBBA, phase transitions from specific-vol. and ultrasonic vel. meas. 3—33438
- hard sphere fluid, statistical mechanics, test partial approach 3—42501
- hexane-hexadecane-n-propyl alcohol, density meas. 3—28022
- intracellular water of Artemia cysts, density obs. 3—58616
- ionic fuid, interfacial electric double layer, long-range correlations 3—43263
- linear homo- and copolymers, molar volumes meas. as function of temp., liq. crystal behaviour 3—2385
- liquid crystals with nematic and smectic phases, order parameter and mol. polarisability meas. 3—46844
- liquid-vapour interfacial thickness, estimation from surface energies 3—38167
- MBBA, nematic, Zvetkow twist viscosity, reduced density depend. 3—56811
- measurement up to critical temp., using automatic balance 3—25852
- metals, liq., density and surface tension meas. 3—13590
- mixture, partial molar volume from hard-sphere model 3—53440
- natural gaslike mixtures, liquefied, density prediction, math. models 3—2638
- N-(p-n-octyloxy benzylidene)-p-n-butyl aniline, smectic liq. cryst., phase transitions, density study 3—38066
- oligoorganosiloxanes, eqns. of state 3—2731
- N-(p-n-pentyloxy benzylidene) p-toluidene, liq. cryst., molar vol., US vel. var., phase transition study 3—38065
- polyamic acid solutions, differing mol. structs., ultrasonic vels. and Rao formalism 3—33365
- polyethylene glycol, aq. soln., US absorpt. and vel. 3—8139
- strontium acetate, aqueous soln., density and US vel., temp. dependence meas. 3—18393
- trans-4-propyl cyclohexyl-4 (trans-4-alkyl cyclohexyl) benzoates, nematic phase, orientational order parameters, expt. study 3—42515
- transport props., depend. on sound vel. and density 3—42826
- vapour-liquid equilibrium, volumetric props., static method using variable volume cell without sampling *(French)* 3—20851
- water, supercooled, density fluctuations and hydrogen bonding 3—27822
- Ba, liquid, density and surface tension up to 1850K 3—51683
- $BaO-Fe_2O_3$, melt, density and surface tension *(Japanese)* 3—47192
- $CaO-Fe_2O_3$, melt, density and surface tension *(Japanese)* 3—47192
- Cs liquid-vapour interface, density profile, X-ray reflectivity 3—47094
- Fe-B, molten, structural transition, phase diagram 3—18435
- Fe-C melts in solid and liq. states, density isotherms 3—37980
- $^3He-^4He$ mixtures, superfluid, dil., ^3He quasiparticle energy spectrum, normal fluid density and sp. ht. 3—8291
- ^4He films, superfluid effective thermal conductance, Kosterlitz-Thouless transition 3—8286
- ^4He, superfluid film, roton compaction near substrate *(Russian)* 3—47176
- K_2CO_3, aq. solns., viscosity and density meas., 20 to 60°C 3—2862
- K_2Cs, critical point at 258K 3—38025
- Kr, liquid-vapour interface, surface tension, density distrib. *(Russian)* 3—2935
- Li-LiH(D)(T), solid and melt, thermodynamic props. 3—8220
- Li_2CO_3, aqueous soln., density and US vel., temp. dependence meas. 3—18393
- $NH_4H_2PO_4$, aqueous soln., density and US vel., temp. dependence meas. 3—18393
- Na_2CO_3, aq. solns., viscosity and density meas., 20 to 60°C 3—2862
- $Na_2O-Fe_2O_3$, melt, density and surface tension *(Japanese)* 3—47192
- N-(p-n-pentyloxybenzylidene) p-n-ethylaniline, nematic-smectic G transition, US vel. and density study 3—57029

density of liquids continued
Rb, liq., struct. changes, viscosity and density temp. depend., thermal expansion coeff., neutron diffr. study 3—22764
$SrOl-Fe_2O_3$, melt, density and surface tension *(Japanese)* 3—47192
Te, liq., semicond.-metal transition, cond. and thermoelec. power meas. 3—13867

density of solids
alkali aluminosilicate glasses, heat capacity and Gruneisen parameters 3—2840
alloys with B2(CsCl) struct., thermodynamics and defect struct. 3—23060
aluminofluorophosphate glasses, struct. with additions of groups I-III fluorides 3—22792
amorphous solids, theoretical model *(French)* 3—51492
bone, US measurements of deer antler, bovine tibia and tympanic bulla, mech. props. 3—24789
calcium-strontium tartrate tetrahydrate, mixed crystals, gel growth, lattice parameter, density, Fe content 3—39023
creep and elongation, low cycle fatigue tests *(German)* 3—4095
graphite intercalation compound with Li, structural and elastic props., in-plane density 3—33213
irradiated metallic crystals, density meas., string method 3—22934
marine sediments, sound velocity and porosity meas. 3—35175
optical thin films, stress, adherence, hardness and density 3—13685
polyethylene terephthalate, spectroscopic charact. of rotational conformations in disordered phase 3—37811
polyethylene terephthalate, thermally crystalised, optical props. 3—19151
polyethylene terephthalate orientation, molar mass and nucleating agents effect 3—33142
polymers, epoxide, supmol. struct., solvents action *(Russian)* 3—46871
polymethylsiloxane, short chain polymer, viscoelastic props. *(Russian)* 3—39187
polystyrene density, cooling rate and press. effect at vitrification 3—8200
powder, solid mixers, internal friction coeff. effect on performance *(Japanese)* 3—18387
pressed powder mixtures, density and strength *(Japanese)* 3—19301
PTFE, amorphous density, heat of fusion and NMR meas. 3—18238
rare earth diortho(pyro)silicates, $R_2(Si_2O_7)$, Czochralski grown, struct. and physical props. 3—51560
sea ice, density and salinity from gamma-ray scattering method *(Russian)* 3—20150
steel powders, elec. cond., depend. on temp. 3—23359
steel type St.3sp, plastically deformed, resistance to fracture *(Russian)* 3—34431
zircon, sintering using SiO_2-TiO_2-Al_2O_3 liquid phase *(Japanese)* 3—3995
Ag-CdO cermet contact, fabrication using ultrasound, physical and mechanical props. improvement *(Bulgarian)* 3—43843
Al films, evaporated, struct., elec. cond. and optical density meas. 3—24140
Al-Mg-Si-Cu-Cr-Fe-Mn (0.98, 0.68, 0.26, 0.2, 0.09, 0.05 wt.%), barrier anodized coating characts. 3—3018
Al-Zn alloys, cold working effect on damping charact. *(Japanese)* 3—9086
Al_2O_3-SiO_2-MgO (CaO) glass, Al ion co-ord. number and physical props. 3—33122
As-Sb-Se glass system, struct. and elec. props. 3—22788
$BaTiO_3$ based powder, dielectric, comparison of calendered and tape cast form 3—34265
C:H amorphous film, struct. optical props. and decomposition kinetics 3—18590
$Ca_{3-x}R_xSi_xP_{2-x}O_8$, (R=rare earth), sintered, phase composition and props. 3—8210
Co-Si-B amorphous alloy, mech. props. and struct. 3—51685
Cu-Ti, amorphous, solubility and diffusion of H_2 3—47114
Cu-Zn (20 wt.%), creep cavitation meas., two techniques 3—39198
CuO-CaO-P_2O_5 glasses, annealing, effect on properties 3—39178
Er_2O_3-ZrO_2 solid solutions, sintering *(Japanese)* 3—39084
Fe alloys, sintered, soft magnetic, props. and appl. 3—39065
Fe, amorphous, vacancies and interstitials, density fluctuation stability 3—37904
Fe-C melts in solid and liq. states, density isotherms 3—37980
Fe-Ti, sintering and diffusional impregnation with C 3—24414
Fe_2O_3, high press. phase transition under shock compression 3—13443
Fe_2O_3-V_2O_5-P_2O_5 glasses, elec. cond. *(Japanese)* 3—3205
$FeTiO_3$ II, disordered, high temp. synthesis, mag. props. 3—14053
$(GdO)_3PO_4$, molar thermal capacity, temp. depend. *(Czech)* 3—13482
^4He-p-H solution, dielectric const. and molar volume *(Russian)* 3—14190
HfO_2, monoclinic, hydrothermal reaction-sintering 3—9026
$In_{1-x}Ga_xAs_yP_{1-y}$, material parameters derivation from linear interpolation scheme 3—33632
$K_3AlB_8O_{15}$, crystal struct., grown from melt *(Japanese)* 3—2522
K_2Cs, critical point at 258K 3—38025
$(La_{1-x}Ca_x)CrO_3$ ceramics, hot isostatic pressing and props. *(Japanese)* 3—3997
$LaNi_5H_x$ solid soln., H dissolution and partial molar volumes 3—23046
Lab_6-Ni powder, hot pressing, densification kinetics rel. to Ni additon 3—47812
$Li_2M^{4+}Fe_6O_{12}$ (M=Ti, Sn, Ge, Si) spinel ferrites, cryst. chem. 3—13204
Li_2O-B_2O_3 glass, phys. props. and struct. 3—29066
Li_2O-Na_2O-Al_2O_3-SiO_2, mixed alkali glasses doped with Cu^{2+} 3—46864
Mg Zn ferrites, mech. strength, density and grain growth depend. 3—14740
MgO-Al_2O_3-SiO_2, Z 3—22793
$MoSi_2$, plasma-sprayed coating, for Mo and Mo alloys *(German)* 3—28985
NaCl-KCl-$ThCl_4$ system, glass forming region, DTA and IR spectra study 3—22786
Na_2O-B_2O_3-SiO_2:Cu^{2+} glass, optical absorpt. and ESR spectra 3—33119
Na_2O-CaO-SiO_2 glasses, N-containing, struct., mech., optical, and elec. props. 3—33129
NdB_6, single cryst. growth from Al flux, characteris. *(Japanese)* 3—8957
PLZT thick film, sintering props. and optical transmittance 3—39055
PrB_6, single cryst. growth from Al flux, characteris. *(Japanese)* 3—8957
$Sc_2(Si_2O_7)$, Czochralski grown, struct. and physical props. 3—51560
SiC polytypes, natural superstructs., cryst. chem. prop. changes 3—22867
SiC, reactive sintered, props. rel. to fractional comp. 3—47813
SiO_2, high density thermal, low oxidation temps., viscous flow model 3—24378
SnSe-Sb_2Se_3 system, X-ray studies, lattice parameters, space group densities determ. 3—7978
SrO-B_2O_3 glass, phys. props. and struct. 3—29066

density of solids continued
Te-Sn(Pb)(Ge)(Cu), chalcogenide glasses, obtained by rapid cooling from liq., crystn., morphological aspects 3—7913
TiB_2, refractory abrasive powders, comminution and classification, physicomechanical props. 3—47904
TiC, refractory abrasive powders, comminution and classification, physicomechanical props. 3—47904
TiC_x single crystals, floating zone prep., C content control 3—43724
TiN, refractory abrasive powders, comminution and classification, physicomechanical props. 3—47904
W alloys, liquid phase sintered heavy metals, fracture props., sintering time effect *(German)* 3—58074
W-P elements, P conc. effect on props. 3—47119
WO_3-CaO-TeO_2 glasses, density, optical absorption edges, IR spectra 3—57952
$Y_2(Si_2O_7)$, Czochralski grown, struct. and physical props. 3—51560
Zi, density meas. using submersible servo-controlled balance, reference standard appl. 3—35964
$Zn_{1-x}Mn_xTe$, lattice parameter and density depend. on comp. 3—51568
Zn_2SiO_4 glass-ceramic, He diffusion, density, refractive index, thermal expansion coeff., thermal history depend. 3—56827
Zr-Pd metallic glass and cryst. hydrides, NMR spectra and props. 3—33999
$Zr_3RhH_{5.5}$ amorphous phase form., X-ray diffr., density and supercond. props. meas. 3—43780

density of states, electron *see electronic density of states*

deoxyribonucleic acids *see DNA*

deperming *see demagnetisation*

desalination
Adriatic solar reverse-osmosis desalination plant design and monitoring *(Italian)* 3—44102
plant using reverse osmosis, solar powered demonstration system 3—14943
productivity of distillation vs. reverse osmosis using solar pond energy 3—39520
seawater desalination, electrochemical changes on passage of small external currents 3—53414
solar-pond-driven desalination system 3—4406
SORO photovoltaic-powered water desalination plant, design, start-up and operating experience 3—58483

desalting *see desalination*

design aids
see also design engineering; nomograms
No entries

design engineering
see also project engineering
1.0 MW ceramic tube bench-model solar receiver, design and fabrication 3—9489
flowmeter test system, universal operating characteristic 3—42339

desk calculators *see calculating apparatus*

desk-top computers *see minicomputers*

desorption
absorption and desorption of H_2 3—48090
adsorbed layers, laser-generated electron emission, pulse shape effects, theory 3—43664
adsorption-desorption equilib., nonlinear diffusion-convection eqn. 3—28215
alkali halides, core-hole induced relax. processes and photon stimulated desorption 3—57232
alkali halides, photon stimulated desorption, three-step model 3—57230
benzene, adsorbed on Re, thermal desorption and photoelectron spectroscopy 3—23159
catalysts, thin film, anomalous behaviour close to mag. phase transition, adsorpt. and desorpt. rates 3—19534
diamond-type crystals, (111) surface, adsorbed H, thermal desorption spectra, diffusion effects, theory 3—57227
electron stimulated desorption dynamics, quantum theory 3—23174
electron stimulated desorption ion ang. distribs., local neutralisation effects 3—43679
electron stimulated desorption of neutral mols. 3—8322
epoxy systems, struct. changes, evaluation by moisture sorption-desorption and dynamic mech. studies 3—24268
field desorption time-of-flight mass spectrometry, ion form. mechanism investig. 3—54810
field evaporated ions, charge state distrib., post-ionisation 3—3928
forced-flow solar regenerator analysis 3—39517
fusion devices desorption and related phenomena 3—2987
fusion reactor material, ion impact desorption cross sections, data compilation and eval. 3—21518
fusion reactor plasma-wall interaction simulator, factors affecting dynamics 3—17046
gas-surface interactions, laser enhanced, basic processes and appls. 3—4316
graphite, implanted with D, trapped states, chem. sputtering, thermal desorption 3—26448
graphite, pyrolytic, implanted He retention, re-emission and thermal desorption 3—21509
graphite, pyrolytic, sputtering yield enhancement at elevated temps. 3—26450
H^+, electron stimulated desorption from condensed branched alkanes 3—2971
heterogeneous surface, desorption kinetics 3—13629
ion desorption, charge transfer, electronic struct. model 3—51940
ion scattering, low energy, elastic and inelastic processes 3—28956
ionisation gauge heads, pumping speed and gas release meas., review 3—5805
isotopic species adsorbed on solid surface, laser excitation, quantum model 3—19229
kinetic theory, energy and angular distrib. 3—47213
Large Electron Positron storage ring, surface electronic processes 3—41361
metal hydrides, amorphous, struct. and props., review 3—46852
metal surfaces, adsorption and desorption phenomena investigation using total current spectrometer *(Polish)* 3—25988
metal surfaces, of H_2 and D_2, differences between d- and s-metals 3—9350
metal-adsorbate systems, ion impact desorption mechanisms and energy distribs., fusion plasma relevance 3—26454
metals, adsorption, desorption, and surface diffusion dynamics of Ar, Xe, N_2, and NO 3—51954

desorption continued
- minerals, mech. prepared pyrite and quartz, surface changes, electron spectroscopy and microscopy obs. 3−13608
- molecules which thermally degrade on vaporisation by heating mass spectroscopy from desorption ionisation 3−19544
- multilayer adsorption phenomena on attractive substrates, systematics 3−13636
- multilayer physisorption mean-field theory, desorption kinetics 3−13630
- nonequilibrium desorption of atoms and molecules from surfaces 3−2966
- photographic emulsion constants, F-containing surface-active substances effect *(Russian)* 3−20944
- physisorption, Kramers's eqn., friction coeff. derivation 3−33570
- propanol-2-water mixtures, influence of diffusion on selectivity of desorption in a wetted wall column 3−8342
- rare earth alloy film, $RNi_{4.5}Mn_{0.5}$ (R=misch metal) 3−28456
- relaxation processes at fluid interfaces 3−51893
- Ru (001), clean and O-dosed, adsorption of water, desorption, AES and LEED studies 3−38221
- semiconductor surface, laser-stimulated adspecies interaction 3−47742
- semiconductors and oxides, laser induced desorption, surface damage and annealing 3−57229
- solid surfaces, of ats. and mols., classical stochastic diffusion theory 3−28216
- statistical mechanics of adsorption, conf., Trieste, Italy (July 1982) 3−49083
- steel, adsorption and desorption of zinc di-isopropyldithiophosphate 3−13619
- steel, stainless, implanted D retention and release, dynamic meas. 3−21505
- steel, stainless, type 316, H ion impact desorption of adsorbed D, SIMS obs. 3−21516
- stimulated by photons and electrons, struct. investig. appls. 3−42912
- stimulated desorption from surfaces, Auger processes 3−57228
- surfaces, kinetics of elementary processes, review 3−38996
- temperature-programmed thermal desorption spectra, quantitative information 3−57216
- tetraalkylammonium haldies, laser desorption, time resolved mass spectra 3−38191
- thermal and flash desorption of atoms and mols. from surface, classical and quantum mech. models 3−47216
- thermal desorption from one-dimensional harmonic chain, entropy effects 3−57225
- thermal insulators, low temp., outgassing props. 3−5800
- time laws for desorption at const. temp., press. curves approx. during evacuation *(German)* 3−38230
- transition metal alloys, hydride formation and props., review 3−2960
- AG (110), adsorption on clean and O covered surface, reaction, EELS study 3−38975
- Ag (111), of NaCl, electron irrad. induced, Auger and photoelec. studies 3−51918
- Ag halides, photon stimulated desorption, three-step model 3−57230
- Ag island film, adsorbed pyridine, resonantly excited desorpt. by IR laser absorpt., SERS detection 3−8329
- Al, etching and product detection in plasma beam under ultrahigh vacuum 3−4157
- Al_2O_3-B_4C composite pellets, moisture adsorption, microstruct. 3−47221
- Bi (0001), interaction with Cl_2, incipient $BiCl_3$ form. and decomp. 3−18563
- C, implanted D retention and release, dynamic meas. 3−21505
- $CH_3{}^+$, electron stimulated desorption from condensed branched alkanes 3−2971
- CO, α phase, electron stimulated desorption from W (110) 3−42916
- $CaHPO_4.2H_2O$, powdery, changes in surface props. during thermal treatment *(Japanese)* 3−18536
- Cd electron stimulated desorption of excited mol. ions, dissoc., spectra 3−43680
- $CeNi_{5-x}Cu_x$, H storage and desorption, hydride heat of form. 3−24641
- Cr, electron-induced desorption of O^+ ions 3−23185
- α-CrO_3 catalysts, heterogeneity of labile O, desorption study *(French)* 3−33558
- Cr_2O_3, chemisorpt. of NH_3 (amines)(pyridines), thermal desorpt. and IR absorpt. obs. 3−8320
- Cu (111), O-covered, adsorption and oxidation of HCN, AES, EELS, and thermal desorption study 3−23172
- D^+, electron stimulated desorption from condensed branched alkanes 3−2971
- Fe (110), laser induced thermal desorption of CO 3−13642
- Fe, desorbing H, acoustic emission 3−22980
- FeO, clean and K-promoted, CO adsorption, UPS, AES and thermal desorption study 3−2976
- GaAs MBE substrates, oxide removal mechanisms, XPS study 3−39260
- GaAs surface, adsorbed $Fe(CO)_5$, UV photolysis at 77K 3−44068
- GaP, nonlinear photoinduced desorption of P 3−38204
- $GdFe_2H_x$, prep. and decomp., Debye-Scherrer X-ray study 3−2807
- Ge (100), adsorption of O, thermal desorption, work function, AES and EELS studies 3−38224
- Ge (100), adsorption of O on Na, K, Cs-covered surface, AES, EELS, thermal desorption and work function meas. 3−38225
- Ge oxide layer, CO electron stimulated desorption 3−8322
- $H_2{}^+$, electron stimulated desorption from condensed branched alkanes 3−2971
- HTO, desorption rate of adsorbed molecules from sieve 3−47215
- He desorption kinetics, continuum model 3−33568
- He, desorption kinetics, macroscopic continuum model 3−51887
- He liberation from irradiated ceramic materials, control purposes 3−28002
- ^{4}He film, adsorbing, relax. time after flash desorption 3−57171
- HfV_2H_x, thermal desorption spectra of H 3−42922
- Ir (110), desorption and oxidation of CO, lattice-gas model 3−38211
- Ir, adsorbed graphite monolayer, AES study 3−2984
- $LaNi_5$, α-β two-phase region, H_2 absorpt./desorpt. isotherms, hysteresis 3−48088
- $LaNi_5$ film, H_2 absorption effects on elec. cond. 3−28456
- $LaNi_5$, phase separation, particle size distrib. of Ni, magnetisation meas., H storage appl. 3−14593
- LiF, (100) surfaces, desorption fluxes, molecular beam impingement 3−42548
- LiF, Li_2F_2, Li_3F_3, condensation and evaporation kinetics using mol. beam methods 3−42549
- LiF(001) with adsorbed He, resonant energy transfer between and adsorbed atom and surface Rayleigh phonons 3−13632

desorption continued
- Mg-Sc dilute alloy, H_2 absorpt. and electronic struct. 3−38195
- Mg-Y dilute alloy, H_2 absorpt. and electronic struct. 3−38195
- MgH_2 formation and decomposition by H_2 absorpt./desorpt. 3−48087
- Mo, electron-induced desorption of O^+ ions 3−23185
- Mo-H(N), solid solutions, desorption meas. of diffusion coeffs. *(Russian)* 3−38129
- NO, from Ru(001), rot. temp., statistical interpretation 3−38192
- Na_xWO_3, photon stimulated desorption of O^+, bond site selectivity demonstrated 3−13627
- Ni (100), adsorption of Xe, LEED, UPS, thermal desorption, and work function meas. 3−2967
- Ni (111), of CO, photon stimulated 3−57231
- Ni, desorbing H, acoustic emission 3−22980
- Ni, permeation of H, oscill. method *(Japanese)* 3−57136
- Ni, polycryst., interaction with H_2, surface and bulk process parameters 3−33578
- Ni surface, oxidation of C, surface morphology effects, CO thermal desorption study 3−33559
- PbI_2 films, radiation induced dissociation, desorption and aggregation 3−57233
- Pd (111), adsorption and coadsorption of H_2 and CO 3−38209
- Pd (111), stepped, adsorption of NO, desorption and reaction kinetics, LEED, TDMS and mol. beam meas. 3−38223
- Pd, solubility and sorption of T 3−2815
- Pd, surface recomb. coeff. of H, implications for H recycle in Tokamaks 3−21506
- PdH_x foil, electronic struct. and surface kinetics 3−28402
- Pt (110), adsorbate-induced phase transitions 3−2970
- Pt (111), adsorption of CO, LEED, thermal desorption and EELS studies 3−38220
- Pt (111), adsorption of DMSO, UPS, XPS, EELS, and IR spectra study 3−42928
- Pt (111), adsorption of SO_2 an interaction of coadsorbed O and S 3−23181
- Pt (111), coadsorption of K and CO, thermal desorption, EELS and UPS study 3−8335
- Pt (111), H_2O+O reaction, SIMS and thermal desorption study 3−24531
- Pt (111), heat of D_2 adsorption and absolute coverage, nuclear microanal. study 3−2978
- Pt (111), of CO_2, ang. distrib. at low temps. 3−38203
- Pt (321) kinked surface, adsorption O_2 and O, thermal desorption, EELS, and AES study 3−42929
- Pt, catalytic oxidation of CO, transient study 3−4318
- Pt, chemisorption and growth of Ag and Au monolayers AES, desorption, and LEED study 3−8334
- Pt desorbing H, acoustic emission 3−22980
- Pt film with adsorbed Ag, submonolayer adsorbed gas distrib. 3−33575
- Re, adsorption of Ag, field emission study 3−43715
- Re, of Ag, field emission study 3−43715
- Rh, coadsorption of CO, H_2, and NO 3−8332
- Rh-TiO_2, reversible H adsorption, TPD-NMR study 3−8333
- Ru (0001), of CO, photon stimulated 3−57231
- Ru (001), adsorbed CO, intact emission in SIMS 3−14419
- Ru (001), chemisorbed CO, chemisorbed and physisorbed N_2O, neutrals desorbed by electron impact 3−57213
- Ru (001), coadsorption of NO and O, temperature programmed desorpt. and IR study 3−57222
- Si (100), reaction with N atoms, thermal desorption, AES and EELS studies 3−38219
- Si (111), adsorbed H, thermal desorption spectra, diffusion effects, theory 3−57227
- Si (111), adsorption of H, surface struct. and cond. studies 3−51938
- Si, etching and product detection in plasma beam under ultrahigh vacuum 3−4157
- Si surface, adsorption of F, removal by ion bombard., SIMS study 3−38990
- Si, surface, laser-stimulated adspecies interaction 3−47742
- Si:O (100) surface, O saturated, CO_2 photodesorption 3−51923
- $SiCl_2$, desorption energy from Si (111) surface 3−38171
- SiO_2-methanol adsorption complexes on aerosil surfaces, struct. and field desorpt. 3−48091
- Si(111), nitridation by N atoms, LEED, AES, EELS and thermal desorption studies 3−38218
- Sm films on W substrates, thermodesorption of Cs, lifetime depend. on film thickness 3−42931
- Ti film, low energy inert-gas ions trapping 3−8338
- Ti oxide coated, sputtering yields, laser fluoresc. and AES obs., oxidised surface influence 3−26443
- $Ti_{1+x}Cr_{2-y}Mn_y$, hydrogen storage props. 3−48181
- TiD_x thin film, thermal decomposition 3−47245
- TiO_2 film, low energy inert-gas ions trapping 3−8338
- $TmCo_3H_x$, press.-comp. isotherms, Debye-Scherrer X-ray study 3−2808
- V_6O_{13}(001) surface, K segregation, low energy in ion scatt. study 3−8927
- W (100), adsorbed α-CO, lowest excited states, electron stimulated desorption 3−38454
- W (110), of S, AES, LEED, work function, and thermal desorption meas. 3−23180
- W (111), of H_2, dynamic measurement of work function with the field emission microscope 3−49508
- W, electron-induced desorption of O^+ ions 3−23185
- W, oxidised, Cs atom flux by 3−2982
- W, oxidised, thermal desorption of Ag 3−38208
- W, surface, H covered, electron stimulated desorption of H^- and H^+ 3−57224
- W(110), adsorption of Se, AES, LEED, work function and thermal desorption meas. 3−38216
- YFe_2H_x, prep. and decomp., Debye-Scherrer X-ray study 3−2807
- ZnO, binding and decomp. of organic dye mols. 3−23184
- ZnO nonpolar, stepped, and polar surfaces, interaction with CO, CO_2, and O_2 3−18561
- Zr-Al alloy getter system for Tokamak, diffusivities of H and D 3−17048
- $ZrMn_2Fe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3−48081
- $ZrMn_2Mn_yFe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3−48082
- $Zr_{0.7}Ti_{0.3}Mn_2Fe_{0.8}$, hydrogenation, H_2 storage appl. 3−24642
- $Zr_{1-x}Ti_xMnFe$ alloys, hydrogenation characts., H_2 storage appl. 3−24529
- ZrV_2H_x, thermal desorption spectra of H 3−42922

detection (demodulation) *see demodulation*

detector circuits
- *see also demodulation; demodulators*
- optical signal receiver, antinoise correction using realizable RC circuit 3-30930
- radiometer, optimizing raster optoelectronic systems 3-30929

detectors
- *see also electric sensing devices; hydrophones; infrared detectors; microwave detectors; nonelectric sensing devices; particle detectors; photodetectors; ultraviolet detectors*
- acceleration, vibration and shock transducers *(French)* 3-16349
- gas sensors, review of work and perspectives *(French)* 3-45132
- intensity interferometers, multidetector 3-45194
- medical instrumentation, phys. and chem. sensors 3-48437
- nonideal, statistical props. of detected signals 3-45205
- physico-chemical sensors, conf., Grenoble, France (1981) 3-44896
- radiating source range, estimation using linear array of passive sensors 3-17725
- sensors, principles and classification *(German)* 3-10831
- sequential detection of moving object in measuring instrument at random instant, rep. by random signal stream 3-35957
- spaceborne, Joule-Thomson miniature refrigerator stability and noise, obs. 3-36003

determinants
- *see also matrix algebra*
- anharmonic oscillators, Hill determinant and analytic continued fraction method appl. 3-103
- Cartan-Gram determinants for simple Lie groups 3-21022

detonation
- *see also explosions; shock waves*
- acceleration of flat plate, optimum explosive charges 3-51155
- collision of deformable bodies, high-speed interaction, numerical modelling 3-16132
- condensed explosives, detonation velocity calcs. 3-9322
- detonation reaction zones chem. rates, temp. and press. depend. determ. 3-24508
- energies and volumes of activation for condensed detonating explosives 3-24507
- fuel-air explosions, two-phase, detonation vel. meas. using fibre optic light-detector probes 3-2089
- gas mixture, shock wave interaction with wall *(Russian)* 3-42262
- gas-mixture, free gas charge realisation and crit. diameter calc. 3-53403
- heterogeneous systems with preliminary unmixed phases, detonation theory 3-51154
- imperfect detonation flow field struct. *(Ukrainian)* 3-46589
- induction generators, detonation driven, with parallel and antiparallel mag. fields 3-39499
- metal spray coating, fusion of particles and controlling parameters 3-53261
- pentaerythritol single cryst. explosive, γ-irrad., detonation, plane shock initiation 3-2671
- plate acceleration to hypersonic vel., explosive method 3-47045
- plate acceleration to hypersonic velocities, explosive method, air-drag instability effects 3-47046
- propane-O_2 mixture, detonation wave suppression accompanying spontaneous ignition, expt. study 3-22490
- quasi steady diverging detonation wave *(French)* 3-22488
- sonic shock-wave autonomy, detonation appls. *(French)* 3-12714
- suspension-type explosives with various textures, prep. and detonation behaviour 3-51153
- 1,3,5-trinitro-1,3,5-triazocyclohexane, mols. in lattice, vibr. excitation due to shock-induced mol. deform. 3-2699
- trinitrotoluene explosives, impact initiation, transient processes 3-53402
- underwater explosion of cylindrical charges with foliated cases, initial stage investig. 3-51152
- H-Cl mixture, detonation initiation 3-7608

detonation spraying *see powder spraying*

deuterium
- abundance in intergalactic clouds towards quasars 3-59496
- abundance variation during galactic evolution and cosmological models test 3-44813
- adsorption and desorption on metal surfaces, differences between d- and s-metals 3-9350
- Antarctic ice core D isotopes and humidity of palaeoclimate 3-10048
- ASDEX plasma boundary, H and D fluxes, time-resolved meas. 3-18120
- atom, neutral current interactions, parity violation 3-32234
- atomic concentration and vel. meas. in tokamak using harmonically generated Lyman-α 1215 Å radiation 3-12968
- chemisorbed on W, atom vibrations 3-28209
- D+Ne($3s^3P_2$,$^3P_0$), ionisation, electron spectra anal. 3-50509
- diffusion coeff. in $LiNbO_3$ meas., waveguide fabrication appl. 3-8253
- diffusion in doped and undoped MgO 3-13547
- diffusion in PdD_x, elec. resist. relax. method 3-33493
- diffusion in Zr-Al alloy getter system for Tokamak 3-17048
- dissolved in amorphous Zr-Ni, local environment 3-46858
- electronic stopping power for 50 to 230 keV ions in C, Al, Au, Cs foils 3-28019
- evaporation from non-vegetated surface, use of D 3-35299
- gas chromatographic separation of H isotopes, D_2-HD and H_2-HD-D_2 mixtures 3-1029
- heat of adsorption and absolute coverage on Pt (111), nuclear microanal. study 3-2978
- implanted in stainless steel, D movement obs. under simulated fusion reactor conditions 3-17049
- ion bombardment of graphite, room temp. to 4000K, erosion yield 3-26449
- ion irradiated Cu, depth distrib. of bubbles and fracture 3-21511
- isotope separation using Pd alloy membranes 3-55629
- Jupiter, cosmological implications of He and D abundances 3-54554
- liquid, eqn. of state from shock-wave expts. at 760 kbar 3-33380
- molecular supersonic beams rot. relax. in free jet expansion, high resolution PES 3-11950
- molecule, high orbital angular momentum states, ab initio calcs. 3-26629
- molecules, dissolved in Ar, rot. line profile of induced spectra, density effects 3-55931
- molecules, stimulated Raman gain detect. using FM spectroscopy 3-40701
- peat bog core D/H and O isotope ratios indicating palaeoclimate 3-29986
- permeation through fusion reactor first wall 3-55634

deuterium continued
- plasma, compressed by cylindrical layered explosion-driven system, anal. 3-51323
- plasma tandem mirror expts., using Axicell MFTF-B superconducting magnet system 3-37691
- primordial abundance, hot-big-bang model, neutrino effects 3-16049
- primordial nucleosynthesis, ^{4}He and D yields rel. to neutrino number and baryon density of realistic universe 3-59516
- rainwater of Israel, ^{18}O and H isotope composition 3-48619
- reflection from Na target bombarded by D ions and D^0, energy distribs. and charge-state fractions 3-26453
- Saturn, cosmological implications of He and D abundances 3-54554
- solid, cryostat for production and ejection of filaments 3-316
- solid, NMR spin-lattice relax. in quadrupolar glass state 3-57812
- solid, Raman study of vibron press. depend. 3-13367
- solid, specific heat in mol. rotational glass phase region 3-8216
- solubility in Li-Pb alloys 3-39094
- spin polarised, adsorbed on liq. He, dynamical stability 3-38163
- spin polarised quantum gas, transport props. 3-28191
- spin-polarised, review 3-13588
- spin-polarised, stabilisation 3-13589
- sputtering yield data for light ion bombarded metals for fusion reactors 3-21515
- sputtering yields of Ti due to light ion bombardment, fusion reactor divertor plates 3-26442
- superpermeability of Nb membrane to $D_2(D_2^+)$, expt. study 3-14888
- surface diffusion on W(110), tunnelling processes 3-38190
- surface processes under H isotope bombardment, SIMS obs., Tokamak relevance 3-17039
- surface tension of H_2 isotopes, and quantum mechanical law of corresponding states *(Russian)* 3-2929
- track-sensitive target in Lyudmila bubble chamber, expanding device 3-11609
- trapped in C, ion-induced release, rel. to plasma-wall interactions 3-17043
- trapped states of implanted D in graphite, chem. sputtering and thermal desorption 3-26448
- trapping, retention and release of implanted D in stainless steel and C 3-21505
- trapping and re-emission during ion bombardment of low-Z wall coatings 3-17040
- trapping and re-emission from type 304LN stainless steel, fusion reactor wall relevance 3-17044
- trapping and re-emission in C, radiation damage effect 3-17042
- trapping and re-emission of implanted D^+ from back surface of stainless steel membrane 3-17047
- trapping and surface permeation of He implanted stainless steel 3-17038
- trapping at Cu surfaces via translational-rotational energy conversion EELS meas. 3-38197
- trapping in He damaged stainless steel, D retention and detrapping energy 3-17050
- vibr.-rot. spectral line shape props. 3-21770
- D^+, beam-foil level excitations, molecular effects study 3-21880
- D_2^+, beam-foil level excitations, molecular effects study 3-21880
- D_3^+, beam-foil level excitations, molecular effects study 3-21880
- D^-, ion beam prod. by negative surface ionisation 3-20952
- D^- ion source for energetic neutral beam prod. 3-55742
- D^- ion source using Si semiconductor, neutral beam injection appl. 3-41383
- D^+, electron stimulated desorption from condensed branched alkanes 3-2971
- D/H ratio in atmosphere of Titan, determ. from methane-d_1 abundance 3-59257
- D/H ratio in Jupiter and Saturn atm. 3-35510
- D/H ratio in Jupiter troposphere, determ. from high-resolution 1100 to 1200 cm^{-1} spectra 3-10253
- D-T fusion plasma, neutron interaction nucl. fuel balance 3-31822
- D-T gas discharge in plasma focus device, neutron yield scaling laws, report 3-7806
- D-T ignition, Tokamak-reactor with divertor 3-32923
- D-T target plasma, anal. of target implosion irradiated by proton beam, report 3-46738
- $D+BrH \rightarrow DBr+H$, 3-dimens. rate coeffs., quantum sudden and var. transition state calcs. 3-44042
- D+Cs, electron loss and capture cross section meas. 3-6779
- $D+F^-$, associative detachment reactions, product vibr. state distrib. 3-44051
- D+H, excitation transfer process, fluoresc., numerical simulation studies 3-50344
- $D+H_2$, participation of 2D hindered internal rot. 3-4279
- $D+H_2$, reaction rate const. meas. at 297K, EPR spectra 3-4273
- $D+H_2$, rot. energy transfer, pot. energy surface, trajectory calcs. 3-41656
- $D+H^+(D^+)$, differential cross-sections, intermediate energies, isotope effect 3-26847
- D+HBr(HI), exchange reactions, integral and differential cross sections, rate coeff. and rot. distribs. 3-4270
- D+Ti targets, monoenergetic neutron sources, flux and energy spectra determ. using (d,p) method 3-11574
- D^-+Ar, detachment collisions, electrostatic vs. dynamical coupling 3-56033
- $D^-+N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3-46059
- $D^++H_2 \rightleftharpoons H^++HD$, rate coeffs. and enthalpy change, appl. to interstellar matter 3-25304
- $D^++H(D)$, differential cross-sections, intermediate energies, isotope effect 3-26847
- $D^++MuH(MuD)$, elastic scatt. cross-sections obs. 3-32163
- D_2 continuous spectrum LD2-D capillary-arc spectral lamp, 170-400 nm wavelength region 3-27181
- D_2, electron impact dissoc., excited state emission cross section 3-36865
- D_2, solid, physical props., theory, book 3-54596
- n-D_2, solid acoustic velocity angular dependence, Brillouin scatt. study using diamond anvil cell 3-38838
- D_2^+ ($X^2\Sigma_g^+$) vibr.-rot. states, threshold electron photoionis. obs. 3-50461
- D_2/H_2 separation, thermal diffusion column design and performance 3-55633
- D_2-$^3He^{2+}$, Tokamak plasma, numerical simulation of ion-cyclotron heating 3-22666
- D_2-F_2-CO_2 photoinitiated chemical laser, high-efficiency 3-1618

deuterium continued
D_2-H_2 plasma in TFR Tokamak, ICRF heating, fast and slow modes obs. 3—37668
D_2-O_2, thermal electron attachment mechanism, isotope effects 3—41693
$D_2+{}^4He$, vibr. relax., rate consts., semiclassical sudden approx. 3—56043
D_2+Ar, D_2 vibr. population relax. 3—1460
D_2+Cs, reaction rate meas. method 3—48066
$D_2+F \rightarrow DF+D$, state-resolved ang. distrib., reactive IOS method calcs. 3—39356
$D_2+Mg({}^3P_J)$ quenching, temp. depend., endoergic chem. reaction as rate limiting 3—14853
D_2+OH, vibr. energy transfer, EPR study 3—21863
$D_2^+ + C \rightarrow CD^+ + D$, reaction dynamics, 0.002-14 eV 3—58406
$D_2^+ + F({}^2P) \rightarrow FD^+ + D$, reaction dynamics, 0.002-30 eV 3—58407
DT fusion in hollow shells, ignition, press. ionis. and electron cond. effects 3—31826
D*, prod. by electron impact from D_2O, mechanism, translational energy distrib. 3—56093
Fe:He, D, ion implanted, D surface permeation and defect trapping obs. 3—33500
HD and H_2-D_2 mixture, solid, electron and ion bombarded, secondary electron emission 3—58009
KDP-DKDP, mixed cryst., electro-optical props., depend. on Curie temp. 3—28835
$MuD+H^+(D^+)$, elastic scatt. cross-sections obs. 3—32163
Si+D,H, amorphous, NMR study 3—28728
Ti-D_2 system, high temp. thermodynamics 3—42809
α-TiO_x-D_2 system, high temp. thermodynamics 3—42809

deuterium compounds
see also heavy water
acetylene-$D^{35}Cl$, D nucl. quadrupole coupling 3—21778
ethylene-$D^{35}Cl$, D nucl. quadrupole coupling 3—21778
DBr, dipole moment, laser Stark and Fourier transform spectroscopy 3—26750
$DBr+H \rightarrow D+HBr$, 3-dimens. rate coeffs., quantum sudden and var. transition state calcs. 3—44042
DCN, electron impact dissoc., $CN(B^2\Sigma^+$-$X^2\Sigma^+)$ polarisation emission 3—26881
DCl, autoionisation, vibr. excitation, UPS study 3—36816
DCl, thermal gasdynamic laser using rot. transitions, energy transfer from H_2 3—27021
DCl, vibronic transition ionisation energies, photoelectron spectroscopy study 3—41621
DCl-HCl, HCl stretching vibr., intermolecular potentials, IR spectra calcs. 3—57039
DF CW chemical lasers, choking anal. 3—12132
DF CW high energy laser diagnostics, review 3—41898
DF, chemical laser, flowfield diagnostic expts. 3—56185
DF, $m=0 \rightarrow m=1$ transition, Pade approximants calcs. 3—32122
DF, polycryst., IR spectra 3—14267
DF, solid, with H-bonded HF impurities, IR vibr. spectra 3—23937
DF, thermal gasdynamic laser using rot. transitions, energy transfer from H_2 3—27021
DF-CO_2 chemical laser, shortening of emitted pulses 3—7041
D_xMoO_3, attachment and motion of D, ${}^2D$ NMR study 3—38704
DO_2, LMR spectra tuned by Coriolis-induced avoidance of Zeeman level crossings 3—1394
D_2O 385 μm laser linewidth meas. to —60 dB 3—32350
D_2O ice, amorphous, struct. characts., neutron diffr. study 3—42519
D_2O in Raman and laser regimes, backward and forward far IR emission characts. 3—56175
D_2O, picosecond continuum temporal characts. as revealed by a two-dimens. anal. of streak images 3—40699
D_2O-fluoromethane far IR lasers, pulsed, optically pumped *(Chinese)* 3—41809
D_2O-VII ice, isothermal eqn. of state and lattice const., X-ray study 3—2732
D_2S, bending modes, vibr. relax. in gas mixtures 3—11951
$DuO_2AsO_4.4D_2O$, cryst. struct., powder neutron diffr. study 3—51551
HD, solid, physical props., theory, book 3—54596
HDO line positions and strengths, 2400-3300 cm^{-1} region 3—1350
HF/DF laser small signal gain meas. system 3—41854
H_2O-DF, H-bonded complex, hyperfine struct., nucl. spin and quadrupole coupling consts. 3—17302

deuteron effects
Cu, irradiated by 200 keV D^+, ring of blisters, stress distrib. 3—37967
Si:Li, diffusion of implanted Li ions, proton and deuteron bombardment effects 3—8265

deuteron interactions *see deuteron-nucleus reactions; hadron-deuteron interactions; lepton-deuteron interactions; meson-deuteron interactions; photon-deuteron interactions; proton-deuteron interactions*

deuteron-nucleus reactions
for inelastic deuteron-nucleus scattering, see 'deuteron-nucleus scattering'
see also nuclear fusion
fusion, break-even controlled, in cryst. targets, theory 3—830
stripping reactions, breakup effects, adiabatic approx. 3—49870
(d,α), A=12-27, low energy, intermediate struct., doorway state *(Chinese)* 3—55006
$(d,{}^6Li)$, alpha particle pick-up reactions 3—21292
$(d,{}^6Li)$, DWBA analysis of α-transfer reactions with microscopic formfactors 3—21268
(d,p), A=12-27, low energy, intermediate struct., doorway state *(Chinese)* 3—55006
(d,X) on NaF and Pb, 2.1 GeV/nucleon, K^+ meson prod. cross section meas. 3—774
${}^{209}Bi(d,{}^3He)$, 45 MeV, ${}^{208}Pb$ proton particle-hole states, J^π, spectra, spectroscopic factors 3—40956
${}^{209}Bi(d,{}^3He){}^{208}Pb$, M1 strength study 3—21217
${}^{12}C(d,{}^2He){}^{12}B$, 99.2 MeV, differential cross-section 3—798
${}^{12}C(d,pX)$, 8.9 GeV/c, stripping reaction, admixture parameters for deuteron six-quark state 3—31409
${}^{12}C(d,p)$, 9 MeV, cross sections and inclusive proton energy spectra 3—21320
${}^{12}C(d,p)$, core excitation effects, transitions to continuum levels, CCBA anal. 3—6238
${}^{12}C(d,pn)$, 56 MeV, p-n ang. correlations, breakup cross sections, DWBA anal. 3—26250
${}^ACa(d,p)$, A=42, 44, low-lying states study above and below Coulomb barrier 3—26249

deuteron-nucleus reactions continued
${}^{44}Ca(d,\alpha)$, 7.00-8.25 MeV, ${}^{42}K$ levels and J^π, anal. powers 3—16697
C(d,X), 4.2 GeV/N, peripheral and central collisions, cross sect. 3—49865
${}^1H(d,pn)p$, 12.5 MeV, collinear geometry investig. 3—797
${}^2H(d, n)$, quasi-free scatt. model calc. of neutron energy spectra *(Chinese)* 3—49868
${}^2H(d, pn){}^2H$, reaction kinematics for ang. correl. expts. with large area detector 3—26224
${}^2H(d,n)$, 5.5-11.5 MeV, anal. powers, angular distrib. 3—45504
${}^2H(d,n)$ and ${}^2H(d,p)$, fusion reactivity meas. for several beam and target ion distributions 3—49904
${}^2H(d,np){}^2H$, 12 MeV, N-P final state interaction 3—16774
${}^2H(d,p)$, 60 MeV, d and p energy spectra, cross section for 3-body break-up 3—16775
${}^2H(d,p){}^3H$, polarisation observables at low energies, nondynamical calcs. 3—26248
${}^2H(d,pn)$, three-body breakup, four particle model 3—21319
${}^2H(d,\pi^\circ){}^4He$, isospin forbidden, charge symmetry breaking, forward differential cross section at $\Delta(3,3)$ energy 3—16777
${}^3H(d,n)$, fast neutron fluences and emission rates, absolute standard establishment *(Japanese)* 3—17151
${}^3H(d,n)$ and ${}^3H(t,2n)$, fusion reactivity meas. for several beam and target ion distributions 3—49904
${}^3He\ (d,p)$, fusion reactivity meas. for several beam and target ion distributions 3—49904
${}^4He(d,p\alpha)$, 14 MeV, isospin forbidden d* prod., cross section 3—26228
${}^4He(\vec{d},\alpha p)$, 12, 17 MeV, cross sections, anal. powers, 3-body Faddeev anal. 3—55017
${}^AK(d,{}^3He)$, A=39, 41, 22.8 MeV, ${}^{38,40}Ar$ low-lying positive-parity level transitions, DWBA anal., spectroscopic strengths 3—36424
${}^6Li(d, X)$, quasi-free scatt., cross section and momentum distrib. calc. *(Chinese)* 3—49875
${}^6Li(d,d\alpha)$, quasi-free scatt., diffraction model appl. *(Chinese)* 3—49873
${}^7Li(d, \alpha\alpha)$, 2.0 MeV, neutron momentum distrib. from PWIA anal. 3—21214
${}^7Li(d,n)$, 0.19 MeV, ang. distribs., anomalous back angle enhancement *(Chinese)* 3—55050
${}^{24}Mg(d,p){}^{25}Mg$, resonance reaction study, width calcs., excitation functions *(Chinese)* 3—49867
${}^2N(d,n){}^3He$, polarisation observables at low energies, nondynamical calcs. 3—26248
${}^{14}N(d, p)$, differential cross sections. vector anal. power 3—41013
${}^{146}Nd(d,t)$, 16 MeV, ${}^{145}Nd$ levels, J, anal. powers, DWBA anal. 3—694
${}^{16}O(d,X)$, local internucleus pot., resonating group method 3—41040
${}^{31}P(d,\alpha)$, 3.5-6.2 MeV, ${}^{33}S$ total level width, correlating channels, channel cross correlation, statistical anal. 3—31296
${}^{31}P(d,p)$, 3.5-6.2 MeV, ${}^{33}S$ total level width, correlating channels, channel cross correlation, statistical anal. 3—31296
${}^{208}Pb(\vec{d},p)$, 7-8 MeV, anal. powers, ${}^2H$ asymptotic D- to S-state ratio 3—21303
${}^{80}Se(d, p)$, Q-values, masses 3—31412
Se(d, xn), 22 MeV, ${}^{76,77,82}Br$ yield for high isotopic purity 3—11328
${}^{30}Si(d, p)$, 1.9-2.5 MeV, diff. cross sections, anal. power, compound resonances, mechanism 3—41012
${}^{147}Sm(\vec{d},t)$, 6.5 MeV, sub-Coulomb reactions, determ. of triton D-state parameter D_2 3—6240
${}^{118}Sn(d,pn)$, 56 MeV, p-n ang. correlations, breakup cross sections, DWBA anal. 3—26250
Ta(d,X), 4.2 GeV/N, peripheral and central collisions, cross sect. 3—49865
${}^{126}Te(d,t){}^{125}Te$, transfer reactions cross sections for low-lying weakly excited high-spin states 3—45439
${}^{51}V(d,pn)$, 56 MeV, p-n ang. correlations, breakup cross sections, DWBA anal. 3—26250
${}^{91}Zr(\vec{d},t)$, 5 MeV, sub-Coulomb reactions, determ. of triton D-state parameter D_2 3—6240

deuteron-nucleus scattering
$(\vec{d},d)$, 20 MeV, on A=16-232, phase relations and static mass quadrupole moments 3—750
(d,d), A=12-27, low energy, intermediate struct., doorway state *(Chinese)* 3—55006
${}^1H(d,d)$, 0.3-2.3 GeV, scatt. at backward angles, tensor analysing power 3—31417
${}^1H(d,d)$, pol. d and ${}^1H$, 10 MeV, spin correlation parameters 3—31231
${}^4He(\vec{d},d)$, 3-43 MeV, phase shifts anal., ONEZERO code, ${}^6Li$ resonances determ. 3—49869
${}^4He(d,d)$, blocking influence on core-exchange effects 3—49876
${}^4He(d,d)$, Chandler-Gibson equations, including identical particle symmetries 3—16786
${}^4He(d,d)$, specific distortion effects and ${}^6Li$ charge form factor 3—6243
${}^4He(d,d)$ few-body reaction mech., effective 3-body problems, corrections 3—16776
${}^{208}Pb(d,d)$, 3-7 MeV, elec. polarisability meas. 3—6165
${}^{168}Yb(d,d')$, 3^+ band, hexadecapole vibrations, proton struct. in $A \approx 170$ 3—6133

deuteron photodisintegration
parity violation, asymmetry calcs. 3—36168
$\gamma d \rightarrow pn$, T=0 dibaryon resonance prod., review 3—16662
${}^2H(\tilde{\gamma},n)$, 19.8 MeV, using LADON photon beam 3—45748
${}^2H(\gamma,n){}^1H$, polarisation meas. 3—763
${}^2H(\gamma,n)p$, 10-120 MeV, data survey, comparison with conventional theories 3—16764
${}^2H(\tilde{\gamma},n)p$, differential cross section and polarisation in Legendre function expansion 3—26231
${}^2H(\gamma,n)p$, pol. γ-rays, exchange corrections effect 3—45509
${}^2H(\gamma,p)$, cross section calc. from deuteron wavefunct. with S-wave component 3—40962
${}^2H(\gamma,p)$, cross sections, charge density for two-nucleon potentials, pion exchange contributions 3—6215
${}^2H(\gamma,pn)$, gauge invariant amplitudes *(Russian)* 3—26233
${}^2H(\gamma_V,p)n$, cross section from PWBA virtual photon spectrum in electron scatt. 3—55018

deuteron polarisation
dynamic 3—26616
low-energy deuterons, polarisation meas. method 3—1178
pd, 10 MeV, spin correlation parameter for pol. d and p 3—31231

deuteron scattering *see deuteron-nucleus scattering; hadron-deuteron scattering; lepton-deuteron scattering; meson-deuteron scattering; photon-deuteron scattering; proton-deuteron scattering*
deuterons
  see also cosmic ray deuterons
  admixture parameters for six quark state, from $^{12}C(d,pX)$ at 8.9 GeV/c 3–31409
  asymptotic D- to S-state ratio for deuteron, precision of ang. extrapolation from dp scatt. 3–31230
  dinucleon states of three colour-triplet scalar diquarks 3–11151
  exponential pot. well depth evaluation from uncertainty principle *(Russian)* 3–16710
  light-ion beam prod. with low impedance generators 3–6482
  magnetic form factor, anal. parametrisation 3–49680
  nuclear matter disassembly, d prod. Pauli quenching, expanding fireballs 3–6187
  phoswich counter, detection of charged particles, p, d, t, α 3–55756
  pulsed beam collected from grid-fixed plasma boundary, density distrib. 3–11573
  structure function meas., comparison of neutron and proton structure from μ^+d 3–54912
  vector and tensor polarised deuterons, polarimeter for polarisation transfer expts. 3–26615
  $pp \rightarrow \pi^+ d$, partial wave analysis, diproton investigation, $E \leq 810$ MeV 3–40920
  $^4He(\vec{d},p\alpha)$, 14 MeV, isospin forbidden d* prod., cross section 3–26228
developers (photographic) *see photographic materials*
development, photographic *see photographic process*
development management *see research and development management*
DFB lasers *see distributed feedback lasers*
diagnosis, patient *see patient diagnosis*
diagnostics, particle beam *see particle beam diagnostics*
diagnostics, plasma *see plasma diagnostics*
diagrams
  see also Feynman diagrams; nomograms; Nyquist diagrams; phase diagrams
  data processing technique, effects on meas. accuracy in certifying methods of executing meas. 3–40540
  polar, graphical interpretation of meas. results from strain gauge rosette *(Bulgarian)* 3–7525
dialogue programming *see interactive programming*
dialogue systems *see interactive systems*
diamagnetic properties of substances
  see also de Haas-van Alphen effect; diamagnetism
  blood cells in plasma, high gradient mag. separation 3–34798
  colloids, sedimentation in high mag. field 3–34650
  DPPH, free radical, solid soln. in paraffin wax, internal mag. viscosity induced by paramag. centres 3–28501
  flocculation, magnetic field induced, particle behaviour 3–34649
  graphite, diamagnetic anisotropy and electronic energy band parameters, 4 to 300K 3–33858
  hydrocarbons, unsaturated, mag. susceptibility, extended London theory 3–26633
  III-V semiconductors, diamagnetic susceptibility, Green's function calc. 3–28502
  magnetic susceptibility, separation into diamagnetic and paramagnetic components 3–8645
  metals, electron-dislocation interaction effect on de Haas-van Alphen effect 3–3045
  nematic liquid crysts., thermodynamic stability, dielect., diamag. and elastic props. 3–37774
  particles, single-wire buildup at low Reynolds numbers 3–33940
  pentachlorophenol powder, diamagnetic internal viscosity meas. 3–8707
  polymers, mag. susceptibility rel. to struct., diamagnetic theory *(German)* 3–57516
  promazine bromide salts, electronic props., EPR, mag. susceptibility and IR spectra studies 3–47551
  promazine perchlorate salts, electronic props., EPR, mag. susceptibility and IR spectra studies 3–47551
  semiconductor film, quantised, diamag. susceptibility of one-electron deep impurity centres 3–23317
  semiconductors, tetrahedrally coordinated, diamagnetic susceptibility, Green's function calc. 3–28502
  superconducting networks, critical field and diamag. props. 3–52300
  superconductor-insulator mixture, random, diamag. susceptibility and upper crit. field near percolation threshold 3–33829
  TCNQ salts, TCNQ-promazine, electronic props., EPR, mag. susceptibility and IR spectra studies 3–47551
  transition metal complexes, bis (ketone thiosemicarbazonato) chelates, mag. and spectrosc. obs. 3–50396
  $[W_4O_8Cl_8(H_2O)_4]^{2-}$, mixed valence system, energy level calcs., mag. susceptibility and optical spectra studies 3–45865
  $CaCO_3:Mn^{2+}$, internal mag. viscosity induced by paramag. centres 3–28501
  CuCl, anomalous diamagnetism of charge transfer excitons 3–13742
  $Cu_3SbS_3(Se_3)$, magnetic susceptibility 3–57511
  Fe complexes, xanthato-Fe (III), mag. and spectroscopic props. 3–52795
  KCl, internal mag. viscosity induced by paramag. centres 3–28501
  $La(FOD)_3$, diamag. relax. reagent leading to nucl. Overhauser enhancement rate increase 3–50442
  $La_{1-x}Sr_xCo_{1-y}Ti_yO_3$, electron transport and mag. props. 3–47348
  $LiNbO_3:Fe$, growth by Czochralski method, phys. props. *(Korean)* 3–3943
  O_2, $^3\Sigma$ state, diamag. susceptibility anisotropy from temp. depend. of Cotton-Morton effect 3–56104
  $Pb_{1-y}Sn_yTe$-In, tunnel self-localisation at negative centres, anomalous elec. and mag. props. 3–3121
  $Pd_{1-x}Ag_x$, mag. susceptibility rel. to ^{109}Ag Knight shift 3–52360
  Si, diamagnetic susceptibility of donors 3–38582
  $(TMTSF)_2ClO_4$, deuterated cryst., supercond., large London penetration depth 3–43322
  $Tl_x(AgTlSe_2)_{1-x}$ molten alloys, elec. and mag. props. 3–52206
diamagnetic resonance *see cyclotron resonance*
diamagnetism
  see also cyclotron resonance; de Haas-van Alphen effect; diamagnetic properties of substances
  anisotropic layer cryst. thin films, diamagnetism of cond. electrons *(Russian)* 3–38581
  atomic diamagnetic susceptibilities from statistical Thomas-Fermi-Amaldi theory 3–55839

diamagnetism continued
  hydrocarbons, unsaturated, extended London theory of diamagnetism 3–26632
  magnetic flux tube, diamagnetic force theory 3–35419
  superconducting film, effect of branched loops 3–13950
  superconductor with dielectric gap at Fermi surface, diamagnetic effects 3–28474
  GaAs, oscillatory magnetoabsorption and diamagnetic excitons 3–38806
  H excited states, Rydberg diamagnetism 3–26655
  H quasi-Landau resonances and at. diamagnetism 3–26617

diameter measurement
  fibre size distribution determ. using laser based optical instrum. 3–45117
  fibres, transparent, size measurement using light scatt., approx. calc. 3–16335
  fine raindrops size meas. using oil method *(Japanese)* 3–48718
  glass fibre, by interference method 3–265
  graduated circle, error determ. by digital method 3–40555
  hole size measuring instrument for small diameter openings 3–40557
  optical fibre, graded index, core diameter meas. 3–46350
  optical fibre, graded-index, core diameter meas., interlaboratory comparison 3–1770
  optical fibre preform rods and starting tubes, outside diameter and wall thickness meas. 3–1815
  submicron particles charge-to-radius meas. apparatus development 3–26614
  wires, super-thin, laser diffr. wave method *(Chinese)* 3–10795

diamond
  abrasive properties analysis, cluster anal. appl. 3–24371
  adsorbed He, ^4He atom beam probe study 3–51936
  anvil pressure cell for high-temp. use 3–20865
  band struct, initial level population, and channelling radiation 3–47012
  CB-type, polycrystalline, physicomech. and physicochem. props. 3–14599
  colouration by electron irrad., induced absorption bands 3–33302
  defect study by electron microscopy, Scherzer resolution limit 3–7884
  defects in semiconductors, conf., Amsterdam, Netherlands (Aug.-Sept. 1982) 3–44894
  deposition of Cr coatings from gaseous phase 3–24382
  diamond: N(B)(C), ion implanted, mechanical props. enhancement 3–4154
  diamond:N_2, EPR study 3–57748
  diamond:Ni, N, cross relax. freezing, spin lattice relax. study 3–18981
  diamond:Ni, synthetic, impurity absorpt. spectra meas. 3–23979
  diamond:Si, cathodoluminescence, annealing temp. depend. 3–8891
  dislocation struct. in low-angle grain boundaries 3–51611
  electrical props. in presence of donor impurities 3–18706
  electron irradiated, A-2 and A-3 ESR centres form., self di-interstitial complexes 3–43436
  electrostriction, stabilised Michelson interferometer study 3–28784
  electrostrictive strains interferometric meas. 3–34036
  EM phonon conversion on relativistic positrons *(Russian)* 3–14379
  EPR of N_2 centre in Cape yellow type Ia diamond 3–14113
  filled WC-Co composites, cracking resist. determ. 3–39321
  formation in Fe-C system under high temp. and press., mag. study 3–18390
  friction of diamond on diamond in air 3–4146
  graphite-to-diamond struct. transform., microscopic model *(Chinese)* 3–28089
  hole relax. time and transport coeffs., intervalence band interaction effects 3–43197
  impurities, exchange-correlation and local field effects, RPA calc. 3–57298
  interstitial host atoms near divacancies, diffusion and annealing 3–37905
  ion implanted, X-ray diffr. contrast, wavelength depend. 3–37736
  ion-implanted, point defect production and interaction 3–42635
  LEED modulated electron energy loss spectra 3–3883
  local density of states at defects calc. 3–47293
  muonium impurity screening 3–38348
  muonium location and hyperfine interaction, HF SCF cluster calc. 3–57325
  natural, impurity distrib., activation anal. and neutron autoradiography 3–18329
  natural and synthetic, abrasion resist. during conventional polishing 3–19427
  natural polycrystal, microstruct. of carbonado and ballas type UHVEM study 3–33260
  neutron irradiated, cryst. lattice expansion and ESR spectrum 3–14133
  P2 centre, ^{13}C hyperfine interaction, ESR study 3–3528
  partial dislocations, electron states, first principles calc. 3–3110
  particles, growth from ethane-H_2 gas 3–19284
  positron channelling study 3–37978
  proton and α-particle stopping power calcs. 3–37976
  random walk and vacancy-imperfection interactions as discrete Markov process 3–13261
  relativistic electron radiation spectra, absolute cross section 3–3854
  semiconducting, distorted defects, optical meas. 3–47678
  semiconducting, photoconductive response, time resolved donor-acceptor and acceptor-valence band recombination 3–43228
  semiconducting, subnanosecond time-resolved photoconductive response 3–47379
  structural anal. from Bragg reflex phases *(German)* 3–51447
  surface (111), EELS study in characteristic loss region 3–38974
  surface (111), electron states, Slater-Koster parameter study 3–38450
  surfaces (2×1) and (1×1) (111), dangling bond surface state dispersion curves 3–3283
  synthesis, formation mechanism 3–37825
  synthesis, internal growth by C^+ implantation 3–47766
  synthesis, nucleation by puckered dimer coalescence *(Chinese)* 3–28090
  synthetic, growth condition for dodecahedral form 3–33161
  synthetic, luminescence study, impurity states 3–47719
  Ni/diamond contacts, microplasma breakdown, luminescence and I-V characts. 3–18787

diaphragms
  see also valves
  bursting diaphragm as a fast-acting valve, laboratory gas gun for mechanical testing 3–42203
  circular plate with eccentric hole, deflection anal. 3–22324
  graphite-PVC composite for loudspeaker diaphragm *(Japanese)* 3–37313
  holographic and refractive optical elements, equivalence *(Russian)* 3–41785

diaphragms continued
mass spectrometer ion source, effects of dielectric film formed on exit diaphragm 3—45243
pressure transducer, piezoresistive, monolithic IC, biomedical appl. 3—4675
semiconductor pressure transmitter using the diffused piezoresistive diaphragm sensor 3—297
sunshade diaphragm coating spectral region calc. 3—27225
synthetic diaphragms and membranes for the electrolytic production of H_2 3—48194
Si diaphragm pressure sensor with high output and high accuracy 3—280
Si diaphragm pressure sensors using Kanda effect 3—281

dibaryons *see baryon resonances*

dichroism
see also magnetic circular dichroism; pleochroism
L-alanine, vibr. circular dichroism, Raman optical activity, CNDO calcs. 3—32123
aromatic mols., in stretched polyethylene, orientation and dichroism 3—26772
associated, linear and circular dichroism in soln. 3—1401
bacteriorhodopsin, protein side chain motion restriction during photocycle 3—48243
beam splitter, dichroic, for separating extreme-UV from high-powered visible and UV laser beams 3—27207
behenic acid Langmuir-Blodgett multilayers, anisotropic, IR dichroism 3—38944
p-bromoaniline cryst., IR and Raman spectra at low temps. 3—52798
cellulose triacetate solns., cholesteric props. 3—18218
charge fluxes and bond currents effect on vibr. circular dichroism 3—17318
chlorophyll, associated, linear and circular dichroism in soln. 3—1401
chlorophyll a, 740 nm absorbing form, linear dichroism 3—9555
trans-1,4-dicyanocyclohexane, conformation and vibr. spectra 3—34090
dimethyl-1,1′-bianthryl-2,2′-dicarboxylate, state mixing and CD spectra 3—32121
N,N-dimethylsulfamide and its C′C′and N-N-deuterated cpds., vibr. spectra 3—43535
diphenyl polyenes in stretched polyethylene films, linear dichroism and fluoresc. polarisation 3—57884
4,4-diphenylmethane diisocyanate elastomer films, segmental orientation during deform. *(Russian)* 3—51515
DNA in polyethylene glycol water-salt solns., liq. cryst. state obs. 3—34766
DOBAMBC, chiral smectic C liq. cryst., homeotropic cell, helical pitch determ. using F-centre laser 3—13080
docosanoic acid-tricosenoic acid, Langmuir-Blodgett multilayers, orientation, IR linear dichroism 3—38931
dye molecules, picosecond polarisation spectroscopy 3—50447
dye solns., dichroism of bleaching, mol. rotational diffusion 3—7084
dye solution (type 1052) passive laser switches, induced dichroism 3—37093
Fourier transform IR circular dichroism, double modulation approach 3—5890
gases, dichroism and birefr. spectra, spatial freq. manifestation *(French)* 3—12815
gyrotropic absorbing crystals, light diffr. by ultrasound 3—34068
1,6-hexamethylene diamine elastomer films, segmental orientation during deform. *(Russian)* 3—51515
histone 2A-2B complex, cooperative props. in various salt media 3—34764
impurity crystals without inversion centre, dichroism induced by energy term linear in wavevector 3—43517
isotropic media and liq. crysts., nonlinear optical activity and circular dichroism, phenomenological theory 3—12211
liquid crystal laser addressed light valve with dichroic dye laser absorber 3—50735
lutein, linear dichroism, basis for Haidinger's brushes 3—53662
malformin A, conformation, energy level calcs. 3—6531
measuring apparatus for birefringence and dichroism meas., in liquids and colloids 3—25912
methanol films, cryst., IR spectra, effect of growth texture 3—43655
4′-(2″-methylbutyl)biphenyl-4-carboxylic acid esther, optical props. 3—3681
(+)-(3R)-methylcyclohexanone, vibr. circular dichroism, Raman optical activity, CNDO calcs. 3—32123
molecules embedded in polymer matrices, average orientation representation using orientation triangle 3—17319
oligotetramethylene glycol elastomer films, segmental orientation during deform. *(Russian)* 3—51515
pheophytin in oriented photosystem II preps., photoreduction, linear dichroism of absorpt. changes 3—34795
trans-polyacetylene, soliton diffusion, ps photoinduced dichroism 3—23914
polymer films, dynamic IR linear dichroism under oscillatory deformation 3—57885
polypeptides, circ. dichroism, linear response theory, Bogoliubov exciton theory 3—12017
polyurethanes, vibr., inversion of IR dichroism 3—34102
polyurethaneurea elastomer films, segmental orientation during deform. *(Russian)* 3—51515
PVC-BAN blends, morphology, stress-strain, DGC, TEM, IR dichroism 3—39216
quartz, crystal, dichroism, birefringence, X-ray polarisation activity 3—3868
retinal, primary photoprocess obs. by picosec. linear dichroism spectroscopy 3—39596
satellite DNAs of Drosophila virilis, UV absorpt. and circ. dichroism, polarisability calcs. 3—29500
second harmonic generation, direct current induced by chiral mols. 3—12238
sperm deoxyribonucleoprotein, sea urchin, progressively depleted of proteins, struct., hydrodynamic and opt. props. *(Russian)* 3—48240
1,1′-spirobi[benzindans], circular dichroism demonstration of C_2 rule nongenerality 3—1400
ω-tricosenoic acid Langmuir-Blodgett multilayers, anisotropic, IR dichroism 3—38944
(+)-(1S,5R)-1,8,8-trimethylbicyclo[3.2.1] octan-3-one, chair-boat conform. equilib. investig. 3—21800
weakly oriented systems, linear dichroism 3—8801
$Bi_{12}SiO_2$:Nd, impurity-induced circular dichroism and optical activity 3—28830

dichroism continued
$CaF_2:O^{2-}$, disturbed colour centres after X-ray irrad., optical studies 3—27937
Co, ferrofluid, form birefr., dichroism meas. 3—28829
$CsNO_3$, low temp. form, circular dichroism spectrum, forbidden n-π^* transition 3—52791
Fe_3O_4, ferrofluid, form birefr., dichroism meas. 3—28829
$GeSe_2$ film, amorphous self-supporting, laser induced optical anisotropy 3—19220
KBr(I):Pb^{2+}, absorption and stress-induced dichroism in Pb^{2+} centre A bands 3—52805
KCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3—14330
K_2O-BaO-Nd_2O_3-Pr_6O_{11}-SiO_2 glasses, colour and absorpt. spectra, effect of added Mn^{3+}, Co^{2+}, Ni^{2+} 3—34130
LiF crystal with F_2^- centres passive laser switches, induced dichroism 3—37093
LiF:U^{6+} crystal, impurity electrooptical effect in 5185-Å absorpt. line region 3—23913
$LiIO_3$ cryst., UV absorpt. and circular dichroism spectra near fundamental absorpt. edge 3—52765
$NaClO_3$ cryst., UV absorpt. and circular dichroism spectra near fundamental absorpt. edge 3—52765
RbBr(I):Pb^{2+}, absorption and stress-induced dichroism in Pb^{2+} centre A bands 3—52805
RbCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3—14330
Si crystal, dichroism, birefringence, X-ray polarisation activity 3—3868
Si:O, heat treated, donor states, DLTS studies 3—43078
Si:O, O diffusivity at donor formation temp., stress-induced dichroism study 3—33498
Si:O_2, radiation enhanced diffusion at room temp. 3—47159
Zn_3P_2, optical props. anisotropy meas. using GDM-1000 monochromator 3—49468
ZnSe:Cu, nonlinear absorpt. and linear circular dichroism spectra 3—19163

dictionaries *see glossaries*

die steel *see tool steel*

dielectric breakdown *see electric breakdown*

dielectric constant *see permittivity*

dielectric depolarisation
see also dielectric polarisation
liquid crystal, nonpolar, anisotropic dielec., cavity and reaction fields 3—57853
orthorhombic lattices, dipole field sums and Lorentz factors 3—14199
photo-induced polarisation and depolarisation, electronic excited state and impurity-vacancy dipoles 3—23868
water in oil suspensions, dielectric props. studied using depolarisation thermocurrent method 3—3640
$CdBr_2$, photodepolarisation mechanism *(Russian)* 3—3639
Si, electret state decay with low dislocation density 3—19043
SiO_2 fused silica surface, thermostimulated depolarization current flow 3—14203

dielectric devices
see also capacitors; ferroelectric devices; insulators; piezoelectric devices; pyroelectric devices; space-charge limited devices
No entries

dielectric-filled waveguides *see dielectric-loaded waveguides*

dielectric function
A15 compounds, electron charge density distributions and Debye temps. 3—56863
alkali metals, liq., ion-ion effect potential at melting point 3—37769
Anderson metal-insulator transition, dielec. and optical anomalies 3—43032
Anderson metal-insulator transition, screening of random pot. 3—3066
binary mixtures, optical dielec. constants, extremal values 3—19096
charged impurity in electron gas, variational binary-mixture theory 3—33677
charged particle wake in electron gas, RPA dielec. function calc. 3—57299
composite medium, statistically correlated polarisation fields and optical props. 3—14245
diamond, muonium impurity screening 3—38348
doped systems, metal-insulator transition, dielec. theory 3—33640
electron gas, linear dielectric response, variational approach 3—23303
free-electron gas, asymptotic interaction between point defects 3—28289
free-electron metal, bulk and surface photoemission 3—52894
glassy dielectrics, TO-LO phonon splittings, dielectric function 3—2725
graphite:B, dielectric function and critical-point transitions 3—14244
insulator, plasmons, model dielec. function 3—8438
insulators, superconvergent sum rules 3—52050
Lindhard dielectric function, anal. struct. 3—23297
metal particles in dielec. host, optical props., dipole-dipole coupling effect 3—28822
metallic thin films, surface plasmons 3—3276
metals, optical properties, surface contrib. of bulk states 3—38787
metals, polyvalent, vacancy formation energy, pseudopotential calc. 3—46928
metals, superconvergent sum rules 3—52050
methylated benzenes, liquid, optical and dielec. functions, 2 to 10 eV 3—34051
narrow gap semiconductor, optical bistability, many body theory 3—12213
nematic liquid cryst. mixtures, low freq. dielec. relaxation and dual freq. addressing of field effects 3—14209
one-dimensional electron-phonon system, distorted, CDW, dielec. function and cond. in precritical region 3—23298
optical bistability due to a two-photon absorption resonance with fluctuations 3—17556
optical properties of titanium nitrides and carbides, utilisation in photothermal conversion of solar energy 3—29453
polar solids, electron-phonon interaction and dielec. function 3—51736
polaritons, nonlinear surface, bistable states 3—33647
quasi-one-dimens. solids, giant Kohn anomaly 3—42730
semiconductor, plasmons, model dielec. function 3—8438
semiconductor, self-consistent Thomas-Fermi dielec. screening 3—3096
semiconductors, light scatt. on free electrons, electron-relax. processes 3—23965
semiconductors and insulators, surface dielec. response function and surface plasmons 3—18762

dielectric function continued
spinels, AB_2X_4 (X=0,S,Se,Te), electronic struct. and dielec. props., crystallographic concepts 3—18281
static, $1/N$ expansion, validity 3—16184
trans-polyacetylene, dielec. function, electronic band struct. calc. 3—43055
two-dimensional system, effect of level broadening on polarisability 3—13755
two-dimensional system with dipole interaction, melting 3—23021
Ag granular film, plasma reson. band oscill. strengths, dielec. const. effect 3—8790
Al_2O_3 pressed powders, dielectric function, finite wavelength effects 3—23299
Au granular film, plasma reson. band oscill. strengths, dielec. const. effect 3—8790
$BaTiO_3$, soft mode spectroscopy, hyper-Raman scatt. 3—23953
$Bi_xSb_{1-x}SI$, soft mode behaviour, microwave dielec. spectra 3—43497
CdS, complex dielec. function in exciton and plasma limit 3—38330
CeO_2, IR optical props., refl. and transmission spectra 3—23947
Co-Al_2O_3 cermet film, electron beam coevaporated, dielec. function meas. 3—8895
Cu complex, Cu-phthalocyanine-iodine, ESR, dielec. function and elec. cond. 3—18980
Cu_2MnAl, optical absorpt. spectra from band struct. 3—28874
GaAs, light scatt. on free electrons, electron-relax. processes 3—23965
GaAs, point charge nonlinear-screening, spatial dielec. function 3—38329
n-GaAs surface, doped, EELS calc., multiple losses and gains 3—19237
GaP(As)(Sb), dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
GaSe thin films, guided wave polaritons, near forward Raman scatt. study 3—43040
Ge, dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
Ge, muonium impurity screening 3—38348
InP(As)(Sb), dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
$NiBr_2(Cl_2)$, fundamental refl. and electronic struct. 3—43562
Ni_2MnSn, optical absorpt. spectra from band struct. 3—28874
NiTi, electronic struct. and optical cond., KKR calc. 3—3053
PbSe-like semiconductors, second-order Auger recomb. processes 3—43201
Pd_2MnS_n, optical absorpt. spectra from band struct. 3—28874
$(SN)_x$, pure and brominated, polarised reflectivity spectra, 1-25 eV region 3—14315
ScN, energy band structs., LCAO interpolation scheme calcs. 3—3058
ScP, energy band structs., LCAO interpolation scheme calcs. 3—3058
Si, CVD grown, laser beam annealed, optical characts. 3—57879
Si, dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
Si inversion layers, g-factor and mag. susceptibility, influence of effective pot. 3—57429
Si, microscopic screening and phonon freq. 3—22997
Si, muonium impurity screening 3—38348
Si:H, amorphous films, valence electron number and H conc., calc. model 3—3041
Sn, anodic passivation, optical reflectivity study 3—9225
TiN, energy band structs., LCAO interpolation scheme calcs. 3—3058
$Ti_{1-x}V_xS_2$, far-IR studies of electronic and vibr. props. 3—57911
TlCl, optical spectra, long-range and short-range many-body corrections 3—3673
ZrN, energy band structs., LCAO interpolation scheme calcs. 3—3058

dielectric hysteresis
betaine arsenate, ferroelasticity and ferroelec. props. 3—8778
betaine phosphate, single crystal anal., antiferroelectricity 3—34043
DTGS, optical rotatory power dispersion, 444 to 632.8 nm 3—8796
nonlinear cryst., Barkhausen effect and hysteresis 3—23704
PLZT ceramic, hysteresis loops 3—28803
TGS, optical, electro-optical props., in ferroelec. and paraelectric states, high accuracy universal polarimeter meas. 3—57880
TGS, optical rotatory power dispersion, 444 to 632.8 nm 3—8796
TGS crystal, dielectric props., chloroacetic acid amide admixture influence 3—23882
TGS-L-alanine, internal bias, temp. depend. near Curie temp. 3—38781
TGSe:L-α alanine, admixture influence on dielectric props. 3—34041
$BaTiO_3$ ferroelectric films, RF sputtered on Si, photovoltaic props. and dielec. hysteresis meas. 3—33757
Fe_3O_4, ferrimag. ferroelectricity, hysteresis and piezoelec. consts. 3—57865
$(NH_4)_2ZnCl_4$, ferroelec. phase transition, permittivity meas. 3—38780
$Ni_3B_7O_{13}I$, dielec., mag., and magnetoelec. props. *(Russian)* 3—38782
$PbZrO_3$, permittivity and ferroelec. transitions, defect conc. effect 3—38779
$RbHSO_4$, spontaneous polarisation, surface layers effect 3—38751
SbSI, single crystal, elec. and optical props. *(Korean)* 3—3653

dielectric-loaded waveguides
permittivity determ. at microwave frequencies, single-moded cylindrical waveguide filled with dielec. anal. 3—54745
resonators, influence of space charge on resonance characts., investigation using optical microscopy 3—5851

dielectric loss angle *see dielectric losses*

dielectric loss-angle measurement *see dielectric loss measurement*

dielectric loss measurement
see also dielectric losses
cross-linked polyelectrolyte ion-exchange membrane, dielec. props. 3—14213
curing systems, in-situ props. meas. by microdielectrometry 3—38757
liquid, low loss in resonant cavities *(Spanish)* 3—40637
liquids, loss tangent meas. *(Spanish)* 3—40636
quartz plate, dielec. const. and loss tangent meas. using quasi-optical open resonator, 75 GHz 3—5817
UHF heating of dielec. materials, loss angle meas. at 2.45 GHz *(German)* 3—45167

dielectric losses
see also loss angle
alcohols, pure and mixtures, dielec. const. and loss meas., high freq. dispersion region 3—57849
i-alkyl halides, relax. intensity evaluation from dielect. loss data 3—19044
3-butyn-2-ol and 2-butyn-1-ol, dielec. dispersion in dil. soln. 3—47598
cholesteryl 2,2,3,3-tetrafluoropropionate, single cryst., incommensurate phase transition 3—18436
cobalt phthalocyanine, dielec. props., temp. and freq. depend. 3—28751
cyclohexane liq. between polymer coated electrodes, charge transfer phenomena 3—19056
dielectric liquid films, tan δ, voltage dependence 3—23876

dielectric losses continued
N,N-dimethylformamide in benzene, dioxane and CCl_4 solns., dielec. relax. and dipole moment, microwave absorpt. study 3—19045
epoxy-resin, electron irradiated, thermal cond. and dielec. props. at low temp. 3—51875
ethylene, plasma-polymerized, dielec. props. and ESR/ESCA studies 3—13938
ferroelectric ceramics, elec. and mech. losses 3—52747
hydrocarbon films with polar additives, low temp. dielec. losses 3—3641
microstrip input-output cable for Josephson appl., electrical props. obs. 3—16344
natural gas liq., dielec. props., appl. to electrical insulation 3—19036
nickel phthalocyanine, dielectric loss, temp. depend., TSC 3—38753
organic fibre reinforced plastics, damage susceptibility determ. by nondestructive methods 3—53326
polar liquids, dielec. relax. time and dipole moments 3—38755
poly(propylene oxide), dielectric loss meas. during isothermal annealing, relax. rates determ. 3—14207
poly-n-alkylisocyanates, soln., dielec. relax., phase behaviour, model simulation 3—52721
polyester resin with styrene crosslinks, dielec. loss and relax. 3—57860
polyethylene, elec. ageing, mech. load influence *(Russian)* 3—43482
polyethylene, high density, mixture with high mol. wt. polyethylene, dielec. loss, struct., rigidity *(German)* 3—56839
polymer, amorphous, dielectric studies at high press. 3—14206
polymer optical waveguide films, light beam deflection by dielec. loss heating, optical switch appl. 3—32461
polymers, isocyanate-terminated, dielec. props. meas. 3—19046
polypropylene films with polar additives, low temp. dielec. losses 3—3641
polystyrene-poly-4-chlorostyrene, mixtures and copolymers, miscibility, heats of mixing, dielec. loss obs. 3—38088
polyvinyl butyral, thick films, dielectric relax. study 3—8763
polyvinylidene fluoride film, uniaxially oriented, piezoelectricity 3—52737
propargyl alcohol (bromide), dielec. dispersion in dil. soln. 3—47598
PVC, dielec. permittivity and loss, thermal history influence 3—19048
rubber, C block filled, degree of dispersion rel. to elec. resist. and matrix phys. props. 3—14814
snow, dielectric const. and losses up to 100 MHz, grain geometry effects 3—23851
sulphate glass, AC cond. and dielectric props. 3—2880
synthetic aromatic insulating liquid, elec. conduction and dielectric loss obs. 3—28762
time-domain probing of lossy dielectric media, practical problems 3—14205
toluene-pyridine glasses, dielectric loss meas. during isothermal annealing, relax. rates determ. 3—14207
Ag halide emulsion grains, pAg adjusted, ionic cond., dielectric loss and photocharge decay kinetics meas. 3—53452
$AgNbO_3$, phase transitions, dielec. props., domain struct., X-ray, DTA studies 3—57086
$AgNb_{1-x}Ta_xO_3$, solid soln., dielec. props., phase transitions, DTA study 3—38748
$AgTlSe_2$, dielec. relax. in solid and liq. states 3—3642
β-Al_2O_3-N_2O polycryst. ceramic, dielec. loss 3—57859
$Ba(A_{1/4}Nb_{3/4})O_3$ (A=Li, Na), prep., thermal change and dielec. props. 3—29044
$Ba_{1-x}La_xF_{2+x}$ crystals, low temp. ionic cond. and dielec. relax. 3—18506
$Ba(Mg_{1/3}Ta_{2/3})O_3$ ceramics with temp. stable high dielec. const. and low microwave loss 3—14189
$Ba(Zn_{1/3}Nb_{2/3})O_3$-$Sr(Zn_{1/3}Nb_{2/3})O_3$ solid solution ceramics with temperature-stable high dielectric constant and low microwave loss 3—34025
$Ba(Zn_{1/3}Ta_{2/3})O_3$-$Ba(Zn_{1/3}Nb_{2/3})O_3$, ceramic, low dielec. loss, for use at microwave freqs. *(Japanese)* 3—47600
$Bi_xSb_{1-x}SI$, soft mode behaviour, microwave dielec. spectra 3—43497
CO, solid, mol. reorientation, audio freq. dielec. meas. 3—2447
$Cd_2Nb_2O_7$, ferroelectric and electro-optical props., permittivity and tanδ study 3—28795
CdS(Se), photoluminescence and dielec. losses, vacuum annealing effects 3—52825
CeO_2-$YO_{1.5}$, solid soln., dipolar dielec. relax., vacancy redistribution 3—52720
CsH_2AsO_4, gamma-ray irrad. and annealed, temp. depend. of dielec. props. 3—2607
$Cu_3B_7O_{13}Cl$, low freq. dielec. relax. in paraelec. and ferroelec. phases 3—52716
Er_2O_3 thin films, dielec. const. and loss factor meas. 3—47604
$Fe_3B_7O_{13}I$, low freq. dielec. relax. in paraelec. and ferroelec. phases 3—52716
HgI_2, red, dielec. behaviour under direct bias, γ-ray detector appl. 3—52718
$KTaO_3$, dielectric losses, dielectric resonator meas. 3—28764
Li-Ni mixed ferrites, dielec. behaviour at low freqs. 3—3629
N_2O, solid, mol. reorientation, audio freq. dielec. meas. 3—2447
$Na_2Al_6Si_6$, $O_{24}Cl_2$, sodalites, non-stoichiometric, ionic cond. and dielectric losses 250-450K, 0.7-10 kHz *(Russian)* 3—57124
NaCl:Bi, dielec. const., losses and conductivity 3—19034
Ni-Zn ferrite:Sn, elec. props. 3—13819
PLZT ferroelec. ceramic, dielec. props., permanent mag. field effects 3—57866
$Pb_9As_4S_{15}$, polycryst. gratonite, dielec. parameters determ. 3—19031
$Pb(Sc_{1/2}Ta_{1/2})O_3$ ceramics, reversible pyroelec. effect under DC bias 3—38771
$Pb_{1-x}Sr_xGe_4O_9$, struct., dielec. optical props. and phase transition 3—8824
$PbZr_{1-x}Ti_xO_3$ ceramics, doped, low field poling, dielec. and piezoelec. props. 3—38750
Sb_2O_3 films, dielec. props. meas. 3—52705
Si_3N_4, dielec. props., impurities effect 3—23870
SnO, thin film capacitors, temp. effects 3—38501
$Sr(A_{1/4}Nb_{3/4})O_3$ (A=Li, Na), prep., thermal change and dielec. props. 3—29044
$Sr_{0.6}Ba_{0.4}Nb_2O_6$, ferroelectric, dielec. props. press., temp. and freq. dependence meas. 3—23888
V_2O_5-B_2O_3-CaO, AC dielectric losses, elec. cond. 3—52724

dielectric materials
see also antiferroelectric materials; dielectric thin films; electrets; ferroelectric materials; glass; insulating materials; insulation; piezoelectric materials
glass, US attenuation at low temp. 3—2691
Kapton electrical conductivity increase using electron beam 3—13286

dielectric materials continued
- liquids, dielec., in long pipes, elec. current generation by turbulent flow 3—3293
- permittivity data for industrially important materials as function of moisture, temp., and freq. 3—8753
- poly(N-vinylcarbazole), effect of charged centres on TSC 3—13834
- power modulators, conf., USA, 1982, June 3—5498
- radiation effects and erosion of spacecraft dielec. materials 3—15819
- spacecraft, space charging currents and effects 3—20201
- Al_2O_3, translucent, polycrystalline, sintering, prod. conditions for capacitor appl. *(Japanese)* 3—58081
- $BaTiO_3$ based powder, dielectric, comparison of calendered and tape cast form 3—34265
- Si_3N_4 hot pressed dielectric material, quality control 3—24195

dielectric measurement
- *see also dielectric loss measurement; permittivity measurement*
- electrostrictive strains interferometric meas. 3—34036
- frequency response analysers for dielectric measurement 3—52726
- high-resolution charge and polarization distrib. meas. by piezoelectrically-induced press. step waves 3—10864
- homogeneous dielectrics, nondestructive meas. of spatial charge or field distrib., press. waves methods, anal. 3—10866
- liquid crystals meas. cell, for 20 to 200°C and 1 Hz to 1 GHz range 3—33079
- NMR study of ferroelectric phase transitions, high-pressure, low-temp. apparatus 3—16376
- paper tan δ and capacitance, mechanical resonance influence 3—10857
- piezoelectric crystals meas. setup, using resonance-antiresonance method 3—36036
- polymer, irradiated films, trapped-charge profile meas. using laser-induced press. pulse 3—10865
- polymer film dielectrics, conduction/displ. current meas. in plane-parallel capacitor, electro-acoustic transducer 3—10863
- void discharges meas. techniques comparison 3—10856

dielectric phenomena
- *see also dielectric hysteresis; dielectric losses; dielectric properties of substances; dielectric relaxation; dielectric resonance; electric strength; ferroelectricity; photodielectric effect; piezoelectricity; solvated electrons*
- conference, Amherst, MA, USA (Oct. 1982) 3—10510
- naphthalene thin cryst. layers, self electrization during phase transition 3—28805

dielectric polarisation
- *see also Barkhausen effect; dielectric depolarisation*
- alkali halides, dielectric const., polarisability and anharmonic behaviour 3—38747
- anthracene, localised charge, polarisation energy, polarisability changes effects 3—47591
- betaine arsenate, ferroelasticity and ferroelec. props. 3—8778
- charge, localised, in mol. cryst., polarisation energy, polarisability changes effects 3—47591
- cholesteryl esters, liq. cryst., Costa Ribeiro effect 3—38752
- cholestoral pelargonate, polarisation in const. elec. field *(Russian)* 3—42516
- correlation function calculation, complex permittivity freq. meas., computer Fourier transforms *(French)* 3—47592
- crystals with correlated defect positions, dynamics 3—33369
- dielectric materials, crack development kinetics, and polarisation effects 3—28755
- dielectrophoretic manipulator 3—49524
- diglycine nitrate, ferroelec., pyroelec. props. and spontaneous polarisation 3—34039
- distribution meas. by piezoelectrically-induced press. step waves 3—10864
- electret effect, relax. current model 3—47596
- electronic subsystem excitation during polarisation relax. with spatial distrib. of dielect. permeability 3—52711
- ethylene vinyl acetate copolymer, dynamic glass transition zone limits determ. *(German)* 3—38071
- ferroelectric, polarisation switching, internal cold emission and luminesc., theory 3—19204
- ferroelectric liq. cryst. smectic C^* transition, modulated to uniform phase 3—28102
- ferroelectrics, polarisation distrib. along polar axis, regularisation method from pyroelec. meas. 3—52741
- ferroelectrics, spontaneous polarisation, chemical bond model 3—47610
- gaseous medium, EM wave interaction in mag. field of arbitrary orientation, nonreciprocal effects 3—18001
- incommensurate systems, classical and non-classical behaviour, secondary order parameter susceptibility 3—18425
- lithium thallium tartrate, pyroelectric and dielectric props. meas. 3—19071
- MBBA, polarisation in const. elec. field *(Russian)* 3—42516
- molecular fluid system, dielectric polarization in non-uniform fields 3—3637
- molecular liquids 3—7055
- nitrobenzene, dil. soln. in benzene, dipolar, assoc., dielec. obs. 3—44038
- orthorhombic lattices, dipole field sums and Lorentz factors 3—14199
- perovskite ferroelectrics, equiprobable directions of spontaneous polarisation 3—28804
- perovskite oxide ferroelec. semicond. electron mobility and TO phonon modes 3—43178
- photo-induced polarisation and depolarisation, electronic excited state and impurity-vacancy dipoles 3—23868
- piezoelectric powders, polarisation echo theory *(Russian)* 3—43481
- polarisabilities and corresponding choice of Hamiltonian 3—8758
- polycarbonate-polypropylene blend, compression molded film, dielec. relaxation and polarization 3—19039
- polyester foil, aged by partial discharges and UV irrad., static polarisation meas. 3—23867
- polyethylene, low density, induced polarisation, thermal current transients study 3—52710
- polyethylene, low-density, dielec. polarisation rel. to charging fields, TSC technique 3—14202
- polymer film electrets, elec. cond. temp. depend., rel. to thermally-stimulated depolarisation current spectra *(Russian)* 3—43479
- polymers, polarisation effect and dielectric props. *(Bulgarian)* 3—19038
- polypropylene polycarbonate blend films, polarisation and depolarisation studies 3—47594
- polyvinyl acetate, dielectric behaviour rel. to mol. wt. 3—38756
- polyvinylidene fluoride, β-phase, polarisation reversal associated with chain molecules rotation 3—52749

dielectric polarisation continued
- polyvinylidene fluoride, piezoelec. const., b-axis distrib., NMR linewidths study 3—28780
- polyvinylidene fluoride film, polarization by breakdown field appl. 3—14196
- Polyvinylidenefluoride films, thermally poles, charge compensated polarization zones obs. 3—14201
- powdered materials, dynamic polarisation echoes 3—8757
- quasi 1-D H-bonded ferroelec. thermodynamic props., tunnelling model 3—2849
- Rochelle salt, ferroelec., step-polarisation switching processes under laser irrad. 3—23861
- shock polarisation of solids between plane electrodes with external load 3—2672
- smectic C^* phase liq. cryst., molecule asymmetry, ferroelectricity 3—2403
- smectic C liq. cryst., nonchiral, with optically active additives, ferroelectricity 3—14225
- solid dielectric, dynamic polarisation and NMR of nuclei near paramag. centres *(Russian)* 3—3562
- spinels, AB_2X_4 (X=0,S,Se,Te), electronic struct. and dielec. props., crystallographic concepts 3—18281
- steel, austenitic stainless, Ti, pitting during anodic polarisation in methanolic-H_2O solns. 3—19446
- TGS:Tl (Co)(Cu), polarised state stability, Barkhausen thermal effect study 3—23863
- TGS, Barkhausen effect and polarisation switching, growth condition effects 3—23865
- TGS, piezoelectric and elastic props. 3—34034
- TGS, polarisation reversal, domain dynamics 3—8760
- TGS, pure and doped, electret effect 3—47588
- TGS, pure and Fe^{3+} doped, current-voltage characteristics *(Russian)* 3—47352
- TGS cryst., ferroelec., step-polarisation switching processes under laser irrad. 3—23861
- transient-state theory of dielectric relaxation and some empirical laws 3—14212
- triglycenselenate, Barkhausen effect and polarisation switching, growth condition effects 3—23865
- vinylidene fluoride-trifluoroethylene copolymer, piezoelec. and ferroelec. props. 3—3648
- water, shock induced electrical polarisation 3—19040
- Al_2O_3 films, bulk polarization and surface charging distinctions, expt. method 3—13939
- Au thin island film, dielectric props., statistical theory 3—3635
- BN, dielec. polarisability at RF and microwave freq. calc. 3—8755
- $Ba(NO_2)_2.H_2O$ pyroelec. cryst., nuclear positions and spontaneous polarisation 3—28756
- $Ba_{0.4}Sr_{0.6}Nb_2O_6$, polarisation distrib. along polar axis, regularisation method from pyroelec. meas. 3—52741
- $BaTiO_3$, adsorption of O_2, H_2 and methyl.alcohol, effect on polarisation processes 3—2983
- $BaTiO_3$ ferroelectric films, RF sputtered on Si, photovoltaic props. and dielec. hysteresis meas. 3—33757
- $BaTiO_3$ ferroelectric, electrostatics, dielec. const. and spontaneous polarisation 3—34040
- $Bi_{12}SiO_{20}$, electret state formed under X-ray irrad., characteristics 3—47589
- CdS, photosensitive, dielec. dispersion and photoconductivity 3—18747
- $CsH_{2(1-x)}D_{2x}PO_4$, quasi-one-dimens. ferroelectric, static dielec. props., deuteration effects obs. 3—19075
- $CsLiMoO_4$, ferroelec., elastic, dielec., and structural props. 3—19084
- Cu halides, strain derivatives of dielec. const., photoelastic behaviour and polarisation 3—34029
- Fe_3O_4, ferrimag. ferroelectricity, hysteresis and piezoelec. consts. 3—57865
- $Gd(MoO_4)_3$, luminescence and polarisation reversal 3—8886
- $Gd_2(MoO_4)_3$, ferroelec., step-polarisation switching processes under laser irrad. 3—23861
- $Gd_2(MoO_4)_3$ single cryst., electroluminescence, correlation with ferroelec. switching 3—24019
- HgI_2, red, dielec. behaviour under direct bias, γ-ray detector appl. 3—52718
- KD_2PO_4, anisotropic polarisation fluctuations 3—14197
- KD_2PO_4-KH_2AsO_4, X-ray irrad., ferroelec. switching times, ESR study 3—57863
- $K_{1-x}Li_xTaO_3$, elastic const. discontinuity, Brillouin spectra 3—3752
- $Li_2Ge_7O_{15}$, ferroelec. phase transition study 3—38775
- $Li_{0.02}Na_{0.98}NbO_3$, ferroelec.-ferroelastic coupling, transitions and optical props. *(French)* 3—47613
- $LiNbO_3$, effective polarisation, thermally stimulated polarisation study 3—14198
- $(NH_4)_2ZnBr_4$, ferroelectric transitions, dielec. const. and spontaneous polarisation study 3—19073
- $(NH_4)_2ZnCl_4$, weak ferroelectricity between ferro- and antiferro-elec. phases, dielec. study 3—19074
- $NaH_3(SeO_3)_2$ ferroelec. domain struct. rearrangement and Barkhausen effect 3—23891
- $NaNO_2$, ^{23}Na NMR, quadrupole coupling parameter 3—14144
- $NaNbO_3$-$PbTiO_3$, ferroelec. solid solns. composition-struct.-props. relationship 3—18280
- $Pb_5Ge_3O_{11}$, domain struct., existence of incommensurate phase *(Russian)* 3—19087
- $PbZrO_3$, antiferroelectric, cryst. struct., X-ray and neutron powder diffr. profile anal. 3—18266
- $PbZrO_3$, permittivity and ferroelec. transitions, defect conc. effect 3—38779
- $PbZr_{1-x}Ti_xO_3$ ceramics, doped, low field poling, dielec. and piezoelec. props. 3—38750
- $PbZr_{1-x}Ti_xO_3$, piezoelement preparation by corona discharge polarisation method, electret state model *(Russian)* 3—8771
- $PbZr_xTi_{1-x}O_3$ textured ferroelec. piezoceramic, polarisation process 3—52709
- $RbHSO_4$, spontaneous polarisation, surface layers effect 3—38751
- SbSI, adsorption of O_2, H_2 and methyl-alcohol, effect on polarisation processes 3—2983
- SbSI, ferroelec. semicond., Barkhausen effect and switching processes 3—23862
- $SbSI_xBr_{1-x}$, pressure-temp.-conc. phase diagram, Landau-Devonshire model 3—8780
- $SbSe_{0.4}S_{0.6}I$, diffuse ferroelec. transition, pyroelec. and polarisation study 3—19080
- $SbSe_{0.5}S_{0.5}I$, pyroelec. effect in applied DC elec. field 3—52738

dielectric polarisation continued
$SbSe_xS_{1-x}I$, tricritical point, pyroelec. current and dielec. const. meas. 3—19079
Si, electret state decay with low dislocation density 3—19043
Si_3N_4, plasma deposited coating, struct. and elec. props. 3—8605
$Sr_{0.5}Ba_{0.5}Nb_2O_6$:Cu ceramics, ageing study, photovoltaic meas. 3—8524
V_2O_5-B_2O_3-CaO, AC dielectric losses, elec. cond. 3—52724
α-$Zr(HPO_4)_2.H_2O$ and organic derivatives, dielec. props. 3—43478

dielectric power factor *see power factor*

dielectric properties of gases
electric strength at high temp. 3—42354
inert gases, electric strength, breakdown voltages at high temp. 3—33015
insulating gases, dielectric strength, boiling point and toxicity 3—2173
Onsager cavity dipole, stochastic dynamics 3—5719
N_2, dielectric virial coeff. and refractivity at 25°C *(French)* 3—56643

dielectric properties of liquids and solutions
N-(4′-n-pentyloxybenzylidene)-4-n-butylaniline, smectic G phase, dielectric permittivity meas. 3—19033
alcohol-water solns., dielec. props. in alcohol-rich regions 3—34028
alcohol/nonpolar solvent systems, permittivity calc. 3—8752
alcohols, pure and mixtures, dielec. const. and loss meas., high freq. dispersion region 3—57849
n-alkanes, eqn. of state based on relative dielec. permittivity meas. 3—28076
i-alkyl halides, relax. intensity evaluation from dielect. loss data 3—19044
4-n-alkyl phenyl esters, laterally cyanated, negative dielec. anisotropy, photochemical instability, phase transition effects 3—18215
automatic complex permittivity meas. method for 200 MHz-18 GHz range, appl. to anisotropic fluids 3—30892
4,4′-bis-n-pentyl-azoxybenzene, liq. cryst., electro-optical and dielec. relax. study 3—14253
n-butanol-acetone complex, dipole moment, dielec. const. meas. 3—47582
n-butanol-acetophenone complex, dipole moment, dielec. const. meas. 3—47582
3-butyn-2-ol and 2-butyn-1-ol, dielec. dispersion in dil. soln. 3—47598
cholesteryl 2,2,3,3-tetrafluoropropionate, single cryst., incommensurate phase transition 3—18436
cholesteryl esters, liq. cryst., Costa Ribeiro effect 3—38752
colliding symmetrical rotators model, dielec. susceptibility, complex power method 3—14232
crude oil water/gas contents measurement *(Norwegian)* 3—44083
cryogenic liquids, breakdown characts. and mechanisms 3—43490
cyclohexane liq. between polymer coated electrodes, charge transfer phenomena 3—19056
dextran gel sephadex G-25 dispersed in aq. phase, dielec. props. 3—47597
dielectric strength of liquid dielectrics *(German)* 3—43485
diethyl ether, static dielec. const. along liq.-vapour coexistence curve 3—3630
dimethyl formamide, thermodynamic excess function calc. from dielect. data *(German)* 3—38749
N,N-dimethylformamide in benzene, dioxane and CCl_4 solns., dielec. relax. and dipole moment, microwave absorpt. study 3—19045
2,2-dinitropropane, dielec. relax. in liq. and plastic phases 3—8764
dipolar hard ellipsoids fluid, second virial coeffs. 3—13394
dipolar hard sphere fluid, dielec. const., perturbation theory calc. 3—57852
2,2′-dipyridyl, mol. dynamics in n-heptane, dielec. relax. study 3—52727
DNA aqueous solns., thermal reversibility, dielec. and elec. cond. meas. 3—53633
drops, stability to breakdown in electric field 3—38763
electrochemical double layer, dielectric const. and cond., thin double layer approx. appl. 3—14191
electrolyte solns., dielectric saturation and friction, EHD eqns. 3—34027
electrolytes, symmetrical, vol. change on ion-pairing 3—48069
ethyl chloride, static dielec. const. along liq.-vapour coexistence curve 3—3630
ethylene glycol-water capacitor, high voltage charge injection and transport 3—43483
ethylene glycol-water mixture, pulsed high-voltage dielec. props. meas. 3—34026
films, tan δ, voltage dependence 3—23876
friction, rel. to reorientation of rotating molecule in polar medium 3—27810
glycerol-H_2O mixtures, conductivity, relax. time and activation energy at RF 3—38416
β-halopropionitriles in benzene solns., dielec. relax. and permittivity 3—8762
heterogeneous mixtures containing bound water, relaxation model for dielectric props. 3—47599
hydration forces, polarisation layers effects 3—52750
ionic solutions, inconsistent dielectric behaviour, Hamiltonian models 3—47585
isobutyl cyanide in benzene solns., dielec. relax. and permittivity 3—8762
liquid crystal, nonpolar, anisotropic dielec., cavity and reaction fields 3—57853
liquid crystal mixtures, photochemically stable, with large negative dielec. anisotropy, synthesis 3—37779
liquid crystals, dielec. friction and ionic mobility 3—52715
liquid crystals, dielectric behaviour 3—18212
liquid films, electrical conduction in 10^{-4} to 10^{-1}s range 3—23369
MBBA, binary nematic mixture with n-alkyl alcohol, dielec. relax. study of intermolecular interaction 3—27838
metals, lyophilic, dielec. const. in diffuse part of double layer 3—53418
methanol, high press. permittivity meas. 3—57855
mixtures, polar and non-polar, dipole moment and static dielect. const. of ellipsoidal polar mol. 3—28753
molecular liquids 3—7055
molecular solution of non-rigid molecules, nonlinear dielec. effect 3—57848
monoacetylferrocene, in nonpolar solvent, dielec. relax. and mol. dynamics 3—28758
monobenzoylferrocene in nonpolar solvent, dielec. relax. and mol. dynamics 3—28759
multipolar hard spheres, second dielectric virial coeff. 3—8754
natural gas liq., dielec. props., appl. to electrical insulation 3—19036
nematic cell, periodically grooved, mean permittivity behaviour 3—38746
nematic liq. cryst., dielectric permittivity, mol. theory 3—47584
nematic liquid cryst. mixtures, low freq. dielec. relaxation and dual freq. addressing of field effects 3—14209

dielectric properties of liquids and solutions continued
nematic liquid crysts., thermodynamic stability, dielect., diamag. and elastic props. 3—37774
nitroanisole-benzene, dilution effects on opt. props. 3—8799
nitrobenzene, dil. soln. in benzene, dipolar, assoc., dielec. obs. 3—44038
nitrobenzene, liquid, light-induced elec. permittivity change with DC elec. field, theory 3—52707
nitrobenzene-benzene, dilution effects on opt. props. 3—8799
nitrotoluene, crit. and far pre-critical solns., nonlinear dielect. effect 3—47581
o,m-nitrotoluene-benzene, dilution effects on opt. props. 3—8799
n-octylammonium formate surfactant, dielect. absorpt. 3—57858
oil-in-water emulsion, depolarisation thermocurrents meas. at subzero temp. 3—23866
Onsager cavity dipole, stochastic dynamics 3—5719
permittivity, high-accuracy meas. for polydisperse, liquid and solid dielec., high absorption at microwave freq. 3—20875
polar dielectrics, microwave cond. and dipole moment 3—57373
polar fluid, electrostriction and dielect. const. 3—23880
polar hard dumb-bell fluid, dielectric const. depend. on mol. shape 3—14192
polar liquids, dielec. friction and ionic mobility 3—52715
polar liquids, dielec. relax. time and dipole moments 3—38755
polar liquids, dielectric relaxation time distrib. function calc. 3—47601
polar mols., dielec. relax. processes using polarisability function plots 3—14204
poly-3,3-dimethyl oxetane chains, thermoelastic and dielectric obs., config.-depend. props. 3—13123
poly-n-alkylisocyanates, soln., dielec. relax., phase behaviour, model simulation 3—52721
polyatomic fluids, dielectric const., interaction site formalism 3—14193
polymer blends, miscible, charact. techniques, review 3—38089
prebreakdown streamers in liq. dielecs. 3—18159
propargyl alcohol (bromide), dielec. dispersion in dil. soln. 3—47598
repulsive hydration forces between two charged mica plates, origin 3—52751
smectic A phases, Lifshitz point associated with polarisation wave 3—38062
symmetric fluid, permittivity, linear hypervertex approx. 3—2353
transition metal nitrates, dielec. props. in water and alcohol solns. 3—47583
water, dielectric const., quadrupole moment influence 3—14188
water, dielectric relaxation time distrib. function calc. 3—47601
water, liquid, dielectric props., integral eqn. 3—22750
water, orientational struct. and dielec. props. comparison of ST2 and MCY potentials 3—56798
water, shock induced electrical polarisation 3—19040
water dissolved in dielectric fluids, calorimetric meas. 3—2804
water in oil suspensions, dielectric props. studied using depolarisation thermocurrent method 3—3640
$AgTlSe_2$, dielec. relax. in solid and liq. states 3—3642
1,3-dibromopropane, molecular solution of non-rigid molecules, nonlinear dielec. effect 3—57848
Ga in $NaClO_4$ solution, dielec. const. in diffuse part of double layer 3—53418
He, cryogenic, dielectric strength of large gaps 3—43488
He, liq., arc extinction voltage between Cu electrodes, appl. to supercond. magnet cooling 3—43489
^{4}He-p-H solution, dielectric const. and molar volume *(Russian)* 3—14190

dielectric properties of solids
bone, dielectric behaviour at microwave freqs., UV irrad. effects 3—58728
ceramics for optical and electronic appls. 3—47809
cobalt phthalocyanine, dielec. props., temp. and freq. depend. 3—28751
crack development kinetics, and polarisation effects 3—28755
crystals, thermodynamics of second sound 3—13483
diamond, electrostriction, stabilised Michelson interferometer study 3—28784
dicalcium strontium propionate, ferroelec, dielec. dispersion 3—43494
2,2-dinitropropane, dielec. relax. in liq. and plastic phases 3—8764
dynamic polarisation and NMR of nuclei near paramag. centres *(Russian)* 3—3562
epoxy-resin, electron irradiated, thermal cond. and dielec. props. at low temp. 3—51875
glasses, dynamic behaviour at low temps. in acoustic and electric fields 3—18405
ionic space charge polarisation charact. with large AC signal appl., numerical hopping method analysis 3—23871
lithium thallium tartrate, pyroelectric and dielectric props. meas. 3—19071
methylammonium aluminium sulphate dodecahydrate, dielec. behaviour, pseudo-spin-lattice coupled-mode model 3—23889
non-linear dielectrics, pot. distribs., numerical calc. 3—8786
organosilicon rubbers, crosslinked, filled and unfilled, mol. mobility *(Russian)* 3—12026
periclase, dielec. props. rel. to chem. and grain comp. 3—23874
plastics, mica reinforced, mech., thermal and dielectric props. and economics rel. to processing 3—29058
PMMA surface, modified by ion bombardment, charact. using noncontact dielec. technique 3—52725
polyester foil, aged by partial discharges and UV irrad., static polarisation meas. 3—23867
polyethylene, high density, mixture with high mol. wt. polyethylene, dielec. loss, struct., rigidity *(German)* 3—56839
polyethylene, low density, induced polarisation, thermal current transients study 3—52710
polyethylene terephthalate, steady state DC conduction 3—23074
polyethylene terephthalate thin films, electron beam probing of space charge 3—3645
polylvinylidene fluoride, pyroelec. currents, separation from nonpyroelec. currents using low freq. sinusoidal temp. waves 3—34038
polymer, amorphous, dielectric studies at high press. 3—14206
polymers, amorphous and crystalline, molecular aspects of multiple dielectric relax. processes 3—28761
polymers, amorphous and crystalline, multiple dielectric relaxation processes 3—14211
polymers, isocyanate-terminated, dielec. props. meas. 3—19046
polymers, polarisation effect and dielectric props. *(Bulgarian)* 3—19038
polypropylene, dielec. strength under high pressure and shear strains., low-mol. additive influence *(Russian)* 3—8765

dielectric properties of solids continued
- polypropylene films, biaxially oriented, morphology and dielec. props., effect of thermal aging 3−19050
- polystyrene-poly-4-chlorostyrene, mixtures and copolymers, miscibility, heats of mixing, dielec. loss obs. 3−38088
- polyvinyl butyral, thick films, dielectric relax. study 3−8763
- porcelain, insulator temp., flashover voltage meas. procedure in vacuum 3−8766
- PVC, dielec. permittivity and loss, thermal history influence 3−19048
- quartz, electrostriction, stabilised Michelson interferometer study 3−28784
- relaxation, many body interpretation 3−38754
- Rochelle salt, deuterated, dielec. relax. spectra meas. 3−3644
- semiconductor, dielectric constant, temp. and press. dependences 3−57854
- shock polarisation of solids between plane electrodes with external load 3−2672
- spinels, AB_2X_4 (X=0,S,Se,Te), electronic struct. and dielec. props., crystallographic concepts 3−18281
- tetramethyl ammonium mercury bromoiodide, polar struct., multiple phase transition 3−18283
- TGS; electrostriction, stabilised Michelson interferometer study 3−28784
- thermal breakdown suppression regimes 3−23875
- transparent dielectrics, optical avalanche breakdown, two-photon absorpt. 3−8768
- transparent dielectrics, optical breakdown, absorbing impurities effect 3−8856
- Ag halide emulsion grains, pAg adjusted, ionic cond., dielectric loss and photocharge decay kinetics meas. 3−53452
- AgBr, defect energy calc., dielec. and elastic props. 3−51593
- $AgTlSe_2$, dielec. relax. in solid and liq. states 3−3642
- β-Al_2O_3-$Ag_2O(Na_2O)$, phase transition, dielectric const. temp. depend. 3−8186
- BN, dielec. polarisability at RF and microwave freq. calc. 3−8755
- $Ba(A_{1/4}Nb_{3/4})O_3$ (A=Li, Na), prep., thermal change and dielec. props. 3−29044
- $Ba(A_{x/4}Nb_{3x/4}Ti_{1-x})O_3$ (A=Na,Li), cubic perovskite, prep., cryst. struct. and dielec. props. 3−52708
- $Ba_{1-x}La_xF_{2+x}$ crystals, low temp. ionic cond. and dielec. relax. 3−18506
- $Ba(Mg_{1/3}Ta_{2/3})O_3$ ceramics with temp. stable high dielec. const. and low microwave loss 3−14189
- $BaMoO_4$, elec. conductivity and dielec. props. 3−38383
- BaS:Cu(Bi), dielect. props. 3−34030
- $BaTiO_3$ ceramics, grain size effect on dielectric const. under DC biasing field 3−3634
- $Ba(Zn_{1/3}Nb_{2/3})O_3$-$Sr(Zn_{1/3}Nb_{2/3})O_3$ solid solution ceramics with temperature-stable high dielectric constant and low microwave loss 3−34025
- $Ba(Zn_{1/3}Ta_{2/3})O_3$-$Ba(Zn_{1/3}Nb_{2/3})O_3$, ceramic, low dielec. loss, for use at microwave freqs. *(Japanese)* 3−47600
- $Bi_xSb_{1-x}SI$, soft mode behaviour, microwave dielec. spectra 3−43497
- CsH_2AsO_4, gamma-ray irrad. and annealed, temp. depend. of dielec. props. 3−2607
- $CsH_{2(1-x)}D_{2x}PO_4$, quasi-one-dimens. ferroelectric, static dielec. props., deuteration effects obs. 3−19075
- $CsH_{2(1-x)}D_{2x}PO_4$, ferroelectric, dynamic dielec. props., deuteration effects obs. 3−19076
- $Cs_{1-x}K_xDy(MoO_4)_2$ and $Cs_{1-x}Rb_xDy(MoO_4)_2$, layer crystals, phase transition, permittivity study 3−18451
- $Cu_3B_7O_{13}Cl$, low freq. dielec. relax. in paraelec. and ferroelec. phases 3−52716
- $Fe_3B_7O_{13}I$, low freq. dielec. relax. in paraelec. and ferroelec. phases 3−52716
- Fe_3O_4, mag. and dielec. relax., permeability and permittivity meas. 3−14214
- HgI_2, red, dielec. behaviour under direct bias, γ-ray detector appl. 3−52718
- $In_{1-x}Ga_xAs_yP_{1-y}$, material parameters derivation from linear interpolation scheme 3−33632
- InP, semi-insulating, relative dielectric constant meas. 3−19032
- $KLiSO_4$, ionic cond. and dielec. props. *(Chinese)* 3−28146
- $K_{1-x}Li_xTaO_3$, dipole glass, elastic and dielec. dispersion 3−18360
- $K(Ta_{0.55}Nb_{0.45})_3$, electrostrictive coeffs., temp. depend. meas. 3−14219
- $KTaO_3$:Li, collective effects in random-site elec. dipole system 3−38716
- $KTaO_3$:Li, response of dielec. susceptibility to external elec. field around phase transition temp. 3−43503
- K_2ZnF_4 and $KZnF_3$, TSC studies 3−3638
- LaF_3, pure and alkaline earth doped, elec. props. 3−23078
- Li-Ni mixed ferrites, dielec. behaviour at low freqs. 3−3629
- LiF, electrostriction, stabilised Michelson interferometer study 3−28784
- $Li_2Ge_7O_{15}$, ferroelec. phase transition study 3−38775
- $Mg_{0.75}Mn_{0.25}Fe_2O_4$, thin ferrite films, dielectric const., mag., permeability tensors 3−52562
- $MgO:Ni^{2+}(Co^{2+})$, single cryst., dielec. const. meas, activation energies at low temps. 3−52706
- Mn-Zn ferrite, mag. and dielec. relax., permeability and permittivity meas. 3−14214
- $NH_4Fe(SO_4)_2.12H_2O$, dielec. behaviour, pseudo-spin-lattice coupled-mode model 3−23889
- $NH_4H_2PO_4$, deuterated, dielec. dispersion 3−47586
- $Pb_9As_4S_{15}$, polycryst. gratonite, dielec. parameters determ. 3−19031
- PbF_2(:La), cubic, thermal depolarisation, ionic thermocurrents study 3−3636
- $Pb(Fe_{1/2}Nb_{1/2})O_3$-$xPb(Mg_{1/2}W_{1/2})$ O_3 solid soln., diffuse antiferroelec.-paraelec. phase transition 3−23886
- $Pb(Fe_{2/3}W_{1/3})O_3$-$Pb(Fe_{1/2}Nb_{1/2})O_3$-$Pb_5Ge_3O_{11}$ solid solution, sintering dielec. props. 3−52702
- $Pb(Sc_{1/2}Ta_{1/2})O_3$ ceramics, reversible pyroelec. effect under DC bias 3−38771
- $PbZr_{1-x}Ti_xO_3$ ceramics, doped, low field poling, dielec. and piezoelec. props. 3−38750
- Sb_2O_3 films, dielec. props. meas. 3−52705
- SbSI, single crystal, elec. and optical props. *(Korean)* 3−3653
- Se, vitreous, permittivity, temp. depend. 3−23854
- Si:P, polycrystalline, interlayer oxides optimized by conventional processing and laser annealing 3−57434
- Si_3N_4, dielec. props., impurities effect 3−23870
- SnI_2 microwave meas. of dielectric const. 3−23852
- SnI_4, microwave meas. of dielectric const. 3−23852
- $Sr(A_{1/4}Nb_{3/4})O_3$ (A=Li, Na), prep., thermal change and dielec. props. 3−29044
- $Sr(A_{x/4}Nb_{3x/4}Ti_{1-x})O_3$(A=Na,Li), cubic perovskite, prep., cryst. struct. and dielec. props. 3−52708

dielectric properties of solids continued
- $Sr_{0.5}Ba_{0.5}Nb_2O_6$, piezoelectric, elastic and SAW props. meas. 3−23153
- $Sr_{0.6}Ba_{0.4}Nb_2O_6$, ferroelectric, dielec. props. press., temp. and freq. dependence meas. 3−23888
- V_2O_5-B_2O_3-CaO, AC dielectric losses, elec. cond. 3−52724
- V_2O_5-TiO_2-P_2O_5 glass, anomalous dielec. relax. spectra 3−38758
- α-$Zr(HPO_4)_2.H_2O$ and organic derivatives, dielec. props. 3−43478

dielectric properties of substances
see also antiferroelectricity; dielectric depolarisation; dielectric function; dielectric materials; dielectric measurement; dielectric phenomena; dielectric polarisation; dielectric properties of gases; dielectric properties of liquids and solutions; dielectric properties of solids; electric strength; optical susceptibility; permittivity; piezoelectricity; pyroelectricity
- erythrocytes, human, packed, with haemoglobins F, AA, AS and SS, RF dielec. characts. 3−58620
- molecular cryst., dielec. props., effect of exciton-exciton and exciton phonon interactions 3−47058
- RF dielectric properties of animal tissues, in vivo and in vitro obs. 3−39686
- skeletal muscle, anisotropy in dielec. props. 3−34825

dielectric relaxation
see also dielectric resonance
- N-(4′-n-pentyloxybenzylidene)-4-n-butylaniline, smectic G phase, dielectric permittivity meas. 3−19033
- alcohol-water solns., dielec. props. in alcohol-rich regions 3−34028
- i-alkyl halides, relax. intensity evaluation from dielect. loss data 3−19044
- amorphous semiconductors, dielec. relax. and delayed-collection field expts., dispersive transport anal. 3−43484
- assembly of mols. containing rot. polar groups, dielec. relax., inertial effects 3−12810
- 4,4′-bis-n-pentyl-azoxybenzene, liq. cryst., electro-optical and dielec. relax. study 3−14253
- 3-butyn-2-ol and 2-butyn-1-ol, dielec. dispersion in dil. soln. 3−47598
- condensed matter, relaxation, many body interpretation 3−38754
- condensed matter structure and dielec. relaxation 3−19047
- curing systems, in-situ props. meas. by microdielectrometry 3−38757
- dextran gel sephadex G-25 dispersed in aq. phase, dielec. props. 3−47597
- dicalcium strontium propionate, ferroelec, dielec. dispersion 3−43494
- N,N-dimethylformamide in benzene, dioxane and CCl_4 solns., dielec. relax. and dipole moment, microwave absorpt. study 3−19045
- 2,2-dinitropropane, dielec. relax. in liq. and plastic phases 3−8764
- 2,2′-dipyridyl, mol. dynamics in n-heptane, dielec. relax. study 3−52727
- elastic ferroelectric dielec. relax., EM internal variables in EM continua 3−49174
- ethylene glycol-water capacitor, high voltage charge injection and transport 3−43483
- glycerol-H_2O mixtures, conductivity, relax. time and activation energy at RF 3−38416
- β-halopropionitriles in benzene solns., dielec. relax. and permittivity 3−8762
- heterogeneous mixtures containing bound water, relaxation model for dielectric props. 3−47599
- isobutyl cyanide in benzene solns., dielec. relax. and permittivity 3−8762
- Kapton H polymide films, high-temp. elec. conductivity meas., multiple transitions and relaxations 3−13936
- liquid crystals, dielec. friction and ionic mobility 3−52715
- liquid crystals, dielectric behaviour 3−18212
- MBBA, binary nematic mixture with n-alkyl alcohol, dielec. relax. study of intermolecular interaction 3−27838
- measurement by freq. response analysers 3−52726
- methyl chloride liquid, rot. coupling effect from dipolar interactions *(French)* 3−52714
- methylammonium iron alum., dielec. relax. in vicinity of ferroelec. transition 3−52712
- monoacetylferrocene, in nonpolar solvent, dielec. relax. and mol. dynamics 3−28758
- monobenzoylferrocene in nonpolar solvent, dielec. relax. and mol. dynamics 3−28759
- mucopolysaccharides, influence of Zn^{2+} on dielec. relax. 3−15044
- nematic liquid cryst. mixtures, low freq. dielec. relaxation and dual freq. addressing of field effects 3−14209
- NMR study of ferroelectric phase transitions 3−16376
- n-octylammonium formate surfactant, dielect. absorpt. 3−57858
- phenol antioxidant, affinity for reagents in hydrocarbon media, low temp. dielectric relaxation study 3−4283
- photo-induced polarisation and depolarisation, electronic excited state and impurity-vacancy dipoles 3−23868
- piezoelectric ceramic, poled, nonlinear relax. of complex permittivity in uniaxial compression 3−38770
- PMMA surface, modified by ion bombardment, charact. using noncontact dielec. technique 3−52725
- polar dielectrics, microwave cond. and dipole moment 3−57373
- polar liquids, dielec. friction and ionic mobility 3−52715
- polar liquids, dielec. relax. time and dipole moments 3−38755
- polar liquids, dielectric relaxation time distrib. function calc. 3−47601
- polar mols., dielec. relax. processes using polarisability function plots 3−14204
- poly(propylene oxide), dielectric loss meas. during isothermal annealing, relax. rates determ. 3−14207
- poly-3,3-dimethyl oxetane chains, thermoelastic and dielectric obs., config.-depend. props. 3−13123
- poly-n-alkylisocyanates, soln., dielec. relax., phase behaviour, model simulation 3−52721
- polycarbonate deformation monitoring by dielec. relax. spectroscopy 3−52722
- polycarbonate-polypropylene blend, compression molded film, dielec. relaxation and polarization 3−19039
- polychloropren nairit elastomer, dielectric relaxation *(Russian)* 3−52717
- polyester resin with styrene crosslinks, dielec. loss and relax. 3−57860
- polyethylene, stretched, solute orientation mechanism, dielec. relax. study 3−22798
- polyethylene terephthalate, struct. changes from thermal treatment in glass transition region *(German)* 3−38070
- polymer film electrets, elec. cond. temp. depend., rel. to thermally-stimulated depolarisation current spectra *(Russian)* 3−43479
- polymers, amorphous and crystalline, molecular aspects of multiple dielectric relax. processes 3−28761
- polymers, amorphous and crystalline, multiple dielectric relaxation processes 3−14211
- polymers, dielec. principal relax. above and near glass transition 3−34032

dielectric relaxation continued
polymers, isocyanate-terminated, dielec. props. meas. 3—19046
polyphenylacetylenes, dielec. relax., thermally stimulated depolarisation current obs. 3—14208
polypropylene films, biaxially oriented, morphology and dielec. props., effect of thermal aging 3—19050
polytoluylenediisocyanate-poly(propylene sulphide), dielec. relax. *(Russian)* 3—14210
polyurethane elastomer, dielectric tan δ meas. during deform. 3—52723
polyvinyl acetate, dielec. relax. meas. 3—28763
polyvinyl acetate, dielectric behaviour rel. to mol. wt. 3—38756
polyvinyl butyral, thick films, dielectric relax. study 3—8763
power-law behaviour in spectral response, extension to mech. relax. processes 3—28044
propargyl alcohol (bromide), dielec. dispersion in dil. soln. 3—47598
quartz, smoky, γ-irrad., dielec. relax., audiofreq. meas. 3—3643
Rochelle salt, deuterated, dielec. relax. spectra meas. 3—3644
smectic B liq. cryst., struct. modification and dielectric relax. 3—42510
space charge, dielectric relaxation, theory *(French)* 3—57861
toluene-pyridine glasses, dielectric loss meas. during isothermal annealing, relax. rates determ. 3—14207
transient-state theory of dielectric relaxation and some empirical laws 3—14212
transition metal nitrates, dielec. props. in water and alcohol solns. 3—47583
trimethylene oxide struct. I clathrate hydrate, classical λ-transition study 3—51774
water, dielectric relaxation time distrib. function calc. 3—47601
Williams-Watts function inversion for large relax. times 3—52719
$AgTlSe_2$, dielec. relax. in solid and liq. states 3—3642
Al-polymer-Al (Au), thin film form. by plasma polymerisation, elec. property meas. 3—13921
$As_{10}Ge_{15}T_{75}$:Ag glassy alloy, dielec. relax. and dispersion using polarisability plots 3—52713
$Ba_{1-x}La_xF_{2+x}$ crystals, low temp. ionic cond. and dielec. relax. 3—18506
CdS, photosensitive, dielec. dispersion and photoconductivity 3—18747
CdS solar cell structs., dielectric relax. contrib. to freq. dispersion of junction admittance 3—14951
CeO_2 ceramics, doped, grain boundary type Maxwell-Wagner peak in thermally stimulated depolarisation 3—8756
CeO_2-$YO_{1.5}$, solid soln., dipolar dielec. relax., vacancy redistribution 3—52720
$CsH_{2(1-x)}D_{2x}PO_4$, ferroelectric, dynamic dielec. props., deuteration effects obs. 3—19076
CsH_2PO_4 quasi-1D ferroelec., permittivity and relax., Ising model study 3—23856
$Cu_3B_7O_{13}Cl$, low freq. dielec. relax. in paraelec. and ferroelec. phases 3—52716
$Fe_3B_7O_{13}I$, low freq. dielec. relax. in paraelec. and ferroelec. phases 3—52716
Fe_3O_4, mag. and dielec. relax., permeability and permittivity meas. 3—14214
$(KBr)_{1-x}(KCN)_x$, dielectric response, relax. time distrib. 3—19049
$KTaO_3$:Li, collective effects in random-site elec. dipole system 3—38716
LaF_3, pure and alkaline earth doped, elec. props. 3—23078
Mn-Zn ferrite, mag. and dielec. relax., permeability and permittivity meas. 3—14214
NaCl:Bi, dielec. const., losses and conductivity 3—19034
NaCl:Ca^{2+}, OH^-, relax. phenomena 3—34031
Na_2O-Fe_2O_3-NiO-B_2O_3-P_2O_5 glass ceramics, crystallised, mag. and elec. props. *(Japanese)* 3—58144
PVC:$3PbO.PbSO_4.H_2O$, dielec. relax., thermally stimulated depolarisation current 3—28760
a-Si solar cell structs., dielectric relax. contrib. to freq. dispersion of junction admittance 3—14951
V_2O_5-B_2O_3-CaO, AC dielectric losses, elec. cond. 3—52724
V_2O_5-TiO_2-P_2O_5 glass, anomalous dielec. relax. spectra 3—38758
α-$Zr(HPO_4)_2.H_2O$ and organic derivatives, dielec. props. 3—43478

dielectric resonance
see also dielectric relaxation; paraelectric resonance
electrically excitable mech. reson. in piezoelectric and ferroelectric materials 3—52735
$Ba(Zn_{1/3}Nb_{2/3})O_3$-$Sr(Zn_{1/3}Nb_{2/3})O_3$ solid solution ceramics with temperature-stable high dielectric constant and low microwave loss 3—34025
$SbS_{0.7}Se_{0.3}I$, ferroelec. phase transition, MM reson. dielec. dispersion 3—57864

dielectric strength *see electric strength*

dielectric susceptibility *see optical susceptibility*

dielectric thin films
see also ferroelectric thin films; insulating thin films; optical films; piezoelectric thin films
ATR zero-reflection conditions for metal and dielectric film optical constant meas. 3—49430
bulk charging by low energy electron irrad. 3—19064
columnar and nodular growth of thin films 3—18571
fluoroethylenepropylene thin films, spatial charge distrib. meas. 3—25897
optical films, slightly absorbing, optical const. determ. by reflection method 3—52863
permittivity, high-accuracy meas. for polydisperse, liquid and solid dielec., high absorption at microwave freq. 3—20875
permittivity and thickness meas. using surface EM waves 3—54746
piezoelectric substrate with dielec. layer, Love surface waves, dispersion eqn. 3—33552
plasma enhanced beam deposition and elec. props. 3—39044
polyethylene, elec. ageing, mech. load influence *(Russian)* 3—43482
polyethylene terephthalate thin films, electron beam probing of space charge 3—3645
polymer, irradiated films, trapped-charge profile meas. using laser-induced press. pulse 3—10865
polymer film dielectrics, conduction/displ. current meas. in plane-parallel capacitor, electro-acoustic transducer 3—10863
polymer film electrets, elec. cond. temp. depend., rel. to thermally-stimulated depolarisation current spectra *(Russian)* 3—43479
polymer films, piezoelectric and pyroelec. effects 3—57862
polypropylene polycarbonate blend films, polarisation and depolarisation studies 3—47594
polystyrene:copper phthalocyanine films, electret characts., TSD studies 3—57856
polystyrene:copper phthalocyanine films, pure and doped, photopolarisation 3—57857

dielectric thin films continued
polyvinylidene fluoride film, uniaxially oriented, piezoelectricity 3—52737
Polyvinylidenefluoride films, thermally poles, charge compensated polarization zones obs. 3—14201
pyroelectric thin film IR detector, optimum operating conditions 3—49452
review 3—52732
thermophysical characts., heat conduction eqn. soln. 3—7373
thickness meas. of transparent dielectric films, by interference method 3—45110
Al-(Al_2O_3/SiO_2)-Si struct., double dielec. layer form by DC plasma anodization 3—13918
Al-Mg-Si-Cu-Cr-Fe-Mn (0.98, 0.68, 0.26, 0.2, 0.09, 0.05 wt.%), barrier anodized coating characts. 3—3018
Al-polymer-Al (Au), thin film form. by plasma polymerisation, elec. property meas. 3—13921
Al_2O_3 thin film, plasma enhanced beam deposition and elec. props. 3—39044
Au thin island film, dielectric props., statistical theory 3—3635
Er_2O_3 thin films, dielec. const. and loss factor meas. 3—47604
Sb_2O_3 films, dielec. props. meas. 3—52705
Se films, slightly absorbing, optical const. determ. by reflection method 3—52863
Si_3N_4 amorphous films, photoluminesc. study 3—34146
SiO_2, masking props. during diffusion of Fe in GaAs 3—8257
SiO_2 RF reactively sputtered coatings on Si, MOS capacitor struct. dielec., props. 3—51978
SiO_2 thin film, plasma enhanced beam deposition and elec. props. 3—39044
SiO_2:P^+, laser irrad. effect on film struct., IR transmission spectroscopy 3—18575
SiO_x dielec. sublayer on $LiNbO_3$ substrate, SAW amplification, deposition conditions effects 3—33553
TiO_x, sputtered coatings, formation and struct. 3—43732

dielectric triodes *see space-charge limited devices*

dielectric waveguides
see also optical waveguides
acoustic waveguide, piezoelectrically active, normal modes, dispersion relations, numerical anal. 3—27290
conference, integrated optics and MM/microwave ICs, Huntsville, AL, USA (Nov. 1981) 3—16071
curved channel dielectric waveguide bend, radiation loss 3—17640
curved dielectric optical waveguides with reduced transition losses 3—7169
gas-dielectric optical waveguide, asymmetric, loss of light calc., geometrical optics 3—7173
inhomogeneous slab waveguides, uniform asymptotic technique for wave propag. anal. 3—32467
inhomogeneous slab waveguides embedded in homogeneous media, wave propag. anal. 3—32466
metal spheres and cylinders in dielectric waveguide, surface shape testing rel. to phase change 3—30840
near field distribution meas. around slanted end of rectangular waveguide 3—25895
planar metal-insulator heterostructure, antireson. in absorpt. spectrum of directed TM modes 3—47424
radiation loss systems, variational principle appl. 3—36902
semiconductor stripe-contact injection lasers, modal props., dielec. waveguide model 3—37032
slab waveguides, integral eqn. method for EM scatt. of guided modes by boundary deformations 3—46137

dielectrics *see dielectric materials*

diesel engines *see internal combustion engines*

difference amplifiers *see differential amplifiers*

difference equations
acoustic wave rel. and density profiles, construction from refl. coeff. ang. depend. 3—37266
binary diffusion finite difference solution, FORTRAN programs 3—29902
cholesteric liquid crysts., field-induced cholesteric-nematic transition in case of homeotropic boundary conditions 3—42517
composites, layered, volumetric shear wave propag. 3—37411
convection-dominated diffusion, combination of method of characts., finite element and finite difference procedures 3—16316
difference-differential eqn., exact and inexact soln. 3—35818
diffusion problems soln. in r-θ geometry, alternating direction implicit methods 3—1926
elastic bodies of finite dimensions, axisymm. problems, difference-type solns. 3—7409
elastic kinetics, stress calc. method 3—35842
elastic wave propagation and scattering theory, advances in num. models 3—25768
elasticity theory, convergence of difference schemes for second boundary-value problem *(Ukrainian)* 3—20633
electrodynamics, EDIP software for automatic soln. of problems *(Russian)* 3—17407
fluid, semi-infinite layer, dilatational and gravitational wave propagation, numerical analysis 3—37509
gas dynamics, stable boundary approxs. for implicit time discretisation 3—27543
Helmholtz eqn., finite-difference solns. to boundary-value problems 3—53912
hyperbolic conservation laws, upstream differencing and Godunov-type schemes 3—49164
laminar flows, evaluation of upwind, hybrid and quadratic finite difference schemes 3—22418
mechanical impacts, repeated, with sinusoidally vibrating plate, dynamics calc. 3—12506
model convection-diffusion eqn., discrete weighted mean approx. 3—27505
nonintegrable difference eqns., analytic treatment 3—30604
parabolic flows, three-dimensional, streamwise computation 3—37516
plate, skew, deflection, block overrelaxation methods for non-rectangular co-ordinates 3—37343
plate response to random loads, finite difference analysis 3—1986
quadrilateral finite difference plate element for nonlinear transient analysis of panels 3—22329
tidal flows in Arabian Gulf, finite difference model 3—29927
time-symmetric self-interaction 3—21058
torus, elastic, difference scheme for equilib. problem 3—81
triple exponential decays, S/N requirements for extracting parameters using noniterative procedure 3—45790

difference equations continued
unrestructured sphere-pac fuel, model for effective thermal cond. 3−890
Zircaloy-4, oxidation kinetics simulation, temp. transients, 600-800°C 3−39298

difference frequency generation (optical) *see optical frequency conversion*

differential amplifiers
bioinstrumentation FET cascode preamplifier design criterion for interference minimisation 3−24930
flow differential pressure measurement appl. 3−12789
isolating biopotential single-transformer amplifier 3−24897

differential analysers
SiC fibre reinforced Al alloys, fibre/matrix interaction, prep. and strength *(Japanese)* 3−47804

differential calculus *see differentiation*

differential equations
see also boundary-value problems; difference equations; Green's function methods; integro-differential equations; linear differential equations; Navier-Stokes equations; nonlinear differential equations; partial differential equations
Abel's cubic differential eqns., nonlinear superposition rule 3−64
acoustic wave scatt., inverse problem in three dimens., optimal soln. approx. 3−17653
arc, circular, varying cross section, natural freqs., transfer matrix method 3−22361
asymptotic theory for a critical class of fourth-order differential equations 3−61
bars, cross-sectional distortions, first order differential eqns. for axial deform. *(German)* 3−7419
calculus of variations applied to continuum physics, inverse problem 3−30620
celestial mechanics, matrix formulation of Picard method for parallel computation 3−48830
circular tube flow, transitional boundary layers, flow development 3−37569
cochlear mechanics, higher-order differential eqns. 3−19725
composites, layered, three-material, periodic wave propag. normal to layer direction 3−37413
constitutive equations of the differential type as approximations 3−30617
crash simulation, triangular plate bending finite element 3−22345
creep, kinetic eqn. for damage parameter change, variation 3−18378
deformable dielectrics with polarisation gradients, one-dimens. shock wave behaviour 3−1990
dielectric nonlinear absorbent, wave propag., differential eqn. soln. *(Italian)* 3−7065
disc, differences between isotropic and anisotropic states of stress *(German)* 3−7420
disperse stream, one dimensional two-speed flow, Cauchy problem, hyperbolicity, stability 3−42285
dynamic systems, topological study 3−30597
dynamical system, analytic struct. and integrability 3−30777
elasticity, compactness of support in fourth-order problems 3−40367
elliptic membrane vibrs., iterative method for charact. value problem *(Japanese)* 3−12581
Ernst eqn. study using Backlund transformation 3−10668
evolution equations with high order conservation laws, structure 3−49145
fatigue accumulation, Markovian models, stochastic differential eqn. 3−7490
few particle Schrodinger eqn., exact bound state solution from Raleigh-Schrodinger perturbation theory. 3−5648
finite microscopic system, fluid dynamics, chaos 3−22416
frictional adhesion, dynamic criteria, for frictional clutch 3−34604
gaseous ellipsoid with repulsion between particles, expansion into vacuum 3−22562
geodynamic eqn., solution in elliptical coordinate system for whole Earth 3−58893
gravitation, scalar-tensor theory, static plane-symmetric soln. 3−40452
heat eqn., equivalence problem 3−20802
Heisenberg spin chain, anisotropic, and nonlinear Schrodinger eqn. 3−30805
high frequency wave propagation in coupled Yang-Mills, scalar, and spinor fields 3−45275
Huygens' principle 3−40344
hydrodynamic differential eqns., soln. asymptotic approach 3−27476
hyperbolic heat transfer with reflection 3−7379
jump type one-dimens. stochastic differential eqns., soln. pathwise uniqueness 3−49269
Lie-Backlund transformation and ordinary differential equations associated with some nonlinear equations 3−30630
linear stochastic differential eqns., statistical measures for soln. processes, existence and uniqueness 3−174
Lorenz equations, approx. analytic soln. from multiple-time perturbation theory 3−40345
Lorenz system, topological character, periodic solution in 3-D ordinary differential eqn. 3−40493
mechanics, equilibrium problems, stability and convergence of solns. using Lyapunov functions 3−20613
monopole solitons 3−5993
multidimensional heat transfer eqns., soln. and reduction methods 3−42236
natural free convection from horizontal cylinder at small Grashof numbers 3−46565
optical band plane and circular dielec. waveguides, theory of synthesis *(Russian)* 3−37184
Painleve II eqn., one-parameter family of solns. 3−20606
parabolic, moving boundary problems, 'real world' appls. 3−24217
parallel flow multichannel heat exchangers differential eqns., coeff. matrix props. 3−51045
paraxial ray equation, axial field distribs. and analytical solns. 3−12062
phase transitions, approximate renormalisation group transformation, differential eqn. 3−5760
plane deformation of compressible materials 3−24315
plane wave fourth moment differential eqn. numerical soln. for propag. in random medium 3−26943
Poisson noise, white and coloured, to drive Brownian particle, generalised master eqns. 3−30786
probability density, differential eqns. and ordered cumulant technique 3−10749
pseudodifferential eqns., comparison theories 3−20607
ring gas laser in a mag. field, nonlinear interaction between elliptically polarised waves 3−17489

differential equations continued
sandwich beam, damped, flexural vibr., differential eqns. 3−7480
Schrodinger equation, coupled channel, spherical delta function approx. method 3−16161
Schrodinger equation, gauge equivalence to one-dimensional integrable classical spin model, gauge equivalence to nonlinear Schrodinger eqn. 3−18839
second order coupled eqns., multipoint algorithms 3−16739
shells of revolution flexible nonhomogeneous, axisymm. deform. 3−42135
Spitzer's one-dimensional lattice model, local stability and hydrodynamical limit 3−194
spontaneous predictivisation, predictive differential eqns., retarded EM eqns. of two point charges 3−10577
stable resonance motions, extremal props., differential eqn. system 3−20610
stable solutions, Euler approx. method 3−49121
stationary Gaussian process, finite multiple Markovian prop., stochastic diff. eqn., fluctuation-dissipation theorem 3−20765
statistical hydromechanics with the Gaussian, nonwhite random force action 3−54625
Stefan problem, multidimensional two-phase, error estimates 3−22303
stochastic differential equations for Euclidean quantum theory 3−16181
supersymmetric field theories and stochastic differential eqns. 3−10988
thermal ignition in a reactive slab with unsymmetric boundary temperatures 3−40536
time-symmetric self-interaction 3−21058
toroidal equilibr., minimum energy, stability, variational principle 3−51370
toroidal helical field for plasma confinement, approx. anal. 3−42430
viscous incompressible oscillatory fluid flow in elastic tube 3−46644
wave propagation in immovable body with smooth boundary 3−20640
weakly ionised magnetised plasma, random fluctuation effects on cond. 3−51287
Yang-Mills eqns. with nonzero current, special solns. *(French)* 3−40744

differential scanning calorimetry *see thermal analysis*

differential thermal analysis *see thermal analysis*

differentiation
see also differential equations
astronomical spectroscopy, appl. of derivative techniques 3−59222
Lagrange interpolation of function and derivatives, n-order matrices 3−10553
Navier-Stokes eqns., higher order accurate fully discrete Galerkin approx. 3−22413

diffraction
see also acoustic wave diffraction; diffraction gratings; diffractometers; electromagnetic wave diffraction; electron diffraction; neutron diffraction
crack, near-surface, diffr. of plane SH waves soln. 3−37429
crack characterisation by combined use of time-domain and freq. domain scatt. data 3−37428
oblique wave diffraction by infinite cylinder, hybrid integral eqn. method. 3−12686
ocean waves, theory and expts. for combined refr. and diffr. near breakwater 3−15457
random waves in solids, evolution and diffraction 3−16145

diffraction gratings
see also holographic gratings
aberration-corrected concave gratings for optical demultiplexers 3−56306
afterimage visibility threshold 3−9594
arbitrary symmetric profile gratings in the quasi-static limit 3−17437
astronomical faint-object spectrograph design 3−20247
binary phase gratings for star couplers with high splitting ratio 3−32464
blazed, electron beam lithographic fabrication 3−32513
Bragg electrooptic rectangular waveguide coupler 3−56316
concave, aberration-corrected gratings, mechanically ruled, for flat-field grazing-incidence spectrograph 3−45252
concave diffraction gratings for monochromators, aberration props. of optical systems 3−27223
concave toroidal diffraction grating, non-astigmatic mounting 3−12301
couplers, ion implanted, for optical waveguides, fabrication 3−37175
curvilinear, generalised, image diffr. patterns 3−46277
curvilinear, generalised ray equations and caustics 3−46278
DFB, higher-order, and light generation 3−27035
dielectric surface relief gratings, diffr. analysis 3−7157
dye activated PMMA element, dynamic diffr. grating rel. to DFB mechanism 3−56192
dye laser, pulsed, compound cavity tuning with grazing-incidence grating *(Chinese)* 3−41897
dynamic gratings, optically induced, light wave diffr. in waveguide plane 3−7158
echelette gratings, modal theory 3−46158
echelettes, with absorbing faces, wave scatt. theory 3−32453
echelle gratings, blaze characts. 3−22192
electrooptic grating array uses, integrated optical light modulator 3−17639
EM wave reflectivity and surface polaritons 3−52043
free-standing diffracting transmission grating fabrication for use in X-ray astronomy 3−22194
generators, nonlinear processes, free electron lasers 3−12162
grating demultiplexers with printed geodesic lenses in glass 3−42033
grazing incidence gratings and mirrors, performance in VUV 3−7155
grazing incidence monochromator using transmission gratings, throughput analysis 3−7146
grazing incidence systems, aberration reduction or toleration 3−7115
ion-etched X-ray and EUV diffraction gratings, manufacture and meas. 3−5928
IR detector, sensitivity anal. using acoustooptical interaction with grating in a light pipe 3−40691
laminar sinusoidal and triangular groove gratings, VUV relative efficiency 3−7153
laser cavity with grating and spherical mirror, theoretical analysis *(Chinese)* 3−12186
laser characteristics meas. with diffr. coupler 3−7049
laser-Doppler velocimeter, two-grating method for beam splitting and frequency shifting 3−27624
light modulation by US progressive wave associated with optical amplitude grating, irradiance, Fourier series 3−56139
linac, laser-driven, beam stability, grating error depend. 3−17145
linac, laser-driven, transverse stability requirement 3−17108
linear-chirped grating filter response, asymptotic approx. 3−41965

diffraction gratings continued
liquid interface viscoelastic props., surface fluctuation scatt. using grating heterodyne spectroscopy 3—3747
masking interactions between chromatic and luminance gratings, colour vision 3—34856
mechanical ruling of gratings 3—7242
metal grating, reflection rel. to surface smoothness 3—46276
metallic, surface impedance boundary condition, optical and IR image 3—46279
metallic crossed gratings, doubly-periodic, roughened, diffr. problem soln. 3—1558
metallic diffraction grating problem, conformal mapping method for a good real conductor 3—17436
microwave reflection grating of rectangular bars, diffr. of two-dimens. Gaussian beams 3—36923
moire, computer generated for Talbot interferometer 3—36077
moire deflectometry, infinite fringe, using two Ronchi rulings 3—10889
moire fringes, filtered, contrast rel. to diaphragm shape 3—26939
moire techniques developments in Japan *(Japanese)* 3—10893
multichannel duplex fibre-optic communication line operating at the wavelength of ~1.3 μm 3—37241
multiechelle grating mountings with high spectral resolution and dispersion 3—22193
multiple-prism-grating beam expanders for pulsed dye lasers, dispersion theory 3—12284
narrow-band filter consisting of two aplanatic gratings 3—27215
neutron diffr. grating interferometer for very cold neutrons 3—41368
organic liquids, depolarised Rayleigh scatt., direct interferometric and grating meas. 3—14313
particle accelerators, laser-driven, struct. obscuration by plasma form. 3—17111
perfectly conducting gratings, generalised reciprocity relations 3—12303
perfectly conducting gratings, optimisation 3—46280
periodic multielement strip gratings, scatt. parameters 3—12041
phase diffraction grating, nonsinusoidal, Fresnel diffr. region light intensity distrib. 3—6880
phase gradients, real-time moire meas. 3—16410
planar metallic nonrefracting transmission-grating profile optimisation, soft-X-ray range 3—32452
plane aspherised grating spectrographs, optical designs 3—30203
plane grating, operator algebra approach to optics 3—1554
plane grating monochromator with off-axis parabolical mirrors 3—27221
PMMA, submicrometer periodic grating as artificial birefringent material 3—50745
PMMA overcoating dielec. layers, far IR surface plasmon coupling 3—27226
polyethylene overcoating dielec. layers, far IR surface plasmon coupling 3—27226
projection moire with moving gratings for automated 3-D topography 3—54766
quasiperiodic spatial structure geometrical parameter anal. using a coherent optical spectrum analyser 3—27227
radiotherapy patients positioning using laser and interference transmission grating 3—53770
reflecting optics for synchrotron radiation, conf., Upton, NY, USA (Nov. 1981) 3—5480
reflection grating method, slope and curvature meas. appl. 3—40547
reflection gratings, pure, rigorous coupled-wave anal. 3—50606
reflection gratings analyses, comments 3—50607
SAW grating integrated optic spectrum analyser 3—27269
SAW phase distribution meas. optical probe method with reference grid *(Russian)* 3—40658
semiconductor, light diffraction by inhomogeneous transient gratings 3—17585
semiconductor, self-diffraction from laser-induced orientational gratings 3—27138
semiconductor material waveguides, light wave diffr. by dynamic gratings 3—7159
semiconductor surface, dynamic grating, optical phase conjugation obs. 3—12249
soft X-ray optics, high resolution, conf., Brookhaven, NY, USA (Nov. 1981) 3—16070
spatial frequency colour encoding by Fresnel images in proximity of twin-gratings 3—41777
spectrograph, ultrafast laser pulse formation with predetermined temporal shape 3—27117
square wave gratings, eigenfunctions, appl. to diffr. and surface plasmon calcs. 3—1759
stimulated multiphoton effects on a diffraction grating 3—27228
surface EM waves, excitation and detection by diffr. gratings over broad spectrum 3—12305
synchrotron radiation optical components and systems, introduction 3—7114
Talbot effect appl. to meas. optical beam collimation *(Chinese)* 3—10891
thin phase grating for optical fibre power splitter with selectable splitting ratio 3—22218
toroidal mirror-toroidal grating combinations, visible UV optical design 3—7117
transient light induced gratings, diffr., three wave mixing, fast relax. processes 3—22152
transmission dielectric grating use in colour and black-and-white reproduction 3—56136
ultraprecision machining of optics at Los Alamos 3—7232
US wave diffraction grating, high-order Bragg refl. 3—34069
VUV spectroscopy, high resolution, review 3—10919
waveguide laser with curved grating 3—1673
wavelength division multiplexing, status and trends 3—42031
wavelength division multiplexing without polarisation problems 3—42032
X-ray measurements, high-resolution, current developments 3—10972
Au, polystyrene thin film coated, Raman scatt. 3—38811
Au X-ray transmission gratings, fabrication and appl. in spectroscopic laser produced plasma diagnostics 3—22195
$CdS_{1-y}Se_y$ waveguides, light wave diffr. by dynamic gratings 3—7159
CdTe, carrier lifetime determ., dynamic phase grating method 3—18720
GaAs grating structures preparation by photochemical etching *(Slovak)* 3—46357
GaAs:Cr, carrier lifetime determ., dynamic phase grating method 3—18720
$GaAs_{0.15}P_{0.85}$ waveguides, light wave diffr. by dynamic gratings 3—7159
$GaAs_{1-x}P_x$ waveguide, light wave diffr. by optically induced dynamic gratings 3—7158

diffraction gratings continued
GaP semiconductor surface, diffr. grating produced by laser beam annealing 3—12304
p-Ge, CW laser induced dynamic grating and subpicosecond hole relax. time 3—46254
p-Ge, laser induced dynamic grating, subpicosec. hole relaxation time, Bragg diffr. study 3—50696
Ge, orientational effects, picosec. transient grating meas. 3—1690
Ge, picosecond optically induced anisotropic state filling, transient orientation gratings 3—7062
InGaAsP 10 kHz linewidth 1.5 μm external cavity laser with 55 nm tuning range 3—37030
InP surface corrugations fabricated using electron lithography for InGaAsP DFB lasers 3—6968
$LiNbO_3$ diffused optical waveguide, corrugated grating for exciting surface waves 3—1765
$LiNbO_3$:Ti electrooptic grating deflector/modulator investigation 3—22196
Ni replicated gratings, potential use in high energy lasers and monochromators 3—7156
Si concave diffraction grating for optical demultiplexer 3—56343
Si_3N_4, submicrometer periodic grating as artificial birefringent material 3—50745

diffraction instruments *see diffractometers*

diffraction model
constituent model, inelastic diffraction, slope-mass correlation 3—45380
diffractive elastic amplitude construction using multiparticle unitarity 3—54898
geometric derivation of diffractive multiplicity distrib. 3—21150
shadowing in diffractive processes, A-dependence 3—49659
$\gamma N \to \psi' X$, 150 GeV, diffractive ψ' photoproduction cross section meas. 3—40913
$\gamma p \to pX$, diffraction dissociation 3—36285
$\gamma p \to \rho^0 p(\omega p)$, 20-70 GeV, cross section, diffractive process 3—26124
$K^- p \to K^- \phi p$, 8.25 GeV/c, dissoc. of K^- into $K^- \phi$ system 3—659
$K^+ p$, 32, 70 GeV/c, energy, charge and quantum number flow, inclusive and exclusive jets 3—45422
$K^+ p \to K^+ p \pi^+ \pi^-$, 70 GeV/c, total cross-section, domination by diffractive dissoc. 3—26150
pN, 350 GeV, charm prod. meas. using prompt muons 3—31242
$pn \to \Delta^{++} X$, 19 GeV/c, cross sections, peripheral and diffractive Δ^{++} prod. 3—40931
$\bar{p}p$, 22.4 GeV/c, inelastic and diffraction dissociation, multiplicity distribs., e^+e^- comparison 3—49709
pp, differential cross-section meas., Lasinski model, small angle, 650→1000 MeV 3—49696
$\bar{p}p$ diffractive scatt., SPS energies, total cross sections, axiomatic field theory test 3—11206
$pp \to pX$, diffraction dissociation 3—36285
$pp(p\bar{p})$, diffractive scattering 3—36272
$\pi^- p \to K^+ \pi^+ K^- p$, 11.46 GeV/c, $K^+ \pi^+ K^-$ system partial wave anal. 3—54929
$\pi^- p \to \pi^0 n(\eta n)$, differential cross section scaling and predictions for inelastic charge exchange processes 3—16664
$\pi^+ p$, 32 GeV/c, energy, charge and quantum number flow, inclusive and exclusive jets 3—45422
$\pi^\pm p \to \pi^\pm \pi N$, 6, 16 GeV/c, diffr. dissoc., quark-parton model aspect 3—26138

diffractometers
see also X-ray diffractometers
neutron, 4-circle diffractometer 3—7872
neutron, Disk, encoder design and operation 3—13043
neutron scattering facilities at the McMaster nuclear reactor 3—6497
neutron time-of-flight diffractometer, multidetector, in Fakel accelerator 3—2344

diffusion
see also biodiffusion; diffusion in gases; diffusion in liquids; diffusion in solids; electromigration; membranes; osmosis; permeability; self-diffusion; surface diffusion; thermal diffusion; turbulent diffusion
1/f fluctuations in space dimensions less than 1 3—49295
active trigger medium, with diffusion, switching front stability 3—25763
advection-diffusion problems, comparison of current numerical methods 3—46564
aerosols, filtration, diffusion collection efficiency of fibres 3—7685
agarose gel, proton diffusion, quasielastic neutron scatt. study 3—15039
alternating direction implicit methods for 3—1926
asymmetric bistable potentials, exact diffusion results 3—45096
atmosphere, advection, diffusion and aerosol coagulation in plume from cross-wind line source 3—4423
atmosphere, control of homopause level by breaking internal gravity waves 3—5004
atmosphere, diffusive model of turbulent mixing of dry and cloudy air 3—15587
atmosphere, vertical struct. of eddy diffusion coefficient in planetary boundary layer 3—4904
average time constant determination, appl. of Ritz variational method *(German)* 3—40525
Backlund transformations for diffusion equations 3—16315
binary liquid mixtures with fast chem. reactions, convective instabilities onset 3—53408
bistable chemical system, stochastic simulation, two-box model 3—20771
boundary layer stability, spectral theory, diffusion eqn. 3—32713
Brownian macroparticles, interacting, self diffusion, conc. depend., nonhydrodynamic contrib. 3—45093
Brownian particle absorption by black sphere, Fokker-Planck eqn. and diffusion eqn. 3—54673
Brownian particle in two-dimensional periodic channel, effective diffusion coeff. 3—30787
bubble growth threshold, rectified diffusion, generalized eqns. 3—17960
Burger's eqn., diffusion and dispersion errors of flux corrected upwind method 3—54692
chaos and diffusion in a sinusoidal potential with a periodic external field 3—45067
charged spherical Brownian particles, self-diffusion coeff. 3—20764
chemically reacting flow systems modelling 3—4288
cluster form., diffusion controlled, in 2-6 dimensional space 3—58454
cluster formation, diffusion-controlled in two, three, and four dimens. 3—34655
convection diffusion equation, numerical solution 3—49297

diffusion continued

- convection-dominated diffusion, combination of method of characts., finite element and finite difference procedures 3—16316
- Coulomb lattice-gas, self-diffusion 3—16310
- coupled reaction-diffusion cells, strange attractors 3—16314
- coupled reaction-diffusion cells, transition to chaos via two-torus 3—183
- crystal growth optimisation with diffusion 3—27867
- Debye-Smoluchowski eqn., generalised, closed-form soln. 3—20804
- degenerate nonlinear diffusion problem, stabilisation of solns. 3—30815
- diffusion-controlled reactions, boundary conditions, and reversibility 3—58408
- diffusive transport across corrugated plates and tubes 3—49291
- directed diffusion in a percolation network 3—54677
- disordered materials, transport props., integral representation of incoherent field, multiple scatt. theory, pair correlations 3—23347
- dispersive diffusion-controlled monomolecular and bimolecular processes *(Chinese)* 3—2160
- drops, evaporation at arbitrary differentials of temp. and densities 3—27372
- eddy diffusivity and viscosity of heat into fluid flow 3—51100
- equivalent diffusivity, freq. depend. 3—45095
- equivalent time constant, determ. by Ritz var. method 3—45094
- ergodic hypothesis, time and space summation single-atom detection method investig. 3—42346
- excitation transfer and trapping in the presence of anisotropic diffusion 3—8445
- extended Brownian dynamics for reactive nonlinear diffusion 3—54674
- fluid flow at a wall, two-dimensional random walk study 3—30784
- fourth order diffusion; boundary value problem soln. 3—45092
- GD 40, hot He-rich white dwarf star, diffusion theory rel. to Fe and Mg abundances 3—54364
- global reaction, linear asymmetric kinetic networks, diffusion coupling 3—22550
- heterogeneous media, heat and mass diffusion, partial differential eqns. 3—37332
- horizontal particle mixing in a free fluidized bed 3—37559
- HTGR, metallic fission products, diffusion in graphitic fuel elements, Cs, Ag, Ru concs. 3—21414
- irreversible processes under random thermal fluctuations, thermodynamic criteria 3—25837
- jump Markov processes, weak convergence, stability props. 3—16259
- laminar flame propag., finite element anal. 3—58426
- laminar premixed flames, stability limits, hydrodynamics and diffusion effects 3—22424
- laminar Stokes flow, reacting particle convective diffusion 3—7575
- ledge growth kinetics, multistep interactions 3—8169
- linear diffusion equations and Lie and Lie-Backlund transformation groups 3—227
- medium with static traps, diffusion, long-time traps 3—28142
- meteor trails effect of inelastic collisions and diffusion cooling on electrons cooling time 3—15670
- microscopic dynamics and macroscopic laws 3—5750
- model convection-diffusion eqn., discrete weighted mean approx. 3—27505
- moving boundary considered as wave propag. 3—51143
- multicomponent mixtures, mass transfer linearized eqn. soln. 3—25831
- multiwell potential, spatially varying viscosity, Brownian motion 3—5716
- nonequilibrium statistical correl. decay, optimal control 3—30781
- noninteracting particles, diffusion coeff. relax., Boltzmann eqn. anal. 3—16318
- nonlinear diffusion eqn., waiting time behaviour 3—5752
- nonlinear diffusion equation, boundary-initial value problem 3—45098
- nonlinear diffusion equations, Lie point symmetry groups 3—40526
- nonlinear diffusion equations and Lie and Lie-Backlund transformation groups 3—227
- nonlinear discrete dynamics, chaos induced diffusion 3—5749
- nonlinear eqn. 3—54691
- nonlinear Langevin eqn. with quadratic noise 3—20768
- nonlinear problems, conf., Los Alamos, NM, USA (March, 1981) 3—16085
- nonlinear reaction-diffusion eqns. solns. in two-space dimensions 3—16313
- nonlinear resonances, diffusion during multiple passage 3—17134
- nonspherical clusters, diffusion-controlled colloidal growth rates 3—53448
- numerical method for convection-diffusion equation with small viscosity coefficient 3—7573
- BP Octantis Am star, diffusion rel. to 3-day light vars. 3—25449
- one-dimensional diffusion in bistable pot., exact soln. 3—25832
- one-dimensional disordered systems, diffusion, effective medium approx. 3—20805
- one-dimensional lattice with random asymmetric transition rates, diffusion 3—20784
- passive scalar diffusion, scalar closures appl. 3—22428
- percolating clusters, anomalous diffusion, rel. to AC cond. and dielec. const. in high freq. limit 3—30807
- percolation clusters, scaling behaviour of diffusion 3—54689
- percolation clusters at criticality, diffusion 3—20779
- planetary atmospheres, control of homopause level by breaking internal gravity waves 3—5004
- porous media, approximation of quasi-variational inequation *(French)* 3—17968
- radiative transfer, theory of flux-limited diffusion with relativistic corrections 3—54220
- random walk model in double diffusion 3—16311
- reaction-diffusion processes, appl. of exact algorithm for d-dimensional walks on lattices with traps 3—10759
- reactions, diffusion-controlled, cluster expansions 3—34605
- renormalized diffusion in systems with periodic variables 3—16257
- Ritz penalty method for solving the control of a diffusion equation 3—50900
- rotating interior flow, viscous spin down, appl. to oceans 3—15471
- scalar transport, higher order numerical scheme 3—2017
- scattering kernels of finite rank, test particle diffusion with external conservative fields, Ohm's law deviations 3—5660
- segmentally flexible macromols., hydrodynamic resistance and diffusion coeffs. 3—50557
- slab of finite thickness, charged test particle diffusion, density profiles 3—35944
- solar cosmic ray particles propag., diffusion model rel. to effects of interplanetary medium struct. 3—15785
- solute dispersion moments in pipes or channels 3—46649
- stiff and convection-diffusion eqns. solved by adaptive spline function 3—49163

diffusion continued

- stochastic H-theorem for multidimensional diffusion processes 3—30782
- stochastically gated diffusion-influenced reactions 3—14838
- sulphate aerosol dynamics in atmospheric plumes, model 3—4422
- test particles, nonlinear diffusion in presence of external conservative force 3—20803
- transient mass transfer with suction at phase boundary appl. to bubble in fluidised beds 3—51216
- turbulent diffusion, scaling, fractal statistics and intermittency 3—46530
- two-phase flow, homogeneous state stability to disturbances 3—32788
- two-phase medium, small particle ensemble transport, effective reaction rate, diffusion coeffs. 3—49293
- unconditionally stable diffusion-acceleration of the transport equation 3—10776
- viscous blob spreading on horizontal surface, nonlinear diffusion eqn. soln. 3—45099
- H recycling, thermally activated processes in fusion devices 3—18050

diffusion coefficient *see diffusion*

diffusion creep

- Coble creep, effect of impurities 3—28038
- fine-grained materials, low stress creep at intermediate temps., diffusional creep vs. grain boundary sliding 3—24304
- steel, stainless, austenitic, creep characteristics and self-diffusion coeffs., simultaneous meas. *(French)* 3—29137
- subgrain size, stress depend., dislocation generation and annihilation 3—18312
- superplastic flow, rate eqn., significance of dimensionless const. 3—22966
- Al_2O_3:Mn, Ti, polycryst., diffusional creep, enhancement by simultaneous doping 3—9122
- Mn-Zn ferrite, polycryst., diffusional creep 3—2659
- Ni-Cr-(Sb, Zr) alloy, creep fracture, Sb and Zr traces effect 3—47964
- Si_3N_4-MgO materials, compressive creep, activation energy, high temp. obs. 3—29126
- Sn-Pb (2, 38.1 wt.%), superplastic, role of Coble creep and interface control 3—39210
- U alloys, residual stresses and thermal stress relieving, classical diffusional creep mechanism 3—53168

diffusion in gases

- *see also self-diffusion in gases; thermal diffusion in gases*
- binary gas mixture, diffusion slipping at moderate density along flat surface 3—51166
- charge particle drift in strong elec. field, distrib. function moments in a neutral gas 3—27632
- chemical vapour deposition modelling, appl. to GaAs epitaxy 3—33594
- chemical vapour deposition modelling 3—34240
- diatomic vibr. nonequilib. gases with nonoverlapping bands, integral and spectral charact. 3—11782
- o-dibromobenzene, diffusion coeff. in air 3—37602
- o-dichlorobenzene, diffusion coeff. in air 3—37602
- diffusion of gas components in two-phase systems with vibrational perturbation 3—7637
- drift chamber, Xe-methane and Xe-CO_2 mixtures, diffusion effects 3—50149
- elementary kinetic theory of diffusion in gases 3—12802
- gain saturation in gaseous active media, influence of diffusion 3—36983
- gas mixture in capillary, barodiffusion and thermodiffusion 3—46677
- gas mixture in channels with arbitrary negative pressure, isothermal diffusion, kinetic coeff. meas 3—7683
- isotope separation, multiparametric optimisation of the process 3—32230
- liquid-vapour system, mol. exchange, vapour phase diffusion effects 3—47093
- metal vapours, diffusion in gases, transport props. and viscosities 3—42348
- particle deposition to spheres and cylinders in dilute gas-particle suspension 3—27633
- pulsed ICR expts., diffusion model for nonreactive ion loss 3—54811
- reacting particles, convective heat and mass transfer, at low Peclet numbers 3—42325
- real gases, nonstationary and isothermal diffusion 3—51267
- surface reaction of thermally conductive sphere moving in gas, heat liberation 3—32813
- H, spin-polarised, collision integrals, transport coeffs. calcs. 3—32833
- H-^{3}He(^{4}He), collision integrals, transport coeffs. calcs. 3—32833
- HF, diffusion coeff. in air, dosimetry meas. 3—27636
- He-Ne mixture, Na(K) diffusion coeffs. of normal states and states excited into lower reson. states 3—32836
- Hg vapour, effective electron-neutral diffusion coeffs. 3—46678
- N_2, electron transport, comparison of Monte Carlo and Boltzmann calcs., multi-term results 3—2177
- N_2O-Ar(N_2)(CO_2) mixtures, diffusion coeff. and viscosity meas. 3—7681

diffusion in liquids

- *see also electromigration; self-diffusion in liquids; thermal diffusion in liquids*
- adsorption-desorption equilib., nonlinear diffusion-convection eqn. 3—28215
- Bingham plastic fluid dispersion, effect of peripheral layer 3—42273
- charged particle liquids, single-particle motion 3—33061
- chemical reactions; dipolar nucl. spin relax. 3—45981
- chemical reactions, pot. energy surface saddle point 3—44046
- colloidal particles, diffusion, sedimentation and friction in soln. 3—58449
- concentrated hard sphere dispersions diffusion, two and three particle mobilities 3—38106
- concentration patterns in cross gradient free systems, solute reaction effects 3—29328
- cyclopropane, liq., mol. rot., extended diffusion model 3—18486
- double diffusive convection in heated fluid with added salt 3—27504
- electrochemical cells separator tortuosity 3—58489
- fluids, mol and at., rattling motions detection 3—2354
- fused salts, interdiffusion coeffs., conc. depend. meas., microgravity conditions *(German)* 3—8239
- gelatin swollen polymeric network, diffusion of methyl red dye by forced Rayleigh scatt. and time-lag technique 3—13497
- HOAB, molecular reorientation in nematic and smectic C phases, quasielastic neutron scatt. 3—13088
- hot dip metallic coatings on steel strip, surface characts. 3—4176
- inert gas condensed liquids, mass and size effect 3—27812
- ionic condensed liquids, mass and size effect 3—27812
- laminar stream in rectangular channel, diffusional deposition 3—7660
- liquid crystals, nematic and smectic, anisotropic translational diffusion of methane and chloroform, NMR spin echo study 3—28133
- macromolecular diffusion in nonuniform vel. gradients 3—28134

diffusion in liquids continued
measurement and prediction 3—18485
metal droplets, potentiostatic study of diffusion layer, natural convection case 3—53423
metals, Soret diffusion vs. impurity diffusion during laser or electron beam induced heat flow transients 3—56961
methyl alcohol-hexane solution, diffusion coeff. *(Russian)* 3—2864
methyl chloride liquid, rot. coupling effect from dipolar interactions *(French)* 3—52714
molecular reorientation with internal extended rot. diffusion in liqs. 3—23065
molten salts, single and multi-component systems, diffusion coeffs., data tables 3—25703
multicomponent liquid systems, diffusivities prediction 3—8235
Nafion membranes for three-electrode photoelectrochem. storage cells, transport props. 3—24612
nematic liq. crystals, impurity diffusion time depend. 3—18487
neopentane, liq. soln. with free radicals, diffusion consts., nucl. spin relax. 3—23823
neutron scatt., reson. epithermal, as condensed matter probe 3—7868
nitroacetophenone anion radicals, acetyl group restricted rot. anal. 3—56102
non-aqueous solvents, conf., Nantes, France (July 1982) 3—49079
particle mixing description in a boiling layer by a hyperbolic eqn. 3—28137
PMMA colloidal particles in conc. suspension, short-time self-mobility 3—51834
polarography, reversible kinetic and diffusion waves, comparison 3—9376
poly-m-phenylene isophthalamide solutions, sedimentation-diffusional and viscometric studies, mol. rigidity *(Russian)* 3—47144
polymer melt, chemical reactions, diffusion controlled, kinetics 3—39380
polymer melts, hindrance model *(German)* 3—42823
polymer melts, single chain diffusion process and proton mag. relax. 3—3568
polymer monolayer, colloid, diffusion kinetics of small mols. 3—38133
polymer solns., diffusion and viscosity, fluctuating hydrodynamic interaction effects 3—47142
polymer solns., gel-like modes in 'θ' solvents 3—28131
polymer solution, injection into turbulent boundary layer, drag of plate 3—32725
polymer solutions, pulsed gradient spin-echo diffusion 3—36895
polymer solutions, transport coeffs., variational bounds 3—47141
polystyrene in cyclohexane, temp. depend. of hydrodynamic dimensions, quasielastic light scatt. 3—38105
polystyrene solutions, benzene mol. mobility NMR study *(German)* 3—38109
reactive particle, convective heat and mass transfer at low Peclet numbers 3—17985
refractive index change rate, interdiffusion coeff., meas. by variable shearing interferometer *(Korean)* 3—36072
sodium dodecyl sulphate aq. micellar solns., positronium lifetime meas. 3—48100
solutions, energy diffusion-controlled-reactions 3—4263
symmetric top mols., rot. motion in liq. phase, extended diffusion model 3—18486
tetrachloromethane-acetone liq. mixt., diffusion coeff. 3—47139
toluene, liq., effect of methyl group rotation on ^{13}C nuclear dipole relaxation 3—28725
water, proton diffusion, quasielastic neutron scatt. study 3—15039
water in heterogeneous systems, quasielastic neutron scatt. 3—27820
water with aqueous polymer soln., H diffusion coeff. by CBS method *(German)* 3—42824
CS_2, liquid, time correlation functions for three centre Lennard-Jones model 3—27814
Cu solid cylinder dissolving in molten Pb-Sn alloys under dynamic conditions 3—2810
Fe alloys, liq., diffusion of N, alloying elements influence 3—8238
GaP, LPE, current controlled, mass-transfer parameters 3—14511
I, atom recombination in liq. state, diffusion theory 3—44049
InSb growth by controlled solidification, liq. state diffusion processes influence *(Russian)* 3—19287
LiCl-KCl, isotope distrib., countercurrent electromigration 3—47135
$LiNO_3$-KNO_3, isotope distrib., countercurrent electromigration 3—47135
$Li_{17}Pb_{83}$, liq., fusion reactor blanket material, H_2 solubility 3—55646
$NaNO_3$-$AgNO_3$ melts, interdiffusion coeffs., conc. depend. meas., microgravity conditions *(German)* 3—8239
Nb_3Sn tape with high crit. current, liquid-phase diffusion fabrication 3—14527
O_2 diffusion in blood plasma, transferrin effect 3—19655
PbTe-SnTe, liq., solutal diffusion coeff. 3—47132
SiO_2, spherical particles, self-diffusion, conc. depend., photon correl. spectrosc. obs. 3—28130
SiO_2-Na_2O glass melt, corrosion of vitreous SiO_2 under weightless conditions 3—39269
Tl-Te liq. alloys, electrotransport study 3—51833

diffusion in plasma *see plasma transport processes*

diffusion in solids
see also electromigration; ionic conduction in solids; self-diffusion in solids; surface diffusion
aggregates of regular packings of uniform spheres, diffusion analogy const. calc. 3—1948
$3Al_2O_3.2SiO_2$-Mo, mullite based composite, high temp. creep, diffusion-viscous flow 3—9118
alloys, dislocation creep, solute drag influence 3—2555
alloys, ion irrad., subsurface composition changes at high temp. 3—2621
alloys, ternary ordering, interstitial at. diffusion, method of average energies *(Russian)* 3—28144
aluminosilicate glasses diffusion processes and surface reaction, Rutherford backscatt. study 3—28168
anthracene, exciton annihilation const. and energy transfer rate 3—47268
atomic mixing of implant atoms, in depth-depend. diffusion approx. 3—18332
binary solid compound, diffusion coupled with reaction 3—13513
binary systems, laws governing mutual diffusion *(Russian)* 3—33488
blocking calculations by diffusion model, thermal effects 3—42688
bombardment-diffused coatings and ion beam mixing, review 3—28167
borosilicate glass, neutron irradiated, thermal release of T 3—55632
borosilicate glasses diffusion processes and surface reaction, Rutherford backscatt. study 3—28168
cluster form., diffusion-limited, mean field theory 3—57102

diffusion in solids continued
coarsening models, incorporating diffusion geometry and vol. fraction of particles 3—53056
Coble creep, effect of impurities 3—28038
concentrated lattice gas, diffusion theory 3—2871
conference, Perpignon, France (Sept. 1982) 3—20568
creep fracture, coupled power law creep and diffusion under multiaxial stress 3—9179
crystal, generalised eqns. 3—2872
crystal diffusion controlled growth, influence of homogeneous chemical reactions 3—2450
crystal growth rate with bulk, surface, and linear diffusion 3—33165
Darken experiment, approx. analytical demonstration 3—2893
dechannelling of particles, migration of light impurities, statistical 3—33512
deep Zn-diffusion in planar stripe lasers, stability of horizontal transverse modes 3—27046
diamond-type crystals, (111) surface, adsorbed H, thermal desorption spectra, diffusion effects, theory 3—57227
differential climb of inhomogeneously distributed dislocations during irradiation 3—18302
diffusion bonding to stainless steel using Al interlayers 3—24396
diffusion couples, thin film and bulk, growth kinetics 3—8268
dissociating materials, destruction by intense energy flux 3—53380
electrochemical cells separator tortuosity 3—58489
environmental cracking, effects of steady-state stress assisted diffusion 3—9239
epitaxial growth, impurity redistribution, theory 3—18582
epoxy systems, struct. changes, evaluation by moisture sorption-desorption and dynamic mech. studies 3—24268
eutectics, zone melting studies, review 3—24117
FCC metals, moving kink-mobile atoms anelastic interaction 3—42645
film interdiffusion, phenomenological description 3—18517
fluorapatite, fission-damage induced colour centres, absorption spectroscopy study 3—56889
forced pipe diffusion of mobile pinning points 3—33253
fusion reactor first wall, in-pile T permeation expt. 3—21507
fusion reactor first wall, T permeation calcs. 3—21508
fusion reactor material, dimensionless transport parameter for max. H inventory and release 3—17045
glass, chem. durability 3—34511
glass 3—13462
glass fibre reinforced epoxy composites, modelling of hydrothermal ageing 3—4062
glass fibre reinforced vinyl ester, diffusion of liq. into thick sections 3—23090
gradient optical wave guides, form. in glass substrates 3—32476
grain boundary and dislocation diffusion 3—47146
grain boundary diffusion, Fisher and Whipple models *(Russian)* 3—33486
grain boundary migration, diffusion-induced, driving force 3—53067
grain boundary migration, review 3—47162
grain boundary migration and form., space charge distribs. 3—46948
grain boundary segregation and diffusion, conf., Caen, France (Sept., 1982) 3—44892
grain boundary sliding, particle blocking and assoc. internal friction 3—37931
grain boundary widths and intergranular diffusion *(French)* 3—47147
graphite, AGR moderator, porous, diffusion, pore struct., effect of oxidation 3—36459
graphite, nuclear, high reactivity, pore structure, effects of oxidation, diffusion studies 3—2867
graphite, pyrolytic, implanted He retention, re-emission and thermal desorption 3—21509
III-V semicond.-metallisation interfaces, metallurgical interactions 3—13909
impurity diffusion, enhanced in shock waves 3—51862
impurity drift induced by nonuniform EM field 3—33510
Inconel-600 membrane, bulk and surface props., H_2 interaction 3—17031
intermediate phase growth, reactive diffusion *(Russian)* 3—38142
interstitial atoms, microscopic diffusion, effect of long-range interaction *(Russian)* 3—28143
interstitial impurities, electro- and thermotransport *(German)* 3—33522
interstitial solid solutions, thermoelastodiffusion process numerical modelling 3—51838
isothermal matter transport, phenomenological coeffs., Einstein and linear response formulae 3—2869
layered solids, ion beam induced mixing, mechanism 3—28006
light interstitials, transition between coherent and stochastic motion 3—33514
Matano plane position determ., approx. analytical method *(Russian)* 3—33487
metal film/halide systems, ambient-induced diffusion 3—18521
metal hydrides, H diffusion appl. of occupancy correlation function for classical particle hopping 3—204
metal powders, diffusion coeffs. determ. from gas absorpt. 3—24464
metallic amorphous films, diffusion, percolation theory *(Russian)* 3—33485
metals, amorphous, impurity hopping activation energies 3—51860
metals, BCC, H diffusion and protonic pot. around interstititial sites 3—42737
metals, corrosion embrittlement in gaseous medium, influence of mass and heat transfer 3—29218
metals, cubic, tilt grain boundaries, struct. and props. 3—46965
metals, diffusion coeff. of H, determ. by mechano-electrochem. method 3—33507
metals, grain boundary diffusion mechanisms 3—33484
metals, grain boundary vacancies and interstitials, self-diffusion, mol. dynamics study 3—46923
metals, H diffusion, potential config. shape, quantum states, noncoherent transitions 3—13552
metals, He self-trapping in metals, kinetic theory 3—51861
metals, muon diffusion const. at low temps. 3—51855
mica, porous cryst., penetrability of toluene mols., IR laser control 3—2888
microsectioning of diffusion samples by sputtering 3—49341
moisture diffusion coupling with heat conduction, model *(Chinese)* 3—42106
multicomponent system, gas porosity produced by diffusive decomposition 3—33448
muonium, anisotropic diffusion in ice, rel. to H 3—23091
naphthalene, exciton annihilation const. and energy transfer rate 3—47268

diffusion in solids continued
natural rubber, C filler effect on sorption and diffusion of CO_2 3—38136
neutron scatt., reson. epithermal, as condensed matter probe 3—7868
nonmetallic crystal, impurity and interstitial diffusion, carrier recombination stimulation 3—33508
one-dimensional disordered systems, diffusion const., density of states and correl. length calcs. 3—2870
passive metal, surface, pitting developments kinetics 3—9243
phase transformations, diffusion-controlled, in finite region 3—2892
planar channelling, diffusion eqn. approach 3—47009
polyacrylonitrile, water vapour solubility and transport 3—18468
polydimethylsiloxane, diffusion and equilib. swelling by linear homologs 3—38137
polyester film, Al metallised, struct. and O_2 barrier props. 3—33597
polyesters, amorphous, O_2 and CO_2 transport, rel. to β-relaxation 3—33506
polyethylene, diffusion of CO_2, methane, ethane and propane at elevated press. 3—57137
polyethylene films, oriented, gas permeability *(Russian)* 3—53152
polyethylene membrane, gas permeation, free vol. model, tests using CO_2 methane, ethylene and propane 3—57138
polymer monolayers, small molecule diffusion kinetics 3—38133
polymer networks, hindrance model *(German)* 3—42823
polymers, epoxide, supmol. struct., solvents action *(Russian)* 3—46871
polymers, glassy, case II diffusion theory 3—18497
polymers, glassy, Fickian diffusion of organic penetrants 3—47165
polymers, glassy, sorption of swelling penetrants, diffusion model, stress relaxation effect 3—47164
polymethylene systems, annealing, diffusion, calorimetric and IR study 3—34103
pore shrinkage, diffusional, theory in real crystals 3—23068
positive muon low temp. mobility 3—28158
positron reemission brightness enhancement, one-dimens. diffusion model 3—14397
positron thermalisation and diffusion in solids 3—13284
powder composites, conductivity, effect of diffusion of components of limited intersolubility 3—14748
precipitate growth in isotropic medium 3—8208
pseudo-steady-state approx. validity 3—57120
quantum diffusion, applicability of tunnelling-jumping approx. *(Russian)* 3—47183
quantum solid solutions, impuritons collision diffusion coeff., temp. depend. 3—38160
randomly distributed trap medium, diffusion and drift study 3—23070
recent developments 3—2868
refractory metal silicide form. by metal+Si reaction, SiO_2 diffusion barrier 3—8270
sapphire, climb dissoc. of $\langle 10\bar{1}0\rangle$ dislocations 3—2564
semiconductor, diffusion profiles alteration due to p-n junctions 3—13549
semiconductor, dopant diffusion mechanisms 3—23095
semiconductor solar cells with strong volume recombination, inapplicability of diffusion theory 3—9426
semiconductor superlattices, diffusion erosion, dopant conc. profile decay 3—38126
semiconductor-metal interfaces, structure, geometrical and electronic, props. 3—18780
semiconductors, deep level defects, lattice relax. and motion, DLTS study 3—57311
semiconductors, diffusion profile alteration due to p-n junction elec. field 3—23098
semiconductors, vacancies and enhanced impurity diffusion, proton irrad. effects 3—18514
silicide form. by ion irrad. backscatt. and X-ray study 3—2629
SIMS direct meas. of small diffusion coeffs. 3—24072
Snoek effect viewed through Mossbauer binoculars 3—14645
soda-lime aluminosilicate glass, hydration and chemical interdiffusion 3—51869
soda-lime silicate glass, hydration and chemical interdiffusion 3—51869
solid solutions, spinel structure, crystalline quasi-particle method 3—8203
steel, alloy, impurity-induced embrittlement, effects of thermal history and alloying elements 3—4096
steel, alloy, oxidised, H penetration, pressure effects of type KhN40B 3—23099
steel, austenitic stainless, Cr-Ni (15, 15 wt.%) ion irradiated, void-assisted grain boundary migration 3—33313
steel, austenitic stainless, H_2 permeation 3—23100
steel, austenitic stainless, He bubble growth *(German)* 3—8077
steel, austenitic stainless, precip. of TiC on surface, AES study *(Japanese)* 3—9066
steel, C, cementite-ferrite interface, interaction with H 3—33293
steel, carburisation during vacuum-oil quenching, depend. on quenching temp. *(Japanese)* 3—29212
steel, diffusion of C during thermocyclic treatment *(Russian)* 3—38128
steel, ferritic, H_2 permeation 3—23100
steel, H attack and embrittlement, mechanisms 3—4097
steel, H trapping, permeation meas. effect of microstruct. 3—33504
steel, maraging, ultrahigh strength, delayed failure *(Japanese)* 3—24338
steel, maraging VNS-2, temp. relationship of retarded fracture process, mobile H content 3—58236
steel, oxide inclusions formation during diffusion of O_2 3—38138
steel, stainless, austenitic, He implanted, trapping and surface permeation of D 3—17038
steel, stainless, implanted D retention and release, dynamic meas. 3—21505
steel, stainless, oxidised, 2Kh13, 12Kh18N10T, 0Kh16N15M3B, 1Kh13M2FB, 1Kh13F2M2, 0Kh18Yu2, H penetration, pressure effects 3—23099
steel, stainless, type 304, implemented D movement, simulated fusion reactor conditions 3—17049
steel, stainless, type 304LN, He damaged, D retention and detrapping energy 3—17050
steel, thermoelastodiffusion of H, time-depend. problem 3—51838
steel, tool and stainless, ion irrad.-induced Sn diffusion, Mossbauer study 3—13561
steel cylinders, gaseous case-hardening, diffusion of C, microhardness *(French)* 3—47931
steel wire, coatings of Cu, Ni and solder, scanning Auger anal. 3—3877
steels, heat-resistant, permeation of H and T up to 950°C 3—33513
stress relaxation around grain boundary particles, relevance to high temp. cavity nucleation 3—2572
stress-assisted diffusion theory 3—38114

diffusion in solids continued
styrene-butadiene rubber, C filler effect on sorption and diffusion of CO_2 3—38136
substitutional impurity distrib. calc. for dissociative mechanism of diffusion 3—8081
superplastic deformation, grain boundary sliding model 3—34407
target-electron impact, atomic number estimation of keV electron transfer *(Russian)* 3—8912
ternary solid solutions, ideal, $(^2\tilde{D})$ matrix 3—33489
tetrafluoroethylene film, permeation, diffusion and dissoln. of H isotopes, methane and inert gases 3—18511
tracer diffusion at general conc., correlated random walk in lattices 3—42828
transition metal ternary hydrides, review 3—2960
Ag-As_2S_3 system, electroluminescence excitation of Ag diffusion 3—28169
Ag-based solid solns., grain boundary segregation and diffusion, AES and scanning radioactive anal. 3—47115
(Al,Ga)As, Mg diffusion profiles alteration due to p-n junctions 3—13549
(Al,Ga)As:Mg, diffusion across p-n junction during LPE growth 3—23098
Al, diffusion of H, lattice relax. effects calc. 3—2886
Al film on Ti substrate, reactions and diffusion 3—33584
Al, ion implanted and pure, laser irrad., impurity profiles and heat flow 3—27990
Al/Ag multilayer films, ion beam mixing, conc. depth profiles, He backscatt. study 3—2625
Al/Sb layers, ion beam mixing, backscattering spectra study 3—2626
Al/Sb multilayer films, ion beam mixing, conc. depth profiles, He backscatt. study 3—2625
Al/$TiSi_2$/Si contact system, thermal stability and elec. meas. 3—47227
Al/V/$GdSi_2$/Si Schottky contacts, V diffusion barrier, backscatt., X-ray and elec. study 3—8588
Al-Al_2O_3-Au electroformed struct., SEM and XPS studies 3—2991
Al-Pd_2Si-Si junctions, material reactions, kinetic rates 3—23105
Al-Si interface, chem. interdiffusion, AES study 3—33520
Al-Si polycrystalline film, solid phase reaction with overlapping Al film obs. 3—33515
AlAs-AlGaAs-GaAs quantum well heterostructures, induced disorder effects on luminescence 3—18519
AlAs-GaAs superlattice intermixing by Zn diffusion 3—18518
AlCr, dilute, self-interstitial trapping at Cr atoms 3—13218
Al_2O_3:Fe,Ti, Nabarro-Herring diffusional creep, dopant conc. depend. 3—53136
Ar, solid, plastic deformation during creep, subboundary migration, etching study 3—13319
As_2S_3:Ag amorphous film, Ag photodoping sensitivity, optical and elec. resist. study 3—46851
Au film, polycryst., grain boundary diffusion of K 3—3017
Au, native particles, variation of Ag content, ESCA depth profiling 3—33288
Au/Ag two layer films, grain boundary diffusion, elec. resist. study 3—13556
Au/Al, diffusion couples, low temp., grain boundary migration and recrystn. 3—38141
Au/In thin film couples, low temp. interdiffusion, backscatt. spectrometry study 3—57149
Au/$Ni_{0.55}Nb_{0.45}$ couples, Au and Nb interdiffusion, Rutherford backscatt. study 3—2891
Au/Si multilayer film, metastable phase form. on ion irrad., Si diffusion 3—2624
Au/Si multilayer struct., metastable phase form. by ion mixing 3—2628
Au/Sn thin film couples, interdiffusion and phase formation, Rutherford backscatt. study 3—23107
Au-Al thin film couple, intermetallic form. and grain boundary diffusion 3—8269
Au-Pt-Pd-Ag-Fe-Sn, dental alloy, internal oxidation, O ion diffusion, Fe_2O_3 and SnO_2 distrib. 3—51854
AuGe-GaAs ohmic contact, laser beam annealed, surface and subsurface morphology 3—57196
$BaTiO_3$-$SrTiO_3$ system, sintering, influence of interdiffusion and solid soln. form. 3—14533
Be, permeability of H 3—8263
Be:C, diffusion studies *(Russian)* 3—13553
C diffusion in alloy steel 3—9181
C, implanted D retention and release, dynamic meas. 3—21505
CaF_2, radiation damaged, oscillating thermal annealing, neutron diffr. study 3—13266
CaF_2:U^{3+}, nuclear spin-lattice relax. anisotropy 3—38717
CaO+SiO_2 polycryst. pellets, interdiffusion behaviour, DC field effects 3—28165
Cd bicrystals, slip deform., grain boundary sliding 3—13233
CdS:Ag, illumination-induced diffusion, radioactive atom method 3—13550
CdS:Ag(Ni), impurity diffusion, two-sample luminescence study 3—18513
CdS(Se), photoluminescence and dielec. losses, vacuum annealing effects 3—52825
CdSb:In, diffusion and solubility of ^{114}In 3—8256
CdTe:In, diffusion and solubility 3—33502
CdTe/HgTe system, interdiffusion meas. 3—2890
$CeMg_{12}$, hydride form. mechanism and kinetics 3—48051
Co ferrite thin film form. by solid state CsO+Fe_3O_4 reaction 3—19266
Cr/Cu layer system, Ar ion implantation-induced intermixing, Cr precipitation 3—2622
Cr-Mn compacts, sintering and interdiffusion processes *(French)* 3—24171
$CrSi_2$-Cr_2O_3 interface, chem. reactions, XPS and Rutherford backscatt. study 3—42856
CsI:He, diffusion during deform. at low temp. 3—28161
$Cs_2UO_2Cl_{4-x}Br_x$, migration and trapping, electronic energy transfer 3—3790
Cu, muon diffusion, positive muon depolarisation meas. 3—3623
Cu/Al, diffusion couples, low temp., grain boundary migration and recrystn. 3—38141
Cu/Au thin layer system, ion irrad.-induced atomic mixing 3—2623
Cu/Ni thin film couples, low temp. interdiffusion 3—57148
Cu/W thin layer system, ion irrad.-induced atomic mixing 3—2623
Cu-Al thin film couple, intermetallic form. and grain boundary diffusion 3—8269
Cu-Al thin film couple, phase form., X-ray anal. 3—18589
Cu-Al_2O_3-Cr, diffusion saturated, precipitation, struct. changes, elec. resist. and plastic deformation study *(Russian)* 3—34324
Cu-based solid solns., grain boundary segregation and diffusion, AES and scanning radioactive anal. 3—47115

diffusion in solids continued
Cu-Fe, internal friction caused by diffusion around second phase particle 3–53100
Cu-Ni system, ultrafine powders, diffusional homogenisation 3–58072
Cu-Ni-Zn(-Mn), α/β microduplex, superplastic flow, cavitation and cavity growth 3–4089
Cu-Sn binary diffusion couple, anal. of inert marker motion for Cu_6Sn_5 growth 3–33517
Cu-Ti, amorphous, solubility and diffusion of H_2 3–47114
$CuInTe_2$, polycrystalline thin film, elec. transport props., H_2 effect, grain boundary scatt. 3–52282
$Cu_{45}Ti_{55}$ amorphous ribbon, H_2 diffusion 3–47160
Fe, cast, white, rapidly solidified, superplasticity 3–14665
Fe, corrosion resistance, ion beam mixing and bombardment diffused coatings 3–28167
Fe, electron irrad., muon trapping at monovacancies 3–52701
Fe, H diffusivity and solubility in pure specimens, effect of vacancies 3–28154
Fe, oxidised, sulfur diffusion in oxide grain boundaries 3–43983
Fe, pure, H permeation and diffusion 3–42855
Fe, Sn and Cr grain boundary diffusion study 3–57140
Fe:He, D, ion implanted, D surface permeation and defect trapping obs. 3–33500
Fe/Zn system, diffusion driven grain boundary migration during zincification of Fe 3–2573
Fe-Al system, interdiffusion, aluminising 3–33519
Fe-based solid solns., grain boundary segregation and diffusion, AES and scanning radioactive anal. 3–47115
Fe-C powders, atomised, annealing, reduction and decarburisation 3–14526
Fe-C-X ternary systems, X=substitutional element, uphill diffusion of interstitial atoms modified quasistationary model 3–47148
Fe-Cr, oxidation at 600°C, influence of prior oxide film 3–19448
Fe-Cr-Al alloys, H permeation characts. 3–28155
Fe-Ni, H permeation and diffusion 3–42855
Fe-Ni (25, 50 and 75 wt.%), diffusion coeff. of S *(French)* 3–42845
Fe-Si, clustering and ordering in ordered phase, conc. waves, kinetic theory 3–51804
Fe-Si (3 at.%), inhibitor phase parameters, grain boundary migration effects *(Russian)* 3–24253
Fe-Si-P, P solubility, AES study 3–42788
$FeAl_3$ and Fe_2Al_5 pack-aluminide coatings on steel, kinetics 3–4201
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous, H permeability, diffusivity and solubility, electrochem. technique 3–8262
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, crystn. by eutectic reaction, kinetics and mechanism *(French)* 3–13104
$Fe_{40}Ni_{40}P_{14}B_6$, crystn., stability, effect of electron irrad. *(French)* 3–51662
FeO, wustite, ionic defects, effect of thermal gradients 3–28371
Ga liquid-rare earth metal interface, interdiffusion, diffusion couple technique 3–13560
p-GaAlAs, LPE growth on GaAs, Be and Zn diffusion obs. 3–52982
$Ga_{1-x}Al_xAs$:Zn and GaAs:Zn, LPE grown, shallow Zn diffusion obs. at 600°C 3–33499
GaAs (001) surface, MBE grown, initial Al growth, temp. and reconstruction depend. 3–18585
GaAs, annealed, 1.35 eV photoluminesc. emission centre, diffusion coeff. meas. 3–23997
GaAs, compensation by low energy ion irrad., defect diffusion and carrier mobility 3–57001
n-GaAs, epitaxial growth, impurity redistribution, theory 3–18582
GaAs films, α-irrad., defect migration, hall effect study 3–47167
GaAs films, α-irrad. defect migration, elec. study 3–47168
GaAs, of Fe, masking props. of SiO_2 film 3–8257
GaAs, optical waveguide fabrication by drive-in diffusion technique 3–50753
GaAs surface barrier diodes, deep level mobility in elec. field, DLTS study 3–8271
GaAs:Al, diffusion through surface layers, X-ray and photoluminescence study 3–8258
GaAs:Cr wafer, Si diffusion from thin film by pulsed laser irrad. 3–57145
GaAs:Mg, anomalous diffusion behaviour 3–23089
GaAs:Te, Zn, defect struct. induced by Zn diffusion, TEM study 3–27944
GaAs:Zn, Te, N, Zn diffusion profiles, Hall effect and elec. cond. study 3–8085
GaAs-Pt interface, interfacial reaction and Schottky barrier 3–51868
GaInAsP-InP:Be DH laser diodes, Be implantation fabrication 3–37038
GaP-$GaAs_{1-x}P_x$ superlattice, strained, Zn impurity induced disordering obs. 3–38236
$(GaSb)_{1-x}Ge_x$, metastable, RF sputtering deposition ion-beam mixing effects 3–3955
Ge, interatomic bonds, vacancy formation potential at diffusion temp. 3–8043
Ge, interstitial ion migration energy, pseudopot. calc. 3–28160
Ge, ion implanted, annealing behaviour 3–37939
Ge:As; laser processed, ^{73}Ge Mossbauer effect 3–57839
He diffusion model for materials under irrad. 3–6287
^4He crystals, ^3He impurity localisation, NMR study *(Russian)* 3–2921
InP (110)-Cu interface, AES and photoemission studies of atomic and electronic struct. 3–58032
InP:Cd, Cd diffusion profiles meas. with etching/Schottky contact method 3–23097
InP:Cd, Cd-diffused, Cd phosphide precipitates, TEM obs. 3–42782
InP:Cd, Zn, diffusion and p-n junction form., Hall effect and EBIC study 3–18512
InP:Fe(Cr), ion implant depth profile after annealing, SIMS study 3–8083
InSb, n-type, Zn diffusion, IR photovoltaic detector appl. 3–33503
InSb:S, ion implanted, S diffusion, laser annealing and elec. props. 3–38140
$KTaO_3:Fe^{3+}$, H diffusion correl. with relative concs. of cubic and axial sites 3–38132
β-La, diffusion and thermotransport of C *(Russian)* 3–38127
$LaCo_5$ powder, diffusion coeffs. determ. from H absorpt. 3–24464
Li_xCoO_2 ($0< x\leq1$): a new cathode material for batteries of high energy density 3–14937
LiF:He, diffusion during deform. at low temp. 3–28161
Li_3N, diffusion processes, NMR study 3–13532
$LiNbO_3$, D^+ diffusion coeff. meas., waveguide fabrication appl. 3–8253

diffusion in solids continued
$LiNbO_3$:Ti channel waveguide, lateral diffusion coeff. meas. *(Chinese)* 3–37176
$LiNbO_3$:Ti optical waveguide fabrication using $(Ti_{0.65}Nb_{0.35})O_2$ as Ti diffusion source 3–41973
$LiNbO_3$:Ti waveguides, outdiffusion suppression 3–22263
Li_2O-Al_2O_3 system, T diffusivity 3–55630
Mg-Al (0.8 wt.%) alloy, grain boundary sliding at high temp. in torsional fatigue 3–29148
Mg-Ni (10 wt.%), hydride form. mechanism and kinetics 3–48051
$MgF_2:Li^+$, Mn^{2+}, enhancement of Mn^{2+} diffusion, ESR study 3–2885
Mg_2Ni(-Mg), diffusion of H, neutron scatt. meas. 3–42851
MgO, dense and porous compacts, normal grain growth 3–8248
MgO, doped and undoped, diffusion of H^+ and D^+ 3–13547
MgO:C, subsurface segregation and diffusion, XPS study 3–28104
MgO:Cr, grain boundary diffusion of ^{51}Cr rel. to dopant conc. and dislocation orientation 3–57135
MgO-MnO_2 particle surface layers, high valence impurity-vacancy complex form., EPR study 3–57773
Mn-Zn ferrite, polycryst., creep deform. 3–14687
Mn-Zn ferrites, O_2 diffusion in surface layers 3–28164
γ-MnO_2, proton diffusion coeff. determ. by NMR *(French)* 3–3559
Mo single cryst., neutron irrad., position trapping at small voids, temp. depend. 3–43657
Mo-H(N), solid solutions, desorption meas. of diffusion coeffs. *(Russian)* 3–38129
$MoSi_2$-Si interface, self-aligned silicide formation by ion implanation through metal film technique 3–51864
$(Na,Cs)_2O$-SiO_2 glass, impurity alkali diffusion, ^{86}Rb tracer, comp. depend. 3–57134
Na zeolite crystallites, mol. diffusion, propagator representation, spin echo NMR study 3–47161
NaCl:He, diffusion during deform. at low temp. 3–28161
Na_2O-SiO_2 glass, Na^+/Ag^+ interdiffusion from melt 3–33518
$(Na_2O)_{33-m}(R_2O)_m.(SiO_2)_{67}$, (R=Li, K, Rb), gradient element form., refr. index 3–3664
Nb, H Cottrell cloud form. at dislocations 3–51655
Nb, H permeation and diffusion, high temp. 3–51856
Nb, partial motor vol. of H and D 3–33454
Nb:H, diffusion model, small polaron models 3–33505
Nb-T system, solubility and diffusion *(German)* 3–18473
Nb_3Sn, monofilamentary, solid-state diffusion prep., growth kinetics 3–58076
Nb_3Sn multifilamentary superconductors, diffusion layer thickness calc., mathematical model *(Chinese)* 3–13982
Nb_3Sn multifilamentary superconductors, solid-liquid diffused, crit. currents and temps. meas. 3–23556
Nb_3Sn:Ga multifilamentary superconductor, external-diffusion processing, Ga effects 3–52320
Ni, corrosion resistance, ion beam mixing and bombardment diffused coatings 3–28167
Ni, monocryst., interstitial diffusion of implanted He 3–38134
Ni, oxidation, at high temps., diffusion anal. 3–19443
Ni, permeation of H, oscill. method *(Japanese)* 3–57136
Ni, pure, H permeation and diffusion 3–42855
Ni wire, tensile stress during H diffusion 3–39246
Ni:H, H diffusion, shearing stresses obs. 3–57139
Ni/Au films, vacuum deposited on Si (111) substrate, interfacial phenomena, SEM study 3–33516
Ni/metal thin film couples, room temp. interactions 3–23108
Ni-Al, enhanced O diffusion during internal oxidation 3–28159
Ni-Al (0.55 to 4.10 wt.%), intergranular oxide development at high temp., high stress effect 3–53286
Ni-Al (1 to 4 wt.%) alloys, internal oxides formation and development at high temp. 3–51858
Ni-Cr, enhanced O diffusion during internal oxidation 3–28159
Ni-CrAl-Zr, Al_2O_3 scale form., ^{18}O tracer studies 3–4204
Ni-Cu-Co ferrite, Ti alloy metallisation, O diffusion, electron probe microanalysis 3–34500
NiAl/Ni diffusion couples, Ni_3Al layer growth, early stages 3–23106
NiSi/Si thin film system, intermetallic cpd. form. and interdiffusion 3–47170
$NiSi_2$ films, epitaxial growth on Si substrate, surface and interface stabilisation 3–42972
Pb film on Al, pulsed laser treatment, chemical interdiffusion, Rutherford backscatt. study 3–27991
Pb, high purity, grain boundary sliding at high temp. in torsional fatigue 3–29148
Pb-In-Au/Pb-Bi thin-film diffusion couples, Kirkendall voids ring form. 3–8266
Pb-Sn diffusion and electromigration of Ag and Ni 3–2884
PbO-SiO_2-P_2O_5, glass, acid corrosion, surface cryst. form., effect of phosphate doping 3–9206
Pd, H Cottrell cloud form. at dislocations 3–51655
Pd, quantum diffusion of H *(Russian)* 3–38130
Pd-Ag, diffusivity and solubility of H 3–42850
Pd-Au, diffusivity and solubility of H 3–42850
Pd-Fe, diffusivity and solubility of H 3–42849
Pd-Si (100) and (111), surface reaction, ion beam anal. and AES study 3–42857
Pd-Si (111) system, low energy EELS and AES study 3–3885
Pd-Si interfaces, struct. props. investig. by RHEED 3–18568
Pd-Si:As interface, Pd_2Si formation, As redistribution, elec. study 3–47169
Pd-V, diffusivity and solubility of H 3–42849
Pd_2Si films, epitaxial growth by scanning electron beam annealing 3–8346
Pd_2Si, form. at Si-Pd interface, chem. bonding, photoemission study 3–58034
Pd_2Si, growth kinetics and diffusion mechanism on Si substrate 3–42975
$Pd_{80}Si_{20}$, amorphous, H isotope doped, internal friction 3–53110
$Pd_{80}Si_{20}$, amorphous, impurity hopping activation energies 3–51860
Pt, neutron irradiated, activation energy, correlated recovery with three dimens. diffusion 3–42677
Pt/Cu/Cr and Cu/Cr thin films, mixing and interdiffusion by O reduction, backscatt. spectra 3–13559
Pt/Ni/Al films, interdiffusion at metal interfaces, electronegativity and surface pot., ambient effects 3–13558
Si (111), adsorbed H, thermal desorption spectra, diffusion effects, theory 3–57227

diffusion in solids continued
Si amorphous solar cell, electrode element distrib. near contacts and junction layers 3—53536
Si, backsurface gettering of metal impurities 3—8254
Si CVD films, polycryst., enhanced grain boundary diffusion 3—23094
Si, CVD grown, P doping and oxidation effects on grain growth, TEM study 3—51624
Si co-deposited layers, fringe effect, two-dimensional diffusion in stagnant layer *(Chinese)* 3—13654
Si, diffusion of Au during low energy Ar$^+$ bombardment 3—2887
Si, diffusion of B and P, back-side oxidation effects with Si_3N_4 film direct mask 3—8261
Si, diffusion of donors, high conc. and nonequilib. defect effects 3—47163
Si, diffusion of O 3—13546
Si, diffusion of P from spin-on heavily P doped oxide source 3—8260
Si, diffusion process, elec. props. and impurity conc. *(Dutch)* 3—57143
Si, float zone, impurity diffusion, divided selective oxidation effects 3—37900
Si, impurity migration retardation by internal elec. field, theory 3—33511
Si, interatomic bonds, vacancy formation potential at diffusion temp. 3—8043
Si, interstitial ion migration energy, pseudopot. calc. 3—28160
Si, ion bombardment, low energy, long range effect 3—33321
Si, ion implanted, annealing behaviour 3—37939
Si, mass transfer, influence of edge dislocations, numerical study 3—28163
Si, multivacancies, interstitials and self-interstitial migration 3—47289
Si, nitridation, ellipsometry and AES studies 3—4160
Si, O_2 indiffusion, ion scattering study during pulsed laser annealing/cleaning 3—57144
Si, of ^{73}As, laser pulse processing 3—56921
Si, oxidation-enhanced B and P diffusion, quantitative model 3—23101
Si, polycryst., impurity distrib. diffusion, and segregation, XPS study *(French)* 3—22930
Si polycrystalline islands, laser recrystallised, grain boundaries and diffusion paths, MOSFET and ring oscillator appl. 3—33295
Si, solid-phase epitaxy with Al transport medium, diffusivity and growth rate 3—23216
Si substrate, silicide form. resulting from interfacial reaction with Ir-V films 3—18520
Si, transition metal solid solubility, NAA and antiCompton spectrometry study 3—28109
Si, zone refining of nonsubstitutional impurities, during pulsed laser annealing 3—58045
Si:Al, enhanced interstitial migration, electronic struct. calc. 3—51859
Si:Al(B), point defect recombination-induced migration 3—57141
Si:As, doping by laser diffusion from spin-on arsenic glass 3—42848
Si:As, Ge, laser processed, ^{73}Ge Mossbauer effect 3—57839
Si:As, ion implanted polycryst. low press. CVD film, As lateral diffusivity meas. 3—38125
Si:As CVD film, reduced press. deposited, diffusion source for Si-SiO_2 interface heavy doping 3—51852
Si:As(Sb)(Ga) epitaxial layer, impurity distrib. and diffusion 3—51648
Si:As.Pt struct., As redistrib. during Pd_2Si form., ion channelling and backscatt. study 3—8267
Si:Au, diffusion and solubility, neutron activation anal. 3—42852
Si:Au, gamma-ray irrad.-induced Au diffusion, Schottky barrier study 3—33509
Si:Au, low temp. diffusion, radioactive Au conc. profile study 3—8264
Si:Au reverse-biased n$^+$-p junction diodes, Ag donor level motion, DLTS study 3—28293
Si:B, P, sequential diffusion, impurity profiles, SIMS study 3—42853
Si:B, polycrystalline, MESA diodes on photocells, electronic props. rel. to grain size and intragrain defects 3—38470
Si:B,P, ion implantation, diffusion, annealing 3—27962
Si:B(P), grain boundary diffusion of dopants 3—51863
Si:Be, diffusion coeff., and solid solubility, elec. cond. study 3—2883
Si:Cr, Sirtl etching, Cr diffusion at room temp. obs. 3—42847
Si:Cr(Mn)(Fe)(Co)(Ni)(Cu), diffusion, solubility and elec. activity, review 3—27966
Si:Cu(Fe), impurity diffusion during activation, neutron activation analysis systematic errors 3—28157
Si:H, As amorphous film, RF sputtered, pulsed laser annealing 3—56970
Si:H solar cell efficiency, passivation techniques 3—24583
Si:H(H,B)(H,P), amorphous, H diffusion coeff., H_2 effusion expts. 3—33501
Si:In, In diffusion in inert and oxidising ambients 3—38131
Si:In, ion implant damage recovery, recrystallisation and elec. props. 3—56920
Si:In, ion implanted, high temp. diffusion and elec. props. 3—57142
Si:In, ion implanted, thermal annealing, In migration obs. 3—56917
Si:Li, diffusion of implanted Li ions, proton and deuteron bombardment effects 3—8265
Si:Mg, diffused, elec. and optical props. 3—18699
Si:Ni, point defects, Ni diffusion and annealing studies 3—42602
Si:O, dislocation-free, diffusion limited O precipitation, IR and neutron scatt. and etching studies 3—51796
Si:O, O diffusivity at donor formation temp., stress-induced dichroism study 3—33498
Si:O, precipitation kinetics, solubility, diffusivity and particle size 3—42787
Si:O_2, radiation enhanced diffusion at room temp. 3—47159
Si:P, buried layer profile broadening by ion beam mixing, backscatt. study 3—8084
Si:P, heavily doped polycryst. film, thermal oxidation 3—9351
Si:P, implant profile computation with depth-dependence diffusion 3—18331
Si:P, ion implanted, enhanced dopant diffusion 3—13548
Si:P, ion implanted, impurity redistrib. by annealing under hydrostatic press. 3—38139
Si:P, P grain boundary spike diffusion 3—51850
Si:P, polycrystalline, in Si:P-$TaSi_2$ double layered struct., P out diffusion, SIMS and resist. study 3—51849
Si:P, polycrystalline in $SiTaSi_2$ interface, P diffusion, SIMS study 3—51853
Si:P, pulse electron beam annealing 3—56985
Si:P,Sb, O ion bombardment-induced diffusion, conc. profiles 3—13551
Si:P CVD coatings, incoherent light annealing, elec. cond. study 3—42646
Si:P(As)(B)(Sb), oxidation effects on diffusion, dual vacancy-interstitial mechanism 3—8259
Si:P(Sb), polycryst., intergranular diffusion *(French)* 3—23093
Si:Sb, oxidation-enhanced and oxidation-retarded diffusion obs. 3—47157

diffusion in solids continued
Si:Sb(P), spin-on source diffusion characts. 3—51857
Si:Te, dopant diffusion, SIMS study 3—23092
Si/Au/Ni, vacuum deposited metal films, interface phenomena and silicide formation 3—51961
Si/Cr struct., silicide form. by ion irrad. backscatt. and X-ray study 3—2629
Si/Ni struct. silicide form. by ion irrad. backscatt. and X-ray study 3—2629
Si/Ni/Si bulk sample intermetallic cpd. form. and interdiffusion 3—47170
Si/NiAu system, Ni silicide growth, Au impurity effects 3—47171
n-Si/PtSi/(Ti-W)/Al Schottky contact, elec. degradation induced by heat treatment 3—18766
Si/SiO_2:P, diffusion of P from surface source in oxidising atmosphere 3—51851
Si/Ti-W Schottky barriers, alloying effects, particle backscatt., X-ray, SEM and elec. study 3—8581
Si-Au, laser beam annealing of interface, diffusion 3—42657
Si-Au interface, solid-state reaction, initial stage *(Japanese)* 3—28166
Si-Mo interface, $MoSi_2$ formation by ion implantation 3—33583
Si-Nb interface, $NbSi_2$ formation by ion implantation 3—33583
Si-Ni, epitaxial growth of $NiSi_2$ 3—38266
Si-Ni binary diffusion couple, anal. of inert marker motion for Ni_2Si growth 3—33517
Si-Ni interface, silicide formation, atom probe FIM study 3—51866
Si-Ni ohmic contacts, interface struct., CVD doping and silicide formation *(Rumanian)* 3—47420
Si-Pd interface, EELS and AES study 3—23191
Si-planar metal reaction couples, first phase mucleation, theory 3—57146
Si-Rh amorphous alloy formation by interfacial reaction between amorphous Si and cryst. RH 3—57147
Si-W interface, silicide formation, atom probe FIM study 3—51865
α-SiC, dense sintered, oxidation behaviour, Al and B additions *(German)* 3—29300
Si_3N_4, hot pressed with Y_2O_3+MgO, oxidation kinetics 3—34507
Si_3N_4, hot-pressed, high temp. environmental strength degradation 3—53252
SiO_2, film, masking props. during diffusion of Fe in GaAs 3—8257
SiO_2, vitreous, diffusion of Cs$^+$, Rb$^+$ and K$^+$ 3—28156
SiO_2-Li_2O(Na_2O)(K_2O), glass, Cu ion, exchange diffusion layers, ESR and optical study 3—52605
Sn thin film, Au diffusion, attenuated total refl. study 3—23102
Sn/electrode film system, Sn elec. cond., electrode effects 3—38497
Sn-Ge bicrystal, In diffusion along single twist phase boundaries 3—18515
$SrCl_2$, ionic cond. neutron scatt. study 3—33491
Ta, partial motor vol. of H and D 3—33454
Ta, plastically deformed, migration of interstitials to immobile vacancies and dislocations 3—56878
Ta-T system, solubility and diffusion *(German)* 3—18473
Ti alloys, bombardment-diffused wear resistant coatings 3—28167
$\alpha+\beta$Ti bonded alloys, diffusion bonding variables effect on struct. and props. 3—14789
Ti, deformation maps 3—34415
α-Ti, gas-phase H permeation, surface film and dimens. effects 3—13554
Ti grades VT1-00 and VT1-0, H permeability at room temp. 3—42854
Ti, of H, at room temp. 3—47166
α-Ti:N, ion implanted, N diffusion, ion and proton bombardment effects 3—51848
Ti-Cu hydrides, amorphous, proton NMR study of H diffusion and electronic struct. 3—34003
Ti-Cu hydrides, proton NMR study of H diffusion and electronic struct. 3—34003
Ti-Si and Ti-SiO_x-Si systems, silicide and Schottky barrier form. 3—3289
Ti-ZrO_2 (ZrN)(ZrC)($ZrSi_2$), solid phase interactions 3—29039
TiC-Ni(Co) sintered composites, mass transport of molten metals 3—39086
Ti_xC_{1-x} magnetron sputtered films on Mo, ductility, internal stresses and diffusion 3—58179
TiI_4, H permeability at room temp. 3—42854
TiO_2 ceramic pellets with asymmetrical elec. cond. unusual microstruct., diffusion of Pt 3—27972
TiO_2:Al ceramic, Al contamination, Al diffusivity meas. 3—33718
TiO_2:Ba, second phase development 3—38135
TiO_{2-x}, cation interstitial defect struct., diffusion 3—46922
$TiSi_2$, oxidation on polycryst. Si 3—19535
$Ti(V_{0.40}Mn_{0.60})_{1.87}(-D_{2.36})$, struct. determ. by neutron scatt. *(German)* 3—42570
(U, Pu)O_{2+x}, nonstoichiometric nuclear fuel, diffusion processes and surface effects 3—55137
UO_2, diffusion of ^{147}Pm, 2273-1873K 3—13545
UO_2, diffusional growth of overpressured fission-gas bubbles on grain boundaries 3—16855
UO_2, diffusivities of fission created or thermally doped T 3—16852
UO_2, primary creep, effect of amorphous grain boundary phases 3—19374
UO_2, Ru transport, mechanistic anal. 3—41124
UO_{2+x}, nonstoichiometric nuclear fuel, diffusion processes and surface effects 3—55137
V, partial motor vol. of H and D 3—33454
V strips, controlled pinning during diffusion implantation of gases 3—43340
V-I, solubility, phase diagram, struct. props. and diffusion *(German)* 3—18473
V_3Ga, monofilamentary, solid-state diffusion prep., growth kinetics 3—58076
W-Re powder mixture, sinter, diffusional interaction, shrinkage, comp. depend. 3—47801
WO_3 thin films, diffusion of H$^+$ 3—8380
WO_3:H, conc. dependent H percolation, optical absorpt. study 3—42846
Y_2O_3-$(Zr_{1-x}Hf_x)O_2$, Zr-Hf interdiffusion coeffs., lattice and grain boundary 3—18496
Zn diffusion in GaAs via SiO_2 layers *(Rumanian)* 3—8255
Zn-Al (22 wt.%), superplastic, steady state flow data 3—34392
$ZnAl_2O_4$, form. kinetics, effect of reactant dispersion in powder mixture *(Japanese)* 3—58086
ZnS:Cu(Al), impurity diffusion, two-sample luminescence study 3—18513
ZnSe: Cu(Ga)(Al), impurity diffusion and luminescence centres 3—23096
ZnSe:Ga (Ni), impurity diffusion, two-sample luminescence study 3—18513
Zn_2SiO_4 glass-ceramic, He diffusion, density, refractive index, thermal expansion coeff., thermal history depend. 3—56827

diffusion in solids continued
ZnTe:Al(Cl)(In), laser-induced donor diffusion, photoluminesc. study 3—47158
Zr, deformation maps 3—34415
β-Zr:Ag, diffusion and isotope effect of Ag *(German)* 3—13544
Zr-Al alloy getter system for Tokamak, diffusivities of H and D 3—17048
Zr-base alloys, oxidation model 3—29208
ZrH_x (x=1.56, 1.90, 1.99), μ^+ diffusion and trapping 3—43476
diffusion pumps
Diffstak diffusion pump, ability to obtain ultra-high vac., energy consumption 3—40629
glass oil diffusion pumps, pumping speed meas. *(Japanese)* 3—25888
vacuum technology, book 3—35765
diffusivity *see diffusion*
diffusivity, thermal *see thermal diffusivity*
digital-analogue conversion
see also analogue-digital conversion
US signal digital preshaping, equipment and appls. 3—46383
digital arithmetic
see also roundoff errors
dedicated arithmetic processor, transmission line matrix method for modelling underwater acoustic waves 3—46369
optical computers, fully-parallel relax. algebraic operations 3—6899
optical processor, outer product, for high accuracy matrix multiplication 3—36943
optical residue processor using interferometric convertor 3—12077
optical waveguide circuit design of adaptive filter in residue no. system 3—1810
digital circuits
see also digital integrated circuits; pulse circuits
double boxcar integrator for pulsed NMR expts. 3—5823
electronic control of flash lamps, stroboscopic appl. 3—22181
versatile digital timer circuit to operate the shutter on a CCD 3—44943
digital communication systems
fibre optic monomode communication system performance, effect of source phase fluctuations 3—17635
fibre optical transmission system optimisation, low-freq. cut-off influence 3—46351
injection laser diode transmitter design 3—7014
junction networks, optical fibres use, technical and economic prospects 3—10497
NMR imaging, impact on medical diagnosis and digital data communications 3—34930
semiconductor multimoded laser for digital communication appl., functional life testing 3—1662
digital computers
for computer applications see under relevant applications e.g. administrative data processing; computerised control; natural sciences computing see also bit-slice computers; microcomputers; minicomputers; special purpose computers
radiotelescope data processing system *(Japanese)* 3—54237
digital control
see also direct digital control
laser absolute dilatometer, with digital data processing unit *(German, English)* 3—20820
digital discs *see video and audio discs*
digital filters
see also signal processing
acoustic intensity meas. by digital filter system 3—12469
acoustic intensity measurement, digital filter based system 3—17752
adaptive digital filtering, application of Krakovian calculus 3—1169
algebraic background correction method investig. of filtering processes 3—6894
astronomy, digital filter design and variational soln. of extended Whittaker problem *(Chinese)* 3—40043
bilinearly distorted image restoration, finite impulse response linear digital filtering 3—32312
biomechanics cinematography, design of digital filter to eliminate HF noise from incontiguous film coord. data 3—4706
finite duration impulse response 2D digital filter, structured noise removal from medical images 3—24823
FIR digital filtering programs for automatic processing of biological signals 3—4660
His bundle activity, external recording, digital filtering process appl. 3—15243
inverse filters, synthesis by nonlinear programming 3—53337
Korean basic spoken digit, automatic recognition, use of energy of vowel bandwidth *(Korean)* 3—22285
low-pass filters design and appl. on core meas. *(German)* 3—49986
nonrecursive inverse signal filtration in NDT 3—53336
pulse signal amplitude estimation using collocation in terms of Krakovian calculus 3—1121
Raman spectroscopy, impulse noise removal using a digital filter 3—25951
digital instrumentation
see also digital readout; digital voltmeters
accelerometer with current-digit convertor, vibration errors analysis 3—49347
calibration, direct digital technique *(Chinese)* 3—40579
CRO developments, LSI appls., digital techniques, facilities 3—36035
electrochemical potential spectroscopy 3—40643
electrogoniometer for clinical use 3—44338
EM thickness gauge, calibration with account of correction function 3—25906
EMG integrator for muscle activity studies in ambulatory subjects 3—39733
flaw detector, acoustic fluoropolymer products testing appl. 3—4241
frequency meter, 500 MHz, decimal point switching facility 3—5778
HC 6010 digital multimeter auto-zero, auto-polarity 3—30890
high-frequency digital CROs, accuracy considerations 3—5808
laser absolute dilatometer, with digital data processing unit *(German, English)* 3—20820
ICD luxmeter 3—45185
multichannel surface balance for monolayer spreading rate determ. 3—494
multimeters, technological trends in analogue and digital instrumentation, computer appls. 3—49394
oscilloscopes and transient recorders, characts. determ. *(French)* 3—30846
pH meter, $3^1/_2$ digit LCD, 0.01 resolution 3—48104
phase shifter for multiple-quantum NMR 3—30912
digital instrumentation continued
polar correlation meas. system for distance and flow transducers *(Chinese)* 3—45124
polarimeter, automatic pulsed digital, for laser spectroscopy 3—5834
quotient-type digital lighting intensity meter *(Polish)* 3—40666
sampling digital acoustic energy meter using VLSI circuits 3—17755
self-balancing digital photoelectric photometer, piezoelectric transducer testing appl. 3—49428
shock pulse parameters meas. 3—49311
tachometer for mean flow speed, design, error analysis 3—42341
thermoelectric digital temp. meter, with analogue linearisation 3—49373
thermometer, high resolution, using voltage controlled oscillator, for low temp. meas. 3—49360
thermometer, low power, design 3—49361
thermometer with digital readout, using LCD display 3—5788
thermometer with quartz probe, operation and construction *(Polish)* 3—5809
thermophysical devices, input units *(Russian)* 3—10840
transducers, direct methods survey 3—20839
vibrating beam accelerometer, strapdown inertial systems applications 3—30849
waveform memorizer, signal sampling and storage, operation, product tends and appls. 3—35982
waveform recorders, performance standards 3—50214
digital instruments *see digital instrumentation*
digital integrated circuits
see also integrated logic circuits; integrated memory circuits; microprocessor chips
pulse height analyzer circuit with constant window width 3—36629
digital modulation *see pulse modulation*
digital readout
see also digital instrumentation
capacitance meter with digital readout for 1 nF to 999-99 μF range *(German)* 3—45126
controlled potential coulometer for determination of uranium in solution 3—6403
distance measurement, using ultrasonic transmitter/receiver 3—20822
drift chambers, readout with flash ADC system 3—45779
force transducer, magneto-elastic, with DC digital voltmeter readout *(German)* 3—285
NMR tracking magnetometer, with digital readout in gauss 3—16379
semiconductor spectrometer, four-channel, data output system 3—11597
digital signal processing *see computerised signal processing; signal processing*
digital signals
acoustic digital signals processing, numerical anal. *(French)* 3—1862
ECG waveforms, appl. of variant of split and merge algorithm 3—35009
geophysical signals, charact. correl. time as estimate of optimum filter length in Maximum Entropy Spectral Analysis 3—39909
digital simulation
see also virtual machines
absorption heat pump refrigerant mass and energy storage anal. for space heating 3—34715
acosutic array signal processing by composite complex sinusoidal modeling, computer simulation 3—32547
acoustic image reconstruction computer simulation 3—46384
acoustic wave propagation and scattering underwater, computer model 3—46369
air conditioning system, open-cycle, solar powered, regenerating type solar collector performance simulation 3—34726
alkanes, rot.-translational coupling and conformation transitions, computer simulation 3—13055
alloys, cluster form. in two-dimensional square lattice, computer simulations *(Japanese)* 3—47865
alloys, phase segregation kinetics, computer simulations, review 3—38074
athermal multichain systems, 2-dimens., scaling relations, computer simulation 3—40506
atomic clusters, superhelical configuration, electron diffr. patterns, computer simulation *(French)* 3—21956
B-mode ultrasonogram processing parameters affecting texture 3—4595
binary crystals, non-random distribs., from order to total disorder 3—22929
binary multiplexing and the phase-retrieval problem 3—32317
biological objects, automated holographic microscopy, computer simulation of 3D imaging 3—24933
biomembranes, chemical oscills. simulation program 3—24689
blood cell transport phenomena examination by computer simulation 3—53652
body fluids transport and distribution model using systems dynamics approach 3—19749
Brice-Phoenix differential refractometer, computer simulation 3—36071
cardiac conduction system, human, mag. field patterns, computer simulation 3—39664
cerebellum, neuronal networks, simulation of learning process 3—29524
charged fluid layer systems, convecting, metastable states relative stability, computer simulation 3—32584
collector-storage walls designing un-utilizability method 3—19615
condensate/feedwater flow system of Washington Nuclear Project Unit, real-time simulation 3—55246
dichloromethane, liq., equilib. thermodynamic props., mol. dynamics computer simulation 3—18479
dichloromethane, liq., mol. dynamic props., computer simulation 3—18201
dichloromethane, liq., mol. dynamics, computer simulation 3—13067
dichloromethane, rototranslation, computer simulation, cybernetic spectroscopy 3—13057
dielectric constant, Ewland-Kornfeld tensor calcs. 3—52703
disordered media, hopping cond. props. 3—33695
EMG studies using population stochastic model of skeletal muscle 3—15057
ETRIN program package for simulation of electrons in solids *(Russian)* 3—43136
Eurelios solar power plant dynamic modelling and simulation 3—44150
evacuated tubular solar collector transient performance model and program 3—39523
fast breeder reactor, three loops engineering simulator 3—55086
first-pass radionuclide angiocardiography, decontamination of time-activity curves 3—15223
flow of gas in a pipe, real-time simulation *(Italian)* 3—27599
foliar injury eval., digital image processing in polarised light 3—4714

digital simulation continued
fossil and nuclear power plants, two phase flow modelling using modular modelling system 3—55252
Fourier transform Nuclear Magnetic Resonance tomographic imaging, computer simulations, imaging methods 3—15184
galactic collisions, numerical simulation techniques 3—16015
ground-coupled tank feasibility in solar-assisted heat pump systems 3—39510
hard sphere fluid, direct simulation of the chemical potential 3—56794
hard triatomic mol. fluid, nonlinear model, Monte Carlo simulation 3—27813
hard triatomic mol. systems, Monte Carlo simulation 3—46819
hard-disk arrays, computer-generated, order and deterministic chaos, hexatic configs. 3—23014
n-hexadecane hydrocarbon chains, conform. in disordered layer systems 3—36880
holographic imaging, complex holographic function, digital reconstruction without conjugate image 3—17729
homogeneous nucleation, generated grain number, reaction time, computer simulation *(Japanese)* 3—39171
horizon sensor errors calculated by computer models, comparison with measured orbit performance 3—5089
horizon sensor performance analysis computing using Earth atmosphere model 3—4959
hydrocarbon chains, conform. in disordered layer systems 3—36880
ice sheet collapse modelling 3—15492
image reconstruction from band-limited data by spectrum extrapolation 3—22004
interacting galaxies, 20000-body computer simulations 3—16014
Josephson tunnel junction, resistively shunted self-reson., chaotic noise obs. 3—57489
Langmuir wave collapse, computer simulation, PIC method 3—2221
latent heat storage for solar power systems, refrigerant storage digital simulation study 3—9493
lattice gauge theories, method for updating SU(N) matrices in computer simulation 3—26016
Lennard-Jones (12,6) fluid, triplet correl. functions, simulations 3—33056
light ion beam fusion, beam transport by z-discharged plasma channel, computer simulation 3—50039
light ion irradiation, radiation damage and imbedded atom profiles, computer simulation 3—51672
liquid metal ion source optics, computer simulation 3—36593
liquid state mol. dynamics, decoupling effects in computer simulation 3—56788
LMFBR, sodium heated once through steam generators, simulation using DYNOT-S computer code 3—55250
LMFBR, thermohydraulic modelling and simulation 3—55398
Lorentzian profile width determ., w.r.t. shot noise 3—49462
magnetic fusion research, computational problems, survey 3—50054
Maxwell fluid, die swell, finite element simulation 3—27561
medical image reconstruction from US array data, statistical estimation approach 3—4589
melting, two dimensional mechanism, Monte Carlo simulation study 3—57065
metals, cubic, grain boundaries, computer modelling 3—46951
metals, texture formation processes during plastic deformation *(Russian)* 3—34344
methane aq. soln., Monte Carlo computer simulation, convergence accel. 3—56801
MHD convertor simulation computer code results and exptl. comparisons 3—51395
moire fringes, filtered, contrast rel. to diaphragm shape 3—26939
molecular beams, RKKM unimolecular decomposition, Monte Carlo simulation program 3—4267
molecular liquids, electrostatic solvation energies, Monte Carlo study 3—22745
muscle motor element mobilisation control by energy expenditure optimisation *(French)* 3—29588
nematic liquid crysts. Maier-Saupe theory and mol. field approx., computer simulation 3—33073
noisy blurred images, const. accel of object, identification of point spread function, recursive restoration 3—22005
non-Gaussian speckle, computer simulation 3—17440
nonsteady detached flow around solid profile lattice 3—32724
nuclear power plant, dynamic modelling 3—55254
nuclear power plant full scope training simulator, software development, maintenance and portability 3—55255
nuclear power plants, multifunctional simulation system *(Japanese)* 3—41210
nuclear reactor, CANDU, deaerator unit, simulation program 3—21445
oculomotor control, visual-vestibular interaction, mathematical modelling and computer simulation 3—48286
one-dimensional flow, turbulent mixing study 3—32716
open channel flow simulation, two-dimensional curvilinear grid model 3—51221
optical system life cycle cost, computerised modelling 3—1739
oxide, EXAFS, exam. of local atomic arrangements 3—38955
oxides, extended defect form., atomistic computer simulation study 3—8066
pacemaker activity suppression by rapid repetitive phase delay 3—34817
packed bed thermal storage unit of hot air solar heating system, design and sizing 3—15005
parabolic dish solar thermal power plants, heat engine type performance capability comparison 3—24622
particle size distribution in opaque matrix, intercept length distribution of rectangular prisms 3—34277
percolation clusters, scaling behaviour of diffusion 3—54689
photographic emulsion, latent image form., computer simulation by Monte Carlo method 3—9338
photovoltaic solar energy, conf. Stresa, Italy (May 1982) 3—54583
plasma, distribution of ionisation fractions in irradiated targets, computer simulation 3—2278
plasma propagation simulation near an electrically propelled spacecraft 3—12965
plastic deformation texture simulation, generalised computer program 3—44954
polyethylene crystals, core struct. of dislocations, computer simulation 3—51602
polyethylene crystals, lattice parameters, elastic consts., computer simulation 3—51588

digital simulation continued
polyethylene crystals, stacking faults, coherent twin boundaries, computer simulation 3—51630
polymer solns., thermodynamic props., computer simulation *(Russian)* 3—47126
polymers, flexible chain, in conc. solns. and in bulk, orientational effects and ordering 3—2376
polymers, self-avoiding walks on dilute lattice, computer simulation 3—40518
positron emitter beam, two-dimens. camera, design and anal., computer simulation 3—50092
positron lifetime spectra, reliability of multi-component anal. 3—47731
powder samples, EPR spectra calc. for axial symm., FORTRAN program 3—23786
pressure vessel, spherical axisymmetrically flawed, expt. and computer simulated holographic inspection 3—48032
psychophysical threshold variability detection procedure 3—53693
PWR components, analytical test bed for evaluating dynamic models, DSNP model 3—55085
PWR nucl. power plant simulator, design and implementation 3—41100
PWR steam generators simulation of heat transfer behaviour using RELAP4 and RELAP5 computer codes 3—55249
PWR system simulation, calculational limitations for accidents 3—55400
PWR U-tube steam generators; modular modelling system simulation 3—55251
pyrophyllite, polymorphism, computer simulation and electron microscopy study 3—42577
random pattern form., self-similarity, phase-transition-like behaviour 3—25819
reactor core system model for Westinghouse advanced simulator 3—55394
reactor transient simulation and analysis, computer codes survey 3—55395
recirculating U-tube nuclear steam generators, modelling and simulation using ATHOS computer program 3—55247
resistance of rot. body with central hole in supersonic flow 3—27548
retino-tectal connections formation, extended branch-arrow model 3—34835
ring polymers, topological tribution functions, theory, computer simulation 3—56433
Ringals 3 PWR power plant model 3—55253
RISM eqns. for site-site 12-6 pot., numerical soln. 3—2361
self-avoiding random walk, asymptotic behaviour 3—35939
semicondcutor, impurity band electron specific heat, Monte Carlo computer simulation *(Russian)* 3—2841
single photon emission tomography, attenuation compensation 3—48388
slope stability, Monte Carlo simulation methods 3—4981
soft sphere fluid, Burnett hydrodynamic computer simulation 3—22414
solar cell array, simulation using microprocessor based controller 3—24611
solar domestic heating using heat pump and uncovered solar collectors, mathematical simulation of performance 3—24624
solar heating systems simulation using generalised computer simulation code 3—34727
Solar Pilot Test Facility modelling group final report (1982) 3—53589
solid-state lasers, mode locking by double passive modulation 3—12193
somatostatin, conformation in aq. soln., simulated PMR, scalar coupling consts. 3—53627
sonar nonstationary reverberation simulation, using linear spectral prediction 3—42060
SPEAR electron-positron storage rings, bunch lengthening, computer simulation 3—26509
spin glass, planar, local minima, computer simulation 3—43376
spin glasses with RKKY interactions, computer simulation studies 3—57678
spreading resistance probe-spacing expt. simulation, probe current density and layer thickness effects 3—30893
statistical surface physics, microclusters, interfaces and simple films, computer simulation 3—13617
steel, solidification of semicontinuously cast ingot, computer simulation 3—9054
SuperPhenix 2 LMFBR, dynamic simulation of overall operation under natural circulation 3—55396
surface asperity profiles using digital data, optimum sampling interval 3—40571
synthetic aperture focusing in ultrasonics, parameter study 3—48034
thunder, acoustic props. for tortuous lightning, quasilinear model and computer simulation 3—35232
tidal flows in Arabian Gulf, finite difference model 3—29927
Tokamaks, impurity transport simulation, computer code, report 3—46776
trajectory formation and handwriting, computational model 3—29587
transition metals, amorphous, spectral functions and anomalous dispersion of electrons 3—52016
transition metals amorphous and liq., electronic states, hybridisation effects 3—52015
transposition of great arteries, blood pressure, blood flow and oxygen transport, model studies 3—58710
turbulent atmosphere, random permittivity field, numerical modelling 3—7581
twin boundaries, incoherent, displacement vectors determ. and anal. *(Chinese)* 3—27950
two-dimensional array, position irregularity estimation by laser light diffr. 3—32399
two-dimensional system, Hall effect and electron localisation in strong mag. fields 3—43212
UNSAT1D, unsaturated groundwater flow computer code manual 3—39571
US array beam pattern simulator for parasitic lobe suppression 3—4586
US backscatter quantitative measurements with phase distortions, expt. and computer simulation 3—29676
US image speckle model and computer simulation 3—4590
US phased-array imaging with multifreq. and nonuniformly spaced arrays, grating lobe amplitude, computer simulation 3—22297
vocal tract system, digital simulation 3—27322
water, liquid, thermal and thermodynamic props., Monte Carlo simulation convergence 3—18200
water, Monte Carlo computer simulation, convergence accel. 3—56801
water droplets, polarisation model for high temps. and density 3—27644
whistler waves, stimulated scatt. by ion acoustic waves in magnetosphere 3—5061
X-ray Laue pattern simulation, Fortran IV program 3—56778
zinc chloride battery, computer simulation 3—39462

digital simulation continued
Ag film, vacuum evaporation, nucleation and growth, real-time computer simulation 3−23221
Au crystal lattices, electron microscope images, computer model 3−33048
Au film, vacuum evaporation, nucleation and growth, real-time computer simulation 3−23221
Au_4Mn, disordered, local ordering and mag. props. 3−52493
Cu, strained crystal, vacancy formation and migration energies, computer simulation 3−38118
Cu, surface scatt., ion focusing and blocking effects for grazing angle 3−47749
Cu-Zn base alloys, martensite interfaces 3−34318
Cu_3Mn, disordered, local ordering and mag. props. 3−52493
Fe, amorphous, vacancies and interstitials, density fluctuation stability 3−37904
γ-Fe, point defect capture by vacancy pores, machine modelling method *(Russian)* 3−37948
Fe, strained crystal, vacancy formation and migration energies, computer simulation 3−38118
Fe_2O_3-PbO-B_2O_3 glasses, ^{11}B and ^{207}Pb NMR lineshape studies 3−52636
$GeTe_4$:Au, amorphous film, diffusion and structural aspects *(French)* 3−2889
$Ge_{0.5}Te_{0.5}(Se_{0.5})$ chalcogenide glass, struct., continuous random network approach 3−33106
H_2 thermochemical production, separation process modelling, computer program 3−48186
H_2-He mixtures with exp-6 interactions, mixing rule 3−33442
^6Li glass scintillator, linear position sensitive neutron detector development 3−41419
Mo (001), low energy Li^+ focused scattering, expt. and computer simulation 3−58023
Mo, strained crystal, vacancy formation and migration energies, computer simulation 3−38118
N_2, microwave energy coupling during elec. breakdown, expt. and computer simulation 3−42470
NaI scintillation detector, estimation method for response curve generation for γ-ray anal. 3−41431
$NaPO_3$, cryst. and vitreous, X-ray irrad., ESR study 3−52625
Ni, strained crystal, vacancy formation and migration energies, computer simulation 3−38118
Si, electronic energy loss of channeled negative pions 3−42687
Si, line defects, EBIC contrast, computer simulation 3−18307
Si, radiation damage by high energy particles, computer modelling study 3−42647
Si surface barrier detectors, microdosimetric aspects of proton-induced nucl. reactions 3−36578
Si:As CVD film, reduced press. deposited, diffusion source for Si-SiO_2 interface heavy doping, computer simulation 3−51852
a-Si:H solar cells, optical behaviour computer simulation 3−58506
Si:O, electron irrad., divacancy production, computer model 3−42662
Si:P, ion implanted, pulsed electron beam annealing, SEM and TEM studies and computer simulation 3−51665
Si:Te, impurity redistribution after pulsed laser annealing, Rutherford backscatt. study 3−42641
SiO_2, amorphous, struct. and bonding, ^{17}O NMR study 3−51495
SiO_2, vitreous, mol. dynamics simulation of surface 3−51901
Tl I photodissociation laser, threshold at low press., meas. and computer simulation 3−37012

digital simulation of computers *see virtual machines*

digital storage
see also content-addressable storage; cryoelectric stores; cryotrons; magnetic storage; optical storage; random-access storage; read-only storage; semiconductor storage
optical fibre recirculating delay line 3−22237

digital voltmeters
capacitance meter, using digital multimeter, 556 IC 3−20868
low-frequency sampling, microprocessor based 3−25896

digitisers *see analogue-digital conversion*

dilatometers *see extensometers*

dilute alloys
see also impurity electron states; Kondo effect; magnetic properties of dilute systems
binary, solid-melt interface stability, thermodynamic criterion *(French)* 3−52920
binary, unidirectional growth from melt, thermodynamic stability of solidification front 3−8965
binary alloy, dilute interfacial stability during growth, thermodynamic approach 3−33158
binary dil. alloys, vacancy jump freq. ratios determ. by electromigration *(French)* 3−2896
FCC, free enthalpy of binding of impurity-vacancy pairs 3−42562
magnetic alloys, min. resist. mech. *(Chinese)* 3−13808
magnetic alloys, nonlinear relaxation dynamics 3−52497
matter, structure and props., book 3−40326
metal-Te liq. alloys, dil., resist. and thermoelec. power 3−3149
nonmagnetic binary, spin-orbit scatt. of cond. electrons 3−52096
rare earth alloys, magnetoelastic coupling via conduction electrons 3−8709
rare earth dilute alloys, magnetostriction 3−33960
thermoelectric power, low temp., in asymm. Anderson model 3−33711
Ag dilute alloys, impurity interaction and elec. field gradients, PAC study 3−38731
Ag-Cu(Pd)(Pt)(Au) foils, dil., CESR linewidth 3−3534
AgIn, alpha-irrad. radiation damage, oxygen stabilised 3−42681
Al dilute alloys, electric field gradient calcs. 3−52091
Al dilute binary alloys, defect induced distortion fields, neutron scatt. study and ab initio calc. 3−13215
Al-Ag(Ga)(Ge), magnetoresist., low-field, anisotropic relax. time effect 3−13802
Al-Cr-Mo, ion implanted metastable phase form by pulsed laser treatment 3−2604
Al-Ge dilute alloys, quenched in vacancies, positron annihilation study 3−56883
Al-H, dil., impurity electronic struct., energy and metal-impurity interaction 3−43070
Al-H, electronic struct. of H impurity, bandstruct. model 3−33673
Al-Sb ion implanted alloy, nonequilibrium segregation during pulsed laser treatment 3−28110
Al-Si, dil., quenched, positron trapping, temp. depend. 3−24047

dilute alloys continued
Al-Si dilute alloys, quenched in vacancies, positron annihilation study 3−56883
Al-Ti dilute alloys, elec. resist., Hall effect and magnetoresistance, clustering effects 3−43155
AlCr, dilute, self-interstitial trapping at Cr atoms 3−13218
AlCu(Si) dilute alloys, ^{65}Zn diffusion coeffs., enhancement effects 3−47150
AlZnCu(Si) dilute alloys, ^{65}Zn diffusion coeffs., enhancement effects 3−47150
Au-Fe, dil., absolute thermoelec. power at low temps., spin glass-Kondo effects 3−8474
AuFe spin glass, dilute, random static polarization, μSR study 3−57659
Ce, Kondo volume collapse in dilute and concentrated cases, γ-α transition 3−52364
Cr-Ge dilute alloys, mag. phase diagram, mag. susceptibility study 3−14020
Cr-Hf-H, local condensation of hydrogen on ^{181}Hf, PAC study *(French)* 3−28107
Cu alloys, spin-orbit scatt. of cond. electrons 3−52096
Cu dilute alloys, cluster model residual resistivities 3−33704
Cu-3d transition metal dil. alloys, magnetoresistance calc. 3−38369
Cu-Al, low temp. lattice sp.ht., Green's function theory 3−13480
Cu-Al(Si)(P)(Zn)(Ge), dil., Dingle temp. and Fermi surface changes, charge transfer effects 3−52009
Cu-Au, dilute, low temp. sp. ht., Green function theory 3−28116
Cu-Au dilute alloy, thermal and fast neutron irrad., isochronal recovery spectra 3−42674
Cu-Au dilute alloys, fast neutron induced defects, dose depend. 3−42675
Cu-based dilute Hume-Rothery alloys Fermi surfaces, de Haas-van Alphen study 3−8400
Cu-Li, dil., spin-orbit scatt. of cond. electrons 3−52096
Cu-Sb, dilute, secondary recrystallisation kinetics meas. *(Russian)* 3−34345
Cu-Sn, very dil., displacement around disordered Sn impurity, EXAFS study 3−13168
CuMn spin glass, dilute, mag. relaxation, field and temp. depend. 3−57650
$Cu_{95}Sn_5$, core level binding energy shifts, XPS study 3−14441
α-Fe-Al-Si-Sn-V, dilute spin and charge density changes on substitution 3−52382
Fe-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3−14038
Fe-P dilute alloys, diffusivity, surface segregation technique, Auger study 3−2876
Fe-Pd-H system, mag. props., Mossbauer emission spectra study 3−28742
Fe-Ti-C, ion implanted friction and wear 3−4153
Fe-Ti(V)(Cr)(Mn)(Co)(Ni)(Cu), dil. alloys, electronic struct. 3−3104
$Fe_{80}B_{20}Sb_x$ amorphous alloy, Sb impurity hyperfine field, Mossbauer study 3−14168
FeCr, dilute, hyperfine field distribs., host and impurity, NMR spectra 3−52639
FeCu dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3−43873
FeMn dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3−43873
FeNi dilute alloys, mag. aftereffect 3−28645
FeTi dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3−43873
FeV, dilute, hyperfine field distribs., host and impurity, NMR spectra 3−52639
$In_{95}Sn_5$, core level binding energy shifts, XPS study 3−14441
$LaCo_{5-x}Al_x(Ga_x)$, hydriding property modification by partial substitution, X-ray study 3−2809
$La_{0.99}Tb_{0.01}Ag$, magnetostriction meas., single-ion model anal. 3−14103
Mg-Al (0.8 wt.%), grain boundary sliding at high temp. in torsional fatigue 3−29148
Mg-Sc dilute alloy, H_2 absorpt. and electronic struct. 3−38195
Mg-Y dilute alloy, H_2 absorpt. and electronic struct. 3−38195
Na-Li, dil., spin-orbit scatt. of cond. electrons 3−52096
NbN-H dilute alloy, N-H complex trapping behaviour, X-ray diffr. study 3−33275
Ni-Eu, ion implanted, pulsed laser irrad., defect-impurity interactions 3−2599
Ni-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3−14038
$Ni_{1-x}Be_x$, dil. alloy, local vibr. broadening, inelastic neutron scatt. study 3−57048
Pb-Zn very dil. composites, proximity-effect induced supercond. 3−38522
Pd-Co alloys, hydrogenated, spin glass type mag. transitions obs. *(French)* 3−14047
Pd-Ni (1 wt.%), localized spin fluctuations obs. by neutron inelastic scatt. 3−52365
PdFe alloys, dil., model of localised moments 3−14000
PdNi, mag. correlations near critical conc. 3−23585
Pt-Au dilute alloys, neutron irrad. and annealed, recovery spectra, resistivity method 3−42676
Pt-Cu dilute alloy, neutron irrad. and annealed, recovery spectra, resistivity method 3−42676
Pt-Ni, dil., elec. and galvanomag. props., 1.4 to 300K 3−57332
Rh-Cr dilute alloys, hyperfine interactions, Knight shift, nuclear orientation study *(French)* 3−33691
Sb-Sn (Te), Fermi surface characts. rel. to impurity conc. *(Russian)* 3−38286
Sc-Gd dil. alloy single crystals, ESR study of dynamics of local moments and cond. electrons 3−38690
Sm-Co based alloys, exchange and hyperfine fields on dil. ^{153}Eu 3−52676
Sn-In, dil., US attenuation in normal and supercond. states, amplitude and freq. depend. 3−33826
$Tb(Zn_{1-x}Cu_x)^{156}Gd$, hyperfine field of ^{156}Gd, γ-γ perturbed angular correlation study 3−14165
Ti-Al(Sn), deform. kinetics at low temp., strengthening mechanism 3−14682
$(U_xTh_{1-x})S(Se)$, dilute alloys, specific heat and Kondo effect 3−57522
$V_{1-y}M_yH_2$ (M=Fe,Mo), normal and deuterated, phase diagram, impurity effects 3−33391
Zr-V alloys, solute and solvent diffusion 3−13517

dimensions
No entries

- **dimer lasers** *see excimer lasers*
- **dimerisation** *see association*
- **dimers** *see molecules*
- **dineutrons** *see neutrons*
- **Dingle temperature**
  - p-CdSb, Shubnikov-deHaas oscills., Fermi surface topology, hole cyclotron masses, Dingle temp. determ. 3—23245
  - Cu-Al(Si)(P)(Zn)(Ge), dil., Dingle temp. and Fermi surface changes, charge transfer effects 3—52009
  - ZrZn$_2$, Fermi surface, field depend., de Haas-van Alphen study 3—33622
- **diode lasers** *see semiconductor junction lasers*
- **diode sputtering**
  - electron microscope specimen coating techniques, review 3—10957
  - LV sputter coating, Au, Au-Pd and Pt deposition 3—52941
  - magnetron/plasmatron systems use 3—39028
  - RF diode sputtering in permanent-match mode 3—52942
  - Ne/O$_2$ RF diode sputtering glow discharges, optical emission study 3—52937
- **diode tubes** *see diodes*
- **diodes**
  - *see also plasma diodes; rectifier tubes; semiconductor diodes*
  - cryo-diode, magnetically insulated; intense pulsed ion beam extraction 3—16445
  - current oscillations in a gas-filled diode with a pulse discharge 3—51429
  - high-current electron beam form. in vacuum diode, appl. to laser pumping 3—32296
  - NMR spectrometer components for low freq. operation improvement 3—16387
  - one-dimensional low air press. diode, role of avalanching 3—37718
  - thermionic double diode as efficient detector in excited state laser spectroscopy 3—36102
  - Si pin diode neutron damage monitors 3—55715
- **dipole antennas**
  - attenuation function for field of vertical elec. dipole for path with two diffr. screens 3—6849
  - HF plasma noise induced in ionosphere/magnetosphere in situ antenna 3—15690
  - impedance meas. method appls. for planetary soil composition studies 3—15854
  - microwave holography, analytic continuation applied to microwave apertures 3—1592
- **dipole moment, electric** *see electric moments*
- **dipole moments, magnetic** *see magnetic moments*
- **Dirac electron theory** *see Dirac equation; electron theory*
- **Dirac equation**
  - *see also electron theory*
  - abelian and nonabelian dyon solns. in curved space-time 3—16488
  - alkali earth atoms, atomic and ionic core binding energies from XPS and DF calcs. 3—1214
  - atomic fine structure in space of constant curvature 3—1502
  - bag model nonspherical possibilities with massless quarks 3—36217
  - Beltrami-de Sitter spacetime, relativistic quantum wave eqns. for scalar and spinor particles *(Chinese)* 3—40743
  - bivariational methods appl. to Schrodinger and Dirac eqn. 3—106
  - Bogomolny inequality for Einstein-Maxwell theory 3—16210
  - bound states, relativistic quark in vector potential 3—36161
  - Breit equation for two Dirac particles, tensor form 3—49528
  - bundle space, affine connection, geometric structure in 5-D unification of vierbien and EM fields 3—31105
  - classical coloured particle with spin in external Yang-Mills field 3—20969
  - coloured spinning classical particle in external SU(2) gauge field 3—537
  - conformally covariant nonlinear equations on tensor-spinors 3—49555
  - Coulombic bound states of spin-1/2 and spin-0 particle, fine structure formula 3—20970
  - Dirac H atom, virial theorem 3—25723
  - Dirac supermultiplet, Di and Rac fields, supersymmetric interactions 3—5973
  - dyons and photons, quantum field theory 3—30985
  - Einstein-Dirac eqns., exact, soln. for anisotropic cosmological space-time 3—30711
  - electron and positron diffr. at high and low energies, relativistic theory 3—13045
  - electron Green's function in external EM field 3—40840
  - electron motion in field of two plane EM waves and inhomogeneous elec. field 3—40841
  - electron motion in longit. EM fields 3—31006
  - electron. Zitterbewegung, Heisenberg eqn. in const. mag. field 3—20967
  - external field derivation based on QED 3—45329
  - field theory of Dirac monopoles 3—16555
  - fields with secondary constraints, Rarita-Schwinger, Dirac, Scalar, commutation relations 3—16201
  - finite-size effects on relativistic electrons in nucl. Coulomb field 3—11217
  - fractional quantum numbers on solitons 3—40778
  - generalised internal variables, external field inconsistency 3—531
  - gravitation and electromagnetism, unified theories 3—5690
  - gravitational field canonical quantum theory, asymptotic fields and unitary problem 3—40455
  - gravitational waves, subquantum origin, Dirac eqn. wavefunction 3—139
  - hydrodynamic form of Dirac eqn. and distorted wave Glauber approx. 3—30994
  - inhomogeneous mag. field, Dirac eqn., exact soln. 3—54833
  - interacting Dirac electron, two-component representation, mean operators 3—40839
  - internal symmetry in theory of multispin particles 3—5978
  - ions, highly charged, relativistic and correl. effects, Green's function of Dirac's eqn. 3—31897
  - isobaric nuclei-charged particle interaction, S-matrix singularities in complex plane of Coulomb coupling constant 3—41002
  - Kahler-Dirac equation in flat and curved space-times, fermionic degrees of freedom 3—11018
  - local representation for fermions on lattice 3—20971
  - Lorentz-Dirac eqn., extra condition from conservation law 3—31056
  - Maxwell-Dirac coupled eqns., global solns. 3—30734
  - meson spectra from Dirac eqn. with power law potential, $b\bar{b}$, $c\bar{c}$, $s\bar{s}$, $u\bar{u}$ mesons 3—40884
  - monopole searches, review of expt. status 3—16560
  - Nambu-Jona-Lasinio model, chiral symmetry and supersymmetry 3—584
  - neutrino perturbations in perfect fluid spacetimes, Godel universe, Taub spacetime, cosmological models 3—20547

Dirac equation continued
  - non-Abelian monopoles, eqns. of motion 3—16554
  - nonlinear, multiparametrical exact solns. 3—30996
  - octet baryons in independent quark model approach based on Dirac eqn. 3—31169
  - one Dirac and one Duffin-Kemmer particle, relativistic two-body eqn. 3—49527
  - path integral in two space-time dimens. 3—40790
  - Poincare invariant representation of spin Dirac particle spin operators 3—35885
  - potential scattering, asymptotic behaviour of eigenvalues, Dirac equation, S matrix spectrum 3—16175
  - Prufer transformation appl. to Dirac operator eigenvalue problem, report 3—20710
  - quantisation in stating co-ordinate system, Minkowski spacetime 3—5968
  - quantum field theory of charges and Dirac monopoles 3—16558
  - quantum field theory of charges and monopoles, infinity subtraction 3—16594
  - quark-antiquark systems, power-law pot, model pot. Lorentz structure vs. relativistic consistency 3—16615
  - quarks bound state energies for scalar pot. in Dirac eqn. 3—36209
  - quasiclassical approximation, associated scatt. operator 3—20989
  - quasiclassical approximation, propagator in external EM field, finite time 3—20988
  - radial potential, fermion and antifermion in infinitely rising potential 3—31150
  - relativistic electron radiation in periodic mag. field 3—21059
  - relativistic wave eqn. and meson spectra 3—524
  - relativistic wave functions and EM gauge group 3—5955
  - Riemann-Cartan space time, supersymmetric Dirac particles 3—131
  - self-dual multimonopole construction by ADHM method 3—16536
  - separable solutions, for electron 3—529
  - shell model potential from a relativistic Hartree-Fock approach 3—11259
  - solitons with fermion number $\pm 1/2$, scatt. process 3—16472
  - spin-$^1/_2$ particles, relativistic quantum theory 3—20985
  - spin-$^1/_2$ particles bound-state energies, relativistic corrections calc. 3—45004
  - spinor fields, to formulate lattice approximation of fermions 3—26019
  - SU(2) n-monopoles, Dirac monopoles embedding 3—16595
  - supergroup extensions, central charges, quantisation through rel. wave eqns. 3—40784
  - supersymmetry, Dirac algebraic approach 3—49576
  - transient amplitudes between Dirac spinors, e^+e^- scatt. appl. 3—30991
  - two-body Dirac equation for semirelativistic quarks 3—21096
  - variable G gravitational theory *(Polish)* 3—35905
  - Yang-Mills theories, field strength gauge-fixing, SU(2) embedding 3—5974
  - e-g system bound states 3—16552
  - $\mu^+\mu^-$, e^+e^- and $\tau^+\tau^-$ pair prod. via virtual-photon exchange in uniform mag. field 3—21057
  - $Q\bar{q}$ like mesons, Dirac mass spectra in power law pot., D, F, B, Ψ, Υ, q masses 3—45381
  - ^{40}Ca(p,p), 497 MeV, spin rotation funct. from Dirac eqn. optical model 3—49861
  - H atom, relativistic, momentum representation 3—55868
- **direct access storage devices** *see magnetic disc and drum storage*
- **direct coupled amplifiers** *see d.c. amplifiers*
- **direct current amplifiers** *see d.c. amplifiers*
- **direct current motors** *see d.c. motors*
- **direct digital control**
  - PWR waste disposal systems, digital control and monitoring system *(Japanese)* 3—41209
- **direct energy conversion**
  - *see also bioenergy conversion; cells (electric); chemical energy conversion; magnetohydrodynamic conversion; photothermal conversion; plasma diodes; solar energy conversion; thermionic conversion; thermoelectric conversion*
  - EHD flow in transfer channel, direct energy conversion 3—39497
  - electromechanical energy conversion, mag. field source optimization 3—19617
  - throttle-type EHD convertors, flow modes, direct energy conversion 3—39498
  - Dy, thermomagnetic energy conversion 3—34731
- **direct nuclear reactions and scattering**
  - *see also pick-up reactions; stripping reactions*
  - amplitude correl., direct reaction theory test 3—41008
  - breakup reactions kinematics for ang. correl. expts. with large area detector 3—26224
  - deeply lying hole states from one nucleon pick-up and knock-out reactions, review 3—49717
  - fast nucleon radiative capture in giant resonance region, simple direct models 3—786
  - generalised impulse approximation for heavy-particle collisions 3—21326
  - heavy ion collisions, microscopic transport theory, neutron and proton transfer 3—21335
  - neutron induced reactions, direct and resonance reactions 3—49866
  - orthogonality in nucleon knockout processes 3—55002
  - partially separable t matrix in scatt. theory 3—6202
  - photonuclear knockout reactions, intermediate energies 3—55024
  - prequilibrium reactions with multistep direct and compound processes and complex particles 3—36396
  - quasifree knockout reactions, DWIA, spin-orbit effects, (p.2p) and (p,pn) results 3—49830
  - reduced matrix eqns. with reactive components for direct nucl. interactions 3—11299
  - relativistic heavy ion collisions, heavy fragment prod., mass scaling phenomena 3—21328
  - single-particle response of finite nuclei in knock-out reactions 3—11300
  - (e,e′p), knockout reactions, intermediate energies 3—55024
  - (γ, px), proton spectra and cross section, virtual pion effect 3—31384
  - (n,γ), fast n, single doorway state model, direct-semidirect consistent anal. 3—790
  - (p,X), fragment relative isotopic yield, critical hadronic matter, thermodynamic model anal. 3—21311
  - (p, X) in emulsion, target nucleus fast fragment energy depend. 3—21308
  - (p,X) on ^{12}C, ^{27}Al, ^{58}Ni, ^{90}Zr, ^{209}Bi, 72 MeV, X=αx or ^{3}Hex cross section and analysing power meas. 3—6225
  - Au(^{4}He,X), 5 GeV, spectator residues, statistical breakup model 3—49831
  - Au(^{20}Ne,X), 5-42 GeV, spectator residues, statistical breakup model 3—49831

direct nuclear reactions and scattering continued
^{197}Au(^{20}Ne,X), 290 MeV, quasielastic projectile dissoc. 3−815
Au(p,X), 4.9 GeV, spectator residues, statistical breakup model 3−49831
^{11}B(α,t), direct and exchange process cross sections, bound state wave function depend. 3−36425
^{9}Be(π^-, πN)^{8}Li, 1,3,4 GeV/c, ang. distrib. meas. of recoil ^{8}Li 3−26276
^{209}Bi(p, α), 24 MeV, spectator role of Bi valence proton, ^{208}Pb comparison 3−21309
^{A}C(n,γ), thermal, A=12, 13, levels, Lane-Lynn direct capture theory test, (d,p) spect. factor 3−26227
^{12}C(^{12}C, 6α), nuclear breakup into α-particles, cross section near yrast-region *(Russian)* 3−11339
^{12}C(^{12}C,X), cross section direct meas. between 10 and 83 MeV/nucleon 3−26264
^{12}C(^{3}He, α)^{11}C, reaction mechanism, finite-range DWBA calcs. 3−11327
^{12}C(n,3α)n, 10-35 MeV, total and partial cross section meas., reaction mechanisms 3−36415
^{A}Ca(d,p), A=42, 44, low-lying states study above and below Coulomb barrier 3−26249
^{40}Ca(^{20}Ne, ^{16}O), 260 MeV, incomplete deep inelastic collisions, direct and dissipative modes 3−26267
^{40}Ca(^{6}Li, d), 76 MeV, EFR-DWBA anal., direct α-cluster transfer, ^{44}Ti α-spectroscopic factors 3−21216
^{40}Ca($\vec{n}$,γ), direct-semidirect model anal. for fast n 3−791
^{40}Ca(p,γ), 2.1-3.1 MeV, direct capture to ^{41}Sc first excited state, excitation functions 3−36395
^{40}Ca(π^+,π^+p), quasifree knockout reactions, distortion effects, DWIA calcs. 3−11346
^{41}Ca polarisation effects from isoscalar quadrupole resonance, direct-semidirect anal. from ^{40}Ca($\vec{n}$,γ) 3−754
^{142}Ce($\vec{p}$,γ), isovector E2 giant resonance excitation in direct-semidirect model 3−16749
^{54}Fe(^{7}Li,^{6}He), 48 MeV, angular distributions, DWBA calcs. with Woods-Saxon potentials, ^{55}Co spectroscopic factors 3−16754
^{54}Fe(^{7}Li,^{6}Li), 48 MeV, angular distributions, DWBA calcs. with Woods-Saxon potentials, ^{55}Fe spectroscopic factors 3−16754
^{2}H(p,2p)n, two-body tensor force, evidence for sensitivity 3−26240
^{2}H(π, πn)p, 438 MeV/c, deuteron break-up reaction, dibaryon reson. 3−49896
^{2}H(π^-,π^-)pn, 371, 438, 552 MeV/c, enhancing Δ_{33}-resonance effect in cumulative nucleon spectra 3−55068
^{3}He(e, e′p), 643, 806 MeV, quasielastic scatt., nucl. structure and NN interaction studies 3−31393
^{3}He(e,e′p), quasifree reaction, proton momentum distrib. 3−765
^{127}I(π,πxn), 60-350 MeV, excitation function in (3,3) reson. region 3−55069
^{127}I($\pi^{\pm}$,πN)^{126}I, 60-350 MeV, excitation functions 3−6267
(^{6}Li,αX), projectile fragmentation struct. in high energy reactions 3−807
(^{6}Li, d), EFR-DWBA descript., shape of α pots., cross section 3−31438
^{6}Li(^{6}Li,3α), direct single spectator process, quasifree scatt. conditions *(Chinese)* 3−55013
^{6}Li(α,d), direct and exchange process cross sections, bound state wave function depend. 3−36425
^{25}Mg (α,α), 12.5 MeV, elastic and inelastic, statistical, optical and coupled channel anals. 3−16780
^{26}Mg(^{12}C,^{12}B), 102 MeV, charge exchange, shell, microscopic direct and CRC anals. 3−55057
^{14}N (^{10}B, 6α), nuclear breakup into α-particles, cross section near yrast-region *(Russian)* 3−11339
^{58}Ni($\vec{p}$,p′), 65 MeV, anal. powers from statistical multistep direct emission theory 3−26229
(^{16}O, X) on nucl. emulsion, 75, 175, 2000 MeV/*A*, correl. between projectile and target break-up 3−31430
^{16}O(^{9}Be, n6α), nuclear breakup into α-particles, cross section near yrast-region *(Russian)* 3−11339
^{16}O(α,x), X=αd, αt, α^{3}He, 139.2 MeV, cross sections, spectroscopic factors from DWIA calcs. shell model comparison 3−6210
^{16}O(p,x), X=pd, pt, 101.3 MeV, cross sections, spectroscopic factors from DWIA calcs. shell model comparison 3−6210
^{16}O(π^+,π^+p), quasifree knockout reactions, distortion effects, DWIA calcs. 3−11346
^{209}Pb M1 giant resonance search, compound and direct-semidirect processes from ^{208}Pb(n,γ) 3−746
^{106}Pd (n,2n), 22.9 MeV, direct ^{2}n* contrib. to neutron spectra 3−749
^{28}Si (α, $\alpha'\gamma$), 24-27.5 MeV, α-γ correlations, transitions, statistical and direct anals. 3−26211
^{A}Sm(^{16}O,X), A=148, 150, 152, fluctuation and fusion cross sections, average S-matrix model 3−16803
^{48}Ti(^{16}O, ^{16}O′), 100 MeV, continuum spectra and polarisations, direct reaction anal. 3−49885

directional couplers
fibre optic directional coupler, single mode, for use in reflectometers or gyroscopes 3−1773
glass-gel-coated single-mode-fibre coupler with programmable power splitting ratio 3−12337
gyroscope couplers, 3×2 channel waveguide, theory 3−12319
integrated optical directional coupler switch, 200 psec. stepped-$\Delta\beta$-operation 3−42038
integrated optical switch matrix for single-mode fibre networks 3−12316
multilayer directional coupler using acousto-optic effects by SAWs, optical switching characts. 3−50797
optical, variable branching ratio, output power fluctuation anal. rel. to parallelogram prism ang. arrangement 3−37185
optical diffused channel-waveguide directional couple, coupling characts. 3−12326
optical fibre recirculating delay line 3−22237
semiconductor directional couplers, insertion loss analysis 3−42037
single mode fibre optic components, directional coupler, polariser and polarisation controller 3−22240
single-mode-fibre 1×N directional coupler 3−32498
variable ratio couplers and no transition optical switches, optical prism appl. proposal 3−22203
GaAs epitaxial layer electro-optically controlled directional coupler switch at 1.15 μm 3−12314
LiNbO$_3$ coupler delineation using laser-written masks 3−17646

directional patterns *see antenna radiation patterns*

directors (programs) *see supervisory and executive programs*

dirty superconductors
film, pair breaking parameter, fluctuation cond. 3−33830
inhomogeneous superconductors, proximity effects 3−23551

dirty superconductors continued
thin film, thermally activated vortex-antivortex plasma, gapless regime 3−38559
transition temp., diagrammatic theory, localisation effects 3−43317
two dimensional, resistive transitions, Coulomb-gas model and vortex fluctuations 3−52318
two-dimensional supercond., vortex-unbinding transition, renormalisation effects 3−8619
Zr-Gl, amorphous binary alloys, superconducting props. 3−23523
Zr-Nb-Ge alloys, amorphous, supercond. props. 3−28473
Zr$_{85}$Ge$_{15-x}$M$_x$(M=B, Al, C, Si or Sn), superconducting transition temp., comp. depend. 3−38517
Zr$_{85}$Si$_{15-x}$M$_x$(M=B, Al, C, Ge or Sn), superconducting transition temp., comp. depend. 3−38517

discharge lamps
see also arc lamps; flash lamps; fluorescent lamps; metal vapour lamps
boosted glow discharge emission lamp, temps., electron densities and degrees of ionis. 3−410
capillary discharge tube for the production of intense VUV resonance radiation 3−27180
hollow cathode lamp light sources for spectrochem. analysis, emission stability for pulsed operation 3−53470
spectral distribution effect on visual performance 3−48292
W halogen lamp, incoherent polarised light use for photostimulated wound healing 3−48322

discharge lasers *see gas lasers*

discharge tubes *see gas discharge tubes*

discharges (electric)
see also arcs (electric); electric breakdown; exploding wires and foils; flashover; glow discharges; high-frequency discharges; lightning; partial discharges; positive column; sparks; surface discharges; Townsend discharge
adsorption mechanism of discharge chamber wall influence on mol. plasma opt. props. *(Russian)* 3−46803
air, discharge current, plasma param. in longitudinal mag. fields 3−37720
air, laboratory, wind-blown positive corona development in point-plane gap 3−27790
air, steamer-to-spark transition, crit. charge value meas. 3−51420
air ionization behind strong shocks, probe meas. 3−12973
anode layer near Cs diode electrodes 3−51431
anode region of a gas discharge controlled by vol. processes 3−2316
avalanche-streamer transition, mathematical model 3−51409
beam-plasma discharge, radial current in crossed elec. and mag. fields *(Russian)* 3−2315
capillary discharge with an evaporating wall, radiation-gasdynamic processes 3−18153
cathode layers near Cs diode electrodes 3−51430
combined photoionization discharge 3−7824
conducting sphere and grounded plane, microdischarge threshold conditions, anal. 3−7821
conference, Moscow, USSR (Sept. 1981) 3−5493
constricted, ionisation waves, theory 3−33017
constricted Ne discharge, ionisation waves investig. 3−32893
current oscillations in a gas-filled diode with a pulse discharge 3−51429
dielectric liq., localised elec. spark discharge, cavitation dynamics 3−18158
diffuse discharge opening switches, optical control 3−27766
DPF discharge, breakdown and run-down phases investig. 3−12986
electrode stabilised elec. discharge stability 3−2317
electron beam controlled, switching appls. 3−27765
electron beam discharge, pipe-like geom., active radical flow generation 3−37714
electron beam formation in skimming discharge plasma 3−13012
electron beam ionised discharges, appl. to switches 3−27763
electron generation, polarisational self-acceleration *(Russian)* 3−1539
electron source, gas injection into high-pressure devices 3−36598
electronegative gases, domain instability in non-self-sustaining discharge 3−51410
electrostatic discharges, charge transfer and current flow meas. 3−7822
electrostatic discharges, spark energy meas. using optical technique 3−27786
excited particle density meas. in gas discharges, light interferometry *(Dutch)* 3−51424
excited states nonstationary kinetic ionisation, recombination and population 3−51274
externally supported, ionisation losses, electron density 2 dimens. distrib. 3−33016
externally sustained, conducting channel propag. 3−33023
externally sustained, gas flow and elec. field relative orientation effect 3−13011
fast atom flow from low safety factor discharge in Alcator A *(Russian)* 3−27665
fast focus discharge, breakdown, compression and pinch data 3−51399
frozen magnetic flux in a Tokamak discharge 3−51365
gas discharge wall cleaning in Tokamak, effect on light impurity flow, temp. and energy lifetime *(Russian)* 3−27757
gas discharges, runaway electrons, X-ray diagnostics 3−13010
gas laser pumping by electron beam from nanosecond skimming discharge plasma 3−12179
gas lasers pumped by electric discharges and electron beams *(Japanese)* 3−1612
gas switches, 2.8 MV, UV laser triggering 3−27126
gas-discharge, AC operated, heat rating of envelope *(Russian)* 3−18148
gas-discharge-plasma streams motion in electromagnetic shock tube, effects of xenon preionisation 3−51322
gaseous dielectrics, conf., Knoxville, TN, USA (March 1982) 3−5495
gaseous insulation discharge voltage/time characteristic calc. *(German)* 3−37726
heat transfer from a horizontal fine wire and cylinders in a corona wind 3−18147
HF vacuum spark in a mass-spectrometer ion source, elect. and optical param. 3−33013
high current discharges, mechanism generating inverse current 3−13000
high density discharges with neutral injection in DITE Tokamak 3−7782
high voltage, crossed-field, 60 Hz 3−18183
hollow cathode, cooled, light source for spectra excitation of monolithic dielectrics 3−53469
hollow cathode magnetron discharge 3−22735
inert gas halide RF pumped lasers, design considerations 3−56241
ion lasing in a radially inhomogeneous discharge 3−17488

discharges (electric) continued
- ion temperatures in plasma discharges 3—13009
- ionisation stability, sudden constriction 3—32844
- ionisation wave, reson. polarisation self-accel. of electrons in gas discharges 3—22740
- ionisation waves in small-bone discharge tubes, linear dispersion obs. 3—42466
- ionization waves caused by effects of magnetic field 3—7818
- Kevlar-polyester composite, charging characts. under electron beam irrad. 3—18768
- laser gas-discharge, elementary processes, mechanism and rate const. reconstruction 3—7703
- limiting voltage effect for breakdown of gas 3—27645
- liquid dielectrics, prebreakdown streamers 3—18159
- long gas discharge, nonlinear theory, production by ionising EM wave 3—18026
- melt disintegration processes study by contactless methods 3—24463
- metal, plasma oxidation 3—9247
- metal vapour-noble gas discharges in transition region, modelling 3—37722
- methane, non-self-consistent electron beam controlled discharge 3—42480
- micro-pinch region in vacuum spark, form. and development *(Russian)* 3—32940
- modified Penning discharge characts. 3—37721
- molecular ionisation by electrons under electric field, rate constant determ. 3—51275
- molecules, vibr. excited, chem. and physical processes in nonequilib. plasmas 3—56765
- nanosecond spatial discharge, finite energy parameters and cathode spot form. by explosive emission *(Russian)* 3—33003
- non-self-maintaining, establishment and decay in electronegative gas, domain form. discharge current *(Russian)* 3—27760
- nonstationary heat flows in plasma jets *(Russian)* 3—32910
- open plasmadynamic plasma-focus discharges, dynamics and radiation 3—51391
- optical striations, lifetimes, form. dynamics *(Russian)* 3—33004
- optogalvanic response to light, photon energy vs. photon number 3—18143
- optogalvanic response to light, photon energy vs. photon number, authors comments 3—18144
- particle balance in T-11 Tokamak 3—7793
- Penning cell with ring-shaped cavity, neutralised ion beam emission 3—50108
- Penning discharge, prod. of Hf thin films, resistivity and struct. study 3—52275
- plasma centrifuge, isotope separation, radial conc. gradient form. 3—18142
- plasma temperature determination from total intensity of self-reversed spectral line 3—27736
- positive corona discharge, primary streamer location 3—27787
- proportional counters, self-quenching streamers in gas mixtures 3—45778
- pulsed low-press. discharge in transverse axisymmetric mag. field, props. investig. *(Russian)* 3—33001
- pulsed volume high-press. discharges, cathode spots 3—33019
- rare gas-Hg mixtures, multichannel discharges, static and dynamic characts. 3—13005
- relativistic nonlinear electron-cyclotron-wave propag. in streaming electron plasmas 3—7731
- removal of light impurities by discharge cleaning 3—18076
- segmented coaxial discharge, for pumping of dye laser *(Korean)* 3—37067
- self-sustained longitudinal, stabilized by oppositely directed gas flow, steady-state current filament 3—42484
- single wave existence in nanosecond discharges with preionisation 3—2215
- single-null poloidal divertor in Doublet III, exptl. testing 3—18134
- sintering Al infiltrated graphite 3—24200
- slagged MHD generator electrode wall, electrical discharge charact. 3—29425
- space discharge formation by UV radiation in Ar-SF$_6$ and He-SF$_6$ *(Russian)* 3—27758
- space-charge-limited bipolar current flow between coaxial cylindrical electrodes 3—33007
- spacecraft, electrostatic charging and discharging 3—20200
- streamer formation 3—2318
- streamer propagation in liquids and over liquid-solid interfaces 3—18157
- streamer propagation in liquids and over liquid-solid interfaces 3—27762
- suprathermal electrons prod. by stimulated Raman scatt. 3—51347
- surface visualisation by Kirlian effect, theory 3—20924
- Tokamak, JIPP T-11, electron cyclotron reson. discharge cleaning 3—18100
- Tokamak, JIPP T-II, wall conditioning by AC discharge cleaning 3—18078
- Tokamak reactor, simulation of fuel pellet injection, plasma density 3—32976
- Trichel type discharges in gases, simple theory, stepped-leader phenomena appl. 3—2326
- vacuum discharge, cathode fast processes 3—18168
- vacuum discharge, cathode processes, numerical simulation 3—18178
- vacuum discharge and elec. insulation, conf., Columbia, SC, USA (Oct. 1982) 3—16087
- vacuum gap, explosive electron emission and plasma formation, expt. study 3—18156
- vacuum gaps, thermoelastic destruction of cathode whiskers 3—51432
- vacuum switch trigger delay characteristics 3—27775
- vacuum-solid insulator interface, elec. field modification by surface charges 3—51416
- vibrational temp. in weakly ionised steady-state N$_2$ discharge plasma 3—42474
- void discharges meas. techniques comparison 3—10856
- water, streamer propag. for selected electrode geometries 3—18161
- Al impurity in spark-discharge plasma, meas. of density of electrode material 3—33021
- Ar DC magnetron discharge, spectroscopic study 3—56751
- Ar ion detachable pulsed laser *(Chinese)* 3—41866
- Ar plasma, organic compounds attachment coeff meas 3—37612
- Ar pulsed discharge, radical prod. from trace H$_2$O, photoabsorpt. spectrum 3—51405
- Ar, thermal discharge, partial local thermodynamic equilib., spectroscopically measured electron temp., theory 3—51419
- Ar/metal ion sources on the basis of a discharge contracted in crossed E×H fields 3—16446
- Ar-Br cpds. mixtures, discharged, Br emission spectra 3—45890

discharges (electric) continued
- Ar-Hg gas mixture, ionisation waves, modulation phenomena obs. 3—12855
- CO$_2$ elec. discharge laser with emission energy of 500 J 3—7017
- CO$_2$ fast-flow closed-cycle industrial laser, active medium investigation 3—37072
- CO$_2$ high-power electric-discharge lasers, dynamic saturation of optical transitions 3—22030
- CO$_2$ laser discharge, non-self-sustaining, limited energy input *(Russian)* 3—33006
- CO$_2$ lasers, ion aging effects on the dissociative-attachment instability 3—12111
- CO$_2$ quasi-CW electric-discharge laser having an unstable resonator, radiation divergence 3—36987
- CO$_2$ TEA laser with UV preionisation, active medium composition influence on 00^02-$[10^01, 02^01]_1$ band gain 3—27001
- CO$_2$ waveguide laser employing RF electrodeless discharge, amplification 3—36990
- CO$_2$-N$_2$ mixture, volume gas discharge with external ionization by electron beam, injection instability 3—42483
- Ca, intermodulated optogalvanic Zeeman spectroscopy in hollow cathode discharge 3—5867
- Cd vacuum-arc plasma, absorpt. effects of Cd II 4416 Å line 3—13007
- Cl$_2^+$ RF discharge plasma etching, laser-induced fluoresc. study 3—2286
- Cu, intermodulated optogalvanic Zeeman spectroscopy in hollow cathode discharge 3—5867
- F RF preionised laser without auxiliary electrodes 3—56225
- H atom source, high-density effusive target prod. 3—30961
- HCl mols. in nonself sustaining discharge, dissociative electron attachment, rate const. determ. 3—14847
- HF pulsed high-press. chem. laser with elec.-discharge initiation 3—27031
- H$_2$O vapour laser, CW, 28 μm, high power operation 3—41872
- He DC discharge, optogalvanic effect due to metastable quenching, spatial depend. 3—27767
- He-Ne laser, radiation output power, excitation by transverse microwave discharge, 0.6328 μm 3—22035
- Hg, discharge, low press., glass darkening obs. 3—51417
- Hg-Ar discharge, low-press., air or CO$_2$ impurity effects, fluorescent lamp appl. 3—42461
- Hg-Ar mixture, positive column of low press. discharge under pulse current modulation, electrokinetic parameters *(Russian)* 3—46802
- Hg-Xe pulsed lamp emission with short lived discharge for dye laser pumping 3—7105
- HgBr$_2$-inert gas mixtures, electron impact HgBr fluoresc. 3—41692
- K molecular ions production in Cs discharge plasma, gas temperature effect on production rate 3—51335
- KrF excimer lasers, wide aperture, self-sustained discharge 3—56268
- Mg impurity in spark-discharge plasma, meas. of density of electrode material 3—33021
- N$_2$, excitation and quenching rate coeffs. meas. of C$^3\Pi_u$ state using nonselfsustained discharge 3—36869
- N$_2$, nonself-sustaining discharge ignited by electron beam, switchover from spatial to spark regime 3—12999
- N$_2$-air, axial discharge, EM fields meas., props. of plasma column and electrode regions 3—13003
- N$_2$-O$_2$ (CO$_2$), nonself sustaining discharge, attachment instability 3—13001
- N$_2$-O$_2$ mixtures photoionisation by radiation from electric gas discharge 3—50462
- NH$_3$, IR laser optogalvanic spectrosc. 3—55936
- NO$_2$, IR laser optogalvanic spectrosc. 3—55936
- Ne gas discharge plasma, ionisation kinetics, electron distrib. function 3—32842
- Ne gas discharge plasma, ionisation waves kinetics 3—32843
- Ne, intermodulated optogalvanic Zeeman spectroscopy in hollow cathode discharge 3—5867
- Ne, light-induced drift under optical excitation from a metastable state 3—6570
- Ne-Cu discharge, formation of excited Cu II levels 3—36707
- NeI high-current discharge, single-mode superradiance and field distrib. 3—37609
- Pb vapour laser at 7229 Å *(Chinese)* 3—41863
- SF$_6$ and SF$_6$/perfluorocarbon mixtures, spark decomposition products, expt. studies 3—13014
- SF$_6$-inert gas mixtures, electric charge stability *(Russian)* 3—22743
- toluene, liq., elec. prebreakdown events, chem. impurity effects 3—19058
- Xe ion detachable pulsed laser *(Chinese)* 3—41866
- XeCl excimer fluorescence and laser emissions 3—1610
- XeCl excimer laser, high-energy, discharge-excited, efficiency optimisation 3—56182
- XeCl excimer laser, UV-preionised, self-sustained avalanche discharge, discharge characts. and output performance 3—56181
- XeCl excimer lasers, wide aperture, self-sustained discharge 3—56268
- XeCl* quasi-CW laser, electric discharge excitation 3—27023

discharges (partial) *see partial discharges*

disclinations
- cholesteric liquid crystals, blue phase, disclination lattice struct. 3—33084
- crystallites, joints of boundaries, elastic stresses, self-distortion effects 3—46450
- DOBAMBC, helical SmC* liq. cryst., field-induced unwinding mechanism 3—37772
- fibrous composites, deform. and fracture micromechanisms, dislocation, disclination theory 3—53140
- hard-disk arrays, computer-generated, order and deterministic chaos, hexatic configs. 3—23014
- liquid crystal, nematic, mixtures with nonmesomorphic cpds., high strength disclinations 3—42511
- liquid crystal director fields, numerical three-dimensional relaxation, FORTRAN program 3—13094
- liquids, supercooled, in spaces of incommensurate curvature, point disclinations 3—56828
- metallic glass, plastic deformation, disclination model 3—22970
- metallic glasses in spaces of incommensurate curvature, point disclinations 3—56828
- nematic liq. cryst., hydrodynamics in presence of conditions density of disclinations 3—13083
- nematic liq. crystals, impurity diffusion time depend. 3—18487
- rectangular wedge disclination loops, elastic anisotropy influence 3—37906
- transversely isotropic media, ang. and straight disclinations 3—46931

disclinations continued
- two-dimensional melting, computer simulation studies 3—51955
- MgO, reoriented band form. and dislocation structure, electron microscopy study 3—42606

discontinuous control systems *see sampled data systems*

discontinuous metallic thin films
- conduction, microscopic aspects 3—23505
- thickness and conductance meas., rel. to granulometry *(French)* 3—23508
- Ag, adsorbed pyridine, surface enhanced Raman scatt. study 3—23930
- Ag aerosol particle deposits, plasma and optical-conduction resons. 3—43648
- Ag, evaporated thin films, recovery and recrystn. 3—3016
- Ag granular film, plasma reson. band oscill. strengths, dielec. const. effect 3—8790
- Ag island film, adsorbed pyridine, resonantly excited desorpt. by IR laser absorpt., SERS detection 3—8329
- Ag island film, adsorbed rhodamine 6G, photochemistry, surface enhanced Raman scatt. 3—29332
- Ag island films, adsorbed p-nitrobenzoate, enhanced IR absorpt., ATR study 3—14269
- Ag island films, of sulphides, surface enhanced Raman study, facile cleavage of S-S and C-S bonds 3—8825
- Au, dielectric props., statistical theory 3—3635
- Au, elec. resist. and activation energy, thickness depend. 3—38496
- Au granular film, plasma reson. band oscill. strengths, dielec. const. effect 3—8790
- Au island film based optical storage, long-life produced by amorphous Si overcoat 3—57987
- Au microcrystal, microdiffr. patterns using STEM with opt. analyser, multiple twinning obs. 3—13238
- Bi, discontinuous films, crystallisation, electron diffr. study 3—23214
- Bi films with Ag, Fe, Cr island layers, elec. resistance 3—43304
- Bi island films, nucleation, small particle crystallisation 3—3006
- Bi, thin films, elec. cond. 3—43294
- $Fe_{82}B_{18}$-Al_2O_3 amorphous granular film, Mossbauer study 3—43466
- Ga, discontinuous films, crystallisation, electron diffr. study 3—23214
- Ga island films, melting and crystn., electron diffr. study 3—3005
- La adsorption on Mo (112), struct., work function and stability, LEED study 3—33576
- Ni island form. during ion beam milling of NiO 3—14760
- Pb, discontinuous films, crystallisation, electron diffr. study 3—23214
- Pb island films, nucleation, small particle crystallisation 3—3006
- Pb, percolation characts., scaling theory 3—13924
- Sn, discontinuous films, crystallisation, electron diffr. study 3—23214
- Sn island films, nucleation, small particle crystallisation 3—3006
- Sn-Ge granulated films, elec. cond. and supercond. props. *(Russian)* 3—38516

discrete symmetries
- *see also C invariance; CP invariance; CPT invariance; P invariance; parity; T invariance*
- No entries

discrete systems
- *see also discrete time systems; sampled data systems*
- horseshoe crab, lateral optic nerve impulses, synchronisation, discrete theory 3—44240
- nonlinear discrete dynamic systems, nonparametric identification 3—26290

discrete time systems
- *see also sampled data systems*
- hydrology cycle of Lake Biwa basin, state estimation appl. 3—25145
- noisy blurred images, const. accel of object, identification of point spread function, recursive restoration 3—22005
- Super-Phenix, French fast breeder nuclear reactor steam generator, model reference multivariable adaptive control 3—6405

discriminators
- *see also demodulators*
- optical pulse intensity discriminator using birefr. fibres 3—1789
- portable beta-gamma dose-rate meter, pulse shape discrimination 3—50225
- pulse shape discrimination technique in NaI(Yl)-CsI(Na) detectors for X-ray astronomy 3—17179
- timing discriminator for multichannel triggers 3—50223

disinclinations *see disclinations*

disintegration (radioactive) *see radioactivity*

disintegration energies *see radioactivity*

dislocation anchoring *see dislocation pinning*

dislocation arrays
- anomalous mechanical aftereffect, dislocation model *(Russian)* 3—37907
- deformed crystals, dislocation density determ. from X-ray diffr. *(Russian)* 3—51601
- grain boundary theory 3—51613
- interphase boundaries, dislocation geometry and lattice misfit 3—28223
- semicondutors, grain boundary energy 3—22913
- steel, stainless, duplex, precipitation at austenite/ferrite interfaces 3—9068
- transition metal alloys, ion irrad. induced amorphisation or dislocation network form. 3—2631
- Fe-Cr-Ni (15, 15 wt.%), shock wave response, effect of polycrystallinity 3—33362
- Fe-Si (0.9 wt.%), dislocation arrangement after tensile deform., TEM study 3—37916
- LiF, heavy ion irrad., defect struct. and mech. props. 3—8108
- Ni-base superalloys, growth of γ' precip., electron diffr. study 3—47836
- Si, laterally seeded, on SiO_2, microstruct. 3—18306
- Si:H single cryst., etch pits and dislocation rosettes, H impurity effect 3—56900
- Sn, white, single crystals, deformed in tension, individual dislocation motion, etch hillock study 3—37911

dislocation breakaway, pinned *see dislocation damping*

dislocation climb
- alloys, dislocation creep, solute drag influence 3—2555
- creep threshold stresses in materials containing dispersed particles 3—28039
- diamond, dislocation struct. in low-angle grain boundaries 3—51611
- differential climb of inhomogeneously distributed dislocations during irradiation 3—18302
- edge dislocation non-uniform motion by climb and glide along arbitrary path 3—56908
- metals, cavity nucleation during post-irradiation creep, bubble sweeping model, appl. to stainless steel 3—33305
- metals, irradiated, relation between creep and swelling *(Russian)* 3—33348

dislocation climb continued
- metals, radiation creep, temp. and dose depends. *(Russian)* 3—37952
- particulated composite, prep. by powder metallurgy techniques, high temp. creep 3—34264
- sapphire, climb dissoc. of $\langle 10\bar{1}0\rangle$ dislocations 3—2564
- silicates, spinels and pyrites, deformation, STEM studies, review *(French)* 3—8123
- steel, austenite-bainite transformation, interface mobility 3—39114
- Al-Mg (3.3, 4.5 at.%), solid solns., creep, breakdown in viscous glide, at high stress levels 3—14652
- α-Al_2O_3, sapphire, prism plane deform., work hardening and recovery 3—14604
- Cu-Al_2O_3, <001> single crystal, high temp. deform. *(Japanese)* 3—47894
- GaAlAs, recombination enhanced defect processes and device degradation 3—56909
- GaAs, antisite defect form. during plastic deform., EPR and photoluminescence study 3—2553
- GaAs, dark line defects from. due to dislocation-point defect interactions 3—42615
- GaAs:Te, Zn, defect struct. induced by Zn diffusion, TEM study 3—27944
- GaP, bright dislocation halos, dislocation-point defect interactions 3—42615
- GaP, recombination enhanced defect processes and device degradation 3—56909
- InGaAsP, recombination enhanced defect processes and device degradation 3—56909
- InP, undoped, prismatic disloation loop anal. by TEM 3—33261
- Mn-Zn ferrite, polycryst., creep deform. 3—14687
- Ni-Mo(W), solid solns., creep meas. of struct. parameters 3—14668
- Si:P, ion implanted, pulsed electron beam annealing, SEM and TEM studies and computer simulation 3—51665
- Sn, creep, high temp., X-ray diffr. of subgrain misorientation in single crysts. 3—34400
- V_3Si, dislocation elastic energy, ang. depend., unstable directions 3—18301
- V_3Si, plastic deform. in stress relax. expts. 3—47890

dislocation damping
- *see also Bordoni effect*
- ferromagnet, dislocation drag and damping, mag. subsystem effects 3—13225
- flow stress at high strain rates controlled by dislocation viscous flow 3—27948
- internal friction background, high temp., damping/temp. curves, strain distrib. influence 3—37996
- steel, Cr-Mn-Si-Ni, temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
- steel, Mn, low C, quenched and tempered, strength and toughness 3—43962
- steel, Mn(-Mo), temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
- Fe-C, US attenuation, microstruct. and ductile to brittle transition temp. 3—58228
- Fe-Cr alloy, hydrogen-induced cold work peak of internal friction 3—14643
- Fe-Si-Al, nonoriented sheet, mag. relax. process in commercially produced alloys 3—47528
- β-LiAl, mech. behaviour, effect of defect struct., hardness and dislocation damping study 3—33266
- Sn-In, dil., US attenuation in normal and supercond. states, amplitude and freq. depend. 3—33826
- β-Ti-Mo(V) alloys, amplitude depend. internal friction, O-dislocation binding 3—14646
- Ti-O solid soln., ultrahigh purity, oxygen relax. obs. 3—14648
- YIG, dislocation drag and damping, mag. subsystem effects 3—13225
- Zn, relaxation peaks with irregular serrations accompanied by automodulation 3—34373

dislocation density
- adsorbed layers, two-dimensional melting of dislocation vector systems 3—57217
- capillary stress relaxation by twinning 3—46967
- cracks in elastic medium, bounds for dislocation densities and stress intensity factors 3—17877
- deformed crystals, dislocation density determ. from X-ray diffr. *(Russian)* 3—51601
- differential climb of inhomogeneously distributed dislocations during irradiation 3—18302
- dislocation link length distribution, approximation 3—13223
- edge dislocation-vacancy and self interstitial interaction, atomistic and Monte Carlo calc. 3—42643
- electron microscopy, quantitative, review 3—24446
- ice, US attenuation near melting point 3—2683
- III-V semiconductor thin films, prep., defects, and appls. 3—23210
- III-V semiconductors, grown-in dislocation density, effect of impurity at. size 3—27943
- irradiated solids, microstructure evolution, dislocation and void populations *(French)* 3—27978
- low-alloy, structs. identification and morphology after hear treatment 3—39176
- metals, internal premelting at dislocation core sites, heterophase fluctuation calc. 3—8176
- misfit dislocation occurrence at grain boundaries under high press. 3—2558
- repeated yielding, dislocation densities, temporal dissipative structure anal. 3—22963
- selected area electron channelling patterns, assessment of defect density magnitude 3—13229
- statistical props. of crysts., partition function, dislocation effects on density correl. functions, solid to liq. phase transition study 3—42748
- steel, austenitic stainless, elevated temp. transient isotropic hardening, microstruct. based eqn. 3—47919
- steel, austenitic stainless, isotropic hardening, separate roles of subgrains and forest dislocations 3—24256
- steel, austenitic stainless, transient creep, dislocation on structure, electron microscopy *(Czech)* 3—34389
- steel, austenitic stainless 3—34417
- steel, austenitic stainless 3—43891
- steel, cleavage plane of pearlite, TEM study 3—14715
- steel, Cr low alloy, hardened, tempered, radiation embrittlement rel. to struct. 3—43951

dislocation density continued
steel, Cr-Mo-V, low alloy, cyclic response 3—4108
steel, dual phase, ductility, influence of martensitic transform. strain 3—53121
steel, dual-phase, extrinsic transform. accommodation hardening 3—53075
steel, dual-phase, mechanical strength rel. to martensite vol. fraction 3—34411
steel, H trapping, permeation meas. effect of microstruct. 3—33504
steel, low alloy, high strength, plastic zone and residual stress near notch and fatigue crack 3—24307
steel, low C, sheet, Luder's strain, effect of solutes 3—34398
steel, low-alloy, structural, struct. and props. after deform. in intercrit. temp. range 3—34363
steel, maraging, precipitation hardening, positron annihilation study 3—4049
steel, Mo, influence of dislocations on the secondary hardening mechanism *(Russian)* 3—34338
steel, structural, crack-tip ductility 3—53222
steel, texture effect on H embrittlement, impact, SEM study, dislocation model *(Chinese)* 3—34419
steel, Ti, microalloyed, yield points 3—43930
steel, V, processing, microstruct. and mech. props. 3—34367
steel type U7, deformation influence on Mossbauer spectrum hyperfine struct. *(Russian)* 3—34011
tangled dislocations, effective bias 3—2556
two-dimensional melting, Monte Carlo simulation of dislocation vector systems 3—23022
Ag, evaporated thin films, recovery and recrystn. 3—3016
Al, cyclically loaded, dislocations, X-ray diffr. intensity study 3—37910
Al, deformed by cyclic bending to fracture, polygonalisation study *(Russian)* 3—34433
Al, low cycle fatigue, effect of strain-amplitude charge on pure samples at 77K *(Japanese)* 3—58212
Al, plastically deformed, positron trap non-uniform distrib. 3—3857
Al, polycryst., internal and effective stress meas., dislocations study 3—24288
Al, recovery-annealed, dislocation density, X-ray diffr. line broadening, Warren-Averbach mean-squared strains anal. 3—56902
Al-Cu-Mg, AA2036, serrated flow, influence of thermomech. treatment 3—47899
Al-Mg, solute segregation to dislocations, internal friction study 3—39152
Al-Mg-Zn-Cu, precip. hardening alloy, flow stress-grain size relationship 3—43923
α-Al_2O_3, sapphire, prism plane deform., work hardening and recovery 3—14604
Au-Cu (4.5 wt.%), static strain ageing, strain depend. 3—47882
$BaCd(HCO_2)_4$, cryst. growth, morphology and defects, etching study 3—37823
$CdCr_2Se_4$:Al(In)(Cu)(Ag), dislocation patterns, rel. to elec. cond., hardness and doping 3—27947
Cu, deformed in torsion, dynamic recrystn. obs. using SEM channelling contrast and TEM 3—47855
Cu, dislocation struct. under action of static and ultrasonic stresses *(Russian)* 3—37912
Cu, heavily deformed, microstruct. and mech. props. 3—47858
Cu, multislip tests, junction hardening effect 3—13231
Cu, single cryst., selected area electron channelling patterns 3—13229
Cu-Al, solute segregation to dislocations, internal friction study 3—39152
Cu-Al_2O_3 polycrystals, dispersion hardened, strengthening mechanisms 3—43850
Cu(-Al), dislocation struct. of [321] crystals grown by Bridgman method 3—13230
Fe, cast, dynamic strain ageing 3—43875
Fe-Ni, austenitic alloys, rapid solidification microstruct. 3—53038
Fe-Si, single crysts., deformed and annealed, dislocations 3—22897
GaAs, 3 in. diam. LEC grown cryst., dislocation density and distrib. 3—42610
GaAs epitaxial layers, dislocation density study *(Russian)* 3—22901
GaAs, LEC grown, deep levels and dislocations, photoluminescence study 3—43086
GaAs, LEC grown, leakage current variation rel. to dislocation density 3—3181
GaAs, low dislocation density single crysts. substrates, liq. encapsulated Czochralski growth 3—28977
GaAs MBE films, cryst. defects rel. to fabrication process *(French)* 3—42971
GaAs:Cr, 3 inch diameter crystal growth by horizontal Bridgeman technique, characts. 3—24115
GaAs:In(Sb), Czochralski grown, doping effect on struct. perfection 3—33281
GaP, computer controlled LEC growth, struct. and elec. props., LED appls. 3—14464
GaP, crystal growth by Czochralski method with reduced dislocation density 3—28983
GaSb:Te, LEC growth, extremely low dislocation densities, X-ray transmission topography 3—14470
$Gd_3Ga_5O_{12}$ refrigeration characts. obs. below 20K 3—33899
Ge, carrier recombination heat treatment and dislocation density effects 3—38401
He single cryst. growth, dislocation form., surface mechanism *(Russian)* 3—47182
^3He, solid, ultrasonic propagation and attenuation 3—28189
^4He, solid, dislocation motion study 3—42881
InP avalanche photodiode with VPE grown p^+-n junction, imperfections effect 3—18573
InP crystals, LEC grown, dislocation generation and propagation, X-ray topography study 3—46936
InP, double doped, low dislocation density, TEM obs. 3—2562
K, anomalous dislocation densities rel. to elec. transport props. 3—3174
KH_2PO_4 crystals, growth phenomena rel. to internal struct., hydrodynamic influence 3—13141
KH_2PO_4, lattice parameter determ., birefr., dislocation density and impurity conc., X-ray study 3—46892
Mg single crystals, basal dislocation density during plastic deform. *(Russian)* 3—51605
$(NH_4)_2SO_2$ single cryst., dislocation struct., cryst. growth rate effects 3—42608
NaCl, dislocation forest, mechanical props. *(Russian)* 3—2567
NaCl, single crysts., stress relax., strain rate depend. and repeated test effect *(Japanese)* 3—2667
NaCl-KCl mixed and two-phase crystals, microhardness studies 3—47041

dislocation density continued
Nb bicrystals, growth and struct. *(Russian)* 3—34220
Ni base superalloy IN-100, powder consolidated, microstruct. changes during superplastic determ. 3—9131
Ni, dislocation struct. under plastic deform., elec. resist. meas., TEM study 3—46934
Ni, iron irrad., uniaxial tensile stress effect on swelling *(Russian)* 3—22944
Ni-Cr (80, 20 wt.%), cast, melting conditions influence on struct. 3—9055
Ni_3Mn alloy, strain hardening and dislocation structure characts. 3—43863
$Pb_{96.1}Cd_{3.9}$ alloy, temp. depend. of positron annihilation at dislocations 3—38952
Pd_2MnSn Heusler alloy, plastically deformed, mag. moment distrib. 3—33966
Pd_2MnSn, Heusler alloy, magnetisation rel. by plastic deform., mag. interactions 3—52583
Si, CVD film, in situ laser recrystallisation 3—57240
Si, CVD VPE, RF heated, technique for low dislocation density layers production 3—34238
Si crystal, X-ray Laue scattering, integrated intensity, dislocation density dependence 3—33256
Si, dislocation core variable reconstruction, photocond. and Hall effect meas. 3—37921
Si, dislocation effect on radiation defect annealing process 3—27993
Si, high purity, thermal donors, elec. resist. study 3—13767
Si, mass transfer, influence of edge dislocations, numerical study 3—28163
Si, notch-tip plasticity, X-ray diffr. study and continuum mechanics anal. 3—18371
Si, single cryst., elastic props., depend. on temp. and dislocation density *(German)* 3—2646
Si single crystal, dislocations study by channelling 3—2569
Si solar cells, polycryst., enhanced photoresponse at dislocation subgrain boundaries, X-ray topography study 3—53560
Si:C, MBE, interfacial C and line dislocation density, SIMS study 3—42945
Si/SiO_2 struct., ion implantation form., microstructure, TEM and SEM study 3—2992
SiC reinforced Al alloy, fibre and particulate, microstruct. 3—47870
α-TeO_2, dislocation distribution and exterior morphology 3—33262
Ti alloy, interstitial, mobile dislocation density during plastic flow at low temp. 3—14681
Ti-Al, low temp. thermocycling and plastic deformation, defect struct., TEM obs. 3—53086
Ti-Al-Nb-Zr alloys, defect struct. evolution rel. to deform. parameters at 4.2K 3—24302
α-Ti-Sn(Al), stacking fault energy, rel. to texture and strain mechanism 3—9091
Zn, dislocation behaviour during anelastic strain recovery under basal glide 3—33265
Zn, internal friction in brittle-plastic transform. temp. range *(Russian)* 3—47044
Zr-Nb (2.5 wt.%) alloy pressure tubes, tensile props. rel. to post-extrusion thermomech. treatment 3—43921

dislocation dipoles
crystals, plastic deform., role of cross-slip 3—33344
II-VI semiconductors, charge transport by dislocations during plastic deform. 3—46946
metals, cold worked, microbands 3—47916
screw dislocation-surface crack elastic interaction, two-dimens. theory 3—33252
shear transform. growth, dislocation models 3—33176
MgO:Au^{3+}d, Eiffel Tower-shaped dislocation dipoles and loops, optical microscopy study 3—2566
Ni_3(Al,Hf), Al-rich phases, dislocation struct. study 3—51607
Ni_3(Al,Ta), Al-rich phases, dislocation struct. study 3—51607
Si, elec. activity of cryst. defects, combined SEM, EBIC and TEM obs., review 3—13770
Si, faulted dislocation dipoles during high temp. deformation 3—42614
α-Ti, plastic deform. below 700K, prismatic slip 3—14660

dislocation drag
ferromagnet, dislocation drag and damping, mag. subsystem effects 3—13225
polycrystal, strength fundamentals, temp./strain rate combinations 3—37988
Zircaloy-4, stress relaxation in bending at 673K, rel. to cold work 3—53104
Al-Cu alloy, moving dislocations, NMR and TEM obs., correls. with ageing induced structures 3—38718
LiF, edge dislocation mobility for electron beam loaded crystals meas. 3—18315
NaCl, edge dislocation mobility for electron beam loaded crystals meas. 3—18315
YIG, dislocation drag and damping, mag. subsystem effects 3—13225
Zn, magneto-oscills. in dislocation drag at low temps. 3—18313

dislocation energy
adsorbed layers, two-dimensional melting of dislocation vector systems 3—57217
edge dislocation, energy and entropy of interacting dislocations, atomistic simulation 3—22895
plastic zone size rel. to thickness, dislocation distribution, fracture theory 3—42186
two-dimensional melting, Monte Carlo simulation of dislocation vector systems 3—23022
GaAs, dislocation line, elastic energy, integral formalism 3—46930
GaP, dislocation line, elastic energy, integral formalism 3—46930
InP, dislocation line, elastic energy, integral formalism 3—46930
NaCl, edge dislocations, core energy and Peierls stress on (110) and (001) slip planes 3—33267
Si, dislocation core variable reconstruction, photocond. and Hall effect meas. 3—37921
Si, dislocation energy levels, DLTS study 3—3111
V_3Si, dislocation elastic energy, ang. depend., unstable directions 3—18301

dislocation etching
diglycine sulphate, anhydrous, deform., slip and fracture elements 3—33347
III-V semiconductors, grown-in dislocation density, effect of impurity at. size 3—27943
metals, etch pit shapes, form. conditions *(Chinese)* 3—33257

dislocation etching continued
- potassium hydrogen phthalate single crystals, {010} faces, surface morphology, optical microscopy 3−33544
- semiconductors, defects study by projection etching 3−33263
- Al cryst., dynamic loading, strain-rate history affects and microstruct. aspects 3−33345
- Ca($Al_2Si_3O_{10}$).3H_2O, etching by H_3PO_4, HCl and formic acid, dislocations, pile ups, twinning 3−8051
- CaF_2, dislocation etch pits, X-ray topography study 3−13226
- Cu crystal, (111) surface, dislocation etching, potentiostatic electrolysis *(Japanese)* 3−56906
- Cu, dislocation etch pits on (111) surface, morphology 3−42616
- Cu(-Al), dislocation struct. of [321] crystals grown by Bridgman method 3−13230
- n-GaAs, etching under laser illum., cryst. defects study 3−42612
- GaAs, LEC grown, deep levels and dislocations, photoluminescence study 3−43086
- GaAs, LEC grown, leakage current variation rel. to dislocation density 3−3181
- GaAs, low dislocation density single crysts. substrates, liq. encapsulated Czochralski growth 3−28977
- GaAs MBE films, cryst. defects rel. to fabrication process *(French)* 3−42971
- GaAs MBE layers, microtwinning and growth defects 3−8359
- GaAs:Si, LEC grown, dislocation distrib., etching study 3−42607
- GaAs:Zn, VPE growth for negative electron affinity photocathodes 3−47779
- $GaAs_{1-x}Sb_x$ p-n junctions, avalanche breakdown voltage, misfit dislocations 3−8569
- InP-InGaAsP multilayer struct., damage-free grooving method 3−4159
- InSb, α-dislocations, vel. of motion *(Chinese)* 3−2561
- InSb, dislocation etch pits obs. for {111} plane using HCl-Fe^{3+} soln. *(Chinese)* 3−18303
- $K_2Cr_2O_7$ {001}, growth spiral and hillock form. during growth from soln. 3−18249
- LiF cryst., dynamic loading, strain-rate history affects and microstruct. aspects 3−33345
- LiF, heavy ion irrad., defect struct. and mech. props. 3−8108
- Mg single crystals, basal dislocation density during plastic deform. *(Russian)* 3−51605
- MgO cryst., etching, dissolution mechanism 3−46935
- MgO, dissolution kinetics in aqueous acidic salt solns., dislocation etching kinetics and pit morphology 3−27942
- MgO:Li; pure and doped, mechanical impact damage, optical absorption study 3−43565
- $NH_4H_2PO_4$ single cryst., dislocation struct. and optical nonuniformity 3−51606
- NaCl, dislocation multiplication probability, stress dependence meas. 3−18311
- NaCl, electron irrad., dislocation dynamics during deformation 3−8054
- NaCl surface, doped and pure, evap. morphology 3−2947
- NaCl-KCl, mixed two-phase soln. grown crystals, quench hardening study 3−18381
- NaCl-KCl mixed and two-phase crystals, microhardness studies 3−47041
- NaCl-KCl mixed crystals, thermal diffusion, decomp., microstructure studies by etching 3−13469
- Ni, plastic flow, activation vol. determ. by micro and macro tests 3−53142
- Si, dislocation motion under illum., photoplastic effect 3−46940
- Si, dislocations, generation and recombination images in scanning microscopy 3−18309
- Si, plastically deformed, dislocation study 3−46939
- Si wafers, (111), gas phase HCl etching, deep etchpit formation 3−33258
- Si:C, MBE, interfacial C and line dislocation density, SIMS study 3−42945
- α-SiC, dislocations, etching and X-ray study *(Chinese)* 3−42605
- β-SiC epitaxial film, dislocations, twins and stacking faults *(Chinese)* 3−42939
- Sn, white, single crystals, deformed in tension, individual dislocation motion, etch hillock study 3−37911

dislocation glide *see slip*

dislocation interactions
- *see also impurity-dislocation interactions; vacancy-dislocation interactions*
- adsorbate solid, dislocation interaction free energy near commensurate-incommensurate transition 3−8049
- alloys, low stacking fault energy, stacking fault stengthening 3−51632
- alloys, second phase particle hardened, microstruct. model of high temp. strength and rupture life time *(German)* 3−24361
- alloys, struct. unstable ageing, strain diagram construction 3−37987
- antiferromagnet, magnon scatt. by dislocations, AFMR line broadening *(Russian)* 3−28534
- antiferromagnet, sound attenuation at low temps., effect of dislocation interaction *(Russian)* 3−28671
- BCC crystal, dissociation of lattice dislocations in coincidence boundaries 3−56903
- BCC crystal, strain hardening law, latent hardening and multislip tests 3−37926
- binary alloys, rel. between Portevin-Le Chatelier effect and solid solubility 3−53119
- continuum strain field, physical interpretation of mathematical singularities 3−33250
- crystal lattice, starting stresses in dislocation motion 3−2557
- differential climb of inhomogeneously distributed dislocations during irradiation 3−18302
- elastic interactions, nonlinear, between point defects and dislocations 3−51653
- FCC alloys, solution hardening by chem. interaction between solute atom and dislocation 3−43853
- FCC crystal, dissociation of lattice dislocations in coincidence boundaries 3−56903
- FCC crystal, strain hardening law, latent hardening and multislip tests 3−37926
- ferromagnetic crystal, magnon-phonon couplings, dislocation influence, phenomenological approach 3−3499
- flexible slipping dislocation interaction with prismatic dislocation loops 3−8088
- forests, junction reactions with 30° and 60° dislocations, theory 3−22894
- grain boundary-dislocation interactions 3−46984
- incoherent particle-dislocation interactions, high temps. 3−33268

dislocation interactions continued
- internal friction, static and dynamic dislocation hysteresis 3−18388
- metals, electron-dislocation interaction effect on de Haas-van Alphen effect 3−3045
- misfitting precipitates, interactions with dislocations, theory 3−33251
- nematic-smectic A transition, interacting dislocations, splay elastic constant 3−56816
- precipitation hardening, evaluation of data 3−29094
- screw dislocation-surface crack elastic interaction, two-dimens. theory 3−33252
- shearing through repulsive particle 3−51604
- solid solution, BCC, solute clusters effect on screw dislocations, strengthening and weakening model 3−37923
- sphalerite structure crysts., antisite defect formation by gliding dislocation-interstitial interaction 3−22892
- steel, struct. unstable ageing, strain diagram construction 3−37987
- strengthening mechanisms, fundamentals, review 3−58126
- string model for dislocation-point defect interaction in bias stress system 3−33294
- Ag, high-purity, cold-worked, plastic flow at low temp. 3−47903
- Ag wire coils, dislocation elasticity *(Russian)* 3−33340
- Al-Cu, flow stress, strain rate sensitivity, Portevin-Le Chatelier effect region, dislocation-precipitate interaction *(Japanese)* 3−39212
- Al-Mg, solute segregation to dislocations, internal friction study 3−39152
- Al-Mg (5 at.%), high temp. deform. under combined high freq. stresses 3−29140
- Al-Zn, initial precipitation hardening, mechanism *(Japanese)* 3−9080
- Au wire coils, dislocation elasticity *(Russian)* 3−33340
- Au-Cu (4.5 wt.%), static strain ageing, strain depend. 3−47882
- AuCd, martensitic transform., internal friction *(Chinese)* 3−43803
- Cu, multislip tests, junction hardening effect 3−13231
- Cu wire coils, dislocation elasticity *(Russian)* 3−33340
- Cu-Al, solute segregation to dislocations, internal friction study 3−39152
- Cu(-Al), Bauschinger effect, internal stress meas. 3−43932
- Fe, cast, dynamic strain ageing 3−43875
- Fe, magnetic domain interactions with dislocations and grain boundaries, HVEM study 3−23699
- Fe wire coils, dislocation elasticity *(Russian)* 3−33340
- Fe-Si (0.9 wt.%), dislocation arrangement after tensile deform., TEM study 3−37916
- GaAs, sphalerite structure crysts., antisite defect formation by gliding dislocation-interstitial interaction 3−22892
- ^{3}He, solid, ultrasonic propagation and attenuation 3−28189
- Mg, internal friction associated with dislocations and electron irrad. induced point defects 3−28045
- Ni, plastic flow, activation vol. determ. by micro and macro tests 3−53142
- NiTi, martensitic, cold worked, mech. props. 3−39221
- NiTiCu, martensitic, cold worked, mech. props. 3−39221
- Ta-based alloys, thermally activated deform. 3−4084
- β-Ti-Mo(V) alloys, amplitude depend. internal friction, O-dislocation binding 3−14646

dislocation jog motion *see dislocation jogs*

dislocation jogs
- Zircaloy-4, stress relaxation in bending at 673K, rel. to cold work 3−53104
- Au film, (111) surface struct. and inclined planar defects, electron microscopy 3−8373
- Cu, dislocation motion in annealed and neutron irrad. single crysts. 3−37930
- Fe, cleavage crack growth, cyclic, quantitative fractography 3−39228
- Fe-Si(Ni), cleavage crack growth, cyclic, quantitative fractography 3−39228
- KCl, hydrostatically compressed, screw dislocation mobility and jogs 3−13557
- Ni_3(Al,Hf), Al-rich phases, dislocation struct. study 3−51607
- Ni_3(Al,Ta), Al-rich phases, dislocation struct. study 3−51607
- Si, CVD grown, P doping and oxidation effects on grain growth, TEM study 3−51624
- Si, faulted dislocation dipoles during high temp. deformation 3−42614
- Si, solar grade, defects, EBIC/TEM study 3−51627

dislocation locking
- *see also Cottrell atmospheres*
- FCC alloys, solution hardening by chem. interaction between solute atom and dislocation 3−43853
- steel, low C, fatigue limit, effect of initial dislocation locking *(Japanese)* 3−58213

dislocation loops
- *see also vacancy condensation loops*
- austenite, P doped, condensation of vacancies, after low rate cooling *(French)* 3−22886
- β-brass, defect study using positron annihilation 3−43859
- β-brass, quenched, defect characts., TEM study 3−56901
- covalent semiconductors, electronic irrad. induced lattice defects 3−42663
- deformation band production by dislocation loop interaction 3−37985
- diamond, natural polycrystal, microstruct. of carbonado and ballas type UHVEM study 3−33260
- flexible slipping dislocation interaction with prismatic dislocation loops 3−8088
- length distrib., forced pipe diffusion of mobile pinning points 3−33253
- metals, internal premelting at dislocation core sites, heterophase fluctuation calc. 3−8176
- nematic-smectic A transition, interacting dislocations, splay elastic constant 3−56816
- paraffins, rotator and melting transitions, dislocation theory 3−38039
- prismatic dislocation loops, influence of dimensions and interf. error, electron microscope contrast calcs. 3−37918
- radiation from expanding circular dislocation loops and elastic precursor decay 3−33255
- sapphire, climb dissoc. of $\langle 10\bar{1}0 \rangle$ dislocations 3−2564
- statistical props. of crysts., partition function, dislocation effects on density correl. functions, solid to liq. phase transition study 3−42748
- string model for dislocation-point defect interaction in bias stress system 3−33294
- structural alloys, radiation effects 3−13289
- Al, cyclically loaded, dislocations, X-ray diffr. intensity study 3−37910
- Al foil, point defect nature determ. from dislocation loops *(Russian)* 3−37902
- Al, pure, quenched-in vacancy clusters, characteristics 3−42604
- Cu, cascade region evolution during thermal spike 3−33306

dislocation loops continued
- Cu foils, electron irrad., growth of dislocation loops 3−18349
- Cu(-Al), dislocation struct. of [321] crystals grown by Bridgman method 3−13230
- Cu_3Au, ordered and disordered, electron irrad. damage 3−13283
- Fe, pure and Sn implanted, electron beam melted, slip, dislocations, SEM, TEM, RBS and channelling studies 3−56987
- α-Fe, Xe^{2+} ion irrad., dislocation loop damage struct., TEM study 3−42682
- Fe-Ni-Cr, austenitic, dislocation loops at twin boundaries, ion-irrad. effects 3−2565
- GaAs, proton bombard. and annealed, dislocation and void form. 3−47005
- GaAs, proton bombarded, extended cryst. defects, annealing, TEM study 3−57000
- GaAs:Cr, Se, ion implanted, damage annealing, Rutherford backscatt. and TEM studies 3−33311
- GaAs:Se, defect struct. after Se implantation through Si_3N_4 encapsulant layer 3−18322
- GaAs:Te, dislocation loops with stripe contrast, high resolution electron microscopy study 3−18310
- GaAs:Te, microdefects and microprecipitates investig. *(Chinese)* 3−8050
- GaAs:Te, Zn, defect struct. induced by Zn diffusion, TEM study 3−27944
- Ge, dislocation loop thermal shrinkage and self-diffusion mechanism 3−46941
- He single cryst. growth, dislocation form., surface mechanism *(Russian)* 3−47182
- InP, B3 structure, electron irrad., dislocation loops seen edge-on, electron microscopy contrast 3−56907
- InP, undoped, prismatic disloation loop anal. by TEM 3−33261
- InSb, dislocation structs. and in situ obs. of dislocation motion 3−46942
- β-LiAl, mech. behaviour, effect of defect struct., hardness and dislocation damping study 3−33266
- MgO:Au^{3+}d, Eiffel Tower-shaped dislocation dipoles and loops, optical microscopy study 3−2566
- Mo, origin of Mo_2C precipitate morphology, metallographic anal. 3−53064
- Ni-Cr-Co, wrought superalloys, creep, 800°C, strengthening mechanisms 3−47922
- Pd-Fe solid solutions, proton irradiation damage, dislocation loops, voids, TEM 3−37969
- Si, dislocation generation, high-resolution real-time X-ray topography study 3−27945
- Si, electron irrad. prod. defects, HVEM study 3−46999
- Si, float zone crystals, swirl defects study 3−46938
- Si, implanted or Czochralski grown, rod-like defects, faults and loops, independent form. 3−46968
- Si, ion implanted, solid phase epitaxial growth 3−8367
- Si, plastically deformed, dislocation study 3−46939
- Si, swirl defects form. mechanism, growth rate and temp. gradient influence 3−8044
- Si thin cryst., X-ray scatt. method for struct. perfection meas. 3−7856
- Si wafer, epitaxial, laser annealed, defect form., SEM, TEM and X-ray studies 3−56958
- Si:In(Sb), ion implanted, solute segregation and solid phase crystallisation dynamics 3−56950
- Si:P, ion implanted, light scanning annealing, elec. and defect props. 3−27980
- Si:P, ion implanted, solid soln. form. after solid phase epitaxial regrowth 3−57099
- Si:P^+ ion implanted buried amorphous layers, recrystallisation behaviour 3−27845
- Sn-Pb (2, 38.1 wt.%), superplastic, role of Coble creep and interface control 3−39210
- ZnSe, N^+ implanted, radiation damage wrt dosage and annealing 3−33314

dislocation motion
- *for dislocation relaxation see dislocation damping*
- *see also dislocation climb; slip*
- acoustic emission from dislocations emerging to the surface of a crystal 3−13224
- alloys, low stacking fault energy, stacking fault stengthening 3−51632
- anomalous mechanical aftereffect, dislocation model *(Russian)* 3−37907
- BCC solid solutions, critical resolved shear stress, temp. and conc. depend., dislocation motion 3−51694
- brass, deformation, high temp. flow stress oscills., recrystallisation and dislocation mechanisms *(Polish)* 3−47878
- crystal lattice, starting stresses in dislocation motion 3−2557
- dispersion hardened alloy, acoustic emission during yielding, computer simulation 3−29141
- edge dislocation non-uniform motion by climb and glide along arbitrary path 3−56908
- flow stress, correlation with dislocation motion and density 3−18373
- grain boundary and dislocation diffusion 3−47146
- grain boundary-dislocation interactions 3−46984
- internal friction, amplitude depend., in crystals, associated modulus change 3−37919
- internal friction, LF, due to dislocations oscillating in lattice 3−37920
- internal friction and defect of Young modulus at low deform. amplitudes *(Russian)* 3−22902
- melting and crystallisation in systems with surface coating, theory 3−42753
- metals, FCC, texture form. during plastic deform., thermoactivation model 3−9089
- metals, irradiated, relation between creep and swelling *(Russian)* 3−33348
- NMR tensile apparatus for dynamical in situ meas. 3−49424
- semiconductors, doped, dislocation mobility theory 3−2559
- solid solution, BCC, solute clusters effect on screw dislocations, strengthening and weakening model 3−37923
- stacking fault energy appropriateness to mech. prop. correls. 3−13241
- steel, predeformed, fracture toughness determ. from stretch zone width meas. 3−4239
- steel, surface deformed, internal stress relax. during annealing *(Russian)* 3−53088
- string model for dislocation-point defect interaction in bias stress system 3−33294
- thermally activated, in dilute solid solns., kinetic theory model 3−33254
- Al, plastic deform. near superconducting T_c 3−28032

dislocation motion continued
- Al, single cryst., dislocation motion, flow stress and cell size, HVEM study 3−13228
- Al, texture formation during plastic deformation 3−9089
- Al-Cu alloy, moving dislocations, NMR and TEM obs., correls. with ageing induced structures 3−38718
- AuCd, martensitic transform., internal friction *(Chinese)* 3−43803
- BaF_2, brittle, predeformation and fracture, high temp. study 3−37981
- $CaSO_4.2H_2O$, selenite, cleavage faces dehydration, expt. study 3−14843
- CdS, deformed at low temp., luminescence 3−3812
- CdS:N_2, acoustic luminescence study *(Russian)* 3−24031
- CdTe, dislocation structs. and motion, TEM study 3−46943
- Cds, dislocation structs. and motion, TEM study 3−46943
- Co-Cr-Mo alloy, twin-twin interaction and work hardening behaviour 3−19371
- Cu, annealed, cyclic deform., dislocation dynamics anal. 3−4079
- Cu, deformation, high temp. flow stress oscills., recrystallisation and dislocation mechanisms *(Polish)* 3−47878
- Cu, dislocation motion in annealed and neutron irrad. single crysts. 3−37930
- Fe, cleavage crack growth, cyclic, quantitative fractography 3−39228
- Fe, single cryst., high purity, effect of H charging during deform. on mech. props. 3−2651
- Fe-Ni-Mn(-C) alloy, isothermal martensitic transform. nucleation rate, stress effect 3−34305
- Fe-Si(Ni), cleavage crack growth, cyclic, quantitative fractography 3−39228
- GaAs, anion antisite defects and electron traps 3−42603
- n-Ge, elec. props. caused by impurity atmospheres left behind by dislocations 3−18707
- ^3He:^4He crystals, BCC, dislocation tunnelling, acoustic study 3−57172
- ^4He, solid, dislocation motion study 3−42881
- InSb, α-dislocations, vel. of motion *(Chinese)* 3−2561
- InSb, dislocation structs. and in situ obs. of dislocation motion 3−46942
- KCl crystal, dislocation exoelectron emission 3−14444
- KCl crystals; X-irradiated, sonolum. and internal friction meas. 3−28912
- KCl, hydrostatically compressed, screw dislocation mobility and jogs 3−13557
- LiF, ductile, predeformation and fracture, high temp. study 3−37981
- LiF, edge dislocation mobility for electron beam loaded crystals meas. 3−18315
- LiF, low-temp. creep, 1.6-300K, temp. depend., Peierls barrier contrib. 3−37990
- LiF, strain rate continuity meas. 3−51697
- Mo, high-purity single crystal, low-temp. plasticity, CASS and activation volume 3−39227
- NaCl crystal, dislocation exoelectron emission 3−14444
- NaCl, dislocation motion mechanism at high temps., creep study 3−22905
- NaCl, edge dislocation mobility for electron beam loaded crystals meas. 3−18315
- NaCl, electron irrad., dislocation dynamics during deformation 3−8054
- NaCl, γ-irrad., mechanical electron emission *(Russian)* 3−19257
- NaCl, single crysts., stress relax., strain rate depend. and repeated test effect *(Japanese)* 3−2667
- NaCl:Ca(Pb) crystals, microhardness and dislocation mobility, quenching effects 3−13326
- NaCl:Eu^{2+}, hardening, aggregation-precip. state effect 3−4050
- NaCl-KCl mixed and two-phase crystals, microhardness studies 3−47041
- Ni-base eutectic composites, microstruct. and fatigue 3−43961
- Pb-In, dislocation internal friction in mixed state, effect of Abrikosov's vortices *(Russian)* 3−27949
- Si, CVD grown, P doping and oxidation effects on grain growth, TEM study 3−51624
- Si, dislocation appearance and motion, X-ray topographic obs. 3−27946
- Si, dislocation generation, high-resolution real-time X-ray topography study 3−27945
- Si, dislocation motion, X-ray topography study, diffraction-contrast inversion obs. 3−33264
- Si, dislocation motion under illum., photoplastic effect 3−46940
- Si, partial dislocation glide 3−22893
- Si, plastically deformed, dislocation study 3−46939
- Si, single cryst., elastic props., depend. on temp. and dislocation density *(German)* 3−2646
- Si:P, single cryst., dislocation mobility at temp. up to 1300°C 3−13555
- SiC, dislocation motion, plastic deformation, electron microscopy study 3−18516
- α-SiC, dislocations, etching and X-ray study *(Chinese)* 3−42605
- Sn, white, single crystals, deformed in tension, individual dislocation motion, etch hillock study 3−37911
- Sn-Pb, acoustic wave emission during superplastic deform. *(Russian)* 3−24295
- TaC_x, C conc. in stacking faults in dissociated dislocations, EELS study 3−8064
- β-Ti alloy, age-hardenable, cyclic stress/strain response 3−14732
- Ti alloy, interstitial, mobile dislocation density during plastic flow at low temp. 3−14681
- Zn, internal friction in brittle-plastic transform. temp. range *(Russian)* 3−47044
- Zn-Al, acoustic wave emission during superplastic deform. *(Russian)* 3−24295
- ZnS crystal, dislocation exoelectron emission 3−14444
- ZnSe, dislocation motion during plastic deform., effect on luminesc. spectra 3−43627

dislocation motion, nonconservative *see dislocation climb*

dislocation motion hindrance *see dislocation drag*

dislocation multiplication
- edge dislocation, energy and entropy of interacting dislocations, atomistic simulation 3−22895
- sintering contact region, stress distrib. and dislocation multiplication *(German)* 3−47793
- steel, HSLA, commercial, strength and ductility, effect of low temps. 3−43911
- CdS, extended dislocations obs. by high resolution electron microscopy 3−13227
- Fe, high purity, fatigue limit and strain ageing *(Japanese)* 3−9165
- NaCl, dislocation multiplication probability, stress dependence meas. 3−18311
- Ti alloy, interstitial, mobile dislocation density during plastic flow at low temp. 3−14681

dislocation nucleation
screw dislocation-surface crack elastic interaction, two-dimens. theory 3—33252
Al-Zn-Mg, single crysts., environmentally assisted cracking 3—4105
He single cryst. growth, dislocation form., surface mechanism *(Russian)* 3—47182
InP crystals, LEC grown, dislocation generation and propagation, X-ray topography study 3—46936
Ni, dislocation struct. under plastic deform., elec. resist. meas., TEM study 3—46934
dislocation pile-ups
adiabatic heating at dislocation pile-up avalanche 3—13313
cellular struct., weakly misoriented, form. by rot. plastic deform. modes *(Russian)* 3—37982
cross-slip and work hardening, dislocation model 3—37928
Griffith crack shielded by dislocation pile-up 3—51007
II-VI semiconductors, charge transport by dislocations during plastic deform. 3—46946
steel, dual phase, stress-strain behaviour in forward and reverse straining, effect of heat treatment 3—14680
Al alloy, inelastic stress-responses in non-proportional deforms. at elevated temp. 3—9119
$Ca(Al_2Si_3O_{10}).3H_2O$, etching by H_3PO_4, HCl and formic acid, dislocations, pile ups, twinning 3—8051
Cu-Al (10 at%) single cryst., role of conjugate slip in deform. 3—37914
Cu-Al-Si-Co, superplastic flow, role of grain boundary dislocations 3—53156
Fe-Ni (50 wt.%), cubic texture formation mechanism *(Russian)* 3—39168
InSb, dislocation structs. and in situ obs. of dislocation motion 3—46942
Ni-Cu (35 wt.%), cyclic creep deform., effect of stress amplitude and friction stress *(Korean)* 3—39215
S crystals, helical dislocations obs. 3—2563
α-Ti-Al, age-hardened, ductility, grain size influence 3—24319
Ti-Al-V (6, 4 wt.%), fatigue behaviour, surface layer 3—34466
β-Ti-Mo, age-hardened, ductility, grain size influence 3—24319
dislocation pinning
see also dislocation damping
BCC solid solutions, critical resolved shear stress, temp. and conc. depend., dislocation motion 3—51694
forced pipe diffusion of mobile pinning points 3—33253
ice, US attenuation near melting point 3—2683
metals, ion implantation effects on mechanical props., review 3—27957
shearing through repulsive particle 3—51604
steel, austenitic stainless, CC H-induced phase transform. effect of X-rays 3—33300
steel, Cr-Mn-Si-Ni, temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
steel, Mn, low C, quenched and tempered, strength and toughness 3—43962
steel, Mn(-Mo), temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
steel, Ni-Cr-Mn-Si, temper brittleness, influence of initial microstruct. 3—47945
string model for dislocation-point defect interaction in bias stress system 3—33294
CsBr, low temp. plasticity and dislocation motion inertial effect 3—42698
Cu-Cd(Mg), dil., yield and flow stress 3—4088
GaAs:Te, Zn, defect struct. induced by Zn diffusion, TEM study 3—27944
Mg, internal friction associated with dislocations and electron irrad. induced point defects 3—28045
Pb-Cd, flux vortex and dislocation pinning *(Russian)* 3—13976
Si, ion irrad., melting and dislocation trapping 3—2568
Sn-In, dil., US attenuation in normal and supercond. states, amplitude and freq. depend. 3—33826
Ti alloy, interstitial, mobile dislocation density during plastic flow at low temp. 3—14681
α-Ti, oscillatory internal friction assoc. with hydride precip. 3—34374
Ti-Al-Nb-Zr alloys, defect struct. evolution rel. to deform. parameters at 4.2K 3—24302
Ti-Al(Sn) alloys, dil., deform. kinetics at low temp., strengthening mechanism 3—14682
WC, Co-cemented, ion implantation effects on mechanical props., review 3—27957
dislocation relaxation *see dislocation damping*
dislocation scattering
used for carrier scattering by dislocations
alkali metals, phonon drag quenching in elec. resist. 3—23356
edge dislocations, tight-binding electron scattering, theory 3—8465
noble metals, low temp. elec. resist., effect of electron-dislocation scatt. 3—33703
simple metals, transport props. 3—18697
Cu, electrical resist. and thermoelec. power, resonant dislocation scattering effects, theory *(Russian)* 3—33715
Cu, electrical resistivity for dislocation 3—3140
GaAs, dislocation effect on electron mobility, theory 3—33724
K, anomalous dislocation densities rel. to elec. transport props. 3—3174
PbSe:In films, elec. props. dopant effects on scatt. parameters 3—18806
Si, polycrystalline, MOSFETs and thin films, elec. characterisation 3—8597
dislocation sources
see also Frank-Read sources
Bauschinger effect, computation simulation model rel. to near surface dislocation sources 3—51699
grain boundary-dislocation interactions 3—46984
BaF_2, brittle, predeformation and fracture, high temp. study 3—37981
Fe alloys, martensitic transform., theory and mechanisms 3—4036
InSb, dislocation structs. and in situ obs. of dislocation motion 3—46942
LiF, ductile, predeformation and fracture, high temp. study 3—37981
Si, Czochralski grown, precipitate-containing, dislocation generation process 3—8053
Si, dislocation sources, starting stresses 3—2570
TiAl, ordered, brittleness, effect of temp. 3—14738
dislocation structure
Astroloy, Ni-base superalloy, supersolidus sintered preforms, necklace struct. obtained by forging 3—9017
creep, high temp., division from point of view of dislocation struct. 3—14671
cross-slip and work hardening, dislocation model 3—37928
crystals, plastic deform., role of cross-slip 3—33344
dislocation structure continued
dunite, deform. mechanisms, results of high temp. testing 3—54023
fatigue, variable amplitude, design against using cyclic stress-strain response 3—58250
fatigue crack growth, phys. principles, models and expt. results, review 3—13325
fibrous composites, deform. and fracture micromechanisms, dislocation, disclination theory 3—53140
2,4-hexadiyne diol bis-(p-toluene sulphonate) monomer and polymer crysts., dislocation substruct. comparison 3—18234
metal, BCC, Peierls stress, effect of nonglide stress 3—37924
metals, BCC, slip behaviour interpret., computer simulation 3—37929
metals, cold worked, microbands 3—47916
metals, FCC, critical strain hardening, grain growth, dislocation struct. *(French)* 3—58133
metals, grain boundary diffusion mechanisms 3—33484
microband formation by cross-slip 3—51609
polyethylene crystals, core struct. of dislocations, computer simulation 3—51602
steel, austenitic Cr-Ni-Mo, steady state creep meas. *(Czech)* 3—58172
steel, austenitic stainless, 21Cr-6Ni-9Mn, low temp. deform., struct. changes 3—53146
steel, austenitic stainless, fatigue crack propag. influence of gaseous environment 3—14707
steel, austenitic stainless, films, tensile cracks, in situ obs. in HVEM 3—19392
steel, austenitic stainless, isotropic hardening, separate roles of subgrains and forest dislocations 3—24256
steel, austenitic stainless, martensitic transform., heavy ion implantation induced 3—42680
steel, austenitic stainless, transient creep, electron microscopy *(Czech)* 3—34389
steel, bainitic, high and low cycle fatigue fracture, dislocation cells 3—53232
steel, bearing, cementite dissolution during austenisation, hydroextrusion effects *(Russian)* 3—24271
steel, Cr-Ni, creep strength, effect of Co and Mo *(Japanese)* 3—53129
steel, deformation hardening in superplastic conditions 3—9092
steel, low alloy, low C, lath martensite, morphology and crystallography, TEM study 3—42796
steel, low alloy, type 03G4AF, rupture strength rel. to struct. 3—47957
steel, low-alloy constructional, lath martensite struct., TEM obs. *(Polish)* 3—47841
steel, pearlitic eutectoid rail, cyclic deform. 3—24308
steel, stainless, H induced martensitic transform. and twin form. 3—43806
steel, stainless creep behaviour, effect of prior fatigue 3—4083
steel 15Kh2MFA, US effects on mech. props. 3—47958
zircaloy-2, annealed, fast neutron irradiated, growth strain breakaway, temp. depend. 3—34385
Al, cold rolled, microstruct. and deform. mechanisms in polycryst. samples 3—43929
Al, cyclically loaded, dislocations, X-ray diffr. intensity study 3—37910
Al, deformed by cyclic bending to fracture, polygonalisation study *(Russian)* 3—34433
Al, dynamic deformation, strain rate history effects and dislocation substruct. obs. 3—43892
Al film, ion-beam corrosion and acoustic emission 3—51673
Al, laser annealed, containing Ni precipitates, vacancy loops obs. 3—56959
Al, polycrystalline, cyclic deform., dislocation substructure rel. to saturation stress 3—53162
$Al-Al_3Ni$ eutectic, strengthening by mech. thermal treatment 3—43854
Al-Cu alloy, moving dislocations, NMR and TEM obs., correls. with ageing induced structures 3—38718
Al-Mg, high temp. creep rate, unified anal. from point of view of recovery 3—58160
Al-Mg (3.3, 4.5 at.%), solid solns., creep, breakdown in viscous glide, at high stress levels 3—14652
Al-Mg (4 wt.%), microstruct. development during forming, effect of strain rate and geometry 3—43933
Al-Mn-Mg (1, 1 wt.%), strip-cast, thermomech. treatment, creep response 3—24301
CaF_2, cleavages, surface distortion features 3—51908
CdTe, dislocation structs. and motion, TEM study 3—46943
Cds, dislocation structs. and motion, TEM study 3—46943
CsI:He, diffusion during deform. at low temp. 3—28161
Cu, dislocation struct. under action of static and ultrasonic stresses *(Russian)* 3—37912
Cu, grain growth, irregular, nucleus-free mechanism 3—29102
Cu, heavily deformed, microstruct. and mech. props. 3—47858
Cu, large-grained polycrysts., random strain cycling 3—14672
Cu, polycrystalline, fatigued, dislocation struct., surface slip 3—53234
Cu-Al, single cryst. solid soln., plastic deform., twinning *(French)* 3—53150
Cu-Al (10 at%) single cryst., role of conjugate slip in deform. 3—37914
Cu-Al (3 to 8 wt.%), polycrystalline alloy, work hardening, room temp. deform., dislocation struct. 3—53082
Cu-Ni, $\Sigma=27$ coincidence grain boundary 3—22907
Cu-Si (8.01 at.%), extended dislocation width, Suzuki segregation to stacking fault, electron micrograph study 3—38078
α-Cu-Zn, grain growth, irregular, nucleus-free mechanism 3—29102
Cu-Zn-Al shape memory alloys, martensitic transform. cycling effects 3—34322
Cu(-Al), dislocation struct. of [321] crystals grown by Bridgman method 3—13230
$Cu(-Al_2O_3)$, cold rolled, deform. struct., effect of dispersed phase 3—47914
CuZnAl shape memory alloys, austenite microstruct. effects on martensitic transform. 3—43830
Fe crystals, rolled, [100](001) oriented, orientation changes, deformation banding and dislocation structs., theory 3—43858
Fe, high temp. creep rate, unified anal. from point of view of recovery 3—58160
Fe, polycrystalline, cyclic deform., dislocation substructure rel. to saturation stress 3—53162
Fe-Cr (19 wt.%), precip. hardening, tensile testing and TEM study 3—24244
$Fe-Cr-Al-Ti-Y_2O_3$, oxide dispersion strengthened, texture and microstruct. 3—34352
Fe-Cr-Ni (15, 15 wt.%), shock wave response, effect of polycrystallinity 3—33362

dislocation structure continued

- Fe-Mo, high temp. creep rate, unified anal. from point of view of recovery 3−58160
- Fe-Ni (34.5 wt.%), shock wave response, effect of polycrystallinity 3−33362
- Fe-Ni-Cr-C, butterfly martensite, morphology and substruct. 3−42794
- Fe-Ni-Mn, lath martensite, TEM study 3−42795
- GaAs, ion implanted, point defect segregation, dislocation struct., annealing 3−33317
- GaAs LEC crystal, undoped, semi-insulation mech., role of dislocations 3−22898
- GaAs:Se, defect struct. after Se implantation through Si_3N_4 encapsulant layer 3−18322
- In, micropores, deformation healing, effect of size *(Russian)* 3−57183
- InP:Ge single cryst., high resolution TEM obs. of defect struct., electron beam induced degradation 3−18304
- InSb, dislocation structs. and in situ obs. of dislocation motion 3−46942
- InSb, ion implanted, point defect segregation, dislocation struct., annealing 3−33317
- KCl, deformed, dislocation struct. anal. 3−22904
- KCl, micropores, deformation healing, effect of size *(Russian)* 3−57183
- KCl monocrystals, knife edge/plane contact, high temp. deformation, dislocation mechanism, optical microscopy 3−47034
- LiF, dislocation struct. and fracture under cyclic loading 3−18314
- LiF:He, diffusion during deform. at low temp. 3−28161
- MgO, dissolution kinetics in aqueous acidic salt solns., dislocation etching kinetics and pit morphology 3−27942
- MgO, laser annealed, containing Ni precipitates, vacancy loops obs. 3−56959
- MgO, reoriented band form. and dislocation structure, electron microscopy study 3−42606
- MgO:Cr, grain boundary diffusion of ^{51}Cr rel. to dopant conc. and dislocation orientation 3−57135
- α-MnSe, low temp. phase transition, TEM study 3−39113
- Mo, dislocation struct. after hot hydrostatic extrusion *(Russian)* 3−42617
- $NH_4H_2PO_4$ single cryst., dislocation struct. and optical nonuniformity 3−51606
- NaCl, deformed, dislocation structure anal. 3−22904
- NaCl, dislocation forest, mechanical props. *(Russian)* 3−2567
- NaCl:He, diffusion during deform. at low temp. 3−28161
- Ni, dislocation struct. development during fatigue, TEM study 3−37909
- Ni, dislocation struct. under plastic deform., elec. resist. meas., TEM study 3−46934
- Ni, grain growth, irregular, nucleus-free mechanism 3−29102
- Ni, laser annealed, containing Ni precipitates, vacancy loops obs. 3−56959
- Ni, martensitic transform., heavy ion implantation induced 3−42680
- Ni-Au(111) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3−23219
- Ni-Au(111) epitaxial couples, interfacial dislocations obs. *(French)* 3−23220
- Ni-base eutectic composites, microstruct. and fatigue 3−43961
- Ni_3(Al,Hf), Al-rich phases, dislocation struct. study 3−51607
- Ni_3(Al,Ta), Al-rich phases, dislocation struct. study 3−51607
- Ni_3Mn alloy, strain hardening and dislocation structure characts. 3−43863
- Pb, micropores, deformation healing, effect of size *(Russian)* 3−57183
- Pd-Au(111) and Au-Pd(001) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3−23219
- Pd-Au(111) and Au-Pd(001) epitaxial couples, interfacial dislocations obs. *(French)* 3−23220
- Si film on sapphire, crystalline quality, automatic X-ray diffr. rocking curves 3−33593
- Si, high resolution imaging by 1 MV electron microscopy 3−7885
- Si, ion implanted, laser annealed, defect struct., electron microscopy anomalies 3−22939
- Si, polycrystalline, grain boundaries, TEM study 3−22911
- Si solar cells, polycryst., enhanced photoresponse at dislocation subgrain boundaries, X-ray topography study 3−53560
- Si, solar grade, defects, EBIC/TEM study 3−51627
- Si wafers, chemical treatment effect on mechanical props. 3−13333
- SiC crystals grown from vapour phase, defect structure, X-ray topographic obs. 3−42611
- Si_3N_4, dislocation struct., high resolution imaging by 1 MV electron microscopy 3−7885
- Sn, micropores, deformation healing, effect of size *(Russian)* 3−57183
- α-TeO_2, dislocation distribution and exterior morphology 3−33262
- Ti alloy, $\alpha+\beta$ type, decomp. of hexagonal martensite, substruct. effect on precip. phase behaviour 3−14591
- Ti alloys, crack propag., in situ electron microscopy obs. 3−9189
- Ti alloys, two-phase, deformation hardening in superplastic conditions 3−9092
- Ti, edge dislocation core struct., high resolution electron microscopy study 3−46945
- Ti-Al (8 wt.%), cyclically deformed, dislocation struct., effect of comp. and temp. 3−58186
- Ti-Al(Cr)-Mo-Zr, hot deform., TEM study of struct. changes 3−19357
- Ti-Cr(Mo)(Nb) alloys, alloying and annealing temp. effect on struct. state, internal friction obs. 3−14647
- Ti-Mo-Zr-Sn (11.5, 6, 4.5 wt.%), β-III sheets, microstruct. and props. 3−14628
- TiNi, equiatomic, martensite form., effect of thermal cycling 3−39128
- W, dislocation struct. after electric spark treatment *(Russian)* 3−37913
- ZnO, microstructure, plastic deform., microhardness anisotropy, SEM study 3−37992
- ZnSe, plastically deformed, dislocation struct., weak beam electron microscopy study 3−42613

dislocation translation *see slip*

dislocations

- *For pipe diffusion, see diffusion in solids. See also dislocation ......*
- *see also Bordoni effect; Cottrell atmospheres; disclinations; edge dislocations; grain boundaries; prismatic dislocations; screw dislocations*
- bicrystals, grain boundaries, struct. and mech. props., expt. studies *(French)* 3−46962
- blistering behaviour during ion beam heating of solids 3−28015
- cholesterics, viscoelastic effects on core radius of dislocations 3−13084
- conference, Castle Hot Springs, Arizona, USA (Jan. 1982) 3−5492
- conference, Perpignon, France (Sept. 1982) 3−20568
- continuous approx. for distribs. 3−27940

dislocations continued

- continuum strain field, physical interpretation of mathematical singularities 3−33250
- cooperative plasticity due to the motion of disorientation and phase separation boundaries 3−47032
- crack stress field determ. from dislocation distribs., thermoelastic fracture solns.; singular influence function distrib. 3−27436
- crystallites, joints of boundaries, elastic stresses, self-distortion effects 3−46450
- diamond, dislocation struct. in low-angle grain boundaries 3−51611
- diamond, partial dislocations, electron states, first principles calc. 3−3110
- discs, composed, anal. using boundary element method *(German)* 3−32598
- dissolution phenomena, influence of cryst. imperfections 3−38082
- electroplated coatings, deposit structure effects 3−52984
- ferromagnet, domain nucleation due to dislocations 3−52518
- ferromagnetic continuum, displacement and stress fields due to dislocations 3−51599
- finite bodies with given boundary tractions, dislocation and displacement fields 3−56899
- free energy for crystal with continuous defect distribution 3−2848
- grain boundaries, nonequilibrium to equilib. changes, model 3−56913
- grain boundaries, surface dislocation and Burgers circuit description 3−18318
- grain boundaries and dislocations, conf., Caen, France (Sept., 1982) 3−44892
- graphite, adsorbed tetrafluoromethane, phase transitions, role of walls and dislocations 3−51952
- hard-disk arrays, computer-generated, order and deterministic chaos, hexatic configs. 3−23014
- p-n-heptyloxybenzoic acid, smectic C single local monocrystal growth from twisted nematic phase 3−46837
- ice crystals, vibr. of dislocations, US attenuation meas. *(Japanese)* 3−2721
- impurity centres, absorpt. spectra and luminesc. lines, inhomogeneous broadening 3−38851
- Inconel 718 and 600, disappearance of serrated flow, proposed theory 3−53117
- insulating crysts., light scatt. from dislocations, elasto-optic contribs. 3−57944
- intercalation compounds, Daumas-Herold domain walls, interf. phenomena 3−28112
- interfacial dislocations within anisotropic and nonhomogeneous isotropic elasticity *(French)* 3−46933
- internal friction, static and dynamic dislocation hysteresis 3−18388
- martensite nucleation, localized soft mode 3−34302
- martensitic transformations, soft mode model, nucleation by dislocation dissociations 3−34311
- melting, duality transform. 3−2554
- melting, local, of cryst. near dislocations, effect on anomalous sp. ht. *(Russian)* 3−38036
- melting, two dimensional mechanism, Monte Carlo simulation study 3−57065
- melting process, defect unbinding process of anisotropic layers in solids, smectics and nematics 3−23038
- metallic glass, plastic deformation, disclination model 3−22970
- metallic materials, cyclic creep, dislocational models *(Czech)* 3−34388
- metallic thin foil, irradiated, interstitial loop growth 3−18294
- metals, cubic, grain boundaries, computer modelling 3−46951
- metals, cubic, tilt grain boundaries, struct. and props. 3−46965
- metals, grain boundaries, dislocation models 3−37934
- metals, stored elastic energy and plastic volume change 3−2649
- micromechanics of defects in solids, eigenstrain method, book 3−27941
- molecular crystals, luminesc. spectra in presence of impurities and defects 3−38874
- n-paraffin homologues, melting, dislocation catastrophe model 3−51759
- phase and domain boundary orientation, interface free energy minimisation 3−2571
- phonon scatt. by strain and rot. fields of cryst. defects 3−42736
- polymer, short chain, melting 3−38035
- polymers, glassy, kinetic parameters of deform. process, dislocation models 3−18375
- radiation deformation rate of crystals, thermocycling influence 3−27981
- semiconductor, electrical cond., temp. depend. with oriented charged dislocations 3−43181
- semiconductor, optical absorpt., dislocation exciton spectrum 3−28824
- semiconductor technology, appl. of dislocations 3−51603
- semiconductors, defects, conf. Amsterdam, Netherlands (Aug.-Sept. 1982) 3−44894
- semiconductors, dislocation Mott exciton, theory 3−23284
- semiconductors, electrical conductivity due to dislocations 3−47338
- semiconductors, grain boundary struct. *(French)* 3−22908
- sheet metals, forming limit diagrams, effect of strain path changes, dislocation treatment 3−14661
- smectic A liquid crysts., dislocations, gauge field theory 3−51483
- smectic A phase, confocal parabola lattice form. under shear *(French)* 3−27841
- SOS film, implanted, furnace annealed, defect struct. 3−8376
- steel, austenitic, void density effect on dislocation bias during electron irrad. of type FV548 3−18348
- steel, austenitic stainless, grain boundary energy and extrinsic grain boundary dislocations, spreading time and temp. 3−13239
- steel, BCC, grain boundary segregation and H embrittlement 3−47839
- steel, low alloy, ultrahigh strength, grain boundary phase obs. in laser heat treated samples 3−22919
- subgrain size, stress depend., dislocation generation and annihilation 3−18312
- superplastically deformed material, in-situ HVEM studies interpret. 3−13318
- surface coated specimens, melting and crystallisation theory 3−38040
- tetrafluoromethane, adsorbed on graphite, commensurate-incommensurate transitions and melting 3−38198
- two-dimensional melting, computer simulation studies 3−51955
- two-dimensional melting, crit. region, scaling form for correl. length 3−23023
- two-dimensional solids, melting, review 3−2736
- unrelaxed extrinsic grain boundary dislocations, appl. to grain boundary processes 3−8060
- Wigner crystal, two-dimensional, melting templ. and anharmonic effects 3−38327
- β-Al brass, cyclically transformed, dislocation study, thermoelastic martensitic transform. 3−43833

dislocations continued
$Ba(Pt(CN)_4).4H_2O$, low temp. photoluminescence, grinding effects 3—43583
$Be_3Al_2Si_6O_{18}$, beryl, lattice defects, X-ray topography study 3—37915
Cd-Zn, directionally solidified eutectic alloy, tensile deform., metallography 3—53134
CdS:Te, low temp. photoluminescence, grinding effects 3—43583
Cu, hole generation during dislocation decay, mechanoluminescence *(Russian)* 3—52859
Cu irradiated thin foils, interstitial loop growth 3—18294
Cu stepped surfaces, RHEED study 3—23149
Cu-Al-Ni, shape memory alloy, matrix-martensite interface, TEM 3—34320
Cu-Zn-Al, faulted martensite, stacking fault form. 3—42620
Cu_2NiZn, $L1_2$ ordered struct., superlattice dislocations and stacking faults 3—46944
α— Fe, (001) plane two-dimens. crack simulation, using new boundary scheme 3—14716
Fe and Fe alloys, muon precession freq., dipole symmetry disruption by dislocations 3—52697
Fe film, magnetic phase transition verification 3—28560
Fe-based alloys, grain boundary segregation and H embrittlement 3—47839
Fe-Co, FCC to HCP transformation, electron microscopy study 3—8190
GaAs, microinclusion-induced mech. prop. degradation 3—57023
GaAs, native point defects and dislocations, effect on devices, review 3—13216
GaAs, negative differential cond. and low freq. elec. instabilities 3—8500
GaAs:Cr, semi-insulating, nonuniformity and dislocations, photoluminesc. intensity study 3—38858
GaAs:S, Te, dislocation-point defect-dopant interaction, effects on recombination processes 3—37951
$GaAs_{1-x}Sb_x$ p-n junctions, avalanche breakdown voltage, misfit dislocations 3—8569
Ge, electrically detected EPR in single crystals 3—57772
Ge, grain boundary microstructure, HREM obs. *(French)* 3—46954
Ge, misfit dislocation formation in epitaxial struct., substrate thickness influence 3—2560
Ge, neutron irrad., VHF dislocation cond. *(Russian)* 3—8502
Ge single cryst., internal friction, amplitude depend., in brittle fracture temp. range *(Russian)* 3—2670
Ge:Li, impurity ion-dislocation dangling bond complex in EPR spectra 3—18989
Ge/GaAs epitaxial system, coherency of interphase boundary and elastic strain 3—51977
InP-InGaAsP LEDs, luminescence study of dark spot defects 3—3824
K, lattice imperfection influence on elec. cond. 3—13797
KCl, gamma irrad., plastic deform., effect on thermolum. spectra 3—47721
$K_2(Pt(CN)_4).3H_2O$, low temp. photoluminescence, grinding effects 3—43583
Mn-Zn ferrites, defects, grain boundary segregation, and secondary phases rel. to mag. props. 3—13240
$MnCO_3$, absorpt. mechanism at antiferromagnetic resonance 3—28707
Mo, grain boundary microstructure, HREM obs. *(French)* 3—46954
NaCl, gamma irrad., plastic deform., effect on thermolum. spectra 3—47721
NaCl, γ-irrad., IR extinction of photoplastic effect 3—2656
$NaClO_3$, X-ray topographic obs. of dislocations in soln. grown crystals 3—33259
Nb_3Sn, A15 supercond., struct., dislocations, high resolution electron microscopy study 3—18305
Ni alloys, FCC, disappearance of serrated flow, proposed theory 3—53117
Ni, field reversed ion rings in background plasma, stability 3—56914
Ni-based alloys, grain boundary segregation and H embrittlement 3—47839
NiO, antiferromagnetic, defects, domain boundaries obs. 3—22899
NiO, reduction during ion beam milling Ni island form. 3—14760
NiTi, electron irrad. induced amorphisation at dislocations 3—51663
$Pb_3(PO_4)_2$, ferroelastic transition, domain wall struct. *(French)* 3—38046
Si, 30° partial dislocations, geometric and electronic struct. 3—22900
Si, bending gettering of cryst. defects 3—19348
Si, dislocation recombination, photocond. decay time study 3—42619
Si, dislocations, generation and recombination images in scanning microscopy 3—18309
Si, electret state decay with low dislocation density 3—19043
Si, electronic and struct. props. of grain boundaries 3—23315
Si, electronic props. of dislocations, Shockley partials, and stacking fault ribbons 3—47305
Si, laser induced backside damage, characterization for gettering 3—56973
Si, line defects, EBIC contrast, computer simulation 3—18307
Si, photoconductivity and ESR study of spin-dependent recombination at dislocations 3—38432
Si, plastic deformation, positron study 3—57014
Si, polycrystalline, grain boundary struct., EBIC study *(French)* 3—22912
Si, twin boundaries, elec. activity, EBIC and TEM obs. 3—51623
Si, twin boundary struct., TEM and α-fringe contrast studies 3—51621
Si wafer, ion beam irrad., melting, resolidification, dislocations, TEM obs. 3—57003
Si wafers, backside laser irrad., microcracks, thermal annealing 3—27984
Si, zone-melting recrystn. on SiO_2 using halogen lamp *(French)* 3—24118
Si:As, ion implanted and laser annealed, defect struct., X-ray and TEM studies 3—42650
Si:P, CW laser induced deep level defects 3—57314
Si:P, ion implanted, misfit strain overcompensation by dislocation networks 3—47004
β-SiC epitaxial film, dislocations, twins and stacking faults *(Chinese)* 3—42939
SiO_2, vitreous, excess sp.ht., dislocation model 3—28119
Ta, plastically deformed, migration of interstitials to immobile vacancies and dislocations 3—56878
$TaSe_2$ (2H), domains and dislocations in CDW state 3—22896
V_2O_3:Cr, high temp. metal-insulator transition, TEM study 3—28270
$(Y_{1-x}Lu_x)_3Al_5O_{12}$ solid soln., annealing effects on acoustic wave absorption 3—13349
Zn, dislocation assisted crack propag. 3—2662
ZnSe, dislocation dissociation and stacking fault energies, weak beam study *(French)* 3—18308

disordered systems, vibrational states *see vibrational states in disordered systems*

disperse systems
see also aerosols; Brownian motion; colloids; dust; emulsions; foams; fog; gels; powders; smoke; sols; suspensions
Brownian particles, transfer to continuous moving surfaces 3—25810
centrifugal separation of mixture 3—51211
cluster form., diffusion controlled, in 2-6 dimensional space 3—58454
cluster formation, diffusion-controlled in two, three, and four dimens. 3—34655
coagulation, particle size distrib. 3—4320
concentric surfaces, spherical, cylindrical or planar, electrostatic pot. 3—36906
dielectric permittivity, temp. depend. of disperse materials 3—23857
dilute polydisperse system of interacting spheres, sedimentation 3—24534
fine disperse particles or drops suspended in air, expansion under influence of explosion 3—2110
fluid-gas mixture in porous medium, compressibility behaviour 3—2179
gas with dispersed solid particles, two-fluid model of flow 3—42286
gas-liquid horizontal flow, pattern transitions, effect of flow obstructions 3—51201
gas-soot mixtures, gray gas weighting, coeffs. determ. method 3—21994
gaseous, acoustic emission during laser breakdown 3—37605
graphite-quartz sand dispersed mixture, elec. cond. 3—43246
graphitic heat shield coatings, dispersity of microparticles effect on radiation attenuation in hypersonic layer 3—54217
heterogeneous media, boundary layers of finite thickness 3—32792
influence of particles on the drag of bodies 3—37542
inhomogeneous samples, magic angle NMR 3—16392
laminar liquid jets in immiscible liquid systems 3—12736
laser working of Al plate, ejected products dispersion during aperture form. 3—53091
latex solution, randomly distributed particles, optical beam transmission, diffusion theory, particle size effect 3—36939
lipid vesicles, interactions with solvent in heavy and light water, phase-transition props. 3—9362
liquid trickle flow through packed beds, axial dispersion processes 3—46641
metal particle composite, far IR absorpt. mechanisms 3—3724
oscillatory convective dispersion in a branching tube network 3—24782
particle dispersion in turbulent flow, Tchen's theory 3—12755
particle size analysis using γ-absorpt. method, math. model of polydisperse absorbent exam. 3—29279
particle velocity distrib. upon mag. liquefaction in variable field 3—22540
polydisperse medium characteristics reconstruction by optical-mixing spectroscopy methods 3—21996
polydisperse system of drops, vaporisation, similarity regime kinetics 3—12750
polydisperse systems, statistical thermodynamics 3—162
polydisperse two-phase system, electrohydrodynamics 3—46655
polydispersed granular material, struct. simulation, thermal cond. calcs. 3—7391
polymer lattices, highly charged, ordered struct., microscopic obs. 3—39411
polymer surface with close-packed monolayer of submicron monodisperse spheres just below surface, form. and thermodynamic stability 3—38172
polystyrene, conc. lattices, viscoelastic props. investig. 3—7527
powders, dispersal in intense elec. fields 3—39419
radiative heat transfer between fluidised bed and a surface 3—51099
soot radiation, soot shape effect 3—50913
spherical particles, calc. of nonuniform broadening of NMR line 3—18998
squaraine dye particle dispersions, photovoltaic action, pulsed photocond., optical absorption 3—38429
two phase systems, momentum equations 3—51198
two-phase flow, one-dimensional two-speed, Cauchy problem, hyperbolicity, stability 3—42285
two-phase flow dispersed composition determ. from small-angle light scatt. 3—51197
ultradisperse particles, influence of surface composition on melting temp. 3—2756
ultradisperse particles on substrate, collective behaviour 3—33613
ultradisperse systems, phase diagram anal. 3—19538
vinylacetate-vinylchloride copolymer, spatially saponified, kinetics of form. of contacts betweeen particles *(Russian)* 3—9359
weakly conducting fluid, dispersion in elec. field of plane condenser *(Russian)* 3—2132
AgBr, tetradecahedral monodisperse microcrystals, equilib. and steady forms 3—48097
α-Fe_2O_3, highly dispersed, in SiO_2 gel pores, interaction obs. using Mossbauer effect *(Russian)* 3—48093
γ-Fe_2O_3:Co, epitaxial, orientation and dispersion, mag. recording appl. 3—23741
NaA-In, zeolite-metal ultradisperse system, struct. and optical props. 3—42587
SiO_2 particles in dil. solns., contrast var. with temp. in light scatt. 3—23963

dispersion (wave)
see also acoustic dispersion; optical dispersion
dielectric layer permittivity and thickness meas. using surface EM waves 3—54746
EM cyclotron-loss-one instability with weakly relativistic electrons 3—27683
millisecond pulsar in 4C 21.53, discovery, precise position, period and period derivative, and dispersion measure 3—15936
nonlinear Alfven waves in collisionless plasma, evolution and dispersion 3—27681
plasma, ballistic second-order echoes compared with third-order waves 3—27694
potential surface wave, isotropic dispersive media 3—44980
seismic waves, regional dispersion of first-order overtone Rayleigh waves 3—39821
travelling wave maser, dispersion charact. form., use of anisotropic dielec. plate 3—50642

dispersion hardening
see also precipitation hardening
acoustic emission during yielding, computer simulation for dispersion hardened alloy 3—29141
alloys, strain rate sensitivity determ., use of dynamic impact expts. 3—47884

dispersion hardening continued
  - cast alloys partially dispersed with uncoated C microballoons, wear resist. 3−19424
  - creep threshold stresses in materials containing dispersed particles 3−28039
  - dislocation-incoherent particle interactions, high temp. 3−33268
  - Elinvar, magnetic anisotropy, uniaxial 3−33885
  - Inconel MA 754, dispersion strengthened Ni alloy 3−53137
  - Inconel MA 754, oxide dispersion strengthened, creep fracture processes 3−34464
  - optical ceramic, toughened materials selection rationale 3−7097
  - steel, austenitic, dispersion hardening, shock loading effect on struct. and props. 3−53074
  - strengthening mechanisms, fundamentals, review 3−58126
  - Al alloy design, fundamentals of strengthening, review 3−58127
  - Al, powder metallurgy grade development, wear props. 3−3987
  - Al-Ni, eutectic alloy, hardened by dispersion of fine intermetallic particles, influence of alloying elements *(French)* 3−24290
  - Al-Ni-Fe-Ti, oxide phase hardened, heat and corrosion resist. 3−34543
  - Al_2O_3-SiO_2-ZrO_2, dispersion ceramic, twin boundaries in ZrO_2 particles, TEM 3−51614
  - Al_2O_3-ZrO_2, slow growth of microcracks, evidence for ZrO_2 toughening 3−29162
  - Cu-Al_2O_3, <001> single crystal, high temp. deform. *(Japanese)* 3−47894
  - Cu-Al_2O_3 polycrystals, dispersion hardened, strengthening mechanisms 3−43850
  - Cu-Al-Ni-Ti, shape memory alloy, grain refinement rel. to Ti addition, transform. hysteresis 3−47832
  - Cu-SiO_2 single crystals, microstruct. study, annealing 3−9087
  - Cu(-Al_2O_3), cold rolled, deform. struct., effect of dispersed phase 3−47914
  - Fe-Cr-Al-Ti-Y_2O_3, oxide dispersion strengthened, texture and microstruct. 3−34352
  - Fe-Ni-Nb(Ta), amorphous containing fine crystalline particles, mech. props. 3−34339
  - Fe-Ni-Zr, ductile and amorphous containing fine crystalline particles, mech. props. 3−34339
  - Nb-Mo-ZrO_2, ZrO_2 stability, rate of coalescence 3−53068
  - Nb-Si system, silicide phase form. and dissociation, field electron microscopy study *(Russian)* 3−23043
  - Ni-based alloys, dispersion strengthening, solid-solution strengthening, TaC and TiC additions 3−29092
  - Ni-Cr-Al-Ti superalloy MA 6000E, oxide dispersion satrengthened, γ' effect on recrystallistion 3−14606
  - Ni-W-Al alloy, dispersion strengthened, prod. by mech. alloying, characteris. 3−58071
  - Pb-Al_2O_3, powder metallurgical composites, consolidation and technical props. 3−52996
  - Pb-Zn, powder metallurgical composites, consolidation and technical props. 3−52996
  - Ti alloy, high-strength, complex alloying principles 3−24248
  - Ti alloy, high-temp. strength improvement methods 3−24251
  - Ti alloy, two-phase $\alpha+\beta$, high-strength, development trends 3−24247
  - Ti, dispersion hardening 3−29098
  - Ti-Al-Y (8, 4 at.%), dispersion strengthened, laser surface melting, microstruct. EM obs. 3−43852
  - Ti-Mo-V-Cr-Al metastable β system, deep hardenable alloy synthesis, design and props. 3−24250
  - β-Ti-Mo-Zr-Su, dispersion hardening 3−29098
  - V-TiN(ZrN)(HfN), long-time hardness 3−24246
  - ZrO_2, partially stabilised, two-wavelength X-ray analysis of transformed zone 3−14602

dispersion power, rotatory *see optical rotation*

dispersion relations
  - *see also dispersion (wave); Kramers-Kronig relations; Mandelstam representation; N/D method; phonon dispersion relations; phonons; plasma instability; plasma waves; S-matrix theory*
  - acoustic waveguide, piezoelectrically active, normal modes, dispersion relations, numerical anal. 3−27290
  - anisotropic media, general 3−14041
  - asymptotic dispersion relation for six-particle amplitude 3−11165
  - biological cell membrane motion, hydrodynamic stability, of viscoelastic thin film, dispersion equation 3−39601
  - circularly polarised waves in streaming cold plasma, Doppler effect 3−27678
  - coupled electron hole-phonon system, collective motion 3−33655
  - elastic strip, variable thickness, longitudinal-shear normal modes 3−12388
  - elliptic waveguide, EM wave propag. 3−22635
  - EM wave in unbounded plasma, transformation to space-independent frame 3−51324
  - EM wave propag. and radiative transfer in heterogeneous random media 3−50588
  - exciton reflection from cryst. surface, auxiliary boundary conditions and dispersion eqn. 3−28280
  - ferromagnet, disordered, magnetoelastic interactions, continuous medium model *(Russian)* 3−23765
  - final-state interactions in eigenchannel formalism 3−40810
  - fluorophosphate glasses, partial dispersive coefficients, composition effects 3−34057
  - Fuda πN separable model for P wave interaction 3−54999
  - garnet thin films, multidimensional elastic waves excited by oscillating domain walls 3−18967
  - generalised functions, symm. theory 3−20693
  - ionosphere, kinetic dispersion relation for two-stream instability rel. to auroral radar expts. interpretation 3−48763
  - isothermal batch crystalliser pulse response analysis for growth rate and dispersion estimation 3−33166
  - laminar flow, longitudinal-dispersion calc. by statistical anal. of mol. motions 3−32709
  - leaky surface Rayleigh waves on flat and corrugated surfaces 3−47205
  - magneto-thermo-elastic plane waves in rotating media 3−27423
  - magnetoacoustic surface waves, in mag. structured atmosphere, long wave dispersion relations 3−42405
  - magnon dispersion in cone phase, exchange interaction 3−52433
  - metal corrugated surface, plasmons, dispersion relations 3−23300
  - nonlinear ion-acoustic waves, dispersion props. *(Russian)* 3−42410
  - normal Fermi liquids, dispersion and damping 3−33533
  - nuclear collective coordinates, damped vibrations, RPA dispersion relation 3−16719

dispersion relations continued
  - nuclear matter, π and Δ propagation, self-consistency and quasi-particle approx. 3−31320
  - periodic surface, SAW theory *(Russian)* 3−18545
  - piezoelectric thin film-half space system, SAW dispersion relations 3−13612
  - piezoelectric waveguide convolver, linear and nonlinear anal. 3−56402
  - pion Compton effect, sum rule estimation of pion polarizabilities from dispersion relations 3−26230
  - pion radiative scattering in nuclear Coulomb fields, sum rule estimation of pion polarizabilities from dispersion relations 3−26230
  - plasma surface waves, inhomogeneous semibound plasma, dispersion equations *(Russian)* 3−37633
  - proton Compton scatt. dispersion theory, optimal inequalities for subtraction functions 3−54915
  - resonator, open, EM field anal. for TEM_{00q} oscillations *(Russian)* 3−1522
  - scattering amplitudes of quarks with nonvacuum exchange in t-channel, double logarithmic asymptotes *(Russian)* 3−596
  - semiconductors, highly excited, relaxation processes, equilib. state and dispersion mechanisms *(Spanish)* 3−13693
  - semiconductors, inhomogeneous, plasma waves, dispersion relations and Landau damping, stochastic theory methods 3−43219
  - sine-Gordon eqn., dispersion eqns. and quasi-periodic solns. 3−517
  - smectic-A liquid crystals, continuum theory 3−51488
  - solid solution, irradiated, long-range periodic decomposition 3−38077
  - space translations matrix representations of Schrodinger eqn. for one dimens. periodic pot. 3−35802
  - spatial dispersion of elec. cond. influence on skin effect *(Russian)* 3−43220
  - thin film, viscoelastic, hydrodynamic stability, linear, dispersion equation 3−38270
  - thin film overlayers, far IR surface plasmon attenuation, dispersion relations 3−28290
  - turbulent medium, low freq. sound attenuation 3−27295
  - viscous thin films, linear hydrodynamics and dispersion relations 3−57178
  - Vlasov plasma, theory of ponderomotive forces 3−22638
  - XY model, two-dimensional, variational estimates for mass gap 3−36159
  - zero-helicity gravitational waves in relativistic expanding medium, dispersion relations 3−5459
  - $\eta\rightarrow\mu^+\mu^-$, branching ratio study 3−21122
  - $\gamma\gamma\rightarrow\pi\pi$, sum rule estimation of pion polarizabilities from dispersion relations 3−26230
  - $\gamma n\rightarrow\pi^-p$, CM energy up to 2.5 GeV, single-pion photoproduction anal. 3−31221
  - $\gamma p\rightarrow\pi^+n(\pi^0p)$, CM energy up to 2.5 GeV, single-pion photoproduction anal. 3−31221
  - $\Lambda\rightarrow N\pi$, nonleptonic decay, final-state interaction from current algebra and PCAC 3−40899
  - $\pi^0\rightarrow e^+e^-$, branching ratio study 3−21122
  - πN, sigma term determ. using hyperbolic dispersion relations in (ν^2,t) plane 3−11200
  - $AgGaS_2$, mixed mode exciton polaritons, two-photon absorption spectra study 3−38321
  - $Ca_{70}Mg_{30}$ metallic glass, atomic struct. and vibr. dynamics 3−42521
  - Cs_2GeF_6, optical props. 3−57871
  - Cs_2SiF_6, optical props. 3−57871
  - FeF_2, AFMR, determ. of mag. polaritons group velocity 3−57788
  - $FeTiO_3$, coexistence of Ising- and XY-like magnons 3−52437
  - $^2H(\gamma,x)$, photoabsorption, deuteron elec. polarisability 3−55021
  - ^3He, superfluid, B-phase, high freq. mode dispersion relations 3−13574
  - InP(A_3), relaxed (110) surface states and resonances 3−23452
  - InSb, relaxed (110) surface states and resonances 3−23452
  - $LiNbO_3$ with Al guide, piezoelectric waveguide convolver, linear and nonlinear anal. 3−56402
  - Na_2GeF_6, optical props. 3−57871
  - Rb_2GeF_6, optical props. 3−57871
  - $RbNiF_3$, magnon spectra calcs. *(Chinese)* 3−43357
  - Rb_2SiF_6, optical props. 3−57871
  - Si (100)-(2×1), surface states by asymmetric dimer model 3−33775

dispersions *see disperse systems*

dispersoids *see disperse systems*

displacement measurement
  - bearing monitoring by fibre-optic displacement sensors 3−258
  - cantilever-type displacement sensor using diffused silicon strain gauges 3−282
  - clip gauge design 3−40590
  - contactless contour tracking using sensing of dielec. props. *(German)* 3−30842
  - curved surface three-dimens. displacement meas., objective laser speckle method 3−49324
  - dual-beam holographic moire interferometry 3−5765
  - ferroelectric micro-displacement transducers *(Japanese)* 3−25849
  - fibre optics appl. to remote speckle metrology of surface displacement 3−22224
  - fluid displacement, unstable, in porous medium, visualisation 3−46676
  - full-field displacement and strain rosettes by moire interferometry 3−5766
  - holographic measurement of deforming direction 3−36970
  - interior displacement, appl. of white light speckle method 3−27457
  - laser interferometer employing a CO_2 laser, 10.6 μm operation, slow movement meas. appls. 3−25939
  - microwave interferometer for measurements of small displacements 3−35960
  - moire analysis of strain 3−27456
  - moire fringes, filtered, contrast rel. to diaphragm shape 3−26939
  - moire method, review 3−20823
  - non-contact linear displacement meas. using magnetic field detect. 3−259
  - optical-waveguide micro-displacement sensor 3−5777
  - photoacoustic microscopy, thermo- and photo-displacement detection 3−45224
  - pressure-to-frequency, based on emitter coupled timing multivibrator *(Chinese)* 3−40581
  - remote displacement analysis using multimode fiber-optic bundles 3−5767
  - remote surface deform. field, fibre optic meas. using numerically processed white light speckle 3−1778
  - rotating component, strain analysis using laser specklegram technique 3−22402
  - sensors for analogue and digital angle and displacement meas. *(German)* 3−40549
  - speckle method, separation of 3-D displacement components 3−42206
  - speckle shear interferometry using split lens, slope data determ. 3−5848

displacement measurement continued
transducer, fast response, transient deflections meas. appl. 3-49344
transducer, magnetoresistor, temp. error compensation with temp. depend. elements in core 3-40587
transducer, pulse-time conversion 3-40588
transducers for acceleration, vibration and shock *(French)* 3-16349
US time delays for linear displacement meas., appl. to mech. precision testing 3-49327
US vibrations, optical probing for detecting surface displacement profile 3-261
vector displacement meas. using microcomputer based real-time holographic interferometry 3-56157
displacive transformations
see also martensitic transformations; polymorphic transformations; reverse martensitic transformations; soft modes
bis(n-propylammonium)tetrachloromanganate, low temp. incommensurately modulated phases, elastic neutron scatt. study 3-13438
coupled softening phonon modes, mean field theory 3-23008
domain nucleation in displacive transition, cryst. struct. distortions 3-13441
elastic incommensurate transitions, Landau theory 3-33420
ferroelectric, first order transition theory, calc. of elastic and electrostatic energies of inclusion 3-38024
ferroelectric transitions, soft modes neutron and X-ray diffraction study 3-8783
incommensurate structures, neutron scatt. studies 3-51738
IV-VI semiconductors, permittivity behaviour at displacive phase transitions 3-3633
lattice stability and soft modes 3-33387
malononitrile, re-entrant phase transitions, sp. ht. capacity meas. 3-42766
multicritical phenomena in structural phase transitions 3-23013
N-nitrodimethylamine, displacive phase transition, neutron inelastic scatt. studies 3-57053
one-dimensional kink-phonon gas, dynamic props., projection operator anal. *(Chinese)* 3-18422
piezoelectric, first order transition theory, calc. of elastic and electrostatic energies of inclusion 3-38024
propagation vectors, similarity operators and displacive structures *(French)* 3-22814
quadrupole moment, macroscopic, temp. depend. near displacive phase transition point 3-2785
soft mode damping function near phase transition points due to acoustic phonon interactions 3-47075
static and dynamic dipole interactions in displacive transformations 3-28796
TCNQ salts, alkali-TCNQ, lattice instability and spin-Peierls phase transition 3-23007
p-terphenyl, displacive phase transition, fluoresc. and excitation spectra study 3-19177
transition temperature of displacive systems with strong cryst. defects 3-38026
$CsCaCl_3:Gd^{3+}$, paramagnetic resonance and displacive transitions 3-18987
HfS_2, ^{181}Ta nucl.-quadrupole freq. doubling, TDPAC study 3-8746
Hg_2Cl_2, periodic spatially inhomogeneous state near phase transition, optical study 3-2787
$K_{1-x}Cs_xSc(MoO_4)_2$-$K_{1-x}Cs_xSc(WO_4)_2$, phonon spectra and displacive phase transitions, permittivity meas. 3-28075
$KMnF_3$, lattice dynamics, lattice instabilities, and phase transitions 3-13372
Mo (001), surface electron states driving phase transitions 3-28408
NH_4Br, polycryst., struct. phase transitions, nucl. spin relax. times meas. 3-57808
$SbS_{0.7}Se_{0.3}I$, ferroelec. phase transition, MM reson. dielec. dispersion 3-57864
$ThBr_4:Pa^{4+}$ crysts., optical spectrosc. and EPR obs. 3-57959
$ThCl_4:Pa^{4+}$ 3-57959
βIII-Ti-Mo-Zr-Sn, decomp. 3-19338
$V_2O_3:Cr$, polycryst., phase transform. triggered by external loading 3-38048
W (001), surface electron states driving phase transitions 3-28408
display devices
see also gas-discharge displays; liquid crystal displays
automobile flat screen display *(French)* 3-45131
electrochromic displays, review of present situation *(French)* 3-45130
electroluminescent thin film displays mechanism, theory and expts. review 3-24020
flat screen displays, conf., Plestin-les-Greves, France (April 1982) *(French)* 3-44895
load cell system for foot press. anal. 3-9765
medical image display, contrast transmission 3-24866
SiO/ZnF_2:Mn/SiO electroluminescent display films, separation of hot electron generation and luminescent excitation 3-43634
display equipment *see display instrumentation*
display instrumentation
see also cathode-ray tube displays; display devices; screens (display)
autostereoscopic viewing device for tomographic scans 3-58775
avionic, diffractive optical elements appl. 3-6937
balance platform centre of press. data, display method 3-24901
color imaging of a passive microwave sensor output for marine oil surveillance *(Japanese)* 3-39567
contour diagram display of physical fields by analog/digital hybrid electronics 3-287
diagnostic US, computer anal. and diplay modes 3-15172
digital waveform memorizer, signal sampling and storage, operation, product trends and appls. 3-35982
electro-optic shutter stereoscopic displays using PLZT ceramics, advances 3-7150
electroluminescent display visual stimulator—a new method for visual evoked potential studies 3-58850
fibre pulse echo tester, MW97A, using time domain reflectometer 3-46359
holographic display of 3D digital data 3-26979
LED peak VU meter 3-7360
multilayer 3-D display by multidirectional beam splitter 3-6887
NMR zeugmatographic images, three-dimens. display 3-15183
noise meter, HP 8970A, microprocessor control, operation and appls. *(German)* 3-45166
pH meter, $3^1/_2$ digit LCD, 0.01 resolution 3-48104
psychophysics appl. to display evaluation 3-24734
display instrumentation continued
PWRs, 1300 MW, in France, improved control room design 3-31648
speech display computer for deaf people 3-9786
tactile speech displays, artificial, quantitative methods for comparative evaluation 3-15288
track photography in 8 m streamer chamber, information collecting system 3-1155
US mammographic viewer playout system, rapid review of multiple images 3-34919
vocal tract shape anal. for deaf children, visual aid 3-9620
display instruments *see display instrumentation*
display systems *see display instrumentation*
disruptive voltage *see electric breakdown*
dissemination of information *see information dissemination*
dissipation (heat) *see cooling*
dissociation
see also electrolytic dissociation; heat of dissociation; ionisation; molecular dissociation; molecular dissociation energies; photodissociation
cadmium oxalate trihydrate, gel grown, elec. cond. and dehydration 3-33720
chemical dissociation-recombination equilibria anomalies near crit. points 3-34645
coal, natural, nonisothermal degradation, mathematical modelling 3-44052
dissociating materials, destruction by intense energy flux 3-53380
gas, dissoc. and vibr. relax., heat transfer in turbulent channel flow with rough walls 3-51090
high polymers, nonisothermal degradation, mathematical modelling 3-44052
polysilsesquioxanes, mech. degradation, low mol. wt. cpds. form. *(Russian)* 3-9318
polystyrene, molecular charm scission during crazing, gel permeation chromatography 3-47949
protein solution, dynamics and time-averaged chem. pot., role in oligomer assoc. 3-9544
shock front, electronic relaxation mechanism 3-34626
solutions, energy diffusion-controlled-reactions 3-4263
transition metal silicide powder reaction with liq. corrosive media, chem. props. and decomp. 3-24381
trimethylaluminium thin film, decomposition induced by electron, ion and photon beams 3-4285
Ag electrode in aqueous Cl^- electrolytes, surface enhanced Raman scatt., evidence for adatoms, complex dissociation 3-38829
BCl_3 cryst., X-irrad., BCl_2 form., struct. investig. 3-36781
$BiCl_3$, incipient form. and decomp. during Cl_2 adsorption on Bi (0001) 3-18563
C, pyrolytic, form. on Mo substrate, DC elec. field effects, gas chromatography 3-34647
CS_2, liq., shock-induced changes in visible and UV spectra 3-47671
$CaSO_4.2H_2O$, selenite, cleavage faces dehydration, expt. study 3-14843
$Cd_3(P_3O_9)_2.14H_2O$, decondensation of $P_3O_9{}^{3-}$ cycles, IR vibr. spectroscopy study *(French)* 3-43525
$Cr(CO)_6$ thin film, decomposition induced by electron, ion and photon beams 3-4285
Fe oxides, plasma-H reduction kinetics *(Russian)* 3-39364
$Hg_{1-\delta}AsF_6$, differential thermal anal. 3-48103
In-Sb-Bi, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3-33603
Mg_2Ni-H system, dehydriding reaction kinetics 3-48044
NO_2, chemically reactive turbulent pipe flow, heat and mass transfer 3-37586
N_2O_4, dissociative flow, free convection heat transfer study 3-37585
Pd film, on SiO_2, adsorption and dissociation of O_2 and H_2, surface and interface pot. meas. 3-38202
dissolution *see dissolving*
dissolving
see also solubility; solutions; solvation
alkali aluminosilicate glasses, leaching, effect of Al_2O_3 additions 3-2822
borosilicate glass, ^{241}Am and ^{239}Pu leaching, gamma-ray effects 3-41171
α-brass, corrosion rate in aerated or oxygenated H_2SO_4 3-19445
crystal imperfections, influence on dissolution phenomena 3-38082
glass 3-13462
D-mannose, storage and annealing effects on lyoluminescence and ESR 3-38916
metal coatings, residual stress diagram plotting during anodic dissolution using length change method 3-47791
polyethylene fibres, shish-kebab, lamellar overgrowth, small angle X-ray scatt. and TEM study 3-22806
quartz grains, mechanically processed, dislocation in $NaOH_2$ X-ray and electron microscope studies 3-38073
radioactive waste, disposal material, leaching, gamma radiolysis effects 3-41166
solid phase dissolution by fluid flow in cylindrical pipeline 3-37573
spherical particle dissolution in liq., moving boundary problem soln. 3-13461
steel, bearing, cementite dissolution during austenisation, hydroextrusion effects *(Russian)* 3-24271
steel, low-alloy, anodic deposits prep. without sampling for X-ray phase analysis 3-58284
steel, mild, dissolution inhibition by halide ions in H_2SO_4 3-39285
SYNROC, leaching, $^4He^+$ and $^{84}Kr^+$ beam effects 3-41167
transition metals and alloys, electrodeposited, corrosion-electrochem. behaviour, effect of non-metallic inclusions *(Russian)* 3-4189
Zircaloy cladding, ThO_2 dissolution, in HNO_3/HF soln., Zr conc. effect 3-41200
Al-Mn alloys, intergranular corrosion mechanism *(Japanese)* 3-9235
Al-Zn-Mg (5, 1 wt.%), GP zones, reversion, calorimetry and thermal anal. study 3-29089
As-S films, vitreous chalcogenide semicond., photostimulated dissolution 3-8379
As_2S_3:Ag amorphous film, Ag photodoping sensitivity, optical and elec. resist. study 3-46851
$Bi_{12}GeO_{20}$, dissolution in HNO_3-acetic acid mixture, kinetics and mechanism 3-57093
coating, residual stress diagrams during electrodeposition and anodic dissolution 3-47792
Cu solid cylinder dissolving in molten Pb-Sn alloys under dynamic conditions 3-2810

dissolving continued
$CuFeS_2$ crystal, electrochemically reacting, thin secondary product films, electron diffr. studies 3−4295
Fe, corrosion behaviour, H evolution reaction in nonaqueous formic acid 3−19447
Fe-Si(Ni)(Cu)(Mn)(C) alloys, dissolution in molten Al 3−29222
Fe-V alloy formation and ordering energies calc. using electron density functional method 3−23049
Fe_3O_4, dissolving and crevice studies with chelant solns., rel. to reactor cooling loop 3−41132
FeS_2 crystal, electrochemically reacting, thin secondary product films, electron diffr. studies 3−4295
n-GaAs with electrons and holes, kinetic control of anodic dark and photodissolution 3−52242
n-GaP with electrons and holes, kinetic control of anodic dark and photodissolution 3−52242
In_2O_3-ZrO_2 solid soln., heat treatment, elec. resist. and struct. 3−58136
K_2O-Al_2O_3-SiO_2 glasses, leaching and dealuminising in HCl 3−2821
MgO cryst., etching, dissolution mechanism 3−46935
MgO, dissolution kinetics in aqueous acidic salt solns., dislocation etching kinetics and pit morphology 3−27942
MnS inclusions in steel, coarsening and dissoln. model 3−33453
Na_2O-SiO_2 glasses, mech. props., effect of dissolved water 3−9159
Na_2O-ZnO-B_2O_3-SiO_2 glass, surface layer form. during aq. attack 3−43975
Ni, anodic dissolution, pit and flow streak formation obs. 3−9226
Ni coating, residual stress diagrams during electrodeposition and anodic dissolution 3−47792
Ni-Cr-Fe, Alloy 600, electrochem. impedance diagrams at active-passive transition pot. *(Japanese)* 3−29209
Si wafer, Czochralski grown, multistep repeated annealing, O and induced defect behaviour 3−4060
SiO_2 particles in Cu, coarsening and dissoln. model 3−33453
Ti-Ni(Co), self-propagating high temp. synthesis products, structure and phase composition 3−9018
V-Ti alloy formation and ordering energies calc. using electron density functional method 3−23049
Zn, cryogenic comminution, effect on acid dissoln. 3−24183
ZrF_4-BaF_2-AlF_3-LaF_3-LiF optical glass, aqueous corrosion, IR and SEM study 3−1731

distance measurement
3C 58, Crab-like supernova remnant, distance 3−5400
R Canis Majoris, short period Algol-type binary, distance, space motions and absolute parameters 3−48945
coherent detection telemetry with CW CO_2 laser *(French)* 3−56269
digital polar correlation meas. system for distance and flow transducers *(Chinese)* 3−45124
electro-optical distance meters, geodetic appl. *(Czech)* 3−36073
electronic distance measurement, instruments, data anal., digital cartography, mining appls. 3−10798
extragalactic distance scale, appl. of H I 21 cm line width of galaxies as distance indicators 3−44835
galaxies, use of inner ring structs. as distance indicators and appl. to Hercules Supercluster and Hubble constant 3−54500
Hyades, cluster main sequence and distance modulus from photometric obs. 3−44808
IC 1805, young open cluster, distance modulus from photoelectric UBV photometry 3−59414
inductive sensor distance meter, using diodes, op amps 3−284
interferometric straightness measuring system, ZSI-S interferometer design and appl. *(German)* 3−40550
laser metrology system with microprocessor calibration *(French)* 3−30836
lasers in distance meas., microprocessor compensation of amplitude-dependent phase nonlinearity 3−37109
lidar meas. in nonstationary inhomogeneous ground-level layer of atmosphere, refractive index determ. 3−48704
M15, globular cluster, distance modulus from double-mode RR Lyrae variables 3−54370
M31 (NGC 224), distance from apparent size distrib. of dark clouds 3−35716
NGC 224, NGC 2841, NGC 7331, Sb-type galaxies, distances from apparent size distrib. of dark clouds 3−35716
NGC 654, young open cluster, distance modulus and age from UBV photometry 3−48968
optical accurate range gating technique with mode locked dye laser 3−7220
phototachymetric measurement accuracy, ambient temp. effect 3−30096
piezoelectric transducer, distance and wind vel. meas. appls. 3−49352
Praesepe (NGC 2632), distance modulus from MK spectral classification on lower main sequence 3−59412
satellite laser range-finder at Metsahovi Space Geodetic Station of Finnish Geodetic Institute 3−35409
sea level variation meas. and reflection coeff. phase determ., interferometric technique implementation 3−4989
stellar parallaxes and proper motions, determs. from asterometric obs. 3−48887
Stock 14, open cluster, distance and age from UBV photometry 3−10410
target-stopper separation monitoring in recoil-distance lifetime meas. 3−17187
temperature compensated ultrasonic sensor operating in air for distance and proximity measurements 3−20835
Tombaugh 1, open cluster, distance and age rel. to membership of Cepheid variable XZ Canis Majoris 3−59413
ultrasonic device, measuring time between transmitted and received pulses 3−5768
ultrasonic measurements, using 34.3 kHz transmitter *(German)* 3−20824
ultrasonic transmitter/receiver, used for measurement, digital readout 3−20822
white dwarfs, known and suspected, parallaxes and relative proper motions from astrometric studies 3−48946

distillation
see also isotope separation
desalination productivity of distillation vs. reverse osmosis using solar pond energy 3−39520
isotope separation, distillation method, mass exchange 3−41698
solar desalination unit low cost design and performance 3−34675
tritiated water, distillation, mathematical simulation 3−964
MoO_2Cl_2, distillation and reduction for high-purity Mo prep. 3−39069

distortion, electric *see electric distortion*
distortion measurement, electric *see electric distortion measurement*
distortive transformations *see solid-state phase transformations*
distributed Bragg reflector lasers
dye lasers with distributed negative feedback and reflection based on cholesteric liquid crystals *(Russian)* 3−37079
LPE growth integration of lasers with DBR 3−24159
distributed control
CERN SPS accelerator distributed control system 3−6471
fuel cell test facility 3−29381
Rossendorf tandem accelerator EGP 10-1, automated energy variation using process computer system with distributed intelligence *(German)* 3−41346
distributed feedback lasers
diode laser based 1.5 μm transmission expt. 3−56346
diode laser with gain-induced waveguiding mode coupling anal. using coupled-wave formalism 3−32342
dye activated PMMA element, dynamic DFB 3−56192
dye DFB laser, pulse duration under single pulse conditions 3−27038
dye DFB laser, single-mode generation with 0.01 cm^{-1} output line width 3−37018
dye DFB laser tunable in broad spectral range, picosecond pulse prod. 3−27039
dye lasers with distributed negative feedback and reflection based on cholesteric liquid crystals *(Russian)* 3−37079
fluoromethane, helical DFB gas laser 3−27019
free electron laser, distributed feedback with corrugated resonator 3−12163
gas lasers, struct., waveguiding book contrib. 3−1652
higher-order DFB and light generation 3−27035
stimulated Raman laser, threshold and spectral characts. 3−17568
travelling laser produced by sound pulse in active medium 3−17475
GaInAsP/InP DFB 1.3 μm lasers, room-temp. CW operation 3−6967
GaInAsP-InP 1.3 μm DFB lasers, InP surface corrugations preserved from thermal deformation during LPE 3−50673
GaInAsP-InP 1.5 μm DFB BH laser fabrication, single-longit. mode operation 3−17528
InGaAsP distributed feedback lasers, hybrid LPE/MOCVD growth 3−32380
distributed parameter systems
boundary heating of solids, performance index optical control 3−50908
neutron flux control system design using inverse Nyquist array method 3−49998
nuclear reactor, nonlinear coupled distributed parameter systems, bilinear control problem 3−50014
one dimensional heat conduction system parameter identification method *(Japanese)* 3−7382
solar testing system, optimal control system 3−9405
distributed processing
see also computer networks; multiprocessing systems
laboratory instrumentation and microcomputer systems for anal. chem. 3−14910
nuclear material storage, computer network for monitoring 3−31518
nuclear power plant full scope training simulator, software development, maintenance and portability 3−55255
nuclear power plants, computerised dosimetry monitoring and management system 3−55228
Rossendorf tandem accelerator EGP 10-1, automated energy variation using process computer system with distributed intelligence *(German)* 3−41346
distribution networks
acoustic protection of the environment for transport and distribution networks *(French)* 3−56380
distributed photovoltaic electric power systems, assessment 3−58507
distributed solar power systems, technical and economic impacts 3−58482
Eurodif uranium enrichment plant energy supply and distribution *(French)* 3−49966
distributions, statistical *see statistical analysis; statistics*
district heating
geothermal heating, variables affecting viability 3−53483
geothermal power utilisation *(French)* 3−44094
industrial waste heat for district heating 3−48125
Malmo district heating system using 20 MW steam driven heat pump *(Hungarian)* 3−48161
nuclear power as commercial heat source in Germany *(German)* 3−39451
solar total energy system expt. facility, system performance *(Japanese)* 3−34673
status report on district heat supply in German Federal Republic 3−14935
Swedish district heating systems' utilisation of heat pumps *(Hungarian)* 3−48160
Swedish district heating using heat pump installations 3−14990
town heating by combination of district heating scheme and heat recovery from river water by heat pumps *(German)* 3−34713
warm water supplying stations burning solid fuels *(Hungarian)* 3−48117
waste heat district heating system with seasonal variations 3−24556
divertors
mechanical divertors in Macrotors, particle accumulation and removal 3−12829
TO-2 Tokamak with two toroidal divertors 3−7812
dividers, voltage *see voltage dividers*
DLTS *see deep level transient spectroscopy*
DNA
actinomycin D complexed to DNA, changes in Y-peak on γ-irrad., spectrophotometric obs. 3−9553
aqueous solns., thermal reversibility, dielec. and elec. cond. meas. 3−53633
ataxia-telangiectasia and normal cells, effect of hypertonicity and X-radiation on DNA synthesis 3−34910
B-form, electostatic field investig. 3−48229
bacteria, DNA damage repair and cell viability after ionising radiation and hyperthermia treatment *(Russian)* 3−58608
bacterial cells, DNA-membrane interactions rel. to γ-irrad. *(Russian)* 3−58731
band structure and transport properties, average lattice method *(Rumanian)* 3−13702
biostimulation of HeLa cells by low-intensity visible light 3−39695
biosynthesis and content in rat spleen, ^{239}Pu and external γ-irrad. combined effect *(Russian)* 3−19664

- **DNA** continued
  - catabolite activator protein binding to supercoiled DNA, model 3—9549
  - chromatin, rat thymus, post-irrad. degradation, low mol. wt. DNA fraction *(Russian)* 3—19663
  - circular, X-ray scatt. from superhelix, rel. to struct. 3—58599
  - compactisation in polymer soln. 3—24664
  - damage induced by ionising radiations with different phys. characts. *(Russian)* 3—58732
  - enhanced survival during confluent holding recovery in UV-irrad. human and mouse cells 3—34908
  - ESR of free radicals in UV-irrad. aq. solns., 77K *(Russian)* 3—34774
  - eucaryotic living cells, UV reson. Raman spectra of nucleic acids, in vivo study 3—48265
  - Euglena cells, light- and dark-grown, γ-irrad.-induced single strand DNA breaks and their repair 3—29654
  - flexibility, coupled backbone torsion angles and base-pair openings 3—24668
  - gamma irradiation, DNA and chromosome repair kinetics in CHO cells 3—34909
  - guanine-uracil pairs, possible conformations of regions of nucleic acids 3—48234
  - heat capacity, low-temp., different degrees of hydration, conform. state depend. 3—34781
  - HeLa cells, biological action of low-intensity 633 nm light as function of coherence, dose, wavelength and irrad. regime 3—58727
  - heterotransplanted human colonic carcinoma, X-irrad. effects before and after cellular DNA content change 3—48336
  - interaction with organic dyes, spectrophotometric study 3—44191
  - intercalation of acridines, thermodynamics and optical absorption spectroscopy 3—19657
  - irradiated animal tissues, anal. of DNA vulnerability to damage, repair and degradation *(Russian)* 3—4549
  - isodisperse, improved technique for strand break anal. 3—29804
  - labelling of DNA of control and irrad. rat tissues after ^{3}H-DNA, ^{3}H-DNP administration *(Russian)* 3—19665
  - large polymer in soln. with incompatible polymer, conc. dependent collapse 3—56107
  - linear polymer, energy states spectrum determ. based on adsorpt. isotherms anal., DNA appl. 3—24660
  - liquid crystal state of DNA in polyethylene glycol water-salt solns. 3—34766
  - liver cells of γ-irrad. senescent mice, unscheduled DNA synthesis and elimination of DNA damage 3—9674
  - liver nuclei, native chromatin DNA, quaternary and quinternary structs., differential scanning calorimetry obs. 3—48269
  - mammalian cell colonies, living, direct screening for DNA repair deficient mutants identification 3—29805
  - mammalian cell DNA, replication forks blocking and pyrimidine dimers, UV irrad., autoradiographic evidence 3—53648
  - mammalian cells exposed to ionising radiation, models for DNA damage formation repair 3—19779
  - meristem cells, asynchronously dividing, of pea seedlings, γ-ray induced unscheduled DNA synthesis 3—44297
  - microwave absorption characts. of DNA and other biomols. in soln., optical method for investigating 3—58874
  - molecular motions of supercoiled and circular forms, ^{31}P NMR study 3—53619
  - molecule, strand separation, degrees of freedom 3—56111
  - motions in nucleosome core particle, time-resolved triplet state anisotropy meas. 3—19661
  - native fluoresc. at room temp. 3—15040
  - nucleosome core complex, HMG 14, neutron scatt. obs. and modelling 3—9548
  - post-irradiation defects in newly synthesised DNA, neutrons and electrons compared and the effect of misonidazole 3—29616
  - probability functions and length, random flight theory 3—53632
  - prokaryotes and eukaryotes, radiosensitivity to ionizing radiation, DNA repair *(Russian)* 3—34893
  - radiation effects, review 3—54563
  - radiation induced release in mammalian cells, superstructure units, sedimentation assay 3—48339
  - radioisotopes incorporated in cells, transmutation effect rel. to irrad. effect 3—29658
  - Raman-active torsional vibrations in DNA molecule 3—41711
  - repair deficient cells identification with multiwire proportional chamber 3—19776
  - replication in HeLa cells, effects of hyperthermia 3—44217
  - replication intermediates, X-irrad. effects in replication initiation inhibition 3—29651
  - retinal photoreceptor cells, effects of heavy ions, anal. of DNA damage, rabbit obs. 3—53724
  - RNA-DNA hybrid helix joined to double helical DNA, mol. struct. soln. by X-ray anal. 3—4464
  - satellite DNAs of Drosophila virilis, UV absorpt. and circ. dichroism, polarisability calcs. 3—29500
  - soliton formation and propagation, nonlinear elec. field effects 3—29617
  - solution, X-ray scatt. curves, calc. using improved cube method 3—37732
  - solvation, quantum chem. calc. and computer simulation 3—39572
  - sperm deoxyribonucleoprotein, sea urchin, progressively depleted of proteins, struct., hydrodynamic and opt. props. *(Russian)* 3—48240
  - structure probe, ^{125}I-labelled DNA ligand 3—58890
  - superhelical nuclear, nucleoid of rat thymocyte subpopulation, radiosensitivity determ. by viscosimetry *(Russian)* 3—19666
  - supramolecular, γ-irradiated, degradation, lipid composition, thin-layer chromatography *(Russian)* 3—34775
  - synthesis, hyperthermic inhibition in CHO cells, mol. studies 3—29492
  - synthesis and postirrad. degradation in micrococcus radiodurans $R_{11}5$, comparative studies using UV and γ-rays 3—9676
  - synthesis in X-irradiated mouse cells, replicon initiation, inhibition and resumption 3—48338
  - thymocytes, depressed DNaseI inhibitor and delayed DNA damage after X-irrad. 3—19774
  - tumor cells, proliferating and resting, response to repetitive pulsed UV laser radiation 3—34888
  - UV radiation effect, high-intensity, photochem. transforms., cell inactivation 3—34905
  - wavelength resolved luminescence lifetime meas. 3—53639
  - X-ray crystallographic studies of nucleic acids and nucleic acid-drug complexes 3—58601
  - xeroderma pigmentosum cells, detect. of DNA single-strand breaks during UV damage repair 3—44299
- **document retrieval** *see information retrieval*
- **documentation, program and system** *see program and system documentation*
- **domain boundaries**
  - *for boundaries between magnetic domains and electric domains see magnetic domain walls and electric domain walls respectively*
  - *see also antiphase boundaries*
  - betaine arsenate, ferroelasticity and ferroelec. props. 3—8778
  - graphite intercalation compounds, staging transition mechanism, role of domain walls 3—38061
  - graphite-Br intercalation cpd., $C_{28}Br_2$, commensurate-incommensurate transition, X-ray scatt. study 3—13435
  - intercalation compounds, Daumas-Herold domain walls, interf. phenomena 3—28112
  - polymorphic transitions, domain wall motion anal. 3—42560
  - shape memory alloys, martensitic domain boundaries, solitary wave model 3—34321
  - $(AsO_4)_2H_2(UO_2)_2.8H_2O$, troegerite, ferroelasticity in phase II 3—8121
  - Na_xTiO_2, order-disorder transition, Na^+ ion diffusion mechanism 3—18257
  - β-NbH_x (x=0.83, 0.91, 0.94), sound attenuation and elastic modulus dispersion 3—33360
  - $Pb_3(PO_4)_2$, ferroelastic transition, domain wall struct. *(French)* 3—38046
  - $ThNb_4O_{12}$, vacancy ordering and microdomain form. electron and X-ray diffr. study 3—13171
- **domains**
  - *see also antiphase domains; crystal microstructure; domain boundaries; electric domains; magnetic domains*
  - displacive transition, domain nucleation, cryst. struct. distortions 3—13441
  - ferroelasticity, transitions and related props., review 3—13317
  - hexapentoxytriphenylene, discotic liq. cryst., flexoelec. distortion of developable domains 3—46840
  - mosaic struct. determ. by neutron diffr. and X-ray topography 3—7871
  - polyacrylate polybutadiene block copolymer films, struct. and prep. *(Russian)* 3—39089
  - polyurethane oriented film, domain morphology, TEM obs. 3—51504
  - rare earth sesquioxides, domain form. during hexagonal-monoclinic transform. *(French)* 3—18444
  - Rochelle salt crystal, refr. and refl. of light at ferroelastic domain walls 3—28806
  - smectic-A liq. crysts., defect structs., spheric domains 3—13099
  - two-dimensional domain kinetics, temp. depend., Monte Carlo simulation 3—33567
  - $(AsO_4)_2H_2(UO_2)_2.8H_2O$, troegerite, ferroelasticity in phase II 3—8121
  - $(Au,Cu)_3Zn$, domain struct., periodic lattice twinning 3—2828
  - Au_2Mn, shear transform. obs., domain struct. 3—39139
  - $BiVO_4$, single cryst., ferroelastic domain struct. 3—38095
  - $Ca_2LaFe_3O_8$, microdomain texture and O excess, TEM and electron diffr. anal. 3—42793
  - Cs intercalated graphite, nonhexagonal superlattice observation, STEM study 3—42586
  - Ga_2Te_3, liq., struct. inhomogeneity and valence fluctuations 3—13070
  - GeO_2 glass, microheterogeneity detection by small angle X-ray scatt. 3—33131
  - NiPt, deformed, ordering kinetics and struct. changes during annealing *(Russian)* 3—28091
  - $Pb_3(AsO_4)_2$, ferroelastic transitions and domain struct. 3—22961
  - SiO_2 glass, microheterogeneity detection by small angle X-ray scatt. 3—33131
  - $TaSe_2$ (2H), domains and dislocations in CDW state 3—22896
  - ZrO_2 monoclinic, high resolution electron microscopy, martensite transform. and domain struct. 3—39145
- **donor levels** *see impurity electron states*
- **doping, semiconductors** *see semiconductor doping*
- **doping profiles**
  - atomic mixing of implant atoms, in depth-depend. diffusion approx. 3—18332
  - buried layers, implantation profiles, MOS capacitance meas. 3—33286
  - III-V semiconductor, light sources, carrier lifetime meas., recomb. rate and doping level determ. 3—8505
  - III-V semiconductors, MBE growth *(Japanese)* 3—29003
  - ion implantation profile reconstruction, Pearson IV distrib. study 3—33290
  - light ion irradiation, radiation damage and imbedded atom profiles, computer simulation 3—51672
  - MOS structure, complete doping profile determ. using C-V characts. meas. 3—52269
  - n^+-n-n^+ structure, voltage-current characteristics in strong electric field 3—33786
  - optical fibre, index profile optimisation at N wavelengths 3—22217
  - p-n junction depth determ., by nondestructive time resolved EBIC technique 3—52238
  - polyacetylene, chemical and electrochemical isomerisation, in situ optical studies 3—19517
  - trans-polyacetylene, doping with O_2, kinetic study of interactions 3—2442
  - semiconductor, diffusion profiles alteration due to p-n junctions 3—13549
  - semiconductor processing, ion implantation appls. 3—27958
  - semiconductor superlattices, diffusion erosion, dopant conc. profile decay 3—38126
  - semiconductors, diffusion profile alteration due to p-n junction elec. field 3—23098
  - silicate glasses, N^+ ion implantation effects, microhardness and refr. index meas. 3—33133
  - SIMS applied to in-depth anal. of impurity profiles, review 3—27971
  - TGS:Fe^{3+} crystals, luminesc. and absorpt. investigation 3—8870
  - YAG:Nd laser rods, spectrophotometric anal. 3—16423
  - (Al,Ga)As, Mg diffusion profiles alteration due to p-n junctions 3—13549
  - (Al,Ga)As:Mg, diffusion across p-n junction during LPE growth 3—23098
  - Al, 2H implanted depth profiles, using (^{3}He,p) 3—55577
  - Al, ion implantation by MeV He^+ ions, uniform depth distrib. using absorber tilting 3—46978
  - Al:N, 700-800 keV ${}^{15}N_2{}^+$ implantation, AlN layers formed, charact. 3—2582
  - $Al_xGa_{1-x}As_{1-y}P_y$:Zn(Te), LPE growth on $GaAs_{0.61}P_{0.39}$ (100), impurity distribution 3—39050
  - As_2S_3:Ag amorphous film, Ag photodoping sensitivity, optical and elec. resist. study 3—46851
  - p-$BaTiO_3$, donor-doped, resist. profile meas. using liquid-metal-wetted four-point probe 3—23480
  - CdS_xSe_{1-x} electrodes, photoluminescence and electroluminescence, appl. to photoelectrochem. cells 3—34153

doping profiles continued
GaAlAs/GaAs DH lasers, Sn doped and undoped, MBE grown, p-n junction positioning study 3−41835
GaAs, impurity analysis with SIMS *(Japanese)* 3−48106
GaAs impurity and mobility profiling techniques 3−23395
GaAs:Cr, LEC grown, radiotracer determ. of Cr distrib. 3−13255
GaAs:Cr, semi-insulating, Cr conc. distribution determination by illumination induced cond. changes 3−51647
GaAs:Cr substrates, Cr conc. distrib., non-destructive determ. 3−33283
GaAs:He, ion implanted, depth distrib. and range parameters for He, SIMS study 3−13252
GaAs:Mg, carrier profile, correlation with Mg atomic profiles, SIMS and Hall effect study 3−3218
GaAs:Si, 1.4 eV Si-related emission, luminesc. characts. 3−43613
GaAs:Si^+, ion implanted, TEM damage studies and elec. profile meas. 3−47006
GaAs:Sn, MBE grown, surface segregation model for Sn profile, SIMS study 3−13663
GaAs:Te crystals impurity nonuniformity determ., by interference microscopy 3−46981
n-$Ga_{0.47}In_{0.53}As$, VPE growth and characterisation for microwave applications 3−19281
GaInAsP-InP, lattice-matched, dopant conc., photoluminesc. study 3−52827
GaP:N VPE layers, (111) oriented, N doping conc., lattice parameter meas. 3−8366
GaP:Te (2n), inhomogeneous distrib. of doping elements 3−8080
Ge:Ga, growth rate depend. of interface distrib. coeff. in Ge-Ga system 3−13144
Ge:Sb, Czochralski growth, uniform dopant distrib., Faraday effect study 3−2593
Ge/Si interfaces, depth profile and depth resolution evaluation, by KARMA technique 3−51965
InGaAsP-InP:Zn, Mg p^+-n abrupt heterojunction, LPE growth techniques 3−3971
InP:Cd, Cd diffusion profiles meas. with etching/Schottky contact method 3−23097
InP:Cd, Zn, diffusion and p-n junction form., Hall effect and EBIC study 3−18512
KCl:Pb, dopant distrib., SEM and energy dispersive X-ray anal. 3−42639
Nb, depth conc. profile of H 3−2595
Pd-Si:As interface, Pd_2Si formation, As redistribution, elec. study 3−47169
Si, depth distribution of donor impurities determ., by electrochemical method 3−46980
Si, dopant region depth-profiling with thermal-wave microscopy 3−13254
Si, doping inhomogeneities, electroreflectance study, effects on photovoltaic conversion 3−47622
Si, doping profile shaping by multiple-pulse laser processing 3−56925
Si, impurity analysis with SIMS *(Japanese)* 3−48106
Si, ion implantation and pulsed annealing, appl. to solar cell fabrication 3−27960
Si, ion implanted, solid phase epitaxial growth 3−8367
Si, laser and electron beam annealed, doping profile, characterisation by IR spectrophotometry 3−57939
Si, melted by laser pulses, non-equilib. dopants incorporation, review 3−51646
Si, monocrystalline, donor generation by halogen implantation 3−51642
Si polycrystalline laser-recrystallized Schottky diodes 3−57409
Si Schottky-barrier solar cell, Al-p-n diode struct., nonuniformly doped, anal. 3−53542
Si solar cells, EFG polycryst., ion implantation and laser annealing prep., SEM characts. 3−24584
Si solar cells, self-annealed ion implanted, fabrication and props. 3−14938
Si solar cells with highly-doped substrates, recombination mechanisms 3−39489
Si: As(Sb)(Bi), ion implanted, doping profiles meas.. by 200 keV α-particle backscattering 3−24077
Si:^{75}As, implanted, isothermal annealing study 3−13253
Si:As CVD film, reduced press. deposited, diffusion source for Si-SiO_2 interface heavy doping 3−51852
Si:As polycrystalline films, ion implanted, regrowth due to oxidation drive-in 3−23207
Si:Au, impurity profile meas. *(Chinese)* 3−8078
Si:Be, diffusion coeff., and solid solubility, elec. cond. study 3−2883
Si:Ga, ion implanted, dopant distrib., elec. activity and damage annealing 3−27970
Si:Ge, ion implanted, Ge ion distrib., X-ray microanalysis 3−8087
Si:Ge, ion implanted X-ray microanalysis determ. of integrated dose 3−8086
a-Si:H film, H conc. determ. by coincidence meas. of elastically scatt. 100 MeV $^3He^{2+}$ ions and recoil protons 3−2411
Si:He, ion implanted, depth distrib. and range parameters for He, SIMS study 3−13252
Si:In (Tl) thin films, ion implanted, ionisation energy, photocond. study 3−28378
Si:In(Sb)(Ga)(Bi), ion implanted, morphological instability and cell form. during pulsed laser annealing 3−8093
Si:K, doped in low energy at beams, K conc. depth profiles *(Japanese)* 3−18330
Si:P, implant profile computation with depth-dependence diffusion 3−18331
p-Si:P, implanted profile, nondestructive transverse acoustoelec. voltage vs. voltage technique 3−42642
Si:P, polycrystalline in $SiTaSi_2$ interface, P diffusion, SIMS study 3−51853
Si:P, pulse electron beam annealing 3−56985
Si:P MOS structs., trap creation in channel oxides due to ion penetration 3−13910
Si:P(As), polycrystalline film, ion implanted, pulsed incoherent light annealing 3−22933
Si:P(B)(As), doping profiles determ. by electrical meas. and anodic stripping, automatic apparatus 3−49403
Si:Sb(As) epitaxial layers, autodoping study 3−42638
Si/SiO_2 substrate, B implantation, ion range profiles, computer calc. 3−28020
Si-Wsi_2 bilayers, behaviour of B and As impurities 3−23103
SiO_2 films, form. by O ion implantation, stoichiometry elec. props. 3−27964

doping profiles continued
SiO_2:B films, dopant conc.-depth SIMS study 3−27967
$V_2O_5:Fe^{3+}(Co^{3+})(Ni^{2+})$, doping effects on texture change, N_2 adsorpt. meas. 3−56918

Doppler broadening *see Doppler effect*

Doppler effect
see also atomic spectra; red shift; spectral line breadth
Arctic ice-movements, satellite monitoring 3−20027
atherosclerosis, quantitative evaluation using Doppler US 3−9682
atmosphere O_2 lines used as astronomical wavelength references, comparison of meas. and theory for line shifts 3−15617
atomic fluorescence, momentum cumulation effects *(Russian)* 3−11738
atomic laser spectroscopy with the thermionic diode 3−5864
auroral radar echoes, reduction of inherent noise in double-pulse Doppler technique 3−48761
benzene, Doppler free two-photon laser spectroscopy study 3−21842
blackbody radiation, Doppler demon 3−35806
blood flow, coherent structure, Doppler US obs. 3−48350
blood flow, Doppler US signals real-time spectral anal. 3−48348
blood flow, instantaneous volumetric, rel. to CW Doppler US recordings, theoretical model 3−29681
blood flow, instantaneous volumetric, rel. to CW Doppler US recordings, canine expts. 3−29682
blood flow, instantaneous volumetric, rel. to CW Doppler US recordings, power spectra calc. 3−29683
blood flow meas. using Doppler shifted ultrasound 3−34924
cardiotocograph, gynaecologic diagnostic instrument based on US Doppler technique 3−58756
carotid arterial disease, quantification by Doppler US 3−48349
circularly polarised waves in streaming cold plasma, Doppler effect 3−27678
cross-section in reson. region of fertile and fissile nuclei, ENDF/B convention for representation 3−823
diatomic molecules, Doppler-free polarisation spectroscopy in flame reactions 3−36770
Doppler shifted electron-cyclotron maser oscillator, interaction efficiency 3−36978
Doppler-shift attenuation meas. after $(n,n'\gamma)$ 3−1175
echocardiology, Doppler US computerised blood flowmeter for noninvasive meas. 3−4575
foetal haemodynamics, Doppler US evaluation 3−29688
foetal vessels, quantitative assessment of blood flow by pulse Doppler techniques 3−15170
formyl ions, vibr.-rot. transitions, vel. modulated IR spectra 3−50407
HF skywave radar sea backscatter, wind speed estimation 3−9993
history of Johann Christian Doppler (1803-53) and his effect 3−25743
inhomogenously broadened media, saturation effects in resonant CARS 3−1702
ionosphere artificial irregularities, Doppler freq. variations in field-aligned scatt. of VHF waves 3−39954
ions, captured in trap, two-photon absorpt. line profile, influence of thermal effects 3−21740
laser anemometry, eventoscope (transient recorder) appl. *(German)* 3−37592
laser backscatter Doppler velocimeter, high energy oceanographic boundary layers obs. 3−4988
laser Doppler anemometer, simultaneous backward-forward scatter meas., in open channel flow 3−51249
laser Doppler anemometer with Bragg frequency shift, using polarisation-preserving fibre 3−12790
laser Doppler anemometry apparatus for meas. on individual red blood cells 3−9795
laser Doppler anemometry appl. to boundary layer flows in cryogenic fluids 3−37596
laser Doppler velocimeter with optical fibre, appl. to blood flow velocity meas. 3−19873
laser Doppler velocimetry device for cell electrophoretic mobility determ. 3−9796
laser Doppler velocity measurement, spectral characts. of buoyant turbulent diffusion flame *(French)* 3−22437
laser Doppler velocity meter, optical signal processing optimisation 3−295
laser long-range anemometry, atmospheric wind velocity meas. 3−35293
laser velocimeter, miniature solid-state directional system 3−10812
lser Doppler anemometer for flows with velocity grad., spectral anal. 3−7677
microcirculatory blood flow assessment, laser-Doppler methods appl. 3−34946
molecular ions, struct., linewidths and shifts, microwave obs. 3−50382
molecular spectroscopy and dynamics below Doppler width 3−11786
Mossbauer spectrometer, isomer shift compensation with reson. detectors. 3−1123
multichannel Doppler-tuned spectrometry for X-ray energy meas. 3−21590
multichannel polarization interferometers 3−45195
multiphoton spectroscopy, high-resolution, Doppler-free 3−10914
particle size and velocity meas., laser Doppler method 3−42331
plasma impurity line profiles for Doppler broadening meas., repetitive display system, report 3−46793
plasmas, dense, multicomponent, with effective interactions, thermodynamics and Stark and Doppler emission profiles *(French)* 3−42359
polymer solutions, dilute, dynamic props., meas. using laser-Doppler velocimeter 3−27627
positron annihilation spectra, Doppler broadening, error anal. 3−24044
pulsed-Doppler echocardiography, microprocessor sample-vol. tracker and light-pen 3−15175
radar profiling and mapping of wind in prestorm convective boundary layer 3−44568
radar sounding of middle atmosphere, pulse compression technique 3−30100
radiowave propagation, effect of daily vars. of ionospheric characts. on Doppler freq. shift on Boulder-Havana path 3−15714
relativistic cyclotron accelerator, anomalous Doppler effect 3−50075
sodar, appl. to atmospheric turbulence *(French)* 3−20107
spectral line broadening by cyclotron mot. 3−49110
spectral line profiles in presence of broadening effects 3−32140
stenoses, axisymmetric, in vitro Doppler detect. from transverse vel. meas. 3−9685
subluminal Lorentz transformations, six-dimensional space time inconsistencies in length contraction, time dilation, Doppler effect 3−20627

Doppler effect continued
  subsurface sounding of earth layers using coherent radar with Doppler filtering 3—15659
  Sun, obs. of global-scale photospheric Fraunhofer line shifts 3—35570
  supersonic two-phase flow over bodies, meas. and visualisation 3—46671
  Tokamak plasma, rotation vel. meas. using spectral lines from charge-transfer reactions 3—46780
  traffic noise, modelling of traffic flow as line of stationary point sources, Doppler effects 3—24654
  turbulent flow meas. in heated pipe, using laser Doppler and hot-wire anemometers 3—51250
  two-level atom, effects of broadening on reson. fluoresc. 3—1297
  US computerised blood flowmeter, noninvasive cardiac output meas. appl. 3—4575
  venous gas emboli, detection and size meas. by Doppler US flowmeter 3—48347
  vibration meas. using laser Doppler vel. interferometer *(Korean)* 3—10797
  wind velocity meas. by Doppler acoustic radar 3—54165
  C_2 radical, reson. enhanced coherent anti-Stokes Raman scatt. 3—36769
  Cl, inverse Lamb saturation dip obs. in laser mag. reson. spectrum, isotopic shift meas. 3—21680
  Cs vapour, intra-Doppler resonances in selective reflection at low press. 3—6580
  Cu target, Ar^+ sputtering, excited atom form., kinetic energy distrib. 3—8922
  F foil excited fast ion beams, EUV spectroscopy, line widths and broadening 3—21686
  HF+He, IR laser-crossed molecular beam study 3—26811
  $H_2{}^{16}O$, $H_2{}^{17}O$, $H_2{}^{18}O$, HDO, secondary wave-number standards, 1066 to 2296 cm^{-1}, Fourier-transform spectrosc., ν_2 bands 3—36748
  Li spectra, identification of charged excited ion states *(French)* 3—21882
  Na_2, vel. distrib. anisotropy induced by a temp. gradient across Knudsen cell 3—1417
  O, foil excited fast ion beams, EUV spectroscopy, line widths and broadening 3—21686
  Si, plastic deformation, positron study 3—57014
  ^{149}Sm, isotopically pure, phonon density of states effect in reson. neutron interferometry 3—13361
  W single crystal, reciprocal conversion of sound and electromagnetic waves under conditions of Doppler-shifted cyclotron resonance 3—3540
Doppler shift *see Doppler effect*
dopplerons
  metal plates, NMR line profile and surface impedance with weakly damped EM wave excitation *(Russian)* 3—33988
  metals, Fermi-liquid cyclotron-doppleron waves *(Russian)* 3—3035
  W, EM and sound waves mutual transform. under doppleron-phonon reson. *(Russian)* 3—3036
  W single crystal, reciprocal conversion of sound and electromagnetic waves under conditions of Doppler-shifted cyclotron resonance 3—3540
dosemeters *see dosimeters*
dosimeters
  see also dosimetry; thermoluminescent dosimeters
  A-150 plastic tissue-equiv. ionisation chambers, air humidity rel. to γ-ray calibration and neutron dose meas. 3—53870
  acoustic impulsive noise, dosimeters and the OHSA Hearing Conservation Amendment 3—56390
  AKN-T neutron dosimeters, neutron resonance self-screening using (n,γ) 3—21566
  albedo neutron dosimeters, phantom distance effect 3—19818
  CR-39 fast neutron dosimeters, highly sensitive, partial optimisation of electrochem.-etching parameters 3—1074
  direct reading scintillation dosimeter *(Spanish)* 3—41407
  electret dosimeter for fast neutrons 3—36573
  emergency dosimeters, use of organic substances 3—48419
  energy dependence of response to ionising photons 3—45706
  FFTF gamma ray measurements 3—55300
  Geiger counter, ZP1320, absolute meas. of neutron sensitivity using the associated-particle technique 3—36623
  ionisation chamber, ion recombination under continuous exposure 3—31876
  ionisation chambers, response and wall correction factors for ^{60}Co γ-rays 3—29759
  ionisation chambers, response and wall correction factors for ^{60}Co γ-rays 3—29760
  lyoluminescence spectra of typical dosimeter materials 3—48242
  medical institution radiation control equipment *(Russian)* 3—48410
  MOS dosimeter for artificial satellite use, characts. 3—54235
  MOS dosimeters using MOST and MOS capacitors, positive charge buildup in silica film 3—36574
  neutron, portable computerised instrument, multifunction 3—50057
  nonisolated-sensor solid polystyrene calorimeter for absorbed dose meas. 3—6454
  personal dosemeter for quantifying the biologically effective sunlight exposure of patients receiving benoxaprofen 3—24891
  PMMA, HX5, thickness and background optical density variations, irrad. and post irrad. storage temp. effects 3—17080
  PMMA, Red 4034H, thickness and background optical density variations, irrad. and post irrad. storage temp. effects 3—17080
  polymethylmethacrylate dosimeters performance study, report 3—21579
  sensors, requirements of risk assessments 3—53861
  solar cells, γ-ray dose rate monitoring, directional depend. 3—58499
  solid state detectors, response to 200 MeV protons 3—17174
  UV dose and irradiance meter 3—53869
  wide energy range personnel neutron dosemeter and its dose evaluation system 3—17073
  wide range environmental γ-ray dosimeter 3—41335
  X-ray dosimetry, fraction of ionisation arising in wall of ionisation chamber 3—50182
  X-ray tube operated with exposure meter, power-variation law choice 3—9704
  $FeSO_4$ dosimeter for ionisation chamber dosimetry control of electron, ^{60}Co γ-beams 3—24886
  Si pin diode neutron damage monitors 3—55715
dosimetry
  see also dosimeters; radiation detection and measurement; radiation monitoring
  γ-irradiation, nonequilibrium distributions, absorbed dose and space charge calcs. 3—27994
  A-150 plastic-equiv. gas, characts. in A-150 plastic ionisation chambers for p(66)Be(49) neutrons 3—29754
dosimetry continued
  absorbed dose rate standards for beta radiation at protection level, report 3—21580
  accelerator room photoneutron and photon background meas. 3—58825
  air-over-ground kermas for neutrons and γ-rays from Hiroshima and Nagasaki 3—11514
  alanine, ^{14}C-labelled, total body absorbed radiation dose 3—29746
  alanine, dosimetry by ESR spectroscopy, review 3—48420
  albedo neutron dosimetry, review 3—48418
  albumin microspheres, human labeled with ^{99m}Tc, radiation absorbed dose, lung appl. 3—9751
  alpha energy potential exposure rel. to index of dose 3—48426
  alpha-particle thermoluminescence dose response curves, interpretation using track struct. theory 3—11511
  angiography, digital intravenous, patient radiation exposures 3—53796
  ANS shielding standards for light water reactors 3—55296
  average quality factor evaluation in mixed radiation field with ionisation chambers 3—17072
  Batho's correction factor for heterogeneities, derivation, radiotherapy appl. 3—29756
  benchmark gamma-ray skyshine experiment 3—55722
  beta radiation in heterogeneous media, dose distribs. calc. using two-group method 3—9749
  beta-ray dose distributions in water, air and other media, tables and graphs 3—54592
  biological dosimetry by aberration scoring using POLYP 3—29765
  biological dosimetry by chromosome aberration scoring with parallel image processing 3—53860
  BR2 high flux materials testing, dosimetry work 3—55303
  bronchial bifurcations of smokers, α-radiation dose from indoor exposure to Rn progeny 3—58832
  buildup dose from electron contamination of clinical photon beams 3—53862
  Burlin's cavity theory evaluation, rel. to electron path length 3—1073
  BWR, radiation protection practices, dose limitation system at TVO Power Co 3—11547
  BWR post-LOCA dose rates on RHR system piping based on a particle settling model 3—11531
  BWR vessel wall neutron dosimetry, spectral analysis 3—55533
  C_λ and C_E conversion factors and stopping power ratios using calibrated $FeSO_4$ dosemeters 3—21563
  cancer incidence, radiation-induced, math. simulation of dose depend. *(Russian)* 3—19761
  cellulose acetate, neutron irrad. effects on elec. cond., dosimetry appl. 3—17074
  cervix carcinoma therapy, mg-hours rel. to dose to Point A 3—29763
  CFRMF spectrum update and application to dosimeter cross-section data testing 3—55317
  chest radiography, reduction of radiation exposure 3—9756
  children undergoing ^{67}Ga citrate scanning, absorbed dose estimates for liver, spleen and metaphyseal growth complexes 3—58838
  chromosome aberration data, regression analysis, dose response curves 3—48341
  Clinac 4/100, tissue phantom ratios 3—9755
  collective dose equivalent, application to nuclear fuel cycle, front end 3—11550
  collision stopping power of elements and compounds for electrons and positrons 3—44907
  computerised tomography and other diagnostic radiology procedures, risk analysis 3—24850
  computerised tomography and urography, absorbed doses 3—9741
  computerised tomography scanner, Siemens, SOMATOM 2, acceptance tests and patient dose meas. 3—4618
  conference, reactor dosimetry, radiation metrology, Gaithersburg, MD, USA (March 1982) 3—54576
  conference on hazard arising from small radiation doses, London, England (Apr. 1982) 3—5476
  Consultative Committee on Standards for the Measurement of Ionising Radiations, recent work of Section I 3—11625
  conversion factors rel. to Canadian high level waste disposal assessment 3—19819
  core melt accident, siting considerations, doses, large population centre dangers 3—41276
  Crawford-cell exposure system automation, for laboratory animals irradiation (225-500 MHz) 3—9800
  CRT X-ray emission standard for video display terminals, operator organ doses estimation 3—39720
  cylindrical gas-filled ionisation chambers, electron fluence perturbation 3—41408
  delayed radiation at Hiroshima and Nagasaki 3—11515
  dental orthopantomography: survey of patient dose 3—58803
  depth dose equivalent in ICRU sphere, ang. depend. for different photon energies 3—34980
  depth dose measurement in the radiation beam of the IBR 30 reactor *(Czech)* 3—26496
  diagnostic nuclear medicine, absorbed dose calcs. 3—48413
  dichromate solution as ref. dosimeter in industrial irradiation plants 3—11534
  difference compensators for radiotherapeutic tissue compensation 3—19814
  digital subtraction angiography, patient doses, comparison with conventional angiography 3—34983
  digital subtraction angiography, X-ray exposure reduction, matched filtering appl. 3—48400
  dose equivalent conversion factors for human organs and tissues from external radiation, review 3—48417
  dose equivalent index, meas. and interpretation 3—6457
  dose estimate from Hiroshima and Nagasaki, implications for risk assessment 3—11517
  dose estimates for Hiroshima and Nagasaki 3—11512
  dose levels and neutron reaction rates for HPRR and SHEBA 3—11532
  dose limitation system, conf., Madrid, Spain (Oct. 1981) 3—10507
  double-junction technique for total central nervous system irradiation with a 4-MV accelerator 3—29715
  Dynaray 18 accelerator, dose rate variation obs. 3—9745
  ear, inner, dose rate during Mossbauer expts. 3—58681
  EDF reactors, surveillance dosimetry program *(French)* 3—55293
  effective dose equivalent calc. 3—19816
  electron absorbed dose meas. by bremsstrahlung dose *(Russian)* 3—41324
  electron energies in photon irradiated water, Monte Carlo calcs., to 1 GeV, dosimetry appls. 3—41328

dosimetry continued
- electron slowing down in tissue equivalent material, statistical modelling 3−26501
- electron therapy, 4 to 7 MeV, curve fitting off-axis depth dose data 3−34976
- electron therapy dose, 4 to 7 MeV, curve fitting of meas. beam data 3−4619
- electron therapy dosimetry surveys, system using TLDs 3−48415
- electrons, stopping power calc. procedure 3−45703
- ellipsoidal models of man, ELF dosage due to HV transmission lines 3−4652
- emergency radiological dose calculations using a pocket-sized computer 3−34982
- emergency reference levels of dose for controlling accidental exposure 3−17089
- EMI CT5005 whole body scanner, radiation dose reduction using a Cu wedge 3−15229
- ENDF/A cross section and uncertainty file, ASTM standard recommended guide 3−55721
- ENDF/B-V dosimetry cross sections, covariances 3−55723
- environmental cleanup operations involving Pu, dose limitation, administrative practices 3−17091
- environmental monitoring, sampling overview 3−50056
- exposure dose rate meas. method with NaI(Tl) crystal 3−41326
- external dose limitation in nucl. fuel cycle, role of UK regulatory agency 3−17095
- external radiation monitoring of occupationally exposed persons, dose limitation system 3−17087
- eye cancer, radiation treatment dosimetry 3−34984
- far-field dosimetric measurements in a full-sized man model at 2.0 GHz 3−39716
- fast neutron dosimetry of spallation neutron sources 3−55725
- fast neutron fields of nuclear plants, dose rates meas. *(Russian)* 3−58818
- FFTF reactor characterization program review 3−55304
- fission chambers development for reactor dosimetry 3−55313
- fission reactor materials, damage parameter estimation uncertainties 3−55727
- fluoroscopy, image quality and dose rate, effect of a TV digital noise reduction device 3−9728
- foetal dose in electron therapy of pregnant patients 3−15230
- fusion materials irradiation facilities, neutron flux, spectral meas. 3−55583
- fusion neutron dosimetry testbed 3−21586
- Fusion-Blanket Dosimetry Program at the Idaho National Engineering Laboratory 3−55587
- Fusion-Blanket Dosimetry Program at the Idaho National Engineering Laboratory 3−55695
- gamma dose-rate surveillance system 3−31852
- gamma exposure rate near nuclear power plants, short term fluctuation simulation 3−21577
- gamma-ray buildup factor approx. by modified geometrical progression 3−41332
- gamma-ray dose buildup factors near the air-ground interface, Monte Carlo anal. 3−11530
- gamma-ray exposure over water, meas. to detect. small increments due to local sources 3−39569
- gamma-ray exposures near a finite Gaussian plume 3−29748
- gamma-therapy, intracavitary, of cervical cancer, dosimetry using Curietron afterloading unit *(Russian)* 3−48409
- gastrointestinal tract, upper, radiographic exam., radiation exposure to female breast 3−29764
- general public exposure 3−15236
- generalised derived limits in milk for commonly occurring radionuclides 3−21560
- German neutron therapy centres, spectroscopic intercomparison 3−15231
- graphite phantom, ionometric determ. of absorbed dose, perturbation correction for ^{60}Co γ-rays 3−58834
- heavy charged particle therapy beams, dosimetry intercomparisons and protocol 3−44334
- heavy charged particle TLD, track struct. theory and expts. 3−45702
- heavy charged particle treatment planning 3−44324
- heavy ion molecular and cellular radiobiology 3−44288
- heavy water reactor, operational radiation protection, radiation sources, dose limitation system 3−11549
- heterogeneous medium, simple equiv. tissue-air ratio method for absorbed dose calc. 3−48425
- high consequence-low probability nucl. accidents, close limitation 3−17090
- high range survey meters for β- and γ-dose rates 3−6459
- HLW repository, extended source model, limiting individual dose 3−41161
- hospital staff attending ^{131}I therapy patients 3−15235
- IAEA International Reactor Dosimetry File (IRDF-82) 3−55724
- ICRP dose limitation system and dosimetry practice 3−17086
- ICRP dose limitation system appl. to radioactivity in building materials 3−17093
- ICRP radiation protection, dose and risk assessment policies 3−41336
- individual dose distrib. and statistical anal. *(French)* 3−17083
- individual dosimeter assessments, patterns of dose incurred by workers 3−21561
- individual monitoring general principles in the UK for dose limitation to workers 3−17082
- industrial radiation technology, international dose-assurance methods 3−17076
- insect pupae, waveguide irrad., thermographic anal., dosimetry appl. 3−24796
- internal emitters dosimetry, age dependent values of specific absorbed fractions and specific effective energy 3−19821
- internal exposure monitoring of personnel of mech. power plant with PWR 3−17088
- interstitial implants, dosimetric anal. of stereo and orthogonal reconstruction 3−29750
- interstitial radiation therapy dosimetry 3−34985
- interstitial radiocolloid lymphoscintigraphy, radiation dose estimates 3−58839
- ionising radiation dosimetry, status and problems 3−39717
- ionising radiation dosimetry *(Russian)* 3−26497
- irradiation planning using dialogue system *(German)* 3−39723
- iso-effect tables for tolerance of irradiated normal human tissues 3−58751
- JOYO, activation dosimeter tests 3−55299

dosimetry continued
- JOYO dosimetry expts. 3−55325
- kerma factors of elements and compounds for neutron energies below 30 MeV 3−45704
- late effects after therapeutic whole-body irrad., symposium, Munich, Germany (Aug. 1981) 3−20583
- late effects development after whole body irrad. and stem cell reconstitution, factors of significance 3−24810
- late effects in rhesus monkeys after whole body irradiation with X-rays and fission neutrons 3−24814
- late effects of total body irradiation in dogs treated with bone marrow transplantation 3−24812
- LMFBR, estimates of radionuclide releases, impact on environment 3−55160
- long term nuclear waste confinement, radiation protection, dose limitation 3−11552
- low level waste, containers and waste form performance requirements, dose criteria 3−21402
- low-level radioactive waste sea dumping operations, experience with dose limitation *(French)* 3−16882
- lung correction factors for 45-MV X-ray therapy 3−9754
- lung dose in primary breast irrad. 3−58830
- LWR fuel cycle wastes, management and disposal, dose limitation system 3−11551
- LWR pressure vessel monitoring, absolute or relative dosimetry 3−55535
- LWR PV dosimetry, regulatory demands, status 3−55531
- LWR PV surveillance capsules, dosimetry re-evaluation 3−55175
- LWR radiation field dosimetry, steel embrittlement surveillance 3−55163
- lyoluminescence dosimetry, principles, review 3−48421
- lyoluminescence dosimetry, state-of-the-art 3−48422
- mailed thermoluminescent dosimetry reviews in radiation therapy 3−29758
- mammography, multiparameter optimisation for dose reductions 3−53794
- mammography, performance of automatic exposure controls 3−29708
- mammography, phantom simulation, dose distrib., image quality 3−53811
- mammography, radiation exposure of the breast *(German)* 3−53872
- mammography, radiographic mottle and patient exposure 3−34968
- materials dosimetry, UK trends 3−55164
- Maximar-100 X-ray therapy machine, filter thickness rel. to exposure rate 3−9715
- microcalorimeters for absorbed dose meas. in benchmark rad. fields 3−55776
- microdosimetric properties of electron tracks measured in a low-pressure cloud chamber 3−41338
- microdosimetry of internally deposited radionuclides 3−48412
- minimal radiographs, digital processing for exposure reductions 3−53815
- Mol cavity fission spectrum standard neutron field and its applications 3−55720
- MOS dosimeter, reducing errors caused by ^{60}Co low energy components and flash X-ray sources 3−36576
- MOST dosimeter using PMOS device in space radiation environment, error estimation and reduction 3−36577
- multicellular systems, biological effects of low dose ionising radiations 3−29641
- multigroup processing of ENDF/B dosimetry covariances 3−55719
- multiple foil activation method for neutron spectrum method 3−55717
- natural radiation indoors, problem of high exposures 3−17092
- near-field EM absorption in man, numerical and expt. results 3−34885
- neutron, dose depth distrib. in elliptical phantom, in vicinity of reactor, Monte Carlo code calc. 3−58819
- neutron, interactive system for scanning tracks in nuclear research emulsions 3−41448
- neutron dose equivalent, attenuation in labyrinth through accelerator shield 3−6455
- neutron dosimetry, analytical modelling of thermolum. albedo detectors 3−55710
- neutron dosimetry, P activation, radiotherapy accelerator appl. 3−29752
- neutron dosimetry by spark counting of tracks in B-doped film 3−36572
- neutron dosimetry practical problems 3−44333
- neutron dosimetry with spherical ionisation chambers, sensitivities for C/CO$_2$ and tissue-equiv. chambers 3−21565
- neutron fluence-to-dose conversion factors and quality factors for Health Physics Research Reactor 3−19817
- neutron irradiation late effects, biological bases for high RBE values 3−44271
- neutron Kerma values derived from neutron energy spectra 3−34978
- neutron leakage characteristics in high energy medical accelerators 3−19820
- neutron normal tissue tolerance in animals, comparison with patient clinical obs. 3−44273
- neutron quality factor estimation, errors using linear energy distribs. meas. in tissue-equiv. proportional counters 3−4654
- neutron quality parameters versus energy below 4 MeV from microdosimetric calculations 3−44278
- neutron spectrometry, mean ion production energy determ. 3−45711
- neutron therapy, accuracy and precision of absorbed dose meas. 3−44332
- neutron threshold dosimeters, γ-contrib., ^{115}In photoexcitation cross section 3−36408
- NIRS proton beam radio therapy, compensation techniques 3−15201
- noise exposure survey in nuclear generating station 3−15024
- normal tissue radiation responses: dose fractionation, dose rate and iso-effect relationships 3−44286
- nuclear and space radiation effects, conf., Las Vegas, NV, USA (July 1982) 3−40315
- nuclear facility environments monitoring, dosimeter systems, compulsory calibration in Germany *(German)* 3−17071
- nuclear fuel reprocessing and associated plants, shield design from ALARA principle 3−11538
- nuclear medicine, enhancement of images and optimisation of ionising radiation usage 3−9753
- nuclear medicine department staff, doses reduction 3−34977
- nuclear plants, offsite dose assessment, simple lake breeze front position technique 3−21578
- nuclear power plant accident, doses received while crossing plume of radioactive material 3−4653
- nuclear power plant design, dose rate data eval. for radiation exposure 3−55363
- nuclear power plants, computerised dosimetry monitoring and management system 3−55228
- nuclear weapon fallout prediction, computer model for doses and dose rates 3−1072

dosimetry continued
occupational exposure during maintenance activities, dose reduction 3−11546
occupational radiation exposure at the Republic of China's first nuclear power station 3−58822
occupational radiation exposure reduction, dose data from LWRs, PWRs, BWRs 3−11545
oral ^{131}I therapy administration, reducing radiation exposure 3−15234
organism, comparison of uniform and nonuniform irrad. effects *(Russian)* 3−19767
oRNL-ICRP dosimetric data base 3−36579
parallel plate ionisation chamber, primary standards of exposure for 50 kV X-rays, report 3−21599
particle accelerators in radiation therapy, conf., Houston, TX, USA (Feb. 1982) 3−40316
personnel system using sensitised LiF TLDs, quality assurance 3−34979
phantom, location of a flat ionisation chamber for absorbed dose determination 3−58835
photoradiation therapy, tissue as medium for laser light transport 3−53722
photoradiation therapy with haematoporphyrin derivatives, wavelength and dosimetry considerations 3−53750
phototherapy, haematoporphyrin augmented, dosimetric studies in expt. liver cancer in rat 3−53721
picoammeter for ion chambers without range switching 3−50055
pion radiobiology at LAMPF, use in therapy 3−44291
polymeric track detectors, γ-ray induced contraction 3−55315
Poolside Facility, fluence neutron dosimeters, interlaboratory comparison 3−55298
Poolside Facility, startup expts. calcs. 3−55297
population dose predictions for releases of radioactive waste water from the hospitals in Verona (Italy) 3−19823
population exposure limits to ionising radiation, adverse event probability, nuclear facilities emissions 3−58821
population exposure to VHF and UHF broadcast radiation in the United States 3−24892
porcelain, effects of fast neutrons on elec. resistivity, dosimetry appl. 3−26500
positron emission tomography, radiation absorbed dose estimates for the ^{38}K, ^{81}Rb, ^{82}Rb and ^{130}Cs 3−48389
positron emission tomography using C^{15}O, ^{11}CO and CO^{15}O, absorbed dose estimates 3−24889
pressure vessel steel, neutron dosimetry in irradiation capsules 3−55165
proportional counter, non-metallic wall-less, for meas. of ^{125}I photons and other soft X-rays 3−41330
proton accelerators, transverse shielding, dose equivalent estimation 3−55709
protons, neutrons, heavy ions and pions in radiotherapy, comparison 3−44292
public protection optimisation, cost-benefit anal. appl. 3−17096
PWR, neutron dosimetry in pressure vessel cavity 3−55718
PWR operation, radiological protection, dose limits and exposures 3−17078
PWR power plant, treatment facility installation, risk transfer from public to workers *(French)* 3−11537
PWR pressure vessel neutronics calcs. and meas. *(French)* 3−55294
PWR surveillance dosimetry 3−55292
PWRs and the United Kingdom conference, Birmingham, England (Mar. 1982) 3−16079
quality factor for low doses of high-LET radiations 3−58828
quantities and concepts used in radiation dosimetry 3−48411
quantities in dosimetry rel. to radiation field 3−19815
quartz monazite, from Climax Stock, thermoluminescent self-dosimetry 3−41169
radiation exposure, dosimetry recording and regulation by ICRP26, Pu uptake 3−11541
radiation exposures limitation from nucl. fuel cycles installations operation 3−17094
radiation monitoring at nucl. research centre, dose limitation system *(Spanish)* 3−17084
radiation protection, ICRP recommendations in Hungary, experience in appl. 3−17097
radiation protection monitoring programme of nucl. power plant, dose limitation system appl. 3−17085
radiation protection optimisation, nuclear plant design and operation *(Spanish)* 3−11544
radiation protection regulations in USA, ICRP recommendations influence 3−17098
radiation protection techniques for workers in nuclear industry, optimisation principle *(French)* 3−11542
radioactive effluent retention in nuclear facilities, cost-benefit analysis for ^{3}H, ^{14}C, ^{85}Kl, ^{129}I and aerosols 3−11394
radioactive nuclides levels in persons residing around Nevada test site, 1971-80 3−44330
radiographic screens, high-speed rare-earth and par-speed, clinical comparison for diagnostic efficacy and radiation dosage 3−15218
radiography, computer-assisted procedure for estimating patient exposure and foetal dose 3−15240
radiography, dose reduction using heavy metal foils 3−19813
radiography, fluoroscopes, C-arm, radiation exposure 3−58824
radiography, W absorption edge filter: effect on X-ray spectra, image quality and absorbed dose 3−53854
radiography personnel annual dosimetry results, statistical evaluation 3−58827
radioiodine, various isotopes, foetal thyroid dose from intake by mother 3−29747
radiological protection optimisation, computer code *(Spanish)* 3−11536
radiologists in the West of Scotland, radiation doses received 3−9744
radiopharmaceutical preparations used in various diagnostic exams., doses *(Russian)* 3−53859
radiotherapy, beta point source dose function 3−15237
radiotherapy, biaxial moving irradiation of cervical cancer patients, dosimetric planning *(Russian)* 3−58817
radiotherapy, dose contribution due to photonuclear reactions 3−29755
radiotherapy, dose corrections for field obliquity for 45 MV X-rays 3−53867
radiotherapy, dose enhancement in tumours with I 3−53865
radiotherapy, films digitisation for construction of tissue compensators, electronic device 3−29709
radiotherapy, irregular field dose determination with the weighted beam-zone method 3−15233

dosimetry continued
radiotherapy, modification of the 50% max. dose depth for 41-MeV (p^+,Be) neutrons 3−29753
radiotherapy, use of match-line wedge for MV radiation field matching 3−58786
radiotherapy dosimetry, computer-controlled direct tissue max. ratio meas. 3−29757
radiotherapy with fast fission neutron beam, depth dose distributions 3−4627
reactor materials REAL-80 exercise, status report 3−55324
regulation protection, ICRP recommendations incorporation into Canadian regulations 3−17099
research reactor spent fuel, dose rate meas. in air 3−26503
reticulocytes, peripheral, amount as biologic dosimetry of ionising radiation, rabbit expts. 3−53723
review of medical radiation dosimetry 3−48414
revised estimate of building transmission factors for Hiroshima and Nagasaki 3−11516
RF radiation biological affects study, exposure methods and dosimetric techniques 3−53902
robotron DOPSY system used in radiotherapy *(German)* 3−39722
rotation therapy using a novel high-gradient filter 3−29716
sapphire, fast neutron damage monitor, expts. 3−55309
scatter dose decrement values for rectangular fields 3−29751
Selectron sources, precision of dose calc. and activity distrib. 3−9746
Sellafield, dose control and reduction 3−11543
semiconductor radiation detectors, present status and future applications *(Japanese)* 3−1162
sex-specific per capita dose due to background radiation in Japan 3−24887
silicone gel breast prosthesis, effect on electron and photon dose distribs. 3−53868
simulated fast reactor blanket region spectrum characterisation, threshold and continuous detector activation 3−55302
slab geometry problems, stationary Boltzmann eqn. multigroup discrete ordinates soln. for γ and n 3−41081
solid state integrated dosimeters *(Japanese)* 3−1077
solid-state video film dosimetry system 3−58837
source spectra calculations for Hiroshima bomb 3−11513
space radiation doses in Hiroshima and Nagasaki 3−48200
spatial dose distribution in radiotherapy, optimisation *(Russian)* 3−4651
spectrum averaged cross section data, measured and evaluated, comparison 3−55076
spermatogonia effective depth, calcs. for external high-energy β-rays, rel. to genetic risk 3−15238
spine in scoliosis, dose reduction during radiography 3−9742
statistical decision theory applied to radiation therapy treatment decisions 3−44329
surface dose from 6 MV photon interactions in air 3−53871
surveillance capsule perturbation studies in the PSF 4/12 configuration 3−55112
surveillance dosimetry of operating power plants 3−55291
synchrotron radiation beams dosimetry by thin film dosimeters 3−41367
TE-phantom irradiated by fast neutrons, dosimetric methods comparison 3−45700
testicle, reduction of scatt. dose outside the radiation treatment fields using gonadal shield 3−29749
TFTR Li blanket module program, neutron dosimetry 3−55586
TFTR Lithium Blanket Module Programme, neutron dosimetry, T breeding 3−55696
therapy level exposure secondary standards for ^{60}Co γ-radiation, Nordic countries intercomparison 3−53858
thermoluminescence dosimetry, environmental appls., review 3−48223
thermoluminescence dosimetry applied to radiation protection, review 3−48416
threshold response helium accumulation fluence monitors for fast breeder reactor dosimetry 3−55301
tissue dosimetry of medium and low energy nuclides, Monte Carlo derivation of parameters 3−9743
tissue-equivalent gas and its constituents, $\bar{W}$ values determ. using 1.1-3.9 MeV α-particles 3−58833
total lymphoid irradiation in the Wistar rat: technique and dosimetry 3−58879
trabecular bone, estimates of absorbed energy due to β-particles or electrons 3−39719
tumour significant dose in radiotherapy 3−53863
weak leakage γ-ray dose using scintillation spectrometer, background estimation method *(Japanese)* 3−1078
Westinghouse perturbation expt. at Poolside Facility, calcs. 3−55295
whole-body irradiation in dogs protected by autologous marrow infusion, acute and delayed toxicity 3−24811
whole-skin electron treatment: patient skin dose distribution 3−58802
world radiation therapy dosimetry network 3−15232
xeromammography, radiation exposure and picture quality *(German)* 3−53873
YAYOI blind intercomparison on multiple-foil reaction rate measurements 3−55728
210p$_0$, evidence for high natural doses in certain mid-water oceanic organisms 3−9757
Al-Au, dose enhancement factor meas. by ^{60}Co gamma-rays 3−36575
^{14}CO$_2$ detection in radiotoxicology, liq. scintillation and Geiger-Muller detector thresholds 3−58826
^{14}C, dose to man, specific activity model, applicability, food chain analysis 3−44331
^{14}C releases from heavy-water-moderated reactors, dose limitation, production and release 3−11535
CaF$_2$:Mn-polyethylene detectors, neutron dosimetry evaluation using optically stimulated luminesc. 3−31834
^{110}Cd(n,γ)^{111m}Cd, fast neutron activation, appl. to dosimetry 3−773
^{111}Cd(n,n')^{111m}Cd, fast neutron activation, appl. to dosimetry 3−773
^{112}Cd(n,2n)^{111m}Cd, fast neutron activation, appl. to dosimetry 3−773
^{252}Cf photon dosimetry, neutron insensitive depolymerisation of polyacrylamide 3−9752
Cs radioactive waste discharge control in Irish Sea, ICRP-26 in practice 3−17081
^{137}Cs, ingested, imprecision in dose estimates due to variability in human biological characts. 3−39718
DT neutrons, use of neutron and γ-ray spectral meas. and calcs. to obtain dosimetric information 3−53864
FeSO$_4$ solution, total absorpt. of electrons for determ. of absorbed dose to water 3−21564

dosimetry continued
HF, diffusion coeff. in air, dosimetry meas. 3—27636
He accumulation neutron dosimetry for fusion neutron test environments 3—55726
^{125}I, encapsulated sources, apparatus and dosimetry for determ. of mammalian cell RBE 3—9801
^{131}I in meadow vole thyroids near Three Mile Island 3—58844
^{131}I in thyroids in meadow voles near Three Mile Island Nuclear Generating Plant 3—58843
^{131}I, thyroid dose factors rel. to thyroid mass values 3—15239
^{192}Ir template procedures, ideal vs. actual dosimetry 3—58836
LiF phosphors in personnel, environmental and accident dosimetry 3—45699
LiF TLD beta dosimetry meas. using Lucite Beta Dosimetry Platform 3—31845
LiF(Mg, Cu, P), TLD phosphor, annealing and reusability characts. 3—31836
^{7}LiF TLD gamma dosimetry and calculations 3—55311
NB dosimeter, EBRII and RR expts. 3—55716
Na_2O-B_2O_3 glass, neutron irrad., elec. cond. and light absorpt., fast-neutron dosimeter appl. 3—51667
Pu conversion facility, personnel shielding, exposure calcs. 3—11539
^{238}Pu assessment in chest of contaminated subject, use of Ge detector 3—58823
^{238}Pu fueled cardiac pacemaker, neutron dose rates and total dose equivs. *(Japanese)* 3—29762
^{222}Ra, daughter nuclides concentration in atmosphere, reactor pollution 3—35233
^{224}Ra, retention, distrib. and dosimetry in beagles 3—29761
Rn and daughters, exposure in dwellings, determ. with solid state nuclear track detectors *(Hungarian)* 3—58831
Rn/Ra ratio in skeletons of beagles, after Ra exposure, prediction eqn. 3—58820
^{A}Rn A=220, 222, method for exhalation rates determ. using α-spectroscopy 3—19651
^{222}Rn decay products, some aspects of human exposure 3—19822
^{222}Rn, radiation dose and effects, progeny in energy efficient homes 3—41334
^{222}Rn, soil concentration profile, effect on exposure rate in Japan 3—17077
Si diode dosimetry, review 3—48423
Si surface barrier detectors, microdosimetric aspects of proton-induced nucl. reactions 3—36578
^{90}Sr body burdens and radiation and radiation dose in Anakturuk Pass Alaska Eskimos due to fallout, prediction 3—9759
^{90}Sr in bone, case study in age-dependent dosimetric modelling 3—9758
^{99m}Tc IDA hepatobiliary agents, radiation dose calc. 3—24888
^{99m}Tc S colloid and HEDP, distrib. in normal humans 3—53866
U fuel fabrication plant, dose limitation system appl. 3—11540
W damage monitors, dosimetry developments *(French)* 3—55308

double heterostructure lasers *see semiconductor junction lasers*

double layers (electric) *see electrochemistry; liquid theory*

double nuclear magnetic resonance
see also INDOR
t-butylamineborane, nucl. quadrupole coupling NQR double reson. study 3—36784
4-[(2,2- dimethyl-aziridino-(1))-methyl]-2,6-di-tert. butyl-phenol, N-inversion activation parameters, ^{1}H DNMR study *(German)* 3—41597
double quantum coherence, appl. to mapping proton-proton coupling 3—55976
liquids, D double-quantum transitions excitation 3—3592
liquids, motional spectral density determ. from ^{13}C-^{2}H scalar relax. meas. 3—47575
1-pentanol, ^{1}H-^{13}C chemical shift correl. NMR spectra 3—45993
potassium hydrogen furan-3,4-dicarboxylate, H-bonds, ^{17}O quadrupole double reson. study 3—34006
spin systems, A_nX type, abnormal intensity effects in heteronuclear NMR double-resonance studies 3—52671
^{13}C NMR, broadband heteronuclear decoupling 3—45991
H_2O, in hydrated cpds., nucl. quadrupole double reson. 3—36783
NH_4HSeO_4, ferroelec. phase transition, high-resolution NMR study 3—28794
$NaClO_3$, ^{23}Na pulsed nucl. quadrupole double reson. spectrum 3—47574
OH^-, isotope effects, nucl. quadrupole double reson. study 3—36782
β-PbF_2:Na^+ single cryst., double NMR of point defects 3—28732
$PbHPO_4$, ferroelec. transition, ^{17}O NQR study 3—28791

double refraction *see birefringence*

double refraction, electric *see electro-optical effects*

double refraction, magnetic *see magneto-optical effects*

double resonance, electron nuclear *see ENDOR*

doublet antennas *see dipole antennas*

DPPH, diphenylpicrylhydrazyl *see organic compounds*

drag reduction
axisymmetric body in hypersonic imperfect gas flow, boundary-layer injection effect on drag 3—37523
biopolymers, drag-reducing, isolation from blood 3—24777
cationic soap aq. soln., drag reduction in pipe flow 3—56578
flocculating agent, v. dilute, drag reduction investig. 3—27566
free turbulent mixing layer, turbulence struct., drag reducing additives effects 3—27576
pipe flow, drag reduction, centrally injected polymer thread effect 3—27577
polyacrylamide solns., v. dilute, drag reduction investig. 3—27566
polyethylene oxide, dilute soln., press. drop and mass transfer in turbulent pipe flow 3—22495
polymer conformation in turbulent flow, appl. to drag reduction 3—7553
polymer solns., drag reduction, turbulent diffusion in pipe flow 3—46541
polymer solution, turbulent flow, friction reduction law, shear stress 3—22496
rectangular cylinder, exposed to grid turbulence, drag coeff. evaluation 3—51080

drawability *see ductility*

drawing (mechanical)
chalcogenide glass IR fibre prep., drawing technique 3—46356
glass fibre, light guide production, with small conc. of OH groups by gas phase chem. deposition 3—22251
metal sheets, in-plane compression forming technique, mech. props. rel. to large drawing deform. 3—53317

drawing (mechanical) continued
metallic materials, viscoplastic flow during cold drawing *(Rumanian)* 3—19369
metals, stretching, cogging and drawing with heating, energetic forces estimation *(Russian)* 3—19351
microwire, using abrasion-resistant corundum ceramic rings 3—24193
nylon 12, transformations among α, γ and γ' forms, wide-angle X-ray diffr. and DSC study 3—51775
optical fibre, birefringence enhancement using borosilicate region, drawing with thermal anneal 3—46289
optical fibre and preform, stress meas. method, stresses rel. to drawing process 3—27245
optical fibre manufacturing process, modified CVD and drawing 3—22264
optical fibres drawn from uncollapsed VCVD preforms, optical props. 3—37221
PMMA-d8 core optical fibres, fabrication and low loss props. 3—56326
polyethylene, struct. deform. during cold drawing 3—24297
polyethylene, ultra-high modulus linear, crystalline thickness meas., effect of draw temp. 3—47851
polyethylene filament, thin, with shish-kebab struct., microindentation hardness, draw ratio depend. 3—19468
polyethylene terephthalate, glassy, forced rubbery strain and stretching *(Russian)* 3—14677
polyethylene terephthalate films, tensile drawing 3—34410
polyethyleneterephthalate, coextrusion drawn, Fourier-transform IR obs. 3—57917
polypropylene, isotactic, hot drawn tubular blown films, orientation, X-ray obs. 3—56835
steel, cold-drawn wire, X-ray residual stress meas. 3—14605
steel, deep-drawing, texture control, review 3—39169
steel, low C, Al-killed sheet, development of texture after uniaxial tensile deform., deep drawing and stretching 3—9082
steel, martensitic stainless, interrelation of plastic deform. and failure after reduction and drawing 3—19383
As_2Se_3 glass IR fibre prep., drawing technique 3—46356
Cu, heavily deformed, microstruct. and mech. props. 3—47858
Cu, wire, second stage drawing texture, mech. props. *(Japanese)* 3—58132
Cu-Al composite wire, hot drawing sintering fabrication, elec. resist., diffusion zone growth 3—52999
GeO_2-Sb_2O_3 glass optical fibres for 2 to 3 μm fabricaed by vapour phase axial deposition 3—46295
Ti sheet, drawing at 800°C, energetic force, numerical anal. *(Russian)* 3—19351
ZrF_4-BaF_2-LaF_3-AlF_3-LiF-BiF_3-PbF_2 glass, viscosity props. for fibre drawing 3—1786

drift chambers *see position sensitive particle detectors; proportional counters*

drives
see also clutches; electric drives
mechanical booster pump, for radioactive and other dangerous gases, mag. drive system 3—40627
projector drive mechanism design, with continuous film loop *(Slovak)* 3—41958
turbomolecular pumps, for radioactive gases, electronic drive system 3—40626

drop model (nuclear) *see nuclear liquid drop model*

droplets *see drops*

drops
air-water, two-phase turbulent flow is noncircular channels 3—22516
binary gas mixture, evaporation of spherical drops at arbitrary Knudsen numbers 3—1943
breakup during turbulent pipe flow 3—51171
charged droplet evaporation in electric field 3—51173
charged liquid drops, gas absorpt. during form in elec. field 3—13591
charged water drop, microdischarge on contact with objects, expt. study 3—23468
cloud drops, size distribs. from diffusive model of turbulent mixing of dry and cloudy air 3—15587
coalescence of coarsely dispersed concentrated emulsions with turbulent agitation 3—7555
correlated site-bond percolation of droplets in three dimensions 3—205
crystal growth, differentially rotated cylindrical drop flow at low Reynolds number 3—47764
cumulus clouds, droplet size distrib. near cloud base 3—15589
cumulus clouds, entrainment rel. to droplet size spectrum 3—15586
dielectric liq. drops, stability to breakdown in electric field 3—38763
dilute polymer solns., vertical pipe flow, stringiness of drops at exit end 3—27558
dimpled liquid film, thinning, London-van der Waals forces effects 3—51897
emulsion stability, effects of bulk and interfacial properties on film mobility and drainage rate 3—51203
evaporating liquid drop, heat and mass transfer on surface 3—1944
evaporation at arbitrary differentials of temp. and densities 3—27372
evaporation of liquid in spheroidal state, theory 3—23025
fine disperse particles or drops suspended in air, expansion under influence of explosion 3—2110
fine raindrops size meas. using oil method *(Japanese)* 3—48718
fog droplets, drop-size distrib. determ. from transmission meas. in 0.53 to 10.1 μ wavelength range 3—25146
freely floating liquid drop, Marangoni-convection due to axial temp. field 3—32728
fuel spray dispersion diagnostic meas. 3—12762
gas-liquid spray systems, similarity anal. 3—32793
generation by capillary waves, excited in small meniscus 3—27625
instability, light-induced, of drops in standing wave field 3—27646
inviscid drops, nonlinear oscillations investig. using Poincare-Lindstedt expansion technique 3—46633
lidar identification of droplet and crystal clouds *(Russian)* 3—20086
liquid drops, gravitational coagulation effectiveness calc., allowance for internal circulation 3—42275
liquid film thinning as small drop or bubble approaches a fluid-fluid interface 3—18533
liquid jet, cylindrical free falling, direct contact heating 3—51181
liquid metal droplet dispersions, metastable phase synthesis, undercooling behaviour obs. 3—13421
marine stratocumulus clouds, drop radius meas. during JASIN expt. 3—15585
maritime cumulus clouds, combined action of droplet coagulation, ice particle riming and splintering process 3—9989

drops continued
- metal droplets, potentiostatic study of diffusion layer, natural convection case 3–53423
- metal jets disruption by electric current, powder prod. 3–24177
- natural convection in evaporating minute drops 3–37548
- non-dilute fluid suspension, hindered settling of particles 3–22513
- nonisothermal viscous flow, droplet motion, thermocapillary convection effects 3–46607
- nucleation theory, Tolman correction for droplet surface tension, effect on reduced supercooling 3–42747
- n-octane bubble growth in liq. droplets at superheat limit, pressure effect 3–37549
- pendent drop, inclined, stability 3–13592
- polydisperse system of drops, vaporisation, similarity regime kinetics 3–12750
- power law non-Newtonian-Newtonian liquid systems, breakup of jets 3–51059
- rain drop size distrib. rel. to soil movement by rainsplash 3–4907
- raindrops, microphonic sizemeter performance test using artificial waterdrops and photographic method 3–35297
- sessile and pendant shapes, interfacial tensions and contact angles 3–51895
- sessile drops, inclined, stability 3–13593
- solid particle form. from soln. in a gas-fluidized bed 3–51214
- spinning drop interfacial tensiometer 3–20966
- Stokes flow, integral eqn. 3–32707
- Stokes flow past bubbles or drops partially coated by thin films, surfactant film stagnant cap 3–46631
- superheated liq. spheres with temp. depend. props., solidification *(French)* 3–13411
- surface oscillation self-excitation of droplets in EM wave field 3–26940
- thermocapillary migration, appl. to controllable heat valve 3–37530
- trajectory eqn., similarity anal. 3–32772
- viscous fluid in circular tube, motion of bubble, drop and solid sphere *(Chinese)* 3–17973
- viscous liq., spreading over solid surface, with slip 3–33542
- viscous particle surrounded by elastic shell flow-induced deform. 3–51174
- visualisation of evaporative convection in minute drops, by laser shadowgraphy 3–32823
- water, with insoluble core, heating under 10.6 μm radiation, explosive boiling 3–51659
- water condensation on insoluble particles without drop form. 3–51765
- water droplets, polarisation model for high temps. and density 3–27644
- weakly conducting fluid, dispersion in elec. field of plane condenser *(Russian)* 3–2132
- wet vapour flow in heat-pipe vaporiser, coolant drop entrainment study 3–7638

drying
- computer model to simulate solar and solar-dehumidification lumber drying 3–14932
- electrokinetic thickening process details and industrial application 3–29314
- evaporator tube, heated, heat transfer coeff. in post-dryout region *(German)* 3–7394
- heat pump for drying/dehumidification system experimental assessment 3–39507
- heat pumps for drying/dehumidification systems, experimental assessment 3–39506
- heat pumps for drying/dehumidification systems, potential 3–39505
- porous materials, drying processes, external mass transfer coeffs. 3–35942
- softwood, vacuum contact drying, heat and mass transfer *(French)* 3–22458
- solar air heater for drying cereal grains, heat transfer characts. 3–48169

DSC *see thermal analysis*

DTA *see thermal analysis*

dual resonance model *see duality and dual models*

duality (mathematics)
- Potts model, q-state, n-layered, duality relations, self-duality conditions 3–30804

duality and dual models
- *see also Veneziano model*
- abelian and nonabelian dyon solns. in curved space-time 3–16488
- Abelian gauge theory, self-dual 3–515
- Ashkin-Teller model functional inversion relation, duality, order-disorder variables 3–31186
- axially symmetric multimonopole solutions 3–16544
- baryon string model, quarks and diquarks 3–600
- beta function, interpolations with quantum corrections in string model 3–31190
- bosonic string, covariant canonical quantisation based on BRS invariance 3–40880
- chromo string dynamics, recent progress 3–11141
- closed supersymmetric string, infinite set of integrals of motion 3–6016
- CP_2^{N-1} model, string variables, large N limit 3–10993
- Dirac monopoles, field theory 3–16555
- dual string spectrum, Polyakov's quantisation, mode separation 3–26090
- dual topological unitarization approach to single particle spectra 3–21112
- Einstein-Maxwell metrics, solutions to axially symmetric static self-dual SU(3) gauge fields 3–5678
- fermion-boson metamorphosis in a chiral invariant theory 3–11064
- free relativistic closed string, group-theoretical approach to quantisation 3–21111
- fundamental and composite monopoles 3–16547
- gauge-invariant canonical quantisation of EM field and duality transformations 3–577
- general coordinate transformations, realisation in phase space 3–45041
- glueball mass from variant actions in lattice Monte Carlo simulations 3–40872
- grand unification and mirror particles, strings 3–31099
- grand unified theories, baryon number from collapsing cosmic strings 3–21035
- grand unified theories, Z_2 vortex strings, Higgs mechanism, broken gauge theories, galaxies form. 3–11091
- hadronic collisions, two-particle inclusive distrib. in dual parton model 3–21158
- Hamiltonian U(1) lattice gauge theory, weak coupling limit 3–49558
- Ising-gauge Ising-Higgs system in two-dimensions, gauge-invariant correl. functions 3–36146
- lattice gauge theories, Monte Carlo results, lattice QCD, string tensions 3–11041
- lattice gauge theories, plaquette formulation and Bianchi identity 3–16480
- lattice gauge theories, U(1) and SU(2), in 2+1 dimens., string tensions 3–10999
- lattice gauge theory, strong coupling, duality, roughening 3–11045
- lattice theory, approach to non-Abelian antisymmetric tensor gauge field theory 3–40752
- left-right symmetric theories, spontaneous breaking, vacuum domain wall and string formation 3–11084
- Liouville field theory, quantum soln. relevant to string dynamics 3–54845
- magnetic monopoles, dualities and fermions 3–16550
- massive Schwinger model on lattice, background field, chiral symmetry and string tension 3–16479
- mesons, self-consistent mass spectrum 3–624
- minimal surface theory, nonlinear eqns. general solns. 3–45304
- mixed U(1) model; Z(2) strings and monopoles, phase diagram 3–40788
- monopole geometry 3–16532
- monopoles in quantum field theory, monopole meeting, Trieste, Italy (Dec. 1981) 3–16090
- multiple hadron prod., SPS collider energies, pomerons as quark-gluon strings 3–11126
- open fermion string with supersymmetric boundary conditions 3–11159
- particles and geometry 3–10644
- partons in soft-hadronic processes, conf., Erice, Italy (March 1981) 3–5499
- perturbative QCD for hadronic processes at low-p_T 3–21078
- pion correlation functions, hybrid approach, dual topological expanded sheets 3–31188
- point monopoles in quantum field theory 3–16553
- Polyakov's string in arbitrary dimensions, canonical quantisation 3–31185
- Polyakov's string theory and Teichmuller spaces 3–21110
- Polyakov string theory, Liouville eqn. with boundary conditions 3–54896
- QCD, gluon condensation and field strength formulation 3–11122
- QCD and string dynamics, Wilson loops 3–11138
- QCD confinement, DTU model and hadron-nucleus collisions 3–6066
- QCD vacuum, confinement and mag. condensation for $N \to \infty$ 3–16607
- quantised string models, $q\bar{q}$ pot., scatt. amplitudes 3–21109
- quantum field theory of charges and monopoles, infinity subtraction 3–16594
- quantum geometry and strings, quantum Yang-mills Schwinger functions 3–21004
- quantum string theory, Monte Carlo simulation on N×N lattice 3–11160
- random lattice gauge theory, Wilson string tension, strong coupling limit 3–10997
- relativistic membrane, quantum theory, transition amplitude 3–31189
- rotating strings, glueballs and exotic mesons 3–6089
- scattering, charged particles by magnetic strings in gauge fields 3–31052
- Schwinger model, energy eigenvalues and string tension 3–45369
- self-dual multimonopole construction by ADHM method 3–16536
- self-dual SU(3) gauge fields, generating solns. 3–31049
- soft hadron-hadron and hadron-nucleus interactions, dual fragmentation models 3–6084
- spherically symmetric monopoles 3–16542
- spin structures, self-consistent, meson amplitudes, bootstrapping, CPT invariance 3–31184
- string mass structure in high-dimensional unified theory 3–11085
- string model revival 3–40882
- string models at finite temp. and deconfinement, general props. 3–31170
- string tension struct. in mixed action SU(2) gauge theory 3–6090
- strings in gauge theories, electric charge conservation 3–16477
- SU(2) Euclidean lattice gauge theory, finite temp., string tension, strong coupling expansions 3–31187
- SU(N) extended dual string model, relation to massive Yang-Mills theories 3–49554
- superstring theories and their field theory limits 3–40458
- superstring theory, review 3–26052
- supersymmetric Liouville theory, string dynamics 3–40879
- topology of Yang-Mills fields and confinement, strings 3–26005
- two-dimensional SO(1,1)×SO(2) gauge model, classical relativistic string 3–45308
- U(3) four-dimensional lattice gauge theory and Monte Carlo calculations 3–11001
- unified field theory of elementary particles, symp., Munchen, Germany (July 1981) 3–10516
- vector particles dually invariant theory, S-matrix unitarity 3–40792
- Yang-Mills gauge groups for type I superstring, tree-level constraints 3–21005
- Z_n lattice gauge theory with generalised actions, phase structure and duality 3–36147
- e^+e^- annihilation, strings and energy-energy correlation, QCD test 3–11161
- $e^+e^- \to$ hadrons, strong coupling constant, fragmentation/hadronisation models influence 3–54916
- $K^\pm p$, high energy forward elastic scatt. cross section 3–26146
- $\bar{p}p \to h^\pm X$, SPS collider region, string-loop prod. and increase of central plateau 3–40933
- $\bar{p}p \to \bar{\Lambda}\Sigma^0$ differential cross section and polarisation, model fit 3–40919
- $pp(p\bar{p})$, high energy forward elastic scatt. cross sections 3–26146
- $\pi^\pm p$, high energy forward elastic scatt. cross sections 3–26146

ductile-brittle transition
- *see also embrittlement*
- ABS, impact resistance eval. by falling weight method 3–24330
- steel, alloy, high temp. grade, US attenuation rel. to transition temp. *(Czech)* 3–34451
- steel, alloy, secondary hardening, embrittlement and debrittlement, role of carbide-forming elements *(Russian)* 3–39233
- steel, alloy, welded and low-annealed condition, strength and fracture behaviour, plate thickness effect *(German)* 3–4134
- steel, austenitic stainless, creep-fatigue interaction in notched specimens, 500°C *(Japanese)* 3–58211
- steel, C, ferritic-martensitic, tensile fracture 3–4120
- steel, cleavage fracture in upper ductile brittle transition region 3–34430
- steel, controlled rolled, fracture features 3–53201
- steel, ferritic stainless, tensile props. and fracture, influence of heat treatment 3–9155
- steel, fracture toughness of C10, temp., loading rate and grain size influence *(German)* 3–4100

ductile-brittle transition continued

steel, low-alloy, crack resist., temp. depend., fracture features, 20 to −80°C 3−19414
steel, low-C, sample dimens., influence on brittle fracture transition temp., static loading 3−58235
steel, martensitic, tempered, struct. strength 3−53198
steel, Ni, cryogenic, QLT-treated, fracture toughness, effect of microstruct. states 3−34362
steel, Ni-Cr, Charpy impact toughness, effect of heat treatment *(Korean)* 3−53192
steel, Ni-Cr-Mo, Ca, rare earth metal treated, impact energy, effect of sulphide inclusion shape control *(Korean)* 3−29169
steel, Ni-Cr-Mo type 4340, thermomech. treatment effect on notch toughness 3−53098
steel, structural, fracture toughness, temp. and loading rate influence *(German)* 3−4099
steel, temper embrittlement, ductile-brittle transition 3−53171
steel, type A302-B 3−43871
steel sheet, dual phase, material parameters and plastic instability at 78-700K 3−9139
steel welds, type A533-B, annealing response, analytic predictions for RPV 3−43861
Fe-C, US attenuation, microstruct. and ductile to brittle transition temp. 3−58228
Fe-Co, fracture and stress relax., effect of at. ordering *(Russian)* 3−24332
Mo:C monocyrystals, alloy softening, ductile to brittle transition temp. 3−43964

ductile fracture

see also ductile-brittle transition; notch ductility
ABS resins, fracture analysis 3−19410
alloys, model for plane strain ductile fracture toughness 3−53238
crack tip, work for plastic deform. in localised area 3−28035
damage accumulation, void nucleation, growth and linkage 3−58249
elastic-plastic material cylinder, strain softening effect during void growth 3−42148
experimental fracture mechanics, developments and state-of-the-art 3−56496
fibre reinforced plastic and fibre/matrix interfaces, temp. depend. of strength *(Japanese)* 3−58222
high strength materials, elastic-plastic fracture toughness, prediction using mech. model 3−14699
LWR integrity of components, ductile fracture concepts 3−24352
mechanics 3−57024
metals, ductile fracture process, local internal necking mechanism 3−8131
polycarbonate bisphenol, ductile fracture, expt. study of T-criterion 3−32687
polystyrene, high impact, rubber modified, fracture toughness rel. to thickness 3−47936
porous material, ductile shear fracture at free surface, void nucleation influence 3−18379
PVC rigid pipe materials, fracture toughness, time and temp. effects 3−19409
steel, alloy type, fracture kinetics at final deform. stage 3−19412
steel, austenitic stainless, H-assisted cracking, types 304L and 316L, grain size and heat treatment effects 3−19396
steel, constructional, resistant to H embrittlement, alloying additions and struct. 3−53200
steel, Cr-Ni-Mo, ferritic-austenitic, corrosion fatigue in NaCl aq. soln. *(German)* 3−4178
steel, Cu-Cr, weather resist., stress rupture behaviour 3−47961
steel, dual phase, deform. and fracture, metallographic study 3−14667
steel, high strength, prestrain effect at elev. temp. effect on fracture 3−58244
steel, low alloy, mixed mode plane stress ductile fracture 3−29156
steel, low alloy, powder-forged, fracture, effect of inclusions 3−53207
steel, low-alloy, crack resist., temp. depend., fracture features, 20 to −80°C 3−19414
steel, Ni-Cr, embrittlement, role of N 3−24346
steel, structural, crack-tip ductility 3−53222
steel, structural, role of strain and stress state in ductile failure 3−43940
steel, structural, size of plastic region due to blunting of precrack tip, crit. stress intensity factor 3−29233
steel weldments, quenched and tempered, H-induced crack propag. 3−14729
T-criterion applied to ductile fracture 3−27442
uniaxial tension tests, annealing and prestrain effects *(Japanese)* 3−39229
Al-Mg-Si alloy, crack extension micromechanisms, dispersoid effect 3−58205
Al-Mg-Si alloys, ductile fracture toughness, effect of dispersoids 3−34452
Al-Zn-Mg, single crysts., environmentally assisted cracking 3−4105
Pb-Sn (62 wt.%), superplastic eutectic, room temperature ductility 3−39199
Ti, fracture behaviour, effect of temp., interstitial content and grain size 3−9186
Ti-Al(Cr)(V) alloys, comp. and struct. influence on fracture features 3−14735

ductility

see also ductile fracture; notch ductility
alloy steel, type 8Kh4V2S2MF, active impurity effect on mechanical strength and low-cycle fatigue 3−14720
alloy strip, flexible, strength and ductility, influence of electrochem. treatment *(Russian)* 3−53274
creep cavitation, mechanistic models and interrelationships 3−47902
electroplated foils, ductility testing 3−53306
flaws in ductile materials, evaluation by engineering flow assessment procedure 3−6299
fracture, damage accumulation, void nucleation, growth and linkage 3−58249
IN597, Ni-base superalloy, creep cavitation and prestrain-induced particle microcracking 3−53173
mechanical props. at low temp., H_2 effects *(Japanese)* 3−9160
metal, pure, abrasion resistance rel. to speed of abrasion *(French)* 3−29193
metals, fracture criteria under nonisothermal loading, endurance eval. from damage summation 3−14722
single crytals, ductile, shear band bifurcations 3−57015
sintering, liquid-phase and activated, progress and problems 3−58063
steel, abrasion resistance rel. to speed of abrasion *(French)* 3−29193
steel, alloy, heat-resistant, props. rel. to struct. 3−29130

ductility continued

steel, alloy, high strength, neutron irrad., evaluation of thermal fatigue damage 3−19418
steel, austenitic, dispersion hardening, shock loading effect on struct. and props. 3−53074
steel, austenitic and ferritic stainless, irrad., high temp. ductility 3−29159
steel, austenitic stainless, 21Cr-6Ni-9Mn, low temp. deform., struct. changes 3−53146
steel, austenitic stainless, Cr-Ni-Mo-Ti, shaped castings, intermetallic phases struct. and props. 3−29114
steel, austenitic stainless, creep, tensile and fracture props. 3−34395
steel, austenitic stainless, creep resist. reactor irrad. effect 3−43898
steel, austenitic stainless, cyclic recrystallisation after deformation 3−29101
steel, austenitic stainless, He embrittled, modelling high temp. mech props. 3−19398
steel, austenitic stainless, high N, struct. and mech. props., effect of V 3−53093
steel, austenitic stainless, powder, hot ductility and recrystn., effect of oxide inclusions 3−58159
steel, C, -Cu multilayer composite, mech. props. 3−39250
steel, carbon type, successive saturation with Al and B, effects on props. 3−24405
steel, cast, low C, high Mn, for cryogenic use, struct. and props. 3−24343
steel, Cr-Mo, creep cavitation and fracture, segregation effects 3−14717
steel, Cr-Mo-V, creep ductility, effect of P and S 3−34390
steel, Cu-Cr, weather resist., stress rupture behaviour 3−47961
steel, dual phase, ductility, influence of martensitic transform. strain 3−53121
steel, dual-phase, low C, mech. corps. and ageing, effect of Mn content *(Korean)* 3−53089
steel, dual-phase, obtained by various rolling schedules 3−43876
steel, fatigue strength and toughness *(German)* 3−34424
steel, ferritic stainless, tensile props. and fracture, influence of heat treatment 3−9155
steel, high strength, ductility and impact energy, effect of vol. fraction and shape of sulphide inclusions 3−34396
steel, high strength low C type X-65, strain rate and cathodic potential effect on tensile ductility 3−39281
steel, hot ductility invest. by tensile testing of in situ solidified samples 3−58158
steel, HSLA, commercial, strength and ductility, effect of low temps. 3−43911
steel, low C, dual phase, initial struct. effect on mech. props. *(Korean)* 3−4086
steel, low C strip, Al-45 wt.% Zn alloy coated, sandwich-composite, strength and ductility 3−43917
steel, low-alloy, structural, struct. and props. after deform. in intercrit. temp. range 3−34363
steel, martensitic stainless, interrelation of plastic deform. and failure after reduction and drawing 3−19383
steel, medium C, impact toughness in different struct. states, complex dynamic loading effect 3−34475
steel, multiphase stainless, athermal, stress and strain induced transform. strengthening 3−43848
steel, multiphase stainless, athermal, stress and strain-induced transforms. 3−43810
steel, Nb, low-pearlite structural, separation behaviour, coiling temp,. infuence 3−47838
steel, normalised, C-Mn, mech. prop. anisotropy, effect of sulphide inclusion morphology and pearlite bonding 3−53197
steel, nuclear pressure vessel, tensile props. and fracture mode, combined effects of neutron irrad. and H absorpt. 3−18353
steel, plain low C, thermomech. treatment, effect on struct. and mech. props. 3−43874
steel, spring, strength and ductility, heat treatment influence 3−29112
steel, stainless, austenitic, electron irrad., low-temp. ductility, irrad. effect on martensitic transform 3−19384
steel, stainless, Cr-Ni, high-strength, mech. props. at low temps. 3−34406
steel, stainless, forgings of 03Kh12K12D2-VD, mag. and mech. props. 3−29129
steel, strength and ductility, improvement by controlled rolling 3−58147
steel, structural, fracture criteria under nonisothermal loading, endurance eval. from damage summation 3−14722
steel plate, mech. props., control of anisotropy 3−47909
stress-cycle asymmetry factor effect on progress of fatigue and quasistatic fracture under low-cycle loading 3−43949
structural material, recovery of ductile props., inclusion of microplastic inhomogeneity 3−43906
superalloys, Ni-base and Fe-base, room temp. tensile props., influence of carburisation 3−19388
testing of ductility and strength characteristics for material with complex loading paths, R function exam. 3−19489
working material, ductility control using spherical focusing system, localized stress peaks *(German)* 3−7514
Al alloy, high-strength V95 sheet, struct., fracture and mech. props. w.r.t. impurity content 3−58233
Al alloy 2024-T3, reinforced double cantilever beam specimen, ductile, fracture, toughness determ. 3−4237
Al alloy 7475, fine grained, superplastic deform. effect on service props. 3−58182
Al alloy castings, mechanical strength rel. to porosity 3−34376
Al coatings, heat-resistant, cracking conditions 3−58310
Al-Cu-Li-Mn-Cd, alloy 2020, ductility, influence of grain struct. 3−34397
Al-Cu-Mn, large slabs, struct. and mech. props. 3−34404
Al-Cu-Mu-Zr-Fe-Si, struct. and props., Fe and Si additions influence 3−39248
Al-Fe-Mn (2.0, 0.8 wt.%), fine-grained, tensile deform. 3−47911
Al-Ni, eutectic alloy, hardened by dispersion of fine intermetallic particles, influence of alloying elements *(French)* 3−24290
Al-Zn-Mg-Cu, ingot and powder processed, deform. and fracture at elevated temps. 3−53159
Al-Zn-Mg-Cu, pressed semifinished products, softening schedules for ageing 3−34365
Al-Zn-Mg-Cu special purity high-strength alloy for forgings, props. 3−34401
Al-Zn-Mg-transition metal alloy billets, granulated, hot rolling 3−14620
Cu-Al, two-phase materials, strength/ductility-microstruct. relationship 3−43926
Cu-Al(Ga)(Si)(Sn), binary alloys, rapidly quenched, struct. and props. 3−19381

ductility continued
Fe alloys, sintered, plain-mixed, detrimental effect of Mo on ductility 3−19368
Fe, commercial purity, H attack, effect of stress *(Japanese)* 3−9163
Fe-Cr-Mo magnet alloys, semi-hard, glass sealable, for remanent reed contacts 3−33936
Fe-Mn-Ni base maraging alloys, struct. and mech. props. of martensite, effect of thermomech. treatment 3−9093
Fe-Ni-Cr-Ti austenitic alloy for cryogenic use, Ti and ageing effects on strength and ductility *(Japanese)* 3−9161
$Fe_{40}Ni_{40}B_{20}$, amorphous, ductility, neutron-induced changes 3−51668
Ir-W:Th, Th segregation to grain boundaries in alloys containing 5-1000 ppm 3−47837
LiF, ductile, predeformation and fracture, high temp. study 3−37981
Nb_3Sn superconducting wire, multi-filamentary, prep. by 'bronze route', presence of voids 3−18291
Ni based heat resistant alloy Eh1698VD temp. effect on mech. props. 3−47872
Ni, H embrittlement intergranular, influence of S, P and Sb segregation 3−53194
Ni-Al-Mo, γ/γ'-α-Mo, directionally solidified eutectic superalloy, microstruct. and dimens. stability, effect of thermal cycling 3−24272
Ni-Cr-Mo superalloy, mech. props. effect of temp. and stress 3−19387
Ni-Cr-Ti-Mn, precip.-hardening, struct. transforms. 3−34341
Pb-Sn (62 wt.%), superplastic eutectic, room temperature ductility 3−39199
Ti alloy, $\alpha+\beta$ type, heat treatment schedule w.r.t. phase comp. diagram 3−14630
$\alpha+\beta$-Ti alloy, fracture toughness, strength and microstruct. 3−14734
Ti alloys, α and $\alpha+\beta$, fracture-microstruct. relationships 3−9185
$\alpha+\beta$-Ti alloys, nature of α/β interfacial layer, effect of heat treatment 3−14686
Ti alloys, two-phase martensitic, β-solid soln. isothermal decomp. mechanisms 3−29074
Ti alloys 685 and 5524 S, thermal stability *(French)* 3−47951
Ti and alloys, H embrittlement, susceptibility 3−9191
Ti, commercial purity, mech. props., effect of α-phase morphology 3−47946
Ti sheet, commercially pure, deep drawability, texture effects 3−24320
Ti, welded joints, stress concentrator effect on bend ductility 3−14685
α-Ti-Al, age-hardened, ductility, grain size influence 3−24319
β-Ti-Al-Mo-Cr, heat treated, polygonised struct. influence on props. 3−19356
$\alpha+\beta$ Ti-Al-V, mech. props., heat treatment influence 3−24279
Ti-Al-V, SCC, hot salt *(Chinese)* 3−4180
Ti-Al-V (6, 4 wt.%), quenched, fatigue and microstruct. props. 3−53195
Ti-Al-V alloy, cast, heat treatment processes and microstructures, mech. props. 3−24282
Ti-Al-V alloy, impurities effect on working ability 3−24364
Ti-Al-V alloy, VT5L, rare earth additions effect on mech. props. and thermal stability 3−24367
Ti-Al-V-Sn-Zr alloy, high-strength alloy development 3−24249
Ti-Al-Zr-Mo-Si, heat treatment effect on microstruct. and props 3−24281
β-Ti-Mo, age-hardened, ductility, grain size influence 3−24319
β-Ti-Mo alloy, age hardening, deform. and fracture characts. 3−14684
Ti-Mo-V-Cr-Al metastable β system, deep hardenable alloy synthesis, design and props. 3−24250
β-Ti-Mo-V-Fe-Al, metastable, direct ageing for optimum mech. props. 3−19355
β-Ti-Mo-Zr-Al, recrystn., Al effect 3−24264
Ti-Mo(Ni) alloys, beta-type, strength and toughness, heat treatment effects 3−24366
Ti-V (20 wt.%), martensitic transform., stress-induced 3−39133
Ti-V-Al-Sn-Zr, Transage alloys, strain-induced transform. and plasticity 3−39132
β-Ti-Zr-Mo-Sn, heat treated, polygonised struct. influence on props. 3−19356
TiAl, ordered, brittleness, effect of temp. 3−14738
Ti_xC_{1-x} magnetron sputtered films on Mo, ductility, internal stresses and diffusion 3−58179
W alloys, liquid phase sintered heavy metals, fracture props., sintering time effect *(German)* 3−58074
W-Cu-Si(Zr) pseudoalloy, fractographic study, Si and Zr effects 3−24358
Zr-Al solid solutions, short-range order hardening 3−34340
Zr-Nb-Si amorphous alloys, supercond. props. 3−33815

duplicating *see reproduction (copying)*

Duralumin *see aluminium alloys*

dusk *see twilight*

dust
see also cosmic dust
asbestos fibre atm. diffusion rates 3−39873
ash, Mount St. Helens, qualitative and quantitative ceramography 3−9882
atmosphere, deposition rate onto rough and smooth surfaces 3−54075
atmosphere, Sun photometry method for suspended matter determin. 3−59001
atmosphere, volcanic dust stratosphere after El Chichon eruption (Mexico) 3−48616
atmosphere at Beer-Sheva, Israel, chem. composition and origin of particulates 3−59035
atmosphere of Yaounde, Cameroon *(French)* 3−25159
atmospheric contaminants effects on radiation propagation, Electro-Optical Systems Atmospheric Effects Library 3−10056
Cairo storm deposited dust, wind speed rel. to particle size 3−44493
Chicago, Illinois, USA, atmos. suspended particulates 3−53601
clouds, ignition and quenching meas. for C, graphite, coal, Al, Mg, quenching distance formula 3−24536
clouds of C, coal, Mg, Al, flame propagation in zero gravity, burning velocity, thickness, radiation heat loss 3−24537
desert dust prediction model, devel. feasibility, heuristic investigation 3−59024
dusty fluid, Couette flow between two parallel plates 3−42220
dusty-gas layer, flow due to shock wave 3−22493
fabric dust collectors, surface electrostatic fields, reduction of flow resistance and penetration 3−39559
fabric filter, electrostatically augmented, dust movement between electrodes 3−39560
Helwan industrial area, Egypt, dust pollution 3−53602
Helwan Industrial Area, Egypt, pollutant dust deposition and anal. 3−48209

dust continued
imaging by dust rays, a dust ray camera 3−12060
industrial fugitive dust control with electrostatically charged fog devices 3−39556
inhalable particle control using electrostatically charged fog generator 3−39555
lungs of miners, magnetopneumography, mag. field study, lung model 3−39665
Mount St Helens 1980 eruption, air-fall ash layers, grain size distrib./secondary thickening 3−35239
particle size meas. following detonations in clay and sandy soils 3−29966
rotating charged dust, solutions in Newton-Maxwell theory and general relativity 3−20730
Tel-Aviv, Israel, dust physical props. and chem. content 3−25196
tropospheric microwave propagation in sand and dust storms 3−9997
volcanic dust chem. comp., Soufriere-Guadeloupe samples *(French)* 3−4834
volcanic dust plume particle aggregation 3−19973
volcanic plumes, Mount St. Helens, particle size in 0.1-25 μm range 3−15403

dust storms *see storms*

DVM *see digital voltmeters*

dwarf stars
see also white dwarfs
A 0620−00, X-ray nova, dwarf+neutron stars, quiescent state var., visible obs. 3−48952
ADS 11060, G1 V triple star, visual-spectroscopic binary orbit 3−10401
RX Andromedae, dwarf nova, outbursts and supermaximum, comparison with AY Lyrae 3−5300
2C24 of SA 51, a CH subdwarf star 3−10326
QU Carinae, nova-like variable, orbital parameters and spectra 3−10331
cataclysmic binaries evolution, use of red dwarf models 3−25443
cataclysmic variables, outbursts decay time rel. to binary period 3−30360
BV Centauri, dwarf nova, spectroscopic study and model 3−20377
α Centauri A (G2 V), far UV and soft X-ray obs. rel. to evolution of stellar chromospheres and coronae 3−30349
VW Cephei, W Ursae Majoris star, photoelectric UBV obs. and light curves 3−25522
VW Cephei, W Ursae Majoris star, UBVRI photometry 3−10391
CH subdwarf star (2C24 of SA 51) 3−10326
close low mass binary, red dwarf and condensed star, orbit evolution and mass loss 3−5335
β Comae Berenicis, late type dwarf star, outer atmosphere struct. from far UV emission lines obs. 3−5272
composite spectrum stars, line and continuum indices for giants and dwarfs from scanner spectra 3−5348
cool subdwarfs metallicity and galactic struct. 3−35723
CW 1103+254, new cataclysmic binary at high galactic latit., evolutionary status of red companion 3−10366
disc stars, old, Li abundance and implications 3−25426
double stars among closest stars to Sun, review 3−40193
BY Draconis, flare star, photoelectric obs. in (1977) 3−10355
BY Draconis, flare star, photoelectric obs. in (1980) 3−10356
dwarf novae during active phases, UV obs. 3−5307
dwarf novae outburst models and evolutionary status *(German)* 3−35635
YY Eridani, W Ursae Majoris star, UBV obs., January to February 1983, rel. to light curve and epoch of light minimum 3−59396
eruptive variables, statistical model of light curve bursts 3−59346
faint stars towards SGP, luminosity function rel. to galactic struct. and galactic thick disc 3−49026
flare star candidates, photometric obs. and discovery of flare activity on Gliese 487 (dM4e) 3−5308
flare star in Pisces at 23^h29^m, $-03°01'$, revised precise position 3−54384
flare stars, HEAO 1 obs. of quiescent coronal X-ray emission 3−10333
flare stars, statistical anal. of photoelectric obs. 3−59357
flare stars in Orion, approximate positions, photographic magnitudes and flare amplitudes 3−25349
flare stars in Pleiades, photometric obs. (1979 to 1981) 3−20387
galactic bulge dwarfs and subdwarfs, density functions, RGU photometry 3−59466
U Geminorum, dwarf nova, orbit period var. from eclipse timings 3−54404
Gliese 487, dM4e star, discovery of flare activity 3−5308
halo stars, unevolved, Li abundance and implications 3−25426
HD 174429, identification as RS Canum Venaticorum system from BV photometry 3−30425
HD 27130, eclipsing binary dwarf system, giant X-ray flare characts., X-ray obs. 3−35614
χ Herculis, late type dwarf star, outer atmosphere struct. from far UV emission lines obs. 3−5272
AH Herculis, system parameter constraints on dwarf nova 3−40139
HR 7578, possible late-type eclipsing binary and/or BY Draconis variable, ephemeris for eclipses 3−30423
Hyades main sequence dwarfs, duplicity effects, JHK obs. 3−30438
EX Hydrae, eclipsing dwarf nova, orbit and light curve 67 min modulation 3−48925
intermediate/late types, absolute magnitudes and kinematics 3−59336
L726-8 A, M-type dwarf star, obs. of unusual microwave flare with 56-second oscills. 3−35598
EV Lacertae, flare star, detect. of 5-6 day outbursts in flare activity and possible temporal relations between flare events 3−35620
EV Lacertae, flare star, obs. of flares and UBV photometry during quiescent phase during (1975) 3−35619
EV lacertae, flare star, U-band photometric obs. (August 1974) 3−35618
EV Lacertae, flare star, UVBRI obs. out of flare *(Russian)* 3−44768
late type dwarfs, transition regions and coronae models, UV emission anal. 3−54367
late type main sequence stars, theory of turbulent heat transport in rotating convective zones 3−35431
late-type dwarf stars, theoretical models for lower main-sequence stars 3−54363
AD Leonis, flare star, photoelectric UBV obs. during (1982) 3−15924
lower main sequence stars, models of differential rotation 3−54347
AY Lyrae, dwarf nova, outbursts and supermaximum, comparison with RX Andromedae 3−5300
M-type dwarf stars, obs. in VRI colours 3−20368
NGC 6171 field, RGU three-colour photometry *(German)* 3−5275
CN Orionis, photometric obs. of dwarf nova 3−20382
RU Pegasi, U Gem star with faint companion, obs. summary (1970 to 1979) 3−54391

dwarf stars continued
Population II dwarfs, N overabundance from NH spectra anal. 3−25429
Population II main sequence, uvby photometry 3−54256
Praesepe, BVRI photometry of low-mass stars 3−10411
Praesepe, MK spectral classification of lower main sequence stars 3−59412
VV Puppis, AM Herculis star, ellipsoidal light curve obs. at 1.2 μm 3−15954
red and black dwarfs luminosity function 3−10311
red dwarfs in solar neighbourhood, space densities and kinematics, visible obs. 3−5295
RGU photometry of main-sequence stars in southern starfield near galactic centre (SA 158) 3−44734
solar neighbourhood stars, vel. ellipsoid depend. on spectral type/metal abundance *(Russian)* 3−44742
solar-type stars, flare detect. technique using Ca II k-line obs. 3−10293
stellar winds, theory of closed and open mag. fields 3−54346
subdwarf stars, high velocity, kinematics rel. to velocity of escape from Galaxy in solar neighbourhood 3−16001
V471 Tauri, red dwarf-white dwarf binary, uvby obs. (October 1981) 3−44794
V471 Tauri, RS CVn star, orbit variability, white dwarf spectrum and red dwarf chromospheric activity 3−40186
SU Ursae Majoris, dwarf nova, 4750 MHz emission detection 3−54392
W Ursae Majoris, IUE obs. 3−40200
XY Ursae Majoris, RS CVn star, obs. of intense optical flare 3−5352
TY Ursae Majoris, W Ursaw Majoris star, seasonal light curves obs. and solns. 3−40181
SU Ursae Majoris stars, outburst models *(German)* 3−35635
W Ursae Majoris stars, recent photometric observational evidence (1978 to 1981) 3−40203
very low mass stars evolution to black dwarfs, mass estimates 3−48904
ER Vulpeculae, W Ursae Majoris star, UBVR photometry during 1982 rel. to light curve vars. 3−15951
W92, fast-rotating late-type star in NGC 2264, UBVRI photometry and spectrum 3−59340

dye lasers
active-passively mode-locked dye laser for diagnosis of laser-produced plasma *(Chinese)* 3−12170
benzoxazole-diphenylene β-methylumbelliferone, lasing by energy transfer *(Chinese)* 3−22048
bifluorophoric laser dyes, intramol. energy transfer processes 3−12137
binary donor-acceptor dye mixture laser, pumped by laser pulses in a nonselective resonator 3−32354
binary dye mixture laser, two-freq. generation regime 3−12140
CARS spectrometer using two synchronously mode-locked CW dye lasers 3−30937
coaxial flashlamp pumped, damage thresholds of UV doubling crystals 3−22142
colliding pulse mode locking in thin saturable absorber 3−27109
conference, laser science, Ankwei, China (May 1982) *(Chinese)* 3−5
coumarin 110 laser, flashlamp pumped, passive mode-locking using the saturable absorber DASBT 3−27116
coumarin 153 laser, flashlamp pumped, passive mode-locking using the saturable absorber DASBT 3−27116
coumarin 1 dye laser, chem. stabilisation with radical chain transfer agents 3−37014
coumarin 460-rhodamine 6G white-light flashlamp-pumped laser for photography through endoscopes 3−50675
coumarin 522 flashlamp pumped, passive mode-locking 3−27099
coumarin 6 passively mode-locked laser, tunable picosec. pulse generation 3−22049
coumarin 6 vapour laser with 12% efficiency 3−27034
coumarin dye lasers, DABCO stabilisation 3−22050
coumarin laser dye stimulated emission obs. using picosec. time-resolved photoacoustic spectroscopy 3−36100
Coumarin laser passive mode-locking from 505-520 nm using DOCI saturable absorber 3−41821
coumarins, lasing action solvent effect on quantum fluoresc. obs. 3−27033
CW, single-mode; atomic-beam set-up for 0.5 MHz absolute frequency stabilisation 3−12199
CW, single-mode, nozzle design yielding interferometrically flat fluid jets 3−27082
CW laser, continuous freq. tuning using birefr. filter 3−27219
CW laser, passively and synchronously mode-locked, pulse substructure 3−27096
CW mode locked linear or ring lasers, femtosecond pulses, tunability at GW level 3−27103
CW synchronously pumped laser theory 3−50655
developments in non-semiconductor lasers, review *(Japanese)* 3−22101
DFB, higher-order, and light generation 3−27035
DFB laser, pulse duration under single pulse conditions 3−27038
DFB laser tunable in broad spectral range, picosecond pulse prod. 3−27039
diphenylfuran 2-(1-naphthyl)-5-phenyloxazole energy transfer dye laser in near UV region 3−1663
distributed negative feedback and refl. lasers based on cholesteric liq. crysts. *(Russian)* 3−37079
distributed-feedback dye laser, single-mode generation with 0.01 cm^{-1} output line width 3−37018
energy transfer dye lasers in spectral range near UV to violet 3−37019
excimer-pumped and YAG-pumped, comparison 3−7013
flash lamp pumped laser, energy transfer characts. in PTM operation *(Chinese)* 3−37015
frequency doubling in external ring cavity, CW single mode UV radiation generation *(German)* 3−1703
Gaussian beams in a smooth transition between two square-law media 3−21986
intracavity pulse compression with glass for generating pulses shorter than 60 fsec. 3−27101
lifetime and degradation eqns., laser dye stability 3−12138
mode structure analysis of CW dye laser, appls. to CW intracavity spectroscopy 3−1624
mode-locked cavity dumped laser meas. using 400 kHz triggered streak camera 3−50690
modified Hansch-type laser output, XeCl- and N_2-laser pumped, streak-camera anal. 3−27118
nanosecond duration pulse source photon-counting statistics 3−12262
operating principles and appls. *(French)* 3−1648

dye lasers continued
oxazine 1 CW mode-locked laser pulses, real time monitoring using rapid-scanning autocorrelator 3−54764
oxazine 750 perchlorate tunable picosec. ring laser, near IR, synchronously pumped 3−41820
passively mode locked, for accurate range gating technique 3−7220
passively mode locked, subpicosec. pulse shape meas. and modelling, saturation and spatial hole burning 3−37095
picosecond pulse generation using synchronously pumped dye lasers 3−1679
plasma diagnostics by laser beam, ion velocity distrib. meas. 3−51383
PMMA element, dye activated, dynamic DFB 3−56192
polymethine cyanine IR dyes for synchronously pumped picosecond lasers 3−27037
polymethine IR dye stability under excimer-laser pumping 3−50654
POPOP lasers, singlet-triplet conversion 3−41819
POPOP-PMMA doped laser *(Chinese)* 3−41818
principles, introductory, book 3−45
pulse generation from piceosecond to femtosecond time regime 3−27102
pulsed, tunable ultrashort pulses by synchronous pumping by Nd glass laser 3−32353
pulsed dye laser compound cavity tuning with grazing-incidence grating *(Chinese)* 3−41897
pulsed dye laser generation with laser pumping 3−46203
pulsed laser spectroscopy using N_2 pumped dye laser 3−5872
pulsed-type, passive cavity line width and selected frequency *(Chinese)* 3−6962
pumping, by segmented coaxial discharge *(Korean)* 3−37067
pquaterphenyl vapour laser with quantum efficiency of 2%, hard UV pumping 3−56191
review 3−17492
rhodamine 110 ring laser and Ar ion laser, intracavity sum freq. mixing as tunable CW UV source 3−1698
rhodamine 3B solution, stimulated T-T absorpt. charact. meas. 3−1374
rhodamine 590 synchronously pumped cavity dumped laser using a high repetition rate amplifier 3−1623
rhodamine 6G, injection locked, four-mirror ring config. injected by pulsed Xe-ion laser 3−32376
rhodamine 6G grazing-incidence laser with an intracavity lens 3−41822
rhodamine 6G laser, double mode-locked, pumped by Ar^+ laser, passive mode locked 3−22136
rhodamine 6G laser, SRJ-II flashlamp pumped *(Chinese)* 3−41865
rhodamine 6G laser radiation second harmonic efficiency and generation energy increase, lidar ozonometry appls. 3−48702
rhodamine 6G laser using Nd^{3+}:YAG CW laser pumping with intracavity SHG in $LiIO_3$ cryst. 3−37017
rhodamine 6G lasing efficiency, H_2O-ethanol solns. effect 3−17491
rhodamine 6G ring lasers, single and double mode-locked 3−27108
rhodamine 6G single-mode ring laser, rapid extended range tuning 3−46246
rhodamine 6G-Nile blue mixture laser, pumped by laser pulses in a non-selective resonator 3−32354
rhodamine 6G-oxazine-4-perchlorate, binary mixtures, energy transfer, fluoresc. study, appl. to lasers 3−26785
rhodamine B-nile-blue-A-perchlorate, binary mixtures, energy transfer, fluoresc. study, appl. to lasers 3−26785
ring dye laser, synchronous pumping 3−7022
ring laser, backreflection-induced oscills., crit. refl. coeff. meas., modulated light appl. 3−22131
ring laser, bistability and self-sustained intensity oscill. with optical backscatt. far from thermal equilib. 3−6961
ring laser, CW, colliding pulse mode locking, transient absorber gratings influence, theory 3−41888
ring laser, tunable, freq. locking to absorpt. lines by wave competition 3−12184
ring laser in colliding pulse mode-locking regime with down-chirp 3−22051
safe operation rules of lasers *(Chinese)* 3−37058
scalar wave equation with focused Gaussian gain, exact soln. 3−26993
single mode operation of tunable CW laser, velocity selective optical pumping appl. 3−7021
solid state active media based on dyes 3−46204
spectroscopic application of tunable CW dye laser 3−16427
spectroscopic laser sources, survey, for visible and UV ranges 3−10910
stimulated-Raman conversion of continuously tunable light into the near- and mid-IR regions, in H_2 3−41928
styryl-10 CW dye laser, Ar ion laser pumped, emission obs. up to 9500 Å 3−22052
subpicosecond pulse synthesis and holographic visualisation *(French)* 3−50669
subsecond synchronously mode-locked system, appls. to electron trapping in amorphous media 3−7033
synchronously pumped dye lasers, active mode stabilisation 3−27107
time resolved spectroscopy, picosecond and femtosecond pulse generation by passive mode-locking 3−5866
TOPOT lasers, singlet-triplet conversion 3−41819
tunable, simple alignment procedure for three-plate birefr. filter assembly 3−46228
tunable dye laser, microprocessor controlled opto-galvanic wavelength determ. 3−46251
tuning range extension using internal interferometers 3−41886
two frequency self-injected flashlamp pumped laser for nonlinear optics expts. 3−37065
ultrashort pulse dye amplifier, N_2-laser pumped 3−37016
UV dye amplifier, XeCl excimer pumped, subnsec. N_2 laser pulse amplification 3−22047
UV picosecond high power laser pulse generation for laser-prod. plasma diagnosis *(Chinese)* 3−37060
VUV tunable coherent radiation generation by freq. tripling and mixing *(German)* 3−1704
waveguide, inhomogenous, with adjacent rhodamine 6G active medium, mode amplification 3−27036
Cu vapour laser pumped dye laser system for laser isotope separation 3−1500
Hg-Xe pulsed lamp emission with short lived discharge for dye laser pumping 3−7105

dye penetrant tests *see nondestructive testing*
dynamic nuclear polarisation
see also CIDNP; Overhauser effect; solid effect
antiferromagnets, magnetic resonance electrical excitation and hypersound scatt. by spin waves 3—57785
$Ca(OH)_2$, transverse mag. ordering of proton spins 3—3448
dynamic programming
see also integer programming
measurement, optimal strategy, for linear estimation case, dynamic programming determ. 3—5761
PWR, optimal control for extending load following capability 3—6393
speaker independent connected word recognition using syntax-directed dynamic programming algorithm 3—32567
speech recognition, Trapezoidal Dynamic Programming Matching 3—12442
dynamic response
flat-plate solar collector, reduced order dynamic model 3—53575
heat exchangers, dynamic behaviour *(German)* 3—37334
ocean wave gauges, thin-wire, dynamic response 3—15636
pressure transducer, dynamic, sensing line configurations 3—20847
dynamic stability *see stability*
dynamic testing
see also fatigue testing
automatic measurement of internal friction and Young's modulus, kHz range unit 3—58333
composite material, flaw growth imaging by computerised US scanning system 3—19505
holographic interferometric apparatus for object dynamic deform. and anal. 3—4248
metals, complete tensile diagrams plotting 3—14818
metals, cyclic strain graphs, method for obtaining at different temps. 3—9279
metals, tube, impact strength testing, stored energy effect 3—9278
misalignment in dynamic tension test, anal. of effect 3—14830
Neitron-11, apparatus for studying reactor radiation effect on creep and strength of structural materials 3—45600
NMR tensile apparatus for dynamical in situ meas. 3—49424
steel, embrittlement, radiation induced, Charpy impact data evaluation and uncertainty estimates 3—55172
steel, tube, impact strength testing, stored energy effect 3—9278
tensile, at high strain rates 3—14803
Al-Mg alloy, dynamic tests by Kolsky method, comparison with num. results 3—19486
Al-Mg alloy AMg6, complete tensile diagrams plotting 3—14818
C fibre reinforced epoxy resin, dynamic shear props., temp. depend. 3—58149
Mg alloy MA18, complete tensile diagrams plotting 3—14818
WC-Co, diamond filled composites, cracking resist. determ. 3—39321
WC-Co, sintered, compressive strength, effects of press. and temp. 3—9267
dynamical symmetry
Abelian gauge theory, gauge dynamical symmetry breaking in 2-D 3—31089
conformal point transformations, invariance conditions and Lie derivatives 3—20991
conserved Noether currents and path integrals for dynamical groups 3—26015
flavour violation, scalar particles and leptoquarks 3—11081
gauge theories of weak interactions, review 3—6052
group theory of unified gauge models and tumbling 3—6035
massless $SU(2) \times U(1)$ theory, dynamical symmetry breaking study 3—40833
second-order differential eqns., polynomial first integrals 3—30998
spontaneously broken and dynamically enhanced global and local symmetries 3—11078
$SU(2) \times U(1)$ Weinberg-Salam symmetry dynamical breaking by colour forces 3—45322
$SU(3)_{HC} \times SU(6)_L \times SU(6)_R$ model, composite quarks and leptons for restricted anomaly matching 3—620
SU(6) quadrupole phonon model and particle-quadrupole phonon coupling model dynamical symmetries and supersymmetries 3—21237
supersymmetry breaking 3—40801
technicolor, extended-technicolor and tumbling 3—16600
unified field theory of elementary particles, symp., Munchen, Germany (July 1981) 3—10516
dynamics
see also ballistics; fluid dynamics; force; friction; haemodynamics; impact (mechanical); kinematics; resonance; rotating bodies; rotation; vibrating bodies; vibrations
axisymmetric gravitational compression of a body, exact solns. 3—5597
elliptical galaxies, energy distrib. function for one-dimensional gravit. system 3—59479
elliptical galaxies, intrinsic principal axes twists in N-body models 3—59480
elliptical galaxies, rel. dispersion profiles and rot. curves rel. to dynamics 3—54514
spherical galaxies, dynamics of models with anisotropic rel. dispersions 3—54504
galaxies, long term evolution of rotating stellar bars 3—49006
galaxies active nuclei, dynamics and fuelling of massive black hole 3—54513
galaxy clusters, dynamical evolution rel. to radio source morphology 3—59489
rich galaxy clusters, relaxation and tidal stripping rel. to evolution of mass distrib. 3—30510
interstellar gas in triaxial S0 galaxies, theory of stable polar gas discs 3—35715
interstellar medium, vel. fluctuations due to gravit. interaction with system of stars 3—54485
M31, dynamical model of central region rel. to luminosity profile from CCD photometry 3—54518
mechanical system dynamics, generalised input appl. 3—35836
mechanical system dynamics, second order design sensitivity anal. 3—16121
mechanical systems in resisting media, stability of stationary motions *(Russian)* 3—7403
multibody, constraint eqns. 3—5600
multifrequency excitation of self-excited two degree-of-freedom system, response calc. 3—10559
multirigid-body system, dynamic analysis from Gauss principle 3—10564
dynamics continued
NGC 584, 50 galaxy, rel. dispersion profile and rot. curve rel. to dynamics of galactic bulge 3—54514
Painleve conjecture generalisation, 2-dimens. integrable Hamiltonian systems 3—20617
plate, annular plastic, residual deflections, transverse shear effect 3—7450
relativistic, with world-line condition and separability 3—49156
rigid body dynamics, microcomputer animation instruction 3—40357
sea ice, motion in response to geostrophic winds 3—15463
spatial four-bar mechanisms, dynamical behaviour, eqns. of motion *(German)* 3—7396
stellar dynamics, nature of stellar orbits in realistic bar potentials 3—54522
stellar dynamics, velocity of escape from Galaxy in solar neighbourhood 3—16001
tape unwinding while rolling down incline, dynamics 3—49107
two-body problem, three-dimens., eqns. of motion 3—5601
W3(OH), maser region dynamics rel. to temporal variability, line width and mag. field 3—16026

dynamometers
see also force measurement
interpolability deviation of dynamometer charact. *(Rumanian)* 3—35987
multicomponent 3—20849
piezoelectric shank type three component dynamometer *(Chinese)* 3—20848
quadruped postural responses study system using multiple plate dynamometer and electromyograph 3—15296
strain gauge, multi-purpose, multicomponent design 3—40591
torque dynamometers up to 50 Nm, static calibration devices *(Rumanian)* 3—40594

dysprosium
see also nuclei with ......
isotopes, changes of charge radii and hyperfine interactions 3—11746
magnetic susceptibility, temp. modulation and temp. hysteresis studies 3—52425
monocrystalline, mag. props. near Neel point 3—28533
Neel transition, second-order character 3—52464
optical props., polarimetric method *(Russian)* 3—28873
thermodynamic props., 7-300K 3—57104
thermomagnetic energy conversion 3—34731
$CXaSO_4$:Dy Teflon TLD, low dose meas., N_2 flushing during readout 3—9748
CaF_2:Dy TLD, UV and gamma ray sensitivity after temp. treatment, thermolum., X-ra and ESCA anal. 3—26498
$CaF_2:Dy^{3+}$, vacuum UV excitation spectra of luminescence 3—14320
$CaSO_4$:Dy, TLD, nonlinearity mechanism anal. 3—24890
$CaSO_4$:Dy, thermolum. spectra and optical absorption 3—19209
$CaSO_4$:Dy phosphors, glow curve characts., dosimetry appl. 3—43641
$CaSO_4$:Dy TLD, response as a function of storage conditions 3—45718
$CaSO_4$:Dy Teflon discs based TLD badge, X- and γ-ray response 3—6452
$CaSO_4$:Dy Teflon TLD, sensitised, for in-phantom dosimetry for ^{60}Co γ-irrad. 3—9750
$CaSO_4$:Dy Teflon TLD disk dosimeters, energy response to photons and electrons 3—41339
Dy I, elec. dipole transitions, Coulomb approx. oscillator strengths 3—21703
^{164}Dy metal target bonding for ^{163}Ho prod. 3—41374
LaSb:Dy, ESR and magnetisation, ion-lattice interaction contrib. 3—3524
LaSb:Dy single cryst., Jahn-Teller stress effects on magnetization and ESR props. 3—3134
Ni-Dy dil. alloy film, surface layers formed by Dy ion implantation, mag. props. 3—57717
$RPO_4:Dy^{3+}$, R=Sc, Y, Lu, hyperfine parameters EPR study 3—33975

dysprosium alloys
Dy-Cu, phase diagram study *(Chinese)* 3—4004
Dy-Cu system, intermediate phase form., cryst. struct. and phase diagrams 3—22853
Dy-Cu(Au)(Ni), amorphous, random anisotropy effects, sp. ht. and spontaneous magnetisation study 3—23623
Dy-Fe amorphous film, magnetostriction meas. by cantilever capacitance method 3—14101
$DyAl_2$, electron density of states at Fermi level 3—13704
$DyAl_2$, magnetisation and magnetocryst. anisotropy 3—3488
$Dy(Co, Ni)_2$, intrinsic mag. aftereffect mechanism 3—52557
$DyCo_5$, spin reorientation and spontaneous magnetisation 3—52494
$Dy_{57}Co_{43}$, amorphous, mag. props. 3—57701
$DyCu_2$, Neel temp., magnetisation and RKKY model 3—52481
$Dy(Fe, Rh)_2$, hyperfine interactions, Mossbauer study 3—19022
Dy_2Fe_{17}, mag. props., ^{161}Dy and ^{57}Fe Mossbauer spectroscopy 3—14171
$Dy_{57}Fe_{43}$, amorphous, mag. props. 3—57701
$Dy(Fe_{1-x}Al_x)_2$ Laves phases, mag. struct. and moments, neutron diffr. study 3—52375
$DyFe_5Al_7$, unusual ferrimagnetism, magnetisation and mag. hysteresis meas. 3—14073
$DyGa_2Ni$ and $DyGa_4Ni$, synthesis and struct. 3—37857
Dy_5Ir_3, cryst. struct., X-ray diffr. study 3—2470
DyM_2Si_2, M=Mn, Fe, Co, Ni, Cu, hyperfine interactions of ^{161}Dy and ^{57}Fe 3—13778
$DyMn_2$, Laves phase, mag. characts. 3—47480
Dy_6Mn_{23} and $Dy_6Mn_{23}H_x$, magnetisation and Mossbauer study 3—28528
DyNi, electrical resistivity and magnetic transitions, expt. study 3—18685
$Dy_2Ni_{17-x}Al_x$, double demagnetisation and ferrimag. order-order transition 3—52535
$DyPd_2Si_2$, magnetic susceptibility meas. 3—8648
Dy_2Pt, mag. props. study 3—57616
Dy_5Rh_3, cryst. struct., X-ray diffr. study 3—2470
$Dy_{0.73}Tb_{0.27}Fe_{1.95}$, mag. domain struct. and defects, X-ray topography obs. 3—18931
$Dy_{1-x}Y_xAl_2$, Mossbauer study of mag. hyperfine fields 3—57820
$Dy_xY_{1-x}Cu_2$, Neel temp., magnetisation and RKKY model 3—52481
DyZn, indirect multipolar interactions, ab initio calc. 3—52099
Fe-Dy dil. alloy film, struct. and props. after Dy ion implantation 3—57716
$(Fe_{82}B_{18})_{90}Dy_5La_5$, amorphous, low field mag. props. 3—28545
$Gd_{0.5}Dy_{0.5}Al_2$, electron density of states at Fermi level 3—13704
$Gd_{1-x}Dy_xAl_2$, mag. susceptibility and elec. resist., random cryst. elec. field effect 3—38376
$(La,Dy)B_6$, spin glass behaviour, elec. resist. and thermoelec. power meas. 3—43379

dysprosium alloys continued
La-Al-Dy, crystal field parameters from neutron spectra 3−13780
$Tb_{0.27}Dy_{0.73}Fe_2$, magnetisation process and domain struct., X-ray topography study 3−3480
dysprosium compounds
see also dysprosium alloys
DyAG, metamagnet, high resolution magneto-optical meas., mag. dipole effects 3−57892
$Dy_3Al_5O_{12}$ antiferromagnetic refrigerants, characts. below 20K calc. and comparison with expts. 3−33898
$DyCl_3$, polymorphism, phase equilib. and cryst. growth meas. 3−18274
$DyCo_2Si_2$, antiferromag. struct. and Neel temp., neutron diffr. and Mossbauer studies 3−38594
$DyCu_2Si_2$, antiferromag. struct. and Neel temp., neutron diffr. and Mossbauer studies 3−38594
$DyFe_{1-x}Mn_xO_3$, x=0.05-0.335, mag. props. and spin reorientation transitions, Mn^{3+} Jahn-Teller ion effect 3−43371
$DyFeO_3$, mag. field induced transitions at low temp. 3−57607
$DyFeO_3$ orthoferrite, spin-reorientation, magnon light scatt. study 3−23924
$DyFe_5O_{12}$, magnetisation reorientation, torque meas. 3−57583
$Dy_3Fe_5O_{12}$ garnet, Faraday rotation and magnetisation 3−57882
$Dy_xGd_{1-x}VO_4$, phase transitions, crystallographic and magnetic 3−8192
DyIG, linear mag. birefr., phenomenological anal. 3−28845
DyIG, linear mag. birefringence, phenomenological anal. 3−57895
$Dy(OH)_3$, mag., optical, thermal and crystal field props. 3−33867
$Dy_2O_2SO_4$, mag. phase diagram, mag. susceptibility study 3−14051
$Dy(PO_3)_3$, Raman spectra 3−34099
$DyPO_4$, nucl. polarisation obs., neutron scatt. expts. 3−57324
$Dy(ReO_4)_3$, vibr. interaction, low temp. investig. 3−52790
$DyRh_4B_4$, elec. and mag. props. from cryst. field parameters 3−28311
Dy_2S_3, bulk photovoltaic effect and photocond. 3−18746
Dy_2S_3, electrooptic effect meas. 3−14259
Dy_5Sb_3, magnetic susceptibility, 77-800K 3−8654
Dy_xSe_y, paramag. susceptibility, exchange interaction and mag. moment 3−52346
$Dy_2(SeO_4)_3$, selenite vibr. and cryst. field effects Raman and IR study 3−3703
$Dy_2Ti_2O_7$ antiferromagnetic refrigerants, characts. below 20K calc. and comparison with expts. 3−33898
$Dy_xU_ySe_z$, paramag. susceptibility, exchange interaction and mag. moment 3−52346
$DyVO_4$, antiferromagnetic phases, NMR study 3−3442
$DyVO_4$, antiferromagnetic, ^{51}V NMR 3−52664
$DyVO_4$-$Gd_3Ga_5O_{12}$, composite material to achieve mag. refrigeration using cycle with internal heat transfer 3−8670
$GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundary geometry 3−8784
$GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundaries, translation vector 3−8785
$KDy(WO_4)_2$, phase transition study by Raman scatt. method *(Russian)* 3−19118
$La_{1-x}Dy_xTaO_4$, solid solns., formula vol., X-ray study 3−22869
$Na_5DySi_4O_{12}$, cryst. struct. and ionic cond. 3−18279
$Sr_2Dy_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
$(YEuDy)_3(FeGa)_5O_{12}$ bubble film, domain walls, saturation vel. 3−43418
E-layer *see E-region*
E-region
see also sporadic-E layer
auroral radar experiments, interpretation using kinetic theory of two-stream instability 3−48763
bay disturbance at low-latitude 21 March 1981 obs. 3−48736
characteristics from ionisation due to solar X-rays/UV emission at different latitudes 3−15693
drifts observed at Sibizmir, USSR, solar activity depend. 3−48733
electric current, correl. with geomag. daily var. at equatorial latits. 3−35354
electrodynamic state of circumterraneous space and neutral gas motion *(Russian)* 3−54185
electrodynamics of diffuse aurora region 3−5019
westward electrojet rel. to FAC and diffused auroral precipitation 3−35348
enhanced conductivity band, effect on F-region 3−15710
gradient-drift instability of nighttime midlatitude E_s-layer 3−20172
heating by high-power microwave beam, simulation using HF ionospheric modification expts. 3−10137
heating of auroral ionosphere by LF/MF transmissions 3−10128
ion velocity distrib. function for auroral zone 3−48760
ion velocity distrib. function model for auroral zone 3−20177
midlatitude sporadic-E layer occurrence rel. to ion drift data 3−54193
plasma electric field, recombination instability 3−5014
polar cap O I 5577 Å emission temporal var. and stratospheric warming 3−5008
radiocommunication at VHF using meteor produced ionisation *(German)* 3−54184
radiowave heating expt. (UHF) causing electron temp. increase 3−5022
riometery method sensitive to E-region irregularities 3−10118
solar eclipse caused magnetic field variations and ionospheric currents 3−59166
solar eclipse effects on 2.2 MHz radio absorpt. and phase height 3−59155
solar eclipse time negative ion, electron density and electron loss coeffs. 3−59171
VHF scattering irregularities of midday upper E-region 3−15735
VLF Fresnel-type fadings observed at Delhi 3−48732
ear
see also hearing
acoustic distortion products in ear canals of chinchillas with normal or damaged ears 3−9612
acoustic impedance meas. using impedance measuring tube and digital signal processing *(Japanese)* 3−37302
acoustical energy reflectance at eardrum estimation from ear canal pressure meas. 3−9611
ageing ears, acoustic reflex threshold 3−39653
canals, human, area function determ. by sound press. meas. 3−39651
cochlea active model, power amplification, short wave case 3−53684
cochlea filtering, detection and compression, computational model 3−15114
cochlear active and passive models 3−53683
cochlear drainage and basilar membrane tuning 3−9615
ear continued
cochlear frequency map, cat, auditory nerve fibre labelling, characteristic freq. 3−19727
cochlear inner hair cell, neurotransmitter release, multiple reservoir model 3−19726
cochlear mechanics, higher-order differential eqns. 3−19725
cochlear mechanics, sharpening mechanism 3−53682
cochlear microphonic responses to acoustic clicks, guinea pig 3−53686
cochlear nonlinear transmission-line model compatible with combination tone psychophysics 3−9606
cochlear outer hair cells, intracellular recordings 3−29560
direction fixing function *(Japanese)* 3−44255
eardrum impedance of human ears, meas. method 3−39752
echolocation by bats, resolution enhancement due to tragus 3−19728
electrocochleography, bone-conducted, reliability 3−29775
electronic ear design, cochlear microphonics changes rel. to white noise and NaCl crystal appl. in guinea pigs' ears *(Korean)* 3−24737
evoked acoustic emissions from the human ear, findings in neonates 3−53698
frequency selectivity meas. psycho-acoustical tuning curves determ. *(German, English)* 3−58757
hair cell, nonlinear elec. circuit model *(Japanese)* 3−4513
inner ear, dose rate during Mossbauer expts. 3−58681
inner ear, hair cells, hearing and balance medication 3−44254
mechanical to neural transduction, model, interaction phenomena 3−19716
microphonic cochlear potential of guinea pig as function of expt. conditions *(French)* 3−53681
middle ear, electronic model 3−53695
middle ear research, use of SQUID magnetometer 3−9797
nerve fibres, auditory, relation between discharges and whole-nerve response, empirical model 3−53685
PARCOR characterization of ear for hearing aids 3−29787
pinna impulse responses, 3-D sound source localisation 3−39659
primary auditory fibre responses to brief tone bursts 3−9613
psychophysical timing curves, normal and pathological ears 3−39656
skin, mouse, long-term thermal sensitivity after previous X-irrad. 3−29501
sound pressure measurements in the aided ear, probe placement 3−29680
stapedius reflex, human, time course in normal-hearing subjects 3−29565
tympanogram freq. characts., human 3−9605
ear microphones *see microphones*
earphones
see also hearing aids; telephone sets
free-field equaliser for TDH 39 earphone 3−37312
interaural attenuation factors meas., 8 to 20 MHz 3−9616
piezoelectric earphones for artefact-free recording of auditory brainstem responses 3−53739
Earth
see also Earth composition; Earth orbit; Earth rotation; Earth structure; earthquakes; geochemistry; geochronology; geodesy; geomagnetic variations; geomagnetism; terrestrial atmosphere; terrestrial electricity; terrestrial heat
asteroid/comet collisions 3−25368
climate change, quasi-periodic, on Mars and Earth, conference, Moffett Field, California (1981 February 24 to 26) 3−13
dynamical ellipticity, revised value 3−39768
evolution of crust, mantle and core 3−48519
figure perturbations in Moon libration 3−30254
formation of early Earth, also causing Moon to break away 3−30249
gravity model using Lageos satellite ranging obs. 3−29814
IR radiation pressure, rel. to perturbations in noda 3−35403
near Earth orbits radiation effects and erosion of spacecraft dielec. materials 3−15819
origin of Earth-Moon system, implications of partitioning of P between metal and silicate phases 3−48514
planet formation process and early thermal profile 3−40062
primary geodynamical parameters for Standard Earth Model, updated values 3−39769
radiation entropies in beam-splitting and application to solar radiation 3−32273
radiation entropies in diffuse reflection and scattering and application to solar radiation 3−32272
solar wind flow around planet, gas dynamic theory 3−39981
earth (soil) *see soil*
Earth age *see geochronology*
Earth atmosphere *see terrestrial atmosphere*
Earth composition
see also Earth structure
Alpine Fault zone, New Zealand, Fe-Mg partitioning between biotite and garnet rel. to shear heating 3−35132
N Atlantic, DSDP Leg 49 basalt evidence of mantle heterogeneity 3−58926
N Atlantic Ocean basalts, isotope geochemical anal., implications for mantle evolution 3−58929
Mid-Atlantic Ridge, comp. and latitude of erupted basaltic glass 3−58964
W Australia, enriched mantle origin of kimberlites and lamproites 3−58916
Chichonal volcano, Chiepas, Mexico, March-April 1982 eruption *(French)* 3−29881
lower continental crust, implications of isotopic and geochemical studies of nodules in kimberlite 3−19968
continental crust growth, evolution and comp., comparative tectonic approach 3−44417
core formation, scenario based on X-ray diffr. of M-H system (M=Fe, Ti, V, Zr) *(Japanese)* 3−29876
inner-outer core struct. due to radioactive dioxides distrib. 3−4818
cosmogeochemical distribution of elements, classification rel. to periodic system 3−4833
crust/mantle composition and devel. *(German)* 3−29866
elemental distrib. in IRDP basalts from E Iceland 3−19957
ferrobasalts from Spiess Ridge segment of SW Indian Ridge, comp. and petrogenesis 3−9906
Fongen-Hyllingen basic intrusion, Norway, discordant layering relations 3−4860
Iceland, $^{18}O/^{16}O$ from deep holes in basalts 3−19959
igneous rocks composition, role of water in magma form. *(Russian)* 3−15441
Indian crustal material, U, Th and K abundances determ. 3−48517

Earth composition continued
iodobromide metalliferous solutions (fluid ores) of Byelorussia, comp. and appls. *(Russian)* 3—39847
Koloula Igneous Complex, Guadalcanal, Pliocene-Pleistocene oceanic-arc plutonic complex, geochemistry 3—19967
lavas of Vulsinian District, Central Italy, O and Sr isotope study rel. to mantle metasomatism 3—9867
Los Humeros caldera, Mexico, Nd and Sr isotope ratios 3—53970
lower mantle chem. composition geophys. constraints 3—35109
marine carbonates in Mediterranean region, stable isotopic evidence for latest Miocene sea-level fall 3—20034
metamorphic fluids in deep crust, evidence from Adirondacks 3—35126
Mid-Atlantic Ridge basalt, discovery of two noble gas components 3—53958
Nyiragongo Nephelinites, isotopic ratios and mantle metasomatism 3—35125
ocean floor hydrothermal black smoker chimneys, mineral zoning rel. to growth history 3—48532
ocean island basalts, Sr and Nd isotopic comps. rel. to mantle reservoirs 3—35149
Reydarfjordur, Iceland, crust seismic props., density and comp. 3—15388
sphalerite composition, press. and temp. depend. rel. to exptl. calibration of cosmobarometer 3—48864
stable isotope reference samples, comparison 3—53957
subalpine massifs, Savoie, W.Alps, Oligocene nappes, superposed deformations *(French)* 3—9892
Terceira, Azores Islands, Sr and Pb isotopic vars. within single oceanic island 3—4829
upper mantle comp. and primary melt of oceanic tholeiite 3—58927
Varzi formation, Eocene Ligurian tectonic phase, N. Apennines, Italy *(French)* 3—9865
volatile elements abundances in terrestrial planets and atmospheres, rel. to planetary atmospheres form. 3—15861
Au concentration in Fawakhir ore, Egypt 3—48715
Ba/Rb/Cs relative abundance in Earth's mantle 3—48520
C geodynamic cycle, anal. rel. to sediment injection into mantle 3—19969
Cu-Ni ore fields of northern area of central Siberia Cu/Ni ratio and ^{34}S abundance rel. to geological and tectonic factors 3—4864
Lu-Hf isotopic system, importance in studies of planetary chronology and chemical evolution 3—48513
P partitioning between metal and silicate phases, exptl. investigations rel. to Earth, Moon and Eucrite Parent Body 3—48514
Pb isotope ratios in Ni sulphides of Thompson Belt, Manitoba, geochronologic interpretations 3—48510
Xe, isotopic comp. vars. rel. to appl. as geodynamic tracer 3—9868

Earth core
dynamo for given vel. fields with var. cond. 3—15326
evolution of crust, mantle and core 3—48519
formation, scenario based on X-ray diffr. of M-H system (M=Fe, Ti, V, Zr) *(Japanese)* 3—29876
formation of early Earth, also causing Moon to break away 3—30249
formation of Earth crust and core, role of water in magma form. *(Russian)* 3—15441
geomagnetic field generation, possible mechanism 3—15330
geomagnetic field model based on splines 3—4766
inner core, seismic velocity constraints on core struct. 3—39829
inner core struct. from seismic data 3—29848
inner-outer core boundary due to radioactive dioxide distrib. 3—4818
mantle coupling, effect on Earth rot. var. 3—24956
mantle interaction effect on Earth rot. 3—9820
Molodensky liquid core problem, variational principle appl. 3—44379
phase transition at core-mantle boundary as origin for crust vertical movements 3—54002
PKIKP waves, travel times *(French)* 3—4777
radius, determ. from seismic wave travel times for Pacific earthquakes 3—39817
seismic attenuation of Earth interior 3—48506
thermal contraction theory 3—20015
transition region bulk/shear attenuation 3—15360
viscosity, effect on Chandler motion, forced nutation and day length tidal var. 3—58912
Fe-FeO-MgO system thermodynamics at Earth core conditions 3—48511

Earth crust
see also geology; oceanic crust
accumulating strain in Los Angeles basin, relative lateration using laser ranging 3—44377
N Aegean trough, N Anatolian fault, seismo-tectonic study *(French)* 3—24978
West African craton, magnetotelluric *(French)* 3—53939
Central Aleutian Islands, seismic vel. struct. from joint hypocentre location and velocity inversion technique 3—39819
Algiers massif, age data at 85 Myr, ^{39}Ar-^{40}Ar method *(French)* 3—48509
Alpine Fault, New Zealand, shear heating assoc. with fault movement 3—35132
Alpine-Himalaya region, geodynamics 3—49094
N Anatolian fault, Turkey, development in Plio-Pleistocene 3—44429
Andean continental margin, subduction processes 3—58955
Andean Cordillera, pre-Andean metamorphism and magmatism 3—25031
Andes mountain chain magmatic evolution 3—25213
Andes of Chile, geochronology of magmatic events 3—25032
Andes of Colombia, magmatic evolution 3—25027
Andes of Ecuador, chronology of tectonic-magmatic events 3—25028
Andes of N Chile, Cainozoic volcanism and tectonism 3—25062
Andes of N Chile and Argentina, tectonic and magmatic evolution 3—25063
Antwerp, Belgium, dam site seismic surveying obs. 3—48486
S Appalachians, palaeomag. evidence for crustblock movement 3—15406
S Appalachians, strain pattern and shortening in folded thrust sheet 3—44434
S Appalachians (USA), struct. geology from seismic data 3—35079
Appalachians regional folds, Virginia, USA 3—9887
Aravalli Range, Rajasthan, India, Quaternary tectonism 3—44433
Arctic ocean and surrounding regions, conf., July 1981, London, Canada 3—5491
Armorican orogeny, crustal shortening rel. to pre-Hercynian mafic belt reactivation 3—9905
Atlantic Canada, ice sheets isostatic equilib. rel. to reconstruction of deglaciation from postglacial relative sea level 3—48578
Atlantic Ocean continental margins, conf. at Harriman, NY, USA (March 1978) 3—54587

Earth crust continued
NE Atlantic passive continental margins, rifting and subsidence 3—58934
Atlantic type margin dynamics, gravity energy decline and metastable basalt phase transition 3—54015
Australian rifted margins, review 3—54011
Bahira basin, High Atlas pull-apart basin and NW continental margin, Morocco *(French)* 3—25026
Baie Verte Lineament, Newfoundland, ophiolite complex floor and mafic volcanic fill of marginal basin 3—58958
Baikal region, travel time curves of longit. seismic waves from earthquakes and seismic shots 3—4814
Baikal rift region, USSR, crust non-stationary temp. field model 3—19955
Baikal-Amur Mainline route, USSR, deep EM sounding 3—4776
NE Baltic Shield, crust/mantle struct. from magnetotelluric obs. 3—9874
NE Baltic shield (Kola Peninsula), MTS study of geoelec. struct. 3—4758
Basin and Range Province, USA, tectonics of Wasatch fault 3—44435
Blue Ridge Province, evidence for Taconic deform. from palaeomagnetism of Unicoi basalts 3—9824
Boso Peninsula, Japan, crust elastic modulus from uplift obs. 3—39842
Brobo ductile wrench fault, Eburnean lineament, Ivory Coast *(French)* 3—25025
Broughton Trough (Baffin Island continental shelf), origin and sediments 3—4846
California, Diablo and Gabilan ranges, geological comp. and compressional wave vel. struct. 3—19944
S California, stress changes near faults, borehole meter obs. 3—4753
SW Canada, elec. cond. struct. of crust, mag. variation study 3—4761
E Canada continental margins, form. and evolution 3—54009
Cape Bojador continental margin, NW Africa, geodynamic, sedimentary and volcanic evolution 3—58935
Cape Verde Islands, palaeomag. and geological implications 3—53923
Caucasus Mountains, testing ground for geological hypotheses, history of geological studies *(Russian)* 3—35823
Central Ranges, Honshu, Japan, Bouguer anomaly map compilation and interpretation 3—44380
Cezanenque gneissic rocks, Massif-Central, France, Hercynian deformation *(French)* 3—44408
Chalk River, Ontario, seismic study of shallow rocks 3—4778
Chara sheet zone, E Kazakhstan, geological struct. and tectonics 3—4863
S Chile margin, post Miocene tectonics 3—58954
North China, crust temp. distrib. 3—39837
Coastal Batholith of Peru, segmented struct. 3—25029
conference (7th UK Geophys. Assembly), April 1983, Leicester, England 3—49074
lower continental crust, implications of isotopic and geochemical studies of nodules in kimberlite 3—19968
continental crust growth, evolution and comp., comparative tectonic approach 3—44417
continental margin subsidence, African east and west coast comparison 3—54010
W Crete, origin and geology of Phyllite-Quartzite Nappe 3—9888
Crozet Islands, S Indian Ocean, volcanic evolution *(French)* 3—44424
Cuddapah basin, India, palaeomagnetism and igneous activity 3—53918
Cyprus, mag. survey of sulphide ore body in Troodos ophiolite complex 3—24971
Damara Orogen (Namibia), mechanisms of nappe emplacement at southern margin of orogen 3—35162
Damara orogenic belt, Namibia, tectonic origin and Rb/Sr geochronology 3—35138
deformation following earthquake on strike-slip faults, theory 3—15407
descending lithosphere geometry from earthquake distrib. in lithosphere subduction Benioff zones 3—58948
disseminated mineralisation, electrical transient response anal. 3—48475
drilling projects in USSR *(Russian)* 3—44420
East African Rift system, geomagnetic and gravity anomalies, tectonics, seismic data, crust model 3—35110
electrical conductivity models for continental crust, implications of laboratory meas. on high-grade metamorphic rocks 3—39775
electrical sounding, effective electrical props. of heterogeneous Earth models 3—48474
elemental distrib. in IRDP basalts from E Iceland 3—19957
Eurasian continent, anelasticity of crust and mantle 3—19926
Europe, Rayleigh wave propagation in crust and mantle 3—15372
Europe lithosphere and asthenosphere struct., conf., Aug. 1981, Uppsala, Sweden 3—10506
N Europe/E Greenland passive margins, struct. and devel. 3—53965
evolution of continental crust, implications of lithosphere subduction 3—29873
evolution of crust, mantle and core 3—48519
explosion seismic data synthetic crustal record section, comparative interpretations 3—15363
Faeroe-Shetland Escarpment, struct. and origin rel. to early opening history of N Atlantic 3—39843
Fennoscandia, Rayleigh wave dispersion in crust and asthenosphere 3—15367
Finland, crust elec. cond. from magnetotelluric obs. 3—15338
flood basalt homogeneity due to thermal convection in magma 3—15440
formation of Earth crust and core, role of water in magma form. *(Russian)* 3—15441
fracture and joint distrib. in boreholes in California and S. Carolina 3—15381
Franciscan Complex of Stanley Mt. area, California, deformational events 3—35103
Gas Hills uranium district, seismic obs. of crust struct. 3—19914
geodynamic evolution and lower mantle convection, upper mantle block/lithospheric plates countermotion 3—35137
geothermal dry rock reservoir, seismic obs. of rock fractures 3—14923
geotherms in uplifts and depressions, struct. and setting effect on heat flow meas. *(Chinese)* 3—9863
E Germany, nearby seismic events location technique rel. to epicentral map and tectonics *(German)* 3—15344
S Germany, subcrustal lithosphere petrology and seismic struct. 3—39827
Geysers-Clear Lake region, California, Moho and Crust low vel. zone from Pn arrivals 3—19943
Ghost Range complex, Ontario, palaeomag. and structural history 3—24962
glacial isostasy, role of transient rheology 3—48523
global stress field deduced from satellite gravity harmonics 3—58943
Gobi desert, geology and hydrology obs. *(Russian)* 3—4816
Golda Zuelva anorogenic complex (N Cameroons), isotope geochemistry 3—19950

Earth crust continued
gravity anomalies of buried objects, theory of inverse problem *(Chinese)* 3—35053
graywacke of Slave Province, Canada, origin of zircon grains 3—25037
Grenville Province, Labrador, geochronology and metamorphism 3—19949
Grenville Province (Canada), U mineralization in granites and pegmatites 3—53954
Guatemala margin, model of convergent extensional margin *(French)* 3—25060
Hat Creek coal deposit, BC, Canada, geophys. exploration 3—53475
heat flow distribution in Siberia, review of meas. and map 3—4832
Hekla, Iceland, magma reservoir location 3—35135
SW Hellenic arc, Greece, L. Cainozoic faulting 3—9889
Hercynian ductile shear zones, Monteneme, Puentedeume, Galicia, Spain *(French)* 3—9893
Hercynian orogenic belt, palaeomagnetism rel. to Mid-Europe Ocean and Lower Palaeozoic apparent polar wander 3—39776
Hidaka region, Japan, crust struct. from seismic vel. obs. 3—4826
Himalaya and surrounding regions, crust/mantle struct. and tectonics, long period seismic wave anal. 3—53962
Himalaya-Pamir-Hindukush region, crust/mantle struct. and Indian plate boundary, seismic data anal. 3—53997
Hohenzollerngraben, W Germany crust seismic props. 3—39828
Hokkaido, Japan, elec. cond. struct. of crust and mantle 3—53940
S Hokkaido, Japan, seismic struct. of crust and mantle 3—4807
central Honshu, Japan, crust and mantle velocity struct. 3—19939
Huronian Dollyberry Lake basalts, Canada, geology and palaeomagnetism 3—53913
hydrothermal alteration and secondary mineralization in IRDP basalts from E Iceland 3—19990
NW Iberian margin, passive margin deform. in Eocene and structural evolution, seismic anal. 3—58933
Iberian Range, Spain, curving deform. zone due to rot. deform. in transcurrent shearing regime *(French)* 3—35156
Iceland, ^{18}O/^{16}O from deep holes in basalts 3—19959
Iceland, alteration in IRDP drill hole 3—19991
Iceland, crust construction model based on lava flows, Iceland Research Drilling Project anal. 3—19961
Iceland, natural magnetization of 3 km section 3—19894
Iceland, thermal props., water chemistry, stress and mag. props. 3—58921
Iceland Research Drilling project, chemical stratigraphy 3—19989
Iceland Research Drilling Project, conf. at Reykjavik, Iceland (May 1980) 3—10503
Ile Bizard intrusion, Quebec, Canada, kimberlite or lamprophyre? 3—25038
impedance of layered isotropic medium, matrix method, crust/mantle appl. 3—30072
Imperial fault, US-Mexico border, crustal Q values 3—39792
India, Sq induction anomalies due to crust struct. 3—24967
E Indonesia, geological history of microcontinents rel. to age of Banda Sea 3—35127
intraplate lithosphere strength and heat flow 3—4828
Iran, P_n velocities in crust and uppermost mantle 3—19913
Iranian plateau, seismic structure of Alpine crust 3—19924
Island of Ibiza, Spain, struct. and geodynamic evolution *(French)* 3—29885
S Italy, geometry of neotectonic stress field 3—44428
Italy, subduction and scattered crumpling models for northern Palaeoapennines 3—19980
Japan intraplate region, crust shortening and seismic moment release determ. 3—15356
Kanto district, Japan, three dimens. vel. struct. from P-wave anal. 3—44405
Kazakhatan, geology of ore-mining regions rel. to development of Earth crust and upper mantle *(Russian)* 3—39848
kinematics of lithospheric plates of variable mass, model 3—4845
Kirishima volcanic area, Japan, crust seismic vel. struct. 3—4804
Klamath Mts. and SW Oregon, palaeosubduction region 3—25050
Koloula Igneous Complex, Guadalcanal, Pliocene-Pleistocene oceanic-arc plutonic complex, geochemistry 3—19967
S Kyushu, Japan, crust seismic vel. struct. 3—19936
La Margeride, France, granitic massif struct., heat meas., gravity and seismic anal. *(French)* 3—44407
Lake Biwa, Japan, crust struct. beneath lake 3—39831
Lake Char fault zone, eastern USA, geometry and kinematics of fault 3—35102
Lake Moondarra area, Mount Isa, Australia, tectonic vein and fibre growth assoc. with multiple slaty cleavage development 3—35161
large Prandtl number finite-amplitude thermal convection with Maxwell viscoelasticity 3—29871
lateral density distrib. from global gravity 3—15382
Leech River complex, Vancouver I., Canada, geology and tectonic history 3—19946
Lesser Antilles island arc, inert gas geochem. and tectonic history 3—39836
Lesser Antilles subduction zone, underthrusting of undeformed sediment beneath accretionary complex 3—29894
lithosphere, low deviatoric stress and earthquakes 3—53960
lithosphere deformation, astronomic geology theory 3—20000
lithospheric doubling and intracontinental volcanology/tectonics 3—35128
lithospheric heterogeneities and flattening rel. to world-wide tidal gravity 3—35056
lithospheric plate movements, wax model *(German)* 3—58938
lithospheric thinning by mantle plume, stagnation flow 3—46528
Little Dal lavas, Mackenzie Mts., Canada, Proterozoic palaeomag. and stratigraphy 3—24961
low velocity, layer, simple harmonic motion, hybrid Green's function calcs. 3—39830
Maar deposits, Clermont-Ferrand, France, dating of volcanic eruption *(French)* 3—44425
magnetically active sources in continental crust, rel. to statistical characts. of anomalous mag. field *(Russian)* 3—15323
Maine, gravity studies of subsurface mass distribs. of granitic rocks 3—9915
Manaslu leucogranite, Nepal, geochem. study of origin 3—25047
Manitoba and N.W. Ontario crust struct. and geology 3—25041
Massif Central (France), Ordovician age of anatexis event *(French)* 3—25023
Mayombian orogenic belt, Zaire, extension under sedimentary rocks *(French)* 3—25058

Earth crust continued
Mboutou anorogenic complex (N Cameroons), isotope geochemistry 3—19950
McCoy Mountain Formation (SE USA), palaeomag. evidence for tectonic deformation 3—35061
Messina area of Italy, tectonic activity since 1900 AD 3—53982
metamorphic fluids in deep crust, evidence from Adirondacks 3—35126
meteorite cratering forming dense mosaic pattern 3—44445
Mississippi River (USA) seismic survey of crust struct. 3—29859
Mohorovicic discontinuity, effect of serpentinisation on thermal props. of ultrabasic rocks 3—9912
Mohorovicic discontinuity as phase change 3—4822
Mohorovicic discontinuity of USA, seismic refl. results 3—4800
Moine thrust zone of NW Scotland, surge zones 3—9886
Monticello Reservoir site, S Carolina, USA, geology and seismic risk 3—19962
Morocco, Atlantic margin, seismic refl. anal. 3—58909
movements, meas. by geodetic techniques 3—54174
Great Nafud Desert, Saudi Arabia, appearing as cloud-like feature in satellite imagery 3—58972
New Hampshire, gravity studies of subsurface mass distribs. of granitic rocks 3—9915
Newfoundland, evolution of Bay of Islands ophiolite complex 3—19951
Newfoundland, lower Cambrian tidally deposited rocks 3—25039
Newfoundland Basin (N Atlantic), continental margin and Mesozoic tectonics 3—58940
E North America continental margin subsidence, tectonic, sediment and eustatic components 3—58936
North America polar margin, struct. and devel. 3—53964
North Sea, crustal thinning and subsidence, seismic anal. 3—48516
S Norway-North Sea, seismic crustal profile 3—48494
Notch Peak pluton, Utah, palaeomag. of metamorphosed contact zone 3—15334
oil shale, r.f. electromagnetic sounding method for mining operations 3—15634
Oman mountains, north-Gondwanian margin, Paleozoic (Hercynian) foldbelt *(French)* 3—44430
Ontario, Canada, crust vel. struct. near to London 3—19912
ophiolite obduction in Oman, tectonic setting 3—4823
ophiolite sequences, comparison with reference section through Layer 2 of oceanic crust 3—29901
optical anchor strainmeter for shear strain meas. in crust upper 24 m 3—20139
N Oregon, crust struct. from heat flow anal. 3—35123
origin and evolution of Earth and lunar crusts 3—5178
W Pacific Ocean, back-arc basins, heat flow anal. 3—58949
parental magma of subduction zone volcanic areas and continent evolution 3—19964
Paris basin, tectonic subsidence 3—35143
passive continental margins, assoc. gravity and mag. anomalies 3—53966
passive continental margins, obs. and mechanisms 3—53963
passive continental margins, stress state and vertical motion 3—54012
passive continental margins, subsidence due to stress-based tectonic mechanisms 3—54013
passive margins dynamics (book) 3—49096
Patagonian Andes, chronology of granitic plutonism 3—25033
Austral Patagonian Andes, magmatic evolution 3—25035
Patagonian Cordillera, Jurassic-Cretaceous volcanism 3—25034
Penokean Orogeny in Precambrian Thomson Formation of Minnesota, USA 3—25040
Peru, E Cordillera mountains magmatic evolution 3—25030
plate interiors, dynamics (book) 3—49095
Pripyatskii trough, Byelorussia, discovery and props. of fluid ores *(Russian)* 3—39847
Puga valley, India, geoelectric study of geothermal area 3—53925
Pyrenees, gneiss and plutonic dome diapiric emplacement 3—9864
Pyrenees tectonic development history from French microfault obs. 3—44436
Queen Charlotte fault zone (W Canada), heat flow obs. 3—4817
Rabat-Tiflet zone, N Morocco Meseta, Paleozoic microblock tectonics *(French)* 3—25024
Rayleigh waves, first-order overtone, regional dispersion rel. to ocean-continents heterogeneities 3—39821
Reydarfjordur, Iceland, crust seismic props., density and comp. 3—15388
Reydarfjordur, Iceland, crust struct. from seismic refr. expts. 3—15387
Reydarfjordur region, Iceland, crustal struct. constraints and one dimens. vel. struct. 3—15386
Rhenish Massif, seismic vel. struct. 3—15374
rifting of continent initiated by convective thinning 3—4838
Rio Grande rift extension from gravity anal. 3—35120
rock mechanical behaviour (book) 3—49093
Rocky Mts. foothills (Alberta, Canada), geothermal anomaly magnetovariational study 3—48469
Romania, thermal struct. of crust and upper mantle 3—15397
Ryukyus-Japan island arc struct. from Rayleigh/Love waves anal. 3—35105
S-wave attenuation in lithosphere due to scatt by random vel. struct. 3—15361
salt dome struct. exploration by borehole EM and seismic methods 3—48688
San Andreas fault, Palmdale, CA, USA, strain accumulation obs. 3—39771
San Andreas fault region, in situ stress meas., elastic anal. implications 3—15415
San Francisco volcanic field, Arizona, 2-D seismic vel. struct. 3—15353
Sanbagawa belt, E Shikoku, SW Japan, tectonic deform. history *(French)* 3—25059
Scandinavia, lower continental crust nature from Seiland Petrographic Province granulites seismic vel. 3—58970
NW Scotland continental shelf, crust struct., seismic obs. 3—15398
seismic sounding, travel time curve eqn. and algorithm for estimating parameters of inclined reflecting boundary 3—4812
seismic surface wave inversion method for crust-mantle struct. lateral var. 3—35273
Seligdar apatite field, Aldan Shield, palaeotectonic features 3—4862
Senegal Basin (West Africa), oceanic-continental crust transition, gravity/mag. anomalies anal. 3—29877
Serpent Mound disturbance, Ohio, USA, struct. and origin 3—35101
shallow crust faulting 3—53961
sheared passive continental margins, crust struct. and devel. 3—53967
Shikoku, Japan, crust struct. from explosion seismology study 3—39833

Earth crust continued
- Shikoku, Japan, crust struct. from seismic refr. obs. 3—39832
- central Siberia, geological and tectonic factors in form. of Cu-Ni ore fields 3—4864
- NE Siberia, plate tectonic evolution 3—9903
- W Siberian plate, seismic absorpt. in crust and mantle 3—4792
- Siberian platform, seismic absorpt. in crust and mantle 3—4792
- Sierra Nevada batholith, California, U-Pb age study 3—4824
- Slate Islands, Ontario, Canada, meteorite crater shatter cones 3—54026
- Snow Mt. Volcanic Complex, CA, USA, an on-land seamount 3—44418
- Somali plate tectonics, implications of age progressive volcanism in Comores Archipelago 3—9880
- Spitsbergen, crust struct. from seismic data 3—9876
- stationary heat conduction, mathematical models 3—29867
- strain analysis from geodetic data, correl. adjustment anal. method appl. *(Chinese)* 3—48527
- subalpine massifs, Savoie, W.Alps, Oligocene nappes, superposed deformations *(French)* 3—9892
- subduction zones seismic/aseismic slip from earthquakes mechanism anal. 3—58950
- sulphide deposit prospecting by induced polarisation method 3—54151
- Superior-Churchill Precambrian boundary zone, seismic struct. 3—15392
- susceptibility log of IRDP drill core in E Iceland 3—19896
- Sydney Basin, Australia, palaeotemps. from geol. and palaeomag. obs. 3—15378
- Taupo volcanic zone, New Zealand, faults and crust struct. 3—53953
- Teisseyre-Tornquist Line, heterochroneity, between Central and E Europe *(French)* 3—25061
- teleseismic inversion method to study crust 3-D struct. *(Chinese)* 3—35077
- tension fractures and extensional tectonics 3—29895
- Texas coastal plain, PL and Rayleigh wave propagation 3—53945
- Thompson Belt, Manitoba, geochronologic interpretations of Pb isotope ratios in Ni sulphides 3—48510
- thrust belt tectonic structs., terminology 3—9885
- Tibet Plateau crust/mantle struct. from Rayleigh/Love waves phase vel. 3—15391
- Tohoku District, Japan, Moho and seismic vel. struct. 3—4806
- Tohoku District, Japan, seismic vel. struct. 3—4805
- Transdanubian Mid Mountains, Hungary crustal cond. rel. to deep faults *(Hungarian)* 3—29831
- Turansk platform, USSR, crust and upper mantle geoelectric and thermal model 3—19956
- Ungava Peninsula, postglacial marine emersion rel. to landscape features *(French)* 3—29923
- United States, Atlantic continental margin struct. from sediments, mag., seismic and gravity obs. 3—58932
- SW United States, migration of Tertiary volcanism rel. to subduction of Mendocins fracture zone 3—9881
- United States of America, crust thickness and upper mantle seismic vel. 3—44421
- upper continental crust struct. and Pg phase amplitude studies 3—39825
- USA, lower crust magnetisation causing long-wavelength anomalies 3—44398
- SE USA Piedmont, common-depth-point profiling using ABCD method 3—29847
- Variscan wildflysch and nappe tectonics in Saxothuringian zone of W Germany 3—35104
- Varzi formation, Eocene Ligurian tectonic phase, N. Apennines, Italy *(French)* 3—9865
- vertical crustal movements in lithospheric plates due to mantle material motion 3—54002
- Vrancea region, Rumania, seismic velocity struct. 3—15369
- Vrancea region of Rumania, seismicity and tectonics 3—15368
- West African craton margin, seismic vel. struct. 3—19927
- Wind River Mountains, Wyoming, USA, gravity anomaly interpretation 3—29813
- Xizang Plateau, China, crust/mantle magnetotelluric obs. along Nagqu-Yadong line *(Chinese)* 3—9823
- Yellowstone Plateau volcanic field, origin of rhyolite-basalt association 3—4825
- Yerington district, Nevada, palaeomag. study of structural deform. 3—15430
- Yerington District, Nevada, total and pre-Oligocene tectonism of Mesozoic basement from palaeomag. study 3—15431
- K, Th, U distribution in crust 3—58910
- K, Th, U vertical distribution in crust 3—58910
- K-Ar study of IRDP borehole, E Iceland 3—19960
- Lu-Hf isotopic systems, implications for ancient crust-mantle evolution 3—48513

Earth electricity *see terrestrial electricity*

Earth heat *see terrestrial heat*

Earth interior
- *see also Earth core; Earth crust; Earth mantle; tectonics; volcanology*
- adiabatic gradient in mantle 3—15380
- convection and heat transport 3—42223
- dielectrophoretic instability of fluid shell 3—10238
- dynamo, Cowling criticisms of primordial field theory 3—25308
- electrical conductivity profile, problem of deep EM sounding 3—15329
- free oscillations and Q^{-1}models 3—48522
- geomagnetic field origin model 3—35063
- global magnetic field models and westward drift 3—35070
- lateral density distrib. from global gravity 3—15382
- magma formation, role of water *(Russian)* 3—15441
- quartz-coesite transition in presence of other substances 3—19986
- seismic wave attenuation at low freq. 3—48506
- Fe-FeO-MgO system thermodynamics at Earth core conditions 3—48511

Earth lower mantle *see Earth mantle*

Earth magnetic field *see geomagnetism*

Earth magnetic field variations *see geomagnetic variations*

Earth mantle
- adiabatic gradient in mantle 3—15380
- West African craton, magnetotelluric *(French)* 3—53939
- Central Aleutian Islands, seismic vel. struct. from joint hypocentre location and velocity inversion technique 3—39819
- anelasticity (book) 3—44903
- anelasticity effect on Chandler wobble and quality factor 3—24948
- anisotropic upper mantle leading to anomalous refl. signals 3—48496
- anisotropy coefficients of upper mantle from elastic wave anal. 3—9849
- N Atlantic, DSDP Leg 49 basalt evidence of mantle heterogeneity 3—58926

Earth mantle continued
- NE Atlantic, seismic study of upper mantle struct. 3—15373
- N Atlantic basalt comp. rel. to mantle props. 3—58930
- N Atlantic lithosphere and asthenosphere struct., conf., Aug. 1981, Uppsala, Sweden 3—10506
- N Atlantic near Iceland, crust and uppermantle seismic struct. 3—29857
- N Atlantic Ocean basalts, isotope geochemical anal., implications for mantle evolution 3—58929
- Atlantic region, mantle density transitions from seafloor relief 3—58918
- W Australia, enriched mantle origin of kimberlites and lamproites 3—58916
- Azores-Gibraltar ridge area, upper mantle struct. 3—15373
- Baikal rift region, USSR, asthenosphere intrusion into crust 3—19955
- NE Baltic Shield, crust/mantle struct. from magnetotelluric obs. 3—9874
- NE Baltic shield (Kola Peninsula), MTS study of geoelec. struct. 3—4758
- Benioff zones in lithosphere subduction regions, earthquake distrib. and descending lithosphere geometry 3—58948
- Bering Sea, multifarious marginal basin model 3—58959
- block structure from seismic wave travel times 3—9873
- bulk/shear attenuation in solid polycrystalline regions 3—15360
- SW Canada, elec. cond. struct. of crust, mag. variation study 3—4761
- chemical evolution, appl. of studies of Lu-Hf isotopic system 3—48513
- conductivity of lower mantle from geomag. field anal. 3—15629
- convection, model involving heat transfer and gravity anomalies 3—15405
- convection and lithospheric plate movements, wax model *(German)* 3—58938
- convection for temp. and press. depend. rheology 3—4835
- convection in lower mantle and geodynamic evolution, upper mantle block/lithospheric plates countermotion 3—35137
- convection in viscous fluid, preferred aspect ratios 3—35129
- convection model implying no mantle stratification 3—4844
- convection model incorporating crust effects 3—4843
- convection modes and interior heat loss 3—4821
- convection patterns beneath China *(Chinese)* 3—53971
- core coupling, effect on Earth rot. var. 3—24956
- core-mantle interaction effect on Earth rot. 3—9820
- cryptocumulate tholeiite as evidence for magma mixing at an intermediate-rate spreading axis 3—4859
- deformation following earthquake on strike-slip faults, theory 3—15407
- deformation processes, Si diffusion in forsterite as constraint 3—48541
- density distrib. calc. from seismic props. 3—29870
- drilling projects in USSR *(Russian)* 3—44420
- dynamics, implications of lithosphere subduction 3—29873
- dynamics, implications of press. enhancement of ion mobilities in liquid silicates 3—29915
- early development, Sm-Nd studies in W Greenland 3—44414
- East European platform, upper mantle for vel. layer struct. 3—58913
- East Pacific Rise, P-wave vel.-depth function with age 3—35114
- East Pacific Rise, S-wave vel. anomalies 3—35096
- electrical conductivity enhanced by existence of free carbon 3—29828
- electrical resistivity below Zarate, Argentina, MT sounding obs. 3—4759
- EM sounding beneath oceans using dipole sources, theory 3—15333
- Eurasian continent, anelasticity of crust and mantle 3—19926
- Europe, Rayleigh wave propagation in crust and mantle 3—15372
- Europe, seismic Q freq. depend. 3—25012
- E Europe, upper mantle seismic velocity struct. 3—15370
- Europe lithosphere and asthenosphere struct., conf., Aug. 1981, Uppsala, Sweden 3—10506
- SE Europe upper mantle, seismic vel. struct. from Greek earthquakes anal. 3—58914
- evolution of crust, mantle and core 3—48519
- evolution of early mantle, implications of $^{40}Ar/^{36}Ar$ ratios 3—4830
- Fennoscandia, Rayleigh wave dispersion in crust and asthenosphere 3—15367
- Fennoscandia, upper mantle seismic heterogeneities 3—15366
- geomagnetic dynamo with core-mantle EM coupling 3—9833
- geotherm through lower mantle, nonadiabatic contrib. from seismic wave anal. 3—35124
- S Germany, subcrustal lithosphere petrology and seismic struct. 3—39827
- Geysers-Clear Lake region, California, Moho and Crust low vel. zone from Pn arrivals 3—19943
- gravity field mapping of mantle by satellite techniques 3—15662
- gravity instabilities in upper mantle, assoc. thermal events and lithospheric doubling 3—35128
- Himalaya-Pamir-Hindukush region, crust/mantle struct. and Indian plate boundary, seismic data anal. 3—53997
- Hokkaido, Japan, elec. cond. struct. of crust and mantle 3—53940
- S Hokkaido, Japan, seismic struct. of crust and mantle 3—4807
- central Honshu, Japan, crust and mantle velocity struct. 3—19939
- Honshu, Japan, mantle shear wave velocity anomalies 3—19940
- hot spots model, rel. to kinematics of lithospheric plates of variable mass 3—4845
- hydrogarnet substitution in pyrope, mantle water content 3—44411
- impedance of layered isotropic medium, matrix method, crust/mantle appl. 3—30072
- India-Himalaya-Tibet area, seismic propagation in uppermost mantle 3—48492
- Iran, P_n velocities in crust and uppermost mantle 3—19913
- Kanto district, Japan, three dimens. vel. struct. from P-wave anal. 3—44405
- Kazakhatan, geology of ore-mining regions rel. to development of Earth crust and upper mantle *(Russian)* 3—39848
- Koolau shield and Hawaiian magmatism, petrological model 3—44412
- Kuril-Kamchatka focal zone, focal mechanism of intermediate earthquakes 3—15349
- Kurile-Kamchatka region, upper boundary of earthquake foci in earth quake focal zone 3—9853
- large Prandtl number finite-amplitude thermal convection with Maxwell viscoelasticity 3—29871
- lateral density distrib. from global gravity 3—15382
- layered convection numerical anal., marginal stability and finite stability anal. 3—25036
- linear visco-elastic models, tensor constitutive relations 3—48523
- lower mantle chem. composition geophys. constraints 3—35109
- metasomatisms, evidence from O and Sr isotope study of Vulsinian District, Central Italy 3—9867
- mid-ocean ridge formation, underlying moving lithosphere melting ducts asthenosphere heat transport *(Chinese)* 3—9862
- Mohorovicic discontinuity, effect of serpentinisation on thermal props. of ultrabasic rocks 3—9912
- Mohorovicic discontinuity as phase change 3—4822

Earth mantle continued
  - Mohorovicic discontinuity of USA, seismic refl. results 3—4800
  - noble gases, evidence for mantle-derived component in Mid-Atlantic Ridge basalt 3—53958
  - Nyiragongo Nephelinites, isotopic ratios and mantle metasomatism 3—35125
  - ocean island basalts, Sr and Nd isotopic comps. rel. to mantle reservoirs 3—35149
  - oceanic basalt crystal fractionation from North Arm Mountain massif cumulates mineral chemistry 3—35122
  - oceanic upper mantle, thermomechanical model 3—9871
  - ophiolite sequences, mafic segregations 3—4858
  - outgassing time, implications of terrestrial Xe isotopic comp. 3—9868
  - PKIKP waves, travel times *(French)* 3—4777
  - plume, rel. to lithospheric thinning, stagnation flow 3—46528
  - plutonic xenoliths of Ascension Is., mantle origin of source magmas 3—44415
  - pyroxene-carbonate reactions in upper mantle 3—35108
  - Rayleigh waves, first-order overtone, regional dispersion rel. to ocean-continents heterogeneities 3—39821
  - Rayleigh waves differential attenuation coeffs., constraint on Q-models 3—48507
  - return flow geographical pattern and plate tectonics driving mechanism 3—15410
  - Rhenish Massif, seismic vel. struct. 3—15374
  - rheology from geodynamic standpoint, review 3—53959
  - Romania, thermal struct. of crust and upper mantle 3—15397
  - Ryukyus-Japan island arc struct. from Rayleigh/Love waves anal. 3—35105
  - Scandinavia, EM study of asthenosphere elec. cond. 3—15337
  - seismic attenuation of Earth interior 3—48506
  - seismic fundamental spherical modes attenuation and Q^{-1} models 3—48522
  - seismic shear wave discontinuity in lower mantle 3—48501
  - seismic surface wave inversion method for crust-mantle struct. lateral var. 3—35273
  - seismic velocity anisotropy of uppermost mantle below oceans 3—4801
  - seismic wave attenuation, effect of dislocations 3—48521
  - seismic waves, localised velocity anomalies in lower mantle 3—39822
  - seismic waves anelastic attenuation in upper mantle 3—48524
  - shear wave attenuation theory for upper asthenosphere 3—44402
  - shear wave vel. distrib. from torsional oscills., inverse problem soln. methods 3—44581
  - Shikoku, Japan, crust struct. from explosion seismology study 3—39833
  - W Siberian plate, seismic absorpt. in crust and mantle 3—4792
  - Siberian platform, seismic absorpt. in crust and mantle 3—4792
  - Spitsbergen, mantle struct. from seismic data 3—9876
  - steady-state creep, effect of dislocations 3—48521
  - temperature profile in Earth's mantle, viscous fluid convection theory 3—9872
  - Terceira, Azores Islands, mantle mixing hypothesis for Sr and Pb isotopic vars. 3—4829
  - thermal evolution model of Earth incorporating mantle convection 3—4831
  - Tibet Plateau crust/mantle struct. from Rayleigh/Love waves phase vel. 3—15391
  - Tonga seismic zone, 650 km discontinuity from P-wave anal., tectonic feature 3—58919
  - Turansk platform, USSR, crust and upper mantle geoelectric and thermal model 3—19956
  - United States of America, crust thickness and upper mantle seismic vel. 3—44421
  - upper mantle comp. and primary melt of oceanic tholeiite 3—58927
  - upper mantle regional heterogeneity differences from teleseismic obs. 3—29853
  - vertical crustal movements in lithospheric plates due to mantle material motion 3—54002
  - viscosity from Holocene Pacific Ocean sea level 3—30056
  - viscosity parameter in glacial isostasy models for Quaternary sea level 3—54007
  - viscosity structure of a layered convecting mantle and plate motions 3—44419
  - West African craton margin, seismic vel. struct. 3—19927
  - Xizang Plateau, China, crust/mantle magnetotelluric obs. along Nagqu-Yadong line *(Chinese)* 3—9823
  - Ba/Rb/Cs relative abundance in Earth's mantle 3—48520
  - C geodynamic cycle, anal. rel. to sediment injection into mantle 3—19969
  - Fe-FeO-MgO system thermodynamics at Earth core conditions 3—48511
  - Fe-partitioning of mantle composition and convection implications 3—15385
  - ^{187}Re-^{187}Os systematics 3—48865

Earth orbit
  - astronomical theory of Pleistocene ice ages, historical review 3—4949
  - climatic response to orbital variations, role of variable ice albedo 3—4952
  - glaciation, pre-Pleistocene, rel. to orbital variation 3—4950
  - obliquity of ecliptic, long term stability rel. to climatic vars. 3—4751
  - perturbations of orbital elements rel. to ice ages, appl. of climate models 3—4951
  - precession of equinoxes, rel. to revised value of Earth dynamical ellipticity 3—39768
  - variation periods, correlation to CaCO$_3$ percentage in loess profiles 3—48663

Earth rotation
  - *see also time and latitude*
  - angular momentum variation, tidal friction model 3—35484
  - Astrolabe of Santiago observations, (1977 to 1980) 3—44643
  - astronomic geology, effect of Earth's axial rotation 3—20000
  - atmospheric circulation effects during AD 1958 to 1980 period 3—19880
  - axis for nutation ephemeris referral to ang. momentum axis *(Russian)* 3—48464
  - Chandler and nearly diurnal free wobble, Liouville eqns. study 3—9817
  - Chandler period variability? 3—19881
  - Chandler wobble, least squares and max. entropy spectral anal. 3—53910
  - Chandler wobble, quality factor and mantle rheology 3—24948
  - Chandler wobble theory and mantle rheology 3—19882
  - Chandler wobble total energy 3—39766
  - Chandlerian nutation in AD 1900 to 1980 period 3—9816
  - Chinese research 3—29817
  - combination of parameters determined by various techniques in 1980 3—30229

Earth rotation continued
  - conference, Sixth European Regional Meeting in Astronomy at Dubrovnik, Yugoslavia (October 1981) 3—20582
  - conference on Earth rot. and Earth-Moon dynamics at Grasse, France (May 1981) 3—25691
  - connected element interferometer method, comparison with lunar laser ranging 3—30232
  - core viscosity effects 3—58912
  - nearly diurnal variations in latitude of Gor'kii periodogram 3—44382
  - dynamical ellipticity, revised value 3—39768
  - dynamical equinox of J2000, orientation of JPL ephemerides (DE2000/LE200) 3—15829
  - geodynamic eqn., solution in elliptical coordinate system for whole Earth 3—58893
  - Greenwich Obs. Time and Latitude Service, Time Report (April to June 1982) 3—59183
  - Greenwich Obs. Time and Latitude Service, Time Report (January-March 1982) 3—30150
  - Greenwich Obs. Time and Latitude Service, Time Report (October-December 1981) 3—15831
  - interplanetary magnetic field, sectoral struct. effect on Earth diurnal rot. speed 3—35396
  - LAGEOS and lunar laser ranging data combination 3—30230
  - latitude variation, effect of different data sources on meridian circle catalogues 3—5093
  - local coordinated time scales uniformity 3—24947
  - lunar acceleration from tables in Ptolemy's Almagest, Babylonian obs. theory 3—20601
  - lunar laser ranging method comparison with traditional techniques 3—30231
  - lunisolar perturbation, dependence on adopted Earth model 3—29816
  - mantle, effect of rot. on convection and temp. profile 3—9872
  - maximum useful observing time for a given declination 3—20260
  - MERIT, international program to monitor Earth rot. 3—15319
  - Molodensky liquid core problem, variational principle appl. 3—44379
  - nutation, effect of oceans and core-mantle interaction 3—9820
  - nutation and precession and periodic terms 3—24956
  - obliquity of Earth's rotation, long term stability rel. to climatic vars. 3—4751
  - ocean tidal effects 3—24958
  - optical observations (1980) 3—29815
  - Paris Observatory astrolabe time and latitude obs. (1981 January to December) *(French)* 3—15830
  - polar motion and rot. parameters from Global Positioning System Satellite data anal. 3—30102
  - polar motion determination from three lunar laser ranging sources 3—30234
  - polar motion frequency modulation hypothesis 3—19884
  - polar motion from 1980 MERIT campaign, data comparison 3—30235
  - polar motion prediction 3—24946
  - pole position biases computation from Navy Navigation Satellites, gravity field effects 3—29819
  - Precambrian rotation parameters from fossil stromatolites 3—24951
  - precession and equinox corrections 3—29818
  - primary geodynamical parameters for Standard Earth Model, updated values 3—39769
  - reference systems for Earth dynamics, importance for celestial mechanics 3—20216
  - secular and decade fluctuations (700 BC to 1978 AD) 3—24957
  - secular polar motion, significance tests, 1949-1976 3—48463
  - short-period variations, correl. with short-period geomag. and atmospheric vars. 3—44373
  - spectral analysis periodicities, correl. with solar 2800 MHz emission 3—19877
  - Starlette satellite laser ranging obs. of rot. in Aug.-Oct. 1980 period 3—44383
  - techniques intercomparability and stability 3—25253
  - time and latitude determ. and group corrections, effect of systematic errors *(Chinese)* 3—40008
  - Tokyo Astronomical Obs., Time and Latitude Bulletins (April to June 1982) 3—25277
  - Tokyo Astronomical Obs., Time and Latitude Bulletins (July to September 1982) 3—48802
  - Universal Time, definition 3—40012
  - variations, 1890 to 1975, rel. to geomag. field vars. and mean monthly temp. anomaly *(German)* 3—15520
  - variations (1973-6) on short time scale 3—24941
  - vectorial astrometry (book) 3—54598
  - VLBI applications *(German)* 3—4999
  - VLBI observations with MERIT and POLARIS 3—30233

Earth satellites *see artificial satellites; Moon*

Earth structure
  - *see also Earth composition; Earth interior*
  - density model, primary geodynamical parameters for Standard Earth Model 3—39769
  - mantle, block structure from seismic wave travel times 3—9873
  - Orozco Fracture Zone, ROSE II results, seismicity and crustal structure 3—35092
  - outer layers composition and devel. *(German)* 3—29866
  - E Pacific Rise, structure from seismic refraction data 3—35113
  - pulsating Earth theory anal. *(Russian)* 3—4743
  - upper mantle Rayleigh wave attenuation struct. and Q-models 3—48507

earth surface processes *see geomorphology*

Earth third layer *see Earth mantle*

Earth upper layer *see Earth mantle*

earthquake recorders *see seismometers*

earthquakes
  - *see also seismology*
  - N Aegean trough, N Anatolian fault, seismo-tectonic study *(French)* 3—24978
  - aftershock occurrence scaling law for California, USA 3—58906
  - Alaska, 28 March, 1964, rupture process and asperity distrib. 3—58907
  - Alay Valley earthquake, USSR, strong motion calc. 3—15346
  - Aleutian island arc, earthquake location determ. problem 3—25000
  - Central Aleutian Islands, joint hypocentre location and velocity inversion technique 3—39819
  - central Aleutian subduction zone, earthquake detect. and location determ. 3—15357
  - E Alpine-Himalayan region, seismicity and focal mechanism solns., implications for tectonics 3—53996

earthquakes continued
Annsville region, New York, tectonic implications and focal mechanism solns. 3—19974
Arette region of Pyrenees, seismicity and fault plane solns. (October to November 1978) 3—19910
ARMA models for earthquake ground motions 3—4783
Asama volcano, Japan, 1973 eruptions, assoc. implosion earthquakes anal. and mechanisms 3—24987
astronomical factors relationship, research in China 3—29817
b values for foreshocks and aftershocks in real and simulated earthquake sequences 3—19907
Baikal region, travel time curves of longit. seismic waves from earthquakes and seismic shots 3—4814
bedrock motion rel. to earthquake magnitude and distance *(Chinese)* 3—48482
Benioff zones in lithosphere subduction regions, earthquake distrib. and descending lithosphere geometry 3—58948
Black Mountains (Caucasus), earthquake mechanism and epicentral seismic waves 3—15347
Bohai Sea, China, 18 July 1969, focal parameters *(Chinese)* 3—53942
Brazil earthquakes erroneously reported by LASA 3—29858
S California, earthquake prediction and recent seismicity 3—9858
California-Mexico border, June 1980 event 3—39795
Campania-Lucania, S Italy, 1980 November 23 event 3—44401
Canada, earthquake catalogue for 1978 AD 3—53951
SW China, earthquake occurrence rel. to tectonic stress field *(Chinese)* 3—48528
China, precursory migration of seismicity before large earthquakes *(Chinese)* 3—35078
China, reservoir induced earthquakes 3—25018
Cocos-N American-Caribbean triple junction, premonitory seismicity 3—25013
crack models of focus 3—29841
Dagestan, 1980 May 14, P-wave seismic moment tensor 3—35288
Dagestan, USSR, earthquake mechanism and epicentral seismic waves 3—15347
danger areas determ. method *(Chinese)* 3—48682
Darel (12 Sept. 1981), Pakistan, source mechanism 3—25014
Dead Sea, Israel, 1979 April 23, seismicity, source props. and tectonics 3—19905
deep earthquakes, evidence for localised seismic vel. anomalies in lower mantle 3—39822
deep subduction zone events, regional dispersion of first-order overtone Rayleigh waves 3—39821
deformation following earthquake on strike-slip faults, theory 3—15407
Denizli, Turkey, 1976 August 19, strong motion record and building damage 3—19906
earthquake algorithms, conf., July 1981, London, Canada 3—20570
earthquake magnitude spatial and temporal distrib. 3—53947
earthquake source parameters 3—25009
East Pacific Rise at 21°N, microearthquakes seismicity and parameters 3—35093
S Egypt, seismicity and origins 3—35074
El Asnam, Algeria, deformations due to 10 Oct. 1980 event 3—39803
El Asnam, Algeria microearthquake study prior to 1980 Oct. 10 event 3—9861
El Asnam earthquake, focal mechanism of 10 Oct. 1980 event 3—39804
England, 1382 May 21, seismicity and damage 3—39814
epicentre location errors in Fennoscandia, statistical model 3—29863
epicentre location using M-estimates method 3—24998
epicentre region, longitudinal waves vel. distrib. determ. method 3—59121
extreme earthquake occurrences, Bayesian anal. and probabilistic hazard model 3—19909
far-field displacements radiated from circular crack *(Chinese)* 3—53941
fault mechanics, theory of Love waves excited by discontinuous propag. of rupture front 3—39818
fault plane parameter determination by statistics of first motion data 3—25004
faulting and strong ground motion, conf., Oct. 1981, Incline Village, NV, USA 3—35767
faults embedded in layered media strain, tilt and rot. simulation and relations 3—19975
Flathead Lake, Montana, seismicity, tectonics and earthquake pot. 3—19903
focal mechanism determination, theoretical-methodological elements 3—9854
focal mechanism determination method using SV/P amplitude ratios 3—25003
focal mechanisms of 28 earthquakes (occurring in 1980 AD) 3—25011
forecasting earthquakes using real-time data processing system *(Russian)* 3—59113
Friuli, Italy, 1976 May 6, long period precursors 3—39811
Gazli, USSR, 1976 May 17, multiple Rayleigh wave trains anal. at two distant stations 3—35096
Gazli, USSR, earthquake mechanism and epicentral seismic waves 3—15347
Gazli earthquake, USSR, strong motion calc. 3—15346
E Germany, epicentral map using technique for locating nearby seismic events *(German)* 3—15344
geysers, laboratory model rel. to seismic influence on eruption regime 3—20044
gouge microstructure rel. to energy release during faulting 3—53948
great earthquake rupture process and asperity distrib. from P-wave data 3—58907
Great Kanto earthquake (1923 Sept. 1), atmospheric thermal convection effects, model calc. and expt. 3—20087
Greece, seismic waves used for SE Europe upper mantle struct. determ. 3—58914
ground accel. relationships with magnitude, moment and intensity 3—29850
ground acceleration model, stress drops statistical distrib. 3—9843
ground accelerations, phase props. of random processes 3—4784
ground oscillation close to earthquake focus 3—9857
Gulf of Patti, Sicily, 1978 April 14, focal mechanism, aftershocks and b-coeff. 3—39812
Haicheng, China, 1975 event precursory seismology *(Chinese)* 3—48483
Haicheng, China, foreshocks of Feb. 1975 event 3—4796
Hamran (3 Sept. 1972), Pakistan, source mechanism 3—25014
Hawaii, November 29, 1975 travel time var. with source vol. 3—15358
central Honshu, Japan, earthquake parameters 3—19939
hypocentre depth estimation methods 3—35085

earthquakes continued
hypocentre determ. technique, by inversion of teleseismic data *(Chinese)* 3—35077
hypocentre parameter determ. using 3-D focal zone vel. models 3—25001
Imperial Valley, California, USA, 15 Oct. 1979 event 3—39789
Imperial Valley, California, USA, mechanism of 15 Oct 1979 event 3—39790
Imperial Valley, California-Mexico border, S-wave velocities 3—39809
Imperial Valley, USA-Mexico border, faulting mechanism 3—39791
International Seismological Centre, seismic anal. procedures 3—24995
island arc earthquake location determ. problem 3—25000
Israel, earthquake hazard and seismicity 3—44399
Italy, basis seismic-tectonic regions intensity-magnitude relations 3—39813
Izu-hanto-tohooki earthquake, June 1980, precursory geoelec. phenomena 3—24977
Japan, EM emissions use as precursors 3—15362
NE Japan arc, deep seismic zone struct. 3—25021
Japan intraplate region, crust shortening and seismic moment release determ. 3—15356
Japan Trench, outer slope region, hypocentre distrib. linear trench 3—24980
joint hypocentre determination algorithm 3—24999
Kalkar fast breeder reactor in Germany, seismic risk study *(German)* 3—16966
Kariba dam, 1963 earthquake source parameters 3—25009
Kempsey, Australia, 1979 September 6, source characts. 3—44404
Koyna region, India, morphology, tectonics and earthquake activity 3—39840
Kuril-Kamchatka focal zone, focal mechanism of intermediate earthquakes 3—15349
Kurile Islands, 13 Oct. 1963, rupture process and asperity distrib. 3—58907
Kurile-Kamchatka region, upper boundary of earthquake foci in earth quake focal zone 3—9853
Lesser Antilles Arc, mechanisms and tectonics 3—35144
Lesser Antilles earthquake (Oct. 1974) and plate motions 3—39805
lights assoc. with M≥7 events, generation mechanism 3—53949
Livermore Valley, California, January 1980 earthquake characts. 3—39784
Liyang-Jiexiu-Wuyuan strong earthquake belt, China, migration and rupture features *(Chinese)* 3—48477
Loihi submarine volcano, earthquake swarms seismic anal. 3—15359
longitudinal waves displacement impulse 3—35089
magnitude determination using homogeneous seismic station system 3—25002
magnitude estimation from signal duration 3—24994
magnitude M_{LV} correl. with Rayleigh wave energy 3—19929
Mammoth Lakes, California, earthquake mechanisms 3—24992
Mammoth Lakes, California, earthquake sequence source parameters 3—4798
Mammoth Lakes earthquake strong ground motion (California, USA) 3—39810
mechanism analysis used for subduction zones seismic/aseismic slip determ. 3—58950
Miyagi-Oki earthquake foreshock sequence, 12 June 1978 event, NE Japan 3—39793
Monticello Reservoir, S Carolina, USA, induced seismicity mechanisms 3—19935
Monticello Reservoir site, S Carolina, USA, geology and seismic risk 3—19962
Monticello Reservoir site, S Carolina, USA, induced seismicity and tectonic stress 3—19934
Mount St. Helens, May 1980 eruption mechanism and seismic waves 3—15399
Nankai trough, Japan, earthquake sequence source region model *(Japanese)* 3—24981
Niigata, Japan, 1971 September 21, hypocentre location, obs. conditions effects 3—24979
North-South seismic belt, China, large earthquakes jumping migration and statistical prediction *(Chinese)* 3—48481
nuclear explosion monitoring, value of source depth as discriminator 3—25015
nuclear plant, containment shell, earthquake response, deterministic and stochastic anal. 3—26419
occurrence in environments of low deviatoric stress 3—53960
occurrence model for earthquakes 3—39835
Mt. Ontake, Japan, focal mechanisms of earthquake swarms 3—25017
Oroville Lake, earthquakes caused by reservoir filling 3—4797
P m K P phases misidentified by LASA as Brazilian events 3—29858
p-time delay measurement of a doublet of microearthquakes 3—19941
Pacific Ocean, ground displacement impulses, ship-borne meas. 3—35089
Pacific Ocean earthquakes, anal. of seismic wave travel times 3—39817
Patan (28 Dec. 1974), Pakistan, source mechanism 3—25014
Petatlan, Mexico, 1978 March 14, aftershocks numbers, energy release and asperities 3—35094
post-earthquake viscoelastic-gravit. deform. in layered Earth 3—15414
post-seismic rebound following dip-slip earthquake 3—48529
precursors, Rn in groundwater conc. var. with impulsive force *(Chinese)* 3—48577
precursors, use of anomalous mechanoelectric phenomena 3—9852
precursory ^{222}Rn variations in underground gallery in Japan 3—39834
precursory mag. field changes due to groundwater flow 3—48499
precursory tectonic deformation due to rainfall changes 3—48503
prediction, use of pattern recognition in seismicity *(Chinese)* 3—48476
prediction of strong earthquake locations by use of recognition methods 3—4791
Rat Islands, 4 Feb. 1965, rupture process and asperity distrib. 3—58907
recurrence time of large earthquakes from freq. magnitude distrib. conversion to M^s 3—20138
risk as probability of exceeding peak ground accel. on free surface, determ. method 3—30099
Rivera Fracture Zone, microearthquakes seismicity and parameters 3—35093
rock magnetic behaviour under uniaxial stress conditions 3—48538
Ruhr district, Germany, mine tremors source parameters 3—15365
rupture mechanism by stochastic model 3—19922
San Fernando, 1971 February 9, longitudinal strain and tilt, simulation 3—19975
San Fernando, California, USA, mechanism of 1971 event 3—39794
San Fernando, USA 1971 earthquake source parameters 3—25009

earthquakes continued
- Santa Barbara, California, USA, Aug. 1978 event and aftershocks 3—39802
- Santa Cruz Islands, 9 July 1980 event 3—39795
- scaling law relating rupture size and predominant period 3—25019
- seismic waves generated by 'quake, high-freq. band limitation 3—39785
- sequences, individual major earthquakes energy distrib. index *(Japanese)* 3—24988
- shear crack interaction mechanism of fault rupture 3—19937
- soil residual strain due to passage of strong seismic waves 3—48504
- solid Earth tide triggering of earthquakes 3—39801
- Songpan-Pingwu, 1976, Sichuan Province, China, max. compressive principal stress direction *(Chinese)* 3—48478
- source moment and radiated energy determ. by broadband method 3—25007
- source parameter and local Q-value by simultaneous inversion method 3—25006
- source parameter determ. by wavefield extrapolation 3—19921
- source parameter determ. methods for standard network 3—24996
- source parameter estimation by synthetic waveform method 3—25010
- source parameters estimation methods for seismic network 3—24997
- source region modeling with fracturing pyrophyllite specimens with soft inclusions 3—39826
- source regions train adjustment and groundwater Rn conc. var. *(Chinese)* 3—48479
- source spectra and moment tensor theory 3—25008
- source-parameter determ. method using regional waveform data 3—25005
- spontaneous rupture velocity, effect of nonuniform prestress 3—39786
- stick-slip failure containment by pore fluid 3—4790
- strain softening model in earthquake simulation *(Chinese)* 3—9845
- strong ground motion for large quakes, scaling relations 3—39787
- strong ground shaking duration 3—4781
- strong motion calculation method statistical model development 3—15351
- Sulawesi (Indonesia), microearthquake survey 3—4789
- Tangshan, 1976 July 28, epicentral area precursory resist. var. *(Chinese)* 3—48480
- Thessaloniki, Greece, 1978 earthquake source parameters 3—25009
- Thessaloniki area earthquake of June 1978 and subsequent gravity changes 3—25016
- Tonghai, China, 1970 January 5, focal parameters and fracture processes *(Chinese)* 3—9846
- tsunamigenicity indicators, efficiency estimation 3—15350
- eastern USA, catalogue of felt earthquakes (1850 to 1930) 3—39806
- Valle Central, Costa Rica, shallow focus seismicity, composite focal mechanism and tectonics 3—19904
- Vanuatu Islands, July 1980 event 3—39795
- very long earthquake mechanism model 3—39788
- volcanic tremors, source mechanisms, fluid transient anal. 3—35098
- Zhalanash-Tyup, 1978 March 25, N Tien-Shan seismicity 3—9855

EAS *see cosmic ray showers and bursts*

Eberhard effect *see photographic materials*

ebullition *see boiling*

e.c.g. *see electrocardiography*

echelles *see diffraction gratings*

echelons *see diffraction gratings*

echo
- *see also anechoic chambers; architectural acoustics; clutter; reverberation; sonar*
- auroral radar echoes, reduction of inherent noise in double-pulse Doppler technique 3—48761
- echocardiology, Doppler US computerised blood flowmeter for noninvasive meas. 3—4575
- echographic real-time system, acoustic beam visualization and quantization 3—27315
- elastic sphere, reson. scatt. theory anal. 3—37264
- elastic waves, inverse scatt. problem from inclusions with unknown boundaries 3—56466
- electroacoustic, in piezoelectric powders, continuum approach *(French)* 3—42057
- impulse response of echo on rigid sphere from planar transducer system, theory *(French)* 3—17663
- liquid containing gas bubbles, spatial acoustic echo 3—50826
- multi-image echo tomography 3—34920
- phased array imaging system, homomorphic signal dereverberation 3—7312
- piezoelectric powders, electroacoustic echoes at resonance, theory *(French)* 3—19069
- plasma, ballistic second-order echoes compared with third-order waves 3—27694
- pulp suspension flow measurement using ultrasonics and correlation 3—56636
- spherical target, acoustic impulse response distribs. *(French)* 3—42055
- US delay time measurement by echo envelope anal. for biomedical appl. 3—34917
- US pulse-echo system, optimal input signal generation 3—56404
- waveform synthesis in rapidly varying geometry 3—7272
- YIG, ferrimagnetic echo bandwidth increase using field gradient synthesis 3—52633

echolocation (physiological) *see bioacoustics; mechanoception*

ECL *see emitter-coupled logic*

eclipses
- *see also solar eclipses*
- ε Aurigae, eclipse depth in UV from IUE obs. (1981 to 1982) 3—35669
- ϵ Aurigae, sudden change in polarisation during eclipse (November to December 1982) 3—30427
- TU Camelopardalis, β Lyrae star, evidence for noncircular orbit from eclipse times 3—35662
- close binary stars, distribs. of K-velocities and eclipse depths from statistical models 3—40195
- V909 Cygni, Algol-type binary, photoelectric light curves, times of minima and orbital period 3—30424
- CI Cygni, symbiotic star, optical emission lines vars. during 1980 eclipse 3—25467
- eclipsing binary stars, photoelectric times of minima (July to October 1982) 3—59394
- W Gruis, southern Algol-type binary, new minimum light times and improved light elements 3—59395
- HD 186943, HD 211853, Wolf-Rayet binary stars, IUE studies during eclipse 3—59372

eclipses continued
- historical records of solar and lunar eclipses 3—5094
- HR 7578, possible late-type eclipsing binary and/or BY Draconis variable, ephemeris for eclipses 3—30423
- ST Indi, W Ursae Majoris star, minimum light times and linear light elements 3—5351
- AR Lacertae, RS Canum Venaticorum star, photoelectric secondary minimum time 3—59398
- NGC 2346, planetary nebula, central star, no eclipses before (1981) 3—54437
- 1 Persei, eclipsing binary, photometric obs. of secondary minimum 3—25524
- UZ Puppis, eclipsing binary, photoelectric epochs of min. light from BV photometry 3—15944
- WY Sagittae (Nova 1783), Weaver's candidate and deep eclipses 3—35602
- W Ursae Majoris, light minimum times during 1982 from photoelectric obs. 3—25523
- W Ursae Majoris, times of minima, October and November 1982, from photoelectric obs. 3—54438
- ER Vulpeculae, W Ursae Majoris star, photometry during 1982 and phase shift of eclipses rel. to ephemeris 3—15951

eclipsing binary stars
- 2A 0311—227 (EF Eridani), AM Herculis star, simultaneous IR and optical light curves rel. to accretion model 3—35672
- A 0620—00, X-ray nova, eclipse of accretion disc 3—48952
- 2A 1822—371, X-ray binary, IR photometry and model for UV, optical and IR light curve 3—10384
- Algol-type binary systems, mass transfer and circumstellar matter rel. to evolution 3—15957
- AN Andromedae, Am eclipsing star, system nature from V obs. anal. 3—10343
- AN Andromedae, metallic line eclipsing binary, UBV obs. 3—5360
- *o* Andromedae, spectroscopic evidence for short period and high eccentricity of binary orbit 3—59351
- CN Andromedae, W UMa star, period var. and orbital elements, UBV obs. 3—54445
- R Aquarii, IUE UV spectra of jet 3—20385
- R Aquarii, symbiotic star, JHKL photometry rel. to IR variability and nature of components 3—59365
- V889 Aquilae, relativistic apsidal motion from photometric anal. 3—25520
- V1343 Aquilae (SS 433), light variability and photometric anal. *(Russian)* 3—44765
- V1343 Aquilae (SS 433), mass transfer binary star, observational characts. and theoretical models 3—40149
- V1343 Aquilae (SS 433), nature and orbital motion, photometric anal. *(Russian)* 3—44764
- V1343 Aquilae (SS 433), nearby photoelectric standard stars, finding chart and UBV obs. 3—54351
- V1343 Aquilae (SS 433), obs. of evolution in relativistic precessing jet 3—25456
- V1343 Aquilae (SS 433), obs. of secular changes in kinematic model 3—40150
- V1343 Aquilae (SS 433), obs. of short period components in relativistic radial vels. 3—54375
- V1343 Aquilae (SS 433), polarisation due to accretion disc electron scatt. *(Russian)* 3—44659
- V539 Arae, eclipsing binary in multiple system, orbit/dimensions/masses/rot., visible obs. 3—48949
- R Arae, IUE obs. of peculiar variable spectrum 3—54427
- R Arae, IUE obs. of very unusual UV spectrum 3—40201
- ϵ Aurigae, abundances and synthetic spectra and UV obs. 3—15943
- ϵ Aurigae, companion star nature and models 3—5359
- ϵ Aurigae, IUE and IR photometry during eclipse ingress (April 1982 to January 1983) 3—35667
- IU Aurigae, light curve soln., UBV obs. 3—44800
- SX Aurigae, new light curve anal. 3—35661
- ε Aurigae, optical and UV spectrum vars. during eclipse ingress (1981 to 1982) 3—35669
- ζ Aurigae, polarisation during 1979 to 1980 eclipse 3—10388
- ζ Aurigae, spectral anal. during 1979-80 eclipse 3—54440
- ϵ Aurigae, sudden change in polarisation during eclipse (November to December 1982) 3—30427
- ζ Aurigae stars, UV reson. lines, transfer scheme for expanding atm. 3—20428
- AD Bootis, Algol-type binary, new orbital period and light curve from photoelectric obs. 3—54435
- TU Camelopardalis, β Lyrae star, evidence for noncircular orbit from eclipse times 3—35662
- AT, AZ Camelopardalis, minimum light times and light curves from photoelectric obs. 3—48955
- AC Cancri, eclipsing cataclysmic variable, secondary mass/spectral type, visible obs. 3—54396
- S Caneri, case study of classical Algol evolution 3—40197
- CW Canis Majoris, masses, radii, orbit and rot. characts., age, visible spectral obs. 3—5333
- R Canis Majoris, short period Algol-type binary, distance, space motions and absolute parameters 3—48945
- RS Canum Venaticorum, normalised photoelectric obs. for three-dimensional representation of light changes 3—40180
- RS Canum Venaticorum eclipsing subgiant systems, spectra anal. 3—54442
- RS Canum Venaticorum-like stars of short period, possible relation with W-type W Ursae Majoris stars 3—40202
- GG Carinae, photoelectric UBVRI photometry 3—59405
- SV Centauri, early-type contact binary, struct. and evolution from photometry and spectroscopy 3—40196
- NY Cephei, double line O-type binary, mass-luminosity anomaly 3—20418
- CX Cephei, eclipsing binary light curve and Wolf-Rayet props. 3—20400
- NN Cephei, photoelectric photometry 3—40178
- VW Cephei, W Ursae Majoris star, photoelectric UBV obs. and light curves 3—25522
- VW Cephei, W Ursae Majoris star, UBVRI photometry 3—10391
- CQ Cephei, WR eclipsing binary, orbit, masses, dimensions from visible obs. anal. 3—48913
- VV Cephei star in SMC, identification and nature, spectral obs. 3—59470
- VV Cephei stars, photometry anal. principal components 3—59227
- VV Cephei stars, search for mag. fields 3—10334

eclipsing binary stars continued
  VV Cephei stars, UV reson. lines, transfer scheme for expanding atm. 3−20428
  close binaries, light curves and Roche lobes *(Japanese)* 3−15941
  close binary stars, distribs. of K-velocities and eclipse depths from statistical models 3−40195
  close binary systems of short period, classification using light curve descriptor 3−15960
  CC Comae, W UMa star, light curve 3−5336
  RZ Comae Berenicis, W Ursae Majoris star, identification with variable star (Archer 5) 3−59393
  contact binaries, evolution, mass transfer and models 3−40177
  contact binaries, solar type, in NGC 188, evolutionary possibilities and impossibilities 3−40198
  contact binary stars, analytical approach to secular stability 3−15958
  V909 Cygni, Algol-type binary, first photoelectric light curves and orbital period 3−30424
  EM Cygni, dwarf nova, rapid brightness oscills. obs. 3−10365
  CI Cygni, eclipsing symbiotic star, UV props. from IUE obs. 3−25464
  V388 Cygni, semi-detached system, components struct. and masses, light curve anal. 3−59402
  CI Cygni, symbiotic eclipsing binary, three colour photoelectric obs. during 1980 eclipse 3−59339
  CI Cygni, symbiotic star, giant viscous accretion discs evolution rel. to light vars. 3−5281
  CI Cygni, symbiotic star, optical emission lines vars. during 1980 eclipse 3−25467
  V444 Cygni, WR atmosphere temp. distrib. from IR brightness *(Russian)* 3−48936
  YY Draconis, Algol-type binary, unsuccessful search using sky patrol plates 3−35743
  UX Draconis, possible eclipsing binary C star, photometric and spectroscopic obs. 3−20429
  BV and BW Draconis, UBV light curves anal. and model 3−40171
  BV and BW Draconis, W UMa stars, orbital elements from spectra/photometry anal. 3−59390
  E1405−451, optical identification with 101.5 minute binary with extremely rapid quasi-periodic variability 3−35656
  E2003+225, new AM Herculis star, spectroscopic, photometric and polarimetric obs. 3−25414
  E 1405-451, AM Her star, continuum flux, interstellar extinction and wind existence, UV obs. 3−48954
  BW Eridani, short period eclipsing binary, parameters, UBV obs. 3−35660
  YY Eridani, W Ursae Majoris star, UBV obs., January to February 1983, rel. to light curve and epoch of light minimum 3−59396
  U Geminorum, dwarf nova, orbit period var. from eclipse timings 3−54404
  U Geminorum, dwarf nova, UV light curve during quiescence 3−40148
  U Geminorum, dwarf nova, UV light curves obs. 3−10332
  AF Geminorum, triple system, spectral types/orbit anal. from UBV anal. 3−54441
  W Gruis, southern Algol-type binary, new minimum light times and improved light elements 3−59395
  H0139−68, AM Herculis-like star, simultaneous spectroscopy and photometry 3−59404
  H 0139-68, AM Her-like X-ray source and optical counterpart 3−35673
  HD 174403, newly-discovered eclipsing binary, preliminary ephemeris from photometric obs. 3−35664
  HD 186943, HD 211853, Wolf-Rayet binary stars, IUE studies during eclipse 3−59372
  HD 27130, dwarf system, giant X-ray flare characts., X-ray obs. 3−35614
  HD 5303, eclipsing RS Canum Venaticorum star, light curve meas. from photometric obs., (1979 to 1982) 3−59397
  HD 5303, RS Canum Venaticorum star, uvby obs. in October 1981 rel. to light curve vars. 3−44795
  HD 5303, RS CVn Bamberg variable star, BV obs. and light curve 3−40185
  HD 77581 (=4U 0900−40), optical eclipses and precession 3−44799
  Hercules X-1, 35-day turn-ons, random walk noise models 3−40175
  Hercules X-1 (HZ Herculis), obs. of cyclotron lines in hard X-ray spectrum 3−30414
  Z Herculis, BV photoelectric photometry 3−25514
  HZ Herculis, light curve synthesis model with accretion disc to interpret UV data 3−30429
  MT Herculis, photoelectric obs. and light curves (1981 July 3 to 10) 3−10394
  AM Herculis, X-ray eclipsing binary, low state X-ray flux anal. 3−20419
  AM Herculis (3U 1809+50), long-term light curve from photographic and visual photometry 3−20430
  AM Herculis (3U 1809+50), visual magnitude estimates, (1982 August 25 to September 11) 3−10398
  AM Herculis (3U 1809+50), visual magnitude estimates (1982 October 27 to November 11) 3−30428
  HZ Herculis (Hercules X-1), Einstein Observatory pulse-shape spectroscopy 3−10387
  HZ Herculis (Hercules X-1), orbital phase depend. of X-ray turn-on times 3−10386
  DQ Herculis (Nova 1934), shell nature and ionisation by central white dwarf UV radiation 3−15933
  HR 1099, RS CVn star, spot activity and models, UBV obs. 3−5350
  HR 7578, possible late-type eclipsing binary and/or BY Draconis variable, ephemeris for eclipses 3−30423
  HR 9049, interstellar reddening, orbit parameters, components masses/radii, UBV obs. 3−15956
  EX Hydrae, cataclysmic variable, soft X-ray emission variability obs. by Einstein Observatory 3−40151
  EX Hydrae, eclipsing dwarf nova, orbit and light curve 67 min modulation 3−48925
  VW Hydri, dwarf nova, UV light curves obs. 3−10332
  ST Indi, W Ursae Majoris star, light elements from photoelectric UBV photometry 3−5351
  AR Lacertae, Bv light curve variations 3−25516
  16 Lacertae, eclipsing β Cephei star, pulsations and orbit from visible obs. 3−48921
  CO Lacertae, orbit anal. from UBV obs. 3−59383
  AR Lacertae, RS Canum Venaticorum star, photoelectric secondary minimum time 3−59398
  EM and SW Lacertae, W UMa stars, orbital elements from spectra/photometry anal. 3−59390

eclipsing binary stars continued
  light curve theory of systems with oscillating components 3−40167
  light curves of binaries with oscillating components, theory 3−25515
  in Local Group galaxies, review of double stars 3−40193
  β Lyrae, IR photometry obs. and comparison with Wilson thick disc model 3−5334
  β Lyrae stars, structural models for accretion discs 3−40120
  main sequence eclipsing binaries, internal struct. consts. 3−40131
  V505 Monocerotis, β Lyrae star orbit, masses and radii, visible obs. 3−35659
  BR Muscae, new early-type contact binary, photoelectric UBV photometry and light curves 3−5342
  NGC 2346, planetary nebula, central star, no eclipses before (1981) 3−54437
  NGC 2346, planetary nebula, central star, photographic obs. rel. to orbital period and light curve vars. 3−44793
  NGC 2346, planetary nebula, central star, photometry and spectra rel. to unprecedented light vars. 3−48947
  NGC 2346, planetary nebula nucleus, orbital period from photometric obs. 3−5356
  RZ Ophiuchi and accretion disc, extinction and uvby obs. anal. 3−30418
  orbital periods of 22 eclipsing binaries, anal. of vars. from photoelectric times of minima 3−40191
  VV Orionis, early-type eclisping binary, multicolour photometric anal. 3−40182
  VV Orionis, triple system, limb darkening, orbit and luminosities 3−59384
  AR Pavonis, eclipsing symbiotic star, photometric and spectroscopic props. 3−25468
  AR Pavonis, eclipsing symbiotic star, UV props. from IUE obs. 3−25464
  U Pegasi, W UMa star, BV obs. anal. 3−25517
  BX Pegasi, W UMa star, orbit from BV obs. 3−25519
  period distribution anal., implications for form. and evolution 3−54433
  1 Persei, photometric obs. of secondary minimum 3−25524
  PG 1550+191, AM Herculis-type magnetic binary system, photographic photometric obs. (August 1972 to May 1981) 3−44792
  ζ Phoenicis, eclipsing binary in multiple system, orbit/dimensions/masses/rot., visible obs. 3−48949
  photoelectric minima of eclipsing variables, results from BV photometry 3−10393
  photoelectric times of minima for eight eclipsing binaries (July to October 1982) 3−59394
  VV Puppis, AM Herculis star, ellipsoidal light curve obs. at 1.2 μm 3−15954
  UZ Puppis, photoelectric epochs of min. light from BV photometry 3−15944
  WY Sagittae (Nova 1783), Weaver's candidate and deep eclipses 3−35602
  V884 Scorpii, Of eclipsing X-ray binary, short term variability obs. 3−5337
  μ^1 Scorpii, semi-detached eclipsing binary star, quest for initial parameters 3−59387
  V861 Scorpii (HC 152667), UBV polarimetry 3−15942
  secular period changes in ten eclipsing binaries photometric anal. 3−35666
  semidetached binaries with A or B-type primaries, spectra anal. 3−54442
  W Serpentis type binaries, evidence for accretion activity and obscured hot component from uvby photometry 3−10385
  short-period binaries, possible relation between W Ursae Majoris systems and RS CVn-like systems 3−40202
  SMC X-1 (Sk 160), obs. of two-component X-ray spectrum 3−54431
  southern hemisphere stars, periods, BV obs. 3−54444
  λ Tauri, eclipsing triple system, nature of components 3−20421
  RY Tauri, possible eclipsing T Tauri star, quasi-simultaneous photometric and polarimetric obs. 3−40132
  V471 Tauri, red dwarf-white dwarf binary, uvby obs. (October 1981) 3−44794
  V471 Tauri, RS CVn star, orbit variability, white dwarf spectrum and red dwarf chromospheric activity 3−40186
  BL Telescopii, VBLUW photometry in 1966-8, 1976-8 periods 3−59388
  4U 0900−40 (HD 77581), X-ray binary star, UBV polarimetry 3−15942
  4U 1700−37 (HD 153919), X-ray binary star, UBV polarimetry 3−15942
  W Ursae Majoris, IUE obs. 3−40200
  W Ursae Majoris, light minimum times during 1982 from photoelectric obs. 3−25523
  XY Ursae Majoris, RS CVn star, obs. of intense optical flare 3−5352
  W Ursae Majoris, times of minima, October and November 1982, from photoelectric obs. 3−54438
  TY Ursae Majoris, W Ursaw Majoris star, seasonal light curves obs. and solns. 3−40181
  W Ursae Majoris (BD+56°1400), evidence for brightness var. between primary minima 3−10392
  W Ursae Majoris stars, absolute dimensions, lifetimes and ang. momentum 3−25521
  W Ursae Majoris stars, anal. of space density and distrib. of spectral types 3−40204
  W Ursae Majoris stars, mass ratios and radial vels., visible obs. 3−59400
  SU Ursae Majoris stars, outburst models *(German)* 3−35635
  W Ursae Majoris stars, recent photometric observational evidence (1978 to 1981) 3−40203
  W Ursae Majoris systems, W-type, possible relation to short period RS CVn-like binaries 3−40202
  W Ursae Majoris type contact binaries, origin and evolution 3−40199
  W Ursae Majoris type systems, zero-age contact binaries, secular stability and evolution 3−40176
  W Ursae Majoris-type stars, IUE SWP images, activity 3−48958
  Vela X-1 (2U 0900-40), obs. of anomalous X-ray absorpt. spectrum 3−5341
  Vela X-1 (HD 77581), high-energy X-ray obs. 3−54430
  ER Vulpeculae, RS Canum Venaticorum star, orbital elements from spectroscopic investigation 3−15952
  ER Vulpeculae, W Ursae Majoris star, UBVR photometry during 1982 rel. to light curve vars. 3−15951
  wide eclipsing binaries, evolutionary trends 3−40118
  Wolf-Rayet eclipsing binaries, core radii, temp. and masses and atm. parameters 3−20378
  zero-age contact binaries, secular stability and evolution 3−40176

ecology
  lake ecosystems, structural comparison of models 3−15501

ecology continued
power overhead line ecological problems and public opinion *(German)* 3—39540
systems analysis appl., conf., Rome, Italy (Sept. 1981) 3—44898
USA ecological mapping, use for radioactive waste disposal studies 3—44162

econometrics *see economic cybernetics*

economic and sociologic effects
see also personnel
aircraft and ground vehicle noise, community annoyance, survey data anal. 3—12425
aircraft and ground vehicle noise, community annoyance, survey data anal. 3—12426
aircraft noise, community annoyance, survey data anal. 3—12427
neutron bomb, operation and effect *(Dutch)* 3—54612
noise effects, social survey data, reliability anal. 3—12424
nuclear fuel reprocessing experience, economic and political implications for W Germany *(German)* 3—55202
nuclear power debate, emotional and ideological aspects *(German)* 3—16810
science and society, rel. to the arms race 3—49106
wind power generation using jet stream winds 3—54099
women meteorologists employed in US 3—25745

economic cybernetics
EFOM 12C energy supply model with EC modelling system 3—4344
Energy Modeling Forum studies, experiences 3—4341
large energy-economic model data bases 3—4342
North Sea oil depletion, policy implications at national level 3—4349

economics
biofuels production, transportation costs 3—58488
biogas systems, control, safety, and economic aspects *(German)* 3—58468
breakeven costs of storage in optimized solar energy systems 3—9479
coal and oil mix as power station fuel, market potential and preparation cost 3—58470
Commission of European Communities solar cell systems study, potential market to year 2000 3—39469
corrosion protection, effective methods, overview 3—47980
cross-current heat exchangers, economic performance optimisation *(German)* 3—4400
distributed solar power systems, technical and economic impacts 3—58482
economic optimisation of wind energy conversion systems for isolated users 3—9402
economics for geothermal direct use 3—4365
energy and materials recovery from waste: limits and prospects *(Italian)* 3—48173
energy resources, world strategies 3—4348
energy technologies, new, economic problems of introduction *(German)* 3—34663
engineering cost estimates and power plant final cost forecasts 3—34678
European community's photovoltaic activities overview 3—58517
fuel cells, potential market and economic impacts 3—48146
geothermal heating, variables affecting viability 3—53483
geothermal power, costs and occurrence in eastern USA 3—58474
geothermal power exploration, the economic strategies 3—53481
geothermal power non-electric potential in USA 3—4362
H_2/H_2-rich fuels production using central receiver solar utilities 3—19625
heat exchanger energy loss minimisation using performance curves *(German)* 3—4401
heat pumps, electrically driven, efficiency calc. method *(German)* 3—4397
heat recovery and central air conditioning in single family house *(German)* 3—29443
HTGR module designed for process heat and high temp. steam, plant costs *(German)* 3—21496
hydrocarbon fuels, new source development, prospects *(French)* 3—34666
hydroelectric power, Austria, 1982, potential and developed *(German)* 3—34669
Indian small hydro development—an important source of power to rural and scattered communities 3—53478
lasers in industrial scale chemical synthesis 3—4303
levelised costs, inflation effects, worth-cost model for coal and nuclear plants 3—34679
lifetime levelised costs for power generation from nuclear and coal plants 3—34681
LWR fuel utilisation and economics improvements 3—26352
Mariner Mark II and exploration of solar system, cost goals and cost-limiting strategies 3—59179
methanol as boiler fuel for electric power generation, combustion test and economics 3—29372
MHD Disc Generator, status and potential 3—29431
municipal solid waste as electric utility fuel, technical and economic assessment 3—14917
Nitinol low-grade thermal energy conversion plant cost analysis 3—39508
non-technical bottlenecks in introducing solar energy *(Dutch)* 3—44100
nuclear fuel cycle, assessment and costing *(German)* 3—16845
nuclear plant lead times and capital costs, construction practices effects 3—34682
nuclear power, levelised costs, pseudo-cash flow or present-worth-cost method 3—34680
nuclear power in German Federal Republic, development from 1955 to 1982, data and factors *(German)* 3—48122
nuclear power plant modification cost engineering program for the near-term licensee 3—34683
nuclear power stations, variable-load operation, heat storage cost effectiveness *(Russian)* 3—19619
oil prices and economic rent over next decade *(French)* 3—34665
oil production optimal rate determ., for OPEC-member countries 3—14915
Omnifuel biomass gasifier, early commercial and technical performance 3—29456
optical fibre fabrication processes, technical and economic aspects 3—37257
optical fibre system design, performance versus cost 3—27260
optical instrument manufacturing, metal utilisation 3—1821
optical system life cycle cost, computerised modelling 3—1739
optical waveguide performance/cost relationships 3—50765
plastics, mica reinforced, mech., thermal and dielectric props. and economics rel. to processing 3—29058
power stations, potential market in Japan *(Japanese)* 3—58497
production methods for H_2 critical assessment 3—19626

economics continued
reactor waste disposal issues, technical political and institutional issues 3—21368
recycling of wastes, methods of reuse *(German)* 3—39438
regional comparison of solar, heat pump, and solar-heat pump systems thermal and economic performances 3—14931
renewable energy sources and developing countries 3—39434
replication, thin film, for precision mirror fabrication, cost effectiveness 3—7222
research for cheaper solar cells, throughout world and in Switzerland *(German)* 3—58501
societal cost of radiation exposure 3—5586
solar absorber convertors, rating method, for various heating systems 3—19616
solar cell module balance-of-system costs impact on photovoltaic electric power systems in rural India 3—58503
solar cells technical/economic considerations of solar energy conversion, applications 3—4396
solar desalination unit low cost design and performance 3—34675
solar energy conversion alternatives, profitability *(German)* 3—58476
solar energy system economics, short term writing 3—4367
solar heating system solar heater area and inclination optimisation for building heating 3—9463
solar hot water heater payoff time computation 3—9466
solar total energy system expt. facility, system performance *(Japanese)* 3—34673
solar total energy system in Japan, cost estimation *(Japanese)* 3—34672
solar water heating systems economics evaluating criteria 3—24631
space heating by isentropic air compression using wind power 3—14919
spent fuel management and decommissioning, costs probabilistic eval. 3—31615
sustainability transition, electric utilities financing 3—39436
Swedish energy industry and policies for reducing dependence on oil *(Hungarian)* 3—48114
Texaco coal gasification process, economic evaluation 3—29457
thermochemical heat pump principles of energy storage and generation, economics 3—4399
United States Federal Photovoltaic Program Status 3—58518
United States residential sector regional energy demands and economics 3—48113
wind power generation using jet stream winds 3—54099
wind power project engineering from electric power utility standpoint 3—39439
H_2 production using U-GAS goal gasification process, pilot plant results, current status and economic projections 3—53594
H_2 storage with cryoadsorpers, comparison with other storage methods 3—48196
He-Cd lasers in commercial systems, cost per mwatt hour of use 3—1659
He-Ne lasers, real cost for original equipment manufacturer user 3—1658
Pu-U recycling economics to nucl. program in Spain 3—968

eddy current losses
conductivity meas. of metal annular specimens, using Heydweiller bridge 3—54749
distribution and losses in multiple solid plates due to parallel current filament 3—21979
fine multifilamentary superconductors, decay-time const. of induced current 3—33836
metal plate in mag. field, eddy-current losses calc. *(German)* 3—41721
nonlinear eddy current problems, approx. treatment 3—36911
Permalloy ferromag. films, factors affecting domain wall mobility 3—3496
soft magnetic materials, polycryst. and amorphous, eddy current losses, rel. to equiv. number of domain walls 3—38647
soft magnetic materials, polycrystalline and amorphous 3—52521
steel, low C, thin laminations, eddy current losses associated with rotating mag. fields calc. 3—38642
steel, Si (3 wt%), thin laminations, eddy current losses associated with rotating mag. fields calc. 3—38642
superconducting energy storage system elec. characts. *(Japanese)* 3—58565
Fe-Si (3 wt.%), domain refinement due to scatching 3—3478
Fe-Si (3 wt.%), grain oriented, power loss, tensile stress effect 3—33963
Fe-Si (3 wt.%), nonoriented, loss calc. from classical viewpoint 3—28590
NbTi-Cu, superconducting composite magnet, AC losses 3—33842
NbTi-Cu-CuNi, superconducting composite magnet, AC losses 3—33842

eddy current testing *see eddy currents; nondestructive testing*

eddy currents
see also induction heating
air cored probe coils of finite length used for eddy current testing, impedance changes 3—44010
alternating magnetic field calc. for two high permeable cylinders, current distribution determ. *(German)* 3—41720
axial electric field vector analysis and eddy-current technique *(Bulgarian)* 3—56119
axisymmetric problems, open boundary finite element anal. 3—26906
biological bodies, eddy currents induced by RF mag. fields 3—24787
conducting plates, strips, films and coatings, eddy current thickness gauging, two parameter gap independence 3—20831
conducting right angle wedge in the field of a double line, induced eddy currents *(German)* 3—17404
crack inspection of turbine blades using endoscope and eddy current probe *(German)* 3—34577
crack opening displacement as a fracture mechanics parameter in eddy current NDE 3—39334
cylindrical shell of finite length and thickness, external current filament effects calc. 3—32264
electrical cond. meas., absolute eddy current technique 3—36044
EM systems, movement considerations in numerical calculations *(French)* 3—41727
ferromagnetic media, nonlinear, anal. study of eddy currents 3—36910
finite element modelling developments 3—39337
finite element solution using magnetic scalar formulation 3—21978
flaw detection, systems anal. of meas. 3—39340
flaw detection, theoretical considerations using superposed transducers, rigorous mathematical soln. of two dimensional problems 3—24465
flaw detection by superposed transducers, two-dimens. fields analysis 3—29268
hardness inspection apparatus using higher harmonics for chilled cast Fe 3—58337
impedance changes produced by a crack in a plane surface 3—39339
impedance plane anal. 3—58349

- **eddy currents** continued
  - inspection with superposed transducers, theory, approx. calc. of two dimensional models 3−53345
  - JT-60 multitorus system, eddy current anal. 3−55621
  - losses and dynamic effects caused by eddy currents induced in a thin non-magnetic plate 3−1521
  - LWR steam generator tubes, in-service inspection by multiple-frequency eddy current methods 3−6398
  - magnetic damper, optimal shape for largest force 3−12034
  - metal particles, ultrafine, far-IR absorption by eddy currents 3−23939
  - metallic spherical conducting bodies with flaws, electromagnetic fields of transfer and superposed eddy current transducers 3−50580
  - microcomputer-based eddy current equipment for nondestructive testing of tandem mill rolls 3−19476
  - multipath eddy current problems, efficient finite element soln. 3−36909
  - NDT, analytical methods 3−39338
  - NDT, eddy current calcs., EM field formulation 3−34570
  - nondestructive materials testing, computerised eddy current method *(German)* 3−29241
  - nonmagnetic materials, theory of eddy current NDT for cracks 3−39336
  - plane-and axisymmetric eddy current distributions calc. using finite element method 3−21971
  - Poisson's equation for axisymmetric vector pot. problems, hybrid finite element-boundary element formulation 3−26893
  - probe, multisegment, for flaw detection of bolted structures 3−39341
  - steel, stainless, thin-walled nuclear fuel element cladding tubes, standardised procedure for eddy current testing 3−4244
  - superposed eddy-current transducer, calc. of signal created by crack 3−29263
  - TEXTOR Tokamak, transient mag. field meas. and eddy current time constants, report *(German)* 3−46775
  - three dimensional defects, response prediction in eddy current NDT 3−44006
  - three-dimensional eddy current calc. by network method, using magnetic scalar potential 3−46125
  - three-dimensional eddy current problems using the T-Ω method and Fredholm integral equations 3−41723
  - transducer, continuous, cylindrical rod in nonstationary electromagnetic field 3−45129
  - transducer, eddy-current transfer, single-layer pipe in pulsed field 3−34589
  - transducer interaction with multilayered spherical product, electrodynamic problem soln. 3−29267
  - transducers approx. anal., laid on type 3−20843
  - two-dimensional eddy current and mag. field problems, interactive graphic soln. 3−36908
  - Al alloy D16, mech. props. control by eddy current method rel. to ageing kinetics 3−53214
  - C fibre reinforced plastics, damage susceptibility determ. by nondestructive methods 3−53326
  - Fe-Si (3 wt.%) grain oriented laminations, Bloch wall dynamics during magnetization 3−33922
  - $Mg_{1-x}Mn_xFe_2O_4$, FMR lineshift and line-width studies 3−38699
  - YIG:Fe^{4+} film, conductive, microwave spectra and mag. relaxation 3−33951
- **edge-defined film fed growth** *see crystal growth from melt*
- **edge dislocations**
  - acoustic emission from dislocations emerging to the surface of a crystal 3−13224
  - alloys, grain boundary at. struct. and intergranular diffusion 3−46957
  - BCC solid solutions, critical resolved shear stress, temp. and conc. depend., dislocation motion 3−51694
  - bubble ordering, elastic interaction explanation of linearity 3−56904
  - cellular struct., weakly misoriented, form. by rot. plastic deform. modes *(Russian)* 3−37982
  - ceramics, grain boundary struct., TEM and diffr. studies, review 3−46956
  - energy and entropy of interacting dislocations, atomistic simulation 3−22895
  - FCC metals, moving kink-mobile atoms anelastic interaction 3−42645
  - ferromagnets, microwave absorpt., effect of dislocation vibrs. 3−18995
  - grain boundary and dislocation diffusion 3−47146
  - grain boundary at. struct., diffr. studies 3−46955
  - interaction with misfitting precipitate, theory 3−33251
  - interfacial dislocations within anisotropic and nonhomogeneous isotropic elasticity *(French)* 3−46933
  - metals, grain boundary at. struct. and intergranular diffusion 3−46957
  - misfit dislocation occurrence at grain boundaries under high press. 3−2558
  - motion, non-uniform, of edge dislocation by climb and glide 3−56908
  - point defect drift-diffusion in dislocation strain fields, saddle point anisotropy effects 3−51847
  - polyethylene crystals, core struct. of dislocations, computer simulation 3−51602
  - scattering of tight-binding electron, theory 3−8465
  - semicondutors, grain boundary energy 3−22913
  - shape effects in the interaction between an edge dislocation and an elliptical inhomogeneity 3−51600
  - steel, alloy, irrad. damage, electron, heavy-ion and fast-neutron, correl. 3−27976
  - stress birefr. in elastically and optically isotropic materials, visibility of dislocations 3−37917
  - structure transform., liquidlike, intergranular diffusion, mol. dynamics approach *(French)* 3−46952
  - vacancy and self interstitial-edge dislocation interaction, atomistic and Monte Carlo calc. 3−42643
  - Al, crack tips, dislocation emission, TEM obs. 3−19394
  - $CoSi_2$, epitaxial, formation and struct. 3−3010
  - Cu, dislocation motion in annealed and neutron irrad. single crysts. 3−37930
  - Cu, neutron irrad., slip bands, heterogeneous form. 3−42678
  - Cu, stacking fault energy, determ. from X-ray peak shift 3−22923
  - Fe, single cryst., high purity, effect of H charging during deform. on mech. props. 3−2651
  - GaP, edge dislocations, stress-induced birefr. images, TEM study 3−3683
  - Ge, grain boundary struct., intergranular dislocations, TEM study *(French)* 3−46937
  - LiF, edge dislocation mobility for electron beam loaded crystals meas. 3−18315
  - Mg single crystals, basal dislocation density during plastic deform. *(Russian)* 3−51605
- **edge dislocations** continued
  - NaCl, edge dislocation mobility for electron beam loaded crystals meas. 3−18315
  - NaCl, edge dislocations, core energy and Peierls stress on (110) and (001) slip planes 3−33267
  - Ni-Au(111) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3−23219
  - $NiSi_2$, epitaxial, formation and struct. 3−3010
  - Pd-Au(111) and Au-Pd(001) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3−23219
  - Si, field reversed ion rings in background plasma, stability 3−56914
  - Si, grain boundary microstructure, HREM obs. *(French)* 3−46954
  - Si, mass transfer, influence of edge dislocations, numerical study 3−28163
  - Si:P, planar dechannelling of energetic ions at edge dislocations 3−47007
  - α-SiC, dislocations, etching and X-ray study *(Chinese)* 3−42605
  - Ti, edge dislocation core struct., high resolution electron microscopy study 3−46945
  - α-Ti, plastic deform. below 700K, prismatic slip 3−14660
- **education**
  - *see also educational aids; educational courses; teaching; training*
  - electrical engineer of the future, profile of requirements and career opportunities in West Germany *(German)* 3−16108
  - general physics course, combined effect of mathematics skills and formal operational reasoning on student skills 3−25712
  - international prospects for engineering education—a comparative analysis *(German)* 3−16109
  - requirements for producing qualified engineers *(German)* 3−16107
  - science and technology education in undergraduate liberal arts curriculum 3−35789
- **educational aids**
  - *see also student laboratory apparatus*
  - Australia, satellite appls., PEACESAT 3−40339
  - automatic data acquisition appl. to turbulent flow meas., in educational environment 3−25860
  - computer controlled apparatus for automatic measurement of resonance in an air column 3−44945
  - computer graphics teaching aid, time-depend. Schrodinger eqn. soln. 3−5530
  - demonstration of optical diffraction patterns to large classes 3−5542
  - viewing system, 3D, for tomographic scan interpretation 3−29721
- **educational computing**
  - *see also computer-aided instruction*
  - Commodore PET microcomputer appl. in undergraduate laboratory 3−44928
  - computer graphics teaching aid, time-depend. Schrodinger eqn. soln. 3−5530
  - data collection in physics laboratory expts., AIM 65 microcomputer appls. 3−35791
  - finite element method, interactive processor for teaching 3−25739
- **educational courses**
  - energy and its carriers 3−5522
  - international prospects for engineering education—a comparative analysis *(German)* 3−16109
  - nuclear plant operation through start-up and test data, classroom introduction 3−50
- **e.e.g.** *see electroencephalography*
- **EELS** *see electron energy loss spectra*
- **effective mass (band structure)**
  - exciton effective mass temp. depend., interaction with polar phonons 3−28282
  - metal, electron gas, specific heat and effective mass relationships at finite temp. *(Russian)* 3−3093
  - metals, positron work function, effective mass and lifetime 3−57994
  - nonparabolic semiconductor thin films, size quantisation, effective electron mass 3−38499
  - polar crystals, ground state energy and effective mass of surface polaron *(Chinese)* 3−33648
  - semiconductor heterojunction, abrupt, effective mass wave functions, interface correction rules 3−57417
  - semiconductor heterostructures, optical susceptibility, third-order nonlinearity induced by effective mass gradient 3−41905
  - semiconductor heterostructures, potential distrib. in presence of quantum effects, selfconsistent calc. 3−13890
  - semiconductors, diamond-like, Γ_8 band dispersion law anisotropy in mag. fields 3−38308
  - semiconductors of inhomogeneous composition, forces active on free carriers, quasi-elec. field study 3−43000
  - semiconductors with inhomogeneous composition, forces acting on free carriers 3−42999
  - semimagnetic semiconductors, review 3−23642
  - solids with nonuniform band struct., Wannier-Slater theorem 3−38285
  - surface polaron excitons in strong mag. fields 3−3081
  - surface states, effective mass calc. method 3−47398
  - n-BNi_2Te_3, carrier mobility and effective mass, Hall effect and magnetoresist. study 3−3202
  - $Bi_{2-x}In_xTe_3$, constant energy surface anisotropy 3−3056
  - $Bi_{2-x}Sb_xTe_{3-y}Se_y$, constant energy surface anisotropy 3−3056
  - $Bi_2Te_{3-x}Se_x(S_x)$, constant energy surface anisotropy 3−3056
  - p-$CdGeAs_2$, energy spectrum and optical absorpt. 3−23246
  - Cd_3P_2, band struct., Fermi level and g-factor in mag. field 3−33634
  - CdSe thin cryst., polariton time of flight meas. 3−3085
  - CdTe, cyclotron resonance of electrons and holes, optical detection 3−18603
  - CdTe thin films, hole effective masses ratio determ. from optical transition 3−43651
  - $CeSn_3$, Fermi surface props., dense Kondo and mixed valence models 3−52010
  - $CuInTe_2$, electron effective mass. carrier mobility anal. 3−43001
  - $Eu_{1-x}Gd_xO$ (SM_xO), carrier scatt. and transport phenomena 3−28363
  - EuO_{1-8}, carrier scatt. and transport phenomena 3−28363
  - $Ga_{1-x}Al_xAs$, electron mobility and deformation pots, meas. in X-conduction band minima 3−18703
  - GaAs heterostructure, polaron effective mass 3−47278
  - $GaAs/Al_xGa_{1-x}As$ LPE grown heterojunctions, two dimens. electron gas 3−43278
  - $Ge_{0.9}Si_{0.1}$, energy band parameter study 3−52030
  - ^3He, liq., zero sound, spin fluctuations and effective mass 3−23130
  - $InAs_{1-x}P_x$, energy spectrum, tunnel spectroscopy study in mag. field 3−13708

effective mass (band structure) continued
  $In_{1-x}Ga_xAs_yP_{1-y}$, material parameters derivation from linear interpolation scheme 3—33632
  In-InSb, ultrathin films, size quantisation, effective electron mass 3—38499
  InSe, effective mass and conduction band parameters, cyclotron resonance study 3—8402
  InSe, elec. props. meas. 3—52155
  InSe, magneto-optical props. near band gap, wavelength modulation spectroscopy study 3—28847
  K, electron quasiparticle mass, press. depend. 3—43002
  Na, electron quasiparticle mass, press. depend. 3—43002
  NaCl crystal, delocalized positronium effective mass 3—19224
  PbS-PbSe(Te) solid solutions, electronic density of states effective mass 3—57262
  $PbSe_{1-x}Te_x$, electron effective mass, Shubnikov-de Haas effect study 3—13710
  $Pb_{1-x}Sn_xTe$ epitaxial films, elec. transport props., band parameters 3—18801
  $Sb_{1.5}Bi_{0.5}Te_3$-Bi_2Se_3 solid soln. single cryst., elec. and thermal conductivities 3—57345
  Sb_2Te_3, Ag doped and undoped, elec. props., reflectivity, nature of Ag impurity 3—23381
  Si, impurity dependent effective mass, transport props. 3—47252
  Si inversion layer, cyclotron effective mass, plasmon and impurity effects 3—3329
  Si surface, hole energy spectrum, WKB calc. 3—8553
  Si:Au, effective mass states, luminesc., photoconductivity meas. 3—52841
  Te, magnetophonon oscill. of thermoelec. power in cond. band 3—23413
  TiO_2:Nb, H, elec. cond., Hall effect and carrier scatt. 3—47344
  $TlInS_2$, electroabsorption spectrum 3—3687
  Zn_3As_2, film and crystal, band struct., optical absorpt. and reflectivity study 3—8812
  $ZrZn_2$, Fermi surface, field depend., de Haas-van Alphen study 3—33622
effusion
  semiconductors, effusion processes, in MBE 3—28242
  Al_2O_3-CaO, evaporation thermodynamics, study by Knudsen effusion method 3—18431
  GaAs-AlGaAs, effusion processes, in MBE 3—28242
  K-containing species, thermodynamic props., effusion-mass spectrometric studies 3—34643
  PbTe-PbSnTe, effusion processes, in MBE 3—28242
  Si:H, amorphous, annealed, adsorbed O behaviour during H effusion, XPS study 3—51921
  Si:H(H,B)(H,P), amorphous, H diffusion coeff., H_2 effusion expts. 3—33501
  Ti_2O_3-TiO_2, evaporation thermodynamics, study by Knudsen effusion method 3—18431
EFG *see crystal growth from melt*
EHD *see electrohydrodynamics*
EHT calculations
  atomic charge in mols., electrostatic pot. calc. at nuclei in point charge approx. 3—55850
  benzylidene aniline, p-p′-derivatives, liq. cryst. props., dipole moments, ESCA, EHT calc., and chromatography 3—56812
  diphenyl ethers, polychlorinated, conform. anal., extended Huckel MO calcs. 3—45858
  hydrazinecarbothioamide, basic and N-protonated, MO calcs. and NMR investig. 3—21782
  semiempirical orbital energies rel. to total energy of mol., Ruedenberg type formula 3—55851
  $(TMTSF)_2X$, band struct. and Fermi surface 3—13724
  Al (111), chemisorbed O, electronic struct., iterative EHT calc. 3—38453
  AlX_3, (X=F, Cl, Br, I), geometry optimisation EHT method, electrostatic correls. 3—45857
  Al_2X_6, (X=F, Cl, Br, I), geometry optimisation EHT method, electrostatic correls. 3—45857
  $BiBr_3$, PES and relativistic interpretation 3—26786
  $BiCl_3$, PES and relativistic interpretation 3—26786
  BiI_3, PES and relativistic interpretation 3—26786
  CdTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3—28248
  Co (111) complex with phthalocyanine, energy band struct., EHT calcs. 3—13718
  HgTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3—28248
  Ni with chemisorbed acetylene, extended Huckel studies 3—51931
  Ni-H, interstitial H bonding, CNDO, EHT and SW-Xα calcs. 3—33183
  $PbMo_6S_8$, electronic struct., role of cluster twisting angle, LCAO EHT tight-binding calc. 3—57280
  PbTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3—28248
  Rh (111) surface, interaction between CO and coadsorbed species, EHT calc. 3—23179
  Si, LDOS of crystal, improvement of calc. by EHMO method *(Chinese)* 3—33620
  Si:B, Si-B3 paramagnetic defect, extended Huckel theory calc. 3—38345
eigenfunctions *see eigenvalues and eigenfunctions*
eigenvalues and eigenfunctions
  adjoint operator pair, stability problem 3—30680
  almost Mathieu model, spectrum, metal-insulator transition 3—52033
  anharmonic oscillator, Schrodinger eqn. soln. 3—30662
  anharmonic oscillators, Hill determinant and analytic continued fraction method appl. 3—103
  anharmonic oscillators, scaling-variational treatment 3—45014
  anisotropic vertex models, eigenvalues and eigenvectors 3—5736
  anticorrelation and an exact wave function in an exactly solvable model 3—30694
  area preserving maps, renormalisation group anal. of bifurcations 3—16112
  atom, single-photon ionisation as Hilbert boundary value problem 3—32018
  atomic systems, relativistic Green's functions calcs. 3—31896
  atoms, high Rydberg states in strong mag. field 3—45871
  Bardeen discs, eigenfunctions and eigenfreqs. of normal modes of uniformly rotating incompressible discs 3—48890
  Beltrami-de Sitter spacetime, relativistic quantum wave eqns. for scalar and spinor particles *(Chinese)* 3—40743
  Bethe wave function norms calc. 3—497

eigenvalues and eigenfunctions continued
  Bethe-Salpeter equation with relativistic harmonic oscillator kernel, nonexistence of discrete bound states 3—5972
  bifurcations of multidimens. maps, universality 3—45076
  buoyancy-driven convection, integral equation formulation 3—27503
  Casimir operator, computation of eigenvalues 3—54859
  charged harmonic oscillator in mag. dipole approx., gauge invariance 3—40398
  classical nonlinear oscillator, new Tamm-Dancoff method 3—40379
  completely integrable Hamiltonian system, gradient theorem 3—10618
  completeness theorem, one-dimens. Schrodinger eqns. with energy-dependent potentials 3—44986
  composite particles, conservation of parity and time reversal 3—36166
  continued fractions and pot. models of confinement 3—30664
  Coulomb Sturmian basis for any spin 3—5638
  coupled oscillator system, eigenvalues and wavefunctions calc. using adiabatic approx. theory 3—6514
  coupled oscillators, SCF eigenvalues, hypervirial-perturbative approx. 3—5621
  coupled structure free vibr. anal. by modal synthesis *(German)* 3—32638
  cyclic harmonic vibrations, soln. of inverse problem, of mols. or polymers *(French)* 3—41544
  decaying states, new quantum theory method 3—35884
  defect classification using singularity expansion method 3—29291
  diffusion in bistable pot., exact soln. 3—25832
  Dirac H atom, virial theorem 3—25723
  discrete dynamical systems, linear and nonlinear response, periodic attractors 3—49259
  discrete eigenvalues in neutron transport theory 3—21361
  discrete equations, asymptotic solns. 3—4262
  discrete spectrum of electrically charged particles, charact. function anal. 3—30683
  disordered systems, one-dimensional, energy level struct., wavefunctions near spectrum edge 3—20707
  double-well anharmonic oscillator, eigenvalue perturbation expansion, Borel sum 3—45009
  double-well pot., perturbative technique appl. 3—10625
  elastic phase transitions, Landau theory appl. 3—23033
  elastic solid, eigenvalue analysis, finite element discretization, optimal design 3—42176
  elastic wave scattering theory, method of equiv. inclusion extension to dynamic case 3—25767
  electron motion in field of two plane EM waves and inhomogeneous elec. field 3—40841
  electron pair correlations, review 3—41507
  ellipsoid space charge effect in waveguide of electron linac *(Chinese)* 3—51404
  EM plane-wave excitation of truncated metal cone *(Russian)* 3—41726
  EM wave scatt. by circular cylinder covered by thin plasma layers, eigenfunction anal. 3—6851
  energy level gaps in a bounded interval 3—49117
  fermions-antifermions relativistic bound states 3—16494
  few particle Schrodinger eqn., exact bound state solution from Raleigh-Schrodinger perturbation theory. 3—5648
  few-body anharmonic oscillators, matrix continued fractions 3—40400
  few-particle Schrodinger equation, solution for ground state of helium 3—5649
  galaxies spiral structure, global shearing modes of galactic disks 3—59452
  geomagnetic field generation, perturbation theory for degenerate eigenvalues case 3—15330
  Hamilton-Jacobi theory and quantum action variable 3—30689
  Hamiltonian spectrum with infinitely many bumps 3—44985
  Hartree-Fock eqn., eigenfunctions without spherical symmetry 3—54649
  helical wormlike chains, dynamics, eigenvalue problems 3—36890
  helical wormlike chains, dynamics, eigenvalue spectra and time correl. functions 3—36891
  Helmholtz eqn. with symmetric profiles, Langer's method for weakly bound states 3—20675
  Hermite polynomial for symmetrical matrix 3—112
  Hermitean matrices, eigenvalue simultaneous bracketing *(German)* 3—44989
  hydrogenic Hamiltonian, Coulomb Green's function, generating integral for matrix elements 3—31902
  hyperbolic systems. Power conservation law and time decay of energy 3—17399
  instability of convergent spherical shock wave *(Russian)* 3—46604
  integral equation eigenvalue problems, numerical method 3—42384
  intermittency, 2-D scaling theory, renormalisation and eigenvalue eqns. 3—184
  internucleon potential, Sturm-Liouville problem, radial equations 3—31308
  inverse scattering transform for stimulated Raman scatt. and two-photon propag. 3—50708
  inverse scattering transforms, Lax-pair operators for squared eigenfunctions 3—30622
  inversion vibr. freqs., ab initio calcs. *(French)* 3—45807
  Ising model, spin 1/2, thermodynamic props., approximation method 3—38570
  Ising model, two-dimensional, analytic continuation at first-order phase transitions 3—28584
  isoscalar particle motion in dyon field 3—31031
  iterative method, static, elastoplastic and eigenvalue problems, finite element analyses, cost reduction 3—17816
  Kratzer-Fues pot., WKBJ eigenenergies 3—32157
  Lanczos eigenvalue algorithm for large structures on a minicomputer 3—22358
  Lennard-Jones pot., asymptotic perturbation technique 3—20702
  level spectra, fluctuations, role of range 3—20665
  linear potential with relativistic kinematics, eigenfunctions asymptotic behaviour 3—521
  Lowdin partitioning in a Lanczos basis: applications to scattering states 3—35875
  m-dimensional spaces and hyperspherical harmonics, angular integrations 3—10612
  matrice eigenvectors, appl. of graph theory to group theory 3—117
  meson spectra of superimposed pots. in Schrodinger eqn. 3—36208
  meson-nucleon system, relativistic, effective operators in Hermitian and non-Hermitian form 3—40976
  metal sphere, dipolar plasmon modes, eigenvalues and damping 3—28292
  methane-d_3, IR absorpt. spectrum between 8 and 11.5 μm, ν_3 and ν_6 band anal. 3—32058
  molecular systems, relativistic Green's functions calcs. 3—31896

eigenvalues and eigenfunctions continued
Morse oscillator matrix elements, recursive formulae 3—46048
N-body Schrodinger operators, exponential bounds and absence of positive eigenvalues 3—30645
natural frequency calcs., errors using eigenvalue economisation 3—10556
neutron transport theory, external boundary perturbation effects on fundamental eigenvalue 3—49907
non-conservative systems, dynamic stability, sensitivity analysis 3—44959
noninteracting particles, diffusion coeff. relax., Boltzmann eqn. anal. 3—16318
nonlinear eigenvalue problem soln. in one dimension 3—45006
nonlinear eigenvalue problems, numerical method, appl. to laser-plasma interactions 3—56690
nonlinear elliptic eqns., bounds for lowest eigenvalue from Barta's method 3—49193
nonlinear Schrodinger equation, generalised, Lax-pairs anal. 3—16149
nuclear binding energies from moment methods using harmonic oscillator Hamiltonian 3—40959
octupole-phonon-state classification, shift operator props. in groups G2 and R(7) 3—6176
one speed neutron transport eqn. with quadratically anisotropic scatt. discrete eigenvalues 3—16811
one-dimensional quark gas, thermodynamical props. 3—21095
operators, superoperators, Hamiltonians, and Liouvillians 3—35863
orbital doublet, Jahn-Teller effect, one-mode intermediate coupling calc. 3—52092
perfectly conducting object, characteristic modes calc., weighted eigenvalue eqn. 3—17411
perturbed harmonic oscillator ladder operators, eigenenergies and eigenfunctions 3—40396
phase conjugate resonator, axially symm., Huygens integral 3—7078
plane rotor with time-varying mag. flux, implications for bound-state Aharonov-Bohm effect 3—104
positronium, hyperfine interval, meas., line shape effects 3—32248
potential scattering, asymptotic behaviour of eigenvalues, Dirac equation, S matrix spectrum 3—16175
Prufer transformation appl. to Schrodinger operator eigenvalue, report problem 3—20710
pyrazine, mol. eigenstates spectrum 3—21802
QCD, planar approx., bounds on particle mass 3—54882
QED, vacuum energy density, finiteness problem 3—49620
quadrupole phonon state labelling and $R(5)\downarrow SU(2)\otimes SU(2)$ 3—6177
quantum bouncer, allowed energies and eigenstates determ. 3—35815
quantum mechanical systems with degenerate states, perturbation theory 3—35882
quantum mechanics, arrangement channel, time-independ. scatt. theory 3—49200
quarks bound state energies for scalar pot. in Dirac eqn. 3—36209
quenched reduced $U(\infty)$ chiral model, spontaneous symmetry breaking in weak coupling 3—31033
radial Schrodinger eqn., resonant state soln. calc. by GAMOW program 3—5623
random coupling models, random coupling distrib. and initial phases dependence 3—25811
rare earth metals, photoemission spectra of 4f states, intermediate coupling calc. 3—43706
Rayleigh piston, discrete spectrum, upper bounds to number of discrete eigenvectors 3—10736
rebalance acceleration of time absorption eigenvalue searches 3—868
recurrence formula for matrix elements with screened potential 3—32159
resonance positions and widths determ. by analytic continuation of stabilisation graphs 3—40390
resonance struct. determ., complex stabilisation method 3—25785
rigid rotator in elec. field, perturbation calcs. 3—32122
Rossby waves modified by basic shear, and barotropic instability 3—22480
rotating compressible flows with internal sources and sinks 3—51133
rotating hollow beam, Weibel mode instability 3—46723
scattering reson. widths from real stabilisation graphs 3—5622
Schonberg's perturbation theory ground state, energy eigenvalues by partitioning technique 3—45020
Schrodinger energy levels for quark confining potentials, ang. momentum analyticity 3—49199
Schrodinger eqn. with radial gaussian pot., bound states energies and eigenfunctions 3—20659
Schrodinger equation, solution by spectral method 3—5625
Schrodinger equation, stationary, coherent memory functions calcs. from eigenvalues and eigenvectors 3—54637
Schrodinger operators, eigenvalues localisation local Birman-Schwinger bound 3—35881
Schwinger model, energy eigenvalues and string tension 3—45369
sheet plasmas, drift waves 3—46710
soliton theory, gauge transforms. 3—44976
spin-$^1/_2$ particles bound-state energies, relativistic corrections calc. 3—45004
square wave gratings, eigenfunctions, appl. to diffr. and surface plasmon calcs. 3—1759
Stark effect near potential barrier peak 3—26689
stellar oscills., matrix method 3—54358
Stieltjes-Tchebycheff orbital approx. for Schrodinger states, explicit Hilbert space representations 3—49196
structure eigenfrequency changes due to cracks, notches and geom. changes 3—7479
$SU(3)\supset G$ generator and basis states realisation using boson creation operators 3—6178
surface states, effective mass calc. method 3—47398
systematic occurrence of repeated eigenvalues in structural optimization 3—12559
systems with confining pots., variational approx. 3—5535
thermal unimolecular reactions, rate constant in intermediate collision cases 3—34606
three dimensional linear elasticity operator, eigenvalue problem *(Italian)* 3—16135
three-body problem, coupled adiabatic approx. 3—11256
time-dependent two-level problem, perturbative soln. and Rosen-Zener conjecture 3—54648
topological effects on MO energies 3—1219
translation matrices of spherical waves of multiple-scatt. theory, eigenvalues and eigenvectors 3—44990
transport eqn., finite element method for criticality eigenvalue problem 3—30817

eigenvalues and eigenfunctions continued
triatomic mols., vibr. energy levels, Schrodinger eqn. soln. by spectral method 3—36670
triple well anharmonic oscillator, perturbation theory, 1-dimens. Schrodinger eqn. 3—5628
two loop soliton soln. props. 3—40377
two-dimensional ang. momentum in presence of long-range mag. flux 3—45001
uniform geometrical theory of diffr. for wedge illuminated by dipole class to its edges 3—50582
vibrating elastic body in tenuous compressible fluid, scatt. frequencies *(French)* 3—37390
vortex longitudinal instability in shear flow, wave induced 3—32742
waveguides, optical, rectangular, new theory 3—12328
WKBJ calculation of the energy levels of an anquartic potential 3—20709
YIG coupling circuit, 4-port cross-wire, eigenvalue anal. 3—46290
Yukawa interaction, operator approach to strong coupling transmutation 3—500
$\bar{C}C$, wave equation for superimposed pot., solns., charmonium spectroscopy 3—40846
Σ^0-hypernuclei, microscopic approach 3—31325
Fe(III) complexes, high-spin porphyrins, mag. props. and electronic struct. 3—41488
^2H quantum numbers, quark configurations S^6 and S^4P^2 in bag model 3—11257
$(N_2)_2$ van der Waals mol. quantum dynamics, ab initio treatment 3—21619
NH_3, inversion vibr. freqs., ab initio calcs. *(French)* 3—45807
Pd I isoelectronic series, I VIII to Ho XXII, reson. lines identification 3—32003
ZrO_2-Y_2O_3:Er^{3+} crysts., radiative transition probabilities 3—14337
eigenvectors *see eigenvalues and eigenfunctions*
eightfold way *see SU_3 theory*
Einstein-de Haas effect
see also gyromagnetic ratio
No entries
einsteinium
see also nuclei with ......
^{254}Es, self-diffusion coeff. determ. in $Nd(ClO_4)_3$ soln. 3—2859
einsteinium compounds
$EsPO_4$, Raman spectra 3—47646
elastic aftereffect
No entries
elastic constants
see also elastic moduli
A15 superconducting cpds., band Jahn-Teller effect 3—57319
alkali halide mixed crysts., rocksalt struct., elastic consts. 3—22959
alkali halides, adiabatic second-order elastic consts. in high-temp. region, temp. depend. 3—2642
alkali halides, elastic consts. and thermal expansion 3—22960
alkali metals, pseudopotential theory 3—51726
alkaline earth chalcide crystals, third-order elastic const. determ. from Gaussian pot. model 3—8117
alkaline earth oxides, lattice dynamics 3—22992
n-alkylcyanobiphenyls, nematic, elastic consts. determ. by anisotropy of turbidity 3—42694
ammonium Rochelle salt, photoelastic study 3—3684
amorphous metal, local struct. fluctuations, glass transition 3—2801
amorphous structures, local analysis 3—22773
antiferromagnetism itinerant model, dynamic matrix theory 3—52340
β-brass, thermal diffuse scatt. anal., determ. of solute-lattice coupling parameters 3—28100
colloidal crystals, phonon dispersion curves, lattice dynamics, photon correl. spectroscopy 3—13376
composite laminates, elastic constants, in-plane, variation with orientation angle and fabrication process *(Japanese)* 3—58155
composites, effective elastic consts. calc., elastostatic resonances 3—7421
cubic materials, adiabatic second-order elastic consts. in high-temp. region, temp. depend. 3—2642
cyano substituted nematic mixtures, elastic consts. and elec. permitt. meas. 3—46845
cyanobiphenyls, elasticity and orientational order 3—13090
elastic phase transitions, Landau theory appl. 3—23033
eutectic nematic liq. cryst. mixture, turbidity anisotropy, elastic consts. and absorpt. coeffs. meas. 3—47013
ferromagnet, morphic effect, magnetostriction and Curie temp. *(Russian)* 3—23764
fibre reinforced composites, elastic constant determination for shells of revolution *(Chinese)* 3—22407
fluorides, heat capacity, low temp. 3—57105
fluorite compounds, thermophysical and anharmonic props. calc. 3—51536
graphite, lattice dynamical model, Raman spectrum calcs. 3—13362
graphite, structural and elastic props., density-functional approach 3—51537
graphite fibre reinforced glass, compliant, high failure strain, prep. and characteris. 3—29056
graphite-alkali metal intercalation cpds., layer-bending modes, neutron scatt. study 3—22999
halogen crystals, interat. pot. model 3—2462
4′-n-heptyl-4-cyanobiphenyl/2-hydroxy-EBBA mixtures, bend and splay elastic consts. in induced smectic A phase 3—57011
2,4-hexadiynylene-bis(p-toluenesulphonate), monomer and polymer, elastic consts. and phase transitions 3—42770
hexagonal cryst., X-ray Debye temp., elastic consts. 3—13391
II-VI semiconductors, elastic Debye temperature, elastic const. calc. 3—42740
III-V semiconductors, elastic Debye temperature, elastic const. calc. 3—42740
incommensurate systems, classical and non-classical behaviour, secondary order parameter susceptibility 3—18425
inhomogeneous elastic medium, model of point defects in mechanics 3—56436
inner compliance, internal strain tensors in cryst. structures, stress depend. 3—51520
ionic crystals of rocksalt struct., elastic const. correls. 3—42695
isotropic hexagonally crystallising material, X-ray radiographic and mech. elastic const. from X-ray radiographic strain meas. *(German)* 3—19478
lattice fourth order coupling parameter relations, elastic consts. 3—223
liquid crystals, elastic consts. and continuum theory, free energy density expansion 3—33082

elastic constants continued
  liquid metal, local struct. fluctuations, glass transition 3—2801
  metal, plane strain-crack growth resistance J_I-R curve determ., tentative procedure 3—29234
  metals, cubic, Lindemann's melting criterion 3—33406
  metals, equation of state, strengths and elastic constants, physico-mech. calc. *(Chinese)* 3—19358
  metals, pseudopotential theory 3—51726
  metals and alloy phases, elastic consts., lattice energy function, model anal. 3—51687
  micropolar elastic constants, wave propagation, moduli 3—42165
  micropolar elastic solid, noncentrosymmetry consequences 3—1955
  minerals, elastic constants pressure derivatives determ. from ultrasonic differential path phase comparison method 3—15635
  nematic liquid cryst., elastic constants, effect of nematic neighbour correlations 3—2637
  nematic liquid cryst. mixtures, low freq. dielec. relaxation and dual freq. addressing of field effects 3—14209
  nematic liquid crystal, Frank const. determ. by light attenuation meas. 3—2639
  nematic liquid crysts., thermodynamic stability, dielect., diamag. and elastic props. 3—37774
  nematic-smectic A transition, interacting dislocations, splay elastic constant 3—56816
  4-n-pentylphenylthiol-4′-heptyloxybenzoate and mixtures with octyloxy analogue, light scattering above the nematic-to-smectic- C transition 3—47108
  phonon scatt. by strain and rot. fields of cryst. defects 3—42736
  piezoelectric layer media, dielectric, piezoelectric and elastic consts. 3—19070
  polychlorotrifluoroethylene, sketched and hydrostatically extruded, orientation effect on elastic 3—4070
  polyethylene, normal mode vibr., rigid mol. model 3—2726
  polypropylene, oriented, fine particle filled, elastic props. 3—9108
  polyvinylidene fluoride film, uniaxially oriented, piezoelectricity 3—52737
  Rochelle salt, nonlinear dielec., elastic and electro-mechanical coeffs. at ferroelec. transition 3—43498
  rubbers, elastic properties, effect of deform. during crosslinking *(Russian)* 3—53111
  shell, inhomogeneous, generalised shear model fundamental relations refinement 3—50948
  shells, three-ply, fatigue failure, variation of stiffness of honeycomb filler 3—42193
  single crystal plate, cubic lattice, nonuniformly doped, equilib. states *(Russian)* 3—13244
  single crystal plates, nonuniformly doped, equilib. states *(Russian)* 3—13243
  single crystals, elastic consts., determ. from elastic moduli of polycryst. samples *(Russian)* 3—51686
  smectic A-C transition in three dimensions 3—2797
  solid solutions with cubic symmetry, elastic interaction pot. 3—42696
  steel, alloy HY 130, plane strain-crack growth resistance J_I-R curve determ., tentative procedure 3—29234
  steel, alloy HY 130, plane strain-crack growth resistance J_I-R curve determ., tentative procedure eval. by round robin tests 3—29235
  stiffness matrices for C_0 continuous tetrahedra 3—27381
  surface elastic waves in crystals, role of spatial dispersion 3—38184
  surface martensite, surface relax. as possible origin 3—43814
  tensor props., rot. symm. of crystals 3—51529
  textured materials, grain interaction effect in calcs. 3—51691
  TGS, piezoelectric and elastic props. 3—34034
  thiourea, elastic const., C_{33}, in elec. field, Brillouin scatt. study 3—3753
  urea single cryst., elastic behaviour, Brillouin and Rayleigh studies 3—19145
  urotropin single crystal Mandelshtam-Brillouin spectrum 3—3751
  weld, US inspection using single crystal elastic const. 3—44034
  woven fabric composites, stiffness and strength 3—18362
  zincblende-type semiconductors, lattice statics, interionic pot. model 3—22818
  β_1-Ag Zn, alloying addition effect on elastic behaviour rel. to phase transform. *(Japanese)* 3—47830
  AgBr, defect energy calc., dielec. and elastic props. 3—51593
  AgTlSe, optical elastic and acousto-optical props. 3—52767
  Al-Cu, elastic consts., effect of solute content and heat treatment *(Japanese)* 3—58152
  Ar:$O_2(N_2)$ alloys, single cryst., elastic const. determ. by Brillouin scatt. 3—13309
  Au-Cu-Zn alloys, anharmonicity and martensitic phase transition, elastic consts. determ. 3—29076
  AuMn-AuZn, quasibinary, antiferromag., martensitic transform. and elastic const. 3—39134
  Bi whiskers, nonlinear elastic consts. 3—51999
  $BiVO_4$, ferroelastic, elastic consts., US velocity study 3—47023
  $BiVO_4$, struct. phase transitions, Brillouin scatt. studies 3—57083
  $CaPd(CN)_4.5H_2O$, Brillouin scatt. and thermal anal. 3—3754
  CeB_6, elastic consts., US attenuation 3—51689
  CeF_3, elastic props., Brillouin scatt. study 3—47021
  Cr, electronic struct., effect of shear strains 3—52020
  Cr-Co, dil., magnetoelastic behaviour, thermal expansion and elastic consts. meas. 3—52581
  Cr-Co, dil., magnetoelastic behaviour, thermal expansion and elastic consts. meas. 3—57726
  $CsNiF_3$, 1-D ferromag., elastic consts., Brillouin scatt. and US propag. studies 3—57013
  $CsNiF_3$, elastic consts., ultrasonic propagation study 3—18365
  CsSCN, room temp. elastic constants meas. 3—51684
  Cu, pseudopotential calc. 3—2703
  Cu-Al-Ni, single crysts., US vel. near martensitic transform. temp. 3—43816
  Cu-Al-Zn alloys, anharmonicity and martensitic phase transition, elastic consts. determ. 3—29076
  Cu-Zr glasses, struct. and vibr. spectra 3—27853
  $Cu_{1-x}Al_x$, equation of state, pseudopot. calc. 3—13396
  CuCl, elastic Debye temperature, elastic const. calc. 3—42740
  $Cu_{1-x}Sn_x$, equation of state, pseudopot. calc. 3—13396
  $Cu_{1-x}Zn_x$, equation of state, pseudopot. calc. 3—13396
  Fe-Cr (19 wt.%), precip. hardening, tensile testing and TEM study 3—24244
  $Fe_{1-x}Pd_x$, FCC, lattice dynamics, mag. ordering effect 3—2701
  $Fe_{0.5}Ti_{0.5}$, lattice dynamics study 3—42727
  GaAs, dislocation line, elastic energy, integral formalism 3—46930

elastic constants continued
  GaAs, z 3—18367
  GaP, dislocation line, elastic energy, integral formalism 3—46930
  n-GaSb, elastic consts. meas., electronic effects 3—33335
  Gd, elastic consts., anomalies, domain phase theory 3—18363
  Gd-Y, onset of helimagnetism, transport props. 3—18894
  Ge, third order elastic consts. and Gruneisen coeff., US vel. study 3—47018
  $Hg_{3-\delta}AsF_6$, long-wavelength excitations 3—13368
  Ho, commensurate turn angle effects, Neel temp. 3—18911
  In, body-centred tetragonal, lattice dynamical study 3—57042
  In, face-centred tetragonal, lattice dynamics 3—47061
  InP, dislocation line, elastic energy, integral formalism 3—46930
  $InPS_4$, elastic, optical and nonlinear optical props. 3—37114
  KBr-KCl(KI) mixed crystals, elastic consts., phenomenological pot. model 3—47022
  $KBr_{1-x}I_x$, lattice dynamics calcs. 3—13364
  $(KBr)_{1-x}(KCN)_x$ mixed cryst., elastic props. and CN reorientation 3—28026
  KCl-KBr mixed crysts., elastic consts. 3—22959
  $KCl_{1-x}Br_x(I_x)$, lattice dynamics calcs. 3—13364
  $KH_3(SeO_3)_2$, deuteration and defect influence on elastic props. 3—28024
  $KH_3(SeO_3)_2$, normal and deuterated, ferroelastic transition, nonlinear elastic coeff. 3—8191
  $K_{1-x}Li_xTaO_3$, dipole glass, elastic and dielec. dispersion 3—18360
  $K_{1-x}Li_xTaO_3$, elastic const. discontinuity, Brillouin spectra 3—3752
  KNO_3-$Ca(NO_3)_2$, glass, elastic props., Brillouin scatt. study 3—47664
  $K_{1-x}Rb_xI(Cl)$, lattice dynamics calcs. 3—13365
  La, phonon dispersion relations, coherent inelastic neutron scatt. study 3—22998
  LaF_3, elastic props., Brillouin scatt. study 3—47021
  LaSb:Dy single cryst., Jahn-Teller stress effects on magnetization and ESR props. 3—3134
  LiH(D), adiabatic elastic consts., 4.2 to 300K 3—18361
  $LiKSO_4$, elastic consts. and phase transition, Brillouin scatt. study 3—57947
  Mg_2SiO_4, forsterite, at. charges fitted to thermoelastic and struct. props. 3—33178
  NaCl-NaBr mixed crystals, elastic consts., phenomenological pot. model 3—47022
  $Na_{1-x}K_xCl$, lattice dynamics calcs. 3—13365
  NdF_3, elastic props., Brillouin scatt. study 3—47021
  Ni, magnetisation rotation, ΔE effect 3—23722
  $(Pb,Ni)(Zr,Ti,Zn,Nb)O_3$ ceramic, uniaxial compression, piezoelec. props., additives effect 3—14221
  PbSnTe, phonon dispersion and elastic consts. rigid ion model 3—57041
  PrF_3, elastic props., Brillouin scatt. study 3—47021
  Si, average stress tensor, ab initio pseudopot. calc. 3—47020
  Si, internal strain parameter and elastic consts., self consistent electronic calc. 3—18367
  Si, internal strain parameter, self-consistent calc. 3—22822
  Si, third order elastic consts. and Gruneisen coeff., US vel. study 3—47018
  $Sr_{0.45}Ba_{0.55}Nb_2O_6$, ferroelec., phonon dispersion, neutron scatt. study 3—2704
  $Sr_{0.5}Ba_{0.5}Nb_2O_6$, piezoelectric, elastic and SAW props. meas. 3—23153
  $Tb_2(MoO_4)_3$, Raman and Brillouin studies of acoustic anomalies 3—34104
  TmSe, intermediate valence cpd., elastic consts., energy gap meas. 3—52080
  $TmSe_{1-x}Te_x$, intermediate valence cpd., elastic consts., energy gap meas. 3—52080
  V, electronic struct., effect of shear strains 3—52020
  WC, single cryst., elastic consts., US pulse-echo meas. 3—2644
  Yb, FCC, lattice dynamics 3—13378
  ZrO_2-Y_2O_3 solid soln., stabilised, hydrostatic press. depend. of elastic behaviour and stability against shear 3—14633

elastic deformation
  see also bending; elasticity; electrostriction; stress/strain relations; torsion
  alloys, struct. unstable ageing, strain diagram construction 3—37987
  anisotropic media, elastic-plastic deform. 3—12543
  bar, elastic, homogeneous deform., dynamic instability 3—27415
  bar, neo-Hookean, coupled torsional and longit. wave propag. 3—1987
  bending cylindrical shells and plates, state equations 3—1959
  bimodular material plates, geom. nonlinear bending, finite element results 3—37359
  brittle materials, elastic stress fields caused by indentations 3—4093
  buckling of embedded layer in rubber-like materials 3—9904
  cables, const. twist deforms. 3—37354
  cantilever rod, non-linear elastic analysis, bending on terminal co-planar concentrated force 3—27379
  contact between cylindrical indenter and plastically deformed body, coeff. of friction determ. by caustics 3—27453
  cylinder, elastic, of finite height, mixed problem of compression by dies on the ends 3—7429
  cylinder, isotropic, nonlinear plane elasticity, Saint-Venant's principle 3—12518
  cylinders, axially compressed stringer stiffened, elastic buckling 3—27413
  cylindrical layer, finite deform. of compressible elastic medium 3—46454
  elastic composite, finite rigidity element reinforced, nonlinear micropolar continuum model, stability of compression 3—42122
  elastic incommensurate transitions, Landau theory 3—33420
  elastomeric foam, porous, nonlinear deformation, neo-Hookean constant 3—27382
  elastomers, nonregular, deform. props., relax. spectra *(Russian)* 3—9106
  eutectic alloys, two-phase, fine-grained, mech. props., effects of thermally induced elastic stresses 3—47897
  extended elastic bodies in orbit, deform., vibr. freqs. 3—56435
  fibre reinforced composites, anisotropic, three-dimens. reinforced, deform., struct. model 3—27408
  fibre reinforced composites, unidirectionally reinforced with elastic-plastic matrix, deformability 3—32621
  fibrous composite materials, nonlinear phenomenological models of deform. 3—50943
  finite deformation computational analyses, objectivity of incremental constitutive relations 3—44965
  hyperelastic continua with finite deformations, wave propag. *(Italian)* 3—7472
  hyperelastic materials, shear deformation, boundary-value problem soln. 3—27387

elastic deformation continued
isotropic bimodulus materials, deform. constitutive theory 3—46470
isotropic materials, static similarity deform. 3—27388
layered anisotropic composite plates, dynamic transient analysis 3—46448
lung deformation problems, elasticity anal. 3—9638
LWR fuel behaviour, cladding deformation with burnup 3—21428
metals, yield stress grain-size depend., finite element anal. 3—14669
micromechanics of defects in solids, eigenstrain method, book 3—27941
multilaminate flexible circular plates with variable stiffness parameters, nonaxisymm. deform. 3—37367
nonlinear viscoelasticity theory, elastic and viscous deforms. 3—46458
optimisation of deformable elastic bodies, thin-walled structural elements 3—46453
plate, circular, with eccentric hole, deflection anal. 3—22324
plates, heated rectangular, temp. depend. props., finite deflection, postbuckling behaviour 3—27414
polyethylene, uniaxially oriented high-density, elastic deform. rel. to segmental mobility *(Russian)* 3—47876
polyethylene foils, orientated, mech. stresses effect on mol. mobility, paramag. probe study *(German)* 3—14636
polyethylene melts, elastic props. at high shear rates with respect to extrusion 3—33333
polymer and polymer soln., viscosity anomaly relationship with high elasticity during flow *(Russian)* 3—47140
polypropylene, annealed film tapes, deformation behaviour 3—33346
polypropylene, dielec. strength under high pressure and shear strains., low-mol. additive influence *(Russian)* 3—8765
polypropylene foils, orientated, mech. stresses effect on mol. mobility, paramag. probe study *(German)* 3—14636
porous solid, fluid-saturated, large elastic deform. 3—7416
quasi one-dimensional cryst. with defects, elastic anisotropy, X-ray and thermal neutron scatt. 3—2347
rubber, Na butadiene, deform. props., relax. spectra *(Russian)* 3—9106
shell, cylindrical, charact. eqn. including shear deform. effect 3—7427
shell nonlinear analysis, mixed and reduced/selective integration displacement models 3—12512
shells, cylindrical, subjected to longit. bending moments, limit loads 3—12540
shells, two-dimens. finite-deform. theories, note 3—1947
shells of revolution, multilayer, nonlinear theory nonaxisymm. problem numerical soln. 3—50951
shells of revolution, multilayer, nonlinearly-elastic, canonical eqns. derivation *(Russian)* 3—17801
shells of revolution flexible nonhomogeneous, axisymm. deform. 3—42135
spherical elastic layer collision, contact deform. 3—51030
spherical indentations, elastic recovery 3—22964
steel, 316 stainless, cyclic hardening under complex loading histories *(French)* 3—47901
steel, austenitic stainless, heat resistant, cyclic deform. resist. rel. to reactor irrad. 3—43897
steel, C, wires, thin high-strength, material and Zn coating influence on props. 3—47886
steel, cold-drawn wire, X-ray residual stress meas. 3—14605
steel, struct. unstable ageing, strain diagram construction 3—37987
strip, elastic, transversely isotropic under tension, instability anal. 3—12546
strut, large elastic-plastic deform., the Plastica 3—1966
superconductors, anisotropic, elastic deform. dynamics and absorpt. and dispersion of sound vel. *(Russian)* 3—38535
Symposium on Advances and Trends in Structural and Solid Mechanics, conf., Washington, DC, USA (Oct. 1982) 3—16067
thermoelasticity equations, nonlinear, divergent form and charact. props. 3—54622
torsion box panels, elastic stability in bending, stiffening parameters 3—42157
transversely isotropic materials, elastic-plastic constitutive eqns., appl. to perforated circular plate bending 3—27376
trusses, geometrically nonlinear, static behaviour under large deflections *(German)* 3—32597
viscoplastic flow during rolling, elastic strain rate, inclusion in anal. 3—13315
viscous particle surrounded by elastic shell flow-induced deform. 3—51174
work theorems for finite and incremental elastic deformations, unified treatment 3—35843
Ag wire coils, dislocation elasticity *(Russian)* 3—33340
Au wire coils, dislocation elasticity *(Russian)* 3—33340
B fibres, bare and SiC coated, mech. props. temp. depend. 3—34408
$BiVO_4$, single cryst., ferroelastic domain struct. 3—38095
Cu wire coils, dislocation elasticity *(Russian)* 3—33340
Cu-Al-Ni shape memory alloys, polycryst., fatigue and fracture characts. 3—14727
Fe wire coils, dislocation elasticity *(Russian)* 3—33340
Fe-Ni, martensitic transform. under elastic loading, effect of stress relax. *(Russian)* 3—24225
$Fe_{40}Ni_{38}Mo_4B_{18}$, Metglas 2826MB, elec. resist., rel. to deform. in tension *(French)* 3—53135
$Hg_2Cl_{1.2}Br_{0.8}$, ferroelastic transitions, spontaneous deformation and thermal expansion 3—18376
NbN, B1 struct. supercond., crit. current and crit. field, effects of strain 3—13978
Ni, lattice stability and theoretical strength calc. for perfect crystal 3—33343
Si:P, impurity ionisation energy, elastic deformation effects, elec. cond. study 3—3119

elastic hysteresis
hereditary structure of anelastic continuum, cyclic torsion and second order effect *(French)* 3—7437
internal friction, static and dynamic dislocation hysteresis 3—18388
nonlinear cryst., Barkhausen effect and hysteresis 3—23704
steel, austenitic stainless, heat resistant, cyclic deform. resist. rel. to reactor irrad. 3—43897
Al, US birefringence, hysteresis effect 3—2687
Cu/Al system, B ion implantation, mechanical props. 3—2647

elastic limit
automatic recording of proportional-strain limit 3—300
steel, dual-phase, extrinsic transform. accommodation hardening 3—53075
steel, structural, struct. and props., thermal hardening and thermomechanical treatment effects *(Russian)* 3—24243
NiTi, martensitic, cold worked, mech. props. 3—39221
NiTiCu, martensitic, cold worked, mech. props. 3—39221

elastic moduli
see also Poisson ratio; shear modulus; Young's modulus
agglomerated materials, compaction and mech. props. 3—29025
alkali aluminosilicate glasses, heat capacity and Gruneisen parameters 3—2840
alkali chalcogenides, cohesive props., interionic pots. anal. 3—22820
alkali halides, interionic forces, quantum mechanical theory 3—2464
beam or plate, dynamic fracture in tensile loading, effect of shear and rotary inertia 3—56478
beam or plate, dynamic fracture under tensile loading, effect of bending moment 3—56477
bone compact tissue, deform. rate effect on mech. props. 3—53715
composite 3-D two-component, Clausius-Mossotti-type approx. for elastic moduli 3—13306
composite multilayer anisotropic shells, stress state with var. parameters 3—32609
composites, granular, with different types of grains, microstress fields 3—53102
composites with periodic microstructure 3—18359
composites with periodic structure, overall elastic moduli 3—4068
dental implants, Al_2O_3 and C, bone-implant interface stiffness rel. to surrounding stress profile 3—58867
diamond, CB-type, polycrystalline, physicomech. and physicochem. props. 3—14599
elastomer, extending oil effect on viscoelastic behaviour 3—14634
elastomers, threshold tear strength meas. 3—19361
elastomers as thermal solar collectors, mech. props. evaluation 3—53578
ethylene-propylene copolymer rubbers, extending oil effect on viscoelastic behaviour 3—14634
fatigue crack growth, phys. principles, models and expt. results, review 3—13325
Fermi liquid, normal, viscoelastic behaviour, bulk and shear moduli 3—13573
fibre reinforced Al and Al alloy composites, mech. props. anisotropy 3—24316
fibre reinforced composite laminates, fracture, unifying strain criterion 3—14696
fibre reinforced composite with anisotropic matrix, effective elastic moduli, generalised plain strain 3—50944
fibre reinforced composites, unidirectionally oriented, stiffness change due to crushing of fibres 3—33338
fibre reinforced elastic plate with fibres lying in concentric circles, stress 3—42129
fibre reinforced polymer, fibre-matrix interactions, mech. props. 3—28221
fibre reinforced polymers, aligned discontinuous fibres, complex moduli 3—24286
fibre-reinforced composites, thermoelastic moduli derivation, differential scheme *(Chinese)* 3—29118
flexible inorganic films and coatings, for high temp. use 3—39264
Flory rubber elasticity theory, modified, rel. to Dossin-Graessley small strain model 3—12523
fracture mechanics concepts, a summary 3—51016
glass, elastic moduli, three-band theory and characteristic temps. 3—33337
glass fibre reinforced plastic cylindrical shell, strain state, local load effect 3—53151
glass fibre reinforced plastics, fatigue strength anisotropy estimation 3—29247
glass fibre reinforced polyoxymethylene, modulus development 3—24283
glass fibre reinforced vinyl ester resin, high strength sheet moulding cpd., fatigue damage 3—24328
granular composite ABS plastics, dynamic characts. 3—29119
graphite fibre reinforced Al, creep anal. 3—9127
HCP metals, lattice vibrs., anisotropy 3—13384
inorganic glasses, struct. depend. of bulk modulus 3—2643
internal friction, amplitude depend., in crystals, associated modulus change 3—37919
intrinsic damping and modulus defect, calc. 3—51711
ionic crystals, diatomic, lattice props. calc. using short-range Rydberg pot. function 3—22819
Knoop indentation technique for determining elastic modulus to hardness ratio 3—14805
metals, bulk modulus, press. depend. 3—33336
metals, stored elastic energy and plastic volume change 3—2649
oil-water curving interface, lipid bilayer curvature elasticity moduli 3—47194
plates, circular, orthotropic, moderately thick, nonlinear flexural vibr. anal. 3—32639
poly(2,6-dimethyl-1,4-phenylene oxide)/styrene-maleic anhydride copolymer blends, characterisation 3—14642
polycarbonate, deformed, variation of dynamic mech. props. 3—53143
polyethylene, $CaCO_3$ filled, dynamic mech. behaviour 3—53109
polyethylene crystals, lattice parameters, elastic consts., computer simulation 3—51588
polymer solns., gel-like modes in 'θ' solvents 3—28131
polymers, particulate-filled, ultimate tensile strength model 3—19379
polyphenylquinoxaline, dynamic and mech. props. *(German)* 3—39190
polystyrene, high impact, rel. between rheological props. and impact strength 3—14639
polystyrene based mixtures, struct. and props. within phase transition region 3—33138
polyurethane networks, from poly(oxypropylene)triols, diisocyanate and a monofunctional component, struct. and elasticity 3—17392
PVC, crack growth anal. 3—53216
PVC-post chlorinated PVC blends, compatibility, mech. criteria 3—14641
quartz, fused, elastic moduli, ultrasonic eqn. of state *(Chinese)* 3—42693
rare earth alloy, RAl_2, elastic props., ultrasonic vel. study 3—18366
rare earth monochalcogenides, effective ionic charge and bulk modulus 3—2645
rocks (cracked), self-consistent theory of elasticity 3—9911
rubber, C block filled, degree of dispersion rel. to elec. resist. and matrix phys. props. 3—14814
semiconductors, A^NB^{8-N} type, surface vacancy formation energy and bulk modulus calc. 3—28211
shell, conical, variable modulus of elasticity, dynamic characts. 3—50931
smectic A liq. cryst., rheological behaviour under layer compression 3—33081
solid solutions, binary and ternary, volume effects, review 3—19315
solids with microcracks, overall moduli, load-induced anisotropy 3—57022
steel, mech. props., US techniques 3—4215
stishovite (SiO_2), elastic moduli 3—4855

elastic moduli continued
- surface elastic waves in crystals, role of spatial dispersion 3−38184
- textured materials, grain interaction effect in calcs. 3−51691
- 3d-transition metal alloys, bulk modulus, mag. contrib., X-ray diffr. study 3−51688
- Ag-Pd composition modulated foils, biaxial elastic modulus meas. 3−47016
- Al alloy 2219, precipitation hardening, US study 3−43846
- Al_2O_3-SiO_2-MgO (CaO) glass, Al ion co-ord. number and physical props. 3−33122
- Al_2O_3-ZrO_2 composites, critical microstruct. for microcracking 3−39240
- B fibres, bare and SiC coated, mech. props. temp. depend. 3−34408
- Bi, elastic and relaxation properties during melting and solidification 3−39191
- Bi, high temp. internal friction and elastic moduli 3−28046
- Bi-Sb, high temp. internal friction and elastic moduli 3−28046
- C fibre tridimensionally reinforced C composites, mech. props. 3−53107
- Cd, elastic and relaxation properties during melting and solidification 3−39191
- $CeAl_2$, Kondo alloy, elastic props., ultrasonic vel. study 3−18366
- Cr-Co, dil., magnetoelastic behaviour, thermal expansion and elastic consts. meas. 3−52581
- CsSCN, room temp. elastic constants meas. 3−51684
- Cu-Au composition modulated foils, biaxial elastic modulus meas. 3−47016
- Cu-Ni composition modulated foils, biaxial elastic modulus meas. 3−47017
- D_2O-VII ice, isothermal eqn. of state and lattice const., X-ray study 3−2732
- Eu_2As_2, lattice const. and bulk modulus, high press. X-ray study 3−22854
- Fe-W (56 wt.%), amorphous, high press., radial distrib. EDAX studies 3−18225
- α-Fe_2O_3, hematite, effective third-order elastic moduli 3−28027
- GaP, ground state struct. props., local density functional formalism 3−57300
- H_2O-VII ice, isothermal eqn. of state and lattice const., X-ray study 3−2732
- ^3He, normal liq., viscoelastic behaviour, bulk and shear moduli 3−13573
- HfV_2, elastic moduli meas., 77 to 1500K 3−13312
- $HoCo_2$, elastic moduli in mag. field, 4 to 200K 3−23777
- LiC_6 intercalation cpd., phonon modes, inelastic neutron scatt. study 3−57043
- LiH, thermophysical props., anharmonic lattice calc., H isotope effects 3−8227
- MgO-Al_2O_3-SiO_2, Z 3−22793
- NaI, ionic cond., bulk modulus and specific heat of vacancies 3−13531
- β-NbH_x ($x=0.83$, 0.91, 0.94), sound attenuation and elastic modulus dispersion 3−33360
- Ni, lattice stability and theoretical strength calc. for perfect crystal 3−33343
- Ni-Mo(W), solid solns., creep meas. of struct. parameters 3−14668
- Pa, bulk modulus, press. studies 3−18364
- Pb, elastic and relaxation properties during melting and solidification 3−39191
- $PbMg_{1/3}Nb_{2/3}O_3$, ceramic, elastic moduli, Debye temp. and specific heat 3−51690
- $Pb_3(V_xP_{1-x}O_4)_2$ solid soln., elastic moduli and piezooptic effect 3−18368
- $PbZrO_3$, ceramic, elastic moduli, Debye temp. and specific heat 3−51690
- $RbNiCl_3$, linear antiferromag., sound propag. and elastic moduli 3−57030
- Se-P glasses, transition temp., bulk modulus, comp. depend. US vel. meas. 3−13307
- Si, average stress tensor, ab initio pseudopot. calc. 3−47020
- Si, ground state struct. props., local density functional formalism 3−57300
- SiC whisker reinforced Al composite, hot rolling effect on microstruct. and tensile props. 3−53181
- Sn, elastic and relaxation properties during melting and solidification 3−39191
- α-Sn, electronic struct. and ground state props., self-consistent nonlocal pseudopot. calc. 3−57266
- $TaSe_2$ (2H), elasticity, thermal expansion 3−28058
- TeO_2-PbO-La_2O_3 glass, elastic moduli, temp. and press. depend. 3−58150
- TeO_2-PbO-WO_3 glass, elastic moduli, temp. and press. depend. 3−58150
- Th, theoretical stability under multidirectional stress 3−2655
- Ti-Al-V (6, 4 wt.%), quenched, fatigue and microstruct. props. 3−53195
- βIII-Ti-Mo-Zr-Sn, decomp. 3−19338
- $YbAl_2$ mixed valence alloy, elastic props., ultrasonic vel. study 3−18366
- Zn, elastic and relaxation properties during melting and solidification 3−39191
- ZrO_2-Y_2O_3 solid soln., stabilised, hydrostatic press. depend. of elastic behaviour and stability against shear 3−14633

elastic moduli measurement
- acoustic microscope, elastic constants meas. 3−46417
- complex elastic moduli meas. method, ultrasonic frequency range holography appl. *(Japanese)* 3−56510
- fibrous silica material, transversely isotropic, fracture, double-cantilever beam testing 3−44003
- mortar prism, dynamic deform. modulus and Poisson ratio eval. by resonance frequency method *(German)* 3−19477
- polymer, glass transition determ. by Autovibron 3−18458
- US resonance spectrometry with Fourier synthesised pseudorandom noise excitation for liquid viscosity and viscoelasticity meas. 3−22977
- viscosity measurement with the longitudinally vibrating band *(German)* 3−32695

elastic scattering of atoms and molecules
- atomic elastic collision influence on coherent emission in separated fields 3−1723
- cross-sections calc. for classical binary system 3−56026
- molecular scattering, natural pot. surface dissection technique 3−55878
- orbiting and rainbow structures, low-energy elastic differential cross sections, semiclassical anal. 3−50304
- particle-rigid rotor scatt. problem, exact soln. 3−56017
- small-angle elastic scatt., differential cross-section, repulsive pot. effects 3−26810
- space-translation method calcs. 3−26806
- spectral line shapes for rot. elastic and inelastic collisions, quantum and semiclassical calcs. 3−55999
- time resolved saturation spectroscopy for studies of elastic collisions *(French)* 3−41645

elastic scattering of atoms and molecules continued
- Ar-N_2(CO)(NO)(CO_2), intermolecular short-range forces, differential scatt. study 3−11917
- CO+CO, short range intermolecular forces 3−17353
- H^+ charged particle, elastic and inelastic collisions, total cross sections 3−11927
- H^++He, elastic differential cross sections for small angle scatt., 25-, 50-, and 100 keV protons 3−11926
- H_2+positronium scattering, elastic and vibr. excitation cross sections, perturbative calc. 3−36846
- He-He_2, elastic and dissociative collisions, multiple scattering description 3−11920
- He-N_2(CO)(NO)(CO_2), intermolecular short-range forces, differential scatt. study 3−11917
- He+CO_2 (N_2O)(cyanogen), crossed atomic and mol. beams, anisotropic intermolecular pots. 3−41647
- He+H^+, orbiting and rainbow structures, low-energy elastic differential cross sections, semiclassical anal. 3−50304
- He+Ne, elastic and energy transfer scatt., interaction pots. 3−6772
- Kr^++He, integral elastic scatt. cross-sections 3−26852
- Li^++Na, elastic differential cross sections 3−11921
- Li^++Na, elastic differential cross sections 3−11922
- Li_2, continuum and metastable states, thermodynamic props. 3−32832
- MuD+H^+(D^+), elastic scatt. cross-sections obs. 3−32163
- MuH+H^+(D^+), elastic scatt. cross-sections obs. 3−32163
- N_2+N_2, short range intermolecular forces 3−17353
- Na_2, continuum and metastable states, thermodynamic props. 3−32832
- Ne atom, metastable state $3P_0$, elastic collisions, time resolved saturation spectroscopy *(French)* 3−41645
- Ne, metastable, elastic collision kernels, time-resolved sat. spectroscopy 3−11925
- SF_6-Ar(Kr), scatt. cross sections, intermolecular pots. 3−21850
- Xe-Ar(Kr), elastic scatt. cross sections, empirical interatomic pots. 3−21849
- Xe^++He, integral elastic scatt. cross-sections 3−26852
- Yb, two-level optical radiators, quantum diffractive vel.-changing collisions 3−41649

elastic scattering of electrons by atoms and molecules
see also gas phase electron diffraction
- acetylene, electron elastic scatt. at intermediate and high energies, two pot. coherent approach 3−46066
- atom-positron scatt. amplitude, dispersion relations, perturbation theory 3−32209
- atoms, spin=1/2, elastic electron scatt., spin-orbit interaction 3−32210
- atoms and ions, electron and photon collisions 3−32212
- atoms and ions, S-matrix description in combination with adiabatic formalism 3−21917
- attaching gases, elastic scatt. of electrons, differential cross sections meas. 3−6786
- bibliography on electron collisions with at. positive ions, report 3−44918
- conference, Arezzo, Italy (Sept. 1980) 3−30563
- conference, Flinders Univ., Australia (Feb. 1982) 3−25676
- cyclohexasilane, mol. struct., electron diffr. obs. 3−1475
- drift and diffusion of electrons in at. gas between closely spaced electrodes 3−50516
- electron-atom scatt. in laser field 3−32223
- fast electron elastic scatt., collision integral by a screened Coulomb pot. 3−1484
- linear-polyatomic molecule, electron elastic scatt. at intermediate and high energies, two pot. coherent approach 3−46066
- metal atoms, electron scatt., shape reson. obs., low energy total cross sections 3−11978
- methane, elastic electron scatt., rot. excitation, ab initio interaction pots. 3−41681
- methane, electron scatt., threshold structures of cross sections 3−50529
- methane, electrons elastic scatt. in energy range of 3 to 20 eV, differential cross sections meas. 3−1479
- methane, positron scatt. cross section meas. 3−32202
- methane, slow electron elastic scatt., local exchange and polarisation pot. 3−1482
- methane, slow positron scatt., fixed-nuclei approx. calcs. 3−56078
- molecule, resonant electron scatt., local complex potentials 3−50515
- one electron atoms in intense mag. fields, review 3−26695
- outer region coupled eqns. in electron-atom, electron-molecule scatt., VPM program 3−17373
- positron impact, elastic and inelastic processes, review 3−1483
- R-matrix propagation program for solving coupled second-order differential equations 3−6782
- Schrodinger eqn., numerical solution, appl. to electron-atom scatt. and many electron problems 3−20704
- small angle electron molecule scatt., high-energy limit of Born series calc. 3−1480
- space-translation method calcs. 3−26806
- sphere, arbitrary radius, Kohn variational principle 3−36854
- surface adsorption, and related effects 3−28957
- tetrachloromethane, intramolecular double electron scatt. 3−41682
- thermal collisions of Rydberg atoms with neutral particles 3−1478
- three charged particle system, threshold behaviour of scatt., influence of finite masses 3−6790
- unitarisation of the eikonal-Born series method for electron-atom and positron-atom collisions 3−11911
- variational linear algebraic equations method 3−21915
- Al, elastic electron scatt. cross sections, dipole polarisability 3−32201
- Ar, elastic electron scatt., reson. investigation 3−1481
- C, electron-scattering cross-section, effects of excited configurations 3−32211
- CO, elastic and inelastic electron scatt. cross sections, pot. model 3−32226
- CO, electron and positron scatt., total cross-sections meas. 3−56079
- CO, electron elastic scatt., 0.1-3 keV, eikonal approx. calcs. 3−56075
- CO, electron thermalisation 3−50528
- CO_2, electron and positron scatt., total cross-sections meas. 3−56079
- CO_2, electron elastic scatt., differential cross sections 3−1476
- CO_2, electron elastic scatt. at intermediate energies 3−6785
- CO_2, electron elastic scatt., 50-500 eV, modified independent atom model calcs. 3−21916
- CO_2, positron scatt. cross section meas. 3−32202
- H, elastic electron scatt., two-pot. method, Coulomb projected Born approx. 3−32208
- H, elastic electron scatt. from excited 2s state, HHOB approx. 3−50306

elastic scattering of electrons by atoms and molecules continued
- H, electron elastic and inelastic scatt., close-coupling eqns. study 3—26850
- H, electron elastic and inelastic scatt. at intermediate energies, coupled channel second order pot. model 3—26859
- H, electron scattering, third-order effects 3—56077
- H, positron collisions, field-theoretic formalism 3—41680
- H, positron scatt., hyperspherical coordinate treatment, singly and double excited S-state props. 3—50525
- H, s-wave electron scatt., variational linear algebraic equations method calcs. 3—21915
- H, scattering theory for intermediate and high energies in 30-400 eV range 3—21913
- H+positron elastic scatt. using polarised orbital method, positronium form. channel 3—56073
- H_2, electron elastic scatt. over 100 to 1000 eV 3—21914
- H_2, electron scatt., low energy 3—11924
- H_2, electron thermalisation 3—50528
- H_2, positron scatt. cross section meas. 3—32202
- H_2^+, electron elastic scatt. anal. 3—46067
- HCl, elastic electron scatt., pot. adapted partial wave representation 3—1477
- H_2O, elastic scatt. in high and intermediate energy regions 3—56076
- H_2O, slow electron elastic scatt., local exchange and polarisation pot. 3—1482
- He, elastic electron scatt., polarisation and exchange effects 3—32200
- He, elastic electron scatt. cross sections, semiclassical polarisation approx. 3—32207
- He, electron elastic and inelastic scatt. at high energies 3—46079
- He, electron scatt., total cross sections, time of flight method 3—26851
- N_2, elastic and inelastic electron scatt. cross sections, pot. model 3—32226
- N_2, elastic electron scatt., pot. adapted partial wave representation 3—1477
- N_2, electron elastic scatt., 0.1-3 keV, eikonal approx. calcs. 3—56075
- N_2, electron impact, elastic and rot. excitation 3—11928
- N_2, electron scatt., low energy 3—11924
- N_2, electron thermalisation 3—50528
- N_2 molecule, electron scatt. processes, cross section calcs. 3—50517
- N_2, positron scatt. cross section meas. 3—32202
- NH_3, slow positron scatt., fixed-nuclei approx. calcs. 3—56078
- Ne, elastic electron scatt. cross sections calc. using Xalpha pot. 3—11923
- Ne, elastic electron scatt. cross sections, semiclassical polarisation approx. 3—32207
- Ne-β-ray multiple scatt. angle distrib. by track digitisation method 3—21601
- O_2, electron elastic scatt. at intermediate energies 3—6785
- O_2, electron elastic scatt., 0.1-3 keV, eikonal approx. calcs. 3—56075
- O_2, positron scatt. cross section meas. 3—32202
- Xe, slow electron elastic scatt., HF calc. 3—46071

elastic waves
- *see also acoustic waves; Love waves; magnetoelastic waves; Rayleigh waves; seismic waves; vibrations*
- acoustic and thermoelastic adjacent media, nonstationary perturbation propag. 3—22384
- acoustic emission, elastic wave invariants calc. 3—7289
- acoustic imaging techniques, and instruments, review *(Japanese)* 3—12471
- anisotropic elastic medium; nonsteady problems of dynamics, numerical soln. 3—46452
- anisotropic media, surface elastic wave topological feautres 3—33557
- antiplane shear wave scatt. by a submerged crack 3—22365
- axisymmetric elastic waves excited by point source in plate 3—32661
- axisymmetric scattering of elastic waves, global local finite element anal. 3—32660
- bar, neo-Hookean, coupled torsional and longit. wave propag. 3—1987
- beam, longitudinal vibrations in presence of dry friction 3—56378
- beam L-joint, flexural and torsion waves coupling loss factors calc. 3—7288
- beams, thin-walled open elastic beams, torsional-flexural waves 3—50983
- box beam, input and transfer admittances 3—12416
- bulk elastic wave conversion into electromagnetic field at ferromagnetic half-space boundary 3—46128
- circular propagation of elastic waves in cylindrical pipes *(German)* 3—22387
- composite material, plane viscoelastic wave propag. 3—22385
- composite material with initial stresses, reduced dynamic characts. 3—50987
- composite materials modelled as interpenetrating solid continua, one dimens. acceleration waves 3—27426
- composite medium, impulsive Reissner-Sagoci problem 3—56462
- composites, laminated, with bonds, longit. elastic wave propag. 3—27418
- composites, layered, nondispersive SH wave propag. 3—1996
- composites, layered, three-material, periodic wave propag. normal to layer direction 3—37413
- composites, layered, volumetric shear wave propag. 3—37411
- conference, Le Havre, France (Oct. 1982) *(French)* 3—16081
- crack, near-surface, diffr. of plane SH waves soln. 3—37429
- crack characterisation by combined use of time-domain and freq. domain scatt. data 3—37428
- die on prestressed half-space surface, vibr., elastic wave propag. 3—50985
- disc, rectilinearly orthotropic, spinning, stability of nonlinear circumferential waves 3—50975
- disc, spinning, thin orthotropic, stability of waves 3—7482
- elastic strip, variable thickness, longitudinal-shear normal modes 3—12388
- elastic surface waves propagation along cylindrical cavity and point force excitation 3—7258
- elasto-viscoplastic bar, shock wave propagation, asymptotic method 3—42166
- elastodynamic edge diffraction, integral representations 3—37415
- elastodynamic waves scattering by rigid plane strip on plane crack, theoretical investigation 3—7264
- energy analysis of wave motions in the Lamb problem 3—1994
- excitation in layer by disk-shape radiator of finite dimension, defectoscopy appl. 3—22974
- ferroelectric layers, ultrasonic intensity near critical angle for total internal reflection 3—51721
- flat cracks, elastic wave scatt. theory 3—37993
- fluid, semi-infinite layer, dilatational and gravitational wave propagation, numerical analysis 3—37509
- gravity induced initial stresses, effect on disturbances in elastic half-space due to moving load 3—42172

elastic waves continued
- homogeneous elastic medium containing an elliptical cylindrical cavity, transient elastic wave propag. 3—50988
- hyperelastic continua with finite deformations, wave propag. *(Italian)* 3—7472
- ideally conducting bodies with initial uniform strains, linearised problems of magnetoelasticity 3—1993
- impulsive, scatt. by fluid cylinder 3—12579
- infinite elastic space, elastic wave propag. due to explosion in centre of cavity 3—12557
- infinitely long elastic strip, shear wave interaction with Griffith crack 3—42187
- inhomogeneous elastic hollow cylinder, transient response to line SH-source 3—50974
- inhomogeneous viscoelastic media, Boltzmann type waves 3—12578
- inverse scatt. problem from inclusions with unknown boundaries 3—56466
- inverse source and inverse scatt. theory, rigorous solns., review 3—25770
- isotropic bimodulus materials, deform. constitutive theory 3—46470
- laminated solid-fluid periodic elastoacoustic medium, wave propagation, theory 3—42056
- laminates, orthotropic, three-dimens. shear waves propag. 3—27430
- laser stress wave probe, 0.2 Å sensitivity, 20 MHz bandwidth 3—50693
- layered composites, moving cracks, stress wave interaction 3—2001
- linearly elastic solids, parabolic wave theory 3—50991
- media with memory, nonlinear shock waves, discontinuity method 3—30618
- metal, elastic pulse generation by laser irrad. 3—13334
- metal rod, electromagnetic-acoustic induction of elastic traveling waves 3—23442
- micropolar elastic constants, wave propagation, moduli 3—42165
- mode conversion on free surface and reflection by corner, computer simulation, motion picture 3—51706
- multilayer structure with spherical symm., elastic wave propag., theory *(French)* 3—17862
- muscle, elastic nature and torsional wave propag. 3—44262
- nonlinear waves, solitary wave existence, wave propag. 3—17861
- nonseparable elastodynamic quarter-plane problems, wavefront anal., general method 3—32658
- nonseparable elastodynamic quarter-plane problems, wavefront events in edge uniform press. problem 3—32659
- nonstationary, propag. from circular cylindrical cavities 3—42178
- oblique impact along surface of elastic-plastic half-space 3—7509
- perturbation and asymptotic methods in mechanics and waves 3—46480
- phase transition temp. and elastic wave vel. of crysts., empirical correlation 3—2782
- piezoelectric plate, transverse backward elastic waves 3—33359
- plane-strain surface waves in a laminated composite 3—32657
- plate, normal edge cracks, horizontally polarized shear wave diffr. 3—46474
- plate, rectangular, elastic, high-freq. flexural mode anal. 3—17866
- polarising media, electroelastic waves 3—21958
- propagating, radiation stress 3—50993
- propagation and scattering theory, advances in num. models 3—25768
- propagation in nonhomogeneous isotropic media, acceleration wave fronts, partial differential equations 3—27422
- quartz crystal, acoustically active, elastic wave propagation, SHG 3—51720
- radiation from expanding circular dislocation loops and elastic precursor decay 3—33255
- rail vibrations, two-dimensional model *(German)* 3—27417
- reflection by corner or crack having corner on surface, numerical expts. 3—57026
- reflection by crack or elliptic cylinder, numerical expts. 3—50994
- reflection by defects, computer simulation, motion picture 3—51705
- ring, rotating, resonant nonlinear travelling waves 3—27420
- rod, semi-infinite uniform, surrounded by Winkler's medium, longit. elastic wave propag. *(Russian)* 3—42180
- rod with dry friction, elastic wave propag., preliminary displacement effect 3—46477
- rod-shaped solids, damage by stress-relief waves 3—53213
- rods, elastic-viscoplastic material, stress wave propagation, work hardening formulation 3—46473
- sandstones, effect of pore-filling material and form. conditions on elastic waves vel. and absorpt. 3—9913
- scattering by circular crack, direct integral equation solutions 3—18386
- scattering from bulk flaws, expt. confirmation of model calcs. 3—29288
- scattering from flaws near surfaces, Fourier elastodynamics appl. 3—56468
- scattering of SH-waves by cylindrical inclusions, interfacial cracks *(French)* 3—50972
- scattering theory, Born series and matrix variational Pade approximant method 3—25764
- scattering theory, Eikonal approx. weak scatt. approx. 3—25765
- scattering theory, inverse scatt. in long wavelength limit 3—25789
- scattering theory, method of equiv. inclusion extension to dynamic case 3—25767
- scattering theory, multiple scatt. formalism and appl. to scatt. by two spheres 3—25769
- scattering theory, unimoment method appl. 3—25766
- SH wave scatt. by cylindrical discontinuity in inhomogeneous elastic medium 3—1981
- SH-wave in viscoelastic layer over elastic half space, reflection/refraction 3—29843
- shell, cylindrical, periodically stiffened, vibrating, natural waves calc. *(French)* 3—17696
- shells, structurally orthotropic cylindrical, travelling waves 3—37412
- solid, educational film for US engineers 3—51704
- solid, elastic, pre-stressed, semi-infinite, disturbance due to plane and line sources 3—22366
- solid medium, inhomogeneous statical initial deformation *(Russian)* 3—12582
- spherical inhomogeneity in elastic medium, radial, torsional and spheroidal vibr., freq. eqns. 3—19928
- split Hopkinson press. bar, wave propag. 3—56513
- square rod corner junction, elastic stress wave generation 3—12576
- Sr, elastic wave propag. at high press., pulse US method 3—28043
- steel, elastic wave refl. by infinitely long ribbon crack 3—4230
- steel-steel interface, elastic waves, attenuation and velocity meas. 3—42174
- stress wave generated by impact, dynamic photoelasticity, fringe vels. 3—51033

elastic waves continued
- stress wave propagation in an elastic/viscoplastic half-space containing a spherical cavity 3—42170
- surface elastic waves in anisotropic cubic crystals, surface stress effect 3—23154
- surface elastic waves in crystals, role of spatial dispersion 3—38184
- surface SH waves in inhomogeneous layer *(French)* 3—42169
- thin crystal plates, plane elastic waves anal. 3—8135
- thin object, two dimens., elastic wave scatt. and wave momentum 3—1997
- Timoshenko beam subjected to impulsive boundary loads, higher order flexural transient propag. 3—22362
- transient surface waves in nonlinearly elastic media 3—1992
- two-component strain state plane wave propag. in nonlinear compressible medium *(Russian)* 3—37414
- urotropin single crystal Mandelshtam-Brillouin spectrum 3—3751
- working material, ductility control using spherical focusing system, localized stress peaks *(German)* 3—7514
- Cu-Fe, coherent Fe particles, ion irrad., martensitic transformation and mech. wave formation obs. 3—53049
- $LiNbO_3$, collinear acousto-optical interaction parameters calc. *(Dutch)* 3—52766
- SbMn, magnetisation, effect of superimposed stress waves 3—23719
- Si:In, enhanced backward elastic wave generation 3—22973

elasticity
- *for crack problems in elasticity see crack-edge stress field analysis*
- *see also elastic constants; elastic moduli; elasticity of liquids; elastoplasticity; photoelasticity; rheology; thermoelasticity*
- acoustical polarimeter, NDE appls. 3—50874
- acousto-elastodynamics, variational theorem 3—12414
- acoustoelastic effects, perturbation theory 3—27286
- acoustoelasticity, analytical relations for acoustic extensometry methods 3—50819
- acoustoelasticity eqn., general form for principle stresses 3—50818
- adhesion, equilib. of structs., variational formulation *(French)* 3—46504
- aeroelasticity, flutter boundaries of conical shells 3—56461
- aerostatic carrier with elastic diaphragm, friction resist. to motion 3—22394
- alloys, modulated struct. form., statistical theory *(Russian)* 3—51799
- anisotropic cylindrical shell, axisymmetric elasticity problem 3—80
- anisotropic damage in elasticity and plasticity *(French)* 3—8120
- anisotropic elastic medium; nonsteady problems of dynamics, numerical soln. 3—46452
- anisotropic elastic struct., medium freq. linear vibrs. *(French)* 3—22380
- anisotropic materials, stress function interface and boundary conditions 3—32603
- anisotropic medium with elastic intrusion, 2-dimens. problem 3—12520
- ankle, human, stiffness dynamics rel. to displacement amplitude 3—24766
- ankle, human, stiffness dynamics rel. to mean torque 3—24765
- annular rigid stamp pressed into elastic half-space, numerical soln. 3—22398
- approximate circular inclusion in an infinite elastic medium 3—30616
- arch problems, approx. by straight beam elements 3—27378
- arterial tissue, contribs. to nonlinear characterisation, review 3—4536
- arterial wall model, 2-layer, parameter anal. 3—4538
- arteries, elastic and muscular, biomech. and reactivity 3—4535
- articular cartilage, compliance and its variation through thickness 3—53717
- bar, curvilinear naturally twisted, generalisation of elasticity theory eqns. and relationships 3—17804
- bar, neo-Hookean, coupled torsional and longit. wave propag. 3—1987
- beam, elastic, finite element model for thin-walled members 3—37344
- beam, infinite, elastic, moving with const. speed across a drop-out 3—46505
- beam, smooth, indentation by rigid cylinder, displacement computation 3—46506
- biceps brachii, human, level of excitation rel. to series elastic component compliance *(French)* 3—58708
- bielastic medium, fracture problem 3—42191
- biharmonic equations acting in unbounded sets, variational approach *(French)* 3—12620
- block, rigid cylindrical, embedded in thick elastic layer, load diffusion 3—51026
- bodies of finite dimensions, axisymm. problems, difference-type solns. 3—7409
- bonded granulates 3—42130
- boundary-value problems, stochastic linear, of elasticity theory, variational formulation 3—49162
- brittle elastic solid, propag. of damaged zone, in mode I and steady state *(French)* 3—46484
- buckling formulae of Engesser, arguments for and against 3—7463
- calculus of variations applied to continuum physics, inverse problem 3—30620
- cantilever beam under tension, bending or flexure at infinity 3—27384
- Cauchy problem, singular perturbated system with first order partial derivatives *(Russian)* 3—40368
- classical crack problem in plane and antiplane elasticity, new singular integral eqn. 3—46494
- column, maximal deflection, remarks on Atanackovic's results 3—56431
- compactness of support in fourth-order problems 3—40367
- complex axisymmetric structures under arbitrary loads, nonlinear dynamics 3—56427
- compliant coatings, flow-induced instabilities 3—32642
- composite, bonded plane, elastic plane equilib. *(French)* 3—42196
- composite, finite ridigity element reinforced, nonlinear micropolar continuum model, motion eqns., constitutive rels. 3—42121
- composite, finite rigidity element reinforced, nonlinear micropolar continuum model, stability of compression 3—42122
- composite elastic plane weakened by slit periodic system, deform. 3—22320
- composite laminar shells, cylindrical, crit. stability parameters, kinematic heterogeneity effect 3—32632
- composite material with initial stresses, reduced dynamic characts. 3—50987
- composite materials, elastic end effects, Saint-Venant's principle 3—50941
- composite media, boundary value problems 3—17798
- composite medium, impulsive Reissner-Sagoci problem 3—56462
- composites, orthogonal fibre, as micromorphic materials, static linearly elastic theory 3—1954
- composites with periodic microstructure 3—18359
- compressible body, two-dimensional dynamical problems 3—7430

elasticity continued
- compressible elastica on elastic foundation, higher buckling loads and critical modes 3—7469
- compressible elastica on elastic foundation 3—7454
- compressible nonlinear elasticity, constitutive equations *(French)* 3—22321
- conic solid, action of axial force *(French)* 3—42124
- conservation laws in linear elasticity based upon divergence transformations 3—25750
- constraint vectors, in P_1 and P_2 approx. *(French)* 3—42123
- contact problems for media inhomogeneous in depth, asymptotic solns. 3—46503
- contact problems in elasticity, numerical analysis 3—17897
- contact problems of elasticity and plasticity theory, finite element soln. 3—17900
- contact problems with friction in elastostatics, numerical anal. 3—22395
- contact problems with friction in general purpose finite element computer programs 3—17898
- contact stresses in two elastic strips and a sandwiched solid-metal flat gasket 3—50939
- continuous elastic systems, Liapunov stability, topological foundations 3—37346
- continuous medium, foreign inclusion, stress and displacement jump conditions *(Ukrainian)* 3—46439
- convergence of difference schemes for second boundary-value problem of elasticity theory *(Ukrainian)* 3—20633
- corundum, local strain and inner elasticity 3—13316
- couple-stress theory of elasticity, one soln. of three-dimensional boundary value problems 3—1960
- crack, rectangular, three-dimens., subjected to shear loading 3—22390
- crack core-region topography under modes I, II and III of fracture 3—46490
- crack problems in anisotropic elasticity 3—51003
- cracked elastic bodies, frictionless contact 3—56498
- critical shear strain localisation in ligament region between parallel prolate holes 3—37347
- cylinder, finite elastic, pressed against rough rigid sliding surface, end problem 3—37432
- cylinder, isotropic, nonlinear plane elasticity, Saint-Venant's principle 3—12518
- cylinder, previously stressed incompressible, containing viscous compressible liq., wave propag. 3—32804
- cylinder clusters in axial flow, fluidelastic instability study 3—12633
- cylinders, axially compressed ring stiffened, elastic buckling 3—56457
- cylinders, deformable, with nonplanar endfaces, three-dimens. boundary-value problems 3—50946
- cylinders, elastic, of finite length, contact interaction of three coaxial cylinders 3—7510
- cylinders, thick-walled, transversely corrugated, 3-dimens. boundary value problems of elasticity theory 3—1957
- disc, heterogeneous, residual stresses determ. 3—17805
- disc, orthotropic accelerating, stress field, closed form. soln. 3—7432
- dislocations, continuum strain fields, physical interpretation of mathematical singularities 3—33250
- dislocations, interfacial, within anisotropic and nonhomogeneous isotropic elasticity *(French)* 3—46933
- edge dislocation interaction with elliptical inhomogeneity, shape effects, plane elasticity problem 3—51600
- elastic half-space pressed aslant by circular punch, partial contact problem 3—17896
- elastic slabs, contact stresses calcs. 3—17895
- elastic solid, couple stress effect on stress concentrations around elliptic hole 3—50940
- elastodynamics, comparison of three boundary element method approaches 3—35846
- elastodynamics, formation of implicit constraints and free-boundary problems 3—77
- elastodynamics, linear, primal mixed boundary problem, variational principle 3—40365
- elastostatic problems, 2D stress intensity factor computation by boundary element method 3—5608
- ellipsoidal thin shell, axial tube bundle elasticity *(Chinese)* 3—1951
- Endochronic theory with singular kernel, new, inelastic response charact. 3—7441
- exterior crack with contact zones 3—37418
- fibre, hollow elastic, in elastoplastic matrix, stability *(Ukrainian)* 3—22348
- fibre reinforced composite, arbitrarily directed fibres, impulse function use in strength problem 3—50964
- fibre reinforced composite, laminate, boundary layer effects, free-edge stress singularities 3—4074
- fibre reinforced composite, spatially reinforced structural deform. model *(German)* 3—58183
- fibre reinforced composites, elastic constant determination for shells of revolution *(Chinese)* 3—22407
- fibre reinforced composites, elastic end effects, Saint-Venant's principle 3—50941
- fibre reinforced composites, laminate, boundary layer effects, free-edge stress soln. and basic charact. 3—4075
- finite cylindrical cavity in elastodynamics, exterior problem 3—37393
- finite elasticity exact eqns., linear elasticity theory derivation 3—5609
- finite element method for elastic contact problems of solid bodies 3—56499
- Flory rubber elasticity theory, modified, rel. to Dossin-Graessley small strain model 3—12523
- fluid loaded plate, with beam array stiffening, excitation 3—56460
- fracture dynamics, nonlinear, path independent integrals 3—46489
- friction of diamond on diamond in air 3—4146
- gasket, sandwiched solid-metal, contact stresses calcs. 3—17895
- grain boundaries, conf., Caen, France (Sept., 1982) 3—44892
- graphite fibre reinforced epoxy laminates, boundary-layer hygroscopic stresses 3—12515
- graphite intercalation compound with Li, structural and elastic props., in-plane density 3—33213
- half space, transversely isotropic, internally loaded, statical Reissner-Sagoci problem 3—12505
- half-plane with initial stresses, dynamic contact problems 3—17902
- half-space, non-Hertzian contact stress analysis for normal and sliding contact 3—46507
- half-space, three-dimens. boundary value problem soln. using an improved dislocation approach 3—22323
- half-space on an elastic foundation, mixed boundary-value problem 3—7428

elasticity continued
- half-space with thin inclusion, axisymm. elastic problem 3—46451
- heterogeneous media, elasticity theory, hybrid integral transforms 3—20635
- homogeneous elastic medium containing an elliptical cylindrical cavity, transient elastic wave propag. 3—50988
- homogenisation, dual method, appl. to elastic media *(French)* 3—7415
- homogenisation of an elastic system with almost periodic coeffs. *(Russian)* 3—35849
- homogenisation of linear elasticity equations 3—7408
- hyperboloidal section elastic space, soln. of first fundamental axially symm. problem *(Ukrainian)* 3—5607
- incompressible nonlinear elastostatics, penalty function formulations 3—17799
- incompressible problems, penalty method formulation, 4CST-elements 3—54624
- infinite elastic conductor with penny shaped crack in mag. field, sudden twisting 3—22392
- infinite elastic solid, planar crack occupying finite doubly connected region 3—1999
- infinite solid, with rigid, finite inclusion, torsion theory 3—50938
- inhomogeneous elastic medium, model of point defects in mechanics 3—56436
- inhomogeneous elastic medium, small spherical radiator 3—56437
- interconnected balloons, equilib. study 3—25843
- knee joint, stiffness characts., math. model 3—48306
- laminate global-local variational model 3—37358
- laminated plates, accuracy of interlaminar stress calc. 3—46446
- Langmuir film, laser light scatt. 3—38943
- layer with thin inclusion, stress conc. determ. 3—27389
- limit problem in domain with cylindrical symmetry, approx. *(French)* 3—20634
- linear classical elastostatics, three-dimens. boundary value problems, indirect fictitious-boundary integral method 3—50937
- linear continuum mechanics; conservation theorems, Lagrangian functions and variational principles 3—35844
- linear elastic solids mixture, unbounded domain, boundary-value problems, uniqueness and reciprocity theories 3—46443
- linearly elastic plate on elastic unilateral boundary support, transverse loads effects 3—7413
- linearly elastic plate on elastic unilateral boundary support 3—7414
- liquid crystal director fields, numerical three-dimensional relaxation, FORTRAN program 3—13094
- load transfer from a rod to an elastic anisotropic half-space 3—7511
- load transmission over two symmetric laps on a half-plane with a semicircular cut on the boundary 3—42199
- lung, elastic properties in acute induced asthma 3—58701
- mass attached to elastically restrained beam, transverse impact of body 3—22400
- membrane, spherical, air-supported, stability under accumulating ponding fluid 3—46463
- metacarpophalangeal joint stiffness meas., finger arthrograph 3—24899
- metal, plastic deform. effect on acoustoelastic response 3—47908
- metals, discrete microstructural changes investigation using resonance method 3—24285
- metals, heat conduction and elastic-viscoplastic stresses during solidification *(Japanese)* 3—19334
- metals, interstitial H, electronic and elastic struct. 3—38341
- microelastic solids of ferroelec. ferromag. types, EM internal variables in EM continua 3—49174
- micropolar elastic constants, wave propagation, moduli 3—42165
- micropolar elastic solid, noncentrosymmetry consequences 3—1955
- micropolar media mechanics, book 3—16062
- mixed formulation method for elastica problems 3—54619
- mixtures, elastic materials, equilib. state stability 3—1979
- moving crack problems in elastic bodies with initial stresses, exact solns. 3—17892
- multilayer medium, longit. harmonic wave problem, elasticity theory 3—50949
- multilayer plates, nonohomogeneous, design to elasticity theory three-dimens. problem 3—37366
- muscle, elastic nature and torsional wave propag. 3—44262
- muscle stiffness changes during contraction, US meas. technique and obs. 3—4737
- N-constituent composite materials, multi-continuum theory, variational principles *(Chinese)* 3—17795
- nonlinear, cavitation and discontinuous equilib. solns. 3—1956
- nonlinear elastic flexibility of a dock gate 3—56440
- nonlinear elastic systems under nonconservative forces, static and dynamic stability, natural approach 3—17786
- nonlinear elasticity, complementary energy functional for critical load 3—49161
- nonlinear elasticity, convergence of Richardson's method *(Russian)* 3—42136
- nonlinear finite elements for oriented bodies 3—54620
- nonlinear shell anal., soln. of finite element eqns. 3—27380
- nonlinearly elastic strings, equilibria 3—40354
- nonstandard model of elasticity theory 3—78
- nonuniform elastic strip, moving perturbations 3—10590
- objective constitutive relations in elasticity and viscoelasticity 3—17802
- optimisation of deformable elastic bodies, thin-walled structural elements 3—46453
- orthotropic elastic plane region, stress in neighbourhood of corner point 3—46444
- orthotropic panel flutter in supersonic flow using affine transformations 3—56567
- physical props., theory, book 3—54596
- piezoceramic shells, eqns. of state 3—8770
- piezoelectric shells, anisotropic, fundamental relations *(Russian)* 3—8774
- piezoelectric thin film-half space system, SAW dispersion relations 3—13612
- plane linear elasticity problem soln., boundary element technique 3—82
- plane ring shaped region, single crack problem, elasticity soln. *(Chinese)* 3—51001
- plane static contact problem, rigid stamp on elastic wedge 3—46502
- plastic bodies, macroexperiment and form of governing relationships 3—35848
- plate, buckled, flutter as nonlinear aeroelastic phenomenon 3—22373
- plate, circular clamped, of variable thickness, large deflections 3—37377
- plate, elastic, with constraint on thickness function slope, optimal design 3—37356
- plate, electroelastic, variable thickness, steady-state vibrs. 3—50990
- plate, inextensible, edge effect in bending 3—7431
- plate, multilayer, bonding design to elastic nonhomogeneous foundation 3—17791
- plate, point source excited axisymmetric elastic waves 3—32661
- plate, rectangular, elastic, high-freq. flexural mode anal. 3—17866
- plate, rectangular, three-dimens. stability problem soln. under heterogeneous precritical state *(Ukrainian)* 3—22347
- plate, skew, deflection, block overrelaxation methods for non-rectangular co-ordinates 3—37343
- plate, Y-shaped with round corners, stress anal. 3—12519
- plate bending element, shear flexible triangular, shear locking term 3—46449
- plate on an elastic foundation, reaction, normal linear load rel. effect 3—7512
- plate reinforced with a stringer, averaging method appl. 3—7410
- plate structures with openings, reinforcement optimisation 3—32604
- plate with two circular holes, uniform in-plane shearing stress effects, stress anal. 3—12521
- plates, circular, on elastic foundations, large amplitude response 3—12509
- plates, crystal, rectangular, cantilever, under transverse loading, stress anal. 3—27401
- plates, deflections and bending moments computation 3—7456
- plates, elastic contact, variational approach 3—22399
- plates, imperfect, flexure theory, stochastic bifurcation 3—7457
- plates, nonuniform through thickness, bending 3—37368
- plates, thin, exact eqns. on basis of Cosserat's theory 3—17826
- polybutadiene networks, entanglements and elasticity 3—4071
- polyethylene, struct. and mech. props., effect of elastomeric microgels *(Bulgarian)* 3—7925
- poroelastic layer, fluid saturated, transient response to sudden fluid pressure rise 3—1995
- porous materials, elastic props., finite element anal. 3—22325
- punch pressure on transversely isotropic layer on rigid base with hole, axisymm. problem 3—42198
- PVC, struct. and mech. props., effect of elastomeric microgels *(Bulgarian)* 3—7925
- quasi-static elastic crack growth, energy release rate and work done by surface traction 3—37421
- rare earth alloy, RAl$_2$, elastic props., ultrasonic vel. study 3—18366
- Rayleigh waves on concave cylindrical poroelastic surface 3—42171
- rectangular wedge disclination loops, elastic anisotropy influence 3—37906
- reduction of elastic system to prescribed state using boundary force 3—20632
- reflector surface diamond grinding, elasticity linear theory for 2D stressed state 3—27279
- reinforced beam, optimum elastic design 3—50942
- resilient body with cylindrical crack, axially symm. problem soln. *(Ukrainian)* 3—7491
- ring, highly anisotropic, second edge problem 3—50945
- ring polymers, topological tribution functions, theory, computer simulation 3—56433
- ring sector, solid circular, pure twist, toroidal elasticity coordinate frame 3—37355
- Ritz method based on successive minimisation of two functionals 3—44968
- rod, compressed elastic, critical load increase problem 3—32612
- rod, elastic line, non-linear differential equation, eccentric buckling 3—27383
- rod, thin straight prismatic, with const. initial twist, problem of elastica 3—37351
- rubber, const. vol. tube model 3—19364
- Saint-Venant's torsion problem, curvilinear and sectional cross sections, torsional rigidities shearing stresses 3—12526
- sandwich strips, stress propagation, St. Venant's appl. 3—22322
- semiconductors, ionic, solute segregation near grain boundaries, space charge contrib. 3—51813
- shafts with rectangular cross-sections, displacement formulation of torsion 3—12522
- shell, cylindrical, linearly and nonlinearly elastic, supporting power during net flexure *(Russian)* 3—56451
- shell, cylindrical, reinforced by coiling, min. weight struct. calcs. 3—17803
- shell, cylindrical, stability under pure bending 3—46469
- shell, inhomogeneous, generalised shear model fundamental relations refinement 3—50948
- shell, long circular cylindrical sandwich, axisymmetric loading, shell-core analysis method 3—42131
- shell, spherical net-like, fixed first eigenfreq. of axisymm. oscills., optimal design 3—7471
- shell collapse by ponding 3—37385
- shell theory, classical, influence of thickness strains and cross-section warping *(German)* 3—42113
- shells, rotating, eqn. of motion soln. optimisation, dynamic stability parameter increase *(Ukrainian)* 3—46462
- shells, thick-walled nonuniform spherical, under asymmetric loads, stressed state 3—42134
- shells, thin elastic, secondary edge effect in bending 3—7411
- shells, thin elastic noncircular conical, dynamic anal. 3—46471
- shells and plates, anisotropic, theory 3—1958
- Signorini problem, idea of duality, linear elasticity theory 3—44967
- Signorini problem with friction, existence and uniqueness results 3—32685
- single crystals, elastic consts., determ. from elastic moduli of polycryst. samples *(Russian)* 3—51686
- skew plates, elastic limit loads 3—27390
- slender body contact with an elastic half space 3—27454
- solid, elastic, containing annular crack, axisymm. thermal stress distrib. 3—2003
- solid, infinite, two-dimens., two collinear pressurised line crack problem 3—12598
- solid, infinite isotropic elastic, problem of two coplanar cracks 3—37423
- space with plane slits, stress-strain state determ. 3—50953
- spheroid, hollow oblate, subjected to internal or external press. 3—17884
- Sr, elastic wave propag. at high press., pulse US method 3—28043
- stamp, elastic, frictionless contact with elastic foundation 3—7506
- steel plate, water immersed, insonified, internal and external fields along zero order Lamb mode branches 3—12394
- stiffness matrices for C_0 continuous tetrahedra 3—27381
- straight beams, elastic contact problem 3—12603
- straight elastic rod subjected to initial finite extension and twist, wave propagation 3—12517

elasticity continued
  stress calculation in elastic kinetics problems 3—35842
  strip, anisotropic, elastic, weakened by an array of Griffith cracks 3—37417
  surface of infinite cylindrical bore, applied tractions 3—37357
  surface stress measurement using Rayleigh waves 3—58380
  suspension of elastic particles, acoustic perturbations *(French)* 3—22984
  symmetric plane strain and torsion-free axi-symmetric problem interrelationship 3—40366
  tapered beam structures, static, dynamic and stability anal., finite element method 3—37352
  textured materials, grain interaction effect in calcs. 3—51691
  thermal-elastic interactions meas. with acoustic waves 3—46409
  thick plate with hemispherical pit, stress distrib. under uniaxial tension, asymmetric calcs. 3—1950
  thin-walled elastic structures, stability and vibr. freqs. optimisation 3—7481
  three dimensional linear elasticity operator, eigenvalue problem *(Italian)* 3—16135
  three dimensional problem soln., two dimens. multiplane finite element technique 3—35847
  three-dimensional, symmetry and bifurcation 3—46445
  three-dimensional problems, numerical integration method appl. 3—37353
  tissue elasticity rel. to Prager's 'locking media' 3—4537
  tissues, fibrous connective, constitutive relations, general multiaxial theory 3—48305
  torus, elastic, difference scheme for equilib. problem 3—81
  trachea, canine, direct in vivo meas. of elastic props. 3—24779
  traction problem uniqueness in finite elasticity 3—25749
  transversely isotropic materials, elastic-plastic constitutive eqns., appl. to perforated circular plate bending 3—27376
  truss design structural optimisation, Norm method, with Gauss-Seidel approx. 3—35841
  trusses, geometrically nonlinear, static behaviour under large deflections *(German)* 3—32597
  trusses isostatic elastic stress limited, Pareto optimal set 3—1952
  two-dimensional bi-harmonic eqn. soln. by Charge Simulation Method 3—25751
  unidirectional fibre reinforced elastic composites, 3-dimens. fibrous flaws, stresses 3—51021
  uniqueness for elastic crack and punch problems 3—2010
  unsteady transonic aerodynamics, linear/nonlinear behaviour, aeroelasticity 3—46591
  variational formulation, mixed, of elastic system problems 3—54623
  vibrating elastic body in tenuous compressible fluid, scatt. frequencies *(French)* 3—37390
  vinyl monomers, polymerisation, rheology 3—7533
  von Karman equation, boundary condition consideration 3—54621
  wedge plane elastic contact with friction, stressed state singularities near wedge corners 3—7513
  wire, elastic, one-kink curve determ. by inverse scatt. method 3—42147
  work theorems for finite and incremental elastic deformations, unified treatment 3—35843
  zoned media with stress discontinuities, implementation of boundary element method 3—35845
  B_2O_3-Na_2O, glass, retarded elasticity rel. to viscosity, compressive method *(Japanese)* 3—4076
  $CeAl_2$, Kondo alloy, elastic props., ultrasonic vel. study 3—18366
  Cu-Al-Co alloys with noncoherent particles, mech. twinning and superelasticity *(Russian)* 3—53126
  Cu-Zn-Al(Ga), stress induced martensitic transform. 3—43822
  ^4He, superfluid-solid interface, crystallisation wave theory 3—13585
  SiO_2-Na_2O, glass, retarded elasticity rel. to viscosity, compressive method *(Japanese)* 3—4076
  $Sr_{0.5}Ba_{0.5}Nb_2O_6$ single cryst., electroelastic and SAW props. 3—52736
  Tb-Fe, sputtered, props. for tunable SAW device appls. 3—51997
  $YbAl_2$ mixed valence alloy, elastic props., ultrasonic vel. study 3—18366

elasticity of liquids
  see also compressibility of liquids
  complex flows in elastic liquids, laser flow-visualisation 3—17979
  nematic liquid cryst., elastic constants, effect of nematic neighbour correlations 3—2637
  nematic liquid crystal, Frank const. determ. by light attenuation meas. 3—2639
  nematic liquid crysts., thermodynamic stability, dielect., diamag. and elastic props. 3—37774
  polymeric liquids, nonlinear Volterra integrodifferential eqn. for stretching 3—51040
  polystyrene melts, styrene-butadiene copolymer modified, rheological props. under shear and uniaxial stretching *(Russian)* 3—51041
  smectic A liq. cryst., rheological behaviour under layer compression 3—33081

elasto-optical effects *see photoelasticity; piezo-optical effects*

elastomers
  see also rubber
  butadiene-methylstyrene elastomer, phys. and chem. relax., gaseous media effects *(Russian)* 3—6818
  butadiene-methylstyrene elastomers, multiplicity of relax. transitions *(Russian)* 3—51517
  cellular silicone elastomers, tress chemiluminesc., appls. to ageing process 3—53309
  corrosivity against stainless steels, quantitative eval. 3—24395
  4,4-diphenylmethane diisocyanate elastomer films, segmental orientation during deform. *(Russian)* 3—51515
  extending oil effect on viscoelastic behaviour 3—14634
  foam, porous, nonlinear deformation, neo-Hookean constant 3—27382
  1,6-hexamethylene diamine elastomer films, segmental orientation during deform. *(Russian)* 3—51515
  nonregular, deform. props., relax. spectra *(Russian)* 3—9106
  O-ring materials, elastomeric, empirical eqn. for abrasive wear 3—19428
  oligotetramethylene glycol elastomer films, segmental orientation during deform. *(Russian)* 3—51515
  polybutadiene, glass-beam filled, positive ion emission in fracture, mass/charge ratio and kinetic energy 3—8947
  polybutadiene networks, threshold tear strength meas. 3—19361
  polychloropren nairit elastomer, dielectric relaxation *(Russian)* 3—52717
  polydimethylsiloxane networks, threshold tear strength meas. 3—19361
  polyisoprene networks, threshold tear strength meas. 3—19361
  polyphosphazene networks, threshold tear strength meas. 3—19361

elastomers continued
  polyurethane, cross linked spin-spin relaxation and chemical bond network density *(Russian)* 3—38709
  polyurethane, orientation effects, detection by thermomech. anal. *(German)* 3—42539
  polyurethane elastomer, liquid, p-V-T studies 3—13395
  polyurethane elastomers, thermoelastic props., scanning calorimetry study *(Russian)* 3—51695
  polyurethaneurea elastomer films, segmental orientation during deform. *(Russian)* 3—51515
  polyurethene, dielectric tan δ meas. during deform. 3—52723
  silicone elastomer, refr. index meas. over 500 to 1500 nm range 3—3661
  tear strength meas. under threshold conditions 3—19361
  thermal solar collectors, mech. props. evaluation 3—53578
  C black filled elastomer, nonlinear viscoelastic behaviour, stress relax. 3—19362

elastoplasticity
  bars, elasto-plastic, torsion theory, perturbation method appl. 3—7435
  beams, elastic-plastic hyperstatic, deflections and deformations under cyclic loading 3—42137
  beams and plates, limit analysis, variational principle and algorithm 3—12537
  bounding principles for elastic-plastic-creeping solids loaded below and above the shakedown limit 3—17823
  celluloid, stress-optic law, effect of temp. and strain rate 3—12607
  circular tube, elastic-plastic, subjected to internal press. and axial force, bifurcation 3—42150
  compact specimen, side-grooved, 3-D elastic-plastic invest. 3—51005
  compact tension specimen, crack tip growth, elastic-plastic finite element analysis 3—27406
  complex axisymmetric structures under arbitrary loads, nonlinear dynamics 3—56427
  complex nonisothermal loading along low-curvature paths, eqns. of state 3—1969
  composites, unidirectional, damage, math. modelling 3—56472
  concrete structures, elastic-plastic fracture anal., finite element method 3—37416
  contact problems of elasticity and plasticity theory, finite element soln. 3—17900
  crack tip, work for plastic deform. in localised area 3—28035
  cracks, short, elastic-plastic finite element analyses 3—27434
  cylinder, hollow, thick-walled, made from nonhomogeneous material, elasto-plastic equilib. *(Russian)* 3—56447
  cylindrical tube and circular bar, simple loading, elastic-plastic deform. theory *(Russian)* 3—42158
  deformation energy constancy, fractographic analysis 3—53166
  discrete elastic-plastic structure yield limit and hardening modulus identification by nonlinear programming 3—50956
  doubly periodic elastic-plastic problem, rigid inclusion effect on elastic zone propag. 3—46459
  dynamic fracture, elastic-plastic finite element anal. 3—12593
  efficient elastic-plastic finite element analysis with higher order stress-point algorithms 3—56441
  elastic-perfect plastic material, modelling of process region at crack growth 3—46495
  elasto-viscoplastic bar, shock wave propagation, asymptotic method 3—42166
  energy relationships for deformation of specimen with crack 3—42712
  ferromagnetic crystal, magnon-phonon couplings, dislocation influence, phenomenological approach 3—3499
  fibre, hollow elastic, in elastoplastic matrix, stability *(Ukrainian)* 3—22348
  fibre reinforced composite, spatially reinforced structural deform. model *(German)* 3—58183
  fibre reinforced composites, anisotropic, three-dimens. reinforced, deform., struct. model 3—27408
  fibre reinforced composites, unidirectionally reinforced with elastic-plastic matrix, deformability 3—32621
  fibre reinforced metal laminate plate, plasticity anal. 3—34416
  fibre stability in elastoplastic matrix *(Ukrainian)* 3—12547
  finite deformation computational analyses, objectivity of incremental constitutive relations 3—44965
  finite elements in nonlinear mech., conf., Stuttgart, Germany (Aug. 1981) 3—16068
  fracture arrest, Mode I, in elastic-viscoplastic transition zone 3—56480
  fracture dynamics, nonlinear, path independent integrals 3—46489
  fracture mechanics, comparison of expressions *(Slovak)* 3—12600
  fracture mechanics, elastic-plastic, finite element part of Lamcal program 3—17894
  frames, two- and three-dimens., finite element anal., natural approach 3—17818
  geomaterials and porous media, elastic-plastic dilatant deform. 3—48539
  high strength materials, elastic-plastic fracture toughness, prediction using mech. model 3—14699
  Huber-Mises material, moving strong discontinuity under plane stress conditions 3—27397
  inclusion, ribbon-like rigid, embedded in elastic-plastic material, stress singularity 3—2650
  inelastic large deformation analysis using nonlinear matrices 3—12532
  iterative method, static, elastoplastic and eigenvalue problems, finite element analyses, cost reduction 3—17816
  laminated structures, dynamic finite element model 3—17814
  lateral crack system, elastic-plastic indentation damage in ceramics 3—27444
  load path tracing creep type strategy in elastoplastic post-buckling anal. 3—17815
  LWR pressure boundary safety and fracture conf. Stuttgart, Germany (Oct. 1981) 3—20569
  matrix material, strain softening effect during void growth 3—42148
  metallic materials, strain rate effect on elastoplastic deform. charact. 3—32620
  metals, elasto-plastic thermal stress, FORTRAN prog. for finite element calc. *(Japanese)* 3—58178
  metals, thermoelastic instability, review 3—24311
  model of failure in ideal elastoplastic media 3—42709
  nonlinear elasticity, convergence of Richardson's method *(Russian)* 3—42136
  nozzle corner crack, elastic-plastic FEM anal., fracture mechanics concept 3—24456
  oblique impact along surface of elastic-plastic half-space 3—7509
  pipe, eccentric, elastoplastic torsion problem soln. 3—56454

elastoplasticity continued
pipes, elastoplastic circular, response and stability under combined bending and external press. 3—7442
planar elastoplastic problems, soln. technique for indirect boundary integral eqn. 3—37375
plastic structures, stability, anisotropic hardening and cyclic loads 3—12536
plastically incompressible elastoplastic medium with reinforcement, plastic deform. upon shear shock wave interaction 3—47048
plate, circular, large elastic-plastic deflection with springback under circumferential moments 3—1973
plate with part-through crack under extension and bending, elastic-plastic problem 3—7493
plates, rectangular, with nonlinear props., finite element anal. 3—22336
plates, stress-state calc., convex anal. appl. 3—12529
plates, Z 3—37373
polycrystalline materials, elastic-plastic behaviour, microhomogeneities effects 3—2652
polyethers, thermoelastoplastic, ^1H and ^{13}C NMR *(Russian)* 3—8115
randomly excited elastoplastic structs., lifetime reliability, permanent deform. 3—37371
rigid punch problem, elastoplastic, using variational inequalities 3—51025
rod, elastoviscoplastic, impact on rigid wall, temp. field produced *(French)* 3—7438
rods, elastic-viscoplastic material, stress wave propagation, work hardening formulation 3—46473
Roorda frame, plastic symmetry 3—42160
shafts with rectangular cross-sections, displacement formulation of torsion 3—12522
shear band, adiabatic, development from small imperfections, elastoviscoplastic material 3—7446
shell, cylindrical, thermally loaded, elastic-plastic analysis 3—27405
shells, elastic-plastic deform., simple finite element 3—22337
shells, elasto-plastic, nonlinear anal. by hybrid stress finite elements 3—22335
shells, sandwich, conical, under axial compression and external press., elastic-plastic buckling 3—1975
shells of revolution, elastic-plastic anal., initial value method appl. 3—37373
shells of rotation, flexible, stress-strain state, numerical investigation 3—12544
single crytals, ductile, shear band bifurcations, rigid-plastic and elastic-plastic cases 3—57015
solar boiler tubes, cyclic thermal loading in elastic-plastic range, long term behaviour *(French)* 3—42140
steel, austenitic stainless, reactor irrad., low cycle strain with holding 3—43904
steel, loading with unloading, intricate deform. paths, lag principle 3—39223
steel, structural, fracture resist. as characterised by strength of plastic stress singularity 3—17907
steel, structural weldable, elastoplastic failure concepts limits *(German)* 3—53175
steel 38NCD4, elastoplastic transition critical point, thermal emission study 3—34566
strain finite element formulations comparison for elastic viscoplastic materials 3—17813
strain hardening material, linear, field radial nonuniformity near moving crack tip 3—7503
stress-strain relations, elastic-plastic theoretical and expt. results 3—42144
strip containing hole, creep stress redistribution 3—27403
structural representations in elasto-plastic strain mechanics 3—7434
strut, large elastic-plastic deform., the Plastica 3—1966
superelement method for solving elastoplastic problems 3—17830
surface flaws, elastic-plastic anal. using simplified line model 3—56486
T-criterion applied to ductile fracture 3—27442
tensile cracks, growing plane strain, in elastic-ideally plastic solids, asymptotic analysis 3—17887
torsion problem, mixed method 3—37369
tube collapse analysis using finite elements 3—22338
tubes, thick, circular, elast.-plastic, under lateral press., bifurcation and post-bifurcation behaviour 3—17817
weld-induced residual stress fields, numerical simulation of crack growth 3—51023
yield design and limit load analysis, static and kinematic methods *(French)* 3—42141
Al-Cu alloy, elastoplastic deform., prior residual deform. effect 3—43901
Al_2O_3, residual surface stress, caused by grinding, X-ray diffr. determ. 3—51903
Ti, fatigue crack propag., effect of stress freq. 3—14730
Zn crystals, electroplastic effect, depend. on applied stresses 3—9134

elastoresistance
No entries

ELDOR
coupled electron-proton spin systems, spin magnetisations, appl. to ESR, ENDOR and ELDOR 3—23782
partially ordered solids, free radicals, cross relax., theory 3—8723

electrets
see also dielectric devices; electrostatics; photoelectrets; thermoelectrets
dosimeter for fast neutrons 3—36573
electric breakdown in gases, space charge effects 3—17995
microphones, theoretical and experimental investigations 3—12487
monopolar, slot-effect electrometers appl. 3—20873
polyester insulating foil electretic phenomena caused by partial discharges *(Polish)* 3—18146
polyethylene, low-density, dielec. polarisation rel. to charging fields, TSC technique 3—14202
polymer film, elec. cond. temp. depend., rel. to thermally-stimulated depolarisation current spectra *(Russian)* 3—43479
polymer films, nonmetallic electrets, mean charge depth, compensation method calc. 3—43480
polymers, production of foil electrets by ionizing radiation in air 3—47595
polystyrene:copper phthalocyanine films, electret characts., TSD studies 3—57856
relaxation current model of electret effect 3—47596
TGS, pure and doped, electret effect 3—47588
US transducers, thin film electret and condenser types 3—50890
$Bi_{12}SiO_{20}$, electret state formed under X-ray irrad., characteristics 3—47589

electrets continued
$Bi_{12}SiO_{20}$ single cryst., photoelectret and X-ray electret state characts. 3—47590
$PbZr_{1-x}Ti_xO_3$, piezoelement preparation by corona discharge polarisation method, electret state model *(Russian)* 3—8771
Rn and Tn, passive meas. using TLD or SSNTD on electrets 3—6500
$(Sr, Ba, Ca)Nb_2O_6$, single cryst. ferroelectrets, electrooptic props. with broad phase transitions 3—34073

electric actuators
piezoelectric stepping drive for sectional telescope mirror adjustment 3—5783

electric admittance
electronic shot-noise devices, quantum electro-dynamic circuit soft-photon renormalisation of conductance 3—57396
Langmuir-Blodgett film MIS structures on narrow band-gap semiconductors 3—38487
nickel lactate complex form., kinetics, conductance correl. anal. 3—53368
short EM wave diffr. from semi-infinite shield with variable admittance 3—17416
solid electrolytes, complex impedance and admittance data, nonlinear least squares anal. 3—13537
SOS, transient conductance meas. during pulsed laser annealing 3—57352
$Ag-RbAg_4I_5$ heterogeneous struct., admittance meas. 3—8344
$Al_xGa_{1-x}As:Si$, doped and undoped, MBE grown, elec. and optical props., effect of growth conditions and alloy comp. 3—43596
KH_2PO_4, aq. soln., specific conductance rel. to temp. and conc. 3—2860
$\beta''-Na_2O-Al_2O_3$ superionic conductor, complex admittance plots 3—42835
$Na_{1-x}Si_xZr_2P_{3-x}O_{12}$, NASICON, superionic conductor, complex admittance plots 3—42835
Si:Au, transient conductance meas. during pulsed laser annealing 3—57352

electric admittance measurement
MOS structure, CC T 3—52268

electric amplifiers *see amplifiers*

electric arc furnaces *see arc furnaces*

electric arc welding *see arc welding*

electric arcs *see arcs (electric)*

electric breakdown
see also electric breakdown of gases; electric breakdown of liquids; electric breakdown of solids
dielectric phenomena and elec. insulation, conference, Amherst, MA, USA (Oct. 1982) 3—10510
electrodes, ion implantation, high voltage vacuum gap breakdown characts. increase 3—18173
electrostatic field computation, for corona and breakdown, effect of grounded enclosure on the field distribution of rod-plane gaps 3—13016
MHD convertor axial field breakdown threshold voltage obs. 3—51394
prebreakdown electron emission 3—19258
vacuum breakdown criteria due to RF fields 3—18184
vacuum breakdown mechanism, point-to-plane, photographic obs. 3—18171
vacuum breakdown voltage and prebreakdown current, variable gap spacing 3—18162
vacuum gap, microparticle induced, investig. using twin beam laser scatt. system 3—18163
vacuum gap, pulsed overstressed radial, current evolution 3—18169
vacuum gap, unbridged, breakdown under impulse voltage 3—18170
vacuum gap, variation of mass spectral line intensity with field and electrode conditions 3—18172
vacuum gap breakdown, anode and cathode material combination effect 3—18166
vacuum gaps, thermoelastic destruction of cathode whiskers 3—51432
vacuum prebreakdown, anode spot temp., spectroscopic meas. 3—18164
vacuum prebreakdown currents, abnormal characts. 3—18165
Nb electrodes, vacuum breakdown delay time, superconductivity influence 3—18167

electric breakdown of gases
see also electron avalanches
air, breakdown by 9 55 μm laser radiation 3—32845
air, breakdown voltage characteristics in a narrow gap 3—18160
air, dry and moist, positive switching impulse breakdown of sphere-plane gap 3—7840
air, positive corona current, DC and pulse components, interacting needles-to-plane discharge 3—7834
air, pulseless corona, space charge field and pot. distrib. for coaxial cylinders 3—33000
air, streamer-to-spark transition in short point-to-plane gaps 3—7829
air, Townsend breakdown, photoionisation as secondary mechanism 3—27789
air conductivity relevant to source region EMP 3—37719
air gap, corona inception and breakdown in nonuniform field with insulating support 3—27785
air in large sphere-gaps, particulate matter influence on DC breakdown 3—7841
Ar-Ne mixture, breakdown voltage characteristics in a narrow gap 3—18160
compressed gas insulation breakdown, influence of steep-fronted pulses and insulator interfaces 3—27643
compressed gases, elec. breakdown for steep fronted pulses and insulator interfaces 3—17996
corona and space charges occurrence 3—27642
effectiveness of breakdown of negative ions in sheath of avalanche corona discharge 3—7816
electric strength at high temp. 3—42354
electrodeless breakdown obs. in glass tubes 3—42469
electron attaching gases mixtures, calc. of breakdown mixtures 3—2171
electron distribution function formulation from transport coeffs. of electron swarm 3—7690
electron-attaching gas breakdown and recovery control by pulsed electron beams 3—7689
electron-attaching gases, breakdown voltage calcs., AC and DC test anal. 3—7839
electronegative gases, Townsend breakdown criteria 3—17998
electronegative gases in non-uniform field, dielec. strength, vibrationally excited molecules 3—7692
ethylene derivatives, elec. ionisation and breakdown obs. 3—42468
fluoroform$+SF_6+$perfluorocarbon ternary gas dielectric, breakdown strengths, insulation appl. 3—7693
gas switches, 2.8 MV, UV laser triggering 3—27126

electric breakdown of gases continued

- gaseous dielectrics, conf., Knoxville, TN, USA (March 1982) 3—5495
- gaseous disperse systems, acoustic emission during laser breakdown 3—37605
- hexafluoropropylene, HV insulation, homogeneous field breakdown strength characts. 3—7695
- high-pressure electronegative gases, sparking potentials calc. from electron-molecule collision props 3—7836
- hydrodynamic relaxation of the cloud of hot gas after laser breakdown in air 3—7550
- impulse breakdown plasma in atmos. air, studies using ruby-laser scatt. diagnostics 3—22719
- inert gases, electric strength, breakdown voltages at high temp. 3—33015
- insulating gases, dielectric strength, boiling point and toxicity 3—2173
- ionising potential-gradient wave attenuation factor 3—32841
- isoprene, elec. ionisation and breakdown obs. 3—42468
- limiting voltage effect for breakdown of gas 3—27645
- low pressure gap, breakdown voltages 3—17999
- optical sparks initiated in two-phase media by short laser pulses 3—7820
- parallel-plate vacuum gap, effect of charge carriers on prebreakdown current 3—2174
- parallel-plate vacuum gap, effect of charge carriers on prebreakdown current 3—2175
- partial discharges in gaseous interfaces in dielectric-uniform field electrode struct. 3—22733
- perfluoroalkanes, breakdown strength rel. to pressure dependent electron attachment rates 3—7687
- perfluoropropane, HV insulation, homogeneous field breakdown strength characts. 3—7695
- perfluoropropylene, breakdown strength rel. to pressure dependent electron attachment rates 3—7687
- plasma column prod. by CO_2 laser induced breakdown in solenoidal field, scaling model 3—37671
- plasma ejection from a breakdown channel, diagnostic method 3—18127
- plasmoids produced in high frequency plasma discharge, equidensitometrical analysis 3—12904
- pressurised spark gaps, electric strength recovery after breakdown 3—7849
- recovery electric strength voltage, homogeneous plasma in discharge gap, gap breakdown voltages *(Russian)* 3—7814
- space charge effects on electric breakdown of gases 3—17995
- spark gap, electron beam induced space charge effects 3—27764
- spark gap Blumlein switch, low press., 250 kV, breakdown, recovery 3—27774
- spark gap breakdown mechanism in nonuniform field with laser beam irradiation under negative polarity 3—51407
- spark gaps, filamentary breakdown in presence of dielec. surface 3—33012
- tetrafluoromethane, arc discharges, enhanced photoemission phenomenon, spectroscopic study 3—7837
- Trichel type discharges in gases, simple theory, stepped-leader phenomena appl. 3—2326
- triggered pseudo-spark chamber as fast switch and as high-intensity beam source 3—41373
- universal features of breakdown phenomena in solids, liquids and gases 3—28770
- universal features of electrical breakdown in solids, liquids and gases 3—19054
- vacuum breakdown, thermal instability of anode in prebreakdown stage 3—18155
- Ar-N_2 mixtures, laser irrad., breakdown threshold 3—56769
- CO_2 gas, lightning impulse breakdown of rod-plane gaps 3—17997
- CO_2/CCl_2F_2 gas mixture, lightning impulse breakdown of rod-plane gaps 3—17997
- He plasma generation by steady microwave discharge in quasioptical resonator 3—37723
- He, supercritical, elec. breakdown with partial discharge in short gaps, cable insulation appl. 3—42465
- N_2, breakdown voltage characteristics in a narrow gap 3—18160
- N_2, electric breakdown plasma, microwave energy coupling, computer simulation 3—51414
- N_2, microwave energy coupling during elec. breakdown, expt. and computer simulation 3—42470
- N_2+SF_6+perfluorocarbon ternary gas dielectric, breakdown strengths, insulation appl. 3—7693
- N_2O, HV insulation, homogeneous field breakdown strength characts. 3—7695
- SF_6, arc discharges, enhanced photoemission phenomenon, spectroscopic study 3—7837
- SF_6, corona and breakdown in coaxial-electrode geometry 3—7832
- SF_6, electric breakdown, effects of stochastic processes *(German)* 3—7827
- SF_6 gas, DC breakdown voltage and current press. dependence 3—7835
- SF_6 gas, streamer-to-spark transition in short point-to-plane gaps 3—7829
- SF_6 gas electrical breakdown phenomena in non-uniform fields, application in gas blast circuit breakers 3—37717
- SF_6, impulse breakdown strengths, HV insulation systems 3—7838
- SF_6/N_2 binary mixtures, impulse breakdown strengths, HV insulation systems 3—7838
- SF_6/N_2 mixtures, corona and breakdown in coaxial-electrode geometry 3—7832
- SF_6/N_2 mixtures under impulse conditions, corona stabilization, optical multichannel anal. 3—7831
- SF_6/N_2/perfluorocarbon ternary mixtures, impulse breakdown strengths, HV insulation systems 3—7838
- SF_6-air mixtures, impulse breakdown behaviour of negative rod-plane gaps 3—2172
- SF_6-air-mixtures breakdown voltage measurement, AC and impulse voltage stress *(German)* 3—42353
- SF_6-CO_2 mixtures, impulse breakdown behaviour of negative rod-plane gaps 3—2172
- SF_6-N_2 mixtures, impulse breakdown behaviour of negative rod-plane gaps 3—2172
- $SF_6+c\text{-}C_4F_8+CO$ 3—7694

electric breakdown of liquids

- cryogenic liquids, breakdown characts. and mechanisms 3—43490
- dielectric, prebreakdown streamers 3—18159
- dielectric liq. drops, stability to breakdown in electric field 3—38763
- dielectric strength of liquid dielectrics *(German)* 3—43485
- electrohydrodynamics, role in dielectric breakdown of liquids 3—19053
- electrohydrodynamics in role in liq. breakdown 3—28769
- elementary procession development of breakdown, review 3—10546

electric breakdown of liquids continued

- ethylene glycol-water mixture, pulsed high-voltage dielec. props. meas. 3—34026
- laser breakdown, spatial struct., stimulated scatt. and self-focusing effects obs. 3—18342
- liquid dielectrics electric withstand strength to microsecond voltage pulses *(Russian)* 3—38759
- localised elec. spark discharge, cavitation dynamics 3—18158
- natural gas liq., dielec. props., appl. to electrical insulation 3—19036
- non-polar liquids, review of elementary processes in development of breakdown 3—28766
- prebreakdown streamers 3—18159
- rhodamine 6G in ethanol, excitation by electric breakdown 3—38921
- space charge and structure effects on breakdown 3—28768
- space charge and structure effects on dielec. breakdown 3—19052
- streamer propagation in liquids and over liquid-solid interfaces 3—18157
- streamer propagation in liquids and over liquid-solid interfaces 3—27762
- transformer oil, influence of DC bias superimposed on step voltage 3—43486
- universal features of breakdown phenomena in solids, liquids and gases 3—28770
- universal features of electrical breakdown in solids, liquids and gases 3—19054
- water, streamer propag. for selected electrode geometries 3—18161
- water dissolved in dielectric fluids, calorimetric meas. 3—2804
- He, cryogenic, dielectric strength of large gaps 3—43488
- He, liq., arc extinction voltage between Cu electrodes, appl. to supercond. magnet cooling 3—43489
- N_2, liquid, prebreakdown phenomena, optical observation 3—23873
- N_2, liquid-phase, electron transport mechanisms under high electric fields 3—28349
- toluene, liq., elec. prebreakdown events, chem. impurity effects 3—19058

electric breakdown of solids

- *see also impact ionisation; partial discharges; Zener effect*
- cylindrical void with metal rod electrode partial discharge intensity investig. 3—28774
- dielectrics, distinction between electrical and thermal effect 3—28767
- dielectrics, transparent, optical avalanche breakdown, two-photon absorpt. 3—8768
- electroluminescence, prebreakdown, occurrence in weak and strong field limits 3—38918
- field controlled p-n junction breakdown voltage *(Chinese)* 3—13887
- FRP, fibre reinforced polymer, dielectric breakdown strength under mechanical stresses, temp. and voltage effects 3—28772
- impulse thermal breakdown eqn., boundary conditions 3—19057
- insulating thin films, electric breakdown mechanisms, review 3—52730
- insulation breakdown, numerical anal. of two-dimensional Poisson field by hopping method 3—28765
- Kapton breakdown, dielectric discharges, RF characts. 3—38760
- lipid bilayer membranes, modified with UO_2^{2+}, reversible elec. breakdown mechanism 3—8769
- Mylar, satellite dielectrics, ionisation induced breakdown and cond. 3—44637
- Mylar breakdown, dielectric discharges, RF characts. 3—38760
- p-n junction, high volt. reverse biased mesa power devices, breakdown volt. modelling 3—43272
- periclase, dielec. props. rel. to chem. and grain comp. 3—23874
- PET, dielectric breakdown strength under mechanical stresses, temp. and voltage effects 3—28772
- polycrystalline, laser annealed, thermal oxides characterization 3—57435
- polyethylene, dielec. breakdown in divergent field, dissolved gases and electroluminesc. effects 3—52729
- polyethylene, effect of freq. on growth of water trees 3—28773
- polyethylene, electrical treeing form. 3—19059
- polyethylene, light emission in highly divergent fields 3—19205
- polyethylene, mechanism of treeing inhibition by additives 3—28771
- polyethylene, water tree propag., mech. aspects 3—19062
- polyethylene, water tree resist. 3—19061
- polyethylene film in partial discharge, temp. distrib. meas. by means of liq. cryst. *(Japanese)* 3—2856
- polyethylene prestressed films, impulse breakdown in ns range 3—28775
- polyethylene terephthalate thin films, electron beam probing of space charge 3—3645
- polymer insulation, water trees, physicochem. aspects 3—19060
- polymer sheet, dielectric surface arcs vel., optical meas. 3—38761
- polymers, water tree freq. depend. and growth rate 3—19063
- polyparabanic acid film, elec. breakdown under square pulse condtions 3—43487
- polyvinylidene fluoride film, polarization by breakdown field appl. 3—14196
- porcelain, insulator temp., flashover voltage meas. procedure in vacuum 3—8766
- semiconductor, punch-through voltage meas., HV device 3—5814
- space charge and structure effects on breakdown 3—28768
- space charge and structure effects on dielec. breakdown 3—19052
- spacer in insulating oil, dielectric breakdown 3—19053
- spark channel in dielectric solids, energy characts. anal. *(Russian)* 3—52728
- spark gaps, high energy, materials, chem. and phys. studies 3—27773
- steel, Si, grain oriented, laser irradiated, characts. 3—34174
- Teflon, electron-beam-charged, barriers to flashover discharge arcs 3—38762
- Teflon, satellite dielectrics, ionisation induced breakdown and cond. 3—44637
- tetramethylsilane/O_2 prepared polymer films, glow discharge polymerised, elec. props. 3—8490
- thermal and purely electric breakdown, review 3—19051
- thermal breakdown of single crysts. with melt-filled breakdown channel 3—28777
- thermal breakdown suppression regimes 3—23875
- thin film insulators 3—23872
- thin films, electrical breakdown testing using electronic testing 3—47602
- thin films, optical breakdown and heating kinetics with spatially homogeneous absorpt. under intense optical radiation 3—28920
- thin films, optical breakdown prod. by intense light having spatially varying absorpt. 3—28921
- universal features of breakdown phenomena in solids, liquids and gases 3—28770
- universal features of electrical breakdown in solids, liquids and gases 3—19054

electric breakdown of solids continued
  XLPE cable insulation, effect of morphology on impulse voltage breakdown 3—3646
  Al-Mg-Si-Cu-Cr-Fe-Mn (0.98, 0.68, 0.26, 0.2, 0.09, 0.05 wt.%), barrier anodized coating characts. 3—3018
  Al-SiO_2-Si, MOS struct., dielectric impurities, elec. durability, SIMS 3—28449
  Al_2O_3 plasma deposited coating, elec. strength at 300-1400K 3—14215
  Al_2O_3 thin film, plasma enhanced beam deposition and elec. props. 3—39044
  $BaTiO_3$ ceramic capacitors, DC leakage in Poole-Frenkel field 3—3208
  $BaTiO_3$ ceramics, grain size effect on dielectric const. under DC biasing field 3—3634
  CaF MIM structs., AC, DC and ionic thermocurrent conduction, dielec. breakdown 3—13923
  $Ca_2V_2O_7$, cryst. growth, struct., elec. and dielec. props. 3—24110
  CdTe single crysts., streamer discharges 3—8868
  Cu_2O, elec. cond., switching phenomena, temp. depend. 3—18709
  GaAs, pulsed laser breakdown thresholds using two laser beams 3—37959
  GaP-Si heterojunction, GaP metalorganic CVD epitaxy and elec. and photoelec. props. meas. 3—19285
  Ge, current filament, secondary breakdown, effects of temp. on stability 3—34033
  KCl, electron irradiation, reduction of rate of electric aging 3—8767
  $LiNbO_3$:Fe, photorefractive effect and surface elec. breakdown, space charges obs. 3—23898
  MgO:Ni, pure and dopes, high field conduction and dielec. breakdown 3—28776
  NaCl, electron irradiation, reduction of rate of electric aging 3—8767
  Si, high press. oxidation, optical and elec. props. of oxide layers 3—19436
  Si, p-n junction, degradation processes, at repeated onset of secondary breakdown *(Russian)* 3—57415
  Si, p-n junction, luminosity distrib., in secondary breakdown zone *(Russian)* 3—57414
  SiO_2, electron traps, annealing in NH_3 effects 3—3221
  SiO_2, plasma enhanced CVD, gate insulator for InSb MOS struct. 3—13917
  SiO_2 thin film, plasma enhanced beam deposition and elec. props. 3—39044
  SiO_2/Si system, elec. cond. and elec. breakdown of SiO_2 3—3345
  Ti/TiO_2/Au anodised layers, current-voltage characts., Schottky effect and types of breakdown 3—47408
  Ti/TiO_2/electrolyte anodised layers, current-voltage characts., Schottky effect and types of breakdown 3—47408
  TiO_2 anodic films formed in acid medium, breakdown voltage *(French)* 3—3647
  V_2O_5-TeO_2 glasses, elec. threshold switching in sandwich geometry 3—52153
  ZnO piezoelectric thin film US transducer, dielectric breakdown characts. *(Japanese)* 3—52731
electric cables *see cables (electric)*
electric capacity *see capacitance*
electric cells *see cells (electric)*
electric charge
  see also space charge
  artificial satellite Earth charging environment, worst case estimation 3—15814
  conservation along strings in gauge theories 3—16477
  interstellar dust grains, elec. charge rel. to rot. spin-up by inverse Cerenkov effect 3—54487
  massless electric charges, local confinement in QED 3—6045
  moving line charge, problem, parallel or perpendicular to anisotropic media, EM field soln. 3—36927
  solar system bodies, role of electrostatic charging of small and intermediate-sized bodies 3—15838
electric coils *see coils*
electric condensers *see capacitors*
electric conductance *see electric admittance*
electric conductance measurement *see electric admittance measurement*
electric conduction processes *see electrical conductivity*
electric conductors *see conductors (electric)*
electric connectors
  see also cable jointing
  active optical connector for duplex plastic fibres, using integrated photodetector 3—37200
  miniature connectors for low-temperature cryostats 3—20859
  multichannel electronic equipment, logic components and adapters 3—11616
  Cu-Ni-Sn spinodal alloys for connectors, powder metallurgy 3—47803
electric control equipment
  see also controllers; electric actuators; electric sensing devices; switches; telecontrol equipment; telemetering equipment
  digital controlled time gate for Ondrejov laser radar 3—10219
  PWRs, 1300 MW, in France, improved control room design 3—31648
electric control gear *see electric control equipment*
electric current
  see also arcs (electric); corona; critical currents; current density; current distribution; current fluctuations; eddy currents; electrojets; fault currents; leakage currents; overcurrent; short-circuit currents; sparks
  EM wavescattering from randomly rough surfaces, stochastic Fourier transform of induced current 3—46139
  solar active regions, induction current rel. to flare dynamo mechanism *(Chinese)* 3—40089
  solar flares, role of explosive breakdown of current layers *(Russian)* 3—15902
  surface current distrib. on finite length tubular cylinder, double series expansion of Green's function 3—46138
electric current control
  50 MW_{th} diagonally-connected MHD generator loading schemes 3—39494
  electron microscope field emission gun, beam current stabilisation 3—10945
  ESR spectrometer (ER-9), EM current stabilization 3—49414
  proton synchrotron magnet power supply, high accuracy control 3—6478
  Tokamaks, optimal control for maintaining plasma equilibrium 3—56709
  UV light-arc current stabilisation 3—13008
  X-ray apparatus, high voltage generator *(Japanese)* 3—491
electric current measurement
  see also ammeters; galvanometers
  AC currents and voltages meas. using AC-DC thermal transfer instruments 3—36042
  AC magnetic properties meas. using phase-sensitive voltmeter and microprocessor 3—30905
  ampere realisation by integration method *(Japanese)* 3—49309
  Casino nuclear weapon effect simulator diagnostic data acquisition and calibration 3—17070
  critical current densities inductive meas., in thin-film superconductors 3—30894
  DC current measurer, accurate wideband, for stabilisation of power supplies to charged particle storage devices 3—10854
  DC line-to-plate gap with DC high voltage, electric field and ion current profile obs. 3—51406
  fibre optic electric current measuring system using a magnetooptic sensor 3—7195
  harmonic content meas. for elec. systems supplied by periodic nonsinusoidal signal *(Croatian)* 3—49395
  high di/dt particle beam accelerator current meas. by piezoelectric gauges 3—17153
  high-current superconductors, critical current meas. by induction method 3—49396
  high-current superconductors, short specimen investig. using instrument with superconducting transformer 3—49397
  ionic currents, elec. meas., error estimation 3—5818
  liquid films, electrical conduction in 10^{-4} to 10^{-1}s range 3—23369
  microammeter, using voltmeter with 741 op. amp. 3—30888
  MOS pulsed capacitors, anomalous behaviour and gated diode leakage current meas. 3—52270
  MOS structures emission currents obs., data processing automation 3—45163
  multielement noncontacting current meter, nonhomogeneous mag. interference field effects *(Russian)* 3—40641
  optical fibre transducers, appls. *(Swedish)* 3—30845
  picoammeter for ion chambers without range switching 3—50055
  polymer film dielectrics, conduction/displ. current meas. in plane-parallel capacitor, electro-acoustic transducer 3—10863
  proton current meas. using prompt gamma ray diagnostics 3—17154
  semiconductor structure, photosensitive, current-voltage characts. meas. method and apparatus 3—5812
  solar cells testing, using parameter meas. system 3—5811
  superconducting tunnel junction, current-voltage characts. meas. cct. 3—5813
  unit with temp. control for thermoluminesc. and thermally stimulated current meas. 3—341
electric discharge machining *see spark machining*
electric discharges *see discharges (electric)*
electric distortion
  GaAlAs heterojunction laser diodes, harmonic and intermodulation distortion 3—46214
electric distortion measurement
  harmonic content meas. for elec. systems supplied by periodic nonsinusoidal signal *(Croatian)* 3—49395
  voltmeter, low-frequency sampling, microprocessor based 3—25896
electric domain walls
  Barkhausen effect, conf., Kalinin, USSR (Dec. 1980) 3—20562
  ferroelectric ceramics, elec. and mech. losses rel. to domain wall movements 3—52747
  ferroelectric liq. cryst. smectic C^* transition, modulated to uniform phase 3—28102
  incommensurate phase of A_2BX_4-type crysts., shear stiffness 3—8116
  MBBA layers, symmetrically weakly anchored, flexoelec. domain wall struct. 3—13089
  TCNQ salts, complex one-dimens. transport props., domain wall propag. in antiferroelec. donor chains 3—47332
  TGS, ferroelec. domain boundary thickness, X-ray topography 3—3656
  TGS ferroelectric crystal, 180° domain wall motion 3—52748
  thin ferroelectric crystals, 180° domain wall motion 3—52748
  $BaTiO_3$, 180° domain walls, interaction with defects, electron and optical microscopy studies 3—38783
  $GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundary geometry 3—8784
  $GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundaries, translation vector 3—8785
  $LiNH_4SO_4$ and $LiND_4SO_4$, domain struct. revealed by liq. cryst. decoration 3—28802
  $Li_{0.02}Na_{0.98}NbO_3$, ferroelec.-ferroelastic coupling, transitions and optical props. *(French)* 3—47613
  $Sr_{0.5}Ba_{0.5}Nb_2O_6$, piezoelectric, elastic and SAW props. meas. 3—23153
  $Sr_{1-x}Nb_2O_6$, polarisation switching, polarisation, permittivity, and electrooptic coeff. meas. 3—28757
electric domains
  see also electric domain walls; ferroelectric materials
  betaine arsenate, ferroelasticity and ferroelec. props. 3—8778
  condensates, molecular, polarized, electric domains obs. at low temp. 3—43261
  electrically excitable mech. reson. in piezoelectric and ferroelectric materials 3—52735
  excitonic insulator in external fields 3—3069
  ferroelectric, polarisation switching, internal cold emission and luminesc., theory 3—19204
  ferroelectrics, RF EM radiation emission during domain-structure changes, theory 3—34045
  pentyl-cyano-biphenyl, nematic films, highly-reversed tilted, flexoelectric domain orientation in applied elec. field 3—46836
  phospholipid layers, electrical interactions 3—38765
  PLZT ceramic, hysteresis loops 3—28803
  polyvinylidene fluoride, β-phase, polarisation reversal associated with chain molecules rotation 3—52749
  quartz SAW device, elec. twinning 3—43502
  Rochelle salt crystal, X-ray topographic study 3—43501
  semiconductor, skewed field domains, Sasaki effect *(Russian)* 3—3216
  TGS, diffusive nonequilibrium trigger medium, mobile domains 3—13733
  TGS, ferroelec. surface domain struct., SEM obs. 3—14230
  TGS, polarisation reversal, domain dynamics 3—8760
  TGS single crystals, ferroelec. domain morphology rel. to growth parameters 3—57867
  $AgNbO_3$, phase transitions, dielec. props., domain struct., X-ray, DTA studies 3—57086

electric domains continued
- $Ba_2NaNb_5O_{15}$, ferroelectric phase transition studies *(Chinese)* 3—3650
- $BaTiO_3$ ferroelectric films, RF sputtered on Si, photoferroelec. domain switching, pyroelec. props. 3—33757
- $BaTiO_3$, semicond., initernal friction and elec. resist. meas. 3—8136
- $BaTi_xZr_{1-x}O_3$, ferroelectric phases, domain-orientation process study 3—19086
- $Cd_2Nb_2O_7$, ferroelec. transitions and domain struct., permittivity study 3—28797
- $Gd(MoO_4)_3$, luminescence and polarisation reversal 3—8886
- $Gd_2(MoO_4)_3$, ferroelec. domain struct. rearrangement 3—23892
- $Gd_2(MoO_4)_3$ single cryst., electroluminescence, correlation with ferroelec. switching 3—24019
- KD_2PO_4-KH_2AsO_4, X-ray irrad., ferroelec. switching times, ESR study 3—57863
- K_2SeO_4, incommensurate phase transition, optical SHG obs. 3—22162
- $LiNH_4SO_4$ and $LiND_4SO_4$, domain struct. revealed by liq. cryst. decoration 3—28802
- $LiNbO_3$ crystal defects, optical imaging using polarizing filters and laser source 3—42596
- $LiNbO_3$ crystals defects characterisation using X-ray diffraction topography 3—8061
- $LiTaO_3$, ferroelectric phase transition studies *(Chinese)* 3—3650
- $(NH_4)_3H(SO_4)_2{:}VO^{2+}$, phase transitions, EPR study 3—52745
- $(NH_4)_2SnBr_6$ crystal, struct. phase transitions, dilatometric studies 3—18437
- $NaH_3(SeO_3)_2$. ferroelec. domain struct. rearrangement and Barkhausen effect 3—23891
- $NaH_3(SeO_3)_2$ single cryst., domain struct. rearrangement, Barkhausen effect study 3—23890
- $NaNbO_3$ antiferroelec. cryst., real domain struct. 3—43500
- PLZT ceramics, transparent ferroelec., appl. field induced birefr. mechanism 3—28834
- $Pb_5Ge_3O_{11}$, domain struct., existence of incommensurate phase *(Russian)* 3—19087
- $Pb_5Ge_3O_{11}$, serpentine shaped ferroelec. domains due to internal stresses 3—3657
- $Pb(Zr,Ti)O_3$ ceramics, ageing *(French)* 3—52739
- $Pb(Zr,Ti)O_3$-type piezoelec. ceramics, physical props. 3—52733
- $Pb(Zr_{1-x}Ti_x)O_3{:}Nb$, 95/5 PZT ceramics, cryst. and domain struct., TEM study 3—23894
- SbSI ferroelec. semicond., single-domain state stability, Barkhausen and electron microscopy study 3—23893

electric double layers *see electrochemistry; liquid theory*

electric double refraction *see electro-optical effects*

electric drives
- *see also clutches*
- electrostatic separator for corona research 3—7843
- photographic processor thyristor drive operation *(Russian)* 3—443
- photography appl., exposure instability vs. film camera mechanism and electric drive parameters *(Russian)* 3—49488
- piezoelectric stepping drive for sectional telescope mirror adjustment 3—5783
- reversible DC electric motor, sample transportation mechanism for NMR spectrometer 3—16383

electric field effects
- *see also acoustoelectric effects; discharges (electric); electrical conductivity: electro-optical effects; electrochemistry; electrodynamics; electrokinetic effects; electroluminescence; electromechanical effects; electromigration; electron field emission; electrophoresis; field emission ion microscopy; field evaporation; field ion emission; field ionisation; high field effects; magnetoelectric effects; particle optics*
- 50 Hz electric field effects on lining organisms and human life *(Polish)* 3—15141
- airborne biological particles and elec. fields 3—24785
- behavioural response of swine to a 60 Hz elec. field 3—39684
- biological effects of exposure to 50 Hz elec. fields *(Italian)* 3—39685
- bone, electric field exposure rel. to bone growth and fracture repair in rats 3—58713
- charge particle drift in strong elec. field, distrib. function moments in a neutral gas 3—27632
- charged droplet evaporation in electric field 3—51173
- charged liquid drops, gas absorpt. during form in elec. field 3—13591
- cholesteric liquid crystals, deform. induced by DC elec. field, capacitance and optical meas. 3—18211
- classical atoms and mols., periodic elec. field-induced perturbations 3—26648
- DOBAMBC, helical SmC* liq. cryst., field-induced unwinding mechanism 3—37772
- electrofluidised beds, AC and DC applied elec. fields, bubble rise velocity 3—37580
- electrofluidised beds, stabilisation against bubbling and boundary value problems, elec. field effects 3—37581
- ferroelectric, first order transition theory, calc. of elastic and electrostatic energies of inclusion 3—38024
- fibres, electroflocculation, behaviour in var. elec. field *(Russian)* 3—4319
- fluid-solid dielectric interfaces, determ. of elec. field distrib. using schlieren technique 3—1745
- high-field atomic and molecular physics, conf., Aussois, France, June 1982 3—25684
- hyperthermia considerations for a conducting cylinder heated by an oscill. elec. field 3—9558
- ionic fuid, interfacial electric double layer, long-range correlations 3—43263
- ISFET pH sensor, electrolyte-insulator interface fringe field effect study 3—54721
- liquid menisci deform. under action of elec. field 3—8304
- 2-methylbutyl p-(p-n-alkoxy-benzylideneamino) cinnamates, ferroelec. smectic liq. cryst., reentrant disordered Sm C* under elec. field 3—42512
- microwave focused Gaussian beam reflected at 45° from conducting plane, field distrib., plasma ignition 3—46133
- mixed powders, segregation characts. of co-flow type electrostatic fluidised bed 3—37564
- molecular ionisation by electrons under electric field, rate constant determ. 3—51275
- nematic liquid cryst., reorientation induced by superposed 3—13093
- nematic liquid crystals reorientation by superposed optical and quasistatic elec. fields 3—7908
- Paramecium, cell motility on exposure to elec. fields 3—48316

electric field effects continued
- piezoelectric, first order transition theory, calc. of elastic and electrostatic energies of inclusion 3—38024
- Pisum sativum L. root meristem cells exposed to electric field or γ rays, micronuclei form. 3—4551
- plasma parametric heating by nonmonochromatic elec. field *(Russian)* 3—2251
- PM-1 film, exposure pulse duration effect on sensitivity in elect. field *(Russian)* 3—20943
- polyethylene, thermolum., long-term strength, strong elec. field influence 3—3838
- powders, dispersal in intense elec. fields 3—39419
- relativistic charged particle motion in highly nonuniform crossed elect. and mag. fields 3—50593
- relativistic ion optics, in crossed toroidal elec. and inhomogeneous mag. fields 3—56131
- reproductive hazards among workers at high voltage substations 3—58714
- rigid rotator in elec. field, perturbation calcs. 3—32122
- Rydberg atoms collisions, recent advances 3—26661
- STEM contamination and electron beam etching, elec. field effects 3—10961
- submicron aerosols rapid coagulation into filamentary three dimens. structs., electron microscopy study 3—32791
- two-dimensional disordered system, density of states elec. and mag. field effects 3—33616
- UV microchannel plate detectors quantum efficiency maximisation, photoelectrons collection from interchannel web 3—40690
- CO, mol. fluid interphases, electric field effects, perturbation-variational theory 3—23137
- Ca, autoionisation reson., elec. field effect 3—32011
- CdI_2, polytypic growth from soln., elec. field effect on crystn. 3—37822
- DF, $m=0\rightarrow m=1$ transition, Pade approximants calcs. 3—32122
- Gd, autoionisation reson., elec. field effect 3—32011
- HF, $m=0\rightarrow m=1$ transition, Pade approximants calcs. 3—32122
- ^3He, superfluid A, phase, mag. charge analog of Ampere and Faraday effects 3—13579
- N_2O, electron capture rate, elec. field depend. 3—41678
- Na atoms in crossed elec. and mag. fields 3—31976
- Sr, autoionisation reson., elec. field effect 3—32011
- Yb I, photoionisation spectroscopy from $6s7s'S_0$ state in presence of static mag. field 3—32023

electric field gradient (condensed matter) *see crystal hyperfine field interactions; hyperfine field interactions (condensed matter)*

electric field measurement
- *see also field plotting*
- DC line-to-plate gap with DC high voltage, electric field and ion current profile obs. 3—51406
- electro-optical system, sensitivity improvement 3—35968
- linear Z-pinch discharge axial electric field obs. 3—51352
- optical fibre, piezoelec. polymer-jacketed single-mode, for elec. field detect. 3—27241
- optical fibre copolymer film electric field sensor 3—56324
- phantom model of man, induced elec. fields meas. system and obs. 3—24931
- RF electric field probe, diode detector response linearisation, biological appl. 3—35976

electric field strength measurement *see electric field measurement*

electric fields
- *see also electric field effects; electric field measurement; electromagnetic fields; electromagnetic waves; field plotting*
- axial electric field vector analysis and eddy-current technique *(Bulgarian)* 3—56119
- basic properties of fields waves and microwave heating *(French)* 3—36901
- bidimensional systems potential gradient calc. by charge simulation *(Italian)* 3—50570
- bioelectric and biomagnetic fields, nature of sources 3—4490
- biological structures, elec. field inside, calc. method 3—4492
- cross-plane electrical model for MHD channels, formulation and assessment 3—24617
- defective semiconductors, hopping conduction and directed percolation in powerful elec. field *(German)* 3—23394
- dielectrophoretic force in electrostatic fields 3—6828
- Dirichlet problem soln. in three dimens., electron gun calc. *(German)* 3—1520
- electrophotographic images, electrostatic field of arctangent voltage transitions 3—50573
- electrophotography, Canon Toner Projection Development mechanism 3—439
- fabric dust collectors, surface electrostatic fields, reduction of flow resistance and penetration 3—39559
- field electron source, electric field and trajectories, space charge effect, numerical analysis 3—45250
- fluctuating electric fields in magnetised positive column plasma, correlation time meas. 3—51408
- free space, EM field computation inside source region 3—41722
- gas lasers, elec. field distrib. in cavities *(Chinese)* 3—22038
- Hertz vectors in nonhomogeneous and nonstationary media 3—12040
- horizontal circular loop antenna near planar interface, elec. field and input admittance distrib. 3—10029
- HV striplines with rounded edges 3—56117
- inhomogeneous media, nonlinear cond. nonuniform electric field, current and Joule heating 3—43144
- interstellar field screened from heliosphere by solar wind plasma 3—5077
- Io plasma torus, drift shell interpretation of dawn-dusk asymmetry of UV emission 3—54274
- ionosphere, electric polarisation field generation in E-region and effect on F-region 3—15710
- ionosphere, F_2-layer, nighttime mid-latitude substorm, electric field and plasma flow effects 3—5012
- lateral waves, interference patterns and electric field radial component 3—6843
- lateral waves, new formulas for $E_{1\phi}$ and E_{1z} 3—6844
- lightning, fields preceding cloud-to-ground flashes 3—15551
- microwave focused Gaussian beam reflected at 45° from conducting plane, field distrib., plasma ignition 3—46133
- moving animal, elec. field visualisation by numerical calc. 3—29806
- nonlinear conducting media, inhomogeneous anisotropic, electrodynamic and electrophysical phenomena *(Ukrainian)* 3—21957
- numerical modelling of electric fields, optimal discretisation *(Polish)* 3—17424

- **electric fields** continued
  - piecewise homogeneous dielectrics, simulation of electric field *(Russian)* 3—21961
  - plasma wave, longitudinal, propag. in inhomogeneous medium 3—42409
  - quadrupole electric field production by linear charges *(Polish)* 3—17402
  - rel. stars, Biermann mechanism rel. to spontaneous mag. field generation 3—10315
  - rock, induced low freq. polarisation thermodynamic models 3—35153
  - satellite in dense plasma, surface charging using system-oriented computer code 3—39996
  - static balance, two-charged particles in general relativity 3—30723
  - steady currents, elec. fields and charge distribs. 3—50583
  - stratosphere, mid-latitude horizontal field during magnetic disturbances 3—10028
  - Sun, coronal magnetic loops elec. fields, nature from Balmer lines Stark effect anal. 3—59310
  - surface spot of charge, electric field study by optical method 3—52770
  - Venus atmosphere, electric field near surface, one dimens. model 3—44690
- **electric filters** *see filters*
- **electric furnaces**
  - *see also arc furnaces*
  - IR image furnace, rapid heating thermal balance appl. 3—30851
  - randiant heater for zone melting of intermediate melting-point materials 3—52926
  - thermocouple calibration furnaces, design and construction 3—16354
- **electric glow** *see corona*
- **electric heaters** *see electric heating*
- **electric heating**
  - *see also drying; electric furnaces; heating elements; induction heating; ovens; radiofrequency heating; space heating*
  - bivalent heat pump heating systems with surface heat exchangers, operational results *(German)* 3—34714
  - electrokinetic thickening process details and industrial application 3—29314
  - heat pumps for water heating appls. *(German)* 3—34709
  - JET gas leaking and cooling plant 3—55616
  - JT-60 vacuum vessel, cooling and heating system model tests 3—55618
  - laboratory heat-treatment device for thermoluminescent dosimeter detectors 3—45707
  - metal flat specimens with circular notches, heated cyclically by elec. current, thermal state 3—13494
  - metal rod elec. heating, study of periodic temp. field possible existence 3—37320
  - resistance heater as a thermocouple 3—45137
  - TEXTOR, high current vacuum bushing for liner-heating 3—55607
  - TEXTOR vacuum vessel heating and cooling system using organic heat transfer fluid 3—55609
  - water heating, domestic, experience with heat pumps *(German)* 3—34712
  - water heating by heat pump, operating experiences *(German)* 3—34710
  - wind driven permanent magnet alternator steady state optimum resistive load control 3—19558
- **electric heating elements** *see heating elements*
- **electric ignition**
  - electron accelerator, high-current, nanosec., with stable energy, miniaturised ignition system using nonlinear inductors 3—1094
  - electrostatic discharges, spark energy meas. using optical technique 3—27786
  - plasma jet igniter, plasma expulsion meas. 3—18140
- **electric immittance measurement**
  - *see also electric admittance measurement; electric impedance measurement*
  - transducer immittance meas. systems 3—20871
- **electric impedance**
  - *see also electric reactance*
  - bond contact-impedance model 3—43268
  - borosilicate glass, Li electrolysed, impedance meas. 3—23415
  - flat disc in magnetically active plasma layer, low freq. impedance, radiosonde appl. 3—15630
  - Josephson junctions, small-capacitance, impedance calc., tunnel theory of Josephson effect 3—13971
  - metal, HF cond. of nonideal surface in mag. field *(Russian)* 3—18763
  - plasma surface impedance for coupling to ion-cyclotron and ion-Bernstein waves 3—42398
  - polyimide, microstrip input-output cable for Josephson appl., electrical props. obs. 3—16344
  - semiconductor-electrolyte interface, surface state energy determ. by Laplace domain impedance anal. 3—3312
  - skeletal muscle, frog, single fibres, transverse impedance obs. 3—9573
  - solid electrolyte electrodes, impedance spectra, Fourier anal. 3—57132
  - solid electrolytes, complex impedance and admittance data, nonlinear least squares anal. 3—13537
  - superconducting surface resistance, inelastic electron-phonon scatt. influence, computer prog. 3—28477
  - voltmeter, very high input impedance meas. cct. using CMOS op. amp. 3—36034
  - Al barrier type oxide films, AC impedance meas. 3—52247
  - β-Al_2O_3 single cryst. and Au blocking electrodes, AC impedance of surface layers, double layer system 3—23457
  - $BaTiO_3$, electric transport, interface and bulk prop. effects 3—43172
  - C, glassy electrodes in H_2O-KCl solns., interface impedance, mechanical surface treatment effect 3—47410
  - n-CdSe, electro-acoustic effects 3—52204
  - LaF_3, pure and alkaline earth doped, elec. props. 3—23078
  - Li/$SOCl_2$ cells, Li electrode kinetics 3—44103
  - Se, trigonal single crystal, temp. depend. of AC elec. cond. 3—33729
  - p-Si, anodic oxidation in methanol compared to glycol, impedance meas. on MOS struct. 3—43970
  - $SrTiO_3$, electric transport, interface and bulk prop. effects 3—43172
  - γ-$(Ti(PO_4)_2)X_2$, X=H,Li,Na,K, ionic cond., impedance meas. 3—18507
  - VO_2, current filament, differential impedance, thermal switching mechanism 3—33767
  - Yb_2O_3, electronic and ionic mixed cond. and point defects, 1423 to 1623K 3—23445
  - ZrO_2, Y stabilised, impedance spectrum of single grain boundary 3—18508
- **electric impedance measurement**
  - *see also electric reactance measurement; electric resistance measurement*
  - cardiac impedance meter, used for modulus/phase meas. *(Spanish)* 3—39738
  - computer automated measurement of electrical tissue impedance spectra 3—39758
  - differential method for measuring impedance properties of bone 3—29792
  - eddy current impedance plane anal. 3—58349
  - impedance based state-of-charge test 3—58491
  - metal/oxide/electrolyte systems oxide film AC impedance determ. 3—8606
  - primary cells, CC Zn electrode types, electrochemistry 3—58493
  - ventilatory noninvasive volume monitor using elec.impedance method, cardiac oscill. impedance elimination *(Japanese)* 3—58854
  - Li/SO_2 cells, Faradic impedance, kinetic interpretation 3—9412
- **electric load** *see load (electric)*
- **electric machine analysis computing**
  - MHD channels, cross-plane electrical model, formulation and assessment 3—24617
- **electric machine testing** *see machine testing*
- **electric machine theory** *see machine theory*
- **electric moments**
  - *see also atomic electric moment; molecular moments; nuclear electric moment*
  - anthracene, localised charge, polarisation energy, polarisability changes effects 3—47591
  - Compton scattering, multipole moment calcs., low energy theorems to high order 3—31218
  - crystal field effects, HF calcs. on periodic systems, low order elec. moments cancellation 3—38356
  - diatomic mols., heteronuclear, dipole moments, ionisation pot. and electron density asymptotic form 3—12002
  - electron dipole elec. moment as test of CP violation 3—21040
  - experiments with cold and ultracold neutrons at the ILL, Grenoble 3—1113
  - grand unified theories review, cosmic baryons, superheavy fermions, neutron dipole moment 3—11102
  - Higgs sector, single quark in Kobayashi-Maskawa model of CP violation 3—36178
  - Majorana neutrino EM props. 3—640
  - molecular electric dipole moment derivatives, relative signs, Coriolis perturbations analysis 3—50366
  - monopole field config. quantisation, semiclassical methods 3—16549
  - neutron, electric dipole moment, rel. to T invariance *(Dutch)* 3—54911
  - neutron particle properties 3—49684
  - phospholipid layers, electrical interactions 3—38765
  - α-quartz, H and muonium quadrupole constant sign change 3—8749
  - n, electric dipole moment, expt. limit 3—642
  - n electric dipole moment in supersymmetric $SU(3)_C \times SU(2) \times U(1)$ theories 3—6099
  - AlH^+, low lying states, ab initio calcs. 3—1237
  - BH^+, low lying states, ab initio calcs. 3—1237
  - H halides, dipole moments, ionisation pot. and electron density asymptotic form 3—12002
  - He, electric dipole polarisability, MC-TDHF calcs. 3—50291
- **electric networks** *see networks (circuits)*
- **electric noise measurement**
  - meter, HP 8970A, microprocessor control, operation and appls. *(German)* 3—45166
  - nuclear reactor noise thermometer, external and internal interference effects 3—45622
  - radio noise, medium-frequency, wideband meas. made in Nevada, USA 3—44541
  - semiconductor, UHF noise measurement 3—33768
- **electric potential**
  - *see also contact potential; surface potential; voltage control; voltage measurement*
  - arcs, plasma-induced, EMF and dissipation 3—37712
  - distributed EMF generation in thermocouples and consequences for temp. meas. 3—40599
  - human thorax potential distribution determ. method *(French)* 3—44343
  - steady state electrical problems, analytical solns. in rectangular domain 3—41717
  - two-dimensional fields, EFIR software for calc. of potentials and excitation *(Russian)* 3—17401
  - (Co,Mn)O, activities of CoO and cluster form., EMF meas. at 900-1450K 3—24230
  - $CsSO_4F$, low. temp. heat capacity, thermodynamic functions 3—33464
  - Cu-S system, thermodynamic stability of Cu_2S, EMF meas. at 1000-1450K 3—24214
  - CuCl-KCl-LiCl, molten, excess free energy and activity coeffs., EMF meas. 3—42814
  - Na, dilute soln. in liq., Zn, thermodynamic props., EMF meas. 3—8224
  - Na-S-Se melts, investig. by EMF meas. 3—8170
  - Na-Te-Se melts, thermodynamic properties, determ. using EMF meas. 3—8225
  - Na_2CdCl_4, $\Delta_f G°$ meas. in galvanic cell, 548 to 668K 3—34644
- **electric power generation**
  - *see also direct energy conversion; ocean thermal energy conversion; power stations; wave power generation*
  - coal-fired MHD power generation, work in China on thermodynamic and electrophysical properties 3—29412
  - Eurodif uranium enrichment plant energy supply and distribution *(French)* 3—49966
  - geothermal source, low temp. organic Rankine cycle turbine utilisation 3—24552
  - improving power generation—the MHD way 3—9457
  - Indian energy forecasts anal., reliability evaluation 3—53474
  - jet stream electricity generation, wind turbines and rotary wing concept compared 3—54099
  - regenerative glass furnace waste heat conversion to electricity, feasibility assessment 3—29378
  - sewage gas utilisation by electric power generation using gas engines *(German)* 3—58469
  - space solar rotary-generator power plant optimisation 3—34671
  - Tehran municipal solid waste incineration for energy recovery, air pollution effects 3—34664

electric reactance
see also capacitance; inductance
No entries

electric reactance measurement
see also capacitance measurement; inductance measurement
No entries

electric resistance measurement
see also ohmmeters
AC bridge for comparing four-terminal-pair impedances, SI units derivation 3−5810
composite coatings, instrument for nondestructive control *(Russian)* 3−19475
cracking onset determ., by monitoring electrical contact resistance 3−53333
H_2O electrolysis for H_2 production, gas bubble behaviour and electrolyte resistance 3−15009
in-circuit resistance measurement technique, three-terminal measurement 3−30891
ion implantation damage not removable by annealing, identification method 3−33276
liquid phase electroepitaxial growth, layer thickness monitoring by resistance meas. 3−3972
megohmmeter, industrial, transistorised design stabilized direct meas. voltage *(Rumanian)* 3−36039
metal-semiconductor interfacial contact resistance, direct meas. method 3−8580
metallic thin coatings, surface impedance, instrument for measurement *(Russian)* 3−16373
metallic thin film, resistance meas. by radiotelemetry system during sputtering 3−34230
milliohmmeter adaptor, for use with multimeter 3−35974
ohmmeter, low range, using 7611 op amp, 334Z constant current generator ICs 3−45155
programmable DC current- and voltage-sources for transistor characts. and resistance meas. *(German)* 3−25891
solar cell series resistance determ. from illuminated I-V meas. 3−29384
spreading resistance calculations, accurate integration algorithm 3−49411
spreading resistance probe-spacing expt. simulation, probe current density and layer thickness effects 3−30893
voltage comparison method, influence of voltmeter internal resist. on accuracy *(German)* 3−30896
In_2O_3:SnO_2 conducting optical coating resist. monitoring apparatus for use during vac. deposition 3−35967

electric resistors *see resistors*

electric sensing devices
see also instruments; measurement
analogue and digital angle and displacement meas. *(German)* 3−40549
biochemical O_2 demand using novel electrode configuration 3−9524
calibration, direct digital technique *(Chinese)* 3−40579
capacitive level meter for continuous meas. of liquid nitrogen level 3−45128
ceramics for optical and electronic appls. 3−47809
charge sensitive preamplifiers *(Spanish)* 3−53462
crystal growth monitoring system, using weight detector 3−19264
differential transformer sensor, pulse-time displacement transducer appl. 3−40588
displacement and rotation angle contactless contour tracking using sensing of dielec. props. *(German)* 3−30842
distance meter, using inductive sensor, diodes, op amps 3−284
electrochemical, measurement techniques *(French)* 3−16352
electrochemical gas sensors, thin solid state devices, exptl. behaviour 3−10822
electrolyte-SiO_2-Si structures, interface state props., pH response 3−13900
electrostatic voltage sensor using SAW oscillator 3−25866
electrostatic voltage sensor using surface acoustic waves 3−49406
ferroelectric transducers and sensors, book 3−25701
fiber optic sensor instrumentation research and development, electromagnetic field meas. appl. 3−42026
flowmeter, electrocaloric type with PTC thermistors, design and heat meas. appl. 3−54737
flying temperature sensor using Pt resistive detector, rotating drum surface temp. 3−10826
FM coil sensor for magnetic suspensions, position control appl. 3−20841
frequency detector, AM, for mag. meas. of ferromag. semicond. and dielec. 3−10867
frequency detector for pressure meas. to 600 Pa, using quartz resonators 3−16345
gas chromatography, flow controller and sensor for HP 5880A unit 3−39425
gas discharge probes as elements of gas analysis meas. devices *(German)* 3−53471
gas sensor, solid state, calibration 3−16347
gas sensor for air pollution detection, homogeneous semiconductor device design 3−10820
high-bandwidth induction sensor coil for EM prospecting 3−342
industrial transducers and sensor components *(French)* 3−45133
ion selective K^+ and Cl^- FET microelectrodes, prep. and elec. characts. 3−54726
ISFET pH sensor, electrolyte-insulator interface fringe field effect study 3−54721
Langmuir-Blodgett film MIS structures on narrow band-gap semiconductors 3−38487
low-temperature measurement device based on relax. oscillator, unijunction transistor temp.-sensitive element 3−5796
magnetic field sensor, bistable, using twisted amorphous magnetostrictive ribbons, Matteucci effect 3−25905
magnetic field using dual-collector bipolar transistor 3−45173
magnetic-field vector sensor based on two-collector transistor structure 3−279
microdielectrometry device for low-frequency dielectric props. of resins 3−340
microelectronic sensors for humidity and electrical parameters *(German)* 3−10825
microprobe ISFET sensors for extracellular ion-activity meas., Na and K sensitivity 3−10943
MOSFET, Pd-gate, H_2 detection *(French)* 3−45134
multiterminal capacitor sensors, design and performance, bridge instrum. and meas. appl. 3−54725

electric sensing devices continued
NTC thermistor temp. sensors, review of appls. and future demand 3−35984
on-line digital phase sensitive detector in the range 2 mHz-2 kHz 3−49412
optical fibre interferometric sensors, pseudoheterodyne detection scheme 3−25936
passive contactless system of information pickup for a magnetographic flaw detector 3−48016
pressure sensor for EM field, using vibrating string transducer 3−16346
quartz crystal, hydrocarbon gas sorption detectors 3−25864
quartz sensor for precision, pressure meas., rugged design 3−20845
RF electric field probe, diode detector response linearisation, biological appl. 3−35976
SAW voltage probe, temp. compensated 3−49407
semiconductor gas sensors, surface-gas interactions, requirements and sensitivity 3−10819
semiconductor pressure transmitter using the diffused piezoresistive diaphragm sensor 3−297
semiconductor-sensors, microelectronic appls. 3−16351
sensors, principles and classification *(German)* 3−10831
solid electrolytes appl., using β''-Na_2O-Al_2O_3 3−13521
solid-state differential potentiometric sensors with LaF_3 membrane, construction and testing 3−54723
solid-state sensors for gas analysis *(German)* 3−16350
SOS-ISFETs with inorganic gate oxides for pH sensing 3−34662
SQUID, dilatometry at low temp. for thermal expansion coeff. meas. 3−16368
SQUID sensor, multihole, high-temp. 3−25870
superconductivity detection, oscillator method using EM penetration depth 3−43309
surface charge distribution meas. using probe systems, metrological parameters 3−49405
thermistor probe appl. to thermal conductivity meas. 3−10839
thin film transducers, pressure, temp. and oil film thickness meas. in bearings 3−54724
vibrating electrode head for measuring surface charge density of dielectric materials 3−49401
yawmeter for steady and low-frequency unsteady flows, using semiconductor strain sensors 3−42335
CO sensitive MOSFET, Pd gate, design and IC sensor appl. 3−54727
γ-Fe_2O_3 semiconducting ceramic gas sensor, life testing, appls. 3−30847
GaAs photoconductive detectors, laser stimulated MOCVD fabrication 3−45201
H_2 sensor, SAW delay line, Pd coated 3−49351
InSb, film magnetic sensor, crystalline struct. and sensing characts. obs. 3−43302
IrO_2 sputtered films, pH sensitivity 3−10823
$MgCr_2O_4$-TiO_2 humidity sensor, recent trends and applications of ceramic sensors 3−35983
Na vapour pressure sensor, appl. of Na/β-Al_2O_3-Na_2O/Na cell, characts. 3−10832
Pd-SiO_2-Si hydrogen sensor, barrier formation and transport, sensitivity 3−10821
SO_2 sensor using solid-sulfate electrolytes 3−15029
n-Si, n^+-n-n^+ asymmetrical struct., effect of strong microwave elec. fields 3−33787
SnO_2 based thick film gas sensor, sensing characts. 3−25867
TaN thin film resistive thermoconductive humidity sensor 3−49386
ZnO combustible and freon gas sensors, recent trends and applications of ceramic sensors 3−35983
ZnO-Cr_2O_3 humidity sensor, recent trends and applications of ceramic sensors 3−35983

electric sheet *see iron alloys; silicon alloys*

electric shielding, nuclear *see nuclear screening*

electric shocks
see also electrical faults; protection; safety
biological effects of electrostatic induction phenomena at 50 Hz from electrical equipment *(Italian)* 3−44232

electric spark machining *see spark machining*

electric sparks *see sparks*

electric steel *see iron alloys; silicon alloys*

electric strain gauges *see strain gauges*

electric strength
see also electric breakdown
air, pulseless corona, space charge field and pot. distrib. for coaxial cylinders 3−33000
dielectric strength of liquid dielectrics *(German)* 3−43485
electrolyte solns., dielectric saturation and friction, EHD eqns. 3−34027
ethylene glycol-water mixture, pulsed high-voltage dielec. props. meas. 3−34026
FRP, fibre reinforced polymer, dielectric breakdown strength under mechanical stresses, temp. and voltage effects 3−28772
gas pressurised spark gaps, electric strength recovery after breakdown 3−7849
gases, electric strength at high temp. 3−42354
HV heavy current leads for liq. He cryostat 3−5793
impulse thermal breakdown eqn., boundary conditions 3−19057
inert gases, electric strength, breakdown voltages at high temp. 3−33015
insulating gases, dielectric strength, boiling point and toxicity 3−2173
liquid dielectrics electric withstand strength to microsecond voltage pulses *(Russian)* 3−38759
natural gas liq., dielec. props., appl. to electrical insulation 3−19036
PET, dielectric breakdown strength under mechanical stresses, temp. and voltage effects 3−28772
polyethylene prestressed films, impulse breakdown in ns range 3−28775
polypropylene, dielec. strength under high pressure and shear strains., low-mol. additive influence *(Russian)* 3−8765
recovery electric strength voltage, homogeneous plasma in discharge gap, gap breakdown voltages *(Russian)* 3−7814
Al_2O_3 plasma-deposited, high temp. elec. insulating characts. 3−14479
SF_6, partially ionized gas, electrical conductivity depend. on electric field strength 3−27641
SF_6-air-mixtures breakdown voltage measurement, AC and impulse voltage stress *(German)* 3−42353
Si:P, polycrystalline, interlayer oxides optimized by conventional processing and laser annealing 3−57434

electric susceptance *see electric admittance*

electric susceptibility *see optical susceptibility*

electric switchgear *see switchgear*
electric transformers *see transformers*
electric utilities *see electricity supply industry*
electric variables measurement
see also attenuation measurement; capacitance measurement; charge measurement; dielectric measurement; electric admittance measurement; electric current measurement; electric distortion measurement; electric field measurement; electric impedance measurement; electric noise measurement; electric reactance measurement; electric resistance measurement; electrical conductivity measurement; frequency measurement; gain measurement; inductance measurement; phase measurement; power factor measurement; power measurement; Q-factor measurement; voltage measurement
batteries and electrodes, electrical performance assessment, automatic system 3—24567
charge carrier distribution in forward biased psn diodes, by meas. recombination radiation *(German)* 3—348
coal combustion MHD power generation experiments with shock tube, plasma electrical conductivity and Hall coefficient meas. 3—29420
EM field parameters, frequency pressure sensor using vibrating string transducer 3—16346
Hall effect in high-resistance materials, using two electrometers 3—45164
III-V semiconductor, light sources, carrier lifetime meas., recomb. rate and doping level determ. 3—8505
oscilloscopes, theory and applications, book 3—35784
power transmission line HV insulations measurement and testing *(French, German)* 3—27754
sampling system for elec. transients with two picosecond resolution 3—25898
semiconductor amorphous thin films transport props. meas. at low temp., cryostat design 3—25881
solar photovoltaic cell performance measuring standard test method development 3—24610
InAs, contactless method of measuring free-carrier concentration in narrow-band semiconductors 3—23922
InSb, contactless method of measuring free-carrier concentration in narrow-band semiconductors 3—23922
electric vehicles
see also electric drives
advanced batteries and fuel cells, conf., Kelkheim, Germany, 1982, April 3—44118
assessing batteries for electric vehicles—a Danish laboratory test 3—44108
electronic hydrometer for stationary lead-acid battery electrolyte 3—34690
nickel oxide/iron battery performance in electric vehicle applications 3—44109
Pb/acid traction batteries under simulated electric vehicle service, positive plates crystalline phase composition 3—24570
electric welding
see also arc welding; electron beam welding; resistance welding
electrode spot-welding device for electrophysiological appls. 3—19866
electrical conduction in condensed matter
see also carrier density; carrier lifetime; carrier mean free path; carrier mobility; carrier relaxation time; dislocation scattering; electrical conductivity of liquids; electrical conductivity of solids; electrical conductivity transitions; electron density (metals); electron mean free path (metals); electron mobility (metals); electron-phonon interactions; electron relaxation time (metals); high field effects; hopping conduction; impurity scattering; Lorenz number; minimum metallic conductivity; minority carriers; mixed conductivity; negative resistance effects; one-dimensional conductivity; photoconductivity; point defect scattering; size effect; skin effect; small polaron conduction; space-charge-limited conduction; spin disorder resistivity; surface conductivity; surface scattering; thermally stimulated currents; tunnelling
Anderson localisation, effective medium approx. 3—43147
Cayley tree of one-dimens. random scatterers, quantum cond. 3—52104
crystal transport props., local-field correction effects 3—33693
DC transport coeff. calc. by derivatives of time correlation functions 3—28318
dextran gel sephadex G-25 dispersed in aq. phase, dielec. props. 3—47597
directed conductivity from directed percolation, analogue expt., computer simulation 3—8466
disordered media, one-dimensional wave eqns. 3—33682
disordered systems, Kubo-Greenwood cond. 3—3141
disordered systems, weakly interacting and weak disorder limits 3—43126
electrical systems, thermodynamical anal. of stability 3—38361
high-resistivity conductors, phonon-controlled cond. theory 3—47322
inhomogeneous media, nonlinear cond. nonuniform electric field, current and Joule heating 3—43144
many-particle systems, transport eqn., linear response theory 3—49296
materials, fast neutron irrad., radiation study *(Japanese)* 3—2614
microemulsions, Winsor IV phases, elec. props., rel. to phase diagram 3—23448
mixtures, two-dimensional conductivity problem 3—43143
one-dimensional disordered systems, localisation in presence of elec. field 3—52079
site-disordered resistor networks, effective cond. theory 3—13790
slanted boundary surface, conductivity change analysis using matrix method *(German)* 3—43135
thin wire, phase averaging study 3—13793
two-dimensional disordered systems, DC cond., numerical study 3—43145
two-dimensional systems, Anderson localisation and cond. 3—43125
two-dimensional two-phase materials, elec. cond. props. 3—43139
two-dimensional weakly localised regime, higher order interaction effects 3—43137
two-phase material with chequer-board geometry, current distribs. 3—43140
electrical conductivity
see also electrical conduction in condensed matter; electrical conductivity of gases; electron mobility; ion mobility; space-charge-limited conduction
space-charge formation in weakly conducting media 3—21963
electrical conductivity measurement
absolute eddy current technique 3—36044
alkaline battery electrolytes, manual testing device *(Hungarian)* 3—29380
bimetallic components electrodynamic inspection using proximity effect 3—58369
biomembrane, artificial, conductance meas. instrument 3—58605
carrier drift mobility measurement in organic semiconductors *(Polish)* 3—10859
cell design for organic semiconductor and organic metal crystals 3—40639
electrical conductivity measurement continued
current-carrier density distributions meas. in semiconductors, contactless instrument 3—36037
3,5-diamino-1,2,4 dithiazolium halides, complexes with Cu(I), Ag(I) and HgII halides, coordination 3—6649
eddy current conductivity meas. of metal annular specimens, using Heydweiller bridge 3—54749
Hall resistivity in two-dimensional electron gas, fine structure constant determ. *(Polish)* 3—10793
high-resistance materials, using two electrometers 3—45164
impurity (defect) concentration levels monitoring, AC Kelvin double bridge technique 3—49402
liquid-metal-wetted four-point probe for resist. profile meas. of n-type oxide semicond. 3—23480
MHD generator plasma diagnostics using bulk conductivity and Hall parameter meas. 3—24616
minority carriers lifetime meas., in base region of three-layer structures 3—45162
mixed ionic-electronic solid conductors, van de Pauw method for cond. meas. 3—40644
p-n junction depth determ., by nondestructive time resolved EBIC technique 3—52238
p-n-p structure, base region, hole lifetime meas., combined optical/electronic method 3—49404
radiowave ellipsometry of thin metal film on dielectric substrate 3—20877
semiconducting wafers photoconductivity measurement using microwave contactless technique 3—57390
semiconductor, conductance meas. using 10 MHz total cond. bridge 3—10855
semiconductor amorphous thin films transport props. meas. at low temp., cryostat design 3—25881
semiconductor circular slice resistivity calc. using four-point probe method *(Chinese)* 3—8478
semiconductor circular wafer, electrical conductivity, contactless meas. method, theoretical considerations 3—5819
semiconductor kinetics parameters meas., contact instrument design 3—45161
semiconductor materials and MIS struct., electrophysical parameters, test methods and equipment *(Polish)* 3—345
semiconductor transient processes nanosecond pulsed meas. with digital accumulation of signals 3—45160
semiconductors specific resistivity meas., microwave cavity method, spatial resolution 3—20876
soil, single probe method to meas. elec. props. up to 1 GHz 3—25234
spacecraft thermal control dielecs. 3—13811
temperature compensation, electrical conductivity in conductometric apparatus *(Polish)* 3—36041
thermostat cell for elec. resist. meas. in vac., 4.2 to 600K 3—5785
Thompson-Lampard theorem, extension and appl., comment 3—16375
time of flight electron-pulse technique for electron mobility meas. in polymer solids *(German)* 3—45156
water and aqueous solutions *(German)* 3—38110
Ag(I) 2-aminobenzothihazole complexes, conductometric and IR investig. 3—17284
C films, hydrogenated, produced by sputtering in Ar-H_2 mixtures 3—8975
Cu (I) 2-aminobenzothihazole complexes, conductometric and IR investig. 3—17284
GaAs LEC semi-insulating wafers for IC appls., resist. and Hall mobility meas. technique 3—20878
GaAs-(AlGa)As multilayer structures, automated conductivity profiles 3—346
Ge, conductivity and Hall coeff. meas., microcomputer-controlled expt. 3—40331
Si MOS devices, interface states, dynamic conductance and noise meas., bias-temp. stresses 3—8591
Si:P(B)(As), doping profiles determ. by electrical meas. and anodic stripping, automatic apparatus 3—49403

electrical conductivity of amorphous metals and alloys
see also dislocation scattering; electron density (metals); electron mean free path (metals); electron mobility (metals); electron relaxation time (metals); electronic conduction in metallic thin films; impurity scattering; point defect scattering; surface scattering
alloys, nonmagnetic d-electron amorphous, elect. resistivity, press. and temp. depend. 3—23353
ferromagnets, transport props., book contrib. 3—57330
metallic glasses, ionic dynamics, elec. transport, electronic struct. and appls., review 3—18678
structure-induced effects on electronic props., multiple scatt. theory 3—3040
transition metal alloys, amorphous feromag., resist minimum 3—23352
$(Ag_{0.5}Cu_{0.5})_{1-x}Mg_x(Al_x)(Ge_x)$ amorphous films, electron transport props., extended Ziman theory 3—3150
$(CO_{100-x}Mn_x)_{76}B_{24}$ amorphous alloy, mag., thermal and elec. props. 3—28524
$Ce_{89}Al_{11}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
$Ce_{80}Au_{20}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
$Ce_{72}Cu_{28}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
Co-Mn-B amorphous alloys, elec. resist., p-d hybrids 3—28323
$Co_{75}B_{25}$ amorphous alloy, melt temp. effect on thermal stability *(Korean)* 3—4063
Cu-Ti, amorphous, elec. resist. and crystn. 3—3147
Cu-Ti, amorphous, solubility and diffusion of H_2 3—47114
Cu_xSn_{1-x}, amorphous, crystn. temp., elec. resist., comp. depend. 3—18679
$Cu_{50}Ti_{50}$, amorphous, short-range ordering, elect. resist. meas. 3—33134
$Cu_{1-x}Zr_x$ amorphous alloy, resistivity and thermopower 3—43151
$Cu_{1-x}Zr_x$, metallic glasses, elec. cond. meas. 3—47326
$Cu_{57}Zr_{43}$, amorphous, elec. resist., press. depend., 1.5 to 300K 3—33698
Fe-B(-Mo)(Ni-P)(-Cr) 3—28326
Fe-Ni-Cr-Si-B metallic glass, resistivity and galvanomag. coeffs. 3—28325
Fe-Ni-Mo-B metallic glass, struct. relax., elec. resist. study 3—33101
Fe-P, amorphous, elec. resist. and magnetoresist., conc. depend. 3—28329
$Fe_{0.815}$ $B_{0.145}$ $Si_{0.04}$, amorphous, mag. props. *(Croatian)* 3—52544
$Fe_{75}B_{25}$ amorphous and cryst. electron irrad., Frenkel-type defects, elec. cond. study 3—2611
$Fe_{75}B_{25}$ ribbons and sputtered films, ion bombardment amorphisation and props. 3—2416
$Fe_{80}B_{20}$, metallic glass, crystn. kinetics 3—2425

electrical conductivity of amorphous metals and alloys continued

- $Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glass, resistivity and galvanomag. coeffs. 3-28325
- $Fe_xCo_{80-x}B_{20}$, amorphous, elec. resistivity and thermopower 3-28327
- $Fe_5Co_{75}Si_{15}B_5$ metallic glass, resistivity and galvanomag. coeffs. 3-28325
- $(Fe_{1-x}Ni_x)_{80}B_{20}$ amorphous alloy, crystallisation, elec. resist. and X-ray diffr. studies 3-27848
- $Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, crystn. kinetics 3-2425
- $Fe_{40}Ni_{38}Mo_4B_{18}$, Metglas 2826MB, elec. resist., rel. to deform. in tension *(French)* 3-53135
- $Fe_{40}Ni_{38}Mo_4B_{18}$, Metglas 2826MB, anomalous elec. resist. 3-57329
- $Fe_{78}Si_{10}B_{12}$ amorphous alloy, struct. relax., elec. and mag. study 3-27847
- Gd-Co amorphous film, elec. cond. 3-28455
- $La_{80}Al_{20}$ amorphous supercond. alloy, elec. and mag. props. 3-23350
- $La_{70}Cu_{30}$, amorphous, elec. and thermal cond., superconducting T_c 3-18680
- Mg-Zn metallic glasses, crystallisation from $Mg_{80}Zn_{20}$ to $Mg_{60}Zn_{40}$ 3-22782
- $Mg_{80.4}Cu_{19.6}$, amorphous, quenched, electron transport props. 3-3153
- $Mg_{70}Zn_{30}$, amorphous, elec. resist., press. depend., 1.5 to 300K 3-33698
- $Mg_{70}Zn_{30}$, amorphous, thermopower and resist. 3-3167
- MnPdFe, resistivity anomaly at spin-glass temp. 3-47509
- $(Mo_{0.6}Ru_{0.4})_{1-x}B_x$ amorphous sputtered film, superconductivity and elec. resist., ion irrad. effects 3-47446
- $(Mo_{0.6}Ru_{0.4})_{82}B_{18}$ metallic glass, annealing effect on struct. 3-37790
- Ni-B amorphous alloys, sp. ht., elec. resist. and Debye temp. 3-28114
- $Ni_{80-x}M_xB_{16}Si_4$ (M=3d transition metal), amorphous, elec. resist. 3-28328
- $Ni_{60}Nb_{40}$ metallic glass, crystallisation, DSC, elec. resist., X-ray diffr., TEM 3-53016
- $Ni_{100-x}P_x$ amorphous alloys, elec. resistivity dependence on prep. technique 3-23351
- $Ni_{35}Ti_{65}$, amorphous, short-range ordering, elect. resist. meas. 3-33134
- $Ni_{64}Zr_{36}$, amorphous, elec. resist., H doping effects 3-52107
- Pd-Ge ribbons, glassy, elec. resist. and thermoelec. power 3-28332
- Pd-Si based metallic glasses, elec. resist. and thermopower, H_2 absorpt. influence 3-47327
- Pd-Zr-H(D) metallic glass, electronic transport in normal and supercond. states 3-47328
- $Pd_{1-x}B_x$, ion implantation prep., amorphisation, elec. props., and supercond. 3-3154
- $Pd_{77.5}Cu_6Si_{16.5}$, amorphous, elec. resist., H doping effects 3-52107
- $Pd_{1-x}Si_x$ ion implantation prep., amorphisation, elec. cond. and TEM study 3-2419
- $Pd_{82}Si_{18}$, amorphous, elec. resist., H doping effects 3-52107
- $Pd_{30}Zr_{70}$, metallic glasses, elec. cond. meas. 3-47326
- Pr based metallic glasses, elec. resistivity 3-28324
- Re amorphous film, ion implantation prep., supercond. and elec. props. 3-28467
- Re amorphous film prep. from Ag-Re films 3-52929
- a-$Si_{1-x}Au_x$ films, supercond. and metal-insulator transition 3-3265
- Sn-Au(Ag)(Cu), amorphous, elec. props., effect of average electron conc. 3-43149
- Tb based metallic glasses, elec. resistivity 3-28324
- $Ti_{50}Be_{40}Zr_{10}$, Metglas 2204, thermoelec. power anomalies, resist. meas., press. study 3-28341
- $Ti_{50}Be_{40}Zr_{10}$, Metglas 2204, elec. resist., press. depend., 1.5 to 300K 3-33698
- $Ti_{1-x}Ni_x$ amorphous alloy, crystallisation, stability and elec. transport props. 3-43150
- $Y_{75}Al_{25}$, amorphous, elec. resist. meas., mag. interf. effect 3-43152
- Zr-Nb, sintering, solid-state electron-configuration model 3-9015
- Zr-Pd metallic glass and cryst. hydrides, NMR spectra and props. 3-33999
- Zr-Rh(Re)(Ru)(Cu) amorphous film, electronic density of states, superconducting props. 3-38281
- $Zr_{50}Cu_{50}$, amorphous, elec. resist. meas., mag. interf. effect 3-43152
- $Zr_{70}Cu_{30}$, amorphous, elec. and thermal cond., superconducting T_c 3-18680
- $Zr_{70}Cu_{30}$, amorphous, elec. cond., Kondo-like model 3-18681
- $Zr_{75}Ni_{25}$, amorphous, elec. resist. meas., mag. interf. effect 3-43152

electrical conductivity of amorphous semiconductors and insulators

see also carrier density; carrier lifetime; carrier mean free path; carrier mobility; carrier relaxation time; dislocation scattering; electrical conductivity transitions; electronic conduction in insulating thin films; high field effects; hopping conduction; impurity scattering; minority carriers; negative resistance effects; photoconductivity; point defect scattering; small polaron conduction; surface scattering

- alkali oxide-WO_3 systems, rapidly quenched glasses prep. and characteris. 3-29054
- amorphous semiconductor, transient electrical transport, IR divergence, Scher-Montroll model 3-3177
- borosilicate glass, Li electrolysed, impedance meas. 3-23415
- chalcogenide glasses, electrical conductivity by small polaron hopping, theory 3-52152
- chalcogenide glasses doubly occupied defect states and AC cond. 3-23373
- cobalt naphthenate, elec. cond., field and temp. effect 3-47342
- disordered semiconductors, elec. cond. theory 3-52158
- epoxy resin, LOCA simulation and gamma-radiation, elec. and mech. props. 3-13279
- FEP radiation induced conductivity, rate theory 3-13812
- field depend., rel. to electronic struct. 3-43186
- field diffusion, theory 3-3227
- glass chalcogenide films, negative differential resistance switching 3-47440
- glass spacecraft thermal control dielecs., elec. cond. and discharge propag. 3-13811
- granular disordered solids, hopping cond. 3-47337
- graphite:F^+, ion implanted, metallic IR reflectivity and elec. cond. 3-2444
- Kapton electrical conductivity increase using electron beam 3-13286
- kapton spacecraft thermal control dielecs., elec. cond. and discharge propag. 3-13811
- metalloplastics, high conductivity materials 3-3198
- Mylar spacecraft thermal control dielecs., elec. cond. and discharge propag. 3-13811
- nonequilibrium carrier diffusion in disordered materials 3-8481
- oligophenols, polyconjugated, interaction of paramagnetism and elec. cond. *(Russian)* 3-47340

electrical conductivity of amorphous semiconductors and insulators continued

- organic semicond. thin films, dark DC cond., visible, UV and IR spectra studies 3-52143
- phosphate glasses, Mossbauer study of Fe oxidation 3-43470
- plastic, insulators, elect. DC cond., 190 to 390K *(German)* 3-52125
- poly(N-vinylcarbazole), TSC interpretation in terms of dispersive carrier transport 3-43198
- poly(p-phenylene sulphide), ion implanted, elec. cond. enhancement 3-3207
- poly(p-phenylene-1,3,4-oxadiazole) film, electronic and struct. props. 3-57339
- polyacetylene:F^+, ion implanted, metallic IR reflectivity and elec. cond. 3-2444
- polyacetylene:I_2, elec. cond., electron irrad. effects 3-3183
- polyacetylene:$I(Br)(IRCl_6)(FeCl_3)$, elec. cond. meas. 3-38390
- trans-polyacetylene, doping with O_2, kinetic study of interactions 3-2442
- polyacetylene, highly conducting, review *(Japanese)* 3-47331
- polyacetylene, I doped conjugation system, electrophys. props., high pressure influence *(Russian)* 3-47587
- polyacetylene, light scatt. and absorption 3-19143
- polydiacetylenes, electronic struct. and electron transport 3-18605
- polydiphenyl butadiene, I doped conjugation system, electrophys. props., high pressure influence *(Russian)* 3-47587
- polyethylene, charge and discharge currents, dipolar mechanisms 3-43170
- polyethylene, charge carrier transport, simulation calcs. 3-33726
- polyhexamethyldisilazane films, electrical cond., carrier generation and SCL processes, expt. study 3-3224
- polyimides, aromatic, with different structs. of dianhydride component, radiation induced elec. cond. *(Russian)* 3-52211
- polymer films, electrical cond., carrier generation and SCL processes, expt. study 3-3224
- polymer solids, electron mobility, time of flight electron-pulse technique meas. *(German)* 3-45156
- polymers, electron irrad. induced cond., current transients 3-8488
- polymers, I doped conjugation system, electrophys. props., high pressure influence *(Russian)* 3-47587
- polymers, insulating materials, radiation induced current and fine struct. 3-8100
- polymers, radiation induced cond., kinetics 3-52175
- polyorganosilicon thin films, hole transport 3-8491
- polyphenyl acetylene, I doped conjugation system, electrophys. props., high pressure influence *(Russian)* 3-47587
- polypiromellite imide, radiation induced elec. cond. *(Russian)* 3-52211
- polypyrrole, neutral, oxidation, optical and EPR spectra 3-58419
- polythiophene perchlorate film, electrochem. polymerisation prep., elec. cond. 3-3182
- polytolane, anionic, I doped conjugation system, electrophys. props., high pressure influence *(Russian)* 3-47587
- polyvinylidene fluoride, pre-poling props., resistivity and X-ray obs. 3-13809
- PVCz-TNF charge-transfer complex amorphous films, carrier drift mobilities *(Chinese)* 3-43298
- semiconducting wafers photoconductivity measurement using microwave contactless technique 3-57390
- semiconductor, amorphous, transit pulse dispersion, localised state effects 3-52177
- Si:H photovoltaic cells, H passivation 3-24581
- Teflon spacecraft thermal control dielecs., elec. cond. and discharge propag. 3-13811
- tetramethylsilane/O_2 prepared polymer films, glow discharge polymerised, elec. props. 3-8490
- thin films, elec. transport props., cryostat design 3-25881
- Ag-Ge-Se-Ga(In)/SnO_2 sandwich structs., optical transmittance and I-V characts. 3-57428
- Al_2O_3 plasma deposited coating, elec. strength at 300-1400K 3-14215
- As:Ni amorphous sputtered film, chemical modification, elec. props. 3-23518
- As-Sb-Se glass system, struct. and elec. props. 3-22788
- $AsGeSe_x$ vitreous chalcogenide film, electron induced cond. meas. 3-28460
- As_2S_3:Ag amorphous film, Ag photodoping sensitivity, optical and elec. resist. study 3-46851
- As_2S_3:Au glass, structural, optical and electrical props. *(Japanese)* 3-56822
- As_2S_3-Ag_2S glasses, elec. cond. and diffusion 3-23087
- AsSe-Ag_2Se glasses, elec. cond. and diffusion 3-23087
- As_2Se_3 intreous films, chem. modification of elec., photoelec., and optical props. 3-23391
- As_2Se_3:Ge glasses, transport props. 3-38425
- As_2SeTe_2-Mg(Al)(Zn) contacts, conductivity control and photovoltaic effects 3-52246
- $(As_{13}Te_{24}Si_{27}Sb_{18})_{1-x}Fe_x$ RF sputtered films, struct., elec., and optical props. 3-13649
- B-B-Mg(Be) ternary compositions, Seebeck coeff. and resistivity obs. to 1000°C 3-13848
- C amorphous film prep. from Ag-C films 3-52929
- C:H amorphous film, struct. optical props. and decomposition kinetics 3-18590
- a-C:H films, elec. cond., optical absorpt., dopant gas effects on props. 3-18705
- Cd-As-Br system, glass form., optical and elec. props. 3-56824
- $CdCr_2Se_4$ vacuum deposited films, amorphous-cryst. transition 3-38257
- CdO-ZnO-P_2O_5 glasses, elec. conduction, refr. index, IR transmission spectra, dielec. const. 3-3184
- $Fe_{2+x}O_3$-Na_2O-P_2O_5 glasses, ionic and electronic cond., temp. depend. 3-33766
- Fe_2O_3-V_2O_5-P_2O_5 glasses, elec. cond. *(Japanese)* 3-3205
- GaAs, amorphous, defects, elec. cond. and optical absorpt. studies 3-22778
- GaAs:H, amorphous, RF sputtered, microstructure, correlation with electronic props. 3-18572
- GaP(Sb), amorphous, defects, elec. cond. and optical absorpt. studies 3-22778
- Ge, amorphous, AC and DC hopping cond., extended pair approx. 3-38386
- Ge amorphous film, short pulsed laser irrad., crystn. mechanism 3-13688
- Ge, reactor neutron compensated, elec. cond., simulation of amorphous semicond. 3-43174
- a-Ge:H, B(P), ESR spectra and transport props. 3-43435
- Ge:H,B(P), amorphous, elec. cond. and thermoelectric power 3-23393
- Ge:O, amorphous, oxygenation effects on elec. props. 3-28350

electrical conductivity of amorphous semiconductors and insulators continued
GeO_2-BaO amorphous thin film complex, DC cond. meas. prior to electroforming 3—3346
$Ge_{40-x}Sb_xS_{60}$ glasses, refr. index and DC elec. cond. 3—28813
$GeSe_2$ amorphous film, low temp. AC conductivity 3—47349
$Ge_{40}Se_{60-x}Te_x$ thin films, prep. by flash evaporation, comp., I-V characts. 3—29011
$Ge_{32}Se_{24+x}Te_{40-x}As$ (x=0, 8, 16, 24, 32) glasses, optical and elec. gaps, cond., glass transition temp., DSC study 3—34056
$Ge_{15}Te_{81}S_2Sb_2$ amorphous thick films, switching and memory phenomena, thermophonic investigation 3—38441
Li_2O-GeO_2 glasses, electrical conductivity and optical absorption meas. 3—23384
Na_2O-B_2O_3 glass, neutron irrad., elec. cond. and light absorpt., fast-neutron dosimeter appl. 3—51667
Na_2O-FeO_n-B_2O_3-SiO_2 glass system, elec. resist., semicond. props. 3—33721
Na_2O-GeO_2 glasses, electrical conductivity and optical absorption meas. 3—23384
NbC-graphite composites, strength with force and thermal loading 3—14726
NbO_2 films, cryst. and amorphous, RF sputtering prep. and struct. and elec. cond. meas. 3—24129
Re amorphous film prep. from Ag-Re films 3—52929
S-Ge-As-Te glass, elec. cond., 20°-1150°C 3—47347
Se vitreous film, recrystallisation process, fast change of cond., temp. influence 3—42950
Se-Ge-As-Te glass, elec. cond., 20°-1150°C 3—47347
Se-Te alloy, amorphous, crystn. and elec. cond., temp. and conc. depend., Avrami eqn. 3—51500
$Se_{0.95}Bi_{0.05}$ amorphous thin films, coevaporated, characterisation 3—3196
Si, amorphous CVD films, elec. props. and ESR, plasma hydrogenation effects 3—52154
Si, amorphous film, CW laser annealing effect on elec. props. *(Korean)* 3—8600
Si, amorphous film cond., thickness and temp. depend. *(Korean)* 3—38505
Si amorphous film prep. from Ag-Si films 3—52929
Si, CVD films, struct. and electronic props. near crystn. temp. 3—23208
a-Si films, electrical and optical props., influence of H_2 gas during RF sputtering 3—14371
a-Si: H, glow discharge deposition from pure Si_2H_6 and pure SiH_4 3—52973
Si:Cl,H, amorphous film, preparation, elec. and optical props. 3—28988
Si:H, amorphous, bulk and interface states, elec. props. 3—28256
Si:H, amorphous, plasma deposited, elec. and optical props. 3—28462
Si:H, amorphous, transport props., temp. depend. *(Korean)* 3—38412
Si:H, amorphous CVD film, electronic and optical props. meas. 3—29014
Si:H, amorphous film, DC and RF glow discharge decomp. prep., elec. cond. meas. 3—43179
Si:H, amorphous sputtered films., elec. props., morphological fluctuation 3—3339
Si:H, amorphous sputtered films, influence of deposition conditions on props. 3—52935
a-Si:H, Cl, glow discharge prep., optical and elec. props. 3—23978
a-Si:H, elec. and optical props., effect of prolonged illum. 3—23441
a-Si:H, light-induced metastable effects 3—23392
Si:H, P amorphous film, transport props. and donor levels 3—23379
Si:H,B(P), amorphous film, in situ doping during homogeneous CVD growth, charact. 3—52967
Si:H amorphous, localised states, elec. cond. study 3—8457
Si:H amorphous, photocond., I-V and C-V characts., field quenching 3—57387
Si:H amorphous film, CVD by direct S_2H_6 photolysis and elec. and optical props. 3—52962
Si:H amorphous film, cond. activation energy and downward cond. kink, prep. condition effect 3—18803
Si:H amorphous film, elec. cond. in planar and sandwich configurations 3—38393
Si:H amorphous film, elec. props. and solar cell characts. 3—53539
Si:H amorphous film, reactively RF sputtered, microcrystalline form., X-ray scatt. study 3—42976
Si:H amorphous films, activation energy for conduction, annealing and thickness effects *(Chinese)* 3—43166
Si:H amorphous films, sputtering under reduced pumping speed, cond. and photocond. props. 3—58047
Si:H amorphous glow-discharge coating on glass, CW laser crystallisation 3—18581
a-Si:H film, trapping props., effect of adsorbates, TSC meas. 3—23401
a-Si:H films, hydrogenated in theta-pinch plasma, photocond. and dark cond. 3—57386
a-Si:H films, thickness depend. of elec. and optical props. and ESR 3—3199
a-Si:H glow-discharge doped films, laser radiation effects on cond. and Schottky diode operation 3—8579
Si:H photoconductive alloys, reactive sputtering in the He-containing atm. *(Japanese)* 3—19267
Si:$H^+(P^+)(Mn^+)(Ar^+)$ amorphous film, ion implantation doping, ESR and elec. cond. 3—37944
Si:H(H,P), amorphous, RF glow discharge deposited, photocond. and dark cond. meas. 3—38423
Si:N, amorphous CVD film, optical and electrical props. meas. 3—8484
Si:Se amorphous film, room-temp. resistivity and optical gap meas. 3—52129
Si:Sn amorphous, dopant effects on elec., optical and Mossbauer spectra props. 3—18708
SiC:H, amorphous RF sputtered films, struct. and optical and elec. props. study 3—3711
SiC:H amorphous film, elec., optical and solar cell window material props. 3—52135
SiGe:H amorphous film, elec. props. and solar cell characts. 3—53539
Si_xGe_{1-x}:H amorphous film, cond. and photocond. props., solar cell appl. 3—33719
Si_3N_4-C, amorphous, composite, CVD, d.c. elec. cond., 250-950°C 3—38387
SiO_2 amorphous film, AC hopping conduction model 3—43177
SiO_xN_y amorphous films, reactive evaporation prep., ESR, XPS and resist. studies 3—52287
$Si_{12}Te_{48}As_{30}Ge_{10}$ chalcogenide glass films, size effect and switching in high elec. field 3—43303
SnO_2 amorphous films, conductive and transparent, antireflection coatings appl. 3—47722

electrical conductivity of amorphous semiconductors and insulators continued
SnS_2, thin films, amorphous, recrystallisation, elec. and optical props., heating effect 3—28354
$TiSi_2$ amorphous thin film, elec. resist. and crystallisation 3—3187
V_2O_5 thin films, amorphous, quenched, elec. and thermal props. 3—8599
V_2O_5-B_2O_3-CaO, AC dielectric losses, elec. cond. 3—52724
V_2O_5-B_2O_3-CaO, DC elec. cond. in weak and strong elec. fields 3—52167
V_2O_5-TeO_2 glasses, amorphous semicond., DC cond. under annealing 3—8486
V_2O_5-TeO_2 glasses, elec. cond. and dielec. const., 0.1 to 100 kHz, 77 to 400K 3—57346
V_2O_5-TiO_2-P_2O_5 glass, anomalous dielec. relax. spectra 3—38758
Zn_3P_2 film, amorphous and polycryst., elec. cond., temp. and thickness depend. 3—3341
ZrC-graphite composites, strength with force and thermal loading 3—14726

electrical conductivity of crystalline metals and alloys
see also dislocation scattering; electron density (metals); electron mean free path (metals); electron mobility (metals); electron relaxation time (metals); electronic conduction in metallic thin films; impurity scattering; point defect scattering; surface scattering
actinide metals, elec. resist., theoretical study 3—47333
alkali metals, phonon drag quenching in elec. resist. 3—23356
alloys, band struct. and transport props., average lattice method *(Rumanian)* 3—13702
binary alloys, resistivity and thermopower calc. during clustering *(French)* 3—3166
α-brass, cold-worked, differential resistivity meas. for monitoring annealing 3—53324
conductors, evaporation under action of large electric currents 3—51958
dilute alloys, low temp. thermoelec. power in asymm. Anderson model 3—33711
electrical noise produced by lattice defects 3—18757
Elinvar, magnetic anisotropy, uniaxial 3—33885
ferromagnetic metals, elect. resistivity meas., laboratory project 3—5570
ferromagnetic metals, resist. due to spin wave scatt. *(Chinese)* 3—28333
ferromagnets, transport props., book contrib. 3—57330
grain boundaries, elec. props. in metals, semiconductors and insulators, review 3—46961
impurity density depend. 3—18695
magnetic alloys, dil., min. resist. mech. *(Chinese)* 3—13808
metal point contacts, resistance study 3—3299
metals, elec. resistivity at low temps. 3—33708
metals, electrical resistivity and thermal expansion coeff. meas. 3—8231
metals, electron-electron collision effect on quantum localisation 3—23346
metals, polycrystalline, elec. cond. and grain boundary scatt. *(Russian)* 3—52109
metals, sintered *(German)* 3—33709
metals, temp. relax. effects, rel. to resist. meas. *(Russian)* 3—33701
misch metal prep., lattice consts., melting point and hardness 3—14524
noble metals, low temp. elec. resist., deviations from Matthiessen's rule 3—33702
noble metals, low temp. elec. resist., effect of electron-dislocation scatt. 3—33703
phonon electrical resistivity, pseudopotential calcs. *(Russian)* 3—38364
rare earth alloy, RAl_2, electrical transport props., mag. scatt. contrib. influence 3—18696
rare earth alloys, RAl_2 (R=La, Ce, Pr, Nd, Sm, Gd, Tb, Dy, Ho), thermoelec. power 3—52117
rare earth alloys, RMn_2Ge_2, single cryst., mag. props., magnetisation, elec. resist. and NMR studies 3—52477
rare earth alloys, RPd_3 (R=Lu, La, Y, SC), low temp. sp. ht. and elec. resist. 3—42801
rare earth alloys, transport props., mag. scatt. contrib. 3—18682
rare earth dodecaboride phases, elec. resist. and thermoelec. coeff. *(Russian)* 3—3159
rare earth intermetallics, RNi (R=Sm,Gd,Dy,Ho,Er), electrical resistivity and magnetic transitions, expt. study 3—18685
rare earth-Mn alloys, RMn_2 (R=Gd, Tb, Dy, Ho, Er), Laves phase, mag. characts. 3—47480
simple metals, transport props. 3—18697
sintered metallic materials, elec. cond. model 3—33705
steel, austenitic stainless, short-range ordering kinetics, elec. resist. changes 3—23073
steel, high speed, R6M5, strength and phase comp. 3—53029
steel, low-alloy, graphitised, quench hardness and transform. during tempering, alloying effect 3—34364
steel, rapidly cooled from liq. state, struct. and electrophys. props. 3—8472
steel, stainless, fatigue damage in hydrogen, elec. and mag. props. meas. *(Ukrainian)* 3—9146
steel, type 38KhGNM, quenching and tempering effect on mag., elec., and mech. props. 3—58142
steel powders, elec. cond., depend. on temp. 3—23359
superconductivity and electronic props. correl. 3—52296
transition metals, resist. saturation, exchange theory 3—3158
Ag, elec. resist., temp. and size depend., surface contribs. 3—52111
Ag-Mn, spin glasses, resist. 3—13799
Al alloy D16, mech. props. control by eddy current method rel. to ageing kinetics 3—53214
Al-Cu alloy D16T sheets, temp. to which heated determ. from struct. and props. 3—24275
Al-Fe, dil., solute segregation and boundary struct. changes during grain growth 3—53057
Al-Li (2.5 at.%), phys. props., effect of Li loss 3—53108
Al-Ti dilute alloys, elec. resist., Hall effect and magnetoresistance, clustering effects 3—43155
Al-Zn, initial precipitation hardening, mechanism *(Japanese)* 3—9080
Al-Zn inhomogeneous alloys, isotropic resist. calc. 3—23360
Al_9Co_2 eutectic alloy fibres, elec. resist. 3—43154
AlCr, dilute, self-interstitial trapping at Cr atoms 3—13218
Al_6Fe eutectic alloy fibres, elec. resist. 3—43154
Al_3Ni eutectic alloy fibres, elec. resist. 3—43154
Au, elec. resist., temp. and size depend., surface contribs. 3—52111
Au foils, elec. resist., temp. depend., size effect theory 3—13800
Au-Cd-Ag-Cu, Ag and Cu additions, order and quenched-in defect effects on martensitic transform. 3—43832
Au-Fe(Mn)(Cr) spin glasses, resist. 3—13799
Au-Ni alloys, elec. cond., anomalous behaviour 3—8471

electrical conductivity of crystalline metals and alloys continued
CdMn, low temp. resist anisotropy of single cryst. spin glass systems 3—28343
Ce, $\alpha \rightleftarrows \alpha'$ polymorphic press.-induced transition, elec. resist. and thermoelec. studies 3—37837
$CeAg_{1-x}In_x$, elec. and mag. props. 3—52419
$CeAl_2$, transport phenomena 3—18683
CeCd, mag. and struct. phase transitions, at high press., elec. resist. meas. 3—51781
$Ce(Fe_{0.8}Al_{0.2})_2$, elec. resist., 1.5 to 300K, spin glass phase 3—23357
$Ce(In_{1-y}Sn_y)_3$, behaviour in mixed valence and Kondo regimes 3—23333
$CeIn_{3-x}Sn_x$, mixed valent system, elec. cond., specific heat 3—23332
$Ce_{1-x}La_xAg$, elec. and mag. props. 3—52419
$Ce_{1-x}La_xCu_2Si_2$, elec. cond., transition from Kondo lattice to Kondo impurity 3—43163
$CePd_3$, magnetisation and elec. cond. 3—28505
$CePd_{3+x}$, low temp. sp. ht. and elec. resist. 3—42801
$Ce(Pd_{1-y}Ag_y)_3$, behaviour in mixed valence and Kondo regimes 3—23333
CePt, resist. and magnetisation meas. 3—47482
$Ce(Sn_xPb_{1-x})_3$, elec. cond., mixed valence behaviour 3—28334
β-Co_xGa_{1-x}, elec. resist. near Curie temp. 3—43153
Cr-Os, mag. transition, anomalous physical props. near triple point 3—3447
Cr-Ru, T-P-C state diagram, mag. transitions *(Russian)* 3—52488
Cs, solid and liq., thermal cond., elec. cond. and thermoelec. power 3—47329
Cu, cold-worked, differential resistivity meas. for monitoring annealing 3—53324
Cu, conduction electron scatt. by stacking fault 3—33716
Cu dilute alloys, cluster model residual resistivities 3—33704
Cu, elec. resist., temp. and size depend., surface contribs. 3—52111
Cu, electrical resist., quadratic temp. depend. 3—33706
Cu, electrical resist. and thermoelec. power, resonant dislocation scattering effects, theory *(Russian)* 3—33715
Cu, electrical resistivity for dislocation 3—3140
Cu-Al (15 at.%), quenched, prop. changes due to development of short-range order state 3—9104
Cu-Al (4.6 at.%), evidence of short-range order state using DTA, elec. resist. and electron microscopy 3—9105
Cu-Al composite wire, hot drawing sintering fabrication, elec. resist., diffusion zone growth 3—52999
$Cu\text{-}Al_2O_3\text{-}Cr$, diffusion saturated, precipitation, struct. changes, elec. resist. and plastic deformation study *(Russian)* 3—34324
Cu-Al-Be, ternary system, shape memory effect, elec. resist., internal friction, Young's Modulus, temp. depend. 3—43835
Cu-Al-Ni-Ti, shape memory alloy, grain refinement rel. to Ti addition, transform. hysteresis 3—47832
Cu-Fe, dil., solute segregation and boundary struct. changes during grain growth 3—53057
Cu-Fe, Kondo and spin glass states, elec. and mag. studies *(Russian)* 3—28512
Cu-Mn, spin glasses, resist. 3—13799
Cu-Mn spin glass, crit. exponent, elec. resist. study 3—23355
α-Cu-Ni-Zn, ternary phase diagram, invest. with elec. resist. meas. 3—14562
α-Cu-Zn, short-range ordering kinetics, heterogeneous microstruct., elec. resist. meas. 3—51814
Cu-Zn alloy, residual resist. and thermopower rel. to short range order 3—33707
Cu-Zn-Al, thermal treatment effect on martensitic transform. 3—43831
Cu-Zu-(Al), single-phase, annealing kinetics and vacancy conc. 3—4064
Dy, monocrystalline, mag. props. near Neel point 3—28533
F-D (H) systems, phase transitions, elec. resist. and DSC studies 3—33427
Fe, high-purity, Si pollution during heat treatment in H_2 atm., resistivity obs. *(French)* 3—29116
Fe-Al, electron and neutron irrad., defect production and recovery 3—42671
Fe-Cr-Ni (18, 10 to 25 wt.%), paramagnetic, elec. resist. and thermal expansion meas. 3—23358
γ-Fe-Mn-C, FCC to BCC transition in paramagnetic phase *(Russian)* 3—51776
Fe-Ni-Si-Co, aging of martensite, Co influence *(Russian)* 3—53087
$Fe_{75}B_{25}$ amorphous and cryst. electron irrad., Frenkel-type defects, elec. cond. study 3—2611
$Fe_{65}(Ni_{0.84}Mn_{0.16})_{35}$ alloy, press. effect on elec. resist., mag. phase transition obs. 3—28336
Gd, transport and mag. props. in critical region 3—18684
Gd, transport props., spontaneous magnetisation, in crit. temp. region 3—57331
Gd-Y, onset of helimagnetism, transport props. 3—18894
$GdCu_{1-x}Ga_x$, cryst. struct. transforms. and mag. ordering phenomena 3—38595
$Gd_{1-x}R_xAl_2$, mag. susceptibility and elec. resist., random cryst. elec. field effect 3—38376
HoNi single cryst., magnetisation and elec. resist. 3—28623
InP_3, synthesis, cryst. struct. and metallic conduction 3—46913
^{193}Ir, neutron activated, Frenkel pair creation and annihilation, elec. resist. meas. 3—56882
K, impurity scatt., residual resist. and CDW hypothesis 3—3175
K, lattice imperfection influence on elec. cond. 3—13797
K_2Cs, critical point at 258K 3—38025
KRb(Cs)(Na), press. depend. of elec. cond. and thermopower 3—13798
$(La,Dy)B_6$, spin glass behaviour, elec. resist. and thermoelec. power meas. 3—43379
$(La, Gd)B_6$, spin glass behaviour, elec. resist. and thermoelec. power meas. 3—43379
$(La_{1-x}Ce_x)Sn_3(Th)(Be_{13})$, behaviour in mixed valence and Kondo regimes 3—23333
LaPt, resist. and mag. resist. meas. 3—47482
Li-Cd system, phase diagram, resist. and DSC meas. 3—24209
Mg, disordered multiply-connected conductor, mag. flux quantisation effect 3—18686
MgMn, low temp. resist anisotropy of single cryst. spin glass systems 3—28343
Mn-Ge system, Invar-type, nonferromag., thermal expansion, mag. and elec. props. 3—42821
$Mn_{1-x}Fe_xSi$, spin fluctuation effects, resist., magnetoresist., and magnetisation meas. 3—57623
Nb, H Cottrell cloud form. at dislocations 3—51655

electrical conductivity of crystalline metals and alloys continued
Nb, sorption of H, surface and bulk conc., photoemission spectra and elec. resist. meas. 3—2958
Nb-H system at high H conc., elec. resist. and neutron diffr. studies 3—38366
$NbSe_3$, quasi I-D metallic cond., phonon drag and elec. props. 3—33713
Nd, magnetic susceptibility and elec. cond. 3—18867
Ni, dislocation struct. under plastic deform., elec. resist. meas., TEM study 3—46934
Ni-Al, mag. susceptibility and elec. resistivity, 700 to 800°C 3—47473
Ni-Cr, electrical props. under high gaseous H_2 press. 3—38365
Ni-Mo alloys, electrical and thermal cond. determ. 3—13796
Ni-Si (12.5 at.%) alloy, decomposition, elec. resist. and small angle neutron scatt. studies 3—14594
$Ni_3Fe(Mn)$, critical behaviour of elec. cond. temp. derivative 3—28335
$NpSb_2$, mag. and elec. props. 3—18937
Pd, H Cottrell cloud form. at dislocations 3—51655
Pd-Fe, elec. and mag. props., order-disorder transition temp. effects *(Russian)* 3—23354
Pd-Fe-Au, elec. and mag. props., order-disorder transition temp. effects *(Russian)* 3—23354
Pd-Ge ribbons, elec. resist. and thermoelec. power 3—28332
Pd-Mn(Pb)(B)(Li)(Sn), electrical props. under high gaseous H_2 press. 3—38365
Pr-Y, mag. ordering, elec. and mag. meas. 3—18866
PrCd single crysts., elec. and thermal transport props., phase transitions 3—52112
$PrPt_2(Rh_2)(Ir_2)(Ru_2)$, mag. props. and elec. resist. at low temps. 3—14023
Pt, electrical resist., quadratic temp. depend. 3—33706
Pt, neutron irrad. and annealed, recovery spectra, resistivity method 3—42676
Pt-Au dilute alloys, neutron irrad. and annealed, recovery spectra, resistivity method 3—42676
Pt-Cu dilute alloy, neutron irrad. and annealed, recovery spectra, resistivity method 3—42676
Pt-Ni, dil., elec. and galvanomag. props., 1.4 to 300K 3—57332
Pt-W (8 wt.%) alloy wire, high-temp. strain gauges, causes of drifting *(German)* 3—30848
Pu, electrical resist., amomalous behaviour and spin fluctuations 3—52113
$PuAl_2$, electrical resist., amomalous behaviour and spin fluctuations 3—52113
Re, single crystal, kinetic properties anisotropy at high temperatures 3—52110
Ta alloys thermal cond., phonon and electron components, elec. resist. and Seebeck coeff. 3—3157
Ta, thermal cond., phonon and electron components, elec. resist. and Seebeck coeff. 3—3157
Th-Nb small-filament eutectic composite, supercond. props. 3—3358
Ti-Al-Zr-Mo(W), rapidly cooled from liq. state, struct. and electrophys. props. 3—8472
Ti-based alloys, thermally activated conductivity, negative temp. coeff. of resist. 3—38367
Ti-Mo binary system, phase diagram investigation 3—14569
Ti-Nb (22 at.%), martensitic transform β-phase instability, elec. resist. temp. depend. 3—34310
Ti-transition metal alloys, high-resist., as highly correlated disordered systems 3—3124
TiNi, ageing, effect on martensitic transform. start temp., elec. resist. meas. 3—53053
$Ti_{50}Ni_{47}Fe_3$, martensitic transformation, electron microscopy study 3—47834
$Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, elec. resist. meas., TEM and electron diffr. studies 3—38053
$U(Fe_{1-x}Mn_x)_2$, Mossbauer study of onset of magnetism, elec. cond. 3—19024
$U_{1-x}Gd_xAl_2$, spin-glass behaviour, susceptibility 3—18910
$(U_xTh_{1-x})S(Se)$, dilute alloys, specific heat and Kondo effect 3—57522
V, elec. resist. meas., electron-electron scatt. and other mechanisms 3—8477
V, electrical resist., quadratic temp. depend. 3—33706
V-Al, struct. characts. rel. to elec. resist. anomalies, electron microscope study *(Russian)* 3—37850
V_2H, normal and deuterated, press. effects on phase transitions, X-ray and resistometry studies 3—33426
$V_{1-y}M_yH_2$ (M=Fe,Mo), normal and deuterated, phase diagram, impurity effects 3—33391
Y_9Co_7, magnetism and supercond., influence of impurities 3—57696
ZnMn, low temp. resist anisotropy of single cryst. spin glass systems 3—28343
$Zr_xHF_{1-x}V_2$ superconducting Laves phase, electron spectrum peculiarities 3—3873
$Zr_{1-x}M_xV_2$ (M=Y, Nb, La, Hf, Ta), C-15 cpds., struct. transition and supercond. transition, resistivity and X-ray study 3—8183

electrical conductivity of crystalline semiconductors and insulators
see also carrier density; carrier lifetime; carrier mean free path; carrier mobility; carrier relaxation time; dislocation scattering; electronic conduction in crystalline semiconductor thin films; electronic conduction in insulating thin films; high field effects; hopping conduction; impurity scattering; minority carriers; negative resistance effects; photoconductivity; point defect scattering; small polaron conduction; surface scattering
anthracene crysts., charge carrier trapping at physical defects 3—57359
$Ba_2Fe_2^{2+}Fe_{28}^{3+}O_{46}$ ferrites, mag. props. and Mossbauer spectra 3—57581
ballistic electron transport and vel. overshoot in semicond. with uniform fields 3—52161
band theory and transport processes, book 3—39
biotite mica, elec. cond., small polaron hopping 3—47345
cadmium oxalate trihydrate, gel grown, elec. cond. and dehydration 3—33720
carrier conc. and mobility distrib., multiprobe meas. apparatus *(Russian)* 3—3193
circular wafer, electrical conductivity, contactless meas. method, theoretical considerations 3—5819
copper-phthalocyanine oligomer, elec. resist., temp. depend., solvent washing effect, IR charact. 3—38382
diamond, elec. props. in presence of donor impurities 3—18706
dicalcium strontium propionate single cryst., elec. cond. and stimulated thermocurrents 3—33740
disordered semiconductor, polycryst., nonlinear percolation theory of elec. cond. with grain boundary barriers 3—18698

electrical conductivity of crystalline semiconductors and insulators continued
doped semiconductors, electron cond. props., Anderson localisation theory 3−43184
electron trapping by ionised impurities, resonance tunnelling effects 3−3223
ferrites, low firing temp., for ferrimag. pastes, prep. and charact. 3−14548
ferrites, mag. and elec. props., Curie temp. about 0°C *(Rumanian)* 3−8695
ferrites, polycryst., elec. cond., three-dimens. DC models 3−13821
GaAs:B, elec. cond., impurity effects 3−23398
gas sensors, surface-gas interactions, requirements and sensitivity 3−10819
grain boundaries, elec. props. in metals, semiconductors and insulators, review 3−46961
graphite, polycrystalline, macrostructural charact. by electroconductivity and magnetoresist. 3−43205
graphite intercalates, conduction mechanism anisotropy *(French)* 3−23371
graphite intercalation cpd. with O, elec. cond. reduction, tight-binding and cluster calcs. 3−28320
III-VI layered crystal, growth and charact., review 3−43723
metal hydrides, props. and appls., conf., Toba, Japan (May 1982) 3−30547
n^+-n-n^+ structure, voltage-current characteristics in strong electric field 3−33786
narrow-band gap semiconductors, doped with mag. impurities, resistivity and thermopower calcs. *(Russian)* 3−43183
noncentrosymmetric nonequilibrium semicond., currents, response to scalar, vector and tensor forces 3−8480
PLZT, effects of impurities on phys. props. *(Korean)* 3−3631
polyacetylene:I(Br)($IRCl_6$)($FeCl_3$), elec. cond. meas. 3−38390
polyethylene, DC-conductivity following irradiation with ^{60}Co-γ-rays, temp. effects *(German)* 3−52136
pyroelectric homogeneous semiconductors, thermal excitation anisotropy from impurities and nonequilib. currents 3−47356
rare earth antimonides, R_5Sb_3 (R=Nd, Sm, Gd, Tb, Dy, Ho), elec. props. 3−3203
rare earth compounds, RFe_2O_4, low temp. mag. transitions 3−57606
rare earth iron garnets, elec. cond. and thermoelec. power meas. 3−23377
semiconducting wafers photoconductivity measurement using microwave contactless technique 3−57390
semiconductor, anisotropic circular sample, elec. characts. 3−47335
semiconductor, conductivity influenced by strong EM radiation 3−38379
semiconductor, electrical cond., temp. depend. with oriented charged dislocations 3−43181
semiconductor, nonequilibrium direct-gap polar, ultrafast transient transport 3−57341
semiconductor alloys, band struct. and transport props., average lattice method *(Rumanian)* 3−13702
semiconductor alloys, disorder scattering, Brooks mobility formula 3−38377
semiconductor circular slice resistivity calc. using four-point probe method *(Chinese)* 3−8478
semiconductor physics, introduction, book 3−40329
semiconductor surface space-charge layer, linear response to EM disturbance 3−43229
semiconductors, disordered, cond. theory 3−13810
semiconductors, electrical cond., evolution operator formalism 3−43164
semiconductors, electrical conductivity due to dislocations 3−47338
semiconductors, impurity level determ. from cond. or Hall data, error anal. 3−3109
semiconductors, Seebeck quality factor for semiconductor alloys 3−13849
semimetallic alloys, band struct. and transport props., average lattice method *(Rumanian)* 3−13702
SOS, transient conductance meas. during pulsed laser annealing 3−57352
superlattice cond. during electron scatt. by optical phonons 3−23389
TCNQ salt, methyl-pyridine homologous group, elec. cond. and thermoelec. power 3−13843
TCNQ salts, n-alkyltriphenylphosphonium tetracyanoquinodimethanides, phase transitions 3−33433
TGS, pure and Fe^{3+} doped, current-voltage characteristics *(Russian)* 3−47352
transition metal carbides, H doped, resistivity, superconductivity and order-disorder transition meas. 3−33814
transition metal dichalcogenide intercalation compounds, electronic props. 3−23386
Ag chalcogenides, Hall effect, thermoelec. power and elec. cond. changes on melting 3−13839
AgBr, non-stoichiometry, DC polarisation cell transient current study 3−42797
AgCl:Cd, elec. cond. mechanism 3−3176
($Ag_{x/2}Ge_{1-x}Sb_{x/2}$)Te, ferroelec. phase transition, elec. cond. and optical absorption studies 3−43496
$AgInTe_2$, nonstiochiometry and elec. props. 3−47341
β-Ag_2Te, electronic and electrogalvanic props., Frenkel defect form. energy *(French)* 3−57347
$Al_xGa_{1-x}As$ graded-gap cryst., elec. cond., hydrostatic and uniaxial compression effects meas. 3−13817
$Al_xGa_{1-x}As$:Te, impurity states, electron mobility 3−33681
α-Al_2O_3, electrical conductivity 3−52141
Al_2O_3 plasma-deposited, high temp. elec. insulating characts. 3−14479
θ-$Al_xV_2O_5$, metal-semicond. transition, elec. resist. and mag. susceptibility study 3−57392
B-B, elec. conduction mechanism, elec. and optical props. 3−8495
BaH_2, elec. resistance under high press. 3−28353
$BaMoO_4$, elec. conductivity and dielec. props. 3−38383
$BaPb_{0.75}Bi_{0.25}O_{3-y}$, anomalous magnetoresist. and elec. resist. 3−47368
$BaPb_{1-x}Bi_xO_3$, superconducting and normal elec. props. meas. *(Japanese)* 3−38560
$BaPbO_3$, electrical conductivity, mixture composition and baking conditions effect 3−52140
$BaSnS_2$($BaSn_2S_3$), elec. cond. and optical absorpt. meas. *(French)* 3−52151
p-$BaTiO_3$, donor-doped, resist. profile meas. using liquid-metal-wetted four-point probe 3−23480
$BaTiO_3$, electric transport, interface and bulk prop. effects 3−43172
$BaTiO_3$, semicond., internal friction and elec. resist. meas. 3−8136
$BaTiO_3$, semiconducting, porous, factors, affecting positive temp. coeff. of resist. *(Japanese)* 3−3206
$BaTiO_3$:Pb,Ca semiconductor ceramics, liquid phase sintered, positive temp. coeff. resist. 3−52130

electrical conductivity of crystalline semiconductors and insulators continued
$Bi_{0.88}Sb_{0.12}$:Fe(Co)(Ni), Fe Co or Ni effect 3−38413
p-$Bi_{1-x}Sb_x$, x=0.12-0.14, thermoelec. power, elec. resist. meas., interband scatt. study 3−43217
Bi_2Te_3, doping effects and impurity elec. activity 3−13251
Bi_2Te_3 films, thermoelectric power, electrical cond., temp. coeff. of resistance and activation energy 3−8598
Bi_2Te_3-Sb_2Te_3-Sb_2Se_3 thermoelectric ingot preparation and characterisation 3−14475
Bi_2Te_3-Sb_2Te_3-Sb_2Se_3 thin film thermoelectric generator design and fabrication 3−14967
Bi_2Te_3-Sb_2Te_3(Bi_2Se_3) alloy, doping effects and impurity elec. activity 3−13251
Bi_2Te_3-Te eutectic system, hardness and elec. cond. interrelations 3−52138
CaH_2, elec. resistance under high press. 3−28353
$CaTiO_3$:La, defect struct., elec. cond. studies 3−51591
$Ca_2V_2O_7$, cryst. growth, struct., elec. and dielec. props. 3−24110
Cd_3As_2 single cryst. growth by zone recrystallization 3−58044
$CdCr_2Se_4$ single cryst., elec. cond. and magnetoresist. in alternating elec. fields 3−28361
$CdCr_2Se_4$:Al(In)(Cu)(Ag), dislocation patterns, rel. to elec. cond., hardness and doping 3−27947
$CdCr_2Se_4$:In(Ag), impurity effects on carrier density and mobility, elec. cond. and Hall EMF studies 3−33810
$CdCr_2Se_4$:In(Ag), mag. semicond., elec. cond., mag. order effects 3−28362
$Cd_xHg_{1-x}Te$, elec. props., annealing effects 3−38384
$CdMnCaO_4$, X-ray study of struct. and ionic config. 3−37866
$Cd_{0.95}Mn_{0.05}Se$ crystals, Bridgman growth and elec., optical and mag. props. 3−52921
$Cd_{1-x}Mn_xSe$, D^- levels, far IR transmission and transport studies 3−47677
$Cd_4Na(VO_4)_3$, dielec., thermal expansion and plastic deformation props. 3−38772
CdP_2:Cu(Hg)(Ga)(Bi)(As), impurity effect on elec. cond. type *(Russian)* 3−47350
$CdPS_3$, intercalated with amines, cryst. struct. and semiconducting props. 3−51573
$CdPt_3O_6$, hydrothermal grown crystal 3−34210
CdS, high pressure optical absorpt., resistivity and phase transformation 3−57028
CdS, photosensitive, dielec. dispersion and photoconductivity 3−18747
CdS single cryst., high temp. conductivity relax., Cd diffusion 3−3263
n-CdS single cryst., high field DC elec. cond. 3−43189
CdSe single cryst., high temp. conductivity relax., Cd diffusion 3−3263
CdSe:Cu, defect structure from conductivity and solubility meas. 3−33280
Cd_2SnO_4 thin films obtained by DC reactive sputtering of Cd-Sn alloys 3−52284
CdTaI crystals, verticle unseeded vapour growth, high resistivity 3−34206
CdTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3−33441
CdTe single cryst., exciton-phonon bound state, detection by photocond. 3−8423
CdTe:Mn, current carrier mobility 3−43182
$Ce_{1-x}Y_xO_{2-x/2}$ ceramic, impedance, AC and DC, inhomogeneity contrib. 3−3188
Co-Zn ferrites, elec. cond., Seebeck coeff. meas., mag. props. 3−3190
$Co_{1-x}Mg_xO$ solid solution, elec. cond., Seebeck coeff., hole mobility, 900-1200°C, comp. depend. 3−43169
$CoMnAlO_4$, spinel, structural, mag., elec. props., ionic config. 3−13180
$Co_{0.37}Na_{0.14}Pt_3O_4$, elec. cond. and mag. susceptibility 3−3191
$Co_{1-\delta}O$, elec. cond. mechanism 3−23378
$CoPt_3O_6$, elec. cond. and mag. susceptibility 3−3191
$CoPt_3O_6$, hydrothermal grown crystal 3−34210
Co_xVS_2, cryst. struct., mag. and elec. props. 3−7997
$Co_{0.5}Zn_{0.5}Fe_2O_4$, elec. cond. mechanism, Fe deficiency effects 3−23383
Cr_2S_3, photoconductivity and optical absorption spectra 3−38427
Cu-Ni ferrites, phase transition and cond. mechanisms, DC resist. and thermopower meas. 3−13820
CuCl, elec. and optical props. at high press. and from 400°C to liq. N_2 temps. 3−13816
$CuCr_2O_4$, semicond., elec. cond. and phase transition 3−3192
$CuGaSe_2$, nonstiochiometry and elec. props. 3−47341
$CuInS_2$ elemental composition determ. by chemical anal. method 3−29354
$CuInS_2$:Fe, defect electron levels, elec. cond. and Mossbauer studies 3−52062
$CuInSe_2$, single cryst., elec. props. *(Korean)* 3−13838
$CuInSe_2$ single cryst., elec. resist. and Hall effect 3−57351
$Cu_{1-x}Li_{x/2}Al_{2+x/2}O_4$, solid soln. form., X-ray and elec. cond. studies 3−47116
Cu_2O, elec. cond., switching phenomena, temp. depend. 3−18709
Cu_xS, elec. cond. and chem. diffusion coeff., rel. to stoichiometric changes, solar cell appls. 3−52159
Er_2S_{3-x} thermoelectric power and resistivity obs. at 500°C 3−14972
$EuGa_2S_4$ single cryst., dark current relax., trapping levels 3−8493
$Eu_{1-x}Gd_xO$ (SM_xO), carrier scatt. and transport phenomena 3−28363
$EuMo_6S_8$, low temp. transport props. 3−33727
$EuO_{1\text{-}8}$, carrier scatt. and transport phenomena 3−28363
Eu_3S_4, thermal props. meas., order-disorder transition 3−33466
Fe complex, trichlorotripyridene Fe (III) monopyridene, elec. cond. 3−18704
$FeGaO_3$, noncryst. ferromag., cond. and mag. props. 3−28660
Fe(II) phthalocyanine, crysts., dark and photo-cond., adsorbed gases effects 3−8528
FeM_2O_4, M=Al, Cr, oxidation, elec. cond. meas., Fe^{2+} ion availability in defect phase γ, DTG anal. 3−39373
$FeNbO_4$, cryst. struct. and elec. cond., relationship to $FeWO_4$ 3−7996
FeO, wustite phase, defect struct. and elec. props. 3−52185
$Fe_{1-\delta}O$, elec. cond. mechanism 3−23378
γ-Fe_2O_3 ceramics, elec. resist. meas., gas sensitivity 3−52132
α-Fe_2O_3:SO_4^{2-} ceramics, gas sensitivity, elec. resist. study 3−52134
Fe_3O_4, magnetite, elec. resist., temp. depend. below Verwey transition 3−38385
FeOCl-ferrocene intercalation cpds., elec. cond. and thermoelec. power elec. cond. and thermoelec. power *(French)* 3−28355
Fe_xVS_2, cryst. struct., mag. and elec. props. 3−7997
$FeWO_4$, cryst. struct. and elec. cond., relationship to $FeNbO_4$ 3−7996

electrical conductivity of crystalline semiconductors and insulators continued
- GaAS:Cr, electrical conductivity and Hall effect meas., using two electrometers 3—45164
- GaAs bicrystal, grain boundaries, elec. characterisation 3—52061
- GaAs, compensation by low energy ion irrad., defect diffusion and carrier mobility 3—57001
- GaAs, diodes, n-type negative differential cond. localised development 3—38391
- GaAs, dislocation effect on electron mobility, theory 3—33724
- GaAs, electron irrad. damage, elec. cond. and defect levels 3—42666
- GaAs heterostructure, electrochemical study 3—47415
- GaAs, impurity cond., AC and DC hopping cond., extended pair approx. 3—38386
- GaAs, LEC grown, leakage current variation rel. to dislocation density 3—3181
- n-GaAs, metallic impurity donor band, elec. cond., Hall effect, luminescence 3—23313
- GaAs, nonequilibrium direct-gap polar, ultrafast transient transport 3—57341
- GaAs, p-conductivity study, intrinsic double acceptor evidence 3—3178
- GaAs, semiinsulating, electrical characterisation using galvano-magnetic measurements *(Slovak)* 3—47364
- GaAs, transient electronic transport, investigation using Monte Carlo simulations 3—33731
- GaAs, transient transport and transferred electron behaviour under high energy electron injection 3—38396
- GaAs velocity overshoot effect anal. *(Chinese)* 3—13822
- GaAs:Zn, Te, N, Zn diffusion profiles, Hall effect and elec. cond. study 3—8085
- GaAs(:Si), MBE growth of high-purity layers and elec. props. meas. 3—34231
- $Ga_xIn_{1-x}As_yP_{1-y}$, lattice matched to InP, high freq. elec. transport 3—13850
- GaP, slip-induced elec. resist. anisotropy 3—57350
- GaS:Yb, single cryst., isothermal relax. currents 3—43202
- n-GaSb:Te, electron mobility, elec. cond. Hall effect 3—8506
- Ga_2Te_3, resist. studies under high press. 3—3179
- n-Ge, band gap, narrowing, effects of nonlinear impurity scatt. 3—47263
- n-Ge, charged grain boundaries, electronic struct. 3—22917
- Ge, conductivity and Hall coeff. meas., microcomputer-controlled expt. 3—40331
- Ge, current filament, secondary breakdown, effects of temp. on stability 3—34033
- n-Ge, elec. props. caused by impurity atmospheres left behind by dislocations 3—18707
- Ge, electrical cond. relax. due to warm carriers 3—57355
- Ge, optical grade, procurement specification 3—1725
- Ge-Bi-Te, phase transition temp., lattice periods and electrophysical props. 3—9057
- Ge-Si alloy, electron and X-ray irrad.-induced acceptors, elec. cond. study 3—18653
- $Ge_{38}As_8I_8$, clathrate semicond., prep., struct. and elec. props. 3—13814
- $Ge_{0.03}Fe_{2.97}O_4$, doped magnetite, mag. and elec. props. *(Korean)* 3—38733
- GeS:In filamentary crysts., prep., morphology, elec. and photoelec. props. 3—57344
- GeTe, high press. phase transitions, elec. cond. 3—28095
- (Hg,Cd)Te MIS devices, impedance characts., effect of crystal defects 3—47431
- $Hg_{1-x}Cd_xTe$, pure and ion implanted, laser annealed, Hall, cond. and C-V meas. 3—28347
- HgMnTe, threshold scatt. of conduction electrons 3—38378
- HgSe, thermoelec. power and elec. cond., high press. study 3—8518
- HoS, antiferromag., kinetic coeffs. in region of mag. ordering temp. 3—43356
- InAs, elec. transport and band struct. 3—3233
- $In_{0.53}Ga_{0.47}As$, electron transport, compositional clustering effects 3—8482
- In_2O_3-ZrO_2 solid soln., heat treatment, elec. resist. and struct. 3—58136
- InP, carrier mobility, grain size depend., elec. cond. and Hall effect studies 3—47343
- n-InP crystals, compensated, illumination influence on inpurity pot. elec. props., study 3—8548
- InP:Se, ion implanted, laser and furnace annealing effects on elec. props. 3—56975
- InP:Se^+, ion implanted, multiply scanned electron beam annealing, elec. props., RBS study 3—8102
- InSb, hole transport parameters in high elec. field, Monte Carlo calc. 3—43191
- InSb, ion implantation, enthalpy of formation and stability 3—42637
- InSb, magnetoresistance, Hall effect and elec. cond. near high press. phase transition 3—13840
- n-InSb, static cond. changes under ESR conditions 3—38697
- InSb, submillimeter photoconductivity and elec. cond. 3—3253
- InSb:Bi, doping during LPE, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3—33603
- InSb:Ge(Cd)(Zn), H ion irrad., conduction type inversion by isochronous annealing 3—43180
- InSb:S, ion implanted, S diffusion, laser annealing and elec. props. 3—38140
- InSb-GaAs heteroepitaxial structures, galvanomagnetic coeffs. *(Russian)* 3—8565
- InSe crystals, elec. and optical props. *(Korean)* 3—33722
- InSe, elec. props. meas. 3—52155
- InSe:Te, diffusion intercalated, elec. and struct. props. 3—3185
- α'-In_2Se_3, prep., optical spectra and elec. cond. 3—38822
- $In_{2-x}Sn_xO_{3-y}$ electrodes, sheet resistance 3—28356
- In_2Te_3, resist. studies under high press. 3—3179
- In_2Te_3-Sb_2Te_3, elec. and photoelectric props. 3—28358
- KBr:Li^+, activated crystals, cation semivacancies, positron annihilation and elec. cond. studies 3—24048
- KBr-KCl(KI) mixed crystals, elastic consts., phenomenological pot. model 3—47022
- KI complex, α cyclodextrin-KI-$I_2.4H_2O$, elec. resist. 3—38389
- LaB_6, thermal conductivity at low temps. 3—42862
- $(La_{1-x}Ca_x)CoO_3$, semiconductive and metallic elec. cond., composition depend. 3—8487
- $(La_{1-x}Ca_x)CrO_3$ ceramics, hot isostatic pressing and props. *(Japanese)* 3—3997
- $LaCoO_3$, spin state equilib. and semicond.-metal transition 3—18620
- $LaCrO_3$, Neel point, press. effect 3—14054
- La_2O_3-NiO system, cpd. prep. and elec. cond. 3—52139
- La_2S_3-Cr_2S_3 alloy synthesis and thermoelectric props. 3—14971

electrical conductivity of crystalline semiconductors and insulators continued
- $La_{1-x}Sr_xCo_{1-y}Ti_yO_3$, electron transport and mag. props. 3—47348
- $La_xY_{1-x}TiO_3$, mag. susceptibility, magnetisation and elec. cond. 3—3421
- $LiAlH_4$, elec. resistance under high press. 3—28353
- $LiBH_4$, elec. resistance under high press., evidence for phase transition 3—28353
- $Li_{0.5\ x/2}Co_xFe_{2.5-x/2}O_4$, magnetisation and mag. switching, thermomag. treatment effects 3—23707
- LiF, heavy ion irrad., defect struct. and mech. props. 3—8108
- Lu_2S_{3-x} thermoelectric power and resistivity obs. at 500°C 3—14972
- $Mg_xHg_{1-x}Se$, zero gap semiconductor-ordinary semiconductor transition *(Russian)* 3—3204
- MgO, periclase, electroengineering, prod. by melting in induction furnace with cold crucible 3—29046
- MgO single cryst., DC elec. cond. and thermal hysteresis effects 3—52142
- MgO:Ni, pure and dopes, high field conduction and dielec. breakdown 3—28776
- MgS, elec. cond., 973-1223K, S partial press. depend., ionic and hole cond. *(Japanese)* 3—38443
- Mn/SiO_2 thin cermet films, conductivity and Hall constant meas. using van der Pauw technique 3—38491
- Mn-ferrites, bulk and thin film, phys. props. 3—14094
- MnAs, elec., galvanomag., and mag. props. 3—28360
- Mn_3O_4:Ti, doped and undoped, elec. cond. and thermoelec. power meas. 3—47374
- $Mn_{1-x}Pt_{3-x}$ O_6, hydrothermal grown crystal 3—34210
- $MnPt_3O_6$, elec. cond. and mag. susceptibility 3—3191
- MnZn ferrite crystals, mag. props. meas., VTR mag. head appl. 3—23726
- $N_2H_6SO_4$, proton cond. and phase transitions 3—23375
- $NaBH_4$, elec. resistance under high press., evidence for phase transition 3—28353
- NaCl:Bi, dielec. const., losses and conductivity 3—19034
- NaCl-NaBr mixed crystals, elastic consts., phenomenological pot. model 3—47022
- Na_xCrO_2, preparation, mag. and elec. props. 3—23385
- $(Na_{1-x}(NH_4)_x)SO_4$ solid solutions, elec. and thermal props., depend. on comp. 3—4019
- Na_2O-Fe_2O_3-NiO-B_2O_3-P_2O_5 glass ceramics, crystallised, mag. and elec. props. *(Japanese)* 3—58144
- NbO_2, Nb_2O_5 form., elec. resist., effect of heating in air and Ar 3—8544
- $NbSe_3$, non-local cond. by charge density waves 3—18712
- Nb_3Se_4, superconducting critical field and elec. cond. 3—28485
- NdB_6, low temp. elec. cond. near Neel temp. 3—28351
- Ni ferrite, transport props., AC elec. cond. and mag. after-effect 3—13818
- Ni-Zn ferrite:Sn, elec. props. 3—13819
- $Ni_{0.76-x}Co_xFe_{2.24}O_4$, magnetisation and mag. switching, thermomag. treatment effects 3—23707
- NiO semicond., surface elec. cond. versus bulk cond. 3—28409
- $NiPS_3$, intercalated with amines, cryst. struct. and semiconducting props. 3—51573
- $NiPt_3O_6$, elec. cond. and mag. susceptibility 3—3191
- Ni_xVS_2, cryst. struct., mag. and elec. props. 3—7997
- $NpTe_2$ $(Te_{1.8})$, mag. and elec. props. 3—18937
- Pb-Sn-Te(Se), extruded alloys, carrier conc. and mobility 3—8507
- $PbFe_{12}O_{19}$, photoelectrochemical studies 3—52195
- $Pb_{1-x}Ge_xTe$, quantum ferroelec. semicond., low temp. resist. enhancement 3—38406
- PbI_2 films, radiation induced dissociation, desorption and aggregation 3—57233
- PbS-PbSe(Te) solid solutions, electronic density of states effective mass 3—57262
- PbSe-SnSe solid soln., phase transition, elec. study 3—8195
- $Pb_{0.76}Sn_{0.24}Te$:Cd, elec. cond. and cond. relax. to equilib. value 3—3201
- $Pb_{0.8}Sn_{0.2}Te$:Ag, solid soln., effect of Ag impurity on elec. and struct. props. 3—8498
- $Pb_{1-x}Sn_xTe$ doped crystals, low temp. cond., thermal radiation influence 3—8496
- p-$Pb_{1-x}Sn_xTe$, ferroelec. phase transition under electron irrad. 3—3651
- PbTe:Ag, effect of impurities on elec. props. 3—8497
- PbTe:Ag_xTe dopant effects on thermoelectric props. 3—14983
- PbTe:Bi, thermoelec. props., elec. cond. and thermal cond. 3—47371
- n-PbTe:Cr, thermoelec. props., current carrier conc. 3—47372
- PbTe-Bi_2Te_3, kinetic parameter dependence on impurity level, annealing effects 3—8515
- PbTe-FeTe system, phase diagram and elec. props. 3—2739
- PdPSe, elec., mag., photoelec., and optical props. 3—18701
- PrB_6, low temp. elec. cond. near Neel temp. 3—28351
- $PtSb_2$, narrow gap semicond., elec. cond., Hall and Seebeck coeffs. 3—52144
- PtSi-Si Schottky barrier contact, elec. characts., interface struct., effects 3—8558
- $RbBH_4$, elec. resistance under high press. 3—28353
- Re_2Te_5, cryst. struct. and semicond. props. 3—42582
- Rh_2O_3, elec., mag. and crystallographic props. 3—38411
- RuO_2, cryst. growth by vapour transport technique, struct. and elec. props. 3—19259
- $Sb_{1.5}Bi_{0.5}Te_3$-Bi_2Se_3 solid soln. single cryst., elec. and thermal conductivities 3—57345
- $Sb_{2-x}Bi_xTe_3$:Se, elec. cond. and forbidden-band width 3—3186
- $SbCl_5$-graphite intercalate, c axis elec. resistivity 3—52156
- Sb_2Te_3, Ag doped and undoped, elec. props., reflectivity, nature of Ag impurity 3—23381
- Sb_2Te_3-Te eutectic system, hardness and elec. cond. interrelations 3—52138
- Sc_2S_{3-x} thermoelectric power and resistivity obs. at 500°C 3—14972
- Se, trigonal single crystal, temp. depend. of AC elec. cond. 3—33729
- p-Si, acoustic phonon limited cond. and Hall mobilities, deform. pot. theory calcs. 3—47366
- n-Si, band gap, narrowing, effects of nonlinear impurity scatt. 3—47263
- Si, CVD grown on amorphous substrate, shaped beam laser recrystallised, structural and elec. characts. 3—57244
- Si, conductivity, nonequilib. field effect at low temp. *(Russian)* 3—47359
- Si, diffusion process, elec. props. and impurity conc. *(Dutch)* 3—57143
- Si, electrical conductivity under large uniaxial deformations 3—52157
- p-Si, grain boundary I-V characts., tunnelling 3—23380
- Si, grain boundary struct., EBIC contrast *(French)* 3—22915
- Si, grain boundary struct. rel. to growth technique and elec. props. 3—51626
- Si, Hall coeff. and conductivity mobility, acoustic phonon scatt. 3—8512
- Si, heat treatment studies of O defect-impurity interactions 3—2598

electrical conductivity of crystalline semiconductors and insulators continued
n-Si, impurity cond., AC and DC hopping cond., extended pair approx. 3-38386
Si, impurity dependent effective mass, transport props. 3-47252
Si, ion implantation by 11 MeV As ions 3-8076
Si, ion implanted laser annealing, charact. and solar cell fabrication 3-13269
Si, laser annealed, melt dynamics meas. 3-46996
Si, neutron irrad., annealing kinetics of defects, elec. cond. study 3-13290
Si, polycryst., grain boundary effects on elec. props. and photovoltaic response *(French)* 3-22918
Si, polycryst., grain boundary passivation and analysis for solar cell applications 3-51629
Si, polycrystalline, Hall mobility and resistivity, model 3-18725
Si, polycrystalline, transport props., three-dimens. model 3-18700
Si sheets, grain boundaries, TEM and EBIC studies 3-22916
Si, solidification during pulsed laser annealing, elec. cond. and optical reflectivity study 3-42754
Si, threshold effect interpretation in acoustic cell expts. 3-38392
Si:As, B, ion implanted and incoherent light annealed, characterisation 3-56922
Si:As, ion implantation damage, electron-induced conductivity study 3-8075
Si:As, ion implanted, flash-lamp annealing, TEM, elec. resist. and Rutherford backscatt. study 3-27979
Si:As(Sb), ion implanted, comparison of solubility limits and elec. activities 3-2583
Si:Au, transient conductance meas. during pulsed laser annealing 3-57352
p-Si:B, distinction of thermally induced defects, resist. meas. 3-51654
Si:B, single step doping by UV laser, Auger electron analysis, spreading resist. obs. 3-42634
Si:Be, diffusion coeff., and solid solubility, elec. cond. study 3-2883
Si:Er, γ-ray irrad., photocond. and elec. props. 3-43235
Si:Ga, ion implanted, dopant distrib., elec. activity and damage annealing 3-27970
Si:Gd, electron localisation at mag. phase transition, elec. resist. study 3-3099
Si:H solar cell efficiency, passivation techniques 3-24583
Si:He$^+$(C$^+$)(N$^+$)(Ne$^+$)(Ar$^+$)(Kr$^+$), ion implantation, radiation damage accumulation kinetics 3-37945
Si:In, ion implant damage recovery, recrystallisation and elec. props. 3-56920
Si:In, ion implanted, high temp. diffusion and elec. props. 3-57142
Si:Mg, diffused, elec. and optical props. 3-18699
Si:O, thermally activated O donors distribution, spreading resist. study 3-33284
Si:P, electrical conductivity meas. near metal-insulator crit. pt. 3-57394
Si:P, heavily doped, P inactivation mechanism 3-18335
Si:P,O, thermal O donors, elec. cond. study 3-3100
Si:Te, I, ion implanted, impurity levels, Hall effect and elec. resist. studies 3-43102
SiC, reactive sintered, props. rel. to fractional comp. 3-47813
SiC, reactively sintered, processing factor influence on struct. and elec. characts. 3-24196
Si_3N_4 hot pressed dielectric material, quality control 3-24195
SiO_2, electron attenuation in cond. band, Monte Carlo calc. 3-43171
SiO_2/Si system, elec. cond. and elec. breakdown of SiO_2 3-3345
SmB_6, transport and US props., NMR, amorphous Wigner crystn. model 3-52150
Sm_3Se_4, valence fluctuation cpd., AC resist. meas. 3-52148
SnI_4, DC cond., 30 to 110°C, cond. mechanism 3-28348
SnO_2:Sb_2O_3, elec. cond. and defect struct. 3-23376
$SrCl_2$:K^+, lattice relax., V_k mobility and electron-hole recomb., luminesc. and elec. cond. meas. 3-19208
SrH_2, elec. resistance under high press. 3-28353
SrS, elec. cond., 973-1223K, S partial press. depend., ionic and hole cond. *(Japanese)* 3-38443
$SrTiO_3$, electric transport, interface and bulk prop. effects 3-43172
$SrTiO_3$:Fe(Al)(Cr), acceptor-doped, high temp. defect struct. 3-8072
$SrTiO_3$:La, quenched and reduced ceramic, elec. cond. 3-52145
TeO_2:Mn^{3+}(Fe^{3+}), elec. cond. study 3-28397
$Ti_{1-x}Nb_xS_2(Se_2)$, electronic and optical props. *(French)* 3-23387
$Ti_{1-x}Ni_xS_2(Se_2)$, electronic and optical props. *(French)* 3-23387
TiO_2 ceramic, cation contamination effects on elec. resist., microstruct. and discoloration 3-33718
TiO_2 photoanodes for photoelectrochemical cells, prep. and characterisation 3-48072
TiO_2:Nb, H, elec. cond., Hall effect and carrier scatt. 3-47344
Ti_nO_{2n-1}, n=4-9, elec. cond., 4 to 320K 3-38442
$Ti_{1+x}S_2$, angle-resolved photoemission and transport props., stoichiometry effects 3-39004
$TiSi_2$, oxidation on polycryst. Si 3-19535
$Ti_{1-x}V_xS_2(Se_2)$, electronic and optical props. *(French)* 3-23387
$Tl_{1-x}Bi_{1+x}Tl_2$, existence in Tl-Bi-Te system, phase transformations and elec. props. *(French)* 3-33394
TlSe, elec. resist. and Hall effect, press. dependence meas. 3-33725
Tl_4SnS_3 ($Tl_2Sn_2S_3$), elec. cond. and optical absorpt. meas. *(French)* 3-52151
Tl_3VS_4, crystal growth, impurity behaviour 3-52924
$Tm_{1-x}Eu_xSe$, intermediate valence cpd., elec. resist., vol. change, compressibility, energy gap meas. 3-52080
UC_2 reactor fuel physical properties due to irradiation 3-31531
U_3O_{8-z}, phase transition from elec. cond. meas. and X-ray diffr. 3-58117
US, neutron irrad. effects 3-16853
$(V_{1-x}Al_x)_2O_3$, elec. resist., Seebeck coeff. and metal-insulator transition 3-13844
VO_2, current filament, differential impedance, thermal switching mechanism 3-33767
V_2O_3, high temp. resist. characts., effect of cation vacancy conc. 3-13813
V_2O_5, free and bound polarons, ESR and DC cond. meas. 3-23293
$Y_{3-x}Ca_xFe_{5-x}Ti_xO_{12}$ garnet, mag., elec. and thermoelec. props. 3-28352
YIG:Si(Ge)(Sn)(Hf)(Th), elec. cond. meas. 3-52147
YbB_{12}, valence fluctuating system, mag. and elec. meas. 3-52149
$YbGa_2Se_4$ single cryst., injection and thermodepolarisation currents 3-43187
P-$ZnGeAs_2$, H^+ irrad., elec. resist. and Fermi level 3-43173
$ZnIn_2S_4$ (III), layered cryst., anisotropic cond., and comp. faults, expt. study 3-3197

electrical conductivity of crystalline semiconductors and insulators continued
$ZnIn_2S_4$, anisotropic cond., effects of comp. faults 3-8489
$ZnIn_2Se_4$ (III), AC conductivity, comp. faults effects 3-57349
ZnO, ceramic semicond., nonlinear cond., potential barriers, voltage contrast imaging in secondary electron microscope 3-52162
Zn_3P_2, elec. cond., Hall effect and acceptor levels 3-18702
Zn_3P_2:Mg(In)(Sn)(Se), impurity effects on elec. cond. 3-52131
ZnS:Cu, electroluminesc. and elec. cond., temp. and field dependence meas. 3-14358
ZnSe, struct. defects rel. to p-type cond. 3-43175
ZnTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3-33441
ZrC-C system, chemical gas-phase deposited, specimens high temp. electrical resistivity, temp. dependence 3-52137
ZrC_x, elec. and thermal conductivity, struct. variation and impurity effects 3-8276
ZrO_2-Nd_2O_3 solid solns., cryst. struct. and elec. cond. 3-2496
$(ZrO_2)_{0.83}(YO_{1.5})_{0.17}$, sintering and cond., effect of impurities 3-19307
$ZrSe_3$, vapour grown, elec. resist. Hall coeff., and thermoelec. power, 200 to 400K 3-33728

electrical conductivity of electrolytic liquids
see also electrochemical analysis; electrolytic ion mobility; Wien effect
acoustic disturbances influence 3-13505
binary systems, liq., diffusion, linear momentum conservation 3-18489
charged particle dilute suspension, static conductivity 3-57114
electrochemical double layer, dielectric const. and cond., thin double layer approx. appl. 3-14191
electrolyte solns., dielectric saturation and friction, EHD eqns. 3-34027
halides, molten, press. effects on elec. cond. 3-47136
ionic tracer diffusion coeff., extended theory 3-18494
KCl aqueous solns., electro-osmotic flowing, resist. fluctuations 3-13501
molten salt, simple, vel. and charge current autocorrel. functions 3-18206
propylene carbonate-1,2-dimethoxyethane mixed electrolyte, cond., for Li cell appl. 3-47131
salt solns. in liquid alkali metals, elec. resist. and solvation enthalpy 3-2857
stationary and homogeneous electrolytes, elec. cond. theory 3-23066
temperature compensation, electrical conductivity in conductometric apparatus *(Polish)* 3-36041
water and aqueous solutions, electrical conductivity meas. *(German)* 3-38110
BaO-Fe_2O_3, molten ferrite system, elec. cond., viscosity, Fe^{3+} coordination *(Japanese)* 3-38107
$CaCl_2$, aq. soln., ionisation consts. assoc. behaviour and elec. cond. 3-33474
CaO-Fe_2O_3, molten ferrite system, elec. cond., viscosity, Fe^{3+} coordination *(Japanese)* 3-38107
$CuSO_4$ aqueous ionic solns., 1/f cond. fluctuations 3-28132
HCl, aq. soln., diffusion, electrical conductance, linear response theory 3-18490
HCl, aq. soln., diffusion, elec. cond., linear response theory 3-18493
HCl, aq. solns., diffusion, elec. conductance, linear response theory 3-18491
HCl, aq. solns., diffusion, elec. cond., linear response theory 3-18492
K^+ ion conductance in cooled and supercooled water, press. depend. 3-13498
$Li_2B_{10}Cl_{10}(Cl_{12})$ nonaqueous electrolytes, prep. and resistivity, Li cell appl. 3-8236
$MgCl_2$, aq. soln., ionisation consts. assoc. behaviour and elec. cond. 3-33474
NaCl, molten, IR spectrum, mol. dynamics simulation, cond. meas. 3-14273
Na_2O-Fe_2O_3, molten ferrite system, elec. cond., viscosity, Fe^{3+} coordination *(Japanese)* 3-38107
$SbCl_3$-$AlCl_3$ molten mixtures, elect. conductivity 3-47133
$SbCl_3$-$AlCl_3$-NaCl molten mixtures, elect. conductivity 3-47133
SrO-Fe_2O_3 *(Japanese)* 3-38107

electrical conductivity of gases
see also space-charge-limited conduction
air, moist atmospheric, ion content, electrical conduct. meas. 3-46681
electron swarms, electron diffusion coeff., Monte Carlo simulation 3-37606
electron swarms with power-law elastic scatt., Boltzmann eqn. anal. 3-51272
high temperature air, Cu contaminated, rel. to arcs 3-27755
optogalvanic effect, use to meas. temperature of gases *(Dutch)* 3-51273
Hg vapour, effective electron-neutral diffusion coeffs. 3-46678
SF_6, partially ionized gas, electrical conductivity depend. on electric field strength 3-27641

electrical conductivity of liquids
see also electrical conductivity of electrolytic liquids
anthracene in dielectric liqs., DC cond. signals obs. following pulsed photoionisation 3-9332
blood, electrical conductivity, practical anal. 3-58635
cholesterin esters, smectic liq. cryst. to solid transition, elec. cond., electron emission and luminesc. meas. 3-18488
cyclohexane liq. between polymer coated electrodes, charge transfer phenomena 3-19056
DNA aqueous solns., thermal reversibility, dielec. and elec. cond. meas. 3-53633
gas-liquid suspension, containing electrolyte, elec. cond., acoustic disturbances influence 3-13505
glycerol-H_2O mixtures, conductivity, relax. time and activation energy at RF 3-38416
interface submitted to high frequency magnetic field, effect of finite conductivity in inviscid stability 3-51245
liquid films, electrical conduction in 10^{-4} to 10^{-1}s range 3-23369
liquid metal-NH_3 solns., strongly decomposed, current instability, plasma waves 3-47376
metal, struct. induced effects on electronic props., multiple scatt. theory 3-3040
metal-Te liq. alloys, dil., resist. and thermoelec. power 3-3149
metals, short mean-free path, electronic transport, review 3-3152
metals, strong-scattering expanded, elec. cond. as a function of expansion 3-33700
metals, struct. factors, compressibility, and elec. resist. 3-22763
metals and alloys, DC transport coeff. calc. by derivatives of time correl. functions 3-28330
microemulsions, diffuse phase inversion, percolation, bicontinuous structs. 3-58452

electrical conductivity of liquids continued

- nematic liq. crysts., injection currents 3−7906
- organic salts, binary aq. mixtures, Walden product, ionic cond. meas. 3−28129
- propane, supercritical, electron mobility meas. as function of density and temp. 3−13815
- streaming current in pipe, conductivity dependence *(Japanese)* 3−46654
- synthetic aromatic insulating liquid, elec. conduction and dielectric loss obs. 3−28762
- tetramethylsilane, liquid, injected electrons Hall mobility, room temp. meas. 3−38404
- water, electrical conductivity under shock loading up to 40 GPa 3−51836
- Ag chalcogenides, Hall effect, thermoelec. power and elec. cond. changes on melting 3−13839
- $AgTlSe_2$, liq. semicond., elec. props. 3−43216
- Bi-BiI_3, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3−43241
- $CaCO_3$, precipitation from aqueous soln., induction period rel. to supersaturation and impurities 3−33154
- Cs, solid and liq., thermal cond., elec. cond. and thermoelec. power 3−47329
- Fe-B, molten, structural transition, phase diagram 3−18435
- GeTe melt, Hall effect 3−23412
- He film, two dimensional trapped electrons, electron cond. and third sound vel. 3−28185
- In-InI_3, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3−43241
- In-Te, elec., mag., optical, thermodynamic, and struct. props. 3−56805
- K-NH_3 solns., elect. cond. and thermoelect. power 3−47373
- K_2Cs, critical point at 258K 3−38025
- KH_2PO_4, aq. soln., specific conductance rel. to temp. and conc. 3−2860
- Li, elec. resist., melting point to 550°C 3−3148
- Li-Cd system, phase diagram, resist. and DSC meas. 3−24209
- Li-Sn, elec. resist., effects of strong chem. interactions 3−3151
- N_2 3−28364
- N_2, liquid, prebreakdown phenomena, optical observation 3−23873
- Na-Sn(Pb), elec. resist., effects of strong chem. interactions 3−3151
- Ni-Al, mag. susceptibility and elec. resistivity, 700 to 800°C 3−47473
- Ni-Ge liquid alloy, struct. and elec. cond. *(Russian)* 3−7902
- Pb, liq., energy band struct. and resistivity, pseudopotential calcs. 3−33697
- PbTe melt, Hall effect 3−23412
- S-Ge-As-Te glass, elec. cond., 20°-1150°C 3−47347
- Se-Ge-As-Te glass, elec. cond., 20°-1150°C 3−47347
- Si, solidification during pulsed laser annealing, elec. cond. and optical reflectivity study 3−42754
- Sn-Te liq. alloys, electronic props., compound-forming effect 3−28331
- SnTe melt, Hall effect 3−23412
- Te, liq., semicond.-metal transition, cond. and thermoelec. power meas. 3−13867
- $Tl_x(AgTlSe_2)_{1-x}$ molten alloys, elec. and mag. props. 3−52206
- Zn-Sb, liquid, elec. resist. and thermoelec. power 3−33699

electrical conductivity of one-dimensional systems *see one-dimensional conductivity*

electrical conductivity of plasmas *see plasma transport processes*

electrical conductivity of solids

- *see also electrical conductivity of amorphous metals and alloys; electrical conductivity of amorphous semiconductors and insulators; electrical conductivity of crystalline metals and alloys; electrical conductivity of crystalline semiconductors and insulators; electronic conduction in crystalline semiconductor thin films; electronic conduction in insulating thin films; electronic conduction in metallic thin films; ionic conduction in solids; recovery; superconductivity*
- alloys, metallic, semiconducting and semimetals, band struct. and transport props., average lattice method *(Rumanian)* 3−13702
- Anderson metal-insulator transition, dielec. const. anomalies 3−3068
- binary solid particle system, electric resist. as measure for estimating randomness, edge effect *(Japanese)* 3−18464
- cellulose acetate, neutron irrad. effects on elec. cond., dosimetry appl. 3−17074
- conductor-insulator composites, charging phenomena, SEM study 3−40726
- dense heavy non-polar fluids, model for excess electron transport 3−18675
- dense Kondo system resistivity and periodic Anderson model 3−52123
- diamond, CB-type, polycrystalline, physicomech. and physicochem. props. 3−14599
- discontinuous metal systems, microscopic aspects of cond. 3−23505
- disordered 1-D system, elec. resist. 3−57327
- disordered conductor, spin relaxation and interaction effects 3−3580
- disordered correlated medium, wave diffusion current and conductivity 3−33694
- disordered materials, transport props., integral representation of incoherent field, multiple scatt. theory, pair correlations 3−23347
- disordered system, elec. cond. of three-dimens. Anderson model 3−43141
- disordered systems, time-of-flight meas. under dispersive transport conditions 3−38362
- electrothermal inspection of conducting materials 3−24474
- glass fibre, electrocond., with metallic grain dispersion, prep. by ion exchange and reduction method 3−14551
- granular materials, variable-range hopping cond., metal-insulator transition 3−47346
- graphite fibres, derived from benzene, Raman spectra and resist. meas., effect of intercalation 3−23951
- graphite fibres, highly ordered, high field magnetoresist., X-ray diffr., and Raman spectra 3−57333
- graphite intercalation compound, $C_{9.3}AlCl_{3.3}$, electrical cond., counter-EMF obs. during phase transition 3−23349
- graphite intercalation compounds with K and $FeCl_3$, c-axis elec. resist. and thermopower, temp. depend. 3−8475
- graphite intercalation cpd. With $CuCl_2$, pitch-based fibre, elec. and mechanical props. 3−52106
- graphite intercalation cpd. with K, c-axis resist. and metal-insulator transition 3−28321
- graphite-alkali metal intercalation cpds., chemisorpt. of H_2, ESR and elec. resist. investig. 3−51927
- graphite-quartz sand dispersed mixture, elec. cond. 3−43246
- graphite-$SbCl_5$ intercalation cpd., commensurate-incommensurate transition, TEM and elec. resist. meas. 3−13437
- graphites, exfoliated, elec. resist., temp. depend., 1.5 to 300K 3−43148
- inhomogeneous media with nonellipsoidal inclusions, elec. cond. 3−33696

electrical conductivity of solids continued

- inhomogeneous system, periodic distrib. of inclusions, electric field and cond. calcs. 3−33641
- ion crystals in neutron stars and degenerate dwarfs 3−25506
- Kondo effect and localization 3−52124
- magnetic crystals, anti-identity operations and props. tensors 3−16292
- magnetic symmetry and the electrical conductivity tensor 3−8467
- mixtures, binary, thermopower, general anal. 3−47323
- monopnictides, MZ:Ce(Yb) (M=Sc, Y, La; Z=As, Sb, Bi), cryst. field splitting and single-ion exchange, elec., mag., and ESR study 3−18985
- nonohmic conductivity for acoustic-phonon scattering 3−52105
- off-diagonal disorder and 1D localisation, probability distrib. of resist. 3−3142
- polyacetylene structures, paramag. solitons *(German)* 3−38674
- polycrystals and two-phase symmetric materials, effective conductivity, sphere assemblage model 3−52102
- porcelain, effects of fast neutrons on elec. resistivity, dosimetry appl. 3−26500
- powder composites, conductivity, effect of diffusion of components of limited intersolubility 3−14748
- pressure dependence in high mag. fields 3−3143
- random directed-diode network, cond. near percolation threshold 3−13794
- rubber, C block filled, degree of dispersion rel. to elec. resist. and matrix phys. props. 3−14814
- semiconductor, two-dimens. disordered, charge carriers power-law localisation 3−13771
- semiconductor with smooth macroscopic inhomogeneity, transport equations 3−23370
- semimetal films, conductivity, consequence of electron scatt. mechanisms 3−3342
- semimetals, prelocalisation and 1-D residual resistance 3−57301
- spacecraft thermal control dielectrics, elec. cond. and discharge 3−39998
- synthetic metals, C based, charge transfer and maximum cond. 3−18691
- TCNQ dispersed radical anion salts, in poly(vinyl acetals) matrix, CT interaction and elect. cond. 3−13830
- thin films and surface layers, (111) oriented, weak-field magnetoresist. and two-dimens. cond. 3−3336
- two dimensional disordered system, conductivity, elec. field effects 3−18676
- two-component mixture, percolation cond. anisotropy 3−13795
- two-dimensional triangular site network, cond., Monte Carlo simulation 3−13791
- Ag sintered submicron powders, rel. to low temp. heat exchangers 3−56416
- Al-Si coconut shell char particulate composite, prep. and props. 3−3989
- C fibres, elec. resist., anomalous behaviour 3−47325
- C-PVC composite, random stick-like conducting particles, percolation 3−8494
- C-PVC composites, elec. cond. and permittivity 3−8479
- $Ce_{1-x}La_xB_6$, elec. resist. meas., scatt. mechanisms 3−52122
- $Ce_{1-y}Y_yB_6$, elec. resist. meas., scatt. mechanisms 3−52122
- Cu complex, Cu-phthalocyanine-iodine, ESR, dielec. function and elec. cond. 3−18980
- Cu sintered submicron powders, rel. to low temp. heat exchangers 3−56416
- $CuCl_2$ intercalated C fibres, metallic cond., air stability and mech. props. meas. 3−38363
- Hg-Ar system, metal-nonmetal transition and annealing effects on elec. cond. 3−43240
- In-In_2O_3 thin film composite, reactively sputtered, struct. phase transition study 3−28989
- Li_xZrS_2 intercalation cpd., structural and semicond.-metal transition obs. 3−52036
- MnO_2 powder, anisotropic conductivity in press. range between 10 MPa and 200 MPa *(German)* 3−33717
- NiO-Ni_3S_2 two-phase mixtures, elec. conduction meas. 3−43168
- $Ni_{3\pm x}S_2$, chem. diff. and elec. cond. 3−13530
- Pt ultrathin wires, electronic cond., size-dependent effects 3−23348
- ReN film, ion implantation prep., struct., supercond. and elec. props. 3−28467
- $(SN)_x$ metallic polymer, low temp. elec. cond., $T^{1/2}$ depend. 3−57328
- SbF_5-graphite stage one intercalation cpd., order-disorder transform. study 3−8182
- Sn-Ge granulated films, elec. cond. and supercond. props. *(Russian)* 3−38516
- TiN, emissivity and electrical cond. meas. at high temp. 3−13495
- UI_4, high temp. phase transform., elec. cond. and calorimetric meas. 3−33419
- $Y_{0.9}Tm_{0.1}S$, Kondo effect, mag. susceptibility, elec. resist. meas. 3−52363

electrical conductivity transitions

- *see also metal-insulator transition*
- chalcogenide glass semiconductor thin films, threshold and bistable switching, chem. modification effects 3−52283
- dirty 2-D superconductors, resistive transitions, Coulomb-gas model and vortex fluctuations 3−52318
- glass-metal particulate system, switching kinetics 3−52208
- ionic crystal, abrupt conductivity changes, elec. field induced, theory 3−8252
- lead phthalocyanine, monoclinic modification, quasi-one-dimensional, metal with charact. order of mol. dipoles 3−8028
- metal-NH_3 solns., liq., strongly decomposed, current instability 3−28395
- 1,4,5,8-naphthalenetetracarboxylic dianhydride thin film, cond. changes induced by Ar^+ ion beam irrad. 3−8540
- nickel phthalocyanine thin film, cond. changes induced by Ar^+ ion beam irrad. 3−8540
- p^+-n-n^+ structure with variband base, switching process anal. 3−13892
- 3,4,9,10-perylenetetracarboxylic dianhydride thin film, cond. changes induced by Ar^+ ion beam irrad. 3−8540
- TCNQ salts, Ag TCNQ and Cu TCNQ, optical switching 3−3843
- tetraselenotetracene iodomercurate, low-temp. resistance anomalies *(Russian)* 3−8543
- Ag_2Se-Se-metal thin film sandwiches, polarized memory switching effects 3−13869
- θ-$Al_xV_2O_5$, metal-semicond. transition, elec. resist. and mag. susceptibility study 3−57392
- $(As_{13}Te_{24}Si_{27}Sb_{18})_{1-x}Fe_x$ RF sputtered films, struct., elec., and optical props. 3−13649
- Au-$As_{30}Te_{48}Ge_{10}Si_{12}$-Au struct., thermal switching at electrode-amorphous semicond. interface 3−8542
- Bi, semimetal-semiconductor transition, mag. field induced 3−13866

electrical conductivity transitions continued
- CaO-CuO-P_2O_5-CuI glasses, memory switching 3—43239
- CdS, photoconductivity relax. under repeated illumination 3—8534
- CdS single cryst., high temp. conductivity relax., Cd diffusion 3—3263
- CdSe single cryst., high temp. conductivity relax., Cd diffusion 3—3263
- $CrAs_{0.47}Sb_{0.53}$, electronic struct. mag. and structural phase transitions, press. study 3—18896
- Cu-SiO_2, granular films, temp. depend. elec. resistivity meas. 3—3261
- Cu_2O, elec. cond., switching phenomena, temp. depend. 3—18709
- CuSCN, insulator to semicond. transition, press. induced 3—28396
- Fe_3O_4, electrical and magnetic transitions 3—33636
- $Fe_2(WO_4)_3$, semicond.-metal transition 3—8419
- GaAs-Al_xGa_{1-x}As heterojunction layers, fast electron switching and storage effects 3—8563
- Ga_2Te_3, resist. studies under high press. 3—3179
- Ge, elec. cond. transition, Hall coeff. meas., neutron irrad. effect, percolation theory 3—38445
- Ge, electrical cond. relax. due to warm carriers 3—57355
- $Ge_{15}Te_{81}S_2Sb_2$ amorphous thick films, switching and memory phenomena, thermophonic investigation 3—38441
- InAs-GaAs synthesised superlattices, mag., optical, elec., magneto-optical props. and cyclotron reson. 3—13899
- In_2Te_3, resist. studies under high press. 3—3179
- Li_xZrS_2 intercalation cpd., structural and semicond.-metal transition obs. 3—52036
- NbO_2, Nb_2O_5 form., elec. resist., effect of heating in air and Ar 3—8544
- $Pb_{0.76}Sn_{0.24}$Te:Cd, elec. cond. and cond. relax. to equilib. value 3—3201
- Si:P, electrical conductivity meas. near metal-insulator crit. pt. 3—57394
- Si-SiO_2-SnO_2-metal heterostruct. memory element, current transport and switching effect study 3—57432
- Si-SiO_2-SnO_2-metal heterostructure, nonvolatile memory element, props. study 3—57433
- $Si_{12}Te_{48}As_{30}Ge_{10}$ chalcogenide glass films, size effect and switching in high elec. field 3—43303
- TaS_3, freq.-depend. cond., CDW transport 3—23368
- TaS_3, nonlinear cond., CDW transport 3—23367
- Te, liq., semicond.-metal transition, cond. and thermoelec. power meas. 3—13867
- $TeO_2:Mn^{3+}(Fe^{3+})$, elec. cond. study 3—28397
- Ti_nO_{2n-1}, n=4-9, elec. cond., 4 to 320K 3—38442
- $Tl_x(AgTlSe_2)_{1-x}$ molten alloys, elec. and mag. props. 3—52206
- VO_2, current filament, differential impedance, thermal switching mechanism 3—33767
- VO_2 film, electronic switching, film-substrate interface effects 3—13935
- V_2O_3, electrical and magnetic transitions 3—33636
- V_2O_5-Bi, glass-metal particulate system, switching kinetics 3—52208
- V_2O_5-P_2O_5-Bi_2O_3 glass-metal particulate composite, elec. cond. switching, obs. and theory 3—18755
- V_3O_5, electrical and magnetic transitions 3—33636
- $V_{50+x}RU_{50-x}$, struct. transform., elec. resist. meas. 3—33431
- $V_{50}Ta_xRU_{50-x}$ and $V_{50-x}Ta_xRU_{50}$, struct. transform., elec. resist. meas. 3—33431

electrical contacts
- *see also contact potential; contact resistance; ohmic contacts; point contacts*
- bond contact-impedance model 3—43268
- n-Cd_xHg_{1-x}Te photoconductor, carrier accumulation effects at contacts 3—28381
- harmful gas influence on contact components and materials in communication technology, testing *(German)* 3—43999
- let-through currents, effect on thermophysical props. 3—40640
- metal microcontacts, thermal relax. in HF EM field 3—33781
- metallic contacts, elastic scatt. effects on I-V characts., ohmic current 3—43267
- semiconductor, bounded, recombination wave excitation for weakly injecting contacts 3—57363
- semiconductor, unipolar, short sample, relaxational elec. instability 3—23397
- Ag-CdO cermet contact, fabrication using ultrasound, physical and mechanical props. improvement *(Bulgarian)* 3—43843
- Ag-Cu rotating electrical contacts, wear debris analysis 3—52229
- Ag-Ni (30 wt.%), elec. contacts, erosion wear in low voltage apparatus 3—14744
- Au contact electroplating, modern techniques, review 3—3976
- CdTe/CuAu low resistance elec. contact, vacuum deposition prep. 3—18783
- Ru, electroplated, with thin Au covering, contact and wear resistance 3—43991
- a-Se/Al contacts, energy barriers, photovoltaic effect study 3—47423
- Si amorphous solar cell, electrode element distrib. near contacts and junction layers 3—53536
- Si devices, appl. of ion beam mixing to electrical contacts 3—28167
- Si-poly Si interconnections, contact resistance 3—28419
- Te/a-Se contacts, energy barriers, photovoltaic effect study 3—47423

electrical double layers *see electrochemistry; liquid theory*

electrical engineering
- *see also high-voltage engineering*
- education system requirements for producing qualified engineers *(German)* 3—16107
- international prospects for engineering education—a comparative analysis *(German)* 3—16109
- professional electrical engineer of the future, profile of requirements and career opportunities in West Germany *(German)* 3—16108

electrical engineering applications of computers *see electrical engineering computing*

electrical engineering computing
- *see also computerised control; computerised instrumentation; electric machine analysis computing; power system analysis computing; power system CAD*
- dielectric bodies, Rayleigh scatt., tensor elements evaluation 3—26912
- electrodynamics, EDIP software for automatic soln. of problems *(Russian)* 3—17407
- electrostatic fields, EFIR software for calc. of potentials and excitation *(Russian)* 3—17401
- EM props. of circular cylindrical coil in set of planar ferromagnetic regions 3—12036
- performance anal. with open circuit defects 3—4393

electrical engineering computing continued
- single-diffused Gaussian p-n junctions, analytical solns. for avalanche breakdown voltages 3—52235
- two-dimensional eddy current and mag. field problems, interactive graphic soln. 3—36908

electrical fault location *see fault location*

electrical faults
- *see also accidents; discharges (electric); electric distortion; fault currents; fault location; flashover; insulation; losses; protection; testing; transients*
- Faraday MHD convertor equivalent cct. and out-of-channel fault model 3—51396
- solar photovoltaic arrays operational electrical faults detection 3—24606
- ZnO varistors, leakage currents, carrier trapping mechanism obs. 3—33738

electrical forming *see electroforming*

electrical insulation *see insulation*

electrical noise *see noise*

electrical power systems *see power systems*

electrical properties of substances
- *see also dielectric properties of substances; discharges (electric); electrical conductivity; flexoelectricity; thermoelectricity*
- glass, conference, Beijing, People's Republic of China (Aug. 1981) 3—30548
- grain boundaries, conf., Caen, France (Sept., 1982) 3—44892
- semiconductor materials, current growth techniques, material props., device fabrication, conf., Los Angeles, CA, USA (Jan. 1982) 3—16073
- semiconductors, grain boundaries, conf., Boston, MA, USA (Nov. 1981) 3—49091

electrical resistance measurement *see electric resistance measurement*

electrical resistivity *see electrical conductivity*

electrical transport processes *see electrical conductivity*

electricity
- *see also atmospheric electricity; electric charge; electric current; electrical properties of substances; electromagnetism; terrestrial electricity*
- generalized Ohm's law, potential difference, and voltage measurements 3—5564
- houses, complementarity of solar power and electricity 3—4368

electricity supply industry
- 200 MW compressed air energy storage peak lopping power plant 3—39532
- coal and oil mix as power station fuel, market potential and preparation cost 3—58470
- cracks in BWR stainless piping, repair work by electric utilities, organisation aspects 3—6373
- distributed photovoltaic electric power systems, assessment 3—58507
- distributed solar power systems, technical and economic impacts 3—58482
- heat pumps, electricity supply effects in Austria by 1990 *(German)* 3—29440
- Heber Binary Cycle Plant for demonstrating commercial viability of geothermal power 3—58473
- methanol as boiler fuel for electric power generation, combustion test and economics 3—29372
- municipal solid waste as electric utility fuel, EPRI seminar 3—58472
- municipal solid waste as electric utility fuel, technical and economic assessment 3—14917
- nuclear power in German Federal Republic, development from 1955 to 1982, data and factors *(German)* 3—48122
- PWR secondary water chemistry guidelines for corrosion reduction in steam plant 3—45633
- radiation training programmes in electric utilities operating nuclear reactors in USA 3—6433
- reactor coolant systems, nonchemical decontamination methods for post-accident use, evaluation 3—45649
- research for cheaper solar cells, throughout world and in Switzerland, benefits *(German)* 3—58501
- USA, solar power projects, 1981 survey 3—29375
- wind power project engineering from electric power utility standpoint 3—39439
- wind turbine research and development programmes in USA and Europe, to late spring 1981 3—14920
- windpower in the UK electricity supply industry 3—14918
- Na-S batteries for utility load levelling appls. 3—44117

electro-oculography *see bioelectric potentials; eye*

electro-optical devices
- *see also electrochromic devices; liquid crystal devices; optical modulation*
- A/D convertor, electrooptic guided-wave, 2-bit 1 Gsample/s 3—7219
- area detectors for recording X-ray diffr. patterns 3—4692
- bistable devices with delayed feedback, dynamic behaviour 3—27135
- bistable system, periodic oscills. and chaos, possible guided-wave all-optical square-wave oscillators 3—50700
- Bragg waveguide coupler 3—56316
- deflector, total internal refl., deflection angle and beam profile calc. 3—12298
- deflectors, gradient-type, resolving power, comparative anal. 3—22191
- electric field strength meas. by sensitive electro-optical system 3—35968
- ferroelectric smectic cell prep. for electro-optical microsec. switches, alignment control using spacer edges 3—51476
- fibre optic technology, proposed symbolic representation/ for optoelectronic components 3—42010
- filter, variable density, PLZT, fusion reactor material testing appls. 3—7143
- fine particle sizer, electro-optic birefringence device 3—260
- gate array, high density, PLZT based, light transmission characts. 3—7152
- HV laser spark discharger in Pockels cell for ultrashort pulse separation 3—50684
- hybrid bistable system with short delay, instabilities and chaotic behaviour 3—37105
- integrated electro-optic components for wideband optical telecommunications *(German)* 3—56349
- integrated electro-optic Mach-Zehnder interferometer for A/D conversion 3—27266
- integrated electrooptic modulator switch based on an induced dielectric channel 3—32459
- integrated optical light modulator, electrooptic grating array uses 3—17639
- integrated optics II, conf., Los Angeles, CA, USA (Jan. 1982) 3—16072
- IR sensor technology, conf., Arlington, VA, USA (May 1982) 3—54566

electro-optical devices continued
- IR transmitting glass appls. in electro-optic systems 3—56294
- laser interferometric meas. of tangential and radial vibrs. of arch dam 3—12608
- liquid surface contactless level sensing by laser beam reflection 3—257
- logic comparison circuit based on an integrated optical interferometer 3—32508
- miniature supply for electrooptic Q-switch of laser resonator *(Polish)* 3—1678
- modulator based apparatus for meas. of linear electro-opt. coeff. of polarising-opt. system 3—5825
- noise resistance of electrooptical system with sectoral grating *(Russian)* 3—30835
- optical image recording, 180 mega-pixel per sec., electro-optic techniques 3—7217
- Pockels cell sampling system for elec. transients with two picosecond resolution 3—25898
- polariser having interdigital electrode, anal. 3—27210
- polarisers and applications, conf., San Diego, CA, USA (Aug. 1981) 3—5482
- polymer films, optical recording, electrically amplified 3—50719
- Priz light modulator, image processing appls. 3—12306
- PROM and PRIZ, resolution and sensitivity depend. on operating mode 3—32454
- quadrupole deflector, cryst. cond. effect on operation 3—50747
- radio-pulse generator for electrooptical mode synchronisation of Nd^{3+}:YAG laser 3—37085
- reflection coupler fibre optic, PLZT based, bidirectional transmission appls. 3—7177
- retinal vessls, electro-optical system for non-invasive oximetry 3—9700
- self-setting attenuator for laser pulse energy stabilisation 3—41966
- semiconductor diode laser, Q-switched, with intracavity electroabsorpt. modulator 3—37084
- shutter stereoscopic displays using PLZT ceramics, advances 3—7150
- shutter utilising PLZT ceramic wafers 3—7149
- shutters, min./const. voltage, PLZT based 3—7151
- spatial light modulator, integrated total internal refl., for laser printing 3—7162
- spatial light modulator, linear total internal refl., for laser printing 3—7161
- spatial light modulator utilising the Pockets effect for image processing 3—56309
- spatial light modulators, amplitude and phase responses rel. to crystallographic orientation 3—37173
- spatial-temporal light modulator for time-varying image processing 3—27231
- spatially uniform image transmission using electro-optical modulators 3—32458
- spectral analyser, Fourier transformation beam deflector arrangement, electronic signals appl. 3—56305
- spectrum analyser, integrated optical, dynamic range calcs. by beam propag. method 3—50798
- Stark cell radiometer for atmospheric solar radiation meas. 3—25917
- temperature fields of bodies of complex shape, numerical calculation *(Russian)* 3—56421
- track photography in 8 m streamer chamber, information collecting system 3—1155
- waveguide modulator, modulation efficiency calc. 3—41970
- wide-band electro-optical microwave light modulators 3—7165
- X-ray optics surface profiling by electro-optical phase meas. 3—17591
- $Bi_{12}GeO_{20}$, sillenite, optical waveguide, electro-optic light polarisation modulation *(Russian)* 3—46291
- CdTe Fabry-Perot type light modulator, 10.6 μm *(Japanese)* 3—50750
- GaAs epitaxial layer electro-optically controlled directional coupler switch at 1.15 μm 3—12314
- $LiNbO_3$ coupled channel diffused waveguide based electrooptic modulator, coupling coeff. determ. by SHF meas. 3—56308
- $LiNbO_3$ electro-optic-waveguide freq. translator fabricated by proton exchange 3—12309
- $LiNbO_3$, electro-optic element, limitations on ang. aperture 3—32456
- $LiNbO_3$, integrated optics channel switch formed from elec. field induced waveguides 3—56350
- $LiNbO_3$ laser Q-switching, electrooptical-elastooptical effects *(Slovenian)* 3—7036
- $LiNbO_3$ waveguide modulator with 1.2 μm thick electrodes fabricated by lift-off technique 3—12307
- $LiNbO_3$ waveguide modulators, bandwidth, field distrib., and optimal electrode design 3—12308
- $LiNbO_3$:Ti electrooptic grating deflector/modulator investigation 3—22196
- $LiNbO_3$:Ti long wavelength waveguide electro-optic $TE \rightleftharpoons TM$ convertor 3—32462
- $LiNbO_3$:Ti waveguide electro-optic polarisation modulator, high-speed 3—1760
- $LiTaO_3$:Ag^+ waveguide, Ag^+ diffused, electrooptic Bragg modulator 3—12310
- PLZT ceramic electrically controlled retardation plate, phase modulation distortion 3—46283
- PLZT ceramic optoelectronic analogue, logic and switch devices 3—50748
- PLZT ferroelectric ceramic controlled transparency arrays 3—27230
- SnO_2 films, laser-induced damage, electro-optic modulator electrodes appl. 3—41901

electro-optical effects
- *see also electroabsorption; electrochromism; electroluminescence; electroreflectance; Kerr electro-optical effect; photorefractive effect; Pockels effect; Stark effect*
- acetylene molecule, electrooptical parameters 3—36787
- anharmonic oscillator, theoretical models 3—3690
- anisotropic layer, light reflection and transmission spectral operators 3—17438
- anthracene, cryst., charge transfer transitions, role in photocond. 3—52802
- battlefield environment, obscuration modelling, US Army 3—54120
- benzene, liq., orientational correl., molecular quadrupole moments, birefringence 3—36786
- 4,4′-bis-n-pentyl-azoxybenzene, liq. cryst., electro-optical and dielec. relax. study 3—14253
- bistable cholesteric twist cell display, switching characteristics meas. 3—33076
- cadmium arachidate Langmuir-Blodgett film with selectively laser excited perylene 3—38945

electro-optical effects continued
- chlorophyll a and b, fluorescence quenching in nematic liq. cryst. solvent 3—9550
- cholesteric layer, polarisation light, double cut-off in mag. or elec. field 3—34079
- cholesteric liquid crystals, storage electrooptic effect response times 3—43515
- cholesteric-dye guest-host colour LCD, contrast ratio of planar-type phase change, theory 3—52768
- cholesteryl chloride-cholesteryl laurate-rhodamine 6G mixture, optical transmission, temp. and DC elec. field depend. 3—2397
- cholestric compensate mixtures, periodical change of birefringence *(Rumanian)* 3—19109
- configuration mixing electric and magnetic field effects, review 3—26676
- ferroelectric ceramic, transparent, interf. effect on electro-optical props. using polarisation method 3—38800
- hexafluorobenzene, liq., orientational correl., molecular quadrupole moments, birefringence 3—36786
- hexatrienes-$d_0(d_4)$, cis and trans, IR spectra inverse problem soln. valence-optical theory 3—17271
- hybrid optical-digital signal processing applied to an optimal nonlinear phase estimator 3—50623
- induced birefr. anisotropy and eigenwave oscill. in electro-optical crystals 3—3682
- liquid crystal-Eu(III) chelate mixture, electrochem. fluorescence quenching, electro-optical display. appl. 3—47684
- mesitylene, liq., orientational correl., molecular quadrupole moments, birefringence 3—36786
- molecular crystals with one- or two-dimens. units, microscopic and macroscopic optical nonlinearities 3—1712
- molecular dipole moments in fluoresc. states, integral electrooptical emission meas. 3—1419
- 4-n-nitrophenyl ether 4-n-hydroxybenzoic acid, smectic A phase, texture transform. electrooptical effect 3—34074
- 4-nitrophenyl-4-octyloxybenzoate, smectic A phase, reversible electrical memory effect, light scatt. 3—51491
- noncentrosymmetric crysts., linear electro-optic effect, Raman spectra of polar oscills. *(Russian)* 3—38821
- photoferroelectrics, electrooptic effect, image storage, vol. phase holograms 3—1591
- photorefractive crystal, optically induced charge distrib. dynamics in appl. elec. field 3—28836
- polarising-optical system, linear electro-opt. coeff. meas. apparatus 3—5825
- poly(γ-benzyl-L-glutamate) in *m*-cresol, dynamic elec. birefr., LF and HF relax. 3—19110
- polyatomic molecules, determ. of complete set of electrooptical parameters by quantum-mech. calcs. 3—32124
- polyurethanes, electrooptic parameters and band intensities in IR spectra 3—6686
- propylene, IR intensity param. transferability 3—32062
- pyridine-N-oxide, IR spectra and electro-optical parameters *(Russian)* 3—43549
- retardation transient meas. equipment with nanosecond time resolution 3—45184
- smectic C liq. cryst., nonchiral, with optically active additives, ferroelectricity 3—14225
- surface-enhanced Raman scattering in a two-oscillator electromagnetic model 3—14301
- TGS, optical, electro-optical props., in ferroelec. and paraelectric states, high accuracy universal polarimeter meas. 3—57880
- weakly oriented systems, linear dichroism 3—8801
- AgBr microcrystals, photosensitive, electroabsorpt. mechanism 3—28837
- $Ba_2MgGe_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
- $Ba_2ZnGe_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
- $BeSO_4$, Raman and IR spectral studies *(French)* 3—34097
- $BeSO_4.4H_2O(4D_2O)$, Raman and IR spectral studies *(French)* 3—34097
- $Bi_{12}SiO_{20}$, electrooptic nature of photorefractive effect 3—14257
- $Bi_{12}SiO_{20}$:Al(Ga)(Ca), electrooptic props., doping effects 3—23918
- $BiSiO_{20}(GeO_{20})$, optical information recording inelec. field 3—12093
- CS_2, liq., orientational correl., molecular quadrupole moments, birefringence 3—36786
- $Ca_2MgSi_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
- $Ca_2ZnSi_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
- $Cd_2Nb_2O_7$, ferroelectric and electro-optical props., permittivity and tanδ study 3—28795
- CdS photoconductor-liq. cryst. system, electro-optical props., surface pot. barriers effect 3—14258
- Cs 6S-7S transition in electric field, parity violation 3—11067
- Dy_2S_3, electrooptic effect meas. 3—14259
- $Fe(CN)_6^{4-}$ complexes, solid and solns., vibr., IR and Raman anal. 3—19116
- GaAs, first-order Raman line intensity ratio, rel. to lattice perfection scale 3—43524
- p-InSb, IR absorpt., anisotropic, by free holes under strong elec. field 3—23917
- KDP, nonlinear electrooptic effect and birefringence 3—43516
- KDP-DKDP, mixed cryst., electro-optical props., depend. on Curie temp. 3—28835
- KH_2PO_4, DK_2PO_4, SHG, electro-optical control of phase synchronism *(Russian)* 3—37116
- $KNbO_3$, cryst. growth, for laser radiation modulation 3—3945
- K_2SeO_4, birefringence, electrooptical effect and ferroelec. transitions 3—14255
- LiF:U^{6+} crystal, impurity electrooptical effect in 5185-Å absorpt. line region 3—23913
- $LiIO_3$, electrooptic coeffs., Raman scatt. study *(Russian)* 3—47623
- $LiIO_3$, SHG, electro-optical control of phase synchronism *(Russian)* 3—37116
- $LiNbO_3$ electro-optical modulator *(Czech)* 3—22133
- $LiNbO_3$, SHG, electro-optical control of phase synchronism *(Russian)* 3—37116
- NH_3, dipole moments, vibr., electro-optical parameter calcs. 3—11848
- $NH_4H_2PO_4$, $NH_4D_2PO_4$, SHG, electro-optical control of phase synchronism *(Russian)* 3—37116
- $NH_4H_2PO_4$, refractive index, temp. depend. meas. 3—14240

- **electro-optical effects** continued
  - NH_4HSeO_4, optical and electrooptical props. near ferroelectric transition 3−28831
  - PF_3, dipole moments, vibr., electro-optical parameter calcs. 3−11848
  - PH_3, dipole moments, vibr., electro-optical parameter calcs. 3−11848
  - PLZT ceramics, transparent ferroelec., appl. field induced birefr. mechanism 3−28834
  - RbH_2PO_4, SHG, electro-optical control of phase synchronism *(Russian)* 3−37116
  - Si, doping inhomogeneities, electroreflectance study, effects on photovoltaic conversion 3−47622
  - (Sr, Ba, Ca)Nb_2O_6, single cryst. ferroelectrets, electrooptic props. with broad phase transitions 3−34073
  - $Sr_2MgGe_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3−3689
  - $Sr_2MgSi_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3−3689
  - $Sr_{1-x}Nb_2O_6$, polarisation switching, polarisation, permittivity, and electrooptic coeff. meas. 3−28757
  - $Sr_2ZnGe_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3−3689
  - WO_3:H, conc. dependent H percolation, optical absorpt. study 3−42846
  - ZnS:Cu, Sm(Eu)(Pb)(Tm) crysts., bulk emission in const. elec. field 3−8867
- **electroabsorption**
  - flame, spatially resolved IR absorption spectroscopy by optical Stark modulation 3−24538
  - hexamethylbenzene-TCNE donor-acceptor complexes, existence and props. 3−32243
  - Michler's ketone, electro-optical absorpt., mol. props. from macroscopic meas. 3−32241
  - p-n junction, electroabsorption produced mixed injection, rel. to impact ionisation coeffs. 3−23477
  - semiconductor diode laser, Q-switched, with intracavity electroabsorpt. modulator 3−37084
  - $As_2S_3(Se_3)$, electric-field-modulated spectra 3−3686
  - InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3−18721
  - $RbI:Ag^2$, off-centre impurity, UV absorpt. and electro-optical alignment obs. 3−3772
  - $TlInS_2$, electroabsorption spectrum 3−3687
  - ZnS:Ni, hydrogen-like states in photoionisation band, electroabsorption study 3−8452
  - ZnSe(S):Ni, bound excitons, electroabsorption spectra study 3−38318
- **electroacoustic effects** *see acoustoelectric effects*
- **electroacoustic generators** *see acoustic generators*
- **electrocaloric effects** *see pyroelectricity*
- **electrocardiogram** *see electrocardiography*
- **electrocardiography**
  - *see also bioelectric potentials; biomagnetism; cardiology*
  - ambulatory ECG, Pathfinder system, computer assisted data anal. *(German)* 3−24895
  - ambulatory ECG monitors, design of QRS and noise detectors 3−19836
  - ambulatory ECG recording and anal. trends, review 3−4672
  - ambulatory ECG system 3−44342
  - arrhythmia continuous monitoring by ECG comparison with regular sample *(Spanish)* 3−39740
  - arrhythmia monitoring systems, computerised, review 3−15254
  - automated analysis, mixed approach 3−24903
  - balanced non-cephalic reference electrode system in EEG recording, ECG rejection *(Japanese)* 3−58853
  - balneologic cardiomonitor for use in bath and mud therapy 3−24896
  - baseline wander removal system using digital FIR filtering 3−15255
  - battery operated monitor/defibrillator used for prehospital care, eval. 3−15277
  - bioinstrumentation FET cascode preamplifier design criterion for interference minimisation 3−24930
  - body surface ECG mapping system, microprocessor based, for pot. patterns dynamic obs. 3−35007
  - body surface pot. mapping 3−9763
  - body surface potential mapping system with microprocessor, potential pattern dynamic obs. *(Japanese)* 3−58855
  - body-surface pot. mapping, noise-reduction method 3−15263
  - cardiovascular alterations in Macaca monkeys exposed to stationary mag. fields, ECG and blood press. obs. 3−58712
  - CCU arrhythmia monitor system, computerised, performance 3−15252
  - classification based on Karhunen-Loeve expansion and discriminant anal. 3−15271
  - data analysis, 2-D spectral estimation method 3−15258
  - early diagnosis of cardiac disease, noninvasive clinical method 3−29778
  - ECG/EEG common mode rejection ratio analyser 3−53877
  - electrode, electrolyte-skin AC impedance studies 3−15265
  - epicardial potential distribution estimation using mode matching method *(Japanese)* 3−53660
  - equipment involved in ECG monitoring 3−44337
  - f-wave frequency spectral analysis, f-wave recognition in computer diagnostic system *(Japanese)* 3−58856
  - feature extraction scheme 3−35010
  - filtering processor for ECG-EEG signals 3−24904
  - FIR digital filtering programs for automatic processing of biological signals 3−4660
  - foetal ECG, cross-correlation techniques appl. 3−58859
  - forward ECG calculations, accuracy testing, comparison of methods 3−15062
  - frequency content assessment, use of phase spectral information 3−29772
  - gated and nongated cardiac CT images, comparison of information 3−58773
  - gated multiplanar cardiac computerised tomography 3−15215
  - His bundle activity, external recording, digital filtering process appl. 3−15243
  - His signal recording, noninvasive, using statistical filtering *(Spanish)* 3−48434
  - His-Purkinje activity, orthogonal surface lead recordings, actual and simulated waveforms comparison 3−58851
  - Holter tape anal., multiprocessor system 3−4673
  - human thorax potential distribution determ. method *(French)* 3−44343
  - inverse problem, theoretical studies and uniqueness of soln. 3−9574
  - inverse problem solution using a priori information 3−4670
  - microcomputer-based heart-rate variability monitor 3−48430
- **electrocardiography** continued
  - microcomputerised biomedical signal processing, ECG, EEG waveform analysis *(Korean)* 3−19834
  - model using new basis functions 3−48282
  - monitor for heart rate, design 3−39739
  - monitoring system, bedside, modular measurement units 3−58858
  - myocardial infarction prediction 3−19839
  - online method for reliable detection of waveforms and event estimation 3−15294
  - pill electrode, new appls. for cardiac recording and pacing 3−15266
  - portable ECG event detector 3−48432
  - processor of heart muscle signal 3−15072
  - QRS detection using automata theory in a battery-powered microprocessor system 3−4671
  - QRS duration measurement using high frequency electrocardiography, appl. and limitations of new technique 3−15244
  - R-R interval values in cardiac arrhythmias, quantities and diagrams set 3−39741
  - R-wave sequence simulator using standard generator 3−24898
  - R-wave triggered cardiac scintigram, sequence anal. 3−29726
  - resting potential, model study of effects of local change on injury currents and ECG 3−15073
  - Sheffield respiration analysis system using ECG and impedance pneumography 3−29774
  - signal processing for recovery of cardiac conducting system activity 3−29773
  - suction electrodes with external vac. pump for investigs. during phys. exertion 3−9775
  - ventricular gradient, rel. to area under the cellular action pot. 3−39734
  - ventricular gradient, rel. to secondary T wave and isoarea maps simulation 3−15071
  - ventricular gradient in medicine and physiology, history and future 3−10551
  - ventricular specialised cond. system of the heart, non-invasive meas. 3−34996
  - ventricular specialised cond. system of the heart, signal modelling 3−34995
  - voltage-triggered system for adaptive sampling in body surface mapping 3−9768
  - waveforms, appl. of variant of split and merge algorithm 3−35009
- **electrocataphoresis** *see electrophoresis*
- **electrochemical analysis**
  - *see also electrochemistry; polarography; voltammetry (chemical analysis)*
  - biological samples, Electrolyte 2 Analyzer for Na and K quantitative determ. 3−19851
  - gas sensors, O_2 and H_2, thin solid state devices design 3−10822
  - incremental voltage step electrochemical meas., electric cells testing appl. 3−40643
  - instrumentation, cybernetic control 3−9364
  - interfacial reactions at solid surfaces, rotating ring-disc electrode design 3−49525
  - proteins electrophoretograms, two dimensional, quantitative anal. by shape fitting 3−29371
  - sensors, measurement techniques *(French)* 3−16352
  - Al alloys, high strengths, fatigue cracks, gel electrode imaging, bending and torsional testing 3−34572
  - (Co,Mn)O, activities of CoO and cluster form., EMF meas. at 900-1450K 3−24230
  - $Fe_{40}Ni_{40}P_{14}B_6$, amorphous, H permeability, diffusivity and solubility, electrochem. technique 3−8262
  - Na coolant, C meter, electrochem. method 3−41236
  - Na, liquid, electrochemical techniques for monitoring dissolved C, H and O 3−16848
  - O_2 partial pressure analyser with automatic temp. compensation 3−9367
- **electrochemical batteries** *see cells (electric)*
- **electrochemical electrodes**
  - *see also electrochemistry*
  - advanced batteries and fuel cells, conf., Kelkheim, Germany, 1982, April 3−44118
  - battery electrolytes for −40°C, kinetic barriers to preferred electrode process 3−24566
  - n-CdSe electrodes, electrodeposition and liq. junction solar cell props. 3−9453
  - crystalline metallic oxides, mixture of two, for positive electrochemical electrodes, new examination method *(French)* 3−24558
  - electrical performance assessment, automatic system 3−24567
  - electrochemistry, conf., Detroit, USA, 1982, Oct. 3−30561
  - industrial effluent neutralisation, reagents, residence times and electrode design 3−48202
  - molten carbonate fuel cell cathodes, thickness effect on performance 3−44119
  - molten carbonate fuel cells, simple porous electrode models 3−48145
  - organic dyes at transparent semiconducting electrodes as base for photoelectrochemical cell 3−19595
  - polarographic O_2 sensors, design parameters 3−14912
  - polyacetylene metallic electrodes for rechargeable battery appl. 3−9414
  - polymeric metallic electrodes for rechargeable battery appl. 3−9414
  - rechargeable solid electrolyte cells with Cu ion conductor, $Rb_4Cu_{16}I_{7-\delta}Cl_{13+\delta}$ and TiS_2 cathode 3−34684
  - redox flow cell energy storage device catalytic electrodes 3−9497
  - rotating ring-disc electrode with a removable disc 3−49525
  - seawater desalination, electrochemical changes on passage of small external currents 3−53414
  - semiconductor electrochem. electrodes with deep impurity level, characterisation method 3−8574
  - sensors, measurement techniques *(French)* 3−16352
  - sintered plate electrodes containing β-$Ni(OH)_2$, voltammetric behaviour 3−58432
  - solid electrolyte electrodes, impedance spectra, Fourier anal. 3−57132
  - viologen-3 ethyl-3-benzothiazolone azine electrochromic system, electrode process kinetics 3−8802
  - Ag electrochemical electrode, specific adsorption of $Br^-(Cl^-)(I^-)(NCS^-)(N_3^-)$ 3−57223
  - Ag electrochemical electrode, adsorbed NCS^- ions, surface enhanced Raman spectra 3−57934
  - Ag electrode in aqueous Cl^- electrolytes, surface enhanced Raman scatt., evidence for adatoms 3−38829
  - Ag electrodes and adsorbates, surface-enhanced SHG during electrochem. cycling 3−56280

electrochemical electrodes continued
Bi_2S_3 semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3—39492
Bi_2S_3-Ag_2S semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3—39492
Bi_2S_3-PbS semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3—39492
CdS(Se), anodes for photoelectrochemical cells, electrophoretic deposition 3—48158
n-CdS(Se) photoelectrode, time resolved photolum., surface state influence 3—38911
n-CdS_xSe_{1-x} graded electrodes, electron-hole pair separation efficiency mapping, luminescent props. 3—47686
CdSe, aged electrodeposited photoelectrodes in liq. junction solar cell, hot electron luminesc. obs. 3—29394
CdSe thin film electrode electrochemical solar cells 3—48150
Fe_2O_3 electrodes for photoassisted electrolysis of water 3—14962
n-GaAs photoanodes, polymer coated, in contact with aqueous electolytes, regenerative photoelectrochemical cells 3—48157
p-GaP photoelectrode, interfacial chemistry 3—4292
p-GaP:Ru photoelectrochemical solar cells, chemically-induced interface states 3—57422
H_2 production by water electrolysis under pressure and moderate temp. 3—48193
$La_{0.8}Sr_{0.2}CoO_3$ porous perovskite as cathode for molten carbonate fuel cell 3—53497
Li/Al electrode in molten LiCl-KCl, kinetics study using linear sweep voltammetry 3—34631
Li/$SOCl_2$ cells, Li electrode kinetics 3—44103
Li-Al electrode in fused salt electrolytes, morphological studies 3—48130
Li-Al/FeS battery cell, simulated negative electrodes, thermomech. behaviour meas. 3—9420
Li-Al/FeS compact cell, reference electrodes for long-term testing 3—44114
Li_nCrO_x cathodes in Li^+/organic electrolyte batteries, transport props. 3—44116
Li_nMoO_3 cathodes in Li^+/organic electrolyte batteries, transport props. 3—44116
MnO_2 electrodes, electrical potential of solid solutions, exponential determ. and theoretical description 3—24557
MnO_2-Li nonaqueous cells, MnO_2 cathode, expt. study 3—9411
Na cell, rechargeable, intercalation positive electrodes, review 3—19578
Ni/Cd accumulators, plastic-bonded NiO_x electrodes, nature of second discharge step 3—19572
Ni-Cd accumulators, plastic-bonded Cd electrodes, O_2 recombination rate with various active materials 3—24573
$Ni(OH)_2$, electrodes, structure and electrochemistry 3—24511
NiOOH, electrodes, structure and electrochemistry 3—24511
n-$NiTiO_3$:Nb electrode, sintered, photoelectrochem. props. 3—19593
Ni(s)-NiO(s) electrodes for high temp. solid oxide electrolyte galvanic cells, role of sintering time 3—58430
Pb/acid batteries, improved electrodes, computerised design and evaluation 3—34685
Pb/acid cells, sulphate passivation as capacity limiting process 3—24569
Pb-acid cells, negative organic expander action at low temps. 3—24571
Pb-acid storage battery with multitubular positive plate 3—34687
PbO_2, cathodic passivation obs. in Pb-acid cell, semicond. model and expt. study 3—9416
β-PdH electrodes, roughened, adsorption of pyridine 3—57905
Ru oxide anodes for oxygen evaluation by water decomposition 3—15007
Si/Fe_2O_3 photoanode with negative flatband potential, XPS and AES studies 3—52244
Sn, polycryst. and single-cryst., adsorpt. of phenol and aniline 3—53422
SnO_2-meso-tetraphenylporphyrin, photoactive electrodes, electrochemical solar cells 3—29382
TiO_2 electrochemical anodes, UPS and Schottky barrier study in photoelectrochemical cell 3—29396
n-TiO_2 electrode in Ti-Hf-H_2O soln., thermodynamic and photoelectrochem. behaviour 3—4291
TiO_2 electrodes, H_2O photoassisted decomposition 3—14961
TiO_2 electrodes, Prussian blue modified, photoelectrochromic behaviour 3—43514
TiO_2 electrodes prep. with minimum Mott-Schottky freq. dispersion 3—9451
TiO_2-acetonitrile contact, flat band pot., influence of illumination and H_2O 3—53412
WC, Co-cemented, O_2 electrochemical reduction 3—39392
$WV_2O_{7.5}(W_{0.2}V_{2.8}O_7)$-Li secondary cells, Li insertion reactions study 3—44115
Zn electrode, rotating disk, in alkaline soln., alternating voltage modulation study 3—44111
Zn/Ag secondary cell porous electrode discharge current evaluations *(German)* 3—44107
Zn-Br_2 cell with C felt flow-through electrode, mass transfer study 3—9417

electrochemical polishing *see electrolytic polishing*

electrochemistry
see also Debye-Huckel theory; electrical conductivity of electrolytic liquids; electrochemical analysis; electrochemical electrodes; electrolysis; electrolytic devices; electrophoresis
advanced batteries and fuel cells, conf., Kelkheim, Germany, 1982, April 3—44118
alkaline cells, electrolyte creepage, transport mechanism at high pressures 3—24561
alkaline cells, electrolyte creepage mechanisms 3—24560
alkaline solutions, Pt catalyst corrosion 3—24401
aniline, adsorpt. on polycryst, and single-cryst. Sn electrodes 3—53422
aniline adsorption on Bi single crystal faces 3—53420
batteries, sealed storage, calc. of capillary equilib. in space between electrodes during charging 3—53424
batteries and electrodes, electrical performance assessment, automatic system 3—24567
battery electrolytes for −40°C, kinetic barriers to preferred electrode process 3—24566
binary solid compound, diffusion coupled with reaction 3—13513
cells, electrochemical, with electrodes within free vol. of electrolyte, processes numerical simulation 3—53421
chloro-alkali industry membrane cell technology, developments and effects on power utilisation 3—53496

electrochemistry continued
chloroplast photosystem I, acceptor X midpoint pot. determ. by electrochem. reduction and ESR 3—24671
colloid, surface charge density/surface potential relationship, double layer potential distrib. 3—39412
conference, Detroit, USA, 1982, Oct. 3—30561
CR-39 fast neutron dosimeters, highly sensitive, partial optimisation of electrochem.-etching parameters 3—1074
crystalline metallic oxides, mixture of two, for positive electrochemical electrodes, new examination method *(French)* 3—24558
disc electrode cells potential distribution, effect of electrode material resistance 3—58429
electrical double layer, hypernetted chain approx., appl., Monte Carlo calcs. 3—19526
electrical double layer eqns. from electrolyte theory 3—14875
electrical double layer with asymmetric ions, modified Gouy-Chapman theory appl. 3—33057
electrochemical method for stripping tin from semiconductor packages 3—24513
electrochemical physics, review 3—9325
electrode reactions study by ellipsometry and surface EM wave excitation *(French)* 3—24510
electrode-electrolyte interfaces, GMSA for mixture of hard ions and hard dipoles against charged hard wall 3—22749
electrolyte contact condition near changed wall, density functional theory 3—39390
fatigue crack growth in environmental test, electrochem. pot. at crack tip 3—29206
field emitter etching facility with good reproducibility 3—29312
graphite-H_2SO_4, cryst. expansion during galvanostatic intercalation, dilatometer study 3—25875
insulator-electrolyte interface, double layer, step voltage transients 3—23458
intense electrochemical SERS signal following hydrogen evolution 3—39389
intercalation materials susceptible to reduction in non-aqueous media, electrochemical reversibility and structure 3—58431
ionic fuid, interfacial electric double layer, long-range correlations 3—43263
Leclanche cells, cellulose battery separators, surface charge and function 3—9421
lipid bilayer membranes, electrostimulated fission and fusion, model expt. 3—34786
liquid acoustoelectric transducers 3—12485
metal/oxide/electrolyte system corrosion rate meas. using faradaic rectification and a.c. impedance meas. 3—58344
metals, ion implanted or laser irrad., corrosion and electrochemical behaviour 3—29215
metals, lyophilic, dielec. const. in diffuse part of double layer 3—53418
organic dyes at transparent semiconducting electrodes as base for photoelectrochemical cell 3—19595
organic liquid with admixture of strong electrolyte, electrification in tube flow 3—56113
phenol, adsorpt. on polycryst. and single-cryst. Sn electrodes 3—53422
photogalvanic cell using anthraquinone-2-sulfonate 3—39491
photographic film development rate, meas. using rotating ring-disc electrode technique, electrochem. method 3—53434
polyacetylene, chemical and electrochemical isomerisation, in situ optical studies 3—19517
polyethylene, prebreakdown free-radical states 3—53379
polythiophene perchlorate film, electrochem. polymerisation prep., elec. cond. 3—3182
primary cells, CC Zn electrode types, electrochemistry 3—58493
rechargeable solid electrolyte cells with Cu ion conductor, $Rb_4Cu_{16}I_{7-\delta}Cl_{13+\delta}$ and TiS_2 cathode 3—34684
redox systems in EHD and electroconvective flows 3—37577
renal artery models, electrochem. surface shear rate evaluation 3—24778
seawater desalination, electrochemical changes on passage of small external currents 3—53414
sensors, measurement techniques *(French)* 3—16352
slagging MHD generators, electrochemical charact. 3—29427
solar energy conversion to electricity and fuels by chemical methods 3—53567
solid state Li/MnO_2 cells 3—9413
steel, stainless, SCC, in boiling $MgCl_2$ solns., influence of martensite *(French)* 3—24385
thin layer electrochemiluminescence cells current efficiency, EHD convection 3—34630
thiourea adsorption on Bi single crystal faces 3—53419
transient elec. response of electrochemical systems containing insertion reaction electrodes 3—19579
transition metals and alloys, electrodeposited, corrosion-electrochem. behaviour, effect of non-metallic inclusions *(Russian)* 3—4189
viologen-3 ethyl-3-benzothiazolone azine electrochromic system, electrode process kinetics 3—8802
$AgBi(CrO_4)_2$ and $Bi_2O(CrO_4)_2$ cathodic materials, electrochemical behaviour in Li batteries *(French)* 3—24512
AgBr emulsion grains, Ag specks formed during reduction sensitisation, electrochem. and photoelec. props. 3—58439
β-Al_2O_3 single cryst. and Au blocking electrodes, AC impedance of surface layers, double layer system 3—23457
Bi single crystal, aniline adsorpt. on faces 3—53420
Bi single crystal, thiourea adsorpt. on faces 3—53419
CaF_2 solid electrolyte/O_2 interface, dopant redoxing and diffusion, electrochem. study 3—51843
$CaO+SiO_2$ polycryst. pellets, interdiffusion behaviour, DC field effects 3—28165
$CdIn_2S_4$, photoelectrochemistry 3—24613
CdS, electroconversion to Cu_xS for thin film solar cells 3—4294
Co-W-Mn alloy deposition, behaviour of sulphate and tungstate ions in H_2SO_4 electrolyte *(Russian)* 3—53415
$CsSO_4F$, low. temp. heat capacity, thermodynamic functions 3—33464
Cu (110), H_2O coadsorbed with $O_2(Br_2)$, work function changes, double layer modelling appl. 3—43262
Cu waveguide tubes, chem. and electrochemical oxidation 3—58428
Cu-Au electrodes, diffusion coeff. using molten salt electrolyte, chronoamperometric determ. 3—47153
$CuFeS_2$ crystal, electrochemically reacting, thin secondary product films, electron diffr. studies 3—4295
Cu_xS thin film solar cells prep. by electroconversion of CdS 3—4294
Fe-Ni-Cr, Alloy 600, crevice corrosion at 288°C, pot./pH meas. 3—24391

electrochemistry continued
FeS_2 crystal, electrochemically reacting, thin secondary product films, electron diffr. studies 3—4295
Ga in $NaClO_4$ solution, dielec. const. in diffuse part of double layer 3—53418
GaAs, surface and redox reactions in various electrolytes 3—52245
n-GaAs with electrons and holes, kinetic control of anodic dark and photodissolution 3—52242
n-GaP solutions, dark and photo-current voltage curves, kinetic anodic processes *(German)* 3—52203
n-GaP with electrons and holes, kinetic control of anodic dark and photodissolution 3—52242
GaP:H(He), ion implanted, photoelectrochemical meas. 3—42627
H_2 production by thermochemical Mark 11 cycle, pilot plant evaluation and detailed design 3—48189
Li ion conducting solid electrolytes for ambient appls. 3—8243
Li organic electrolyte cyclable batteries with rocking chair configurations 3—24574
Li/Al electrode in molten LiCl-KCl, kinetics study using linear sweep voltammetry 3—34631
Li/metal/sulphide cells, pelletised, research review 3—19570
Li/SO_2 cells, Faradic impedance, kinetic interpretation 3—9412
Li/SO_2 cells, investigation and production control by galvanostatic pulse method 3—19576
Li/$SOCl_2$ batteries, sources of press. 3—24563
LiAl-FeS cells, pelletised, operating characteristics 3—19571
MnO_2 electrodes, electrical potential of solid solutions, exponential determ. and theoretical description 3—24557
MnO_2 for batteries, history and etymology 3—24559
MnO_2 production by electrolytic process for electrochemical cells *(Polish)* 3—39452
MnO_2-alkali battery, structure modernisation and electrochemical props. *(Polish)* 3—39454
Na-S batteries, melting-crystallisation properties of S electrolyte 3—58495
Na_2CdCl_4, $\Delta_f G°$ meas. in galvanic cell, 548 to 668K 3—34644
Na_2O-CaO-SiO_2 glass, electrochem. treated, surface durability 3—43969
Ni, electrochem. meas. of H transport, Joule heating effect 3—9240
Ni, electrochem. meas. of H transport, Joule heating effect 3—9241
Ni/Cd accumulators, plastic-bonded NiO_x electrodes, nature of second discharge step 3—19572
Ni/Cd batteries, sealed, failure model 3—19574
Ni/Cd cells, sealed, deeply discharged, anomalous behaviour 3—19577
Ni-Cd accumulators, plastic-bonded Cd electrodes, O_2 recombination rate with various active materials 3—24573
Ni-Cd batteries with sintered plates, production and characts. *(Polish)* 3—39459
Ni-Zn long life sealed cell using nylon non-woven polyvinyl alcohol coated cloth separator 3—58496
$Ni(OH)_2$, electrodes, structure and electrochemistry 3—24511
NiOOH, electrodes, structure and electrochemistry 3—24511
Pb/acid batteries, discharged, sulphation 3—24568
Pb/acid batteries, improved electrodes, computerised design and evaluation 3—34685
Pb/acid cell, tubular positive plate formation, factors affecting 3—19575
Pb/acid cells, sulphate passivation as capacity limiting process 3—24569
Pb/acid traction batteries under simulated electric vehicle service, positive plates crystalline phase composition 3—24570
Pb-acid cells, negative organic expander action at low temps. 3—24571
Pb-acid cells maintenance-free using catalytic gas recombination device *(German)* 3—24572
PbO_2 in concentrated H_2SO_4, behaviour study using linear sweep computer controlled methods 3—9326
PbO_2 reduction to $PbSO_4$ in H_2SO_4 electrolyte, effects of antimony doping, application to secondary cells 3—58422
Pd-Ag, diffusivity and solubility of H 3—42850
Pd-Au, diffusivity and solubility of H 3—42850
Pd-Fe, diffusivity and solubility of H 3—42849
Pd-V, diffusivity and solubility of H 3—42849
Pt electrocatalyst, hydrous oxide growth, improved activation technique 3—24528
Rh complex, pyrophosphate rhodium, polarography, cathodic reduction, kinetic regularity *(Russian)* 3—48073
Ru complex, bis(2,2′-bipyridine)(2,2′-bipyridine-4,4′-dicarboxylato)Ru(II), chem. modified electrode electrochem. and photophysical props. 3—14874
Si, depth distribution of donor impurities determ., by electrochemical method 3—46980
Si:B(P) wafer, etch-stop mechanism 3—4158
SnO_2-dye solution interface, laser-induced photoelectrochemical transients meas. 3—43279
TaS_2 (2H)-K^+/H_2O, cryst. expansion during galvanostatic intercalation, dilatometer study 3—25875
Tb^+ photogalvanic cell characts. with a series of reducing agents 3—34704
n-TiO_2 electrode in Ti-Hf-H_2O soln., thermodynamic and photoelectrochem. behaviour 3—4291
TiO_2 electrodes, Prussian blue modified, photoelectrochromic behaviour 3—43514
Zn electrodeposition from aqueous Zn halide electrolytes, dendritic growth study 3—9329
Zn/Cl_2 batteries, alternative design 3—19573
Zr and alloys, electrochemical hydriding, H supersaturation effects, H storage appls. 3—58562

electrochromic devices
displays, review of present situation *(French)* 3—45130
flat screen displays, conf., Plestin-les-Greves, France (April 1982) *(French)* 3—44895
optical, laboratory construction techniques 3—32457

electrochromism
alkali oxide-WO_3 systems, rapidly quenched glasses prep. and characteris. 3—29054
amorphous semiconductors, review *(Japanese)* 3—46853
viologen-3 ethyl-3-benzothiazolone azine electrochromic system, electrode process kinetics 3—8802
MoO_3 electrochromic thin films, IR and Raman spectroscopy studies *(French)* 3—47724
TiO_2 electrodes, Prussian blue modified, photoelectrochromic behaviour 3—43514
WO_2 electrochromic thin film, amorphous, oscillator strength of colour centres 3—24035
WO_2, thermally evaporated layer, xerogel struct. 3—18579

electrochromism continued
WO_3 amorphous film electrochromic cell under heavy Li ion injection, optical characts. 3—24036
WO_3 electrochromic thin film, amorphous, oscillator strength of colour centres 3—24035
WO_3 electrochromic thin films, IR and Raman spectroscopy studies *(French)* 3—47724
WO_3 films, struct. changes during electrochromic and photochromic processes 3—19111
WO_3 thin film electrochromic elements, electrode processes 3—34072
WO_3-MoO_3-V_2O_5 evaporated thin films, electrochromism 3—3688

electrodeposited coatings *see electrodeposits*

electrodeposited films *see electrodeposits*

electrodeposited layers *see electrodeposits*

electrodeposition
see also electrodeposits; electroplating
n-CdSe electrodes, electrodeposition and liq. junction solar cell props. 3—9453
coating techniques, review 3—3974
electrode reactions study by ellipsometry and surface EM wave excitation *(French)* 3—24510
equilibrium electroliquid epitaxy, film growth rate 3—19294
galvanostatic electrocrystallisation, morphological instability, growth mode of surface irregularities 3—23201
hydrous oxide film growth on Pt electrocatalyst, improved activation technique 3—24528
magnetic alloys, binary, electrodeposition, review 3—4207
metal powder electrodeposition at gas-evolving electrodes, H generation rate 3—47788
metals, by electric arc process with electrode preheating *(Russian)* 3—19288
metals, electrode surface roughening in pulsating current and periodic reverse current electrodeposition 3—19296
pulsating current metal electrodeposition, optimal freq. range determ. 3—9011
Ag, galvanostatic electrocrystallisation, morphological instability, SEM image anal. 3—23202
Ag recovery and colour developer regeneration units appl. 3—49477
Al-Mg alloy pretreatment for electrodeposition by immersion Zn and electroless Ni 3—19459
Au-Cu films, electroless autocatalytic deposition 3—9004
Bi_2S_3 semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3—39492
Bi_2S_3-Ag_2S semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3—39492
Bi_2S_3-PbS semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3—39492
CdSe films, chem. bath deposition for photoelectrochem. solar cells 3—52983
Co-W alloy based electrolytic thin films, mag. props. and chemical composition *(Russian)* 3—14092
Co-W alloys, electrocrystallisation during this mag. film deposition *(Russian)* 3—14514
Co-W-Mn alloy deposition, behaviour of sulphate and tungstate ions in H_2SO_4 electrolyte *(Russian)* 3—53415
Co-W-P alloys, electrocrystallisation during thin mag. film deposition *(Russian)* 3—14515
Cr electrodeposition from fused LiF-NaF-KF-CrF_3 electrolyte 3—3977
Cr_2O_3-Cr, black chrome, electrodeposition on Sn, optical props., solar absorber appls. *(Russian)* 3—9003
Cu, current-time behaviour for electro-deposition, anal. based on surface diffusion model 3—9009
Cu, electrodeposition, current-time behaviour, surface diffusion model 3—9010
Fe powder, oxidation processes during prep., washing and drying 3—47991
Fe-Co, electrodeposition from acid tartrate bath, effect of superimposed AC 3—47785
LaB_6 emitter coatings prep., improved cataphoretic deposition methods 3—40718
^{54}Mn radioactive isotope thin target preparation by rapid methods 3—50094
NbC, crystal growth by low temp. electrosynthesis from molten salt soln. 3—43763
Ni cathodically hydrogenated bright electrodeposited coatings, spiral cracking 3—47790
Ni, electrocrystallisation, effects of additives 3—19298
Ni electrolytically deposited bright coatings, internal stresses and hydrogenation rel. to cracking 3—47789
Ni P electrolytic composition coatings, coating technique and properties *(Russian)* 3—58056
Ni-Fe-B alloys, chemically deposited, mag., elec., mech. props. 3—52985
Pb, electrodeposition on Cu wire, supercond. solenoid manuf., crit. current 3—9001
Pb-Sn alloy deposition, chloride bath comp. 3—58057
Pu, electrolytic deposition from fused chlorides 3—24165
Si, grain boundary struct. rel. to growth technique and elec. props. 3—51626
p-Si, metallisation by photoelectrochem. deposition using internal cell 3—39048
Si powder, preparation by electrolysis of fluoride-oxide melt, process parameters 3—47811
TaC, crystal growth by low temp. electrosynthesis from molten salt soln. 3—43763
U, electrolytic deposition from fused chlorides 3—24165
Zn electrode, rotating disk, in alkaline soln., alternating voltage modulation study 3—44111
Zn electrodeposition from aqueous Zn halide electrolytes, dendritic growth study 3—9329

electrodeposits
see also electroplated coatings
black chrome solar selective coatings, electro-deposited, thermal stability optimisation for high temp. applications 3—29450
electroplated coatings, deposit structure, effects of epitaxy dislocations, twinning, and nucleation 3—52984
glass vacuum tabular collector black nickel selective coating deposition and characts. *(Chinese)* 3—9476
hydrous oxide film growth on Pt electrocatalyst, improved activation technique 3—24528
machine parts, metal coated, endurance limit eval. 3—58285

electrodeposits continued
- metal layered coatings on Ti-Al-Mo alloys, effect on damping props. 3−14778
- metals, electrodeposited, method for fracture toughness determ. 3−19501
- transition metals and alloys, electrodeposited, corrosion-electrochem. behaviour, effect of non-metallic inclusions *(Russian)* 3−4189
- Ag film on Cu, Ar^+ and N^+ implanted, temp. evolution, model calcs., energy loss 3−57010
- Bi_2S_3 semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3−39492
- Bi_2S_3-Ag_2S semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3−39492
- Bi_2S_3-PbS semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3−39492
- CdSe, aged electrodeposited photoelectrodes in liq. junction solar cell, hot electron luminesc. obs. 3−29394
- CdSe thin films electrodeposited on Ni substrate, etched and unetched cross-sections prep. and anal. 3−28987
- Co-W alloy based electrolytic thin films, mag. props. and chemical composition *(Russian)* 3−14092
- Co-W alloys, electrocrystallisation during this mag. film deposition *(Russian)* 3−14514
- Co-W-P alloys, electrocrystallisation during thin mag. film deposition *(Russian)* 3−14515
- Cr-W(Mo)(Fe), amorphous electrodeposited, corrosion resist. *(Japanese)* 3−24399
- Cr_2O_3-Cr black chrome solar selective films, sol-gel protective coatings 3−19611
- Fe, fine electrolytic powders with organic coatings, reduction annealing, micropowder prep. 3−58066
- Ni based rough hot selective surfaces produced by electroless, electrolytic methods 3−19609
- Ni cathodically hydrogenated bright electrodeposited coatings, spiral cracking 3−47790
- Ni electrodeposit, [100] texture, internal stresses, Mossbauer line intensities study 3−23847
- Ni electrolytically deposited bright coatings, internal stresses and hydrogenation rel. to cracking 3−47789
- Ni P electrolytic composition coatings, coating technique and properties *(Russian)* 3−58056
- Ni-Fe-B alloys, chemically deposited, mag., elec., mech. props. 3−52985
- $Ni_{100-x}P_x$ amorphous alloys, elec. resistivity dependence on prep. technique 3−23351
- Pb, electrodeposition on Cu wire, supercond. solenoid manuf., crit. current 3−9001

electrodes
- *see also anodes; cathodes; electrochemical electrodes; electron tube components; microelectrodes*
- balanced non-cephalic reference electrode system in EEG recording, ECG rejection *(Japanese)* 3−58853
- capacitance type differential pressure transmitter, spherical electrodes, theoretical anal. *(Chinese)* 3−40578
- capcitor-type stimulating electrodes miniature, for intracortical implantation, fabrication methods 3−15290
- cochlear prostheses, design and evaluation of electrode implants for the profoundly deaf, review 3−9779
- conference on health care engng., Philadelphia, USA (Sept. 1982) 3−10517
- corona and breakdown, effect of grounded enclosure on the field distribution of rod-plane gaps 3−13016
- design of two-dimensional electrodes by the field-plane method 3−12037
- drug eluting electrodes for improved pacemaker performance 3−15289
- ECG electrode, electrolyte-skin AC impedance studies 3−15265
- ECG suction electrodes with external vac. pump for investigs. during phys. exertion 3−9775
- EEG, electrode cap evaluation 3−35003
- electrode gap breakdown in MHD channels 3−2299
- electroerosion processes in the presence of plasma streams emanating from diaphragmed arc support spots 3−7826
- electrostatic precipitators, current density meas. 3−27783
- electrosurgical dispersive electrodes, effect of gelled-pad design on performance, thermal anal. 3−24911
- erosion rate in spark gaps for pulsed power systems 3−7846
- fabric filter, electrostatically augmented, dust movement between electrodes 3−39560
- graphite, in plasmatron, temp. field investig. 3−42457
- ion implantation, high voltage vacuum gap breakdown characts. increase 3−18173
- long air sparks, leader discharge ignition criterion *(German)* 3−37725
- MHD conversion, plasma sheaths, electrical charact. 3−29408
- MHD generator electrode charact. investigation using statistical analysis of electrical nonuniformities 3−29426
- molten alloy electrode, sustained high-current arcs during vacuum consumable arc remelting 3−18182
- myography electrode, implantable, for recording muscle activity in freely moving small animals 3−9799
- parallel-plate vacuum gap, effect of charge carriers on prebreakdown current 3−2174
- parallel-plate vacuum gap, effect of charge carriers on prebreakdown current 3−2175
- phthalocyanine thin-film electrodes, photocurrent spectra, visible to near IR 3−24089
- Pierce-type electron guns theory 3−26519
- pill electrode, new appls. for cardiac recording and pacing 3−15266
- semiconductor-oxide heterojunctions as electrodes in photoelectrochem. cells 3−8587
- slagged MHD generator electrode wall, electrical discharge charact. 3−29425
- space-charge-limited bipolar current flow between coaxial cylindrical electrodes 3−33007
- spark gap, long-life triggered, for CO_2 TEA laser power conditioner 3−7848
- spot-welding device for electrophysiological appls. 3−19866
- thermoelectrode materials, nondestructive mag. testing 3−9273
- vacuum breakdown voltage and prebreakdown current, variable gap spacing 3−18162
- vacuum gap, variation of mass spectral line intensity with field and electrode conditions 3−18172
- Ag electrode surface, in situ O sensor, XPS study 3−43705

electrodes continued
- Ag, electrodes, adsorpt. of H_2O and pyridine, surface morphology, voltammetry and SERS, laser beam effects 3−14873
- Ag electrodes, deposition on plastic foils by magnetron sputtering 3−8980
- Ag electrodes, surface-enhanced Raman scatt., laser illumination effect during oxidation-reduction cycles 3−4297
- C, glassy electrodes in H_2O-KCl solns., interface impedance, mechanical surface treatment effect 3−47410
- Cu electrode, C coating, arc conditioned, metallurgical characterization 3−3015
- Cu electrode, C surface pollution enhanced by electron bombardment 3−19463
- Cu-Au electrodes, diffusion coeff. using molten salt electrolyte, chronoamperometric determ. 3−47153
- IrO_2 sputtered films, pH sensitivity 3−10823
- Pb-Bi-Au Josephson junction counterelectrodes, film microstructure and thermal stability 3−47238
- Pt electrode polarisation, onset of nonlinear behaviour in freq. and time domains, medical appl. 3−15267
- Ru complex, bis(2,2′-bipyridine)(2,2′-bipyridine-4,4′-dicarboxylato)Ru(II), chem. modified electrode electrochem. and photophysical props. 3−14874
- ZnO electrode, rose bengal dye-sensitized photocurrent, time resolved meas. with nanosecond pulsed dye laser 3−3238

electrodynamics
- *see also electron beams; electron optics; electron tubes; ion beams; ion optics; ion sources; quantum electrodynamics*
- analytic signal model, interpretation of components 3−25773
- atomic ion in homogeneous mag. field, approx. const. of motion 3−21980
- bounded electron gas, electrodynamic response in hydrodynamic formalism 3−33652
- Cerenkov amplification of exchangeless spin waves travelling along axis of ferromagnetic-dielec. circular cylinder 3−6867
- charge distributions, permanent multipole and induced dipole vector contrib., torque algorithms 3−5617
- charged media, relativistic motion, Maxwell's eqns. 3−10606
- charged medium interaction with EM field, space charge density, velocity and vector pot. 3−36928
- charged particles reson. interaction with wave packets, drift theory 3−40383
- classical electron theory from modern standpoint, book contrib. 3−56128
- classical radiation reaction calcs., use of hyperfunctions 3−16200
- conducting solid body motion about centre of mass in varying mag. field 3−17400
- conformal-invariant field theory, gradient model 3−5619
- coupled retarding system and electron beams interaction, mathematical model 3−6857
- cyclotron emission rates in superstrong mag. fields 3−26924
- dipole radiation, relativistic corrections to classical theory *(Russian)* 3−26927
- eddy current transducer interaction with multilayered spherical product, electrodynamic problem soln. 3−29267
- EDIP software for automatic soln. of problems *(Russian)* 3−17407
- effective mass of electron in EM field 3−1535
- electrically charged test particle in external static field, inverse problem of relativistic mechanics 3−40437
- electron beams, potential motion, theory, steady-state condition 3−21981
- electron gyromag. autoresonance in elec. and mag. fields 3−56127
- electron motion in uniform mag. field and variable elec. field, Schrodinger eqn. 3−5657
- electron stream in waveguide with crossed fields and secondary emission wall, avalanche multiplication 3−12059
- EM wave diffr., two-dimensional periodic arrays of dielec. rods, electrodynamic formulation 3−21976
- EM wave generation by electron streams in nonsynchronous mode 3−17420
- extended charged particles, radiative corrections, anomalous mag. moment 3−6856
- galaxies active nuclei, electrodynamic models for energy source 3−25615
- homogeneous retarding systems containing an electron beam, mode conversion 3−12056
- infiltration of porous medium by liquid metal, effet of elec. current 3−12766
- ion mobility near conducting boundary 3−12055
- ion near surface of conducting dielectric, electrodynamics 3−12054
- light confinement in polarisable vacuum, confinement mechanism 3−31131
- linear magnetic wiggler with axial guide field, electron drift 3−26922
- longitudinal EM field charge and elementary charge are commensurate 3−10603
- macroscopic electrodynamic behaviour of a soluble hopping model 3−229
- magnetic charges, review, book contrib. 3−56133
- magnetic moment synchrotron radiation in classical electrodynamics 3−41746
- magnetic monopoles, slow, energy loss calc. in metal 3−17183
- magnetic monopoles, slow, stopping power calc. 3−17182
- metal surface, bounded electron gas, electrodynamic response in hydrodynamic formalism 3−33652
- microwave-stimulated supercond., nonlinear electrodynamics 3−52304
- Minkowski and Abrahams tensors, non-closed systems non-uniqueness 3−72
- moving line charge, problem, parallel or perpendicular to anisotropic media, EM field soln. 3−36927
- neutral sheet electrons, motion and radiation 3−35423
- nonlinear conducting media, inhomogeneous anisotropic, electrodynamic and electrophysical phenomena *(Ukrainian)* 3−21957
- nonrelativistic streams of charged particles, two-dimens. motion, beam configs. 3−21982
- nonrelativistic theory, momentum gaps 3−50591
- polarisational self-acceleration *(Russian)* 3−1539
- positrons, relativistic, small angle refl. from solid surface, EM radiation prod. 3−56982
- quantum chemistry, conf., Uppsala, Sweden (June 1982) 3−35770
- radiation pressure, in liquids, quantum naive approach, presentation of arguments 3−54695
- radio galaxies, electrodynamic models for energy source 3−25615
- radio pulsar disc electrodynamics, theory 3−54417
- relativistic charged particle motion in highly nonuniform crossed elect. and mag. fields 3−50593
- relativistic charges and radiation, statistical mechanics 3−40384
- relativistic electron beam reson. excitation of slow EM wave 3−32298

electrodynamics continued
relativistic electron moving along arc of circle, radiation emission 3—32284
relativistic electrons in periodic mag. field, energy exchange with light radiation *(Chinese)* 3—36926
relativistic intensive electron beam in spatially periodic magnetic field, induced radiation 3—36929
relativistic orbital-drift integral of electron motion in a rotating electromagnetic field 3—50592
relativistic particle bunches, elongation invariance in electrostatic field 3—1538
retarding systems, cascaded coupled-resonator type interactions between electron beams and EM waves 3—12057
single-flow pot. motion of stream of charged particles, theory 3—6859
solid boundary layers, contact field eqns. 3—17421
spin problem in classical electrodynamics *(German)* 3—12053
threshold singularities in radiation of charges moving through junctions between waveguides of arbitrary cross section 3—12058
toroidal electron model, nonlinear complex Maxwell eqns. 3—35860
Trouton-Noble expt. anal. in continuum media and electrodynamics 3—20626
vortical stratified motion of electron beam 3—6858
Yang-Mills theory and gravitation: a comparison 3—5691
α-term in mean field electrodynamics 3—48814

electrodynamometers *see dynamometers*

electroencephalograms *see electroencephalography*

electroencephalography
see also bioelectric potentials; biomagnetism; brain
activity reduction caused by a light flash 3—48288
adaptive EEG derivation technique 3—48429
auditory vertex response interstimulus interval depend. 3—34859
balanced non-cephalic reference electrode system in EEG recording, ECG rejection *(Japanese)* 3—58853
biofeedback instrument and appl. for therapy writer's cramp *(Japanese)* 3—4677
brain, electrical activity, microelectronic electrode probe for investigations 3—35050
brain at work, worked potentials anal. 3—53876
coherence function between pairs of recordings, integral meas., 3—34824
computer diagnosis using bootstrap identification 3—24906
computer generation of surface distribution maps of measures of brain activity 3—4696
depth profiles of the electrocorticogram 3—24700
dynamic brain model, neuronal oscillators in cerebral cortex, chaotic behaviour 3—9537
ECG/EEG common mode rejection ratio analyser 3—53877
electrocorticograms, human, automated morphological anal. of spikes and sharp waves 3—58847
electrocorticograms of the adult and aged mouse X-irradiated during the perinatal period 3—58626
electrode cap evaluation 3—35003
epileptic baboon, effects of constant light on EEG and seizure activity 3—15064
epileptic seizures, automatic recognition method 3—35001
evoked potential latency meas., effects of ongoing EEG 3—15090
filtering processor for ECG-EEG signals 3—24904
FIR digital filtering programs for automatic processing of biological signals 3—4660
hippocampal EEG in the freely moving rat, spectral characts. 3—15065
human infant brain activity asymmetry after visual stimulation 3—39620
information theory based time delay estimation for EEG analysis 3—15259
intraoperative frequency anal., general anaesthetic component 3—35017
late positive complex, auditory stimulus intensity effects on components 3—15104
micro-movement transducers as an aid in EEG interpretation 3—4661
microcomputerised biomedical signal processing, ECG, EEG waveform analysis *(Korean)* 3—19834
neurological condition at birth rel. to EEG and visual evoked pot. at the age of 5 3—34823
neuromagnetic localisation of epileptiform spike activity in the human brain 3—29585
numerical evaluation of human EEG pots., simple method 3—24702
operating room EEG, artefacts and unusual waveforms 3—19825
quantitative analysis, artificial intelligence methods 3—34999
segmentation and clustering of time series, appl. to electroencephelograms, entropy distance measure 3—35008
signal processing, microprogrammable system and appl. to multichannel EEG anal. 3—9762
signal processing, time series, directed coherence anal. 3—9771
sleep EEG anal. and sleep stages, human, computerised pattern recognition approach 3—48433
spectra, method for assessing alertness fluctuations 3—58849
spectral patterns anal., for recognition of patients 3—15257
spike-wave activity, analog machine detect., special purpose electronic circuit 3—35002
spontaneous cortical slow-potential shifts and choice reaction time performance 3—48279
syntactic pattern recognition appl. 3—29776
theta rhythm, septo-hippocampal relationships 3—34820
topographic methods of functional cerebral analysis 3—15261

electroendosmosis *see electrophoresis*

electroerosive machining *see spark machining*

electrofluidynamics *see electrohydrodynamics*

electrofluorescence *see electroluminescence*

electroforming
Al-Al$_2$O$_3$-Au electroformed struct., SEM and XPS studies 3—2991
Al$_2$O$_3$, porous anodic thin film incorporating Ag ions within pores, elec. props. 3—38510

electrogasdynamics *see electrohydrodynamics*

electrohydrodynamics
axisymmetric meridional laminar flow, azimuthal rot. due to current source 3—51128
binary liquid metal system, with immiscibility region, break-up in crossed elec. and mag. field 3—22544
cholesteric mixtures, pulsing EHD instability 3—56817
current carrying liquid conductor stability in gravitational field 3—7669
dielectric breakdown of liquids, role of electrohydrodynamics 3—19053

electrohydrodynamics continued
disperse particles in bipolarly charged two-phase electrohydrodynamic stream, oscill. intensification 3—17984
electric breakdown of liquids, role of EHD 3—28769
electrofluidised beds, AC and DC applied elec. fields, bubble rise velocity 3—37580
electrofluidised beds, stabilisation against bubbling and boundary value problems, elec. field effects 3—37581
electrolyte solns., dielectric saturation and friction, EHD eqns. 3—34027
electrostatic precipitators, exptl., study of EHD flow 3—51244
EM batching trough with separate inductor supply 3—22548
Faraday MHD convertor three-dimensional model flow and electric field interaction 3—51397
flow in transfer channel, direct energy conversion 3—39497
ion source with reservoir and emitter tip heated by electron bombardment 3—460
ion sources, field emission *(Japanese)* 3—20951
liquid flow through narrow gaps, mechano-electric effects 3—42320
liquid metal surface, electromagnetic control *(French)* 3—42316
metal jets disruption by electric current, powder prod. 3—24177
nematic liquid cryst., electrohydrodynamic instabilities, classification 3—12786
nematic liquid cryst. film, torsion pendulum oscills. caused by dissipative structs. 3—7905
4-n-nitrophenyl ether 4-n-hydroxybenzoic acid, smectic A phase, texture transform. electrooptical effect 3—34074
planet interior, dielectrophoretic instability of spherical shell 3—10238
Poisson struct. elementary derivation 3—22549
polydisperse two-phase system, particle charging and motion eqns. 3—46655
redox systems in EHD and electroconvective flows 3—37577
smectic A liquid crystals, low-melting, EHD effect 3—33092
thin layer electrochemiluminescence cells current efficiency, EHD convection 3—34630
throttle-type EHD convertors, flow modes, direct energy conversion 3—39498
water, hydrodynamic effects in elec. and mag. fields, review 3—42322
waves, 1-dimens., time-depend., existence and tilting 3—42321
weakly conducting fluid, dispersion in elec. field of plane condenser *(Russian)* 3—2132

electrojets
see also ionosphere
annual variations of equatorial electrojet field 3—35067
auroral electrojet during substorm, effect on thermosphere gravity wave characts. 3—15667
auroral electrojet indices, rel. to Birkeland currents and high latit. Joule heating 3—5030
E-region current, correl. with geomag. daily var. at equatorial altitudes 3—35354
eastward polar electrojet region, VHF auroral backscatter amplitude, depend. on ionosphere cond. 3—59152
equatorial counter-electrojet effect on Indian region geomag. solar/lunar daily var. 3—44390
equatorial electrojet, characts. at Huancayo and Eusebio (Fortaleza), in S American region 3—5028
equatorial electrojet, parameters regional var. 3—44604
equatorial electrojet and counterelectrojets, global dynamo model 3—39951
equatorial electrojet characts. from Brazil geomag. field var. anal. 3—44605
equatorial electrojet characts. rel. to E Senegal geomag. var. *(French)* 3—44394
equatorial electrojet effect on S$_q$ var. 3—44393
geomag. field variations assoc. with equatorial and counter electrojets 3—35066
induced currents contrib. to Sq var. 3—39778
post-noon quadrant field-aligned currents and electrojets 3—30111
two-component auroral electrojet during substorm 3—25259
westward electrojet rel. to FAC and diffuse auroral precipitation 3—35348

electrokinetic effects
see also electrodynamics; electrophoresis
drying process details and industrial application 3—29314
O$_2$, electrokinetic props. and dissoc. in O glow discharge 3—51427

electroluminescence
see also phosphors
ferroelectric, polarisation switching, internal cold emission and luminesc., theory 3—19204
free complex mol. vapours, luminesc. with elec. excitation 3—36796
metal-oxide-Si heterostructures, electrolum., tunnel-transparent dielec. influence *(Ukrainian)* 3—47712
MIM structure, nature of forming process 3—18795
optical fibres coupling to LED, electrolum. 3—8884
organic solutions, electrochemical luminescence using charge transfers *(German)* 3—24032
p-s-n diode, forward biased, charge carrier distrib. determ. by recombination radiation *(German)* 3—30895
phosphor, electroluminescent, Destriau-type, long-living, emission intensity-time depend. 3—19203
phosphor powder, AC, electrolum. brightness and maintenance, etching effect 3—3819
polyethylene, dielec. breakdown in divergent field, dissolved gases and electroluminesc. effects 3—52729
polyethylene, light emission in highly divergent fields 3—19205
prebreakdown, occurrence in weak and strong field limits 3—38918
rhodamine 6G in ethanol, excitation by electric breakdown 3—38921
thin film, using Mn and rare earth dopants, displays appl. 3—24020
thin layer electrochemiluminescence cells current efficiency, EHD convection 3—34630
visibility improvement of electroluminescing object using circular polariser 3—27218
ZnS:Mn, La, physical study of phosphors, trap-depth calcs. 3—43608
Ag-As$_2$S$_3$ system, electroluminescence excitation of Ag diffusion 3—28169
Al-SiO$_2$-Si electron injector structs., surface plasmon polariton mediated luminesc. 3—52854
AlGaAs heterostructures, electroluminescence photon yield study 3—3823
AlGaAs LPE heterostructures, luminesc. efficiency improvement by CW laser annealing 3—47700
Ar/CH$_4$ scintillating drift chambers, emission process nature 3—11603
Au/Langmuir-Blodgett film/n-GaP diode, electrolum. 3—38923
CaO:Tb, Ce, phosphor system, sensitised electrolum. 3—8885

electroluminescence continued
- CaS:Cu,Ce phosphors, photoluminesc. and electroluminesc. 3—47683
- CdS crysts., acoustoinjection luminesc. 3—47716
- CdS_xSe_{1-x} electrodes, photoluminescence and electroluminescence, appl. to photoelectrochem. cells 3—34153
- n-CdS_xSe_{1-x} graded electrodes, electron-hole pair separation efficiency mapping, luminescent props. 3—47686
- $CuGa_{0.7}In_{0.3}Se_2$-ZnSe heterojunction, electroluminesc. and I-V characteristics meas. 3—3821
- $Ga_{1-x}Al_xP$, homogeneous, temp. difference LPE growth and photo- and electro-luminesc. meas. 3—39051
- GaAs doping superlattices, tunable electrolum. 3—14357
- GaAs:Si p-n structures, radiative recomb. characts., effect of In impurities 3—38920
- GaAs-$Al_xGa_{1-x}As$ heterostructure, photo-EMF, forward current flow mechanism, electrolum. study 3—18774
- $GaAs_{0.11}P_{0.89}$(GaP):N, Te, Zn LEDs, yellow and green, current dependent electroluminescence decay and degradation behaviour obs. 3—3822
- GaP LED's, IR to visible up-conversion 3—38917
- GaP thermally-stable two-color light source 3—37148
- GaP-based epitaxial structs., isoelectronic N impurities spectrosc. obs. 3—3820
- $Gd(MoO_4)_3$, luminescence and polarisation reversal 3—8886
- $Gd_2(MoO_4)_3$ single cryst., electroluminescence, correlation with ferroelec. switching 3—24019
- InGaAsP-InP:Zn double heterostructures, luminescence study 3—38922
- Ni/diamond contacts, microplasma breakdown, luminescence and I-V characts. 3—18787
- Si MOS struct., thermal excitation of two-dimensional plasma oscillations 3—23491
- Si-ZnS:Mn heterostructure, DC electroluminescence 3—24022
- SiC polytypes, prebreakdown electroluminesc. spectra 3—19201
- α-SiC:Al^+, LED, ion implanted, radiative recomb., electrolum. study 3—57978
- Si_xC_{1-x}:H, amorphous, electroluminescence obs. 3—47711
- SiO/ZnF_2:Mn/SiO electroluminescent display films, separation of hot electron generation and luminescent excitation 3—43634
- ZnF_2:Mg, phosphors, electro- and photo-luminesc. study 3—38919
- ZnO metal-semicond. diodes, electroluminescence emission 3—23483
- ZnS, AC powder electroluminescence, brightness and maintenance *(Japanese)* 3—47713
- ZnS phosphors with plate microcrystals, prep. and characts. *(Japanese)* 3—47715
- ZnS:Cu, AC electrolum. lines, intermittent arrays and segments 3—19199
- ZnS:Cu, electroluminesc. and elec. cond., temp. and field dependence meas. 3—14358
- ZnS:Cu,In,Cl phosphors, electroluminesc. 3—47714
- ZnS:In,Cl phosphors, electroluminesc. 3—47714
- ZnS:La, physical study of phosphors, trap-depth calcs. 3—43608
- ZnS:Mg, phosphors, electro- and photo-luminesc. study 3—38919
- ZnS:Mn CVD film, AC and DC coupled devices appl. 3—24021
- ZnS:Mn thin films, AC electrolum. emission decay and saturation 3—19200
- ZnS-Cu:Sm(Eu)(Pb)(Tm), bulk electroluminesc. intensity, temp. depend. 3—19202
- ZnS(Se):Mn^{2+} MISIM structures, electron impact excited luminescence 3—43633
- ZnSe, deep centres, electrolum., barrier capacitance relax. study 3—18654

electroluminescent devices *see luminescent devices*

electrolysis
- *see also anodisation; electrical conductivity of electrolytic liquids; electrodeposition; electroforming; electrolytic dissociation; electrolytic ion mobility; electrolytic polishing*
- borosilicate glass, Li electrolysed, impedance meas. 3—23415
- chloro-alkali industry membrane cell technology, developments and effects on power utilisation 3—53496
- electrocoagulation, intra-arterial electrolysis, pig expts. 3—48274
- ferrite pellets for bipolar particulate electrolytic cells 3—19527
- H_2-NiOOH rechargeable cell, hydrogen permeable membrane electrode, for H_2 production 3—15008
- H_2/H_2-rich fuels production using central receiver solar utilities 3—19625
- H_2O electrolysis for H_2 production, gas bubble behaviour and electrolyte resistance 3—15009
- liquid metal droplets, potentiostatic study of diffusion layer, natural convection case 3—53423
- magnetolysis, energy conversion appl. 3—9408
- polymerised organic films, grafting and growing mechanism on metallic surfaces 3—13656
- production methods for H_2 critical assessment 3—19626
- synthetic diaphragms and membranes for the electrolytic production of H_2 3—48194
- viologen-Pt systems for H_2 generation 3—24643
- water electrolysis, polymer separators for H_2 production 3—48195
- wear resistant coatings, fracture rel. to electrolytic prep. *(Russian)* 3—58281
- C, pyrolytic, form. on Mo substrate, DC elec. field effects, gas chromatography 3—34647
- Cu crystal, (111) surface, dislocation etching, potentiostatic electrolysis *(Japanese)* 3—56906
- H_2 production, electrolyser with solid electrolyte using Nafion membrane, design and construction 3—48184
- H_2 production by catalysis of SO_2 3—48187
- H_2 production by decomposition of water in photoelectrochemical cell 3—34743
- H_2 production by hybrid thermoelectrolysis using various catalysts 3—48188
- H_2 production by water electrolysis under pressure and moderate temp. 3—48193
- H_2 production by water electrolysis using solar cells, parameters affecting efficiency 3—58564
- H_2 production from water, R&D present status in Japan 3—53592
- H_2 production in large quantities using electrolytic cells 3—48192
- H_2 production using alkaline water electrolysis cells and polyantimonic acid based membranes 3—48191
- H_2 production using steady-state pH-differential water electrolysis cell 3—19623
- H_2 production/storage using titanium electrodes and metal hydrides 3—39537
- H_2O photoassisted decomposition over modified TiO_2 electrodes 3—14961

electrolysis continued
- H_2O, photoassisted electrolysis using pure and doped Fe_2O_3 electrodes 3—14962
- H_2O, tritiated, solid oxide electrolysis cell 3—45675
- Hz and fresh water production from sea-water by electro-chemical method 3—19622
- Ni-Cr electrolytic powders, prod. 3—24184
- $NiNb_2O_6$ photoanode for H_2O photoelectrolysis 3—9327
- $NiTiO_3$ photoanode for H_2O photoelectrolysis 3—9327
- O_3 production from O_2, non-mass-dependent isotope effect 3—39391
- Pb metal electrowinning from $PbCl_2$, electrolyte impurity effects 3—58433
- $PbFe_{12}O_{19}$, photoelectrochemical studies 3—52195
- SnO_2-meso-tetraphenylporphyrin, photoactive electrodes, electrochemical solar cells 3—29382
- WO_3 thin film electrochromic elements, electrode processes 3—34072

electrolytes
- *for solid electrolytes see superionic conducting materials*
- *see also electrolysis; superionic conducting materials*
- alkali halides, enthalpies of mixing, 373.15K 3—33451
- alkali halides electrolytic aq. soln., McMillan-Mayer ion-ion pot., Coulombic contrib. correction 3—22753
- alkali halides in conc. aqueous salt solns., partial molar volumes *(French)* 3—53441
- alkali metals in liq. phase, entropy calc. from consideration of ionic atm. 3—2842
- alkaline cells, electrolyte creepage, transport mechanism at high pressures 3—24561
- alkaline cells, electrolyte creepage mechanisms 3—24560
- aqueous solutions, dispersive Fourier transform obs. of opt. consts. 3—8819
- aqueous solutions, luminesc. study 3—38877
- battery electrolytes for −40°C, kinetic barriers to preferred electrode process 3—24566
- binary mixture, excess free energy changes at vanishing ionic strengths 3—38072
- chalcogenides, hydrated, electrolyte layers, quasi 2D motion and proton exchange 3—14154
- colloid, surface charge density/surface potential relationship, double layer potential distrib. 3—39412
- colloidal system, highly asymm. electrolytes model 3—14890
- contact condition near changed wall, density functional theory 3—39390
- continuum model of electrolyte soln. occupying half-space, equilibrium statistical theory 3—46823
- crystal growth from aqueous soln., theory 3—27870
- electrical double layers, in size asymmetric electrolytes, struct., interaction 3—53413
- electrochemistry, conf., Detroit, USA, 1982, Oct. 3—30561
- electrode-electrolyte interfaces, GMSA for mixture of hard ions and hard dipoles against charged hard wall 3—22749
- electronic hydrometer for stationary lead-acid battery electrolyte 3—34690
- electrowinning of Pb metal from $PbCl_2$, electrolyte impurity effects 3—58433
- ether electrolytes for rechargeable Li/TiS_2 cells 3—24562
- Fermi level of solutions, theory 3—34628
- ionic tracer diffusion coeff., extended theory 3—18494
- KCl aqueous solns., electro-osmotic flowing, resist. fluctuations 3—13501
- lead-acid battery electrolyte, ultrasonic technique for specific gravity meas. 3—56392
- micellar system, Monte Carlo study of electrostatic interaction, cell model test 3—56790
- molten carbonate fuel cells, electrolyte loss mechanisms 3—39464
- organic solvent mixtures, saturated vapour press. 3—42759
- organic solvents and electrolytes, condensed gas-vapour aprotonic, heterogeneous equilib. 3—38042
- polyacrylamide gels, collapse and mech. behaviour, effect of crosslinking agent conc. at network form. 3—34656
- polyelectrolyte, rodlike molecule in salt soln., effects 3—37765
- polyelectrolyte contributions to transitions in electrostatic persistence length 3—46107
- polyelectrolyte solutions, cylindrical Poisson-Boltzmann eqn. 3—56802
- polyelectrolyte strong soln., dynamics, quasi-elastic neutron scatt. study 3—27819
- polyelectrolytes, linear, virial eqn. for osmotic press. 3—23009
- polyion in dil. ionic solns., statistical mechanics, counterion condensation on line charge 3—16225
- primitive model 3—22759
- propylene carbonate-1,2-dimethoxyethane mixed electrolyte, cond., for Li cell appl. 3—47131
- protamine-polynucleotide insoluble polyelectrolyte complex, interaction with polyphosphates *(Russian)* 3—53384
- room temperature molten salt electrolytes for photoelectrochemical applications 3—14963
- sealed lead-acid battery development for telecommunication standby power 3—39463
- sodium polystyrene sulphonate, polyelectrolyte strong soln., dynamics, quasi-elastic neutron scatt. study 3—27819
- solutions, cylindrical Poisson-Boltzmann eqn. 3—56802
- solutions, density gradient and correl. function, surface contrib. 3—56792
- symmetric electrolyte solns., statistical mechanical theory using BBGKY hierarchy 3—16224
- symmetrical, vol. change on ion-pairing 3—48069
- testing of alkaline battery electrolytes, manual devices *(Hungarian)* 3—29380
- thermoelectric power meas. of small samples using minicomputer *(French)* 3—10860
- viscosity and density expt. determ. 3—28139
- $CuBr_2$-$SrBr_2$ mixed electrolytic aqueous solns., local order and vibr. dynamics 3—47631
- K_2SO_4-$ZnSO_4$-H_2O system, thermodynamic investig. at 25°C, phase equil. and activities *(Russian)* 3—47090
- Li organic electrolyte cyclable batteries with rocking chair configurations 3—24574
- $Li_2B_{10}Cl_{10}(Cl_{12})$ nonaqueous electrolytes, prep. and resistivity, Li cell appl. 3—8236
- Na-S batteries, melting-crystallisation properties of S electrolyte 3—58495
- Sn and Sn-Pb coatings, electrolytic deposition *(German)* 3—52980
- Zn electrodeposition from aqueous Zn halide electrolytes, dendritic growth study 3—9329
- $ZrBr_2$-MBr_2 mixed electrolytic aqueous solns., (M=Cu, Sr), local order and vibr. dynamics 3—47631

electrolytes, solid *see superionic conducting materials*

electrolytic capacitors
Al foil in NaCl solutions, pitting corrosion effect investigation *(Polish)* 3−47990

electrolytic conductivity of liquids *see electrical conductivity of electrolytic liquids*

electrolytic deposition *see electrodeposition*

electrolytic devices
ferrite pellets for bipolar particulate electrolytic cells 3−19527

electrolytic dissociation
see also electrolytic ions
Li_4SiO_4, in solid-state thermal cells, electrochem. decomp. 3−4293
Li_2TiO_3, in solid-state thermal cells, electrochem. decomp. 3−4293

electrolytic ion mobility
see also electrophoresis
halides, molten, press. effects on elec. cond. 3−47136
Ca^{2+} intracelluar conc. in frog cardiac cells, ionic diffusion theory 3−53651

electrolytic ions
see also electrical conductivity of electrolytic liquids; electrolytic dissociation; electrolytic ion mobility
No entries

electrolytic polishing
anodic barrier films on Al for RBS studies, prep. 3−14779
electrochemical method for stripping tin from semiconductor packages 3−24513
jet electropolishing soln. for thinning semiconductors and oxides, prep. and props. 3−10818
B fibre, residual stress, determ. using length change on electropolishing, instrument design 3−9268
Cu-Ni-Ti alloy, TEM specimen prep., Cu_2O epitaxial film growth and identification 3−29204
$Pb_{1-x}Sn_xSe$, electrolytic polish 3−4161

electrolytic tanks
forward ECG calculations, accuracy testing, comparison of methods 3−15062

electromagnetic absorption *see electromagnetic wave absorption*

electromagnetic compatibility
fiber optic sensor instrumentation research and development, electromagnetic field meas. appl. 3−42026
Kapton breakdown, dielectric discharges, RF characts. 3−38760
Mylar breakdown, dielectric discharges, RF characts. 3−38760
nuclear and space radiation effects, conf., Las Vegas, NV, USA (July 1982) 3−40315
radiation soft dynamic RAM, appl. as particle detector 3−50171
Si solar cell damage from elec. overstress 3−44126

electromagnetic corrections
"electromagnetic corrections" is distinguished in use from "radiative corrections" by application to elementary particle and nuclear interactions
see also radiative corrections
charged scalar soliton Q-stability domain, EM correction 3−40771
electroweak interactions, gauge theories 3−26026
GUT electroweak radiative corrections 3−40821
Higgs boson mass and coupling constant, upper limits in Weinberg-Salam-Glashow model 3−54871
hyperon semileptonic decay, using SU(3) spectrum generation 3−26111
N=1 supergravity and inverted gauge hierarchy 3−45048
N=1 supersymmetric theories, Lagrangian approach, mass splitting, gluino and photino masses 3−26022
potential, effective for nonconvex potentials in scalar QFT 3−40751
primordial nucleosynthesis including radiative, Coulomb, and finite-temperature corrections to weak rates 3−20550
QED, book 3−16103
quark and lepton masses, radiative contrib. in grand unified theories 3−31116
supersymmetric gauge theories, spontaneous supersymmetry breaking 3−11109
supersymmetry, low energy, quark and lepton mass from radiative corrections 3−11056
supersymmetry, radiative corrections for fermion mass, gravitinos 3−49588
SUSY SU(5) model with complete Higgs structure 3−54874
weak-interaction parameters, corrections in technicolour theories 3−31217
$ed \to ed$, electroweak radiative corrections calc., $\sin^2\theta_w$ value 3−16646
$e^+e^- \to e^+e^-$, polarised Bhabha scatt., higher order QED contrib. 3−54901
$e^+e^- \to hadrons+\gamma$, direct photon prod. cross section, angle and energy depend. 3−16650
$e^+e^- \to \mu^+\mu^-$, hard bremsstrahlung corrections in standard $SU(2)\times U(1)$ model 3−625
$e^\pm N \to e^\pm \gamma X$, inelastic scatt., γ-quanta emission, Compton mechanism in quark-parton model 3−21139
$e^-p \to e^-Z^0X$, total cross-section calculation, Z^0 mass 3−26122
$n \to pe\nu$, finite temperature radiative corrections 3−31212
$ne \rightleftarrows p\nu$, finite temperature radiative corrections 3−31212
$n\nu \rightleftarrows pe$, finite temperature radiative corrections 3−31212
$\nu d \to \nu d$, electroweak radiative corrections calc., $\sin^2\theta_w$ value 3−16646
νN, deep inelastic scatt., weak and EM corrections to $\sin^2\Theta_w$ 3−631
pp, $^1S_0$ scatt. length, EM corrections, strong interaction model depend. 3−49688

electromagnetic decays
$^3S_1(Q\bar{Q}) \to \gamma + {}^3P_J(q\bar{q})$, transition rate and helicity structure 3−31216
axion$\to\gamma\gamma$, search in nuclear reactor 3−643
charmonium, elec. dipole one-photon transition rates, relativistic corrections 3−16644
Dirac and Majorana neutrinos, EM props. and decays in gauge theory $SU(2)_L\times U(1)$ and $SU(2)_L\times SU(2)_R\times U(1)$ 3−11082
meson radiative decays and baryon mag. moments 3−26084
neutrino radiative decay and cosmology 3−26032
scalar and tensor meson decay to two photons, relativistic calcs. 3−31215
$A_2^+(1310) \to \pi^+\gamma$, radiative decay width from Primakoff formalism 3−11186
B^0 meson radiative decay, electroweak interactions within five-quark model 3−615
$\eta \to 2\gamma$ decay rate, large symmetry breaking effects 3−634
$\eta \to \gamma\gamma$, radiative transitions, neutral meson quark content 3−49686
$\eta \to \pi^0\gamma\gamma$, branching ratio 3−21134

electromagnetic decays continued
$\eta_c \to \gamma\gamma$, QCD multipole expansion, soft gluon effects in quarkonium decays 3−49629
$f' \to \gamma\gamma$, radiative transitions, neutral meson quark content 3−49686
$f'_b \to \gamma\Upsilon(\gamma\Upsilon')$, decay widths, sum rule for tensor-meson dominance 3−26108
$G \to \gamma\gamma$, chiral Ward identities, pseudoscalar mesons, gluonic bound state 3−26076
$\iota(1440)$ hadronic and radiative decay characts., $\delta\pi\eta'$ coupling strength 3−6100
$\iota(1440) \to \gamma\gamma$, radiative transitions, neutral meson quark content 3−49686
$J/\psi \to f\gamma \to \pi\pi\gamma$, ang. anal. in lowest order QCD 3−36240
$K \to \gamma\gamma$, effects of ρ, ω, ϕ, ψ exchanges, decay rates 3−26117
$K^+ \to \gamma e\nu$, radiative decay and effective $q\bar{q}$ pot. near origin 3−21137
$K^+ \to \pi^+\pi^0 \to \pi^+\tilde{\nu}\tilde{\nu}$ in spontaneously broken supersymmetric models 3−54907
$K_L{}^0 \to \gamma\gamma$ in relativistic quark model 3−21133
$K_{\mu2} \to \mu^+\nu\gamma$, heavy-neutrino search 3−11170
$K^{*+}(1430) \to K^+\gamma$, radiative decay width using Primakoff formalism 3−11187
$p \to \gamma e^+$, Feynman diagram calc., pe^+ coupling strength 3−16572
pp 52 GeV, multigamma-ray events, monopole-antimonopole pair prod. 3−26151
$\phi \to \eta'\gamma$, radiative transitions, neutral meson quark content 3−49686
$\pi \to e\nu\gamma$ decays and related processes 3−16635
$\pi^+ \to \gamma e\nu$, radiative decay and effective $q\bar{q}$ pot. near origin 3−21137
$\psi \to \gamma+$meson, P state quarkonia production using two gluon mechanism 3−36251
$\psi \to \gamma f$, helicity structure, f as (gg) state M=1220 MeV in QCD 3−26077
$\psi(\psi')$ radiative decays involving $q\bar{q}$ scalar-meson final states 3−16645
ψ radiative decay to pseudoscalar meson, QCD and heavy quark mass expansion 3−49669
$\rho^- \to \pi^-\gamma$, radiative decay width and coherent prod. 3−26116
$\theta(1640) \to \gamma\gamma$, radiative transitions, neutral meson quark content 3−49686
$\theta(1670) \to p\bar{p}(\gamma\gamma)(\gamma V)$, glueball nature of θ, comparison with dynamical factors from f and f′ decays 3−21123
$\Upsilon' \to \gamma a$, axion search in CUSB detector 3−31204
$\Upsilon' \to \gamma\chi_b''$, P-wave bound state obs. in CUSB detector 3−31204
Υ' radiative decay, bottomonium $1\,{}^3P_J$ splitting size, possible detection 3−11188
$\Upsilon'' \to \gamma\chi_b'$, P-wave $b\bar{b}$ bound states obs. 3−21135
$\Upsilon'' \to \gamma\chi_b' \to \gamma\gamma\Upsilon'(\gamma\gamma\Upsilon)$, χ_b' prod. in exclusive reaction 3−21136
$\Upsilon''(\Upsilon') \to \gamma f_b$, decay widths, sum rule for tensor-meson dominance 3−26108
$V \to P\gamma$ decay rate suppression by spin-spin force in QCD 3−49687
$Z^0 \to gg\gamma(ggg)$, massive quarks, top quark mass, branching ratios, electroweak test 3−26049
Z^0 multiphoton and multigluon decay modes, composite model test 3−619
f′(1515), radiative width, TASSO results from PETRA 3−36258
$\psi \to \gamma\eta\pi\pi$, radiative decay obs. 3−36250
ψ radiative decay, $Q^2\bar{Q}^2$ search possibilities 3−21196

electromagnetic energy *see electromagnetic waves*

electromagnetic field theory
see also electromagnetic waves; electromagnetism
annular scalar field distribution propag. 3−1525
aperture-driven cavities, finite-difference analysis application 3−26904
band-limited asymptotic field anomalies 3−32265
book, Beckers electromagnetic fields and interactions 3−44909
charged medium interaction with EM field, space charge density, velocity and vector pot. 3−36928
charged particle moving under continuous accel. and deceleration, radiation emission 3−44984
circular cylindrical coil in set of planar ferromagnetic regions, EM props. computing 3−12036
complex potential, anisotropic, 3D finite element soln. 3−26892
conducting bodies internal resonances, E-field integral equations solution 3−26910
eddy current calc. by network method, three-dimensional, using magnetic scalar potential 3−46125
eddy currents, movement considerations in numerical calculations *(French)* 3−41727
EM field propagation velocity ambiguity 3−16131
energy flow vector, alternative 3−25733
energy flow vector, alternative 3−25734
energy flux vector for the EM field and gauge invariance 3−25732
equiradial circular coils for producing uniform magnetic field 3−26907
Fourier spectra of fields from harmonic sources in uniform motion, dyadic Green's function appl. 3−46123
free space, EM field computation inside source region 3−41722
general discussion of Maxwell's eqns., Ampere's law etc. 3−41728
global energy-momentum conservation of scatt. of point charges 3−44983
inhomogeneous anisotropic medium, transverse elec. and mag. fields, EM field scalar eqns. 3−46127
inverse source and scattering problems, nonuniqueness, comments and replies 3−12381
inverse source and scattering problems, nonuniqueness 3−12380
Lagrangian and Hamiltonian formulation of EM theory with ohmic loss 3−36914
linear field problems, variational theory, electrostatic appl. 3−99
local inhomogeneity, calculation of anomalous field 3−21964
Lorentz-Dirac eqn., extra condition from conservation law 3−31056
Maxwell's eqns., symmetry of polarisation space and supplementary invariance 3−5618
momentum and angular momentum exchange between atom and EM wave by interf. flux 3−36922
moving charge distrib., EM mass, classical theory 3−49175
moving line charge, problem, parallel or perpendicular to anisotropic media, EM field soln. 3−36927
nonclassical fields with singularities on moving surface 3−30635
oscillating electric dipole radiation fields, alternative derivation 3−35799
parity invariant, twisted tensors 3−30636
Poincare-Cartan invariant form, point mechanisms, extension to field theory 3−31022
polarising media, electroelastic waves 3−21958
Poynting theorem, partial forces, contradictions 3−10604
properties with instantaneous acceleration of charged discs 3−45036
pseudo-Maxwell equations revisited 3−97
reflection by moving diffuse interface of two media 3−36919
reflection by perfectly conducting plane in moving medium 3−36918
relativistic charges and radiation, statistical mechanics 3−40384
scattered EM fields, ang. spectrum representation 3−32270

electromagnetic field theory continued
- SEM expansion for current density on scattering object, class 1 coupling coefficient performance 3−46117
- solid boundary layers, contact field eqns. 3−17421
- sources of EM field, new concepts and appls. 3−32261
- space with curvature, EM field eqns. 3−40382
- stationary EM field associated with EM wave propagating in vacuum, active suppression 3−32278
- thin wire antennas, study of methods for EM field calc. using thin wire integral equations 3−46126
- transformations of EM field components, symmetry of equations 3−20650
- transverse EM waves with finite energy action and $\int \bar{E}.\bar{B}d^4x$ 3−10605
- unbounded field problems, finite element method, appl. to two-dimens. taper 3−46124
- viscous fluid interpretation of EM fields 3−30733

electromagnetic fields
- analytic signal model, interpretation of components 3−25773
- atoms and molecules, bound levels, multiphoton interactions, quasistationary quasienergy states 3−32150
- bulk elastic wave conversion into electromagnetic field at ferromagnetic half-space boundary 3−46128
- calculable RF and microwave field standard with broad beamwidth experimental results 3−17406
- circular loop, small, in dissipative medium, EM near field and parameters *(Russian)* 3−6832
- coil, EM forces, static, 3D, equivalent dipole modelling 3−50581
- conducting layer media, EM fields, numerical computation 3−21967
- current carrying conductors, vector pot. of EM fields 3−17405
- cylindrical liner implosions, EM wave induction, hyperbolic theory 3−56120
- cylindrical perfectly conducting surface, 2D EM wave scatt., EM field calc. 3−17412
- dielectric slab waveguides, tangential EM fields rel. to EM scatt. of guided modes by boundary deforms. 3−46137
- diffusion processes, average time constant determination, appl. of Ritz variational method *(German)* 3−40525
- dipole waves on two-layer medium, asymptotic approximation 3−6841
- Earth, struct. of natural ELF EM field in Arctic Basin 3−15522
- eddy current flaw detection by superposed transducers, two-dimens. fields analysis 3−29268
- eikonal structure synthesis for directing families of light rays *(Russian)* 3−17410
- electrodes two-dimensional design, by field-plane method 3−12037
- electron motion in an undulator, EM wave field spatial depend. effect 3−32294
- EM wave propagation in multilayered media, EM fields anal. using dyadic Green's function 3−6840
- exterior alternating field problems, Bubnov-Galerkin method 3−21965
- ferromagnetic hollow cylinder, electromag. fields distrib. *(Ukrainian)* 3−12035
- ferromagnetics, EM field discontinuities 3−6829
- free Euclidean EM field, Markov property 3−12038
- gauge-invariant canonical quantisation of EM field and duality transformations 3−577
- Helmholtz eqn., finite-difference solns. to boundary-value problems 3−53912
- hyperbolic systems. Power conservation law and time decay of energy 3−17399
- induced EM fields in MHD channel with electrodes, integral characts. 3−22543
- lateral waves, interference patterns and electric field radial component 3−6843
- lateral waves, new formulas for $E_{1\phi}$ and E_{1z} 3−6844
- levitated conducting body stability in axisymm. EM field 3−50578
- local inhomogeneity, calculation of anomalous field 3−21964
- magnetic bodies, nonlinear, EM forces, static, 3D, equivalent dipole modelling 3−50581
- microwave heating and electromagnetic waves *(French)* 3−36901
- multilevel atom, unequally spaced, dipole interaction with monochromatic EM field 3−41536
- multiple diffraction on semiplanes 3−46143
- NDT, eddy current calcs., EM field formulation 3−34570
- one dimensional medium, internal light field and renormalisation group 3−21968
- parabolic equation weak solution uniqueness 3−41716
- perfectly conducting gratings, generalised reciprocity relations 3−12303
- quantized EM field with periodic boundary conditions, ang. momentum 3−21966
- radiating system, EM waves emission charact. props. 3−17418
- radiation field computation, holographic method 3−32266
- radio fields, numerical method for extending ray trace calcs. into strong focusing regions 3−6842
- rectangular protrusion, field generated by plane wave scatt., exact calc. 3−1529
- relativistic orbital-drift integral of electron motion in a rotating electromagnetic field 3−50592
- resonator, open, EM field anal. for TEM_{00q} oscillations *(Russian)* 3−1522
- scattered EM field in planetary occultations, strong scatt. formulation including inhomogeneous background for turbulence effects 3−10205
- scattered wave fields from periodic dielectric surface, theory for general angle of incidence 3−6845
- scattering, far-field radiation integral of arbitrary source distrib., sampling approach 3−32267
- scattering from imperfectly conducting objects, field generation from soln. of perfectly conducting object 3−32268
- shortwave approximation in Kreichnan equation for mean field in randomly inhomogeneous medium 3−36924
- thermocouple thermometry in radiofrequency electromagnetic fields, error sources 3−5791
- thin anisotropic conducting plate, EM excitation by axisymmetric field *(Russian)* 3−41725
- transient electromagnetic processes in interaction of an impulsive magnetic field with a cylindrical conductor *(Russian)* 3−21959
- transparent wedge, incident three-dimens. beam, field expression, geometric optics 3−46141
- two level atom in standing EM wave field, self consistent pot. 3−1276
- two-dimensional open boundary problems, static ballooning numerical technique 3−26905
- undergraduate textbook 3−25707

electromagnetic fields continued
- vertical dipole in dielec. or conducting half-sphere, EM field formulae 3−36913
- waveguide with slightly perturbed wall, EM field accompanying bunch of particles *(French)* 3−41370

electromagnetic induction
- *see also inductance*
- accelerator for masses up to 1 g, using capacitor bank 3−49523
- attached electromagnet with square shaped core, mag. field calc. 3−54753
- blood flow and velocity meas. in vivo appl. 3−34927
- component during demagnetizing with attached square shape electromagnet along hysteresis loop 3−54752
- conducting right angle wedge in the field of a double line *(German)* 3−17404
- crack detection in fastener holes using elec. current perturbation method 3−39342
- cylindrical liner implosions, EM wave induction, hyperbolic theory 3−56120
- Earth, electrical transient anal. for disseminated mineralisation 3−48475
- Earth, inverse problem of deep EM sounding 3−15329
- Earth crust, deep EM sounding in zone of Baikal-Amur Mainline (BAM) route, USSR 3−4776
- Earth EM sounding, study of methods for EM field calc. using thin wire integral equations 3−46126
- Earth EM sounding, theoretical considerations for inverse scattering 3−48473
- Faraday's law, integral formulation 3−5544
- force-measuring electromagnet suspension of accelerometer, accuracy increase 3−49348
- integrating inductive transducers for the measurement of the induction of constant magnetic fields 3−45170
- internal magnetic field of object magnetised between poles of electromagnetic 3−50579
- levitated conducting body stability in axisymm. EM field 3−50578
- magnetic damper, optimal shape for largest force 3−12034
- measuring instrumentation, present state and future prospects 3−45172
- metal rod, electromagnetic-acoustic induction of elastic traveling waves 3−23442
- metallic spherical conducting bodies with flaws, electromagnetic fields of transfer and superposed eddy current transducers 3−50580
- motional induction, theory, comments *(German)* 3−6830
- phantom model of man, induced elec. fields meas. system and obs. 3−24931
- plane-wave excitation of truncated metal cone *(Russian)* 3−41726
- point charge moving uniformly along axis of narrow cylindrical ring, radiation 3−12039
- pulsed magnetic field and high pressures producing equipment, for meas. materials props. 3−45168
- steel, C, compacted particle core, AC mag. characts. 3−43397
- steel, low alloy and C, type 45, 50, 40Kh and 30KhN2MPA, tempered, remanent magnetism, induction under alternating mag. field 3−58143
- steel, type 38KhGNM, quenching and tempering effect on mag., elec., and mech. props. 3−58142
- thin anisotropic conducting plate, EM excitation by axisymmetric field *(Russian)* 3−41725
- Fe-Ni (32 wt.%) alloy, elec. emission assoc. with martensitic burst, optical reflectivity and voltage obs. 3−39149
- Fe-Si-B-C-N alloy, high induction development, C content rel. to hot rolling temp. 3−29197

electromagnetic interference
- *see also radiofrequency interference*
- air conductivity relevant to source region EMP 3−37719
- Mylar, satellite dielectrics, ionisation induced breakdown and cond. 3−44637
- nuclear and space radiation effects, conf., Las Vegas, NV, USA (July 1982) 3−40315
- Teflon, satellite dielectrics, ionisation induced breakdown and cond. 3−44637
- Si solar cell damage from elec. overstress 3−44126

electromagnetic lenses *see magnetic lenses*

electromagnetic oscillations
- *see also cavity resonators; lasers; masers; ring lasers*
- $Al-Al_2O_3-Al-Al_2O_3-Al$ structures, EM oscill. generation 3−38489
- H, maser oscillation level, function of HF discharge characteristics *(French)* 3−22019

electromagnetic pulse *see electromagnetic compatibility; electromagnetic interference; radiofrequency interference*

electromagnetic radiation *see electromagnetic waves*

electromagnetic theory of light
- ether, interpretation, experimental testing of special relativity 3−49176

electromagnetic wave absorption
- *see also electromagnetic wave propagation in plasma; gamma-ray absorption; light absorption; spectra; X-ray absorption*
- D-region radio wave absorption, dominant role of solar Lyman-α radiation 3−5029
- DNA and other biomols. in soln., optical method for investigating microwave absorpt. characts. 3−58874
- ethanediol, microwave absorpt. in liqs., study by heterodyne detect. of thermally induced refr. index fluctuations 3−24061
- glass, nonreson. absorption of acoustic and EM radiation 3−18404
- HF surface waves propag. over ocean, attenuation with distance and wind speed 3−10031
- human whole-body radiofrequency absorption studies using a TEM-call exposure system 3−29793
- inhomogeneous medium without a cavity, EM wave reson. absorpt. 3−1530
- ionosphere, night-time absorpt. during and after magnetospheric storms from auroral to middle latits. 3−5024
- liquid, subMM absorption coeff. determ. using differential method 3−47740
- lossy dielectric objects, iterative procedure 3−17413
- metal strips on semiconductor, surface EM wave propag. 3−47726
- microwave attenuation distribution in Earth-space communications links Dougherty-Dutton model improvement 3−25171
- microwave power absorption in biological specimen in standing-wave irrad. waveguide 3−34890
- microwave power absorption of insects, Tenebrio pupa, expt. 3−24792
- microwaves, partial-body absorption resonances in a sitting rhesus model at 1.29 GHz 3−15145

electromagnetic wave absorption continued
- multilayered lossy media, incident beam absorpt. and lateral shift 3–32271
- near-field EM absorption in man, numerical and expt. results 3–34885
- parallel joined tubes, defined equivalent radiative temperature *(French)* 3–36916
- planar EM wave, elec. polarized, absorption by comb struct. in stratified dielec. medium 3–12046
- Planck mean absorpt. efficiency of graphite and amorphous C, interstellar appl. 3–59193
- plasma equivalent circuit resonance and HF power absorption 3–56688
- prolate spheroidal models of humans and animals, irrad. in near field of a small loop antenna 3–24791
- radar attenuation, rain rate, determ. using spaceborne meas. 3–44569
- tissue EM wave power absorption *(Polish)* 3–39687
- X-ray evanescent-wave absorption and emission 3–32277
- H_2O, microwave absorpt. in liqs., study by heterodyne detect. of thermally induced refr. index fluctuations 3–24061
- KBr(l), microwave absorption coeff., two phonon difference processes 3–34173
- LiF, microwave absorption coeff., two phonon difference processes 3–34173
- NaCl, microwave absorption coeff., two phonon difference processes 3–34173

electromagnetic wave attenuation *see electromagnetic wave absorption; electromagnetic wave scattering*

electromagnetic wave diffraction
- *see also electromagnetic wave propagation in plasma; gamma-ray diffraction; light diffraction; X-ray diffraction*
- absorbing material surfaces, EM field diffraction and scatt., exact limit conditions *(French)* 3–56122
- atmosphere ELF propagation, diffraction, refl. and focusing due to lateral ionospheric gradients 3–10035
- attenuation function for field of vertical elec. dipole for path with two diffr. screens 3–6849
- beam cross-section meas. using synchrotron radiation, optical resolution 3–26533
- circular cylinder excitation by TE-polarised EM wave 3–6853
- curvilinear screens, EM field diffraction, numerical soln. *(Russian)* 3–41742
- cylinder with inhomogeneous impedance surface, plane wave diffr. 3–50589
- cylindrical screen, infinitesimally thin, H-polarised field diffr. numerical soln. 3–6852
- E-polarised plane wave diffr. by dielec. wedge 3–56126
- external diffraction problems, method of nonorthogonal series and Rayleigh hypothesis 3–36920
- general diffraction theory, new approach 3–1524
- Green's function, spectral series, rate of convergence 3–46142
- H-polarized EM wave diffr. by ideally conducting curvilinear sheet 3–12047
- hollow sphere with slit, plane wave diffr. 3–36921
- ionosphere, isolated diffraction centres investigation via wave field reconstruction of VHF radio waves 3–10136
- matrix operators in outer diffr. problems 3–21977
- mixed inverse electrodynamic diffraction problem for a doubly-connected scatterer 3–12050
- modern optics, mathematical appls., conf., San Diego, CA, USA (Aug. 1982) 3–40314
- multiple diffraction on semiplanes 3–46143
- planar EM wave diffr. from radially conducting conical surface 3–12049
- plane EM wave diffr. by conducting half plane, Senior's approx. anal. method 3–6855
- plane EM wave diffr. by semi-infinite grid of parallel conductors 3–21975
- plane screens, perfectly conducting, Hilbert space formulation 3–6835
- plane wave diffraction by infinite set of soft/hard parallel half planes, theory 3–6837
- PMMA overcoating dielec. layers, far IR surface plasmon coupling 3–27226
- polyethylene overcoating dielec. layers, far IR surface plasmon coupling 3–27226
- polygonal apertures, Fraunhofer diffr., Abbe transform derivation of algebraic formulae 3–6871
- radiation field computation, holographic method 3–32266
- radiowave attenuation by reinforced concrete obstacle with rectangular hole 3–6854
- radiowaves, caustic cusp diffr. region in ionospheric plasma layer, field struct. 3–5032
- rayleigh and the Sommerfeld diffracted field representations and the regions of their convergence 3–32279
- reflecting grating of rectangular bars, diffr. of two-dimens. Gaussian beams 3–36923
- resonator, open, EM field anal. for TEM_{00q} oscillations *(Russian)* 3–1522
- scalar-diffraction line response 3–12068
- screens, diffracting, theory, spatial and freq. var. of field behind screen 3–12048
- seam of two-dimensionally periodic waveguide arrays and dielec. rod 3–12044
- semi-infinite shield with variable admittance, diffraction of short waves 3–17416
- slit, thick, pierced in perfectly conducting screen, two-dimens. EM beam wave diffr. 3–50585
- surfaces with inhomogeneous admittance 3–6847
- two-dimensional periodic arrays of dielec. rods, electrodynamic formulation 3–21976
- uniform geometrical theory of diffr. for wedge illuminated by dipole class to its edges 3–50582
- uniform geometrical theory of diffraction 3–41729
- wedge, arbitrary wave diffraction 3–17409
- wedge, perfectly absorbing and with reflecting faces, use of virtual rays 3–46140

electromagnetic wave diffusion *see electromagnetic wave scattering*

electromagnetic wave interference
- *see also atmospherics; electromagnetic wave interferometers; electromagnetic wave interferometry; electromagnetic wave propagation in plasma; light interference; Moire fringes*
- IR multilayer narrow-band reflection filter 3–56300
- lateral wave propagation, 3–6843

electromagnetic wave interference continued
- radio waves coherent refl. from sea surface, phase shift meas. via S-band radio interferometer 3–10099
- radiowaves, space-time vel. distrib. of tidal motions including Coriolis force *(Russian)* 3–44531

electromagnetic wave interferometers
- *see also electromagnetic wave interferometry; light interferometers*
- double-freq. dispersion interferometers for solar wind inhomogeneous formations investigation 3–10228
- Fabry-Perot interferometers, fast-scanning of spectral line profiles, Cr I 3–10890
- Infrared Space Observatory, cooled telescope with photometric and spectroscopic instruments 3–40033
- Jodrell Bank as part of MERLIN interferometry network 3–20243
- microwave interferometer for measurements of small displacements 3–35960
- multidetector intensity interferometers 3–45194
- radioastrometry using interferometers with ultralong baselines 3–40009
- real time 155 GHz interferometer module for electron density meas. in Tokamak, report 3–46791

electromagnetic wave interferometry
- *see also light interferometry; Moire fringes*
- 3C 84, strong radio source, high dynamic range mapping using redundant interferometers 3–5122
- cosmic radiosource brightness distrib., minimal-phase reconstruction 3–10230
- extragalactic high luminosity radio sources, kiloparsec scale struct. obs. with MTRLI 3–25634
- ionospheric radio phase path contrib. from F_2-layer characts. 3–5015
- BL Lacertae objects, arc second radio structure of twelve objects from VLA obs. 3–54501
- lunar radio interferometer 3–20256
- pulsars, proper motions meas. from radio interferometry 3–15937
- quasars, milliarcsecond struct. from VLBI mapping 3–25616
- radio galaxies nuclei, milliarcsecond struct. from VLBI mapping 3–25616
- sea level variation meas. and reflection coeff. phase determ., interferometric technique implementation 3–4989
- sea surface remote sensing, appl. of S-band radio interferometer to meas. of phase shift of coherently refl. radio waves 3–10099
- Sun, interferometric obs. of solar 3–35567
- super-resolution of compact-source beyond Rayleigh limit, evaluation of flux, position, size and shape 3–10227
- superluminal radio sources, review of VLBI obs. and physical models 3–25637
- time dependent convection under reduced gravity *(German)* 3–7589
- vibrational spectra and structure, book 3–5513
- VLBI real time meas. technique and obs. of atmospheric and solar wind scintillation 3–35455
- X-ray wave fields in perfect and nearly perfect crystals, expt. techniques fundamentals 3–13030

electromagnetic wave propagation
- *see also atmospheric electromagnetic wave propagation; atmospheric light propagation; backscatter; electromagnetic wave absorption; electromagnetic wave diffraction; electromagnetic wave interference; electromagnetic wave propagation in plasma; electromagnetic wave reflection; electromagnetic wave refraction; electromagnetic wave scattering; guided electromagnetic wave propagation; light propagation; radiowave propagation*
- boundary with small irregularities, effect on propagation 3–32280
- chiral smectic liq. cryst., EM and sound wave propag. 3–51490
- circularly polarised waves, mech. demonstration 3–35821
- coherent wave propagation in discrete random media, closure hypotheses from method of smoothing 3–36915
- composite, layered, volumetric EM wave geometric dispersion and damping *(Ukrainian)* 3–46131
- coupled-mode-theory approach to electromagnetic propagation through a random medium 3–6836
- ECM resistant systems in communication and navigation, propagation effects, conf., Copenhagen, Denmark (May 1982) 3–44899
- free-space wave propagation beyond the paraxial approximation 3–56124
- gaseous medium, EM wave interaction in mag. field of arbitrary orientation, nonreciprocal effects 3–18001
- gravitational freq. shift effect in solar system 3–40028
- heterogeneous random media, EM wave propag. and radiative transfer 3–50588
- homogeneous media with Hermitian permeability and permittivity 3–26908
- lateral wave propagation, 3–6843
- layered conducting structure, EM surface wave propag. 3–32281
- layered nonuniform media, multiple reflections method modification 3–12045
- layered symmetric struct., nonlinear surface EM waves, asymmetric modes *(Russian)* 3–1534
- linearly vibrating objects, reflections, plane mirror at oblique incidence 3–6870
- metal strips on semiconductor, surface EM wave propag. 3–47726
- MM-wave propagation in surface vicinity 3–46145
- in multilayered media, anal. using dyadic Green's functions 3–6840
- ocean ELF wave propag. meas. by APL 3–20032
- optically nonlinear cubic crystals, EM wave polarisation, self-induced change 3–43506
- planetary atmospheres, possible existence of global EM resonances 3–15862
- relativistic particle motion by EM pulse propag. along static mag. field 3–55736
- resonance ponderomotive effect for an open spherical screen 3–26926
- Reusch piles, normal incidence illum. by monochromatic plane and uniform waves *(French)* 3–1528
- scattering in multi-layered random media with rough interfaces 3–46130
- short-wavelength photons motion in gravitating refractive media, appl. to double quasar (0957+561) 3–35418
- shortwave approximation in Kreichnan equation for mean field in randomly inhomogeneous medium 3–36924
- solar coronal transient, simultaneous radio scatt. and white light obs. 3–20316
- three-dimensionally inhomogeneous media, continuous asymptotic solutions in the case of linear interaction of waves in the absence of polarization degeneracy 3–36925
- transmission lines with periodic nonlinear loads, harmonic generation 3–46129

electromagnetic wave propagation continued
  unbounded field problems, finite element method, appl. to two-dimens. taper 3−46124
  vacuum, stationary EM field associated with EM wave, active suppression 3−32278
  VHF, UHF and SHF, marine atmosphere propagation limitations 3−46144

electromagnetic wave propagation in plasma
  see also ionospheric electromagnetic wave propagation; light propagation in plasma; magnetospheric electromagnetic wave propagation
  amplitude modulation by modulated mag. fields in inhomogeneous plasma 3−37656
  charged particles reson. interaction with wave packets, drift theory 3−40383
  circumsolar plasma, spectral broadening of radio waves 3−25404
  cold plasma containing electric charges and mag. monopoles 3−5562
  cyclotron absorption of EM wave in plasma appl. to electron-cyclotron heating in Tokamak *(Russian)* 3−22637
  drift wave turbulence, numerical calcs., wave-wave nonlinear coupling models 3−42399
  dynamics of one-dimensional upper-hybrid turbulence in a magnetized plasma 3−46725
  electron beam-plasma system, Em wave generation 3−32903
  electron beam-plasma system, laser light backscatt. 3−56697
  electron heating due to resonance absorption of moderate-intensity microwaves 3−2248
  electron plasma waves in inhomogeneous plasma layer, nonlinear effects 3−22641
  elliptic waveguide, EM wave propag. 3−22635
  EM wave amplification in plasma with random mag. fields 3−46729
  equivalent circuit resonance and HF power absorption 3−56688
  excitation in relativistic plasma in random mag. field 3−56660
  extraordinary wave nonlinear polarisation, electron thermal motion effect 3−7747
  Faraday rotation, nonlinear evolved due to strong radiation 3−32906
  finite amplitude whistlers, nonlinear propagation in narrow current carrying plasma column *(Russian)* 3−22636
  fluctuating ω_{pe} emission from Alcator C, high resolution spectral meas. 3−42452
  fluctuations and nonlinear wave interactions in plasmas, book 3−42
  group velocity in multicomponent magnetically active plasma 3−12888
  HF driver pump, nonmonochromatic, nm reson. param. interaction with magnetised plasma 3−22644
  HF waves in toroidal plasma, propag. and absorpt., Eikonal description 3−12889
  inhomogeneous plasma slab, EM wave interaction 3−46728
  ion cyclotron waves, anomalous reflection in flowing plasma 3−51325
  ionosphere, HF radiowave propagation effects on striction parametric instability 3−39957
  ionospheric waveguides, radiowave extraction mechanism, resonance buildup of beams 3−20179
  isotropic plasma, electron interaction with two propagated electromag. waves 3−27707
  JFT-2 Tokamak, lower hybrid RF heating by phased waveguide array 3−51350
  laser absorbing plasma, perturbation evolution 3−42363
  laser emission nonlinear absorption, numerical simulation using LAST/MEDUSA code 3−7711
  laser radiation absorpt. efficiency in plasmas with different z 3−32907
  laser-plasma interaction diagnostics using streak camera image converter tube, photocathode design 3−40711
  light scattering, k- and ω-spectra meas. in plasma focus 3−12977
  long gas discharge, nonlinear theory, production by ionising EM wave 3−18026
  longitudinal wave focusing at plane EM wave diffr. by plasma *(Russian)* 3−51327
  low-density plasma stream, EM wave scatt. by metallic body, charged paricle distrib. effect 3−7745
  lower hybrid waves focusing by EM effects 3−37650
  magnetised plasma stimulated scattering of EM pump wave 3−22603
  magnetoactive plasma, EM radiation absorpt. in lower hybrid reson. region 3−46732
  magnetoplasma connected with ion influence, LF EM waves behaviour 3−7741
  magnetosphere, whistler propag. beyond plasmapause, hot plasma effect 3−10153
  microwave discharge sustained by travelling waves, axial struct. 3−42475
  microwave focused Gaussian beam reflected at 45° from conducting plane, field distrib., plasma ignition 3−46133
  microwave scattering meas. in plasma, phase-locked heterodyne receiver appl. 3−18126
  microwaves, nonlinear dissipation in inhomogeneous plasma 3−22639
  mode conversion, electrostatic cyclotron harmonic wave/EM ordinary wave 3−27708
  non-relativistic thermal plasma, absorpt. around electron-cyclotron harmonic 3−22643
  nonlinear diffr. problem for open cylinder with plasma 3−37658
  nonlinear interaction with plasmas 3−32872
  nonlinear plasma eqns. transformation to space-independent frame 3−51324
  parallel-plane waveguide containing compressible macroscopic plasma, propag. of plasma wave modes 3−56691
  parametric excitation of plasma modes at upper hybrid reson. 3−2227
  parametric transparency of a magnetized plasma 3−7744
  plane plasma front subsonic radiation waves, comparison of theory with expt. 3−32875
  inhomogeneous plasma sheath EM wave propagation *(Chinese)* 3−51328
  pulsed microwave absorpt. in collisionless plasma waveguide flow 3−22640
  radiowave propagation in ionospheric plasma 3−35359
  Raman back-scattering in inhomogeneous plasma 3−22597
  real time 155 GHz interferometer module for electron density meas. in Tokamak, report 3−46791
  reflection from diffuse plasma boundary 3−35800
  resonance absorption at supersonic plasma flow 3−22596
  resonance absorption in streaming plasma, self-consistent calcs. 3−37654
  resonant energy absorpt., review 3−32905
  second harmonic spectrum in laser plasma interactions 3−22679
  self-generated mag. fields due to reson. absorpt. in laser-prod. plasmas 3−42364

electromagnetic wave propagation in plasma continued
  semiconductor plasma, magnetised inhomogeneous, metal sheet coated, electrostatic wave propag. 3−37635
  soft X-ray bremsstrahlung emission in laser plasma, spatial distrib., density and temp. effects 3−46731
  spherically-expanding plasmas, profile steepening by reson. absorpt. 3−42361
  stimulated Brillouin scattering feedback oscills. in underdense plasmas with supersonic flow 3−12890
  surface wave produced plasmas props. and appls. 3−22642
  surface waves on the separation boundary between two isotropic plasma media 3−7746
  thermal fluctuations in two-ion-component plasma, CO_2 laser scatt. 3−56689
  thermal self-focusing of microwaves in a plasma *(Russian)* 3−32900
  uniform limits in hot plasma 3−32904
  Vlasov plasma, theory of ponderomotive forces 3−22638
  VLF waves self-focusing in a magnetoplasma 3−37657
  VUV radiation generation by plasma nonlinearities 3−12224
  waveguide, transversely nonuniform, failure of homogeneous multilayer approximation 3−7749
  waveguide-plasma coupling, three dimens. theory 3−46730
  weakly ionised plasma, kinetic approach to EM wave propag. 3−18025
  whistler waves, stimulated scatt. by ion acoustic waves in magnetosphere 3−5061
  whistlers, nonlinear, propag., multidimensional stability anal., time derivative depend. ponderomotive force contrib. 3−7743
  Al plasma, continuous absorpt. spectra 3−22588
  Cd vacuum-arc plasma, absorpt. effects of Cd II 4416 Å line 3−13007
  He steady microwave discharge in quasioptical resonator 3−37723
  He-like ion reson. line, dielectronic satellite strengths in optically thick plasma 3−12846
  He-Ne glow discharge, reson. interaction of laser emission 3−27782
  N_2, electric breakdown plasma, microwave energy coupling, computer simulation 3−51414
  N_2, microwave energy coupling during elec. breakdown, expt. and computer simulation 3−42470

electromagnetic wave reflection
  see also electromagnetic wave propagation in plasma; light reflection; X-ray reflection
  absorbing surface, EM wave refl. and refraction 3−49112
  anomalous scattering from slightly random surface, amplitude and phase of coherent refl. 3−6846
  atmosphere ELF propagation, diffraction, refl. and focusing due to lateral ionospheric gradients 3−10035
  auroral radar echoes, reduction of inherent noise in double-pulse Doppler technique 3−48761
  biaxial-isotropic boundary, EM wave reflection 3−46134
  dielectric, semi-infinite, EM wave refr. and refl., mol. optics eqns. exact soln. 3−6834
  dielectric slab, Green's function in microscopic theory 3−41743
  exact reflection amplitudes for Rayleigh profile 3−21973
  ferromagnetic insulators and metals, uniaxially anisotropic, nonsaturated, EM wave propag., theory 3−33985
  finite metallic cylinder, specular refl. from lateral surface, fringe-wave method 3−6850
  gas, stationary, perturbed by relativistically moving EM signal, EM wave interaction 3−50587
  ionosphere, apl. of VLF refl. coeffs. to estimation of D-region electron density profile 3−48764
  ionosphere, D-region ionisation ledges identification by LF/VLF obs. during meteor shower 3−5027
  ionosphere, D-region MF partial reflection profiles rel. to electron density meas. 3−10129
  ionosphere, modulation frequency wave generation by nonlinear interaction of high-power RF interaction 3−10138
  ionosphere random nonuniformities, EM wave refl., radiowave propag. effects *(Russian)* 3−54194
  IR multilayer narrow-band reflection filter 3−56300
  microwave focused Gaussian beam reflected at 45° from conducting plane, field distrib., plasma ignition 3−46133
  moving diffuse interface of two media 3−36919
  moving medium and perfectly conducting plane 3−36918
  multilayered lossy media, incident beam absorpt. and lateral shift 3−32271
  neutral atom EM mirror 3−6583
  parallel joined tubes, defined equivalent radiative temperature *(French)* 3−36916
  planar stratified medium synthesis for smooth variation of refl. phase by 360° 3−56125
  plane wave scattering by lossy dielec. rectangular cylinder 3−41744
  radiation entropies in beam-splitting and application to solar radiation 3−32273
  radiation entropies in diffuse reflection and scattering and application to solar radiation 3−32272
  radiowave reflection from plane inhomogeneous slabs, Ambartsumian's invariance principle 3−56121
  Reusch piles, normal incidence illum. by monochromatic plane and uniform waves *(French)* 3−1528
  sea surface, appl. of S-band radio interferometer to meas. of phase shift of coherently refl. radio waves 3−10099
  sea surface, inversion of synthetic aperture radar side-scanned image 3−48678
  slabs, plane, inhomogeneous, radio wave refl., Ambartsumian's invariance principle 3−56121
  transparent wedge, incident three-dimens. beam, field expression, geometric optics 3−46141
  X-ray evanescent-wave absorption and emission 3−32277

electromagnetic wave refraction
  see also electromagnetic wave propagation in plasma; light refraction
  absorbing surface, EM wave refl. and refraction 3−49112
  dielectric, semi-infinite, EM wave refr. and refl., mol. optics eqns. exact soln. 3−6834
  radiowave propagation in atmosphere, refractive index inhomogeneities, anisotropy coeff. 3−4931
  short-wavelength photons motion in gravitating refractive media, appl. to double quasar (0957+561) 3−35418

electromagnetic wave refraction continued
  troposphere radio refractivity profile, inference from satellite-to-ground RF meas. 3—10034
  Venus atmosphere, strong refraction near surface, Pioneer probe obs. 3—30283

electromagnetic wave scattering
  see also backscatter; electromagnetic wave propagation in plasma; gamma-ray scattering; light scattering; X-ray scattering
  absorbing material surfaces, EM field diffraction and scatt., exact limit conditions *(French)* 3—56122
  aircraft, transmission-line modelling, computer solution 3—12051
  angular spectrum representation of scattered electromagnetic fields 3—32270
  anisotropic multiple scattering of collimated irradiance 3—20801
  anomalous scattering from slightly random surface, theory 3—6846
  backscattering from vegetation layer over flat lossy ground 3—44449
  Booker-Gordon formula, generalization inc. multiple scattering 3—26916
  charged particles, by magnetic strings in gauge fields 3—31052
  circular cylinder covered by thin plasma layers, eigenfunction anal. 3—6851
  circular disk, T-matrix for acoustic and EM wave scatt. 3—17651
  coherent EM wave propagation in media embedded with dielec. scatters, effective propag. consts. 3—26915
  coherent scattering of slow EM waves by beam of nonrelativistic electrons 3—6848
  coherent wave propagation in discrete random media, closure hypotheses from method of smoothing 3—36915
  complex-frequency poles and creeping-wave transients 3—46136
  composite surfaces with large mean square slopes, full wave analysis 3—1523
  computational procedure for imaging by numerical modelling and quadratic optimisation 3—12441
  cylindrical perfectly conducting surface, 2D EM wave scatt., EM field calc. 3—17412
  dielectric bodies, Rayleigh scatt., tensor elements evaluation 3—26912
  dielectric spheres, two cooperative scatt., comparison between theory and expt. 3—32275
  doppler frequency variations in the field-aligned scattering of VHF waves by artificial irregularities of the ionosphere 3—39954
  Earth EM sounding, theoretical considerations for inverse scattering 3—48473
  EHF multiple scattering by rain 3—25183
  EHF waves scattering by ice needles and plates in cirrus clouds 3—25184
  extended boundary condition method for scatt. calcs. 3—41732
  exterior Dirichlet problem, inverse scatt. 3—25761
  F-region of auroral ionosphere, electron and ion velocity distribution functions, incoherent radar wave scatt. 3—30115
  far-field radiation integral of arbitrary source distrib., sampling approach 3—32267
  finite dielectric circular cylinder scatterers, Fredholm integral eqn. anal. 3—41741
  finite-difference time-domain method, complex objects analysis 3—26913
  guided modes EM scattering by boundary deforms. of dielectric slab waveguides, integral eqn. method 3—46137
  hybrid method analysis which combines moment methods and asymptotic techniques 3—41731
  imperfectly conducting objects, field generation from soln. of perfectly conducting object 3—32268
  inhomogeneous dielectric cylinder, Gaussian beam scatt. 3—12043
  inverse problems, approx. methods 3—26918
  inverse problems, polarization dependence, comments 3—26911
  inverse scatt. by EM and allied methods, conf., London, England, 1982, Oct. 3—10521
  inverse scattering for smooth reflecting objects 3—41735
  inverse scattering in the first Born approximation 3—41734
  inverse scattering in two dimens., discrete approach 3—41738
  inverse source and scattering problems, nonuniqueness, comments and replies 3—12381
  inverse source and scattering problems, nonuniqueness 3—12380
  ionosphere, foreshortened scatter of UHF signals rel. to characts. of H_E-type and E_{sq}-type irregularities 3—15711
  ionosphere, mutual coherence function for transionospheric radiowaves 3—10135
  K-distributions, multiscale surface scattering model 3—12052
  Levinson-modified Born approximation as applied to the spherical square well and to Mie theory 3—25719
  lossy dielectric objects, iterative procedure 3—17413
  microwave scattering meas. in plasma, phase-locked heterodyne receiver appl. 3—18126
  Mie-theory phase function expansion in series of Legendre polynomials 3—32269
  mixed inverse electrodynamic diffraction problem for a doubly-connected scatterer 3—12050
  modern optics, mathematical appls., conf., San Diego, CA, USA (Aug. 1982) 3—40314
  Moon, effects of subsurface volume scatt. on microwave brightness temperature spectrum 3—59238
  multiple scattering, path integral approach 3—46163
  multiple scattering by hydrometeors, effect on mm monopulse systems 3—30040
  multiple scattering of wave packets, geometrical theory, low density limit 3—17415
  oil films on sea surface, characts. of 13.9 GHz radar scatt. 3—9529
  parametric interaction of waves in fluctuating medium, phase correl. effect 3—36917
  perfectly conducting object, characteristic modes calc., weighted eigenvalue eqn. 3—17411
  periodic dielectric surface, wave scatt. theory for general angle of incidence 3—6845
  periodic multielement strip gratings, scatt. parameters 3—12041
  physical optics inverse scattering identity, survey 3—12042
  plane wave scattering by lossy dielec. rectangular cylinder 3—41744
  planetary atmospheres, strong scatt. formulation including inhomogeneous background rel. to turbulence in planetary occultations 3—10205
  propagation in multi-layered random media with rough interfaces 3—46130
  radar attenuation, rain rate, determ. using spaceborne meas. 3—44569
  radar scattering by open circular waveguides 3—26917
  radiation entropies in beam-splitting and application to solar radiation 3—32273
  radiation entropies in diffuse reflection and scattering and application to solar radiation 3—32272
  radio-holographic process modelling, boundary-wave method, effective scatt. surfaces 3—17468
  rain attenuation considerations for satellite paths in Australia 3—48587
  raindrop size distrib. from microwave scatt. meas. in equatorial and tropical zones of Africa 3—20076
  random surface scatter models review 3—41733
  randomly grooved surface, EM wave scatt. study 3—21972
  randomly rough surfaces, scatt. theory rel. to validity of far field approximation 3—46139
  Rayleigh dielectric cylinders, randomly separated, variational calc. of EM scatt. 3—50586
  rectangular protrusion, field generated by plane wave scatt., exact calc. 3—1529
  relativistic electron beam scatt. of EM wave 3—26919
  resonant and near-reson. scatterers, method-of-moments solns. 3—41730
  rotating ideally conducting cylinder of arbitrary cross section, EM wave excitation and scatt. 3—17417
  rough dielectric surface, scattering patterns 3—26921
  rough periodic surface wave scatt. anal. 3—41739
  rough surfaces, scatt. and depolarisation, full wave approach 3—41740
  sea surface, appl. of S-band radio interferometer to meas. of phase shift of coherently refl. radio waves 3—10099
  solar coronal transient, simultaneous radio scatt. and white light obs. 3—20316
  solar wind plasma inhomogeneities, radiowave scatt., obs. of fluctuations in freq. and phase 3—10172
  sphere index of refraction reconstruction from scatt. phase-shifts at one freq. 3—41737
  spheroidal conductors, scatt. cross sections for arbitrary polarisation and angle of incidence 3—6838
  stochastic Fourier transform approach to scattering from perfectly conducting randomly rough surfaces 3—26909
  synthesis problem, general, exact closed-form analytical soln. 3—6823
  thin optically isotropic spherical shell, Mie scatt. 3—1526
  tubular cylinder, perfectly conducting, of finite length, double series expansion of Green's function 3—46138
  uniform geometrical theory of diffraction 3—41729
  SU Ursae Majoris, dwarf nova, X-ray scatt. from interstellar grains rel. to soft X-ray halo 3—40152

electromagnetic wave transmission
  see also light transmission
  atmosphere, meas. of submillimetre transmission at Shorbulak, Eastern Pamirs 3—44538
  beam splitting by a plane-parallel absorptive slab 3—1532
  boundary of two lossy media, transmission coeff., interactive method 3—46135
  ferromagnetic insulators and metals, uniaxially anisotropic, nonsaturated, EM wave propag., theory 3—33985
  ionosphere sporadic E-layers, partial transparency at high latits. due to radio waves mode coupling 3—5023
  thin metallic film, microwave transmission coeff. phase meas. 3—28935
  transparent wedge, incident three-dimens. beam, field expression, geometric optics 3—46141

electromagnetic waves
  see also bremsstrahlung; channelling radiation; Cherenkov radiation; electromagnetic field theory; electromagnetism; gamma-rays; heat radiation; light; microwaves; solar radiofrequency radiation; sunlight; synchrotron radiation; transition radiation; undulator radiation; whistlers; X-rays
  cavities sharing a partial reflector, EM radiation exchange and oscills. 3—56123
  cylindrical waves propag. at c, theory, appls. to waveguides and accelerating structs. 3—17408
  dipole waves on two-layer medium, asymptotic approximation 3—6841
  dispersion and nonlinear effects, variational principle 3—17414
  Earth, struct. of natural ELF EM field in Arctic Basin 3—15522
  EDIP software for automatic soln. of problems *(Russian)* 3—17407
  frequency gyrokinetics formalism, appl. to ion drift-cyclotron instability and ion Bernstein modes 3—42402
  Fresnel equations, vectorial representation 3—32274
  generation by electron streams in nonsynchronous mode 3—17420
  half space, three dimens., with a dissipative boundary 3—1527
  history, optics of invisible information and the EM wave spectrum 3—54
  lateral waves, new formulas for $E_{1\phi}$ and E_{1z} 3—6844
  lateral waves generated by horizontal elec. dipole, mag. field 3—46132
  maritime EM prospecting equipment, methodical errors anal. *(Russian)* 3—44586
  Maxwell's equations, homogeneous, focus waves modes, transverse electric mode 3—50584
  mode conversion, electrostatic cyclotron harmonic wave/EM ordinary wave 3—27708
  paramagnetic excitation in relativistic electron beams 3—26920
  parametric generation and amplification of EM waves, electron beams theory 3—6860
  polarisation plane rotation due to gravitational field 3—140
  positrons, relativistic, small angle refl. from solid surface, EM radiation prod. 3—56982
  protection and measurement of man-made electromagnetic fields *(Polish)* 3—34987
  radiating system, EM waves emission charact. props. 3—17418
  radio fields, numerical method for extending ray trace calcs. into strong focusing regions 3—6842
  reconstruction techniques 3—41736
  resonance absorption in inhomogeneous medium without a cavity 3—1530
  semiconductors, nonlinear interaction of electromagnetic waves in superlattices 3—38395
  slow wave amplification by longitudinal nonphased electron beam in inhomogeneous mag. field 3—26925
  surface potential wave, isotropic dispersive media 3—44980
  transverse EM waves with $\vec{E} \parallel \vec{B}$ 3—32276
  transverse EM waves with finite energy action and $\int \vec{E}.\vec{B} d^4x$ 3—10605
  two level atom in standing EM wave field, self consistent pot. 3—1276
  vector EM beam representation 3—21974
  wave interaction in arbitrarily directed mag. field, medium polarisation 3—1531

electromagnetism
- *see also electric fields; electrodynamics; electromagnetic field theory; electromagnetic induction; electromagnetic oscillations; electromagnetic waves; magnetic fields; magnetism*
- book, Beckers electromagnetic fields and interactions 3—44909
- book 3—54594
- calculus of variations applied to continuum physics, inverse problem 3—30620
- charged media, relativistic motion, Maxwell's eqns. 3—10606
- charged particle in EM field, new Hamiltonian derivation 3—46146
- classical electron theory from modern standpoint, book contrib. 3—56128
- diamagnetic force on mag. flux tube, appl. to solar corona 3—35419
- displacement current, transport current, and charge conservation 3—44935
- electric charge interaction with magnetic dipole, field ang. momentum 3—5540
- electroflux quantisation 3—16590
- electromagnetism, particles and anholonomy 3—100
- electron models, classical, book contrib. 3—54634
- energy-momentum tensor uniqueness 3—10653
- equivalent superficial current equation, flux diagram *(French)* 3—6831
- ferrites, hyperfine fields, new physics frame 3—13781
- field frequency change due to stimulated radiation in medium 3—50568
- frequency gyrokinetics formalism, appl. to ion drift-cyclotron instability and ion Bernstein modes 3—42402
- general synthesis problem, exact closed-form analytical soln. 3—6823
- Helmholtz equation, exterior problems 3—101
- internal variables in EM continua, ferroelec. and ferromag. type microelastic solid theory 3—49174
- Laplace transform inversion, implications on SEM coupling coefficients in time domain 3—46116
- magnetic charges, review, book contrib. 3—56133
- magnetic fields diffusion into conductors with external EM transients, initial boundary value problem 3—12031
- massive, null-plane formulation, limit and SU(2) dual invariance 3—50566
- Maxwell's equations, homogeneous, focus waves modes, transverse electric mode 3—50584
- Maxwell eqns. for harmonic fields, uniqueness of steady-state soln. 3—6824
- nonmetric theories of gravity anal. 3—45040
- Poisson's equation for axisymmetric vector pot. problems, hybrid finite element-boundary element formulation 3—26893
- Poynting vector study 3—5571
- quantum mechanical power operator, energy theorem for charged particle in classical electromagnetic field 3—5656
- radiation loss systems, variational principle appl. 3—36902
- scalar potentials, mag., multipole expansion, magnetostatics, book contrib. 3—56118
- sphere-plane struct. EM response, effects of reson. interactions, appl. to surface enhanced spectroscopy 3—50567
- spontaneous predictivisation, predictive differential eqns., retarded EM eqns. of two point charges 3—10577
- superconductors, electromagnetic props., book contrib. 3—57480
- synthesis, interdisciplinary aspects 3—1547
- synthesis methods for optics, quasi-optics, acoustics and electromagnetics, conf., San Diego, CA, USA (Aug. 1981) 3—11
- time-dependent excitation notions *(French)* 3—25771
- unified field theory of gravtitation and electromagnetism, metric hypothesis 3—5673

electromagnets
- *see also coils; superconducting magnets*
- attached electromagnet with square shaped core, mag. field calc. 3—54753
- betatron magnetic system with auxiliary magnetisation 3—11563
- component during demagnetizing with attached square shape electromagnet along hysteresis loop 3—54752
- deflection coils, contribution of cylindrical ferromagnetic body to magnetic field generation *(French)* 3—50574
- electromechanical device for support of oscillating secondary mirror for IR telescope 3—54243
- ESR spectrometer (ER-9), EM current stabilization 3—49414
- force interactions, lateral groove dimensions effect *(Russian)* 3—351
- force-measuring electromagnet suspension of accelerometer, accuracy increase 3—49348
- helical mag. configuration using ferromagnetic materials 3—46763
- inspection of components of high inductions using coercimeter and attached electromagnet with ferrosensor 3—29270
- Rose's shim method anal. for magnetic field homogeneity improvement 3—26514

electromechanical effects
- energy conversion, mag. field source optimization 3—19617
- piezoelectric disk, nonaxisymmetrically loaded, with electroded face, electromech. anal. 3—19066
- α-quartz, electroelastic effect, US velocity study 3—34035
- Rochelle salt, ferroelectric, surface photon emission, uniaxial press. effects 3—58028
- Rochelle salt, nonlinear dielec., elastic and electro-mechanical coeffs. at ferroelec. transition 3—43498
- TGS, ferroelectric, surface photon emission, uniaxial press. effects 3—58028
- PbTiO$_3$ US linear array probe, 7.5 MHz 3—50872
- PbZr$_{1-x}$Ti$_x$O$_3$ ceramics, doped, low field poling, dielec. and piezoelec. props. 3—38750
- Zn crystals, electroplastic effect, depend. on applied stresses 3—9134

electrometers
- *see also charge measurement*
- high-speed, design, freq. correction loop 3—10853
- slot-effect, with monopolar electrets 3—20873

electrometry *see electrometers*

electromigration
- binary dil. alloys, vacancy jump freq. ratios determ. by electromigration *(French)* 3—2896
- interstitial impurities, electro- and thermotransport *(German)* 3—33522
- metallic thin films, review 3—47434
- metals, electromigration, thermomigration and thermoelec. transport 3—33521
- multiplicative dichotomic Markov noise, appl. to electrodiffusion and chromatography 3—185
- thin film conductors, electromigration induced damage, metal and passivation defects role 3—8377
- Al/polycrystalline Si composite metallisation, electromigration induced shallow junction leakage 3—51871

electromigration continued
- Al-Cu (0.5%) fine-grained evaporated thin films, pulsed current induced electromigration transport mobility 3—42859
- Al-Cu (0.5%) fine-line thin film conductors, electromigration induced failure by edge displacement 3—42858
- CaO+SiO$_2$ polycryst. pellets, interdiffusion behaviour, DC field effects 3—28165
- CsNO$_3$-KNO$_3$, internal mobility ratio, Klemm method meas. 3—47138
- Cu-Au, diffusion coeff. using molten salt electrolyte, chronoamperometric determ. 3—47153
- GaAs, electroliquid epitaxy, mass transfer effects 3—33604
- LiCl-KCl, isotope distrib., countercurrent electromigration 3—47135
- LiNO$_3$-KNO$_3$, isotope distrib., countercurrent electromigration 3—47135
- NaNO$_3$-KNO$_3$, internal mobility ratio, Klemm method meas. 3—47138
- Na$_2$O-CaO-SiO$_2$ glasses, electron irrad., field-assisted Na migration 3—2894
- Nb:Ta(Cr)(Fe)(Co)(Ni), effective valence for electromigration 3—42860
- Pb, ^{203}Hg electromigration and thermomigration *(German)* 3—51872
- Pb-Sn diffusion and electromigration of Ag and Ni 3—2884
- Si (111) surfaces, field induced surface transport of In adatoms 3—23109
- SiO$_2$-Na$_2$O(-CaO) glasses, proton irrad., field-assisted Na migration 3—2895

electromotive force *see electric potential*

electromyography *see bioelectric potentials; muscle*

electron absorption
- *see also beta-ray absorption*
- electron slowing down in tissue equivalent material, statistical modelling 3—26501
- thin targets, electron energy deposition 3—13287
- FeSO$_4$ solution, total absorpt. of electrons for determ. of absorbed dose to water 3—21564

electron accelerators
- *see also betatrons; electron ring accelerators; microtrons*
- acceleration in system of radial lines with ferrite *(Russian)* 3—11559
- Angara-5 module, pulsed electron accelerator for ICF 3—45693
- colliders, future 3—41359
- diode, large area, high current, electron beam uniformity 3—45739
- double-resonator accelerating system, compact, construction and expt. characts. 3—11553
- electron-positron storage rings, depolariser using time dependent radial fields 3—26512
- excimer laser pumping appl. 3—12168
- free electron laser drivers, use of high current high voltage accelerators 3—22103
- FXR, beam tests on 1.5 MeV injector 3—17129
- GAEL, relativistic beam generator 3—17127
- HERA ep collider at DESY 3—41354
- High Voltage Electron Microscope-Tandem Facility at Argonne National Laboratory, operation and applications 3—11561
- high-current, nanosec., with stable energy, miniaturised ignition system using nonlinear inductors 3—1094
- high-energy electron storage ring, Touschek effect *(Japanese)* 3—1101
- IGUR-II accelerator, design and operation characts. 3—6463
- intense electron beam accel., self-consistent anal. 3—17120
- klystrons application 3—21587
- Large Electron Positron storage ring, surface electronic processes 3—41361
- laser focus accelerator 3—17142
- LEP, supercond. accel. cavities at CERN 3—45732
- LEP, the next and final electron-positron storage ring 3—41353
- LEP electron-positron collider, pumping approach 3—41358
- linac, high relativistic energy, C-band superconducting structures 3—36602
- Linac control data transmission, optical fiber datalinks for Nuclear Instrument Modules 3—6510
- linear, for Kharkov accelerator, beam parameters 3—1110
- linear, multidetector neutron time-of-flight diffractometer in Fakel accelerator 3—2344
- linear, relativistic electron beam, three-dimens. trajectory in helical mag. field 3—1112
- linear, standing wave, new accelerating systems 3—11557
- linear accelerator, current loading in bunching section 3—31855
- linear accelerator, electron beam emittance and brightness study 3—17115
- linear accelerator, optimum use high freq. source study 3—41349
- linear induction accelerator, physics aspects 3—17128
- microscope HV accelerator tube, electron energy analysis of vac. discharge 3—45248
- microwave linear accelerator for use in high-energy electron microscopes 3—25989
- multipole wigglers in storage rings, sources of synchrotron radiation 3—1100
- multisectional linear electron accelerator, pulsed beam distrib. 3—17114
- neutron leakage characteristics in high energy medical accelerators 3—19820
- NIKE-M, HV pulse electron accelerator for ICF 3—17126
- optimised X-ray synchrotron radiation facility development 3—1099
- permanent magnet undulator NOEL for ACO storage ring 3—45726
- PETRA, physics 3—41357
- relativistic equation of motion of electron stream, solns. 3—11556
- relativistic high freq. electronics, achievements and problems 3—33024
- resonant accelerators, acceleration energy and rate increase *(Russian)* 3—11560
- SILUND linear induction accelerator, automatic synchronisation of modulators 3—50066
- SLAC linear collider, machine, physics, future 3—41341
- SPEAR electron-positron storage rings, bunch lengthening, computer simulation 3—26509
- SPEAR storage ring, beam polarisation meas. 3—36588
- Stanford supercond. electron recyclotron, regenerative beam breakup, standing wave model 3—36584
- storage ring, electron beam, 70 MeV, particle loss meas. on one-dimensional third-order reson. *(Russian)* 3—11565
- storage ring, longitudinally polarised electron beam prod. for ep collisions 3—26511
- storage rings, space charge neutralisation of beam 3—17136
- superconducting continuous wave accelerator development 3—45523
- superconducting linear accelerator at Stanford rel. to free electron laser programme 3—17131
- synchrotron, electron energy control by interference method 3—45728

electron accelerators continued
- traveling-wave buncher accelerator, electron phase spectrum meas. 3−41348
- travelling-wave linear accelerator, passive resonator for electron beam accel. 3−11555
- TRISTAN electron-positron storage ring, bunched beam instability due to RF cavities 3−26521
- ^{123}I prod. by photonuclear reactions 3−26232

electron affinity
- alkoxide and enolate negative ions, photoelectron spectra, electron affinities and vibronic features 3−46027
- atom, many electron system, exchange-correlation energy, one-particle approach 3−8431
- benzophenone, electron affinity determ. using electron capture detector 3−50512
- biacetyl, electron affinity determ. using electron capture detector 3−50512
- carbonyl compounds, oxy, aza and thio groups, electron affinities by electron transmission spectra 3−32193
- chalcogen hexahalogenides, electronic struct., discrete var. $X\alpha$ calc. method 3−55834
- halogen atoms, electron affinities calc. using relativistic HF approach with atomic polarisation 3−6534
- metal-free phthalocyanine-polymer photoreceptor, sensitivity and electron affinity of electron acceptor dopants *(Japanese)* 3−24515
- methylene, electron affinity, CI calcs. 3−31955
- molecular anions, electron propagator of Green's function method calcs. 3−36652
- naphthoquinone, electron affinity determ. using electron capture detector 3−50512
- nitrobenzene, electron affinity, ion cyclotron reson. obs. 3−12007
- nitrobenzene, electron affinity determ. using electron capture detector 3−50512
- nitromethane, electron affinity determ. using electron capture detector 3−50512
- superalkali cations, electronic struct., DVM $X\alpha$ calcs. 3−11684
- COS, electron affinity determ. using electron capture detector 3−50512
- CS^-, PES, electron affinity and bond lengths 3−46026
- CS_2, electron affinity determ. using electron capture detector 3−50512
- I^-, electron photodetachment thresholds, laser optogalvanic spectrosc. obs. 3−36733
- $In_xGa_{1-x}As$ photocathodes, electron emission probability with negative electron affinity 3−47755
- K, electron affinity, valence correl. wavefunctions 3−50319
- Mg_2Ni, modified by organic cpds., H_2 absorpt. 3−48089
- MgO, dissoc. energy, ab initio CI calcs., electron affinity and ionisation pot. 3−17229
- Mo fluorides, electron affinities determ. by meas. equilib. const. of ion-mol. reactions involving negative ions 3−1509
- NO, electron affinity determ. using electron capture detector 3−50512
- NO_2, electron affinity determ. using electron capture detector 3−50512
- NS^-, PES, electron affinity and bond lengths 3−46026
- O_2, electron affinity determ. using electron capture detector 3−50512
- $PbFe_{12}O_{19}$, photoelectrochemical studies 3−52195
- SF_6, electron affinity determ. using electron capture detector 3−50512
- SO_2, electron affinity, ion cyclotron reson. obs. 3−12007

electron annihilation *see electron-positron interactions*

electron attachment
- chlorine donors in electron-beam pumped laser gas mixture, electron attachment rate const. meas. 3−1455
- chlorofluoroethanes, electron attachment rate meas. by swarm method 3−21854
- diatomic mols., electron dissoc. attachment, 3-body rearrangement calcs. *(Russian)* 3−1496
- elastic scatt. of electrons in attaching gases, differential cross sections meas. 3−6786
- freon, electron attachment determ. in absence of ionisation using freon/inert gas mixtures 3−7828
- gas breakdown and recovery control by pulsed electron beams 3−7689
- gases, breakdown voltage calcs., AC and DC test anal. 3−7839
- hexafluoropropene gas, ion mobility and recombination and effective ionisation coeff. 3−7688
- high-pressure electronegative gases, sparking potentials calc. from electron-molecule collision props 3−7836
- n-nonanol, electron impact, negative ion form. 3−56087
- perfluoroalkanes, breakdown strength rel. to pressure dependent electron attachment rates 3−7687
- perfluoropropylene, breakdown strength rel. to pressure dependent electron attachment rates 3−7687
- 2-propanol, electron impact, negative ion form. 3−56087
- trichlorofluoromethane, thermal electron attachment rate 3−50510
- CO_2, vibr. excited, dissoc. electron attachment, double electron beam technique obs. 3−46084
- Cl^-+trichlorobromomethane, electron attachment cross sections in energy range 0-100 meV, pot. energy curves 3−6751
- Cl_2, dissociative electron, attachment rate constants *(Chinese)* 3−41691
- HBr, reson. state coupling effects on dissociative electron attachment 3−32199
- HCl mols. in nonself sustaining discharge, dissociative electron attachment, rate const. determ. 3−14847
- $HgBr_2$, low-energy electron dissociative attachment, Br-formation 3−26874
- N_2 molecule, electron scatt. processes, cross section calcs. 3−50517
- O_2, reson. attachment of thermal electrons, vel. distrib., hole burning effects 3−36855
- O_2-$N_2(H_2)(D_2)(CO_2)$ mixtures, thermal electron attachment mechanism, isotope effects 3−41693
- $^{18}O_2$, thermal electron attachment mechanism, isotope effects 3−41693
- SF_6, thermal electron attachment rate 3−50510
- SF_6-air mixture, ionisation and attachment coeffs. meas. 3−22732
- SF_6+N_2, Townsend ionisation and attachment coeffs. meas. 3−33010
- $SF_6^-+SF_6$, electron attachment cross sections in energy range 0-100 meV, pot. energy curves 3−6751
- SO_2, dissoc. electron attachment, negative ion prod. 3−56091
- SO_2 molecule, electron impacted, total ionisation and dissociative attachment cross sections meas. 3−50530

electron avalanches
- air, low press. diode, role of avalanching 3−37718
- breakdown voltage between closely spaced electrodes on insulating surfaces, probability distribs. 3−13006

electron avalanches continued
- compressed gases, elec. breakdown for steep fronted pulses and insulator interfaces 3−17996
- gas counter, avalanche growth along anode wire 3−26582
- gas discharges, ionisation wave, reson. polarisation self-accel. of electrons 3−22740
- HIDAC, electron avalanche chamber with wire chamber for positron emission tomography 3−53825
- high pressure gas, ionisation avalanche plasma mechanism 3−18154
- ionisation const. in pulsed EM fields 3−7825
- position sensitive proportional counter, grouped-wire method for signal read-out 3−26584
- wire chamber, light produced by electron avalanches, detecting structure using wavelength shifter 3−1152
- N_2, compressed gases, streamer mechanism validity 3−7830
- SF_6 compressed gases, streamer mechanism validity 3−7830
- SF_6 gaseous insulation, prebreakdown processes influencing volt-time characts. 3−7691
- SF_6/air gaseous insulation, prebreakdown processes influencing volt-time characts. 3−7691
- SF_6/He gaseous insulation, prebreakdown processes influencing volt-time characts. 3−7691

electron beam absorption *see electron absorption*

electron beam applications
- *see also electron beam deposition; electron beam lithography; electron beam machining; electron beam welding; radiation therapy*
- alloys, supercond., quenching by ion bombard., laser and electron irrad. 3−57459
- dielectric electrical conductivity increase 3−13286
- diffuse discharge opening switches, optical control 3−27766
- discharges, electron beam controlled, switching appls. 3−27765
- divinyl-benzene polymer, thin film deposition by electron and ion beam induced polymerisation 3−39042
- double electron beam technique for excited state collision studies 3−46084
- double foil acceleration by intense relativistic electron beam irrad. 3−45682
- excimer laser pumped by microsecond beam, electron accelerator design 3−12168
- excimer lasers pumping, space-charge-limited bipolar current flow between coaxial cylindrical electrodes calc. 3−33007
- free-electron laser, millimetric, using spiraling relativistic electron beam 3−41851
- gas laser pumping by electron beam from nanosecond skimming discharge plasma 3−12179
- gas lasers pumped by electric discharges and electron beams *(Japanese)* 3−1612
- high-repetition-rate electron beam for laser pumping, resonant transformer construction and operation 3−17524
- HVDC voltage, absolute determ. by frequency meas., electron-optical system 3−54748
- ion laser, CW, electron beam pumping, 1 to 6 keV 3−7002
- ion lasers, CW, electron beam pumped, glow discharge electron beams appl. 3−42472
- Langmuir-Blodgett films, electron-beam fine-line writing 3−36131
- metal, US oscillation generation by high current electron beam released into atmos. 3−53341
- ohmic contact form. on n-GaAs and Si, MBE, laser and electron beam annealing 3−18781
- on/off switches, electron beam controlled, performance predictions 3−25987
- polyethylene terephthalate thin films, electron beam probing of space charge 3−3645
- power, cable transmission, model expt. study 3−11586
- Schottky contacts, Si-metal, junction electrical props., contactless electron beam meas. 3−8578
- stimulated Cherenkov interaction at optical wavelengths 3−32287
- surface melting, practical implications 3−34536
- therapy dose, 4 to 7 MeV, curve fitting of meas. beam data 3−4619
- CO pulsed electron beam controlled laser with selective resonators, emission spectra 3−6957
- CO pulsed electron beam controlled high press. laser, emission spectrum characts. 3−6958
- CO_2 CW closed-cycle laser, electron-beam controlled, with nonself-sustained discharge 3−32385
- CO_2 laser, miniature, with sealed-off electron source 3−41874
- CO_2 pulse-periodic electron-beam-controlled laser with cooled active mixture, energy charact. calc. 3−36991
- CdS multicomponent laser emitting visible radiation, electron-beam-pumped 3−37050
- CdS_xSe_{1-x} multicomponent laser emitting visible radiation, electron-beam-pumped 3−37050
- GaAsP, electron beam annealing of defects during SEM meas. 3−42669
- a-Ge film, transient effects in electron pulse annealing, time-resolved TEM 3−7910
- Ge-Te amorphous film, transient effects in electron pulse annealing, time-resolved TEM 3−7910
- H_2-F_2 chemical laser parameters, initial electron beam initiation influence 3−1621
- H_2-HF laser, electron-beam-excited, high specific lasing parameter possibility using a chain reaction 3−1620
- HF chemical laser utilising a high-press. H_2-SF_6 mixture and relativistic electron beam excitation 3−1619
- $InP:Se^+$, ion implanted, multiply scanned electron beam annealing, elec. props., RBS study 3−8102
- KrF excimer laser pumped by annular electron beam, beam quality 3−1681
- KrF excimer lasers, electron-beam switched, discharge-pumped, gain and discharge characts. 3−56180
- KrF, high-power lasers, pulsed electron beam systems, for fusion 3−12183
- KrF laser, electron-beam pumped, constant intensity approximation analysis 3−27010
- KrF Sprite excimer laser, high power, electron-beam-pumped 3−56242
- Nb, bicrystals, electron beam floating zone growth and struct. 3−8968
- Ni thin film on Si, laser annealing, electron beam annealing, silicide form. 3−56963
- Pd_2Si, epitaxial growth on Si substrate, electron beam annealing 3−56988
- Pd_2Si films, epitaxial growth by scanning electron beam annealing 3−8346

electron beam applications continued

- SF_6-H_2-He chem. laser, relativistic electron beam excitation using TEREK-1R system 3−6960
- Si, amorphous, electronic defects, laser and electron beam crystn. obs. 3−56956
- Si, electron beam annealed, minority carrier diffusion length, solar cell appls. 3−57365
- Si, polycryst., recrystn. by laser and electron beam annealing *(French)* 3−24121
- Si:As, electron beam annealing of ion implantation damage 3−42664
- Si/Si_3N_4/Si struct., electron beam recrystallisation of Si 3−56989
- Ti and alloy powders, high purity, prod. by electron beam process 3−29036
- Ti thin film on Si, laser annealing, electron beam annealing, silicide form. 3−56963
- XeCl excimer electron beam ionisation laser, high-power UV operation 3−22122
- XeF excimer laser, electron beam-pumped, tuning, output power characts., depend. on optical resonator config. *(Chinese)* 3−22105
- XeF excimer laser, electron beam excited, transient index meas., 350-354 nm 3−56183
- XeF excimer laser, electron-beam pumped, injection locking at ambient and elevated temps. 3−56252
- ZnSe, epitaxial films, use in electron-beam pumped lasers 3−56206

electron beam deposition

- computer-controlled thin film deposition, Al and Al alloy sources 3−29000
- electron microscope specimen coating techniques, review 3−10957
- evaporator cathode having a 180° beam rot. angle, sputtering 3−29006
- evaporator gas-flow density distrib. function calc. 3−39038
- glassy optical coatings by multisource evaporation 3−17589
- half-sphere substrate, deposit of uniform thickness *(French)* 3−19274
- ion-beam-assisted electron-beam deposition of thin films 3−28997
- melting and evaporation, of metals and non-metals 3−29012
- MOS capacitors, thin oxide, radiation effects caused by evaporation of Al 3−52267
- multilayer coating deposition for reflective filters, EUV and soft X-ray region 3−7142
- refractory metal films electron-beam vaporizer for ultrahigh vacuum systems 3−39035
- roll coater, prototype semi-continuous design, for optical multilayer coating prod. 3−12370
- roll coating equipment for product appls. 3−14492
- vacuum, electron and ion technologies, conf., Varna, Bulgaria (Sept. 1981) 3−25688
- viewing window of vac. chamber, protection under intense sputtering conditions 3−29009
- Be optical mirrors produced by vapour deposition 3−7227
- Co-Al_2O_3 cermet film, electron beam coevaporated, dielec. function meas. 3−8895
- Fe_2O_3/Si photoanode with negative flatband potential, XPS and AES studies 3−52244
- In_2O_3:SnO_2 conducting optical coating resist. monitoring apparatus for use during vac. deposition 3−35967
- In_2O_3-SnO_2 reactively evaporated films as high quality transparent heat reflectors 3−17597
- Nb_3Ge A15 superconducting films, high T_c, electron beam codeposited, tunnelling, resist. and crit. currents meas. 3−33813
- Ni electron beam evaporated coating on Si(111), oriented growth of Ni and Ni_2Sn 3−42973
- Si, amorphous thin films, prod. by ion beam sputtering, optical props. 3−47727
- Si:H, amorphous thin films, prod. by ion beam sputtering, optical props. 3−47727
- SiO_2-Ta_2O_5 AR coatings, laser-damage threshold at 1064 nm, deposition parameter influence 3−8089
- ZrO_2 film condensation, charged-particle stream during electron-beam evaporation 3−29008

electron beam effects

- *see also beta-ray effects; cathodochromism; cathodoluminescence; electron impact; plasma-beam interactions*
- aldehyde copolymer electron-beam and X-ray resists, self-developing, highly sensitive 3−34623
- amorphous film, explosive crystn., kinetic parameters 3−38258
- attaching gas breakdown and recovery control by pulsed electron beams 3−7689
- chalcogen and related alloy films, photocontraction effect 3−7919
- coherent scattering of slow EM waves by beam of nonrelativistic electrons 3−6848
- covalent semiconductors, electronic irrad. induced lattice defects 3−42663
- crystal, channelling radiation, at. and mol. physics, in 1 and 2 dimens. 3−42686
- diamond, coloration by electron irrad., induced absorption bands 3−33302
- diamond, electron irradiated, A-2 and A-3 ESR centres form., self di-interstitial complexes 3−43436
- diamond, interstitial host atoms near divacancies, diffusion and annealing 3−37905
- diamond relativistic electron radiation spectra, absolute cross section 3−3854
- dielectric electrical conductivity increase 3−13286
- dielectric films, bulk charging by low energy electron irrad. 3−19064
- dielectric materials for satellites, exposed to electrons, charging and discharging characts. 3−40002
- dielectric medium, hyperlight electron interactions, macroscopic relativistic dynamics 3−42672
- DNA, newly synthesised, post-irrad. defects, neutrons and electrons compared and the effect of misonidazole 3−29616
- electron microscopy of frozen water and aqueous solutions 3−20957
- electron-solid interactions, chem. aspects 3−3513
- elemental thick targets, Z=50-82, electron impacted, $L\alpha$ X-ray production efficiency meas. 3−52869
- energy deposition in thick media, calc. method 3−18350
- epoxy-resin, electron irradiated, thermal cond. and dielec. props. at low temp. 3−51875
- excitation of weak turbulence in interplanetary plasma 3−30141
- fast electron beam from DC glow discharge, interaction with metallic surface 3−2608
- flue gas from coal combustion, electron beam treatment, electrostatic precipitator development 3−39561

electron beam effects continued

- fluorocarbon polymer films, charge storage capability, thermally stimulated discharge current meas. 3−23399
- focused electron beam irrad. solid targets, temp. profiles calc. 3−51664
- glass, commercial crystallised, fracture features at internal fracture origins 3−14704
- graphite, electron bombardment enhanced reactivity with atomic H, temp. depend., methane yield 3−26445
- graphite, vacancies, positron studies 3−47733
- graphite and TiC-coated graphite, methane prod. under electron and atomic H impact 3−26446
- graphite limiter and armour damage in Doublet III 3−56695
- heat extraction from targets in high current electron beams 3−26527
- heteroepitaxial films, electron beam polishing technique 3−57198
- hydrated specimens in wet gas environment, quantitative meas. of radiation damage 3−15159
- ice, electron irradiated, visible band electron fast decay at low temp., isotope effects and H^+ mobility 3−13221
- Josephson junction, annealing and tunnelling current density modification using electron irrad. 3−18827
- Kapton breakdown, dielectric discharges, RF characts. 3−38760
- Kevlar-polyester composite, charging characts. under electron beam irrad. 3−18768
- laser and electron beam interactions with solids, conf., Boston, MA, USA (Nov. 1981) 3−54582
- metals, electron beam kinetic heating, temp. fields 3−51666
- metals, Soret diffusion vs. impurity diffusion during laser or electron beam induced heat flow transients 3−56961
- metals, vacancy form. after irrad. and quenching, positron annihilation study 3−47732
- metastable surface alloys produced by ion implantation, laser and electron beam treatment, review 3−27961
- MOS capacitors, thin oxide, radiation effects caused by evaporation of Al 3−52267
- MOST dosimeter using PMOS device in space radiation environment, error estimation and reduction 3−36577
- multilayer coatings for dielec. enhanced refl. mirrors, radiation effects 3−1743
- Mylar, satellite dielectrics, ionisation induced breakdown and cond. 3−44637
- Mylar breakdown, dielectric discharges, RF characts. 3−38760
- PET, elec. fields due to keV electron irradiation 3−37964
- plastic construction materials, thermal and mech. props., ionising radiation effect *(German)* 3−58176
- PMMA, tacticity effects on electron resist. appls. 3−17390
- polyacetylene:I_2, elec. cond., electron irrad. effects 3−3183
- polyethylene, electron beam irrad., mech. props., spatial crosslink distrib. effects 3−47014
- polyethylene, linear, ultrahigh mol. wt., uniaxial tensile creep behaviour, high-energy radiation effect 3−51700
- polymer films, irradiated, nondestructive laser method for measuring charge profiles 3−38764
- polymer sheet, dielectric surface arcs vel., optical meas. 3−38761
- polymers, electron irrad. induced cond., current transients 3−8488
- polypropylene, radiation processes, emission intensity influence *(Russian)* 3−42661
- quartz:Ge(Li)(Fe), short-lived optical absorption, influence of pulsed electron irradiation 3−14324
- quartz, electron irrad., ESR of E_1' centres 3−52626
- reverse scattering of electrons on material targets, investig. using modified electron diffr. camera 3−5914
- SEM secondary electron image brightness changes under electron irrad., electron spectroscopy studies 3−10964
- semiconductor, surface recombination velocity at grain boundary, EBIC determ. 3−43195
- semiconductor processing, dual electron beam system 3−56992
- semiconductors, light- and electron-beam induced currents 3−57358
- semiconductors, nature of pulsed beam annealing, review 3−56937
- semiconductors and metals, ion implantation and laser treatment, conf., Bombay, India (Feb. 1981) 3−25686
- Si:H photovoltaic cells, H passivation 3−24581
- silicide Schottky diode, electron beam induced voltage study 3−8557
- solar array, charging and discharging characts. during geomagnetic substorm 3−39474
- space charge meas., of electron beam irradiated dielectrics 3−45159
- spacecraft thermal control dielecs., elec. cond. and discharge propag. 3−13811
- spacecraft thermal control dielectrics, elec. cond. and discharge 3−39998
- spark gap, electron beam induced space charge effects 3−27764
- steel, alloy, irrad. damage, electron, heavy-ion and fast-neutron, correl. 3−27976
- steel, austenitic stainless steel, type 316, void swelling, C and N effects, in-situ HVEM study 3−39159
- steel, electron pulse beam generated acoustic signal, effect of thermophys. props. 3−28060
- steel, stainless, austenitic, electron irrad., low-temp. ductility, irrad. effect on martensitic transform 3−19384
- steel, stainless, SUS-304L, surface struct. variation with heat treatment, SEM and AES study 3−42901
- steel, stainless, void density effect on dislocation bias during electron irrad. of type FV548 3−18348
- superconducting tunnel junctions, two-dimensional imaging of current-density distrib. 3−18828
- surface heat treatment, laser and electron beam hardening, review 3−58270
- surface wave generation in a solid state plasma by relativistic electron beams 3−38414
- Teflon, electron-beam-charged, barriers to flashover discharge arcs 3−38762
- Teflon, spacecraft thermal control surfaces, laser produced pinholes effect on charging characts. 3−40001
- Teflon FEP foils, electron beam irradiated, charge dynamics model 3−38399
- trimethylaluminium thin film, decomposition induced by electron, ion and photon beams 3−4285
- water in liquid and vapour phases, electron energy deposition and yields 3−18351
- Al, electron beam induced heat flow transients, heat diffusion eqn. calc. 3−42670
- Al, electron stopping power, 11-127 keV 3−13297
- Al surface, interaction with O, electron irrad. effect, AES study 3−18562

electron beam effects continued
Al-Cu, ion implanted, pulsed electron beam annealing and furnace annealing, RBS and channelling meas. 3—13257
Al-Ge, Ge precipitate amorphisation by electron bombardment, TEM study 3—56981
Al-SiO_2-n-Si system, 1.3 MeV electron radiation effects obs. *(Chinese)* 3—38481
AlCr, dilute, self-interstitial trapping at Cr atoms 3—13218
β-Al_2O_3-$Na_2O(K_2O)(Li_2O)(Ag_2O)(PbO)$, electron beam writing on 20 Å scale 3—46998
$(ArXe)^+$ heteronuclear ion, fluoresc. study in electron beam excited Ar-Xe mixture 3—46012
$AsGeSe_x$ vitreous chalcogenide film, electron induced cond. meas. 3—28460
As_2S_3, glassy, optical props. and microhardness, electron stimulated reversible changes 3—18352
CO, α phase, electron stimulated desorption from W (110) 3—42916
CO_2-N_2 mixture, volume gas discharge with external ionization by electron beam, injection instability 3—42483
$Ca_2Nd_8(SiO_4)_6O_2$, apatite struct., radiation damage 3—27977
$Ca_5(PO_4)_3$, apatite, electron irrad. damage, TEM study 3—13285
CdTe film, minority carrier diffusion length, EBIC studies on Schottky barrier struct. 3—43746
$Co_{77}B_{23}$, metallic glass, positron annihilation study 3—19226
$Cr(CO)_6$ thin film, decomposition induced by electron, ion and photon beams 3—4285
Cu, electron stopping power, 11-127 keV 3—13297
Cu foils, electron irrad., growth of dislocation loops 3—18349
Cu-Be (1.35 at.%), microstruct. evolution under electron irrad. in HVEM 3—27996
Cu-Si (8.01 at.%), extended dislocation width, Suzuki segregation to stacking fault, electron micrograph study 3—38078
Cu_3Au, ordered and disordered, electron irrad. damage 3—13283
Cu_3Au, ordering and disordering, HVEM study 3—13282
CuPd, order-disorder transform. under 148 MeV neutron and 1.8 MeV electron irradiations 3—55576
Fe, electron irrad., muon trapping at monovacancies 3—52701
Fe, pure and Sn implanted, electron beam melted, slip, dislocations, SEM, TEM, RBS and channelling studies 3—56987
Fe-Al, electron and neutron irrad., defect production and recovery 3—42671
Fe-Ni-P-B amorphous ribbons, electron and proton irrad. effects on mag. props. 3—28554
FeAl, electron irrad. amorphisation, high volt. electron microscopy study 3—47001
$Fe_{100-x}B_x$, metallic glass, positron annihilation study 3—19226
Fe_3B, electron irrad. amorphisation, TEM study 3—2417
$Fe_{75}B_{25}$ amorphous and cryst. electron irrad., Frenkel-type defects, elec. cond. study 3—2611
$Fe_{80}B_{20}$, metallic glass, electron irrad., point defects, positron lifetime and mag. aftereffect study 3—3860
FeCu dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
FeMn dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
FeNi dilute alloys, mag. aftereffect 3—28645
$Fe_{40}Ni_{40}P_{14}B_6$, crystn., stability, effect of electron irrad. *(French)* 3—51662
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, electron irrad., point defects, positron lifetime and mag. aftereffect study 3—3860
$Fe_{40}Ni_{40}Si_{14}B_6$, metallic glass, positron annihilation study 3—19226
FeTi dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
$Ga_{1-x}Al_xAs$, electron irrad., electron trap optical ionisation cross-sections, DLTS meas. 3—43092
$Ga_{1-x}Al_xAs$, electron traps due to electron irrad. 3—33675
GaAs, annealing, material-process interactions, review 3—58146
GaAs, dislocation glide, recombination enhanced, cathodoluminesc. microscopy study 3—42609
GaAs, electron bombarded and plastically deformed, intrinsic emission intensity 3—24102
GaAs, electron irrad., anisotropic defect production, electron and hole traps 3—42667
GaAs, electron irrad., optical props. thermal stability 3—43577
GaAs, electron irrad. damage, elec. cond. and defect levels 3—42666
GaAs, electron irrad.-induced defects, electron traps 3—42668
p-GaAs, electron irradiated, deep levels, DLTS and deep level optical spectroscopy study 3—33664
n-GaAs solar cells, polycryst., charge collection characts., SEM/EBIC study 3—53563
n-GaAs:Cu, electron irrad., photoluminesc. meas. 3—3798
GaAs:Cu, electron irrad., defect interaction with Cu atoms, photoluminescence study 3—37949
GaAs:Si, Cr, multiply scanned electron beam annealing 3—56991
GaAs-$Al_xGa_{1-x}As$ heterostructures, modulation doped, electron or γ-irrad., transport props. 3—38461
GaP, electron or neutron irrad., band edges modification by defects, optical absorpt. and photocond. study 3—23975
GaP thin films, electron beam induced carrier excitation, quantum yield 3—43301
GaP:Fe, electron irrad., radiation defects, ESR study 3—14123
GaP:Zn, as-grown and electron irrad., defect study by DLTS and EPR 3—43087
n-Ge, electron irrad., electron traps, ionisation free energy emission rates and capture cross sections 3—28300
Ge, electron irrad., vacancy and interstitial clustered defect form. 3—47000
Ge:Ga(In)(As)(Sb), electron irrad., hole trapping defects, DLTS study 3—43083
Ge:O_2, combined HREM and STEM microanalysis on decorated dislocation cores 3—8055
Ge-Si alloy, electron and X-ray irrad.-induced acceptors, elec. cond. study 3—18653
p-$Hg_{1-x}Cd_xTe$, electron irrad., effect on carrier props., isochronal annealing study 3—33303
InGaAsP LPE layers, electron irrad., defect states, DLTS study 3—57304
InP, B3 structure, electron irrad., dislocation loops seen edge-on, electron microscopy contrast 3—56907
n-InP, electron irrad. defects, positron annihilation and Hall effect study 3—24045
InP, electron irradiated, deep levels study 3—3107

electron beam effects continued
p-InP, electron irradiation induced deep levels, DLTS study 3—13758
InP epilayers, process-induced defects, photoluminesc. and DLTS study 3—43089
InP:Cd, Zn, diffusion and p-n junction form., Hall effect and EBIC study 3—18512
InP:Ge single cryst., high resolution TEM obs. of defect struct., electron beam induced degradation 3—18304
InSb, nature of radiation-induced defects 3—13281
$In_{2-x}Sn_xO_{3-y}$-p-InP solar cell, electron diffusion length 3—19585
KBr, formation of Br bubbles via planar state, electron microscopy study 3—27995
KBr(I), electron irrad., O_2^- ion form., luminesc. study 3—19207
KCl (100) electron beam irrad. effect on LEED 3—8103
KCl, reduction of rate of electric aging 3—8767
KCl:I, electron irrad., exciton decay, Frenkel defects, optical absorption study 3—8425
KCl:I, electron irrad., impurity exciton prod., optical absorpt. and luminesc. studies 3—43576
$KMgF_3:Eu^{2+}$, electron irrad., optical absorption and emission 3—52831
LiF, edge dislocation mobility for electron beam loaded crystals meas. 3—18315
LiF thin films, electron bombarded in electron microscope, void growth obs. 3—2612
$LiNbO_3$ crysts., damage by electron beams 3—8104
$LiTaO_3$ crysts., damage by electron beams 3—8104
Mg, internal friction associated with dislocations and electron irrad. induced point defects 3—28045
$MgF_2:Ni^{2+}$, absorption, emission and excitation spectra, electron beam radiation defects 3—43592
MgO epitaxial film, secondary electron emission and conductivity mechanisms 3—23519
$MgO:H^-$, thermochemically reduced, charge and mass transfer, IR absorpt. and luminesc. study 3—43573
$MnF_2:Ni^{2+}$, absorption, emission and excitation spectra, electron beam radiation defects 3—43592
MnZn ferrite, ferrospinel, electron irrad., Fe valency changes, Mossbauer study *(Russian)* 3—3605
NH_3 dissociation by electron beam 3—36868
NaCl, edge dislocation mobility for electron beam loaded crystals meas. 3—18315
NaCl, electron irrad., dislocation dynamics during deformation 3—8054
NaCl, exoelectron energy distrib., Monte Carlo calc. 3—24103
NaCl layer on Ag (111), electron irrad. induced desorption, Auger and photoelec. studies 3—51918
NaCl, reduction of rate of electric aging 3—8767
Na_2O-CaO-SiO_2 glasses, electron irrad., field-assisted Na migration 3—2894
Ne(:Ar), solid, electron-induced erosion meas. 3—13280
Ni_3Fe, electron irrad. and cold worked, mag. disaccommodation 3—23743
Ni_3Si film, electron bombard. induced surface segregation, growth kinetics, TEM study 3—56983
NiTi, electron irrad. induced amorphisation at dislocations 3—51663
p-$Pb_{1-x}Sn_xTe$, ferroelec. phase transition under electron irrad. 3—3651
$Pb(Zr_{1-x}Ti_x)O_3$:Nb, 95/5 PZT ceramics, cryst. and domain struct., TEM study 3—23894
$RbMgF_3:Eu^{2+}$, electron irrad., optical absorption and emission 3—52831
$RbMgF_3:Mn^{2+}$, electron beam irrad. damage, annealing and luminescence studies 3—56984
Sb, microclusters, fragmentation from electron bombardment 3—3880
Se, epitaxial and amorphous films, vacuum growth on electron irrad. KI, film morphology, TEM study 3—23195
Si, amorphized by ion implantation, fast scanned electron and laser beam induced explosive crystn. 3—56821
Si amorphous layers, polycentre crystallisation in pulse annealing 3—18221
Si, CVD deposition onto alumina and sapphire, electron beam enhanced, partial epitaxy 3—8990
Si, crystalline to amorphous boundary, EBIC and voltage contrast SEM microscopy 3—57239
Si, electron beam annealing by focused beam, temp. profiles calc. 3—51664
Si, electron beam pulse processing 3—56990
Si, electron irrad., positron annihilation angular distrib. 3—28926
Si, electron irrad. in HVEM, point defect interaction with surface 3—27999
Si, electron irrad. prod. defects, HVEM study 3—46999
Si, electron irradiated, radiation defects stability, surface effects 3—2609
n-Si, electron-irradiated, heavily compensated, deep levels, photo-DLTS study 3—43063
Si films, single cryst. lateral nucleated epitaxy on amorphous $SiO_2(Si_3N_4)$ using scanning laser and electron beams 3—34224
Si, grain boundary struct., EBIC contrast *(French)* 3—22915
Si, interstitial host atoms near divacancies, diffusion and annealing 3—37905
Si, ion implanted, annealing using dual electron beam processing system 3—56992
Si, ion implanted, discharge annealing, optical reflectivity study 3—56993
Si, ion implanted, short time annealing methods, review 3—51638
Si, ion implanted, solid state annealing by incoherent light pulses and multiscan electron beam 3—27997
Si, irradiated, defects determining Fermi level stabilisation 3—33674
Si, laser and electron beam annealed, doping profile, characterisation by IR spectrophotometry 3—57939
Si, line defects, EBIC contrast, computer simulation 3—18307
n-Si p^+-n diodes, Al diffusion type, electron irrad., defect states and annealing behaviour *(Chinese)* 3—33659
Si, polycrystalline, electron-beam induced current response of grain boundary, surface recomb. vel. 3—33737
Si, polycrystalline cast, solar grade, grain boundary props., heat treatment effect, EBIC study 3—51628
Si, radiation defect optical charge exchange and ESR 3—38695
Si ribbon, edge-defined film-fed growth, electron irrad. effects 3—42665
Si sheets, grain boundaries, TEM and EBIC studies 3—22916
Si, single cryst., relativistic electron radiation spectra, absolute cross section 3—3854
Si solar cells for space appl. elec. performance degradation due to electron and proton irrad. 3—53502
Si, solar grade, defects, EBIC/TEM study 3—51627
Si, surface temperature using large diameter scanning CW laser and electron beam sources 3—56978

electron beam effects continued

- Si, twin boundaries, elec. activity, EBIC and TEM obs. 3−51623
- Si ultrathin solar cells for space appl., elec. characts. and electron irrad. resist. 3−53503
- Si, vibronic bands, IR spectra 3−42720
- Si:^{11}B, divacancy annealing, electron beam and pulsed ruby laser excitation 3−56986
- Si:As, ion implantation damage, electron-induced conductivity study 3−8075
- Si:B,C, electron irrad., defect accumulation, IR study 3−27998
- Si:Ga, electron irrad., defect studies and minority carrier lifetime, DLTS studies 3−57306
- Si:H, amorphous films, sputtered thin film growth 3−24127
- Si:In, Al, photoluminesc., IR absorpt., photocond. and Hall effect meas. 3−34135
- Si:O, electron irrad., divacancy production enhancement by O, expt. study 3−33301
- Si:O, electron irrad., divacancy production, computer model 3−42662
- Si:O, electron irradiated, divacancy production enhancement 3−42601
- Si:O, heat treated, donor states, DLTS studies 3−43078
- Si:O, pre-annealed, electron radiation defects accumulation obs. 3−2610
- Si:O$_2$, combined HREM and STEM microanalysis on decorated dislocation cores 3−8055
- Si:O$_2$, radiation enhanced diffusion at room temp. 3−47159
- Si:P, ion implanted, pulsed electron beam annealing, SEM and TEM studies and computer simulation 3−51665
- Si:P, pulse electron beam annealing 3−56985
- Si:P p-n homojunctions, avalanche breakdown voltage; electron irrad. effects 3−8570
- p-Si:Sn, electron irrad., A-centre and divacancy form. 3−13250
- Si-SiO$_2$, electron irrad., interface defects, XPS study 3−51962
- Si-SiO$_2$ interface, electron beam enhanced surface photovoltage 3−3239
- Si-SiO$_2$ interface, radiation induced defects meas. with XPS 3−43288
- Si-SiO$_2$ MOS structures with thick SiO$_2$ layers, interface state generation 3−43286
- Si-SiO$_2$-Al MOC capacitor, surface space charge layer, electron irrad., compensated donor generation 3−52255
- Si$_3$N$_4$ (SiO$_x$N$_y$) films, deposition on Si by electron beam activated reaction of SiO$_2$ film with NH$_3$ vapour 3−52965
- SiO$_2$, electron irrad. induced E$''$ centres, ESR study 3−3531
- SiO$_2$, vitreous, stress relax. on irradiation 3−22946
- V, electron beam irrad., channelling and X-ray anal. 3−56980
- V metastable surface alloys by Ga, Se, Bi and In ion implantation 3−42636
- VSe$_2$, electron irrad. induced defects, elec., mag., and lattice parameter meas. 3−18347
- V$_3$Si, supercond. phase, formation by electron beam annealing *(Japanese)* 3−38520

electron beam impact *see electron impact*

electron beam lithography

see also electron resists

- curved structures fabrication for integrated optics 3−7218
- deflecting current generator, semiconductor-based with high stability 3−36124
- Fresnel lenses and blazed grating fabrication 3−32513
- microrecording with minimum coma *(German)* 3−6862
- Monte Carlo calculations for electron scatt. and energy dissipation in solid targets, review 3−14413
- position-controlled rectangular-coordinate table [SEM application to lithography], design and construction 3−40728
- InP surface corrugations fabricated using electron lithography for InGaAsP DFB lasers 3−6968

electron beam machining

No entries

electron beam welding

- bimetals, energy emission during electron irradiation *(Russian)* 3−3879
- steel, stainless, forgings of 03Kh12K12D2-VD, mag. and mech. props. 3−29129

electron beams

see also electron impact; electron optics; Schwarz-Hora effect

- acceleration in system of radial lines with ferrite *(Russian)* 3−11559
- accelerator diode, large area, high current, electron beam uniformity 3−45739
- axisymmetric electron-optical systems for electron beam shaping 3−6864
- beam discharge, pipe-like geom., active radical flow generation 3−37714
- Bernstein mode conversion to EM modes, quasioptical maser expt. 3−22020
- bunched electron beam diagnostic device, free electron laser diagnostics appls. 3−32299
- charged particle beams transported through dense plasma, current instability 3−7757
- collector plasma acceleration mechanism in relativistic electron beam 3−2250
- collision processes, relativistic, numerical modelling *(Russian)* 3−17141
- coupled retarding system and electron beams interaction, mathematical model 3−6857
- critical vacuum current of electron beam in electrostatic struct. 3−41390
- electron-wave detectors with low current density beams, dynamical transverse scatt. effects 3−1542
- EM slow wave amplification by longitudinal nonphased electron beam in inhomogeneous mag. field 3−26925
- EM wave generation by electron streams in nonsynchronous mode 3−17420
- EM waves, paramagnetic excitation in relativistic electron beams 3−26920
- envelope of beam with paraxial path and arbitrary phase contours 3−41749
- formation in skimming discharge plasma 3−13012
- free-electron laser, space charge field effect due to finite length electron beams 3−22086
- GAEL, relativistic beam generator 3−17127
- glow discharge electron beam, luminosity study 3−42472
- high current betatron 3−17139
- high-current electron beam form. in vacuum diode, appl. to laser pumping 3−32296
- high-current electron beam propag. in gas, intrinsic mag. field inclusion 3−17428
- high-current electron beam shape control and heavy-ion beam generation in dielectric channels 3−17121

electron beams continued

- high-current nanosecond low-energy electron beam generation for the material surface heating 3−11593
- high-repetition-rate electron beam for laser pumping, resonant transformer construction and operation 3−17524
- homogeneous retarding systems containing an electron beam, mode conversion 3−12056
- inductive storage for particle beam prod. and plasma implosions 3−17067
- instabilities in finite systems near transparency bands 3−17432
- intense magnetised electron beams, quality meas. 3−17164
- ion resonance instability of electron beam in modified betatron accelerator 3−37641
- line-focusing by means of a quadrupole lens, using novel shadow-image technique 3−30965
- linear electron accelerator, electron beam emittance and brightness study 3−17115
- magnetically focused electron beams, warm rippled, vol. space charge waves 3−41748
- magnetically insulated transmission line for GREC generator 3−11590
- microwave emission, long-term, using a relativistic electron beam prod. by explosive emission cathode 3−7761
- modulated electron beam and modulated travelling parameter systems, reson. conversion of waves 3−27159
- modulated electron beam diffraction in presence of cylindrical semitransparent resonator 3−12063
- motion in an undulator, EM wave field spatial depend. effect 3−32294
- multisectional linear electron accelerator, pulsed beam distrib. 3−17114
- nanosecond, extracted from sealed vacuum diodes, up to 0.6 MeV 3−36595
- neutralised, refl. from metallic surface, trapping into ring orbit 3−50106
- parametric generation and amplification of EM waves, theory 3−6860
- Pierce-type electron guns theory 3−26519
- plasma formed by electron beam in rarefied gas, density distribution evaluation 3−32922
- plasma laser pumping by modulated electron beam 3−7000
- polarisational self-acceleration *(Russian)* 3−1539
- positron beam prod. by 14 MeV CW electron accelerator 3−1104
- potential motion, theory, steady-state condition 3−21981
- radiative self-polarization in storage ring, theory 3−31864
- relativistic, EM waves in noncompensated high current beams 3−21984
- relativistic, gamma-ray prod. by interaction with two interfering laser fields 3−26990
- relativistic, propag. in longitudinal mag. wiggler, higher harmonic emission 3−1645
- relativistic, transport in dense neutral gas, in presence of mag. mirror 3−46770
- relativistic electron beam, high-power, atmosphere ionisation effects 3−12814
- relativistic electron beam, thin-walled, form. and transport in limited channels 3−21985
- relativistic electron beam, three-dimens. trajectory in helical mag. field 3−1112
- relativistic electron beam energy concentration study 3−11589
- relativistic electron beam for double foil acceleration, optical shadowgraphy study 3−50042
- relativistic electron beam generation in cylindrical diode with mag. insulation 3−6474
- relativistic electron beam injection into neutral gases 3−42419
- relativistic electron beam instability in plane drift space 3−6865
- relativistic electron beam pulse-periodic microwave generators 3−17130
- relativistic electron beam reson. excitation of slow EM wave 3−32298
- relativistic electron beam scatt. of EM wave 3−26919
- relativistic electron beam scattering and its attenuation in gas chamber 3−37696
- relativistic electron beam transport in curved channels, theory 3−36930
- relativistic electron beam wiggler buncher 3−17431
- relativistic electron beams injection and propag. into performed plasma channels for X-ray prod. 3−6490
- relativistic high current electron beam, stimulated cyclotron maser emission 3−32338
- relativistic high current electron beam form. in magnetically insulated coaxial diode 3−32293
- relativistic high freq. electronics, achievements and problems 3−33024
- relativistic high power electron beam, stimulated microwave radiation emission 3−32339
- relativistic high-energy electron beam, interaction with atmosphere 3−15677
- relativistic intensive electron beam in spatially periodic magnetic field, induced radiation 3−36929
- relativistic interactions in ultra-high-speed electron beams 3−46152
- relativistic orbital-drift integral of electron motion in a rotating electromagnetic field 3−50592
- relativistic simulation of collective ion acceleration 3−31856
- relativistic solid electron beam, in helical wiggler field, free electron laser instability 3−41745
- relativistic two-intense current electron beam, production from electron gun 3−41380
- retarding systems, cascaded coupled-resonator type interactions between electron beams and EM waves 3−12057
- ruby laser radiation scattering by nonrelativistic electron beam 3−22144
- self-focusing in gases and their ionisation 3−26546
- slowing down in spherical type recuperator 3−11580
- solar radio burst models, evolutionary electron beam and MHD two stream instability 3−59285
- space charge limit instabilities in electron beams 3−56130
- stationary states in mag. field 3−32295
- stimulated multiphoton effects on a diffraction grating 3−27228
- storage ring, electron beam, 70 MeV, particle loss meas. on one-dimensional third-order reson. *(Russian)* 3−11565
- TATB, exothermic reactions initiated by an electron beam 3−39387
- temporal and spatial structure control of intense electron beam 3−32297
- TeV-electrons, motion in a quadrupole mag. field allowing for synchrotron radiation 3−26543
- thermionic electron guns evaluation, using versatile test rig 3−20955
- threshold singularities in radiation of charges moving through junctions between waveguides of arbitrary cross section 3−12058
- transverse optical klystron, gain curve in small signal regime, report 3−21588
- transverse optical klystron (TOK) and convertor physics and figures 3−32285

electron beams continued
- virtual cathode formation in electron beams as a bifurcation phenomena 3—11588
- vortical stratified motion of electron beam 3—6858
- waveguide with crossed fields and secondary emission wall, avalanche multiplication 3—12059
- MgO moderator, ang. distrib. of slow positrons 3—1103

electron capture
- *see also charge exchange; electron attachment*
- anthracene A-$(CH_2)_n$-D type excited molecules, picosec. obs. of intramol. charge transfer processes 3—32198
- anthraquinones, polyhalogenated, photoreduction by direct electron transfer from alcohol 3—44059
- atom-ion collisions, K X-ray yield associated with electron capture, reson. behaviour, review 3—41639
- atoms, 3d elements, K_β/K_α intensity ratio for X-ray prod. by photoionisation and electron capture 3—26709
- carbonyl compounds, oxy, aza and thio groups, electron affinities by electron transmission spectra 3—32193
- chlorobenzene anions in liquids, ps dehalogenation study by positronium inhibition meas. 3—29325
- coherent excitation cross-sections 3—21898
- differential cross-sections, intermediate energies, isotope effect 3—26847
- electron emission, slow ion collisions and super-Rydberg cascades 3—21851
- ethyl cation, bridged and classical structs., neutralised ioon-beam spectrosc. obs. 3—56030
- ferromagnetic metal surfaces, electron spin polarisation techniques, review 3 -28516
- gaseous targets+Ne ions, CC X-rays from radiative electron capture 3—11935
- heavy-ion collisions, electron capture cross section impulse approx. 3—6780
- iodobenzene, ^{125}I labeled, electron capture, Auger ionisation after-effects 3—36852
- ion-surface collisions, capture amplitude calc. Stark states, post-collision interaction 3—21899
- methyl iodide, ^{125}I labeled, electron capture, Auger ionisation after-effects 3—36852
- molecular electron affinities determ. 3—50512
- momentum transfer, translation factors 3—56063
- non-self-maintaining discharge, establishment and decay in electronegative gas, domain form., discharge current *(Russian)* 3—27760
- recombination processes in atomic and molecular physics 3—32166
- relativistic second Born approx. 3—6781
- Rydberg atoms, field-ionised, obs. on convoy electrons 3—56059
- Rydberg atoms and electron transfer to the continuum spectra 3—56060
- Rydberg state production in convoy electron expts. 3—56061
- single cryst., glancing ion scatt. by surface semichannels, ion charge form. 3—3899
- slow multiply charged ion+atom, large angle scatt., $C^{6+}+H$ system 3—21902
- slow recoil ions with few electrons, Auger electron and X-ray emission spectra 3—11931
- trichlorofluoromethane, thermal electron attachment rate 3—50510
- Ar^+, electron capture, energy and width of Ar $(3s3p^6nl)$ series 3—41688
- $Ar+H^+$, angular distribution of ejected L-shell electrons 3—26831
- $Ar+H^+$, electron capture from the K and L shell, probability depend. on scatt. angle 3—1474
- $Ar+He^+(C^{5+})(Li^{2+})(O^{7+})$, electron loss from fast one-electron ions 3—1471
- $Au^{2+}+He(Ne)$, electron capture, target ionisation, coincidence meas. 3—32185
- $C^{4+}+H_2$, electron capture to Rydberg states 3—21904
- C^6+H, large angle scatt., illustration for slow multiply charged ion+atom collisions 3—21902
- Cl ions, highly stripped, moving in solids, K-shell binding energies, radiative electron capture 3—56070
- Cs+H(D), electron loss and capture cross section meas. 3—6779
- $D^++H(D)$, differential cross-sections, intermediate energies, isotope effect 3—26847
- ^{165}Er, double *K*-shell-vacancy prod. per *K*-electron-capture-decay 3—11762
- ^{55}Fe, K-L double ionis., X-ray emission 3—26869
- $H+C^{q+}(O^{q+})$, electron capture cross-section meas. in low energy collisions 3—6760
- $H+H^+$, reson. charge transfer, total cross sections, impact parameter calcs. 3—50305
- $H+H^+(He^+)(He^{2+})$, 0.25-2.0 MeV, total electron capture cross sections 3—26837
- H+ion collision, electron capture cross-sections by highly charged ions, charge exchange 3—56028
- $H+Li^{q+}(C^{q+})$, electron capture cross sections, eikonal approx. 3—11972
- $H^++H(D)$, differential cross-sections, intermediate energies, isotope effect 3—26847
- H^++Li, charge exchange, mol. pot. model 3—41677
- H^++Li^+, electron capture cross sections calc. 3—11942
- H^++methane, electron capture in close collisions 3—21905
- $H^++Na(K)(Rb)(Cs)$, electron capture from ground and excited states, mol. calcs. 3—26816
- $H_2+C^{q+}(O^{q+})$, electron capture cross-section meas. in low energy collisions 3—6760
- $H_2+H^+(He^+)(He^{2+})$, 0.25-2.0 MeV, total electron capture cross sections 3—26837
- H_2+O^{6+} charge exchange collisions at 60 keV, captured electron distrib. 3—32195
- He^{2+}:Li, electron capture processes in energy range 15-150 keV 3—1457
- He-ions isoelectronic series, dielectronic recombination rate coeff. 3—26846
- He-like ions, electron capture by protons, cross sections calc. 3—11942
- He-like ions, isoelectronic series, dielectronic recombination rate 3—26845
- $He+C^{3+}(N^{4+})(O^{5+})$, electron capture reactions, (n,l) distribs. meas. 3—21903
- $He+He^+(Li^{2+})(C^{5+})(O^{7+})$, electron loss from fast one-electron ions 3—1471
- $He+N^{7+}(O^{7+})$, two electrons capture into autoionising states 3—11966
- $He^{2+}+He(Ar)(Kr)$, electron capture, cross section binary encounter approx. 3—32194
- $He^{2+}+Ne(Ar)(Kr)(Xe)(N_2)$, electron capture from gas target atoms, 0.7-4.5 keV 3—46064
- $^3He^{2+}+C$, charge transfer reactions at 68, 99 and 130 MeV 3—21908

electron capture continued
- Li + ions, ion excitation by electron capture, plasma impurity ion transport study appl. 3—12922
- Li metastable atomic beams prod. by electron capture in ion-surface impact, X-ray laser implementation 3—32340
- $Li^{3+}+H$, electron capture capture cross section calc. in continuum distorted wave approx. 3—11971
- Mg^{3+}, electron capture, energy and width of Mg^{2+} $(2s2p^6nl)$ series 3—41688
- Mn, K-L double ionis., X-ray emission 3—26869
- $N_2+He^+(Li^{2+})(C^{5+})(O^{7+})$, electron loss from fast one-electron ions 3—1471
- $N_2{}^++H$, state-selective electron capture, collision spectrosc. obs. 3—56066
- N_2O, electron capture rate, elec. field depend. 3—41678
- Ne ions, multicharged, effective capture cross section meas. 3—21897
- Ne^+, electron capture, energy and width of $Ne2s2p^6nl$ series 3—41688
- $Ne+H^+$, electron capture from the K and L shell, probability depend. on scatt. angle 3—1474
- Ne^{10+}+rare-gas targets, electron capture, selective final state population, energy gain spectroscopy 3—11970
- $Ne^{2+}+Xe$, charge exchange, transfer ionisation, translational spectroscopy 3—41676
- Ne^{9+}+rare-gas targets, electron capture, selective final state population, energy gain spectroscopy 3—11970
- $Ne^{q+}+Li$, state-selective and total one-electron capture, VUV line emission 3—6758
- $O^{8+}+H(1s)\rightarrow O^{7+}(n,l)+H^+$, electron capture cross sections, perturbed stationary states calcs. 3—50513
- $S^{13+}+Ar$, electron capture, projectile X-ray yield, reson. processes 3—11969
- SF_6, thermal electron attachment rate 3—50510
- ^{181}W, double *K*-shell-vacancy prod. per *K*-electron-capture-decay 3—11762
- Xe, metastable and ground-state prod. by electron capture 3—45878

electron capture, nuclear *see nuclear electron capture*

electron density
- *see also carrier density; current density; electron density (metals); plasma density*
- active galaxies narrow-line regions, electron density from spectral anal. 3—54252
- atomic, bounds in near-nuclear region 3—55814
- atomic, upper bound estimates 3—55810
- VZ Cancri, RRs-type variable star, electron density determ. rel. to spectral type 3—10353
- carboxylic acids, packing characts., atom-atom pot. anal. using electron density distribs. 3—2541
- D-region, effect on mesosphere turbulence radar echoes 3—59141
- D-region, identification of ionisation ledges by LF/VLF obs. during meteor shower 3—5027
- D-region electron density profile, estimation from knowledge of VLF refl. coeffs. 3—48764
- F_2-layer, post-sunset electron density increase in Asian zone 3—44606
- F_2-layer, two-dimensional model for various mechanisms of electron density distrib. form. 3—15709
- F-region, night-time, over Cachoeira Paulista (22°S, 45°W), gravity wave induced ionisation layers 3—5025
- F-region plasma diagnostics from radioemission of injected electron beams 3—48684
- fermions,interacting and noninteracting, N representability of electron density and first-order density matrix 3—5708
- first row homonuclear diatomic mols., electron momentum distrib., HF calcs. 3—41489
- Harang discontinuity variability, radar and magnetometer chain meas. 3—59151
- Heile's dust cloud 2, electron density upper limit from HF obs. 3—44831
- interstellar diffuse clouds, electron and gas densities from Ca I absorption 3—48975
- interstellar electron density rel. to pulsar scatt. index parameter 3—40219
- interstellar medium, ionisation equilibria and electron density from UV absorpt.-line spectrum of μ Ophiuchi 3—10415
- interstellar neutral gas towards HD 93206, electron densities and temps. from IUE obs. 3—59425
- ionosphere, D-region MF partial reflection profiles rel. to electron density meas. 3—10129
- ionosphere, effect on VHF auroral backscatter amplitude 3—59153
- ionosphere, effect on VHF auroral backscatter amplitude in eastward polar electrojet region 3—59152
- ionosphere, effects of lateral gradients on ELF propag. 3—10035
- ionosphere, electron density gradient rel. to incoherent scatter radar obs. of plasma line with chirped pulse system 3—10139
- ionosphere, electron density valley problem, inverse scattering solns. 3—48756
- ionosphere, mid-latitude electron conc. distrib., mag. field effects 3—35344
- ionosphere pulsed plasma probe technique for multi-ion plasmas and assoc. effects on instabilities 3—20123
- ionosphere topside equatorial electron density irregularities 3—44613
- lower hybrid wave heating on TM-1-MU Tokamak 3—22663
- M42 (Orion nebula), electron densities rel. to complex ionised struct. in θ^2 Orionis region 3—15978
- molecular complex formation, electron density redistrib. anal. 3—14855
- NGC 6720, NGC 7662, planetary nebulae, electron density maps from two-dimensional photometry 3—54482
- ρ Ophiuchi interstellar cloud, electron densities and radiation field intensity rel. to ionisation equilib. 3—54472
- α Orionis, electron density in extended chromosphere rel. to radio emission obs. 3—35599
- polycrystalline solids, electron density and spin density obs., X-ray and neutron scatt. 3—2340
- Simeis 147, supernova remnant, chem. and physical conditions 3—40235
- solar prominences, electron density determ. during 1981 July 31 eclipse 3—59277
- near-Sun plasma, electron density fluctuations rel. to decimetre radio wave propag. 3—10295
- total electron content structure over Israel 3—30116
- Venus ionosphere, electron density altitude profiling by radio occultation, amplitude data 3—10242
- O IV semiforbidden 1401 Å multiplet appl. 3—20250

electron density (crystallography) *see crystallography*
electron density (metals)
  transition metals, positron annihilation characts. rel. to cond. electron density 3-47735
  Mo-W-Ir(Rh), struct. form., electron conc. role 3-37858
  Sn-Au(Ag)(Cu), amorphous, elec. props., effect of average electron conc. 3-43149
electron density (semiconductors and insulators) *see carrier density*
electron density of states *see electronic density of states*
electron density of states (condensed matter) *see electronic density of states*
electron detachment
  acetonitrile-d_3, doped, photodetachment threshold of solvated electrons, luminesc. study 3-23998
  multichannel photodetachment, extended zero-core contrib. model 3-32022
  negative ions, multi-quantum processes 3-32025
  two-electron threshold escape rel. to autoionising states 3-26704
  $Ar+H^-(D^-)$, detachment collisions, electrostatic vs. dynamical coupling 3-56033
  $D^-+N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3-46059
  $F^-+H(D)$, associative detachment reactions, product vibr. state distrib. 3-44051
  F^-+inert gas, charge neutralisation in thin target 3-26835
  H^-, $1s2p2p'{}^4P^e$ reson. in photodetachment 3-45909
  H^-+He, electron detachment, doubly differential cross-section 3-26819
  H^-+He collisions, electron detachment cross section 3-50504
  $H^-+He(H_2)(N_2)$, charge exchange to shape reson., detached electron energy spectra 3-50495
  $H^-+N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3-46059
  I^-, electron photodetachment thresholds, laser optogalvanic spectrosc. obs. 3-36733
  SF_6^-, electron detachment in RF quadrupole trap *(French)* 3-26670
electron detection and measurement
  ARGUS electron-photon calorimeter for low-energy EM shower detection 3-41413
  backscattered electron image detector, particles in paraffin sections of human tissue 3-39754
  Burlin's cavity theory evaluation, rel. to electron path length 3-1073
  central shower counter prototype for FNAL collider detector facility 3-36616
  Consultative Committee on Standards for the Measurement of Ionising Radiations, recent work of Section I 3-11625
  counting installation for the registration of electron emission 3-45788
  diode arrays for detecting photoelectrons 3-36087
  drift chamber, dE/dx resolution in various gases 3-45769
  drift chamber, detection of single electrons produced by aerosol photoemission 3-26559
  electron-pair detector for in-beam nucl. studies 3-36619
  electron-photon coincidences with polarised electrons and without plane symmetry invariance 3-26860
  electron/hadron descrimination in hyperon semileptonic decay expts. 3-36608
  gas sampling calorimeter using conductive plastic tubes 3-36617
  gas sampling saturated avalanche EM calorimeter testing in positron beam 3-41412
  glass shower detector, response measurement for 2-17.5 GeV positrons 3-50140
  hodoscope, fine grained scintillator, shower position measurement 3-50141
  HVDC voltage, absolute determ. by frequency meas., electron-optical system 3-54748
  ionisation tubes for high energy electrons and photons 3-26566
  microchannel plates, electron detection efficiency, theory 3-50132
  microdosimetric properties of electron tracks measured in a low-pressure cloud chamber 3-41338
  Mossbauer backscatter electron counter for low temp. 3-40733
  multiwire chamber for positron and photon beam scanning 3-26558
  multiwire chambers, high resolution positron camera 3-50173
  pair spectrometer for electron-positron pair detection 3-26548
  particle identification by dE/dx sampling in neon 3-50250
  photodiode arrays, self-scanned, to record 100 keV electrons 3-475
  photoreceiver electron time-of-flight meas. 3-36088
  pions and electrons energy loss meas. at 4 GeV/c in jet chamber 3-26600
  positron camera, scintillator photomultiplier arrangements, problems and solutions 3-50174
  positron emission tomography, BGO crystal—photosensor combinations, assessment 3-53827
  positron tomograph, BGO scintillation camera 3-53826
  positron tomography, high resolution system, BGO crystal, HI_2 photodetector 3-53828
  relativistic electrons, energy and momentum meas. in undergraduate lab. 3-5534
  secondary electron detector for scanning electron microscopy of irradiated nuclear fuel 3-10947
  statistical characteristics of single-electron photoreceivers 3-45781
  surface barrier detector cosmic ray event and spectrometer algorithms, Si detector 3-6503
  transition radiation detector for LEP experiments 3-50202
  Ar-isobutane gas drift chamber in 100 kG mag. field, electron deflection meas. 3-41415
  $CaSO_4$:Dy Teflon TLD disk dosimeters, energy response to photons and electrons 3-41339
  Fe films, 7.3 keV electrons energy distribs. with depth selective Mossbauer spectrometer 3-40720
  $FeSO_4$ dosimeter for ionisation chamber dosimetry control of electron, ^{60}Co γ-beams 3-24886
  ^{55}Fe activity measurement method using 4π proportional counter, efficiency calibration 3-6501
  He filled proportional counter for reson. electron Mossbauer spectroscopy 3-41409
  LiF TLD, energy sensitivity at different electron energies *(Afrikaans)* 3-55714
  NaI(Tl) Crystal Box detector at LAMPF, signal processing 3-50267
  Pb-plastic scintillation detector, electron energy determ. and identification 3-26567
  Si detector, GeV electron identification via particle multiplicity, meas. and EM cascade simulation 3-41426
electron device manufacture
  see also integrated circuit manufacture; semiconductor device manufacture
  surface treatment of electronic components, electroplating versus painting, criteria for choice *(German)* 3-53249
electron device noise
  bioinstrumentation FET cascode preamplifier design criterion for interference minimisation 3-24930
  DC Josephson effect, static tunnelling characts. in ultrasmall junctions 3-3388
  diode lasers with optical feedback, LF instabilities rel. to refr. index shifts 3-41840
  fluctuation heat engine and cold diode rectifier models 3-14984
  image sensor using CCD hybrid device noise/performance modelling 3-394
  injection laser, appl. in magnetooptic devices, energy and noise characts. effect 3-41904
  Josephson voltage steps, microwave phase noise effect 3-3379
  laser stress wave probe, 0.2 Å sensitivity, 20 MHz bandwidth 3-50693
  low noise preamplifiers for fast pulse processing, working points optimisation 3-50219
  low-noise pre-amplifiers for gas proportional counters, emitter followers and source followers 3-45785
  n^+-n^--n^+ solid state diodes, collision-dominated limit to near-thermal noise 3-8546
  n^+-n^--n^+ solid state diodes, collision-free limit to near-thermal noise 3-8547
  n^+-p^--n^+ solid state diodes, collision-dominated limit to near-thermal noise 3-8546
  n^+-p^--n^+ solid state diodes, collision-free limit to near-thermal noise 3-8547
  optical signal receiver, antinoise correction calc. 3-30930
  pulse signal amplitude estimation using collocation in terms of Krakovian calculus 3-1121
  semiconductor diode, generation-recombination noise under ambipolar injection conditions 3-3270
  semiconductor diodes, electrical fluctuations under quasi ballistic electron motion 3-43276
  semiconductor injection lasers, single-mode, FM noise theory, optical communication appl. 3-46244
  semiconductor laser, multiple quantum well injection laser, dynamic and noise props. meas. 3-27045
  semiconductor laser for FSK, heterodyne detect. system, S/N and error rate 3-37240
  semiconductors, velocity, overshoot, velocity autocorrelation and hot electron noise calc. from small signal microwave mobility 3-52166
  shot-noise devices, quantum electro-dynamic circuit soft-photon renormalisation of conductance 3-57396
  superlattice, graded band gap, channeling and staircase avalanche photodiodes: towards a solid-state photomultiplier 3-47418
  thin film devices, 1/f noise model, appl. to bolometers, Josephson junctions, SQUIDS 3-52314
  AlGaAs CW DH lasers, longit. mode partition noise in gain spectrum shift and gain suppression 3-22068
  AlGaAs laser preamplifier and linear repeater system, S/N and error rate performance 3-7008
  p-Ge:Au diode, generation-recombination noise under ambipolar injection conditions 3-3270
  InGaAsP injection laser, transient spectra and mode partition noise obs. 3-6974
  p-Si field emission devices burst noise 3-24100
  Si MOS devices, interface states, dynamic conductance and noise meas., bias-temp. stresses 3-8591
  Si p-n junction, abrupt, LF noise due to carrier recomb. in space charge region calc. 3-13894
  Si:Au diode struct. with strong carrier accumulation, noise spectra 3-13870
electron device testing
  see also integrated circuit testing; semiconductor device testing
  nuclear and space radiation effects, conf., Las Vegas, NV, USA (July 1982) 3-40315
electron diffraction
  see also electron diffraction crystallography; electron diffraction examination of materials; gas phase electron diffraction; high energy electron diffraction; low energy electron diffraction
  data refinement for spectrosc. and electron diffraction expts. 3-36094
  modulated electron beam diffraction in presence of cylindrical semitransparent resonator 3-12063
electron diffraction crystallography
  see also crystal atomic structure; Debye-Waller factors; electron diffraction examination of materials
  atomic site and species determination using the channeling effect in electron diffraction 3-51461
  camera modification for investig. of reverse scatt. of electrons on material targets 3-5914
  condenser lens system with ultrafine parallel beam for electron microdiffr. 3-477
  convergent beam electron diffr., translation symm. 3-7880
  defects, electron diffraction, absorpt. distances, dynamical theory 3-18193
  dynamical electron diffr. intensities, real space computation 3-2349
  indexing of patterns using gnomonic projections 3-37746
  Kossel diffraction SEM for precision crystallogrphic studies in metallurgy, mineralogy and semiconductor materials 3-10967
  many-beam dynamical theory of electron diffr., averaged intensities, orientation depend. 3-37745
  many-wave theory of fast electron diffr. scatt., group-theoretic anal. 3-33045
  many-wave theory of fast electron diffr. scatt. for resolvable systems 3-33046
  multislice formula for inclined illumination, Schrodinger eqn. calc. 3-13046
  ordered structures, elastic scatt. of moderate energy electrons 3-27807
  picosecond domain electron diffraction 3-37747
  reflection electron diffraction, practical 3-42496
  rocking crystal electron channelling patterns, backscatt. and transmission, review 3-13051
  scattering patterns from interacting overlayers 3-2348
  secondary electron spectrometer with angular resolution for studying single-crystal surfaces 3-36128

electron diffraction crystallography continued
  small metallic particles, electron microdiffr. patterns 3—46817
  stacking faults, weak beam images, anomalous contrast 3—8069
  STEM, microdiffraction studies of surface struct. 3—51464
  structural change kinetics, obs. using EMR-100 electron-diffraction camera 3—46816
  two-dimensional polycrystals, X-ray and electron diffr. intensities, orientation and thickness corrections 3—42490

electron diffraction examination of materials
  see also gas phase electron diffraction; high energy electron diffraction; low energy electron diffraction; reflection high energy electron diffraction
  alloy, cubic phase, martensitic transform., morphology, periodic strain modulations 3—34316
  atomic clusters, superhelical configuration, electron diffr. patterns, computer simulation *(French)* 3—21956
  brass, β-γ, space group and struct., electron diffr. and microscopy study 3—13161
  n-butane, supersonic jets, conformational cooling, electron diffr. study 3—41714
  n-butane clusters, supersonic jets, electron diffr. study 3—41713
  carbides, M_7C_3, microstructure and planar defects, electron diffr. and microscopy study *(French)* 3—38093
  ceramics, grain boundary struct., TEM and diffr. studies, review 3—46956
  conference, Castle Hot Springs, Arizona, USA (Jan. 1982) 3—5492
  crystal surface, microdiffraction, STEM imaging and ELS 3—7888
  cyclohexasilane, mol. struct., electron diffr. obs. 3—1475
  diamond particles, growth from methane-H_2 gas 3—19284
  difluorophosphine pseudohalides, mol. struct., liq. cryst. NMR, electron diffr. study 3—50429
  ferrites, electron microscopy studies of microstructure-property relations 3—13054
  formamide, liq., mol. struct., H-bonds, electron neutron and X-ray diffr. study 3—46831
  glass, oxide, containing Ag granules, microstruct. and optical absorpt. 3—33104
  hydrated specimens in wet gas environment, quantitative meas. of radiation damage 3—15159
  hysteresimeter for thin films, adapted for electron diffractometer *(French)* 3—20880
  Invar, saturation induction, thermomagnetic anal., electron diffr. meas. *(German)* 3—47477
  metal-metalloid amorphous cpd. formation by ion implantation, expt. study *(German)* 3—2585
  metallic discontinuous films, crystallisation, electron diffr. study 3—23214
  metals, metalloid ion implantation, amorphisation, irrad. dose effect, crit. energy density model, TEM and electron diffr. studies 3—47002
  methoxydichlorophosphine, mol. struct., electron diffr. obs. 3—36856
  organotin film, metallic, prep. by glow discharge polymerization, props. 3—14510
  poly-4-methyl-pentene-1, ultraquenched glass, chain mobility and crystallisation 3—13127
  polydiacetylene monolayers, molecular microscopy study 3—8341
  polyethylene ultraoriented fibres, extended-chain morphology 3—18241
  polymer, linear, refinement of cryst. structs. determined from electron diffr. data 3—13122
  polypivalolactone, ultraquenched glass, chain mobility and crystallisation 3—13127
  α-polypropylene, crystalline, microstruct. and unit-cell orientation, optical microscopy, EM, X-ray diffr. 3—37805
  polyvinylidene fluoride and blends with PMMA, morphology 3—37810
  rod outer segment photoreceptor membrane multilayers, phase separation obs. 3—4470
  silicates, defect structs., electron microscopy electron diffraction and X-ray emission spectra study 3—8068
  steel, Al, highly-coercive, electron microscope study 3—34328
  steel, austenitic, stress relaxation of thermomechanically hardened crystals, expt. study *(Russian)* 3—34381
  steel, austenitic Cr-Ni-Mo, steady state creep meas. *(Czech)* 3—58172
  steel, austenitic stainless, ferromag. martensite surface layer anal. by electron diffr. 3—47540
  steel, high-voltage diffraction electron microscopy, methodological features 3—9269
  steel, medium C, plastic deform. development in packet martensite *(Russian)* 3—39203
  steel, Si, transformer, nitrided, intercryst. precip. 3—34329
  steel, steel, maraging, age hardening, 773K, microstruct., TEM and electron diffr. obs. *(Japanese)* 3—39165
  zinc stearate film, struct., surface energy, X-ray and electron diffr. study 3—57236
  Ag, evaporated thin films, recovery and recrystn. 3—3016
  Ag-Ge amorphous film, struct., elec. and optical props., free electron model 3—37787
  Ag-In, rapidly quenched from melt, metastable ζ-HCP phase in Ag-rich FCC region 3—9095
  $AgSbSe_2$ films, thermally evaporated, film crystallinity, substrate temp. effects. meas. 3—24141
  Al (100) surface, current image diffr. patterns 3—42493
  Al, pure and Sb implanted, laser irrad., AlSb precip. nucleation, lattice defects, TEM, ion beam anal. 3—56960
  Al-Cu, etched and anodised, surface anal. 3—39302
  Al-Pb vapour deposited film, struct. and precipitation, electron diffr. and microscopy study 3—8368
  Al-Rh thin films, vapour deposited, solid soln. decomp., annealing, TEM and electron diffr. studies 3—28244
  AlN-SiO_2 ceramics, containing long-period polytypes, charact. by fracture toughness 3—39093
  α-Al_2O_3 whiskers, sintering prep., growth morphology and mechanism 3—42986
  Ar discontinuous film, atom mean-square displacements, sample size effect 3—8365
  As_2S_3 amorphous thin films, contact reactions with metal films, electron diffr. studies 3—23223
  $(As_{13}Te_{24}Si_{27}Sb_{18})_{1-x}Fe_x$ RF sputtered films, struct., elec., and optical props. 3—13649
  $(Au,Cu)_3Zn$, domain struct., periodic lattice twinning 3—2828
  Au, grain boundary at. struct., electron diffr. study 3—46955
  Au small particles, electron microdiffr. patterns 3—46817
  Au-Ge amorphous film, struct., elec. and optical props., free electron model 3—37787

electron diffraction examination of materials continued
  Au-Mg (20 at.%), double hexagonal superstructure, high resolution HVEM study 3—56851
  Au_2Mn, shear transform. obs., domain struct. 3—39139
  B:C ion implantation form. of B_4C, TEM and electron diffr. study 3—27959
  BN film, hard, ion beam sputter deposited, prep. and props. 3—13673
  BaF_2, $Ba_xCa_{1-x}F_2$, insulating epitaxial films grown by MBE on InP substrates 3—33596
  $Ba_{1+x}Fe_2S_4$, vernier struct., electron diffr. and microscopy study 3—27906
  BaO-ZnO-Al_2O_3-B_2O_3-SiO_2 optical glass, spangle form. during melting 3—33132
  Be-B, ion implantation prep., wear resistance and microstructure 3—4152
  Bi island films, nucleation, small particle crystallisation 3—3006
  C film, hard, ion beam sputter deposited, prep. and props. 3—13673
  C films, diamond-like, ionized deposition from methane gas and hardness props. 3—52976
  C:B, ion implantation form. of B_4C, TEM and electron diffr. study 3—27959
  C:H amorphous film, struct. optical props. and decomposition kinetics 3—18590
  CaF_2, insulating epitaxial films grown by MBE on InP substrates 3—33596
  $Ca_2LaFe_3O_8$, microdomain texture and O excess, TEM and electron diffr. anal. 3—42793
  $CdCr_2Se_4$ vacuum deposited films, amorphous-cryst. transition 3—38257
  $CdInGaS_4$ thin films, electron diffr. study 3—51980
  CdO whiskers, growth and morphology 3—38273
  CdSe thin films electrodeposited on Ni substrate, etched and unetched cross-sections prep. and anal. 3—28987
  $CdSe(Te)(Te_{1-x}Se_x)$ films, prep. by laser annealing, elec. and optical characts., photovoltaic appls. 3—52931
  $CeBa(CO_3)_5F_2$, cebaite, cryst. struct., electron diffr. and lattice image study *(Chinese)* 3—18263
  Co-Fe (1.2 at.%), field induced DHCP$\rightarrow$HCP transform. and anisotropy change 3—57588
  Co-W alloys, electrocrystallisation during this mag. film deposition *(Russian)* 3—14514
  $Co_{5.8}Ni_{10}Fe_5B_{16}Si_{11}$ amorphous alloy struct. changes during heating 3—51778
  CoPd alloy films, equiatomic, struct. transitions *(Russian)* 3—33590
  Co_5Sm permanent magnet, mag. domain struct. and microstruct., TEM and electron diffr. study 3—28603
  Cr dendritic needle crystals, FCC struct., electron diffr. and Auger study 3—3021
  Cr film, vacuum deposition at low temp., form. conditions and struct. 3—3962
  Cr, surface oxide layer, elastic and inelastic electron scatt. anal. 3—13677
  Cr_xTiSe_2, phase diagram, mag. props., DTA, X-ray and electron diffr. studies 3—38047
  Cs intercalated graphite, nonhexagonal superlattice observation, STEM study 3—42586
  $CsBO_2$, mol. struct., electron diffr. obs. 3—21911
  Cs_2SO_4, mol. struct., electron diffr. obs. 3—21912
  Cu (100) surface, current image diffr. patterns 3—42493
  Cu surface, laser produced plasma, compound formation obs., surface treatment appl. 3—24388
  Cu-Ni, $\Sigma=27$ coincidence grain boundary 3—22907
  Cu-Zn-Al (29.8, 6.1 at.%) alloy, stress induced bainitic transform., habit plane obs. 3—43802
  Cu_3Au, ordered and disordered, electron irrad. damage 3—13283
  Cu_3Au, ordering and disordering, HVEM study 3—13282
  $CuFeS_2$, crystal, electrochemically reacting, thin secondary product films, electron diffr. studies 3—4295
  Cu_2O, thin epitaxial film growth and identification during Cu-Ni-Ti alloy TEM specimen prep. 3—29204
  Cu_xS thin film solar cells prep. by electroconversion of CdS 3—4294
  $Cu_{2-x}Te$ systems, thin films by vapour phase epitaxial growth, superstruct., electron diffr. technique 3—8349
  Fe, anodic oxide film form. in neutral phosphate soln., comp. and struct. 3—34531
  Fe, anodic oxide film form. in neutral $Na_2B_4O_7$-H_3BO_3 soln., effect of Cl^- ion 3—34532
  Fe, surface oxide layer, elastic and inelastic electron scatt. anal. 3—13677
  Fe:C, ion implanted form. of Fe_3C, TEM and electron diffr. study 3—27959
  Fe-Cr, oxidation at 600°C, influence of prior oxide film 3—19448
  Fe-Cr, surface oxide layer, elastic and inelastic electron scatt. anal. 3—13677
  Fe-Ni (25 at.%), long-range ordering, TEM study 3—19344
  Fe-Zr amorphous thin films, crystallisation, TEM and electron diffr. studies 3—27849
  $Fe_{80}B_{20}$ amorphous alloys, electron diffr. 3—22795
  Fe_3O_4, magnetite, low temp. cryst. struct. deduced from diffuse electron scatt. 3—13202
  Fe_3O_4-Fe_2O_3 film, prep. by reactive condensation, oxidation and coercivity 3—18954
  FeS_2 crystal, electrochemically reacting, thin secondary product films, electron diffr. studies 3—4295
  $Fe_{78}Si_{10}B_{12}$ amorphous alloy, struct. relax., elec. and mag. study 3—27847
  $Fe_{75}Sn_{25}$-$Co_{75}Sn_{25}$ alloys, metastable phases, X-ray and electron diffr. studies 3—37855
  Fe(001) surface, reaction with H_2S, AES and LEED study 3—2955
  Ga island films, melting and crystn., electron diffr. study 3—3005
  GaAs, ion implanted, non-planar solid phase epitaxial growth processes 3—3012
  GaAs-Pt interface, interfacial reaction and Schottky barrier 3—51868
  Gd, martensitic transition to cubic phase, electron diffr. study 3—37846
  Gd-Co amorphous film, perpendicular mag. anisotropy, influence of H_2 addition 3—28659
  Ge, hexagonal crystal structure in polycrystalline matrix 3—42566
  Ge microcrystals, Raman study 3—3727
  Ge, surface struct., changes due to metal ion adsorption, electron diffr. study 3—2937
  Ge, symmetrical tilt grain boundaries, electro microscopy and diffr. studies 3—51620
  GeO film, heat treatment effect on struct. and props. 3—14612
  In thin film, optical props. and struct. 3—19221
  InP ion implanted amorphised layers, epitaxial regrowth, RHEED, TEM, backscatt. and X-ray studies 3—2994

electron diffraction examination of materials continued
$K_{1.33}Mg_{3.11}Sb_{4.89}O_{16}$, hollandite-type struct., supercell ordering, X-ray, electron diffr., and HREM studies 3−51571
$K_xP_4O_8(WO_3)_{2m}$, cryst. struct., electron microscopy, electron and X-ray diffr. study 3−2505
Kr discontinuous film, atom mean-square displacements, sample size effect 3−8365
MgO:Fe, magnesioferrite form., mag. resonance and electron diffr. 3−8726
Mn-Ga amorphous films, crystn. and mag. domain struct., electron microscopic study 3−8704
α-MnSe, low temp. phase transition, TEM study 3−39113
$Mn_{73}Si$ amorphous alloys, electron diffr. 3−22795
MoO_3, orthorhombic, red. to MoO_2, electron diffr. study 3−19521
Nb thin films, prod. in Penning discharge, struct. investig. 3−33608
$NbTe_4$, CDW, X-ray and electron diffr. obs. 3−43045
Ni (100) surface, phonon dispersion meas. by inelastic electron scatt. 3−47209
Ni particles, struct. and morphology *(French)* 3−42567
Ni-Al martensite, electron diffr. pattern 3−43844
Ni-Al-Co (35.2, 1wt.%) martensite, reordering and new ordered phase after ageing 3−43870
Ni-Au(111) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3−23219
Ni-base superalloys, cast, high Mo and W content, microstruct. features 3−19481
NiFeGe amorphous thin film, structural and galvanomag. props., electron diffraction study 3−47230
Os heteroepitaxial layers, on sapphire, orientational relations, electron diffr. study 3−38253
Pb island films, nucleation, small particle crystallisation 3−3006
$PbZrO_3$, ferroelectric, space group, electron diffr. study *(Japanese)* 3−46878
Pd particles on NaCl and mica substrates, morphology, electron diffr. and TEM studies 3−28246
Pd-Au(111) and Au-Pd(001) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3−23219
Rb-graphite intercalation cpd. 3−42585
$Rb_xP_4O_8(WO_3)_{2m}$, cryst. struct., electron microscopy, electron and X-ray diffr. study 3−2505
$SbCl_5$, vapour, mol. struct. and pseudorot., electron diffr. obs. 3−36857
Se, epitaxial and amorphous films, vacuum growth on electron irrad. KI, film morphology, TEM study 3−23195
Si (001), adsorbed monohydride and dihydride phases, electronic struct., EELS study 3−57405
Si (111), Ge adsorption, struct. and electronic props. 3−18539
Si, amorphous CVD film, solid phase epitaxy on cryst. Si, reflection electron diffr. study 3−8972
Si, amorphous wafers, ion implanted, thermal recrystallisation annealing, transmission electron diffr., microscopy studies 3−56998
Si, crystal growth as oriented thin film on metal patterned amorphous planar substrate 3−34232
Si film, lateral seeding epitaxy by CW Ar laser irrad. and high temp. CVD 3−2996
Si, stacking faults, electron microscopy, weak-beam contrast meas. 3−22922
Si, surface struct., changes due to metal ion adsorption, electron diffr. study 3−2937
Si-Rh amorphous alloy formation by interfacial reaction between amorphous Si and cryst. RH 3−57147
Si_3N_4-Y_2O_3-Al_2O_3, hot pressed, microstruct., grain boundary comp., electron microscopy 3−43782
Sn island films, nucleation, small particle crystallisation 3−3006
Sn-Pb-Cd ternary eutectic, crystallographic orientation relationship 3−33188
SnO_2 films, elec. resist., high temp. annealing effects, X-ray and electron diffr. studies 3−28459
SnTe film, noncryst., struct. analysis, disordered microcrystallites 3−13655
Ta films, amorphous and β-phase, optical conductivity and struct. 3−34048
Ta oxide layer form. conditions and struct., electron diffr. study 3−33223
$TaTe_4$, CDW, X-ray and electron diffr. obs. 3−43045
$ThNb_4O_{12}$, vacancy ordering and microdomain form. electron and X-ray diffr. study 3−13171
Ti alloys, high strength, behaviour in passivated state 3−9258
β-Ti alloys, unstable, transform., step ageing influence 3−19337
Ti surface, laser produced plasma, compound formation obs., surface treatment appl. 3−24388
Ti ultrathin film on Si, solid state nucl. study 3−33598
Ti-Al-Y (8, 4 at.%), dispersion strengthened, laser surface melting, microstruct. EM obs. 3−43852
TiNi thin foil, intermetallic cpd., martensitic transform. 3−39126
$Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, elec. resist. meas., TEM and electron diffr. studies 3−38053
$Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, microstructural changes, CDW, electron diffr. study 3−38054
$Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, incommensurate and commensurate phases 3−39124
$Ti_{50}Ni_{50-x}Fe_x$, phase transform., TEM and electron diffr. study 3−39123
$Ti_{1+x}S_2$, Ti atom and vacancy order, electron and X-ray diffr. studies 3−37862
$TiSi_2$ amorphous thin film, elec. resist. and crystallisation 3−3187
V-Al, struct. characts. rel. to elec. resist. anomalies, electron microscope study *(Russian)* 3−37850
VSe_2, superstructure near liquid N_2 temp., electron diffr. study 3−38173
VSi_x fine particles, gas evaporated, cryst. struct. and morphology, electron micrcroscopy study 3−37849
W thin films, prod. in Penning discharge, struct. investig. 3−33608
Xe discontinuous film, atom mean-square displacements, sample size effect 3−8365
$ZnBr_2$, aq. soln., complex form., electron and X-ray diffr., Raman study 3−46830
Zr_4Al_3, superstruct., electron and X-ray diffr. study 3−18262
Zr(Nb), γ-hydride phase, form. via shear transform. 3−39112
ZrO_2 on α-Zr[$11\bar{2}0$], electron diffr. anal. 3−28201
ZrO_2, partially stabilised, PSZ, solute partitioning, STEM anal. 3−29068
ZrO_2-Si_2O_3 (8 mol.%), annealing, microstruct., β-phase content 3−58138

electron-electron double resonance *see ELDOR*
electron-electron interactions
see also electron-electron scattering
QED, book 3−16103
$e^-e^- \rightarrow W^-W^-$, inverse neutrinoless double beta decay 3−627
electron-electron scattering
see also electron-electron interactions
amplitude calcs., high energy fixed angle 3−31127
electron emission
see also cathodes; electron field emission; exoelectron emission; photoemission; secondary electron emission; spin polarised electron emission; thermionic electron emission; work function
arc spots, thermal runaway prevention 3−18177
cholesterin esters, smectic liq. cryst. to solid transition, elec. cond., electron emission and luminesc. meas. 3−18488
counting installation for the registration of electron emission 3−45788
cyclotetramethylene tetranitramine, mol. cryst., explosive, fracto-emission obs. 3−14446
pentaerythritol tetranitrate, mol. cryst., explosive, fracto-emission obs. 3−14446
polybutadiene, glass bead filled, electron emission during fracture, crack vel. depend., free radical decay 3−14447
prebreakdown electron emission 3−19258
silicon rubber, filled, electron emission during fracture, crack vel. depend., free radical decay 3−14447
NaCl, γ-irrad., mechanical electron emission *(Russian)* 3−19257
NaCl:$Ca^{2+}(O^{2-})(OH^-)$, electrification kinetics during plastic deformation, electron mechanoemission 3−33780
electron energy bands *see band structure*
electron energy loss spectra
applications in TEM 3−8918
C $Fe_{80}B_{20}$, amorphous and cryst., electronic props., EELS, AES, and X-ray absorpt. study 3−52876
conference, Castle Hot Springs, Arizona, USA (Jan. 1982) 3−5492
core levels and valence bands of solids, electron spectroscopy studies 3−33657
crystal structure anal. using electron energy loss spectra 3−5920
crystal surface, microdiffraction, STEM imaging and ELS 3−7888
deconvolution technique 3−8917
deep levels, excitation spectroscopy techniques, review *(French)* 3−33671
detection limits, definition 3−34185
diamond, LEED modulated electron energy loss spectra 3−3883
diamond (111), EELS study in characteristic loss region 3−38974
electron energy-loss study in 14.8 to 20.3 eV region using a multidetector electron spectrometer 3−26873
electron microscope, EELS and microscopic in-situ examination combination 3−49503
EXELFS technique in analytical electron microscopy, review 3−14899
formaldehyde, EELS of forbidden transitions to valence and Rydberg states 3−1491
free molecules, inner shell excitation, electron energy loss spectrosc. 3−36853
graphite, electronic structure, single particle and collective excitations, EELS and secondary electron emission study 3−58011
graphite, localised Compton scatt. using EELS 3−24041
graphite, plasmon excitation by electron energy loss 3−43053
graphite intercalation cpd., KC_8, electronic struct., XPS and EELS studies 3−19250
graphite surfaces, low energy electron incidence, total yield energy depend. 3−19234
metal hydride surface studies, electrons as H probes, review 3−47199
metal surfaces, adsorbed Ar and Xe, excited states, EELS and UPS study 3−47399
metals, FCC, low energy electron reflectance spectra and band struct. 3−23257
mica, amorphous, change in electron energy loss near edge struct. 3−14414
microanalysis, plural inelastic electron scattering 3−53473
microbeam analysis, conf., Washington, DC, USA (Aug. 1982) 3−25690
Monte Carlo calculations for electron scatt. and energy dissipation in solid targets, review 3−14413
organic compounds, condensed state, electron inelastic mean free paths 3−28942
performance and application in STEM 3−5921
photodiode arrays, self-scanned, to record 100 keV electrons 3−475
polymers, thermal transformation of local to extended electronic states, EELS study 3−47254
quantitation, SEQUEL semi-quantitative program appl. 3−49340
rare earths, surface valence changes monitored by giant-reson. EELS 3−43676
scattering, inelastic, at. matrix element, EELS appl. 3−36864
SEM secondary electron image brightness changes under electron irrad., electron spectroscopy studies 3−10964
sensitivity and resolution improvement *(Japanese)* 3−28943
signal/noise ratio in EELS 3−14415
silver acetylides on Ag(110), spectroscopic studies 3−24526
spectral library preparation 3−8919
surface analysis and surface reactions monitoring 3−29334
TGS, anomalous electron energy loss at ferroelec. Curie temp. 3−13294
trans-polyacetylene, dielec. function, electronic band struct. calc. 3−43055
transmission ELS for STEM microanalysis 3−8916
X-ray and atomic inner-shell physics, conf., Eugene, OR, USA (Aug. 1982) 3−40308
AG (110), adsorption on clean and O covered surface, reaction, EELS study 3−38975
Ag halides, surface analysis by Auger and electron energy loss spectroscopy 3−57186
Ag with adsorbed O_2 and N_2, electron energy loss study 3−14408
Al (111), adsorption of O, surface site determ., EELS spectra and lattice dynamical model 3−3884
Al, adsorbed O, surface extended energy loss fine structs. above K-edge 3−19235
Al film, He ion irrad., He bubble form. 3−22949
Al film, implantation induced He bubble press. and density determ. 3−8381
Al, implanted with He, bubble density and press. 3−21510
Al oxides, local at. arrangements from electron energy loss near edge struct. 3−14414
Al small spherical clusters, surface plasmon resonance, ELS study 3−8439

electron energy loss spectra continued
Al-SiC interface, AES and EELS study 3—33582
BN film, hard, ion beam sputter deposited, prep. and props. 3—13673
Ba-0.6Al_2O_3, transmission ELS for STEM microanalysis 3—8916
$BaTiO_3$, anomalous electron energy loss at ferroelec. Curie temp. 3—13294
Bi (0001), interaction with Cl_2, incipient $BiCl_3$ form. and decomp. 3—18563
C, amorphous, localised Compton scatt. using EELS 3—24041
C film, hard, ion beam sputter deposited, prep. and props. 3—13673
CO, electron impact excitation, rot. and rot.-vibr. cross sections meas., energy loss spectra 3—6797
CO, rot. branch struct. theory 3—21910
CS_2, excited states, EELS 3—41679
Ce, comparison of loss and absorpt. spectra *(Russian)* 3—34184
Cr, surface oxide layer, elastic and inelastic electron scatt. anal. 3—13677
Cs adsorbed layer on Mo(111), electronic struct., surface plasmons, EELS and UPS study 3—28404
Cu (110), clean and O-covered, adsorption of water, UPS, LEED, EELS, and work function meas. 3—2969
Cu (111), O-covered, adsorption and oxidation of HCN, AES, EELS, and thermal desorption study 3—23172
Cu with adsorbed O_2 and N_2, electron energy loss study 3—14408
p-$CuInSe_2$ surface, clean and O contaminated, EELS studies 3—38976
$CuInTe_2$, low energy electron loss peaks 3—3881
$DyAl_2$, electron density of states at Fermi level 3—13704
Fe (110), adsorption of acetylene and ethylene, EELS study 3—3889
Fe, surface oxide layer, elastic and inelastic electron scatt. anal. 3—13677
Fe, surface sensitive $M_{2,3}$ absorpt. edge shifts by refl. EELS 3—19236
Fe-Cr, surface oxide layer, elastic and inelastic electron scatt. anal. 3—13677
GaAs, chemical and electrical characterisation 3—23404
n-GaAs surface, doped, EELS calc., multiple losses and gains 3—19237
$GdAl_2(Ni_2)$, electron density of states at Fermi level 3—13704
$Gd_{0.5}Dy_{0.5}Al_2$, electron density of states at Fermi level 3—13704
GdMnAl, electron density of states at Fermi level 3—13704
Ge (100), adsorption of O, thermal desorption, work function, AES and EELS studies 3—38224
Ge (100), adsorption of O on Na, K, Cs-covered surface, AES, EELS, thermal desorption and work function meas. 3—38225
Ge, segregation of O on dislocation core, EELS study 3—28108
H adsorbed on surfaces, detection using refl. EELS, review 3—14905
HF, time of flight mass spectra invest. of anomalous behaviour in scatt. expts. 3—41704
H_2O, electron impact excitation, rot. and rot.-vibr. cross sections meas., energy loss spectra 3—6797
He (2^1P) electron impact alignment and orientation study 3—41687
He(2^1P), electron impact excitation, orientation, radiative decay polarisation 3—26855
$HgBr_2$, electron energy loss spectra, close correspondence with optical absorpt. spectra 3—26871
$HgCl_2$, electron energy loss spectra, close correspondence with optical absorpt. spectra 3—26871
$InPO_4$, band gap, UPS and EELS studies 3—57271
InSb (110), O_2 adsorption, UPS, EELS and ellipsometry study 3—2959
La, comparison of loss and absorpt. spectra *(Russian)* 3—34184
Mg oxides, local at. arrangements from electron energy loss near edge struct. 3—14414
Mo film with adsorbed ethylene, electron energy loss spectra 3—28945
Mo, plasmon-loss spectra, elastic peak electron spectroscopy 3—43675
N_2, electron impact excitation, rot. and rot.-vibr. cross sections meas., energy loss spectra 3—6797
N_2, multielectron transitions in K-shell electron energy loss spectrum, ab initio calcs. 3—1490
N_2, rot. branch struct. theory 3—21910
Nd, comparison of loss and absorpt. spectra *(Russian)* 3—34184
Ne, Compton profile, electron energy loss spectra investig. 3—56080
Ni (111), ordered overlayer 3—57215
Ni film, implantation induced He bubble press. and density determ. 3—8381
Ni, Fono line shape in electron-energy-loss spectra 3—38973
Ni, implanted with He, bubble density and press. 3—21510
Ni, interband transitions and exchange splitting, EELS study 3—43677
Ni, surface sensitive $M_{2,3}$ absorpt. edge shifts by refl. EELS 3—19236
Pd (100), adsorbed p(2×2)O and c(2×2)H, vibr. excitations, EELS study 3—3886
Pd (111), chemisorption of ethylene, EELS study 3—3887
Pd (111), clean and adsorbate-covered, electronic excitations, angle-resolved EELS study 3—43678
Pd-Si (111) system, low energy EELS and AES study 3—3885
PdH_x foil, electronic struct. and surface kinetics 3—28402
Pr, comparison of loss and absorpt. spectra *(Russian)* 3—34184
Pt (111), adsorption of CO, LEED, thermal desorption and EELS studies 3—38220
Pt (111), adsorption of DMSO, UPS, XPS, EELS, and IR spectra study 3—42928
Pt (111), coadsorption of K and CO, thermal desorption, EELS and UPS study 3—8335
Pt (111), of O_2, thermal desorption, EELS and LEED study 3—38206
Pt (321) kinked surface, adsorption O_2 and O, thermal desorption, EELS, and AES study 3—42929
SO_2, electron impact excitation cross section meas., energy loss spectra 3—21930
Se, permittivity, reflectivity, absorption coeff. and electron energy loss spectra 3—8846
Si (001), adsorbed monohydride and dihydride phases, electronic struct., EELS study 3—57405
Si (001)2×1, adsorption of H, angle-resolved EELS and elastic LEED study 3—38207
Si (100), clean and adsorbed O layer, characteristic EELS spectra 3—28944
Si (100), reaction with N atoms, thermal desorption, AES and EELS studies 3—38219
Si (111)-(2*) surface, H adsorption, electron energy loss study 3—51935
Si (111)(7×7) and (1×1) surfaces, comparison study 3—28403
Si as modified by O_2 exposure, electron spectroscopy 3—14404
Si, channelled ion energy loss, charge-state depend. 3—3882
Si, chemical and electrical characterisation 3—23404
Si, polycryst., grain boundary effects on elec. props. and photovoltaic response *(French)* 3—22918

electron energy loss spectra continued
Si surface, (111), adsorbed Ag, surface plasmon dispersion, angle resolved EELS study 3—52213
Si surface, (111), Ag adsorbed, surface plasmon dispersion, angle-resolved EELS study 3—43673
Si-Au, laser beam annealing of interface, diffusion 3—42657
Si-Ge, amorphous, sputtered, XPS study 3—3913
Si-Pd interface, EELS and AES study 3—23191
Si_3N_4, cryst. and amorphous, grain boundary chem. comp., EELS study 3—46956
Si(111) and (100) surfaces, initial stages of oxidation, vibr. study 3—39261
Si(111), nitridation by N atoms, LEED, AES, EELS and thermal desorption studies 3—38218
Si(111)7×7 surface, angle-resolved EELS study 3—43674
Sm, comparison of loss and absorpt. spectra *(Russian)* 3—34184
SnO_2:Sb, conduction band density of states, UPS, XPS and EELS study 3—23237
SnO_2:Sb, doped and undoped, surface props., XPS, UPS and EELS studies 3—39013
surface, trapping of H_2 via translational-rotational energy conversion, EELS meas. 3—38197
TaC_x, C conc. in stacking faults in dissociated dislocations, EELS study 3—8064
Ti, resonant electron emission, UPS, EELS, and AES study 3—39010
Ti, surface sensitive $M_{2,3}$ absorpt. edge shifts by refl. EELS 3—19236
TiC_x, unoccupied electron states, EELS study 3—8410
TiN_x, unoccupied electron states, EELS study 3—8410
TiO_2, resonant electron emission, UPS, EELS, and AES study 3—39010
VN, unoccupied electron states, EELS study 3—8410
W (100), adsorbed α-CO, lowest excited states, electron stimulated desorption 3—38454
Zn II, $4^2S \rightarrow 4^2P$ transition, electron energy loss spectra and cross sections 3—1489
$ZrC+O_2$, reaction, Auger spectrosc., characteristic energy loss and work function meas. 3—34648
$ZrS_2(Se_2)$, optical and electron energy loss spectra 3—23971

electron energy states (condensed matter)
see also band structure; band theory models and calculation methods; deep levels; defect electron energy states; dopplerons; electron energy states of amorphous solids; electron energy states of liquid metals; electron energy states of liquid semiconductors; electron gas; electron traps; electronic density of states; exchange interactions (electron); excitons; Fermi level; Fermi surface; field interactions (condensed matter); helicons; hole traps; impurity electron states; Landau levels; localised electron states; magnetic breakdown; magnons; metal-insulator transition; metal theory; plasmons; polar semiconductors; polarons; positron states; ripplons; spin-orbit interactions; spin-phonon interactions; surface electron states; triplet state
AGP states, iterative algorithm for optimising geminal coeffs. 3—38274
chalcogenide glasses doubly occupied defect states and AC cond. 3—23373
condensed matter physics at absolute zero temp., many-body 3—49113
crystal electron struct., pseudopot. theory, numerical methods 3—23235
density matrix equation for crystals 3—38275
disordered alloys, electronic props., single site approxs. 3—23231
disordered electronic systems, symm. relations, algebraic derivation 3—42987
electron in random potential, representation in one-particle Green function 3—23233
interacting electrons system, orthogonality catastrophe 3—42990
ladders of resonances, approx., in semi-infinite cryst. 3—23230
nonadiabatic model Hamiltonians, exact soln. 3—8909
one-dimensional disordered system, exact evaluation of Green's functions 3—42991
one-dimensional disordered systems, Wannier functions, appl. to fractionally charged solitons 3—13692
quantum chemistry, condensed matter theory, and propagator methods, conf., Flagler Beach, FL, USA (March 1982) 3—30542
quantum chemistry, conf., Uppsala, Sweden (June 1982) 3—35770
rare earths and actinides, conf., Durham, England (March 1982) 3—16077
rare-gas solids, electronic relaxation, atoms ejection by fast ions 3—47744
solid, quantum electrodynamic theory 3—52002
symmmetry adaptation of crystal spin-orbitals 3—7944
tetragonal d^3 systems, differential orbital expansion 3—3028
transverse electron energy levels, widening at axial channelling, quantum theory 3—57008
$(Fe(CN)_6)^{4-}$, electronic struct. calc. by SCF Xα-scatt. wave generalised partitioning method 3—23238

electron energy states of amorphous solids
see also Anderson model
n-alkanes, solid, conduction band struct. by electron-transmission spectra 3—47253
alloys, amorphous and liquid, charge transfer, tight-binding calc. 3—3042
alloys, atomic and electronic structure, glass formation 3—2434
alloys, random, conc. waves and Fermi surfaces 3—38288
amorphous semiconductors, physics and chemistry, review 3—33625
chalcogenides, amorphous, photoelectron spectroscopic studies *(Japanese)* 3—24088
chalcogens, amorphous, photoelectron spectroscopic studies *(Japanese)* 3—24088
disordered film, density of electron states and Feynman path integral 3—33617
glassy semiconductors, model of electronic processes, correlation with structural features 3—57265
I-D system, Anderson transition and Ioffe-Regel criterion 3—28272
local analysis of low energy levels 3—22773
Lorentz model of disordered system, functional integral anal. 3—42993
metal, disordered, struct. induced effects on electronic props., multiple scatt. theory 3—3040
metal, local electronic density of states, direct space expansion 3—28252
metal hydrides, amorphous, struct. and props., review 3—46852
metallic glasses, ionic dynamics, elec. transport, electronic struct. and appls., review 3—18678
model polymer, electron localisation calcs. 3—13713
polyacetylene, CNDO/S3 cryst. orbital model, definition and appl. 3—12018
polyacetylene, localised states 3—3125

electron energy states of amorphous solids continued
polyacetylene, semicond., quasiparticle energy band struct., correlation effects on band gap 3-57264
polyacetylene, vibronic states, energy levels calc. 3-47072
polydiacetylenes, electronic struct. and electron transport 3-18605
polyenes, π-electron correl. effects in one-particle spin-pairing amplitudes method 3-47255
polymer, diatomic, linearly conjugated, continuum quantum field theory with fermion fractionisation 3-40777
polymer, linearly conjugated diatomic, elementary excitation spectrum 3-13387
polymer, thermal transformation of local to extended electronic states, EELS study 3-47254
polymers, ground state props., ab initio calcs. 3-17389
semiconductor, amorphous, localised state density, field effect study 3-8391
semiconductor, amorphous, transit pulse dispersion, localised state effects 3-52177
semiconductors, amorphous, photoluminescence, trapped exciton model 3-14347
semiconductors, disordered, 2-D, electron localisation, renormalisation group study 3-38291
transition metals, spectral functions and anomalous dispersion of electrons 3-52016
transition metals amorphous and liq., electronic states, hybridisation effects 3-52015
As-Te film, fabrication, comp. and physicochem. props. 3-8995
As_2S_3 glass, atomic tunnelling spectrum, optically induced gap 3-14445
As_2Se_3, amorphous, localised states, SCL currents activation energy 3-57354
As_2Se_3 chalcogenide glass, charged impurity conc., MIS CV charact. study 3-28447
$(As_{13}Te_{24}Si_{27}Sb_{18})_{1-x}Fe_x$ RF sputtered films, struct., elec., and optical props. 3-13649
BeF_2, crystalline and vitreous, electronic struct., optical study 3-52032
CdO-ZnO-P_2O_5 glasses, photocond. band gap, comp. depend. 3-28382
$Cr_{30}Zr_{70}$, amorphous, electronic struct., band struct. calcs., UPS and XPS studies 3-28255
Cu_xZr_{1-x}, amorphous, electronic struct., linear muffin-tin orbital method 3-23247
Fe, local electronic density of states, direct space expansion 3-28252
Fe-metalloid alloy glasses, soft X-ray emission study of chemical bonding 3-28933
$Fe_{80}B_{20}$, electronic props., EELS, AES, and X-ray absorpt. study 3-52876
Ge:H,B(P), amorphous, elec. cond. and thermoelectric power 3-23393
$GeSe_2$, electronic struct., optical and photoemission props. 3-23265
$Mn_{30}Zr_{70}$, amorphous, electronic struct., band struct. calcs., UPS and XPS studies 3-28255
Ni-metalloid alloy glasses, soft X-ray emission study of chemical bonding 3-28933
P, amorphous, red, electronic struct., X-ray spectra study 3-8403
P-Se chalcogenide glasses, electron transfer from broken bonds, ESR study 3-8722
Se, cluster approach *(Russian)* 3-57263
Se, highly disordered amorphous, changes in 4p bonding and 4s states on annealing, XPS study 3-33626
Se, XPS study, comparison with monoclinic and trigonal forms 3-24093
Se:Te, amorphous, density of gap states 3-28254
Si, amorphous, density of electronic states calc., model *(Chinese)* 3-33624
Si, amorphous, electronic struct. using reverse-recovery techniques 3-13711
Si, amorphous, electronic struct. CNDO calcs. 3-52018
Si, amorphous, gap-state density determ. problems 3-23251
Si:H, amorphous, band tails, photomodulation spectroscopy studies 3-23248
Si:H, amorphous, bulk and interface states, elec. props. 3-28256
Si:H, amorphous, electronic struct. model 3-3043
Si:H, amorphous, electronic struct., self-consistent pseudopot. . calc. 3-28253
Si:H, amorphous, electronic struct. CNDO calcs. 3-52018
Si:H, amorphous, gap state studies 3-23249
Si:H, amorphous, symm. relax. of vacancy 3-22888
Si:H, amorphous, three-centre bond model calcs. 3-37789
Si:H, amorphous film, Penn model calcs. of electronic struct. 3-52014
Si:H, amorphous films, valence electron number and H conc., calc. model 3-3041
Si:H, F, amorphous, electronic struct. CNDO calcs. 3-52018
Si:H,P, amorphous film, photoconductivity study 3-28385
Si:H amorphous, localised states, elec. cond. study 3-8457
a-Si:H and a-Si:H, P, gap-state profiles, below-gap optical absorpt. meas. 3-3844
a-Si:H films, optical props., annealing effect *(French)* 3-52862
a-Si:H/c-Si heterojunctions, space-charge limited currents 3-18769
Si-Ge, amorphous, sputtered, XPS study 3-3913
SiO_2, amorphous, atomic structural models 3-37788
SiO_2, amorphous, electron energy states calcs. 3-38292
SiO_2, vitreous, defect electron states, tight-binding and recursion method calc. 3-57315
SiO_x, amorphous, atomic structural models 3-37788
SiO_x amorphous, electronic struct. calcs. 3-38293
Sn-Au(Ag)(Cu), amorphous, elec. props., effect of average electron conc. 3-43149
$Tb_{0.23}(Fe_{1-y}M_y)_{0.77}$ $(M=V, Mn, Co, Cu)$, amorphous, mag. and magneto-optical props. 3-57897
Ti-Cu hydrides, amorphous, proton NMR study of H diffusion and electronic struct. 3-34003
$V_{36}Zr_{64}$, amorphous, electronic struct., band struct. calcs., UPS and XPS studies 3-28255
Zr-based metallic glasses, electronic struct. 3-52017
$Zr_{0.67}Ni_{0.33}H_x$ amorphous, soft X-ray emission spectra and electronic struct. 3-38964
$Zr_{0.65}Pd_{0.35}H_x$, amorphous, soft X-ray emission spectra and electronic struct. 3-38964
Zr_2PdH_x, cryst. and amorphous, electronic struct., NMR studies 3-52644

electron energy states of glassy solids *see electron energy states of amorphous solids*

electron energy states of liquid metals
charge transfer, ionisation pot., tight-binding calc. 3-3042

electron energy states of liquid metals continued
polyvalent heavy liquid metals, electronic density of states, Fermi surface 3-18598
structure-induced effects on electronic props., multiple scatt. theory 3-3040
transition metals amorphous and liq., electronic states, hybridisation effects 3-52015
Au alkali liquid alloys, electronic and atomic struct. 3-13729
Bi, electronic density of states, perturbation and Green function calcs. 3-43003
Ga, electronic density of states, perturbation and Green function calcs. 3-43003
Hg, electronic density of states, perturbation and Green function calcs. 3-43003
Pb, liq., energy band struct. and resistivity, pseudopotential calcs. 3-33697
Tl_xTe_{1-x} liq. alloys, electronic struct. and bonding 3-38290

electron energy states of liquid semiconductors
No entries

electron field emission
current instabilities, ion bombardment effects meas. 3-14443
elliptic functions for calc. of electron emission from surfaces 3-3927
emitter temp. estimation from electron energy distribution 3-52902
explosive electron emission and plasma formation, expt. study 3-18156
ferromagnetic metal surfaces, electron spin polarisation techniques, review 3-28516
field-enhanced secondary-electron emission at increased current loads 3-14406
Fowler-Nordheim emission from non-planar surfaces 3-13886
metal surface, photo-assisted field emission, appl. of space-time formulation for dynamic image pot. 3-39016
microscopic cathode projections, β coeff. depend. on electrode gap width 3-19255
MIM structure, nature of forming process 3-18795
source, field electron, electric field and trajectories, space charge effect, numerical analysis 3-45250
spectrometer for field electron energy distrib., testing 3-20956
vacuum breakdown voltage and prebreakdown current, variable gap spacing 3-18162
vacuum discharge, cathode fast processes 3-18168
C fibre micropoint cathodes, field electron emission, energy spectrum meas. 3-52903
C field-emission cathodes, stability in sealed instruments 3-28970
Cr needle crystals, growth on field electron emitter in $Cr(CO)_6$ vapour 3-52909
Ir field emitter, adsorption of O_2 studies using FEM 3-34202
Nb electrodes, vacuum breakdown delay time in normal and superconducting states 3-19254
Ni, spin polarised field emission from (100) and (111) planes 3-24098
Re, adsorption of Ag, field emission study 3-43715
Re field emitter, Ag and Al coated adsorption studies, work function meas. 3-34201
p-Si, burst noise in field emission devices 3-24100
Si, photo-field emission mechanism 3-34203
Si:Au, electric field enhanced electron emission from acceptor level and A-centre 3-43073
W surface, testing of field electron energy spectrometer 3-20956
W-Sc cathodes, field emission stability, effect of gas adsorption 3-52905
W-Zr field emitters investigation by field ion microscopy 3-19256

electron gas
see also cathode ray tubes; electron optics
alloys, nonmagnetic d-electron amorphous, elect. resistivity, press. and temp. depend. 3-23353
bounded electron gas, electrodynamic response in hydrodynamic formalism 3-33652
charge states for moving proton, intra-atomic correlation and surface effects 3-43052
charged impurity in electron gas, variational binary-mixture theory 3-33677
charged particle wake in electron gas, RPA dielec. function calc. 3-57299
Compton profile, Fourier transformed, Fermi momentum determ., electron correlations effect 3-42998
Coulomb gas vacuum struct. in 2-dimens. from 1+1 sine-Gordon model 3-11000
coupled electron hole-phonon system, collective motion 3-33655
densities, density-functionals and electron fluids 3-40484
direct gap polar semiconductor, luminesc. of hot electrons in high excitation density regime 3-47710
dynamic struct. function, interacting boson formalism 3-3094
electron layer, polarizability function with collisional broadening effects 3-33651
electron liquid, dynamic struct. factor 3-3090
energy diffusion eqn. for electron gas interacting with polar optical phonons, non-parabolic case 3-43142
exchange-correlation effects on higher-order polarisations 3-16251
fine structure constant, high precision determ. using quantum Hall effect *(Polish)* 3-10793
Gaussian path integrals involving nonlocal potentials for electron gas in random pot. 3-169
ground state energies of interacting electron systems of finite numbers of particles 3-20757
high-resistivity conductors, phonon-controlled cond. theory 3-47322
homogeneous, self energy graph and RPA spectrum 3-38325
interacting with polar optical phonons, energy-diffusion eqn. 3-23004
linear dielectric response, variational approach 3-23303
magnetic moment in inhomogeneous mag. field 3-5706
many-particle correlation functions, departure from ideal behaviour 3-10745
metal, electron gas, high-frequency wave propag., symmetry anal. 3-8430
metal, specific heat and effective mass relationships at finite temp. *(Russian)* 3-3093
metal surface, bounded electron gas, electrodynamic response in hydrodynamic formalism 3-33652
metallic mixture, composition modulated, wavelength depend. of electronic excess energy 3-43046
metallic mixture, non-uniform, electronic contrib. to gradient energy 3-52049
metals, ion interactions, effective Hamiltonian, influence of conduction electron correlation functions 3-18639

electron gas continued
metals, simple adiabatic potential, exchange and correlation effects 3—3095
neutron stars period variation ducts stellar electron component magnetisation instabilities 3—44778
noble metals, electron-fluid shell models 3—42731
phase transitions, computer simulation, classical and quantum systems 3—30823
point defect asymptotic interactions in a free-electron gas 3—28289
polyacetylene, Hubbard versus Peierls and Su-Schrieffer-Heger model 3—8428
positronium, degenerate gas, oscills. in radiation 3—26888
Potts model, extended scaling relations for mag. critical exponents 3—38331
quasi-two dimensional electron gas, thermopower and quantum size effects 3—38381
quasiparticle inelastic lifetime, plasmons, RPA calc. 3—8435
quasiparticle props., Green's function and random phase approx. 3—8433
quasirelativistic electron gas 3—45059
semiconductor injection laser threshold characts., Auger recombination effect 3—17499
semiconductors, NQR in quantising mag. fields 3—23825
semimetals, NQR in quantising mag. fields 3—23825
small and large wave vector behaviour for struct. factor 3—23294
spin waves and spin resonance in electron liquid with ferromagnetic impurities *(Russian)* 3—33869
surface plasmon wave phase conjugation by third order nonlinearity of free electron gas 3—7079
two dimensional, particle-particle ladder diagrams, coupled cluster summation 3—43051
two-dimensional disordered electron gas, magnetocond. and Hall resist. 3—3144
two-dimensional system, effect of level broadening on polarisability 3—13755
weakly disordered electron gas, magnetoresist. 3—13792
Wiener path integral with nonlocal pot., lower bound 3—165
GaAs, negative differential cond. and low freq. elec. instabilities 3—8500
GaAs/Al$_x$Ga$_{1-x}$As LPE grown heterojunctions, two dimens. electron gas 3—43278
GaAs/AlGaAs heterostructures, two-dimens. electron gas, magnetophonon reson. 3—23479
GaAs-Al$_\alpha$Ga$_{1-x}$As heterojunction, 2D electron gas struct., FET and logic IC appl. 3—57420
GaAs-Al$_x$Ga$_{1-x}$As heterostructure, selectively doped, two-dimens. electron gas mobility and conc. 3—52231
H$_2$, metallic, absence of crystn., electron screening of proton-proton interaction 3—2922
InSb, electron gas, electron energy relax. time, photocond. study 3—38328
MnSi, ordered and paramag. phase, heavy Fermi liquid, spin fluctuations, neutron scatt. study 3—8672
Pb$_{1-x}$Sn$_x$Te solid soln., electron spin polarisation in field of strong optical waves 3—18940
Si (111) surface dangling bonds, many-body effects 3—28405
Si (111)-1×1 surface, highly doped, electronic props., many-body effects 3—38449
Si/SiO$_2$ interface, 2-D electron gas, cyclotron resonance, memory function and random pot. 3—23497
Si-SiO$_2$ MIS struct., charged impurity effects on inversion layer electrons 3—28443

electron guns
conical five-element electron gun for LEED experiments 3—455
Dirichlet problem soln. in three dimens., electron gun calc. *(German)* 3—1520
electron microscope field emission gun, beam current stabilisation 3—10945
evaporator for refractories deposition 3—47772
field electron source, electric field and trajectories, space charge effect, numerical analysis 3—45250
free electron lasers, two-stage, using electron-guns and depressed collectors 3—56234
ion laser, CW, electron beam pumping, 1 to 6 keV 3—7002
magnetically focused line source electron gun 3—462
optical and electron microscopy, advances, book 3—10536
Pierce-type electron guns theory 3—26519
point cathode, gun geom. depend. of brightness characts. 3—10948
relativistic two-intense current electron beam, production from electron gun 3—41380
test rig for thermionic electron guns evaluation 3—20955
thermionic cathode electron gun, high-energy wide-beam section, pulse width over 100 μs *(Chinese)* 3—10944

electron-hole avalanches *see impact ionisation*

electron-hole drops
conference on condensed matter techniques and materials, Argonne Nat. Lab., Argonne, IL, USA (Sept. 1981) 3—10514
ground state, variational approach 3—3074
semiconductor, compensated completely, semiconductor-metal transition 3—23446
semiconductor, lightly doped, multicomponent exciton gas 3—23282
semiconductors, exchange-correlation energy, plasmon-pole model 3—47280
Bi$_{1-x}$Sb$_x$, plasma dynamics study 3—38418
CdS, highly excited, picosec. spectroscopy, free carrier-exciton system dynamics 3—38910
CdS(Se), luminesc. of high density electron-hole plasma 3—43603
GaAs, electron-hole pair ODMR signals, donor-acceptor pair separation effect 3—8742
GaAs, photoluminescence under intense laser excitation 3—52851
Ge, electron-hole drop luminesc. damping by high power CO$_2$ laser radiation 3—43601
Ge, electron-hole drop system as model for gas-liq. spinodal decomposition 3—51809
Ge, electron-hole liq., ground state, variational approach 3—3074
Ge, electron-hole liq. correlation factor, density depend. 3—13737
Ge, electron-hole liquid, ground state props., thermodynamics and systematics 3—43033
Ge, stressed, containing electron-hole liqs., spectroscopic studies, review 3—13745
Ge, time-resolved images of electron-hole droplets 3—43036
Ge:O(Sb), annealed, photoluminescence at thermal defects 3—3810

electron-hole drops continued
PbI$_2$ laminar straight band crystal, non-equilibrium carrier condensation kinetics 3—38864
Si, electron-hole correls. under uniaxial stress 3—43035
Si, electron-hole droplet transport up to near-sonic velocity 3—23280
Si, electron-hole liquid, ground state props., thermodynamics and systematics 3—43033
Si, electronically excited, phonon instabilities 3—38316
Si, stressed, containing electron-hole liqs., spectroscopic studies, review 3—13745
ZnTe, luminescence on intense lase excitation 3—43628
ZnTe, optical amplification spectra meas. 3—24009

electron-hole plasma *see solid-state plasma*

electron-hole recombination
see also carrier mobility
alkali halides, cryst. defect form. mechanisms 3—56876
alkali halides, recombination induced F-H pair prod., cascade spectroscopy studies 3—56894
amorphous semiconductor, time-resolved band tail luminesc. 3—24004
amorphous semiconductor, ultrafast relax. of photoinduced carriers 3—38836
4-butoxybenzylidene-4′-hexylaniline, liq. cryst., electron trapping and recomb., radiothermoluminescence, DSC spectra 3—28906
charge carrier distribution determ. in psn diodes, by meas. recombination radiation *(German)* 3—348
crossed electric and magnetic fields 3—33742
deformable lattice, electron, hole and exciton instabilities 3—57047
electrophotographic films, p-type, bimol. recomb. and reciprocity 3—49485
metal-glass-insulator-semicond. struct., surface recombination and minority carrier generation meas. *(Russian)* 3—3324
MNOS structures, carrier conduction and trapping, expt. study 3—33796
narrow band gap semiconductors, stimulated plasmon emission by electron-hole recombination 3—38804
nonmetallic crystal, impurity and interstitial diffusion, carrier recombination stimulation 3—33508
organic crystals, electronic processes, book 3—5512
p-n junction, current-voltage characts. under intense carrier generation and recombination 3—3307
p-n junctions, I-V characts., depletion layer surface recombination-generation effects 3—18770
photoconductor, intrinsic, generation-recombination noise, theory 3—18756
quantum well heterostructure, Auger recombination 3—47361
recombination induced defect form., conf., Urbana-Champaign, USA (June 1982) 3—54573
ruby, irrad., thermostimulated luminesc. 3—3834
semiconductor, bounded, recombination wave excitation for weakly injecting contacts 3—57363
semiconductor, direct gap n-type, Auger recombination, Kane four band model 3—43204
semiconductor, electron induced lattice relaxations and defect reactions 3—47070
semiconductor, photoacoustic signal generation, carrier diffusion and recombination influence 3—47055
semiconductor, photoexcited carriers, temp. and conc. self-oscillations 3—28389
semiconductor, photoexcited on opposite sides by light at two freqs., temp. distrib. 3—33763
semiconductor, surface recombination velocity at grain boundary, EBIC determ. 3—43195
semiconductor, variable gap, photoelectron emission, diffusion drift model 3—14440
semiconductor diode, generation-recombination noise under ambipolar injection conditions 3—3270
semiconductor injection laser threshold characts., Auger recombination effect 3—17499
semiconductor injection lasers, threshold characts. associated with Auger processes 3—46218
semiconductor solar cells with strong volume recombination, inapplicability of diffusion theory 3—9426
semiconductors, Auger recombination, role of dielectric screening 3—3225
semiconductors, coherent light propagation, Maxwell-Bloch eqns., interband and exciton transitions 3—28809
semiconductors, coherent light wave propagation, single electron band theory 3—28807
semiconductors, electron-hole recomb., correl. mechanism 3—28369
semiconductors, minority carrier diffusion length and surface recombination velocity, light- and electron-beam induced currents 3—57358
semiconductors, polycrystalline, grain boundary space-charge region potential barrier 3—43194
semiconductors and insulators, generation recombination noise spectra, effect of trap distrib. 3—13872
solar cell, interdigitated back contact fabrication process for high photocurrent 3—24579
solar cells, polycrystalline thin film, struct. and performance, review 3—9439
solar cells with nonlinear recombination, exactly soluble model 3—9430
spin-dependent recombination under conditions of optical excitation with polarized radiation 3—47363
surface barrier struct. photon-diffusion transport of nonequilib. carriers 3—28412
Teflon FEP, bimolecular recombination rate model 3—13832
p-terphenyl cryst., charge carrier generation and recomb., singlet exciton photoionis. 3—57379
tunnelling recombination by defect motion, diffusion, hopping and mixed mechanisms, review 3—33741
Ag halide emulsions, photocond. decay kinetics at low temp. 3—57383
AgBr, recombination radiation, ODMR studies 3—57819
AgCl, recombination radiation, ODMR studies 3—57819
AgCl$_{1-x}$Br$_x$ 3—57819
AgCl$_{1-x}$Br$_x$, ODMR study of trapped exciton dynamics 3—23277
n-Bi$_{1-x}$Sb$_x$ semicond. alloys, impact ionisation and carrier recombination in mag. field 3—3215
Cd$_{0.2}$Hg$_{0.8}$Te, photocond. relax., lifetime and generation-recombination noise 3—18759
CdS, donor-acceptor recomb., ODMR study 3—14163
CdS:Cl, luminescence, recombination flows *(Russian)* 3—24012
n-CdS$_x$Se$_{1-x}$ graded electrodes, electron-hole pair separation efficiency mapping, luminescent props. 3—47686
CdSe, self-diffraction of picosecond light pulses 3—34177
CdTe:Ge, impurity states and carrier recombination *(Russian)* 3—52078

electron-hole recombination continued
  CuCl, highly excited, picosec. time-resolved spectroscopy 3—38909
  $EuAlO_3$, recomb. centres, ODMR study 3—23840
  GaAlAs, recombination enhanced defect processes and device degradation 3—56909
  $Ga_{1-x}Al_xAs$-GaAs solar cell, role of photoluminesc. in efficiency 3—58539
  GaAs, direct band-gap semiconductor, minority carrier transport, radioactive recombination effects 3—52171
  GaAs, highly excited, picosec. spectroscopy, free carrier relax. in continuum states 3—38910
  n-GaAs, nonradiative recomb., electron probe investigation 3—18773
  GaAsP, electron beam annealing of defects during SEM meas. 3—42669
  $Ga_{0.47}In_{0.53}As$ film, MBE grown, optical quality 3—19273
  $Ga_{0.29}In_{0.71}As_{0.61}P_{0.39}$/AnP laser diode, Auger recomb., free-carrier losses 3—12144
  GaP, ODMR study of antisite related luminescence 3—19185
  GaP, recombination enhanced defect processes and device degradation 3—56909
  GaP, zero-phonon recombination spectra of donor-acceptor pairs 3—28891
  GaSe, picosec. relax. kinetics of highly photogenerated carriers 3—38913
  Ge, carrier recombination heat treatment and dislocation density effects 3—38401
  Ge, ion irrad., defect accumulation, magnetoconcentration effect study 3—13291
  Ge, photoexcited, Coulomb gas; Mott and liq.-gas transitions, photoluminescence study 3—23272
  p-Ge:Au diode, generation-recombination noise under ambipolar injection conditions 3—3270
  p-$Hg_{1-x}Cd_xTe$, electron irrad., effect on carrier props., isochronal annealing study 3—33303
  $Hg_{1-x}Cd_xTe$ p-n junctions, field ionisation of deep levels, theory 3—38467
  InGaAsP, Auger recombination, phonon-assisted, theory 3—52813
  InGaAsP lasers, lightly doped, radiative and nonradiative recomb. law 3—46209
  InGaAsP, photoexcited carrier lifetime and Auger recombination 3—43192
  InGaAsP quantum well lasers, Auger recombination rates calc. 3—50662
  InGaAsP, recombination enhanced defect processes and device degradation 3—56909
  p-InGaAsP solid soln., Auger recombination rate and luminescence 3—19186
  $In_{0.5}Ga_{0.5}P$-InGaAsP double heterostructs., nonequilib. carrier lifetime in active region, effect of emitter recomb. 3—38900
  InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3—18721
  InSb, photoacoustic signal generation, carrier diffusion and recombination influence 3—47055
  KCl, KCl:Ag, Frenkel defect creation, recombinational and excitonic mechanisms, at 4.2K *(Russian)* 3—56879
  $LaAlO_3$, recomb. centres, ODMR study 3—23840
  NH_4Br, recomb. luminesc. study by simultaneous excitation 3—24000
  $Na_2O.3SiO_2:Tb^{3+}$, glass, tunnel recombination luminesc. 3—24010
  P, amorphous, time resolved luminesc. study of recomb. and defects 3—3782
  $PbS_{0.1}Se_{0.9}$, intrinsic, recombination, depend. on doping conc. and excitation level 3—52174
  $PbS_{1-x}Se_x$ photovoltaic detectors, carrier lifetimes and resist.-area product 3—47381
  PbSe, carrier recomb., photocond. decay curves 3—23406
  PbSe-like semiconductors, second-order Auger recomb. processes 3—43201
  $Pb_{0.78}Sn_{0.22}Te$, intrinsic, recombination, depend. on doping conc. and excitation level 3—52174
  Si (111)-Ag(Au)(Ni) interfaces, localised states, capacitance spectroscopy 3—3315
  Si amorphous solar cells, photocarrier collection, carrier transport model 3—53537
  Si, dislocation dangling bonds, spin-dependent recombination obs. *(Russian)* 3—3229
  Si, electron-hole correls. under uniaxial stress 3—43035
  Si, electron-hole droplet transport up to near-sonic velocity 3—23280
  Si epitaxial layer on O_2^+ implanted substrate, carrier lifetime meas., IC appl. 3—47360
  Si film, elec. oscills., surface recomb. waves 3—18805
  Si, gamma-ray irrad., charge carrier recombination at defect clusters 3—3226
  Si, multilayer structures, current-voltage characts. at high current densities, Auger recomb. 3—8571
  Si, nonlinear recombination processes, saturated photovoltage transient meas. method 3—18719
  Si, p^+-n-n^+ multilayer struct., Auger recomb. at high current densities, I-V meas. 3—18772
  Si p-n junction, abrupt, LF noise due to carrier recomb. in space charge region calc. 3—13894
  Si p-n junction solar cell, minority carrier effective lifetime 3—44133
  Si, photoacoustic signal generation, carrier diffusion and recombination influence 3—47055
  Si, polycrystalline, electron-beam induced current response of grain boundary, surface recomb. vel. 3—33737
  Si, polycrystalline solar cell, minority carrier diffusion length and interface recombination velocity, EBIC and light induced currents anal. 3—53541
  Si, self-diffraction of picosecond light pulses 3—34177
  Si solar cells, effective surface recombination velocity and minority-carrier lifetime meas. 3—44128
  Si solar cells, induced junction, open circuit voltage limitations due to surface recomb. 3—58537
  Si solar cells with highly-doped substrates, recombination mechanisms 3—39489
  Si wafer, nonradiative processes, piezoelec. photoacoustic spectroscopy 3—47709
  Si:Al(B), point defect recombination-induced migration 3—57141
  Si:Au, minority carrier lifetime, recombination mechanisms 3—3219
  Si:H, amorphous, dual-beam photocond. modulation spectroscopy study 3—18739
  Si:H, amorphous, electron-hole recombination lifetime distrib., light induced ESR and luminesc. 3—8510
  Si:H, amorphous, photovoltaic props., light-induced effects obs. 3—57377
  Si:H, amorphous, recombination, spin depend., ODMR study 3—3594
  Si:H, Cl amorphous film, photocond. meas. 3—43225
  Si:H amorphous, non-geminate recombination, EPR and photoluminescence study 3—24008

electron-hole recombination continued
  Si:H amorphous, photocond., I-V and C-V characts., field quenching 3—57387
  Si/amorphous As_2Te_3 interface, I-V and C-V characteristics and photovoltaic effects 3—52233
  $SrCl_2:K^+$, lattice relax., V_k mobility and electron-hole recomb. 3—19208
  TiO_2, semiconductor-electrolyte boundary, generation-recombination processes 3—28434
  TiO_2 suspensions, photocurrent enchancement via trapping of photogenerated electrons 3—8527
  $YAlO_3$, recomb. centres, ODMR study 3—23840
  Y_2O_3, recomb. centres, ODMR study 3—23840
  ZnO, semiconductor-electrolyte boundary, generation-recombination processes 3—28434
  Zn_3P_2-Mg junction, transport mechanism study; solar cell appl. 3—33791
  ZnSe, zero-phonon recombination spectra of donor-acceptor pairs 3—28891

electron impact
  see also atomic electron impact excitation; atomic electron impact ionisation; molecular electron impact dissociation; molecular electron impact excitation; molecular electron impact ionisation; secondary electron emission
  atomic excited states, relative populations from sputtering and electron impact, plasma anal. 3—3896
  backscattering of fast electrons total inelastic reflection coeff. calc. for normal incidence 3—19238
  bimetals, energy emission during electron irradiation *(Russian)* 3—3879
  degradation in finite regions of matter, fluctuations in ionisation yield 3—32228
  desorption, electron stimulated, of neutral mols. 3—8322
  desorption, electron stimulated, quantum theory of dynamics 3—23174
  desorption ion ang. distribs., electron stimulated, local neutralisation effects 3—43679
  electron emission, enhanced, reduction by electron and ion impact 3—19233
  electron-solid interactions, chem. aspects 3—3513
  film, electron backscatt., models, review 3—14412
  magnetic surfaces, low energy electron exchange scattering studies *(Japanese)* 3—28946
  metal particles, internal potential, contrib. of excess charge and image forces 3—8914
  metallic thin film, depth of emission of reflected electrons 3—14409
  meteor trails effect of inelastic collisions and diffusion cooling on electrons cooling time 3—15670
  molecular adfilms, low-energy electron interaction, Frenkel exciton role 3—3888
  Monte Carlo calculations for electron scatt. and energy dissipation in solid targets, review 3—14413
  organic surface characterisation techniques, review 3—13607
  outer region coupled eqns. in electron-atom, electron-molecule scatt., VPM program 3—17373
  positron reemission brightness enhancement, one-dimens. diffusion model 3—14397
  positron surface anal. with slow positron beams, review 3—24068
  specimen manipulators, for surface science studies in ultra-high vac. 3—40620
  targets, atomic number estimation of keV electron transfer *(Russian)* 3—8912
  Au film, polycryst., grain boundary diffusion of K 3—3017
  Cd electron stimulated desorption of excited mol. ions, dissoc., spectra 3—43680
  Cr, electron-induced desorption of O^+ ions 3—23185
  Cu electrode, C surface pollution enhanced by electron bombardment 3—19463
  Mo, electron-induced desorption of O^+ ions 3—23185
  Nb crystal, gamma-ray emission spectrum from relativistic electron impact 3—14411
  Pd (111), adsorption and coadsorption of H_2 and CO 3—38209
  Ru (001), chemisorbed CO, chemisorbed and physisorbed N_2O, neutrals desorbed by electron impact 3—57213
  Si crystal, gamma-ray emission spectrum from relativistic electron impact 3—14411
  Si, electron backscatt., energy distrib. and ang. distrib. meas. at intermediate energy 3—3891
  Si films, lateral nucleated epitaxy on amorphous insulators, electron backscatt. contrast and electron channelling study 3—34224
  W (100), adsorbed α-CO, lowest excited states, electron stimulated desorption 3—38454
  W crystal, gamma-ray emission spectrum from relativistic electron impact 3—14411
  W, electron-induced desorption of O^+ ions 3—23185
  W, surface, H covered, electron stimulated desorption of H^- and H^+ 3—57224

electron interactions *see elastic scattering of electrons by atoms and molecules; electron attachment; electron beam effects; electron beams; electron-electron interactions; electron-electron scattering; electron impact; electron-nucleon interactions; electron-nucleon scattering; electron-nucleus reactions; electron-nucleus scattering; electron-positron interactions; electron-positron scattering; electron spectra; hadron electroproduction; neutrino-electron interactions; neutrino-electron scattering; secondary emission*

electron ionisation *see electron impact*

electron lenses
  see also aberrations; electron microscopes; electron optics; electrostatic lenses; magnetic lenses
  aberration coefficients, third order, depend. on object position *(German)* 3—17427
  aberration coefficients in relativistic case, derivation, ALGOL program 3—32292
  asymptotic aberration coefficient depend. on magnification 3—1540
  combined scanning electron beam system, dynamic aberration correction 3—1543
  condenser lens system with ultrafine parallel beam for electron microdiffr. 3—477
  crossed lenses, electrode shape effect on electron-optics props. 3—17429
  crossed lenses, freq. contrast characts. 3—1544
  energy analyser using chromatic aberration of single-field condenser objective 3—26929
  field emission optical system, spherical and chromatic aberration addition for electron lens pair 3—46151

- **electron lenses** continued
  - microwave cavity lens primary (second-order) aberration calc., computer-aided methods 3—26928
  - objective lens spherical aberration correction using foil lens, characts. and numerical evaluations 3—1541
  - paraxial ray equation, axial field distribs. and analytical solns. 3—12062
  - pole design in single pole piece projector electron lenses 3—30966
  - probe forming lens, low-aberration, design proposal 3—10955
  - SEM design advancements 3—464
  - single-pole lens as a scanning electron microscope objective 3—49514
  - Nb-Sn superconducting sinter material, electron microscope lens appl. 3—19305
- **electron lifetime (metals)** *see electron relaxation time (metals)*
- **electron lifetime (semiconductors)** *see carrier lifetime*
- **electron lithography** *see electron beam lithography*
- **electron mean free path (metals)**
  - A15 compounds, disorder effects on density of states, Fermi vel. and Drude plasma freq. 3—3370
  - film, Fuchs-Sondheimer size effect theory, approxs. for case of total diffuse scatt. 3—13926
  - liquid metals, short mean-free path, electronic transport, review 3—3152
  - point contact characts., electron-electron scatt. influence 3—3296
  - polycrystalline, elec. cond. and grain boundary scatt. *(Russian)* 3—52109
  - Al, electronic relax. rates, anomalous surface impedance study 3—23365
  - Al-Ti dilute alloys, elec. resist., Hall effect and magnetoresistance, clustering effects 3—43155
  - Al-Zn inhomogeneous alloys, isotropic resist. calc. 3—23360
  - Ca thin films, elec. cond., grain boundary effects 3—23507
  - Cr amorphous film, elec. cond., struct., mag. transition *(Russian)* 3—13927
  - Cr-Co films, elec. resist. meas. 3—23506
  - Cu, electronic relax. rates, anomalous surface impedance study 3—23365
  - In whiskers, supercond., electron mean free path influence on phase slip centres 3—8631
  - K, electronic relax. rates, anomalous surface impedance study 3—23365
  - β-Sn film, thermoelec. power, size and temp. effects 3—52274
- **electron mean free path (semiconductors)** *see carrier mean free path*
- **electron micrographs** *see electron microscope examination of materials; electron microscopy*
- **electron microprobe analysers** *see electron probe analysis*
- **electron microprobes** *see electron probes*
- **electron microscope applications**
  - *see also electron microscope examination of materials; scanning electron microscope applications*
  - microelectronic device investig. using mirror electron microscopy, review 3—10963
- **electron microscope examination of materials**
  - *see also electron microscope applications; electron microscopy; scanning electron microscope examination of materials; scanning-transmission electron microscope examination of materials; transmission electron microscope examination of materials*
  - alloy, cubic phase, martensitic transform., morphology, periodic strain modulations 3—34316
  - bacterial magnetosomes, morphology and struct. of magnetite particles 3—58693
  - bibliography of microscopic equipment, methods, biomedical applications 3—44917
  - bicrystals, grain boundaries, struct. and mech. props., expt. studies *(French)* 3—46962
  - brass, β-γ, space group and struct., electron diffr. and microscopy study 3—13161
  - carbides, M_7C_3, microstructure and planar defects, electron diffr. and microscopy study *(French)* 3—38093
  - N-carboxy-amino acid anhydride polymers prepared by polymerisation in solid state, mol. arrangements 3—14868
  - coatings, magnetic-electrical strengthened, electron microscopy study *(Russian)* 3—53248
  - composite, nonuniform, comp. variations analysis using electron microscope images 3—24430
  - conference, Castle Hot Springs, Arizona, USA (Jan. 1982) 3—5492
  - diamond, defect study by electron microscopy, Scherzer resolution limit 3—7884
  - ethylene-butene-1 copolymer model, soln. grown crysts. 3—13118
  - ferrites, electron microscopy studies of microstructure-property relations 3—13054
  - glass, oxide, containing Ag granules, microstruct. and optical absorpt. 3—33104
  - grain boundaries, conf., Caen, France (Sept., 1982) 3—44892
  - HVEM, greater than 1 MeV, advantages 3—19485
  - hydrated specimens in wet gas environment, quantitative meas. of radiation damage 3—15159
  - metal-metalloid amorphous cpd. formation by ion implantation, expt. study *(German)* 3—2585
  - metallic particles, surface site distrib. rel. to catalytic activity 3—13689
  - Nimonic 115, Ni-base superalloys, long-term service exposure, microstruct. changes 3—53063
  - Permalloy thin films, circular Bloch line size determ. by electron microscope method 3—52568
  - plant cell nucleus ultrastructure, automatic diagnosis with image analysis system 3—9566
  - poly /p-/phenylenebenzobisthiazole fibres, high modules, axial bright field lattice images 3—37801
  - poly-4-methyl-pentene-1, ultraquenched glass, chain mobility and crystallisation 3—13127
  - polyacetylene, morphology, electron microscopy study 3—2441
  - polyacrylate polybutadiene block copolymer films, struct. and prep. *(Russian)* 3—39089
  - polydiacetylene monolayers, molecular microscopy study 3—8341
  - polyester, thermotropic, phase transitions and struct. props. 3—57081
  - polyester fabric, PVC coated, boiling water treatment, 6 weeks, stake and socket fractures 3—39231
  - polyethylene, crystalline, HVEM technique with reduced beam damage 3—13050
  - polyethylene, high density, mixture with high mol. wt. polyethylene, dielec. loss, struct., rigidity *(German)* 3—56839
  - polyethylene, ultrahigh modulus, crystallite size meas. 3—2439
  - polyethylene melt, crystallisation at high supercooling 3—4030
  - polymer electrically insulating compounds, determ. of homogeneity by electron microscopy *(Bulgarian)* 3—37802
- **electron microscope examination of materials** continued
  - polymers, crystalline, HVEM technique with reduced beam damage 3—13050
  - polyoxymethylene, epitaxial morphologies, electron microscopy obs. 3—18235
  - polypivalolactone, ultraquenched glass, chain mobility and crystallisation 3—13127
  - α-polypropylene, crystalline, microstruct. and unit-cell orientation, optical microscopy, EM, X-ray diffr. 3—37805
  - pyrophyllite, polymorphism, computer simulation and electron microscopy study 3—42577
  - quartz grains, mechanically processed, dislocation in $NaOH_2$ X-ray and electron microscope studies 3—38073
  - rare earth sesquioxides, monoclinic, twins, electron microscopy study *(French)* 3—2574
  - second phase particles, quantitative anal. using extraction replicas and thin foil techniques 3—24450
  - silicates, defect structs., electron microscopy electron diffraction and X-ray emission spectra study 3—8068
  - stearic acid films, vacuum deposited, form., growth and surface morphologies, electron microscope obs. *(Japanese)* 3—38250
  - steel, 10B20, coarsening of cementite particles in ferrite matrix 3—24236
  - steel, Al, highly-coercive, electron microscope study 3—34328
  - steel, alloy, low C acicular ferrite, fracture mechanism rel. to microstruct. *(Italian)* 3—4137
  - steel, austenitic stainless, Cr-Ni-TiN neutron irrad., microstruct. 3—28001
  - steel, austenitic stainless, films, tensile cracks, in situ obs. in HVEM 3—19392
  - steel, austenitic stainless, martensite form. at grain boundaries 3—34308
  - steel, austenitic stainless steel, type 316, void swelling, C and N effects, in-situ HVEM study 3—39159
  - steel, boride precipitation during cooling *(Chinese)* 3—53059
  - steel, high-voltage diffraction electron microscopy, methodological features 3—9269
  - steel, HSLA tempered martensitic, adiabatic shear bands, projectile impact loading, electron microscopy 3—34375
  - steel, low alloy, high strength, reheating behaviour, quantitative metallographic techniques 3—24449
  - steel, low alloy, low C, optical revelation of fine martensite islands in bainite *(German, English)* 3—24462
  - steel, low alloy, type 03G4AF, rupture strength rel. to struct. 3—47957
  - steel, martensitic, Cr, carbide form., electron microscopy study *(Russian)* 3—24231
  - steel, medium C, plastic deform. development in packet martensite *(Russian)* 3—39203
  - steel, Mn, low C, quenched and tempered, strength and toughness 3—43962
  - steel, Mn-V-N, lamellar tearing susceptibility *(Chinese)* 3—53182
  - steel, Ni-Cr, electrochem. honing, condition of surface *(Russian)* 3—53275
  - steel, Si, transformer, nitrided, intercryst. precip. 3—34329
  - steel, stainless, duplex, precipitation at austenite/ferrite interfaces 3—9068
  - steel, V, processing, microstruct. and mech. props. 3—34367
  - steel 15Kh2MFA, US effects on mech. props. 3—47958
  - steel Mn-Si, high strength, retained austenite and mech. props. *(Korean)* 3—39214
  - steel wire, coatings of Cu, Ni and solder, scanning Auger anal. 3—3877
  - striation spacing measurement, effect of replica tilt 3—29231
  - submicron aerosols rapid coagulation into filamentary three dimens. structs., electron microscopy study 3—32791
  - superplastically deformed material, in-situ HVEM studies interpret. 3—13318
  - surface morphology on an atomic scale, electron microscopy methods 3—38181
  - $TiO_{1.9985}$, disorder when rapidly cooled, electron microscopic examination 3—8039
  - Udimet 500, Ni-base superalloys, long-term service exposure, microstruct. changes 3—53063
  - zeolites, structural chem., X-ray and magic-angle-spinning NMR studies 3—37873
  - Ag colloidal particle stability in fixing solns., gelatine stabilising action, electon microscopic investigation *(Russian)* 3—54802
  - Ag, containerless solidification under microgravity conditions, external and internal structs. 3—14582
  - Ag film on TlBr-TlI, adhesion failure, atmosphere induced, AES and electron microscopy study *(Russian)* 3—19507
  - $Ag:He^+(H^+)$ ion-implanted films, Frenkel-type radiation defects form. and annealing 3—13249
  - Al alloys, oxide film rupture, reanodisation and stress corrosion cracking 3—43985
  - β-Al brass, cyclically transformed, dislocation study, thermoelastic martensitic transform. 3—43833
  - Al, single cryst., dislocation motion, flow stress and cell size, HVEM study 3—13228
  - Al-Mg, struct., plastic deformation and corrosion resistance *(Russian)* 3—24292
  - Al-Pb vapour deposited film, struct. and precipitation, electron diffr. and microscopy study 3—8368
  - Al-Ru (10, 15 wt.%), vapour deposited, metastable phases 3—19324
  - Al-Zn (10-15 wt.%), metastable phases, size distrib. 3—14564
  - Al-Zn-Mg-Zr(-Cu), strength and stress corrosion resist. improvement, role of Zr 3—14622
  - $AlN-SiO_2$ ceramics, containing long-period polytypes, charact. by fracture toughness 3—39093
  - $(As_{13}Te_{24}Si_{27}Sb_{18})_{1-x}Fe_x$ RF sputtered films, struct., elec., and optical props. 3—13649
  - $(Au,Cu)_3Zn$, domain struct., periodic lattice twinning 3—2828
  - Au crystal lattices, electron microscope images, computer model 3—33048
  - Au film, (111) surface struct. and inclined planar defects, electron microscopy 3—8373
  - Au-Ge (111) interface form., AES, LEED, and electron microscopy study 3—38240
  - Au-Mg (20 at.%), double hexagonal superstructure, high resolution HVEM study 3—56851
  - Au-Mn (25-28 at.%), ordered structs., HVEM study 3—2469
  - Au_2Mn, shear transform. obs., domain struct. 3—39139
  - Au_4Zn, one- and two-dimensional long-period antiphase boundaries, high-resolution electron microscopy studies 3—56912
  - B, β-rhombohedral, {100} twinning, high resolution electron microscopy study 3—18317
  - BaF_2, oxidised, precipitates, HVEM study 3—18459
  - $Ba_{1+x}Fe_2S_4$, vernier struct., electron diffr. and microscopy study 3—27906

electron microscope examination of materials continued
- BaO-transition metal oxide-Fe_2O_3 ferrite, microsyntactic intergrowth and composition fluctuation 3-13472
- $BaTiO_3$, 180° domain walls, interaction with defects, electron and optical microscopy studies 3-38783
- C thin film, on-line image processing system *(Japanese)* 3-49504
- CdS, extended dislocations obs. by high resolution electron microscopy 3-13227
- Co-Cr layers, RF sputtered, for perpendicular mag. recording, struct. props. 3-51987
- Co-Cr-Mo, Vitallium superalloy, precipitation under heat treatment, expt. study 3-9074
- Co-Gd amorphous film, mag. anisotropy, electron microscopy study 3-57578
- Co-W alloys, electrocrystallisation during this mag. film deposition *(Russian)* 3-14514
- CoO film, chem. composition and struct., Auger and electron microscopy study 3-8351
- $CoSi_2Si(111)$ interface struct., determ. by ultrahigh resolution electron microscopy 3-8343
- Cu, containerless solidification under microgravity conditions, external and internal structs. 3-14582
- Cu, ion bombard. induced surface topography, depth resolution, electron microscopy study 3-8924
- Cu-Al (10 at%) single cryst., role of conjugate slip in deform. 3-37914
- Cu-Al (15.1 wt.%), martensitic transform., room temp. 3-43819
- Cu-Al (4.6 at.%), evidence of short-range order state using DTA, elec. resist. and electron microscopy 3-9105
- Cu-Al martensitic alloys, single crystal, deform. behaviour 3-43824
- Cu-Al_2O_3-Cr, diffusion saturated, precipitation, struct. changes, elec. resist. and plastic deformation study *(Russian)* 3-34324
- Cu-Be-Co (2.1, 0.2 wt.%), ageing, influence of rapid solidification 3-29095
- Cu-Ge, rolled alloys, deform. mechanism, microstruct., grain orientation 3-53165
- Cu-Si (8.01 at.%), extended dislocation width, Suzuki segregation to stacking fault, electron micrograph study 3-38078
- Cu-Te, amorphous film, crystn., bending contours, electron microscopy study 3-2412
- Cu-Zn, rolled alloys, deform. mechanism, microstruct., grain orientation 3-53165
- Cu-Zn (39.3 wt.%) alloy, martensite nucleation, BCC to 9R transform., HVEM obs. 3-34306
- Cu-Zn-Al, internal friction of single and polyvariant martensites 3-43829
- β-Cu-Zn(-Al), surface martensite transform. and microstruct., electron microscopy study 3-43812
- Cu_3Au, ordered and disordered, electron irrad. damage 3-13283
- Cu_3Au, ordering and disordering, HVEM study 3-13282
- Cu_2NiZn, $L1_2$ ordered struct., superlattice dislocations and stacking faults 3-46944
- $Cu_{60}Zr_{40}$, amorphous, possible metallic glass-ceramic, crystn., effect of O doping 3-51498
- Fe alloys, structural memory of ferrite *(French)* 3-29077
- Fe, magnetic domain interactions with dislocations and grain boundaries, HVEM study 3-23699
- Fe powders, disaggregation at low temps. 3-39071
- Fe-Al, ordered alloy, in situ plastic deformation in 200 kV electron microscope 3-53163
- Fe-Co, FCC to HCP transformation, electron microscopy study 3-8190
- Fe-Gd amorphous film, mag. anisotropy, electron microscopy study 3-57578
- Fe-Ni (32.8 wt.%), thin foils, martensitic transforms. 3-9063
- Fe-Ni-Al-Ti mag. alloy, semi-hard, struct. and mag. props. 3-58145
- Fe-Pd alloy, struct. changes before FCC→BCT martensitic transform., Invar effect role 3-39143
- Fe-Pd alloy, successive martensitic transforms., stress and alloying effects 3-39142
- FeAl, electron irrad. amorphisation, high volt. electron microscopy study 3-47001
- $Fe_{82}B_{18}$-Al_2O_3 amorphous granular film, Mossbauer study 3-43466
- $(Fe_xB_{1-x})_{0.9}Tb_{0.05}La_{0.05}$, crystallized, coercive force and microstruct., composition depend. 3-33931
- $Fe_{40}Ni_{38}Mo_4B_{18}$ metallic glass, crystallisation, size effect, high voltage electron microscopy obs. 3-3236
- $Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, crystn. by eutectic reaction, kinetics and mechanism *(French)* 3-13104
- β-FeO(OH), thermal decomp. intermediate product, mag. props. 3-14089
- FeTi, activation for H_2 absorpt. 3-48177
- GaAs, ion implantation, void form. and swelling, electron microscopy study 3-22926
- GaAs, ion implanted, solid phase epitaxy, interface structures and twins obs. 3-33591
- GaAs:Te, dislocation loops with stripe contrast, high resolution electron microscopy study 3-18310
- Ge amorphous film, short pulsed laser irrad., crystn. mechanism 3-13688
- Ge, dislocation loop thermal shrinkage and self-diffusion mechanism 3-46941
- Ge, electron irrad., vacancy and interstitial clustered defect form. 3-47000
- α-Ge film, amorphous, low-power multi-pulse laser annealing 3-46992
- Ge, grain boundary microstructure, HREM obs. *(French)* 3-46954
- Ge, symmetrical tilt grain boundaries, electro microscopy and diffr. studies 3-51620
- Ho-Co sputtered thin films, magnetisation distrib. of submicron bubbles 3-52574
- Ho-Co thin films, magnetisation distribs. in bubbles and domains, HVEM study *(Japanese)* 3-18960
- $(HoS)_2Te_{1.34}$, superstruct., order-disorder transitions and twin domains *(French)* 3-33210
- InP, B3 structure, electron irrad., dislocation loops seen edge-on, electron microscopy contrast 3-56907
- InSb, dislocation structs. and in situ obs. of dislocation motion 3-46942
- InSb film magnetic sensor, crystalline struct. and sensing characts. obs. 3-43302
- InSb, ion implantation, void form. and swelling, electron microscopy study 3-22926
- In_2Te_3:PbTe thin film, recrystallisation and phase transitions, electron microscopy study 3-2768
- KBr, formation of Br bubbles via planar state, electron microscopy study 3-27995

electron microscope examination of materials continued
- $K_{1.33}Mg_{3.11}Sb_{4.89}O_{16}$, hollandite-type struct., supercell ordering, X-ray, electron diffr., and HREM studies 3-51571
- $K_xP_4O_8(WO_3)_{2m}$, cryst. struct., electron microscopy, electron and X-ray diffr. study 3-2505
- LiF thin films, electron bombarded in electron microscope, void growth obs. 3-2612
- MgO, reoriented band form. and dislocation structure, electron microscopy study 3-42606
- MgO single crystals, cathodoluminescence at frictional damage 3-24025
- MgO-FeO-Al_2O_3-SiO_2 glass-ceramics with coal stone as main raw material 3-34275
- Mo, grain boundary microstructure, HREM obs. *(French)* 3-46954
- MoO_3, chemical reduction and H chemisorption, electron microscopy study *(French)* 3-9356
- NaCl, indentation deformation, screw dislocation slip, electron microscope study 3-8125
- Na_2O-SiO_2-UO_3 glass, IR spectra, heat capacity and electron microscopy studies 3-14306
- Nb, bicrystals, electron beam floating zone growth and struct. 3-8968
- Nb bicrystals, growth and struct. *(Russian)* 3-34220
- Nb_2O_5, with long-period superlattice, lattice interference images, cryst. struct. 3-8018
- Nb_3Sn, A15 supercond., struct., dislocations, high resolution electron microscopy study 3-18305
- Ni, iron irrad., uniaxial tensile stress effect on swelling *(Russian)* 3-22944
- Ni particles, struct. and morphology *(French)* 3-42567
- Ni, superalloy MAR-M247, Co effect on microstruct. 3-14618
- Ni-Au(111) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3-23219
- Ni-B film, electroless plating, amorphous, struct. rel. to B conc. *(Japanese)* 3-58055
- Ni-Ce-Y-C, graphite morphology and microdistrib. of Ce and Y modifying agents 3-39108
- Ni-Cr-Ti-Mn, precip.-hardening, struct. transforms. 3-34341
- Ni-Cr-(Sb, Zr) alloy, creep fracture, Sb and Zr traces effect 3-47964
- Ni_4Mo, antiphase boundary struct., asymm. contrast characts. *(Russian)* 3-27951
- NiO, Al_2O_3 supported, solid state prop. study, catalytic activity 3-29333
- NiO, chemical reduction and H chemisorption, electron microscopy study *(French)* 3-9356
- NiTi, electron irrad. induced amorphisation at dislocations 3-51663
- Pb crystallites, time-depend. melting and superheating 3-2754
- α,β-PbO smoke particles, struct. and coalescence growth from metal combustion in Ar-O_2 3-7934
- Pd-Au(111) and Au-Pd(001) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3-23219
- Pd-Ce (12.5 at.%Ce) solid soln., LRO and superlattices, phase diagram obs. 3-19319
- Pt_2Si_3 amorphous films, struct., crystallisation and diffusion 3-8352
- $Rb_xP_4O_8(WO_3)_{2m}$, cryst. struct., electron microscopy, electron and X-ray diffr. study 3-2505
- SbSI ferroelec. semicond., single-domain state stability, Barkhausen and electron microscopy study 3-23893
- Se, amorphous film, crystn., bending contours, electron microscopy study 3-2412
- Se-Te, amorphous film, crystn., bending contours, electron microscopy study 3-2412
- $Se_{0.95}Bi_{0.05}$ amorphous thin films, coevaporated, characterisation 3-3196
- Si, 30° partial dislocations, geometric and electronic struct. 3-22900
- Si, CVD layer, grain boundaries, HREM obs. 3-51619
- Si crystal struct. electron microscopy determ., Scherzer resolution limit 3-7884
- Si, Czochralski grain, bulk defects, impact of high temp. processing 3-46925
- Si, damage, induced by picosecond laser pulse irradiation 3-56955
- Si, dislocation struct., high resolution imaging by 1 MV electron microscopy 3-7885
- Si, electron irrad. in HVEM, point defect interaction with surface 3-27999
- Si, electron irrad. prod. defects, HVEM study 3-46999
- Si, faulted dislocation dipoles during high temp. deformation 3-42614
- Si, grain boundary microstructure, HREM obs. *(French)* 3-46954
- Si, ion bombard. induced surface topography, depth resolution, electron microscopy study 3-8924
- Si, ion implanted, laser annealed, defect struct., electron microscopy anomalies 3-22939
- Si, ion implanted, solid phase epitaxy, interface structures and twins obs. 3-33591
- Si, MBE patterned growth with submicron lateral resolution, interference contrast microscopy study 3-8982
- Si:H amorphous glow-discharge coating on glass, CW laser crystallisation 3-18581
- Si:In(Sb)(Ga)(Bi), ion implanted, morphological instability and cell form. during pulsed laser annealing 3-8093
- SiC, dislocation motion, plastic deformation, electron microscopy study 3-18516
- SiC polytypes, direct struct. imaging by electron microscopy 3-33192
- Si_3N_4, dislocation struct., high resolution imaging by 1 MV electron microscopy 3-7885
- Si_3N_4, hot-pressed, electron microscopy obs. of microstruct., grain boundary struct. 3-51612
- Si_3N_4-TiN composites, CVD, microstruct. 3-23204
- Sm-Co-Cu-Fe-Zr magnets, sintered, phase comp. and struct. 3-4043
- Sn-Sb-O system, microstruct., high resolution electron microscopy study 3-18474
- $SnO(SnO_2)$ smoke particles, struct. and coalescence growth from metal combustion in Ar-O_2 3-7934
- $Sr_2Nb_2O_7$, incommensurate struct., high resolution electron microscopy study 3-13172
- $TaSe_2$ (2H), CDW states, discommensuration arrays, broken hexagonal symmetry 3-18635
- $ThNb_4O_{12}$, vacancy ordering and microdomain form. electron and X-ray diffr. study 3-13171
- Ti alloy, phase and structure transformations on rapid heating 3-14587
- Ti alloys, crack propag., in situ electron microscopy obs. 3-9189
- Ti, dispersion hardening 3-29098
- Ti, edge dislocation core struct., high resolution electron microscopy study 3-46945

electron microscope examination of materials continued
Ti-Al, alloy VT3-1, heat treatment influence on phase and struct. transform. *(Russian)* 3—34296
Ti-Al-Cr-Mo-V, VT22, β solid soln. precipitation, initial struct. effect *(Russian)* 3—29081
Ti-Al-Mo-V-Cr-Fe alloy, VT23, supercooled β-phase, precipitation *(Russian)* 3—34325
Ti-Al-Ni, electrospark alloying of VT-18 with Ni, electrode surface layer struct., electron microscopy *(Russian)* 3—58279
Ti-Al-V-Sn (86, 6, 6, 2 wt.%), annealing behaviour and strengthening 3—24278
Ti-Al-V-Sn alloy, slack quenching and tempering, microstruct. and mech. props. 3—14629
Ti-Al-V-Sn-Zr (2, 12, 2, 6 wt.%), microstruct. transform., heat treatment, tensile mech. props. 3—43849
Ti-Al-Zr-Mo-Si, heat treatment effect on microstruct. and props 3—24281
β-Ti-Mo-Zr-Su, dispersion hardening 3—29098
β-Ti-Mo-Zr-(Al), ageing characts. 3—19354
Ti-Ti_5Si_3-Ti_2Cu system, phase diagram construction 3—14570
$TiC_xO_yN_z$ film, reactively sputtered, microhardness, elec. cond. and temp. coeff. of resist. 3—51994
TiNi, equiatomic, martensite form., effect of thermal cycling 3—39128
$Ti_{50}Ni_{47}F_3$, martensitic transform., electron microscopy study 3—39125
$Ti_{50}Ni_{47}Fe_3$, martensitic transformation, electron microscopy study 3—47834
$TiO_{0.5}$ evaporated films, δ-phase and phase transitions, electron microscopy study 3—38247
TiO_{1+x} evaporated films on NaCl, transition structures, electron microscopy study 3—38246
TiO_2 anodic films formed in acid medium, breakdown voltage *(French)* 3—3647
V-Al, struct. characts. rel. to elec. resist. anomalies, electron microscope study *(Russian)* 3—37850
W bronzes, order and disorder, electron microscopy study 3—8006
WO_3 and Bi_2O_3 smoke particles coalescence, high resolution electron microscopy study 3—51522
WO_3, hexagonal to monoclinic transition, electron microscopy study *(French)* 3—8188
WO_3-WO_2-GeO_2 system, phase diagram and equilibrium, electron microscope and X-ray diffr. study 3—2742
$(Y,Re)_3(Fe,Ga)_5O_{12}$ films, mag. domain obs. using mirror electron microscopes 3—57724
Y-Si-Al-O-N glass, crystn. and characterisation 3—27852
$ZnIn_2S_4$ (III), layered cryst., anisotropic cond., and comp. faults, expt. study 3—3197
ZnO, ceramic semicond., nonlinear cond., potential barriers, voltage contrast imaging in secondary electron microscope 3—52162
ZnO single cryst., solid-state impurity crystn. 3—2817
ZnSe, dislocation dissociation and stacking fault energies, weak beam study *(French)* 3—18308
ZnSe, plastically deformed, dislocation struct., weak beam electron microscopy study 3—42613
ZrO_2 monoclinic, high resolution electron microscopy, martensite transform. and domain struct. 3—39145
ZrO_2 toughened Al_2O_3, X-ray microanal. and electron microscopy of ZrO_2 particles 3—39160

electron microscopes
see also electron microscopy; field emission electron microscopes; scanning electron microscopes; scanning-transmission electron microscopes; transmission electron microscopes
condenser lens system with ultrafine parallel beam for electron microdiffr. 3—477
conference on condensed matter techniques and materials, Argonne Nat. Lab., Argonne, IL, USA (Sept. 1981) 3—10514
diffraction camera modification for investig. of reverse scatt. of electrons on material targets 3—5914
dodecapole lens, elec. and mag., design and test for electron-optical aberration correction 3—17426
double Faraday cup attachment for relative intensity meas. 3—465
double-tilt improved stage for AEI EM7 HVEM 3—471
high resolution 600 kV Cambridge University electron microscope, optimisation and applications 3—5918
High Voltage Electron Microscope-Tandem Facility at Argonne National Laboratory, operation and applications 3—11561
HV accelerator tube, electron energy analysis of vac. discharge 3—45248
mirror electron microscopy in surface research, review 3—10963
on-line image processing system *(Japanese)* 3—49504
publications concerning microscopic equipment, methods, appls. and related topics 3—16106
quality control, NDT, mech. and electron-optical methods *(German)* 3—14811
spherical aberration, approx. third order calc. using relativity theory 3—54816
tunnel effect microscope for surface topography studies *(French)* 3—20959
vacuum system, simulation by resistor network for molecular flow region 3—49387
Nb-Sn superconducting sinter material, electron microscope lens appl. 3—19305

electron microscopy
see also electron microscope applications; electron microscope examination of materials; electron microscopes; field emission electron microscopy; metallography; scanning electron microscopy; scanning-transmission electron microscopy; specimen preparation; transmission electron microscopy
algorithms and experimental results on image reconstruction from limited data 3—17464
bibliography of microscopic equipment, methods, appls. and related topics 3—5521
bibliography of microscopic equipment, methods, biomedical applications 3—44917
biological electron microscopy, methods for averaging non-periodic objects and distorted crystals 3—19867
biological frozen suspensions for electron microscopy 3—44364
biological materials, high tension electron microscope contrast, Monte Carlo calc. *(French)* 3—7881
biological specimen, HVEM, top-bottom effect rel. to max. observable thickness 3—15300
biological specimen protection in electron microscopes 3—19868
book, advances in optical and electron microscopy 3—10536
cell biology, stereology, point counting, BASIC program 3—35039
electron microscopy continued
cell vertical section prep. for electron microscopy, cultivated anchorage-depend. cells 3—53899
correlation averaging of a regularly arranged bacterial cell envelope protein 3—4724
cryomicrotomy appl. to rapid-freeze deep-etch replica method for unfixed tissues and cells 3—15297
crystal defects, electron diffraction, absorpt. distances, dynamical theory 3—18193
direct and indirect methods of obtaining information for struct. anal. 3—7887
dislocation loops, prismatic, influence of dimensions and interf. error, electron microscope contrast calcs. 3—37918
EELS and microscopic in-situ examination combination 3—49503
electron-solid interactions, chem. aspects 3—3513
embedding plastics for electron microscopy, improved handling method 3—472
EXELFS technique in analytical electron microscopy, review 3—14899
Fourier holography reconstruction conditions and resolution 3—25993
freeze etching system Balzers BAF 400, improved specimen table 3—4727
Fresnel fringe for defocus determ. in HREM 3—16451
high resolution 600 kV Cambridge University electron microscope, optimisation and applications 3—5918
high resolution electron microscopy, on-line image processing 3—476
high resolution imaging by 1 MV electron microscopy 3—7885
hologram, interferometrical processing, photographic noise problem *(German)* 3—46182
holograms, electron microscopic, interferometric processing, practical experience with various methods *(German)* 3—45249
holograms produced in electron microscopy, interferometric reconstruction *(German)* 3—1595
holography in electron microscopy, conf., Hamburg, Germany (Aug. 1982) 3—25696
HVEM, greater than 1 MeV, advantages 3—19485
hydrated specimens in wet gas environment, quantitative meas. of radiation damage 3—15159
image reconstruction of weak phase-amplitude object, statistical analysis 3—45251
image recording using Fuji Miniposi Fiche film 3—467
LEED apparatus for intensities meas., with Johansson objective lens 3—42495
many-beam electron microscopical images, digital simulation for phyllosilicates 3—42577
materials analysis using analytical electron microscopy and Auger electron spectroscopy 3—24545
materials structure and composition, role of electron microscopy 3—40719
metal particles, internal potential, contrib. of excess charge and image forces 3—8914
metallic deposits, rough, surface height and slope distribs. 3—5764
microbeam analysis, conf., Washington, DC, USA (Aug. 1982) 3—25690
mirror electron microscopy in surface research, review 3—10963
Monte Carlo calculations for electron scatt. and energy dissipation in solid targets, review 3—14413
multiple image integration method in biological electron microscopy 3—4726
on-line image processing system *(Japanese)* 3—49504
particle analysis, quantitative, in electron beam instruments, review 3—14907
periodic object recorded image random noise elimination 3—466
phase contrast improvement in interferometric holographic reconstructions under nearly dark field conditions 3—25991
plastic embedded tissues, grinding method for producing large area sections 3—4731
polyethylene glycol technique improvements, 3D organisation study of cell cytoskeletal elements 3—53897
protein particles in membranes, radial distrib. function estimation 3—29791
publications concerning microscopic equipment, methods, appls. and related topics 3—16106
random-signal recognition system, determ. of parameters in presence of noise *(Russian)* 3—5915
resolution and contrast in the electron microscope, historical review 3—17425
Scherzer resolution limit 3—7884
serial section no. required for volume of structure reconstruction 3—19863
spatial resolution of EDX composition determ. 3—5922
stereo micrographs, accurate alignment and assembly procedure 3—49507
thin film surface roughness meas. using electron microscopic technique 3—25985
tissue sections, semithin, embedded in Quetol 651, light and electron microscopy of identical sites 3—15299
MgO single crystals as specimen supports for high resolution electron microscopy 3—10969

electron mobility
see also carrier mobility; electron mobility (metals)
gas discharges, electron distribution function formulation from transport coeffs. of electron swarm 3—7690
quantum density corrections to mobility and dispersion law for electrons in a medium of disordered scatterers 3—12812
H_2, electron scatt., Ramsauer-Townsend minima 3—22570
N_2, electron scatt., Ramsauer-Townsend minima 3—22570
N_2, electron transport, comparison of Monte Carlo and Boltzmann calcs., multi-term results 3—2177
N_2 gas, electron-swarm props. at moderate E/N values 3—22569
SF_6, partially ionized gas, electrical conductivity depend. on electric field strength 3—27641

electron mobility (metals)
No entries

electron mobility (semiconductors and insulators) *see carrier mobility*

electron multipliers
amplification factors of a particle multiplier for singly charged alkali ions 3—40727
EMI 9603B particle multiplier for singly charged alkali ions, amplification factor 3—26580
microchannel plate, gain characteristics for X-ray photon counting 3—54231
microchannel plate CRT increases gain, aid to fault finding 3—35979
microchannel plate detectors efficiency and absolute time calibration 3—26551

electron multipliers continued
- microchannel plates and readout systems for position sensitive detectors 3−1126
- microchannel plates in expt. physics, review 3−41433

electron nuclear double resonance *see ENDOR*

electron-nucleon interactions
- *see also electron-nucleon scattering; electron-proton interactions*
- deep inelastic scatt., polarised electron, Glashow-Weinberg-Salam theory of electroweak interactions and neutral currents 3−21051
- deep inelastic scattering virtual photon absorption 3−26120
- ed, nonperturbative effects, deep inelastic scattering, structure functions 3−26119
- eN, deep inelastic scatt., parameterisation for Q^2 depend. parton distrib. function 3−16649
- $\mathrm{eN}\rightarrow\mathrm{e}'\Delta(1236)\mathrm{X}$, zero parameter model calc. within nuclei 3−16714
- $\mathrm{eN}\rightarrow\mathrm{e}\gamma^*(\mathrm{Z}^0)\mathrm{X}\rightarrow\mathrm{e}l\bar{l}\mathrm{X}$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3−40910
- $\mathrm{e}^{\pm}\mathrm{N}\rightarrow\mathrm{e}^{\pm}\gamma\mathrm{X}$, inelastic scatt., γ-quanta emission, Compton mechanism in quark-parton model 3−21139
- $\mathrm{ne}\rightleftharpoons\mathrm{p}\nu$, finite temperature radiative corrections 3−31212

electron-nucleon scattering
- *see also electron-nucleon interactions; electron-proton scattering*
- en, $Q^2 \leq 10\ (\mathrm{GeV}/c)^2$, elastic cross section, n-p cross section ratio 3−6101

electron-nucleus reactions
- *for inelastic electron-nucleus scattering, see "electron-nucleus scattering"*
- *see also electron-nucleon interactions; nuclear electron capture*
- conference, medium energy reactions, Pavia, Italy (Sept. 1982) 3−54581
- deep inelastic scatt., longit. response function, test of Noble's hypothesis 3−6216
- electrofission, P-odd effects, P-violation tests 3−36438
- intermediate energy nuclear physics, Verona, Italy (July 1981) 3−44901
- quasi-elastic scatt., distortion effects in imaginary optical potential 3−36410
- y-scaling in quasi-elastic electron scattering by nuclei 3−55032
- (e,d_0) studies in Japan, (γ,d_0) anal. 3−45519
- (e,e′p), knockout reactions, intermediate energies 3−55024
- (e,e′p) on A=6-60 nuclei, proton hole states 3−49717
- (e,e′π), light nuclei, spin-isospin strength distribution effects 3−55037
- (e, e′X), quasielastic scatt., missing longitudinal strength, longitudinal sum rule 3−36411
- (e,eh) h=hadron, particle ejection, weak neutral currents 3−21306
- (e,p) studies in Japan, (γ,p) anal. 3−45519
- (e,π^+) studies in Japan, (γ,π^+) anal. 3−45519
- $\mathrm{eN}\rightarrow\mathrm{e}'\Delta(1236)\mathrm{X}$, zero parameter model calc. within nuclei 3−16714
- ′H(e, π^+)n, pion electroproduction, virtual photon theory, expt. test 3−31392
- ^{10}B(e,π^+e′)^{10}Be, 158.5-165.0 MeV, ang. distrib. and cross section meas. 3−11305
- ^{12}C (e,π^+)^{12}B, pion electroproduction, virtual photon theory, expt. test 3−31392
- ^{12}C(e,π^-)^{12}B, expt. test of virtual photon theory 3−55036
- ^{12}C(e,π^+)^{12}B, expt. test of virtual photon theory 3−55036
- ^{12}C(e,$\pi^{\pm}$), 32 MeV, ^{12}B, ^{12}N discrete isobaric analogue states, π ang. distrib. cross sections 3−45456
- ^{63}Cu(e,2n), 14-34 MeV, virtual photon anal. accuracy deduction of (γ,2n) cross section 3−16765
- ^{65}Cu(e,α), 14-34 MeV, DWBA and virtual photon spectra anal., deduction of (γ,α) cross section 3−16765
- ^{65}Cu(e,p_0), 13-28 MeV, E2 strength distrib., isoscalar giant quadrupole resonance 3−55028
- ^{2}H(e, ep), parity nonconservation in electrodisintegration 3−41022
- ^{2}H(e,e′n)^{1}H, near break-up threshold at high momentum transfer, exchange effects 3−31219
- ^{2}H(e,e′p), exclusive electrodisintegration of few-body nuclear systems 3−55030
- ^{2}H(e,e′pn), exchange currents, near threshold at high momentum transfer 3−55031
- ^{2}H(e,p)n, <300 MeV, virtual photon concept in electrodisintegration 3−26235
- ^{3}He(e, e′p), 643, 806 MeV, quasielastic scatt., nucl. structure and NN interaction studies 3−31393
- ^{3}He(e,eX), quasielastic scatt., PWIA anal. 3−45521
- ^{3}He(e,e′p), exclusive electrodisintegration of few-body nuclear systems 3−55030
- ^{3}He(e,e′p), quasifree reaction, proton momentum distrib. 3−765
- ^{24}Mg(e,e′ϕ^+)^{24}Na, existence of φ low mass pseudoscalar meson 3−45520
- ^{A}U(e,f), A=233, 235, 236, 238, electrofission study *(Russian)* 3−11352
- ^{A}U(e,f), A=234, 236, 238, ang. distrib. and E2 strength functions 3−6271
- ^{238}U(e,f), fission decay probabilities and electrofission cross sections 3−41006

electron-nucleus scattering
- *see also electron-nucleon scattering*
- inclusive scattering and medium effects 3−55033
- intermediate energy nuclear physics, Verona, Italy (July 1981) 3−44901
- medium mass nuclei, electron scattering in the interacting boson model 3−54968
- PWBA, virtual photon spectrum calc. from electron induced cross sections 3−55018
- relativistic, virtual photon spectrum, second-order Born approx. 3−45522
- tensor correlations in inclusive electron scatt. processes 3−55000
- (e,e), high multipolarity mag. scatt. on ^{49}Ti, ^{51}V, ^{87}Sr, ^{93}Nb, valence orbit shape determ. 3−45524
- (e,e), wave functions, precise radii, muonic atom transitions, QED test 3−687
- (e,e) on ^{40}Ca, ^{58}Ni, ^{116}Sn, ^{124}Sn, ^{208}Pb, charge distrib. meas. 3−45524
- (e,e′), charge and current transition densities 3−49840
- (e,e′), cross section calc. in interaction time approx. framework 3−11239
- (e,e′), nucl. constituents study from electron scatt. 3−49843
- (e,e′) in medium and heavy nuclei, high spin mag. observables 3−49839
- (e, e′N), quasi-elastic scatt. anal. in plane wave impulse approx. 3−31391
- Au (e, eγ) X, computation of bremsstrahlung at 0°, partial wave calculations 3−49838
- ^{11}B(e, e), elastic backscatt., second Born approx. interference corrections 3−41021
- ^{9}Be(e, e), elastic backscatt., second Born approx. interference corrections 3−41021
- ^{209}Bi(e,e), mag. form factor, polarisation effects 3−752
- ^{12}C(e,e′), Coulomb sum rule 3−55034

electron-nucleus scattering continued
- ^{12}C(e,e′), magnetic dipole transitions and isospin mixing meas. using DALINAC 3−45523
- ^{12}C(e,e), 4-10 MeV, application of second order monopole deformation, form factors from Born approx. 3−6174
- ^{A}Ca(e, e), A=40, 48, elastic scatt., radial distrib. of nucleons 3−49841
- ^{48}Ca(e,e′), 30-58 MeV, M1 strength distrib. shape and magnitude for N=28 isotones 3−716
- ^{A}Cr(e,e), 30-400 MeV, A=50,52,54, elastic and inelastic, charge distrib., form factors 3−31283
- ^{52}Cr(e,e′), 30-58 MeV, M1 strength distrib. shape and magnitude for N=28 isotones 3−716
- ^{54}Fe(e,e′), 30-58 MeV, M1 strength distrib. shape and magnitude for N=28 isotones 3−716
- ^{A}Ge(e,e), A=70, 72, 74, 76, elastic and inelastic scatt. cross section 3−49841
- ^{2}H(e,e′), nuclear scaling in inelastic scatt. 3−11303
- ^{2}H(e,e′), parity violating EM form factor, magnetisation and convection current 3−26192
- ^{2}H(e,e), mesonic degrees of freedom investigation 3−45524
- ^{2}H(e,e), polarisation effects, one-photon exchange approx. 3−11189
- ^{2}H(e^-,e), recoil d polarisation, relativistic impulse approx. calc., form factors, NN forces 3−6211
- ^{3}H(e,e), mesonic degrees of freedom investigation 3−45524
- ^{3}He(e,e′), 185-380 MeV, mag. form factor, charge radius 3−31282
- ^{3}He(e,e), elastic mag. form factor meas. 3−685
- ^{4}He(e,e), continuum RPA with finite range interaction 3−54972
- ^{A}He(e,e′), A=3, 4, nuclear scaling in inelastic scatt. 3−11303
- ^{A}He(e,e′), A=3,4, inclusive inelastic scatt. cross section meas. 3−11304
- ^{165}Ho(e,e), form factors, spin magnetisation and orbital current density distrib. 3−36316
- ^{39}K(e,e), mag. form factor, core pol. and mesonic exchange current effects 3−31280
- ^{7}Li(e,e′), 40-74 MeV, 0.478 MeV transition, width, form factor 3−717
- ^{24}Mg(e,e′), inelastic form factors, transition strengths between 0^+ and 1^+ states 3−55029
- ^{58}Ni(e,e′), electric multiple strengths distrib., DWBA form factors 3−55035
- ^{A}Pb(e,e′), A=207, 208 mag. form factor, polarisation effects 3−752
- ^{206}Pb(e,e), 3s radial wave function in independent-particle shell model 3−766
- ^{206}Pb(e,e), 502 MeV, elastic scatt. cross section, 3s proton orbit determ. 3−49842
- ^{208}Pb(e,e′), 5.846 MeV, proton and neutron spin-flip contrib. to $J^{\pi}=1^+$ state electroexcitation 3−31284
- ^{208}Pb(e,e′), noncollective and high lying collective M 1 states, DWBA calcs. 3−6141
- ^{152}Sm(e,e), charge distrib. meas. 3−45524
- ^{A}Sn(e,e), 500 MeV, A=116, 124, cross sections, charge density distribs. 3−21215
- ^{88}Sr(e, e), E2 transition densities and proton shell structure 3−31395
- ^{181}Ta(e,e), form factors, spin magnetisation and orbital current density distrib. 3−36316
- ^{50}Ti(e,e′), 30-58 MeV, M1 strength distrib. shape and magnitude for N=28 isotones 3−716
- ^{205}Tl(e,e), 3s radial wave function in independent-particle shell model 3−766
- ^{205}Tl(e,e), 502 MeV, elastic scatt. cross section, 3s proton orbit determ. 3−49842
- ^{89}Y(e,e), E2 transition densities and proton shell structure 3−31395
- ^{90}Zr(e,e′), 37.2, 60.6 MeV, low multipolarity mag. transitions 3−767
- ^{90}Zr(e,e), E2 transition densities and proton shell structure 3−31395

electron optics
- *see also beta-ray spectrometers; electron beams; electrostatic lenses; ion optics; magnetic lenses; particle optics*
- aberration coefficients, third order, depend. on object position *(German)* 3−17427
- aberration coefficients in relativistic case, derivation, ALGOL program 3−32292
- Aharonov-Bohm effect obs. by electron holography 3−20680
- astigmatic lenses with planar electrodes, electron-optical props. 3−17430
- Auger spectrometer, electron-optical system with cylindrical mirror 3−40724
- axisymmetric electron-optical systems for electron beam shaping 3−6864
- beam deflector magnetic field anal. using boundary integral method 3−56129
- biplanar electrostatic lenses, pot. distrib. study 3−32291
- biplanar lens, symmetric single section, focusing props. 3−41750
- bipolar electrostatic lenses, focusing properties, right-angle model 3−46153
- charged particle beam deflection and focusing in electrostatic transaxial system 3−32290
- charged-particle energy analyzers, transmission function determination, analytical treatment 3−1120
- combined scanning electron beam system, dynamic aberration correction 3−1543
- crossed lenses, electrode shape effect on electron-optics props. 3−17429
- crossed lenses, freq. contrast characts. 3−1544
- electron-wave detectors with low current density beams, dynamical transverse scatt. effects 3−1542
- electrostatic lenses, astigmatic, cylindrical, cardinal elements, approx. formulas 3−50598
- electrostatic lenses, three-element, magnification and focal props. meas. 3−12061
- electrostatic system with cylindrical and spherical mirrors 3−50597
- electrostatic sytems with plane of symmetry, aberrations 3−32262
- envelope of beam with paraxial path and arbitrary phase contours 3−41749
- field electron source, electric field and trajectories, space charge effect, numerical analysis 3−45250
- field emission optical system, spherical and chromatic aberration addition for electron lens pair 3−46151
- Fourier holography reconstruction conditions and resolution in electron microscopy 3−25993
- geometrical optics and aberrations, Lie algebraic theory, comment on similarity to known results in electron optics 3−32305
- high-current electron beam form. in vacuum diode, appl. to laser pumping 3−32296
- holography, off-axis image prod. with mixed type interferometer 3−46150

electron optics continued
- holography employing a coherent quasi-cylindrical illumination wave for electron microscopy 3—25992
- holography in electron microscopy, conf., Hamburg, Germany (Aug. 1982) 3—25696
- image reconstruction of weak phase-amplitude object, statistical analysis 3—45251
- magnetic coaxial lens system for electron beams 3—41369
- microscope hologram, interferometrical processing, photographic noise problem *(German)* 3—46182
- microwave cavity lens primary (second-order) aberration calc., computer-aided methods 3—26928
- monochromator, trochoidal, resolution improvement 3—469
- numerical modelling of electric fields, optimal discretisation *(Polish)* 3—17424
- paraxial ray equation, axial field distribs. and analytical solns. 3—12062
- periodic electrostatic focusing with finite-thickness electrodes, boundary electron paths calc. 3—50596
- phase contrast improvement in interferometric holographic reconstructions under nearly dark field conditions 3—25991
- probe for charge neutralisation studies, of heavy ion beams 3—31861
- relativistic electron beams, EM waves in noncompensated high current beams 3—21984
- relativistic equation of motion of electron stream, solns. 3—11556
- resolution and contrast in the electron microscope, historical review 3—17425
- rotating relativistic electron rings, change in motion after interaction with cavity field 3—6863
- scanning electron beam system, dynamic aberration corrections *(Chinese)* 3—41747
- scanning electron-probe instrument design 3—30967
- wide-angle colour TV picture tubes 3—26930

electron pair annihilation *see electron-positron interactions*

electron pair production
- crystal assisted pair-creation process using channelling 3—57005
- crystals, e^+e^- photoproduction, direct and inverse electron bremsstrahlung 3—38972
- heavy ion+U target atom collisions, direct pair prod. 3—45830
- pregalactic stars, nucleosynthesis in pair creation supernovae rel. to pregalactic metal enrichment 3—54450
- e^+e^-, $\mu^+\mu^-$ and $\tau^+\tau^-$ pair prod. via virtual-photon exchange in uniform mag. field 3—21057
- (γ, e^+e^-), polarised electron bremsstrahlung, differntial cross section 3—36404
- $^{10}B(\vec{\gamma}, \vec{e}^+\vec{e}^-)$, photoprod. in nuclear field, P-odd polarisation phenomena 3—41016
- $^{12}C(\vec{\gamma}, \vec{e}^+\vec{e}^-)$, photoprod. in nuclear field, P-odd polarisation phenomena 3—41016

electron pairs
- *see also electron pair production; positronium*
- No entries

electron paramagnetic resonance *see paramagnetic resonance*

electron-phonon interactions
- *see also phonon drag; strong-coupling superconductors; tunnelling spectra; tunnelling spectroscopy; Umklapp process*
- 1-D system, electron trapping by lattice solitary waves 3—23003
- alkali metals, point-contact electron phonon spectral functions and coupling parameters 3—8159
- alloys, amorphous, thermopower enhancement, Eliashberg function 3—13803
- amorphous superconductors, phonon spectrum parameters and Hall coeffs. *(Chinese)* 3—28465
- bound polaron energy level calcs. 3—28285
- CDW, dielec. function and cond. in precritical region, for distorted one-dimensional electron-phonon system 3—23298
- chalcogenide glasses, absorption edge, photoluminescence and photoconductivity, review *(Japanese)* 3—28900
- Chevrel-phase cpds., electron-phonon interactions, isotope effect and tunnelling spectra, book contrib. 3—8160
- collective effects in solids and liquids, book 3—10538
- crystal T-matrix, temp. depend. 3—3146
- crystalline solids, phonon interactions, neutron spectrometry studies 3—51732
- Curie-Weiss low spin susceptibility, electron-phonon interaction effect 3—52345
- deformable lattice, electron, hole and exciton instabilities 3—57047
- dielectric cryst., nonradiative transition of electron excitation energy between impurity centres *(Russian)* 3—52824
- dielectrics, transparent, optical avalanche breakdown, two-photon absorpt. 3—8768
- diphenylmethylenes, visible absorpt. spectra and electron-phonon coupling 3—33375
- direct gap polar semiconductor, luminesc. of hot electrons in high excitation density regime 3—47710
- disordered alloys, thermoelec. power, Chen-Weisz-Sher model, CPA calcs. 3—23364
- disordered systems with strong electron-phonon interaction, optical intraband absorpt. 3—19101
- displacive type ferroelectrics, electron-ionic vibr. coupling const. in vibronic model 3—52744
- distortive phase transitions, phonon-assisted electronic excitation transfer 3—52066
- electroluminescence, prebreakdown, occurrence in weak and strong field limits 3—38918
- electron gas interacting with polar optical phonons, energy-diffusion eqn. 3—23004
- electron-lattice relax., localised electron and tunnelling exciton selftrapping 3—57046
- energy diffusion eqn. for electron gas interacting with polar optical phonons, non-parabolic case 3—43142
- ferroelectric phase transitions, role of quadratic electron-phonon interaction 3—28793
- ferromagnetic metals, elect. resistivity meas., laboratory project 3—5570
- Frohlich polaron, galvanomagnetic phenomena for arbitrary coupling const. 3—23292
- GaN highly excited semiconductors, relax. processes 3—14351
- glass:Nd^{3+}, nonradiative decay rate, composition depend. 3—34139
- graphite intercalation compounds, thermal cond., electronic and lattice contribs. 3—42866

electron-phonon interactions continued
- gyrotropic cryst. circular photogalvanic effects due to electron-phonon interaction 3—13861
- high-resistivity conductors, phonon-controlled cond. theory 3—47322
- high-temperature superconductivity, book 3—10532
- homeopolar cryst., optical absorption coeff., multiphonon processes *(Russian)* 3—3679
- impurity centre, transient spectra, meas. scheme influence *(Russian)* 3—13382
- IV-VI ferroelec. semiconductors, band gap and energy spectra, temp. depend. 3—18617
- Jahn-Teller impurities in crystals, electron-phonon states determ. 3—18659
- Jahn-Teller spectra, semiclassical, optical band shape, method of moments 3—38786
- kinetics of interacting quasiparticles in strong external fields, review 3—33752
- locally coupled electron-phonon systems, numerical renormalisation group approach 3—23002
- luminescing activated crysts., reson. electron-phonon interaction 3—38872
- metal, electron gas, specific heat and effective mass relationships at finite temp. *(Russian)* 3—3093
- metal, magnetoacoustic tilt effect in electron-phonon interactions with finite electron relax. time 3—18753
- metal, optical phonon damping under laser irrad. 3—2716
- metal point contacts, elec. cond. nonlinearity and phonon spectroscopy *(Russian)* 3—38460
- metal point contacts, resistance study 3—3299
- metal valence fluctuators, electron-phonon scatt. 3—28317
- metallic microcontacts, nonlinear cond. in variable elec. field, theory *(Russian)* 3—57411
- metallic point contacts, two-phonon processes of electron scatt. *(Russian)* 3—18416
- metals, 1/f noise, theory 3—57395
- metals, elec. resistivity at low temps. 3—33708
- mixed valence cpds., Raman excitation spectrum and acoustic phonons 3—52083
- molecular chains, autolocalised collective excitations, cubic anharmonicity effect 3—42716
- molecular systems with nonlinear nearest-neighbour interactions, soliton theory of electron motion 3—47277
- noble metal β-phase alloys, martensitic transform. onset 3—24228
- nonohmic conductivity for acoustic-phonon scattering 3—52105
- nonradiative multiphonon transitions, dynamical theory, Landau-Zener formula 3—19170
- nonradiative transitions, transition rates, static and adiabatic base approaches 3—57973
- nontransition metals and alloys, phonon spectrum parameters and Hall coeffs. *(Chinese)* 3—28465
- one-dimensional electron-phonon system, mag. susceptibility calc., small polaron model 3—3030
- one-dimensional fermion systems, Monte Carlo simulations 3—10743
- organic metals, quadratic electron-phonon coupling, mass and freq. renormalisation 3—57045
- perovskite oxide ferroelec. semicond. electron mobility and TO phonon modes 3—43178
- photo echo decay calc. 3—2714
- piezoelectric crystal, exciton motion, lattice vibr. effect, electron-hole interaction 3—23286
- polar media, long-range electron hopping, Condon approx. 3—38380
- polar semiconductor, D^--centre binding energy, effect of free carrier screening 3—43103
- polar semiconductor, electronic charge redistrib. associated with zone-centre phonons, local field effects 3—57044
- polar semiconductor, polarisation charge density around electron in mag. field 3—43043
- polar semiconductors, electron-electron correls. in self-localised two-electron states 3—18630
- polar solids, electron-phonon interaction and dielec. function 3—51736
- polaron effect in Hubbard Hamiltonian renormalisation group method 3—13750
- polyacetylene, Hubbard versus Peierls and Su-Schrieffer-Heger model 3—8428
- polydiacetylenes, polaron states calcs. 3—33649
- polyenes, substituted in rigid matrices, vibronic and electron-phonon coupling 3—50459
- pyroelectric homogeneous semiconductors, thermal excitation anisotropy from impurities and nonequilib. currents 3—47356
- quasi-one-dimensional systems, polarisation energy fluctuations and commensurate-incommensurate cond. 3—3170
- rare earth materials, mixed valence systems, polaron effect, temp. depend. 3—52044
- self-trapping and bonding of particles at weak interaction 3—57302
- semiconductor, disordered, generalised master eqn. for phonon-assisted hopping, DC elec. field effect 3—57343
- semiconductor, intervalley scattering, nonequilib. phonon spectroscopy technique 3—45217
- semiconductor, narrow band-gap, two-band Kane model, large polaron bound states 3—28286
- semiconductor, nondegenerate, hot electrons, absorption coeff. of light 3—3212
- semiconductor, optical phonon damping, laser-cyclotron resonance effect 3—18991
- semiconductor, phonon-assisted carrier transport across a grain boundary 3—28345
- semiconductor, polar, secondary electron-phonon radiation, differential cross section 3—14310
- semiconductor, polaron vel. distrib. in crossed elec. and mag. fields 3—8426
- semiconductor, scattering by ionisation and phonon emission, Monte Carlo calcs. 3—42734
- semiconductor, strongly doped, optical phonon damping under laser irrad. 3—2716
- semiconductor diodes, electrical fluctuations under quasi ballistic electron motion 3—43276
- semiconductor layers of submicron thickness, quasiballistic current flow 3—33809
- semiconductor quantum well structures, quasi-two-dimensional, electron-phonon interaction 3—2715
- semiconductor with superlattice, cond. during electron scatt. by optical phonons 3—23389

electron-phonon interactions continued
- semiconductors, band-edge and intervalley phonons, magnetoresist., magnetophonon reson. study 3—3230
- semiconductors, defect reactions and electron induced lattice relaxations 3—47070
- semiconductors, electrical cond., evolution operator formalism 3—43164
- semiconductors, heavily doped, many-valley, phonon attenuation study 3—22993
- semiconductors, optical phonon resonance scatt. effect on electron energy relax. *(Russian)* 3—23005
- semiconductors, phonon intervalley scatt. at low temp. *(Russian)* 3—47339
- semiconductors, polar, free electron-hole pair contrib. to third-order resonance Raman scatt. of light 3—28864
- semiconductors, trapped electron thermal release by multiphonon processes 3—52176
- semiconductors and oxides, laser induced desorption, surface damage and annealing 3—57229
- semiconductors with doping superlattices, electron-hole excitation energies in subband struct. 3—57402
- semimetals, Shubnikov-de-Haas effect, oscill. amplitudes two-band model 3—38403
- simple metals, transport props. 3—18697
- Su-Schrieffer-Heeger model for 1-D electron-phonon systems 3—38013
- superconducting critical temp., phonon freq. dispersion influence 3—3352
- superconducting phase, reduced electron-phonon hamiltonian, derivation 3—52298
- superconducting surface resistance, inelastic electron-phonon scatt. influence 3—28477
- superconductivity, LMTO study, intrinsic limitation and potentiality 3—38529
- superconductivity of amorphous metals, Green's function theory *(Russian)* 3—57461
- superconductor impure anisotropic, crit. temp. Eliashberg eqns. 3—8609
- superconductors, electronic sp. ht. and electron-phonon coupling const., data compilation 3—5505
- superconductors, phonon and magnon instability in strong elec. field 3—47069
- surface photogalvanic effect due to free carriers 3—3254
- surface polaron discontinuity 3—33650
- TCNQ salt, TEA(TCNQ)$_2$, lattice dynamics 3—18409
- ternary compounds, superconductivity, struct., electronic and lattice props., book 3—5515
- tetramethylsilane, liquid, injected electrons Hall mobility, room temp. meas. 3—38404
- thermo field dynamics and condensed states, book 3—10535
- trans-polyacetylene, Frank-Condon approach to Raman scatt. and optical absorpt. 3—34109
- trans-polyacetylene, quasi1-D system, polaron excitations 3—28284
- transition metal alloys, disordered electron-phonon interaction 3—13381
- transition metal cpds., phonon anomalies, supercond. CDW system, Raman study, book contrib. 3—3745
- transition metal halides, Raman scatt. from electronic and mag. excitations, book contrib. 3—3743
- transition metals, electron-paramagnon coupling parameters, supercond. tunnelling studies 3—52439
- tunnelling relaxation 3—52228
- two-dimensional electron lattice with phonon interactions, drag calcs. for MIS struct. 3—2717
- uniaxial ferromagnetic metals, anisotropic effects on spin fluctuation thermoelec. power 3—43157
- valence instability, phonon-induced f-d hybridisation effects 3—57317
- weak-coupling superconductor with paramag. impurities, functional derivative of transition temp. to electron-phonon spectral function 3—57458
- IT-TiS$_2$(Se$_2$), layered, electron-lattice interactions and struct. phase transitions, review *(Japanese)* 3—28099
- Ag, electron-phonon scatt. rate for Fermi surface, time-of-flight effect meas. 3—38287
- Ag, microcontact spectroscopy study *(Russian)* 3—2713
- Ag, specific heat, S-electron effective thermal mass, electron-electron and electron-phonon interaction *(Chinese)* 3—51816
- Al/AlO$_x$/Pb junctions, inelastic electron tunneling, barrier prep. effects 3—23502
- Al-Ag(Ga)(Ge), dil., magnetoresist., low-field, anisotropic relax. time effect 3—13802
- As-based chalcogenide glasses, photoinduced struct. changes, IR absorpt., Urbach tail features 3—52804
- Au, microcontact spectroscopy study *(Russian)* 3—2713
- Au, specific heat, S-electron effective thermal mass, electron-electron and electron-phonon interaction *(Chinese)* 3—51816
- Au-GaP structure, photocurrent due to electron emission from metal, elec. field effect 3—38434
- Au-Ni, phonon dispersion and thermodynamic props. 3—14557
- BaPb$_{1-x}$Bi$_x$O$_3$, superconducting and normal elec. props. meas. *(Japanese)* 3—38560
- Bi, semimetal, magnetoresistance and magnetothermoEMF, variational calc. 3—3231
- Bi$_{10}$SiO$_{20}$:Nd^{3+}, absorption spectra, vibronic struct. 3—34131
- C, dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
- C, incompletely graphitised, Raman scattering model 3—34082
- CaF$_2$:Eu^{2+}(Sm^{2+}), reson. electron-phonon interaction, luminesc. study 3—38872
- CdS, absorpt. and stimulated emission processes, electron-phonon interaction influence 3—8852
- CdS, dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
- CdS, ultrasonic amplification under uniaxial deformation, electron-phonon interaction 3—8538
- Ce$_{1-x}$Al$_x$, metallic glass, thermal conductivity study 3—18677
- ITCrSe$_2$, layered, electron-lattice interactions and struct. phase transitions, review *(Japanese)* 3—28099
- Cu, specific heat, S-electron effective thermal mass, electron-electron and electron-phonon interaction *(Chinese)* 3—51816
- Cu$_3$Au, point-contact spectra of electron-phonon interactions *(Russian)* 3—13380
- Cu$_2$O, excitonic absorpt. lines, isotopic shift 3—14328
- Cu$_{0.46}$Zr$_{0.54}$, supercond. glossy, struct. relax., sp.ht. and X-ray diffr. meas. 3—22791
- EuO, carrier mobility, mag. spin, acoustic phonon and impurity scattering 3—3195
- FeTiH$_x$ (x=1, 2), electronic props. 3—38294

electron-phonon interactions continued
- Ga$_{1-x}$Al$_x$As, electron mobility and deformation pots, meas. in X-conduction band minima 3—18703
- GaAs, electron capture by multiphonon emission at native levels 3—3106
- GaAs heterolayer, hot electrons, phonon scattering 3—8499
- GaAs heterostructure, polaron effective mass 3—47278
- GaAs highly excited semiconductors, relax. processes 3—14351
- GaAs, picosecond dynamics of optical gain due to electron-hole plasma, under near band gap excitation 3—47688
- GaAs:Fe^{2+}, photons and phonons stimulated emission study 3—52809
- GaAs/AlGaAs heterostructures, two-dimens. electron gas, magnetophonon reson. 3—23479
- Ga$_{0.47}$In$_{0.53}$As, single longitudinal-mode optical phonon scatt. obs. 3—47334
- Ga$_x$In$_{1-x}$P, electron-phonon interaction effects, refl. and photoluminesc. spectra 3—3764
- GaP, indirect exciton, lineshape and electron-phonon coupling 3—38313
- GaP, zero-phonon recombination spectra of donor-acceptor pairs 3—28891
- n-GaSb, elastic consts. meas., electronic effects 3—33335
- GaSe, picosec. relax. kinetics of highly photogenerated carriers 3—38913
- n-Ge, Benedicks thermo-emf meas. 3—47375
- Ge, dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
- p-Ge, galvanomagnetic effects, hole distrib. functions 3—43207
- n-Ge, heavily doped, many-valley, phonon attenuation study 3—22993
- Ge, hot hole noise at liq. He temps., expt. and Monte Carlo calc. 3—13874
- Ge-based chalcogenide glasses, photoinduced struct. changes, IR absorpt., Urbach tail features 3—52804
- Hg$_{3-\delta}$AsF$_6$, magnetoresistance calcs. *(Russian)* 3—8513
- Hg$_{3-\delta}$AsF$_6$, quasi-one-dimens., low temp. elec. cond., electron-phonon scatt., theory *(Russian)* 3—3172
- In$_{0.72}$Ga$_{0.28}$As$_{0.6}$ P$_{0.4}$, hot carrier multiphonon scatt., 1.3 μm photoluminesc. study 3—38886
- In$_{1-x}$Ga$_x$As$_y$P$_{1-y}$, material parameters derivation from linear interpolation scheme 3—33632
- InSb, electron energy relaxation by neutral donor impurities in quantising mag. fields 3—57361
- InSb MOS struct., magneto-polarons in two-dimens. electron inversion layer 3—52263
- n-InSb, noise and diffusion of hot electrons 3—57356
- K, electron quasiparticle mass, press. depend. 3—43002
- K, lattice imperfection influence on elec. cond. 3—13797
- K microbridges, electron-phonon interaction function, pseudopot. calc. *(Russian)* 3—47068
- KBr:Pb^{2+}, obtical absorpt. and mag. circular dichroism 3—34129
- KBr(I):Pb^{2+}, absorption and stress-induced dichroism in Pb^{2+} centre A bands 3—52805
- KCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3—14330
- La, superconducting, thermodynamics 3—57471
- La, superconductivity, electron-phonon interaction *(Chinese)* 3—52289
- LiTmF$_4$, lattice dynamics and electron-phonon interactions 3—42722
- Mg, electron-phonon interactions, inelastic neutron scatt. study 3—28070
- Mo ternary chalcogenide superconductors, lattice dynamics, neutron scatt. studies, book contrib. 3—8158
- Mo, US absorption and relaxation, microplastic deformation effects *(Russian)* 3—57035
- Na, electron quasiparticle mass, press. depend. 3—43002
- Na microbridges, electron-phonon interaction function, pseudopot. calc. *(Russian)* 3—47068
- Nb-Mo, Fermi surface and electron-phonon mass enhancement 3—3037
- Nb$_3$Ir(Pt)(Au), electronic struct., superconductivity and spin fluctuations 3—38299
- NbSe$_3$, quasi I-D metallic cond., phonon drag and elec. props. 3—33713
- Nb$_3$Sn(Sb), E$_g$ optical phonon damping by interband electronic excitations, Raman scatt. study 3—57926
- (Nb$_{1-x}$Ta$_x$)$_{55}$Rh$_{45}$(Ir$_{45}$), metallic glasses, superconducting T$_c$ press. depend. 3—43313
- Ni-Zr alloys, band struct., specific heat, mag. props. 3—13715
- Pb$_{1-x}$Ge$_x$Te narrow band-gap ferroelec. semicond., absorption edge near phase transition 3—34061
- PbS-PbSe(Te) solid solutions, electronic density of states effective mass 3—57262
- PbSe-like semiconductors, second-order Auger recomb. processes 3—43201
- RbBr(I):Pb^{2+}, absorption and stress-induced dichroism in Pb^{2+} centre A bands 3—52805
- RbCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3—14330
- SRO:Cu^{2+}, impurity states, EPR spectra 3—43428
- Si (111), electron-phonon scatt. self energy in nonperiodic systems 3—42735
- Si (111) inversion layer, hot electron effect at low temps. 3—28439
- p-Si, acoustic phonon limited cond. and Hall mobilities, deform. pot. theory calcs. 3—47366
- Si, dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
- Si, Hall coeff. and conductivity mobility, acoustic phonon scatt. 3—8512
- Si MOSFET, electron mobility and electron-phonon interaction study by negative magnetoresist. expts. 3—23486
- Si:Fe,B, interstitial-substitutional pairs, electronically controlled reactions 3—43079
- Si:P, phonon scatt. study using heat pulse technique 3—18417
- Si-Ge modified alloys, long-term cross-doping effect models 3—14982
- SiO$_2$, electron attenuation in cond. band, Monte Carlo calc. 3—43171
- SrTiO$_3$, ultrasonic amplification under uniaxial deformation, electron-phonon interaction 3—8538
- Ta alloys thermal cond., phonon and electron components, elec. resist. and Seebeck coeff. 3—3157
- Ta, thermal cond., phonon and electron components, elec. resist. and Seebeck coeff. 3—3157
- TaSe$_2$(2H), Raman scatt. from orthorhombic CDW state 3—52793
- TbVO$_4$, cooperative Jahn-Teller phase transition, fluctuation dynamics, Brillouin scatt. study 3—47665
- Ti, ht. capacity, lattice vibrs. and electronic contrib. 3—2833
- TiO$_2$:Nb, H, elec. cond., Hall effect and carrier scatt. 3—47344
- V, elec. resist. meas., electron-electron scatt. and other mechanisms 3—8477
- V-oxide-Au tunnel junctions, tunnelling density of states 3—3390
- V$_3$Ir(Pt)(Au), electronic struct., superconductivity and spin fluctuations 3—38299

electron-phonon interactions continued
V_2O_3, optical absorpt. spectrum, electron interaction effects *(Russian)* 3−28879
V_2O_3:Cr, metal-insulator transition, ^{18}O substitution effects, expt. study 3−3065
IT-VSe_2, layered, electron-lattice interactions and struct. phase transitions, review *(Japanese)* 3−28099
V_3Si, proton irrad., phonon density of states, Raman scatt. study 3−57925
$V_3Si(Ge)$, E_g optical phonon damping by interband electronic excitations, Raman scatt. study 3−57926
$V_2Zr_{0.5}Hf_{0.3}Ta_{0.2}$, C-15 supercond., sp. ht. meas. at low temps. *(Chinese)* 3−13954
$YAlO_3:R^{3+}$ (R=rare earth ion), nonradiative transitions caused by nonlinear electron-phonon interaction 3−3089
Zn_3P_2, elec. cond., Hall effect and acceptor levels 3−18702
ZnSe, electronic charge redistrib. associated with zone-centre phonons, local field effects 3−57044
ZnSe, zero-phonon recombination spectra of donor-acceptor pairs 3−28891
Zr-Nb, Fermi surface and electron-phonon mass enhancement 3−3037
$Zr_{70}Cu_{30}$, amorphous, phonon thermal cond. 3÷57152
$(Zr_{0.5}Hf_{0.5-x}TA_x)V_2$ and $(Zr_{0.5-x}Hf_{0.5}Nb_x)V_2$, C-15 Laves phases, supercond. transition temp., press. dependence meas. *(Chinese)* 3−18808

electron-positron inclusive interactions
annihilation at high energies, review 3−45406
fundamental interactions, summer school, Cargese, Corsica, France (July 1981) 3−44902
gauge theory and particle physics, book 3−5511
gluon fragmentation function, extraction from jet events in e^+e^- annihilation 3−31157
hadron production at CESR 3−36255
hadron production comparison to pp collisions 3−21189
heavy quark production 3−40859
jet production and fragmentation 3−40861
jet production comp. in Kp, pp, e^+e^-, νN, μp interactions 3−21167
multiparticle dynamics, conf., Notre Dame, IN, USA (June, 1981) 3−20581
PETRA recent results 3−21583
QCD, many-parton distrib. and fragmentation functions, appl. to hadron jets 3−36220
scale breaking, particle spectra TASSO results from PETRA 3−36258
soft hadronic multiparticle physics, review 3−21163
$e^+3^-\rightarrow$ hadrons, effects in bag-model of $qq\bar{q}\bar{q}$, s*(980), $\sigma(980)$ 3−26133
$e^+3^-\rightarrow$hadrons $(\mu^+\mu^-,\tau^+\tau^-)$, results from JADE at PETRA 3−36257
$e^-e^+\rightarrow q\bar{q}g$, gluon spin ang. distrib., beam polarisation 3−11196
e^+e^-, 34 GeV, topologically isolated energetic electron prod. 3−26127
e^+e^-, baryon prod., gluon jet props. from KUV calculus and recombination 3−31156
e^+e^-, radiative annihilation to hadrons, differential cross section calc. 3−6112
$e^+e^-\rightarrow Z\rightarrow q\bar{x}$ flavour changing decays, GIM at one loop level 3−36175
$e^+e^-\rightarrow$4 jets, gluon self coupling test 3−26078
e^+e^- annihilation, 30 GeV CM, baryon prod. and charmed-quark fragmentation function 3−21145
e^+e^- annihilation, 3.8-6.7 GeV CM, D-meson prod. cross section 3−16651
e^+e^- annihilation, baryon-antibaryon prod., fire-string decay at high energies 3−54918
e^+e^- annihilation, charged hadrons correl. in quark and gluon jets in perturbative QCD *(Russian)* 3−21142
e^+e^- annihilation, charged-particle inclusive cross section anal. including QCD higher-order correction 3−40918
e^+e^- annihilation, differential three-jet cross section, QCD and abelian vector theory predictions 3−21144
e^+e^- annihilation, electroweak mixing schemes, weak boson scenarios and prod. cross section 3−21045
e^+e^- annihilation, energy-energy correlation; $O(\alpha_s)^2$ calc. in QCD framework 3−26125
e^+e^- annihilation, evolution of short distance phase space quanta into hadron jets 3−16654
e^+e^- annihilation, hadron prod., single gluon contrib. 3−646
e^+e^- annihilation, hadronic final states from MARK II detector at PEP 3−31225
e^+e^- annihilation, Higgs bosons and heavy flavours prod. at LEP 3−21143
e^+e^- annihilation, inclusive hadron prod., scale breaking obs. 3−11194
e^+e^- annihilation, inclusive hadron prod., 2nd order QCD effects obs. in PETRA 3−31224
e^+e^- annihilation, kaon, baryon and vector meson prod. 3−31223
e^+e^- annihilation, multihadron prod. 3−647
e^+e^- annihilation, multihadron prod. cross section, inclusive muon prod. rate 3−31194
e^+e^- annihilation, neutral current effects in QCD four-jet prod. 3−54919
e^+e^- annihilation, parton shower production, QCD model 3−45404
e^+e^- annihilation, possibility of finding $b\bar{b}$ state above threshold 3−21126
e^+e^- annihilation, strings and energy-energy correlation, QCD test 3−11161
e^+e^- annihilation, three-jet events in hadronic final states 3−36261
$e^+e^-\rightarrow e^+e^-+$hadrons, photon structure function in high Q^2 region 3−40908
$e^+e^-\rightarrow e^+e^-\gamma\gamma\rightarrow e^+e^-+$twojets$+X$, broken colour gauge analysis 3−36263
$e^+e^-\rightarrow e^+e^-q\bar{q}$, photon-photon collision 3−6126
$e^+e^-\rightarrow e^+e^-x$, x-hadrons, polarised photon structure functions, QCD leading behaviour 3−16639
$e^+e^-\rightarrow ggg$, differential and total cross-sections and Z^0 decay into three-gluons 3−650
$e^+e^-\rightarrow gg\lambda$, gluon jets prod. via Z^0 reson. 3−16653
$e^+e^-\rightarrow\gamma^*\rightarrow\psi X$, production rate calcs., 3−36262
$e^+e^-\rightarrow h$ describing QCD jets in leading logarithmic approximation for transitions 3−26132
$e^+e^-\rightarrow\tilde{H}\tilde{H}$, light neutral Higgsino pair prod. at LEP energies 3−31226
$e^+e^-\rightarrow hX$, 22.4 GeV compared to $\bar{p}p$ 3−26166
$e^+e^-\rightarrow$hadrons, 14-34 GeV, $\pi^\pm$,$K^\pm$,$\bar{p}$ and p inclusive prod., yields and composition 3−49693
$e^+e^-\rightarrow$hadrons, 9.5 GeV, cross section meas., Υ and Υ' resonance parameters 3−648

electron-positron inclusive interactions continued
$e^+e^-\rightarrow$hadrons, comparison with $\bar{p}p$ annihilations into charged particles 3−16672
$e^+e^-\rightarrow$hadrons, energy-energy correl. function, perturbative QCD correction 3−21081
$e^+e^-\rightarrow$hadrons, perturbative QCD, large corrections from gluon bremsstrahlung 3−598
$e^+e^-\rightarrow$hadrons, $Q^2\rightarrow A\sqrt{s}$ scaling law at high energies 3−16655
$e^+e^-\rightarrow$hadrons, scaling violations, quark fragmentation, perturbative QCD 3−26130
$e^+e^-\rightarrow$hadrons, strong coupling constant, fragmentation/hadronisation models influence 3−54916
$e^+e^-\rightarrow$hadrons, total cross section higher corrections, electro-strong model, scalar quarks 3−6110
$e^+e^-\rightarrow$hadrons$+\gamma$, direct photon prod. cross section, angle and energy depend. 3−16650
$e^+e^-\rightarrow$jets, Lund Monte Carlo method, computation and comparison with expt. 3−54917
$e^+e^-\rightarrow$jets, pol. beams., ang. distribs., broken colour gauge theory 3−11214
e^+e^- jets, proton and Λ prod. from jet calculus and recombination model 3−16652
$e^+e^-\rightarrow\mu^+\mu^-$, reaction cross-section measurements, comparison with QED predictions 3−40845
e^+e^- physics at very large energies 3−45408
$e^+e^-\rightarrow\Psi(4S)\rightarrow B\bar{B}$, inclusive K^0 prod. at upsilon reson. 3−6109
$e^+e^-\rightarrow q\bar{q}X$, 29 GeV, free quark inclusive search at PEP 3−26126
$e^+e^-\rightarrow q\bar{q}+Ng$, plausability of hadron spectra to produce parton bremsstrahlung 3−26131
$e^+e^-\rightarrow\rho^0X$, 14-34 GeV, differential cross section 3−11195
$e^+e^-\rightarrow$two jets, cross section in QCD 3−11193
$e^+e^-\rightarrow\Upsilon'\rightarrow\gamma\gamma\Upsilon'(\gamma\gamma\Upsilon)$, evidence for $\chi_b{}'$ prod. 3−21136
$e^+e^-\rightarrow\Upsilon(9.46)$ or $\Upsilon'(10.01)$, 7-10 GeV, KNO scaling 3−21146
$e^+e^-\rightarrow VX$, associated heavy vector meson prod. 3−649
$e^+e^4\text{-}\rightarrow H^+H^-$, search for charged Higgs and technipions at PETRA 3−45383
e^+e^-annihilation, strong coupling constant variation from jet energy spread meas. 3−45405
$e^+e^\$$annihilations, multiple prod. phenomena, existence of jets, quark and quark-gluon models 3−40873
s-quark mass, lower bound from e^+e^- and function operator expansion 3−31130
Υ family production, CESR results 3−21584

electron-positron interactions
see also electron-positron inclusive interactions; electron-positron scattering; positron annihilation in liquids and solids
annihilation, conf., Arlington, TX, USA (April 1982) 3−49087
electroweak interactions, conf., Schladming, Austria (February-March 1982) 3−25675
experimental knowledge, review 3−36231
high energy physics conf., Paris, France, (July, 1982) 3−35771
LENA results 3−36254
methane, slow positron scatt., fixed-nuclei approx. calcs. 3−56078
multielectron system, two-photon positron annihilation probability 3−32245
particle physics conf., Nashville, TN, USA (May 1982) 3−30539
perturbative QCD and low-p_T physics 3−6070
small transverse momentum physics 3−21085
D* production MARK II results at PEP 3−36256
$e^++e^-\rightarrow e^+e^-\gamma\gamma\rightarrow e^+e^-q\bar{q}$, large transverse momentum jets in polarised photon-photon collisions 3−16629
e^+e^-, multiplicity distrib., connection between KNO and geometrical scaling 3−36275
$e^+e^-\rightarrow$1.4 to 2.2 GeV vector mesons 3−36259
e^+e^- annihilation, 34.2 GeV, two photon final states, QED anal. 3−54900
e^+e^- annihilation, charged-hadronic multiplicity distrib. for high-mass diffractive states 3−21150
e^+e^- annihilation, free quark search at PEP 3−31222
e^+e^- annihilation, nonradiative and radiative muon pair prod. 3−31194
e^+e^- annihilations, charged particle multiplicity distrib. 3−661
e^+e^- annihilations, electroweak interactions 3−26027
e^+e^- collisions comparison with soft hadronic interactions 3−6123
$e^+e^-\rightarrow\Delta+$gravitino$+$antiphotino, cross sections, detection at PETRA energies 3−11168
$e^+e^-\rightarrow\delta+$photino$+$antiphotino, cross sections, detection at PETRA energies 3−11168
$e^+e^-\rightarrow e^-\mu^++$(heavy leptons), reaction cross-section measurements, comparison with QED predictions 3−40845
$e^+e^-\rightarrow e^+e^-M\bar{M}$, heavy meson prod. cross section in perturbative QCD 3−36200
$e^+e^-\rightarrow e^+e^-(\mu^+\mu^-)(\tau^+\tau^-)(\gamma\gamma)$, 31 GeV QED tests, cutoff parameters, electroweak effects 3−16597
$e^+e^-\rightarrow e^+e^-\eta'$, 2.0-3.7 GeV, $\gamma\gamma$ prod. of η', f(1270), A_2, f′(1515), E(1420) 3−49714
$e^+e^-\rightarrow e^+e^-\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3−6092
$e^+e^-\rightarrow e^+e^-\gamma\gamma\rightarrow e^+e^-f'$, $K\bar{K}$ pair prod. and tensor meson f′(1515) excitation 3−40944
$e^+e^-\rightarrow e^+e^-h$, interference effects of electroweak interaction, photon structure functions 3−26053
$e^+e^-\rightarrow e^+e^-\mu^+\mu^-$, transverse momentum behavior of muons 3−626
$e^+e^-\rightarrow e^+e^-q\bar{q}(e^+e^-g\bar{g})$, two-photon jet expts. anal. in integer charge quark model 3−21093
$e^+e^-\rightarrow e^\pm\tilde{e}^\pm\lambda$ single selectron prod. cross section, mass lower limit 3−628
$e^+e^-\rightarrow e+$heavy lepton, one photon exchange, unified field theory 3−16627
$e^+e^-\rightarrow$exclusive channels, 1.4-1.9 GeV, $\rho'\omega'\phi'$ model interpretation 3−26128
$e^+e^-\rightarrow\tilde{\gamma}\tilde{\gamma}(\tilde{\gamma}\tilde{\gamma}\gamma)$, cross sections, finite mass effects, photons search domain 3−49662
$e^+e^-\rightarrow\gamma\gamma\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3−6092
$e^+e^-\rightarrow h$, cross section ratio to $e^+e^-\rightarrow\mu^+\mu^-$ 3−26101
$e^+e^-\rightarrow l^+l^-$, Glashow-Weinberg-Salam theory of electroweak interactions and neutral currents 3−21051
$e^+e^-\rightarrow\mu^+e^-$, muon number conservation in models with majorana neutrinos *(Russian)* 3−6017
$e^+e^-\rightarrow\mu^+\mu^-$, 14-36.4 GeV CM, total cross section meas. 3−630

electron-positron interactions continued
- $e^+e^- \to \mu^+\mu^-$, electroweak coupling constants, scalar lepton search 3−11167
- $e^+e^- \to \mu^+\mu^-$, forward-backward asymmetry in two-Z-boson electroweak model 3−567
- $e^+e^- \to \mu^+\mu^-$, forward-backward charge asymmetry, MARK-J expt. results 3−36229
- $e^+e^- \to \mu^+\mu^-$, hard bremsstrahlung corrections in standard SU(2)×U(1) model 3−625
- $e^+e^- \to \mu^+\mu^-$, neutral current contrib. to cross sections, review 3−45338
- $e^+e^- \to \mu^+\mu^-$ cross section ratio to $e^+e^- \to h$ 3−26101
- $e^+e^- \to \mu^+\mu^-(\Upsilon^+\Upsilon^-)$, forward-backward asymmetry meas. in lepton pair prod. 3−31224
- $e^+e^- \to \mu^+\mu^-\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3−6092
- $e^+e^- \to \nu\nu$, neutrino distinction and family, total cross sections 3−21113
- $e^+e^- \to \nu\bar{\nu}$, neutrino mag. moment upper limit 3−641
- $e^+e^- \to \pi^-\tau\nu_\tau$, weak pion production, structure functions *(Russian)* 3−40892
- $e^+e^- \to \psi X$, exclusive channel production rates for $(\pi\pi)$, η' and $\iota(1440)$ 3−11198
- $e^+e^- \to q\bar{q}\pi^\pm$, three jet processes, P-odd effects for one-photon mechanisms *(Russian)* 3−11197
- e^+e^- radiative annihilation into pair of arbitrary particles, weak neutral current contrib. 3−21114
- $e^+e^- \to \tau^+\tau^-$, CELLO results at PETRA 3−36230
- $e^+e^- \to \tau^+\tau^-$, τ and quark composite structure from anomalous mag. moment meas. 3−49657
- $e^+e^- \to \tau^+\tau^- \to \pi^+\pi^-\bar{\nu}_\tau\nu_\tau$, $\pi^+\pi^-$ ang. correl. anal. 3−16628
- $e^+e^- \to \Upsilon$ family, CESR results 3−45407
- $e^+e^- \to \Upsilon \to$ hadrons, Υ mass, high precision meas. 3−26129
- $e^+e^- \to W^+W^-$, W-pair prod. in quantum flavour dynamics based on SU(2)×U(1) symmetry 3−629
- $e^+e^- \to Z \to H\mu^+\mu^-$, Higgs boson compositeness resolution 3−49601
- e^+e^- annihilation, 1.4-31.6 GeV, power series for charge multiplicity 3−49692
- $e^+e^- K_S K_L$, 1.06-1.40 GeV, neutral kaon formfactor meas. *(Russian)* 3−6111
- Υ spectroscopy at CESR 3−36260
- NH_3, slow positron scatt., fixed-nuclei approx. calcs. 3−56078

electron-positron scattering
- *see also electron-positron interactions*
- transient amplitudes between Dirac spinors 3−30991
- $e^+e^- \to e^+e^-$, 14-34 GeV, electroweak coupling constants, scalar lepton search 3−11167
- $e^+e^- \to e^+e^-$, neutral current contrib. to cross sections, review 3−45338
- $e^+e^- \to e^+e^-$, polarised Bhabha scatt., higher order QED contrib. 3−54901
- $e^+e^- \to e^+e^-$, reaction cross-section measurements, comparison with QED predictions 3−40845
- $e^+e^- \to e^+e^-(\mu^+\mu^-)(\tau^+\tau^-)(\gamma\gamma)$, 31 GeV QED tests, cutoff parameters, electroweak effects 3−16597

electron probe analysers *see electron probe analysis*

electron probe analysis
- atmospheric particulate matter, chem. element comparison of individual particle and bulk analysis methods 3−15032
- Auger electron spectrometry, basic principles and equipment 3−19484
- Auger scanning electron microscope, quantitative interpretation 3−49513
- bibliography of microscopic equipment, methods, biomedical applications 3−44917
- composite, nonuniform, comp. variations analysis using electron microscope images 3−24430
- deep levels, excitation spectroscopy techniques, review *(French)* 3−33671
- EELS microanalysis, plural inelastic electron scattering 3−53473
- elemental thick targets, Z=50-82, electron impacted, $L\alpha$ X-ray production efficiency meas. 3−52869
- energy dispersive X-ray detector, windowless, on SEM, for quantitative analysis 3−14898
- EXELFS technique in analytical electron microscopy, review 3−14899
- extrapolation method, critical energy determ. 3−9368
- glass particulates, electron probe microanalysis, expt. and Monte Carlo simulation 3−44084
- heterogeneous material, electron microprobe anal., quantitative *(Czech)* 3−14896
- III-V semiconductors, standardless quantitative technique 3−24547
- MAR M 509, Co-base superalloy, low cycle fatigue, high temp., influence of oxidation 3−47939
- metal hydride surface studies, electrons as H probes, review 3−47199
- microbeam analysis, conf., Washington, DC, USA (Aug. 1982) 3−25690
- Monte Carlo calculations for electron scatt. and energy dissipation in solid targets, review 3−14413
- multilayer structures, improved spatial resolution 3−9369
- particle analysis, quantitative, in electron beam instruments, review 3−14907
- particle mixtures, SEM/EDS analysis, errors in overscanning 3−14909
- SEM, ultrahigh vac., for solid surface analysis 3−14906
- SEM and particle analyser design for space applic. 3−15815
- SEM fractography, preservation and cleaning of fractures 3−14826
- SEM/energy dispersive X-ray analysis and image analysis, alternative chem. file structures use 3−14908
- steel, austenitic stainless, Cr-Ni-Mo-Ti, shaped castings, intermetallic phases struct. and props. 3−29114
- steel, stainless/C(Si) magnetron sputtered coatings, comp. anal., electron probe X-ray microanalysis 3−48108
- STEM X-ray microanalysis, spatial resolution considerations 3−14895
- superalloy castings, surface grain refinement investigation *(Chinese)* 3−4001
- surfaces and peripheral coatings, wear anal., SEM obs. *(German, English)* 3−43965
- thin film, electron probe microanal., Monte Carlo code incl. X-ray charact. fluoresc. correction 3−4334
- thin films, chem. analysis techniques *(Hungarian)* 3−39422
- thin films, electron microprobe quantitative anal., Monte Carlo simulation 3−44085
- thin films thickness determ., using Monte Carlo simulation 3−49326
- XPS review, UPS, AES and ion scatt. spectroscopy 3−8940
- α+BZircaloy-2, O-enriched, strain ageing and strain rate sensitivity 3−24306
- Al alloys, high strength, factors influencing fracture toughness 3−53220
- Al electrophoretic coatings on steel 3−24413

electron probe analysis continued
- Al/$TiSi_2$/Si contact system, thermal stability and elec. meas. 3−47227
- Al-Zn, phase equilibrium at elevated temp. *(Japanese)* 3−29062
- Al_2O_3 ceramics, intergranular phases, SEM, TEM and EPMA study 3−14552
- $(As_{13}Te_{24}Si_{27}Sb_{18})_{1-x}Fe_x$ RF sputtered films, struct., elec., and optical props. 3−13649
- Au/Al, diffusion couples, low temp., grain boundary migration and recrystn. 3−38141
- Au-Ge ohmic contacts to GaAs, role of Ge, phys. and elec. meas. 3−33793
- Au-Pt-Pd-Ag-Fe-Sn, dental alloy, internal oxidation, O ion diffusion, Fe_2O_3 and SnO_2 distrib. 3−51854
- BN, cutting tool, wear resist. rel. to binder composition, EPMA obs. *(Japanese)* 3−39256
- BaO-ZnO-Al_2O_3-B_2O_3-SiO_2 optical glass, spangle form. during melting 3−33132
- $BaTiO_3$-$SrTiO_3$ system, sintering, influence of interdiffusion and solid soln. form. 3−14533
- $Ca_5(PO_4)_3OH$, hydroxyapatite, cryst. growth in gel 3−19260
- Co-Si, laser melting, phase segregation, SEM study 3−56962
- Co(-Fe)-O, liq., surface tension, effect of O, wettability of Al_2O_3 *(Japanese)* 3−8303
- CoAsS, cobaltite, cryst. struct., electron microprobe and X-ray study 3−2494
- Cu/Al, diffusion couples, low temp., grain boundary migration and recrystn. 3−38141
- Fe and Fe compounds, X-ray $L_{\alpha 1,2}$ emission lines, chemical shifts meas., electron microprobe anal. appl. 3−8906
- Fe-Al-O system, thermodynamics, 1073 to 1573K 3−58113
- Fe-Si(Mn)(Cr)(Ni)(Cu)(C), reaction with molten Al, form. of alloy layers 3−29060
- $FeAl_3$ and Fe_2Al_5 pack-aluminide coatings on steel, kinetics 3−4201
- Ga liquid-rare earth metal interface, interdiffusion, diffusion couple technique 3−13560
- GaAlAs DH laser, long-lived, Cu identification by SEM, cathodoluminesc., EBIC and electron probe anal. 3−50661
- GaAs MBE films, cryst. defects rel. to fabrication process *(French)* 3−42971
- n-GaAs, nonradiative recomb., electron probe investigation 3−18773
- GaAs:Te, heavily doped crystals influence of polarity on facet effect *(Chinese)* 3−2591
- GaAs-$Al_xGa_{1-x}As$, double heterostructure, comp. profile 3−9369
- n-$Ga_{0.47}In_{0.53}As$, VPE growth and characterisation for microwave applications 3−19281
- Ge/Si interfaces, depth profile and depth resolution evaluation, by KARMA technique 3−51965
- $Ge_{38}As_8I_8$, clathrate semicond., prep., struct. and elec. props. 3−13814
- H adsorbed on surfaces, detection using refl. EELS, review 3−14905
- HgI_2-AgI system, reactional diffusion 3−51867
- InSb, laser annealing, MOS elec. props. and compositional anal. 3−56976
- $(La_{0.8}Ca_{0.2})MnO_3$, cryst. growth by travelling-solvent floating-zone method 3−14477
- MgO-M_2O_3-silicate system (M=Al,Cr,Fe in binary mixture), solid solubility in periclase phase 3−34290
- MgO-ZrO_2-Fe_2O_3 system, phase equilib., X-ray and electron microprobe obs. 3−34289
- $20Na_2O.Al_2O_3.(80\text{-}x)SiO_2$, Cu incorporation by Cu-Na ion exchange 3−33117
- $20Na_2O.10CaO.xAl_2O_3.(70\text{-}x)SiO_2$, Cu incorporation by Cu-Na ion exchange 3−33117
- Nb-V-Ge system, isothermal cross section of phase diagram at 1123K 3−13407
- Nb-W(-Zr) liq. alloys, evaporation kinetics, element distrib., activity coeffs. EPMA study *(Chinese)* 3−33536
- Ni-Co-Cr-Ti-Al superalloys, corrosion in sulphate melt, 1173K, $NaCrS_2$ phase identification 3−53288
- Ni-Cr-W-Co-Ti, chromoaluminised in vac., coating struct. 3−29213
- Ni-Cu-Co ferrite, metallisation by Ti alloy, direct reduction method, appl. to US vibrator 3−34500
- Ni-Si, laser melting, phase segregation, SEM study 3−56962
- NiAsS, gersdorffite, cryst. struct, electron microprobe and X-ray study 3−2495
- ϵ-Pb-Bi films for Josephson junction counterelectrodes, film comp. and thermal stability 3−47237
- Si:As, ion implanted polycryst. low press. CVD film, As lateral diffusivity meas. 3−38125
- Si:H,B(P), amorphous film, in situ doping during homogeneous CVD growth, charact. 3−52967
- TeO_2, paratellurite single crysts. grown by Czochralski technique, impurity microdistrib. 3−13256
- TiB_2-Ni ceramic, struct. and comp., analytical electron microscopy obs. 3−14900
- TiC-Ni(Co) sintered composites, mass transport of molten metals 3−39086
- TiN_xO_y, film on Si, composition and thickness determ. by X-ray and nuclear microanal. 3−42982

electron probe microanalysis *see electron probe analysis*

electron probe microscopy *see electron probe analysis*

electron probes
- *see also electron probe analysis*
- metal hydride surface studies, electrons as H probes, review 3−47199
- rotational mol. mobility in solid phase investig. by oriented-spin-probe method 3−18246
- scanning electron-probe instrument design 3−30967
- SEM probe interaction with target material, TV system comparison 3−10953

electron-proton interactions
- *see also electron-proton scattering*
- $e^+e^- \to e^+e^-(\mu^+\mu^-)(\tau^+\tau^-)$, 22, 34 GeV, electroweak mixing angle, weak neutral current coupling strengths 3−45384
- ep, π production, P violation, Z boson exchange, neutral weak current 3−21141
- $ep \to ep\pi^0$, very low $|q^2|$ values, 1.7-2.1 GeV, cross section 3−45402
- e^-p, selectron and sneutron prod. cross section 3−49689
- $e^-p \to e^-Z^0X$, total cross-section calculation, Z^0 mass 3−26122
- $\tilde{e}^\pm p$, SU(2)×U(1)×U′(1) and SO(10) gauge models, distinguishability from Weinberg-Salam model 3−6041
- $n\nu \rightleftarrows pe$, finite temperature radiative corrections 3−31212

electron-proton scattering
see also electron-proton interactions
$e^+e^- \rightarrow e^+e^-(\mu^+\mu^-)(\tau^+\tau^-)$, 22, 34 GeV, electroweak mixing angle, weak neutral current coupling strengths 3−45384

electron radiation
relativistic electron moving along arc of circle, radiation emission 3−32284
waveguide, electron classical radiation from finite segment of its path 3−46147

electron relaxation time (metals)
A15 compounds, disorder effects on density of states, Fermi vel. and Drude plasma freq. 3−3370
magnetoacoustic tilt effect in electron-phonon interactions with finite electron relax. time 3−18753
Ag film, influence of electric field on weak localisation 3−28453
Ag thin film, magnetoresist. and inelastic scatt. time in weakly localised regime 3−57438
Al, electronic relax. rates, anomalous surface impedance study 3−23365
Al-Ag(Ga)(Ge), dil., magnetoresist., low-field, anisotropic relax. time effect 3−13802
Au film, influence of electric field on weak localisation 3−28453
Au thin film, magnetoresist. and inelastic scatt. time in weakly localised regime 3−57438
Cu, electronic relax. rates, anomalous surface impedance study 3−23365
Cu thin film, localisation phenomena, resistivity and scatt. time study 3−43058
Cu thin film, localisation and scatt. times, magnetoresist. study 3−43297
K, electronic relax. rates, anomalous surface impedance study 3−23365
K, impurity scatt., residual resist. and CDW hypothesis 3−3175

electron relaxation time (semiconductors) *see carrier relaxation time*

electron resists
aldehyde copolymer electron-beam and X-ray resists, self-developing, highly sensitive 3−34623
computer-generated holograms, electron beam written, to test deep aspheric wavefronts 3−6925
diacetylene Langmuir-Blodgett layers for integrated optics 3−37145

electron ring accelerators
collective accel. methods development at Joint Institute for Nucl. Research 3−17118
collective accelerator study by means of synchrotron radiation 3−26507
electron-ring collective accelerator, high freq. props. of electron ring in adhesator 3−50067
intense electron ring dynamics in modified betatron field 3−17140
INUS-2 high-current, HV pulse modulator design 3−1095
neutralised electron beam, refl. from metallic surface, trapping into ring orbit 3−50106
relativistic non-neutral electron ring in modified betatron accelerator, stability props. 3−17113

electron scattering *see elastic scattering of electrons by atoms and molecules; electron beam effects; electron beams; electron-electron interactions; electron-electron scattering; electron impact; electron-nucleon interactions; electron-nucleon scattering; electron-nucleus reactions; electron-nucleus scattering; electron-positron interactions; electron-positron scattering; electron spectra; hadron electroproduction; neutrino-electron interactions; neutrino-electron scattering; secondary emission*

electron solvation *see solvation*

electron spectra
see also Auger effect; conversion electron spectra; electron energy loss spectra; electron impact; electron spectroscopy; photoelectron spectra
n-alkanes, solid, conduction band struct. by electron-transmission spectra 3−47253
carbonyl compounds, oxy, aza and thio groups, electron affinities by electron transmission spectra 3−32193
chalcogenide vitreous semiconductors, Mossbauer and electron spectroscopy studies, review 3−33135
chlorophyll based monolayer and multilayer arrays, optical props. 3−39591
ethylene, plasma-polymerized, dielec. props. and ESR/ESCA studies 3−13938
o-naphthoquinonediazides, electron struct. and spectral props. 3−17225
pentacene, polycryst. films, low energy electron backscatt. 3−43672
Rydberg atoms, field-ionised, obs. on convoy electrons 3−56059
Rydberg atoms and electron transfer to the continuum spectra 3−56060
Rydberg state production in convoy electron expts. 3−56061
sputter profiles convection, electron mean free paths, self-consistent determ. by electron spectroscopic methods 3−43683
tapered-wiggler free-electron laser, electron spectrum meas. 3−56255
$Ar+He^+(H_2^+)$ collision, electron ang. distrib. in electron spectra 3−56034
$CxF(MgF_2)_y$, intercalation compound, prep. at 20-350°C, ESCA and ^{19}F NMR 3−24168
$H^-+He(H_2)(N_2)$, charge exchange to shape reson., detached electron energy spectra 3−50495
HF, dipole oscillator strengths, mol. and dissociative photoionisation studies 3−46024
$HgBr_2$, low-energy electron dissociative attachment, Br-formation 3−26874
Li vapour, inner shell photoemission obs. 3−21737
Mg_2Ni, modified by organic cpds., H_2 absorpt. 3−48089
N_2 adsorbed layer on metals, vibr. struct. of electron resonances 3−57214
Na vapour, inner shell photoemission obs. 3−21737
$Ne+H_2$, thermal energy ionising collisions, mass and electron spectra studies 3−46055
Ne+H(D), using state selected $Ne(3s^3P_2, {}^3P_0)$ metastable atoms, ionisation, electron spectra anal. 3−50509
Ni (111) surface, chemisorbed CO, NO, electronic struct., surface Penning ionisation electron spectra 3−43249
W powders, oxidised layers, comp. and depth for various particle sizes 3−39306
Xe, reson. multiphoton ionis., AC Stark shift as intensity probe 3−55907
Xe solid thin films, struct. temp. depend., electron transmission spectra 3−8913
$Zr_xHF_{1-x}V_2$ superconducting Laves phase, electron spectrum peculiarities , 3−3873

electron spectrometers
see also beta-ray spectrometers
2π, magnetic field paralleliser design and performance 3−50096
Auger, control and data acquisition using Apple II personal computer 3−31870

electron spectrometers continued
Auger electron spectroscopy, metallic surfaces chemical analysis application *(Polish)* 3−29350
Auger spectrometer, electron-optical system with cylindrical mirror 3−40724
bremsstrahlung, momentum-resolved and polarisation-dependent, vacuum UV range 3−31869
CAD for STEM, with high resolution and large acceptance angle 3−49511
charged-particle energy analyzers, transmission function determination, analytical treatment 3−1120
cosmic ray electron spectrometer, appl. to Prognoz-4 meas. in 7 to 40 MeV range 3−15788
cylindrical mirror photoelectron spectrometer with position sensitive detector for X-ray anal. 3−26550
data acquisition and processing, interfocusing AEI/Kratos electron spectrometer to a microcomputer 3−35969
electron energy analyser, transmission function 3−10954
electrostatic charged particle spectrometer 3−26557
field electron energy spectrometer, testing 3−20956
High Resolution Spectrometer at PEP, progress report 3−36613
metal surfaces, adsorption and desorption phenomena investigation *(Polish)* 3−25988
multidetector, electron energy-loss study in 14.8 to 20.3 eV region 3−26873
pair spectrometer for electron-positron pair detection 3−26548
registration system for a secondary electron spectrometer 3−36129
secondary electron beam spectrometer 3−25990
secondary electron detector for scanning electron microscopy of irradiated nuclear fuel 3−10947
secondary electron spectrometer with angular resolution for studying single-crystal surfaces 3−36128
time of flight, 2π, multiphoton ionisation study appls. 3−10938
triple focusing, with pair of sector magnets for in-beam spectroscopy 3−26555
uniform magnetic field spectrometers, second and third order aperture aberrations 3−5917
Si(Au) spectrometer, construction, characteristics *(Chinese)* 3−41400

electron spectroscopy
see also electron spectra; photoelectron spectroscopy
AES intensity and energy calibration, effect of analyser modulation 3−8910
atoms, struct., electron coincidence spectroscopy, HF wavefunctions 3−26857
Auger electron appearance potential spectroscopy *(Japanese)* 3−16450
Auger electron spectrometry, basic principles and equipment 3−19484
Auger electron spectroscopy using Zener diode circuit for background subtraction *(Japanese)* 3−478
Auger spectra recording equipment using quasispherical analyser 3−10946
α-brass, oxidation and dezincification, ESCA study 3−14897
calibration of sample Fermi level 3−52875
conversion electron Mossbauer spectroscopy, film plastic scintillator-sumcoincidence system 3−24543
escape depths of characteristic electrons 3−25986
inner shell electron energy loss spectroscopy, review 3−36853
magnetic disc, fluorocarbon lubricant film thickness determ. by ESCA 3−29341
materials analysis using analytical electron microscopy and Auger electron spectroscopy 3−24545
molecules, electron coincidence spectroscopy, LCAO-MO wavefunctions 3−26857
molecules, electronic polarisability, analysis by X-ray electronic and Auger spectroscopy 3−46095
photodiode arrays, self-scanned, to record 100 keV electrons 3−475
positron lifetime spectrometer, amplitude selection stabilisation in γ-quantum registration channels 3−50229
Rubber to brass bonding mechanism studied by electron microanalysis techniques 3−53356
SEM secondary electron image brightness changes under electron irrad., electron spectroscopy studies 3−10964
Solid-surface electron spectroscopy 3−14410
spark gaps, high energy, materials, chem. and phys. studies 3−27773
surface magnetic order and electron capture spectroscopy 3−57531
CO, ESCA peak intensities in DA and GSA calcs., using Fourier transformed GTOs 3−50292
Cu, polycrystalline, oxidation, ESCA study 3−14897
$Cu_{98}Be_2$, thermal degration, preferential surface migration, ESCA study 3−14897
KCl:Tl, electron trap spectroscopy, exoelectron emission and luminescence meas. by fractional glow technique 3−34204
LiF, electron trap spectroscopy, exoelectron emission and luminescence meas. by fractional glow technique 3−34204
Si solar cell, MIS polycrystalline, study using AES and ESCA *(Chinese)* 3−9428
Si_3N_4 thermal films, LPCVD, characterization by optical methods 3−28914
SiO_2, vitreous glass, dislocation by Na 3−4333
SnO_2 thin films stability following heat treatment at 200°C in air, application in photovoltaic devices 3−34515

electron spin
No entries

electron spin-lattice relaxation
acetate radical pairs, bimol. electron spin relax., time resolved electron spin-echo spectrosc. 3−11839
diamond:Ni, N, cross relax. freezing, spin lattice relax. study 3−18981
9,10-dichloroanthracene, β-phase crysts., triplet exciton motion, EPR study 3−38672
magnetically diluted solids, spin polarisation effect on phase relax. 3−38679
metals, anisotropic, electron spin susceptibility in diffusion regime, appl. to nuclear spin relax. 3−28684
molecular cryst., spin-lattice relax. of excited triplet state due to acoustic phonons 3−18975
naphthalene, triplet-triplet exciton annihilation, effect of spin relax. 3−43034
overlapping paramagnetic species, study using ESR modulation spectrometer 3−57754
overmodulation effects on saturation transfer EPR signals 3−55973
paramagnetic complexes, spin-lattice relax., role of charge-transfer states 3−28688

- **electron spin-lattice relaxation** continued
  - paramagnetic system, nuclear spin relaxation, slow motion problem for electron spin relaxation 3–43450
  - polyacetylene, paramagnetic defects, time resolved ESR studies 3–57776
  - quartz, EPR study of spin-lattice relax. of O^-(Al)-centres *(Russian)* 3–47550
  - Rochelle salt, electron spin-lattice relax. at ferroelec. transition 3–23791
  - ruby, electron spin-lattice relax. rates and thermal equilib. under high mag. fields, conc. depend. 3–57759
  - s-d spin glasses, nonlinear magnetisation and instability 3–43377
  - spin-systems, dipolar-coupled homonuclear, paramag. relax. 3–1395
  - predeuterated-tempone, temp.-depend. EPR relax. studies, solvent effects 3–3536
  - predeuterated-tempone dissolved in toluene-d_8, press.-depend. EPR relax. study 3–3537
  - trimethylammonium cobalt manganese chloride, ESR studies 3–52609
  - tris-sarcosine calcium choride:Mn^{2+}, electron spin-lattice relax. at ferroelec. transition 3–23791
  - $BaFeSi_4O_{10}$, gillespite, Fe^{2+} Mossbauer spectrum, mag. relax. effects obs. 3–3609
  - GaP, optical detect. of ESR and electron spin-lattice relax. 3–38725
  - ^3He-^4He liq. mixture, negative ions, ESR relax. time and g-factor studies 3–51886
  - KH_2AsO_4:AsO_4^{4-}, electron spin-lattice relax. at ferroelec. transition 3–23791
  - K_2MnF_4:Fe, antiferromag., EPR linewidth and spin-lattice relax. 3–57762
  - $La_xCe_{1-x}F_3$:Gd^{3+}, EPR linewidth study 3–43431
  - $LiYF_4$:Er^{3+}, Orbach spin-lattice relax. under phonon bottleneck conditions, effect of secondary reson. scatt. of phonons 3–28698
  - $MgCO_3$:Fe^{2+}, slow spin relax, Mossbauer study 3–38730
  - $PbMoO_4$:Cr, ESR study of [CrO_4Pb_8] centre 3–14122
  - Si, photoconductivity and ESR study of spin-dependent recombination at dislocations 3–38432
  - Si:H, amorphous, recombination, spin depend., ODMR study 3–3594
  - SrF_2:Yb^{3+}, trigonal centre, electron spin-lattice relaxation and g-factors 3–14125
  - TGS, electron spin-lattice relax. at ferroelec. transition 3–23791
  - TiO_2:V^{4+}, spectral diffusion of V^{4+} and spin lattice relax., electron spin-echo study 3–52617
  - VO^{2+} in tutton salts, EPR, host lattice effects 3–57756
  - V_2O_5:V^{4+}, amorphous, electron spin-lattice relax. study 3–28691
  - $(Y_{1-x}R_x)Rh_4B_4$ (R=rare earth) mag. superconductors, spin dynamics 3–52499

- **electron spin polarisation**
  - *see also CIDEP; spin polarised electron emission*
  - beams, radiative self-polarization in storage ring, theory 3–31864
  - 9,10-dichloroanthracene, β-phase crysts., triplet exciton motion, EPR study 3–38672
  - ferromagnetic metal surfaces, electron spin polarisation techniques, review 3–28516
  - ferromagnetic semiconductor, conduction electron self-energy effects 3–52031
  - magnetic surface chemisorption energy, spin-and-charge-polarisation effect 3–57208
  - magnetically diluted solids, spin polarisation effect on phase relax. 3–38679
  - quinoxaline, ESR spectra, overlapping, separation by time-resolved spectroscopy, implications for CIDEP spectra 3–50439
  - relativistic electrons and photons, polarization, theory 3–45426
  - semiconductors, nuclear spin system reson. cooling on optical orientation of electrons, theory *(Russian)* 3–3139
  - singlet ground state systems, electronic and nucl. magnetism 3–38568
  - superconductor, homogeneous NMR line shift induced by mag. doping 3–13959
  - superconductor, NMR line shift in presence of paramag. impurities 3–28481
  - surface magnetism, spin polarised electron scatt. studies 3–57530
  - Al-Ni tunnel junctions, spin states resolution, cond. meas. 3–8628
  - Cs, oscillator strengths, atomic cone polarisation influence on multiphoton processes 3–41541
  - D, adsorbed on liq. He, dynamical stability 3–38163
  - D, spin polarised quantum gas, transport props. 3–28191
  - D, spin-polarised, review 3–13588
  - D, spin-polarised, stabilisation 3–13589
  - EuO(S)(Se)(Te), ferromag. interactions, indirect exchange mediated by spin polarisation of chalcogen electrons 3–57577
  - EuS, feromagnetic semiconductor, conduction electron self-energy effects 3–52031
  - Fe (110) epitaxial film on W (110) ribbon, spin polarised electron scatt. 3–23751
  - Fe, surface (110) magnetism from polarized electron scatt. 3–18969
  - Fe(110) surface ferromag., exchange scatt. of spin polarised electrons 3–57711
  - H, conference on condensed matter techniques and materials, Argonne Nat. Lab., Argonne, IL, USA (Sept. 1981) 3–10514
  - H, doubly spin polarised, hyperfine states, ESR study 3–33535
  - H, spin polarised, Bose-Einstein condensation and superfluidity 3–28192
  - H, spin polarised, order parameter relax. and quasiparticle scatt. time 3–171
  - H, spin polarised quantum gas, transport props. 3–28191
  - H, spin-polarised, review 3–13588
  - H, spin-polarised, stabilisation and adsorption on ^3He surface 3–13589
  - H, sticking of spin polarised atoms to ^4He surface 3–38146
  - ^3He, spin polarised quantum gas, transport props. 3–28191
  - ^4He liq. surface, H atoms collisions, sticking probability 3–57174
  - $MnAs_{1-x}P_x$, metallic, high spin-low spin transition, sp. ht. anomaly obs. 3–3457
  - Mn_xSb_{1-x}, spin polarisation from tunnelling electrons 3–57437
  - N, model pot. for electron spin-polarised atom 3–55815
  - Na+inert gas atoms, electronic and nuclear spin polarisations of $5^2S_{1/2}$ state, collisional disorientation meas. 3–26830
  - Ni (001) surface, clean and with adsorbed Te, spin polarised LEED study 3–38179
  - Ni (001) surface and thin films, spin-polarised electronic struct. 3–3277
  - Ni (110), surface magnetism, polarised low-energy positron study 3–28681
  - Ni(110), spin-polarized inverse photoelectron spectra 3–3851
  - $Pb_{1-x}Sn_xTe$ solid soln., electron spin polarisation in field of strong optical waves 3–18940

- **electron spin polarisation** continued
  - Pd-Fe, dil., localised giant magnetisation, hyperfine mag. field *(German)* 3–18851
  - Pt(001) film, spin-polarisation and Knight shift, all electron self-consistent determ. 3–57803
  - Rb-dimethoxyethane solution 3–14117
- **electron spin relaxation** *see electron spin-lattice relaxation*
- **electron spin resonance** *see paramagnetic resonance*
- **electron states, impurity** *see impurity electron states*
- **electron states, surface** *see surface electron states*
- **electron streams** *see electron beams*
- **electron structure of solids (crystallography)** *see crystallography*
- **electron structure of solids and liquids (energy structure)** *see electron energy states (condensed matter)*
- **electron theory**
  - *see also Dirac equation; quantum electrodynamics*
  - classical electron models, book contrib. 3–54634
  - classical electron theory from modern standpoint, book contrib. 3–56128
  - Dirac's positive-energy wave equation, generalised internal variable, external field inconsistency 3–531
  - separable solutions, for electron 3–529
  - toroidal electron model, nonlinear complex Maxwell eqns. 3–35860
  - e-g system bound states 3–16552
- **electron theory of metals** *see metal theory*
- **electron traps**
  - *see also colour centres; hole traps; impurity electron states*
  - 1-D system, electron trapping by lattice solitary waves 3–23003
  - adsorbed layers, electronic photoexcitation and discharging of deep traps in dielec. substrate 3–3228
  - amorphous media, electron trapping and photoionisation, ultrashort laser pulse appl. 3–7033
  - amorphous semiconductors, dielec. relax. and delayed-collection field expts., dispersive transport anal. 3–43484
  - amorphous semiconductors, transient and steady-state photocond. 3–23440
  - anthracene crysts., charge carrier trapping at physical defects 3–57359
  - 4-butoxybenzylidene-4′-hexylaniline, liq. cryst., electron trapping and recomb., radiothermoluminescence, DSC spectra 3–28906
  - DTS signals analysis, automatic deconvolution 3–47311
  - impurity polar semiconductor, secondary radiation at deep levels 3–52077
  - MOS struct., electron trapping and turn-around effect for different gate metals 3–13912
  - MOS structure, interface trap density determ. at midgap 3–18791
  - MOS structure, tunnel injection and irrad. studies 3–18789
  - MOS structures, ion implantation induced electron traps, photoinjection studies 3–23484
  - organic crystals, electronic processes, book 3–5512
  - organic photoconductor with deep traps, photo-induced memory effect, charging characts. 3–52198
  - p^+-n junction containing mid-bandgap electron traps, looped C-V characts., modelling 3–38469
  - photorefractive crystal, optically induced charge distrib. dynamics in appl. elec. field 3–28836
  - polar media, long-range electron hopping, Condon approx. 3–38380
  - poly(bisphenol-A-carbonate), doped, surface pot. decay, trapping effects influence 3–23419
  - poly(N-vinylidole) photophysical processes, charge carrier trapping *(Japanese)* 3–23402
  - poly-N-vinylcarbazole, trap-free drift mobility, transient photocurrent curves 3–52202
  - polydiacetylenes, electronic struct. and electron transport 3–18605
  - polyethylene, carrier traps, TSC study 3–23400
  - polyethylene, DC-conductivity following irradiation with ^{60}Co-γ-rays, temp. effects *(German)* 3–52136
  - polyethylene, thermoluminesc., UV induced, electron trapping model 3–3837
  - polyethylene/ethylene-vinylacetate copolymer laminated films, interfacial phenomena, TSC study 3–47593
  - polymers, electron irrad. induced cond., current transients 3–8488
  - polymers, radiation induced cond., kinetics 3–52175
  - polyphenylacetylene, undoped and I_2 doped, photoconductivity, carrier generation, transport and trapping 3–28377
  - SAW acousto-electronic absorption in piezodielectric-semiconductor struct. electron trapping effects on surface states 3–8312
  - semiconductor, compensated non-polar, IR Faraday rotation due to hot carriers, trapping parameters 3–34078
  - semiconductors, resistivity, electron trapping by ionised impurities, resonance tunnelling effects 3–3223
  - semiconductors, trapped electron thermal release by multiphonon processes 3–52176
  - semiconductors and insulators, generation recombination noise spectra, effect of trap distrib. 3–13872
  - single injection solid state diodes, I-V characts. in nonconstant mobility regime 3–8590
  - Teflon FEP foils, electron beam irradiated, charge dynamics model 3–38399
  - Ag halide emulsions, photocond. decay kinetics at low temp. 3–57383
  - AgCl photographic emulsion, photoluminesc. charact. in prescence of AgI and 1-phenyl-5-mercaptotetrazole *(Russian)* 3–20939
  - AgCl:Pd^{2+},Fe^{2+} UV light irrad. prod. Fe^{3+} centres, EPR study 3–47288
  - Al-(Al_2O_3/SiO_2)-Si struct., double dielec. layer form by DC plasma anodization 3–13918
  - AlGaAs, metalorganic CVD growth, review *(Japanese)* 3–29015
  - $Al_{0.3}Ga_{0.7}As$ LPE layer, grown-in deep level defects, thermal annealing effect 3–18799
  - $Al_xGa_{1-x}As$ organometallic VPE layer, electron traps, transient capacitance study 3–3340
  - $Al_xGa_{1-x}As$:Si, doped and undoped, MBE grown, elec. and optical props., effect of growth conditions and alloy comp. 3–43596
  - α-Al_2O_3, traps, thermally stimulated electron emission and annealing curves 3–18649
  - As_2S_3, amorphous, local struct., lowest unoccupied MO approach 3–22794
  - BaS:Cu, Bi phosphor, radiolum., radiative recomb. phenomena, thermolum. comparison 3–14356
  - CaS, Ce activated, polycryst., thermolum. due to intrinsic point defects 3–3832
  - $CaSO_4$:Dy, thermolum. spectra and optical absorption 3–19209
  - CdS, photocurrent temp. depend. irreproducibility 3–28388

electron traps continued
$Cd_{1-x}Zn_xS$/p-GaAs heterojunction, trap states in space-charge region, AC admittance study 3—23470
$Ga_{1-x}Al_xAs$, electron irrad., electron trap optical ionisation cross-sections, DLTS meas. 3—43092
$Ga_{1-x}Al_xAs$, electron traps due to electron irrad. 3—33675
GaAs, anion antisite defects and electron traps 3—42603
GaAs, antisite defect form. during plastic deform., EPR and photoluminescence study 3—2553
GaAs bicrystal, grain boundaries, elec. characterisation 3—52061
GaAs, EL2 emission band, photoluminescence and photoluminescence excitation spectroscopy 3—43589
GaAs, E3 trap annealing, DDLTS study 3—3117
GaAs, electron irrad., anisotropic defect production, electron and hole traps 3—42667
GaAs, electron irrad.-induced defects, electron traps 3—42668
GaAs in MIS and electrolyte-insulator-semicond. systems, cond. of anodic oxide films *(Russian)* 3—47429
GaAs, LEC grown, deep levels and dislocations, photoluminescence study 3—43086
GaAs LPE layer, grown-in deep level defects, thermal annealing effect 3—18799
GaAs, MBE grown, deep states and surface processes, DLTS study 3—43068
GaAs MBE layer, capless and Si_3N_4 encapsulated annealing, photoluminescence and DLTS study 3—8441
GaAs, MBE layers, defect deep levels, optical excitation study 3—47307
GaAs, metalorganic CVD growth, review *(Japanese)* 3—29015
GaAs, plastically deformed As antisite defects as main electron traps, DLTS meas. 3—52055
GaAs, semi-insulating, undoped, EL2 deep level, direct obs. by IR absorpt. 3—57305
GaAs, VPE and LPE grown, electron traps, DLTS and C-V meas. 3—43069
GaAs, VPE grown, deep-level defects vs. growth param., electron traps meas. 3—33670
GaAs:Be MBE layers, impurity and defect levels 3—3102
GaAs:Cr, boat grown bulk, Cr level and EL2 electron traps, DLTS study 3—8443
GaAs:Ge, doped and undoped, MBE grown, elec. and optical props., effect of As vapour species 3—43595
GaAs:O(B)(Ne), ion implanted, electron trap EL2, photocapacitance transients study 3—28294
In-GaAs/n-$Al_xGa_{1-x}As$ heterostructures, organometallic VPE grown, interface states study 3—28416
n-GaAs-Al(Au)(Sn), MIS-type Schottky barrier, electron traps in oxide layer, detrapping study 3—23499
$GaAs_{1-x}P_x$, VPE, deep level electron traps, transient capacitance spectroscopy study 3—52054
β-Ga_2O_3:Cr, thermoluminescence study *(Russian)* 3—43642
GaP, triplet antisite centre, spin depend. form. and decay, ODMR study 3—43462
GaP:N, deep electron trap 3—43088
GaP:N epitaxial film, deep level electron trap, absolute energy, DLTS and I-V charact. study 3—43072
GaP:Ni, photoconductivity, impurity states 3—23427
GaS:Yb, single cryst., isothermal relax. currents 3—43202
n-Ge, electron irrad., electron traps, ionisation free energy emission rates and capture cross sections 3—28300
Ge nuclear radiation detectors, carrier trapping by impurity clusters 3—57362
InGaAsP LPE layers, electron irrad., defect states, DLTS study 3—57304
InGaAsP/InP p^+n diodes, deep level electron and hole traps, DLTS study 3—47414
InP, electron irradiated, deep levels study 3—3107
InSb, localised defect states, electron capture and emission 3—8449
InSe, photoconductivity meas. 3—23434
KBr:Li, X-irrad., trapping parameters, monochromatic thermoluminesc. glow curve studies 3—24030
KCl:Tl, electron trap spectroscopy, exoelectron emission and luminescence meas. by fractional glow technique 3—34204
LiF, electron trap spectroscopy, exoelectron emission and luminescence meas. by fractional glow technique 3—34204
MgO:H^-, thermochemically reduced, electron traps and F-centres 3—57312
NbO_2, single crystal, trapping centres, admittance spectroscopy study 3—33662
P-Se chalcogenide glasses, electron transfer from broken bonds, ESR study 3—8722
$Pb_{0.78}Sn_{0.22}Te$:In, photoelectric effect 3—38431
PbTe films, cond., photocond., thermoelectric, Hall and photothermoelectric meas. 3—8596
Si, grain boundary barrier height and interface states, laser beam photocond. study 3—38335
Si, polycrystalline, Hall mobility and resistivity, model 3—18725
Si, polycrystalline, Schottky diodes, grain size, laser annealing study 3—33777
Si polycrystalline film grain-boundary trapping model 3—3343
Si surface, reactively ion etched, DLTS study 3—33770
Si, trap centres in wafers containing A-swirl defects, annealing behaviour, DLTS study 3—13760
Si:Au(Ag)(Fe)(Cu)(Ni), deep level defects prod. by quenching, DLTS study 3—57309
Si:Cr, deep levels in energy band gap, transient capacitance anal. 3—38349
Si:F(H)(H,F), amorphous, picosecond photocarrier trapping, photoinduced absorpt. study 3—57376
Si:H, amorphous, dangling bond defects, trapping parameters, photoconductivity study 3—28367
Si:H, amorphous CVD film, electronic and optical props. meas., Staebler-Wronski effect 3—29014
Si:H, amorphous glow discharge film, optically illuminated, picosecond carrier dynamics obs. 3—33735
a-Si:H, light-induced metastable effects 3—23392
a—Si:H, spin-depend. photocond., ESR study, illum. effects 3—3248
a-Si:H film, trapping props., effect of adsorbates, TSC meas. 3—23401
a-Si:H n^+-i-n^+ sandwiches, SCL currents under AC conditions 3—47357
a-Si:H n^+nn^+ films, SCL cond. 3—3209
a-Si:H Schottky barrier structs., gap states, transient current spectroscopy study 3—57316

electron traps continued
Si:In, Al, photoluminesc., IR absorpt., photocond. and Hall effect meas. 3—34135
Si/SiO_2 interface state, effect on MOS props., C-V characts., trap activation 3—47430
Si-SiO_2 interface, fixed oxide charges and interface trapped charges, under temp. stress ageing 3—47409
Si-SiO_2 interface, radiation induced defects meas. with XPS 3—43288
Si-SiO_2 interface, VUV irrad., oxide traps and interfacial states obs. *(Chinese)* 3—38482
Si_3N_4 amorphous films, photoluminesc. study 3—34146
Si_3N_4 film, electrolyte-insulator-semicond. struct., trapped charge distrib. study 3—57431
Si_3N_4 film, thermal oxidation, traps obs., MONOS memory diodes appl. 3—57442
SiO_2, electron traps, annealing in NH_3 effects 3—3221
SiO_2 films, neutral traps induced by He^+ beam lithography *(Japanese)* 3—38336
SiO_2 films, plasma anodised, interface and neutral traps, ESR study, IC fabrication appl. 3—38337
SiO_2, grown in presence of trichloroethylene, electron traps, hot electron avalanche injection studies 3—33667
SiO_2:Al, amorphous, photoluminesc. 3—47707
SiO_2:As, ion implanted, electron traps microscopic location, avalanche injection study 3—43061
SiO_2:B ion implanted layer, capture cross section of induced traps, elec. field depend. 3—38402
SiO_2/Si system, elec. cond. and elec. breakdown of SiO_2 3—3345
TiO_2 suspensions, photocurrent enchancement via trapping of photogenerated electrons 3—8527
TiO_2-merocyanine-Au, sandwich cells, photovoltaic props., transient effects 3—33758
ZnO varistors, leakage currents, carrier trapping mechanism obs. 3—33738
ZnS electron release from traps, investig. using optical recharging 3—19161
ZnS:Cu, electroluminesc. and elec. cond. involving electron tunnelling from traps, expt. study 3—14358

electron tube components
see also electron guns
C, field-emission cathodes, stability in sealed instruments 3—28970

electron tube diodes *see diodes*

electron tube rectifiers *see rectifier tubes*

electron tubes
see also cold-cathode tubes; diodes; electron emission; microwave tubes; relativistic electron beam tubes; tetrodes; thermionic tubes; triodes; ultra-high frequency tubes; vacuum tubes; X-ray tubes
controlled thermonuclear fusion system appl. 3—55686

electron tunnelling *see tunnelling*

electron valves *see electron tubes*

electron-wave tubes
see also klystrons; magnetrons; travelling-wave-tubes
coupled retarding system and electron beams interaction, mathematical model 3—6857
detectors with low current density beams, dynamical transverse scatt. effects 3—1542

electronegativity
atoms in molecules, charge calcs., mol. mechanics approach 3—21943
electronegative gases in non-uniform field, dielec. strength, vibrationally excited molecules 3—7692
freon, electron attachment determ. in absence of ionisation using freon/inert gas mixtures 3—7828
haloalkanes, charge calcs., mol. mechanics approach 3—21943
high-pressure electronegative gases, sparking potentials calc. from electron-molecule collision props 3—7836
low-electronegativity ligans, VSEPR model calcs. 3—55792
non-self-sustaining high-freq. discharge, in electronegative gases *(Russian)* 3—33005
Rf discharge, attachment instability suppression 3—42485
ternary supercond. cpds., cryst. struct. and bonding, book contrib. 3—8023
transition metal hydrides, diatomic mol. param. calc., electronegativities 3—26878
AlCl, mols., dissoc. energies calc. 3—36875
AlF mols., dissoc. energies calc. 3—36875
Au alkali liquid alloys, electronic and atomic struct. 3—13729
B, excited state, electronegativity, spin-polarised Xα calcs. 3—55836
Be, excited state, electronegativity, spin-polarised Xα calcs. 3—55836
GaSe(S), ionicity, effective charges, bond angles, optimised bond orbital model 3—13156
InSe, ionicity, effective charges, bond angles, optimised bond orbital model 3—13156
Li, excited state, electronegativity, spin-polarised Xα calcs. 3—55836
N_2XO radical (X=B,C,N), electronic struct., geometry, UHF MNDO PMO calcs. 3—11687
Ni alloys, electronic struct., X-ray photoelectron spectra 3—52025
Pd alloys, electronic struct., X-ray photoelectron spectra 3—52025
Pt/Cu/Cr and Cu/Cr thin films, mixing and interdiffusion by O reduction, backscatt. spectra 3—13559
Pt/Ni/Al films, interdiffusion at metal interfaces, electronegativity and surface pot., ambient effects 3—13558
SF_6 surface discharge under well-defined geometrical conditions and varied discharge parameters 3—13013
SF_6+c-C_4F_8+CO 3—7694
Si-Ge, amorphous, sputtered, XPS study 3—3913
SiH_5^+, struct. and energy, comparisons with CH_5^+ and BH_5 3—55794
YI, bond dissoc. energy, pot. energy curves 3—11721

electronic component manufacture *see electron device manufacture*

electronic conduction in crystalline semiconductor thin films
for electronic conduction in amorphous thin films, see "electrical conductivity of amorphous semiconductors and insulators"
see also electrical conductivity of amorphous semiconductors and insulators; electrical conductivity of crystalline semiconductors and insulators; electrical conductivity transitions
1,4,5,8-naphthalenetetracarboxylic dianhydride thin film, cond. changes induced by Ar^+ ion beam irrad. 3—8540
nickel phthalocyanine thin film, cond. changes induced by Ar^+ ion beam irrad. 3—8540
3,4,9,10-perylenetetracarboxylic dianhydride thin film, cond. changes induced by Ar^+ ion beam irrad. 3—8540

electronic conduction in crystalline semiconductor thin films continued
quasiballistic current flow in semiconductor layers of submicron thickness 3—33809
p-quaterphenyl, polycryst. layers, field depend. carrier drift mobility 3—8601
SDS films, laser annealed, melt dynamics meas. 3—46996
semiconductor films, polycrystalline, electronic and optical props. 3—23515
semiconductor thin film, inter-subband optical absorption in mag. field, freq. depend. cond. 3—14370
size-limited intrinsic transport, quantum freeze out effect 3—47437
tetracene, polycryst. layers, field depend. carrier drift mobility 3—8601
$Al_xGa_{1-x}As$ epitaxial layer on GaAs:Cr, elec. cond. and transfer doping effect 3—23509
$Al_xGa_{1-x}As$, LPE grown, composition and minority carrier diffusion length meas. *(Chinese)* 3—38242
$Al_xGa_{1-x}As$ MBE layers, Si doped, elec. props. 3—23512
$(Al_xGa_{1-x})_yIn_{1-y}As$, lattice matched to InP, MBE growth and elec. and optical props. 3—24132
$Al_xGa_{1-x}N$ MBE films, struct., elec. and optical props 3—8355
AlSb film on GaAs, MBE growth and elec. and struct. props. 3—58051
Bi film, elec. cond., electron localization and interaction effects 3—18802
Bi films with Ag, Fe, Cr island layers, elec. resistance 3—43304
Bi, N_2^+ and Ar^+ ion bombarded, elec. cond. 3—28457
Bi thin film, resist., Hall effect and magnetoresistance, anisotropic two carrier model 3—43300
Bi_2Te_3-Sb_2Te_3-Sb_2Se_3 thin film thermoelectric generator design and fabrication 3—14967
Cd-Sn-O, thin films, reactively DC magnetron sputtered, comp. control, sheet resist. determ. 3—8978
$CdCr_2Se_4$ film, synthesis, chem. composition, elec. and mag. props. 3—58050
$CdCr_2Se_4$ vacuum deposited films, amorphous-cryst. transition 3—38257
$Cd_xHg_{1-x}Te$, MBE growth, epitaxy temp. effect on cryst. quality and elec. props. *(French)* 3—42969
CdS films, chem. bath deposited, elec. resist., Ar^+ laser annealing study 3—38498
CdS:Al films, transport and optical props., dopant conc. effects 3—18804
CdSe films, one-barrier residual cond., control by O_2 adsorption induced changes in surface state density 3—38507
CdSe thin films, dark current instabilities obs. 3—33808
CdSe vacuum deposited film, photocond. props. 3—38439
CdSe:La γ-irrad. films, photoconductivity and dark conductivity 3—38508
$CdSe_xTe_{1-x}$ thin films, struct. and elec. props. 3—57237
CdSe(Te)($Te_{1-x}Se_x$) films, prep by laser annealing, elec. and optical characts., photovoltaic appls. 3—52931
Cd_2SnO_4 thin films, reactively DC magnetron plasmatron sputtered, press. ratio 3—8977
CdTe film, CND on foreign substrates and minority carrier diffusion length meas. 3—43746
CdTe film, electron and hole diffusion length determ. using surface photovoltage method 3—28461
$CuInS_2$ thin film, prod. by spray pyrolysis, structural, optical and elec. props. 3—47244
$CuInTe_2$, polycrystalline thin film, elec. transport props., H_2 effect, grain boundary scatt. 3—52282
Cu_xS, evaporated films, effect of thermal treatment on optical and elec. props. 3—38503
Cu_xS thin films, transport props., heat treatments effects 3—38502
EuV_2S_4 thin film, prep. and elec. props. 3—14493
$FeCr_2S_2$ film, ferrimag. semicond., prep. and props. 3—58049
Fe_2O_3 films, semiconducting, spray pyrolysis deposition and elec. and optical props. 3—52930
$Ga_{1-x}Al_xAs$:Se(Zn), elec. resist., Hall effect meas., impurity energy levels 3—23510
GaAs film, triode sputtering prep., elec. characts. 3—28995
GaAs films, α-irrad., defect migration, hall effect study 3—47167
GaAs films, α-irrad. defect migration, elec. study 3—47168
GaAs, impurity incorporation during MBE growth, optical and elec. props. 3—8378
GaAs layers irradiated by H^+ ions, elec. props. study 3—23517
GaAs, liquid phase electroepitaxial growth, layer thickness monitoring by resistance meas. 3—3972
GaAs, MBE growth of undoped semi-insulating layers, elec. and photoluminesc. props. 3—39033
GaAs, VPE grown using novel $AsCl_3$ reactor, photoluminescence, elec., DLTS meas. 3—19276
GaAs VPE layer, elec. props. improvement by cooling HCl liq. source 3—23514
GaAs:Sb(In) epitaxial films, elec. props. and acceptor centres 3—57441
GaAs:Si, LPE growth, cond. inversion 3—8603
GaAs:Si, liquid doping in CVD, electron mobilities, FET devices 3—18323
GaAs:Sn, epilayers, low pressure metal-organic CVD growth using tetraethyltin Sn source 3—34236
GaInAsP VPE layer, elec. props. improvement by cooling HCl liq. source 3—23514
GaN epitaxial films, low press. MOCVD growth, ion implantation and elec. props. 3—47775
GaN films, reactive MBE growth on AlN-sapphire substrates and elec. and luminescent props. 3—47771
GaP thin films, electron beam induced carrier excitation, quantum yield 3—43301
GaP:Cr epitaxial layers, MOCVD grown, high temp. resist., capacitance and I-V meas. 3—13930
GaP:Fe epitaxial layer photosensitive valve struct. *(Russian)* 3—3344
GaSb film on AlSb, MBE growth and elec. and struct. props. 3—58051
Ge/GaAs epitaxial heterostructures prep. by scanned CW laser annealing 3—57248
n-$Hg_{0.8}Cd_{0.2}Te$, LPE growth for photoconductivity-type IR detector 3—52979
In-Sn-O thin films, reactively DC magnetron sputtered, comp. control, sheet resist. determ. 3—8978
$In_{0.53}Ga_{0.47}As$ high-purity LPE layers, postgrowth heat treatment effects on elec. characts. 3—52278
p-$In_{0.53}Ga_{0.74}As$:Zn VPE layers, elec. and optical props. 3—18800
$In_{0.2}Ga_{0.8}Sb$, MBE growth, cond. props. and donor levels 3—33588
$In_{0.2}Ga_{0.8}Sb$:S, MBE and elec. props. 3—52945
In_2O_3:Sn, crystal struct., electric props. *(Korean)* 3—38504
In_2O_3:Sn film, deposited by RF sputtering, struct. and props. 3—51983
InP epitaxial films, MOCVD, growth using Lewis acid-base adducts 3—43758

electronic conduction in crystalline semiconductor thin films continued
InP epitaxial layer growth by In-PCl_3-H_2 technique, surface quality and mobility characts. 3—43756
InP, MBE growth from cracked PH_3, photoluminesc. and carrier mobility 3—47770
InP:Si, ion implanted, and semi-insulating transport props. and defects 3—28383
$In_{2-x}Sn_xO_{3-y}$ coatings to prevent spacecraft charging 3—39999
NbO_2 films, cryst. and amorphous, RF sputtering prep. and struct. and elec. cond. meas. 3—24129
PbSe:In films, elec. props. dopant effects on scatt. parameters 3—18806
n-$Pb_{0.8}Sn_{0.2}Te$ epitaxial films, H_2 effects in stabilising elec. props. 3—47436
$Pb_{1-x}Sn_xTe$ epitaxial films, elec. transport props., band parameters 3—18801
n-PbTe epitaxial film, (111)-oriented, four coeff. weak-field magnetoresist. at 4.2K 3—13929
PbTe films, cond., photocond., thermoelectric, Hall and photothermoelectric meas. 3—8596
PbTe thin film, elec. props., ion bombardment effects 3—52277
$PrVS_3$ thin film, prep. and elec. props. 3—14493
Sb_2S_3 thin films, elec., photoelec., and optical props. 3—52286
Si CVD films, polycryst., grain boundary induced deep levels, transport props. meas. 3—23316
Si, CVD films, struct. and electronic props. near crystn. temp. 3—23208
Si, epitaxial film growth on Y_2O_3-ZrO_2 substrates by CVD, struct. and elec. props. 3—42968
Si, epitaxial growth on Si by RF plasma CVD using Si-Ge buffer layer and elec. characterisation 3—52968
Si epitaxial layer on O_2^+ implanted substrate, carrier lifetime meas., IC appl. 3—47360
Si film, explosively crystallized on glass, optical, struct. and elec. characts. 3—57246
Si film, plasma enhanced CVD, deposited from 525 to 725°C, props. 3—8357
Si film, plasma enhanced CVD, doped during deposition, props. 3—8358
poly-Si films, cond. model for semicond.-grain boundary-semicond. barriers 3—52280
Si, films. polycryst., As and P ion implanted, effects of CW and pulsed laser annealing 3—33299
Si plasma sprayed film, microstruct. and elec. props. 3—23213
Si, polycrystalline, MOSFETs and thin films, elec. characterisation 3—8597
Si, polycrystalline film, ion implanted laser annealing, struct., resist., carrier mobility *(Chinese)* 3—43299
Si polycrystalline film grain-boundary trapping model 3—3343
Si polycrystalline film growth on liq. Sn layer, growth mechanism and elec. props. 3—58046
Si, subdoped layers, average carrier mobilities calc. 3—13932
Si, thin film, recrystallisation on glass substrate, correlated elec. and microstructural studies, TEM 3—57241
Si, thin film, transport effects, scatt. anisotropy 3—18807
Si:^{75}As(^{31}P), thermal stability, effects of ion implantation and laser annealing 3—57249
Si:B, ion implanted, elec. activation of B ions during solid phase epitaxy 3—2579
Si:B films prep. by plasma decomp. of SiH_4, elec. props. 3—58054
Si:C CVD layers, polycryst., morphology and resist. 3—23209
Si:P CVD coatings, incoherent light annealing, elec. cond. study 3—42646
Si:P CVD film, struct., optical and elec. props. 3—42935
Si:P films, elec. cond., Hall mobility and carrier density 3—8602
Si:P(As), polycrystalline film, ion implanted, pulsed incoherent light annealing 3—22933
Si:Sb supersaturated laser annealed ion-doped layers, decompostion, elec. cond. study 3—42786
SiO-GeO based supermultilayer films, barrier conduction 3—43305
SnO, thin film capacitors, temp. effects 3—38501
SnO_2 films, elec. resist., high temp. annealing effects, X-ray and electron diffr. studies 3—28459
SnO_2:Sb film, RF magnetron sputtered, struct., elec. and optical props. 3—13934
SnS_2, thin films, amorphous, recrystallisation, elec. and optical props., heating effect 3—28354
$SnSe_2$ evaporated thin films, elec. resist. study, heat treatment and doping effects *(French)* 3—29010
p-$(SnTe)_{0.2}(PbSe)_{0.8}$, epitaxial layer, transfer phenomena 3—8408
Te films, elec. resist. and light transmission, degradation effects 3—52281
$TiC_xO_yN_z$ film, reactively sputtered, microhardness, elec. cond. and temp. coeff. of resist. 3—51994
VO_2 film, electronic switching, film-substrate interface effects 3—13935
YIG:Ca film, p-type semicond., elec. cond., mag. field gradient dependence meas. 3—33806
YIG:Fe^{4+} film, conductive, microwave spectra and mag. relaxation 3—33951
ZnO film, highly conductive and transparent, prep. by RF magnetron sputtering, elec. props. 3—13651
ZnO film, RF sputtered, elec., optical and structural props. 3—28229
Zn_3P_2, amorphous and polycryst., elec. cond., temp. and thickness depend. 3—3341
ZnSe, VPE on GaAs, photoluminescence and cond. 3—8863

electronic conduction in insulating thin films
see also electrical conductivity of amorphous semiconductors and insulators; electrical conductivity of crystalline semiconductors and insulators
anthracene films, morphological changes via vapour phase transport 3—42980
dipalmitoyl phosphatidylethanolamine Langmuir-Blodgett film, steady state conduction 3—38513
ethylene, plasma-polymerized, dielec. props. and ESR/ESCA studies 3—13938
Kapton H polymide films, high-temp. elec. conductivity meas., multiple transitions and relaxations 3—13936
phthalocyanine films, Frenkel-Poole effect 3—38511
poly(vinylidene fluoride) films, DC conductivity, comparison with pyroelec. polymer 3—13937
polycarbonate films, elec. cond. and I-V characts. 3—38515
polyimide: Cu complex films, etching and elec. props. 3—57443
polymer thin foil-metal interface, current-voltage characteristics, space charge effects *(French)* 3—23482
polyvinylfluoride films, I_2 doped, elec. cond. meas. 3—23520
porphyrins, esterified, Langmuir-Blodgett films 3—38512

electronic conduction in insulating thin films continued
- $Y_{3-x}Ca_xGe_yFe_{5-x}Fe_{x-y}O_{12}$ epitaxial films, mag. props. 3—33948
- Al-(Al_2O_3/SiO_2)-Si struct., double dielec. layer form by DC plasma anodization 3—13918
- Al_2O_3, porous anodic thin film incorporating Ag ions within pores, elec. props. 3—38510
- BaF_2, $Ba_xCa_{1-x}F_2$, insulating epitaxial films grown by MBE on InP substrates 3—33596
- C film, ion beam sputter deposited, diamond-like 3—3952
- CaF_2, insulating epitaxial films grown by MBE on InP substrates 3—33596
- GeO film, heat treatment effect on struct. and props. 3—14612
- GeO_2-BaO amorphous thin film complex, DC cond. meas. prior to electroforming 3—3346
- HfN coating, RF sputtered, composition, elec. resist., refractive index 3—13674
- MgO epitaxial film, secondary electron emission and conductivity mechanisms 3—23519
- $PbTiO_3$ amorphous sputtered thin films, struct. and elec. cond. 3—33811
- Si_3N_4 film, electrolyte-insulator-semicond. struct., trapped charge distrib. study 3—57431
- Si_3N_4, plasma deposited coating, struct. and elec. props. 3—8605
- Si_3N_4 thin films, He^+ ion irrad., elec. cond. 3—43307
- SiO_2 films, form. by O ion implantation, stoichiometry elec. props. 3—27964
- SiO_2 films, off-stoichiometric, high-field conduction 3—47441
- SiO_2 films, thermally grown, Poole-Frenkel currents obs. 3—33734
- SiO_2, MOS heterostruct. memory element, current transport and switching effect study 3—57432
- SiO_2 MOS structures, thermally grown, DC characteristics and hopping cond. meas. 3—3327
- SiO_2, plasma enhanced CVD, gate insulator for InSb MOS struct. 3—13917
- SiO_2, positive mobile ion density determ. by amorphous Si:H field effect technique 3—43265
- SiO_2 RF sputtered films, bipolaron and single polaron contrib. to AC cond. 3—28463
- SnO_2, MOS heterostruct. memory element, current transport and switching effect study 3—57432
- Ta_2O_3 film, conductivity, irreversible changes in Ta-Ta_2O_3-MnO_3 in strong elec. fields 3—8607
- Ta_2O_5 anodic films, photocond. meas. in 3.9-6.2 eV spectral energy range 3—43306
- $TbO_{1.75-x}$ films, elec. cond. and thermoelec. power meas. 3—52288
- TiN film, reactively DC sputtered, composition, struct. and elec. props., substrate bias influence 3—13678
- TiN films, neg. temp. coeff. of resist., struct. anal. 3—47442
- $TiSi_2$ films, formation and elec. cond. 3—42979
- Xe film, elastic and inelastic mean free paths 3—28464

electronic conduction in metallic thin films
- *see also discontinuous metallic thin films; electrical conductivity of amorphous metals and alloys; electrical conductivity of crystalline metals and alloys*
- Au film, superimposed on metallic base, elec. cond. 3—38494
- discontinuous metal systems, microscopic aspects of cond. 3—23505
- discontinuous metallic film, granulometry rel. to thickness and conductance meas. *(French)* 3—23508
- double layer metal films, continuous, elec. conduction meas. *(German)* 3—57439
- double layer thin metallic films, transport coeff. size effects 3—43295
- flicker noise, gas absorpt. mechanism of flicker fluctuations of resist. 3—38447
- Fuchs-Sondheimer size effect theory, approxs. for case of total diffuse scatt. 3—13926
- Hall coefficient, reduced, impurity effects 3—13925
- Mayadas-Shatzkes model, grain boundary scatt. 3—8594
- metal film/halide systems, ambient-induced diffusion 3—18521
- metallic thin film, resistance meas. by radiotelemetry system during sputtering 3—34230
- organotin film, metallic, prep. by glow discharge polymerization, props. 3—14510
- Permalloy films, vacuum evaporated, $^+H_2$ ion implantation effects on coercive force and magnetoresist. 3—38492
- rare earth alloy film, $RNi_{4.5}Mn_{0.5}$ (R=misch metal) 3—28456
- resistivity depend. of 1/f noise 3—43243
- silicide thin films in microelectronics, prep. and props. 3—33805
- steel, stainless, film, thermal emittance and elec. resist. meas. 3—8593
- surface impedance, instrument for measurement *(Russian)* 3—16373
- Ag, conductance, influence of electric field on weak localisation 3—28453
- Ag film, ageing characts., effect of electrode annealing, elec. resist. meas. 3—18796
- Ag film, superimposed on metallic base, elec. cond. 3—38494
- Ag thin film, magnetoresist. and inelastic scatt. time in weakly localised regime 3—57438
- Ag:He^+(H^+) ion-implanted films, Frenkel-type radiation defects form. and annealing 3—13249
- Ag-Cu(Al) film, vacuum deposited, elec. and mechanical props. 3—14495
- Ag-Ge amorphous film, struct., elec. and optical props., free electron model 3—37787
- Al, and alloys, magnetron sputtered film, optical reflectance, elec. resist., effect of gas purity 3—38947
- Al film, ageing characts., effect of electrode annealing, elec. resist. meas. 3—18796
- Al film, interaction and localisation effects above supercond. transition temp., cond. and magnetoresist. meas. 3—33804
- Al film, ion-irradiated, defect production, residual resist. 3—33312
- Al films, evaporated, struct., elec. cond. and optical density meas. 3—24140
- Al, $N_2{}^+$ and Ar^+ ion bombarded, elec. cond. 3—28457
- Au, conductance, influence of electric field on weak localisation 3—28453
- Au discontinuous thin film, elec. resist. and activation energy, thickness depend. 3—38496
- Au foils, surface-induced elec. resist., temp. depend. 3—43296
- Au thin film, magnetoresist. and inelastic scatt. time in weakly localised regime 3—57438
- Au, thin films, effective conductivity and microwave reflectivity 3—38493
- Au/Ag two layer films, grain boundary diffusion, elec. resist. study 3—13556
- Au-Ge amorphous film, struct., elec. and optical props., free electron model 3—37787

electronic conduction in metallic thin films continued
- Bi, thin films, elec. cond. 3—43294
- Bi-H amorphous film, elec. props., supercond. props. and crystallisation 3—33817
- Ca thin films, elec. cond., grain boundary effects 3—23507
- Co-Sn thin film, cryst. and amorphous, elec. and mag. props. 3—28454
- Cr amorphous film, elec. cond., struct., mag. transition *(Russian)* 3—13927
- Cr film, resistivity and TCR *(Russian)* 3—3338
- Cr, films, photodeposited, elec. resist., reflectivity, stress and step coverage meas. 3—29017
- Cr-Co films, elec. resist. meas. 3—23506
- Cu film, ageing characts., effect of electrode annealing, elec. resist. meas. 3—18796
- Cu film, disordered, spin-orbit interaction and electronic conduction 3—13928
- Cu, $N_2{}^+$ and Ar^+ ion bombarded, elec. cond. 3—28457
- Cu thin film, localisation phenomena, resistivity and scatt. time study 3—43058
- Cu-Ag(Au) film, disordered, spin-orbit interaction and electronic conduction 3—13928
- Cu-Al film, vacuum deposited, elec. and mechanical props. 3—14495
- Fe-C magnetic films, RF reactively sputtered, phys. props. and struct. 3—52563
- Fe_xNb_{100-x} sputtered amorphous alloy, mag. props., resistivity and Mossbauer spectra 3—28658
- Gd-Co amorphous film, elec. cond. 3—28455
- Hf thin films, form. in Penning discharge, resistivity and struct. study 3—52275
- In film, ageing characts., effect of electrode annealing, elec. resist. meas. 3—18796
- In thin films, struct. and elec. props. 3—3337
- $LaNi_5$ film, H_2 absorption effects on elec. cond. 3—28456
- Mo films, bias sputtered in Ar/N_2 or N^+ ion implanted, supercond. and elec. props. 3—39032
- Mo films, photodeposited, elec. resist., reflectivity, stress and step coverage meas. 3—29017
- $(Mo_{0.6}Ru_{0.4})_{1-x}B_x$ amorphous sputtered film, superconductivity and elec. resist., ion irrad. effects 3—47446
- $MoSi_2$, magnetron cosputtered from elemental targets, props. 3—28243
- Nb refractory films vacuum deposition, electric conductivity increasing method 3—39036
- Nb superconducting thin films, resistive behaviour in normal RF mag. field 3—52297
- Nb, thin films, elect. props., superconducting temp. 3—52276
- Ni film, adsorption of H_2, search for supercond. 3—47451
- Ni film, thermal emittance and elec. resist. meas. 3—8593
- Ni-Fe-B alloys, chemically deposited, mag., elec., mech. props. 3—52985
- Pt film, adsorption of H_2, search for supercond. 3—47451
- Sc film, resistivity and TCR *(Russian)* 3—3338
- Sn, elec. resist. effects of metallic electrode film 3—38497
- Ta thin film, sputtering, resist. meas. by radiotelemetry system during deposition 3—34230
- $TiC_xO_yN_z$ film, reactively sputtered, microhardness, elec. cond. and temp. coeff. of resist. 3—51994
- W, films, photodeposited, elec. resist., reflectivity, stress and step coverage meas. 3—29017
- W, thin films, elect. props., superconducting temp. 3—52276
- WSi_2 film, cosputtered, resistivity, grain boundary effects 3—8595
- WSi_2, magnetron cosputtered from elemental targets, props. 3—28243

electronic density of states
- A15 compounds, disorder effects on density of states, Fermi vel. and Drude plasma freq. 3—3370
- alkali cyanides, density functional theory 3—2497
- alloys, binary FCC, electronic struct. and local density of states, Husimi model 3—23258
- alloys, density of states calc. and localisation Monte Carlo method 3—13697
- amorphous metal, local electronic density of states, direct space expansion 3—28252
- Anderson lattice, one-dimensional, density of states, single-particle dispersions, perturbation expansions with Coulomb screening 3—52053
- Anderson-localised regime, disorder and electron correls. 3—43113
- antiferromagnet, density of states, fluctuation theory with collective-state electrons *(Russian)* 3—33862
- antiferromagnetic semiconductor, optical absorpt. edge shift, s-f model 3—8844
- chemisorbed layer on metal, electronic states, Green's function calc. 3—33771
- cohesion and electronic structure of condensed matter, review 3—37844
- CPA theory for materials with complex cryst. structs. 3—18597
- crystal, 1-dimens., spectral density from method of moments 3—8388
- crystals, real-space formulation in closed form using cyclic matrices 3—22800
- diamond, local density of states at defects calc. 3—47293
- dilute systems, quantum percolation and Anderson transition 3—43118
- disordered binary alloys with off-diagonal disorder, band gap, interband repulsion effects 3—18606
- disordered conductor, spin relaxation and interaction effects 3—3580
- disordered diatomic linear chain having diagonal and off-diagonal randomness, CPA 3—57251
- disordered electronic systems, Lagrange formulation without replica trick, density of states scaling law 3—18596
- disordered film, density of electron states and Feynman path integral 3—33617
- disordered system, Anderson localisation, density of states and screening near the mobility edge 3—23327
- disordered systems, electronic correls. and transient effects 3—23328
- disordered systems, probability of electron localization at deep levels 3—18663
- disordered systems with strong short range order and off-diagonal randomness, cluster theory of electrons 3—3122
- electrolyte-SiO_2-Si structures, interface state props., pH response 3—13900
- ferromagnetic ensemble, Mott transition, electronic model solutions 3—33876
- ferromagnetic semicond., electron density of states, s-f exchange model 3—38280
- graphite, electronic structure, single particle and collective excitations, EELS and secondary electron emission study 3—58011

electronic density of states continued
graphite intercalated with C, electronic struct. 3—13723
graphite intercalation cpds., higher stage, band struct. and c-axis charge distribs. 3—38282
Green's function at T=0 for electrons in quantising mag. field, integral representation 3—57250
III-V semiconductors, antisite and vacancy electron states, local density of states 3—43096
intermediate coupling superconductors with variable electronic density of states, crit. temp. 3—57493
Lindner high-freq. MOS capacitance approx. 3—57427
liquid metals, electronic density of states, perturbation and Green function calcs. 3—43003
local density of states and EXAFS in the small scattering atom approximation 3—28249
localisation with off-diagonal disorder, local density of states 3—33627
Lorentz model of disordered system, functional integral anal. 3—42993
metal, disordered, local electron densities, Green's function formalism 3—8459
metal, disordered, local electronic densities, multiple scatt. Green's function theory 3—8458
metal, disordered, struct. induced effects on electronic props., multiple scatt. theory 3—3040
metal hydrides, amorphous, struct. and props., review 3—46852
mixed valence Hamiltonian and metal-insulator transition 3—52086
Mott Anderson metal insulator transition in n orbital models 3—43020
n-type crystals, energy band parameters, heavy doping effects 3—13701
NMOS capacitors, high-field stress effects on interface state density 3—52266
oligophenols, polyconjugated, interaction of paramagnetism and elec. cond. *(Russian)* 3—47340
one-dimensional alloys, partially disordered, electronic spectrum, renormalisation group treatment 3—57254
one-dimensional electron-phonon system, mag. susceptibility calc., electronic density of states enhancement 3—3030
one-dimensional systems, density and comp. fluctuation effects 3—3032
polyvalent heavy liquid metals, electronic density of states, Fermi surface 3—18598
quasi-one-dimensional systems and localized defects: some results of the Green's matrix formalism 3—33672
random alloys, cluster expansions and density of states, projection technique 3—23236
rare earth alloys, charge and spin density, electronic struct., Mossbauer study 3—28749
rare earth alloys, RPd_3 (R=Lu, La, Y, SC), low temp. sp. ht. and elec. resist. 3—42801
semiconductor, amorphous, localised state density, field effect study 3—8391
semiconductor, impurity band density of states, mag. field effects in atomic limit 3—47247
semiconductor, transient injection with weakly ionised impurities 3—43203
semiconductors, doped, impurity band, self-consistent theory 3—43105
semiconductors, heavily doped, impurity band tails based on semiempirical pseudopotentials 3—52075
semiconductors, joint density of states in interband transitions in mag. field 3—38804
semiconductors, polar or covalent, electronic struct., equivalent-orbital and bond-orbital methods 3—18599
semiconductors, tetrahedrally bonded, electronic densities of states, bond rings effects, cluster-cactus lattice model *(Chinese)* 3—38277
semiconductors, two-dimensional disordered, hopping cond., optical transitions, under weak localisation conditions 3—23382
superconductor, anisotropic, with approx. neutral electron-electron interaction, BCS-type theory 3—3366
superconductor, impure, with anisotropic electron-electron interaction, generalised BCS theory 3—28476
superlattices, heavily doped n-type, impurity band tails calc. 3—57310
TCNQ salt, TSeF-TCNQ, electron tunnelling meas., Peierls gap opening 3—52119
tight binding cubic crystals, projected density of states, trigonometric series expansion 3—52004
tight binding Lorentzian random models, equality of the density of states 3—57253
tight-binding quasiparticle motion in Poisson correlated discrete stochastic pot., density of states calc. 3—3025
$(TMTSF)_2X$ organic superconductors, props. in fluctuating regime 3—52293
trans-polyacetylene, acceptor doped, midgap band in density of states, electron tunnelling study 3—3033
transition metal alloys, electronic struct., d-band LCAO interpolation and recursion methods 3—33628
transition metal alloys, electronic struct. and density of states, cluster $X\alpha$ calc. *(Russian)* 3—23252
transition metal alloys, $L1_2$ and $D0_{22}$ ordered structures, electronic struct. and relative stabilities 3—43007
transition metal and noble metal β-phase alloys, martensitic transformation onset, phase stability 3—34309
transition metals, 3d, systematic struct. in K emission bands 3—38966
transition metals, Curie-Weiss law and band struct. parameters 3—28511
transition metals, positron annihilation characts. rel. to cond. electron density 3—47735
transition metals amorphous and liq., electronic states, hybridisation effects 3—52015
transparent conductor-oxide-Si struct., interface characts. 3—18790
two-dimensional disordered system, density of states elec. and mag. field effects 3—33616
two-level adsorbate chemisorbed on transition metal surface, density of state calcs. 3—13879
V-VI layered compounds, binding energies, valence bond density of states, photoemission 3—8930
valence change transitions, mech. 3—43130
Al 3—38279
Al-Mg-Si, quenched and aged, electron density of states, soft X-ray emission study 3—3029
Au, electronic struct. and d^ns^1 impurity states 3—3046
Au-SmS, point contact spectroscopy 3—28415
Au_xNi_{1-x}, electronic struct. and density of states, KKR CPA calc. 3—43004
Au_cPt_{1-c}, electronic struct., relativistic theory 3—3049
Be slabs, electronic struct., ab initio LCAO HF calc. 3—23259
$Bi_3Sr(Eu)$, band struct. and superconductivity 3—13726

electronic density of states continued
$Cd_{0.2}Hg_{0.8}Te$, density of states distrib. in valence and cond. bands, UPS study 3—14433
$Cd_{1-x}Mn_xF_2$, valence and conduction band struct., UPS study 3—23269
CdO, ab initio energy bands 3—43018
CdTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3—28248
Ce valence fluctuation cpds., metallic point contact spectra 3—3298
$CeAl_2$, mag. ordering, electronic struct., LMTO calcs. 3—57508
CeH_x (x=2.1, 2.9), XPS studies of electronic struct. 3—39008
CeH_x, non-stoichiometric, XPS, UPS spectra and density of states 3—39009
$CePd_{3+x}$, low temp. sp. ht. and elec. resist. 3—42801
CoAl, X-ray band spectra 3—38965
Cr, electronic struct., effect of shear strains 3—52020
Cr-Al(Be), paramag. electronic density of states rel. to antiferromag., sp. ht. meas. 3—57599
$Cs_xK_{1-x}C_8$ intercalation cpd., electronic struct., configuration propagator theory 3—38300
CuCl, band struct. and density of states, UV reflectivity study 3—43017
$CuInTe_2$, electron effective mass. carrier mobility anal. 3—43001
Cu_xZr_{1-x}, amorphous, electronic struct., linear muffin-tin orbital method 3—23247
$DyAl_2$, electron density of states at Fermi level 3—13704
EuTe, antiferromagnetic semiconductor, optical absorpt. edge shift, s-f model 3—8844
Fe, amorphous, local electronic density of states, direct space expansion 3—28252
Fe-Co alloys, electronic and mag. struct. from SCF $X\alpha SW$ calcs. 3—38278
Fe-Co alloys, Fermi surface topology influence on kinetic props. 3—8405
Fe-Ti sputtered alloys, magnetovolume effects 3—23770
FeAl, local partial Al density of states, linear KKR study 3—38279
$FePd_3$, electronic struct. and magnetism, LCAO calc. 3—28258
$FeTiH_x$ (x=1, 2), electronic props. 3—38294
p-GaAs, heavily doped, impurity band tails based on semiempirical pseudopotentials 3—52075
n-GaAs ohmic contacts, specific contact resistance, model for $N_D{}^{-1}$ depend. 3—13902
GaAs, oxyfluoride layer, plasma deposited, props. 3—8604
GaAs, vacancies and anti-struct. defects, electronic density of states 3—47301
GaP surface single adsorbate, local density of states, local charges and adsorpt. energy calc. 3—3275
GaSe(s), SCL cond., two-barrier model, I-V characts. 3—18715
Gd, band struct. and electronic density of states, mag. torque meas. 3—28257
$GdAl_2(Ni_2)$, electron density of states at Fermi level 3—13704
$Gd_{0.5}Dy_{0.5}Al_2$, electron density of states at Fermi level 3—13704
GdMnAl, electron density of states at Fermi level 3—13704
$GeSe_2$, cryst. and amorphous, electronic struct., optical and photoemission props. 3—23265
$Hg_{1-x}Cd_xTe$, density of states, virtual cryst. approx. breakdown, UPS and CPA study 3—8389
HgTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3—28248
$Hg_{1-x}Te$, electronic struct., CPA and tight-binding calc. 3—43016
InSe, SCL cond., two-barrier model, I-V characts. 3—18715
$KMgF_3$, electronic struct., photoemission expts. 3—57277
$K_xRb_{1-x}C_8$ intercalation cpd., electronic struct., configuration propagator theory 3—38300
La-H, self-consistent band struct. calcs. and optical props. 3—38298
LaH_2, electronic energy bands and optical props., APW calc. 3—43011
LaH_x (x=2.1, 2.9), XPS studies of electronic struct. 3—39008
α-Mn, valence-band UPS spectra 3—34193
$Mo_{8-x}Ge_x$ (x=2, 3), heat capacity meas. on irrad. and nonirrad. samples 3—18821
MoO_2, electronic struct. and photoelectron spectra, $X\alpha$ calc. 3—13722
Mo_3Si, neutron irrad., sp. ht., supercond. and phonon softening *(Russian)* 3—51819
$NaWO_3$, bronze, band struct., photoemission study, applicability of rigid band model 3—18610
NbC, vacancy band in electronic struct., DV-$X\alpha$ cluster calc. 3—38306
$Nb_3Ir(Pt)(Au)$, electronic struct., superconductivity and spin fluctuations 3—38299
NbN, vacancy band in electronic struct., DV-$X\alpha$ cluster calc. 3—38306
NbN_x ($0 \leq x \leq 0.2$), density of states calc., recursion method 3—13698
NbO, vacancy band in electronic struct., DV-$X\alpha$ cluster calc. 3—38306
$Nb_3S_4(Se_4)(Te_4)$, quasi-one-dimensional, electronic struct. calc. 3—47249
$NbSe_3$, electronic band struct. calc. 3—47248
Nb_3Sn, supercond. transition temp. and electronic density of states 3—52295
$Nb_3Sn_{1-x}Sb_x$ A15 pseudobinary alloy, tetragonal-to-tetragonal phase transition 3—38055
NdH_2, electronic energy bands and optical props., APW calc. 3—43011
Ni, band struct. and electronic density of states, mag. torque meas. 3—28257
Ni ferromagnetic thin films, electronic structure near surface 3—23449
Ni-Zr, amorphous, sp. ht., 0.8 to 40K, supercond. props. 3—57473
Ni-Zr alloys, band struct., specific heat, mag. props. 3—13715
Ni_6-Nb_4, metallic glass 3—13695
Ni_xFe_{1-x}, unoccupied electron states 3—13694
NiO powders, cold pressing mechanism *(Serbian)* 3—34266
Ni_cPt_{1-c}, paramag., electronic struct., relativistic KKR CPA calc. 3—52021
NiTi, electronic struct. and optical cond., KKR calc. 3—3053
$PbMo_6S_8$, electronic struct., role of cluster twisting angle, LCAO EHT tight-binding calc. 3—57280
$PbMo_6S_8$ thin films, supercond., prep. and irradiation induced disorder effects 3—38564
PbO, tetragonal, self-consistent energy band struct. 3—43013
PbS-PbSe(Te) solid solutions, electronic density of states effective mass 3—57262
PbTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3—28248
Pd (111), unoccupied band density of states, secondary electron emission study 3—57255
Pd adsorbed layer on Nb(110), atomic and electronic struct., and commensurate-incommensurate transition 3—33773
Pd, electronic energy bands and optical absorpt. spectra 3—13716
Pt, electronic struct. and d^ns^1 impurity states 3—3046

electronic density of states continued
RU surface, clean and C-covered, electronic struct., self consistent LCAO calc. 3—23256
Rb, liq., isolated ^{88}Y ions, anomalously small Knight shift and nucl. relax. rate 3—14175
$Rb_xCs_{1-x}C_8$ intercalation cpd., electronic struct., configuration propagator theory 3—38300
Rh surface, clean and C-covered, electronic struct., self consistent LCAO calc. 3—23256
Si (111), electron-phonon scatt. self energy in nonperiodic systems 3—42735
Si, amorphous, density of electronic states calc., model *(Chinese)* 3—33624
Si, amorphous, density of states, SCLC meas. 3—3031
Si, amorphous, gap-state density determ. problems 3—23251
Si, clean and adsorbed Cs, conduction band density of states, secondary electron emission study 3—24067
Si, electron and hole densities of states, ionized donors effect, Born approx. calc. 3—52003
Si, electronic and struct. props. of grain boundaries 3—23315
n-Si, heavily doped, band-gap shrinkage, luminesc., IR absorpt. and bipolar transistor data 3—38859
Si, local density of states at defects calc. 3—47293
Si MIS structs., ion implantation radiation damage, density of surface states study 3—28446
Si, polycrystalline p-type, density of states and trapping states, DLTS study 3—33661
Si:H, amorphous, band tails, photomodulation spectroscopy studies 3—23248
Si:H, amorphous, bulk and interface states, elec. props. 3—28256
Si:H, amorphous, electronic struct., self-consistent pseudopot. calc. 3—28253
Si:H, amorphous, energy distrib. of traps, photoconductivity study 3—47314
Si:H, amorphous, gap state studies 3—23249
Si:H, amorphous, photocond., reversible photoinduced changes at low temps. 3—13854
Si:H, amorphous, symm. relax. of vacancy 3—22888
a-Si:H, DC glow discharge produced, pseudogap state density by field effect meas. *(Korean)* 3—13696
Si:H amorphous MOS struct., interface states 3—23455
a-Si:H films, optical props., annealing effect *(French)* 3—52862
a-Si:H n^+nn^+ films, SCL cond. 3—3209
a-Si:H/c-Si heterojunctions, space-charge limited currents 3—18769
a-Si:H-SiO_2 interface, gap state density and interface states 3—52214
Si:transition metals, impurity electronic struct., Green's function calc. 3—43098
SiO_2, amorphous, electron energy states calcs. 3—38292
SiO_x amorphous, electronic struct. calcs. 3—38293
SiO_x, electronic struct. and density of states, random bonding model 3—38305
SnO_2:Sb, conduction band density of states, UPS, XPS and EELS study 3—23237
T 3—52268
$Ta_{0.5}W_{0.5}$ alloy, electronic density of states and Fermi surface calc. 3—23232
Ti-Al system, α and γ phase equilib., mag. investigation of electronic bonding 3—14572
Ti-Cu hydrides, amorphous, proton NMR study of H diffusion and electronic struct. 3—34003
Ti-Cu hydrides, proton NMR study of H diffusion and electronic struct. 3—34003
TiC (100) and (111) surfaces, electronic props., LCAO calc. 3—8551
TiC_x, unoccupied electron states, EELS study 3—8410
$TiFeH_x$, substoichiometric, electronic struct. 3—38296
TiN_x, unoccupied electron states, EELS study 3—8410
$U(Fe_{1-x}Co_x)_2$, electronic struct. calcs. 3—18608
$U(Fe_{1-x}Mn_x)_2$, electronic struct. calcs. 3—18608
UIr_3 (100), f-band dispersion angle resolved and resonant photoemission study 3—57269
$UMn_2(Fe_2)(Co_2)(Ni_2)(Al_2)$, electronic struct. calcs. 3—18608
V, electronic struct., effect of shear strains 3—52020
V-oxide-Au tunnel junctions, tunnelling density of states 3—3390
$V_3Ir(Pt)(Au)$, electronic struct., superconductivity and spin fluctuations 3—38299
VN, unoccupied electron states, EELS study 3—8410
VPd_3, electronic struct. and magnetism, LCAO calc. 3—28258
Yb valence fluctuation cpds., metallic point contact spectra 3—3298
Zn-blende semiconductor surfaces, angle resolved local density of states Green's function calc. 3—8390
Zn-Pd, surface segregation, photoemission study 3—14436
Zr-Pd metallic glass and cryst. hydrides, NMR spectra and props. 3—33999
Zr-Rh(Re)(Ru)(Cu) amorphous film, electronic density of states, superconducting props. 3—38281
ZrH_x, proton NMR study of electronic struct. 3—38307
Zr_2PdH_x, cryst. and amorphous, electronic struct., NMR studies 3—52644

electronic density of states of amorphous solids *see electron energy states of amorphous solids*

electronic density of states of liquid semiconductors *see electron energy states of liquid semiconductors*

electronic engineering computing
see also computerised instrumentation
Josephson junction transmission lines coupled by resistive networks, fluxon propag. 3—18834

electronic equipment testing
HV control and protection system for Culham mult-Megawatt beam line 3—55766
microchannel plate CRT increases gain, aid to fault finding 3—35979
oscilloscopes, theory and applications, book 3—35784
piezoelectric ceramic acoustic radiators flaw detection using thermovisor 3—48022
piezoelectric transducer characts., self-balancing digital photoelectric photometer appl. 3—49428
power crowbar battery and predischarge ccts. for SPICA II expt., design, construction and tests 3—55767
TFTR neutral beam power supply system 3—55772
thyristor-controlled pulsed power supply for TEXTOR, performance evaluation 3—55764

electronic music
see also musical acoustics; musical instruments
computer generated 3—12450
digital sound analysis system based on MUSIC V Program 3—17738
dynamic audio spectra synthesis, two-variable function technique 3—12451
octophony, three dimensional sound panning system 3—17768
sound anal., signal processing 3—7352
touch-sensitive keyboard, interface system 3—12452

electronic structure, atomic *see atomic structure*

electronic structure, molecular *see molecular electronic states*

electronics applications of computers *see electronic engineering computing*

electrons
see also beta-rays; cosmic ray electrons; positrons
bursts of high energy in BL Lac objects and quasars, spectra 3—35415
cavity-resonant electrons and muons, Lamb shift 3—49619
dipole elec. moment as test of CP violation 3—21040
Dirac electron, Zitterbewegung, Heisenberg eqn. in const. mag. field 3—20967
distribution, transport eqn. soln. for heterogeneous slab shields 3—40532
eighth-order mag. moment, Feynman diagrams contrib. 3—45334
eighth-order mag. moment, Feynman diagrams contrib. 3—45335
eighth-order mag. moment, Feynman diagrams contrib. 3—45336
excited lepton effects on e and μ anomalous mag. moments, masses and couplings 3—638
meteor trails, electrons cooling time 3—15670
plane rotor with time-depend. mag. flux, gauge invariance 3—44995
shock-heating and self-similar structures of nonradiating blast waves 3—40015
spin flipping in Penning trap, motional mag. field appl. 3—49679
$e^{\pm} \rightarrow \pi^{\pm} + \nu$, quantum processes in EM wave field *(Russian)* 3—26058

electrooptics *see electro-optical effects*

electroosmosis *see osmosis*

electrophoresis
see also electrophoretic coating techniques
aerosol size distrib., meas. using differential mobility analyser and inversion 3—35963
biological dielectrophoresis, appls. to cell dielec. props., cell sorting and cell fusion determ. 3—15307
cell electrophoretic mobility determ., laser Doppler velocimetry device 3—9796
colour imager, electrophoretic recording 3—45230
dielectrophoretic force in electrostatic fields 3—6828
dielectrophoretic manipulator 3—49524
divinylbenzene suspended in aq. solns., dielectrophoretic force and impedance response 3—29313
proteins electrophoretograms, two dimensional, quantitative anal. by shape fitting 3—29371
purple membrane particles, microelectrophoretic props. 3—4484
thin charge layer near interface between insulating solid and semi-insulating bipolar liq., ion conc. 3—9328
thin double layer approximation for electrophoresis and dielectric response 3—44057
CdS(Se), anodes for photoelectrochemical cells, electrophoretic deposition 3—48158
γ-Fe_2O_3, behaviour of surface OH group, isotachoelectrophoresis study 3—23738
Fe_3O_4, aqueous suspensions of magnetite, behaviour of Co 3—18553
Fe_3O_4, behaviour of surface OH group, isotachoelectrophoresis study 3—23738
TiO_2-electrolyte interface, surface and diffuse-layer charge 3—28410

electrophoretic coating techniques
Al_2O_3, electrophoretic deposition from aq. suspensions on graphite substrate 3—34252

electrophoretic coatings
Al electrophoretic coatings on steel 3—24413
Cr-Ni-P-C electrophoretic sintered coatings on steel, disintegration on heating and extension 3—24411

electrophotography
Ag-halide crystal in electric field, surface Ag atom coalescence 3—54781
Canon Toner Projection Development mechanism 3—439
copper phthalocyanine, binder resin system sensitised by poly-N-vinylcarbazole, photoconduction study 3—28390
copy density variations, calc. using imaging and charging characts. 3—25979
electrostatic field of arctangent voltage transitions in electrophotographic images 3—50573
electrostatic image development with polarised toners 3—56116
electrostatic toner transfer, toner charge effects 3—25977
electrothermography, latent image formation, mathematical modelling 3—36110
halftone noise, particulate model, expt. verification 3—423
halftone noise, particulate model, theory 3—422
holographic scanner, design trade-offs of laser diode and photoconductor parameters 3—6928
image fixing, toner fusing, time, temp., press., and particle size dependences 3—36109
laser scanner/printer using different laser frequencies 3—25967
layered organic electrophotographic photoconductors using squarylium pigments, laser printer appls. 3—25981
liquid electrophotographic developers, space charges and flow 3—49484
metal-free phthalocyanine-polymer photoreceptor, sensitivity and electron affinity of electron acceptor dopants *(Japanese)* 3—24515
michlers ketone in polycarbonate binder layers, electrophotographic characts. 3—5903
model emulsion microcrystal latent image centre topography, influence of pulsed electric field *(Russian)* 3—54796
Monte Carlo modelling of photochemical imaging systems 3—20914
nonimpact printers, geometric flow model of development 3—25973
oligomers based on carbazole for electrophotographic and photothermoplastic recording of information *(Russian)* 3—54801
organic photoconductor with deep traps, photo-induced memory effect, charging characts. 3—52198
organic photoconductors, charge transport and generation, struct. to activity correlation 3—52201
particle trajectory imaging, xerography method appl. *(Polish)* 3—55752
photo-active particle electrophotographic printer 3—20919
photo-active particle electrophotographic system model 3—20918
photoconductors, layered, xerographic system, photoinduced discharge characts. 3—36108

electrophotography continued
photoconductors, p-type, bimol. recomb. and reciprocity 3—49485
pictorial xerographic reproduction, high-quality, by halftone screening 3—20916
platemaking, high-speed, by coupling conventional presensitized plate and electrophotographic layer 3—54784
poly(N-vinylidole) photophysical processes, charge carrier trapping *(Japanese)* 3—23402
poly-N-epoxypropylcarbazole, photosensitivity, effect of photo-oxidation 3—34640
poly-N-vinylcarbazole, trap-free drift mobility, transient photocurrent curves 3—52202
poly-N-vinylcarbazole film, photocond., extrinsic carrier photogeneration, exciplex and charge transfer sensitisation 3—57384
poly-N-vinylcarbazole-ZnO photoreceptor layer with polyester addition, electrophotographic props. 3—3247
poly-N-vinylcarbazole/diazonium salt/TNF system photoreceptor design with charge-acceptance memory 3—52200
polymer powder layers, corona charge decay, model for electrophotographic plates 3—8561
polyvinyl carbazole layer local electron state energy struct. *(Russian)* 3—54799
printer/copier photoconductor electrostatic sensor 3—16434
radiography, electrostatic X-ray image recording methods 3—58794
toner charge dependency of toner transfer ratio *(Japanese)* 3—21960
trends and applications 3—436
triphenylamine-Lexan films doped with difluoroboron-1,3-diphenyl-1,3-propanedionate, photogeneration 3—3244
tunnel electrode/excited dye molecule interface, photocurrent-voltage characts. *(Japanese)* 3—23466
X-ray detector, electrophotographic, Monte Carlo modelling 3—488
Xerographic copier, corona caused by superimposed AC and DC voltage 3—25982
xerography, fusing enhancement of background 3—25978
xeromammography, resolution and noise 3—29704
Xerox dry microfilm, versatile camera-film and information-recording medium 3—45233
CdS binder layers, photoelectric props. for image recording appl. 3—52197
CdS electrophotographic binder layers, degradation process 3—16435
CdS type photoconductors, electrophotographic versatility 3—20917
$CdS_{1-x}Se_x$:Cu in polystyrene binder layers, electrophotographic characts. 3—28379
He-Ne laser, reprographics, optical storage, gauge and medical appls. 3—56271
Se, amorphous photoreceptors, light fatigue effect related to interfacial barrier layers and corona charging voltage 3—20915
Se based amorphous xerographic photoreceptors, charge transport, time of flight expts. 3—3245
Se electrophotographic films, effect of contaminants *(German)* 3—20928
Se, vapour deposition, correlation between electrophotographic props. and original material props. 3—16437
Se-P layered system, electrophotographic characts. *(Russian)* 3—20942
Se-PVK films, electrophotographic props. *(German)* 3—20927
Se-Te particle migration film, for Xerox dry micrography, form., photographic props. 3—25980
Si amorphous photoreceptor design for electrophotography 3—57385
a-Si:H film, high rate plasma deposition, for electrophotographic photoreceptor 3—13657
a-SiH_x photoreceptors, xerographic photodischarge characts., residual voltage 3—20925
Te_xSe_{1-x}, photocond. props. rel. to xerography use 3—3246
electrophotoluminescence *see electroluminescence; photoluminescence*
electrophysiology *see bioelectric phenomena*
electroplated coatings
black chrome selective surfaces props. dependence on deposition parameter 3—29024
foils, ductility testing 3—53306
metal coatings, residual stress diagram plotting during anodic dissolution using length change method 3—47791
steel, HSLA, Cr plated, low cycle fatigue rel. to cooling conditions 3—43952
CdSe electrodeposited coatings characts. dependence on deposition rate, application in photoelectrochemical cells 3—29400
Co film, electroplated, for perpendicular mag. recording, microstruct. and mag. props. 3—28227
coating, residual stress diagrams during electrodeposition and anodic dissolution 3—47792
Cr plate on steel, fretting resist.improvement, optimum grinding parameters 3—58307
Cr_2O_3-Cr, chrome black coatings, improvement of optical performance, durability and economic feasibility *(Korean)* 3—37144
Cu plated Ti alloy, mass spectrometer analyser chambers props. improvement 3—36119
Fe-Ni film, electroplating, comp. rel. to AC to DC ratio 3—34251
Ni coating, residual stress diagrams during electrodeposition and anodic dissolution 3—47792
Ni, on Cu wires, thermo EMF meas. 3—18688
Ni, plate deposited in butynediol presence, morphology and props. 3—47787
Ni-B film, electroless plating, amorphous, struct. rel. to B conc. *(Japanese)* 3—58055
Ni-P electroless films, microstruct. evolution w.r.t. comp., cryst. to amorphous transform. 3—13672
Sn, electrolytic deposition *(German)* 3—52980
Sn-Pb, electrolytic deposition *(German)* 3—52980
electroplating
deposit structure, effects of epitaxy, dislocations, twinning, and nucleation 3—52984
disc electrode cells potential distribution, effect of electrode material resistance 3—58429
heat pump utilisation for energy savings *(German)* 3—29437
high-speed selective electroplating with single circular jets 3—24163
laser enhanced, mechanisms and appls., review 3—3975
metal coatings, residual stress diagram plotting during anodic dissolution using length change method 3—47791
polyimide film, reactive ion etching, study, electroplating appl. *(Japanese)* 3—39268
production, effluent purification and recycling by combined electrocoagulation and ion exchange *(Russian)* 3—53416
electroplating continued
solar selective absorber development, high temp., coating methods 3—19603
surface treatment of electronic components, electroplating versus painting, criteria for choice *(German)* 3—53249
Au contact electroplating, modern techniques, review 3—3976
Au-Zn alloys for ohmic contacts, alloy deposition by electroplating on semiconductor 3—38478
coating, residual stress diagrams during electrodeposition and anodic dissolution 3—47792
Cr-Co, pulse plating prep., struct. phase 3—24164
Cr_2O_3-Cr, chrome black coatings, improvement of optical performance, durability and economic feasibility *(Korean)* 3—37144
Cu and Ni electroplating methods of stress anal., ground plating effects on proper stress 3—53300
Cu, electroless soln., electroless plating appl. *(Polish)* 3—47786
Cu-Mo bond, low thermal barrier, effective joining technique 3—29022
Cu-Ni alloy electrodeposition from solns. containing L-asparagine 3—19295
Cu-W bond, low thermal barrier, effective joining technique 3—29022
Cu_2S-CdS solar cells, electrochem. prep. and conditioning of Cu_2S 3—53553
Fe sintered compacts, electroplating with Cu, Ni and Zn 3—19461
Ni coating, residual stress diagrams during electrodeposition and anodic dissolution 3—47792
Ni, recovery from wastewater by electrodialysis 3—53417
Ni-Cl-Zn alloy electrodeposition from borate bath, addition agents effects 3—19297
Ni-P electroless films, microstruct. evolution w.r.t. comp., cryst. to amorphous transform. 3—13672
Ni-plating on U-Nb alloys, effect on tensile testing 3—58163
Sn, electrolytic deposition *(German)* 3—52980
Sn-Pb, electrolytic deposition *(German)* 3—52980
electropolishing *see electrolytic polishing*
electroreflectance
$Al_xGa_{1-x}As$ variable-gap epitaxial films, exciton reflection and electroreflection spectra 3—14372
$As_2S_3(Se_3)$, electric-field-modulated spectra 3—3686
$Cd_xHg_{1-x}Te$, local degree of imperfection, electroreflection study 3—14256
CdTe/$Hg_{0.8}Cd_{0.2}Te$ (111) system, laser annealing effects, electrolyte electrorefl. study 3—14252
$Hg_{1-x}Cd_xTe$, cleaved, stress-mediated Hg migration, photoemission and electrolyte electroreflectance study 3—47195
InGaAsP, growth by MBE, optical and elec. props. 3—24131
$InP_xAs_ySb_{1-x-y}$, band. struct., pseudopot. calc. and electroreflection meas. 3—8412
$Mn_xCd_{1-x}Se$, electroreflectance spectra, 1.2 to 2.7 eV 3—57887
SnS, electroreflectance and thermoreflectance spectra 3—38799
TiO_2-aqueous electrolyte interface, intrinsic surface states, sub-band gap electrorefl. spectroscopy 3—43280
ZnS:In, ion implanted, struct. transitions, luminescence and electroreflection study 3—2780
electroretinography *see bioelectric potentials; eye*
electrospark machining *see spark machining*
electrostatic accelerators
see also Van de Graaff accelerators
critical vacuum current of electron beam in electrostatic struct. 3—41390
electron, high-current, nanosec., with stable energy, miniaturised ignition system using nonlinear inductors 3—1094
free electron lasers, electrostatic accelerator, UCSB electron beam system design 3—22124
history of development *(Dutch)* 3—54610
neutral beam injector performance, capacitive stored energy effect 3—55743
PBFA II modification for ICF 3—6450
RF ion source for 600 kV Cockcroft-Walton accelerator *(Chinese)* 3—41378
Rossendorf tandem accelerator EGP 10-1, automated energy variation using process computer system with distributed intelligence *(German)* 3—41346
electrostatic coating techniques
powder coating technology, state-of-the-art review 3—47795
electrostatic coatings
No entries
electrostatic devices
see also capacitors; dielectric devices; electrostatic accelerators; electrostatic lenses; electrostatic precipitators
analyser for wide beams and its ion-optical props. 3—6866
cylindrical electrostatic analyser for mass spectrometry with accelerator 3—447
electron-optical system designed with cylindrical and spherical electrostatic mirrors 3—50597
fabric filter, electrostatically augmented, dust movement between electrodes 3—39560
granular bed filters for collection of respirable aerosols 3—39557
gyroscope, electrostatic, with sampled-data control system, dynamics 3—45136
industrial fugitive dust control with electrostatically charged fog devices 3—39556
MEDICYC cyclotron, 150 kV DC dry feedthrough 3—17137
mirror, vel. filter for charged particles 3—1537
printer/copier photoconductor electrostatic sensor 3—16434
separator for corona research 3—7843
slot-effect electrometers with monopolar electrets 3—20873
SPS, electrostatic deflectors for luminosity meas. 3—17156
SPS, electrostatic septa, high voltage, spark mechanism 3—17157
vel. filter for charged particles 3—1537
voltage sensor using SAW 3—49406
voltage sensor using SAW oscillator 3—25866
volumes meas. of capacity measures 3—49316
electrostatic fields *see electric fields*
electrostatic lenses
see also aberrations; focusing; particle beams
astigmatic cylindrical electrostatic lenses, cardinal elements, approx. formulas 3—50598
biplanar electrostatic lenses, pot. distrib. study 3—32291
biplanar lens, symmetric single section, focusing props. 3—41750
biplanar lens, symmetric single-section, aberration props. 3—41751

electrostatic lenses continued
bipolar electrostatic lenses, focusing properties, right-angle model 3—46153
charged particle beam deflection and focusing in electrostatic transaxial system 3—32290
dodecapole lens, elec. and mag., design and test for electron-optical aberration correction 3—17426
electric field lens for focusing and polarising, ion beam measurement and microfabrication *(Japanese)* 3—39430
foil lens, rotationally symmetric, of min. spherical aberration 3—6861
line-focusing by means of a quadrupole lens, using novel shadow-image technique 3—30965
magnification and focal props. meas. of three-element electrostatic lenses 3—12061
quadrupole lens, charged particle beam calcs. 3—41749

electrostatic microphones *see microphones*

electrostatic precipitation *see electrostatic precipitators; precipitation (physical chemistry)*

electrostatic precipitators
air pollution control, particulate removal, electrostatically augmented gas cleanup devices 3—39558
current density meas. in model electrostatic precipitators 3—27783
diesel engine exhaust, C soot, electrostatic precipitation 3—39562
EHD flow, exptl. study 3—51244
flue gas from coal combustion, electron beam treatment, electrostatic precipitator development 3—39561
inhalable particle control using electrostatically charged fog generator 3—39555
mixed powders, segregation characts. of co-flow type electrostatic fluidised bed 3—37564
particle deposition in electro-filters, effect of electric wind *(Russian)* 3—37452
pesticide sprays electrostatic deposition onto ionizing targets, charge- and mass-transfer anal. 3—36903
positive polarity operation 3—27784
submicron particles charge-to-radius meas. apparatus development 3—26614
US agglomeration 3—344

electrostatics
see also electrets; electric charge; electric fields; electrostatic devices; static electrification; triboelectricity
aberrations in sytems with plane of symmetry 3—32262
anisotropic media, two-dimensional, mapping onto isotropic media 3—26894
aspartate, buried, in serine proteinases, electrostatic field effect and catalytic power 3—58587
charged particle electrostatic stability in plasma 3—42467
charged particle motion in mag. cusp, strong transverse electrostatic field effects *(Russian)* 3—32862
circular conducting discs, dissimilar pair, mixed boundary value problem 3—50572
concentric rings, electrostatic problem 3—26902
concentric surfaces, spherical, cylindrical or planar, electrostatic pot. 3—36906
conducting body capacitance optimised simulated image method 3—26895
corona and breakdown, effect of grounded enclosure on the field distribution of rod-plane gaps 3—13016
current carrying conductors, max. ponderomotive force 3—1519
α,ω-diamino acids, protonation energies, through-space electrostatic field effect 3—48055
discharges, electrostatic, charge transfer and current flow meas. 3—7822
B-DNA, electostatic field investig. 3—48229
electrophotographic nonimpact printers, geometric flow model of development 3—25973
electrophotography, electrostatic image development with polarised toners 3—56116
finite dipole, transient assoc. elec. and mag. fields study 3—44923
graphite intercalation compound with Li, structural and elastic props., in-plane density 3—33213
Green's functions in rectangular domains with Dirichlet or Neumann boundary conditions 3—21962
hollow finite cylinder in presence of spherical conductor, electrostatic problem 3—26901
homothetic shells, electrostatic interactions 3—50575
hydration forces, polarisation layers effects 3—52750
inhomogenous regions effects on elec. potentials, theory 3—36905
integral equation methods 3—44936
intermolecular complexes, ionisation, electrostatic and relax. effects 3—55805
layered systems with spatial dispersion, potential electrostatic charge energy 3—13884
linear field problems, variational theory, electrostatic appl. 3—99
liquid surface, elec. double layer and electrohydrostatic surface deformation 3—33778
molecular dimers, ionisation, electrostatic and relax. effects 3—55805
multipole moments, characteristic centre and characteristic exterior potential coefficients definition 3—46118
parallel conducting plate system, electrostatics 3—5529
particle at or far from electrode, action of elec. forces 3—26903
pesticide sprays electrostatic deposition onto ionizing targets, charge- and mass-transfer anal. 3—36903
photo-active particle electrophotographic system model 3—20918
planar lattices, electrostatic energy calc. 3—8317
polarising media, electroelastic waves 3—21958
potential due to uniform source distrib. over a triangular domain 3—1518
potential of point charge, equivalence principle and Schwarzschild space-time expressions 3—49222
quadrupole electric field production by linear charges *(Polish)* 3—17402
solar system bodies, role of electrostatic charging of small and intermediate-sized bodies 3—15838
space-charge formation in weakly conducting media 3—21963
sphere with volume and surface conduction, pot. distribution calc. 3—50571
surface charges and leaky shields 3—49118
thin film, viscoelastic, hydrodynamic stability, linear, dispersion equation 3—38270
two-dimensional fields, EFIR software for calc. of potentials and excitation *(Russian)* 3—17401
two-dimensional open boundary problems, static ballooning numerical technique 3—26905

electrostriction
see also piezoelectric materials; piezoelectricity
antiferroelectrics, electrostrictive effect, review *(Japanese)* 3—3649
diamond, electrostriction, stabilised Michelson interferometer study 3—28784
ferroelectric layers, ultrasonic intensity near critical angle for total internal reflection 3—51721
interferometric meas. of electrostrictive strains 3—34036
isotropic solid, laser radiation, nonlocal effects, response tensor 3—34176
mirror, deformable, 2-dimens., consisting of multilayered electrostrictors bonded to mirror glass plate backside 3—7108
photoacoustic detection, pulsed, electrostrictive limit and focusing effects 3—37997
polar fluid, electrostriction and dielect. const. 3—23880
polyvinylidene fluoride, piezoelectricity under high press., dielec. and electrostriction const. meas. 3—23878
quartz, electrostriction, stabilised Michelson interferometer study 3—28784
TGS; electrostriction, stabilised Michelson interferometer study 3—28784
TGS, ferroelec. phase transition study, modified capacitor dilatometer technique 3—38104
tris-sarcosine calcium chloride, electrostriction coeff., temp. depend. near ferroelec. phase transition 3—19081
US wave, optical generation and amplification by electrostriction *(German)* 3—50599
$Ba_2MgGe_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
$Ba_2ZnGe_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
$Ca_2MgSi_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
$Ca_2ZnSi_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
CdS, ultrasonic amplification under uniaxial deformation, electron-phonon interaction 3—8538
$KAl(SO_4)_2.12H_2O$, dielec. const., stress depend., quadratic electrostrictive effects 3—43492
$K(Ta_{0.55}Nb_{0.45})_3$, electrostrictive coeffs., temp. depend. meas. 3—14219
LiF, electrostriction, stabilised Michelson interferometer study 3—28784
NaCl, dielec. const., stress depend., quadratic electrostrictive effects 3—43492
$Sr_2MgGe_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
$Sr_2MgSi_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689
$SrTiO_3$, ultrasonic amplification under uniaxial deformation, electron-phonon interaction 3—8538
$Sr_2ZnGe_2O_7$, melilite struct., electrooptical and electrostrictive behaviour *(German)* 3—3689

electrosynchronisation *see synchronisation*

electroviscous effect
see also colloids; viscosity
No entries

electroweak model *see unified field theories*

element origin
see also cosmic ray origin; cosmology
galactic disc, primary nucleosynthesis theory 3—10446
hot-big-bang model and He/D abundances, neutrino effects 3—16049
light nuclei primordial abundances in bouncing Universes 3—25659
pregalactic metal enrichment, nucleosynthesis in pair creation supernova explosions of massive pregalactic stars 3—54450
pregalactic stars, H and He burning stages of massive objects 3—54449
primordial nucleosynthesis, ^4He and D yields rel. to neutrino number and baryon density of realistic universe 3—59516
primordial nucleosynthesis including radiative, Coulomb, and finite-temperature corrections to weak rates 3—20550
Ag, exotic, in Fe meteorites, prod. by ^{107}Pd decay and nuclear reactions 3—48863
D, primordial abundance rel. to He and D abundances on Jupiter and Saturn 3—54554
F, warm CNO nucleosynthesis as possible enrichment mechanism for O and F isotopes 3—30161
He, primordial abundance rel. to the He and D abundances on Jupiter and Saturn 3—54554
N production as primary element in early Universe 3—25429
O, warm CNO nucleosynthesis as possible enrichment mechanism for O and F isotopes 3—30161

element relative abundance
see also isotope relative abundance
aerosol in Venus cloud layer, new data from study by (Venera 14) *(Russian)* 3—35493
alkali and hydrogen element distrib. in IRDP basalts from E Iceland 3—19957
atmosphere aerosol of Amazon Basin, preliminary data on comp. and particle size distribs. 3—4905
BB 1, halo planetary nebula, abundances, obs. rel. to theory 3—54499
BD+39°4926, A- or F-type supergiant, Mg^+/Ca^+ ratio from IUE spectrum 3—20365
bituminous coal seam in Illinois, geochemical anal. 3—4865
Bo 158, X-ray globular cluster in M31, metallicity determ. from optical and UV obs. 3—10444
Chesapeake Bay, trace elemental characterisation of water column 3—9503
lower continental crust xenoliths in kimberlite, implications of rare earth elements abundances 3—19968
cosmogeochemical distribution of elements, classification rel. to periodic system 3—4833
galactic disc, C, O, Mg and Fe abundances from primary nucleosynthesis 3—10446
GD 40, hot He-rich white dwarf star, Fe and Mg abundances as test of diffusion theory 3—54364
Glanggang and Selakopi, two new paired Indonesian chondrites, textures and comps. 3—10276
globular clusters in Sculptor group galaxy NGC 55, metal abundances meas. 3—10443
IC 2165, planetary nebula, ionic abundances from 8 to 13 μm spectrum 3—59444
interstellar element depletion depend. on H column density 3—59422
interstellar element depletions, implications of ionisation equilib. inside ρ Ophiuchi cloud 3—54472

element relative abundance continued
- interstellar medium, C depletion in tubulent mol. cloud cores 3−10413
- interstellar medium, column densities and abundances from IUE obs. towards Carina star (HD 93206) 3−59425
- interstellar medium, element abundances rel. to spatial distrib. and spectral characts. of diffuse X-ray emission 3−40295
- interstellar medium, element depletions from UV absorpt.-line spectrum of μ Ophiuchi 3−10415
- Kilauea Iki lava, neutron activation anal. 3−9918
- Koloula Igneous Complex, Guadalcanal, Pliocene-Pleistocene oceanic-arc plutonic complex, geochemistry 3−19967
- Lesser Antilles island arc, inert gas geochem. and tectonic history 3−39836
- M92, metal-poor globular cluster, giant stars C and N abundances 3−5372
- Magellanic Clouds globular clusters, metallicities from four-colour photometry of giant stars 3−54366
- metal abundance of H II region ionizing star, effect on emission-line spectra 3−44817
- N interstellar abundance, implications for grain models 3−48988
- NGC 5430 (Markarian 799), barred spiral galaxy, heavy elements abundances in extraordinary star-forming region 3−20500
- NGC 7099 (M30), globular cluster, He content radial gradient from photometry in central region 3−5371
- noble gases distribution in Mid-Atlantic Ridge basalt, two-component model 3−53958
- Ornans carbonaceous chondrite, ultra-refractory inclusion composition 3−20304
- planetary nebulae, compact, He, N and O abundances from photometric survey 3−35685
- planetary nebulae chem. comp. determ. methods 3−59436
- Population I G and K giant stars, C and N abundances from DDO photometry 3−5298
- primordial nucleosynthesis including radiative, Coulomb, and finite-temperature corrections to weak rates 3−20550
- rare earth element anal. of geological materials by neutron activation anal. 3−9917
- Selakopi and Glanggang, two new paired Indonesian chondrites, textures and comps. 3−10276
- SMC, spectral classification of metal-deficient O9-B0 supergiants 3−48897
- solar interior, He and heavy elements abundances rel. to low-l five minute oscill. 3−10282
- solar nebula Pu, Nd and ^{244}Pu/^{238}U ratio from meteorite evidence 3−15858
- supernova remnants, elemental abundances, highly stripped ions in astrophysics 3−25402
- young supernova remnants, non-ionisation-equilib. models abundances from X-ray spectra 3−10417
- symbiotic stars, fractional abundances of ions from UV line emission spectra 3−25463
- Universe He abundance from neutron decay finite temperature radiative corrections 3−31212
- Uranus, abundances of H, N, and S rel. to origin 3−5217
- UV line emission spectra 3−25463
- Vela X-1, element abundances in circumstellar gas rel. to anomalous X-ray absorpt. spectrum 3−5341
- Venus rocks determ. of chemical and mineral comps. by Venera 13 and 14 missions *(Russian)* 3−40060
- volatile elements abundances in terrestrial planets and atmospheres, rel. to planetary atmospheres form. 3−15861
- volcanic glasses from Pacific seafloor, inert gas geochem. 3−35106
- WN and WC Wolf-Rayet stars, C and N abundances from UV spectra 3−15930
- Wolf-Rayet star and assoc. H II region in IC 1613, He and metals abundances 3−10364
- Ag in Fe meteorites, isotopic comp. and conc., and origin of exotic Ag 3−48863
- Ba/Rb/Cs relative abundance in Earth's mantle 3−48520
- Bi, microdistrib. in unequilibrated chondritic meteorite 3−10277
- C abundances in Earth crust and mantle, rel. to C geodynamic cycle 3−19969
- C in mid-oceanic ridge basalts 3−44413
- C/H ratio in Jupiter and Saturn atm. 3−35510
- CNONe abundance in planetary nebulae NGC 6572 and 5315 and BD+30°3639, obs. 3−54497
- CNONe abundance in planetary nebula NGC 7662, UV obs. 3−54498
- Ca content of Ap-star atmospheres, Ca I and II spectra 3−44771
- Ca-Al rich chondrules in unequilibrated ordinary chondrites, bulk chemical comp. and mineralogy 3−10274
- Cu-Ni ore fields of northern area of central Siberia Cu/Ni ratio and ^{34}S abundance rel. to geological and tectonic factors 3−4864
- F isotopes, warm CNO nucleosynthesis as possible enrichment mechanism 3−30161
- Fe in NE Pacific Ocean waters, meas. of dissolved Fe concs. 3−4896
- Fe meteorites, group IVA, local bulk Ni and P var. rel. to cooling rates and nucleation histories 3−59275
- Fe pyrites, neutron activation anal. 3−9918
- H I deficiency in Abell 262 cluster of galaxies 3−20510
- He abundance in solar atmosphere, determ. from cut-off freq. of solar acoustic modes 3−54323
- He abundances on Jupiter and Saturn, cosmological implications 3−54554
- He in globular cluster M15, abundance from double-mode RR Lyrae variables 3−54370
- K I, interstellar, abundances and physical conditions in clouds towards 188 early-type stars 3−44820
- N V and O VI prod. in galactic haloes by photons emitted by massive photinos 3−44825
- O interstellar abundance, implications for grain models 3−48988
- O isotopes, warm CNO nucleosynthesis as possible enrichment mechanism 3−30161
- O/H ratio in atmosphere of Jupiter, determ. from H$_2$O abundance meas. 3−59251
- ^{208}Pb, microdistrib. in unequilibrated chondritic meteorite 3−10277
- S abundance in Galaxy, Magellanic Clouds and POX 4 galaxy 3−48981
- W/Si ratio for Sun from W I oscillator strengths 3−30325

elemental semiconductors
- band structure, semiempirical construction of Slater-Koster parameters 3−57270
- conference, Perpignon, France (Sept. 1982) 3−20568

elemental semiconductors continued
- defects in semiconductors, conf., Amsterdam, Netherlands (Aug.-Sept. 1982) 3−44894
- diamagnetic susceptibility, Green's function calc. 3−28502
- diamond, band struct, initial level population, and channelling radiation 3−47012
- diamond, coloration by electron irrad., induced absorption bands 3−33302
- diamond, dislocation struct. in low-angle grain boundaries 3−51611
- diamond, distorted defects, optical meas. 3−47678
- diamond, elec. props. in presence of donor impurities 3−18706
- diamond, electron irradiated, A-2 and A-3 ESR centres form., self di-interstitial complexes 3−43436
- diamond, hole relax. time and transport coeffs., intervalence band interaction effects 3−43197
- diamond, ion-implanted, point defect production and interaction 3−42635
- diamond, muonium impurity screening 3−38348
- diamond, muonium location and hyperfine interaction, HF SCF cluster calc. 3−57325
- diamond, semiconducting, photoconductive response, time resolved donor-acceptor and acceptor-valence band recombination 3−43228
- diamond, semiconducting, subnanosecond time-resolved photoconductive response 3−47379
- diamond, synthetic, luminescence study, impurity states 3−47719
- diamond (111), EELS study in characteristic loss region 3−38974
- diamond (2×1) and (1×1) (111), dangling bond surface state dispersion curves 3−3283
- dielectric constant, temp. and press. dependences 3−57854
- electrolyte-SiO$_2$-Si structures, interface state props., pH response 3−13900
- fibre optic communication appls. 3−32506
- Ge(111), laser annealed, surface core level states, photoemission study 3−58039
- nuclear radiation detector at low temp., operating characts. 3−11613
- P, black, lattice dynamics, force const. model 3−8157
- SDS films, laser annealed, melt dynamics meas. 3−46996
- Si:H photovoltaic cells, H passivation 3−24581
- α-Si, microwave plasma CVD system for fabrication 3−43743
- Si MIS solar cells, advantages 3−48153
- Si MIS solar cells, overview 3−48154
- Si p$^+$-n-n$^+$ type epitaxial-diffusion photoelectron convertors, technology and props. 3−44120
- P$^-$Si/rare earth metal ohmic contacts 3−18782
- SOS, pulsed laser annealing, melt dynamics, transient conductance study 3−46991
- SOS, transient conductance meas. during pulsed laser annealing 3−57352
- SOS epitaxial wafers, thermally activated features of 1/f noise 3−43245
- SOS film, annealing using dual electron beam processing system 3−56992
- SOS film, implanted, furnace annealed, defect struct. 3−8376
- SOSMOS accumulation layers, intersubband resonances, Fourier transform spectroscopy study 3−43293
- transparent conductor-oxide-Si struct., interface characts. 3−18790
- Al/polycrystalline Si composite metallisation, electromigration induced shallow junction leakage 3−51871
- Al/TiSi$_2$/Si contact system, thermal stability and elec. meas. 3−47227
- Al-(Al$_2$O$_3$/SiO$_2$)-Si struct., double dielec. layer form by DC plasma anodization 3−13918
- Al-SiO$_x$-Si, solar cells, capacitance-voltage and conductivity-voltage characts. *(Slovak)* 3−39479
- As, thermopower meas. 2 to 300K 3−33747
- As:Ni amorphous sputtered film, chemical modification, elec. props. 3−23518
- Au/a-Se/Al struct., aging effect of capacitance and photoelec. characts. 3−33802
- Au-Si(111) 7×7 interface growth, cryst. and electronic struct. 3−23190
- B-B, elec. conduction mechanism, elec. and optical props. 3−8495
- C DC planar-magnetron sputtered film microstruct., Ar press. effect 3−3001
- C, deep levels due to isolated single and pair vacancies 3−13761
- C, dilation and vibr. contrib. to exciton temp. shift at melting point 3−3088
- C:H amorphous film, struct. optical props. and decomposition kinetics 3−18590
- a-C:H films, elec. cond., optical absorpt., dopant gas effects on props. 3−18705
- CoSi$_2$Si(111) interface struct., determ. by ultrahigh resolution electron microscopy 3−8343
- GaAs photovoltaic solar energy conversion appl., principle, development trends and future potential *(Czech)* 3−24575
- GaP-Si heterojunction, GaP metalorganic CVD epitaxy and elec. and photoelec. props. meas. 3−19285
- Ge *(Russian)* 3−43658
- Ge (100), adsorption of O, thermal desorption, work function, AES and EELS studies 3−38224
- Ge (100), adsorption of O on Na, K, Cs-covered surface, AES, EELS, thermal desorption and work function meas. 3−38225
- Ge (111)-Au interface form., AES, LEED, and electron microscopy study 3−38240
- Ge (2×1) and (1×1) (111), dangling bond surface state dispersion curves 3−3283
- Ge, [111] stressed, far IR absorpt. spectrum of excitons in high stress limit 3−57927
- Ge, absolute hydrostatic deform. pot., LMTO-ASA calcs. 3−13717
- Ge, acceptor pairs, unlike group III impurities, heteronuclear molecular ion model 3−18644
- Ge, allo- and 4H- modifications, Raman spectra 3−47653
- Ge, amorphised, epitaxial regrowth rate, effects of electrically active impurities 3−3011
- Ge, amorphous, AC and DC hopping cond., extended pair approx. 3−38386
- Ge, amorphous, crystallisation processes in multipulse low power laser irradiation 3−57088
- Ge, amorphous, melting during rapid heating, internal flaw effects 3−2757
- Ge, amorphous, Rayleigh waves, tunnelling defects 3−33551
- Ge, amorphous film, laser-stimulated cond. 3−38422
- Ge amorphous film, short pulsed laser irrad., crystn. mechanism 3−13688
- Ge, amorphous state, struct., scanning HEED study 3−13044
- n-Ge, anisotropic hot-carrier thermo-EMF 3−52184
- Ge, anomalous muonium hyperfine parameters, temp. depend. 3−38741
- n-Ge, band gap, narrowing, effects of nonlinear impurity scatt. 3−47263
- Ge, band gap meas. technique using p-n diode 3−35805

elemental semiconductors continued
Ge, band struct., self consistent APW calc. 3—47259
n-Ge, Benedicks thermo-emf meas. 3—47375
p-Ge, CW laser induced dynamic grating and subpicosecond hole relax. time 3—46254
Ge, carrier recombination heat treatment and dislocation density effects 3—38401
Ge, channelled relativsitic particles, characteristic X-ray radiation 3—3855
n-Ge, charged grain boundaries, electronic struct. 3—22917
Ge, chem. vapour transport by GeI_4, convection influence on growth *(French)* 3—14453
Ge, cleaved surface, struct. and phases 3—57189
Ge coated Ag and Au, IR surface plasmon attenuation coeffs. 3—34059
Ge, conductivity and Hall coeff. meas., microcomputer-controlled expt. 3—40331
Ge, core-level reflectance spectroscopy 3—3282
Ge, current filament, secondary breakdown, effects of temp. on stability 3—34033
Ge, Czochralski growth, uniform radial segregation, pronounced dopant striations 3—8962
Ge, deep levels due to isolated single and pair vacancies 3—13761
Ge, dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
Ge, dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
Ge, dislocation loop thermal shrinkage and self-diffusion mechanism 3—46941
Ge, dispersive phonons, isotope scatt. 3—42726
Ge, elec. cond. transition, Hall coeff. meas., neutron irrad. effect, percolation theory 3—38445
n-Ge, elec. props. caused by impurity atmospheres left behind by dislocations 3—18707
Ge, electrical cond. relax. due to warm carriers 3—57355
Ge, electrically detected EPR in single crystals 3—57772
Ge, electron energy dissipation and carrier intervalley redistrib. under strong high freq. fields 3—57357
n-Ge, electron irrad., electron traps, ionisation free energy emission rates and capture cross sections 3—28300
Ge, electron irrad., vacancy and interstitial clustered defect form. 3—47000
Ge, electron-hole drop luminesc. damping by high power CO_2 laser radiation 3—43601
Ge, electron-hole liq., ground state, variational approach 3—3074
Ge, electron-hole liq. correlation factor, density depend. 3—13737
Ge, electron-hole liquid, ground state props., thermodynamics and systematics 3—43033
Ge, electron-hole plasma drift in inhomogeneous mag. field 3—18734
Ge, electronic charge redistrib. associated with zone-centre phonons, local field effects 3—57044
Ge, epitaxial growth on (100)GaAs, RF sputter deposition, controlled doping, hole conc. and mobility 3—43730
Ge epitaxial layers, initial growth on GaAs (100), LEED and AES study 3—42978
Ge, exciton luminesc., mag. field depend. 3—3808
Ge, exciton mols., luminesc. study, stability in mag. field 3—38868
α-Ge film, amorphous, low-power multi-pulse laser annealing 3—46992
Ge film, epitaxial growth onto CaF_2/Si struct. 3—13658
a-Ge film, transient effects in electron pulse annealing, time-resolved TEM 3—7910
Ge films, graphoepitaxy on SiO_2 by zone melting recrystallisation 3—13659
p-Ge, galvanomagnetic effects, hole distrib. functions 3—43207
Ge, grain boundary energy states 3—23314
Ge, grain boundary microstructure, HREM obs. *(French)* 3—46954
Ge, grain boundary struct., TEM obs. *(French)* 3—22910
Ge, grain boundary struct., intergranular dislocations, TEM study *(French)* 3—46937
Ge graphoepitaxy on gratings, on SiO_2 substrate 3—2993
Ge, γ-irrad., layer inhomogeneities, piezoresistance and mobility anisotropy 3—28359
n-Ge, heavily doped, four electron pockets, magnon-like modes 3—52067
n-Ge, heavily doped, many-valley, phonon attenuation study 3—22993
Ge heteroepitaxial film, electron beam polishing technique 3—57198
Ge, hole relax. time and transport coeffs., intervalence band interaction effects 3—43197
Ge, hot hole noise at liq. He temps., expt. and Monte Carlo calc. 3—13874
Ge, IR Faraday rotation due to hot carriers, trapping parameters 3—34078
Ge, impurity energy levels of group V and VI elements using unified theoretical model 3—8455
Ge, interatomic bonds, vacancy formation potential at diffusion temp. 3—8043
Ge, interstitial ion migration energy, pseudopot. calc. 3—28160
n-Ge, intervalley phonons, magnetoresist., magnetophonon reson. study 3—3230
Ge, intrinsic, effective creep, cryst. orientation effects *(French)* 3—42703
p-Ge inversion layers, elec. subbands, Shubnikov-de Haas study 3—47403
Ge, ion implanted, damage to surface, TEM study 3—8106
Ge, ion irrad., defect accumulation, magnetoconcentration effect study 3—13291
Ge, laser generated heat pulse propagation 3—23112
p-Ge, laser induced dynamic grating, subpicosec. hole relaxation time, Bragg diffr. study 3—50696
Ge, laser-induced defects, H_2 passivation, DLTS study 3—46993
Ge, laser-induced periodic surface struct. 3—42897
Ge, laser-induced periodic surface struct., time-resolved evolution 3—42899
Ge, lattice dynamics, ab initio pseudopot. theory 3—2707
Ge, lattice thermal cond., 4-700K 3—2897
p-Ge, lightly doped, interimpurity absorpt. of IR radiation 3—38856
Ge liquid, radioactive/non-radioactive, evaporation by effusion method 3—51764
Ge, MBE growth on Si vicinal surface 3—33605
Ge microcrystals, Raman study 3—3727
Ge, misfit dislocation formation in epitaxial struct., substrate thickness influence 3—2560
Ge, muonium impurity screening 3—38348
Ge, muonuim hyperfine freq., direct meas. 3—38743
Ge n^+p diodes, reverse biased, mobility of γ-ray induced defects 3—18650
Ge, neutron irrad., VHF dislocation cond. *(Russian)* 3—8502
Ge, neutron scatt. cross section for intraband transitions 3—8395

elemental semiconductors continued
Ge, neutron transmutation doped, elec. props., annealing effects 3—46971
Ge, non-equilib. carrier conc. depend. on laser excitation intensity *(Russian)* 3—38426
Ge, nonohmic hopping cond. of samples compensated by fast reactor neutron irradiation 3—8504
Ge nuclear radiation detectors, carrier trapping by impurity clusters 3—57362
Ge on Si ⟨111⟩, heteroepitaxial growth by vacuum deposition, elec. props. 3—24130
Ge, optical grade, procurement specification 3—1725
Ge, orientational effects, picosec. transient grating meas. 3—1690
Ge p-n homojunctions, secondary breakdown under dynamic conditions 3—18779
Ge, periodic surface damage, 1.06 μm YAG laser pulses, spectrum in $\vec{K}$ space 3—56952
Ge, phase factor in EXAFS 3—43662
Ge, phonon anisotropic scatt. by holes 3—52127
Ge photodiodes, detection of ultraviolet scintillations in liquid He 3—50163
Ge, photoexcited, Coulomb gas, Mott and liq.-gas transitions, photoluminescence study 3—23272
Ge, photoexcited electron drift vel. space overshoot, Monte Carlo method calc. 3—52191
p-Ge photon drag IR detector, p-Ge element optimal parameters calc. *(Chinese)* 3—40685
Ge, picosecond laser excited, transmission at various wavelengths, carrier diffusion role 3—38837
Ge, picosecond optically induced anisotropic state filling, transient orientation gratings 3—7062
a-Ge, random network model 3—22776
Ge, reactor neutron compensated, elec. cond., simulation of amorphous semicond. 3—43174
Ge, resonant photoemission at 3p threshold 3—8937
Ge, segregation of O on dislocation core, EELS study 3—28108
Ge, shallow acceptor ground state wavefunctions 3—33668
Ge single cryst., internal friction, amplitude depend., in brittle fracture temp. range *(Russian)* 3—2670
Ge, single cryst. and amorphous, optical coeffs. meas. at elevated temp. and 6328 Å 3—28815
Ge solar thermophotovoltaic cells using selective radiators of Er_2O_3 and Yb_2O_3 3—58540
Ge, solid phase epitaxy and VPE on Ge(Si) 3—38266
Ge, spectral dependence of energy deposited in hole plasma by optical radiation 3—38417
Ge, stressed, containing electron-hole liqs., spectroscopic studies, review 3—13745
Ge, subharmonic transit resonance, carrier cyclic motion effects on harmonic generation 3—8521
Ge, submm. impurity and exciton photocond. kinetics 3—23432
Ge, substitutional transition metal impurities, electronic struct. 3—52065
Ge surface, spin centres, interaction with adsorbed mols., EPR study 3—38451
Ge surface, thermal nitridation to produce Ge_3N_4 films 3—33592
Ge, surface (001), reconstructed, intrinsic surface states, angle resolved photoelectron spectra 3—57404
Ge, surface struct., changes due to metal ion adsorption, electron diffr. study 3—2937
Ge, symmetrical tilt grain boundaries, electro microscopy and diffr. studies 3—51620
a-Ge, thermodynamics of equilib. and non-equilib. crystn. 3—22775
Ge, third order elastic consts. and Gruneisen coeff., US vel. study 3—47018
Ge, time-resolved images of electron-hole droplets 3—43036
Ge transition metal impurities, electronic struct. calcs. 3—18651
Ge, transverse photovoltaic effects under laser pulses 3—57389
Ge, ultra-pure, shallow acceptor levels, nature and interconversion 3—43084
a-Ge, vibr. states, effective local environment model 3—8162
Ge, wideband semiconductors, charge carrier conc. meas. using magnetic circular dichroism, NDT 3—58370
Ge:^{129}I (^{125}Te), nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3—8464
Ge:Al, laser multistage ionisation technique for Al impurity conc. determ. 3—58462
Ge:Al(Na), laser photoionisation impurity detect. 3—14891
Ge:As, metal-nonmetal transition under ⟨111⟩ stress, NMR study 3—57283
Ge:As heavily doped solid soln., Frenkel pair form. in initial stage of precipitation 3—33247
Ge:As; laser processed, ^{73}Ge Mossbauer effect 3—57839
p-Ge:Au, recombination wave instability in injected electron-hole plasma 3—38420
Ge:Au,Sb, impurity photoconductivity spectra oscills. 3—13860
p-Ge:Au diode, generation-recombination noise under ambipolar injection conditions 3—3270
Ge:Au p-n junction diodes, forward current, inhomogeneous illum. effect 3—18744
Ge:B single cryst., CW laser beam annealing and junction formation 3—56974
Ge:Cr(Co)(Cd)(Te)(S)(Se)(Zr)(Ti), deep donor centres, H plasma passivation 3—47287
Ge:Cu, impurity states, piezospectroscopy 3—3118
Ge:Fe, electronic struct. calcs. 3—18651
Ge:Ga, growth rate depend. of interface distrib. coeff. in Ge-Ga system 3—13144
Ge:Ga(In)(As)(Sb), electron irrad., hole trapping defects, DLTS study 3—43083
a-Ge:H, B(P), ESR spectra and transport props. 3—43435
Ge:H, reduction in γ-ray damage, DLTS study 3—18345
Ge:H,B(P), amorphous, elec. cond. and thermoelectric power 3—23393
Ge:Li, impurity ion-dislocation dangling bond complex in EPR spectra 3—18989
Ge:Ni, Ni-related defect acceptor level, H passivation, DLTS study 3—43065
Ge:O, amorphous, oxygenation effects on elec. props. 3—28350
Ge:O, γ-irrad. and quenched, deep donor levels 3—43101
Ge:O_2, donor deep level transient spectra 3—18652
Ge:O(Sb), annealed, photoluminescence at thermal defects 3—3810
Ge:Pb(Sn), γ-ray irrad., deep level defects, DLTS study 3—13764

elemental semiconductors continued
Ge:Sb, Czochralski growth, uniform dopant distrib., Faraday effect study 3–2593
Ge:Sb, impurity state ionisation, connection with L- and X-valleys 3–38344
Ge:Sb, P, shallow donors, photoexcitation line quenching by γ-irrad. 3–8454
Ge:Sb(P), impurity photoexcitation spectra, gamma-bombard. fine struct. 3–38436
Ge:Si, ultra-pure, muonium spin precession signals 3–43477
Ge:Te$^+$, ion implanted, damage, cryst. orientation depend., TEM, RHEED and channelling studies 3–56999
Ge:Zn, double acceptor bound exciton, photoluminesc. study 3–33645
Ge/Au interface form., photoemission at Cooper minimum 3–52897
Ge/Av interface, electronic props., EELS study 3–18785
Ge/GaAs epitaxial heterostructures prep. by scanned CW laser annealing 3–57248
Ge/Si interfaces, depth profile and depth resolution evaluation, by KARMA technique 3–51965
Ge-Au, oxidation to GeO_2 through Au layer contacts, Ge nucl. radiation detectors storage appl. 3–34505
Ge-GaAs (110) interface, preparation and electronic props. 3–13889
Ge-GaAs heterojunctions, plasticity and strength studies *(Russian)* 3–47035
Ge-GaAs heterojunctions, gamma ray effects on noise characts. 3–52237
Ge-GaAs superlattice, MBE grown, ion channelling studies 3–47225
Ge-GeO_2 structure, energy diagram determ. from photocharging spectra 3–52271
Ge-MBBA interface, photoelec. effects 3–52190
nGe-p GaAs anisotype graded p-n heterojunctions, nonequilibrium behaviour 3–33784
Ge(111), adsorbed Ag surface diffusion, AES study 3–57206
Ge(111), pyridine chemisorption, UPS study 3–38201
Ge(111)-(2×1) surface, dangling-bond band, angle-resolved photoemission 3–47402
Nb-Ge multilayers, superconducting props. 3–13967
NiSi/Si thin film system, intermetallic cpd. form. and interdiffusion 3–47170
P, amorphous, red, electronic struct., X-ray spectra study 3–8403
P, amorphous, time resolved luminesc. study of recomb. and defects 3–3782
P, black, acoustic phonon dispersion relations, inelastic neutron scatt. study 3–8156
P, black, electronic struct., XPS study 3–19249
P, black, valence band and core-level photoemission spectra 3–34197
Pd-Si:H magnetron sputtered Schottky barrier solar cell 3–8586
Pt-Si:H magnetron sputtered Schottky barrier solar cell 3–8586
PtSi-p-Si Schottky diode barrier height reduction by B$^+$ ion implantation 3–8559
PtSi-Si Schottky barrier contact, elec. characts., interface struct., effects 3–8558
SOS, cryst. growth, laser beam induced, model calcs. 3–56966
Sb-Pt/Si p-n junction form. by laser processing 3–57421
Se, amorphous, atomic models and radial distrib. function, review 3–33097
Se, amorphous, correlation model and short range order, X-ray diffr. study 3–33096
Se, amorphous, positron annihilation, evidence of voids *(French)* 3–24043
Se, amorphous, with O impurity, viscosity, elec. field effect, quasimolecular defect theory 3–27846
Se amorphous films, optical properties in visible range *(Korean)* 3–57986
Se, amorphous photoreceptors, light fatigue effect related to interfacial barrier layers and corona charging voltage 3–20915
Se amorphous thick film, optical gap, heat treatment effects 3–52758
Se amorphous thin film, crystallisation parameters, optical microscopy study *(French)* 3–42520
Se, amorphous thin film, vacuum evaporated, radial distrib. function anal., X-ray diffr. study 3–57235
Se electrophotographic films, effect of contaminants *(German)* 3–20928
Se electrophotographic X-ray detector, Monte Carlo modelling 3–488
Se, epitaxial and amorphous films, vacuum growth on electron irrad. KI, film morphology, TEM study 3–23195
a-Se film, photodarkening phenomena 3–3674
Se, highly disordered amorphous, changes in 4p bonding and 4s states on annealing, XPS study 3–33626
a-Se, optical absorpt. in low freq. range 3–3714
Se, permittivity, reflectivity, absorption coeff. and electron energy loss spectra 3–8846
Se thin film solar cell 3–53513
Se, trigonal, phonon density of states and related thermodynamic props. calc. 3–38008
Se, trigonal single crystal, temp. depend. of AC elec. cond. 3–33729
Se, UPS spectra in condensed phase 3–41620
Se vitreous film, recrystallisation process, fast change of cond., temp. influence 3–42950
Se, XPS study of monoclinic, trigonal, and amorphous forms 3–24093
Se:Te, amorphous, density of gap states 3–28254
a-Se/Al contacts, energy barriers, photovoltaic effect study 3–47423
Se-PVK films, electrophotographic props. *(German)* 3–20927
n-Si *(Chinese)* 3–33659
Si, 30° partial dislocations, geometric and electronic struct. 3–22900
Si (001)2×1, adsorption of H, angle-resolved EELS and elastic LEED study 3–38207
Si (100), clean and adsorbed O layer, characteristic EELS spectra 3–28944
Si (100), reaction with N atoms, thermal desorption, AES and EELS studies 3–38219
p-Si (100) electron inversion layers, two dimens. plasmon dispersion and intersubband reson. 3–13915
Si (100) surface, hole-accumulation layers, Raman study 3–14308
Si (100) surface, thermal etching in Ar ambient 3–47971
Si (100)-Pd, surface reaction, ion beam anal. and AES study 3–42857
Si (100)-(2×1), surface states by asymmetric dimer model 3–33775
Si (100)-(2×1) surface electron states 3–33776
Si (111), adsorbed H, thermal desorption spectra, diffusion effects, theory 3–57227
Si (111), adsorption of H, surface struct. and cond. studies 3–51938
Si (111), Ag chemisorption sites, electronic struct. DV-Xα calc. 3–3285
Si (111), electron-phonon scatt. self energy in nonperiodic systems 3–42735
Si (111), Ge adsorption; struct. and electronic props. 3–18539

elemental semiconductors continued
Si (111) 7×7 surface at. arrangement, LEED patterns 3–42902
Si (111) and (110) surfaces, optical absorpt. of surface space-charge layers 3–52763
Si (111) cleaved surface, adsorption of O_2, AES study 3–14400
Si (111) inversion layer, valley phase transition in high mag. fields 3–23451
Si (111) inversion layer, hot electron effect at low temps. 3–28439
Si (111) surface, Ne$^+$ bombarded, secondary ion emission 3–14417
Si (111) surface, states and dangling bonds 3–38448
Si (111) surface dangling bonds, many-body effects 3–28405
Si (111) surfaces, H adsorption, Auger study 3–14401
Si (111) unreconstructed surface, disordered mag. moments 3–14110
Si (111) with chemisorbed water, surface electronic states 3–28407
Si (111)-Ag(Au)(Ni) interfaces, localised states, capacitance spectroscopy 3–3315
Si (111)-CaF_2(BaF_2)(SrF_2) heterostructures, epitaxial relations, ion channeling anal. 3–51967
Si (111)-Pd, surface reaction, ion beam anal. and AES study 3–42857
Si (111)-Pd system, low energy EELS and AES study 3–3885
Si (111)-1×1 surface, highly doped, electronic props., many-body effects 3–38449
Si (111)-(2*) surface, H adsorption, electron energy loss study 3–51935
Si (111)-(2×1), density of states, clean and H-covered surface 3–43256
Si (111)-(2×1) surface model, LEED calcs. 3–28204
Si (111)(7×7), oscillatory intensity in He scatt., random distrib. of islands model 3–24081
Si (111)(7×7) and (1×1) surfaces, comparison study 3–28403
Si (2×1) and (1×1) (111), dangling bond surface state dispersion curves 3–3283
Si ⟨111⟩, substrate for Ge, heteroepitaxial growth by vacuum deposition, elec. props. 3–24130
Si, absolute hydrostatic deform. pot., LMTO-ASA calcs. 3–13717
Si, acceptor pairs, unlike group III impurities, heteronuclear molecular ion model 3–18644
Si, acceptorlike excited states of isoelectronic A,B,C exciton system, luminesc. study 3–3802
p-Si, acoustic phonon limited cond. and Hall mobilities, deform. pot. theory calcs. 3–47366
Si, amorphised, epitaxial regrowth rate, effects of electrically active impurities 3–3011
Si, amorphised ion implanted single cryst., laser annealing, explosive crystn. obs. 3–42655
Si, amorphized by ion implantation, fast scanned electron and laser beam induced explosive crystn. 3–56821
Si amorphized surface, struct. modifications following picosecond laser irradiation 3–56949
Si, amorphous, bibliography update of material published during 1981 3–49102
Si, amorphous, crystallization on glass substrate, uniform and directed 3–57247
Si, amorphous, density of electronic states calc., model *(Chinese)* 3–33624
Si, amorphous, density of states, SCLC meas. 3–3031
Si, amorphous, electronic defects, laser and electron beam crystn. obs. 3–56956
Si, amorphous, electronic struct. using reverse-recovery techniques 3–13711
Si, amorphous, electronic struct. CNDO calcs. 3–52018
Si, amorphous, evidence against reduced melting temp. 3–57071
Si, amorphous, gap-state density determ. problems 3–23251
Si, amorphous, laser annealing, explosive crystn., implantation effects 3–42654
Si, amorphous, laser irrad., melting temp. meas. for recrystn. process 3–33402
Si, amorphous, mass transfer analyses of the plasma deposition process 3–51985
Si, amorphous, melting during rapid heating, internal flaw effects 3–2757
Si, amorphous, melting point and entropy 3–42755
Si, amorphous, solar cells, thin film, review 3–44124
Si, amorphous, solar cells for 2 kW photovoltaic power generating system 3–53529
Si, amorphous, substrate for MIS and SIS solar cells, future potential *(Slovak)* 3–34699
Si, amorphous, surface-photovoltage diffusion length, theory and expt. 3–43223
Si, amorphous, thin film deposition and solar cell fabrication review *(Hungarian)* 3–44125
Si, amorphous, thin film solar cell, graded band gap, photovoltaic conversion efficiency improvement *(Japanese)* 3–39472
Si, amorphous CVD film, solid phase epitaxy on cryst. Si 3–8972
Si, amorphous CVD films, elec. props. and ESR, plasma hydrogenation effects 3–52154
Si, amorphous film, CW laser annealing effect on elec. props. *(Korean)* 3–8600
Si amorphous film, CW laser annealing, solid phase epitaxy and random crystallisation 3–56948
Si, amorphous film, defects, positron lifetime studies 3–42518
Si, amorphous film, influence of deposition conditions on optical props. *(Korean)* 3–38792
Si amorphous film, photovoltaic props. and solar cell characts. 3–52192
Si, amorphous film, reactive laser-sputtering 3–58053
Si, amorphous film cond., thickness and temp. depend. *(Korean)* 3–38505
Si amorphous film prep. from Ag-Si films 3–52929
Si amorphous films, microwave plasma CVD system 3–52961
Si, amorphous laser quenched from melt, prep. and charact. 3–56944
Si amorphous layers, polycentre crystallisation in pulse annealing 3–18221
Si amorphous photoreceptor design for electrophotography 3–57385
Si amorphous pin solar cells, arc-discharge deposition and conversion efficiency 3–53531
Si amorphous pin solar cells, photovoltaic props. 3–53535
Si amorphous solar cell, electrode element distrib. near contacts and junction layers 3–53536
Si amorphous solar cells, photovoltaic props. and separated reactor chamber prep. 3–53532
Si amorphous solar cells, photocarrier collection, carrier transport model 3–53537
Si amorphous sputtered films, deposition influence on props. 3–52934
Si amorphous sputtered tunnelling barrier for Nb-Nb Josephson junction 3–43330

elemental semiconductors continued
Si amorphous thin film technology and characterization *(Japanese)* 3—28233
Si, amorphous thin films, prod. by ion beam sputtering, optical props. 3—47727
Si, amorphous wafers, ion implanted, thermal recrystallisation annealing, transmission electron diffr., microscopy studies 3—56998
Si and Si-SiO_2, thermal nitridation, oxidation stacking faults shrinkage and growth obs. 3—33274
Si, annealed, bulk material dislocation-free, O and C precipitation study *(Chinese)* 3—33439
p-Si, anodic oxidation in methanol compared to glycol 3—43970
Si as modified by O_2 exposure, electron spectroscopy 3—14404
Si, average stress tensor, ab initio pseudopot. calc. 3—47020
Si, backsurface gettering of metal impurities 3—8254
n-Si, band gap, narrowing, effects of nonlinear impurity scatt. 3—47263
Si, band gap meas. technique using p-n diode 3—35805
Si, band struct, initial level population, and channelling radiation 3—47012
Si, band struct., self consistent APW calc. 3—47259
Si, band struct. calcs. 3—3027
Si, bending gettering of cryst. defects 3—19348
Si, CVD, linear flow reactor, SiH_4 conc. profiles, pulsed UV laser Raman spectroscopy 3—47773
Si, CVD deposition onto alumina and sapphire, electron beam enhanced, partial epitaxy 3—8990
Si CVD epitaxial growths incorporation kinetics, theory 3—13248
Si, CVD film, in situ laser recrystallisation 3—57240
Si CVD film, solid-phase-recrystallised, on fused SiO_2, thin film transistors fabrication 3—43727
Si CVD films, polycryst., enhanced grain boundary diffusion 3—23094
Si CVD films, polycryst., grain boundary induced deep levels, transport props. meas. 3—23316
Si, CVD films, struct. and electronic props. near crystn. temp. 3—23208
Si, CVD grown, laser beam annealed, optical characts. 3—57879
Si, CVD grown, laser irrad., grain enlargement, optical microscopy, SEM studies 3—56968
Si, CVD grown, P doping and oxidation effects on grain growth, TEM study 3—51624
Si, CVD grown on amorphous substrate, shaped beam laser recrystallised, structural and elec. characts. 3—57244
Si, CVD grown on fused SiO_2, laser crystn. 3—56969
Si, CVD layer, grain boundaries, HREM obs. 3—51619
Si, CVD VPE, RF heated, technique for low dislocation density layers production 3—34238
Si, CVD VPE from $SiCl_4+H_2$, gas phase reactions, mass spectra study 3—43747
Si, CVD VPE in $(Y_2O_3)_m(ZrO_2)_{1-m}$ insulating substrates 3—52960
Si, CW laser annealed, quenched-in E-centres, vacancy diffusion model 3—46995
Si, carrier diffusion coeff. 3—57364
Si cathode gas-filled counters for radioactivity meas., background level meas. 3—41437
Si, chemical and electrical characterisation 3—23404
Si, chemical equilibria of $SiCl_4$ reduction by hydrogen, low-pressure epitaxy *(Chinese)* 3—14497
Si, clean and adsorbed Cs, conduction band density of states, secondary electron emission study 3—24067
Si, cleaved surface, struct. and phases 3—57189
Si, cluster model calc. based on tight binding method *(Chinese)* 3—33619
Si co-deposited layers, fringe effect, two-dimensional diffusion in stagnant layer *(Chinese)* 3—13654
Si, complex defects, divacancy and E-centre, mol. cluster study 3—47297
Si, conductivity, nonequilib. field effect at low temp. *(Russian)* 3—47359
Si, cryst. solar cells, practical limiting efficiencies, review 3—48151
Si crystal, Czochralski growth, defect formation, annealing effect 3—43722
Si crystal, dichroism, birefringence, X-ray polarisation activity 3—3868
Si crystal, gamma-ray emission spectrum from relativistic electron impact 3—14411
Si crystal, optical multistability obs. with CW Nd:YAG laser at 1.06 μm 3—50698
Si crystal, X-ray Laue scattering, integrated intensity, dislocation density dependence 3—33256
Si crystal grown from at. beam in vacuum, doping characts. 3—22928
Si crystal growth, Czochralski method increased C content for carrier lifetime and yield improvement 3—14468
Si crystal growth, Czochralski process, low C content product 3—24109
Si crystal growth, Czochralski method, melt rotation interrupt and O conc. control 3—28978
Si crystal growth, temp. oscill. at growth interface 3—42554
Si, crystal growth angle determination, in vacuum and in Ar atm. *(French)* 3—42556
Si, crystal growth as oriented thin film on metal patterned amorphous planar substrate 3—34232
Si, crystalline to amorphous boundary, laser induced solid phase epitaxy 3—57239
Si, crystallisation and amorphisation from melt at interface rel. approaching 20 m/sec. 3—56943
Si, crystallisation methods for terrestrial photovoltaics appls. 3—52907
Si cubic cryst., elastically anisotropic, phonon conduction 3—33527
Si, Czochralski grain, bulk defects, impact of high temp. processing 3—46925
Si, Czochralski grown, precipitate-containing, dislocation generation process 3—8053
Si, Czochralski growth, mag. control of O content 3—58042
Si, Czochralski growth in vertical mag. field 3—3942
Si DC planar-magnetron sputtered film microstruct., Ar press. effect 3—3001
Si, damage, induced by picosecond laser pulse irradiation 3—56955
Si, dangling bonds at line defects, electronic props. 3—47295
Si, deep defects, photolum. characterization 3—43609
Si, deep level impurities, finite mol. cluster calcs. 3—47290
Si, deep levels due to isolated single and pair vacancies 3—13761
Si deep-space solar cell performance at low illumination and temp. 3—39477
Si, defect struct. transitions induced by Q-switched laser annealing 3—46994
Si, defect triplet states, photoexcited, optical nuclear polarization 3—43460
a-Si, defects, bipolaronic ground state 3—23329

elemental semiconductors continued
Si defects, review 3—13214
Si, defects study by projection etching 3—33263
Si, deposition of single crystal bars directly from vapour phase 3—34207
Si, depth distribution of donor impurities determ., by electrochemical method 3—46980
Si, diamagnetic susceptibility of donors 3—38582
Si, dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
Si, diffusion of ^{73}As, laser pulse processing 3—56921
Si, diffusion of Au during low energy Ar^+ bombardment 3—2887
Si, diffusion of B and P, back-side oxidation effects with Si_3N_4 film direct mask 3—8261
Si, diffusion of donors, high conc. and nonequilib. defect effects 3—47163
Si, diffusion of O 3—13546
Si, diffusion of P from spin-on heavily P doped oxide source 3—8260
Si, diffusion process, elec. props. and impurity conc. *(Dutch)* 3—57143
Si, dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
Si diode arrays for detecting photoelectrons 3—36087
Si, dislocation appearance and motion, X-ray topographic obs. 3—27946
Si, dislocation core variable reconstruction, photocond. and Hall effect meas. 3—37921
Si, dislocation dangling bonds, spin-dependent recombination obs. *(Russian)* 3—3229
Si, dislocation effect on radiation defect annealing process 3—27993
Si, dislocation energy levels, DLTS study 3—3111
Si, dislocation free, Schottky barriers, microdefects *(Russian)* 3—23464
Si, dislocation generation, high-resolution real-time X-ray topography study 3—27945
Si, dislocation motion, X-ray topography study, diffraction-contrast inversion obs. 3—33264
Si, dislocation motion under illum., photoplastic effect 3—46940
Si, dislocation recombination, photocond. decay time study 3—42619
Si, dislocation sources, starting stresses 3—2570
Si, dislocations, generation and recombination images in scanning microscopy 3—18309
Si, disordered, electron localization on defects and optical nuclear polarization 3—43115
Si, distorted defects, optical meas. 3—47678
p-Si, divacancies, hole capture cross sections, isothermal capacitance relax. study 3—43107
Si, donor electron localisation in multivalley split 1s states 3—3108
Si, donor level, H-defect complex behaviour, elec., optical and DLTS meas. *(Chinese)* 3—33658
Si, dopant region depth-profiling with thermal-wave microscopy 3—13254
Si, doping inhomogeneities, electroreflectance study, effects on photovoltaic conversion 3—47622
Si, doping profile of buried layer from MOS capacitance, HF and LF C(U) curves 3—33286
Si, doping profile shaping by multiple-pulse laser processing 3—56925
Si, edge defined film fed growth ribbon, effect of heat treatment on bulk diffusion length 3—52179
Si, elec. activity of cryst. defects, combined SEM, EBIC and TEM obs., review 3—13770
Si, electret state decay with low dislocation density 3—19043
Si, electrical conductivity under large uniaxial deformations 3—52157
Si, electron and hole densities of states, ionized donors effect, Born approx. calc. 3—52003
Si, electron backscatt., energy distrib. and ang. distrib. meas. at intermediate energy 3—3891
Si, electron beam annealed, minority carrier diffusion length, solar cell appls. 3—57365
Si, electron beam annealing by focused beam, temp. profiles calc. 3—51664
Si, electron beam pulse processing 3—56990
Si, electron energy dissipation and carrier intervalley redistrib. under strong high freq. fields 3—57357
Si, electron irrad., positron annihilation angular distrib. 3—28926
Si, electron irrad. in HVEM, point defect interaction with surface 3—27999
Si, electron irrad. prod. defects, HVEM study 3—46999
Si, electron irradiated, radiation defects stability, surface effects 3—2609
Si, electron-hole correls. under uniaxial stress 3—43035
Si, electron-hole droplet transport up to near-sonic velocity 3—23280
Si, electron-hole liquid, ground state props., thermodynamics and systematics 3—43033
n-Si, electron-irradiated, heavily compensated, deep levels, photo-DLTS study 3—43063
Si, electronic and struct. props. of grain boundaries 3—23315
Si, electronic energy loss of channeled negative pions 3—42687
Si, electronic props. of dislocations, Shockley partials, and stacking fault ribbons 3—47305
Si, electronic struct., localised orbital description 3—43008
Si, electronic structure of substitutional 3d impurities 3—43104
Si, electronically excited, phonon instabilities 3—38316
n-Si, electrothermal instabilities, nonlinear heat transfer conditions to liq. N_2 3—28344
Si enriched layer as protection against carburisation in HTGR 3—4208
Si, entropy barrier against vacancy-interstitial recombination 3—27975
Si, epitaxial and polycryst. layers, vapour growth mechanism by dichlorosilane decomp. 3—42948
Si epitaxial CVD layers, dopant incorporation and incorporation equilib. 3—18321
Si, epitaxial ΔE detector 3—41439
Si, epitaxial film growth by ion beam sputtering *(French)* 3—43731
Si, epitaxial film growth on Y_2O_3-ZrO_2 substrates by CVD, struct. and elec. props. 3—42968
Si epitaxial film on Al_2O_3, crystallographic misorientations during epitaxy 3—57238
Si epitaxial film thickness meas. using nondestructive regression method 3—269
Si, epitaxial growth on Si by RF plasma CVD using Si-Ge buffer layer 3—52968
Si epitaxial growth on SiO_2 by Si mol. beam reactive etching, AES, RHEED and SEM study 3—8354
Si epitaxial layer, $\langle 100 \rangle$ oriented, defect evaluation by wet chem. etch 3—2997
Si epitaxial layer growth using moving solvent enriched with rare earth metals 3—24166
Si, epitaxial layer growth on Si substrate, solar cell fabrication 3—52972

elemental semiconductors continued
Si epitaxial layer on O_2^+ implanted substrate, carrier lifetime meas., IC appl. 3—47360
Si epitaxial layers by vacuum sublimation, impurity conc., minority carrier lifetime 3—38255
Si, epitaxy from chlorosilanes, modelling of CVD, reaction kinetics 3—42946
Si, etched grooves, planar refilling by LPE 3—34247
Si, etching and product detection in plasma beam under ultrahigh vacuum 3—4157
Si, etching by silane ion beam *(Japanese)* 3—47977
Si, etching in C_xF_y-H_2 RF discharge, polymerisation mechanisms 3—53382
Si, etching in ClF_3 and related mixtures, multiple-etchant loading effect 3—43971
Si, excess solubility of O during steam oxidation 3—13455
Si, exciton mols., luminesc. study, stability in mag. field 3—38868
Si, exciton-plasma Mott transition 3—38310
Si, faulted dislocation dipoles during high temp. deformation 3—42614
p-Si field emission devices burst noise 3—24100
Si, field evaporation voltage, temp. depend. 3—52904
Si, field reversed ion rings in background plasma, stability 3—56914
Si film, diffusion into GaAs:Cr by pulsed laser irrad. 3—57145
Si film, elec. oscills., surface recomb. waves 3—18805
Si film, explosively crystallized on glass, optical, struct. and elec. characts. 3—57246
Si film, laser irrad., radiative melting, lamellae obs. 3—46989
Si film, lateral seeding epitaxy by CW Ar laser irrad. and high temp. CVD 3—2996
Si film, on CaF_2/Si structs., cryst. quality improvement by ion implantation and solid phase recrystn. 3—51972
Si film, on SiO_2 substrate, arc lamp zone melting and recrystn. 3—8999
Si film, plasma enhanced CVD, deposited from 525 to 725°C, props. 3—8357
Si film, plasma enhanced CVD, doped during deposition, props. 3—8358
Si film, polycryst., amorphisation by Si ion implantation, annealing behaviour 3—51982
Si film, polycryst., recrystallisation using incoherent light 3—34223
Si film, recrystallisation using graphite heaters 3—57004
Si film, segregation of P at grain boundaries, STEM X-ray microanal. study 3—13456
Si film of sapphire substrate, TSC study of polarisation effects *(Russian)* 3—8761
Si film on sapphire, crystalline quality, automatic X-ray diffr. rocking curves 3—33593
Si film on sapphire, elec. props., thermal stress effects 3—38506
poly-Si films, cond. model for semicond.-grain boundary-semicond. barriers 3—52280
a-Si films, electrical and optical props., influence of H_2 gas during RF sputtering 3—14371
Si films, orientation selection by zone melting through planar constriction 3—8971
Si films, plasma etching, polymerisation effects, spectrosc. investig. 3—2306
Si, films, polycryst., As and P ion implanted, effects of CW and pulsed laser annealing 3—33299
Si films, single cryst. lateral nucleated epitaxy on amorphous $SiO_2(Si_3N_4)$ using scanning laser and electron beams 3—34224
Si films, zone-melting recrystn. with moveable-strip-heater oven 3—34225
Si, float zone, oxidation induced stacking faults, backside oxidation effects 3—22921
Si, float zone, point defect distribution, divided selective oxidation study 3—37900
Si, float zone crystals, swirl defects study 3—46938
Si, float-zone crystal growth, crystal superrefinement by electrolytic segregation *(Japanese)* 3—43725
Si float-zoning 3—52927
Si for VLSI, implant gettering and ion beam detect. of generation impurities 3—42633
Si, free surface, diffusive scatt. of HF phonons 3—28207
Si, g-tensor for defects with dangling bonds 3—47296
Si, gamma-ray irrad., charge carrier recombination at defect clusters 3—3226
Si, grain boundary anal. by TEM 3—22909
Si, grain boundary barrier height and interface states, laser beam photocond. study 3—38335
Si, grain boundary energy states 3—23314
p-Si, grain boundary I-V characts., tunnelling 3—23380
Si, grain boundary impurity distrib., SIMS and ion bombard. studies 3—51625
Si, grain boundary microstructure, HREM obs. *(French)* 3—46954
Si, grain boundary struct., EBIC contrast *(French)* 3—22915
Si, grain boundary struct. rel. to growth technique and elec. props. 3—51626
Si, ground state struct. props., local density functional formalism 3—57300
Si growth on SiO_2 by CVD epitaxial lateral overgrowth 3—24148
Si, Γ-point optical phonon, Raman study 3—28848
Si, Hall coeff. and conductivity mobility, acoustic phonon scatt. 3—8512
Si, heat treatment studies of O defect-impurity interactions 3—2598
n-Si, heavily doped, band-gap shrinkage, luminesc., IR absorpt. and bipolar transistor data 3—38859
Si, heavily doped, phonon self-energies 3—22989
Si heavily doped wafers, behaviours of thermally induced microdefects 3—42592
Si, heavy ion and electron collisions, Auger line shape 3—43689
Si, high dose N ion implantation, formation of Si_3N_4 buried layers 3—51643
Si, high press. oxidation, optical and elec. props. of oxide layers 3—19436
Si, high purity, thermal donors, elec. resist. study 3—13767
Si, high purity material prep. by aluminothermic reductin of quartz sand 3—52988
Si high-low back-surface-field solar cells, anal. of efficiency limitations 3—39473
Si, hole relax. time and transport coeffs., intervalence band interaction effects 3—43197
Si, hollow p-n junction and silicide ohmic contact form. by ion implantation technique 3—13246
Si, horizontal ribbon cryst. growth, morphologically stable, quasi steady-state heat flow anal. 3—34218

elemental semiconductors continued
Si IC, bipolar, $FeSi_2$ precip. contamination effect on circuit yield 3—23045
Si, impact ionisation, prob. calc. 3—18714
Si, implanted impurity electron states, hyperfine interaction and channelling studies 3—43076
Si, implanted or Czochralski grown, rod-like defects, faults and loops, independent form. 3—46968
n-Si, impure, elec. and optical energy gap calcs. 3—43009
Si, impurities, exchange-correlation and local field effects, RPA calc. 3—57298
Si, impurity analysis with SIMS *(Japanese)* 3—48106
n-Si, impurity cond., AC and DC hopping cond., extended pair approx. 3—38386
Si, impurity deep levels, electronic props. and stability 3—52072
Si, impurity energy levels of group V and VI elements using unified theoretical model 3—8455
Si, impurity gettering of damage generated by ion implantation through SiO_2 layers 3—22948
Si, impurity migration retardation by internal elec. field, theory 3—33511
Si, incoherent light irrad., recrystn. on insulating substructure 3—47765
Si, interatomic bonds, vacancy formation potential at diffusion temp. 3—8043
Si, internal strain parameter and elastic consts., self consistent electronic calc. 3—18367
Si, internal strain parameter, self-consistent calc. 3—22822
Si, interstitial host atoms near divacancies, diffusion and annealing 3—37905
Si, interstitial ion migration energy, pseudopot. calc. 3—28160
Si, interstitial muons and H_2, self-consistent total energy surfaces calc. 3—46924
n-Si, intervalley phonons, magnetoresist., magnetophonon reson. study 3—3230
Si inversion layer, cyclotron effective mass, plasmon and impurity effects 3—3329
Si inversion layers, 2D quantised Hall resistance, electron localisation 3—3302
Si inversion layers, g-factor and mag. susceptibility, influence of effective pot. 3—57429
Si inversion layers, magnetic properties of surface electrons 3—52596
Si, ion bombard. induced surface topography, depth resolution, electron microscopy study 3—8924
Si, ion bombardment, low energy, long range effect 3—33321
Si, ion implant damage, rapid annealing using thermal radiation 3—2590
Si, ion implantation, high energy damage mechanism, theory 3—42626
Si, ion implantation and pulsed annealing, appl. to solar cell fabrication 3—27960
Si, ion implantation by 11 MeV As ions 3—8076
Si, ion implantation damage annealing with graphite heaters 3—57004
Si, ion implantation of C, β-SiC synthesis 3—3993
Si, ion implanted, annealing using incoherent light 3—56928
Si, ion implanted, annealing using dual electron beam processing system 3—56992
Si, ion implanted, CW CO_2-laser annealing, solid-phase epitaxy model *(Chinese)* 3—37955
Si, ion implanted, characterisation of XeCl excimer laser annealing 3—8092
Si, ion implanted, discharge annealing, optical reflectivity study 3—56993
Si, ion implanted, dopant redistribution by pulsed laser annealing, particle backscatt. and channelling study 3—33289
Si, ion implanted, dynamic behaviour of nanosecond pulsed laser annealing, optical studies 3—56939
Si, ion implanted, ellipsometric spectrum and optical props. 3—28880
Si, ion implanted, explosive liq. phase crystallisation 3—18222
Si, ion implanted, form. energy of amorphous layer, calorimetric study 3—42683
Si, ion implanted, halogen lamp annealing *(Japanese)* 3—46986
Si, ion implanted, laser annealing and damage, electron channelling pattern obs. 3—13052
Si, ion implanted, laser annealed, defect struct., electron microscopy anomalies 3—22939
Si, ion implanted, light absorpt. effects on Nd laser annealing 3—56951
Si, ion implanted, picosecond laser annealed, recrystn., microprobe Raman anal. 3—51656
Si, ion implanted, Raman scatt. calcs. during laser annealing 3—57937
Si, ion implanted, short time annealing methods, review 3—51638
Si, ion implanted, solid epitaxy, impurity and conc. depend. of growth rate 3—37938
Si, ion implanted, solid phase epitaxial growth 3—8367
Si, ion implanted, solid phase epitaxy, interface structures and twins obs. 3—33591
Si, ion implanted, solid state annealing by incoherent light pulses and multiscan electron beam 3—27997
Si, ion implanted laser annealing, charact. and solar cell fabrication 3—13269
Si, ion irrad., melting and dislocation trapping 3—2568
Si ion source extraction grid, fabrication and use 3—459
Si, ion-induced Auger electron emission 3—3893
Si, irradiated, defects determining Fermi level stabilisation 3—33674
Si irradiated by photons with energies up to 2 MeV, initial electron energies calc. 3—27992
Si, LDOS of crystal, improvement of calc. by EHMO method *(Chinese)* 3—33620
Si, laser and electron beam annealed, doping profile, characterisation by IR spectrophotometry 3—57939
Si, laser annealed, melt dynamics meas. 3—46996
Si, laser annealing, pulsed, coupling of optical absorpt. and thermal cond., theory 3—42653
Si, laser annealing/cleaning, pulsed, ion scattering study of O_2 indiffusion 3—57144
Si, laser crystallised thin film, deep levels, capacitors 3—3271
Si, laser heated, picosec. time-resolved detection of plasma form. and phase transition 3—38834
Si, laser induced backside damage, characterization for gettering 3—56973
Si, laser induced CVD single cryst. growth 3—47758
Si, laser induced nonlinear absorpt., free carrier absorpt. and thermal effects 3—57875
Si, laser induced phase transitions, space-time resolved reflectivity meas. 3—56936
Si, laser irrad., O incorporation, effect of O_2 pressure 3—22936

elemental semiconductors continued
Si, laser irradiated, charged particle emission 3—58038
Si, laser irradiation, picosecond, fundamentals of energy transfer 3—56933
Si, laser-enhanced etching by XeF$_2$, non-thermal effects 3—43967
Si, laser-induced periodic surface struct. 3—42897
Si, lateral epitaxial overgrowth on SiO$_2$ from SiH$_4$+H$_2$ 3—8989
Si, lateral twin boundaries, struct. and crystallograpy 3—22914
Si, laterally seeded, on SiO$_2$, microstruct. 3—18306
Si, lattice deformation relax. under const. load, Raman scatt. study 3—47027
Si, lattice dynamics, ab initio pseudopot. theory 3—2707
Si, lattice thermal cond., 4-700K 3—2897
Si, lattice vacancy, negative-U props. 3—43077
Si, light diffraction by inhomogeneous transient gratings 3—17585
p-Si, lightly doped, interimpurity absorpt. of IR radiation 3—38856
Si, line defects, EBIC contrast, computer simulation 3—18307
Si, low-press. CVD, review 3—8992
Si, MBE, bibliography, 1962-82 3—40330
Si, MBE, laser processing 3—58052
Si, MBE growth, high quality layers *(Japanese)* 3—29002
Si, MBE patterned growth with submicron lateral resolution 3—8982
Si MOS devices, interface states, dynamic conductance and noise meas., bias-temp. stresses 3—8591
Si MOS inversion layers, effective mobility edge and inelastic scatt. time in strong mag. fields 3—43292
Si MOS photodiodes, polycryst., for large-area high spatial resolution photosensor arrays 3—49449
n-Si MOS pulsed capacitors, anomalous behaviour and gated diode leakage current meas. 3—52270
Si MOS solar cells, polycryst. and amorphous, fabrication by anodisation 3—53509
Si MOS struct., thermal excitation of two-dimensional plasma oscillations 3—23491
Si MOS structure and diffused junctions charge collection meas. for energetic ions 3—38465
Si MOS structures, inversion layer formation, illumination effects 3—43289
Si MOSFET, high density electron-hole plasma form. below 25K 3—47426
Si MOSFET, localisation and electron-electron interaction effects 3—23492
Si MOSFET structs., one-dimens. effects, nonmetal-metal transition 3—3328
Si, many-valley semiconductors, acoustic wave interaction with oscillator 3—47392
Si, mass transfer, influence of edge dislocations, numerical study 3—28163
Si, melt-in, regrowth, and amorphisation vels. under pulsed laser irrad. 3—56931
Si, melted by laser pulses, non-equilib. dopants incorporation, review 3—51646
Si, melting phenomena and interfacial instability associated with laser irradiation 3—56945
Si, melts during pulsed ruby laser annealing, lattice temp. meas. 3—56935
Si memory materials, U and Th content determ. by high fluence neutron activation anal. 3—29343
p-Si, metallisation by photoelectrochem. deposition using internal cell 3—39048
Si microcrystalline film, plasma transport growth, in situ Raman spectroscopy study 3—23206
Si, microdefects, triple cryst. diffractometer studies with Laue-case diffr. 3—18293
Si, microscopic screening and phonon freq. 3—22997
Si, microwave plasma etching with SF$_6$ and carbon tetrafluoride gases 3—43973
Si, minority carrier diffusion coeff., AC photo-current study 3—52168
Si, minority carrier lifetime temp. dependence meas., microwave contactless, instrument 3—40642
p-Si, minority carrier recomb. vels. at grain boundaries, temp. depend. 3—13828
Si mirror, actively cooled, performance potential 3—7110
Si, model of Cu impurity levels 3—33679
Si modulation doped structs. using multi-step MBE and ion implantation 3—42630
Si, monocrystalline, donor generation by halogen implantation 3—51642
Si, monoisotopic, thermal cond. estimates 3—2900
Si, Mossbauer γ-ray diffr. integrated refl. power determ. 3—42497
Si, multicrystalline, growth methods for solar cell appls. 3—24112
Si, multilayer structures, current-voltage characts. at high current densities, Auger recomb. 3—8571
Si, multivacancies, interstitials and self-interstitial migration 3—47289
Si, muonium impurity screening 3—38348
Si, muonuim hyperfine freq., direct meas. 3—38743
n-Si, n$^+$-n-n$^+$ asymmetrical struct., effect of strong microwave elec. fields 3—33787
Si n-n$^+$ junction with point contact, I-V characts. and current oscill. 3—8568
Si, narrow accumulation layers, two-to-one-dimensional cond. transition 3—23489
Si narrow inversion layer, 1-D localisation and interaction effects 3—8589
n-Si, negative differential resistance, transverse fields and Sasaki effect 3—33733
Si, neutral-vacancy defect, embedded cluster theory, ab initio calc. 3—8448
Si, neutron bombarded, defect formation kinetics, self-consistent electric field allowance 3—51669
Si, neutron displacement cascades structure 3—42673
Si, neutron irrad., annealing kinetics of defects, elec. cond. study 3—13290
Si, neutron irrad., charge transient spectroscopy 3—23307
Si, neutron irrad., minority carrier lifetime study 3—23403
p-Si, neutron irradiated, current DLTS with bipolar rectangular weighting function 3—52057
Si, neutron scatt. cross section for intraband transitions 3—8395
Si, neutron transmission doped, radiation damage, IR absorpt. study 3—46974
Si, neutron transmutation doped, radiation damage, EPR study 3—46973
Si, nitridation, ellipsometry and AES studies 3—4160
Si, nonequilibrium crystal growth during pulsed laser annealing 3—56942
Si, nonlinear recombination processes, saturated photovoltage transient meas. method 3—18719
Si nuclear radiation detector at low temp., operating characts. 3—11613

elemental semiconductors continued
Si, O and C content meas. in Si using ratio spectrum *(Chinese)* 3—4325
Si on sapphire (vitreous quartz), heavily doped layers, stress relief, Raman study 3—51993
Si, optical reflectivity and transmission changes, electronic plasma, pulsed laser beam annealing 3—13270
Si, oriented superlattices, electronic phenomena 3—13896
Si, oxidation, oxide film thickness meas. by ellipsometric technique *(Chinese)* 3—20821
Si, oxidation, oxygen trapping, induced by laser irradiation 3—56953
Si, oxidation, ultrathin oxide films, AES and ellipsometry study *(Chinese)* 3—38241
Si, oxidation in presence of trichloroethylene, SiO$_2$ electron traps obs. 3—33667
Si, oxidation-enhanced B and P diffusion, quantitative model 3—23101
Si, oxide films, viscoelasticity, X-ray topography study 3—22967
Si, p$^+$ implanted, defect annealing, DLTS *(Chinese)* 3—43060
Si p$^+$-n and n$^+$-p junctions, enhanced charge collection via funnelling 3—38463
Si, P$^+$-n-n$^+$ back surface field, with very large short circuit current densities 3—39487
Si p$^+$-n-n$^+$ diodes, current filaments obs. *(Russian)* 3—47417
Si, p$^+$-n-n$^+$ multilayer struct., Auger recomb. at high current densities, I-V meas. 3—18772
Si p-i-n diode optical modulator Sn wavelength 1.15 μm 3—22199
Si p-i-n photodiode permanent damage effects due to total dose exposure 3—40688
Si p-i-n photodiode pocket radiation chirper 3—55712
Si p-i-n structures at high injection level, recomb. of nonequilibrium carriers in base region 3—23474
Si p-n junction, abrupt, LF noise due to carrier recomb. in space charge region calc. 3—13894
Si, p-n junction, degradation processes, at repeated onset of secondary breakdown *(Russian)* 3—57415
Si p-n junction, ionisation transients of shallow levels in space charge layer 3—43106
Si, p-n junction, luminosity distrib., in secondary breakdown zone *(Russian)* 3—57414
Si p-n junction, minority carrier lifetime meas. using AC photovoltages 3—52169
Si p-n junction characts., photovoltaic method using cut-off freq. 3—47411
Si, p-n junction formation, laser induced liq. zone migration of metal-Si alloys 3—56964
Si p-n junction solar cell, minority carrier effective lifetime 3—44133
Si p-n shallow junctions, ion implanted, gettering effects on leakage currents, MOS VLSI appl. 3—52230
Si, partial dislocation glide 3—22893
Si, phonon focusing, flux density calc. 3—38012
Si, photo-field emission mechanism 3—34203
Si, photoacoustic signal generation, carrier diffusion and recombination influence 3—47055
Si, photoconductivity and ESR study of spin-dependent recombination at dislocations 3—38432
Si, photoconductivity meas. by microwave cavity method *(Japanese)* 3—57378
Si photodiode, weak opt. signal detecting device 3—5856
Si photodiode quantum efficiency enhancement at 365 nm, optical and electrical 3—16413
Si photodiode self-calibration for IR radiometry 3—395
Si, photoelectrochemical cell using n(p)-Si/acetonitrile system 3—9448
n-Si, photoelectrochemical cell using aq. ferrocene/ferricenium 3—9449
p-Si photoelectrochemical cell using liq. NH$_3$ or NH$_3$-NaI 3—9450
Si, photoresponse, near UV quantum yield meas. 3—43226
Si photovoltaic devices for photometric use, spectral charact. correction 3—40665
Si, photovoltaic solar energy conversion appl., principle, development trends and future potential *(Czech)* 3—24575
Si, picosecond laser pulse annealing, carrier and lattice temp. calcs. 3—56947
Si, plasma anodization, low temp., short range O migration and O exchange through thin ZrO$_2$ films 3—9209
Si, plasma etching mechanism; plasma beam studies 3—4164
Si plasma sprayed film, microstruct. and elec. props. 3—23213
Si, plasma-chemical etching, kinetics and mechanisms 3—29202
Si, plastic deformation, positron study 3—57014
Si, plastically deformed, dislocation study 3—46939
Si, polycryst., grain boundary effects on elec. props. and photovoltaic response *(French)* 3—22918
Si, polycryst., grain boundary passivation and analysis for solar cell applications 3—51629
Si, polycryst., impurity distrib. diffusion, and segregation, XPS study *(French)* 3—22930
Si, polycryst., MIS processing rel. to grain boundary activity, solar cell appls. 3—52272
n-Si, polycryst., phonon-assisted carrier transport across a grain boundary 3—28345
Si, polycryst., recrystn. by laser and electron beam annealing *(French)* 3—24121
Si, polycryst. film deposited on dielectric layers, CW laser annealing 3—33298
Si, polycrystalline, Bridgman growth, crystallographic anal., photovoltaic appls. 3—22807
Si, polycrystalline, carrier transport mechanism in MOS devices on polycrystalline Si 3—33795
Si, polycrystalline, electron-beam induced current response of grain boundary, surface recomb. vel. 3—33737
Si, polycrystalline, grain boundaries, TEM study 3—22911
Si, polycrystalline, grain boundary struct., EBIC study *(French)* 3—22912
Si, polycrystalline, grain boundaries, electronic props., photoelec. study *(French)* 3—23430
Si, polycrystalline, grain size influence on mobility, lifetime and diffusion length 3—43167
Si, polycrystalline, grain orientation determ. by directional acoustic microscope 3—46397
Si, polycrystalline, Hall mobility and resistivity, model 3—18725
Si polycrystalline, ion implanted, laser annealed film, characterisation by Raman microprobe 3—3842
Si, polycrystalline, laser recrystallisation effect on substrate minority carrier lifetime 3—27987

elemental semiconductors continued
Si, polycrystalline, laser annealed, thermal oxides characterization 3—57435
Si, polycrystalline, low temp. prep. from $SiCl_4$ and charact. 3—3934
Si, polycrystalline, MOSFETs and thin films, elec. characterisation 3—8597
Si, polycrystalline, n^+-p/p^+ solar cell, fabrication and characts. *(Korean)* 3—34698
Si, polycrystalline, nucleation and deposition on amorphous Si_3N_4 layer, ellipsometry *(French)* 3—23193
Si, polycrystalline, Schottky diodes, grain size, laser annealing study 3—33777
Si, polycrystalline, transport props., three-dimens. model 3—18700
Si, polycrystalline and amorphous, Schottky barrier solar cells, growth facilities and growth quality, plasma discharge 3—58511
Si, polycrystalline cast, solar grade, grain boundary props., heat treatment effect, EBIC study 3—51628
Si, polycrystalline coatings, prep. from $SiHCl_3$ in RF plasma 3—8998
Si, polycrystalline film, ion implanted laser annealing, struct., resist., carrier mobility *(Chinese)* 3—43299
Si polycrystalline film, plasma etch profile control with plasma sheath elec. field and RF power density 3—24377
Si polycrystalline film, solid phase reaction with overlapping Al film obs. 3—33515
Si polycrystalline film deposition, nucleation and early stage growth depend. on substrate *(Chinese)* 3—13653
Si polycrystalline film grain-boundary trapping model 3—3343
Si polycrystalline film growth on liq. Sn layer, growth mechanism and elec. props. 3—58046
Si, polycrystalline ingot, crystallographic orientation study after directional solidification *(French)* 3—13148
Si polycrystalline islands, laser recrystallised, grain boundaries and diffusion paths, MOSFET and ring oscillator appl. 3—33295
Si polycrystalline laser-recrystallized Schottky diodes 3—57409
Si, polycrystalline p-type, density of states and trapping states, DLTS study 3—33661
Si polycrystalline sheet, continuous growth on C shaper by ribbon-against-drop process, solar cell appls. 3—52922
Si polycrystalline solar cells, elec. props., effect of thermal treatment *(French)* 3—24586
Si, polycrystalline solar cell, grain boundaries, EBIC and light induced currents characterisation 3—53541
Si, polycrystalline thick films, seeded epitaxial recrystn. on SiO_2 3—34222
Si, polycrystalline thin film p-n junction solar cell with preferential doping, model 3—24587
Si, porous, laser processing 3—56972
Si, positron annihilation at defects meas. for light irrad. crystals 3—34164
Si, positron annihilation radiation and bremsstrahlung at 1 GeV *(Russian)* 3—43658
Si, positron spectroscopy of defects 3—3861
Si, pulsed doping in high-current gas discharge 3—33282
Si, pulsed laser annealed, impurity segregation coeffs. determ. method 3—51651
Si, pulsed laser annealing, temp. and temp. gradients, X-ray diffr. study 3—37954
Si, pulsed laser annealing, nonthermal effect, EPR study 3—46997
Si, pulsed laser annealing, synchrotron X-ray study of struct. 3—56934
Si, pulsed laser annealing, pulsed-Raman temp. meas. 3—57936
Si, pulsed laser annealing and damage, electron energy distribs. 3—56940
Si, pulsed laser annealing phase, Raman and optical props. 3—57935
Si, pulsed laser irrad., time resolved reflectivity and transmission 3—28820
Si, pulsed ruby laser irradiated, time resolved transmission and refl. 3—57957
Si, pulsed-laser annealing, synchrotron X-ray diffr. study, plasma model 3—27988
Si, quenched, dislocation-free, vacancy agglomerates formation obs. 3—2550
Si, quenched, thermal defects, photocond. study 3—37898
Si, radiation damage by high energy particles, computer modelling study 3—42647
Si, radiation defect optical charge exchange and ESR 3—38695
Si, Raman scatt. with nanosecond resolution during pulsed laser beam annealing 3—8811
a-Si, random network model 3—22776
a-Si, ranges of low energy light ions, SIMS study 3—57007
Si reach-through avalanche photodetector 3—40693
Si, reactive sputtering characts., effect of N_2-Ar mixing 3—52943
Si, reactively ion etched, deep levels, DLTS study using p^+-n diode arrays 3—52056
n-Si, rectangular waveguide, microwave electric field strength 3—33754
Si, reduced press. epitaxy, kinetic theory of autodoping 3—42961
Si, resonance dechannelling of He and H at axial to planar transition 3—13296
Si ribbon, EFG, Cu precipitates morphology characterizing lattice imperfections 3—37897
Si ribbon, edge-defined film-fed growth, electron irrad. effects 3—42665
Si ribbon, photovoltaic mechanism, lifetime meas. 3—33760
Si, ribbon cryst. pulling, raw material continuous feeding, solar cell substrate fabrication 3—52923
Si ribbon growth method development *(French)* 3—24113
Si ribbons, Stepanov growth, SiC inclusion form. 3—2547
Si, SAW interdigital transducers, optimal design 3—27344
Si, SIMS depth profiling of light impurities, broadening effects 3—38992
Si, SOS small-size p^+nn^+ diodes, double injection phenomena, hot carrier effects obs. 3—13888
Si Schottky contacts on n- and p-type surfaces, props. 3—52251
Si Schottky-barrier solar cell, Al-p-n diode struct., nonuniformly doped, anal. 3—53542
Si, seeded epitaxial growth over SiO_2 substrate by laser irrad. 3—57245
Si seeded lateral epitaxial layer on SiO_2, RHEED characterisation 3—23194
Si, selective epitaxial growth using reduced press. technique 3—3964
Si, selective lifetime doping by laser scanning, meas. on p-n junctions and MOS capacitors 3—33736
Si, self-consistent electronic struct. for Al and Si interstitials, cluster extended Green's function technique 3—47294
Si, self-diffraction of picosecond light pulses 3—34177
Si, self-diffusion, study by nucl. techniques 3—42830
Si, semicrystalline ingot prod. by unidirectional crystn., solar cell appls. 3—52989

elemental semiconductors continued
Si sheet, melt spinning prep., solar cell fabrication 3—53507
Si, sheet, semicontinuous edge-supported pulling, solar cell appl. 3—8960
Si sheet casting using mould releasing agent, solar cell fabrication 3—53505
Si, sheet crystal growth, edge-supported pulling, filament materials 3—34213
Si sheets, grain boundaries, TEM and EBIC studies 3—22916
Si, simultaneous nucl. microanalysis of N and O 3—4327
Si, single cryst., relativistic electron radiation spectra, absolute cross section 3—3854
Si, single cryst., X-acceptors 3—28303
Si, single crystal, Czochralski growth, C contamination 3—33153
Si single crystal, dislocations study by channelling 3—2569
Si single crystal, lifetime subjected to loads of duration 10^{-6}-10 s 3—8133
Si single crystal growth by Czochralski method, O incorporation and precipitation 3—14467
Si solar cell, CW laser annealing and ion implantation 3—19586
Si solar cell, efficiency improvement using plasma deposited Si_3N_4 films 3—53508
Si solar cell, high energy proton irrad. damage 3—53504
Si solar cell, low-cost material, optical absorpt. coeff. and minority carrier diffusion length meas. 3—23900
Si solar cell damage from elec. overstress 3—44126
Si solar cell efficiency as affected by minority carrier diffusion length and silicon quality 3—24599
Si solar cell fabrication impurities effects on cell efficiency 3—24600
Si solar cell performance under concentrated sunlight, temp. depend. 3—53526
Si solar cell struct., ion beam hydrogenation effects 3—8112
a-Si solar cell structs., dielectric relax. contrib. to freq. dispersion of junction admittance 3—14951
a-Si solar cell structs. and characts. *(Croatian)* 3—19584
Si solar cell with bus electrodes 3—53523
Si solar cells, amorphous thin films, characts. props. 3—9435
Si solar cells, cast, low cost process sequence using thick film technology 3—53557
Si solar cells, conf., Kyoto, Japan (May 1982) 3—49073
Si solar cells, EFG polycryst., ion implantation and laser annealing prep., SEM characts. 3—24584
Si solar cells, EFG ribbon, minority carrier diffusion length, bias light wavelength depend. 3—4386
Si solar cells, edge-defined film-fed grown, H_2 passivation of defects, EBIC studies 3—58498
Si solar cells, effect of Ti layer thickness on reflectivity in near IR region 3—44121
Si solar cells, effective surface recombination velocity and minority-carrier lifetime meas. 3—44128
Si solar cells, induced junction, open circuit voltage limitations due to surface recomb. 3—58537
Si solar cells, ion implantation techniques in manufacture 3—51644
Si solar cells, n^+-p-p^+ structure, open circuit voltages across junctions under high illumination levels 3—58502
Si solar cells, open circuit voltage dependence on emitter surface parameters 3—4394
Si solar cells, polycryst., photovoltaic conversion efficiency, plasma hydrogenation effects 3—53506
Si solar cells, polycryst., integral screen printing technique 3—53558
Si solar cells, polycryst., enhanced photoresponse at dislocation subgrain boundaries, X-ray topography study 3—53560
Si solar cells, polycryst., chem. and ion beam etch studies rel. to elec. characts. 3—53561
Si solar cells, polycryst., I-V characts., effect of grain boundary recomb. and grain size 3—58524
Si solar cells, review of progress 3—14949
Si solar cells, self-annealed ion implanted, fabrication and props. 3—14938
a-Si solar cells, solar cells, state-of-the-art review 3—24589
Si solar cells, TiO_2 antireflective coatings 3—53524
Si solar cells fabricated by non-mass-analysed ion implantation 3—53500
Si solar cells fabricated by ion implantation and short time furnace processing 3—53501
Si solar cells for space appl. elec. performance degradation due to electron and proton irrad. 3—53502
Si solar cells low cost fabrication using epitaxial structures 3—9427
Si solar cells made by liquid phase epitaxy, cell performance 3—53522
Si solar cells with highly-doped substrates, recombination mechanisms 3—39489
Si, solar grade, defects, EBIC/TEM study 3—51627
Si, solar grade, floating zone growth method 3—52928
Si, solar grade, impurity segregation at grain boundaries and other comp. inhomogeneities 3—51812
Si, solar grade, prep. in arc furnace from high purity starting materials 3—52987
Si, solar grade, review 3—19300
Si, solar-grade, prod. by carbothermic reduction of silica 3—34254
Si, solid phase epitaxy on Si(Ge) 3—38266
Si, solid solubility of III, IV, V group impurities, strain entropy and tetrahedral radius correl. 3—13242
Si, solid-phase epitaxy with Al transport medium, diffusivity and growth rate 3—23216
Si, solidification during pulsed laser annealing, elec. cond. and optical reflectivity study 3—42754
Si spherical solar cells, development 3—34695
Si, sputter-etch-damaged, annealing by Q-switched ruby laser 3—51657
Si, sputtering yield for low energy noble gas ions, fluence depend. 3—38977
Si, stacking fault weak beam contrast asymmetry in TEM 3—7883
Si, stacking faults, electron microscopy, weak-beam contrast meas. 3—22922
Si, stacking faults, oxidation induced, shrinkage, doping depend. 3—8065
a-Si, static charge fluctuations; 2p core-level photoemission spectra 3—24091
Si, stressed, containing electron-hole liqs., spectroscopic studies, review 3—13745
a-Si, struct. order parameters, Raman scatt. study 3—56820
Si, subdoped layers, average carrier mobilities calc. 3—13932
Si, substitutional and interstitial 3d impurities, electronic struct. 3—23323
Si, substitutional chalcogen donors, shallow-deep instabilities 3—3114
Si substrate, silicide form. resulting from interfacial reaction with Ir-V films 3—18520

elemental semiconductors continued
Si substrate for ZrO_2 films, thickness determ. using electron probe analysis 3—49326
Si surface, (111), adsorbed Pd, surface superstruct., LEED-AES and ion scatt. spectra 3—51922
Si surface, (111), adsorbed Ag, surface plasmon dispersion, angle resolved EELS study 3—52213
Si surface, (111), facet form., $SiCl_2$ adatom desorption energy 3—38171
Si surface, adsorption of F, removal by ion bombard., SIMS study 3—38990
Si surface, anisotropically etched, scanning Auger electron microscopy, topographical effects correction 3—40725
Si surface, hole energy spectrum, WKB calc. 3—8553
Si surface, integrated reflecting power meas. by Mossbauer γ-ray diffr. 3—52757
Si surface, laser pulse irrad., electron and ion emission mechanisms 3—38967
Si, surface, laser-stimulated adspecies interaction 3—47742
Si, surface, mag. instabilities 3—47471
Si surface, reactively ion etched, DLTS study 3—33770
Si surface, spin centres, interaction with adsorbed mols., EPR study 3—38451
Si surface, X-ray reflection spectra in region of $L_{2,3}$ ionisation threshold 3—28928
Si, surface (110) during stratified growth from at. beam in vacuum 3—8371
Si, surface (111), 7×7 reconstruction resolved in real space 3—33546
Si, surface (111), reconstruction mechanism and surface state dispersion 3—13877
Si surface barrier detectors, microdosimetric aspects of proton-induced nucl. reactions 3—36578
Si, surface characterisation of time-of-flight atom probe anal. 3—38174
Si, surface characterisation using transverse acoustoelec. voltage meas. 3—43237
Si, surface defect form. under laser irrad., DLTS study 3—18340
Si, surface electrostatic pot., acoustoelectronic meas. 3—8556
Si, surface patterns deform. during epitaxial growth *(Czech)* 3—47767
Si, surface reactions with XeF_2, gaseous reaction products 3—53444
Si, surface struct., changes due to metal ion adsorption, electron diffr. study 3—2937
Si, surface temperature using large diameter scanning CW laser and electron beam sources 3—56978
Si, surface transitions, gradual, induced by multiple picosec. laser pulses 3—28936
Si surfaces, high freq. acoustic phonon scatt. study 3—18546
Si, swirl defects form. mechanism, growth rate and temp. gradient influence 3—8044
Si, swirl defects revealed by Cu decoration etching *(Chinese)* 3—13209
Si, tetracene thin film, mol. fluoresc. quenching 3—43587
Si, thermal donor electronic struct., Hall effect and IR study *(Chinese)* 3—43059
a-Si, thermodynamics of equilib. and non-equilib. crystn. 3—22775
Si, thick crystal, synchrotron X-ray section topography, liquid N_2 cooling 3—51440
Si thin cryst., X-ray scatt. method for struct. perfection meas. 3—7856
Si thin film, CVD deposited and laser beam annealed, optical characts. 3—28917
Si, thin film, recrystallisation on glass substrate, correlated elec. and microstructural studies, TEM 3—57241
Si, thin film, transport effects, scatt. anisotropy 3—18807
Si, thin film formation by direct photochemical decomposition of Si_2H_6 3—43744
Si, thin film growth by CVD 3—38269
Si thin films, explosive liquid-phase crystn. during laser pulse heating 3—33601
Si, thin films, flash-lamp-induced crystal growth an amorphous substrates 3—33602
Si, thin highly doped layer creation for ohmic contact form. 3—18781
Si, third order elastic consts. and Gruneisen coeff., US vel. study 3—47018
Si, threshold effect interpretation in acoustic cell expts. 3—38392
Si, time-resolved cathodoluminescence in scanning electron microscopy 3—52857
Si, time-resolved refl. meas. of femtosec. optical pulse induced phase transitions 3—43507
Si, trace contamination, capacitance transient spectroscopy 3—3103
Si, transient IR refl. and transmission during pulsed laser annealing 3—57938
Si, transverse photovoltaic effects under laser pulses 3—57389
Si, trap centres in wafers containing A-swirl defects, annealing behaviour, DLTS study 3—13760
Si, twin boundaries, elec. activity, EBIC and TEM obs. 3—51623
Si, twin boundary struct., TEM and α-fringe contrast studies 3—51621
Si, U distrib., neutron activation anal. 3—29344
p-Si, U trace distrib., using SSNTDs 3—56924
Si ultra fine particles for high efficiency H storage *(Japanese)* 3—29458
Si ultrathin solar cells for space appl., elec. characts. and electron irrad. resist. 3—53503
Si VPE from $SiCl_4$, heterogeneous kinetics and mass transfer, CVD rotating disc reactor 3—14502
Si, VPE growth, use of low press. 3—42960
Si, vacancy deep levels, pseudo-atomic orbitals cluster model *(Chinese)* 3—38338
Si, valence electron density under high press., X-ray diffr. study 3—13160
Si, valence force field 3—2727
a-Si, variable struct. order, Raman scatt. and optical absorpt. study 3—2413
a-Si, vibr. states, effective local environment model 3—8162
Si, vibronic bands, IR spectra 3—42720
n-Si wafer, $1/f$ noise 3—3268
Si wafer, Czochralski grown, multistep repeated annealing, O and induced defect behaviour 3—4060
Si wafer, epitaxial, laser annealed, defect form., SEM, TEM and X-ray studies 3—56958
Si wafer, ion beam irrad., melting, resolidification, dislocations, TEM obs. 3—57003
Si wafer, minority carrier lifetime, extent of LID gettering effect, nondestructive SAW technique 3—48025
Si wafer, nonradiative processes, piezoelec. photoacoustic spectroscopy 3—47709

elemental semiconductors continued
Si wafer, phase-conjugate self-defocusing and weak-wave retardation 3—37136
Si wafer, plastically bent, residual stress meas. by photoluminesc. 3—33339
Si wafer bulk generation lifetime evaluation from pulsed MOS capacitance and gated diode meas. 3—38400
Si wafers, (111), gas phase HCl etching, deep etchpit formation 3—33258
Si wafers, backside laser irrad., microcracks, thermal annealing 3—27984
Si wafers, heavily doped, thermally induced microdefects obs., intrinsic gettering appl. 3—51587
Si wafers. stress-reduced, thermomechanical behaviour 3—22968
Si wafers, surface damage, surface photovoltage study technique 3—23425
Si wafers, virgin and implanted, laser beam annealed, point defects, EPR, cyclotron reson., DLTS meas. 3—56957
Si whiskers, internal friction and microplasticity, free torsion vibr. study 3—13337
p-Si, with natural oxide film, photomagnetoelectric effect, dependence on angle of radiation incidence 3—33761
Si X-ray imaging spectrometer fabricated by Al thermomigration 3—45260
Si, X-ray powder diffr. study 3—37738
Si, zone refining of nonsubstitutional impurities, during pulsed laser annealing 3—58045
Si, zone-melting recrystn. on SiO_2 using halogen lamp *(French)* 3—24118
Si: As(Sb)(Bi), ion implanted, doping profiles meas. by 200 keV α-particle backscattering 3—24077
a-Si: H, glow discharge deposition from pure Si_2H_6 and pure SiH_4 3—52973
Si:^{11}B, divacancy annealing, electron beam and pulsed ruby laser excitation 3—56986
Si:^{125}Te (^{129}I), nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3—8464
Si:^{31}P epitaxial layers, neutron transmutation doping, heat treatment effects 3—42629
Si:^{75}As, implanted, isothermal annealing study 3—13253
Si:^{75}As(^{31}P), thin film, thermal stability, effects of ion implantation and laser annealing 3—57249
Si:Al, enhanced interstitial migration, electronic struct. calc. 3—51859
p-Si:Al, negatively charged vacancy, hyperfine interactions and ENDOR meas. 3—43459
Si:Al and SOS films, Al anal. by SIMS 3—24539
Si:Al(B), point defect recombination-induced migration 3—57141
Si:Ar, ion implanted, surface states, positron annihilation study 3—19225
Si:Ar, ion implanted, XPS, charge correction method 3—43707
Si:As, As ion doping during MBE growth 3—52950
Si:As, B, ion implanted and incoherent light annealed, characterisation 3—56922
Si:As, doping by laser diffusion from spin-on arsenic glass 3—42848
Si:As, electron beam annealing of ion implantation damage 3—42664
Si:As, Ge, laser processed, ^{73}Ge Mossbauer effect 3—57839
Si:As, heavily doped, low minority carrier mobility and diffusivity meas. 3—38398
Si:As, ion implanted, annealing meas. by optical spectrometry *(Chinese)* 3—13247
Si:As, ion implanted, damage study 3—2616
Si:As, ion implanted, flash-lamp annealing, TEM, elec. resist. and Rutherford backscatt. study 3—27979
Si:As, ion implanted and laser annealed, defect struct., X-ray and TEM studies 3—42650
Si:As, ion implanted polycryst. low press. CVD film, As lateral diffusivity meas. 3—38125
Si:As, pulsed X-ray annealing 3—56979
Si:As CVD film, reduced press. deposited, diffusion source for Si-SiO_2 interface heavy doping 3—51852
Si:As polycrystalline films, ion implanted, regrowth due to oxidation drive-in 3—23207
Si:As-Al Schottky barrier diode, barrier height enhancement by ion implantation 3—52223
Si:As$^+$ wafers, rapid annealing with scanning Hg arc lamp 3—13264
Si:As$^+$(As$^+$), ion implanted, self-interstitial atom interactions 3—2586
Si:As(B), ion implantation damage, flame annealing, TEM and Van der Pauw studies 3—46970
Si:As(B), laser annealed, surface electron props. 3—57408
Si:As(Bi), influence of laser beam homogeneity on regrowth 3—56954
Si:As(P), heavily doped, grain boundary segregation 3—23047
Si:As(P)(Sb), substitutional defect pairs, electronic energy levels 3—3115
Si:As(Sb), impurity activation by laser irrad., Hall effect and Rutherford backscatt. study 3—18339
Si:As(Sb), ion implanted, comparison of solubility limits and elec. activities 3—2583
Si:As(Sb)(Ga) epitaxial layer, impurity distrib. and diffusion 3—51648
Si:As(Sb)(In)(Pb)(Tl)(Bi), ion implanted, metastable solid soln. form., backscatt. and channelling study 3—2588
Si:Au, diffusion and solubility, neutron activation anal. 3—42852
Si:Au, effective mass states, luminesc., photoconductivity meas. 3—52841
Si:Au, electric field enhanced electron emission from acceptor level and A-centre 3—43073
Si:Au, gamma-ray irrad.-induced Au diffusion, Schottky barrier study 3—33509
Si:Au, H, deep level passivation study 3—33676
Si:Au, impurity gettering using Ar-, O- and Cl-ion implantation, MOS study 3—2594
Si:Au, impurity profile meas. *(Chinese)* 3—8078
Si:Au, low temp. diffusion, radioactive Au conc. profile study 3—8264
Si:Au, minority carrier lifetime, recombination mechanisms 3—3219
Si:Au, temperature fluctuation method for direct determ. of thermal activation energy of deep levels 3—57307
Si:Au, transient conductance meas. during pulsed laser annealing 3—57352
Si:Au, zero-phonon photoluminescence study 3—43624
Si:Au diode struct. with strong carrier accumulation, noise spectra 3—13870
Si:Au reverse-biased n$^+$-p junction diodes, Ag donor level motion, DLTS study 3—28293
Si:Au(Ag)(Fe)(Cu)(Ni), deep level defects prod. by quenching, DLTS study 3—57309
Si:B, As, ion implanted and CW laser annealed, Fe-related defect centres 3—47304
p-Si:B, distinction of thermally induced defects, resist. meas. 3—51654
Si:B, ion implant damage and annealing, EPR studies 3—14132

elemental semiconductors continued
Si:B, ion implantation, impurity distribution prediction using ion range statistics 3−51650
Si:B, ion implantation damage annealing, etching and ellipsometry study, I^2L gate appl. 3−22927
Si:B, ion implantation through submicron slit at 1 MeV, ion conc. study 3−51639
Si:B, ion implanted, elec. activation of B ions during solid phase epitaxy 3−2579
Si:B, irradiated, photolum. 1.080 eV (I_2) line origin 3−43610
Si:B, laser annealing, picosecond dynamics 3−56938
Si:B, P; sequential diffusion, impurity profiles, SIMS study 3−42853
Si:B, polycrystalline, MESA diodes on photocells, electronic props. rel. to grain size and intragrain defects 3−38470
Si:B, shallow strain distributions near impurities, X-ray Bragg reflection meas. 3−42622
Si:B, Si-B3 paramagnetic defect, extended Huckel theory calc. 3−38345
Si:B, single step doping by UV laser, Auger electron analysis, spreading resist. obs. 3−42634
Si:B,As, CW laser annealing, quenched-in defects 3−57313
Si:B,C, electron irrad., defect accumulation, IR study 3−27998
Si:B,P, ion implantation, diffusion, annealing 3−27962
Si:B amorphous solar cells, junction props. of nip and pin structs. 3−53530
Si:B film, highly doped, deposited on Si(100) substrates, solid phase epitaxy 3−23198
Si:B films prep. by plasma decomp. of SiH_4, elec. props. 3−58054
Si:B(As), ion implantation through mask window, impurity distrib. study 3−51640
Si:B(P), grain boundary diffusion of dopants 3−51863
Si:B(P), impurity content meas. by photoluminesc. technique *(Chinese)* 3−38863
Si:B(P) wafer, etch-stop mechanism 3−4158
Si:B(P)(Ar)(Ge)(As)(Bi), ion implanted, characterisation by ellipsometry and channelling 3−46977
Si:Be, diffusion coeff., and solid solubility, elec. cond. study 3−2883
Si:Be, luminescence, Zeeman spectroscopy 3−14340
Si:Be,k isoelectronic bound excitons, photoluminesc. lifetime, absorpt. and excitation spectra 3−8878
Si:C, crystal growth by Czochralski technique, quantitative model for C incorporation 3−46876
Si:C, irradiated, luminescence, 0.97 eV line origin 3−43611
Si:C, MBE, interfacial C and line dislocation density, SIMS study 3−42945
Si:C, O, suppression of O precipitation by C for two-step thermal anneal 3−13454
Si:C, single crystal, errors in measuring C conc. from IR absorption 3−47675
Si:C, substitutional impurity, local modes and IR absorpt., local effective charge model *(Chinese)* 3−38014
Si:C CVD layers, polycryst., morphology and resist. 3−23209
Si:Cl,H, amorphous film, preparation, elec. and optical props. 3−28988
Si:Co,B, impurity electron states, DLTS and Mossbauer studies 3−43081
Si:Co,B,Al,Ga, pairing reactions of interstitial Co and acceptors, Mossbauer study 3−42623
Si:Cr, deep levels in energy band gap, transient capacitance anal. 3−38349
Si:Cr, ion pairs between Cr and surface acceptors, DLTS study *(German)* 3−43074
Si:Cr, Sirtl etching, Cr diffusion at room temp. obs. 3−42847
Si:Cr,B, charact. by EPR, DLTS, luminesc. and neutron activation anal. 3−47283
Si:Cr,B Cr-B pair photolum. 3−43612
Si:Cr,Fe,P, spin depend. carrier-impurity interactions, ESR studies 3−57765
Si:Cr(Mn)(Fe)(Co)(Ni)(Cu), diffusion, solubility and elec. activity, review 3−27966
Si:Cu/Au Schottky diodes, I-V and photoelec. meas. 3−47422
Si:Cu(Ni), deep level states, DLTS study 3−52060
Si:D_2, D^- ion source 3−41383
Si:Er, γ-ray irrad., photocond. and elec. props. 3−43235
Si:F amorphous film, annealing behaviour of Si-F bonding struct., optical props. meas. 3−57988
a-Si:F films, RF glow discharge prep., struct. props. 3−34243
Si:F(H), amorphous, chemical bonding 3−22777
Si:F(H)(H,F), amorphous, picosecond photocarrier trapping, photoinduced absorpt. study 3−57376
Si:Fe,B, EPR spectra 3−52615
Si:Fe,B, interstitial-substitutional pairs, electronically controlled reactions 3−43079
Si:Fe,B,Al,Ga, deep impurity levels, photocapacitance photocond. and Hall effect studies 3−43080
Si:Fe,S, ESR of Fe-S pairs, g-factor and excited states 3−43425
Si:Ga, electron irrad., defect studies and minority carrier lifetime, DLTS studies 3−57306
Si:Ga, epitaxial layers, sublimation in vacuum 3−13660
Si:Ga, IR photodetectors, performance under reduced background 3−59220
Si:Ga, ion implanted, dopant distrib., elec. activity and damage annealing 3−27970
Si:Gd, electron localisation at mag. phase transition, elec. resist. study 3−3099
Si:Ge, ion implanted, Ge ion distrib., X-ray microanalysis 3−8087
Si:Ge, ion implanted X-ray microanalysis determ. of integrated dose 3−8086
Si:H, amorphous, ^1H NMR pulsed studies 3−3579
Si:H, amorphous, annealed, adsorbed O behaviour during H effusion, XPS study 3−51921
Si:H, amorphous, Auger line shape anal. of struct. 3−24065
Si:H, amorphous, band tails, photomodulation spectroscopy studies 3−23248
Si:H, amorphous, bulk and interface states, elec. props. 3−28256
Si:H, amorphous, crystallisation and nucleation kinetics meas. 3−33094
Si:H, amorphous, dangling bond defects, trapping parameters, photoconductivity study 3−28367
Si:H, amorphous, determ. of metallic impurities by SIMS 3−37947
Si:H, amorphous, dual-beam photocond. modulation spectroscopy study 3−18739
Si:H, amorphous, electron-hole recombination lifetime distrib., light induced ESR and luminesc. 3−8510
Si:H, amorphous, electronic struct. model 3−3043
elemental semiconductors continued
Si:H, amorphous, electronic struct., self-consistent pseudopot. calc. 3−28253
Si:H, amorphous, electronic struct. CNDO calcs. 3−52018
Si:H, amorphous, energy distrib. of traps, photoconductivity study 3−47314
Si:H, amorphous, gap state studies 3−23249
Si:H, amorphous, light soaked state, transient photoconductivity 3−52188
Si:H, amorphous, nonradiative recombination study 3−38894
Si:H, amorphous, optical absorption edge and energy-band tails 3−28821
Si:H, amorphous, p-type, Schottky barriers 3−28437
Si:H, amorphous, photocond., reversible photoinduced changes at low temps. 3−13854
Si:H, amorphous, photovoltaic band gap for solar cells 3−13712
Si:H, amorphous, photovoltaic props., light-induced effects obs. 3−57377
Si:H, amorphous, plasma deposited, elec. and optical props. 3−28462
Si:H, amorphous, radiative recomb., ODMR study 3−19016
Si:H, amorphous, radiative recomb., ODMR waveform meas. 3−19017
Si:H, amorphous, recombination, spin depend., ODMR study 3−3594
Si:H, amorphous, solar cells, carrier mobility, photocapacitance study 3−48147
Si:H, amorphous, symm. relax. of vacancy 3−22888
Si:H, amorphous, three-centre bond model calcs. 3−37789
Si:H, amorphous, transient photoconductivity 3−13859
Si:H, amorphous, transport props., temp. depend. *(Korean)* 3−38412
Si:H, amorphous, vibr. props. study 3−2724
Si:H, amorphous CVD film, electronic and optical props. meas. 3−29014
Si:H, amorphous film, DC and RF glow discharge decomp. prep., elec. cond. meas. 3−43179
Si:H, amorphous film, interface and surface states, optical absorpt. spectra, photothermal deflection spectroscopy study 3−34125
Si:H, amorphous film, optical props. 3−24040
Si:H, amorphous film, Penn model calcs. of electronic struct. 3−52014
Si:H, amorphous film, permittivity, optical props. 3−23859
Si:H, amorphous films, efficient visible photoluminesc. obs. 3−47682
Si:H, amorphous films, role of H, deposition 3−24156
Si:H, amorphous films, sputtered thin film growth 3−24127
Si:H, amorphous films, valence electron number and H conc., calc. model 3−3041
Si:H, amorphous glow discharge film, optically illuminated, picosecond carrier dynamics obs. 3−33735
Si:H, amorphous hydrogenated, intrinsic surface phonons, theoretical study 3−33556
Si:H, amorphous p-i-n^+ solar cell, thin n^+ window layers, elec. props. meas. 3−14942
Si:H, amorphous solar cell, hot carrier diffusion influence on collection efficiency 3−44130
Si:H, amorphous sputtered films., elec. props., morphological fluctuation 3−3339
Si:H, amorphous sputtered films, influence of deposition conditions on props. 3−52935
Si:H, amorphous thin films, prod. by ion beam sputtering, optical props. 3−47727
Si:H, amorphous ultrafast relax. of photoinduced carriers 3−38836
Si:H, As amorphous film, RF sputtered, pulsed laser annealing 3−56970
a-Si:H, As(Cl), ion implanted, IR absorpt. spectra 3−47681
Si:H, B, amorphous, optical absorpt. spectra and struct. props. 3−52803
a-Si:H, B, anomalous optical and struct. props. 3−34127
a-Si:H, Cl, glow discharge prep., optical and elec. props. 3−23978
Si:H, Cl amorphous film, photocond. meas. 3−43225
Si:H, crystalline, defect-impurity complexes and IR bands, theory 3−23948
a-Si:H, DC glow discharge produced, pseudogap state density by field effect meas. *(Korean)* 3−13696
a-Si:H, doping and Fermi energy, Mott 8-N rule 3−8456
a-Si:H, elec. and optical props., effect of prolonged illum. 3−23441
Si:H, F, amorphous, electronic struct. CNDO calcs. 3−52018
Si:H, form. of H_2, MNDO calc. 3−37946
a-Si:H, glow discharge deposited, initial growth region 3−42977
a-Si:H, light-induced metastable effects 3−23392
a-Si:H, luminesc. fatigue and light-induced ESR 3−24011
Si:H, microcrystalline, glow discharge deposition, crystallite size and orientation control 3−52974
Si:H, microcrystalline glow discharge deposited, wide range control of crystallite size 3−42943
Si:H, P amorphous film, transport props. and donor levels 3−23379
a-Si:H, photocond. at 125K, photocarrier generation and recomb. 3−38435
a-Si:H, plasma deposited, SiH_3Cl impurity effect on props. 3−18583
Si:H, polycryst., IR study and MIS solar cell photovoltaic props. 3−4389
Si:H, radiative recombination and spin effects *(French)* 3−23999
Si:H, reduction in γ-ray damage, DLTs obs. 3−18346
a-Si:H, role of dangling bond defects in early recomb., IR absorption 3−47679
a−Si:H, spin-depend. photocond., ESR study, illum. effects 3−3248
Si:H, sputtered solar material, optical prop.-comp. relations 3−17586
Si:H,B thick films, H evolution, film morphology 3−23217
Si:H,B(F), amorphous, optical props. 3−23908
Si:H,F, amorphous, majority carrier drift mobility 3−23407
Si:H,F films, influence of deposition conditions on props. 3−52975
a-Si:H,O, IR absorpt. spectra, structural interpretation 3−23987
Si:H,P, amorphous, gap state profiles, photoacoustic spectroscopy studies 3−23250
Si:H,P, amorphous film, photoconductivity study 3−28385
Si:H,P(B), amorphous film, in situ doping during homogeneous CVD growth, charact. 3−52967
Si:H amorphous, localised states, elec. cond. study 3−8457
Si:H amorphous, low temp. anomalous magnetoresistance, Fermi level shift contrib. 3−3232
Si:H amorphous, low temp. distant-pair photoluminescence 3−28890
Si:H amorphous, non-geminate recombination, EPR and photoluminescence study 3−24008
Si:H amorphous, photocond., I-V and C-V characts., field quenching 3−57387
Si:H amorphous alloys, minority carrier diffusion length, photovoltaic device study 3−3220
Si:H amorphous film, CVD by direct S_2H_6 photolysis and elec. and optical props. 3−52962
Si:H amorphous film, cond. activation energy and downward cond. kink, prep. condition effect 3−18803
Si:H amorphous film, dangling bond correlation energy 3−8437

elemental semiconductors continued
- Si:H amorphous film, elec. and struct. props., capacitor photo-EMF spectra study 3—8535
- Si:H amorphous film, elec. cond. in planar and sandwich configurations 3—38393
- Si:H amorphous film, elec. props. and solar cell characts. 3—53539
- Si:H amorphous film, H anal., mass spectrometry *(Japanese)* 3—23205
- Si:H amorphous film, photoconductivity spectrum, temp. depend. 3—3252
- Si:H amorphous film, reactively RF sputtered, microcrystalline form., X-ray scatt. study 3—42976
- Si:H amorphous films, $0.2<x<0.5$, HOMOCVD prep., broadband visible photoluminesc. 3—8860
- Si:H amorphous films, activation energy for conduction, annealing and thickness effects *(Chinese)* 3—43166
- Si:H amorphous films, anodic oxidation 3—34504
- Si:H amorphous films, ionized cluster beam deposition 3—52977
- Si:H amorphous films, reactive sputtering, ion bombardment morphology control 3—28990
- Si:H amorphous films, sputtering under reduced pumping speed, cond. and photocond. props. 3—58047
- Si:H amorphous films, void supernetworks, TEM and SEM study 3—2995
- Si:H amorphous glow-discharge coating on glass, CW laser crystallisation 3—18581
- Si:H amorphous MOS struct., interface states 3—23455
- Si:H amorphous oxidised film, characterisation using Auger and UPS methods 3—18578
- Si:H amorphous pin solar cells, characts. in dark and under illumination 3—53534
- Si:H amorphous Schottky solar cells, photogenerated carrier conduction mechanism 3—44132
- Si:H amorphous solar cells, open circuit voltage difference between p-i-n and n-i-p cells 3—39467
- Si:H amorphous solar cells on polymer film substrate, plasma deposition and photovoltaic props. 3—53533
- a-Si:H and a-Si:H, P, gap-state profiles, below-gap optical absorpt. meas. 3—3844
- a-Si:H and a-Si:H,F, struct. order parameters, Raman scatt. study 3—56820
- a—Si:H and a—Si: H, N, localised state distrib. profiles, SCL current meas. 3—18711
- Si:H and Si noncrystalline films, optical parameters and struct. meas. 3—3668
- a-Si:H film, high rate plasma deposition, for electrophotographic photoreceptor 3—13657
- Si:H film, polycryst., lightly doped, effects of hydrogenation, Hall effect meas. 3—23513
- a-Si:H film, trapping props., effect of adsorbates, TSC meas. 3—23401
- a-Si:H films, deposition by glow discharge and reactive sputtering, H reactions 3—3951
- a-Si:H films, disorder characts., optical transmission and photocond. study 3—38932
- a-Si:H films, hydrogenated in theta-pinch plasma, photocond. and dark cond. 3—57386
- a-Si:H films, optical props., annealing effect *(French)* 3—52862
- a-Si:H films, RF sputtering prep., microstruct. and H bonding environment 3—51970
- a-Si:H films, thickness depend. of elec. and optical props. and ESR 3—3199
- a-Si:H films for photovoltaic appls., optical props. rel. to deposition conditions 3—57990
- a-Si:H glow-discharge doped films, laser radiation effects on cond. and Schottky diode operation 3—8579
- a-Si:H MIS Schottky structures, modelling using C-V and conductance-voltage meas. 3—47427
- Si:H microcrystalline film, optical props., solar cell appls. 3—4387
- a-Si:H n^+-i-n^+ sandwiches, SCL currents under AC conditions 3—47357
- a-Si:H n^+nn^+ films, SCL cond. 3—3209
- a-Si:H n-i-p solar cells, characterisation and optimisation by variation of device geometry 3—53549
- a-Si:H p-i-n diodes, photo-induced effects on elec. props. 3—14953
- a-Si:H p-i-n solar cells, effect of SiC layer 3—39484
- Si:H photoconductive alloys, reactive sputtering in the He-containing atm. *(Japanese)* 3—19267
- a-Si:H Schokky solar cell, plasma deposited, band tail absorption *(Korean)* 3—9433
- a-Si:H Schottky barrier structs., gap states, transient current spectroscopy study 3—57316
- Si:H single cryst., etch pits and dislocation rosettes, H impurity effect 3—56900
- Si:H solar cell efficiency, passivation techniques 3—24583
- a-Si:H solar cell on organic polymer substrate 3—53544
- Si:H solar cells, H annealing from recombination defects *(French)* 3—24582
- a-Si:H solar cells, optical behaviour computer simulation 3—58506
- α-Si:H solar cells thin film, design, fabrication and characts. 3—9438
- α-Si:H sputtered solar selective surfaces, optical props., effect of Ar press. 3—53574
- a-Si:H tandem-type solar cells 3—58534
- Si:H thin films on polyethylene, far IR spectra 3—57902
- a-Si:H/c-Si heterojunctions, space-charge limited currents 3—18769
- Si:H/electrolyte amorphous contacts, band bending, photoresponse and surface reactions 3—8573
- a-Si:H-SiO_2 interface, gap state density and interface states 3—52214
- Si:$H^+(P^+)(Mn^+)(Ar^+)$ amorphous film, ion implantation doping, ESR and elec. cond. 3—37944
- Si:H(H,B)(H,P), amorphous, H diffusion coeff., H_2 effusion expts. 3—33501
- Si:H(H,P), amorphous, RF glow discharge deposited, photocond. and dark cond. meas. 3—38423
- Si:He, ion implanted, depth distrib. and range parameters for He, SIMS study 3—13252
- Si:$He^+(C^+)(N^+)(Ne^+)(Ar^+)(Kr^+)$, ion implantation, radiation damage accumulation kinetics 3—37945
- Si:In, Al, photoluminesc., IR absorpt., photocond. and Hall effect meas. 3—34135
- Si:In, enhanced backward elastic wave generation 3—22973
- Si:In, In acceptor IR absorpt. spectrum meas. 3—23976
- Si:In, In diffusion in inert and oxidising ambients 3—38131
- Si:In, ion implant damage recovery, recrystallisation and elec. props. 3—56920
- Si:In, ion implanted, high temp. diffusion and elec. props. 3—57142

elemental semiconductors continued
- Si:In, ion implanted, thermal annealing, In migration obs. 3—56917
- Si:In, optical props. and photocond. 3—3701
- Si:In, photoelectric spectroscopy 3—38430
- Si:In, recoil implanted, electric quadrupole interaction, ^{111}Cd TDPAC study 3—43473
- Si:In,P LPE layers, donor acceptor pair spectra 3—57971
- Si:In (Tl) thin films, ion implanted, ionisation energy, photocond. study 3—28378
- Si:In(Sb), ion implanted, defects and solid solubility, solid phase epitaxial growth 3—2826
- Si:In(Sb), ion implanted, solute segregation and solid phase crystallisation dynamics 3—56950
- Si:In(Sb)(Ga)(Bi), ion implanted, morphological instability and cell form. during pulsed laser annealing 3—8093
- Si:In(Tl), isoelectronic bound excitons, photoluminescence obs. 3—19168
- Si:K, doped in low energy at beams, K conc. depth profiles *(Japanese)* 3—18330
- Si:Li, diffusion of implanted Li ions, proton and deuteron bombardment effects 3—8265
- Si:Mg, diffused, elec. and optical props. 3—18699
- Si:Mg(Ca), solubility of dopant during LPE 3—33444
- Si:Mn, impurity electron state, ESR and photoconductivity study 3—13768
- Si:N, amorphous CVD film, optical and electrical props. meas. 3—8484
- Si:Ni, point defects, Ni diffusion and annealing studies 3—42602
- Si:O, C, Czochralski grown, C and O nucleation during annealing, O-C complexes obs. 3—33287
- Si:O, Czochralski grown, as-grown, oxide micro-precipitates study 3—33443
- Si:O, Czochralski grown, O precipitation, impurity diffusion and surface processing effects 3—42779
- Si:O, Czochralski growth, O segregation obs. 3—51803
- Si:O, dislocation-free, diffusion limited O precipitation, IR and neutron scatt. and etching studies 3—51796
- Si:O, electron irrad., divacancy production enhancement by O, expt. study 3—33301
- Si:O, electron irrad., divacancy production, computer model 3—42662
- Si:O, electron irradiated, divacancy production enhancement 3—42601
- Si:O, heat treated, donor states, DLTS studies 3—43078
- Si:O, ion implanted, buried oxide layer, thermal annealing, ion channeling and Rutherford backscatt. study 3—27955
- Si:O, neutron irradiated, defect accumulation and lattice strain, IR study 3—56994
- Si:O, O content meas. by 9 μm IR absorpt., calibration curve *(Chinese)* 3—38850
- Si:O, O diffusivity at donor formation temp., stress-induced dichroism study 3—33498
- Si:O, pre-annealed, electron radiation defects accumulation obs. 3—2610
- Si:O, precipitation kinetics, solubility, diffusivity and particle size 3—42787
- Si:O, Se, S, impurity binding energies and screening 3—43100
- Si:O, thermally activated O donors distribution, expt. study 3—33284
- Si:O (100) surface, O saturated, CO_2 photodesorption 3—51923
- Si:O wafer, Czochralski grown, defect engineering, VLSI substrate development 3—42593
- Si:O_2, radiation enhanced diffusion at room temp. 3—47159
- Si:O^-, electronic struct. calc. of O^-impurity 3—47298
- Si:P, (Sb), deformation pot. of shallow donors, Hall effect meas. 3—8453
- Si:P, buried layer profile broadening by ion beam mixing, backscatt. study 3—8084
- Si:P, CW laser induced deep level defects 3—57314
- Si:P, disorder and Coulomb interactions in Anderson localised states, effect on mag. and elec. props. 3—43128
- Si:P, electrical conductivity meas. near metal-insulator crit. pt. 3—57394
- Si:P, excited impurity level widths 3—47284
- Si:P, heavily doped, minimum metallic cond. and metal-insulator transition 3—52035
- Si:P, heavily doped, P inactivation mechanism 3—18335
- Si:P, heavily doped polycryst. film, thermal oxidation 3—9351
- Si:P, implant profile computation with depth-dependence diffusion 3—18331
- p-Si:P, implanted profile,.nondestructive transverse acoustoelec. voltage vs. voltage technique 3—42642
- Si:P, impurity band density of states, mag. field effects in atomic limit 3—47247
- Si:P, impurity ionisation energy, elastic deformation effects, elec. cond. study 3—3119
- Si:P, impurity states calcs. 3—33669
- Si:P, ion implanted, enhanced dopant diffusion 3—13548
- Si:P, ion implanted, impurity redistrib. by annealing under hydrostatic press. 3—38139
- Si:P, ion implanted, laser annealing dynamics, reflectivity and transmission coeff. study 3—37958
- Si:P, ion implanted, light scanning annealing, elec. and defect props. 3—27980
- Si:P, ion implanted, misfit strain overcompensation by dislocation networks 3—47004
- Si:P, ion implanted, pulsed electron beam annealing, SEM and TEM studies and computer simulation 3—51665
- Si:P, ion implanted, solid soln. form. after solid phase epitaxial regrowth 3—57099
- Si:P, metal-nonmetal transition, Anderson localisation, sp. ht. and mag. props. 3—43026
- Si:P, P grain boundary spike diffusion 3—51850
- Si:P, phonon scatt. study using heat pulse technique 3—18417
- Si:P, planar dechannelling of energetic ions at edge dislocations 3—47007
- Si:P, polycrystalline, in Si:P-$TaSi_2$ double layered struct., P out diffusion, SIMS and resist. study 3—51849
- Si:P, polycrystalline, interlayer oxides optimized by conventional processing and laser annealing 3—57434
- Si:P, polycrystalline in $SiTaSi_2$ interface, P diffusion, SIMS study 3—51853
- Si:P, pulse electron beam annealing 3—56985
- Si:P, single cryst., dislocation mobility at temp. up to 1300°C 3—13555
- Si:P, sp. ht., electron hopping energy influence 3—42803
- Si:P,O, thermal O donors, elec. cond. study 3—3100
- Si:P,Sb, O ion bombardment-induced diffusion, conc. profiles 3—13551
- Si:P CVD coatings, incoherent light annealing, elec. cond. study 3—42646
- Si:P CVD film, struct., optical and elec. props. 3—42935
- Si:P films, elec. cond., Hall mobility and carrier density 3—8602

elemental semiconductors continued

- Si:P ion implanted damaged layers, ellipsometric study *(Chinese)* 3—2578
- Si:P MOS structs., trap creation in channel oxides due to ion penetration 3—13910
- Si:P p-n homojunctions, avalanche breakdown voltage, electron irrad. effects 3—8570
- Si:P polycrystalline film growth technology 3—24147
- Si:P$^+$, ion implanted, refl. dynamic interf. effect by CW CO_2 laser annealing *(Chinese)* 3—38789
- Si:P$^+$ ion implanted buried amorphous layers, recrystallisation behaviour 3—27845
- Si:P(As), polycrystalline film, ion implanted, pulsed incoherent light annealing 3—22933
- Si:P(As)(B)(Sb), oxidation effects on diffusion, dual vacancy-interstitial mechanism 3—8259
- Si:P(B)(As), doping profiles determ. by electrical meas. and anodic stripping, automatic apparatus 3—49403
- Si:P(Sb), polycryst., intergranular diffusion *(French)* 3—23093
- Si:Pt, optically pumped photoconductivity and deep traps 3—57380
- Si:Pt$^-$, acceptor struct., ESR and IR spectra studies 3—43082
- Si:Pt$^-$, spectroscopic splitting in strain-modulated ESR study 3—57767
- Si:Pt(Si:Pd), elec. props. *(Chinese)* 3—3217
- Si:S, Mn, ESR investig. of impurity interactions 3—23794
- Si:S(Zn)(H), impurity electronic struct. calcs. 3—23322
- Si:Sb, ion implanted, annealing with incoherent halogen lamp irrad. 3—2601
- Si:Sb, ion implanted, rapid annealing using radiant light source 3—56929
- Si:Sb, oxidation-enhanced and oxidation-retarded diffusion obs. 3—47157
- Si:Sb (100), ion implanted, metastable Sb doping, channelling study 3—33277
- Si:Sb supersaturated laser annealed ion-doped layers, decompostion, elec. cond. study 3—42786
- Si:Sb(As) epitaxial layers, autodoping study 3—42638
- Si:Sb(P), spin-on source diffusion characts. 3—51857
- Si:Sc, impurity distrib. coeff., temp. depend. 3—51649
- Si:Se amorphous film, room-temp. resistivity and optical gap meas. 3—52129
- Si:Se amorphous films, optical absorption coeff. and optical gap 3—34158
- p-Si:Sn, electron irrad., A-centre and divacancy form. 3—13250
- Si:Sn amorphous, dopant effects on elec., optical and Mossbauer spectra props. 3—18708
- Si:T, thermal emission rates and majority carrier capture cross-sections in p$^+$n and n$^+$n junctions 3—33678
- Si:Te, dopant diffusion, SIMS study 3—23092
- Si:Te, I, ion implanted, impurity levels, Hall effect and elec. resist. studies 3—43102
- Si:Te, impurity redistribution after pulsed laser annealing, Rutherford backscatt. study 3—42641
- Si:Tl, Poole-Frenkel effect influence on acceptor ionisation energy 3—43190
- Si:transition metals, impurity electronic struct., Green's function calc. 3—43098
- Si:Zn(Ni), S-type photodetector, photosensitive regions in base 3—5860
- Si/amorphous As_2Te_3 interface, I-V and C-V characteristics and photovoltaic effects 3—52233
- Si/Au/Ni, vacuum deposited metal films, interface phenomena 3—51961
- Si/Fe_2O_3 photoanode with negative flatband potential, XPS and AES studies 3—52244
- Si/GaAs layers, thickness, refr. index, m-lines and refl. spectroscopy techniques, waveguide appl. 3—28916
- Si/glass struct., laser annealing, thermal model 3—56965
- n-Si/$In_{2-x}Sn_xO_{3-y}$ catalytically modified anodes for photoelectrochem. solar cell 3—9445
- n-Si/$In_{2-x}Sn_xO_{3-y}$ solar cell, comparison with n-Si/SnO_2 solar cells 3—53521
- Si/metal interface, H^+ and He^+ irrad. damage 3—42685
- n-Si/n-Fe_2O_3, double layer solar cell electrode, interface states effects obs. *(Chinese)* 3—19581
- p-Si/n-GaAs heterojunctions, MBE growth, elec. and photoelec. props. 3—43277
- p-Si/n-$Zn_xCd_{1-x}S$ heterojunction solar cells, form. and behaviour optimisation under various heat treatments 3—9440
- Si/Ni/Si bulk sample intermetallic cpd. form. and interdiffusion 3—47170
- Si/NiAu system, Ni silicide growth, Au impurity effects 3—47171
- Si/$NiSi_2$ interface, at. struct., TEM study 3—13644
- Si/Pd_2Si(NiSi) parallel Schottky contacts, barrier heights, internal photoemission study 3—47421
- Si/Pt Schottky contacts, barrier heights, internal photoemission study 3—47421
- n-Si/PtSi/(Ti-W)/Al Schottky contact, elec. degradation induced by heat treatment 3—18766
- Si/Si_3N_4/Si struct., electron beam recrystallisation of Si 3—56989
- Si/SiO_2 CCDs optical carrier generation beyond fundamental absorption edge 3—28445
- Si/SiO_2 interface, 2-D electron gas, cyclotron resonance, memory function and random pot. 3—23497
- Si/SiO_2 interface, hole capture by deep levels 3—28448
- Si/SiO_2 struct., ion implantation form., microstructure, TEM and SEM study 3—2992
- Si/SiO_2 substrate, B implantation, ion range profiles, computer calc. 3—28020
- Si/SiO_2:P, diffusion of P from surface source in oxidising atmosphere 3—51851
- Si/SiO_2/Al MIS structs., irrad. effects on built-in charge form. 3—38485
- Si/SiO_2/Mg inversion layer solar cells, elec. characts. 3—53520
- Si/SiO_2/Si struct., laser annealing, thermal model 3—56965
- n-Si/SnO_2 solar cell, comparison with spray deposited $In_{2-x}Sn_xO_{3-y}$/n-Si solar cell 3—53521
- Si-Al interface, chem. interdiffusion, AES study 3—33520
- Si-Al interface struct., γ-irradiation effects *(Russian)* 3—47229
- p-Si-Al thermocouples, thermopile fabrication using semicond. planar technology 3—54731
- n-Si-Al:Si small-area contacts, resist. increase due to heat treatment 3—52248
- Si-Al_2O_3 interface, depth profiles, AES electron beam excited plasmon-loss features 3—8345
- Si-Au, laser beam annealing of interface, diffusion 3—42657
- Si-Au interface, solid-state reaction, initial stage *(Japanese)* 3—28166
- Si-Au interface, struct. and behaviour under O_2 exposure, UPS and XPS study 3—52898
- n-Si-electrolyte junctions, photovoltaic effects *(Korean)* 3—8575

elemental semiconductors continued

- n-Si-Fe_xO_y-1M $NaNO_3$ functions, photovoltaic effects *(Korean)* 3—8576
- Si-In_2O_3 solar cells, behaviour and conversion efficiencies 3—4392
- Si-MBBA interface, photoelec. effects 3—52190
- Si-metal solar cell contacts, energy level diagrams and tunnelling cond. 3—58525
- Si-MgO.Al_2O_3-Si struct., VPE 3—24153
- Si-Mo interface, $MoSi_2$ formation by ion implantation 3—33583
- Si-$MoSi_2$, interface, self-aligned silicide formation by ion implanation through metal film technique 3—51864
- Si-Nb interface, $NbSi_2$ formation by ion implantation 3—33583
- Si-Ni, epitaxial growth of $NiSi_2$ 3—38266
- Si-Ni binary diffusion couple, anal. of inert marker motion for Ni_2Si growth 3—33517
- Si-Ni interface, silicide formation, atom probe FIM study 3—51866
- Si-Ni ohmic contacts, interface struct., CVD doping *(Rumanian)* 3—47420
- Si-on-insulator wafers, lateral zone growth and device quality characterisation 3—24116
- Si-organic dye luminesc. solar concentrators for residential system 3—58532
- Si-PbS n-p heterojunction, photoresponse kinetics 3—38472
- Si-Pd interface, EELS and AES study 3—23191
- Si-Pd_2Si, amorphous Si solid phase epitaxy, anal. of inert marker motion 3—33517
- Si-planar metal reaction couples, first phase mucleation, theory 3—57146
- Si-poly Si interconnections, contact resistance 3—28419
- Si-PtSi ohmic contacts for Si shallow junctions, VLSI appl. 3—33790
- Si-Rh amorphous alloy formation by interfacial reaction between amorphous Si and cryst. RH 3—57147
- Si-SiO_2, electron irrad., interface defects, XPS study 3—51962
- Si-SiO_2, gamma irrad., effect of bias on paramagnetic defects 3—3319
- Si-SiO_2, interface electronic struct. calcs. 3—38293
- Si-SiO_2, interface states, generation annealing kinetics activated by photohole injection 3—33797
- Si-SiO_2, interface state spectroscopy, energy resolution increase with Tikhonov weak regularisation method 3—57407
- Si-SiO_2, interface state generation after high-field stress 3—57425
- Si-SiO_2, ion implanted, defect study 3—28444
- Si-SiO_2, laser recrystallisation of polycrystn. Si film with encapsulating film 3—33297
- Si-SiO_2, mobile ion energy distrib., constant current transient technique *(Chinese)* 3—43284
- Si-SiO_2, stress relaxation in oxide film, theory 3—23155
- Si-SiO_2 interface, electron beam enhanced surface photovoltage 3—3239
- Si-SiO_2 interface, γ-irrad., induced paramag. centers, ESR study 3—52261
- Si-SiO_2 interface, ion beam induced atomic mixing, Monte Carlo calc. 3—2990
- Si-SiO_2 interface, radiation induced defects meas. with XPS 3—43288
- Si-SiO_2 interface, surface inversion current 3—43285
- Si-SiO_2 interface, VUV irrad., oxide traps and interfacial states obs. *(Chinese)* 3—38482
- Si-SiO_2 interface analysis using spectroscopic ellipsometry *(French)* 3—28438
- Si-SiO_2 interface state generation by alternating voltage stress under visible irrad. 3—43290
- Si-SiO_2 interfaces in MNOS structs., electronic props., effect of Si_3N_4 films 3—33794
- Si-SiO_2 MIS struct., Si^+ ion implantation defect energy levels meas. 3—3322
- Si-SiO_2 MOS capacitors, interface states and X-ray produced holes 3—52259
- Si-SiO_2 MOS struct., high-field hole drift vel. in inversion layers 3—13911
- Si-SiO_2 MOS struct. with SiO_2 ultrathin plasma, surface electronic props. 3—47428
- Si-SiO_2 MOS structure, B implanted, incoherent light pulse annealing 3—23496
- Si-SiO_2 MOS structure, overlapping polycryst. Si gates, interface state density, constant capacitance DLTS study 3—38483
- Si-SiO_2 MOS structures with thick SiO_2 layers, interface state generation 3—43286
- Si-SiO_2 MOS structures, γ-radiation induced paramagnetic defects, EPR study 3—43287
- Si-SiO_2 p-MOS tunnelable structures, tunnelling currents induced by interface states 3—3325
- n-Si-SiO_2 solar cell, prep. by spray pyrolysis 3—14956
- Si-SiO_2 structure, energy diagram determ. from photocharging spectra 3—52271
- Si-SiO_2 system, internal stresses, temp. depend. 3—23151
- Si-SiO_2 system, $SiCl_4$ annealing, SIMS study 3—47746
- Si-SiO_2-Al MOC capacitor, surface space charge layer, electron irrad., compensated donor generation 3—52255
- Si-SiO_2-Al MOS capacitor, Na contaminated, scanning internal photoemission study 3—52256
- n-Si-SiO_2-Al system, 1.3 MeV electron radiation effects obs. *(Chinese)* 3—38481
- Si-SiO_2-CdS, photosensitivity of semiconductor-insulator-semiconductor structures 3—33779
- Si-SiO_2-Si struct., multilayer film characts., optical in-situ determ 3—5838
- Si-SiO_2-Si structure, field effect meas., positive mobile ion density determ. in SiO_2 3—43265
- Si-SiO_2-SnO_2-metal heterostruct. memory element, current transport and switching effect study 3—57432
- Si-SiO_2-SnO_2-metal heterostructure, nonvolatile memory element, props. study 3—57433
- Si-SiO_3 interface, high field drift velocity, time-of-flight study technique 3—52260
- Si-SiO_x-Ti system, silicide and Schottky barrier form. 3—3289
- Si-Ti system, silicide and Schottky barrier form. 3—3289
- Si-$TiSi_2$ interface, electronic struct., low temp. annealing effects *(Russian)* 3—47425
- Si-W interface, silicide formation, atom probe FIM study 3—51865
- Si-Wsi_2 bilayers, behaviour of B and As impurities 3—23103
- Si-ZnS:Mn heterostructure, DC electroluminescence 3—24022
- Si+D,H, amorphous, NMR study 3—28728
- Si+N, laser annealed, deep level study 3—28299
- Si(Li) detectors for charged-particle spectrometry over wide energy range 3—41438

elemental semiconductors continued
Si(Li) γ-ray detectors, accuracy of time recording 3−11608
SiO_2/Si system, elec. cond. and elec. breakdown of SiO_2 3−3345
SiO_2-Si interface, thermally nitrided, characterization 3−8347
Si(100) with adsorbed Ni, diffusion layer microstructure 3−13634
Si(111) 7×7-Ag interfaces, LEED, AES, and angle-resolved photoemission meas. 3−43711
Si(111) and (100) surfaces, initial stages of oxidation, vibr. study 3−39261
Si(111), ion oxidation, photoemission study 3−24375
Si(111), nitridation by N atoms, LEED, AES, EELS and thermal desorption studies 3−38218
Si(111), pyridine chemisorption, UPS study 3−38201
Si(111)-7×7 surface reconstruction, hexagonal ring model 3−23143
Si(111)7×7 surface, angle-resolved EELS study 3−43674
Si;As, pulse laser induced solid-phase annealing 3−8094
Si;H, amorphous, planar RF magnetron sputtering, H effects on deposition rate 3−39031
α-Sn, direct-gap semiconductor, MBE growth, band struct. investig. 3−8406
surface (111), laser annealed, surface core level states, photoemission study 3−58039
T 3−52268
Te, cold worked, lattice defects, X-ray diffr. line breadth anal. 3−18290
Te film, ablative hole form. process 3−12256
Te films, elec. resist. and light transmission, degradation effects 3−52281
Te films, evaporated in NaCl, KBr and KCl substrates, epitaxial growth 3−28237
Te gyrotropic cryst. circular photogalvanic effects due to electron-phonon interaction 3−13861
p-Te, high field effects, S-shaped I-V characts., surface pot. meas. 3−8501
Te, liq., semicond.-metal transition, cond. and thermoelec. power meas. 3−13867
Te, magnetophonon oscill. of thermoelec. power in cond. band 3−23413
Te, optical and electron energy loss spectra 3−23972
Te, photoinduced complex permittivity at 9 GHz 3−57388
Te, strongly localised states, photocond. spectra study 3−18642
p-Te, thermoelec. power in phonon drag region, intervalley magnetophonon reson. peak 3−33748
Te thin film, photocond. after UV light exposure 3−47380
Te, UPS spectra in condensed phase 3−41620
Te/a-Se contacts, energy barriers, photovoltaic effect study 3−47423
Ti-Si:Pd junction, tunnel resonance current 3−52253
Xi films, recrystallised from melt, microelectronics appls. 3−23212
ZnO-SiO_2-Si membrane, acoustically thin, plate mode excitation and propagation 3−51911

elementary particle coupling constants
${}^3S_1(Q\bar{Q}) \to GGGG(GGq\bar{q})$, orthoquarkonium decays, nonplanar 4-jets as probe for 3-gluon coupling 3−40897
πN, modified normalisation conditions, $G_{NN\pi}$ calc. 3−36269
Altarelli-Parisi eqns., optimisation 3−26080
axion mass raising in hypercolour sideways interaction model 3−16610
chiral bag models, chiral symmetry breaking length scale and g_A 3−40870
decoupling in theories with spontaneous symmetry breakdown 3−11025
electroweak model, topological bootstrap theory predictions of boson couplings and spectra 3−54868
flavour changing processes, effective weak nonleptonic Hamiltonians 3−6022
$g_0\phi^4$ lattice field theory in d-dimens., renormalised strong coupling series 3−10995
generalised gauge hierarchies, subgroups of unifying group 3−20997
grand unified theories, neutral current interactions 3−16586
Higgs boson coupling constants, SU(5) Coleman-Weinberg theory 3−563
Higgs boson mass and coupling constant, upper limits in Weinberg-Salam-Glashow model 3−54871
Kobayashi-Maskawa matrix, charged current coupling determination in six-quark model 3−607
lattice and continuum QCD, gauge theory coupling, implications of change in lattice actions 3−11132
meson exchange, quark pairing and chiral bag models 3−11251
N-extended supersymmetric unification, supersymmetry breaking, gravitino mass, early Universe 3−16577
neutral currents, weak, coupling strength, CELLO results at PETRA 3−36230
neutron beta-decay, expt. studies, historical review 3−54608
non-Abelian gauge, arbitrariness in perturbation series 3−5944
nucleon axial vector coupling constant and mag. moments in bag model, gluon exchange currents 3−45398
perturbative QCD, 't Hooft and Adler transformations of running coupling constant 3−26066
proton decay in SU(5) grand unified theory 3−11176
QCD, gluon condensation and field strength formulation 3−11122
QCD, hadron coupling to Goldstone bosons 3−45345
QCD, renormalisation scheme, β function 3−31149
QCD, running coupling const., IR behaviour 3−589
QCD sum rules, coupling constant $g_{\omega\rho\pi}$ calc. 3−49628
QCD vacuum as glueball condensate 3−11135
quark dynamic mass in QCD using Dyson-Schwinger eqn. 3−21084
quarkonium spectra and QCD 3−21077
quenched momentum prescription for large-N theories, quenched lattice and continuum theories, loop equations 3−10990
renormalisation group eqns., asymptotic freedom and infrared problem, Landau-gauge gluon propagator 3−49570
S O(18) grand unified models with fractionally charged color singlet particles 3−40811
scalar QED, vacuum instability and critical value of coupling parameter 3−45337
scalar theory, strong coupling method with two sources 3−31063
SO(N) grand unified theories, low-energy left-right symmetry restoration 3−568
SU(3)×SU(2)×U(1) model, two-loop corrections to beta function for Higgs-Yukawa coupling constant 3−26044
SU(5) and SO(10) models, mass scales in grand unified theories 3−16584
superallowed Fermi β-decays, anal. 3−36365
supergrand unification of gravity with strong, weak and EM forces 3−10689
supersymmetric models, Witten's mass hierarchy 3−21038
triplet scalar bosons and double-β decay 3−16738

elementary particle coupling constants continued
e^+e^- annihilation, charged-particle inclusive cross section anal. including QCD higher-order correction 3−40918
$e^+e^- \to e^+e^-$, 14-34 GeV, electroweak coupling constants, scalar lepton search 3−11167
$e^+e^- \to$hadrons, strong coupling constant, fragmentation/hadronisation models influence 3−54916
$e^+e^- \to \mu^+\mu^-$; 14-36.4 GeV CM, total cross section meas. 3−630
$e^+e^- \to \mu^+\mu^-$, electroweak coupling constants, scalar lepton search 3−11167
e^+e^-annihilation, strong coupling constant variation from jet energy spread meas. 3−45405
$\iota(1440) \to \pi\delta$, glueball nature, SU(3) flavour symmetry determination of coupling constants, QCD 3−11172
$\nu(\bar{\nu})N$, charged-current interactions, nucleon structure function and gluon distrib. 3−54902
$\nu(\bar{\nu})N$, Gross-Llewellyn Smith sum rule as function of q^2 3−36233
$\nu(\bar{\nu})N \to \mu^+\mu^-X$, coherent pair prod., four lepton coupling const. limit 3−45385
$p \to \gamma e^+$, Feynman diagram calc., pe^+ coupling strength 3−16572
$\pi\Delta\Delta$ coupling constant, cloudy bag model prediction 3−605
πNN form factor, nonlocality effects in pion quark coupling in chiral bag model 3−49681
${}^{20}Na$, superallowed $J^\pi=2^+ \to 2^+$ β-decay, vector weak coupling constant 3−31343
${}^{21}Ne$, parity mixing, evidence for weak neutral currents in nuclei 3−49803

elementary particle decay
see also electromagnetic decays; elementary particle coupling constants; hadron decay; lepton decay; leptonic decays; nonleptonic decays; semileptonic decays
axion, very weakly interacting, cosmological aspects, domain walls, decay constant 3−35757
axion$\to\gamma\gamma$, search in nuclear reactor 3−643
detector, Si target, lifetime meas. of short lived particles, 10^{-13} s 3−50162
flavour changing decays, GIM at one loop level 3−36175
geometrical rishon model, lepton and quark generations 3−40875
laser field effects on total cross sections and decay rates 3−49661
quark weak decay rate, mass effects in QCD corrections 3−49642
weak decays of open and hidden top in standard model of electroweak interaction 3−26029
$b \to llq$, inconsistency of exotic models of b quark decay 3−49646
$b \to l\bar{q}\bar{q}$, inconsistency of exotic models of b quark decay 3−49646
$b \to \mu^+\mu^-X$, flavour-changing neutral current search up to 38.54 GeV at PETRA 3−54892
$b \to q+$Higgs boson, inconsistency of exotic models of b quark decay 3−49646
b-quark decay, supersymmetric SU(7) model 3−40943
double nucleon decay to 2 antileptons, intermediate mass scales in SO(10), E(6) and SU(16) GUTs 3−31107
$Z \to q\bar{q}$, $\beta'\bar{\beta}$ fourth generation possibilities and ultraheavy quark spectrum 3−36176
$Z^0 \to 4$ jets, gluon self coupling test 3−26078
Z^0 flavour changing decay into top quark in $SU(2)_2 \times U(1)$ theory 3−31097
$Z^0 \to ggg$, differential and total decay rates and e^+e^- annihilation into three-gluons 3−650
$Z^0 \to gg\gamma(ggg)$, massive quarks, top quark mass, branching ratios, electroweak test 3−26049
Z^0 heavy boson decay, leptonic branching ratio 3−570
Z^0 multiphoton and multigluon decay modes, composite model test 3−619
pN, beam dump expt., bounds on supersymmetric particles 3−45412

elementary particle electromagnetic interactions
see also Weinberg model
quarks weak interaction, P violation in neutron-nucleus scatt. 3−21102
$\gamma N \to \gamma\gamma$, delay cascade effects in emulsion, angular dependence 3−36253

elementary particle gravitational interactions
see also supergravity
higher spin particles, mag. and gravit. moments 3−49616
supergravity, massless second-order tetradic spin-3 and higher-helicity bosons 3−30754

elementary particle inclusive interactions
see also electron-positron inclusive interactions; elementary particle large momentum transfer interactions; pion-proton inclusive interactions; proton-proton inclusive interactions
central region inclusive spectra, colour tube, pomeron quark-gluon struct. 3−6060
cosmic ray high-energy interactions, semi-inclusive model 3−35393
deep inelastic scatt., Glashow-Weinberg-Salam theory of electroweak interactions and neutral currents 3−21051
deep inelastic scatt., parameterisation for Q^2 depend. parton distrib. function 3−16649
direct photon production in hard hadron process at ISR 3−21186
Drell-Yan model of hadroproduction of dimuons, experimental review 3−6119
Drell-Yan pair ang. distrib. and probe of hadronic wave functions 3−21082
Drell-Yan process 3−21160
dual topological unitarization approach to single particle spectra 3−21112
gauge theory and particle physics, book 3−5511
hadron jets from diquark fragmentation 3−21066
hadron leptoproduction, transverse momentum effects and ang. energy flow 3−11143
hadronic charm production 3−21194
hadronic collisions, dilepton prod., oscillatory scaling violations and QCD Coulomb 3−21080
hadronic collisions, two-particle inclusive distrib. in dual parton model 3−21158
hadronic system fragmentation meas. in different flavour and colour states 3−21182
heavy quark production by hadrons 3−21067
high p_T hadron production 3−21185
inclusive multihadron prod., p_T distribs. 3−31167
inelastic multiplicity distrib., approx. scaling and scaling violation 3−36288
jet fragmentation in Lund Monte Carlo method 3−6088
jet production, study with identified high transverse momentum particle 3−21184
jet production and fragmentation 3−40861

elementary particle inclusive interactions continued
- jet production comp. in Kp, pp, e^+e^-, νN, μp interactions 3−21167
- jet structure sequential determination, pierce numbers and thrust 3−11158
- jets, baryon prod. from quark fragmentation, multiplicity, scaling 3−6081
- large E_t hadronic processes, very high energies, gluon jets in perturbative QCD, hadron source 3−40936
- low-p_T particle prod. in nuclei, quark-parton model 3−6085
- massive μ pair prod. in association large momentum hadron, recombination model anal. 3−667
- meson resonance inclusive prod. and sea-quark distrib. in proton 3−16669
- multiparticle correlations 3−21181
- multiparticle dynamics, conf., Notre Dame, IN, USA (June, 1981) 3−20581
- multiple hadron prod., SPS collider energies, pomerons as quark-gluon strings 3−11126
- multiplicity, dispersion, pseudorapidity distribs., from shower particles in 24-400 GeV hadron-nucleus reactions 3−820
- nonleading single inclusive prod., phenomenological description 3−602
- nonlinear effects in parametric excitation in crystal with rhombic symmetry *(Russian)* 3−57753
- nucleus-nucleus, highly relativistic, space-time evolution, quark-gluon plasma, central rapidity region 3−26165
- perturbative QCD, inclusive proton production in quark and gluon jets, recombination model calcs. 3−26067
- proton-emulsion nuclei interactions at 400 GeV, hadron prod. mechanism 3−11209
- QCD, many-parton distrib. and fragmentation functions, appl. to hadron jets 3−36220
- qCD expectations for high-energy hadronic collisions 3−11149
- QCD jets, hadron multiplicity and distrib., next-to-leading effects 3−45344
- quark jet structure from deep inelastic lepton scatt. 3−21065
- quarks bound state energies for scalar pot. in Dirac eqn. 3−36209
- semi-inclusive deep inelastic scatt., azimuthal asymmetry calc. 3−26121
- soft hadron-hadron and hadron-nucleus interactions, dual fragmentation models 3−6084
- soft hadronic interactions, review 3−6123
- soft hadronic multiparticle physics, review 3−21163
- soft hadronic processes and hadron structure 3−6083
- superhigh energy physics 3−36286
- top jet and QCD jet differentiation using energy flow 3−31144
- $eN\rightarrow e'\Delta(1236)X$, zero parameter model calc. within nuclei 3−16714
- $eN\rightarrow e\gamma^*(Z^0)X\rightarrow el\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3−40910
- $e^{\pm}N\rightarrow e^{\pm}\gamma X$, inelastic scatt., γ-quanta emission, Compton mechanism in quark-parton model 3−21139
- e^-p, selectron and sneutron prod. cross section 3−49689
- $e^-p\rightarrow e^-Z^0X$, total cross-section calculation, Z^0 mass 3−26122
- $\gamma\gamma\rightarrow$jets, high p, recent PETRA results 3−21583
- $\gamma N\rightarrow\gamma\gamma$, delay cascade effects in emulsion, angular dependence 3−36253
- $\gamma N\rightarrow\Psi X(\Upsilon X)$, inelastic photoprod., QCD heavy quark contribs., charm subprocess 3−40917
- $\gamma p\rightarrow F^+F^-X$, 20-70 GeV, inclusive cross section, estimation from η decay channels 3−49690
- $\gamma p\rightarrow\gamma X$, deep-inelastic Compton scatt., QCD corrections 3−645
- $\gamma p\rightarrow pX$, diffraction dissociation 3−36285
- $\gamma q\rightarrow gq$, QCD Compton process up to Tevatron energies 3−644
- $hd\rightarrow pX$, fast backward N prod., confinement forces, colour flux tub model 3−6120
- hh, 10^{15}-10^{16} eV, cluster phenomena in emulsion chamber expts. and hadron jets *(Chinese)* 3−44633
- hh, large transverse energy events, gluon bremsstrahlung effects in QCD 3−36199
- $hh\rightarrow\gamma X$, direct photon polarisation jet-γ correlations *(Ukrainian)* 3−45425
- $hh\rightarrow hX$, low $p_\perp$ high energy inclusive reactions, leading particles phenomenology 3−26167
- $hh\rightarrow hX$, multiplicity distributions, universality ansatz 3−26149
- $hh\rightarrow l^+l^-X$, transverse momentum distributions in massive quark model, QCD comparison 3−26163
- $h_1h_2\rightarrow l^+l^-X$, perturbative QCD calc., soft gluon effects, K-factor 3−54883
- $h_1h_2\rightarrow l^+l^-x$, lepton pair prod., role of soft gluons 3−16609
- $h_1h_2\rightarrow\mu^+\mu^-X$, lepton pair prod. at large transverse momentum in second order QCD 3−31152
- $hp\rightarrow\Omega(\bar{\Omega})X$, $\bar{\Omega}/\Omega$ ratio in proton fragmentation, quark junction model 3−31251
- K^+ and π^+ beam jets, meson and baryon prod. and quark-diquark cascade model 3−40867
- $K\pm N$, 150, 200 GeV, dimuon transverse momentum meas., differential cross sections, QCD anal. 3−11213
- K^-N, low mass dimuons prod. at high transverse momentum, ρ, ω, ϕ reson. study 3−49704
- Kp, multijet prod. in QCD framework 3−16641
- K^-p, 16 GeV, pion pair second order interference 3−666
- K^-p, 32 GeV/c, fragmentation processes, π longitudinal correlations, quark processes 3−49710
- K^-p, 4.5, 5.6, 14.3 GeV, planar features of hadronic final states, e^+e^- and μp comparison 3−11210
- K^-p, u, d, ud quark fragmentation obs. by fast $\bar{K}^0$ (Λ) selection 3−21171
- $K^-p\rightarrow\bar{K}^0X$, SU(3) based comparison with pion charge exchange scatt. in triple Regge region 3−11208
- $K^-p\rightarrow\pi X$, quark and diquark jet fragmentation at 70 GeV 3−21172
- K^+p, 147 GeV/c, jet-like multiparticle systems, coplanarity 3−6122
- K^+p, 32, 70 GeV/c, energy, charge and quantum number flow, inclusive and exclusive jets 3−45422
- K^+p, 70 GeV/c, inclusive ϕ prod., s-quark fragmentation and recombination 3−11212
- $K^+p\rightarrow$ charged particles, forward distrib. anal., net charge and strangeness distribs. 3−21168
- $K^+p\rightarrow(K^0,\bar{K}^0,\Lambda,\bar{\Lambda},K^*,p^0)X$, 70 GeV, inclusive prod. cross sections 3−21175
- $K^+p\rightarrow(K^{*+}(892), \bar{\Sigma}^{*-}(1385), \Sigma^{*\pm}(1385))X$, 32 GeV, multiparticle fragmentation 3−21176
- $K^+p\rightarrow K^{*\pm}(890)X$, 147 GeV, inclusive strange resonance prod. 3−26169
- $K^+p\rightarrow\bar{\Lambda}X$, 32, 70 GeV/c inclusive $\bar{\Lambda}$ hyperon polarisation 3−40937
- $K^+p\rightarrow\pi^-X$, 70 GeV/c, proton fragmentation, internal structure of valons 3−31176
- $K^+p\rightarrow X$, 70 GeV, jetlike props. of multiparticle systems 3−21164
- $K^+p\rightarrow Y^{*\pm}(1385)X$, 147 GeV, inclusive strange resonance prod. 3−26169

elementary particle inclusive interactions continued
- $K^{\pm}p$, 100, 175 GeV/c, single particle inclusive scatt. and multiplicities 3−671
- lh, deep inelastic scatt. structure functions, first power corrections 3−40911
- lN, deep inelastic scatt., hadron ang. distribs., T odd asymmetry in QCD 3−26105
- lN, deep inelastic scatt. structure functions, slow rescaling variable 3−40912
- $l^{\pm}N\rightarrow lgX$, gluon bremsstrahlung cross section, neutral current effects 3−16648
- lp deep inelastic scatt. and nucleon structure 3−6102
- μN, nucleon structure functions ratio for Fe and D 3−54913
- $\mu N\rightarrow\mu\gamma^*(Z^0)X\rightarrow\mu l\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3−40910
- $\mu^{\pm}N\rightarrow\mu^{\pm}X$, 120, 200 GeV, deep inelastic, electroweak asymmetry, μ neutral current couplings 3−31220
- μp, 280 GeV, deep inelastic scatt., hadrons transverse momentum balance 3−21140
- NN, 10^{13}-10^{16} eV, scaling violations in Pamir-ANI expts. and in QCD 3−16673
- NN, Drell-Yan mechanism, muon pair prod. rate 3−673
- NN, inelastic collisions, 5-5000 GeV, leading particle effect, anal. 3−49700
- NN in $\alpha\alpha$, 126 GeV, large p_T particle prod., multiplicity, cross section ratio with pp 3−31246
- NN in $\alpha\alpha$, ISR energies, excited state hadronisation outside nuclear volume 3−31247
- $NN\rightarrow$jets, ultrahigh, energies in Pamir-ANI expts., QCD predictions 3−16674
- np, 100-400 GeV/c, multiplicity distribs., final state props. 3−49699
- $np\rightarrow pX$, cross-section, momentum spectra, comparison with peripheral model 3−36266
- $\nu(\bar{\nu})N$, charged-current interactions, nucleon structure function and gluon distrib. 3−54902
- $\nu(\bar{\nu})N\rightarrow\mu^+\mu^-X$, coherent pair prod., four lepton coupling const. limit 3−45385
- $\nu_\mu(\bar{\nu}_\mu)N\rightarrow\mu^-(\mu^+)x$, charged current cross section meas. 3−31196
- νd, hadron production at Fermilab energies 3−21118
- νd, inclusive $\rho°$, $\omega°$, $\eta°$, $K^{*\pm}(890)$ prod. 3−21119
- $\nu d\rightarrow\mu^-\Lambda X$, charmed baryon prod., $\Lambda_c^+\rightarrow\Lambda X$ decay, Λ_c^+ total cross section 3−6094
- νN, 10-50 GeV, hadron multiplicities in charged current events 3−45386
- νN, charged current interactions 3−31195
- νN, cross section for charm prod. 3−40894
- νN, D^0, D^+, F^+ and Λ_c^+ prod. study 3−40895
- $\bar{\nu}N\rightarrow\mu^+\pi^{\pm}X$, BEBC expt. results 3−31199
- $\bar{\nu}N\rightarrow\mu^+x$, charged current interaction cross section meas. by Fermilab bubble chamber 3−31197
- νN same-sign dimuon, trimuon, tetramuon prod. in intrinsic heavy quark model 3−40893
- $\nu_\mu n\rightarrow\mu^-X$, charged particle multiplicity distribs., quark-parton anal. 3−26104
- νp deep inelastic, average charged particle multiplicities, comparison with pp 3−49663
- $\nu p\rightarrow\mu^-\pi^+X$, BEBC expt. results 3−31199
- $\bar{\nu}p\rightarrow\mu^{\mp}\pi^{\pm}X$, BEBC expt. results 3−31199
- $\nu p\rightarrow\mu hX$, charged current hadron production in BEBC 3−21116
- $\nu_\mu p\rightarrow\mu^-X$, charged particle multiplicity distribs., quark-parton anal. 3−26104
- $p(\bar{p})N$, low mass dimuons prod. at high transverse momentum, ρ, ω, ϕ reson. study 3−49704
- $ph\rightarrow X$, planar multiparticle prod. at 147 GeV 3−21166
- pN, 30 GeV, two particle inclusive rapidity correlation functions 3−11211
- pN, 350 GeV, charm prod. meas. using prompt muons 3−31242
- pN, 400 GeV, prompt neutrino prod. in Fermilab beam dump expt. 3−31241
- pN, 400 GeV/c, high transverse energy events prod. 3−31252
- pN, 400 GeV/c, rapidity gaps and rapidity correlations, cluster characts. 3−26162
- pN, 400 TeV, high transverse energy hadronic collisions 3−36278
- pn, charged particle ratios and large p_T depend. quark statistics 3−16616
- pN, collision mean number and mean multiplicity from multiple scatt. theory 3−16665
- $\bar{p}N$, large corrections in perturbative QCD from gluon bremsstrahlung 3−598
- pN, $\bar{p}$ prod. from extended targets using weighted Monte Carlo hadron cascade model 3−664
- pN, $\bar{p}N$, 150, 200 GeV, dimuon transverse momentum meas., differential cross sections, QCD anal. 3−11213
- $pn\rightarrow\Delta^{++}X$, 19 GeV/c, cross sections, peripheral and diffractive Δ^{++} prod. 3−40931
- pN in $p\alpha$, ISR energies, excited state hadronisation outside nuclear volume 3−31247
- $\bar{p}N\rightarrow\mu^+\mu^-X$, K factor meas. 3−36281
- $pN\rightarrow$strange particles, 300 GeV in Ne 3−21178
- $pN\rightarrow X$, multiparticle prod. at 200 GeV on H,Ar,Xe in streamer chamber 3−21179
- $p\bar{p}$ final state, evidence for baryonium in $\bar{p}p$ interactions 3−36277
- $\pi^-N\rightarrow\pi^-\pi^-\pi^-N$, 40 GeV, 0^-S meson production 3−21170
- π^0 production in π, K, p interactions with nuclear targets 3−21187
- π=emulsion nuclei interactions, 50 GeV/c, low-P_T spectra, sea and valence quark distrib. 3−16668
- $\pi^+d\rightarrow K_S^0K^{\pm}\pi^{\mp}X$, 10 GeV/c, cross section meas. 3−651
- πN, in nuclei, high energy, multiplicities and total cross sections 3−45414
- πN, inelastic collisions, 5-5000 GeV, leading particle effect, anal. 3−49700
- $\pi N\rightarrow\mu^+\mu^-X$, hard hadron phenomenology 3−36284
- $\pi N\rightarrow\psi\psi X$, evidence for B-meson prod. 3−36289
- π^-N, 190 GeV/c, beauty meson prod. search 3−45417
- $\pi^-N\rightarrow hX$, hadron production mechanism, collective tube model, pomerons 3−26164
- $\pi^-N\rightarrow J/\psi X$, gluon structure function of pion from J/ψ prod. 3−40907
- $\pi^-N\rightarrow l^+l^-X$, perturbative QCD, large corrections from gluon bremsstrahlung 3−598
- $\pi^-N\rightarrow\mu^+\mu^-X$, K factor meas. 3−36281
- $\pi^-N\rightarrow\psi\psi X$, cross section calcs. from quark-antiquark annihilation in QCD 3−31254
- Π^-N_1 350 GeV/c, beauty particle decay, direct observation attempt, prod. limit 3−45421

elementary particle inclusive interactions continued
- $\pi^{\pm}N$, 150, 200, 280 GeV, dimuon transverse momentum meas., differential cross sections, QCD anal. 3−11213
- $\pi^{\pm}N$, low mass dimuons prod. at high transverse momentum, ρ, ω, ϕ reson. study 3−49704
- $\pi^{-}p\rightarrow\eta X$, SU(3) based comparison with kaon charge exchange scatt. in triple Regge region 3−11208
- $\pi^{-}p\rightarrow\pi^{0}X$, SU(3) based comparison with kaon charge exchange scatt. in triple Regge region 3−11208
- qg, infrared divergences, Bloch-Nordsieck theorem 3−45356
- $qh\rightarrow l\bar{l}X$, Drell-Yan process in QCD, two-loop graphs, spectator partons 3−6121
- qq, infrared divergences, Bloch-Nordsieck theorem 3−45356
- $\bar{s}s$ suppression in hadronic vacuum, SU(3) symmetry violation 3−49654
- $\Sigma^{-}N\rightarrow\Lambda K^{-}\pi^{+}\pi^{+}X$, narrow state at 2.46 GeV/c^2 obs., charmed strange baryon A^{+} prod. 3−49705

elementary particle interaction models
- *see also bootstrapping; composite models of hadrons; diffraction model; duality and dual models; peripheral models; statistical models; vector meson dominance model; Weinberg model*
- πN, modified normalisation conditions, $G_{NN\pi}$ calc. 3−36269
- πN scatt., Chew-Low eqns. as Cremona transformations 3−6116
- beta function, interpolations with quantum corrections in string model 3−31190
- boson model, four-point interaction and Yukaway interaction equivalence 3−11163
- bottom production, in νn interactions, using parton model 3−36213
- bound states and Lorentz-Poincare symmetry 3−10982
- Buchmuller-Grunberg-Tye-type potential consistent with smaller values of Λ_{MS} 3−36226
- central production and small-angle elastic scattering in the valon model 3−21063
- charmonium spectrum study using nonrelativistic pot. model, Prufer transformation appl., report 3−20710
- composite model of weak interactions 3−30539
- confinement and hadron-hadron interactions, general relativistic methods using scaled down Einstein eqns. 3−6055
- constituent model, inelastic diffraction, slope-mass correlation 3−45380
- deep inelastic scatt., QCD mass effects, parton distribution p struct. function 3−31166
- deep inelastic scattering at small x, QCD gluon ladder diagram 3−40852
- Drell-Yan cross-section, cancellation of long distance contributions 3−49638
- elastic-to-total cross section ratio at finite energies 3−16466
- end point region, soft and hard wave functions, SU(6) symmetry breaking patterns 3−36293
- fermion model, four-point interaction and Yukawa interaction equivalence 3−11164
- flavour-changing EM transitions in standard weak interaction model 3−16599
- Goldstone-fermion pair exchange in spontaneously broken supersymm., van der Waals type forces 3−49595
- heavy mesons mass spectra and decay widths in quark-confining pot. model 3−16614
- large angle elastic scatt., diff. cross section, anal. props. 3−6087
- meson and baryon masses non-perturbative calc. with one-parameter pot. 3−16626
- meson exchange, OBEP momentum-space, treatment with high order form factor 3−45379
- meson spectra of superimposed pots. in Schrodinger eqn. 3−36208
- mesons, mass spectra, leptonic decay widths, noncoulomb power law potential 3−26098
- pion correlation functions, hybrid approach, dual topological expanded sheets 3−31188
- quark statistical function, distribution in violent collisions 3−31162
- quark-antiquark systems, power-law pot, model pot. Lorentz structure vs. relativistic consistency 3−16615
- quarkonium, two-step potential 3−54884
- radial potential, fermion and antifermion in infinitely rising potential 3−31150
- relativistic and nonrelativistic quarkonium models 3−16617
- relativistic models of extended hadrons with mass-spin trajectory constraint, book 3−10540
- scattering, charged particles by magnetic strings in gauge fields 3−31052
- soft gluons, baryon-antibaryon production and low $p_{\perp}$-physics in the Lund model 3−21107
- total cross-section and zero-free radius of scatt. amplitude, new bounds 3−49658
- twistor theory for particle models 3−11166
- weak interactions composite model 3−31128
- Yukawa interaction, operator approach to strong coupling transmutation 3−500
- $e^{+}e^{-}\rightarrow e^{+}e^{-}\gamma\gamma\rightarrow e^{+}e^{-}+\text{twojets}+X$, broken colour gauge analysis 3−36263
- hd, elastic scatt., GeV region, multiple scatt. formalism 3−6219
- KN, optical potential, computer model, linear equations 3−36224
- NN, inelastic collisions, 5-5000 GeV, leading particle effect, anal. 3−49700
- NN scatt., phase shifts, P matrix anal., quark interactions 3−26134
- $pA\rightarrow hX$, analytic approximation, heuristic Glauber model, semi-inclusive interactions 3−26136
- $\bar{p}d\rightarrow e^{+}e^{-}n_{s}$, nonadiabatic effects, proton EM form factor 3−54921
- $p\bar{p}$, 540 GeV, elastic scatt. model discrimination, geometrical scaling predictions 3−49698
- $p\bar{p}$, bag model analysis, nuclear structure implications 3−36216
- pp, differential cross-section meas., Lasinski model, small angle, 650→1000 MeV 3−49696
- $\bar{p}p$ elastic scatt., geometrical scaling, cross section correlations, eikonals 3−6118
- $\bar{p}p\rightarrow\bar{p}p$, 0.7 GeV/c, polarisation ang. depend., strong absorptive pot. model anal. 3−16675
- $\bar{p}p\rightarrow\bar{p}p$, low energy, Ramsauer effect, potential parameter calc. 3−11199
- $pp(\bar{p}p)$, Coulombic-hadronic interference in eikonal model 3−16658
- πd channels, comparative study, existence of dibaryon resonances 3−54923
- πN, inelastic collisions, 5-5000 GeV, leading particle effect, anal. 3−49700
- πN, optical potential, computer model, linear equations 3−36224
- πN elastic scatt., geometrical scaling, cross section correlations, eikonals 3−6118

elementary particle interaction models continued
- $\pi^{-}p$, 50, 200 GeV, elastic scatt., van der Waals type model, structure 3−31236
- $\pi^{\pm}p\rightarrow\pi^{\pm}p$, 378-687 MeV/c, differential cross sections, pion-proton coincidences, comparison with partial wave analysis 3−16659
- $\bar{q}q$ system, glueball exchange of $\iota(1440)$ 3−26092
- $qq\bar{q}\bar{q}$ system, in nonrelativistic potential model 3−36225

elementary particle interactions
- *see also cosmic ray effects and interactions; elementary particle coupling constants; elementary particle electromagnetic interactions; elementary particle gravitational interactions; elementary particle inclusive interactions; elementary particle large momentum transfer interactions; elementary particle scattering; elementary particle strong interactions; elementary particle weak interactions; hadron-deuteron interactions; hadron-hadron interactions; high-energy cosmic ray interactions; lepton-deuteron interactions; lepton-hadron interactions; lepton-lepton interactions; photon-deuteron interactions; photon-hadron interactions; photon-lepton interactions; photon-photon interactions; polarisation in elementary particle interactions; quantum field theory of interactions; unified field theories; vertex functions*
- non-potential interaction and inseparable constitutents of hadrons 3−31129
- symmetry as a clue to the physics of elementary particles 3−6020
- Universe gross parameters rel. to elementary particle parameters 3−40296
- $\gamma\gamma\rightarrow\eta_{c}$, charmonium sum rules 3−26175

elementary particle large momentum transfer interactions
- *see also elementary particle inclusive interactions*
- charged particle ratios and large p_T depend. quark statistics 3−16616
- direct photon production in hard hadron process at ISR 3−21186
- dissoc. on nuclei at 200 GeV coherent pion 3−31240
- gauge theory and particle physics, book 3−5511
- hadron leptoproduction, transverse momentum effects and ang. energy flow 3−11143
- high p_T hadron production 3−21185
- high p_T particle hadroprod. QCD review 3−26061
- high-p_T hadron prod., QCD from gluon bremsstrahlung 3−598
- jet production, study with identified high transverse momentum particle 3−21184
- large angle elastic scatt., diff. cross section, anal. props. 3−6087
- large E_t hadronic processes, very high energies, gluon jets in perturbative QCD, hadron source 3−40936
- large transverse momentum hadrons interactions, QCD anal. 3−21079
- multiparticle dynamics, conf., Notre Dame, IN, USA (June, 1981) 3−20581
- nonlocal quasipotentials, large angle hadron scattering 3−11152
- p_T spectrum multiplicity depend., probe for deconfining phase transition in hadronic matter 3−26152
- polarised photon-photon collisions, large transverse momentum jets prod. 3−16629
- QCD tests in large transverse momentum hadron photoproduction 3−6067
- $e^{+}e^{-}$ annihilation, hadron prod., single gluon contrib. 3−646
- hh, 10^{15}-10^{16} eV, cluster phenomena in emulsion chamber expts. and hadron jets *(Chinese)* 3−44633
- hh, large transverse energy events, gluon bremsstrahlung effects in QCD 3−36199
- $h_1h_2\rightarrow\mu^{+}\mu^{-}X$, lepton pair prod. at large transverse momentum in second order QCD 3−31152
- $K^{+}(K^{-})p$, 20, 50 GeV/c, elastic scatt. differential cross section at large momentum transfers 3−54927
- $K^{-}N$, low mass dimuons prod. at high transverse momentum, ρ, ω, ϕ reson. study 3−49704
- NN, 500 GeV, minimum bias events, P_T distribution, comparison with $p\bar{p}$ interactions 3−31248
- NN in $\alpha\alpha$, 126 GeV, large p_T particle prod., multiplicity, cross section ratio with pp 3−31246
- NN in $\alpha\alpha$, π^0 prod. invariant cross section meas. at ISR energies 3−670
- NN→jets, ultrahigh, energies in Pamir-ANI expts., QCD predictions 3−16674
- $p(\bar{p})N$, low mass dimuons prod. at high transverse momentum, ρ, ω, ϕ reson. study 3−49704
- pN, 400 GeV/c, high transverse energy events prod. 3−31252
- pN, 400 TeV, high transverse energy hadronic collisions 3−36278
- pN in αp, π^0 prod. invariant cross section meas. at ISR energies 3−670
- $pN\rightarrow\pi K+X$, identification test, large aperture ring imaging Cherenkov counter 3−45766
- pp, 150, 300 GeV deep inelastic hadron scattering with a 2π calorimeter trigger 3−21183
- pp, 300 GeV, high P_T interactions, jets, parton spectrum, cross section 3−31249
- pp, 300 GeV/c, transverse energy trigger for large p_T jets, gluon bremsstrahlung 3−26153
- pp, 31, 63 GeV, large p_T particle prod., multiplicity, cross section ratio with $\alpha\alpha$ 3−31246
- pp, 400 GeV, high transverse energy hadronic collisions 3−36278
- pp, 44.7, 62.3 GeV, correl. between high-momentum secondaries 3−665
- $\bar{p}p$, 540 GeV, charged particle transverse momentum spectra 3−26154
- $\bar{p}p$, 540 GeV, high transverse momentum charged particles, rapidity and azimuthal angle correls. 3−26155
- $p\bar{p}$, 540 GeV, high transverse energy events, jet cross section and mass distrib. meas. 3−54932
- $\bar{p}p$, 540 GeV, very large p_T jets, cross section, E_T distrib. 3−26159
- pp, 63 GeV, charged particles associated with high p_T prompt γ and π^0 3−26156
- pp, 63 GeV CM parton-parton scatt. amplitude, gluon spin 3−45415
- pp, hadron formation length in high $p_{\perp}$ processes at 70 GeV 3−36283
- $\bar{p}p$, large p_T strange or charmed baryon prod., higher power QCD mechanisms 3−49713
- $\bar{p}p$, large ${P_T}^2$ scatt., spin physics 3−54936
- $\bar{p}p\rightarrow\gamma X$, prompt photon polarisation at large p_T, perturbative QCD test 3−674
- pp→jet evidence at 400 GeV from E-609 calorimeter expt. at Fermilab 3−36279
- $pp\rightarrow K(\pi)+X$, large P_T, qualitative comparison with QCD 3−36203
- $pp\rightarrow M+\bar{M}+X$, 53 GeV, monopole pair prod. in high p_T collisions, parton model 3−31250
- $\bar{p}p(pp)$, 31, 63 GeV CM, hadron and hadron-pair prod. at large transverse momentum 3−45416
- $pp(\bar{p}p)$, 62, 800 GeV cm, photon and π^0 prod., QCD calcs. 3−31256
- $\bar{p}p(pp)$, large p_T quarkonium prod., perturbative QCD anal. 3−16667

elementary particle large momentum transfer interactions continued
  $pp(\bar{p}p)\to\gamma X$, 53 GeV CM, direct prod. at large p_T, longit. spin-spin asymmetry, QCD calc. 3−21159
  $pp\to\pi^0\pi^0X$, hard constituent scatt., angular and energy depend., CERN ISR expt. 3−36280
  $pp\to\pi^0\pi^0X$, ISR energies, hard constituent scatt., ang. and energy depend. 3−31245
  $pp\to\Pi^{\pm}X$, 63 GeV, inclusive cross section meas. of high transverse momentum pions, QCD comparison 3−16666
  $\bar{p}p\to W^{\pm}X\to e^{\pm}\nu X$, 540 GeV, large transverse energy electron obs. 3−45419
  $\bar{p}p\to W^{\pm}X\to e^{\pm}\nu(\bar{\nu})X$, single isolated electrons obs. at high transverse momentum at CERN collider 3−49706
  $p\bar{p}\to X$, 53 GeV, minimum bias events, P_T distribution, comparison with cosmic rays 3−31248
  π^0 production in π, K, p interactions with nuclear targets 3−21187
  $\pi^{\pm}N$, low mass dimuons prod. at high transverse momentum, ρ, ω, ϕ reson. study 3−49704
  πp, 150, 300 GeV, high P_T interactions, jets, parton spectrum, cross section 3−31249
  πp, 150, 300 GeV deep inelastic hadron scattering with a 2π calorimeter trigger 3−21183
  π^-p, 200, 300 GeV, inclusive high P_T prod. cross sections for $\pi^{\pm}$, $K^{\pm}$, p and $\bar{p}$, A depend. 3−49707
  π^-p, 300 GeV/c, transverse energy trigger for large p_T jets, gluon bremsstrahlung 3−26153
  $\pi^-p\to K(\pi)+X$, large P_T, qualitative comparison with QCD 3−36203

elementary particle mass
  see also baryon mass; lepton mass; mass differences; mass formulae; meson mass
  axial electrodynamics, dynamical mass generation 3−16589
  axion mass raising in hypercolour sideways interaction model 3−16610
  axion signal from positronium decay, branching ratio, mass 3−6809
  composite models, W dominance and weak boson mass bounds 3−40877
  composite quarks and leptons, generation labels and mass matrices 3−16621
  composite quarks and leptons, mass generation mechanism 3−11155
  constituent model, inelastic diffraction, slope-mass correlation 3−45380
  dynamical mass generation for quarks and leptons 3−45342
  fermion mass relations and mass of t-quark *(Russian)* 3−6086
  fermion-boson composite model of quarks and leptons, masses, flavour mixing angles 3−31179
  gauge-fermion masses, upper bound 3−40805
  gauge-independent effective quark mass under momentum-subtraction renormalisation condition 3−611
  glueball mass, estimation, plaquette-plaquette correlation in lattice gauge theory 3−26062
  glueball mass from variant actions in lattice Monte Carlo simulations 3−40872
  glueball mass in SU(2) lattice gauge theory 3−36145
  glueball mass spectrum, finite size scaling, finite lattice effects 3−588
  glueball mass spectrum, SU(3) lattice Monte Carlo calc. 3−6058
  glueballs and $q\bar{q}$ mesons interplay, 0^{-+} and 2^{++} mesons study 3−54887
  gluon magnetic mass in Hartree-Fock approximation of QCD 3−587
  grand unification, fermion mass matrix, axions, Higgs couplings 3−11103
  gravitino mass, supergravity intermediate supersymmetry breaking 3−40457
  hadron mass spectrum in lattice QCD, numerical estimates, Monte Carlo calc. 3−26096
  hadron mass spectrum in lattice QCD, numerical estimates, Monte Carlo in SU_3 3−26097
  Higgs boson mass and coupling constant, upper limits in Weinberg-Salam-Glashow model 3−54871
  Higgs boson mass from QED and muonic atom considerations 3−36183
  high temperature gauge theories, exact chiral invariance, effective fermion masses, QCD, GUT appls. 3−16499
  hot quark-gluon plasma, photon emission, quark mass singularity shielding 3−40855
  lattice QCD, boundary effects and hadron mass fluctuations 3−49559
  lattice QCD, hadron spectroscopy, u, d and s quark masses 3−11119
  light axion, astrophysical mass constraints in the Sun, red giants, white dwarfs 3−10204
  light quark mass, finite energetic sum rules calc., π radial excitations mass spectrum 3−54866
  light quark masses using finite energy sum rule, scalar correlation function 3−6080
  N=1 locally supersymmetric theories, light scalars 3−49603
  N=1 supersymmetric theories, Lagrangian approach, mass splitting, gluino and photino masses 3−26022
  neutral boson masses in left-right $SU(2)_L\times SU(2)_R\times U(1)_{B-L}$ symmetric model 3−16582
  neutral Higgs boson mass and weak decays $K^{\pm}\to\pi^{\pm}l^+l^-$ 3−21121
  neutrino mass, lower limit rel. to semi-degenerate equilib. configurations of collisionless self-gravitating Fermi gas 3−54222
  photon electric mass, effect of photon interaction with thermal neutrino background 3−49622
  QCD, light quark mass differences from Laplace-type sum rules 3−40857
  QCD, planar approx., bounds on particle mass 3−54882
  QCD Weinberg sum rules and the mass of composite quarks 3−26087
  quark dynamic mass in QCD using Dyson-Schwinger eqn. 3−21084
  quark dynamical mass generation, self-consistency eqn. 3−31136
  quark mass, SO(10) theory, lepton, up and down quark mass matrices 3−36177
  quark mass in lattice gauge theories and on the continuum 3−11023
  quark masses, radiative contrib. in grand unified theories 3−31116
  quark weak decay rate, mass effects in QCD corrections 3−49642
  quark-lepton, mass ratio estimates, possible symmetry breaking $m\geq10^7$ GeV 3−40816
  quarks, dynamical mass in quantum chromodynamics asymptotic behaviour 3−594
  realistic quark masses and mixing angles without scalars, extended technicolour 3−11129
  reciprocity principle in stochastic quantum mechanics 3−30653
  relativistic models of extended hadrons with mass-spin trajectory constraint, book 3−10540
  rishon model, quark mass matrix struct., CP violation, Cabibbo angle 3−40878
  scalar-invariant scalar-tensor theory, gravitational constant and particle mass origins 3−16208
  SO(14) GUT, intermediate symmetries, fermion masses 3−26038

elementary particle mass continued
  squarks, parity violation, occurrence if squarks are not mass degenerate, SUSY bounds 3−49637
  $SU(2)_L\times U(1)$ model with horizontal interactions, fermion masses, mixing angles 3−45326
  $SU(2)\times U(1)\times \tilde{U}(1)$ supersymmetric models, neutral currents, neutral boson mass bounds 3−11116
  $SU(2)\otimes U(1)\otimes S_4$ model, t-quark mass, ν mass and mixings, CP nonconservation 3−11105
  $SU(4)_{colour}$ gauge boson mass limit from $K_L\to\mu e$ exptal. bound 3−49610
  SU(8) grand unification, symmetry breaking mass scales and fermion mass relations 3−21048
  SU(N) hypercolour and extended hypercolour models, fermion masses, rare processes, CP violation 3−49632
  supergravity grand unified theories, quarks, leptons, gauge mesons superpartners masses 3−36174
  supersymmetric GUTs, radiative quark and lepton mass suppression, Higgs supermultiplets 3−11097
  supersymmetric-particle masses from $(g\text{-}2)\mu$, lower bounds 3−572
  supersymmetry, low energy, quark and lepton mass from radiative corrections 3−11056
  supersymmetry, radiative corrections for fermion mass, gravitinos 3−49588
  teaching approach 3−49123
  top-quark mass and B meson decay to kaons without charm 3−11173
  unextended hypercolour unified theories, mass hierarchies 3−49633
  weak CP nonconservation in terms of quark mass hierarchies 3−49606
  weak vector boson masses in supergrand unified theory 3−10689
  Witten's mass hierarchy, effective potential 3−541
  $e^-p\to e^-Z^0X$, total cross-section calculation, Z^0 mass 3−26122
  γ, spin properties, spin kinetic energy and intrinsic mass calc. 3−40890
  p decay in SUSY GUTs due to d=5 operators, lifetime, W-ino mass 3−31106
  $pp(\bar{p})$, squark and gluino production, fusion model calcs., gluino mass 3−45312
  $Q\bar{q}$ like mesons, Dirac mass spectra in power law pot., D, F, B, Ψ, Υ, q masses 3−45381
  s-quark mass, lower bound from e^+e^- and function operator expansion 3−31130
  S-quark mass and quark condensate from QCD 3−31193
  t-quark mass, gauge-independent computation 3−604
  $W^{\pm}$, dynamical mass generation 3−45342
  W_R mass constraints and $\bar{K}^0$-K^0 matrix elements 3−54909
  $W^{\pm}$ boson mass determ. in $\bar{p}p$ collisions 3−45418
  Z^0, dynamical mass generation 3−45342
  Z^0 boson mass, leading corrections using chiral dynamics techniques 3−31217
  pN, beam dump expt., bounds on supersymmetric particles 3−45412

elementary particle scattering
  see also bootstrapping; elementary particle interactions; hadron-deuteron scattering; hadron-hadron scattering; lepton-deuteron scattering; lepton-hadron scattering; lepton-lepton scattering; Mandelstam representation; photon-deuteron scattering; photon-hadron scattering; photon-lepton scattering; photon-photon scattering; polarisation in elementary particle scattering; Pomeranchuk poles and trajectories; quantum field theory of elastic scattering; Regge poles and trajectories; relativistic scattering theory; S-matrix theory
  gauge-invariant regularisation of non-Abelian fields, Lee-Nauenberg probability for gluon scattering 3−20972
  high-energy, path-integral formulation 3−49566
  quark-monopole scatt. cross section in grand unified SU(5), fermion mass and axial anomaly 3−49611

elementary particle strong interactions
  see also composite models of hadrons; duality and dual models; hadron classification schemes; peripheral models; quantum field theory of strong interactions
  confinement and hadron-hadron interactions, general relativistic methods using scaled down Einstein eqns. 3−6055
  hadron spectrum calculations at strong coupling in lattice QCD 3−45354
  higher symmetry in strong interaction and its effects to weak interaction process 3−36207
  KNO distributions using the generalization of Novero-Predazzi's ansatz with three constraints 3−40924
  multiparticle dynamics, recent developments 3−21087
  nucleus-nucleus, highly relativistic, space-time evolution, quark-gluon plasma, central rapidity region 3−26165
  pion correlation functions, hybrid approach, dual topological expanded sheets 3−31188
  total cross-section and zero-free radius of scatt. amplitude, new bounds 3−49658
  weak interaction relation 3−16598
  pp, $^1S_0$ scatt. length, EM corrections, strong interaction model depend. 3−49688

elementary particle symmetry
  see also chiral symmetries; conservation laws; discrete symmetries; dynamical symmetry; helicity (elementary particles); isotopic spin (elementary particles); nonlinear symmetries; spontaneous symmetry breaking; SU_n theory; supersymmetry
  Ashkin-Teller model functional inversion relation, duality, order-disorder variables 3−31186
  B-L violating proton decay and late cosmological baryon prod. 3−558
  cosmological first-order phase transition and baryon-monopole problem 3−44880
  E(2)-like little group for massless particles and neutrino polarisation, gauge invariance consequence 3−31047
  electroweak interactions within five-quark model 3−615
  families, the invisible axion, and domain walls, instantons in hypercolor 3−591
  four-particle symmetry group, orthogonal units, substitutional anal. *(Chinese)* 3−31090
  gauge field theories, book 3−10537
  grand unified theories, baryon number from collapsing cosmic strings 3−21035
  hadrons internal symmetries, description and interpretation as exchange symmetry 3−6076
  internal symmetry in theory of multispin particles 3−5978
  least action, conservation laws and symmetries 3−5575
  SO(10) grand unification and neutron-antineutron oscills. 3−26051
  SO(N) grand unified theories, low-energy left-right symmetry restoration 3−568

elementary particle symmetry continued
SO(N) Higgs problem with adjoint+vector representation and nonlinear pot. 3—16470
symmetry groups of the regular tessellations of S^2 and S^3. 3—530
$eN \rightarrow e\gamma^*(Z^0)X \rightarrow el\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3—40910
$\mu N \rightarrow \mu\gamma^*(Z^0)X \rightarrow \mu l\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3—40910
$\bar{p}p$ annihilation, isospin conservation, π multiplicity and primary temp., internal symmetry 3—668

elementary particle theory
see also Bethe-Salpeter equation; complex angular momentum plane; current algebra; dispersion relations; electron theory; elementary particle interaction models; elementary particle symmetry; Feynman diagrams; form factors (elementary particles); group theoretical schemes; helicity (elementary particles); isotopic spin (elementary particles); Lee model; mass formulae; quantum field theory; S-matrix theory; scaling phenomena; structure functions; sum rules; vertex functions
Bethe-Salpeter kernels and particle structure in the $Yukawa_2$ quantum field theory 3—16522
book, leptons and quarks, weak interaction theory 3—54593
causal functions, self-similar asymptotic behaviour, light cone behaviour 3—5979
chronometric cosmology and fundamental fermions 3—49065
cosmology and unified gauge theory, correlations 3—30168
developments in particle physics 3—45382
equation of state of hadronic systems, pion contrib. *(Russian)* 3—26100
free relativistic massive quantum particle, mass shell, gauge fixing conditions 3—5986
geometry and particles 3—10644
hadronic mechanics, Lie admissible Fock space foundations 3—31075
high energy accelerators, impending demise 3—40888
high energy physics, theory, accelerators and instruments 3—41473
laser field effects on total cross sections and decay rates 3—49661
massless particles, spin properties, spin kinetic energy and intrinsic mass calc. 3—40890
multiparticle dynamics, conf., Notre Dame, IN, USA (June, 1981) 3—20581
particles, fields and quantum theory, historical development 3—5992
relativistic models of extended hadrons with mass-spin trajectory constraint, book 3—10540
relativistic-particle quantum mechanics—(applications and approximations) 3—11050
superconductivity solutions, application to particle physics, Green's functions 3—31120
symmetry as a clue to the physics of elementary particles 3—6020
theoretical perspectives 3—40889
twistor theory for particle models 3—11166
unification or substructure *(Polish)* 3—16574
zero quantisation as origin of Dirac spin and fermionic generations 3—26099

elementary particle weak interactions
see also neutral currents; quantum field theory of weak interactions; Weinberg model
asymptotic freedom sum rules and $\sin^2\theta_W$ in nearby composite models 3—31180
book, leptons and quarks, weak interaction theory 3—54593
charged leptonic current, V, A structure study 3—16569
composite model of weak interactions 3—30539
composite model of weak interactions 3—31128
composite models, W dominance and weak boson mass bounds 3—40877
composite models of the weak interactions 3—40874
flavour-changing EM transitions in standard weak interaction model 3—16599
GUT electroweak radiative corrections 3—40821
higher symmetry in strong interaction and its effects to weak interaction process 3—36207
lattice QCD_2, $\langle \det U_p \rangle$ evaluation, weak coupling 1/N expansion 3—6061
lepton-hadron processes, new results, summary and assessment 3—36252
nucleus as a laboratory for studying the weak interaction 3—45325
primordial nucleosynthesis including radiative, Coulomb, and finite-temperature corrections to weak rates 3—20550
quarks weak interaction, P violation in neutron-nucleus scatt. 3—21102
SO(n) grand unified theories, weak interactions V-A structure, conjugate families 3—16585
strong interaction relation 3—16598
SU(2)×U(1) gauge theory, CP nonconservation superweak model 3—21046
supernovae, weak interaction reaction rates rel. to neutrino esccape, nuclear dissoc. and core collapse and/or explosion 3—35641
technicolour theories, corrections to weak-interaction parameters 3—31217
weak CP nonconservation in terms of quark mass hierarchies 3—49606
weak interactions in the confining phase 3—45373
K weak decay, Nambu-Goldstone nature, quark-tadpole transitions, $\Delta I = {}^1/_2$ rule 3—26110
$\nu(\bar{\nu})N \rightarrow \mu^+\mu^-X$, charm decay, strange-sea struct. function 3—6095
$\bar{\nu}_\mu N$, charged weak currents of quarks, V, A structure study 3—26106
$\pi p \rightarrow l^+l^-$, polarisation distribution of quarks, perturbative QCD, weak asymmetries 3—21088
SU(2)×U(1) guage model, weak interactions of quarks 3—26028

elementary particles
see also bosons; charm particles; composite particles; cosmic rays; fermions; gamma-rays; hadrons; hypothetical particles; leptons; quantum field theory; strange particles
particle physics, citation analysis 3—44886

elements (chemical)
for specific metals and non-metals see appropriate chemical names
see also element origin; element relative abundance; periodic system of elements
protons subshell stopping power calc. using oscillator strength formulation of Born approx. 3—6783
pseudopotentials, appl. to atoms, mols. and solids 3—13691
transuranium elements 3—50535
X-ray wavelength and width meas. for elements from $47 \leq Z \leq 92$, ZZ 3—11736
Z=188, radiative transition of electrons to K shell 3—1304
Pb+Pb, nucl. sticking, superheavy quasimol. form., MO X-ray spectra 3—50421

Eliashberg strong-coupling model *see strong-coupling superconductors*

Elinvar
magnetic anisotropy, uniaxial 3—33885

ellipsometers
see also ellipsometry
IR ellipsometer design and construction for thin film research 3—25925
Ge, surface struct., changes due to metal ion adsorption, electron diffr. study 3—2937

ellipsometry
see also ellipsometers; polarimetry
304 stainless steel selective surfaces, chemically coloured, ellipsometric and spectral measurements 3—9486
cadmium arachidate monolayer assembly, ellipsometry, reflection, luminesc. and Raman spectra 3—38941
crystalline surface growth process study by ellipsometry, vapour growth systems *(French)* 3—24104
electrochemistry, electrode reactions study by ellipsometry and surface EM wave excitation *(French)* 3—24510
ellipsointerferometry for thin film thickness meas., improved lateral resolutions 3—25922
equi-intensity spectroscopic ellipsometry with imperfect optical components, optical consts. determ. 3—45190
fluid-fluid interface, elec. and mag. susceptibilities 3—34046
III-V semiconductors, dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
IR ellipsometry, instrument limitations and computer codes 3—10884
isotropic transparent thin film on biaxial nonabsorbing cryst., thickness and refr. index determ., ellipsometric method 3—30921
liquid surface, light reflection, ellipsometric coeff. 3—14243
metal, optical constants determined ellipsometrically, surface roughness effect 3—38793
null ellipsometry technique for thin films on substrates 3—49429
organic adsorbed layer role in friction, shear props. of partial monolayers 3—51960
plasma/surface reactions, real time study by interferometry and ellipsometry *(French)* 3—29198
polariser-surface-analyser ellipsometry of Conical elements 3—25924
quartz glass polished surface anal. using ellipsometric and spectroscopic method 3—32512
Raman spectroscopy, polarisation active, control of line profile and S/N ratio 3—5868
simulation measures for especially thin coatings and means of checking them 3—49322
steel, austenitic stainless AISI 314, ion bombardment pretreatment, oxidations obs. by AES and ellipsometry 3—43979
stratified structures, derivatives of reflection and transmittance, solution of reverse ellipsometric problem 3—25923
thin films and diffuse interfaces, optical properties determ., photometry and ellipsometry, surface plasmon excitation *(French)* 3—24033
thin metal film on dielectric substrate, radiowave ellipsometry, fundamental relations 3—20877
two-phase surfaces model for ellipsometry of polyphase substrates, AgCu-CuAg example 3—20889
Ag surfaces, adsorption of O_2 and N_2O, reaction kinetics, ellipsometry 3—23158
Al film, interaction with O_2 at low press. 3—9352
Al film, oxidation, ellipsometric meas. 3—9353
Cu surfaces, adsorption of O_2 and N_2O, reaction kinetics, ellipsometry 3—23158
Fe, passive film, optical spectra, mol. orbital study 3—9231
Fe-Ni-Cr, passive film form. in borate buffer soln., ellipsometric study 3—24390
GaAs epitaxial film, heat treatment, ellipsometric and AES studies 3—14621
GaAs-anodic native oxide interface analysis using spectroscopic ellipsometry *(French)* 3—28438
Ge, dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
Ge_3N_4 films grown by thermal nitridation, comp., struct. and refractive index meas. 3—33592
In thin film, optical props. and struct. 3—19221
n-InP, RF sputter-damaged layer, ellipsometric study 3—34501
InSb (110), O_2 adsorption, UPS, EELS and ellipsometry study 3—2959
Ni surfaces, adsorption of O_2 and N_2O, reaction kinetics, ellipsometry 3—23158
NiO films grown by sputter oxidation *(Japanese)* 3—19455
$Se_{0.95}Bi_{0.05}$ amorphous thin films, coevaporated, characterisation 3—3196
p-Si, anodic oxidation in methanol compared to glycol, ellipsometric meas. 3—43970
Si, CVD grown, laser beam annealed, optical characts. 3—57879
Si, dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
Si, ion implanted, ellipsometric spectrum and optical props. 3—28880
Si, nitridation, ellipsometry and AES studies 3—4160
Si, polycrystalline, nucleation and deposition on amorphous Si_3N_4 layer, ellipsometry *(French)* 3—23193
Si solar cell struct., ion beam hydrogenation effects 3—8112
Si, surface struct., changes due to metal ion adsorption, electron diffr. study 3—2937
Si:B, ion implantation damage annealing, etching and ellipsometry study, I^2L gate appl. 3—22927
Si:B(P) wafer, etch-stop mechanism 3—4158
Si:Ga, ion implanted, dopant distrib., elec. activity and damage annealing 3—27970
Si:H, amorphous, film growth, in situ study, rate and refr. index, dielec. const. spectrum *(French)* 3—28224
Si:H amorphous films, anodic oxidation 3—34504
Si:P ion implanted damaged layers, ellipsometric study *(Chinese)* 3—2578
$Si-SiO_2$ interface, comparative study of optical nature of interface layers 3—5835
$Si-SiO_2$ interface analysis using spectroscopic ellipsometry *(French)* 3—28438
SiN_x films, low press. CVD growth, comp. and struct. control, EPR, optical and He backscatt. studies 3—52970
Si_3N_4 film on GaAs, ellipsometry study 3—8896
Si_3N_4 thermal films, LPCVD, characterization by optical methods 3—28914
SiO_2 film, thermal nitridation 3—19435
SiO_2 film on Si, thickness meas. by ellipsometric technique *(Chinese)* 3—20821
SiO_2, plasma enhanced CVD, gate insulator for InSb MOS struct. 3—13917

ellipsometry continued
SiO_2, ultrathin layer on Si, AES and ellipsometry study *(Chinese)* 3−38241
SiO_xN_y films, low press. CVD growth, Rutherford backscatt., AES and optical study 3−52964
Ta_2O_5 anodic oxide films on Ta, thickness meas., spectrophotometric and ellipsometric methods compared 3−52864
Ti, thin oxide film and O_2 chemistorption study by ellipsometry, nuclear reaction anal. and microgravimetry 3−14784
ZnS films, vacuum evaporated, struct. and optical props., ellipsometry study 3−52865

elliptical polarisation *see polarisation*

elongation
see also deformation; thermal expansion
alloy strip, flexible, strength and ductility, influence of electrochem. treatment *(Russian)* 3−53274
bimetallic strip, stability of plastic elongation 3−56453
cellulose diacetate, hydrothermal transition power *(Russian)* 3−51790
compressible materials, plane deform. 3−24315
elastomers as thermal solar collectors, mech. props. evaluation 3−53578
flexible inorganic films and coatings, for high temp. use 3−39264
HDPE/LDPE blends, extensional flow 3−33332
ice, artificial, torsion, deform. effects, shear 3−18369
Kevlar fibre reinforced epoxy composites, transverse tensile props., moisture effect 3−47892
metals, complete tensile diagrams plotting 3−14818
natural rubber, melting of oriented crystalline phases *(Russian)* 3−38034
optical fibre breaking elongation meas. 3−42053
poly-3,3-dimethyl oxetane chains, thermoelastic and dielectric obs., config.-depend. props. 3−13123
1,2-polybutadiene, linear, durability above glass transition point under complex loading *(Russian)* 3−9114
polybutylmethacrylate, viscosity rise in prestationary stage of uniaxial extension *(Russian)* 3−9115
polyethylene foils, orientated, mech. stresses effect on mol. mobility, paramag. probe study *(German)* 3−14636
polyethylene melt, const. force elongational flow 3−27557
polyisoprene, synthetic rubber, melting of oriented crystalline phases *(Russian)* 3−38034
polymer liquids spinning, shear history effects 3−51042
polymer melts, multiaxial elongational flows, linear viscoelastic shear viscosity 3−27556
polymer solns., elongational capillary flow, contraction influence 3−27608
polymers, linear, durability above glass transition point under complex loading *(Russian)* 3−9114
polymers, viscosity rise in prestationary stage of uniaxial extension *(Russian)* 3−9115
polypropylene foils, orientated, mech. stresses effect on mol. mobility, paramag. probe study *(German)* 3−14636
polystyrene, shear bands, reverse shearing 3−24298
polystyrene based mixtures, struct. and props. within phase transition region 3−33138
polyurethane based blends, morphology and mech. props. 3−34436
rubber, accelerated ageing tests in hot air, air change rate effect 3−24266
rubber, accelerated ageing tests in hot air, air change rate effect on different cmpds. 3−24267
rubber, C block filled, degree of dispersion rel. to elec. resist. and matrix phys. props. 3−14814
rubber, unvulcanised cmpds., high-rate start-up behaviour 3−56515
steel, austenitic, Cr-(Ni)-Mn, fatiguq fracture in liq. N_2 3−34474
steel, austenitic, thermomechanical hardening, experiment planning optimisation methods 3−58135
steel, austenitic and ferritic, creep and elongation, low cycle fatigue tests *(German)* 3−4095
steel, austenitic Cr-Ni, hot embrittlement in heat affected zone of welded joints *(German)* 3−53097
steel, austenitic stainless, corrosion resist. and mech. props., influence of Mn:Ni ratio 3−9244
steel, austenitic stainless, H-assisted cracking, types 304L and 316L, grain size and heat treatment effects 3−19396
steel, austenitic stainless, slow crack growth, effect of H conc. 3−14714
steel, C-Mn, controlled rolled plates, direct quenching, improved strength and toughness 3−9079
steel, Cr, quenched, internal friction meas., hardness and tensile props., effect of tempering at 1100°C 3−43912
steel, Cr-Mo-V, cyclic creep under push-pull loading with different mean stresses *(German)* 3−9142
steel, dual phase, containing V, tempering charact. rel. to mech. props. 3−14616
steel, dual phase, deform. and fracture, metallographic study 3−14667
steel, dual-phase, mech. orps. and microstruct., effect of controlled rolling *(Korean)* 3−39179
steel, dynamic strain ageing characts. 3−14619
steel, ferritic-austenitic stainless, H-charged, tensile props. *(Japanese)* 3−29167
steel, loading with unloading, intricate deform. paths, lag principle 3−39223
steel, low alloy, heat treated, fracture toughness, mech. props. correlations 3−34423
steel, low C, sheet, Luder's strain, effect of solutes 3−34398
steel, maraging, ductility characts., struct. sensitivity in age hardening 3−29139
steel, nuclear pressure vessel, tensile props. and fracture mode, combined effects of neutron irrad. and H absorpt. 3−18353
steel, spring, strength and ductility, heat treatment influence 3−29112
steel, stainless, hot vacuum pressed powder, corrosion reistance, mech. props. 3−47802
steel, unalloyed normalised and low alloy heat treated, elongation and stress controlled low cycle fatigue *(German)* 3−4136
steel ferrite-martensite, coarse, deform. and fracture, micromech. concepts 3−43960
steel Mn-Si, high strength, retained austenite and mech. props. *(Korean)* 3−39214
steels, sintered, mech. props., review 3−24326
superalloys, Ni-base and Fe-base, room temp. tensile props., influence of carburisation 3−19388
viscoelastic Z *(German)* 3−56584
Al alloy 7475, fine grained, superplastic deform. effect on service props. 3−58182
Al alloy castings, mech. strength rel. to porosity 3−34377

elongation continued
Al alloy castings, mech. strength rel. to porosity 3−34378
Al alloy castings, mechanical strength rel. to porosity 3−34376
Al, pure ultrafine-grained, Luders deform. 3−24305
Al-Cu-Co, sintered, struct. and mech. props., effect of rapid cooling on crystn. 3−34259
Al-Cu-Li-Mn-Cd, alloy 2020, ductility, influence of grain struct. 3−34397
Al-Li-Cu (2.7, 2.3 wt.%), fracture behaviour and tensile props., effect of grain struct. 3−29182
Al-Mg alloy AMg6, complete tensile diagrams plotting 3−14818
Al-Zn-Mg-Cu, ingot and powder processed, deform. and fracture at elevated temps. 3−53159
Al-Zn-Mg-Cu special purity high-strength alloy for forgings, props. 3−34401
B fibre-organic fibre reinforced plastics, deform., fibre fracture effect 3−34409
B fibres, bare and SiC coated, mech. props. temp. depend. 3−34408
Co and alloys, cold worked, tensile strength, elongation, allotropic transformation effect 3−43919
Cu, wire, second stage drawing texture, mech. props. *(Japanese)* 3−58132
Cu-Al, two-phase materials, strength/ductility-microstruct. relationship 3−43926
Cu-Al (10 wt.%), quenched martensitic alloy, internal friction, tensile props., hardness, heat treatment effect 3−43920
Cu-Al(Ga)(Si)(Sn), binary alloys, rapidly quenched, struct. and props. 3−19381
Cu-Sn-Ni (8, 8 wt.%), prep. by powder metallurgy, rel. between microstruct. and strength 3−58075
$Cu_{57}Zr_{43}$, amorphous, pre-yield microstrain, precision meas. 3−43913
$Cu_{60}Zr_{40}$ metallic glass, relax. under tensile stress, dilatometric meas. 3−53105
Fe, cast, dynamic strain ageing 3−43875
Fe, cast, white, rapidly solidified, superplasticity 3−14665
α-Fe whiskers, stress-strain curves, effect of H charging 3−14651
Fe-P-Mo powder premix, sintering temp. effect on mech. props. 3−39068
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, amorphous, pre-yield microstrain, precision meas. 3−43913
Mg alloy MA18, complete tensile diagrams plotting 3−14818
Pb-Sn (62 wt.%), superplastic eutectic, room temperature ductility 3−39199
SiC whisker reinforced Al composite, hot rolling effect on microstruct. and tensile props. 3−53181
Ti alloys 685 and 5524 S, thermal stability *(French)* 3−47951
Ti alloys AT-3 and AT-6, corrosion resistance and mech. props., prolonged oxidation effect 3−9256
Ti foil, vac. evaporated, influence of MgF_2 and CaF_2 release agents 3−29013
Ti sheet and strip, commercially pure, anisotropic props., processing and heat treatment influence 3−24321
Ti, ultrafine grained, processing and deform. studies 3−24265
Ti-Al-V, powder metallurgical, prod. and mech. props. 3−29035

e.m. waves *see electromagnetic waves*

embrittlement
see also ductile-brittle transition; hydrogen embrittlement; liquid metal embrittlement
grain boundaries, conf., Caen, France (Sept., 1982) 3−44892
grain boundary chem. bonding, impurity embrittlement study 3−46960
grain boundary embrittlement model, effective fracture energy rel. to surface energy 3−29146
irradiated nuclear-pressure vessel steel database 3−11391
metal, classification and coating 3−47983
metallic glasses, inelastic deform. and struct., props. 3−24299
metals, corrosion embrittlement in gaseous medium, influence of mass and heat transfer 3−29218
nuclear reactor pressure vessel materials, neutron embrittlement eval. and prediction 3−55147
rubber-modified thermoplastics, surface embrittlement, impact and tensile tests 3−34514
steel, alloy, high strength, neutron irrad., evaluation of thermal fatigue damage 3−19418
steel, alloy, impurity-induced embrittlement, effects of thermal history and alloying elements 3−4096
steel, alloy, secondary hardening, embrittlement and debrittlement, role of carbide-forming elements *(Russian)* 3−39233
steel, austenitic and ferritic stainless, irrad., high temp. ductility 3−29159
steel, austenitic Cr-Ni, hot embrittlement in heat affected zone of welded joints *(German)* 3−53097
steel, austenitic stainless, Cr-Ni-TiN neutron irrad., microstruct. 3−28001
steel, austenitic stainless, He embrittled, modelling high temp. mech props. 3−19398
steel, Cr, structural, optimisation for improved strength and toughness 3−34462
steel, Cr low alloy, hardened, tempered, radiation embrittlement rel. to struct. 3−43951
steel, Cr-Al, ferritic, heat resistance, strength and embrittlement increase by thermal stress 3−47861
steel, Cr-Mo, grain boundary segregation of P, role of carbides 3−34331
steel, Cr-Mo, temper embrittlement, compositional effects 3−14728
steel, Cr-Mo-V, stress relief cracking 3−39245
steel, Cr-Ni-Si, ferritic-austenitic, heat resistance, strength and embrittlement increase by thermal stress 3−47861
steel, Cu-Cr, weather resist., stress rupture behaviour 3−47961
steel, embrittlement, radiation induced, Charpy impact data evaluation and uncertainty estimates 3−55172
steel, embrittlement in reactor press. vessel by neutron exposure 3−55168
steel, embrittlement surveillance in LWRs 3−55163
steel, ferritic, thermal neutron induced embrittlement in HTR *(French)* 3−55170
steel, grain boundary segregation of P, intergranular embrittlement, alloying element effect 3−58247
steel, high purity 37KhN3 and 37Kh2N4, influence of high temp. thermomechanical treatment on props. *(Russian)* 3−34361
steel, low alloy RPV, radiation embrittlement annealing 3−43862
steel, low-alloy thermally improved, thermal embrittlement tendency 3−19352
steel, low-C martensitic structural, design for high strength and toughness, struct.-prop. relations 3−39162
steel, Mn-V-N, lamellar tearing susceptibility *(Chinese)* 3−53182
steel, Ni-Cr, embrittlement, role of N 3−24346
steel, Ni-Cr, P doped, temper embrittlement diagrams 3−34460

embrittlement continued
steel, Ni-Cr-Mo-V, tempered, Mn effect on P segregation kinetics 3−9067
steel, stainless, Kh20N45M4B, high temperature He embrittlement, bubbles in dislocation network 3−47955
steel, temper brittle, thermodynamics of interactive co-segregation of P and alloying additions 3−14596
steel, temper embrittlement, ductile-brittle transition 3−53171
steel, tempered, intergranular brittleness, influence of segregated transition metals 3−47944
steel, tensile deform., 700-1300°C *(Chinese)* 3−53122
steel, type A302-B 3−43871
structural alloys, radiation effects 3−13289
thermonuclear reactor structural materials, helium induced embrittlement from (n,α) reactions 3−45692
Al-Zn-Mg, ageing embrittlement after stress corrosion treatment *(Japanese)* 3−47986
Fe alloys, austenite, P segregation 3−53066
Fe, thermodynamics of interactive co-segregation of P and alloying additions 3−14596
Ni, α-particle irrad., grain boundary deformation 3−43895
Ni, grain boundary chem. bonding, impurity embrittlement study 3−46960
$Ni_{77}Cr_{16}Fe_7$, S atomic behaviour in grain boundaries, embrittlement *(French)* 3−29175
Pt-W (8 wt.%) alloy wire, high-temp. strain gauges, causes of drifting *(German)* 3−30848
Ti alloys 685 and 5524 S, thermal stability *(French)* 3−47951
$\alpha+\beta$Ti-Al-Mo-Fe-Cr-Mn, hardened, embrittlement and spontaneous cracking during ageing 3−19422
Ti-Al-Zr alloy, creep resist. and thermal stability in air and vac., Si additions influence 3−24322
W, sintered, recrystn. and embrittlement 3−39251

e.m.c. *see electromagnetic compatibility*

emergency power supply
sealed lead-acid battery development for telecommunication standby power 3−39463
sealed-for-life lead-acid battery for telephone power equipment rack 3−34691

e.m.f. *see electric potential*

emission nebulae *see nebulae*

emission spectra *see spectra*

emissivity
see also brightness
absorber-convertors, high-temperature, effects of interference on spectral selectivity 3−29452
absorbing material spectral emission coeffs. determ., polarimetric method 3−25926
Antarctic sea ice, microwave emissivity and brightness rel. to Nimbus 5 ESMR and Landsat imagery 3−15462
Arctic sea ice, microwave brightness and emissivity rel. to distrib. at end of summer (1973 to 1976) 3−15461
blackbody cavities emissivities, calculation methods *(Chinese)* 3−42110
cryogenic materials, thermal radiative properties 3−8234
film IR spectral emittance meas. for optical characts. determ. 3−14366
gas-soot mixtures, gray gas weighting, coeffs. determ. method 3−21994
glass, molten, near IR absorpt. coeff., emissivity spectroscopy 3−3662
grey gas model, weighted sum coeff. evaluation 3−37610
heat exchangers, radiation heat transfer effect on performance, expt. results of one flow channel 3−27510
heat shield materials reflectance under radiant-convective heating 3−37324
ice, optical constants and thermal radiative props. 3−8788
industrial oxide systems, radiative properties, effects of chemical and mineralogical composition 3−51831
IR source, standard, blackbody model with high effective emissivity 3−46268
IR thermometric meas. of true surface temp. via brightness method *(Chinese)* 3−16360
metal oxide layer, spectral emissivity *(Japanese)* 3−42822
metal oxide transparent conducting coatings, as heat mirrors on plastic sheet 3−17595
NGC 6720, NGC 7662, planetary nebulae, volume emissivity maps from two-dimensional photometry 3−54482
radiative heat transfer between fluidised bed and a surface 3−51099
semitransparent samples, supported, IR emissivity correl. with spectral parameters 3−18484
solar control and low emissivity coatings on architectural glass 3−17598
Space Shuttle external tank icing, multispectral radiation detection of small changes in target emissivity 3−30146
steel, stainless, film, thermal emittance and elec. resist. meas. 3−8593
transition metals, thermal emittance, calc. using optical consts. 3−37336
CoO films supported by Al substrate, emissivity measurement and comparison with theoretical results 3−34719
Cr_2O_3-Cr, black chrome, electrodeposition on Sn, optical props., solar absorber appls. *(Russian)* 3−9003
CuO anodised films, IR spectral absorptance and emittance, solar absorber appl. 3−53581
$Gd_3Ga_5O_{12}$, thermal and optical props. 3−28117
H_2O vapour, total emissivity, dimerisation effect on IR absorpt. 3−55934
HfN film based transparent heat mirror, transmittance and reflectance 3−17599
$In_{2-x}Sn_xO_{3-y}$ coatings to prevent spacecraft charging 3−39999
Mo-MoO_2, solar absorptance, surface texture influence 3−4409
Ni based selective surface, Maxorb, high solar absorptivity with emissivity 3−19607
Ni film, thermal emittance and elec. resist. meas. 3−8593
NiS films supported by Al substrate, emissivity measurement and comparison with theoretical results 3−34719
TiI_4 and technical grade Ti, emissivity meas. in temp. interval 1100-1900K 3−2855
TiN, emissivity and electrical cond. meas. at high temp. 3−13495
TiN film based transparent heat mirror, transmittance and reflectance 3−17599
ZrN film based transparent heat mirror, transmittance and reflectance 3−17599

emitrons *see television camera tubes*

emitter-coupled logic
see also logic circuits
fast four-input coincidence unit using MECL ICs for scintillation counters 3−50231
FASTBUS active segment extender and high density prototyping (kluge) card 3−50268
segment ancillary logic developments for FASTBUS 3−50271

emitter followers
low-noise pre-amplifiers for gas proportional counters, emitter followers and source followers 3−45785

EMP *see electromagnetic compatibility; electromagnetic interference; radiofrequency interference*

employees *see personnel*

employment
see also personnel; salaries and wages
women meteorologists employed in US 3−25745

emulsions
see also nuclear track emulsions; photographic emulsions
alloys, unidirectional solidification, space expts. at Grenoble, review 3−4027
coalescence of coarsely dispersed concentrated emulsions with turbulent agitation 3−7555
concentrated emulsions, turbulent pipe flow with nonequilib. disperse phase 3−27605
cross-linked polymeric interface stabilisation, rheological study 3−58451
ether in glycerin emulsion, heat transfer coeff. with high superheating of its disperse phase 3−12749
internal structure of emulsion particles, obs. by cryo-scanning electron microscope 3−48098
liquid-liquid phase transition, percolation theory 3−38044
micro emulsions, Rayleigh ratios, hard-sphere model, mean spherical approx. 3−13058
microemulsions, crit. behaviour and percolation phenomena, US absorpt. study 3−18396
microemulsions, diffuse phase inversion, percolation, bicontinuous structs. 3−58452
oil-H_2O emulsion, light scatt. parameters meas. using a receiver with arbitrary aperture 3−6885
oil-in-water emulsion, depolarisation thermocurrents meas. at subzero temp. 3−23866
sodium dodecylsulphate emulsion, birefr., interface defects and curvature, spin-labelling technique 3−58450
spherical microemulsions, thermal fluctuations of size and shape 3−53447
stability, effects of bulk and interfacial properties on film mobility and drainage rate 3−51203
Winsor IV phases, elec. props., rel. to phase diagram, chem. struct. of alcohol cosurfacant influence 3−23448
H_2O-oil microemulsions, phase diagrams interpretation 3−39409

emulsions (nuclear track) *see nuclear track emulsions*

emulsoids *see emulsions*

encapsulation
fibre coupled multimode laser, encapsulated, short coherence length, mode selection, reflection suppression 3−37074
high-voltage plasma discharge, bubble-free encapsulation of magnetic probes 3−354
GaAs, low dislocation density single crysts. substrates, liq. encapsulated Czochralski growth 3−28977
GaAs MBE layer, capless and Si_3N_4 encapsulated annealing, photoluminescence and DLTS study 3−8441
GaAs:Se, defect struct. after Se implantation through Si_3N_4 encapsulant layer 3−18322
InP:Si, ion implanted, and semi-insulating transport props. and defects, encapsulation effects 3−28383
Si films, zone-melting recrystn. with moveable-strip-heater oven 3−34225
Si-SiO_2, laser recrystallisation of polycrystn. Si film with encapsulating film 3−33297

encoding
see also codes; decoding
absorption cycle heat pump, solar powered, temporal hierarchical approach to operational and design optimisation problems 3−9462
acoustic annular transducer with a nonelectronically achieved depth of focus ranging from 20 mm to 140 mm 3−50893
acoustic microscope, subsurface defect characterization, fringe pattern recognition and contrast enhancement by digital colour encoding 3−46416
acoustic multimode phased array, Golay codes 3−50849
color image subtraction with extended incoherent sources 3−1577
complementary and barker codes for radar sounding of middle atmosphere, pulse compression technique 3−30100
contour-texture approach to picture coding 3−6911
diffusing object, three-dimens., depth level contour pseudocolour encoding method 3−25847
displacement transducer, pulse-time conversion 3−40588
fuzzy coarse coding, A/D converters upgrading for pulse height anal. 3−41452
graduated circle, error determ. by digital method 3−40555
image coding using a predictor controlled by image content 3−6910
image coding using vector quantization 3−6909
image transmission, two-dimens. through single optical fibre by wavelength-time encoding 3−32497
impulse frequency modulation in neural encoding model 3−15060
interference coatings, optical filtering and spatial freq. coding 3−17611
neutron diffractometer, Disk, encoder design and operation 3−13043
optical encoding method, illuminated dot array, fibre-optic bundle *(Russian)* 3−41768
spatial frequency colour encoding by Fresnel images in proximity of twin-gratings 3−41777
spatial frequency information optical pseudocolour encoding 3−6904
speckle interferograms, misfocused, white-light colour encoding 3−49437
speech, continuous, freq. distributed band-limited noise, threshold of degradation 3−17733
thermometer error correction *(Russian)* 3−25877
Walsh-Hadamard transformed picture transmission 3−6913
white-light stereoprojection with modulated speckle encoding *(Chinese)* 3−41771
$LiNbO_3$:Ti waveguide electro-optic polarisation modulator, high-speed 3−1760

end-fire antennas *see antenna arrays*
ENDOR
β-alumina, stoichiometric, X-irrad., ENDOR and EPR of defects 3−34009
chromans, tricyclic, ESR and ENDOR spectrosc. of cation radicals 3−1396
coupled electron-proton spin systems, spin magnetisations, appl. to ESR, ENDOR and ELDOR 3−23782
DOUBLE ENDOR, appl. to powder samples 3−54754
DOUBLE ENDOR with linearly and circularly polarised RF field 3−16384
ferromagnetic film, EM wave absorpt. by coupled electron-nuclear excitations with inhomogeneous FMR line broadening 3−3541
free radical solids, radiation products dipolar hyperfine couplings in radiation effects, ENDOR study 3−14162
methyl radicals, paramag., ESR and ENDOR in solid Ar matrix 3−11841
naphthalene, photoexcited triplets in solid soln. ENDOR study 3−17316
nuclear echo phase in the region of coincidence of nuclear magnetic and ferromagnetic resonances *(Russian)* 3−23838
nuclei, distant, ENDOR optical detect. theory 3−38723
organic compounds, multiple mag. reson. in ground and excited states 3−45989
polyacetylene, ENDOR study of ^{13}C and ^{1}H hyperfine tensors 3−47573
polyacetylene films, π electron character, ESR and ENDOR studies 3−57816
potassium hydrogen oxydiacetate, γ-irrad., ENDOR study of free radicals 3−47572
quartz, electron irrad., ESR of E_1' centres 3−52626
tryptamine hydrochloride, irrad. effects, H-addition radicals, ENDOR study 3−57815
vanadium dibenzene, paramag., ESR and ENDOR in solid Ar matrix 3−11841
zinc tetraphenylporphyrin, photoexcited triplets in solid soln. ENDOR study 3−17316
CaF_2:Tm^{2+}, ligand hyperfine interaction, optical detection of ENDOR 3−52670
Cu complex, bis(salicylaldoximato)copper (II), double-quantum transitions in ENDOR induced by RF fields 3−50441
^{3}He-^{4}He liq. mixture, negative ions, ESR relax. time and g-factor studies 3−51886
K_2MgF_4:Cr^{3+}, EPR and ^{19}F ENDOR of Cr^{3+} impurity centres 3−14119
K_2SO_4:CrO_4^{2-}, electronic struct. of CrO_4^{3-}, EPR and ENDOR study 3−18976
MgO:Ni^{2+}, local-field-induced multiple-pulse free-induction decay 3−57817
p-Si:Al, negatively charged vacancy, hyperfine interactions and ENDOR meas. 3−43459
VO_2^{2+}-imidazole complexes, frozen aq. soln., ENDOR investig. 3−21795
energies, molecular dissociation *see molecular dissociation energies*
energy, binding *see binding energy*
energy, lattice *see lattice energy*
energy, surface *see surface energy*
energy bands *see band structure*
energy bands, electron *see band structure*
energy control *see power control*
energy conversion, direct *see direct energy conversion*
energy dispersive X-ray analysis *see X-ray chemical analysis*
energy gap
see also superconducting energy gap
alkali halides, band gap and dielec. const., plasma oscill. theory calc. 3−38304
amorphous semiconductor, photovoltaic band gap for solar cells 3−13712
p-benzoquinone(-d_4) in naphthalene and toluquinone crysts., vibronic struct. and phosphoresc. spectra 3−36806
diamond (111), EELS study in characteristic loss region 3−38974
disordered binary alloys with off-diagonal disorder, band gap, interband repulsion effects 3−18606
disordered systems with strong short range order and off-diagonal randomness, cluster theory of electrons 3−3122
glassy semiconductors, model of electronic processes, correlation with structural features 3−57265
III-V semiconductors, antisite and vacancy electron states, local density of states 3−43096
IV-VI ferroelec. semiconductors, band gap and energy spectra, temp. depend. 3−18617
laser field induced distortion in solids 3−47250
mixed semiconductors, gap struct. *(Chinese)* 3−33631
n-type crystals, energy band parameters, heavy doping effects 3−13701
one-dimensional disordered systems, resist. distrib. transparency coeff. 3−18692
p-n junction, energy band gap and diffusion pot., laboratory expt. 3−25716
poly-(p-phenylene) chains, electronic struct., ab initio HF study 3−23239
polyacetylene, high press. optical absorption spectra, expt. and tight binding calc. 3−3763
polyacetylene, photogenerated gap states, transient optical absorpt. 3−3760
polyacetylene, semicond., quasiparticle energy band struct., correlation effects on band gap 3−57264
PTFE, photoconduction meas. for VUV light 3−23422
quasi-one-dimensional systems, kink form., continuum approx. 3−13699
semiconducting, optical absorpt. edge 3−24039
semiconductor alloys, clustering and second-neighbour interactions, tight binding calc., virtual crystal approx. 3−23261
semiconductor injection laser threshold characts., Auger recombination effect 3−17499
semiconductor or semimetal, magnetic field-induced impurity band, energy gap before first Landau band 3−13766
semiconductor spin superlattice with tunable minigap 3−3303
semiconductor thin film, size-limited intrinsic transport, quantum freeze out effect 3−47437
semiconductors, binary, forbidden bandwidths rel. to covalent bond parameters *(Chinese)* 3−43010
semiconductors, energy gap-refractive index interrelation 3−14238
semiconductors, exchange-correlation energy, plasmon-pole model 3−47280
semiconductors, heavily doped, band gap narrowing, extended Thomas-Fermi model 3−23240
energy gap continued
semiconductors of inhomogeneous composition, forces active on free carriers, quasi-elec. field study 3−43000
semiconductors with doping superlattices, electronic subband struct. and effective energy gap 3−57401
semimagnetic semiconductors, review 3−23642
spinels, AB_2X_4 (X=0,S,Se,Te), electronic struct. and dielec. props., crystallographic concepts 3−18281
superconductor, anisotropic, with approx. neutral electron-electron interaction, BCS-type theory 3−3366
superexchange, correlation with superconductivity 3−3365
TCNQ salt, $(NMP)_x(Phen)_{1-x}$TCNQ, solitons, mag., elec., and X-ray scatt. meas. 3−3168
TCNQ salt, TSeF-TCNQ, electron tunnelling meas., Peierls gap opening 3−52119
$Al_xGa_{1-x}As$, luminescence and minority carrier transport 3−28889
$Al_xGa_{1-x}As$ variable-gap epitaxial films, exciton reflection and electroreflection spectra 3−14372
$(Al_{0.5}Ga_{0.5})_{0.48}In_{0.52}As$, MBE growth on InP substrate, Schottky diode and MESFET fabrication 3−8985
$(Al_xGa_{1-x})_yIn_{1-y}As$, lattice matched to InP, MBE growth and elec. and optical props. 3−24132
Al_2TiO_5, pure and transition metal doped, luminesc. and optical absorption, rel. to solar energy appl. 3−52816
As-Te-Cd thin films, struct. and optical energy gap 3−34058
As_2S_3 glass, atomic tunnelling spectrum, optically induced gap 3−14445
$As_{40}S_{60}$, thin films, sputtered, optical energy gap and refr. index meas. 3−8979
$As_2S_3(Se_3)$, electric-field-modulated spectra 3−3686
$BaCl_2$, X-ray emission and absorption spectra, rel. to bond ionicity 3−58006
BeF_2, crystalline, electronic struct., ab initio cluster calcs. 3−43019
Bi, valence band study 3−28268
$Bi_{1-x}Sb_x$, valence band study 3−28268
C:H amorphous films, plasma deposition and optical props. 3−38251
a-C:H films, elec. cond., optical absorpt., dopant gas effects on props. 3−18705
CaF_2, X-ray absorpt. spectra and electronic struct. 3−3866
$CdCr_2Se_4$, mag. semicond., photoluminescence spectra under laser excitation 3−43619
CdF_2, band struct., photoemission spectra study 3−38997
$Cd_{0.2}Hg_{0.8}Te$, photoconductivity, acceptor impurity band 3−8533
$Cd_xHg_{1-x}Te$, surface composition fluctuation effects on optical props. 3−28823
CdO-ZnO-P_2O_5 glasses, photocond. band gap, comp. depend. 3−28382
CdS (Se)(Te), colouring mechanism in glasses, IR, visible and UV transmission spectra 3−34122
CdS, high pressure optical absorpt., resistivity and phase transformation 3−57028
CdS, ideal vacancy electronic states and band struct., Green's function calc. 3−43099
CdS_xSe_{1-x} electrodes, photoluminescence and electroluminescence, appl. to photoelectrochem. cells 3−34153
$CdSe_{0.65}Te_{0.35}$, chemical shift, XPS study 3−28964
$CdSnAs_2$, n- and p-type, carrier lifetime, optical energy gap, photocond. study 3−18743
$CeCl_3$, X-ray emission and absorption spectra, rel. to bond ionicity 3−58006
$CePd_3$, electron tunnelling spectra 3−3292
Cr_2S_3, photoconductivity and optical absorption spectra 3−38427
CsCl, X-ray emission and absorption spectra, rel. to bond ionicity 3−58006
Cu, conduction band gap at L point, photoemission and electron refl. meas. 3−8404
$Cu_{1-x}Ag_xGaSe_2$, energy gap, lattice consts., and transmission spectra *(Korean)* 3−13721
$CuGa_xIn_{1-x}Se_2$ solid solns., optical absorpt. spectra in fundamental absorpt. band edge region 3−19153
EuV_2S_4 thin film, prep. and elec. props. 3−14493
FeS_2, electronic structure of 3d pyrite- and marcasite-type sulphides 3−18611
$Ga_{1-x}Al_xAs$ epitaxial films, band gap energy, photoacoustic method 3−51992
$Ga_{1-x}Al_xAs$ variable gap films, photoelectron spectra, electron diffusion length 3−14440
$Ga_{1-x}Al_xP$, homogeneous, temp. difference LPE growth and photo- and electro-luminesc. meas. 3−39051
$Ga_{1-x}Al_xP$/GaP p-n structures, cathodoluminescence from p and n regions 3−8890
GaAs, (110) bound and resonant surface states 3−28406
GaAs, coupled LO phonon-plasmon modes, anisotropic Raman excitation 3−43054
GaAs electrodes, room temp. chloroaluminate molten salt interfaces, Mott-Schottky analyses 3−52243
GaAs, heavily doped, photoluminescence edge calc. 3−38860
$Ga_{1-x-y}In_xAl_yAs$, LPE growth on GaAs and near IR optical props. 3−3973
$Ga_xIn_{1-x}As$, n- and p-type, on InP substrate, optical, crystallographic, and transport props. 3−43597
$Ga_xIn_{1-x}As_yP_{1-y}$ LPE layer, electron and hole mobilities and scatt. 3−18798
GaP, electron or neutron irrad., band edges modification by defects, optical absorpt. and photocond. study 3−23975
GaP(Sb), (110) bound and resonant surface states 3−28406
n-Ge, band gap, narrowing, effects of nonlinear impurity scatt. 3−47263
Ge, band gap meas. technique using p-n diode 3−35805
Ge-GaAs system, metastable continuous solid solns., prep. and props. 3−8369
$Ge_{38}As_8I_8$, clathrate semicond., prep., struct. and elec. props. 3−13814
$Ge_{22.5}As_{10}Se_{67.5}$, thin films, sputtered, optical energy gap and refr. index meas. 3−8979
$Ge_{10}As_{40}Se_{25}S_{25}$, thin films, sputtered, optical energy gap and refr. index meas. 3−8979
$Ge_{1-x}S_x$ noncrystalline system, average energy gap, compositional depend. 3−52753
$Ge_{25}Se_{75}$, thin films, sputtered, optical energy gap and refr. index meas. 3−8979
$Ge_{32}Se_{24+x}Te_{40-x}As$ (x=0, 8, 16, 24, 32) glasses, optical and elec. gaps, cond., glass transition temp., DSC study 3−34056
$Hg_{1-x}Cd_xTe$, density of states, virtual cryst. approx. breakdown, UPS and CPA study 3−8389

energy gap continued
  $Hg_{1-x}Cd_xTe$, energy gap vs. comp. and temp. 3–13719
  HgSe, transport props. under press. 3–18730
  $Hg_{1-x}Te$, electronic struct., CPA and tight-binding calc. 3–43016
  $InAs_{1-x}P_x$, energy spectrum, tunnel spectroscopy study in mag. field 3–13708
  InGaAs epitaxially grown layers, Sn-doping effects on some properties 3–51634
  InGaAsP quaternary alloys, analytical model for gain spectra 3–22059
  $In_{1-x}Ga_xAs_yP_{1-y}$, material parameters derivation from linear interpolation scheme 3–33632
  InP, heavily doped, photoluminescence edge calc. 3–38860
  InP under high press., pseudopotential form factors 3–43012
  InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3–18721
  $InPO_4$, band gap, UPS and EELS studies 3–57271
  InSe crystals, elec. and optical props. *(Korean)* 3–33722
  InSe, magneto-optical props. near band gap, wavelength modulation spectroscopy study 3–28847
  In_2Te_3-Sb_2Te_3, elec. and photoelectric props. 3–28358
  InTe(Se) films, optical absorpt. coeff. meas. 3–43652
  $LaCl_3$, X-ray emission and absorption spectra, rel. to bond ionicity 3–58006
  LaH_x, self-consistent electronic struct. calcs. 3–23264
  Li_2O-GeO_2 glasses, electrical conductivity and optical absorption meas. 3–23384
  $MO_xW_{1-x}Se_2$ single cryst. solid solns., reflectivity, optical consts., optical energy gap meas. 3–14237
  Mg_2Si-Mg_2Ge-Mg_2Sn alloy for thermoelectric conversion devices 3–14979
  $Mn_xCd_{1-x}Se$, electroreflectance spectra, 1.2 to 2.7 eV 3–57887
  MnO, short range correlation effects, energy gap 3–8409
  Na_2O-GeO_2 glasses, electrical conductivity and optical absorption meas. 3–23384
  $NiBr_2(Cl_2)$, fundamental refl. and electronic struct. 3–43562
  $Pb_{1-x}Ge_xTe$ narrow band-gap ferroelec. semicond., absorption edge near phase transition 3–34061
  PbS (Se)(Te), colouring mechanism in glasses, IR, visible and UV transmission spectra 3–34122
  $Pb_{1-x}Sn_xTe$ photosensitive films, phase composition, struct. and O_2 adsorption effects 3–52193
  $Pb_{1-x}Sn_xTe$:Cd single cryst., band gap, rel. to electrophysical props. 3–28267
  $Pb_xSn_{1-x}Te$, ^{125}Te Mossbauer parameters and phonon spectrum 3–38737
  Pd-Si:H magnetron sputtered Schottky barrier solar cell 3–8586
  PdPSe, elec., mag., photoelec., and optical props. 3–18701
  $PrVS_3$ thin film, prep. and elec. props. 3–14493
  Pt-Si:H magnetron sputtered Schottky barrier solar cell 3–8586
  $PtSb_2$, narrow gap semicond., elec. cond., Hall and Seebeck coeffs. 3–52144
  $Sb_{2-x}Bi_xTe_3$:Se, elec. cond. and forbidden-band width 3–3186
  SbSI, single crystal, elec. and optical props. *(Korean)* 3–3653
  Se amorphous films, optical properties in visible range *(Korean)* 3–57986
  Se amorphous thick film, optical gap, heat treatment effects 3–52758
  Se, electronic structure, cluster approach *(Russian)* 3–57263
  Se:Te, amorphous, density of gap states 3–28254
  Si amorphous films, microwave plasma CVD system and optical gap meas. 3–52961
  Si amorphous pin solar cells, photovoltaic props. 3–53535
  n-Si, band gap, narrowing, effects of nonlinear impurity scatt. 3–47263
  Si, band gap meas. technique using p-n diode 3–35805
  a-Si films, electrical and optical props., influence of H_2 gas during RF sputtering 3–14371
  n-Si, heavily doped, band-gap shrinkage, luminesc., IR absorpt. and bipolar transistor data 3–38859
  n-Si, impure, elec. and optical energy gap calcs. 3–43009
  Si, irradiated, defects determining Fermi level stabilisation 3–33674
  Si solar cells, n^+-p-p^+ structure, open circuit voltages across junctions under high illumination levels 3–58502
  Si solar cells with highly-doped substrates, recombination mechanisms 3–39489
  Si:B films prep. by plasma decomp. of SiH_4, elec. props. 3–58054
  Si:H, amorphous, dual-beam photocond. modulation spectroscopy study 3–18739
  Si:H, amorphous, photocond., reversible photoinduced changes at low temps. 3–13854
  Si:H, amorphous, symm. relax. of vacancy 3–22888
  Si:H, amorphous CVD film, electronic and optical props. meas. 3–29014
  a-Si:H, DC glow discharge produced, pseudogap state density by field effect meas. *(Korean)* 3–13696
  Si:H, P amorphous film, transport props. and donor levels 3–23379
  Si:H amorphous film, elec. and struct. props., capacitor photo-EMF spectra study 3–8535
  Si:H amorphous films, ionized cluster beam deposition and optical gap meas. 3–52977
  a-Si:H films, disorder characts., optical transmission and photocond. study 3–38932
  a-Si:H films, thickness depend. of elec. and optical props. and ESR 3–3199
  a-Si:H films for photovoltaic appls., optical props. rel. to deposition conditions 3–57990
  a-Si:H-SiO_2 interface, gap state density and interface states 3–52214
  Si:N, amorphous CVD film, optical and electrical props. meas. 3–8484
  Si:S(Zn)(H), impurity electronic struct. calcs. 3–23322
  Si:Se amorphous film, room-temp. resistivity and optical gap meas. 3–52129
  Si:Se amorphous films, optical absorption coeff. and optical gap 3–34158
  Si/$Mg_{(1-x)}SiP_{2(1-x)}$ heterojunctions, prep. and elec. props. 3–38473
  SiC:H, amorphous RF sputtered films, struct. and optical and elec. props. study 3–3711
  SmB_6, electron tunnelling spectra 3–3292
  SmB_6, transport and US props., NMR, amorphous Wigner crystn. model 3–52150
  SmS, electron tunnelling spectra 3–3292
  SnI_2 film, optical consts. meas. at fundamental absorpt. edge, forbidden gap width 3–3846
  $SrS_{1-x}Se_x$, exciton reflection spectra, amalgamation-type behaviour 3–8849
  TiO_2:Nb, electronic deep levels, DLTS study 3–43075
  $Ti_{1+x}S_2$, angle-resolved photoemission and transport props., stoichiometry effects 3–39004

energy gap continued
  TlSe, fundamental absorption edge, hydrostatic press. depend. 3–19099
  Tl_4SnS_3 ($Tl_2Sn_2S_3$), elec. cond. and optical absorpt. meas. *(French)* 3–52151
  $Tm_{1-x}Eu_xSe$, intermediate valence cpd., elec. resist., vol. change, compressibility, energy gap meas. 3–52080
  TmSe, electron tunnelling spectra 3–3292
  TmSe, intermediate valence cpd., elastic consts., energy gap meas. 3–52080
  $TmSe_{1-x}Te_x$, intermediate valence cpd., elastic consts., energy gap meas. 3–52080
  YbB_{12}, valence fluctuating system, mag. and elec. meas. 3–52149
  $YbGa_2Se_4$ single cryst., injection and thermodepolarisation currents 3–43187
  P-$ZnGeAs_2$, H^+ irrad., elec. resist. and Fermi level 3–43173
  $Zn_{1-x}Mg_xS$ ($0 \leq x \leq 0.31$), energy band struct., exciton refl. spectra 3–3057
  ZnS_2, electronic structure of 3d pyrite-and marcasite-type sulphides 3–18611
  $ZnTe_{1-2x}S_xSe_x$, energy gap variation with composition, photolum. spectra 3–52845
  ZrO_2, elec. struct., phase stability, DV-Xα cluster method 3–52028

energy gap, superconducting *see superconducting energy gap*

energy level crossing
  see also Hanle effect
  atoms, highly ionised, electronic struct. and emission spectra, theory 3–41525
  butadiene, avoided crossing of mol. excited states, photochem. 3–55857
  electron-lattice relax., localised electron and tunnelling exciton selftrapping 3–57046
  isocyanamide, rot.-inversion spectrum in millimeter wave region 3–6614
  K- M M Auger-intensity peaks from double-hole energy-level crossings 3–45913
  methyltrifluorosilane, avoided-crossing mol. beam spectroscopy 3–17343
  pyrene, quenching by metal ions, intersystem-crossing rate const. 3–6704
  Rydbergisation and avoided crossing 3–1273
  Schiff base, unprotonated, avoided crossing of mol. excited states, photochem. 3–55857
  theory of level crossing *(Russian)* 3–17249
  three-level system subjected to laser radiation field with smoothly varying freq., nonadiabatic transitions 3–36975
  He^+, electric field induced anticrossing signals, Stark effect mass 3–1303
  He^+, fine struct. interval anticrossing meas. 3–1315
  He^++He, atomic excitation, level-crossing meas. 3–1468
  ^{3}He I, nd ^{1}D states HFS study 3–21938
  ^{4}He motional Stark effect induced anticrossings, zero-field level separations 3–50349
  NH, bond rupture surface in NH_3, Rydbergisation and avoided crossing 3–1273

energy level transitions, atomic *see atomic spectra*

energy level transitions, molecular *see molecular spectra*

energy level transitions, nuclear *see nuclear energy level transitions*

energy levels *see energy states*

energy levels, atomic *see atomic structure*

energy levels, molecular *see molecular energy levels*

energy levels, nuclear *see nuclear energy levels*

energy levels in solids and liquids *see electron energy states (condensed matter)*

energy loss of particles
  see also channelling; electron energy loss spectra; radiation effects
  air, electron beam energy branching, appl. to gas lasers *(French)* 3–22567
  ARGUS drift chamber dE/dx meas. 3–50248
  blocking calculations by diffusion model, thermal effects 3–42688
  Bragg curve detector, heavy ion identification using ionisation chamber 3–26589
  charged particle ΔE-E telescope with large solid angle 3–26570
  charged particle slowing down in JET, meas. using neutron yield meas. 3–12819
  charged particle stopping powers, rel. to X-ray CT numbers, radiotherapy treatment planning appl. 3–34965
  collective effect in energy deposition by beams of relativistic charged particles 3–11629
  collision cascades in alloys and compounds *(Russian)* 3–42689
  collision stopping power of elements and compounds for electrons and positrons 3–44907
  composition depth profile due to multidirectional ion bombardment 3–21533
  concrete, biological shield for fusion reactor neutron transport anal. 3–11533
  crystals, natural undulators, particle radiation charcts. 3–32283
  damage energy calc., use of thresholds 3–18355
  damped heavy-ion reactions, simultaneous mass and charge data anal. 3–36630
  dense fusion plasma, fusion product slowing down, nucl. elastic scatt. effect 3–51329
  diamond, proton and α-particle stopping power calcs. 3–37976
  drift chamber dE/dx measurement with fine sampling 3–50251
  electron beam self-focusing in gases and their ionisation 3–26546
  electron density determ. by δ-electron yield 3–33324
  electron energy deposition and yields in water in liq. and vapour phases 3–18351
  electron energy deposition in thick media, calc. method 3–18350
  electron range as a function of energy and atomic number 3–22955
  electron slowing down in tissue equivalent material, statistical modelling 3–26501
  electronic stopping of ions in solids, universal eqn. 3–13293
  electronic stopping powers, shell corrections, orbital mean excitation energies calcs. 3–26635
  electronic subsystem excitation during polarisation relax. with spatial distrib. of dielect. permeability 3–52711
  electrons, stopping power calc. procedure 3–45703
  K-electrons stopping power at extreme relativistic energies 3–33323
  elements, protons subshell stopping power calc. using oscillator strength formulation of Born approx. 3–6783
  eletron accelerator diode, large area, high current, electron beam uniformity 3–45739
  energy deposition as function of target material depth 3–11630
  fast particle energy distribution, elastic collision processes 3–22953

energy loss of particles continued
  fission fragments counting and energy degradation in air, spark counter appl. 3—55751
  heavy ion beam slowing down in ionized metal target, inertial fusion appl. 3—11493
  heavy ion energy loss meas. using time-of-flight spectrometer 3—26551
  high energy channelled particles, positive and negative, energy losses 3—33322
  inert gas atoms+H_2, energy loss and scatt. angle calc. for medium energy collisions 3—6761
  inert gases, positron annihilation in presence of elec. field 3—46068
  ion beams, $^4He^+$, $^{12}C^+$, $^{16}O^+$, projected range distributions, low-intermediate-high energy, Al target 3—51676
  ion range distribs., comparison of theoretical evaluations 3—41462
  ion range statistics by a Fourier series, implanted impurity distribution prediction 3—51650
  ion slowing-down by monoenergetic electrons, nonequilibrium plasma, stopping-power formula 3—12817
  ionisation loss of charged particles, density effect 3—28018
  ions, heavy, range and energy loss rates, anomalous props. 3—36637
  JADE, particle identification by dE/dx measurement 3—50247
  low energy individual cascades, spatial distrib. depend. on displacement model 3—2635
  magnetic monopole energy loss in matter 3—45793
  magnetic monopoles, slow, energy loss calc. in metal 3—17183
  magnetic monopoles, slow, stopping power calc. 3—17182
  magnetically confined fusion plasma, α-particle scatt. losses during slowing down 3—11479
  material stopping power, empirical formulae for accelerated ions 3—13300
  metal, slow ion stopping power, exchange-correlation approx. 3—51678
  metals, fast H^+ energy loss and straggling, nuclear resonant reaction study 3—51680
  metals, stopping power, valence bond effects on mean excitation energies 3—22951
  Monte Carlo electron transport models using continuous slowing down approx. 3—26606
  multi-anode focal plane detector, technique for removing geometrical resolution effects 3—41423
  multicomponent materials, proton retarding power, Bragg-Kleeman rule verification 3—22954
  muons, energy loss calcs. in inelastic scatt. 3—50245
  neutron attenuation length in concrete shielding *(Chinese)* 3—31467
  nucleon, α-particles, stopping power of Ni, Ag, Au and Pb 3—57006
  partial cross-section calcs. for energy loss spectroscopy 3—6536
  particle bunch traversing waveguide with slightly perturbed wall, total energy loss *(French)* 3—41371
  particle identification and tracking in central detectors 3—50252
  particle identification by dE/dx sampling in neon 3—50250
  particle stopping in medium with internal motion, kinetic theory 3—13298
  PEP TPC, energy loss meas. 3—50249
  pions and electrons energy loss meas. at 4 GeV/c in jet chamber 3—26600
  planar channelling, diffusion eqn. approach 3—47009
  plastic ball spectrometer, electronic 4π detector with particle identification 3—26547
  polyparaxylylene, on Au, electron mean free path, kinetic energy depend. 3—8508
  polypyromellithimide, stopping power, energy depend. for 0.6 to 1.2 MeV proton energies 3—1179
  positron annihilation technique for thickness and density meas. by gamma-ray absorption 3—49314
  positron stopping power and CSDA range difference, empirical relations 3—6509
  pressurised MWPC, CLEO dE/dx system, design and performance 3—50197
  proportional dE/dx counter, in 8-telescope system, for proton detection 3—50131
  proton and α-particle stopping power, mean excitation energies and Barkas effect parameters 3—41456
  proton beam energy determ. by BN nucl. activation method 3—45737
  proton stopping powers in H_2, He, N_2, O_2, Ne, Ar, Kr and Xe 3—41455
  range distribution function for energetic ions in matter 3—13299
  relativistic heavy ion beam anal. spectrometer for biology and nucl. physics expts. 3—44355
  relativistic particle identification by dE/dx, ISIS expts. 3—50246
  scintillation counter, NE 102A plastic type, particle identification and coincidence meas. 3—50234
  semiconductors, proton and α-particle stopping power calcs. 3—37976
  solids, electron scatt., screening parameter for Thomas-Fermi pot. 3—2633
  stopping power for electrons below 10 keV *(Japanese)* 3—1181
  stopping power for protons and α particles *(Japanese)* 3—1182
  stopping ratios for 30-330 keV ions with $1 \leq Z_1 \leq 5$ 3—22950
  thin absorber, particle range straggling *(French)* 3—37973
  thin film scintillation detectors, light collection systems 3—45761
  thin targets, electron energy deposition 3—13287
  total nuclear energy loss distrib. at low energies, analytical soln. 3—13295
  β-emitting point source depth determ. from bremsstrahlung meas. 3—31885
  γ, mass attenuation and energy-absorption coeffs., 1 keV to 20 MeV 3—44908
  Ag film on Cu, Ar^+ and N^+ implanted, temp. evolution, model calcs., energy loss 3—57010
  Ag surface, scatt. of He^+ and Ne^+ ions, inelastic energy loss and departures from binary scatt. model 3—52887
  Al, Compton profile, stopping power, X-ray scatt., HF wavefunctions 3—6581
  Al, electron stopping power, 11-127 keV 3—13297
  Al, electronic stopping powers, shell corrections calcs. 3—26635
  Al, energy loss meas., low-velocity ion effective charge 3—14418
  Al foil, electron energy loss calc. 3—26605
  Al foil, electronic stopping power for 50-230 keV D^+ and He^+ 3—28019
  Al, low-energy electron energy loss and range distribs. 3—41457
  $^{27}Al(p,\alpha)^{24}Mg$, 633 keV, blocking technique, lifetime-effect relations, multistirring model and Fokker-Planck eqn. anal. 3—36636
  Ar, electronic stopping powers, shell corrections calcs. 3—26635
  Au, energy loss meas., low-velocity ion effective charge 3—14418
  Au foil, electronic stopping power for 50-230 keV D^+ and He^+ 3—28019
  Au foil, energy loss and straggling of p, d and α-particles 3—57009
  Au^{n+}, proton stopping power between 0.1 and 10 MeV 3—6784
  Au-C-poly(butene-1 sulfone) three-layered system, soft X-ray induced energy deposition 3—37962

energy loss of particles continued
  Be foil, electron energy loss calc. 3—26605
  $Bi_{1-x}Sb$, electron probe microanalysis, extrapolation method 3—9368
  C, *K*- and *L*-shell electron stopping power calcs. 3—11974
  C, energy loss meas., low-velocity ion effective charge 3—14418
  C foil, electronic stopping power for 50-230 keV D^+ and He^+ 3—28019
  C foil, specific energy loss depend. on foil thickness 3—41463
  C foils, heavy ion energy loss and energy loss straggling calcs. 3—36634
  C ions, stopping power of Ni, Ag, Au and Pb 3—57006
  C^+, energy straggling in Al and Ag, comparison Bethe-Livingston theory 3—51675
  ^{252}Cf fission fragments, fine structure of electronic stopping powers in gases 3—36635
  Cs foil, electronic stopping power for 50-230 keV D^+ and He^+ 3—28019
  Cu, electron stopping power, 11-127 keV 3—13297
  Cu foil, electron energy loss calc. 3—26605
  F ions, moving in solid C, single and double K vacancies 3—47008
  Ge, proton and α-particle stopping power calcs. 3—37976
  H^+, 7 MeV, energy loss in Cu foils, geometrical effect, computer simulation 3—51679
  $H+\mu^-$, stopping powers, ionisation and capture cross sections, Monte Carlo calcs. 3—32187
  H^++atoms, (Z=1-92), energy loss, time-of-flight, inelastic collision probability data tables 3—10527
  H^++He, elastic differential cross sections for small angle scatt., 25-, 50-, and 100 keV protons 3—11926
  Kr^+ beams stopping power meas., time of flight method, in Al, Ti, Ni, Zr, Ag 3—51677
  La-Al-Nd(Tb)(Dy)(Ho)(Er), crystal field parameters from neutron spectra 3—13780
  N_2^++H, state-selective electron capture, collision spectrosc. obs. 3—56066
  Ne, *K*- and *L*-shell electron stopping power calcs. 3—11974
  Ni+H^+, *K*-vacancy prod. cross sections, struct. effects 3—11943
  O, *K*- and *L*-shell electron stopping power calcs. 3—11974
  O_2-Ar, electron beam energy branching, appl. to gas lasers *(French)* 3—22567
  Se, energy loss and straggling of protons, deuterons and He ions 3—41464
  Si, electronic energy loss of channeled negative pions 3—42687
  Si, proton and α-particle stopping power calcs. 3—37976
  a-Si, ranges of low energy light ions, SIMS study 3—57007
  Si/SiO_2 substrate, B implantation, ion range profiles, computer calc. 3—28020
  Si(Au) semiconductor counter, particle identification and coincidence meas. 3—50234
  U, proton and α-particle stopping power calcs. 3—37976
  ^{238}U ions+C(Al)(Ti)(Ni)(Nb)(Pb)(Sn) foils, thermal neutron activation anal., stopping power values 3—8920
  U+H^+, *K*-vacancy prod. cross sections, struct. effects 3—11943
  ^{238}U ionisation tracks in nucl. track emulsion 3—6506
  ZnTe, proton and α-particle stopping power calcs. 3—37976

energy measurement *see power measurement*

energy-range relations *see energy loss of particles*

energy resources
  see also fuel; geothermal power; hydrogen economy; solar energy concentrators; solar power; wind power
  coal deposit at Hat Creek, BC, Canada 3—53475
  cogeneration technology 3—24623
  conservation and UK energy strategy 3—4340
  Earth's hydroelectric potential and methods of utilisation 3—4361
  EFOM 12C energy supply model with EC modelling system 3—4344
  energy conversion systems using geopressured-geothermal fluids 3—24551
  Energy Modeling Forum studies, experiences 3—4341
  energy technologies, new, economic problems of introduction *(German)* 3—34663
  estimation of potential biomass resource and biogas production from aquatic plants in Argentina 3—9388
  French energy policy since election of President Mitterand to office 3—4339
  French nuclear energy programme, present and future requirements 3—1021
  fusion-fission hybrids, role in nuclear future of USA and West 3—48123
  geomagnetic anomaly survey methods for geothermal exploration in Italy 3—44556
  geothermal area prospecting by soil Hg concentrations 3—59118
  geothermal dry rock reservoir, seismic obs. of rock fractures 3—14923
  geothermal energy exploration by seismic methods, review 3—48692
  geothermal energy field (vapour dominated), reinjection study 3—4363
  Hat Creek coal deposit, BC, Canada, geophys. exploration 3—53475
  hydroelectric power, Austria, 1982, potential and developed *(German)* 3—34669
  IIASA's study of global energy supply and demand until 2030 3—9387
  Indian energy forecasts anal., reliability evaluation 3—53474
  Indian energy policy for coming decades 3—19555
  industrial waste heat for district heating 3—48125
  large energy-economic model data bases 3—4342
  MARKAL approach to energy modelling for technology assessment 3—4343
  North Carolina, USA, solar energy climatology 3—44544
  North Sea oil depletion, policy implications at national level 3—4349
  nuclear power stations, safety and reliability 3—36558
  physical concept of energy 3—4346
  primary energy, status and future, book 3—37
  reference handbooks 3—16096
  renewable, utilisation and storage, futuristic aspects 3—53492
  renewable energy sources, Norwegian and other developments *(Norwegian)* 3—58466
  renewable energy sources, world prospects *(French)* 3—44090
  renewable energy sources and developing countries 3—39434
  review of identities and contrasts between different energy resources *(German)* 3—44089
  risk perception role in energy policy 3—4345
  solar energy and appls., resource letters 3—5523
  solar power, for developing countries *(French)* 3—53490
  supply and demand at present and in future 3—4347
  sustainability transition, electric utilities financing 3—39436
  Swedish energy industry and policies for reducing dependence on oil *(Hungarian)* 3—48114
  United Nations Nairobi conf. on new and renewable energy resources, progress after one year *(French)* 3—39435

energy resources continued
waste heat recovery using heat pumps 3−48164
West German energy economy in relation to world supply *(German)* 3−39433
wind coldness exploitation, energy field importance *(French)* 3−53476
wind coldness exploitation, house heating and elec. prod. systems *(French)* 3−53477
wind power potential of southern Wyoming, USA 3−59060
world strategies 3−4348
Pu supply and demand for fast breeder program 3−19557
U, world reserves and resources 3−19556

energy states
see also atomic structure; electron energy states (condensed matter); energy level crossing; molecular energy levels; nuclear energy levels; population inversion
Bose particles, ground state energy calculation 3−30772
disordered systems, one-dimensional, energy level struct., wavefunctions near spectrum edge 3−20707
two-particle fractional-parentage coefficients for $s^\nu p^\mu$-electronic configurations 3−1202

energy states in solids and liquids *see electron energy states (condensed matter)*

energy storage
see also capacitor storage; direct energy conversion; energy storage devices
200 MW compressed air energy storage peak lopping power plant 3−39532
absorption heat pump refrigerant mass and energy storage anal. for space heating 3−34715
azobenzenes photochemical storage potential 3−53571
bottled energy, elec. engineering and chemical energy storage, book 3−5471
breakeven costs of storage in optimized solar energy systems 3−9479
chemical storage, optimisation of energy densities, based on solid-gas reactions *(French)* 3−44153
closed loop solar energy system with concentrating collectors, design method 3−14996
collector/storage solar water heaters transient behaviour for generalised demand patterns 3−19598
compressed air storage in underground reservoirs for utility load levelling, problems *(Polish)* 3−19618
constant flow solar pond collector/storage system, periodic anal. of heat extraction process 3−53579
flat-plate solar water heating system energy flow simulation 3−9483
ground thermal performance as inexpensive solar collector/storage system 3−34733
ground-coupled tank feasibility in solar-assisted heat pump systems 3−39510
H_2/H_2-rich fuels production using central receiver solar utilities 3−19625
H_2S solar thermochemical high temp. processing to produce H_2 and S 3−9400
heat transfer in cubic heat storage container with helical tube heat exchanger and $CaCl_2.6H_2O$ latent heat storage material *(Japanese)* 3−34736
heat-accumulating materials with phase transition at 250-300°C 3−44152
heat-generating simulation and expt. performance 3−39522
hot water systems performance with tanks in series 3−34735
integral compact solar water heater thermal performance anal. 3−53586
latent heat of fusion of paraffin adsorbed on activated C as energy storage method 3−19620
latent heat storage for solar power systems, refrigerant storage digital simulation study 3−9493
latent heat storage materials, thermodynamic props. of $LiNO_3$ and $NaNO_2$ *(Japanese)* 3−34732
long slender heat pipe performance for latent-heat thermal energy storage 3−39534
low temperature latent heat thermal energy storage: heat storage materials 3−58560
metal hydride hydrogen storage beds space-time dependent temp. and composition props. determ. using RET 1 computer code 3−53595
nuclear power stations, variable-load operation, heat storage cost effectiveness *(Russian)* 3−19619
packed bed solar water heater with thermosyphonic circulation, performance anal. 3−39514
packed bed thermal storage unit of hot air solar heating system, design and sizing 3−15005
packed-bed storage system thermal behaviour anal. 3−4411
paraffin wax storage subsystem models using liquid heat transfer media, comparisons 3−24639
passive space heating concepts thermal performance anal. 3−34724
peak lopping electrical power by H_2 storage during low demand periods *(German)* 3−9498
pebble bed heat storage for buildings heated by solar collectors, development project 3−19621
phase change thermal energy storage in shell and tube heat exchangers, preliminary model 3−9495
photochemical/thermal energy storage using organic cations 3−34740
photovoltaic cold storage system 3−39533
photovoltaic concentrating system for meeting large building energy needs 3−58521
photovoltaic power systems, balance-of-system assessment 3−9404
productivity of distillation vs. reverse osmosis using solar pond energy 3−39520
prototype energy storage flywheel 3−15004
Rankine cycle working fluid selection for direct-contact heat exchange with solar pond 3−39509
residential solar energy system development 3−58533
rock bin thermal storage system dynamic temp. response simulation using mathematical model 3−9494
salt-gradient solar pond surface convective layer model 3−39519
sand thermal trap solar collector/storage system thermal performance anal. 3−34720
seasonal heat storage in water saturated soils, ground water flow heat losses determ. using mathematical model 3−58561
shallow solar pond: state-of-the-art 3−9482
solar and process heat, storage using latent heat *(German)* 3−39535
solar domestic heating using heat pump and uncovered solar collectors, mathematical simulation of performance 3−24624
solar energy conversion to chemical by photoassisted processes, NH_3 production over TiO_2 catalysts 3−14959

energy storage continued
solar energy storage as H_2 and Br_2 from HBr, idealised system performance 3−58563
solar energy storage by the reversible reaction: $N_2O_4 \rightleftharpoons 2NO_2$. Theoretical and experimental results 3−24640
solar energy storage using surfactant micelles 3−9496
Solar Pilot Test Facilities and computer models *(French)* 3−24636
Solar Pilot Test Facilities central control system 1 software presentation 3−24635
Solar Pilot Test Facility modelling group final report (1982) 3−53589
solar pond, with diffusely reflecting bottom, thermal efficiency calc. 3−19612
solar silkworm breeder energy accumulator thermal conditions 3−44141
solar space heating using common building elements as passive systems 3−53491
solar Trombe walls filled with $CaCl_2.6H_2O$ phase change material, thermal behaviour 3−4405
solar water heater, 'built-in' storage, booster mirror 3−58551
solar-pond-driven desalination system 3−4406
superconducting energy storage system elec. characts. *(Japanese)* 3−58565
systems for absorbing load demand fluctuations and power generating systems output variations 3−44110
N,N,N′,N′-tetraethyloxonine, triplet state props., rel. to solar energy devices 3−6558
thermal, materials enthalpy meas. using twin high-temp. calorimeter *(Japanese)* 3−30859
thermal storage by latent heat in the range 100 to 150°C. Experimental study and modelling of the kinetics of storage and removal in a 25 kWh accumulator 3−4412
thermochemical energy storage system, heat and mass transfer considerations 3−34738
thermochemical heat pump principles of energy storage and generation, economics 3−4399
thermocline storage of hot water, stratified, theoretical and experimental studies 3−34734
thermosyphon solar water heater long term performance anal. 3−58479
underground heat storage trench with forced air circulation, characts., application in greenhouses 3−9491
US Chemical Heat Pump Program—an overview 3−24620
water heating, domestic, operating experiences with heat pumps *(German)* 3−34711
H_2 storage, underground, implications of fingering 3−34744
H_2 storage with cryoadsorpers, comparison with other storage methods 3−48196
Li cells and energy storage state-of-art, applications in interplanetary probes *(French)* 3−48141
Mg_2Ni hydride heat storage system heat transfer characts. 3−9492
$NH_4Al(SO_4)_2.12H_2O/NH_4NO_3$ short term heat storage system, characts. 3−34739
$NaNO_3$-KNO_3 heat transfer salts, thermodynamic props. *(Japanese)* 3−33468
$Na_2SO_4.10H_2O$ (Glauber's salt) crystal size effect on thermal energy storage capacity 3−34737

energy storage devices
accelerator for masses up to 1 g, using capacitor bank 3−49523
composite flywheels for energy storage *(Japanese)* 3−48174
flywheel, 80 tons, material and fabrication 3−9490
flywheels for space vehicle energy storage 3−24638
heat storage plant using heat pump, energy calcs. *(German)* 3−39536
HV pulse modulator for INUS-2 high-current electron accelerator 3−1095
redox flow cell energy storage device catalytic electrodes 3−9497
CdSe three-electrode photoelectrochem. storage cells, transport props. of Nafion membranes 3−24612
Na-S batteries for utility load levelling appls. 3−44117

energy transfer collisions, molecular *see molecular inelastic collisions*

engineering
see also biomedical engineering; civil engineering; design engineering; electrical engineering; environmental engineering; maintenance engineering; mechanical engineering; project engineering
possibilities of laser applications *(Hungarian)* 3−37097

engineering applications of computers *see engineering computing*

engineering computing
see also aerospace computing; chemical engineering computing; civil engineering computing; communications computing; electrical engineering computing; electronic engineering computing; mechanical engineering computing; nuclear engineering computing; virtual machines
geothermal heating, variables affecting viability 3−53483
solar-hydrogen energy system-model applied to isolated island 3−53593

engineering facilities
see also test facilities
experimental facility for University of Sydney at White Bay; Power Station 3−29404
MHD plasma flow facility, coal-fired, for USA DOE, capabilities and test results 3−29403
spent nuclear fuel temporary storage facility at Atucha (Argentina) *(German)* 3−55127

engineering societies *see societies*

entertainment *see sports and entertainment*

enthalpy
see also heat of ...
acetone, liq., mol. interactions, reorientational motion, ^{17}O NMR chem. shifts and linewidths studies 3−45969
α-acetylenic tertiary alcohols, acid-catalysed rearrangements, energy hypersurface, STOC calc. 3−39354
alloys with B2(CsCl) struct., thermodynamics and defect struct. 3−23060
benzene, heat of vaporisation and thermodynamic props. in liq. and gaseous phase 3−8213
boron compounds, bond order depend. bond enthalpy terms 3−53439
1,3-butadiene, conformational change thermodynamics, UV absorpt. study 3−50545
3-butyn-2-ol and 2-butyn-1-ol, dielec. dispersion in dil. soln. 3−47598
calorimetric experiment setup 3−312
chlorofluoroacetonitrile, liq., chiral discrimination, hard-core model for repulsive forces 3−33064
cyclopropylcarbonyl fluoride, solid, liq. and gas, conformational barriers to internal rot. and vibr. assignment 3−11795
dense gases, heat of mixing, temp. depend. 3−27640

enthalpy continued
dimethyl formamide, thermodynamic excess function calc. from dielect. data *(German)* 3—38749
diphenyl-diphenyl oxide mixture, heat of vaporisation and thermodynamic props. in liq. and gaseous phase 3—8213
DNA, intercalation of acridines, thermodynamics and optical absorption spectroscopy 3—19657
ethyl formate, gas-phase pyrolysis, intrinsic reaction coord. 3—58424
ethylene, critical region, thermodynamic surface 3—49099
FCC metals, self-diffusion, correl. between melting temp. and vacancy parameters 3—13519
glass, quenched and annealed, struct. recovery 3—13107
glass-forming systems, reduced thermodynamic functions at 0K 3—2852
glycerol-H_2O mixtures, conductivity, relax. time and activation energy at RF 3—38416
high temperature air, Cu contaminated, rel. to arcs 3—27755
histone 2A-2B complex, cooperative props. in various salt media 3—34764
histones H1 and H5, cooperativity of compact struct. 3—34765
III-V ternary and quaternary solid solns., equilib. diagrams, influence of chemical disorder and epitaxial substrate, DLP model *(French)* 3—42957
JANAF thermochemical tables, 1982 supplement 3—25704
lCc Pb-Cu-Ag-S, thermodynamic behaviour of dil. solns. of S 3—29063
lipid vesicles, interactions with solvent in heavy and light water, phase-transition props. 3—9362
measurement using twin high-temp. calorimeter *(Japanese)* 3—30859
mesotartaric acid, and hydrates, vapour press. and lattice energies 3—42763
metals, H-defect interactions, binding energies and enthalpies 3—13260
metals, vacancy noise meas., power spectrum calc. 3—37899
methane-CO_2 mixture, enthalpy and heat of mixing, BWR equation of state 3—37598
moving phase change front, Stefan eqns. 3—27371
myoinositol, and hydrates, vapour press. and lattice energies 3—42763
nitrobenzaldehyde anion radicals, formyl group restricted rot., EPR study 3—50544
octylcyanobiphenyl, liq. cryst., enthalpy, heat capacity, phase transitions 3—13449
oxalic acid, and hydrates, vapour press. and lattice energies 3—42763
phase diagram and binary thermodynamic data, optimisation 3—57061
phloroglucinol, and hydrates, vapour press. and lattice energies 3—42763
PMMA stereoisomers and their blends, isothermal enthalpy studies 3—13459
polyalkylmethacrylates, isothermal annealing mol. motion, side chains effects 3—13126
polycarbobenzoxyornithine, struct. and side chain interactions 3—56836
polyethylene, high and low density, mixing behaviour, thermal analysis *(German)* 3—57095
polystyrene, amorphous, enthalpy, temp. depend. near glass transition *(Russian)* 3—47127
polystyrene, thermodynamic props., data tables 3—16093
polystyrene networks in cyclohexane, swelling, macromol. system thermodynamics 3—18481
propargyl alcohol (bromide), dielec. dispersion in dil. soln. 3—47598
PVA, amorphous, enthalpy, temp. depend. near glass transition *(Russian)* 3—47127
self-cooling materials, based on pseudoalloys, methods of calc. 3—13496
silicate glasses, specific heat consumption in melting *(Slovak)* 3—18478
silicate melts, enthalpy under ambient press., 1520 to 2600K 3—57108
solid electrolyte, mass-action law appl. *(French)* 3—47156
solid solutions, binary and ternary, volume effects, review 3—19315
spinels, crystallographic parameters, cation radii end distrib., lattice energies 3—46888
ternary alloy superlattice, free enthalpy 3—8219
thermal system for simple bodies, temp. scale 3—38020
thermodynamic model, parameter estimation, successive reduction of data sets 3—2844
transition metals, heat of fusion, enthalpy and specific heat 3—8171
triorganophosphates, in n-octane, osmotic and activity coeffs. meas. 3—34646
tris(ethylenediamine)nickel(II)sulphate, struct. determ. in presence of twinning 3—27923
uracil protomers, relative stabilities and relative enthalpies 3—48080
van der Waals complexes formation, entropy effect 3—58444
water, liquid, thermal and thermodynamic props., Monte Carlo simulation convergence 3—18200
Ag_2S-Sb_2S_3 system, molten thermodynamic quantities, meas. using thermal anal. *(Japanese)* 3—29069
Al-Ca, liq., mixing enthalphy, thermodynamic invest. *(German)* 3—47118
Al-Mg-Pb(Sn), melt, temp. depend. of mixing enthalpy *(German)* 3—58100
Al-Sr, liq., mixing enthalphy, thermodynamic invest. *(German)* 3—47118
α-Al_2O_3, sapphire, synthetic, enthalpy and heat capacity standard reference material, 10 to 2250K 3—2847
β-Al_2O_3-LiO_2, hydration reaction, IR meas. 3—14858
β''-Al_2O_3-Na_2O, activation enthalpy, Gibbs free energy, and entropy for cond. 3—23085
As sulphides, reactions, equilib. consts., thermodynamic data 3—5510
C, microporous, physical adsorption, heat of immersion studies 3—23160
Ca-Ni, liq., mixing enthalphy, thermodynamic invest. *(German)* 3—47118
CaF_2-AlF_3, phase diagram, median section, stability of Ca_2AlF_7 *(French)* 3—9044
$CeSn_3$, high temp. heat capacity 3—33467
Cu-Ag(Ti)(Zr)(Hf), thermochem. at 1373K 3—4007
Cu-Sn system, disorder in ordered β-brass phase *(German)* 3—29064
Cu-Ti, liq. alloys, thermodynamic mixing functions 3—4015
Cu-Zn alloy, FCC and BCC, pair interchange energies, order-disorder transition enthalpy 3—34307
Cu-Zn-Al, $\beta \rightleftharpoons 2H$ martensitic transform., enthalpy and acoustic emission meas. 3—43818
Cu_2S-Ni_3S_2 system, molten, thermodynamic quantities, meas. using thermal anal. *(Japanese)* 3—29069
Fe complex, bromobis(N,N-diethyldithiocarbamato)iron(III), heat capacity, λ-type ferromag. phase transition 3—52463
Fe-Al (6.3-28.3 at.%), recovery of quenched-in vacancies, positron annihilation 3—9094
Fe-C martensites, tempering, DTA study 3—29115
Fe-Cr-Ni, ternary system, correlation of thermodynamic and phase data; review 3—34280
Fe_3O_4, first order transition at 1433K, thermodynamic props. *(French)* 3—47827

enthalpy continued
Ga-In-As-Ge(Sn), liquid quaternary phases, melting diagram meas. and calc. 3—13410
$(GaAs)_x(InAs)_{1-x}$, specific heat and thermodynamic functions, 5 to 300K 3—23055
$(GdO)_3PO_4$, molar thermal capacity, temp. depend. *(Czech)* 3—13482
H_2 storage in the form MgH_x, Mg hydrogenation characts. 3—53596
HfC, sp. ht., entropy and enthalpy 3—51822
KCl:Co crystals, elec. cond. study, impurity-vacancy complex association enthalpy 3—57123
K_2S_x, molten, thermodynamic and phys. props., open-circuit voltage meas. 3—44113
β-$LaNi_5H_x$, Haucke cpd., struct., statistical thermodynamics approach 3—42568
$LaSn_3$, high temp. heat capacity 3—33467
Li-LiH(D)(T), solid and melt, thermodynamic props. 3—8220
LiF-K_2SO_4/KF-Li_2SO_4 charge-asymmetric reciprocal molten salt mixtures, excess enthalpies 3—4313
$Li_{17}Pb_{83}$ eutectic alloy, breeding material for fusion reactor, thermodynamic props. 3—57111
Mg-Ni, liq., mixing enthalphy, thermodynamic invest. *(German)* 3—47118
Mg-Pb, liquid, enthalpies of mixing at 975K 3—57098
Mg-Pb-Sn, melt, temp. depend. of mixing enthalpy *(German)* 3—58100
MgH_2 formation and decomposition by H_2 absorpt./desorpt. 3—48087
Mn-Si system, thermodynamic props. in ranges of existence of Mn_9Si_2 and Mn_6Si 3—58099
Mo, enthalpy meas., certification of standard specimen for thermodynamic props. 3—47124
$NaNO_3$-KNO_3 heat transfer salts, thermodynamic props. *(Japanese)* 3—33468
Ni-base superalloys, enthalpy of solidification, DTA study *(French)* 3—9053
$Pb(Fe_{1/2}Nb_{1/2})O_3$-$xPb(Mg_{1/2}W_{1/2})$ O_3 solid soln., diffuse antiferroelec.-paraelec. phase transition 3—23886
Pd-Cu-H, solid soln., thermodynamics 3—47817
Pt complexes, exchange processes, PMR study 3—55965
$(Pu,U)O_2$, enthalpy and ht. capacity 3—8221
PuO_2, enthalpy and ht. capacity 3—8221
SO_2-N-methyl-2-pyrolidinone system, freezing point, thermodynamic props. 3—51751
Sn-Te melt, enthalpy of mixing *(German)* 3—58101
Ta, liq. and solid, enthalpy meas. by levitation calorimetry 3—4014
$(Th,U)O_2$, enthalpy and ht. capacity 3—8221
ThO_2, enthalpy and ht. capacity 3—8221
TiO, α- and β-modifications, heat capacity, enthalpy, and enthalpy of transition 3—2834
TiO_x, enthalpy at high temps. 3—51826
$U_{1-y}Gd_yO_{2+x}$, nonstoichometric solid soln., thermodynamic props., 700 to 1100°C 3—16854
UO_2 compounds, electronic-vibr. mechanism of reactivity and feasibility of laser control of chem. processes 3—19530
UO_2, enthalpy and ht. capacity 3—8221
V, surface segregation of O, SIMS study 3—42893
$ZrMn_2Fe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3—48081
$ZrMn_2Mn_yFe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3—48082

entropy
see also entropy of substances
antiferromagnetism, type I, statistical theory on FCC lattice, AB alloy superlattice theory 3—28489
bilayer membrane, conformational entropy derived from mol. dynamics simulation 3—41700
black hole spin temp., three-stage process 3—44787
black holes, entropy evaporation 3—20746
black holes, entropy evaporation through emission of massless radiation 3—59210
Boltzmann's entropy for fluids, energy spectrum, statistical fluid dynamics 3—2033
classical lattice systems, equilib. states, energy-entropy inequalities 3—40516
classical statistics inherent in pure quantum states 3—30695
computer analogy for illustrating entropy concepts 3—49300
conservation laws, symmetrisation, gas dynamic for numerical methods 3—35951
cosmological first-order phase transition and baryon-monopole problem 3—44880
cosmology, relaxation terms and entropy prod. in leptonic period of Universe 3—25663
dilute antiferromagnets, mixed ferro/antiferromag. interactions, thermodynamic props. 3—23632
Edwards-Anderson Ising spin glass, residual mag. entropy and metastable states 3—49276
electron system, transport coeffs. in mag. field, variational principle calc. 3—28319
energy and entropy balances, appl. to flow and temp. meas. across real wall in unsteady state *(French)* 3—50897
energy and mass diffusion, inertial relax. terms, variational principles 3—27370
energy conversion theorem *(Rumanian)* 3—17769
entropy change and reversibility 3—35811
ethyl formate, gas-phase pyrolysis, intrinsic reaction coord. 3—58424
extended irreversible thermodynamics, kinetic derivation 3—25838
fine entropy from nonconservative statistical mechanics 3—30825
flux across surface of rigid body, effect of inner structure 3—16322
forced convection, fin geometry for minimum entropy generation 3—37494
gas bubbles in fission reactor materials, thermodynamics 3—36460
gas moving in channel of variable cross sections, acoustic, entropy and vorticity perturbations propag. 3—2121
gauge theories, entropy of random surfaces 3—5965
glycerol-H_2O mixtures, conductivity, relax. time and activation energy at RF 3—38416
hydrodynamic fluctuations, nonequilibrium sources, kinetic coeffs. 3—2166
hydroxypyridines, tautomers, interaction of H_2O, SCF-MO-LCAO-ab initio calcs. 3—31937
ideal gas, shock thickness estimation based on entropy prod. 3—42261
information thermodynamics, classical, with higher-order temps., thermodynamic limit study 3—35946
interval dynamics, topological entropy, scaling, characteristic exponents 3—25814

entropy continued
inviscid fluid, local theory of thermo-acoustic phenomena 3—37340
irreversible processes under random thermal fluctuations, thermodynamic criteria 3—25837
irreversible systems, entropy, partial integrability basis 3—54706
Ising chain, one-dimensional, with competing interactions, residual entropy 3—23562
Ising chains, random-bond, ground state props. 3—3402
Ising model, dil., on triangular lattice, spin glass transition, Monte Carlo simulation 3—23672
Ising model, random, systematic expansion 3—18919
JANAF thermochemical tables, 1982 supplement 3—25704
lipid vesicles, interactions with solvent in heavy and light water, phase-transition props. 3—9362
liquid-vapour phase change, geometry 3—13403
magnetic polaron theory 3—52048
medical image reconstruction by maximum entropy 3—29736
melting, mean-field theory based on Bogolyubov-Born-Green-Kirkwood-Yvon eqn. 3—38037
molecular system in condensed matter, quantum statistical degeneracy removal 3—35910
$N=2$ Hamiltonian systems, intramol. relax., role of K entropy 3—55917
negentropy, description of work 3—35947
neutron star atmosphere, entropy of free particle gas rel. to neutrino emission and convective stability criterion 3—10199
non-equilibrium entropy definition 3—232
nonequilibrium entropy and irreversibility 3—5755
nonequilibrium hydrodynamic fluctuations and generalised entropy 3—233
nonequilibrium statistical mechanics, basic eqns. 3—5703
nozzle, pressure transfer function due to acoustic and convected entropy fluctuations 3—32782
one dimensional chains, vibr. entropy, short range order effects 3—42811
phenomenological thermodynamics to canonical ensemble 3—30759
plasma confinement, microinstability and entropy production, variational calc. 3—12925
polarisable multicomponent systems thermodynamics, nonequilibrium relativistic long-wave limit 3—20809
polymer blends, interface struct., conformational entropy 3—38168
polymers, real chain simulation method 3—20785
Potts antiferromagnet in mag. field, Ising transition into order with extensive entropy at $T=0$ 3—52505
production on Earth and planets 3—59242
pyridones, tautomers 3—31937
radiation, partially coherent, entropy, generalised canonical statistical operator construction 3—30771
radiation entropies in beam-splitting and application to solar radiation 3—32273
radiation entropies in diffuse reflection and scattering and application to solar radiation 3—32272
radiological image receptors, performance evaluation by redundancy 3—24849
relativistic shock waves, in Synge gas, entropy profiles 3—17986
reverberant sound field complexity *(Japanese)* 3—17658
simple cubic Ising lattice, free energy and entropy estimation by computer simulation 3—45081
state functions of gas, one-particle distrib. function, derivative alternation 3—30827
stochastic H-theorem for multidimensional diffusion processes 3—30782
stressed systems, entropy variations 3—35954
stressed systems, thermodynamic equilib. 3—243
supersonic combustion around a truncated cone 3—53409
thermodynamic equilib. in stressed systems, appl. to adsorption of gases 3—47222
thermodynamic inequalities in continuum mechanics 3—54700
tomography, maximum reliable information 3—26963
transport theory, minimum entropy prod., semiclassical Boltzmann eqn. 3—10771
van der Waals complexes formation, entropy effect 3—58444
β-Al_2O_3-LiO_2, hydration reaction, IR meas. 3—14858

entropy of substances
acenaphthene, thermodynamic functions, cell model 3—33470
acetone, liq., mol. interactions, reorientational motion, ^{17}O NMR chem. shifts and linewidths studies 3—45969
alkali chlorides, molten, co-ordination of heterovalent and cation impurities 3—2375
alkali metals in liq. phase, entropy calc. from consideration of ionic atm. 3—2842
alloys, amorphous covalent, random and nonrandom bonding, Ising lattice study 3—37786
benzene, heat of vaporisation and thermodynamic props. in liq. and gaseous phase 3—8213
binary alloy, dilute interfacial stability during growth, thermodynamic approach 3—33158
3-butyn-2-ol and 2-butyn-1-ol, dielec. dispersion in dil. soln. 3—47598
diphenyl-diphenyl oxide mixture, heat of vaporisation and thermodynamic props. in liq. and gaseous phase 3—8213
DNA, intercalation of acridines, thermodynamics and optical absorption spectroscopy 3—19657
edge dislocation, energy and entropy of interacting dislocations, atomistic simulation 3—22895
ethylene, critical region, thermodynamic surface 3—49099
FCC metals, self-diffusion, correl. between melting temp. and vacancy parameters 3—13519
fluids thermophysical props. calc., interactive FORTRAN program, report 3—46679
glass-forming systems, reduced thermodynamic functions at 0K 3—2852
p-n-hexyloxybenzylidene-p'-toluidene, nematic liq. cryst., sp. ht., thermodynamic props. 3—28113
p-n-hexyloxybenzylideneaniline and homologous cpds., sp. ht., melting entropy 3—28118
ice:HF, proton ordering, calorimetric study 3—33463
ice, KOH-doped, hexagonal, first-order transition 3—13434
III-V ternary and quaternary solid solns., equilib. diagrams, influence of chemical disorder and epitaxial substrate, DLP model *(French)* 3—42957
ICc Pb-Cu-Ag-S, thermodynamic behaviour of dil. solns. of S 3—29063
liquid alloys, binary, free enthalpy of mixing, association and vol. contraction 3—51807
liquid metals, thermal press. coeffs., Percus-Yevick phonon description 3—33069
metals, BCC, configurational entropy of H 3—33469

entropy of substances continued
metals, entropy prod. due to irreversible deform. 3—39202
metals, liq., surface entropy, hard sphere model 3—23059
metals, thermoelastic instability, review 3—24311
nitrobenzaldehyde anion radicals, formyl group restricted rot., EPR study 3—50544
PAA, solid polymorphs, thermal study 3—2775
phase diagram and binary thermodynamic data, optimisation 3—57061
polycarbobenzoxyornithine, struct. and side chain interactions 3—56836
polymer blends, phase stability, molecular equation of state theory 3—38021
polymer melts, undercooled, config. entropy, temp. depend. and rel. to glass transition 3—13487
polymer melts with low-molecular organic compounds, excess entropy of mixing calc. *(Russian)* 3—51811
polymers, amorphous, cooperative relax. props. and glass transition temp., press. effect 3—8201
polymers, fatigue crack layer propag. law 3—53208
polystyrene, thermodynamic props., data tables 3—16093
polystyrene networks in cyclohexane, swelling, macromol. system thermodynamics 3—18481
polyurethane elastomers, thermoelastic props., scanning calorimetry study *(Russian)* 3—51695
propargyl alcohol (bromide), dielec. dispersion in dil. soln. 3—47598
semiconductors, carrier mobility and irreversible thermodynamics, nonlinear field depend. 3—43176
spin glasses, freezing temp., two-dimens. ±J model 3—23668
sulphate and thiosulphate hydrates, phase transitions and thermodynamic props. 3—13478
$(TMTSF)_2ClO_4$, solid, supercond. props., cooling rate influence 3—13956
water, models, excess free energy computed by Monte Carlo methods 3—28122
Pd-H, thermodynamic props., review 3—42808
$(AgI)_{0.79}(Ag_2O.B_2O)_{0.21}$, vitreous electrolyte, thermoelec. power and ionic entropy 3—18509
β''-Al_2O_3-Na_2O, activation enthalpy, Gibbs free energy, and entropy for cond. 3—23085
Au-H solutions, H-vacancy interactions, entropy anomaly 3—28111
β'-AuMn, nonstoichiometric phase, thermodynamic props. 3—24213
BaF_2, vibr. entropy calc. of anion Frenkel defects 3—13489
CO, solid, mol. reorientation, audio freq. dielec. meas. 3—2447
Ca, FCC, heat capacity, entropy Debye temp. up to 450K 3—47120
CaF_2, nucl. dipolar antiferromag., field-entropy phase diagram 3—3449
CaF_2, vibr. entropy calc. of anion Frenkel defects 3—13489
$CsAlSi_2O_6$, leucite-type cpds., heat capacity and phase transition 3—8218
$CsLiWO_4$, ferroelec. phase transitions, calorimetric study 3—38773
$Cs_2NaBiCl_6$, thermal props., phse transitions, Landau thermodynamic theory anal. 3—42812
$Cs_2NaPrCl_6$, thermal props., phse transitions, Landau thermodynamic theory anal. 3—42812
$CsSO_4F$, low. temp. heat capacity, thermodynamic functions 3—33464
Cu, stacking fault energy, determ. from X-ray peak shift 3—22923
Cu-Si liquid thermodynamic props. 3—13457
Cu-Sn system, disorder in ordered β-brass phase *(German)* 3—29064
CuMn, specific heat, spin-glass ordering effect 3—57647
D_2, solid, specific heat in mol. rotational glass phase region 3—8216
$Dy(OH)_3$, mag., optical, thermal and crystal field props. 3—33867
$DyVO_4$-$Gd_3Ga_5O_{12}$, composite material to achieve mag. refrigeration using cycle with internal heat transfer 3—8670
Eu_3S_4, thermal props. meas., order-disorder transition 3—33466
Fe complex, bromobis(N,N-diethyldithiocarbamato)iron(III), heat capacity, λ-type ferromag. phase transition 3—52463
Fe-C, ferrite 3—8202
Fe_3O_4, first order transition at 1433K, thermodynamic props. *(French)* 3—47827
Ga, liq. and solid phases, heat ca;pacity, laser flash calorimetry meas. 3—42802
$(GaAs)_x(InAs)_{1-x}$, specific heat and thermodynamic functions, 5 to 300K 3—23055
a-Ge, thermodynamics of equilib. and non-equilib. crystn. 3—22775
H_2 storage in the form MgH_x, Mg hydrogenation characts. 3—53596
^3He, solid paramag., thermal props., role of spin and phonon excitations 3—38158
^3He-^4He mixture, critical dynamics, eqn. of motion approach with mode coupling 3—28183
HfC, sp. ht., entropy and enthalpy 3—51822
$HoAl_2$, sp. ht., with external mag. field *(French)* 3—23640
$KAlSi_2O_6$, leucite-type cpds., heat capacity and phase transition 3—8218
$K(H_{1-x}D_x)_2PO_4$, Slater model and ferroelectric transition 3—43495
KOH, thermodynamic props., effusion-mass spectrometric studies 3—34643
LaH_3, normal and deuterated, phase transitions and polymorphism, sp. ht. study 3—51533
β-$LaNi_5H_x$, Haucke cpd., struct., statistical thermodynamics approach 3—42568
β-$LaNi_5H_x$, struct., entropy and enthalpy calcs., statistical thermodynamical approach 3—2499
$Li_{17}Pb_{83}$ eutectic alloy, breeding material for fusion reactor, thermodynamic props. 3—57111
Lu-H system, phase boundaries and entropy of form., H_2 vapour press. study 3—23029
Mg-Pb, liquid, enthalpies of mixing at 975K 3—57098
MgO, press. depend. to 100 kbar of phonons, vibronic spectra, entropy contrib. 3—33367
Mn-Si system, thermodynamic props. in ranges of existence of Mn_9Si_2 and Mn_6Si 3—58099
N_2O, solid, mol. reorientation, audio freq. dielec. meas. 3—2447
Na, melting transition, pseudopot. model, mol. dynamics calc. 3—51757
Na-Pb liquid alloys, heat of mixing and specific heat, concentration cell meas. 3—42799
Na_2CdCl_4, $\Delta_f G°$ meas. in galvanic cell, 548 to 668K 3—34644
Na_2O-B_2O_3-SiO_2 melt, thermodynamic activity of Na_2O 3—9046
NbO_2, phase transition, calorimetric study 3—3063
NbO_2:Mo(Zr), phase transition, calorimetric study 3—3064
$NdCo_5$ anisotropic ferromagnet, magnetic refrigeration appl. 3—33897
Pd, solubility and sorption of T 3—2815
$PrNi_2$, sp. ht. and susceptibility meas., 12 mK to 80K 3—14058
Pt complexes, exchange processes, PMR study 3—55965
$RbAlSi_2O_6$, leucite-type cpds., heat capacity and phase transition 3—8218
Rh-Ni, solid soln., thermodynamic props., miscibility gap 3—38102

entropy of substances continued
SO_2-N-methyl-2-pyrolidinone system, freezing point, thermodynamic props. 3—51751
Si, amorphous, melting point and entropy 3—42755
Si, entropy barrier against vacancy-interstitial recombination 3—27975
Si, solid solubility of III, IV, V group impurities, strain entropy and tetrahedral radius correl. 3—13242
a-Si, thermodynamics of equilib. and non-equilib. crystn. 3—22775
SmC_x, vaporisation and thermodynamic props. 3—13425
SrF_2, vibr. entropy calc. of anion Frenkel defects 3—13489
Ta, liq. and solid, enthalpy meas. by levitation calorimetry 3—4014
Ti-Cu, amorphous, thermal stability, crystn. behaviour 3—46854
Ti-$H_2(D_2)$ system, high temp. thermodynamics 3—42809
α-TiO_x-$H_2(D_2)$ system, high temp. thermodynamics 3—42809
$UC_{1\pm y}$, liq., thermochem. props., estimated by extrapolation of low temp. vapour press. 3—18480
$U_{1-y}Gd_yO_{2+x}$, nonstoichometric solid soln., thermodynamic props., 700 to 1100°C 3—16854
$V_{1-y}M_yH_2$ (M=Fe,Mo), normal and deuterated, phase diagram, impurity effects 3—33391
VO_x, heat capacity anomaly due to order-disorder transition 3—47122
$ZrCr_2$-based alloys, hydrides, calorimetric enthalpy of form., decomp., config. entropy 3—53442
$ZrMn_{2+x}$, hydride formation and decomposition, kinetics and thermodynamics 3—42810
$ZrMn_2Fe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3—48081
$ZrMn_2Fe_{0.8}(Co_{0.8})(Ni_{0.8})(Cu_{0.8})(Mn_{0.8})$, hydrides, calorimetric enthalpy of form., decomp., config. entropy 3—53442
$ZrMn_2Mn_yFe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3—48082
$Zr_{1-x}Ti_xMn_2$, hydride formation and decomposition, kinetics and thermodynamics 3—42810
$Zr_{0.7}Ti_{0.3}Mn_2Fe_{0.8}$, hydrogenation, H_2 storage appl. 3—24642
$Zr_{1-x}Ti_xMnFe$ alloys, hydrogenation characts., H_2 storage appl. 3—24529

environmental engineering
see also air conditioning; cooling; lighting; safety; space heating; temperature control; ventilation
coal-fired power stations, dust and noise emissions prevention *(German)* 3—39550
cracking, residual stresses role and meas., review 3—58269
energy conservation in tropical air conditioning: environmental variables 3—34674
thermal power plants, large capacity protection against excessive environmental and air pollution *(Slovenian)* 3—53605

environmental requirements *see environmental engineering*

environmental testing
see also corrosion testing
atmospheric corrosion testing system, polymer permeation as corrosive gas source 3—34567
organic insulating materials for HV machines for nuclear power plants, gamma-ray effects testing 3—11396
Ag, Ag/Cu mirrors on glass, electroless Ni, and ion-plated protective coatings 3—17602

enzymes *see proteins*

epitaxial growth
see also liquid phase epitaxial growth; vapour phase epitaxial growth
binary crystals, non-random distribs., from order to total disorder 3—22929
coalescence of nuclei on substrates 3—38268
impurity redistribution, theory 3—18582
nucleation and growth theories for thin films 3—18570
rare earth sesquioxides, domain form. during hexagonal-monoclinic transform. *(French)* 3—18444
semiconductor, laser annealing, book contrib. 3—13274
semiconductor films, amorphous, laser epitaxy, review 3—51989
three and two dimensional nucleation on substrates 3—38267
AlSb film, laser irrad., self-epitaxial growth, TEM and electron diffr. study 3—47236
Au epitaxial growth on Pd (111), transition from pseudomorphic to nonregistered state 3—47242
Au/Ag epitaxial struct., metastable phase form. by pulsed beams and ion beam mixing 3—2627
Au-Ge (111) interface form., AES, LEED, and electron microscopy study 3—38240
$CoSi_2$, epitaxial, formation and struct. 3—3010
$CoSi_2$, epitaxial film on Si, form. and struct. 3—3009
Cu_2O, thin epitaxial film growth and identification during Cu-Ni-Ti alloy TEM specimen prep. 3—29204
GaAs, amorphous, low temp. epitaxial regrowth by ion irradiation 3—38266
n-GaAs, epitaxial growth, impurity redistribution, theory 3—18582
GaAs, ion implanted, non-planar solid phase epitaxial growth processes 3—3012
GaAs, ion implanted, solid phase epitaxy, interface structures and twins obs. 3—33591
Ge, amorphised, epitaxial regrowth rate, effects of electrically active impurities 3—3011
Ge/GaAs epitaxial heterostructures prep. by scanned CW laser annealing 3—57248
$Ge_{1-x}Si_x$ epitaxial layer prep. using graphite heaters 3—57004
InGaAsP/InP V-grooved substrated buried heterostruct. laser emitting at 1.3 μm 3—7011
InP ion implanted amorphised layers, epitaxial regrowth, RHEED, TEM, backscatt. and X-ray studies 3—2994
Ni/Si struct., metastable phase form. by pulsed beams and ion beam mixing 3—2627
$NiSi_2$, epitaxial, formation and struct. 3—3010
$NiSi_2$, epitaxial film on Si, form. and struct. 3—3009
Pb, on graphite, cryst. growth, melting and oxidation SEM study 3—27866
Pd_2Si epitaxial film on Si, form. and struct. 3—3009
Pd_2Si, epitaxial growth on Si substrate, electron beam annealing 3—56988
Pd_2Si films, epitaxial growth by scanning electron beam annealing 3—8346
PtSi epitaxial film on Si, form. and struct. 3—3009
Si, amorphised, epitaxial regrowth rate, effects of electrically active impurities 3—3011
Si, amorphised ion implanted single cryst., laser annealing, explosive crystn. obs. 3—42655

epitaxial growth continued
Si, amorphous CVD film, solid phase epitaxy on cryst. Si 3—8972
Si amorphous film, CW laser annealing, solid phase epitaxy and random crystallisation 3—56948
Si, crystalline to amorphous boundary, laser induced solid phase epitaxy 3—57239
Si epitaxial growth on SiO_2 by Si mol. beam reactive etching, AES, RHEED and SEM study 3—8354
Si film, polycryst., amorphisation by Si ion implantation, annealing behaviour 3—51982
Si films, single cryst. lateral nucleated epitaxy on amorphous $SiO_2(Si_3N_4)$ using scanning laser and electron beams 3—34224
Si, ion implanted, CW CO_2-laser annealing, solid-phase epitaxy model *(Chinese)* 3—37955
Si, ion implanted, solid epitaxy, impurity and conc. depend. of growth rate 3—37938
Si, ion implanted, solid phase epitaxial growth 3—8367
Si, ion implanted, solid phase epitaxy, interface structures and twins obs. 3—33591
Si, melt-in, regrowth, and amorphisation vels. under pulsed laser irrad. 3—56931
Si on sapphire, heavily doped, amorphisation and thermal regrowth, stress relief 3—51993
Si, polycrystalline thick films, seeded epitaxial recrystn. on SiO_2 3—34222
Si, seeded epitaxial growth over SiO_2 substrate by laser irrad. 3—57245
Si seeded lateral epitaxial layer on SiO_2, RHEED characterisation 3—23194
Si, solid phase epitaxy on Si(Ge) 3—38266
Si, solid-phase epitaxy with Al transport medium, diffusivity and growth rate 3—23216
Si, surface patterns deform. during epitaxial growth *(Czech)* 3—47767
Si:As(Sb)(In)(Pb)(Tl)(Bi), ion implanted, metastable solid soln. form., backscatt. and channelling study 3—2588
Si:B, ion implanted, elec. activation of B ions during solid phase epitaxy 3—2579
Si:B film, highly doped, deposited on Si(100) substrates, solid phase epitaxy 3—23198
Si:In, ion implanted, thermal annealing, In migration obs. during solid phase epitaxial growth 3—56917
Si:In(Sb), ion implanted, defects and solid solubility, solid phase epitaxial growth 3—2826
Si:In(Sb), ion implanted, solute segregation and solid phase crystallisation dynamics 3—56950
Si:P, ion implanted, solid soln. form. after solid phase epitaxial regrowth 3—57099
Si-Ni, epitaxial growth of $NiSi_2$ 3—38266
Si-Pd_2Si, amorphous Si solid phase epitaxy, anal. of inert marker motion 3—33517
Si-planar metal reaction couples, first phase mucleation, theory 3—57146
SiC p-n junction, high struct. quality 3—13897
Si;As, pulse laser induced solid-phase annealing 3—8094
V, electron beam irrad., channelling and X-ray anal. 3—56980

epitaxial layers
see also magnetic epitaxial layers; metallic epitaxial layers; semiconductor epitaxial layers
composition automodulated complex epitaxial films, struct. stability, thermodynamic anal. 3—13669
electron beam polishing technique 3—57198
incommensurate layer, first and second order transition to superstructures, discrete maps 3—57059
materials analysis by ion channelling, book 3—54597
monolayers on (111)FCC and (110)BCC substrates, misfit accommodation, analytical calc. 3—23222
Rutherford backscattering and channelling analysis of interfaces and epitaxial systems, review 3—8929
thermodynamic stability of $CA_{1-x}B_x$ epitaxial films 3—42984
ultradisperse particles on substrate, collective behaviour 3—33613
AlN epitaxial film, cathodoluminescence after irrad. with fast electrons 3—14360
AlN insulating films for CraAs-AlN MIS structures, reactive MBE growth 3—24142
BaF_2, $Ba_xCa_{1-x}F_2$, insulating epitaxial films grown by MBE on InP substrates 3—33596
CaF_2, insulating epitaxial films grown by MBE on InP substrates 3—33596
$CaF_2(BaF_2)(SrF_2)$-Si (111) heterostructures, epitaxial relations, ion channeling anal. 3—51967
$CoSi_2Si(111)$ interface struct., determ. by ultrahigh resolution electron microscopy 3—8343
Cu_2O, thin epitaxial film growth and identification during Cu-Ni-Ti alloy TEM specimen prep. 3—29204
$(Eu,Tm,Y,Ca)_3(Fe,Ge)_5O_{12}$ epitaxial garnet films, domain wall resonance 3—8705
Fe_3O_4 epitaxial layer on Fe(110), composition and structure 3—3002
GaN epitaxial film, cathodoluminescence after irrad. with fast electrons 3—14360
MgO epitaxial film, secondary electron emission and conductivity mechanisms 3—23519
$NiSi_2$, epitaxial struct., channelling and backscattering studies 3—42981
β-SiC epitaxial film, dislocations, twins and stacking faults *(Chinese)* 3—42939
$SrTiO_3$, ferroelectric, autoepitaxial vacuum deposition 3—29005

epitaxy *see epitaxial growth*

EPR *see paramagnetic resonance*

EPR line breadth
alkaline earth compounds, MF_2:Mn^{2+}, superionic, high temp., EPR studies 3—57763
alkaline earth fluorides, defect struct. and defect-defect interactions, Gd^{3+} EPR study 3—38691
ferroelectrics, critical phenomena, EPR studies, review *(Rumanian)* 3—8714
ferroelectrics, EPR line profile broadening and asymmetry 3—3512
lecithin bilayers, binding of Mn(II) ions, ESR and NMR study 3—48253
magnetically diluted solids, spin polarisation effect on phase relax. 3—38679
merocyanine dye Langmuir films, ESR 3—38678
metals, surface spin relax., CESR study 3—28703
bis-(1,2-bis-(2-methoxyethoxy)ethane) sodium biphenylide, ESR line shapes 3—57745

EPR line breadth continued
  molecular pairs, ESR line shapes of triplet excitons, temp. depend. 3—41594
  nematic liquid cryst., supercooled, ordering and ESR line shape 3—14111
  nitrobenzaldehyde anion radicals, formyl group restricted rot., EPR study 3—50544
  p-nitrophenyl-p-n-octyloxy benzoate, smectic A liq. cryst., ESR spectrum, line shape and angular variation 3—14116
  N-(p-octyloxybenzylidene)-p-toludine, smectic A liq. cryst., ESR spectrum, line shape and angular variation 3—14116
  oxide glass: Tl^+, stereochemistry and struct. model, ESR study 3—23798
  paramagnetic species on surfaces, ESR line shapes due to surface polaritons 3—47541
  pentafluorocyclopentadienyl radical, ESR spectrum 3—57777
  peroxy radicals in PTFE, 2-mm ESR spectra 3—17315
  trans-polyacetylene, undoped, mag. reson. studies 3—38715
  polyacetylene structures, paramag. solitons *(German)* 3—38674
  polycrystal, EPR line shape in presence of dynamic Jahn-Teller effect 3—52598
  polycrystalline aggregate, EPR line shape in presence of Jahn-Teller effect 3—28687
  polypropylene films, region accessible for low-mol. substances, orientation and annealing influence *(Russian)* 3—7924
  rare earth fluorides, RF_3, defect struct. and defect-defect interactions, Gd^{3+} EPR study 3—38691
  ruby, d-orbital theory, appl. to high press. spectra 3—43578
  ruby, dil. samples, spin packet lineshape 3—18978
  smectic liquid cryst., ordering and ESR line shape 3—14111
  spin glasses, electron spin resonance line width and line shift effects theory 3—3511
  spin packet lineshape effect on inhomogeneous resonance saturation 3—14115
  TCNQ salt, $(\phi AsCH_3)^+(TCNQ)_2^-$, triplet exciton exchange dynamics, half-field reson. study 3—3508
  TCNQ salt, TMTSF-DMTCNQ, weakly irrad., ESR study 3—8712
  tight-binding quasiparticle motion in Poisson correlated discrete stochastic pot., density of states calc. 3—3025
  $(TMTSF)_2ClO_4$, TMTTF doped, transport and EPR studies, doping effect 3—14112
  $(TMTSF)_2PF_6$, weakly irrad., ESR study 3—8712
  zeugmatography with modulated mag. field gradient 3—4613
  Ag-Cu(Pd)(Pt)(Au) foils, dil., CESR linewidth 3—3534
  Ag-Mn spin glass, magnetisation and ESR, time depend. 3—38628
  Al, ESR linewidth and g-anisotropy, temp. and freq. depend. 3—52628
  $BaMnF_4$, 2-D antiferromag. system, EPR and spin dynamics 3—57761
  $BaMnF_4$, low dimensional antiferromags., EPR study *(Russian)* 3—3515
  $8CaO.8SiO_2.3Fe_2O_3.2FeO$, amorphous slag, EPR study 3—18977
  $CdCr_2S_4(Se_4)(O_4)$, ESR line width and line broadening 3—33978
  $CdCr_2Se_4(S_4)$, ferromagnets, EPR linewidth critical behaviour 3—23799
  $Cd_xZn_yMn_zTe$, semimagnetic semicond., spin glass transition, ESR study 3—33970
  CoS_2, EPR and ferromagnetic resonance study 3—18996
  $CsCuCl_3$, EPR line broadening, cooperative Jahn-Teller effect 3—52610
  $CsMnCl_3.2H_2O$, 1-D antiferromag. system, EPR and spin dynamics 3—57761
  $CsMnCl_3.2H_2O$, low dimensional antiferromags., EPR study *(Russian)* 3—3515
  $CsNiCl_3$, ESR absorption line, exchange interaction and critical indices 3—14124
  Cu complexes, Cu(II) bis (ethyl- and phenylethylsalicylaldimine), magnetism and EPR 3—52602
  $CuCr_2S_4(O_4)$, ESR line width and line broadening 3—33978
  $Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. phases study by EPR 3—43430
  GaP, ion implanted, highly disordered layers, dangling bonds, ESR study 3—52624
  $Gd(Co_xAl_{1-x})$, mag. susceptibility and EPR study 3—3424
  a-Ge:H, B(P), ESR spectra and transport props. 3—43435
  H, doubly spin polarised, hyperfine states, ESR study 3—33535
  $HgCr_2S_4(Se_4)$, ESR line width and line broadening 3—33978
  $InP:Co^{2+}$, EPR study 3—43426
  n-InSb, ESR at submillimeter wavelengths 3—28686
  K_2MnF_4:Fe, antiferromag., EPR linewidth and spin-lattice relax. 3—57762
  K_2SeO_4 crystal, incommensurate phase, phase soliton effect ESR line shape of VO^{2+} 3—28699
  $KTaO_3:Gd^{3+}$, EPR line broadening by elec. fields 3—3525
  $La_xCe_{1-x}F_3:Gd^{3+}$, EPR linewidth study 3—43431
  $La_{1-x}Gd_xAl_2$ spin glass, ESR resonance position shifts, internal field effects 3—57769
  $LiYF_4:Yb^{3+}$, Tb^{3+}, dilute paramagnet, dipole-dipole ESR line width 3—14128
  α-$MnGa_2Se_4$, antiferromagnet, mag. props. meas. 3—23602
  Mo complex in soln., ESR linewidths, spin exchange and rot. diffusion relax. processes 3—47548
  $PbF_2:Mn^{2+}$, superionic, high temp., EPR studies 3—57763
  Pd-Si-Gd, amorphous, EPR, crystallisation studies 3—52619
  $RbCaF_3$, dynamic clusters and disorder near crit. temp., EPR of Gd^{3+}-O^{2-} 3—2772
  $RbNiCl_3$, ESR absorption line, exchange interaction and critical indices 3—14124
  Sc-Gd dil. alloy single crystals, ESR study of dynamics of local moments and cond. electrons 3—38690
  $Si_{1-x}N_x$, g-value, ESR linewidth and hyperfine struct. const. 3—38696
  SiO_2-$Li_2O(Na_2O)(K_2O)$, glass, X-ray induced hole centres, ESR studies, struct. model 3—3530
  SiO_2-Na_2O-NiO-Fe_2O_3 glasses, precipitation of $NiFe_2O_4$, ESR and Mossbauer studies 3—13468
  $SrCl_2:Mn^{2+}$, superionic, high temp., EPR studies 3—57763
  TaS_2(1T), hydrazine intercalation complexes, mag. props. 3—23578
  $Tb_xGd_{1-x}Al_2$, ESR in ferromag. and paramag. phases 3—18986
  $TmPO_4:Gd^{3+}$, slowly fluctuating random strains, EPR fine struct. spectrum 3—38692
  VO^{2+} in tutton salts, EPR, host lattice effects 3—57756
  VO^{2+}-H_2O complex in poly (vinyl alcohol) gels, electron spin echo and ESR studies, mol. cage size effect 3—48094
  $YAG:Nd^{3+}$, struct. imperfection by EPR linewidth study 3—18983
  $ZnCr_2Se_4$, ESR line width and line broadening 3—33978

EPROM *see PROM*
E^2PROM *see PROM*
epsilon meson resonances *see eta meson resonances*
equalisers
  flat response and room gain anal. 3—50842
  sound systems appl. 3—50841
equations
  for equations used in specific subjects, see the specific indexing heading see also Bethe-Salpeter equation; differential equations; equations of state; functional equations; integral equations; nonlinear equations
  colour equations for United Kingdom Schmidt Telescope, appl. to photographic photometry 3—10215
  finite electrode Faraday MHD generator, electrical charact. 3—29409
  stabilised DC arc, current/voltage characts. determ., calc. and obs. 3—51426
equations of state
  see also equations of state of gases; equations of state of liquids; equations of state of solids; phase transformations; thermodynamics
  thick accretion discs, eqn. of state rel. to instability 3—10308
  boson gas, equation of state, barometric formula in weak external potential 3—30768
  calorific equations of state, linear depend. on solidification and melting curves 3—47076
  condensed media, integral eqn. for radial distrib. function 3—8163
  Dirac H atom, virial theorem 3—25723
  distribution of zeros and eqn. of state, cluster series, ideal Fermi-Dirac gas 3—16323
  energetic heavy-ion reactions, three-component fluid dynamics for description 3—6251
  fermion lattice gas, phase transition with infinite ranged interactions 3—30806
  fermion lattice gas with infinite-ranged interaction, phase transition, ground state props. 3—16250
  heavy ion collisions in hydrodynamical model 3—21333
  ideal Bose-Einstein gas, distrib. of zeros and eqn. of state 3—16249
  lattice gas, adsorption isotherm, viral coeffs. 3—30793
  linear combinations of basis pots. calcs. 3—25841
  local temperature 3—16319
  multicomponent classical plasma, eqn. of state 3—27656
  nuclear matter eqn. of state, incompressibility constant 3—11335
  perfect-fluid-filled Kantowski-Sachs cosmological models, Hamiltonian formulation and canonical quantisation 3—35761
  second virial coeff., finiteness effects for spherical boundary conditions 3—54704
  superdense hadronic plasma in degenerate stars, eqn. of state and thermodynamics 3—59195
  supernova explosions, neutrino trapping effects 3—20406
  supernovae, eqn. of state rel. to neutrino esccape, nuclear dissoc. and core collapse and/or explosion 3—35641
  Szyszkowski-Langmuir adsorption, alleged ideality 3—47189
  thermal equations of state, linear depend. on solidification and melting curves 3—47076
  thermodynamic model, parameter estimation, successive reduction of data sets 3—2844
  two-dimensional fluids, semiclassical statistical mechanics 3—32705
  van der Waals-like eqns. of state, symmetry prop. 3—40535
  virial coefficients for thermodynamic system pressure, overlap graph representation of B_6 and B_7 3—10784
equations of state of gases
  compressed real gas, natural convection 3—2168
  conservation laws, symmetrisation, gas dynamic for numerical methods 3—35951
  construction using reference curves 3—51265
  density expansions of correlation functions 3—32838
  disperse system with solid particles, two-fluid model of flow 3—42286
  fusion reactors, propagation of target explosion, to first wall, computer code 3—50038
  gas bubbles in fission reactor materials, thermodynamics 3—36460
  methane-CO_2 mixture, enthalpy and heat of mixing, BWR equation of state 3—37598
  methane-CO_2 mixture, volumetric and thermodynamic props., BWR equation of state 3—37597
  methane-noble gas mixtures, diffusion coeffs. and thermal diffusion factors 3—7682
  multicomponent gaseous mix., approx. eqn. of state 3—51264
  multipolar hard spheres, second dielectric virial coeff. 3—8754
  nonpolar gases, third virial coefficient, correl. using T_c, P_c and ω parameters 3—49298
  real gas, Joule-Thomson effect calc. using Bettie-Bridgeman eqn. 3—2169
  virial coeff. and coupled equations, WKB approx. 3—22564
  Ar gas, pair pot. determ. from thermodynamic props. 3—12806
  CO_2, acentric factor 3—17991
  H_2-H_2, thermodynamic props. from ab initio pot. surface calcs. 3—11723
  He bubbles in Al and Ni films, press. and density determ. 3—8381
  Kr, dense gas, eqns. of state 3—22565
  Kr-Xe, vapour-liquid equilib., crit. line, Gibbs energy, phase compositions 3—33397
  Li_2, continuum and metastable states, thermodynamic props. 3—32832
  N_2, dielectric virial coeff. and refractivity at 25°C *(French)* 3—56643
  Na_2, continuum and metastable states, thermodynamic props. 3—32832
  Xe, dense gas, eqns. of state 3—22565
equations of state of liquids
  alkali metals at high temp., setup for PVT diagram determ. 3—36139
  n-alkanes, eqn. of state based on relative dielec. permittivity meas. 3—28076
  associated systems, vapour-liq. equilib. calc. by eqn. of state 3—18429
  binary liquid mixtures, 2-fluid theory and thermodynamic props., appl. to hard-sphere mixtures 3—2363
  Boyle line and density of fluids 3—33327
  bubble containing, acoustic wave propag,, model nonlinear eqns. 3—12403
  cellulose diacetate in 2-butanone, light scatt. meas., theta temp., solubility, association, virial coeff. 3—3748
  construction using reference curves 3—51265
  dipolar hard ellipsoids fluid, second virial coeffs. 3—13394
  Flory equation of state theory, conc. depend. of interaction parameter 3—51740
  fluid under shear, thermodynamic variables, nonequilib. corrections 3—8222
  formamide, (p,V,T) behaviour, 288-323K and 0.1-280MPa 3—57055

equations of state of liquids continued
  four component liquid systems, density and viscosity meas., eqn. of state 3—8240
  hard disc fluid, isotropic-nematic transition, Monte Carlo study 3—2796
  hard fused spheres, eqn. of state, generalised Boublik eqn. 3—57054
  hard triatomic mol. fluid, nonlinear model, Monte Carlo simulation 3—27813
  hard triatomic molecules, fluid, virial coeffs. 3—23010
  hard-core particles, Stirling numbers 3—37755
  hard-sphere eqn. of state, Carnahan-Starling, pure component vapour press. 3—2729
  limited miscibility at high press. 3—18462
  LMFBR, liquid metal coolant, critical temp. determ., appl. to Na 3—36463
  methane-CO_2 mixture, enthalpy and heat of mixing, BWR equation of state 3—37598
  natural gaslike mixtures, liquefied, density prediction, math. models 3—2638
  nonelectrolyte binary liq. mixtures, vap. liq. equilib., heat of mixing and vol. change of mixing data 3—25705
  nonideal fluid mixtures, eqn. of state, local comp. model, density depend. mixing rules 3—2730
  oligoorganosiloxanes, eqns. of state 3—2731
  polyelectrolytes, linear, virial eqn. for osmotic press. 3—23009
  polymer blends, phase stability, molecular equation of state theory 3—38021
  polymer melts 3—32698
  polymer solns., thermodynamic props., computer simulation *(Russian)* 3—47126
  polymer solutions, Flory eqn. of state theory, conc. depend. of interaction parameter 3—51740
  polyurethane elastomer, liquid, p-V-T studies 3—13395
  polyvinylidene fluoride-isotactic polyethyl methacrylate blends, lower critical soln. temp., eqn. of state theory 3—38022
  simple liquids, eqn. of state and thermodynamic props. at high press. 3—13393
  viscoelastic Z *(German)* 3—56584
  water containing bubbles, Hugoniot curves *(Russian)* 3—47077
  Yukawa fluid crit. behaviour in mean spherical approx. 3—51466
  D_2 liquid, eqn. of state from shock-wave expts. at 760 kbar 3—33380
  H_2 liquid, eqn. of state from shock-wave expts. at 760 kbar 3—33380
  Hg, expanded, metal-nonmetal transition, electronic and thermodynamic props. 3—43023
  Kr, liquid-vapour interface, surface tension, density distrib. *(Russian)* 3—2935
  Kr-Xe, vapour-liquid equilib., crit. line, Gibbs energy, phase compositions 3—33397
  N_2, eqn. of state and thermodynamic props. at high press. 3—13393
equations of state of solids
  actinide nitrides, electronic struct., lattice parameters 3—18613
  ice VII, eqn. of state and refr. index to 500 kbar 3—28048
  inert gas crystals, FCC struct. and pair interaction pot. 3—46886
  melting, van der Waals theory in two and three dimens. 3—57064
  metals, equation of state, strengths and elastic constants, physico-mech. calc. *(Chinese)* 3—19358
  metals interpolation equations of state 3—51741
  quartz, fused, elastic moduli, ultrasonic eqn. of state *(Chinese)* 3—42693
  rare earth cpds., mixed valence state electron phase transitions in two level model 3—23334
  reinforced plastic, eqns. of state at high temp. under load, mech. damageability and physicochem. transforms. 3—51742
  solid/vapour interfacial free energy and surface tension 3—47191
  Al, nuclear Gruneisen parameter for eqn. of state, vol. variation 3—28074
  Ba, electronic transitions, s→d and p→d, at high press., systematics 3—13700
  Be, nuclear Gruneisen parameter for eqn. of state, vol. variation 3—28074
  $CaCO_3$ (aragonite), shock compression expts. and eqn. of state 3—4856
  Cs, electronic transitions, s→d and p→d, at high press., systematics 3—13700
  $Cu_{1-x}Al_x$, equation of state, pseudopot. calc. 3—13396
  $Cu_{1-x}Sn_x$, equation of state, pseudopot. calc. 3—13396
  $Cu_{1-x}Zn_x$, equation of state, pseudopot. calc. 3—13396
  D_2O-VII ice, isothermal eqn. of state and lattice const., X-ray study 3—2732
  H_2O-VII ice, isothermal eqn. of state and lattice const., X-ray study 3—2732
  I_2, solid, electronic transitions, s→d and p→d, at high press., systematics 3—13700
  La, electronic transitions, s→d and p→d, at high press., systematics 3—13700
  Li halides, eqn. of state anal. 3—51743
  $LiTb_pT_{1-p}F_4$, mag. eqn. of state 3—28557
  MgO, bonding charge density and eqn. of state 3—42565
  Na halides, eqn. of state anal. 3—51743
  Rb, high press. equation of state, X-ray diffr. and IR reflectivity study 3—18423
  Ta, work hardening and plastic eqn. of state 3—58129
  UO_2 fast breeder oxide fuel, Redlich-Kwong eqn. of state 3—16858
  Xe, solid, electronic transitions, s→d and p→d, at high press., systematics 3—13700
equilibrium, chemical *see chemical equilibrium*
equilibrium, phase *see phase equilibrium*
equilibrium constants *see chemical equilibrium*
equilibrium diagrams *see phase diagrams*
equipment evaluation (computers) *see computer selection and evaluation*
equivalent circuits
  cylindrical shells, coaxial, sound radiation 3—27300
  dielectric surface discharges, and pot. field solns. equiv. circuit anal. 3—2325
  distributed-line pyroelectric detector 3—49453
  electric-field coupled, magnetic-field transducers representations 3—7367
  electrical inhomogeneities in MHD channels, statistical anal. 3—2300
  elemental mechanical vibrating system equiv. network representation, coordinate transform. 3—27431
  Faraday MHD convertor equivalent cct. and out-of-channel fault model 3—51396
  ion selective K^+ and Cl^- FET microelectrodes, transfer function meas. and equiv. circuit 3—54726
  linear modulation, internal, equiv. electrical models method 3—7039
  nonlinear eddy current problems, approx. treatment 3—36911

equivalent circuits continued
  optoacoustic transducer, modified equivalent circuit 3—27347
  partial discharges in gaseous interfaces in dielectric-uniform field electrode struct. 3—22733
  photoelectrochemical cells, current-voltage anal. under mass and light flux variation 3—9454
  piezoelectric transducer, membrane type, flexural mode, characts. 3—12484
  piezoelectric transducer, thickness mode, induced voltage characteristics 3—32576
  planar stripe lasers with deep Zn-diffusion, stability of horizontal transverse modes 3—27046
  plasma equivalent circuit resonance and HF power absorption 3—56688
  porous material double layer, sound absorpt. coeff. 3—12393
  shear bulk acoustic waves, generation by pair of electrodes on piezoelec. surface 3—37314
  silent discharge, positive and negative figures on dielec. surface, mirror image relations obs. 3—51422
  solid electrolyte electrodes, impedance spectra, Fourier anal. 3—57132
  solid electrolytes, complex impedance and admittance data, nonlinear least squares anal. 3—13537
  superconducting energy storage system elec. characts. *(Japanese)* 3—58565
  vacuum system, simulation by resistor network for molecular flow region 3—49387
  n-GaAs metal-semiconductor-metal stripline photodetectors, first order optoelectronic correlations meas. 3—49445
  n-InP/room temp. molten $AlCl_3$-butyl pyridinium chloride electrolyte interface study 3—9452
  Pb-acid battery electrical circuit model 3—34692

erbium
  see also nuclei with ......
  alkaline earth fluorides; Er^{3+}, spin transfer, ^{19}F NMR shift 3—33995
  magnetic excitations in spin struct., inelastic neutron scatt. 3—8660
  $N_{4,5}$ appearance potential spectra interpretation *(Russian)* 3—34171
  thiogallates, Er doped, photolum. and cathodolum. props. 3—3780
  $BaYb_2F_8:Er^{3+}$ cryst., laser transitions, excitation schemes 3—27063
  $BaYb_2F_8:Er^{3+}$ crystals, multistage sensitisation of $^4F_{9/2}\rightarrow{}^4I_{112}$ and $^4F_{9/2}\rightarrow{}^4I_{13/2}$ lasing transitions 3—38904
  $Bi_{12}SiO_{20}:Ho^{3+}$, Er^{3+}, impurity IR absorption spectra, Stark levels 3—19165
  $CaF_2:Er$, transverse Zeeman effect, optical absorpt. and fluoresc. spectra 3—3691
  Er I, elec. dipole transitions, Coulomb approx. oscillator strengths 3—21703
  $Er:Lu_3Al_5O_{12}$ laser operation, influence of excitation energy absorpt. from $^4I_{13/2}$ level 3—27065
  $Er:Lu_3Al_5O_{12}$ millisecond laser 3—1640
  $Er^{3+}:BaYb_2F_8$, multistage sensitisation of $^4F_{9/2}\rightarrow{}^4I_{112}$ and $^4F_{9/2}\rightarrow{}^4I_{13/2}$ lasing transitions 3—38904
  Er^{3+}:YAG crystal laser, active mode locking, 2.94 microns 3—17500
  ^{165}Er, double *K*-shell-vacancy prod. per *K*-electron-capture-decay 3—11762
  GaAs:Er, ion implanted, luminescence line profile 3—19187
  GaP:Er, ion implanted, luminescence line profile 3—19187
  $LaF_3:Er^{3+}$, optically excited, high field studies of spin-lattice relax. processes 3—38727
  $LiTmF_4:Ce^{3+}$, Nd^{3+}, Er^{3+}, Yb^{3+}, magnetisation of non-Kramers ions, ESR study 3—14127
  $LiYF_4:Er^{3+}$, Orbach spin-lattice relax. under phonon bottleneck conditions, effect of secondary reson. scatt. of phonons 3—28698
  $RPO_4:Er^{3+}$, R=Sc, Y, Lu, hyperfine parameters EPR study 3—33975
  $RbMgF_3:Er^{3+}$, optical transitions of Er^{3+} ions 3—3773
  $RbMgF_3:Er^{3+}$, optical transitions study 3—3774
  Si:Er, γ-ray irrad., photocond. and elec. props. 3—43235
  $ThO_2:Er^{3+}$, site selective spectroscopy, fluoresc. and excitation spectra 3—19172
  $(Y, In)_2O_3:Er^{3+}$, luminescence, host sensitization mechanism 3—3781
  ZrO_2-$Y_2O_3:Er^{3+}$ crysts., radiative transition probabilities 3—14337

erbium alloys
  $ErBe_{13}$, cryst. field parameters, magnetisation and susceptibility meas. 3—52089
  $ErCo_2$, magnetic excitation spectra and neutron differential scatt. cross sections 3—52434
  Er_4Co_3, bulk amorphous alloy, mag. props. meas. 3—52456
  $Er_{57}Co_{43}$, amorphous, mag. props. 3—57701
  $ErCo_2Ge_2$, mag. props., magnetisation and neutron diffr. meas. 3—43352
  $ErCo_2Si_2$, collinear antiferromag. ordering, neutron diffr. study 3—43351
  $Er_2Co_{17-x}Zr_x$, mag. props., effect of substitution 3—28636
  $ErCu_2$, Neel temp., magnetisation and RKKY model 3—52481
  $Er_6(Fe, Mn)_{23}$, mag. props. under high press. and in high mag. fields 3—28674
  $ErFe_2$ hydride forming alloy, surface segregation, XPS and mag. susceptibility study 3—2816
  $Er_{57}Fe_{43}$, amorphous, mag. props. 3—57701
  $ErGa_2$, metamagnetism, magnetisation and neutron diffr. study 3—23631
  $ErGa_2Ni$ and $ErGa_4Ni$, synthesis and struct. 3—37857
  Er_5Ir_3, cryst. struct., X-ray diffr. study 3—2470
  $ErMn_2$, Laves phase, mag. characts. 3—47480
  $ErMn_2$, mag. props. and thermal expansion anomaly 3—52588
  ErNi, electrical resistivity and magnetic transitions, expt. study 3—18685
  $ErNi_2$, quadrupolar pair interactions, spontaneous magnetisation meas. 3—52422
  $ErPd_2Si_2$, magnetic susceptibility meas. 3—8648
  $Er_{2-y}Pr_yCo_{16.4}Zr_{0.6}$, mag. props., effect of substitution 3—28636
  Er_2Pt, mag. props. study 3—57616
  Er_5Rh_3, cryst. struct., X-ray diffr. study 3—2470
  ErSb, anisotropic exchange and antiferromag. transition, neutron diffr. study 3—38609
  $(Fe_{82}B_{18})_{90}Er_5La_5$, amorphous, low field mag. props. 3—28545
  $Gd_{1-x}Er_xAl_2$, mag. susceptibility and elec. resist., random cryst. elec. field effect 3—38376
  Ho-Er, γ-γ perturbed angular correlation study 3—52687
  $(Ho_{0.6}Er_{0.4})Rh_4B_4$, re-entrant superconducting-ferromagnetic transition, specific heat 3—3444
  La-Al-Er, crystal field parameters from neutron spectra 3—13780
  $La_{0.7}Er_{0.3}Al_2$, spin glass freezing dynamics, neutron scatt. study 3—38631
  Y-Cu-Eu, dilute amorphous alloy, crystal field, neutron diffr. study 3—23337

erbium alloys continued
Y-Er anisotropic spin glasses, susceptibility and magnetisation meas. 3—14062
$Y_{6-x}Er_xFe_{23}$, hydrides, mag. props., structural props., X-ray diffr. anal. 3—52524

erbium compounds
see also erbium alloys
$(Bi_2O_3)_{0.8}(Er_2O_3)_{0.2}$, struct. and ionic cond., neutron diffr. study 3—33201
$CsEr(PO_3)_4$ structural type IV crysts. 3—56853
CsF-ErF_3 system, phase diagrams and X-ray powder data *(French)* 3—19330
$ErCl_3$ alcohol solvates, f-f bands intensity 3—11885
$ErCl_3$, hydrated and unhydrated X-ray absorpt. spectra, white lines theory 3—21777
$Er(ClO_4)_3$, hypersensitive bands, oscillator strengths, solvent effect 3—6723
$ErCoO_3$, magnetocaloric effect in adiabatic spin reorientation, optical and thermal obs. 3—52489
$ErCo_2Si_2$, antiferromag. struct., neutron diffr. study 3—52368
$ErCrO_3$, magnetisation induced by optical pumping, expt. study 3—23727
$ErCrO_3$, spin reorientation, laser induced, time resolved spectra 3—52777
$ErFe_2H_x$, cryst. struct. and props. 3—8007
$ErFe_{1-x}Mn_xO_3$, x=0.07-0.33, mag. props. and spin reorientation transitions, Mn^{3+} Jahn-Teller ion effect 3—43371
$ErFeO_3$ orthoferrite, spin-reorientation, magnon light scatt. study 3—23924
$ErFeO_3$, orthoferrites, weak antiferromag., neutron diffr. study 3—14008
$ErFeO_3$, spin transitions, easy axis monitor 3—40646
$Er_3Fe_5O_{12}$ garnet, linear mag. birefringence and optical axis position 3—28844
$Er_3Fe_5O_{12}$, spin transitions, easy axis monitor 3—40646
$Er_{1-x}Ho_xRh_4B_4$, ferromag. and supercond. crit. behaviour, mean field study 3—18824
$(Er_{1-x}Ho_x)Rh_4B_4$, ferromag. supercond., US attenuation near T_{c2} 3—57477
ErIG, Faraday rot. anisotropic behaviour 3—23920
$Er_6Mn_{23}D_{23}$, antiferromag., powder neutron diffr. study 3—14004
Er_2O_3, band struct., metal-semicond. transition due to Coulomb correlation 3—18619
Er_2O_3 stabilised HfO, polycryst., self-diffusion of Er and Hf 3—13528
Er_2O_3 thin films, dielec. const. and loss factor meas. 3—47604
Er_2O_3-HfO_2 system, phase relations and ordering, X-ray diffr., thermal expansion 3—53036
Er_2O_3-ZrO_2 solid solutions, sintering *(Japanese)* 3—39084
ErOCl, optical absorpt., thermal expansion *(Russian)* 3—3768
$ErPO_4$, cryst. struct. determ. 3—46901
$Er(ReO_4)_3.4H_2O$, NQR study 3—23832
$ErRhB_4$, mag. supercond., Gibbs free energy, paramag. contrib. 3—8617
$ErRh_4B$, ferromagnetic superconductors, mixed states 3—38563
$ErRh_4B_4$, BCT phase, supercond. and mag. order 3—57496
$ErRh_4B_4$, coexistence of magnetism and supercond., resist. and neutron diffr. studies 3—13947
$ErRh_4B_4$, domain-like mag. struct. in supercond. phases 3—23592
$ErRh_4B_4$, elec. and mag. props. from cryst. field parameters 3—28311
$ErRh_4B_4$, ferromag. supercond., mol. field theory for sf exchange model 3—57463
$ErRh_4B_4$, ferromagnetic superconductor, SF exchange interaction model 3—18817
$ErRh_4B_4$ single cryst., supercond. and mag. props., anisotropic 3—13952
$ErRh_4B_4$ sputtered supercond. films, type II to type I transition 3—57499
$Er(Rh_{1-x}Co_x)_4B_4$, supercond. and magnetism 3—57495
Er_2S_{3-x} thermoelectric power and resistivity obs. at 500°C 3—14972
Er_5Si_3Cx, superstructure and order-disorder phenomena, X-ray diffr. study 3—13192
$ErTiO_3$, mag. struct., neutron diffr. study 3—14013
$Er_{10}W_2O_{21}$, cryst. struct. determ. 3—27899
$(EuEr)_3(FeGa)_5O_{12}$, domain struct. of (111) crystal plates with uniaxial anisotropy 3—52520
Ho_2O_3-Er_2O_3 powdered mixtures, photoacoustic spectra, dilution effects 3—18401
$LiErF_4$ crystal, self-activated, stimulated emission of Er^{3+} ions 3—52808
LiF-ErF_3 system, cryst. growth, phase constitution, microstructure, DTA 3—56841
$(NH_4)_2[Er_2UMo_{12}O_{42}].22H_2O$, cryst. struct. determ. 3—8015
$(TbErCd)_3Fe_5O_{12}$ crystals, multiplet mag. domains, Faraday effect study 3—33924
$(Y_{1-x}Er_x)Rh_4B_4$, effect of supercond. on spin dynamics 3—57478
Zr_2O_3-Y_2O_3-Er_2O_3 system, solid state synthesis of fluorite, kinetics and mechanism 3—24216

ergodic theorem *see statistical mechanics*

erosion
arroyo development in Henry Mountains, Utah, USA 3—35163
Cayman Islands, coastal morphology and L.Quaternary history 3—54017
Flynn Creek, Oregon Coast Range stream, two-phase bedload transport model 3—29952
glacial erosion in ice-divide zone in Scotland 3—44485
Himalayan arc river gradients rel. to tectonic development 3—39841
ice cap, effect of wind scouring on climatic records from ice core O isotope profiles 3—35196
India coast (10°N, 76°E), waves, longshore currents, erosion 3—54041
Laurentian submarine fan, sedimentation and erosion history 3—25072
rain drop size distrib. rel. to soil movement by rainsplash 3—4907
river sedimentation processes affected by log-jams and landslides 3—44470
rivers, coarse sediment transport in Pennine (UK) streams 3—44469
Rolling Plains of Texas Panhandle, evaporite dissolution and karst features development 3—29954
slope instability remote sensing, appl. of elevation models for landform anal. by SEASAT-SAR imagery 3—20125
Texas Panhandle, storm erosion of potential nucl. waste disposal site 3—44444
Yilgarn Block, SW Australia, chem. weathering and groundwater chem. 3—54028
Ne(:Ar), solid, electron-induced erosion meas. 3—13280

error analysis
see also error correction; error detection
Abel inversion, simple analytic representation for experimental data 3—40349
Amravati district, Vidarbha, India, areal mean rainfall, errors due to obs. gaps 3—9944
convection diffusion equation, numerical solution 3—49297

error analysis continued
deformation electron density determ. by coherent neutron scatt., effect of amplitude errors 3—33044
digital tachometer mean flow speed, design, error analysis 3—42341
elastoplastic torsion problem, mixed method 3—37369
four circle diffractometry, error assessment of single crystal 2θ data 3—37737
Fourier phase problems, computational examples for two dimens., error criterion 3—1580
geodesic lenses, design modification and aberration error analysis 3—56352
graduated circle, error determ. by digital method 3—40555
Helmholtz equation in exterior domain, approximation method 3—16154
Helmholtz-type eqns. in unbounded domains, finite-element method 3—20644
kinematic equations, solution error eqns. derivation using quaternions, artificial satellite appl. 3—35413
maritime EM prospecting equipment, methodical errors anal. *(Russian)* 3—44586
natural frequency calcs., errors using eigenvalue economisation 3—10556
neutron time-of-flight diffractometry, assessment of accuracy 3—7873
nuclear mass calc. from transverse mass relations, error props. 3—49737
random process correlation functions, errors in determ. of derivatives *(Russian)* 3—10789
roughness parameters, effect of approximations on error of digital meas. 3—40551
seismic magnitude-frequency b-value errors 3—19908
semiconductors, impurity level determ. from cond. or Hall data, error anal. 3—3109
sound propagation in shallow water, low-error bearing estimation 3—1832
Stefan problem, multidimensional two-phase, error estimates 3—22303

error compensation
see also error correction
laser-mirror scanner error compensation *(Russian)* 3—27125
temperature error compensation in transducers elastic components, for mechanical quantities meas. 3—299
vibrational level gauge with temperature-error compensation 3—10829
weighing, aerostatic force effects due to air density fluctuations 3—274

error correction
digital EM thickness gauge, calibration with account of correction function 3—25906
digital thermometers, error correction *(Russian)* 3—25877
fission reactor control computer, error diagnosis/recovery system 3—31689
Fourier transform IR spectroscopy, phase correction methods 3—5873
Fourier transform IR spectroscopy, photometric accuracy and phase correction 3—5874

error correction codes
speech autocorrelation pitch detector with error correction 3—7337

error detection
see also error analysis
fission reactor control computer, error diagnosis/recovery system 3—31689

error recovery (computers) *see system failure and recovery*

error statistics
monitoring system error probabilities calc. 3—247
power meas. for random signals, minimal sampling freq. *(Polish)* 3—5816

errors
see also measurement errors; roundoff errors
air pollution concentrations, comparison of roadway pollutants dispersion models with Texas data 3—34750
biomolecules, synthesis, accuracy, thermodynamic aspects 3—58592
correlation coefficients, optical computation errors 3—36941
earthquake epicentre location errors in Fennoscandia, statistical model 3—29863
EPR data anal., parameter errors calc. 3—23785
holographic interferometry, evaluation optimisation *(German)* 3—32327
light divider design, systematic error anal. 3—12287
molecular beam scattering expts., cluster study as a source of error 3—21947
nonmetallic materials in conditions of radiant heat transfer, contact method for meas. surface temp., error 3—304
optical straightedge, noncontact, error anal. 3—27277
optoelectronic device having a linear detector array, signal detect. error probabilities 3—25948
parabolic trough annual performance effects of systematic rotation and receiver location errors 3—39450
seismic phase-velocity analysis, systematic errors 3—58904
star positions, errors propagation 3—59185
visual optical indexing heads, reading errors 3—10877

erythema *see biological effects of ultraviolet radiation*

erythrocytes *see blood; cellular biophysics*

Esaki diodes *see tunnel diodes*

Esaki effect *see tunnelling*

ESCA *see electron spectroscopy; spectrochemical analysis; X-ray photoelectron spectra*

ESR *see paramagnetic resonance*

estimation theory
see also information theory
medical image reconstruction from US array data, statistical estimation approach 3—4589

eta meson resonances
effective Lagrangians, U(1) axial anomaly, renormalisation, meson spectrum η, η' gluon content 3—26064
$e^+e^- \rightarrow \psi X$, exclusive channel production rates for $(\pi\pi)$, η' and $\iota(1440)$ 3—11198
$\eta_c \rightarrow \gamma\gamma$, QCD multipole expansion, soft gluon effects in quarkonium decays 3—49629
$\eta'(960)$ hadronic decay, pseudoscalar glueball treatment, flavor SU(3) symmetry 3—6096
$\eta' \rightarrow \eta\pi\pi$, $\delta(980)$ as a broad $q\bar{q}q\bar{q}$ state 3—31168
η' mass from lattice QCD 3—26096
η'-η-G(1440) mixing, scheme on QCD mass formula including axial-anomaly 3—45359
$\gamma\gamma$ prod. of η', f(1270), A_2, f′(1515), E(1420) 3—49714
$\iota(1440)$ hadronic and radiative decay characts., $\delta\pi\eta'$ coupling strength 3—6100
$\phi \rightarrow \eta'\gamma$, radiative transitions, neutral meson quark content 3—49686

eta meson resonances continued
π-η-η' mass difference, Wilson action, axial anomaly depend. 3−31028
$\theta(1640)\rightarrow\eta\eta(\eta\eta')$, effective Lagrangian framework satisfying QCD, glueball config. 3−49671

eta mesons
effective Lagrangians, U(1) axial anomaly, renormalisation, meson spectrum η, η' gluon content 3−26064
$e^+e^-\rightarrow$exclusive channels, 1.4-1.9 GeV, $\rho'\omega'\phi'$ model interpretation 3−26128
$\eta\rightarrow2\gamma$ decay rate, large symmetry breaking effects 3−634
$\eta\rightarrow3\pi$ decay rate, large symmetry breaking effects 3−634
η EM form factors in VDM and QCD 3−36249
$\eta\rightarrow\mu^+\mu^-$, branching ratio study 3−21122
$\eta\rightarrow\pi^0\gamma\gamma$, branching ratio 3−21134
η'-η-G(1440) mixing, scheme on QCD mass formula including axial-anomaly 3−45359
$\gamma p\rightarrow F^+F^-X$, 20-70 GeV, inclusive cross section, estimation from η decay channels 3−49690
π-η-η' mass difference, Wilson action, axial anomaly depend. 3−31028
$\tau\rightarrow\nu\pi X$, $X=\rho,\omega,\phi,\eta$, second class currents, weak current form factors 3−31209
$\theta(1640)\rightarrow\eta\eta(\eta\eta')$, effective Lagrangian framework satisfying QCD, glueball config. 3−49671

etalons *see interferometers*

etchants *see etching*

etching
see also crystal defects; dislocation etching; sputter etching
alpha particle tracks, optimum etching time in cellulose nitrat track detector 3−26595
cellulose nitrate Kodak CA 80-15, etching props. 3−50126
conical microlenses, chem. etched, for coupling single-mode lasers into single-mode fibres 3−1771
CR39 solid state track detectors, bulk-etch rates and track-etch rates study 3−26579
CR-39, plastic film detector, characteristics, using chemical-electrochemical etching 3−50135
CR-39 fast neutron dosimeters, highly sensitive, partial optimisation of electrochem.-etching parameters 3−1074
CR-39 solid state track detector, anomalous track development, γ-ray effects 3−1153
Cu-Zn, new etchant for study of grain boundary-induced migration 3−48001
dielectric detectors, nucl. fission fragment tracks electrochemical etching 3−50180
field emitter etching facility with good reproducibility 3−29312
gas-surface interactions, laser enhanced, basic processes and appls. 3−4316
glass, optimum sample prep. condition for precise meas. of homogeneity by Shelyubskii's method *(Japanese)* 3−9385
glass, technical grade, strengthening by deep etching in acid influence on strength in axial tension 3−19441
holographic gratings, metal coated, groove profile form. 3−12302
integrated optical circuit processing using III-V compounds 3−32507
loss stabilised buried optical guide laser, LPE grown, integration with other optical devices 3−24159
LR 115 cellulose nitrate track detectors using different (n,α) radiators, neutron sensitivity 3−26577
particle damage trails, electrochemically etched, amplification in nucl. track detectors 3−31879
phosphor powder, AC, electrolum. brightness and maintenance, etching effect 3−3819
PMMA film, vaccum UV photoetching 3−19442
polarisation maintaining fibres, fabrication using gas-phase etching 3−22266
poly(ethylene terephthalate) films, self-developing photoetching by laser radiation 3−4155
polyethylene, struct. deform. during cold drawing 3−24297
polyethyleneterephthalate film, heavy ion irrad., etching, pore dias. 3−26593
polyimide: Cu complex films, etching and elec. props. 3−57443
polymer film, soft X-ray photoetching 3−34517
polymeric nucl. track detector, particle track etching mechanism 3−17171
polyvinylidene fluoride, straining with UF_6 on fission tracks 3−11614
quartz, fluoride-based etchants 3−34509
quartz, surface electron structure, X-ray fluorescence anal. 3−13606
solid state nuclear track detectors, lightning chemical etching method using electrohydraulic effect *(Chinese)* 3−50137
steel, ion nitrided, struct. characterization 3−4209
steel, low alloy, low C, optical revelation of fine martensite islands in bainite *(German, English)* 3−24462
STEM contamination and electron beam etching, elec. field effects 3−10961
strip buried heterostructure laser, LPE grown, integration with other optical devices 3−24159
VMOS structures, anisotropic etchant effects on surface charge 3−13914
wire, drawn, residual stresses determ. in etching off layers by chem. and electrolytic methods 3−24434
Al-Cu, etched and anodised, surface anal. 3−39302
Ar, solid, plastic deformation during creep, subboundary migration, etching study 3−13319
Au-C-poly(butene-1 sulfone) three-layered system, soft X-ray induced energy deposition 3−37962
$BaCd(HCO_2)_4$, cryst. growth, morphology and defects, etching study 3−37823
$CaCO_3$, calcite, etch pit morphology, by glacial acetic acid 3−9200
$CaCO_3$, cleaved surface, etch pit morphology, chem. eqns. and lateral reaction rates 3−47970
$Cd_{1-x}Mn_xTe$, semimagnetic, cryst. struct. imperfections, X-ray diffr., etching and optical transmission studies 3−33194
n-CdS(Se) photoelectrode, time resolved photolum., surface state influence 3−38911
CdSe thin films electrodeposited on Ni substrate, etched and unetched cross-sections prep. and anal. 3−28987
$Co_{66}B_{30}Si_4$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3−33932
$(EuTmCa)_3(FeGe)_5O_{12}$ film, ion-implanted layers, defects study 3−18328
Fe-C alloys, etching of spheroidal graphite *(Chinese)* 3−4222
$Fe_{70.5}B_{15.5}Tb_7La_7$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3−33932

etching continued
GaAs epitaxial films, structural imperfections and their effect on Schottky-barrier characts. 3−13671
GaAs, etched (100) surface, Auger anal. 3−34181
n-GaAs, etching under laser illum., cryst. defects study 3−42612
GaAs grating structures preparation by photochemical etching *(Slovak)* 3−46357
GaAs semi-insulating substrate, in situ etching using $AsCl_3$ in MOVPE 3−14756
GaAs wafers, laser chemical etching of vias 3−47972
GaAs:Te, microdefects and microprecipitates investig. *(Chinese)* 3−8050
GaInAsP/InP etched mirror and groove-coupled laser device for integrated optics 3−7009
Gd-Co powders, amorphised by milling, magnetisation props. meas. *(Russian)* 3−33928
$Gd_2(MoO_4)_3$, ion beam irrad. area meas. using surface etching technique 3−20829
InGaAsP/InP laser diodes, V-grooved-substrate buried heterostruct., etching, ageing 3−41869
InGaAsP-oxide interface, comp. profiles, AES ESCA and ion sputtering studies *(Chinese)* 3−38237
InP (100)-Al(Au) interface with etched or cleaned InP surfaces, Fermi level, XPS study 3−47419
InP epitaxial layer growth by In-PCl_3-H_2 technique, surface quality and mobility characts. 3−43756
InP, epitaxial layers, carrier conc. and Hall data rel. to vapour etching before growth 3−34239
n-InP, epitaxial vapour phase etching, Hall mobility meas., SEM study 3−43976
InP:Cd, Cd diffusion profiles meas. with etching/Schottky contact method 3−23097
InP/InGaAsP, material-selective etching, device fabrication 3−9204
InP-Hg(Au) Schottky barrier diodes, noninvasive anal. of InP surface 3−13881
InSb, AES evaluation of cleaning and etching methods 3−43667
Li_2CO_3, single crystal growth, zone melting technique 3−8967
$LiGaO_2$, dielec. props., relation to crystallographic polarity, ion surface scatt. and chem. etching studies 3−38766
$LiGeO_3$, dielec. props., relation to crystallographic polarity, ion surface scatt. and chem. etching studies 3−38766
NH_4Cl-$NiCl_2$-H_2O system crystal growth, etching, optical and X-ray obs. 3−27882
Ni based rough hot selective surfaces produced by electroless, electrolytic methods 3−19609
$Ni_{80}Fe_{20}$ etched films, micromagnetic struct. and struct. const. 3−14096
Pt, surface struct., etching morphology 3−33547
Si (100) surface, thermal etching in Ar ambient 3−47971
Si, amorphous CVD film, solid phase epitaxy on etch cleaned cryst. Si 3−8972
Si cryst. etching by electron beam discharge, pipe-like geom., active radical flow generation 3−37714
Si doping profiles determ., by meas. electrode potential during etching 3−46980
Si epitaxial layer, <100) oriented, defect evaluation by wet chem. etch 3−2997
Si, etched grooves, planar refilling by LPE 3−34247
Si, etching in ClF_3 and related mixtures, multiple-etchant loading effect 3−43971
Si, laser-enhanced etching by XeF_2, non-thermal effects 3−43967
Si, nitridation, ellipsometry and AES studies 3−4160
Si, polycrystalline, Bridgman growth, crystallographic anal., photovoltaic appls. 3−22807
Si solar cells, polycryst., integral screen printing technique 3−53558
Si solar cells, polycryst., chem. and ion beam etch studies rel. to elec. characts. 3−53561
Si surface, (111), facet form., $SiCl_2$ adatom desorption energy 3−38171
Si surface, adsorption of F, removal by ion bombard., SIMS study 3−38990
Si surface, anisotropically etched, scanning Auger electron microscopy, topographical effects correction 3−40725
Si, swirl defects revealed by Cu decoration etching *(Chinese)* 3−13209
Si wafer, Czochralski grown, multistep repeated annealing, O and induced defect behaviour 3−4060
Si:B, ion implantation damage annealing, etching and ellipsometry study, I^2L gate appl. 3−22927
Si:B, laser annealing, picosecond dynamics 3−56938
Si:B(P) wafer, etch-stop mechanism 3−4158
Si:Cr, Sirtl etching, Cr diffusion at room temp. obs. 3−42847
Si:H single cryst., etch pits and dislocation rosettes, H impurity effect 3−56900
Si:O, dislocation-free, diffusion limited O precipitation, IR and neutron scatt. and etching studies 3−51796
Si:O, precipitation kinetics, solubility, diffusivity and particle size 3−42787
Si:O, thermally activated O donors distribution, etching study 3−33284
Si:P, heavily doped, P inactivation mechanism 3−18335
SiO_2 films, thermally nitrided, N distribution, AES, IR and etching studies 3−51976
SiO_2, vitreous, surface electron structure, X-ray fluorescence anal. 3−13606
Ti, etching in acid soln., H_2 absorption 3−9261
Ti-Al-Mo-V(G), etching in acid soln., H_2 absorption 3−9261
n-TiO_2 electrode in Ti-Hf-H_2O soln., thermodynamic and photoelectrochem. behaviour 3−4291
TiO_2 film to improve photoresist adhesion 3−8973

ether drift *see special relativity*

Ettingshausen effect *see thermomagnetic effects*

europium
see also nuclei with ......
Atlantic Ocean, rare earth element distrib. 3−35191
atom, F-level features, Dirac-Fock calcs. 3−31913
atom, partial photoionis. cross-sections in 4d reson. region 3−41534
excess ferromagnetism study *(Russian)* 3−18933
fluoroberyllate:Eu^{3+} glass, computer simulated struct., comparison with optical spectra 3−33128
glass:Eu^{3+}, homogeneous spectral line broadening, luminesc. study 3−28899
Schiff base ^{151}Eu complexes, Mossbauer study 3−43467
silica glass:Eu, absorption and fluorescence spectra, melting and heat treatment effects 3−34140

europium continued
silicate glass: Eu^{3+}, optical dephasing, coherent transients and hole burning meas. 3−27173
sulphate glass:Eu^{3+}, internal vibrs., electron-vibr. and Raman spectra study 3−14311
surface valence instability, core-level shifts 3−3279
$BaF_2{:}Eu^{2+}$, zero-field splitting 3−23335
BaFCl:Eu luminescence anal. 3−3794
$BaSO_4$(Eu) thermoluminophore, use in prolonged exposure dose meas. 3−21567
$CaCl_2{:}Eu^{2+}$ single crystals of low symm., luminesc. of Eu^{2+} centres 3−34141
$CaF_2{:}Eu^{2+}$, Faraday rot. behaviour of light polarisation plane with superposition of weak radio-freq. field 3−23921
$CaF_2{:}Eu^{2+}$, reson. electron-phonon interaction, luminesc. study 3−38872
$CaF_2{:}Eu^{2+}$, spectral distrib. of HF phonons generated by nonradiative transitions 3−47697
$CaF_2{:}Eu^{2+}$, zero-field splitting 3−23335
$CaF_2{:}Eu^{2+},Ho^{3+}$, fluorite, interaction and luminesc. of activator ions *(Ukrainian)* 3−23995
$CaF_2{:}Eu^{3+}$, vacuum UV excitation spectra of luminescence 3−14320
$Ca_{1-x}Sr_xS$:Eu and CaS:Eu redo phosphors, prep. and cathodluminesc. 3−38925
$CaWO_4{:}Eu^{3+}$, energy transfer between ions, obs. and calcs. 3−14336
$CdBr_2$:Eu, optical props. and EPR 3−3526
$CdF_2{:}Eu^{2+}$ crystal, thermal ionisation energy of deep centres from ESR data 3−38689
CdI_2:Eu, optical props. and EPR 3−3526
Eu (III) in cryst. environments of octahedral, near-octahedral, and trigonal symm., comparison of $^7F_J \leftarrow {}^5D_0$ emission spectra 3−57950
Eu I, isotope shift, crossed second-order effects 3−6568
Eu^{3+}, quenching of singlet and triplet excited states of aromatic molecules 3−6708
$Eu^+ + He$, excitation transfer process study 3−21890
$Eu_xY_{1-x}P_5O_{14}{:}Eu^{3+}$, energy transfer between ions, obs. and calcs. 3−14336
^{152}Eu activity determ. using $4\pi\beta$-γ spectroscopic coincidence method 3−26601
^{152}Eu specific radioactivity and neutron fluence in Hiroshima/Nagasaki rock samples 3−48200
$Gd_2O_2SO_4{:}Eu^{3+}$, prep., fluoresc. spectra, and cryst. field anal. 3−43594
KCl:Eu,F crystals, absorpt. and luminesc. centre form. 3−43599
$KCl{:}Eu^{2+}$, ODMR study of $4f^65d$ excited state 3−34010
$KMgF_3{:}Eu^{2+}$, electron irrad., optical absorption and emission 3−52831
$La_2O_2SO_4{:}Eu^{3+}$, prep., fluoresc. spectra, and cryst. field anal. 3−43594
$LaWO_4Cl{:}Eu^{3+}$, luminescence props. and Stokes shifts 3−47691
$La_3WO_6Cl_3{:}Eu^{3+}$, luminesc. studies 3−52837
$LiNbO_3{:}Eu^{3+}$, energy transfer between ions, obs. and calcs. 3−14336
$MgCl_2{:}Eu^{2+}$ single crystals of low symm., luminesc. of Eu^{2+} centres 3−34141
NaCl:Ca, Eu, precipitation of Ca, Eu^{2+} fluorescence studies 3−51806
NaCl:Eu, effects of X-irradiation, colour centre formation 3−18343
$NaCl{:}Eu^{2+}$, first stage coloration, X-irrad. dose rate depend. 3−56890
$NaCl{:}Eu^{2+}$, hardening, aggregation-precip. state effect 3−4050
$NaCl{:}Eu^{2+}$, X-ray irrad. effects on precipitated phases, photoluminescence study 3−13466
$NaCl{:}Eu^{3+}$, X-ray irrad., absorption and luminescence spectra 3−8874
NaCl:Sr, Eu^{2+}, Sr precipitation, optical absorption and photoluminescence study 3−2814
$PbF_2{:}Eu^{2+}$ single cryst., EPR study 3−52620
$PbF_2{:}Eu^{2+}$ single cryst., EPR, superhyperfine struct. 3−52621
$PbF_2 + Eu^{3+}$, mag. tagging of ^{19}F NMR relax. 3−28729
$RbGd_3F_{10}{:}Eu^{2+}$, UV phosphor, $Gd^{3+} \rightarrow Eu^{2+}$ energy transfer, emission spectra meas. *(French)* 3−52840
$RbMgF_3{:}Eu^{2+}$, absorpt., emission, and excitation spectra, rel. to solid laser development 3−19175
$RbMgF_3{:}Eu^{2+}$, electron irrad., optical absorption and emission 3−52831
SiO_2-Na_2O-BaO-ZnO:Eu^{3+} glass, optical dephasing meas. by spectral holeburning 3−50715
SnO_2:Eu powder phosphor, synthesis, physicochemical props., luminesc. characts., low energy electron excitation *(Japanese)* 3−57980
$SrBr_2{:}Eu^{2+}$ single crystals of low symm., luminesc. of Eu^{2+} centres 3−34141
$SrF_2{:}Eu^{2+}$, zero-field splitting 3−23335
SrFCl:Eu luminescence anal. 3−3794
$ThO_2{:}Eu^{3+}$, site selective spectroscopy, fluoresc. and excitation spectra 3−19172
(Y, Gd)$F_3{:}Ce^{3+}$, Eu^{3+}, energy transfer from Ce^{3+} to Eu^{3+}, quantum efficiency 3−43607
YAG:Eu^{3+}, high temp. press. sensor using fluorescence spectrum press. dependence 3−20865
Y_2O_3:(Eu)(Tb), luminescence excitation spectra, caused by synchrotron radiation *(Russian)* 3−57964
$Y_2O_2SO_4{:}Eu^{3+}$, prep., fluoresc. spectra, and cryst. field anal. 3−43594
$Y_2W_3O_{12}{:}Eu^{3+}$ red phosphor of high lumen equivalent, cathodoluminesc. meas. 3−8887
ZnS:Cu, Eu crysts., bulk emission in const. elec. field 3−8867
ZnS:Eu, Gd, single cryst., struct., impurities effects 3−2512
ZnS:Eu, luminescence polarisation kinetics during afterglow process 3−8880
ZnS-Cu:Eu, bulk electroluminesc. intensity, temp. depend. 3−19202

europium alloys
intermetallic cpds., with nontransition metals, valence states, heat of form. calcs. 3−52082
$EuPd_3B_x$, valence state, lattice const., mag. susceptibility 3−23331
$EuPd_3Si_x$, valence instability, Mossbauer and susceptibility meas. 3−52682
EuSi microalloy, implanted Eu valence state, conversion electron Mossbauer study 3−3607
Gd-Mg, charge and spin density, electronic struct., Mossbauer study 3−28749
Ni-Eu, ion implanted, pulsed laser irrad., defect-impurity interactions 3−2599
Sm-Co based alloys, exchange and hyperfine fields on dil. ^{153}Eu 3−52676

europium compounds
see also europium alloys
chalcogenides, L_{III} X-ray absorption spectra, band struct. calc. 3−8904
chalcogenides, transferred hyperfine interactions, transfer mechanisms 3−52100
chelate, reson. enhanced two-photon absorpt. 3−6740

europium compounds continued
configurational crossover theory 3−18667
spin dynamics at high temp., neutron scatt. meas. and theoretical models 3−57564
C_6Eu intercalate, high-field magnetisation, spin fluctuations 3−52533
$(Eu,Tm,Y;Ca)_3(Fe,Ge)_5O_{12}$ epitaxial garnet films, domain wall resonance 3−8705
Eu complex, $Na_3[Eu(oxydiacetate)_3].2NaClO_4.6H_2O$, chiroptical luminesc. spectra of Eu^{3+} 3−3788
Eu I, elec. dipole transitions, Coulomb approx., oscillator strengths 3−21703
$EuAlO_3$, recomb. centres, ODMR study 3−23840
$EuAlO_3{:}Gd^{3+}$, Gd^{3+} ESR spectra, Eu^{3+} $^7F_1$ levels influence, expt. study 3−18988
$EuAs_3$, mag. ordering, neutron diffr. study 3−18857
Eu_2As_2, lattice const. and bulk modulus, high press. X-ray study 3−22854
Eu_4As_3, crystallographic distortions, Mossbauer, mag. susceptibility and mag. moments studies 3−57837
EuB_6, compressibility by high pressure X-ray powder diffraction anal., band struct. determ. 3−28031
EuC_6, intercalation cpd., electronic and mag. props. 3−33690
$EuCl_3$, in non-aqueous solvents, intensity anal. and luminesc. spectra 3−41616
$Eu(ClO_4)_3$, in non-aqueous solvents, intensity anal. and luminesc. spectra 3−41616
$EuCo_2P_2$, Mossbauer studies 3−57823
$EuCrO_3$, optical absorpt. spectra 3−3765
$(EuEr)_3(FeGa)_5O_{12}$, domain struct. of (111) crystal plates with uniaxial anisotropy 3−52520
$EuFe_2P_2$, Mossbauer studies 3−57823
$EuGa_2S_4$ single cryst., dark current relax., trapping levels 3−8493
$Eu_{1-x}Gd_xO$ (SM_xO), carrier scatt. and transport phenomena 3−28363
EuH_2, ferromag. semicond., mag. and optical meas. 3−57553
$Eu(H_2PO_4)_3$, preparation, chem. and X-ray crystallographic analyses 3−58058
Eu(III) chelate-liq. cryst. mixture, electrochem. fluorescence quenching, electro-optical display appl. 3−47684
$(EuLaCa)_3(FeGeAl)_{5O12}$, garnet films, LPE grown, mag. props., growth atm. effects 3−23753
$EuMo_6S_8$, cluster compounds, band struct., book contrib. 3−8418
$EuMo_6S_8$, low temp. transport props. 3−33727
$EuMo_6S_8$, struct. phase transition, sp. ht. meas. 3−47102
$Eu_{1.2}Mo_6S_8$, supercond. under high press., appearance and disappearance 3−13942
$Eu(NO_3)_3$, in non-aqueous solvents, intensity anal. and luminesc. spectra 3−41616
$EuNi_2P_2$, Mossbauer studies 3−57823
EuO, active electron-magnon interaction 3−52432
EuO, carrier heating, thermal noise temp. meas. 3−28399
EuO, carrier mobility, mag. spin, acoustic phonon and impurity scattering 3−3195
EuO, ferromag. interactions, indirect exchange mediated by spin polarisation of chalcogen electrons 3−57577
EuO ferromagnetic thin films, Brillouin light scatt. by spin waves, magnetostatic theory 3−57943
EuO, isotropic ferromagnets, dynamical crit. behaviour 3−14061
EuO, magnetic moment, optically induced charge, microwave SQUID study *(Japanese)* 3−28682
EuO, mixed valence, press.-vol. relationship, quasiparticle density of states and hybridisation gap 3−28269
EuO, static and dynamic mag. props., self-consistent correl. theory 3−52335
EuO, transferred hyperfine interactions, transfer mechanisms 3−52100
EuO, transition temperature shifts and correction-to-scaling amplitudes in systems exhibiting crossover behaviour 3−2734
EuO_{1-8}, carrier scatt. and transport phenomena 3−28363
Eu_2O_3, spin polarised band struct. Coulomb correlation effects 3−38303
Eu_2O_3-ZrO_2, cubic struct., thermal stability 3−9042
$Eu(OH)_3{:}Gd^{3+}$, host lattice effects, zero field splitting, EPR study 3−18982
$Eu(PO_3)_3$, Raman spectra 3−34099
$Eu(Pd_{1-x}Au_x)_2Si_2$, valence and mag. ordering instabilities, global phase diagram 3−28566
$Eu(ReO_4)_3$, vibr. interaction, low temp. investig. 3−52790
$EuRh_3B_2$, NMR, mag. and superconducting studies 3−23819
EuS epitaxial films, ferromag. domains, magneto-optical study 3−18963
EuS, Faraday rotation and magnetisation obs. in megagauss fields 3−57894
EuS, feromagnetic semiconductor, conduction electron self-energy effects 3−52031
EuS, ferromag. interactions, indirect exchange mediated by spin polarisation of chalcogen electrons 3−57577
EuS films on Si substrate, MBE growth and mag. props. 3−18951
EuS, isotropic ferromagnets, dynamical crit. behaviour 3−14061
EuS, mag. hyperfine fields, high press., high field, ^{151}Eu Mossbauer effect study 3−52683
EuS, magnetic form factor of Eu^{3+} 3−52400
EuS, static and dynamic mag. props., self-consistent correl. theory 3−52335
EuS thin films, sputtering from negative ion targets 3−8976
EuS-Sb_2S_3 system, phase diagrams, and struct. props., X-ray and DTA study 3−8166
Eu_3S_4, thermal props. meas., order-disorder transition 3−33466
$Eu_2(SO_4)_3.8H_2O$, internal vibrs., electron-vibr. and Raman spectra study 3−14311
EuS(Se)(Te), Mossbauer study of mag. hyperfine interaction press. depend. *(German)* 3−52694
EuSe, Faraday rotation and magnetisation obs. in megagauss fields 3−57894
EuSe, ferromag. interactions, indirect exchange mediated by spin polarisation of chalcogen electrons 3−57577
EuSe, mag. hyperfine fields, high press., high field, ^{151}Eu Mossbauer effect study 3−52683
EuSe, mag. phase diagram under hydrostatic press. 3−18890
EuSe, mag. props., ^{153}Eu NMR study 3−52638
EuSe, magnetisation, magnetostrction meas. 3−52592
$EuSe_{1-x}S_x$, $x \leq 0.03$, mag. phases, AC susceptibility, ^{153}Eu NMR studies 3−52483
$EuSe_{1-x}S_x(Te_x)$ and $Eu_{1-x}Sr_xSe$, magnetic phases, ^{153}Eu NMR and differential susceptibility study 3−18899
$(Eu_{0.2}Sr_{0.8})S$, susceptibility behaviour near freezing temp. 3−57562

europium compounds continued
- $Eu_{0.4}Sr_{0.6}S$, insulating spin glass, time depend. crit. field transition line, magnetisation study 3—28572
- $Eu_{0.44}Sr_{0.56}S$, insulating spin glass, thermal cond. meas., 60 mK to 70K 3—28571
- $Eu_xSr_{1-x}S$, mag. hyperfine fields, high press., high field, ^{151}Eu Mossbauer effect study 3—52683
- $Eu_xSr_{1-x}S$, site-diluted Ising ferromagnet, spin glass, octahedron approx. on FCC lattice 3—3464
- $Eu_xSr_{1-x}S$, spin correlations near ferromag.-spin glass crossover 3—57663
- $Eu_xSr_{1-x}S$ spin glass, spin excitations, effect of dipolar interactions 3—18908
- $EuSySe_{1-y}$, mag. phase diagram under hydrostatic press. 3—18890
- EuTe, antiferromag., spin assisted Raman scatt. 3—57919
- EuTe, antiferromagnetic semicond., electronic excitation spectrum calc. 3—8407
- EuTe, antiferromagnetic semiconductor, optical absorpt. edge shift, s-f model 3—8844
- EuTe, ferromag. interactions, indirect exchange mediated by spin polarisation of chalcogen electrons 3—57577
- EuTe, mag. hyperfine fields, high press., high field, ^{151}Eu Mossbauer effect study 3—52683
- EuTe, microscopic mech. of Raman scatt. 3—57910
- $(EuTmCa)_3(FeGe)_5O_{12}$ film, ion-implanted layers, defects study 3—18328
- EuV_2S_4 thin film, prep. and elec. props. 3—14493
- EuYFeGaO bubble films, increased mobility of bubble domains after laser annealing 3—18959
- $Eu_xY_{1-x}P_5O_{14}:Eu^{3+}$, energy transfer between ions, obs. and calcs. 3—14336
- $(Ho_xEr_{1-x})Rh_4B_4$, mean field behaviour of reentrant superconducting-ferromagnetic transition 3—43365
- $KBr:Eu^{2+}$ single cryst., precipitated phases, optical absorpt. and fluoresc. 3—3807
- $La_{1.2-x}Eu_xMo_6S_8$, supercond. props., hydrostatic press. effects 3—23524
- $La_{1-x}Eu_xTaO_4$, solid solns., formula vol., X-ray study 3—22869
- $NaEu(WO_4)_2$, optical holeburning and emission spectra 3—23968
- $Pb_{1.2-x}Eu_xMo_6S_8$, supercond. and mag. props. 3—57453
- $Sr_2Eu_8Ge_6O_{26}$, IR spectra and stoichiometry 3—3735
- $Tm_{1-x}Eu_xSe$, intermediate valence cpd., elec. resist., vol. change, compressibility, energy gap meas. 3—52080
- $(YEuDy)_3(FeGa)_5O_{12}$ bubble film, domain walls, saturation vel. 3—43418
- $Y_{2.6}Eu_{0.4}Fe_{3.8}Ga_{1.2}O_{12}$ garnet films, epitaxial, domain struct. near Neel temp. 3—23762
- $Y_{2.6}Eu_{0.4}Fe_{3.8}Ga_{1.2}O_{12}$, mag. bubble lattices, thermal and field stability 3—38663
- $(YEuLuCa)_3(FeGe)_5O_{12}$ garnet films, LPE grown, mag. props., growth atm. effects 3—23753
- ZrF_4-BaF_2-AlF_3-LaF_3-EuF_3, glass, Eu(III) fluoresc. study 3—52818

eutectic alloys
- directionally crystallised, creep and fracture modelling *(Russian)* 3—53186
- growth in space 3—4024
- laminar crystallisation process, kinetic consts. 3—33410
- nucleation and unidirectional solidification, space expts. at Grenoble, review 3—4027
- solidification, effect of temp. gradient in casting, computer simulation *(Polish)* 3—4022
- two-phase, fine-grained, mech. props., effects of thermally induced elastic stresses 3—47897
- XCC TiB_2-Re, quasibinary system, phase diagram construction 3—14561
- zone melting studies, review 3—24117
- Ag-Cu, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3—24424
- Ag-Si, eutectic alloy, unidirectionally solidified, morphology study 3—47829
- Al-Al_3Ni eutectic, strengthening by mech. thermal treatment 3—43854
- Al-Ca eutectic composition alloy props. as superplastic selective coatings for solar absorber-convertors 3—29454
- Al-$CuAl_2$ eutectic alloys, heat pipe solidification, microstruct., mech. props. 3—58162
- Al-Cu(Fe), strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3—24424
- Al-Ni, hardened by dispersion of fine intermetallic particles, influence of alloying elements *(French)* 3—24290
- Al-Si-Ge system, phase diagram study *(Chinese)* 3—34278
- Al-Si(-Ge), eutectic, modification of Si phase *(Chinese)* 3—53024
- Al_9Co_2 eutectic alloy fibres, elec. resist. 3—43154
- Al_6Fe eutectic alloy fibres, elec. resist. 3—43154
- Al_3Ni eutectic alloy fibres, elec. resist. 3—43154
- Bi-Te(Cd)(Pb), eutectic possibility of use in production of cooling elements based on bismuth and antimony chalcogenides 3—9047
- Bi_2Te_3-Te eutectic system, hardness and elec. cond. interrelations 3—52138
- Cd-Zn, directionally solidified eutectic alloy, tensile deform., metallography 3—53134
- Cd-Zn, unidirectionally solidified eutectic alloy, compressive deform., metallography 3—53133
- Cd-Zn eutectic melts, undercooled, solidification 3—4028
- Cu-O eutectic system, solidified from drop of melt, surface topography *(German)* 3—23150
- Dy-Cu system, intermediate phase form., cryst. struct. and phase diagrams 3—22853
- Fe, cast, white, mischmetal effect on microstructure and mech. props. 3—24327
- Fe-B melts, structure close to eutectic comp., X-ray study *(Russian)* 3—46834
- Fe-C-Cr-Mn, Mn addition and solidification rate effects during directional solidification, on eutectic interphase distance and tensile strength *(Polish)* 3—47828
- Fe-C-Cr-Ti, struct. and mech. props., effect of Ti addition and solidification *(Polish)* 3—4023
- Ga-In eutectic alloys, solid and liq., sputtering, ion scatt., AES, and Rutherford backscatt. study 3—52885
- K-Na eutectic alloy, saturated vapour press. determination by static method 3—8178
- Li-Pb liq. blanket designs for fusion Tokamak power reactors 3—55640
- $Li_{17}Pb_{83}$ blanket, materials and design solns. for breeding T 3—55591
- $Li_{17}Pb_{83}$ eutectic alloy, breeding material for fusion reactor, thermodynamic props. 3—57111
- $Li_{17}Pb_{83}$, liq., blanket material, T recovery 3—55646
- Mg-Ni (23.3 wt.%) eutectic alloy, reaction with H_2, kinetics 3—48050

eutectic alloys continued
- NbB_2-$NbSi_2$ and NbC-$NbSi_2$ systems, quasibinary, eutectic constitution diagram and reactions 3—58098
- Ni-Al-Mo, γ/γ'-α-Mo, directionally solidified eutectic superalloy, microstruct. and dimens. stability, effect of thermal cycling 3—24272
- Ni-Al-Ti(-Ta), eutectic alloy, directionally solidified, tensile strength rel. to comp. and prep. *(Japanese)* 3—39213
- Ni-Cr-Nb-C eutectic alloy, in-situ composite, isothermal oxidation, 800 to 1300°C 3—58317
- Pb-Cd, flux vortex and dislocation pinning *(Russian)* 3—13976
- Pb-Li blankets for fusion reactors, neutronic implications 3—55644
- Pb-Sb eutectic, twin roll solidification, rolling charact. *(Japanese)* 3—9050
- Pb-Sb eutectic alloy, twin-roll rapid solidification process, cooling characts. *(Japanese)* 3—24218
- Pb-Sn, eutectic, high temp. deform., constitutive relations 3—43893
- Pb-Sn, periodic lamellar substructure, investigation by laser beam diffr. 3—24441
- Pb-Sn (62 wt.%), superplastic eutectic, room temperature ductility 3—39199
- $Pd_{1-x}B_x$, ion implantation prep., amorphisation, elec. props., and supercond. 3—3154
- $Pd_{0.825}Si_{0.175}$, liquid eutectic, X-ray and neutron diffr. study 3—22761
- Sb_2Te_3-Te eutectic system, hardness and elec. cond. interrelations 3—52138
- Si alloys, directionally crystallised, microstructure and crystallography 3—7980
- Sn-Pb-Cd ternary eutectic, crystallographic orientation relationship 3—33188
- Th-Nb small-filament eutectic composite, supercond. props. 3—3358
- $VC_{0.88}$-VB_2 system, phase diagram construction 3—14560

eutectic structure
- lamellar, regularity, anal. using diffraction of laser beam 3—58357
- lamellar eutectics, stability in solidification 3—9048
- off-eutectic solidification, stage II initial transient 3—8174
- pearlite, microstruct. parameters, evaluation of method of determ. 3—24451
- solidification, Lamellar spacing, mode selection model 3—14583
- steel, carbide and sulphide eutectic morphology 3—24205
- steel, duplex stainless welds, precip., STEM/EDS study 3—34327
- steel, high-speed, powder, compressibility and sinterability vel. to particle size 3—47798
- transition metal carbide-boride system, eutectic struct. form., cooling rate effect 3—24186
- Ag-Si, eutectic alloy, unidirectionally solidified, morphology study 3—47829
- Ag_3AsS_3-Ag, interstitial solid soln., eutectic type phase diagram 3—9039
- Al-Mg (5%), solidification, conc. changes in electromag. mould *(Czech)* 3—14584
- Al-Mg-Si-Sr, microstruct. after prolonged soln. treatment, quantitative metallography 3—24276
- Al-Si-P(Na), hypereutectic alloy, cost struct., strengthening and refinement *(Japanese)* 3—29171
- Al-Zn-Cu-Mg, dendritic segregation, effect of Cu and Mg *(Polish)* 3—4040
- Bi-Te(Cd)(Pb), eutectic possibility of use in production of cooling elements based on bismuth and antimony chalcogenides 3—9047
- CaF_2-AlF_3, phase diagram, median section, stability of Ca_2AlF_7 *(French)* 3—9044
- $2CaO.P_2O_5$-$3CaO.P_2S_5$, eutectic, unidirectional solidification *(Japanese)* 3—4033
- Cd-Ni-As system, reactions 3—58106
- Co-Mo-W-C, phase equilibria, incipient melting *(German)* 3—9038
- Fe, cast, pearlitic grey, fracture behaviour, microstruct. and macrostruct. modelling 3—14731
- $Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, crystn. by eutectic reaction, kinetics and mechanism *(French)* 3—13104
- InP:Fe, semi-insulating, eutectic precipitates 3—8207
- InSb-NiSb eutectic, direct solidification in space *(German)* 3—4035
- Na_2O-Al_2O_3 system, β'' to β transform. kinetics 3—58109
- Ni-Mo-W-C, phase equilibria, incipient melting *(German)* 3—9038
- PbSe-CdS, phase equilibria 3—9040
- ZrO_2-MgO, subeutectoid aged alloys, microstructural development 3—39156

eutectic transformations *see phase diagrams; phase equilibrium*

eutectoid steel *see carbon steel*

eutectoid transformations *see solid-state phase transformations*

evaporated layer production *see vapour deposition*

evaporation
- *see also drying; field evaporation*
- alkali halide crystal condensation and evaporation by mol. beam methods 3—13143
- atmosphere evaporation theory, book 3—5517
- atomically rough surface growth, solid-on-solid model of cryst.-vapour interface 3—33160
- binary gas mixture, evaporation of spherical drops at arbitrary Knudsen numbers 3—1943
- binary mixtures, evaporation at reduced press. interfacial stability 3—51766
- building thermal environmental control by evaporative cooling and variable ventilation 3—58481
- calorimeter chamber for testing small evaporators for commercial and industrial refrigeration plant 3—20855
- charged droplet evaporation in electric field 3—51173
- condensed medium, evaporation transient plane wave instability under radiation 3—2985
- conductor, role of surface evaporation in pulsed heating 3—18432
- conductors, evaporation under action of large electric currents 3—51958
- cryogenic liquids, isobaric storage, hazardous variations in boil-off 3—36020
- cylindrical condensed phase, kinetic theory of evaporation and condensation 3—57073
- dielectric half-space, evaporation by laser, stabilised crater shape 3—43665
- drops, evaporation at arbitrary differentials of temp. and densities 3—27372
- drops in standing wave field, light-induced instability 3—27646
- electron-beam melting and evaporation of metals and nonmetals 3—29012
- evaporator tube, heated, heat transfer coeff. in post-dryout region *(German)* 3—7394

evaporation continued
  free water surface in DDR, summer months evaporation height *(German)* 3—44472
  gas-dynamic discontinuity at the evaporation front, kinetic model 3—46635
  heat transfer with evaporation and boiling of a liquid in porous bodies 3—12494
  industrial multi-stage evaporation-concentration processes utilising plastic materials as heat-exchange surfaces 3—4378
  inorganic superconductors, synthesis and cryst. growth, book contrib. 3—14454
  interface role in heat transfer processes 3—51763
  linear ablation problem, steady-state, calcs. 3—22308
  liquid, bubble-containing, shock wave struct. 3—12419
  liquid drop, heat and mass transfer on surface 3—1944
  liquid in spheroidal state, evaporation, theory 3—23025
  liquid surface temp. meas. under evaporation or condensation 3—54733
  liquid-vapour system, mol. exchange, vapour phase diffusion effects 3—47093
  MBE evaporation source fitted with shutter and water-cooled jacket 3—3960
  microwave-exposed mice, evaporative heat loss, effect of heating rate 3—29502
  natural convection in evaporating minute drops 3—37548
  non-evaporating region in a downward flow vertical liquid film type evaporator 3—17939
  nonabsorbing targets, laser vaporisation 3—51771
  PMMA film, vaccum UV photoetching 3—19442
  rare-earth-metal thin film in situ prod. and investigation, optical cryostat *(Russian)* 3—8983
  sintering, microstruct. evolution, role of evaporation/condensation 3—47794
  source, rate-resistance-heated, high-capacity, high evaporation 3—3949
  thermooptical effect during the evaporation of a material under the influence of a modulated radiation 3—8810
  tropical cyclone landfall, decay rel. to surface evaporation 3—48648
  vapour-gas mixture, evaporation and condensation, kinetic anal. 3—22304
  non vegetated surface evaporation, determ. technique using D 3—35299
  visualisation of evaporative convection in minute drops, by laser shadowgraphy 3—32823
  water, evaporation and thermal struct. in free and forced convection, organic surface film effects 3—12661
  water, evporation into laminar stream of air and superheated steam 3—46629
  water, in energy prod. systems 3—49115
  water, subcooled pool boiling, heat transfer in transition boiling 3—2038
  water drop with insoluble core, heating under 10.6 μm radiation, explosive boiling 3—51659
  Ar flow boiling, fouling phenomena obs. 3—32590
  Ar, in horizontal tube, fouling by CO_2 solidification *(German)* 3—42761
  BCl_3 condensed gas, selective evaporation by laser radiation 3—1430
  $BaTiO_3$, monocrystalline film, thermal evaporation in vacuum 3—8984
  CdSe film, polymorphism, production by evaporation 3—28235
  GaAs, evaporation and ripple formation under laser irrad. 3—38968
  Ge liquid, radioactive/non-radioactive, evaporation by effusion method 3—51764
  LiF, (100) surfaces, desorption fluxes, molecular beam impingement 3—42548
  LiF, Li_2F_2, Li_3F_3, condensation and evaporation kinetics using mol. beam methods 3—42549
  LiF molecular beam interaction with (100)LiF surface, molecular relaxation times 3—42547
  NaCl surface, doped and pure, evap. morphology 3—2947
  Nb-W(-Zr) liq. alloys, evaporation kinetics, element distrib., activity coeffs. EPMA study *(Chinese)* 3—33536
  Pb, dynamical clean surface prepared by continuous evaporation 3—24387
  Pd evaporation source for use in UHV, high stable, low cost 3—3961
  Si:H, As amorphous film, RF sputtered, pulsed laser annealing 3—56970
  W, carburisation, impurity behaviour, thermochemical study 3—29207
Evershed effect *see sunspots*
evoked potentials *see bioelectric potentials*
evolution (biological)
  asymmetry of biomolecules, origins 3—15037
  Cretaceous Tertiary boundary, clay mineralogy of boundary clay rel. to asteroid impact model 3—58971
  Cretaceous-Tertiary species extinctions due to meteorite dust cloud optical effects 3—48676
  deep sea prokaryotic organisms living in 105°C environment 3—15045
  Ediacarian period and system, metazoa inherit Earth 3—4861
  geological boundary species extinctions due to volcanism induced ocean changes 3—44448
  human brain size, coevolution and paleolithic culture in Northern hemisphere rel. to geomagnetic intensity 3—4517
  meteorite impacts rel. to extinction events, appl. to Cretaceous Tertiary and Eocene-Oligocene boundaries 3—29922
  origin of life, possible clue from UV astronomy *(French)* 3—25211
  prebiotic organic matter synthesis during early geological times 3—4867
  trans-Pacific faunal similarities among Mesozoic and Cenozoic invertebrates, rel. to plate tectonic processes 3—48544
EXAFS
  alloys, amorphous, atomic and mag. order, review *(Polish)* 3—43350
  azidomethemerythrin from Phascolopsis gouldii, X-ray absorpt. spectroscopy of dimeric Fe site 3—24678
  clean surfaces, struct., review 3—38180
  coordination complexes, non-aqueous solvents, conf., Nantes, France (July 1982) 3—49079
  curved crystal spectometer for laboratory 3—49521
  dilute species in competing fluoresc. matrices, double fluoresc. detection of XANES and EXAFS signals 3—47739
  fluorescence EXAFS, sensitivity, phenomenological theory 3—24050
  free atom absorpt., normalisation programs and algorithms 3—36714
  glass, EXAFS spectra for local atomic order determ., use of synchrotron radiation 3—46862
  glass structure determ., review of recent developments 3—33114
  glitches compensation in EXAFS data collection 3—26683
  local density of states and EXAFS in the small scattering atom approximation 3—28249
  metals, core holes, dynamical screening by conduction electrons 3—43702
  metals, X-ray edge, absorpt. and emission spectra 3—43660
  muscovite mica, X-ray K-absorption study 3—24051
EXAFS continued
  non-aqueous solutions, EXAFS spectroscopy 3—50422
  oxide, EXAFS, exam. of local atomic arrangements 3—38955
  phase transferability and bond length determination using EXAFS linear phase functions 3—58003
  rare earth cobaltites, local struct., EXAFS obs. 3—14390
  spectrometer for structural investigations 3—52867
  spectroscopy analysis, algorithms and set of programs 3—21948
  structural investigations by EXAFS, review 3—3864
  surface excitations, surface EXAFS obs. 3—43661
  transmission spectrometer, appl. to lattice distortion meas. *(German)* 3—13245
  X-ray spectrometer for EXAFS and XANES meas. 3—40738
  α-$ZrCu(PO_4)_2.4H_2O$, EXAFS, dehydration and calcination effects on bond lengths 3—8903
  Ag, EXAFDS, K- and L-satellites, theory 3—8902
  Al alloys, lattice distortion at impurity atoms, EXAFS study *(German)* 3—13245
  Cd, metallic, EXAFS study at 26.7 keV K edge 3—47738
  Co oxide glasses, local struct., EXAFS obs. 3—14390
  Co oxides, local struct., EXAFS obs. 3—14390
  Cr, fluorescence and transmission EXAFS meas. 3—24050
  Cu (001) surface, geometry and electronic struct. of Cl overlayer 3—23144
  Cu (111) and (100), Te chemisorption, surface struct., EXAFS study 3—33571
  Cu alloys, lattice distortion at impurity atoms, EXAFS study *(German)* 3—13245
  Cu, EXAFS and EXELFS above $M_{II,III}$ edges 3—58004
  Cu-Sn, very dil., displacement around disordered Sn impurity, EXAFS study 3—13168
  $Cu_x(As_{0.4}Se_{0.6})_{100-x}$, amorphous, bonding of Cu impurity, EXAFS study 3—24055
  CuBr, phase factor in EXAFS 3—43662
  $CuBr_2$-$SrBr_2$ mixed electrolytic aqueous solns., local order and vibr. dynamics 3—47631
  $CuZr(PO_4)_2$, bond lengths, EXAFS 3—8903
  Fe complexes, multiple scatt. and disorder in EXAFS anal. 3—58001
  Fe, fluorescence and transmission EXAFS meas. 3—24050
  Fe oxide layer on Fe surface, EXAFS study, total photoelectron yield method 3—28932
  Fe, passive film, EXAFS study 3—43988
  GaAs, phase factor in EXAFS 3—43662
  $GaAs_xP_{1-x}$, epitaxial, EXAFS study 3—38958
  $Ga_{1-x}In_xAs$, atomic-scale struct., EXAFS study 3—14388
  Ge film, vapour-deposited, struct. as function of substrate temp. 3—23200
  Ge, phase factor in EXAFS 3—43662
  $(Mg, Fe)_{1-x}O$, specific Fe^{3+} cluster geometries, Mossbauer, EXAFS and X-ray diffr. study 3—33285
  MgO:Fe, specific Fe^{3+} cluster geometries, Mossbauer, EXAFS and X-ray diffr. study 3—33285
  $Mg_{70}Zn_{30}$, amorphous struct., EXAFS studies 3—52867
  Na_2O-GeO_2 glass, chemical state anal., EXAFS study 3—3863
  Ni alloys, lattice distortion at impurity atoms, EXAFS study *(German)* 3—13245
  Ni, EXAFS and EXELFS above $M_{II,III}$ edges 3—58004
  Ni, fluorescence and transmission EXAFS meas. 3—24050
  Ni, K absorption discontinuity in EXAFS 3—24052
  Ni-S amorphous alloy, K absorption discontinuity in EXAFS 3—24052
  Ni(100), chemisorbed $CO(N_2)(NO)$, absorption edge reson., core-hole screening and orientation 3—13631
  RbCN, Rb^+ displacement and CN^- rotation, EXAFS study 3—56840
  Rh-Cu cluster struct., EXAFS study 3—37852
  $Sn(ClO_4)_2$ aq. soln., EXAFS and X-ray diffr. studies of hydration struct. of active Sn(II) ions 3—33063
  $YLnFeSbO_7$, (Ln=La-Ce), EXAFS study 3—43663
  ZnSe, phase factor in EXAFS 3—43662
  $ZrBr_2$-MBr_2 mixed electrolytic aqueous solns., (M=Cu, Sr), local order and vibr. dynamics 3—47631

exchange forces in nucleus *see nuclear forces*

exchange interactions (electron)
  see also antiferromagnetism; ferromagnetism; RKKY interaction; superexchange interactions
  alkali metal halides, repulsive energy and Gruneisen coeff., ab initio and Thomas Fermi calc. 3—38018
  alkali metals, heavy, effective ion-ion interaction 3—18638
  Anderson-localised regime, disorder and electron correls. 3—43113
  antiferromagnet, phase diagram with ferromag. integral of intersublattice exchange 3—3446
  bis-ethylammonium copper tetrachloride, antiferromag. transitions, press. effects 3—57613
  cluster spin glass, magnetisation process in low temp. region 3—18907
  copper formate tetrahydrate, exchange and anisotropy parameters, antiferromag. resonance studies 3—57576
  copper formate-2-urea dihydrate, exchange and anisotropy parameters, antiferromag. resonance studies 3—57576
  copper nitroxyl, paramag., susceptibility, exchange interactions, extended Huckel calcs. 3—57515
  di-tert-butyl nitroxide, spin exchange freqs. in different solvents, EPR spectra 3—45986
  diamond, impurities, exchange-correlation and local field effects, RPA calc. 3—57298
  dielectric polarisabilities and corresponding choice of Hamiltonian 3—8758
  dilute antiferromagnets, mixed ferro/antiferromag. interactions, thermodynamic props. 3—23632
  electron liquid with ferromagnetic impurities, spin wave spectrum and resonance *(Russian)* 3—33869
  ferous formate dihydrate, paramag. susceptibility anal. 3—13999
  ferro- and antiferromagnets, resonant freq. shifts in anisotropic exchange 3—57787
  ferromagnet, double exchange and spin wave approximation, s-d model *(Russian)* 3—23606
  ferromagnetic ensemble, Mott transition, electronic model solutions 3—33876
  ferromagnetic films and heterogeneous double layers, mag. props., Brillouin scatt. from spin waves *(German)* 3—14314
  ferromagnetic liquids, mag. transition *(Russian)* 3—18898
  ferromagnetic semicond., electron density of states, s-f exchange model 3—38280

exchange interactions (electron) continued
ferromagnetic semiconductor, nonlinear absorption of EM field, electron-magnon interactions 3—19090
ferromagnetic superconductor, surface magnetisation, field penetration, and surface ordering 3—38531
ferromagnetic superconductors, theory 3—57463
fine particles, magnetization reversal 3—18945
first-row transition metal EDTA complexes, 1-dimens., ferrimagnetic-like coupling 3—8657
garnet exchange coupled films, mag. props. 3—33950
Hartree-Fock exchange energy, density-gradient expansion 3—8434
Heisenberg ferromagnet, anisotropic, with biquadratic exchange, Green function theory 3—28586
Heisenberg ferromagnet, three-dimens., spin dynamics, effect of exchange anisotropy in crit. region 3—18927
Heisenberg ferromagnet, three-dimens., spin dynamics at finite fields and temps. 3—18929
Heisenberg ferromagnetic insulators, surface exchange anisotropy effects 3—38574
Heisenberg spin Hamiltonian, Heitler-London approach, test on half filled Hubbard model 3—57506
Heisenberg spontaneous metamagnet, thermodynamics, transitions and exchange parameter 3—33893
helical SDW state, spin waves due to antisymm. exchange interaction 3—52436
Heusler alloys, mag. props., spin-polarised energy band calc. 3—52341
higher-order polarisation of electron gas, exchange-correlation effects 3—16251
Hubbard model dynamics, Markovian approach 3—3408
in-crystal ionic polarisability, ionic radii depend., exchange-charge model 3—7956
infinite-range random Ising model, limit distrib. 3—202
intermediate valence, s-f interaction role 3—8460
ions in insulators, indirect exchange interaction theory 3—3437
iron-sulphur proteins, three ion clusters, exchange interactions, EPR study 3—4458
Ising model, cluster method, incl. 1st and 2nd nearest neighbour interactions 3—3468
Ising model, three-dimens. with long-range exchange forces, pair correl. function calc. 3—23565
Ising random spin systems, mag. props., high temp. series expansion 3—38637
Ising spin glass models, generalised, stability conditions 3—18923
itinerant ferromagnet, amorphous, anomalous Stoner enhancement 3—23664
itinerant ferromagnets, effective Heisenberg Hamiltonian, effective exchange integral 3—38577
itinerant magnetism, mixed valence effects 3—52085
itinerant-electron magnetism 3—57507
kinetic energy functionals for electron number and spin density, non-local approx. 3—43050
Kohn-Sham density functional theory, electron removal energies 3—23301
linear Ising magnet, in strong constant field, exchange anisotropy, nonequilibrium behaviour 3—23564
magnetic interactions in clusters studied by neutron inelastic scattering 3—57527
magnetic surfaces, spin polarised LEED, probing of exchange and spin-orbit interaction 3—28313
magnetically ordered superconductors, theories 3—57468
magnon dispersion in cone phase, exchange interaction 3—52433
manganese formate dihydrate, quasi-two-dimensional isotropic antiferromag., mag. phase boundary 3—47502
many electron system, exchange-correlation energy, one-particle approach 3—8431
metal, slow ion stopping power, exchange-correlation approx. 3—51678
metals, simple adiabatic potential, exchange and correlation effects 3—3095
metamagnets, dil., phase transitions, field induced 3—52485
monopnictides, MZ:Ce(Yb) (M=Sc, Y, La; Z=As, Sb, Bi), cryst. field splitting and single-ion exchange, elec., mag., and ESR study 3—18985
multisublattice ferromagnet, exchange interaction and cation distrib. determ. method *(Russian)* 3—23621
narrow-band gap semiconductors, doped with mag. impurities, resistivity and thermopower calcs. *(Russian)* 3—43183
neutron polarisation, conference, Grenoble, France (Oct. 1982) 3—49077
paramagnetic ion pair, exchange-coupled, EPR spectra, second-order effects 3—23787
paramagnetic ions, cation-cation exchange interaction via phonons 3—13997
phyllosilicates, 2:1 layer minerals mag. props. 3—33860
rare earth alloys, neutron diffr. quasi-elastic line width, spin fluctuation model 3—52377
rare earth alloys, RPd_2Si_2 (R=Gd, Tb, Dy, Ho, Er), magnetic susceptibility meas. 3—8648
rare earth antimonides, R_5Sb_3 (R=Nd, Sm, Gd, Tb, Dy, Ho), elec. props. 3—3203
rare earth compounds, induced electric dipole transitions, electron transfer 3—18673
rare earth compounds, $R_3Ni_7B_2$, mag. and struct. characts., magnetisation and Mossbauer studies 3—33934
rare earth intermetallics, localised-itinerant magnetism 3—23573
rare earth metals and alloys, localised spins and d-like itinerant electrons, indirect coupling calc. 3—8664
rare earth uranium sulphide, $R_4U_5S_{16}$, paramag. susceptibility, exchange interaction and cryst. field effects 3—52347
rare earth uranium tellurides, R_2UTe_5, paramag. susceptibility, exchange interaction and cryst. field effects 3—52347
rutile-type cryst., antiferromag. spin struct., statistical theory 3—57538
s-d spin glasses, nonlinear magnetisation and instability 3—43377
semiconductor, dil., spin density around mag. ion 3—23583
semiconductor, exciton-neutral donor complex, exchange interaction 3—57323
semimagnetic semiconductors, review 3—23642
singlet ground state systems, electronic and nucl. magnetism 3—38568
spin glasses, magnetically disordered systems 3—33901
spin glasses, ultrasound rel. and damping 3—52577
spin systems with random transverse fields tricritical point, classical n-vector model 3—52504
superconducting metals, Cooper pair form. rel. to exchange interaction 3—43320

exchange interactions (electron) continued
superconductor, homogeneous NMR line shift induced by mag. doping 3—13959
superconductor, NMR line shift in presence of paramag. impurities 3—28481
superconductor-ferromagnetic metal-superconductor junction, crit. current oscills., exchange field depend. 3—8627
surfaces, low energy electron exchange scattering studies *(Japanese)* 3—28946
tetramethylammonium cadmium chloride, exchange coupled Mn^{2+} pairs, EPR investig. 3—8720
thallous halides, theory of excitonic molecules, role of electron-hole exchange interaction 3—38319
transition metal compounds, Jahn-Teller effect and magnetism 3—33687
transition metals, resist. saturation, exchange theory 3—3158
trimethylammonium cobalt(II)chloride, deuterated 1-D ferromag., mag. props. 3—28532
trimethylammonium cobalt(II)chloride, quasi 1-D Ising ferromag., mag. props. 3—28531
trimethylammonium cobalt manganese chloride, ESR studies 3—52609
two-sublattice ferrimagnets with ang. mag. config., spontaneous magnetisation 3—8700
Van Vleck enhanced cpds., many-body nucl. Hamiltonian 3—43344
Ag-Mn spin glass phase, remanent magnetisation, field and temp. depend. 3—28573
Ag-Mn spin glasses, transverse magnetoresist. and Hall resist. 3—38371
Au-Fe(Mn) spin glasses, transverse magnetoresist. and Hall resist. 3—38371
AuMn spin glass, high temp. susceptibility, freezing process precursors 3—57648
$Ba_3CaRu_2O_9$, exchange interaction in Ru(V) dimer, neutron inelastic scatt. study 3—52097
$Ba_3CaRu_2O_9$, magnetic interactions in clusters studied by neutron inelastic scattering 3—57527
$BaFe_{12}O_{19}$, magnetic domain width, cryst. thickness depend. 3—8698
$BaMnF_4$ 2-D antiferromag., interlayer exchange interactions 3—57575
$BaMnF_4$, pyroelectric antiferromagnet, exciton and magnon-sideband absorption 3—57970
C_6Eu intercalate, high-field magnetisation, spin fluctuations 3—52533
$CdCr_2Se_4(S_4)$, ferromagnets, EPR linewidth critical behaviour 3—23799
$CdCr_2X_4$ (X=O,S,Se), spin-orbit interaction, bond form. effects, g-factor study 3—8462
$Cd_{1-x}Mn_xS$, spin-flip Raman scatt., magnetisation, and transport meas. 3—47656
$Cd_{0.9}Mn_{0.1}Se$, magnetisation and spin-flip Raman meas. 3—23724
$Cd_{1-x}Mn_xTe$, excitons, exchange spin splitting effects, magnetoabsorption study 3—33643
Ce^{3+} system, X-ray electronic spectra of inner levels, terminal state of photoionised system 3—28934
CeB_6 and alloys, dense Kondo behaviour 3—52361
CeTe, mag. form factors, polarised neutron diffr. study 3—57542
Co monolayer film on Cu (111), exchange splitting and ferromag. order 3—38656
Co-P alloys, amorphous, temp. depend. of exchange inhomogeneity characts., spin wave reson. 3—57791
$CoCO_3$, antiferromagnet, Mandelstam-Brillouin scatt. from magnons and phonons 3—28870
$CoCl_2$:Fe, localised mag. modes, far IR absorpt. spectra 3—3770
$(Co_{1-x}Mn_x)_2P$, Curie temp., press. depend., AC susceptibility meas. 3—43364
Cr(III) comlex, di-p-hydroxo-bis(tetramine Cr III) bromide, metal pair spectra and exchange coupling 3—17287
$CsCOBr_3(Cl_3)$ quasi-1-D Ising antiferromag., spin wave response, neutron scatt. study 3—38606
$CsCoBr_3$, Raman scatt. from magnons and excitons 3—28853
$Cs_3Cr_2Br_9$, Cr^{3+} $(^4A_2 \times ^2T_1)$ exchange-coupled excited states, pair spectra 3—52774
$Cs_2CrCl_5.4H_2O$, mag. susceptibility, exchange and cryst. field effects 3—52426
$Cs_3Gd_2Br_9$, mag. behaviour of Gd^{3+}-Gd^{3+} pair *(French)* 3—23703
$CsMnFeF_6$, frustration effects, neutron study 3—28518
$CsNiCl_3$, ESR absorption line, exchange interaction and critical indices 3—14124
$CsNiF_3$, scaling laws, magnetization and optical linewidth 3—57700
$CsNiF_3$, spin fluctuations without applied field, neutron scatt. study 3—57533
Cu complex, β:bis(N-methyl salicylaldimine) copper (II), g-shift and exchange interaction, EPR study 3—52604
Cu complex, $Cu(2,2'\text{-bipyridene})(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3—8656
Cu complex, hexakis pyridine-N-opxide copper(II), Jahn-Teller distorted, EPR studies 3—28694
Cu complexes, linear Heisenberg chains with alternating exchange, susceptibility and magnetisation study 3—23600
Cu, nuclear mag. ordered phases, combined Ruderman-Kittel and dipole-dipole interaction 3—14048
Cu-Mn spin glasses, transverse magnetoresist. and Hall resist. 3—38371
$CuCr_2Se_4-Cu_{0.5}M_{0.5}Cr_2Se_4$, (M=In, Ga), spin glass state suppression by indirect exchange 3—52498
CuNi, modulated struct., electronic struct. and magnetism 3—57267
CuO-MnO-B_2O_3-K_2O glasses, Cu^{2+}-Mn^{2+} interaction, EPR and mag. susceptibility study 3—23792
$Cu_xZn_{1-x}Cr_2Se_4$ $(0 \leq x \leq 0.1)$, mag. props., phase transition, mag. struct., neutron powder diffr. study 3—38596
Dy_2Fe_{17}, mag. props., ^{161}Dy and ^{57}Fe Mossbauer spectroscopy 3—14171
Dy_xSe_y, paramag. susceptibility, exchange interaction and mag. moment 3—52346
$Dy_xU_ySe_z$, paramag. susceptibility, exchange interaction and mag. moment 3—52346
$ErCo_2$, magnetic excitation spectra and neutron differential scatt. cross sections 3—52434
$ErRh_4B_4$, domain-like mag. struct. in supercond. phases 3—23592
ErSb, anisotropic exchange and antiferromag. transition, neutron diffr. study 3—38609
Eu systems, configurational crossover theory 3—18667
EuO, mixed valence, press.-vol. relationship, quasiparticle density of states and hybridisation gap 3—28269
EuO, transferred hyperfine interactions, transfer mechanisms 3—52100
Eu_2O_3, spin polarised band struct. Coulomb correlation effects 3—38303
EuO(S), static and dynamic mag. props., self-consistent correl. theory 3—52335

exchange interactions (electron) continued
- EuO(S)(Se)(Te), ferromag. interactions, indirect exchange mediated by spin polarisation of chalcogen electrons 3−57577
- EuS(Se)(Te), transferred hyperfine interactions, transfer mechanisms 3−52100
- EuSe, mag. props., ^{153}Eu NMR study 3−52638
- EuSe, magnetisation, magnetostrction meas. 3−52592
- $EuSe_{1-x}S_x$, $x \leq 0.03$, mag. phases, AC susceptibility, ^{153}Eu NMR studies 3−52483
- $EuSySe_{1-y}$ and EuSe, mag. phase diagram under hydrostatic press. 3−18890
- α-Fe, and α-Fe alloys, mag. order influence on Fe self-diffusion *(Czech)* 3−57666
- Fe complex, Fe(2,2′-bipyridene)$(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3−8656
- Fe, electronic struct. and magnetism above Curie temp. 3−28498
- Fe epitaxial garnet films, anisotropy and exchange parameter ferromag. resonance study 3−14093
- Fe, magnetism and thermodynamic props. above Curie temp. 3−52356
- Fe powder, reduced from α-FeOOH, coercive force 3−18944
- Fe, spontaneous magnetisation and spin wave theory *(French)* 3−52412
- Fe, surface (110) magnetism from polarized electron scatt. 3−18969
- Fe-C magnetic films, RF reactively sputtered, phys. props. and struct. 3−52563
- Fe-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3−14038
- Fe-Ni, magnetovolume effect, magnetostriction and thermal expansion anomalies 3−52584
- Fe-Ni-Cr-B-Si amorphous ribbons, Cr conc. effects, magnetisation study 3−28616
- Fe-Ni(-Ru), hysteresis loops and thermal expansion coeff., 4.2 to 300K 3−52530
- Fe-Si, ferromagnetic resonance and antiresonance linewidths 3−38700
- $FeBO_3$, antiferromagnet, Mandelstam-Brillouin scatt. from magnons and phonons 3−28870
- $FeCl_2$:Co, localised mag. modes, far IR absorpt. spectra 3−3770
- $Fe_xCo_{80-x}B_{20}$, amorphous, elec. resistivity and thermopower 3−28327
- $Fe_{1-x}Co_xCl_2$, random mixture with competing spin anisotropy, phase diagram 3−28567
- FeCr, mag. hyperfine fields, Curie temp. and mag. moments, Mossbauer study 3−52673
- FeF_2, Raman scatt. from magnon pair excitations 3−57913
- $FeF_2:Mn^{2+}$, spin-lattice relax. determ. 3−57809
- Fe(III) porphyrins, low temp. magnetisation study 3−38599
- $Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous alloy, hydrogenation effects on mag. props. 3−28555
- GaAs, heavily doped, photoluminescence edge calc. 3−38860
- Gd alloys, conc., EPR g-shift 3−33976
- $GdAl_2$, ferromag. reson., exchange const. and surface anisotropy const. determ. 3−18992
- $Gd(Al_{1-x}Cu_x)_2$, thermoelec. power, exchange interaction, partial wave expansion 3−3164
- $GdAlO_3:Cr^{3+}$, magnetic Franck-Condon effect 3−34142
- $GdCo_5$, mag. props., H_2 absorption effects 3−52537
- Gd_2CuO_4 semicond., antiferromag. ordering, mag., X-ray and EPR studies 3−38601
- $Gd_xY_{2-x}Co_{17}$, saturation mag., electron exchange *(Russian)* 3−47494
- $Gd_xY_{2-x}Fe_{17}$, mag. props. and exchange interactions 3−38608
- $Gd_xY_{1-x}Rh_4B_4$, supercond. and magnetism 3−3357
- ^{3}He, solid, magnetism, review 3−47184
- ^{3}He, solid, nuclear magnetism 3−51889
- ^{3}He, solid paramag., thermal props., role of spin and phonon excitations 3−38158
- $HgCr_2X_4$ (X=O,S,Se), spin-orbit interaction, bond form. effects, g-factor study 3−8462
- $HoAl_2$, spin dynamics, inelastic neutron scatt. study 3−57528
- $HoCo_2$, magnetic excitation spectra and neutron differential scatt. cross sections 3−52434
- $HoMo_6S_8$, domain-like mag. struct. in supercond. phases 3−23592
- HoS, antiferromag., kinetic coeffs. in region of mag. ordering temp. 3−43356
- $(Ho_xY_{1-x})Co_2$, spin reorientation temp. 3−18893
- $Ho_xY_{1-x}Co_{5+0.5x}$, mag. moments and magnetisation curves *(Russian)* 3−28520
- InP, heavily doped, photoluminescence edge calc. 3−38860
- InSb, diamagnetic excitons and energy band parameters, magnetoabsorption study 3−33644
- $KCl:Eu^{2+}$, ODMR study of $4f^65d$ excited state 3−34010
- $K_2Mn_{1-x}Fe_xF_4$, random mixture with competing spin anisotropy, phase diagram 3−28567
- $LaCo_2Ni_3$, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399
- $LaCr_xN_{1-x}O_3$, solid soln., at. distrib. and exchange interaction parameters 3−38359
- $LaFe_xAl_{1-x}O_3$, solid soln., at. distrib. and exchange interaction parameters 3−38359
- $La_2Fe_xMn_{2-x}S_5$, mag. props. meas. 3−28543
- $LaV_xN_{1-x}O_3$, solid soln., at. distrib. and exchange interaction parameters 3−38359
- $La_xY_{1-x}TiO_3$, mag. susceptibility, magnetisation and elec. cond. 3−3421
- $LuFe_2O_4$, electron exchange between Fe^{2+} and Fe^{3+} 3−14182
- Mg-Zn-Gd, amorphous, mag. interactions, AC susceptibility meas. 3−23620
- Mn_2 antiferromag. mol., ground-state exchange energy 3−11658
- $MnAs_{1-x}P_x$, relation between struct. and mag. props. 3−13185
- $Mn_{1.97}Cr_{0.03}Sb$, spin wave dispersion relations 3−57566
- $Mn_{1-x}Fe_xAs$, single cryst., mag. interactions and phase transitions *(Russian)* 3−3440
- $Mn_{1-x}Fe_x(Co_x)Sb$, thin films, mag. props., ferromag. and spin wave resonance studies 3−43440
- $MnSb_{1-x}In_x$ films, mag. props., ferromag. resonance study 3−23808
- MnSi, antisymm. exchange interaction, APW band calc. 3−52450
- $Mn_{1-x}Ti_xAs$, interatomic exchange interaction, Curie temp. 3−52449
- $Mr_{1.9}Fe_{0.1}Sb$, spin wave dispersion relations 3−57566
- Na, nuclear mag. ordered phases, combined Ruderman-Kittel and dipole-dipole interaction 3−14048
- $Nb_3Ir(Pt)(Au)$, electronic struct., superconductivity and spin fluctuations 3−38299
- Nd^{3+} system, X-ray electronic spectra of inner levels, terminal state of photoionised system 3−28934
- $NdCo_5$, Nd ground state, reduced 4f moment 3−52399

exchange interactions (electron) continued
- Nd_2CuO_4 semicond., antiferromag. ordering, mag., X-ray and EPR studies 3−38601
- $(Nd_xY_{1-x})Co_2$, spin reorientation temp. 3−18893
- Ni (001), (110) surfaces, mag. critical behaviour 3−28622
- Ni complex, Ni(2,2′-bipyridene)$(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3−8656
- Ni, exchange splittings, effect of nonlocal spin density exchange pot. 3−52448
- Ni, interband transitions and exchange splitting, EELS study 3−43677
- Ni, itinerant electron ferromagnetism, many-body effect 3−52344
- Ni, spontaneous magnetisation and spin wave theory *(French)* 3−52412
- Ni-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3−14038
- Ni-Rh(V), first magnetocrystalline anisotropy const. and press. effects, torque study 3−18881
- Ni-Zn ferrite, mol. field approx. 3-sublattice 3−13987
- NiO, antiferromagnetic, one-magnon formalism for inelastic electron scattering 3−33879
- PdAu, modulated struct., electronic struct. and magnetism 3−57267
- Pd_2MnSn Heusler alloy, plastically deformed, mag. moment distrib. 3−33966
- Pd_2MnSn, Heusler alloy, magnetisation rel. by plastic deform., mag. interactions 3−52583
- $(Pd_xPt_{1-x})_3Fe$, Hall effect, 13 to 400K, effect of mixed exchange interaction *(Russian)* 3−28338
- Pr, magnetic susceptibility, 4 to 50K, antiferromag. ordering 3−28529
- Pr_2CuO_4 semicond., antiferromag. ordering, mag., X-ray and EPR studies 3−38601
- PrF_3, magnetic props. 3−52348
- Pr(La, Y)Al_3, cryst. elec. field effects, inelastic neutron scatt. 3−23340
- $Pr_{1-x}U_xSF$ (x=0, 0.1), magnetic props. 3−52348
- $PtMn_x(Sn)(Sb)$, exchange striction and press. effect on Curie temp. 3−52470
- $Rb_3Cr_2Cl_9$, exchange-coupled pairs of Cr^{3+} ions, high resolution optical absorpt. and Zeeman spectra 3−8806
- $Rb_2CuBr_4.2H_2O$, spin dynamics, effect of exchange interactions in crit. region, NMR study 3−18928
- $RbNiCl_3$, ESR absorption line, exchange interaction and critical indices 3−14124
- Si, impurities, exchange-correlation and local field effects, RPA calc. 3−57298
- Si:Fe,S, ESR of Fe-S pairs, g-factor and excited states 3−43425
- Si:P, disorder and Coulomb interactions in Anderson localised states, effect on mag. and elec. props. 3−43128
- Sm^{3+} system, X-ray electronic spectra of inner levels, terminal state of photoionised system 3−28934
- Sm-Co based alloys, exchange and hyperfine fields on dil. ^{153}Eu 3−52676
- $SmCo_{2.5}Ni_{2.5}$, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399
- $(SnTe)_{100-x}$ $(MnTe)_x$ mag. semicond., NMR shift and line width 3−47564
- $SrFeO_3$, cubic perovskite type, exchange interactions 3−14040
- $SrMnO_3$, cubic perovskite type, exchange interactions 3−14040
- $TbFe_2$, amorphous, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399
- $Tb(Zn_{1-x}Cu_x)^{156}Gd$, hyperfine field of ^{156}Gd, γ-γ perturbed angular correlation study 3−14165
- $(Ti_2Cl_9)^{3-}$ binuclear unit, exchange between orbitally unquenched ions 3−8463
- TlCl, optical spectra, long-range and short-range many-body corrections 3−3673
- $TmNi_3(Co_3)$, ^{169}Mossbauer spectra, cryst. field calcs. 3−52675
- UF_x (x=3, 4), magnetic props. 3−52348
- $U_xY_{1-x}As$, collinear to noncollinear mag. struct. transitions and anisotropic exchange 3−52479
- $V_3Ir(Pt)(Au)$, electronic struct., superconductivity and spin fluctuations 3−38299
- Y-Al-Gd, amorphous, mag. interactions, AC susceptibility meas. 3−23620
- YCo_5, mag. props., H_2 absorption effects 3−52537
- $Y_{6-x}Er_xFe_{23}$, hydrides, mag. props., structural props., X-ray diffr. anal. 3−52524
- $Y_{1-x}Fe_x$ amorphous alloy, hydrogenation effects on mag. props. 3−28555
- Zn complex, $Zn(pyO)_6(ClO_4)_2$:Cu, exchange interactions, EPR study 3−23793
- $Zn_2Ba_2Fe_{12}O_{22}$, temp. depend. of magnetostriction 3−57734
- $ZnCr_2X_4$ (X=O,S,Se), spin-orbit interaction, bond form. effects, g-factor study 3−8462
- Zr-Cu-Gd, amorphous, mag. interactions, AC susceptibility meas. 3−23620
- Zr-Rh-Gd, amorphous, mag. interactions, AC susceptibility meas. 3−23620

exchange models *see peripheral models*

exchanges (chemical) *see chemical exchanges*

exchanges (telephone) *see telephone exchanges*

excimer lasers
- conference, Incline Village, NV, USA (Jan. 1983) 3−54580
- conference, laser science, Ankwei, China (May 1982) *(Chinese)* 3−5
- conference on condensed matter techniques and materials, Argonne Nat. Lab., Argonne, IL, USA (Sept. 1981) 3−10514
- electron beam pumping, electron accelerator design 3−12168
- electron-beam pumping, space-charge-limited bipolar current flow between coaxial cylindrical electrodes calc. 3−33007
- exciplex lasers, a review 3−27013
- extreme UV radiation generation with excimer lasers 3−12223
- $HgBr/HgBr_2$ dissociation laser, kinetic processes 3−27025
- inductively stabilized long-pulsed excimer lasers 3−56228
- inert gas halide discharge lasers, analysis, design and construction 3−41858
- inert gas halide RF pumped lasers, design considerations 3−56241
- KrF laser triggered spark gaps using UV optical to transmit beam 3−7851
- physical principles, construction and appls., review *(Polish)* 3−1613
- pulsed laser spectroscopy using N_2 laser 3−5872
- pump laser for dye laser systems, comparison with YAG pump 3−7013
- Raman shifting of excimer lasers 3−56286
- rare gas-halogen UV excimer lasers for at., mol., and condensed matter studies 3−12206
- spectroscopic laser sources survey, for visible and UV ranges 3−10910

- **excimer lasers** continued
  - subnanosecond excimer pulse generation using saturable absorbers 3—56231
  - UV lasers development and appl. 3—41814
  - ArF excimer laser at 193 nm, UV preionisation effect *(Chinese)* 3—37063
  - ArF laser gas mixture cryogenic purification and lifetime extension 3—56230
  - ArF laser with high spectral brightness working in the regenerative amplifier regime 3—56229
  - ArF* excimer laser, tunable, nonlinear optical applications 3—27073
  - Br_2 intracavity gain detect. 3—41805
  - H_2, two-photon excited, high power VUV stimulated emission 3—56006
  - HgBr, bound-free emission 3—6691
  - HgBr laser spectrum study *(Chinese)* 3—41815
  - HgCl, $B\rightarrow X$ transitions 3—6950
  - HgI, $B\rightarrow X$ transitions 3—6950
  - $^{200}HgBr^{81}$ photodissoc. lasers, spectroscopy and efficiency 3—56187
  - I_2, collisionally induced optical double reson., rotational anal. of D′(2g)-A′(2u) laser transition 3—11844
  - I_2 high-energy 342 nm laser, optically pumped using exploding metal films and wires 3—56243
  - I_2 intracavity gain detect. 3—41805
  - $I_2(D'\text{-}A')$ UV laser pumped by wide-band radiation 3—1616
  - IF, $B^3\Pi(0^+)\rightarrow X^1\Sigma^+$ lasing from collisionally pumped states 3—37010
  - IF electron beam pumped laser characts. 3—37005
  - IF, fluoresc. and lasing in blue-green region, optical pumping 3—22045
  - KI/Xe mixtures, photodissociation, excimer emission 3—44058
  - KrF electron beam excited laser performance, F_2 conc. optimisation 3—37008
  - KrF electron beam pumped laser, saturation property meas. 3—56267
  - KrF, electron-beam pumped, constant intensity approximation analysis 3—27010
  - KrF electron-beam switched discharge-pumped lasers, gain and discharge characts. 3—56180
  - KrF, high-power lasers, pulsed electron beam systems, for fusion 3—12183
  - KrF laser, wide-aperture, self-sustained discharge 3—6952
  - KrF laser gas mixture cryogenic purification and lifetime extension 3—56230
  - KrF laser pulse compression by stimulated Brillouin scatt. in tapered waveguides 3—32391
  - KrF laser pulse harmonic generation using a supersonic gas jet expansion 3—56284
  - KrF laser pumped by annular electron beam, beam quality 3—1681
  - KrF laser radiation phase conjugation and pulse compression by stimulated Raman scatt. 3—27167
  - KrF laser with high spectral brightness working in the regenerative amplifier regime 3—56229
  - KrF minilaser, inductively stabilised, long-pulsed operation 3—50647
  - KrF Sprite high power electron-beam-pumped laser 3—56242
  - KrF transversely excited Blumlein laser, fast discharge pulsed current meas. *(Chinese)* 3—37002
  - KrF UV laser, plasma channel form. 3—7764
  - KrF, UV-preionised, lasing and fluorescence spectra meas. 3—32349
  - KrF wide aperture self-sustained discharge lasers 3—56268
  - KrF* amplified ultrashort UV laser pulse generation and pulsewidth meas. 3—37087
  - N_2 high pressure laser, rot. relaxations 3—50646
  - N_2 laser, coaxial pumping with focused intense proton beams 3—32386
  - N_2 laser, drift chambers, observation of space charge effects 3—45776
  - N_2 small-size laser with ceramic capacitor as energy source *(Chinese)* 3—12171
  - N_2 subnanosecond laser pulse amplification in UV dyes 3—22047
  - N_2 TE high-power polarised coherent laser 3—12177
  - N_2 TEA compact segmented laser with Blumlein circuit *(Chinese)* 3—12172
  - N_2 TEA laser oscillator-amplifier system for interferometric plasma diagnostic appls. 3—27084
  - N_2 travelling-wave beam laser, expt. test 3—50652
  - Na_2 optically pumped dimer lasers, gain lineshape study 3—56178
  - Na_2 optically pumped mol. CW laser *(German)* 3—32378
  - Na_2 optically pumped supersonic beam laser, CW operation 3—41859
  - Na_2 ring laser, optically pumped, using highly excited vibr. levels 3—41806
  - Na_2 UV excited laser emission 3—22041
  - Xe UF_6 mixture, nuclear pumping of XeF exciplex by fission products 3—27014
  - XeCl 5 J UV preionised laser, time-depend. gain and absorpt. 3—56176
  - XeCl amplifier for degenerate four-wave mixing 3—56232
  - XeCl, compact repetitively pulsed excimer laser 3—41873
  - XeCl discharge-excited high-energy laser, efficiency optimisation 3—56182
  - XeCl excimer electron beam ionisation laser, high-power UV operation 3—22122
  - XeCl excimer fluorescence and laser emissions 3—1610
  - XeCl high average brightness laser technology 3—12169
  - XeCl high average power laser 3—56227
  - XeCl large aperture discharge laser performance 3—56226
  - XeCl laser, coaxial pumping with focused intense proton beams 3—32386
  - XeCl laser, laser oscills. on 11 vibr. bands at about 308 nm *(Chinese)* 3—41808
  - XeCl laser, microwave-pumped, improved performance 3—12126
  - XeCl laser, wide-aperture, self-sustained discharge 3—6952
  - XeCl laser, X-ray preionisation, minimum X-ray flux 3—36999
  - XeCl laser modelling and design 3—56240
  - XeCl laser picosecond amplification and kinetic studies 3—12127
  - XeCl laser pulse temporal tuning using saturable absorber dyes 3—7031
  - XeCl laser with high spectral brightness working in the regenerative amplifier regime 3—56229
  - XeCl miniature excimer lasers 3—56228
  - XeCl minilaser, inductively stabilised, long-pulsed operation 3—50647
  - XeCl twin-type discharge-pumped excimer laser 3—46230
  - XeCl, UV picosecond high power laser pulse generation for laser-prod. plasma diagnosis *(Chinese)* 3—37060
  - XeCl UV-preionised self-sustained avalanche discharge laser, discharge characts. and output performance 3—56181
  - XeCl wide aperture self-sustained discharge lasers 3—56268
  - XeCl* long pulse resistively ballasted laser, pulse length limitations 3—56266
  - XeCl* quasi-CW laser, electric discharge excitation 3—27023
  - XeF discharge lasers, gain, saturation and optimisation meas. 3—37009
  - XeF electron-beam pumped laser, injection locking at ambient and elevated temps. 3—56252

- **excimer lasers** continued
  - XeF excimer laser, electron beam-pumped, tuning, output power characts., depend. on optical resonator config. *(Chinese)* 3—22105
  - XeF excimer laser dye amplifier chain, picosecond tunable pulse generation in XUV 3—27165
  - XeF laser, discharge excitation, electrodeless, 200 MHz 3—6951
  - XeF laser, electron beam excited, transient index meas., 350-354 nm 3—56183
  - XeF laser, electron-beam pumped, temporal coherence length meas. using holographic procedure 3—6927
  - XeF laser, transform-limited-bandwidth injection locking 3—12120
  - XeF laser gas mixture cryogenic purification and lifetime extension 3—56230
  - XeF laser radiation third harmonic conversion, high energy VUV source appls. 3—56285
  - XeF, photodissociation laser, molecular vibrational struct., transition spectra 3—41811
  - ^{64}ZnI photodissoc. lasers, spectroscopy and efficiency 3—56187

- **excimers**
  - *see also excimer lasers*
  - anthracene-diethylanaline exciplex, fluorescence, temp. and solvent effects 3—52832
  - anthracene-tetracene photodimer, adiabatic photodissoc. 3—11906
  - 1-(9-anthryl)-n-(p-N, N-dimethylaminophenyl) alkane, intramol. charge transfer processes, picosec. fluoresc. studies 3—50455
  - aromatic intramolecular exciplexes formation, electronic structures 3—4282
  - 3-aryl-3-methyl-1,2-dioxetanes, thermolysis, excited states carbonyl form., electronic effects 3—4271
  - α-aryl-ω-N,N-dialkylaminoalkanes, exciplex form. and props., fluoresc. 3—52820
  - benzonitrile-amine exciplexes lifetimes, fluoresc. obs. 3—6696
  - 2-tert-butyl-6-vinylnaphthalene polymers, singlet energy migration and excimer form. 3—14880
  - 9-cyanoanthrene+9-methoxyanthrene, solid-state photoaddition via exciplex, activation energy 3—4300
  - dodecylcyanobiphenyl liq. cryst., excimer formation and phase transition, luminesc. probe 3—34133
  - exciplex intramol. charge transfer dynamics and small-chain relax., picosec. fluoresc. obs. 3—21901
  - exciplex kinetics in vapour phase and in nonpolar soln. investigated using steady-state and lifetime techniques 3—9303
  - fluorescence for display appl. 3—21817
  - lipid bylayers vesicles, exciplex systems, photoinduced charge separation and recombination 3—6702
  - mixed crystals, solid-state photoaddition via exciplex, activation energy 3—4300
  - naphthylalkylamines, solvent isotope effect on exciplex fluorescence yield and lifetime 3—26777
  - poly(2-naphthyl methacrylate) soln., excimer form., fluoresc. study 3—28885
  - poly-1-methoxy-4-vinylnaphthalene, fluid soln., normal and second excimers, fluoresc. 3—3779
  - poly-N-epoxypropylcarbazole, photosensitivity, effect of photo-oxidation 3—34640
  - poly-N-vinylcarbazole, and model cpds., excimer form., picos. absorpt. spectrosc. obs. 3—50418
  - polyethyleneterephthalate, excimer fluorescence 3—46020
  - pyrene evaporated coatings, emission spectra and fluorescence decay times 3—52835
  - pyrene on oxide supports, surface modification effect on probe dispersion and mobility 3—39404
  - pyrene-N,N-dimethylaniline bonded to polyester, fluoresc. obs. 3—6697
  - rare gas dimers, self-trapped excitons 3—23283
  - ArF(ArCl), excimer, electronic struct. of ground and excited states, variational cellular model 3—45833
  - H_3* photodissociative transition, parameters, quantum mechanical calcs. 3—26664
  - K_2, time behaviour of diffuse band emission 3—36809
  - KXe exciplex form. kinetics, following KI photolysis at 193 nm 3—58443
  - Kr_2F* in electron beam excited mixtures, time resolved fluorescence spectra, kinetics 3—26784
  - KrS excimer formed by H_2S photodissociation in Kr matrix, photoluminescence study 3—26774
  - Na_2, time behaviour of diffuse band emission 3—36809
  - NeF(NeCl), excimer, electronic struct. of ground and excited states, variational cellular model 3—45833
  - XeF* excimer formation mechanism by Xe-F_2 mixture photoexcitation 3—24521
  - XeF* excimers, electron beam generated, kinetic processes 3—41511
  - Xe_2F* excimers, electron beam generated, kinetic processes 3—41511
  - XeO* excimer formation mechanism by Xe-O_2 mixture photoexcitation 3—24521

- **exciplex lasers** *see excimer lasers*

- **exciplexes** *see excimers*

- **excitonic molecules**
  - alkali cyanides, optical absorption spectra of triplet mol. excitons 3—19156
  - energy transfer, generalised master eqn., relation to Pauli master eqn. 3—13738
  - nonlinear optical response and optical bistability 3—12215
  - nonlinear optical response and retarded photon self energy 3—12216
  - semiconductor, bistability in a system of coherent excitons, photons, and biexcitons 3—28279
  - semiconductor, direct-gap, picosec. spectroscopy of excitonic mols. and electron-hole plasma 3—38908
  - semiconductors, large gap, nonlinear optical effects assoc. with excitonic-mols. 3—41912
  - semiconductors, many-particle exciton complexes, variational calc. 3—23285
  - semiconductors, nonlinear dielecric function calcs. 3—14195
  - thallous halides, theory of excitonic molecules, role of electron-hole exchange interaction 3—38319
  - CdS, biexcitons or drop embryos in luminesc. 3—47269
  - CdS, many-exciton systems, boson description 3—47274
  - CdSe, biexcitons or drop embryos in luminesc. 3—47269
  - CuBr, exciton and biexciton states, mag. field effects, hyper-Raman scatt. study 3—57289
  - CuBr(Cl), many-exciton systems, boson description 3—47274

excitonic molecules continued
CuCl, biexciton lineshape, at low temp., Bose-Einstein statistics *(French)* 3−43579
CuCl, exciton polaritons in spatially dispersive region, two photon polarisation spectra 3−57955
CuCl films, excitonic molecules, Bose-Einstein statistical props., optical study 3−52041
CuCl, induced absorpt. spectra from excitonic polaritons, additional boundary conditions 3−43558
CuCl, reson. coherent scatt. from biexcitons, interference of 4-wave and 6-wave mixing 3−12219
Ge, luminesc. study, stability in mag. field 3−38868
HgI_2-red, excitonic molecule state, two-photon absorpt. obs. 3−3077
Ne, solid, exciton luminescence study 3−19184
Si, luminesc. study, stability in mag. field 3−38868

excitons
see also excitonic molecules; phonon-exciton interactions
acraflavine, exciton energy transfer to rhodamine B in soln. 3−52833
alkali halides, F-centre form. and excitons, time and temp. depend. 3−56893
alkali halides, recombination induced F-H pair prod., cascade spectroscopy studies 3−56894
alkali halides, self-trapped excitons and F+H pair form. 3−57291
alkali iodides, luminescence from free and self trapped excitons 3−57975
p-alkylbenzenes, electronic spectra, cryst. struct. effect 3−23278
Anderson-localised many-particle excitations, optical props. 3−43584
anthracene:tetracene, time resolved sensitised fluoresc., singlet exciton energy transfer 3−3818
anthracene, cryst., charge transfer transitions, role in photocond. 3−52802
anthracene, cryst., photoelectron-photoion coincidences 3−57962
anthracene, exciton annihilation const. and energy transfer rate 3−47268
anthracene, exciton-phonon interaction, absorpt. spectra *(Russian)* 3−43039
anthracene crysts., charge carrier trapping at physical defects 3−57359
anthracene single crysts. on substrates, exciton luminesc. spectra 3−8866
benzo[f]quinoline+naphthalene in biphenyl host, triplet-triplet energy transfer, phosphoresc. spectra 3−38314
book 3−35788
collective effects in solids and liquids, book 3−10538
cooperative optical absorption 3−14319
Coulomb excitons, nonanalytic critical points in uniaxial crysts. 3−47267
critical behaviour of systems exhibiting excitonic phase transition 3−38315
1,4-dibromonaphthalene, inhomogeneous broadened lowest triplet absorpt., delayed fluoresc. and phosphoresc. 3−3778
1,4-dibromonaphthalene, lowest triplet exciton state, intraband scatt. 3−47270
1,4-dibromonaphthalene, phosphorescence emission, mag. field effects 3−38883
1,4-dibromonapthalene, crystal perfection and triplet excitons 3−14332
9,10-dichloroanthracene, β-phase crysts., triplet exciton motion, EPR study 3−38672
diffusion in system with nonconservation of exciton number, two-level approx. 3−3075
4,4′-dimethylbenzophenone, mol. cryst., energy transfer, photochem. control 3−19169
disordered system, exciton transport and trapping, cluster CPA and random walk calc. 3−57360
electron-hole liquid, ground state, variational approach 3−3074
electron-lattice relax., localised electron and tunnelling exciton selftrapping 3−57046
electronic excitation energy transfer in condensed matter, book 3−40328
ethylene oxide cryst., phonon spectra and struct. at 77K 3−28850
ethylene sulphide cryst., phonon spectra and struct. at 77K 3−28850
exciton-surface plasmon coupling, attenuated total refl. spectrosc. investing. 3−28275
Frenkel exciton trapping in presence of low trap conc. 3−18621
high-temperature superconductivity, book 3−10532
inelastic exciton-exciton collision rate constant, determ. from absorpt. measurements 3−23275
inert gas solids, relaxed excitons, time resolved absorption spectra study 3−57292
insulator, plasmons, model dielec. function 3−8438
insulator crystals with impurities, optical absorption spectra study 3−23977
insulators, excitonic, indirect interaction of Anderson impurities 3−14046
interference patterns in the vicinity of an exciton line 3−32307
ionic crystals, short wave luminesc., excitation by nanosecond electron beam probe *(Russian)* 3−57979
Jahn-Teller effect at exciton self-trapping in adiabatic approx. 3−23281
laser applications to solid state physics *(Japanese)* 3−20902
layer crystals, exciton light absorpt., temp. depend. anomalies 3−3078
light absorption, integral intensity temp. behaviour, theory 3−52040
luminescence, conf., Leningrad, USSR (April 1981) 3−35766
luminescence of self-localized excitons 3−38311
MIS struct., surface states at semicond.-insulator interface, exciton spectra study 3−8552
molecular adfilms, low-energy electron interaction, Frenkel exciton role 3−3888
molecular cryst., Frenkel exciton trapping theory 3−28273
molecular cryst., one dimens., Frenkel excitons interaction with local and extended perturbations, Green's function formalism appl. 3−23276
molecular cryst. spectra, vibronic struct., hypochromic and hyperchromic effects, dimer model 3−47059
molecular crystal, anisotropic, Frenkel excitons diffusion 3−52038
molecular crystals, exciton Bose-Einstein condensate, nonlinear light scatt., theory *(Russian)* 3−47669
molecular crystals, luminesc. spectra in presence of impurities and defects 3−38874
molecular pairs, ESR line shapes of triplet excitons, temp. depend. 3−41594
monomolecular film, exciton autolocalisation *(Russian)* 3−47275
naphthalene, exciton annihilation const. and energy transfer rate 3−47268
naphthalene, triplet exciton transport and metal-nonmetal transition 3−47266
naphthalene, triplet-triplet exciton annihilation, effect of spin relax. 3−43034
naphthalene alloys, exciton transport, percolation to diffusion transition 3−28274

excitons continued
naphthalene crysts., substitutionally disordered, singlet exciton transport, percolation and diffusion 3−33642
nonlinear optical response and retarded photon self energy 3−12216
nonrigid cryst., elementary excitations 3−3091
one-dimensional crystal, excitons with arbitrary electron-hole interaction 3−52037
one-dimensional many electron system, phase diagram, fluctuation effect 3−13754
optical bistability, excitonic, quantum theory 3−32404
organic crystals, electronic processes, book 3−5512
pentacene, exciton-phonon interaction, absorpt. spectra *(Russian)* 3−43039
pentacene, polycryst. films, low energy electron backscatt. 3−43672
phenanthrene+naphthalene in biphenyl host, triplet-triplet energy transfer, phosphoresc. spectra 3−38314
piezoelectric crystal, exciton motion, lattice vibr. effect, electron-hole interaction 3−23286
polar crystal, ground state energy and wave function of exciton *(Chinese)* 3−8421
polariton solitons, reflection and refraction of wave packets in cryst. 3−23288
polydiacetylenes, electronic struct. and electron transport 3−18605
polymers, molecularly doped, elec. field assisted triplet exciton annihilation, photocond. meas. 3−52173
polypeptides, circ. dichroism, linear response theory, Bogoliubov exciton theory 3−12017
polyvinyl carbazole, 1-dimens. electronic energy transfer 3−18622
polyvinylcarbazole, amorphous, energy-dependent incoherent singlet exciton motion 3−3072
Pyrene crystals, lineshape anal. of 0-0 exciton absorption band 3−14316
pyrene in p-terphenyl, delayed excimer fluoresc. study 3−24003
rare earth cpds., mixed valence state electron phase transitions in two level model 3−23334
rare earth orthochromite, CC $RCrO_3$, Cr^{3+} exciton and R^{3+} spin flip 3−52773
rare gas crysts., exciton spectrum, effect of nucl. motion *(Russian)* 3−38312
rare gas dimers and solids, self-trapped excitons 3−23283
rare gas solids, self-trapped excitons and F+H pair form. 3−57291
recombination induced defect form., conf., Urbana-Champaign, USA (June 1982) 3−54573
reflection from cryst. surface, auxiliary boundary conditions and dispersion eqn. 3−28280
scattering by charged impurities, effects on exciton absorption band shift 3−28281
self-trapped, adiabatic surface formulae 3−13746
semiconductor, bistability in a system of coherent excitons, photons, and biexcitons 3−28279
semiconductor, bound exciton Auger recomb., selection rules 3−3809
semiconductor, core excitons, dynamical shift and broadening 3−13736
semiconductor, electron-exciton elastic collision cross sections, approx. polarised orbital calc. 3−28277
semiconductor, exciton broadening of angle-resolved photoemission spectra 3−47754
semiconductor, exciton-neutral donor complex, exchange interaction 3−57323
semiconductor, lightly doped, multicomponent exciton gas 3−23282
semiconductor, optical absorpt., dislocation exciton spectrum 3−28824
semiconductor, plasmons, model dielec. function 3−8438
semiconductor, polariton theory in electron-hole config. space, Wannier-type model 3−13747
semiconductor near interband resons. high-resolution picosec. modulation spectroscopy 3−36099
semiconductor size quantized films, exciton absorption 3−3079
semiconductor-metal boundary, exciton quenching at interface 3−3317
semiconductors, amorphous, photoluminescence, trapped exciton model 3−14347
semiconductors, coherent light propagation, exciton polarisation waves 3−28808
semiconductors, coherent light propagation, Maxwell-Bloch eqns., interband and exciton transitions 3−28809
semiconductors, dislocation Mott exciton, theory 3−23284
semiconductors, exciton luminesc., laser constriction 3−38878
semiconductors, exciton-exciton interactions in two-photon absorption P band, theory 3−19089
semiconductors, excitonic polaritons; resonant light scatt., book contrib. 3−3087
solids, light scattering, Brillouin and Raman spectra, book 3−46
spatially disperse exciton-polariton medium, light propag. 3−47615
spectrum of excitons of intermediate radius, effect of nucl. motion *(Russian)* 3−38312
superconducting exciton laser possibility 3−37055
superconductor-semimetal-superconductor junctions, stationary Josephson current, effect of exciton coupling *(Russian)* 3−38542
surface exciton polaritons, excitation and detection by optical nonlinear mixing 3−56273
surface polaron excitons in strong mag. fields 3−3081
TCNQ salt, $(\phi AsCH_3)^+(TCNQ)_2{}^-$, triplet exciton exchange dynamics, half-field reson. study 3−3508
TCNQ salt, NBP-$TCNQF_4$, cryst. and mol. struct. and ESR spectra 3−33228
p-terphenyl, triplet exciton trapping, delayed fluoresc. and phosphoresc. study 3−43604
p-terphenyl cryst., charge carrier generation and recomb., singlet exciton photoionis. 3−57379
transition metals, K edge study by X-ray absorpt. spectroscopy 3−52868
Wannier excitons, self-trapping, internal motion depend. 3−43037
wave functions, steady-state packet representation, nonhomogeneous kinetics 3−38317
AgBr, recombination radiation, ODMR studies 3−57819
AgBr, resonant Raman scatt. at indirect triplet exciton 3−47637
AgBr:Ca^{2+}, Cd^{2+}, resonant exciton trapping at impurity states 3−57290
AgCl, recombination radiation, ODMR studies 3−57819
$AgCl_{1-x}Br_x$ 3−57819
$AgCl_{1-x}Br_x$, ODMR study of trapped exciton dynamics 3−23277
$AgGaS_2$, mixed mode exciton polaritons, two-photon absorption spectra study 3−38321
$AgGaS_2$, single cryst., edge emission, cathodolum. study 3−24026
Ag_2HgI_4 thin film superionic conductor, preparation and characterisation 3−23088

excitons continued
Al/merocyanine:Cl/Au thin film photovoltaic cell, carrier photogeneration, depletion layer study 3—3335
$Al_{0.28}Ga_{0.72}As$, shallow acceptors, photoluminescence study 3—43590
$Al_xGa_{1-x}As$, core exciton spectra studied with synchrotron radiation 3—18625
$Al_xGa_{1-x}As$ variable-gap epitaxial films, exciton reflection and electroreflection spectra 3—14372
α-Al_2O_3 film, core excitons, soft X-ray absorpt. spectra 3—3867
As_2S_3 glass, photoluminescence and competing nonradiative processes 3—14348
Au-merocyanine-TiO_2, sandwich cells, photovoltaic props., electron acceptor doping effects 3—33759
BaF_2 crystals, exciton form. during interaction of radiation-induced defect 3—3795
$BaMnF_4$, pyroelectric antiferromagnet, exciton and magnon-sideband absorption 3—57970
$BaMnF_4$, two-dimensional antiferromag., absorption and luminesc. spectra 3—57953
BeO, pure, Li-Al, B-doped monocrystals and powder samples *(Russian)* 3—57966
BiI_3, resonant Raman scatt., zone folding effects on phonons and excitons 3—8836
$BiI_3:Pb^{2+}(Cd^{2+})(Mn^{2+})$ thin films, exciton absorpt. spectrum 3—19162
C, dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
CaF_2 crystals, exciton form. during interaction of radiation-induced defects 3—3795
CaF_2, X-ray absorpt. spectra and electronic struct. 3—3866
$CaF_2:Ce^{3+}(Eu^{3+})(Dy^{3+})$, vacuum UV excitation spectra of luminescence 3—14320
n-$Cd_xHg_{1-x}Te$, discrete exciton absorpt. struct. flare-up in mag. field 3—57930
CdI, low temp. luminescence study *(Russian)* 3—47708
$Cd_{1-x}Mn_xSe$, mag. polaron contrib. to donor bound exciton, photoluminesc. study 3—57972
$Cd_{1-x}Mn_xTe$, exciton transfer between Mn ions, photoluminesc. study 3—3796
$Cd_{1-x}Mn_xTe$, excitons, exchange spin splitting effects, magnetoabsorption study 3—33643
CdS, B excitons, two-photon spectroscopy 3—52042
CdS, complex dielec. function in exciton and plasma limit 3—38330
CdS, dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
CdS, dispersion in exciton-transition region 3—8791
CdS, exciton reflection spectra, Brewster effect, theory and expt. *(Russian)* 3—3084
CdS, exciton transitions, two-beam interferometry study 3—43508
CdS, excitonic transmission spectra, memory effect 3—43561
CdS, highly excited, picosec. spectroscopy, free carrier-exciton system dynamics 3—38910
CdS, laser irrad., structural defects, recombination radiation spectra 3—52844
CdS, many-exciton systems, boson description 3—47274
CdS, possible excitonic supercond. state, theoretical studies 3—38527
CdS, splitting near a surface of the n=2 exciton level, optical reflectance 3—47272
CdS, time resolved luminescence at high excitation 3—34138
CdS, ultrasonic Lamb wave irrad., point defect form., exciton luminescence study 3—14363
CdS-CdSe heterojunctions, exciton effects in photo-EMF spectra 3—28430
CdS(Se), luminesc. of high density electron-hole plasma 3—43603
$CdS_{1-x}Se_x$, recombination emission under high excitation levels 3—43580
$CdS_{1-x}Se_x$ solid solns., localised excitons, luminesc. study 3—14345
$CdS_{1-x}Se_x:Te$, exciton binding energy of isolated and paired Te impurities 3—13739
CdSe, nonlinear attenuation of excitonic polariton pulses 3—38846
CdTe, edge luminesc. under high-power optical excitation 3—38901
CdTe, exciton diffusion, reson. self-absorpt., luminesc. spectrum profiles 3—19189
CdTe:Ag (Cu), excited states, photoluminescence and IR absorption study 3—8450
Cs halides, self trapped exciton and V_k centre, small polaron model 3—56897
$Cs_3Bi_2Br_9$, optical props., 2 to 10 eV, and photocond. meas. 3—43560
CsBr, anion and cation exciton decay into anion and cation defects 3—3083
CsBr, excitons, luminesc., self-localisation, and decay to defects 3—38875
$CsCl:Ag^+$, F-H centre production under light irrad. 3—56896
$CsCoBr_3$, Raman scatt. from magnons and excitons 3—28853
$CsMnCl_3$ crystals, antiferromag., exciton migration, luminesc. and excitation spectra *(Russian)* 3—3073
$CsMnF_3$, antiferromag., exciton motion *(Russian)* 3—3073
CuBr, exciton and biexciton states, mag. field effects, hyper-Raman scatt. study 3—57289
CuBr(Cl), many-exciton systems, boson description 3—47274
CuCl, anomalous diamagnetism of charge transfer excitons 3—13742
CuCl, anomalous wave interference at Z_3-exciton resonance 3—18624
CuCl, induced polariton branch, hyper-Raman scatt. study 3—57931
CuCl, picosec. dynamics of excitonic polariton 3—38835
CuCl, possible excitonic supercond. state, theoretical studies 3—38527
CuCl, quantum size effect in optical spectra 3—28877
CuCl:N crystal, excitons bound to ionised donor-acceptor pairs, optical absorption 3—52810
$CuGaSe_2$ crystals, bound exciton low-temp. luminesc. 3—14344
Cu_2O, excitonic absorpt. lines, isotopic shift 3—14328
Cu_2O, paraexciton, stress depend., luminescence study 3—47271
EuTe, microscopic mech. of Raman scatt. 3—57910
GASe, exciton transition oscill. strength temp. depend. *(Russian)* 3—23287
$Ga_{1-x}Al_xAs$, exciton emission, luminescence study 3—52850
$Ga_{1-x}Al_xAs:N$, ion-implanted, x=0.2-0.8, photoluminescence studies *(Chinese)* 3—34132
GaAs (100), one- and two-photon absorpt. due to surface state excitons 3—43559
GaAs, collisional broadening of exciton luminesc. and spin-relax. time 3—28277
GaAs direct-gap semicond., transient optical spectra of dense exciton gas 3—14317
GaAs, electron-hole pair ODMR signals, donor-acceptor pair separation effect 3—8742

excitons continued
GaAs, epitaxial, photoluminescence study of exciton-ionised donor complexes 3—3806
GaAs, MBE grown, exciton-like features in low temp. photoluminescence spectra 3—3804
GaAs, MBE growth of undoped semi-insulating layers, elec. and photoluminesc. props. 3—39033
GaAs, oscillatory magnetoabsorption and diamagnetic excitons 3—38806
GaAs, photoluminescence under intense laser excitation 3—52851
GaAs thin film Wannier exciton energy levels structure and effective radius *(Chinese)* 3—8422
GaAs, uniaxially compressed, metastable excitons, photo-EMF spectra study 3—13741
GaAs, Z *(Russian)* 3—38889
GaAs:Sn, MBE growth, Sn doping using $SnSe_2$, photoluminesc. studies 3—37941
$GaAs/Ga_{1-x}Al_xAs$ multiple quantum well struct., room temp. optical absorpt. saturation spectra 3—7082
GaAs/GaAlAs multi-quantum well struct., Rayleigh scatt. at exciton resonance 3—8843
GaAs-$Ga_{1-x}Al_xAs$ quantum wells, elec. field effect on luminescence 3—34143
GaAs-$Ga_{1-x}Al_xAs$ quantum well structs., Wannier exciton binding energies 3—47273
$GaAs_{1-x}P_x:N$, luminescence decays of bound excitons 3—52849
$GaAs_{1-x}P_x:N$, transfer of excitons bound to N traps, time resolved luminesc. study 3—47689
$GaAs_{1-x}P_x:N$, Zn epitaxial layers, cathodoluminesc. doping level influence 3—8889
$Ga_{0.47}In_{0.53}As$ film, MBE grown, optical quality 3—19273
GaP, indirect exciton, lineshape and electron-phonon coupling 3—38313
GaP, wavelength modulated reflectivities of direct exciton edge 3—57951
GaS, Faraday effect up to 20 T 3—14261
GaSe, bound excitons, light polarisation transformation, mag. field induced, phenomenological theory 3—43518
GaSe, Faraday effect up to 20 T 3—14261
GaSe, inelastic exciton-exciton collision rate constant, determ. from absorpt. measurements 3—23275
Ge, [111] stressed, far IR absorpt. spectrum of excitons in high stress limit 3—57927
Ge, dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
Ge, electron-hole liq., ground state, variational approach 3—3074
Ge, electron-hole liq. correlation factor, density depend. 3—13737
Ge, exciton luminesc., mag. field depend. 3—3808
Ge, stressed, containing electron-hole liqs., spectroscopic studies, review 3—13745
Ge, submm. impurity and exciton photocond. kinetics 3—23432
Ge:O(Sb), annealed, photoluminescence at thermal defects 3—3810
Ge:Zn, double acceptor bound exciton, photoluminesc. study 3—33645
H_2 solid, far-IR absorpt. study 3—3694
InBr, direct excitonic transition and reflectivity spectra 3—23973
$In_{1-x}Ga_xP_{1-z}As_z$ solid solution, intrinsic exciton luminescence 3—47720
InP, donor discrimination and bound exciton spectra 3—43591
InP, near gap energy levels, photolum. and photocond. study 3—3240
InSb, diamagnetic excitons and energy band parameters, magnetoabsorption study 3—33644
InSe, Faraday effect up to 20 T 3—14261
InSe, magneto-optical props. near band gap, wavelength modulation spectroscopy study 3—28847
InSe-naphthalene (anthracene) intercalation cpds., exciton refl. and photoluminesc. spectra, 4.2 to 40K 3—38845
KBr:I, localised exciton relax., luminescence and defect form. 3—56877
KBr(I), lattice defect form. by two-photon excitation 3—12214
KCl, exciton decay into F, H and α-I pairs, luminesc. study 3—23279
KCl, KCl:Ag, Frenkel defect creation, recombinational and excitonic mechanisms, at 4.2K *(Russian)* 3—56879
KCl:Br(I), exciton decay to Frenkel defects, tunnel recharge *(Russian)* 3—57287
KCl:I, electron irrad., exciton decay, Frenkel defects, optical absorption study 3—8425
KCl:I, electron irrad., impurity exciton prod., optical absorpt. and luminesc. studies 3—43576
KCl:I, localised exciton relax., luminescence and defect form. 3—56877
KCl:Na, exciton decay, creation of anion and cation defects *(Russian)* 3—57286
KCl:Sn, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3—13743
KI, dynamical aspects of self-trapping of 1s excitons 3—28276
KI, laser irrad. defect form., V_k and H-centres 3—56892
KI, mag. circular dichroism of lowest exciton bands 3—57888
$KMgF_3$, electronic struct., photoemission expts. 3—57277
Kr, fluid, free electrons and excitons, photocond. excitation and VUV refl. spectra 3—23437
LiF, excitons and interband processes, configuration interaction method 3—57288
$LiTb_xY_{1-x}F_4$, model singlet ground state system, spin dynamics, inelastic neutron scatt., mag. excitons obs. 3—23591
Mg-Li, band struct., exciton-like behaviour 3—13714
MgF_2, X-ray irrad., self-localised excitons, thermoluminescence props. 3—13744
$Mg_2SnO_4:Mn$, luminescence excitation spectra, caused by synchrotron radiation *(Russian)* 3—57964
$Mg[Pt(CN)_4].7H_2O$ under press., self-trapped exciton destabilisation 3—3076
$MoS_2(Se_2)$, cond. band struct. from g-values of excitons 3—28250
NH_4Br, recomb. luminesc. study by simultaneous excitation 3—24000
NaI, mag. circular dichroism of lowest exciton bands 3—57888
$NaMnCl_3$, antiferromag., exciton motion *(Russian)* 3—3073
$Nd_xLa_{1-x}P_5O_{14}$, exciton diffusion and fluorescence quenching 3—13740
Ne, solid, exciton luminescence study 3—19184
Ne:Ar, solid, electron-induced erosion meas. 3—13280
$NiBr_2(Cl_2)$, fundamental refl. and electronic struct. 3—43562
P, amorphous, time resolved luminesc. study of recomb. and defects 3—3782
$PbCl_2$, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3—13743
RbBr(I), lattice defect form. by two-photon excitation 3—12214
RbI, mag. circular dichroism of lowest exciton bands 3—57888
$RbMnCl_3$ crystals, antiferromag., exciton migration, luminesc. and excitation spectra *(Russian)* 3—3073

excitons continued
Si, acceptorlike excited states of isoelectronic A,B,C exciton system, luminesc. study 3−3802
Si, dilation and vibr. contrib. to exciton temp. shift at melting point 3−3088
Si, exciton-plasma Mott transition 3−38310
Si, stressed, containing electron-hole liqs., spectroscopic studies, review 3−13745
Si, substitutional chalcogen donors, shallow-deep instabilities 3−3114
Si:B, bound exciton and multi-exciton complexes, kinetics 3−57285
Si:Be, luminescence, Zeeman spectroscopy 3−14340
Si:Be,k isoelectronic bound excitons, photoluminesc. lifetime, absorpt. and excitation spectra 3−8878
Si:Cr,B Cr-B pair photolum. 3−43612
Si:In, Al, photoluminesc., IR absorpt., photocond. and Hall effect meas. 3−34135
Si:In,P LPE layers, donor acceptor pair spectra 3−57971
Si:In(Tl), isoelectronic bound excitons, photoluminescence obs. 3−19168
Si:P, excited impurity level widths 3−47284
SiO_2, exciton models 3−18626
$SnBr_2$ single crystals, exciton luminesc. 3−24018
$SnCl_2$, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3−13743
SnI_2 film, optical consts. meas., exciton binding energy 3−3846
SrF_2 crystals, exciton form. during interaction of radiation-induced defects 3−3795
$SrS_{1-x}Se_x$, exciton reflection spectra, amalgamation-type behaviour 3−8849
$SrTiO_3$, X-ray induced luminesc., thermoluminesc. and visible absorpt. meas. 3−34136
TlCl, optical spectra, long-range and short-range many-body corrections 3−3673
$TlInS_2$, electroabsorption spectrum 3−3687
VO_2, nucl. mag. relax, 4.2 to 600K 3−52655
$WS_2(Se_2)$, cond. band struct. from g-values of excitons 3−28250
Y_2O_3:(Eu)(Tb), luminescence excitation spectra, caused by synchrotron radiation *(Russian)* 3−57964
Y_2SiO_5:Ce, luminescence excitation spectra, caused by synchrotron radiation *(Russian)* 3−57964
$Zn_xCd_{1-x}S$:Te, exciton binding energy of isolated and paired Te impurities 3−13739
$Zn_{1-x}Mg_xS$ ($0 \leq x \leq 0.31$), energy band struct., exciton refl. spectra 3−3057
$Zn_{1-x}Mn_xTe$, optically detected mag. resonance 3−52672
ZnO, exciton peak energy meas., optical spectra, press. depend. 3−8424
ZnP_2, exciton reflection spectra, Brewster effect, theory and expt. *(Russian)* 3−3084
ZnP_2, free excitons, optical study 3−38320
ZnS:Ni, hydrogen-like states in photoionisation band, electroabsorption study 3−8452
ZnSe exciton photoconductivity 3−23431
ZnSe, exciton system heating under laser excitation 3−18623
ZnSe, luminescence spectra *(Russian)* 3−24015
ZnSe:N, binding energy of shallow acceptor 3−52076
ZnSe(S):Ni, bound excitons, electroabsorption spectra study 3−38318
ZnSe(Te), exciton diffusion, reson. self-absorpt., luminesc. spectrum profiles 3−19189
Zn_2SiO_4:Mn, Zn_2GeO_4:Mn, luminescence excitation spectra, caused by synchrotron radiation *(Russian)* 3−57964
$ZnSiP_2$, photoluminescence lines associated with pseudodirect gap 3−52821
ZnTe, Brewster effect on refl. amplitude and phase in exciton spectral region 3−23969
ZnTe, exciton reflection spectra, Brewster effect, theory and expt. *(Russian)* 3−3084
ZnTe, excitonic surface polaritons, ATR, reflection and luminesc. spectra 3−28283
ZnTe, luminescence on intense lase excitation 3−43628
ZnTe, optical amplification spectra meas. 3−24009
ZnTe:Fe(Co)(Mn), impurity effect on excitonic and mag. props. *(Russian)* 3−23580

executive programs *see supervisory and executive programs*

exhibitions
No entries

exobiology *see extraterrestrial life*

exoelectron emission
ruby, irrad., thermostimulated luminesc. 3−3834
thermostimulated exoelectronic emission, activation energy calc. 3−8946
Al, photoemission sources, energy level distribution changes due to scratching 3−39017
Al_2O_3, hydrated, exoelectron emission studied by IR spectroscopy 3−8944
Au, thermally stimulated exoelectron emission after low energy electron excitation 3−8945
$CaNi_5$, absorption of H_2, disintegration, acoustic emission and exoelectron emission 3−47935
Cu, thermally stimulated exoelectron emission after low energy electron excitation 3−8945
GaAs, electron bombarded and plastically deformed, intrinsic emission intensity 3−24102
KCl crystal, dislocation exoelectron emission 3−14444
KCl:Tl, electron trap spectroscopy, exoelectron emission and luminescence meas. by fractional glow technique 3−34204
$LaNi_4Fe$, absorption of H_2, disintegration, acoustic emission and exoelectron emission 3−47935
LiF, electron trap spectroscopy, exoelectron emission and luminescence meas. by fractional glow technique 3−34204
$LiNbO_3$:Fe, exoelectron emission and radiation strength, impurity and temp. depend. 3−39019
NaCl crystal, dislocation exoelectron emission 3−14444
NaCl crystals, ion excited, electron emission and point defects 3−8048
NaCl, exoelectron energy distrib., Monte Carlo calc. 3−24103
Ni-NaF thin film system, thermostimulated exoelectron energy distrib. meas. 3−3929
Ni-Zn ferrites, exoelectron emission study of surface damage after treatment *(Russian)* 3−39018
SiO_2, gel, platinised, exoelectron emission studied by IR spectroscopy 3−8944
Zn, photoemission sources, energy level distribution changes due to scratching 3−39017

exoelectron emission continued
Zn, thermally stimulated exoelectron emission after low energy electron excitation 3−8945
ZnS crystal, dislocation exoelectron emission 3−14444

exosphere
nonstationary polar wind, causes and effects 3−15719
temperature effect on density Jacchia's 1977 model atm. 3−44597

exotic atoms
see also hadronic atoms; muonic atoms
antiprotonic atoms, vacuum-polarisation contrib. to spin struct. 3−46104
multielectron system, two-photon positron annihilation probability 3−32245
protonium atoms, mag. moments and hyperfine struct. 3−46104
radiative Coulomb sum rules from a continuum-spectrum initial state 3−36884
e^+-H bound state nonexistence 3−46101
anti-H+H, interaction potential 3−36886
$\bar{p}+H^-$ collisions, H^- stripping with low energy $\bar{p}$ 3−46058

expanding universe *see cosmology*

expansion, thermal *see thermal expansion*

expansion chambers *see cloud chambers*

expert systems *see artificial intelligence*

exploding foils *see exploding wires and foils*

exploding wires and foils
see also discharges (electric); plasma production
electron emission and plasma formation, expt. study 3−18156
H_2^+, dissoc., H^+ velocity distrib. and separation in C foil, computer model 3−50541
implosion focus, shock waves, plasma prod., temp. meas. 3−7768
metallic conductor, electrical explosion, energy anomalies 3−2324
X-ray source using exploding wire micro Z-pinch, lithography appl. 3−20965
Au foil, laser irrad., XUV radiation transport 3−22680

explosion bubbles *see bubbles*

explosions
see also accidents; detonation; nuclear explosions; safety; shock waves
ablative implosion dynamics study using streaked X-radiography, 0.53 μm driver radiation 3−42450
acceleration of flat plate, optimum explosive charges 3−51155
biogas systems, control, safety, and economic aspects *(German)* 3−58468
blast wave generated by intense explosion, boundary layer study 3−22484
condensed explosives, detonation velocity calcs. 3−9322
detonation reaction zones chem. rates, temp. and press. depend. determ. 3−24508
dust particle size meas. following detonations in clay and sandy soils 3−29966
electric arc, quenching by shock compression using explosives 3−2327
energies and volumes of activation for condensed detonating explosives 3−24507
fine disperse particles or drops suspended in air, expansion under influence of explosion 3−2110
fuel-air explosions, two-phase, detonation vel. meas. using fibre optic light-detector probes 3−2089
gas bubbles, adiabatic compression in non-compressible viscous liq. 3−51162
gas cloud explosion calc. program GASEX2 3−56565
gas mixture detonation, free gas charge realisation and crit. diameter calc. 3−53403
Gaussian fluctuations effect on model kinetic system exhibiting explosive behaviour 3−58427
imperfect detonation flow field struct. *(Ukrainian)* 3−46589
inhomogeneous atmosphere, point explosion, heat radiation 3−7606
liquid, bubble-containing, wave processes induced by explosions and shocks 3−13304
metallic conductor, electrical explosion, energy anomalies 3−2324
nonisothermal processes in system with serial and parallel reactions under linear heating conditions 3−53398
pentaerythritol single cryst. explosive, γ-irrad., detonation, plane shock initiation 3−2671
pentaerythritol tetranitrate, implosion, temperature meas. at focus, plasma black body nature 3−7768
pregalactic objects explosions in early Universe, shock wave struct. and expansion law 3−49061
pulsed volume high-press. discharges, cathode spots 3−33019
radiative ignition, role in large explosion propagation 3−34625
shock tube, explosive, based on cellular high-explosive charges, investig. and applics. 3−51151
similarity flows behind strong shock waves in presence of transverse mag. field 3−2137
slurry explosives, adiabatic compression of gas bubbles in non-compressible viscous liq. 3−51162
slurry explosives, gas bubbles shock compression in ideal compressible liq. 3−51163
soil, water saturated, wave processes induced by explosions and shocks 3−13304
steel shell, cylindrical, impulsive collapse due to explosive charge detonation 3−46468
strong explosion in rarefied gas, kinetic description 3−46661
supernova explosions, light polarisation as measure of deviation from spherical symmetry 3−30396
supernovae, neutrino escape and nuclear dissociation rel. to core collapse and/or explosion 3−35641
suspension-type explosives with various textures, prep. and detonation behaviour 3−51153
TATB, exothermic reactions initiated by an electron beam 3−39387
thermal explosions, distributed temp. system, times to ignition 3−34624
trinitrotoluene explosives, impact initiation, transient processes 3−53402
under water explosions, shock wave propag. and attenuation study 3−46596
underground explosions, low-freq. seismic body wave excitation 3−4802
underwater, of cylindrical charges with foliated cases, initial stage investig. 3−51152
water drop with insoluble core, heating under 10.6 μm radiation, explosive boiling 3−51659
water waves produced by ground motions 3−48551
D plasma, compressed by cylindrical layered explosion-driven system, anal. 3−51323
F_2+H_2 explosion initiation due to pulsed laser radiation on reaction vessel surface 3−53405

explosions continued
H_2-O_2, implosion, temperature meas. at focus, plasma black body nature 3—7768
Li/$SOCl_2$ batteries, hazards during anode-limited cell reversal, spectroscopic study 3—24564
exposure meters *see photometers*
extended Huckel theory calculations *see EHT calculations*
extended X-ray absorption fine structure *see EXAFS*
extensive air showers *see cosmic ray showers and bursts*
extensometers
4-acetyl-4′-n-alkanoyloxy-azo-benzene series, smectic-A phase struct. obs. 3—51479
capacitor dilatometer technique for ferroelec. phase transition study in TGS 3—38104
dilatometer for in situ studies of electrointercalation of layered materials 3—25875
Edelmans opto-electric dilatometer for thermal length changes measurement of dry transformer epoxide insulation *(Slovak)* 3—16333
high-temp. appl., extender for conversion of room-temp. extensometers 3—40595
laser absolute dilatometer with digital data processing unit *(German, English)* 3—20820
metallic glasses, free volume change meas. during annealing, thermal dilatation apparatus 3—1939
strain gauge for longit. and transverse deform. meas. in test sample neck 3—19496
thermal expansion coeff. meas. at low temp., using SQUID detector 3—16368
tilting dilatometer for excess molar volumes in very dilute liq. mixtures 3—10800
$Cu_{57}Zr_{43}$, amorphous, pre-yield microstrain, precision meas. 3—43913
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, amorphous, pre-yield microstrain, precision meas. 3—43913
external flows
ablation layer instability, analytic theory 3—56543
air flow around three cylinders in row at low pitch-to-diameter ratios 3—32739
air flow separation structure over wind wave crests 3—12723
approaching flow types effect on straight conical diffusers performances 3—37438
asymptotics of slow fluid flow past an array of fixed obstacles 3—12621
atmospheric motion, existence of Hadley convective regimes 3—44681
boundary layer with self-induced press., locally nonviscous perturbations 3—22423
Butler's sphere theorem for Stokes stream function 3—51047
circular cylinder, external steady laminar flow, third-order boundary conditions 3—51050
circular cylinders at low Reynolds number, use of roughness to produce high Reynolds number 3—46529
circulatory flow in rectangular cavity, Navier-Stokes eqns. 3—32746
coherent flow patterns in viscous wall region, multiple wall probe meas. 3—22432
consecutive shock waves, interaction with wedge 3—51164
constrained flow, two-dimensional inclined plate, surface press., wind tunnel tests 3—56518
convection phenomena at reduced gravity of importance in space processing of materials 3—2040
convective heat transfer during flow of fluid around inner surfaces of cylindrical tank, convective heat transfer *(Russian)* 3—17941
cylinder in longitudinal streamline flow variable props. external turbulence, effect on friction coeffs. *(Russian)* 3—51076
detached shear layers in rotating sliced cylinder 3—27579
diffusive transport across corrugated plates and tubes 3—49291
drag force fluctuation on cylinder 3—46522
dusty fluid, Couette flow between two parallel plates 3—42220
free surface flow over semicircular obstruction including influence of gravity and surface tension 3—51048
graphite body in hypersonic gas stream, thermochem. breakdown 3—46660
heat transfer and flow behaviour around a circular cylinder at high blockage ratio's 3—27511
high Reynolds number internal/external flow computation 3—56528
horizontal cylinder within confining walls, natural and mixed convection heat transfer 3—7583
hot stainless steel tube, rewetting by falling liq. film 3—47186
hydrodynamic fluctuation due to the discontinuity of flow impedance 3—46669
incompressible longitudinal fluid flow, flexible rod dynamic stability 3—37388
micropolar fluid two-dimens. flow, fundamental Oseen soln. 3—56519
mobility matrix for two spherical particles with hydrodynamic interaction 3—22415
natural convective flow in closed rectangular area, hydrodynamic and thermal structs. *(Russian)* 3—17942
Navier-Stokes eqns. in three dimensions, wall driven cavity flow penalty finite element anal. 3—17911
parabolic viscous shear past a cylinder, flow separation 3—37503
plane wall effect on sphere moving parallel to it 3—46516
plate roughness and hydrodynamic drag 3—46512
potential flow analysis of arbitrary cascade using conformal transformation into a row of circular cylinders 3—37437
potential flow of axially symmetrical complex profile bodies *(Russian)* 3—22561
potential flow past a group of expanding or contracting circular cylinders 3—42217
reactive particle, convective heat and mass transfer at low Peclet numbers 3—17985
rotating cone in axial flow, boundary layer transition 3—51134
shock-free flow near convex corner 3—2088
shock-free flow past symmetric profile, transonic Karman-Fal'kovich eqns. soln. 3—46592
spheres in unbounded fluid, hydrodynamic interaction at small, finite Reynolds number 3—22519
stationary subsonic flow over 3-dimens. annular blade row, quasi-2-dimens. approx. 3—46579
Stokesian flow analysis, penalty-finite element methods 3—83
supersonic two-phase flow over bodies, meas. and visualisation 3—46671
surface tension gradient generated flow 3—2016
temperature-dependent viscosity effects on slow flow past hot sphere 3—22463
external flows continued
turbulent viscosity of external flow effect on heat transfer in boundary layer 3—37460
unsteady Newton-Buseman flow theory, freq. depend. and indicial response 3—27488
viscoelastic fluid, flow along torsionally oscillating flat plate 3—2094
viscous fluid, determ. of force acting on a body in the fluid 3—7540
viscous fluid, vel. field near two spherical dipoles oscillating in phase and in parallel 3—50825
viscous fluid film flowing down vertical wall, solitary waves 3—44969
viscous fluid steady stream at low Reynolds no., force acting on cylinder in fluid 3—7541
viscous incompressible fluid squeezed layer, interaction dynamics with elastic walls 3—46586
viscous wall jet, stability 3—46613
external modes (crystals) *see lattice dynamics*
extraordinary ray *see birefringence*
extrapolation
acoustic imaging by wave field extrapolation, data acquisition methods 3—1868
acoustic imaging by wave field extrapolation, theory 3—1867
electron probe microanalysis, critical energy determ. by extrapolation 3—9368
image reconstruction from band-limited data by spectrum extrapolation 3—22004
nematic liquid crysts., order parameters determ. by mean field extrapolation 3—51486
extraterrestrial atmospheres *see planetary satellite atmospheres*
extraterrestrial life
comets, mm-wave expts. rel. to origin of life 3—15877
galactochemistry 3—44679
SETI observations, symbiotic approach using maps from Westerbork Synthesis Radio Telescopes 3—20259
Voyager mission, planetary biology implications, conf. 3—30551
extraterrestrial radiofrequency radiation *see radiofrequency cosmic radiation*
extremum control *see optimal control*
extrusion
dislocation struct. after hot hydrostatic extrusion *(Russian)* 3—42617
polyethylene, ultraoriented extruded solid, Raman spectroscopic study 3—14278
polyethylene melts, elastic props. at high shear rates with respect to extrusion 3—33333
polyethyleneterephthalate, coextrusion drawn, Fourier-transform IR obs. 3—57917
polypropylene melts viscosity, time, temp. and shear depend., extrusion effect 3—32768
porous materials, densification in rigid conical and cylindrical dies 3—39057
PVC melts, rheological props., extrusiometric obs. 3—27472
PVC-polypropylene copolymer melts, rheological props., extrusiometric obs. 3—27472
PVC-polyvinyl acetate copolymer melts, rheological props., extrusiometric obs. 3—27472
radial extrusion, upper bound anal. 3—24300
steel, bearing, cementite dissolution during austenisation, hydroextrusion effects *(Russian)* 3—24271
Sylon ceramics development, fabrication and engng. applics. 3—29048
Al, polycryst., thermal softening during hydrostatic extrusion 3—24258
Al, powder compact, hot extrusion, flow pattern *(Japanese)* 3—58065
Al-Cu(Si), cast and extruded, cyclic behaviour, fatigue crack propag. 3—58193
Al-Cu(Si), cast and extruded, cyclic behaviour, electron fractographic study 3—58194
Cu, polycryst., recovery and recrystn. during hydrostatic extrusion 3—24257
Cu, powder compact, hot extrusion, flow pattern *(Japanese)* 3—58065
Ni-W-Al alloy, dispersion strengthened, prod. by mech. alloying, characteris. 3—58071
Pb-Al_2O_3, powder metallurgical composites, consolidation and technical props. 3—52996
Pb-Sn-Te(Se), extruded alloys, carrier conc. and mobility 3—8507
Pb-Zn, powder metallurgical composites, consolidation and technical props. 3—52996
eye
see also contact lenses; vision
accessory pigments in crayfish compound eye, range of light sensitivity modulation 3—34848
accommodation, dark-field, empty-field and instrument, emmetropic and ametropic subjects 3—48289
accommodation dark focus, long-term stability 3—39622
accommodation in cats after elec. stimulation of mesencephalic reticular formation 3—9578
accommodation in human infants 3—53663
amblyopia therapy by light intensity reduction 3—53884
ametropia and peripheral refraction 3—19689
angle of deviation, anal. of 7 methods for meas. 3—39728
anomalous correspondence, anal. of 7 methods of determ. 3—19706
anomalous correspondence, angle of anomaly rel. to accommodation 3—19691
aqueous humour outflow through pores in lining endothelium of Schlemm's canal 3—44263
astigmatic system, advantages of a block matrix formulation 3—19687
binocular vergence, accuracy for peripheral stimuli 3—24715
biomechanics, muscular stress calc., in humans 3—9580
bipolar cells, carp, double colour-opponent receptive fields 3—58659
cataracts, senile and IR induced, laser Raman spectroscopy 3—53747
circular retinal receptive fields, recursive features 3—48285
cone adaptation of one class, Stiles's π_4 mechanism 3—9589
cone-system contributions to responses of colour-opponent neurones in monkey lateral geniculate 3—15081
contour signal isolation, work performed by retina 3—24711
convergence accommodation 3—53666
cornea, isochromes and isoclines calc. 3—48283
corneal endothelial specular-micrograms, computer anal. 3—39757
corneal sensitivity rel. to iris colour, touch threshold studies *(Italian)* 3—4516
corneal small-angle light-scatt. theory, wavy fibril models 3—15078
corneal topography and thickness, diurnal variations 3—34830
corneal transparency changes resulting from osmotic stress 3—58644

eye continued
- counterrolling measurement using polarised light 3—9691
- β-crystallin, struct. of eye lens protein of mouse 3—58645
- crystallin proteins, short-range order rel. to eye lens transparency 3—58646
- crystalline lens, maintenance of optical quality during growth 3—44239
- crystalline lens, split laser technique for optical study 3—9789
- cylindrical refractive error: a population study in western Newfoundland 3—39623
- damage due to laser radiation, safety standards 3—19757
- defocus blur discs, anglular diameter 3—19688
- defocus effects on contrast sensitivity of monkeys behavioural meas. and predictions 3—53673
- deformation measurement by laser interferometry 3—15180
- dopaminergic cells in octopus optic lobe, inhibitory retinal efferents 3—58663
- electrooculogram and eye position, combined recording during controlled room illumination, device *(French)* 3—58857
- EM radiation interaction with human eye 3—15147
- EM wave induced vibrs. in the eye, acoustic wave generation 3—19758
- ERG, cat, display of 2 retinal processes 3—34844
- ERG b wave, recent advances in origin and modulation 3—4496
- fish, retinal growth and ability to see small prey 3—39625
- fixation disparity curve, stability obs. 3—58647
- fluorescein ocular fundus angiography time series, semiautomatic leakage anal. system 3—48370
- fundus image recognition, computer method 3—9698
- fundus images, pattern recognition of blood vessel networks 3—29697
- fundus oculi, stereoophthalmoscopy and stereophotography with RETINOPHOT 211 3—34937
- fundus oculi, TV ophthalmoscopy and fluoroscopy of fundus oculi 3—34939
- fundus oculi examination using multispectral and multitemporal techniques 3—34938
- fusional vergence response to local peripheral stimulation 3—34839
- gain, speed and sensitivity of GTP binding vs PDE activation in visual excitation 3—34846
- gigaseal patch clamp recordings from outer segments of intact retinal rods 3—9582
- graphical analysis of prism adaptation, convergence accommodation, and accommodative convergence 3—24709
- grating visual evoked cortical pots. in laser bioeffects evaluation, instrumentation 3—35032
- heterophoria, prism-induced, effect of orthoptics upon ability of patients to adapt 3—34833
- holography, illumination with laser radiation, immersion method 3—58768
- horizontal cell light responses, dynamic props., cat obs. 3—44245
- horizontal cell response in carp retina, discrete nonlinear reduction model 3—58661
- horizontal cells, isolated, from teleost retina, biophys. and biochem. studies, review 3—58662
- horizontal cells of carp retina, colour coding mechanisms *(Japanese)* 3—19692
- horizontal cells of turtle retina, spread of pots. along network 3—58660
- hyperthermic treatment, math. model to calc. temp. distribs. 3—15046
- infant visual acuity, effects of induced optical blur 3—53672
- interocular transfer in cats with early callosal transection 3—39627
- IR optometer, continuously recording, for ocular accommodation changes meas. 3—39749
- IR/UV radiation protection during arc welding, visual training aids *(French)* 3—54603
- lens turbidity, conc. change effect, random fluctuation theory prediction 3—34831
- lutein, linear dichroism, basis for Haidinger's brushes 3—53662
- microwave heating technique for hyperthermic treatment of eye tumours, especially retinoblastoma 3—15185
- microwave-induced lens motion in rat, in vitro meas. using laser interferometer 3—35049
- modelling, early visual processing, display/observer interface factors 3—4497
- monocular asymmetries in visual latency, rel. to sighting dominance 3—34834
- motion aftereffects, separate aftereffects from each eye and from both eyes 3—39644
- movement analysis, computerised method based on electronystagmography 3—24905
- movement measurement using double mag. induction 3—9688
- movement response to horizontally moving object, meas. system *(Japanese)* 3—44372
- moving image perception, from multi-CRT display, eye movement role 3—15099
- myopia avoidance in Naval Academy midshipmen, rel. to ocular servo control 3—15079
- neuritic outgrowth from goldfish regenerating retinal explants, use of image anal. for meas. 3—58886
- ocellar system of the insect: comparison of dorsal ocellus and lateral ocellus 3—58653
- oculomotor control, visual-vestibular interaction, mathematical modelling and computer simulation 3—48286
- oculomotor system, nonlinear behaviour 3—24720
- On-Off response variation in frog retinal ganglion cells, functional implications 3—24716
- ophthalmological setup using microprocessor based METROPHOR system 3—35012
- optical system demands and conditions for medical engng. instruments 3—34934
- optometry conference, Birmingham, England (July 1982) 3—54567
- optomotor system, blowfly, motion sensitive interneurons, horizontal cells 3—44242
- pachometry: a comparison between touch and overlap measurement method 3—39702
- pachometry, review of technique over past 250 years 3—19792
- patching and evoked potential acuity in children 4 months to 8 years old 3—9577
- perimetry, layer-by-layer, quantitative tests 3—34994
- peripheral target luminance rel. to pupillary area 3—24707
- photo-ergonomy, glossary of some terms used 3—4544
- photomechanical responses in crustacean retinula cells: the role of microtubules 3—34847
- photoreceptor cell, light induced pore formation in membrane 3—19699
- photoreceptor function, conf., Mexico, (Aug.-Sept. 1981) 3—30554

eye continued
- photoreceptor membrane shedding and assembly in insect retinae 3—29539
- physiopathological effects on skin and eyes of UV, visible and IR radiation *(Italian)* 3—44282
- polychromatic image quality evaluation by means of transfer function 3—26964
- posterior lenticular opacities among atomic bomb survivors in Hiroshima and Nagasaki 3—34912
- protection against He-Ne lasers, interf. filter based protective glasses *(Czech)* 3—4656
- psychological and phys. optics, teaching demonstrations 3—5567
- pupil, model of nonlinear stochastic behaviour 3—15083
- R/G type horizontal cell receptive field, nonlinear summation model 3—9583
- refractive error, exam. through computer simulation 3—39624
- retina, bee, faster O_2 uptake than Na^+ pumping after a light flash 3—44243
- retina, carp, connections between photoreceptors and horseradish peroxidase-injected bipolar cells 3—58656
- retina, catfish, synaptic organisation involving receptor, horizontal and on- and off-centre bipolar cells 3—58655
- retina, frog, local stimulation and whole retina shedding 3—34849
- retina, goldfish, convergence of signals from red-sensitive and green-sensitive cones onto L-type horizontal cells 3—58658
- retina, injurious effects of light, singlet O_2 and lipid peroxides role 3—34889
- retina, L-type horizontal cells, nonlinear response characts. 3—29541
- retina, struct. damage by heavy ion irrad. 3—15167
- retina, toad, high-pass filtering of small signals by rod network, equivalent circuit modelling 3—53664
- retina, toad, high-pass filtering of small signals by rod photoreceptor network, K^+ cond. mechanism 3—53665
- retina, turtle, kinetics of synaptic transmission from photoreceptors to horizontal and bipolar cells 3—58657
- retina model as stochastic receptor array 3—24719
- retinal blood flow visualisation, laser speckle photography, optical filtering deblurring 3—46274
- retinal chromophore, protein side chain motion restriction during photocycle of bacteriorhodopsin 3—48243
- retinal ganglion cells, turtle, 2 identifiable classes 3—58654
- retinal image displacement during head movement, assessment by afterimage method 3—9584
- retinal mosaic visual image processing, contrib. from recent studies on Limulus 3—58651
- retinal neurocircuitry, rel. to synaptic transmission, conf., Katata, Japan (Nov.-Dec. 81) 3—54574
- retinal photoreceptor cells, effects of heavy ions, anal. of DNA damage, rabbit obs. 3—53724
- retinal polarisation effects 3—15077
- retinal polypeptides, Drosophila, light-induced modification, in vivo obs. 3—4546
- retinal research and study, selected review 3—9579
- retinal rod outer segment cytoplasmic membrane, cyclic nucleotides effect on conductance 3—34837
- retinal vessls, electro-optical system for non-invasive oximetry 3—9700
- retino-geniculate connectivity in kittens, abnormal development in absence of action pots. 3—4501
- retino-tectal connections formation, extended branch-arrow model 3—34835
- rhabdom bleaching in eyes of intact butterflies 3—53669
- rod cell light detection capabilities (cynomolgus monkey) 3—9586
- rod outer segment photoreceptor membrane multilayers, phase separation obs. 3—4470
- rod pathways in the retina of the cat 3—58652
- rod pigment regeneration in rabbits, adapto-electroretinographic obs. *(French)* 3—48290
- rod responses in frog retina, reconstruction by differential eqns. soln. 3—19700
- saccades, normal characts. and variability, effects of age 3—24717
- saccades, timing of peak vel. 3—58650
- saccadic eye movements, velocity calc., frequency limitations of two point central differentiation algorithm 3—15082
- scanning laser ophthalmoscope, image control 3—15190
- sensitivity to grating contrast in falcons 3—9587
- slitlamp estimate of anterior chamber depth, rel. to angle structs. gonioscopic visibility 3—19791
- smooth pursuit movement vel. in humans, computer technique for determ. 3—35000
- spherical aberration of the crystalline lens 3—24708
- tear film rupture, dispersion force and surface tension 3—4530
- US biometry, tolerances in eye meas., retinal irradiance calcs. *(Italian)* 3—4572
- ventral serve-photoreceptor of Limulus polyphemus, light-induced ionic current and intracellular Ca^{2+} conc. obs. *(German)* 3—39631
- vertical fusional vergence performance, unreliability of nonius line estimates 3—44246
- vestibulo-ocular reflex, three-dimens. behaviour, matrix anal. method 3—44241
- video eye position detector, noise tolerance 3—9811
- visual sensation, gap between perceptual information *(Japanese)* 3—44238

F-centres
- *see also A-centres; M-centres; R-centres; Z-centres*
- alkali halides, deformable lattice, electron, hole and exciton instabilities 3—57047
- alkali halides, excited F-centre ionisation, evidence for lattice tunnelling 3—28301
- alkali halides, F- and F_A-centres, HF cluster calculation 3—3116
- alkali halides, F-centre absorption energy, temp. and press. depend. 3—23319
- alkali halides, F-centre form. and excitons, time and temp. depend. 3—56893
- alkali halides, F-H pair production by UV laser irrad., absorption spectra studies 3—56895
- alkali halides, mixed, F-band position in absorpt. spectrum, Mollwo-Ivey relations 3—43569
- alkali halides, recombination induced F-H pair prod., cascade spectroscopy studies 3—56894
- alkali halides, self-trapped excitons and F+H pair form. 3—57291

F-centres continued
alkaline earth oxides, $Li^+(Na^+)$ ion implantation defects, EPR, luminesc. and optical absorpt. study 3−2584
β-alumina, stoichiometric, X-irrad., ENDOR and EPR of defects 3−34009
excited state processes, relaxed versus unrelaxed mechanisms 3−56891
halosodalites, nonstoichiometric, colour centre destruction spectra 3−19160
ice, electron irradiated, visible band electron fast decay at low temp., isotope effects and H^+ mobility 3−13221
radiationless transitions and fluorescence, Dexter-Klick-Russell mechanism 3−57976
rare gas solids, self-trapped excitons and F+H pair form. 3−57291
relaxed excited state, magnetic nature and spin flipping processes in optical pumping cycle 3−18297
Al_2O_3, review 3−56898
Cs colloids in additively coloured CsF, annealing, IR spectra, precip. and ripening obs. 3−28881
$CsCl:Ag^+$, F-H centre production under light irrad. 3−56896
CsF, F′-centres, form. and bleaching characts., optical props. 3−2551
CsOH, glass, modulation effects of metal nuclei in spin echo of trapped electrons 3−38694
K halides, F-centre luminescence quenching by nonradiative processes 3−57974
KBr crystal, containing F colour centres, temp. depend. of real refr. index 3−57869
KBr, electrolytically coloured, lattice parameter, F-F′ conversion effects 3−22890
KBr:I, F-centre accumulation efficiency, temp. depend. *(Russian)* 3−56888
KBr(I), lattice defect form. by two-photon excitation 3−12214
KCl, electrolytically coloured, lattice parameter, F-F′ conversion effects 3−22890
KCl, exciton decay into F, H and α-I pairs, luminesc. study 3−23279
KCl, F centre optical nonlinear susceptibilities 3−2552
KCl, F centres, hyperfine interactions, electron spin-echo study 3−33979
KCl, Frenkel pair annihilation kinetics, optical absorption study 3−46927
KCl, gamma-ray irrad., optical destruction of radiation induced F- and V-centres 3−2605
KCl, internal mag. viscosity induced by paramag. centres 3−28501
KCl, optically induced F-centre aggregation 3−38854
KCl, positron annihilation study of colloidal centres 3−34161
KCl with F_A-centres, nonlinear optical activity *(Russian)* 3−19104
KCl:Br(I), exciton decay to Frenkel defects, tunnel recharge *(Russian)* 3−57287
KCl:Br(I), F-centre accumulation efficiency, temp. depend. *(Russian)* 3−56887
KCl:Ca(Sr), gamma irradiated, thermal bleaching of $V_2{}^M$ centres, oscillator strengths 3−8047
KCl:I, electron irrad., exciton decay, Frenkel defects, optical absorption study 3−8425
KCl:I, electron irrad., impurity exciton prod., optical absorpt. and luminesc. studies 3−43576
$KCl_xBr_{1-x}:Ca^{2+}$, X-irrad., Z_1- and F-centres, thermoluminesc. and optical absorpt. studies 3−19212
KI, electrolytically coloured, lattice parameter, F-F′ conversion effects 3−22890
KOH, modulation effects of metal nuclei in spin echo of trapped electrons 3−38694
LiCl, γ-irrad., vacuum UV absorpt. spectra 3−43571
LiF, colour centre transformation by laser radiation 3−8098
LiF, F_2-centre form. mechanism, synchrotron radiation luminescence method 3−27938
$LiF:F_2$ colour centre lasers, bleaching of F_2 centres and absorption spectra 3−56203
$LiNbO_3$, F^+-centre energy levels, point-ion-lattice calc. 3−23318
$LiNbO_3$, F^+-centre wave functions, transition energies in absorpt. spectra 3−43071
$LiTaO_3$, F^+-centre energy levels, point-ion-lattice calc. 3−23318
$LiTaO_3$, F^+-centre wave functions, transition energies in absorpt. spectra 3−43071
$MgCl_2$, γ-irrad., ESR and optical absorpt. spectra study 3−43434
MgO, thermochemically reduced, luminesc. from O vacancies 3−43620
$MgO:H^-$, thermochemically reduced, charge and mass transfer, IR absorpt. and luminesc. study 3−43573
$MgO:H^-$, thermochemically reduced, electron traps and F-centres 3−57312
$MgO:Li^+(Na^+)(K^+)(Rb^+)(Fe^+)(In^+)(Au^+)$, ion implanted, precipitation and defects 3−2827
Na halides, F-centre luminescence quenching by nonradiative processes 3−57974
$Na_8Al_6Si_6O_{24}Cl_2$, sodalite, polycryst., optical and cathodochromic props. *(Russian)* 3−57870
NaCl crystals, ion excited, electron emission and point defects 3−8048
NaCl, force const. change calcs. around point defects 3−2719
NaCl, gamma-ray irrad., optical destruction of radiation induced F- and V-centres 3−2605
NaCl:Ca, post-irradiation deform., thermolum. studies 3−3835
$NaCl:Ca^{2+}(Sr^{2+})(Cd^{2+})(Eu^{2+})$, first stage coloration, X-irrad. dose rate depend. 3−56890
NaCl:Eu, effects of X-irradiation, colour centre formation 3−18343
$NaCl:Pb^{2+}(Sr^{2+})$, F-colouring efficiency, effect of precipitated phases, optical study 3−47680
NaF:Li, additively coloured, F′-centre formation by optical bleaching 3−14327
$NaF:Mn^{2+}$, doped and undoped, γ-ray irrad., thermoluminesc. study 3−14362
NaOH, modulation effects of metal nuclei in spin echo of trapped electrons 3−38694
RbBr, F′-centre absorpt. spectrum 3−43568
RbBr(I), lattice defect form. by two-photon excitation 3−12214
$RbMgF_3:Er^{3+}(Mn^{3+})$, optical transitions study 3−3774
$RbMgF_3:Mn^{2+}$, electron beam irrad. damage, annealing and luminescence studies 3−56984
$ZnS_{0.3}Se_{0.5}$, neutron irrad., F-centres, optical absorption bands 3−3762
ZnSe, neutron irrad., F-centres, optical absorption bands 3−3762

F_2-centres *see M-centres*

F_3-centres *see R-centres*

F_A-centres *see A-centres*
F-layer *see F-region*
F-region
anisotropic irregularity of nighttime auroral zone 3−35353
auroral electron precipitation, correlated guided ULF waves, negative Landau damping 3−15736
auroral ionosphere, electron and ion velocity distribution functions, incoherent radar wave scatt. 3−30115
daytime equatorial region, struct. simulation during action of east and westward electric currents 3−15692
decametre radiowave nonlinear interaction at close freq. in oblique propagation 3−48749
electric field model derived from radar obs. 3−54191
electrodynamics of diffuse aurora region 3−5019
electron content depletions assoc. with VHF scintillations 3−48751
electron density and temp. during solar max. 3−15723
electron density irregularities and equatorial radio scintillation 3−44613
electron density irregularities produced in radiowave heating expt. 3−48746
equatorial plasma bubble shape 3−30113
equatorial plasma depletions of nighttime F-region 3−35351
equatorial spread-F obs. indicating drift wave instabilities 3−15724
EXB instability in presence of inhomogeneous elec. field 3−44615
f_0F_2, appl. of theoretically derived values to improvement of ionospheric maps 3−48762
F_2 layer, altitude and max. plasma freq. forecast 3−35343
F_2-layer, nighttime mid-latitude substorm, electric field and plasma flow effects 3−5012
F_2-layer, post-sunset electron density increase in Asian zone 3−44606
F_2-layer, reflected partly scattered vector field, ang. spectra 3−15695
F_2-layer critical frequency var. rel. to mag. field var. *(French)* 3−44394
F_2-layer critical penetration freq., sunrise effects 3−5013
F_2-layer formation, two-dimensional model rel. to role of various mechanisms 3−15709
field-aligned plasma flow in quiet, mid-latitude ionosphere 3−48700
heating by HF waves, cause of density and temp. disturbances 3−15697
height and electron concentration summer diurnal var. rel. to upper atm. comp. 3−35342
high-latitude trough location and production 3−48758
hot spots at high latitudes due to plasma convection 3−20166
ion beam injection expt. and generation of electrostatic waves 3−44610
ion velocity distrib. function for auroral zone 3−48760
ion velocity distrib. function model for auroral zone 3−20177
irregularities in high-latitude ionosphere 3−15731
irregularity drifts deduced from scintillation meas. by the closely spaced antennas 3−35356
large-scale plasma depletion occurrence during nighttime 3−10125
long-distance television reception in Band I due to F2 propagation 3−54183
magnetic storm effects during 17-18 Dec. 1971 storm 3−5009
MF high power incident waves, non-linear interference effects at electron gyrofrequency 3−15684
mid-latitude region, nonstationary self consistent model 3−15699
neutral winds and temps. at mid-latitudes 1975-9, Fabry-Perot interferometric meas. 3−10133
night F-region over Cachoeira Paulista (22°S, 45°W), gravity wave induced ionisation layers 3−5025
perturbation with high-power radiowaves 3−20178
plasma convection at high-latitudes, model 3−10121
plasma density and flow in F-region, effect of enhanced conductivity band in E-region 3−15710
plasma diagnostics from radioemission of injected electron beams 3−48684
plasma instabilities of ionospheric holes 3−5021
radiowave heating, feedback-diffraction theory 3−48743
radiowave heating expt. exciting thermal modulational instability 3−48742
regional structure of ionospheric radiowave absorpt. 3−20171
rocket exhaust causing F-layer ionisation depletion 3−48750
solar eclipse effects on ionospheric phase paths and group path variations 3−59156
solar eclipse of 26 February 1979, total electron content obs. 3−59163
solar eclipse time horizontal drift obs. 3−59164
spread F and vertical ionis. drift velocities 3−44612
spread-F occurrence at high latits., study of irregular struct. of polar ionosphere using oblique incidence sounding 3−5026
two-dimensional nonstationary model 3−15691
H_2O^+ fluorescent emission mechanisms due to human effects on ionosphere 3−35327
Mg^+ morphology of F-region from airglow obs. 3−30114
O I 1304 and 1356 Å emissions, night variations 3−25257
f-values *see oscillator strengths*
faces (crystal) *see crystal faces*
facsimile
see also video signals
Walsh-Hadamard transformed picture transmission 3−6913
facsimile communication *see facsimile*
facsimile document reproduction *see photocopying*
facsimile signals *see video signals*
facsimile transmission *see facsimile*
faculae *see Sun*
failure, electrical *see electrical faults*
failure (mechanical)
see also fracture; mechanical strength; plastic deformation
laminates, simple, symmetric, optimal design, first ply failure criterion 3−14705
plastic structures, reliability, strain effect 3−58188
Plexiglas, spalling failure at normal and elevated temps. 3−19421
1,2-polybutadiene, linear, durability above glass transition point under complex loading *(Russian)* 3−9114
polyethylene, spalling failure at normal and elevated temps. 3−19421
polyethylene, unoriented high density, kinetics of bulk failure 3−43954
polymers, linear, durability above glass transition point under complex loading *(Russian)* 3−9114
polyvinylidene fluoride, piezoelectric, potential failure mechanisms 3−9077
powders, cohesive, failure props. meas. using shear tester 3−48007
solids, compression failure along cracks 3−7501

failure (mechanical) continued
structural systems, one-dimens. fourth-order moment approx. for reliability anal. *(Japanese)* 3−56430
Teflon, spalling failure at normal and elevated temps. 3−19421
C fibre reinforced plastic laminate, cross ply, edge effects in uniaxial compression testing 3−9129
$(\mathrm{ZrO_2\text{-}Y_2O_3})/(\mathrm{Ni\text{-}Cr\text{-}Al\text{-}Zr})$ thermal barrier coating, failure mechanism at high temp. 3−3020

failure analysis
see also electrical faults; wear
engineering system reliability, integrated approach 3−16822
flat-plate photovoltaic modules reliability and performance experience 3−58523
flaw size distrib. in welds 3−16815
nuclear plant, reliability parameters, estimation 3−16824
nuclear power plant, decisions in reliablity analysis [nuclear power plant] 3−16982
nuclear power plant, failure data problems with respect to system reliabilty anal. 3−16980
nuclear power plant, inelastic structures, probabilistic anal. 3−16813
nuclear power plant, items unavailability contributing to safety, operating procedures 3−16987
nuclear power plant, mechanical aspects of failure probability 3−16814
nuclear power plant seismic safety, system reliability anal. appl. 3−16974
nuclear power plant system, reliability anal., data anal. and surveillance role 3−16978
nuclear power plants, decision methods in risk anal. 3−16826
nuclear power plants, maintainability vs. disposability 3−16988
nuclear power plants, multistate reliability anal. 3−16821
nuclear power plants, seismic risk anal. and decisions 3−16986
nuclear power plants, system reliability anal. developments 3−16973
nuclear power plants, systems and structural reliability 3−16975
nuclear power station safety systems reliability anal. using Failure Modes and Effects Analysis *(French)* 3−31692
nuclear reactor safety in Germany, probabilistic methods 3−16984
PWR core melt probability, vessel rupture contrib. 3−16971
PWR plant, primary coolant loop pipe fracture, probabilistic assessment 3−16972
reactor pressure vessels reliability, pre/in-service inspection and tests influence 3−16825
SEM instrument guidelines for failure analysis and metallography 3−14824
solar photovoltaic arrays operational electrical faults detection 3−24606
structural and mech. components, probabilistic aspects of fracture 3−16981
structural reliability anal. for JRC-Ispra, response surface methodology approach 3−16970
structural reliability anal. using extended second moment algebra 3−16819
technological plant, fake of reliability measures as absolutes 3−16989
Al-Cu (0.5%) fine-line thin film conductors, electromigration induced failure by edge displacement 3−42858
Ni/Cd batteries, sealed, failure model 3−19574
Si solar cell damage from elec. overstress 3−44126

fallout
see also air pollution
atmospheric dust, fission products and radionuclide conc. 3−44178
Baltic Sea, ^{137}Cs and ^{90}Sr radionuclide concs. 3−15491
Chinese test of 16 Oct. 1980, products indicating H-bomb 3−15017
environmental radioactivity in the UK in 1981 3−19628
fluorescein particles, 18.6 µm, comparison of obs. and predicted air concs., radioisotope deposition appl. 3−9515
Hudson River and estuary, New York, chlorinated hydrocarbons and radionuclide chronologies in sediments 3−19630
Japan, radioactive fallout due to 26th Chinese nuclear explosion test 3−29476
Lake Huron, radioactive fission product pollution 3−39552
Lake Superior, radioactive fission product pollution 3−39552
Nevada Test Site, USA, radionuclide content of humans 3−44330
nuclear weapon fallout prediction, computer model for doses and dose rates 3−1072
Windscale, Cumbria, radioactivity meas. against nucl. weapon fallout 3−9500
^{36}Cl fallout from nucl. bomb tests 3−29470
^{36}Cl radioactive fallout from bomb tests, Greenland ice core obs. 3−29460
^{137}Cs, migration in multilayer soils, batch, column and fallout meas. 3−45716
^{137}Cs resuspension 3−29475
Pu in seasonally anoxic lake waters, aquatic chemistry 3−19632
Sr isotope fallout from Chinese weapons tests 3−15016
^{90}Sr body burdens and radiation and radiation dose in Anakturuk Pass Alaska Eskimos due to fallout, prediction-3−9759
^{90}Sr, migration in multilayer soils, batch, column and fallout meas. 3−45716
^{95}Zr/^{95}Nb in Hudson River water due to Chinese nuclear test 3−39544

Faraday effect
acoustic, transient 3−28676
ferrite thin film magnetooptical waveguides 3−22213
fluids, Faraday effect, role of mol. symm. and mol. interactions 3−50448
helical gyrotropic structures 3−8809
holographic gratings formation in gyrotropic media, theory 3−12100
M87, Faraday rot. in radio halo rel. to line-of-sight mag. fields 3−10465
magnetic field integral meas. appl. 3−25856
magneto-optical props., appl. to magneto-optical unidirectional TE-TM mode convertor 3−23926
magnetopolarimeters, Kerr and Faraday, for local mag. parameter meas. of film, coatings, wafers 3−40648
multiple reflection effects and ellipticity in propagation through three distinct media 3−47625
optical isolator, compact 3−1747
QSO absorption-line clouds, Faraday rotation and magnetic fields 3−30522
QSOs, Faraday rot. model rel. to simultaneous visual-IR polarimetry 3−49048
radio sources, extragalactic, anal. of galactic and intergalactic Faraday rotation 3−5440
radio sources, extragalactic, Faraday rot. measures rel. to Galaxy bisymmetric spiral mag. field and spiral arms 3−48969

Faraday effect continued
radio sources, extragalactic, in Perseus arm window, rotation measures determ. 3−40279
radio sources, extragalactic, rotation measure-redshift relation rel. to upper limit for intergalactic mag. field 3−59451
semiconductor, compensated non-polar, IR Faraday rotation due to hot carriers, trapping parameters 3−34078
semimagnetic semiconductors, review 3−23642
$\mathrm{BaFe_{12}O_{19}}$, magneto-optical and optical props. meas. 3−8805
$\mathrm{Bi_xTm_{3-x}Fe_yGa_{5-y}O_{12}}$ films, mag. props. 3−33949
$\mathrm{CaF_2{:}Eu^{2+}}$, Faraday rot. behaviour of light polarisation plane with superposition of weak radio-freq. field 3−23921
$\mathrm{CdCr_2Se_4}$ film, synthesis, chem. composition, elec. and mag. props. 3−58050
$\mathrm{CoFe_{2-x}Al_xO_4}$ ferrite, polar Kerr rotation and Faraday effect 3−28842
$\mathrm{Co_xFe_{3-x}O_4}$ ferrite, polar Kerr rotation and Faraday effect 3−28842
$\mathrm{CoO\text{-}Al_2O_3\text{-}SiO_2}$ (20, 40 wt.%) glass, spin-glass, photomag. effects 3−38624
$\mathrm{CuGaS_2}$, Faraday effect in optically active crystals with birefringence inversion 3−38803
$\mathrm{Dy_3Fe_5O_{12}}$ garnet, Faraday rotation and magnetisation 3−57882
ErIG, Faraday rot. anisotropic behaviour 3−23920
EuS, Faraday rotation and magnetisation obs. in megagauss fields 3−57894
EuSe, Faraday rotation and magnetisation obs. in megagauss fields 3−57894
$\mathrm{FeBO_3}$, magneto-optical props., appl. to magneto-optical unidirectional TE-TM mode convertor 3−23926
GaS, Faraday effect up to 20 T 3−14261
GaSe, Faraday effect up to 20 T 3−14261
$\mathrm{Gd_3Ga_5O_{12}}$, gyromag. Faraday effect 3−19112
Ge:Sb, Czochralski growth, uniform dopant distrib., Faraday effect study 3−2593
I, Faraday cell for single-pulse photodissociation laser 3−56251
n-InSb, free-carrier Faraday effect with pulsed 0.337 mm HCN laser 3−3692
InSe, Faraday effect up to 20 T 3−14261
$\mathrm{Mn_{0.8}Co_{0.2}Sb}$ films, polar Faraday rot. and optical absorpt. coeff. 3−8803
$\mathrm{PbFe_{12}O_{19}}$, magneto-optical and optical props. meas. 3−8805
$\mathrm{Pr_xY_{3-x}Fe_5O_{12}}$ garnet, magneto-optic and mag. props. 3−28843
$\phi_3(\mathrm{Fe_{2-x}Ga_x})(\mathrm{Fe_{3-y}Ga_y})\mathrm{O_{12}}$ garnet, magneto-optical props. 3−38805
$\mathrm{(SmLuCa)_3(FeVSi)_5O_{12}}$ garnet film for ion implanted bubble devices, prep. and high temp. bubble propagation 3−38659
$\mathrm{SrFe_{12-x}Al_xO_{19}}$, magneto-optical and optical props. meas. 3−8805
$\mathrm{(TbErCd)_3Fe_5O_{12}}$ crystals, multiplet mag. domains, Faraday effect study 3−33924
TlBr-TlI (KRS-5) flexible fibres, magneto-optical effects at $\mathrm{CO_2}$ laser lines, dispersive props. 3−46319
$\mathrm{(Y, Gd, Yb, Bi)_3(Fe, Al)_5O_{12}}$ garnet films, epitaxial, pulsed remagnetisation, magneto-optical and high-speed photography studies 3−23761
YAG:Nd CW ring laser, freq. doubling, single freq. output 3−41929
YIG, Faraday rotation and optical transparency 3−57883
YIG films, ion irradiated, healing behaviour of nucl. tracks, mag. and optical props. 3−22945
YIG, gyromag. Faraday effect 3−19112
YIG waveguide magnetometer using Faraday effect 3−25900
YbIG broadband Faraday magneto-optic isolator 3−42039
YbIG, gyromag. Faraday effect 3−19112
ZnS, piezoelec., bulk magnetophotovoltaic current, influence of Faraday effect 3−8523

farming
photovoltaic irrigation pumps application and experience in Pakistan 3−58485
poultry farm with solar space heating, radiation conditions 3−44098

fast amplifiers *see pulse amplifiers*

fast Fourier transforms
acoustic multichannel FFT analyser for signal processing 3−12470
acoustic planar radiators, Rayleigh integral, numerical evaluation using FFT 3−32526
anechoic chambers, wideband, testing, FM-CW reflectivity measuring technique *(Dutch)* 3−37305
cell image anal., Fourier transformation for chromatin texture and shape 3−29809
EM wave scattering, far-field radiation integral of arbitrary source distrib., sampling approach 3−32267
galactic collisions, numerical simulation techniques 3−16015
ion cyclotron spectroscopy software 3−449
$K\alpha_2$ elimination algorithm for Cu, Co and Cr radiations 3−37729
molecular fluorescence, cross-correl. analysis for spectra identification 3−53458
multicomponent exponential signal anal., technique for resolution improvement 3−40576
principles and application to audio signal processing 3−22283
sound intensity meas. appl., theoretical principles 3−17739
Tokamak plasma, free boundary equilib., fast Fourier transforms and conformal mapping techniques 3−27729
toroidal field coils, vibr., finite element anal. using Laplace transform 3−6441
Ag surfaces, roughness spectrum, autocovariance function computation, comparison with ATR results 3−23902
Ag thin film, roughness spectrum and surface plasmons 3−43650
Au thin film, roughness spectrum and surface plasmons 3−43650
Cu thin film, roughness spectrum and surface plasmons 3−43650
Mg thin film, roughness spectrum and surface plasmons 3−43650

fast ion conductors *see superionic conducting materials*

fastening *see joining processes*

fatigue
for corrosion fatigue see stress corrosion cracking; for thermal fatigue see thermal stress cracking
see also fatigue cracks; fatigue testing
alloy steel, type 8Kh4V2S2MF, active impurity effect on mechanical strength and low-cycle fatigue 3−14720
alloys, defect struct. and mech. props., computer-controlled X-ray diffr. study 3−37734
alloys, positron annihilation in nondestructive testing, fatigue damage and defect distrib. 3−48027
amorphous polymers, crack growth under static and fatigue loading, cold rolling effects 3−19407
borosilicate glass, fatigue props., comparative study with synroc 3−14703

fatigue continued
- borosilicate glass fibres, multicomponent optical, bending strength and fatigue rel. to environment and comp. 3—47976
- bronze, pitting limit, influence of lubrication 3—39258
- ceramics, thermal fatigue life under mechanical load 3—19395
- combustor linear analysis 3—17872
- complex stess state conditions, fatigue strength criteria, optimisation model 3—43958
- composite laminates, fatigue fracture damage 3—4107
- concrete, flexural fatigue, deterioration assessment 3—39249
- conference, Sheffield, England (Jan. 1982) 3—54568
- crack growth rate under creep, fatigue, creep-fatigue interaction at high temps., parametric representation 3—56497
- critical curvature radii evaluation in stress conc. zones, fatigue fracture similitude theory 3—43950
- electrochemical detection of fatigue, effect of oxide thickness 3—4242
- environmentally enhanced crack growth under cyclic loading, mechanical factors *(Japanese)* 3—9174
- failure, probability, reliability of estimation *(Japanese)* 3—4114
- fibre reinforced composites, unidirectional, time-dependent failure under local elastic load sharing 3—56485
- fibre reinforced epoxy resin laminates, impact fatigue strength under repeated impact loads *(Japanese)* 3—58225
- fibre reinforced plastic, fatigue life, frequency depend. *(Japanese)* 3—58221
- fibre reinforced plastic, laminated, residual strength degradation model *(Japanese)* 3—58226
- Gaussian waves, wavelength, amplitude and steepness, oceanography and fatigue appl. 3—10748
- glass, fracture statistics, normal, Weibull and Type I extreme value distributions 3—43939
- glass fibre reinforced PET, microstruct. and fracture 3—19406
- glass fibre reinforced plastic, eval. model for strength and endurance during variable cycle loading 3—24435
- glass fibre reinforced plastics, fatigue strength anisotropy estimation 3—29247
- glass fibre reinforced plastics, laminate, diffuse light transmission rel. to cyclic loading 3—29153
- glass fibre reinforced polyester, long-term strength in dil. sulphuric acid 3—24335
- glass fibre reinforced polyester composite, compressive fatigue behaviour, 77K and 300K 3—58191
- glass fibre reinforced polyetherimide, fatigue initiation 3—29147
- glass fibre reinforced vinyl ester resin, high strength sheet moulding cpd., fatigue damage 3—24328
- graphite fibre reinforced epoxy, fatigue life predictions from US detected laminar defects 3—39328
- graphite fibre reinforced epoxy resin to metal joint, fatigue spectrum sensitivity 3—34426
- graphite fibre reinforced epoxy tubes, fatigue, static axial and shear props. under completely reversed load controlled loading 3—9126
- hole defect, stress conc. in vicinity, under conditions of Hertzian contact 3—12583
- IN100, Ni-base superalloy, high temp. low-cycle fatigue rel. to strain rate, in air and vacuum 3—53236
- IN 738LC, Ni-base superalloy, cast, low cycle fatigue in air and hot corrosive environments 3—47941
- JT-60 vacuum vessel, fatigue strength evaluation using dynamic response anal. 3—55623
- laminar composite cylindrical shell, strength under dynamic loading 3—51020
- life, statistical invest. by separating crack initiation and crack propag. lives *(Japanese)* 3—9173
- life prediction 3—47948
- lifetime prediction for meta components subjected to stochastic loading 3—17871
- low C, fatigue limit, distribs. characts. of microcracks and role of cyclic strain ageing *(Japanese)* 3—58214
- machine parts, metal coated, endurance limit eval. 3—58285
- MAR M 509, Co-base superalloy, low cycle fatigue, high temp., influence of oxidation 3—47939
- MAR-M 509, Co-base superalloy, low cycle fatigue, influence of temp., 20-1100°C 3—47938
- Markovian models for fatigue accumulation 3—7490
- metal, containing small defects or cracks, quantitative eval. of fatigue strength 3—14692
- metal, kinetic fracture criteria for combined low-cycle and quasistatic loading 3—19411
- metal flat specimens with circular notches, heated cyclically by elec. current, thermal state 3—13494
- metallic materials qualification for appl. in advanced HTGR 3—898
- metals, creep behaviour, influence of fatigue stress 3—47885
- metals, fracture criteria under nonisothermal loading, endurance eval. from damage summation 3—14722
- metals, fracture criteria under nonisothermal loading, endurance eval. allowing for fracture type 3—14723
- metals, ion implantation effects on mechanical props., review 3—27957
- metals, ion implantation-modified, mech. props., Dept. of Defence appl. 3—2589
- metals, laminated inhomogeneous, method to estimate bending fatigue life *(Japanese)* 3—9177
- metals, post-yield creep at room temp. 3—9116
- microinitiation, micropropagation and damage *(French)* 3—47950
- micromechanics of defects in solids, eigenstrain method, book 3—27941
- PMMA, fatigue crack propag., modeling of frequency effect 3—14693
- polycarbonate, fatigue fracture 3—53209
- polyethylene pipes, fatigue failure, constant and fluctuating internal press. loading 3—58204
- polystryene-polyphenylene oxide blends, fracture toughness and fatigue 3—53210
- probability criteria of fatigue fracture in biaxial stress state 3—42711
- PWR boiler mechanical components, effects of system fluctuations *(French)* 3—31649
- residual stress nature and changes during fatigue, destructive, nondestructive meas. methods 3—53349
- rolling contact fatigue, new acoustic emission source locating system 3—4249
- rubber, natural and polybutadiene blend, flexing and tension fatigue failure 3—34434
- shakedown criteria in case of loading and temp. variations 3—7488

fatigue continued
- shells, three-ply, fatigue failure, variation of stiffness of honeycomb filler 3—42193
- slow crack growth, rel. between power and exponential laws 3—13331
- solar boiler tubes, cyclic thermal loading in elastic-plastic range, long term behaviour *(French)* 3—42140
- statistical and deterministic models of strength 3—42710
- steel, alloy, high strength, neutron irrad., evaluation of thermal fatigue damage 3—19418
- steel, alloy, high strength, notched fatigue strength, improvement by partial unloading *(Japanese)* 3—58216
- steel, alloy, surface deform. induced by SCC *(Chinese)* 3—53259
- steel, antifraction bearing, surface fatigue, study of nonmetallic inclusions, microcracks and pitting 3—29145
- steel, austenitic, Cr-(Ni)-Mn, fatiguq fracture in liq. N_2 3—34474
- steel, austenitic, fatigue fracture, at 293 and 11K, influence of microstructure 3—4104
- steel, austenitic, martensitic transformation, rel. to stress intensity coeff. *(Russian)* 3—24224
- steel, austenitic, stainless, type 304, irradiated fatigue characteristics 3—41145
- steel, austenitic and ferritic, creep and elongation, low cycle fatigue tests *(German)* 3—4095
- steel, austenitic stainless, AISI 304, cracking and microstruct. development under time dependent fatigue modes 3—58245
- steel, austenitic stainless, creep-fatigue interaction in notched specimens, 500°C *(Japanese)* 3—58211
- steel, austenitic stainless, fatigue, time-depend., correl. with substruct. 3—4122
- steel, austenitic stainless, He embrittled, modelling high temp. mech props, 3—19398
- steel, austenitic stainless, JRC fusion materials programme in-pile creep and fatigue facilities 3—55691
- steel, austenitic stainless, solution heat treated, high temp. fatigue, mode of failure, electron microscopy 3—53233
- steel, austenitic stainless AISI 304, annealed and cold worked, notch effect on low-cycle fatigue 3—58246
- steel, austenitic stainless steel, type 304, fatigue fracture and creep with cracks *(Japanese)* 3—39195
- steel, bainitic, high and low cycle fatigue fracture, dislocation cells 3—53232
- steel, C, hardfaced rolls, fatigue strength improvement using ultrasonic treatment 3—9212
- steel, carburised, local induced residual stress changes 3—53241
- steel, carburised, retained austenite effect on fatigue strength *(Japanese)* 3—19400
- steel, corrosion fatigue in sea water 3—24415
- steel, Cr-Mo-V, cyclic creep under push-pull loading with different mean stresses *(German)* 3—9142
- steel, Cr-Mo-V, low alloy, cyclic response 3—4108
- steel, Cr-Ni-Mn, unstable, damping power, vibr. fatigue strength 3—19420
- steel, fatigue in detrimental gaseous environment 3—29180
- steel, fatigue lives at stress levels near fatigue limit, grain size effect *(Japanese)* 3—58223
- steel, fatigue strength and toughness *(German)* 3—34424
- steel, high strength, corrosion fatigue crack propag. mechanism 3—34429
- steel, high strength, fatigue, impact and nonimpact, comparison of crack growth rates *(Japanese)* 3—9172
- steel, HSLA, Cr plated, low cycle fatigue rel. to cooling conditions 3—43952
- steel, laser surface hardening, for increasing design strength 3—53281
- steel, low alloy, fatigue, determ. of threshold stress intensities 3—4109
- steel, low alloy, fatigue strength for cyclic load, degree of purity and surface condition influence *(German)* 3—53218
- steel, low alloy and low C, heat treated, quantitative anal. of fatigue fractographs 3—34483
- steel, low C, fatigue limit, effect of initial dislocation locking *(Japanese)* 3—58213
- steel, low-alloy, cyclic creep resist., alternating low-cycle loading 3—43899
- steel, low-alloy, type 20khML, cyclic strain at high temps. *(Russian)* 3—58201
- steel, maraging, cleaned, 3.5 GPa grade, fatigue strength *(Japanese)* 3—24337
- steel, martensitic stainless, fatigue life prediction, low cycle, damage law 3—47940
- steel, martensitic stainless, high temp. fatigue damage calc., thermal fatigue *(French)* 3—24325
- steel, mild, corrosion fatigue in $NaNO_3$ soln. 3—29205
- steel, Ni, fatigue, low temp., low cycle, microfractographic features of crack development 3—29189
- steel, Ni type, thermal hold at nitriding temp. influence on fatigue resist. 3—58238
- steel, Ni-Cr, fatigue failure, fracture toughness and critical crack length 3—53221
- steel, nitrided, fatigue behaviour 3—53227
- steel, pitting limit, influence of lubrication 3—39258
- steel, SAE 1040, normalised and peened, tension fatigue, residual stress changes 3—24341
- steel, stainless, austenitic, metastable, kinetics of α'-martensite form. during fatigue deform. 3—39243
- steel, stainless, CC Ni-Cr-Nb, low cycle fatigue behaviour, cycle waveshape effect, 650°C 3—58198
- steel, stainless, fatigue damage in hydrogen under low-cycle bending load *(Ukrainian)* 3—9146
- steel, stainless, type 316, fatigue failure, effects of multienergy ion bombardment, neutron irrad. and stress/temp. cycling 3—24336
- steel, stainless, type 316, irradiation induced in fusion reactor 3—41308
- steel, stainless, type SUS 304, fatigue strength in long life range and non-propagating fatigue crack 3—53178
- steel, stainless AISI 4140, fatigue life estimation, X-ray diffr. obs. *(Korean)* 3—4112
- steel, stainless creep behaviour, effect of prior fatigue 3—4083
- steel, structural, AE correl. with fracture mech. during fatigue 3—19405
- steel, structural, fracture criteria under nonisothermal loading, endurance eval. from damage summation 3—14722
- steel, structural, fracture criteria under nonisothermal loading, endurance eval. allowing for fracture type 3—14723
- steel, structural, high strength, welded joints, improvement of fatigue strength by after treatment *(German)* 3—4133

fatigue continued
- steel, tufftrided, fatigue strength, effect of compressive residual stresses *(Japanese)* 3—9164
- steel, unalloyed normalised and low alloy heat treated, elongation and stress controlled low cycle fatigue *(German)* 3—4136
- steel 15Kh2MFA, US effects on mech. props. 3—47958
- steel 65G, fatigue crack growth resist., struct. influence 3—58234
- steel fibre reinforced concrete flexural fatigue, deterioration assessment 3—39249
- steel mild, fatigue strength, effect of nitriding in electrolyte plasma *(Russian)* 3—53184
- steels, heat-resistant, creep-fatigue props. for high temp. service 3—24360
- stress-cycle asymmetry factor effect on progress of fatigue and quasistatic fracture under low-cycle loading 3—43949
- structural components, determ. of degree of defectiveness using natural vibration period 3—29259
- structural element fatigue life, cracks, acoustic emission appl. 3—44019
- synroc, fatigue props., comparative study with borosilicate glass 3—14703
- variable amplitude, design against using cyclic stress-strain response 3—58250
- welded joint, fillet, defects and crack shape development 3—29150
- Al alloy, high-strength V95 sheet, struct., fracture and mech. props. w.r.t. impurity content 3—58233
- Al alloy, preliminary plastic deform. influence on fatigue props. of semifinished products 3—19419
- Al alloy 2011-T3, cumulative fatigue damage, anal. under different stress ratios 3—24340
- Al alloy 2024-T351, torsional fatigue, effect of relative humidity and coatings 3—9148
- Al alloy 7475, fine grained, superplastic deform. effect on service props. 3—58182
- Al alloys, back stress variation along the hysteresis loop 3—53225
- Al alloys, residual stress relaxation during fatigue, microplastic deform. process 3—53242
- Al, cyclic hardening and grain boundary crack in high purity specimens *(Chinese)* 3—53078
- Al, cyclically loaded, dislocations, X-ray diffr. intensity study 3—37910
- Al, fatigue failure in air and vacuum, X-ray diffr. study *(Japanese)* 3—58217
- Al, low cycle fatigue, effect of strain-amplitude charge on pure samples at 77K *(Japanese)* 3—58212
- Al, polycryst., internal and effective stress meas., dislocations study 3—24288
- Al-Cu, fatigue, fracture of constituent particles 3—14708
- Al-Cu-Mg-Mn, wrought, props., comp. and struct. influence 3—34471
- Al-Cu-Mg-Si, corrosion resist., improvement by ageing 3—34542
- Al-Mg, torsional fatigue, effect of absorbed H_2 3—47954
- Al-Mg-Si, low cycle fatigue props., dispersoid effects 3—53229
- Al-Zn-Mg, single crysts., environmentally assisted cracking 3—4105
- Al-Zn-Mg-Cu, alloy plate, comparison of engng. props. 3—58192
- Al-Zn-Mg-Cu special purity high-strength alloy for forgings, props. 3—34401
- C-fibre reinforced plastics, tensile fatigue and fatigue life diagrams, review 3—43935
- CdS electrophotographic binder layers, degradation process 3—16435
- Co-base superalloy, 73C, directionally solidified, cyclic response 3—58251
- Co-base superalloy, fatigue life prediction, fatigue-oxidation interaction 3—34467
- Cu, cyclic stress-strain response, low stress amplitudes 3—29135
- Cu, fatigue, low amplitude, role of surface in failure of single crysts. 3—53174
- Cu, polycrystalline, fatigued, dislocation struct., surface slip 3—53234
- Cu single crystal, low amplitude fatigue at room temp. 3—53224
- Cu, single crysts., single-slip oriented, persistent slip band struct. 3—13232
- Cu-Al-Ni shape memory alloys, polycryst., fatigue and fracture characts. 3—14727
- Cu-Al-Ni-Ti, shape memory alloy, grain refinement rel. to Ti addition, transform. hysteresis 3—47832
- Cu-Cr alloys, high temp. creep and fatigue rel. to microstruct., Mg and Zr addition effects 3—47928
- Cu-Ni-Cr (30, 3.2 wt.%), spinodally decomposing alloys, high cycle fatigue strength rel. to ageing 3—53237
- Cu-Ti (4 at.%), spinodally decomposing alloys, high cycle fatigue strength rel. to ageing 3—53237
- Cu-Zn-Al, shape memory alloys, fatigue props. rel. to grain refinement and texture 3—43945
- Cu-Zn-Al, thermoelastic alloy, dynamic fatigue curves, —196 to 40°C 3—43944
- Cu(-Ni), fatigue hardening, multicryst. foil specimens 3—14709
- Fe, cast, ferritic spheroidal graphite, fracture mechanics, heat treatment effects *(French)* 3—43937
- Fe, cast, flake graphite, fractography study *(Japanese)* 3—19401
- Fe, cast, spheroidal graphite, Si effect on low-cycle fatigue life *(Japanese)* 3—29178
- Fe, high purity, fatigue limit and strain ageing *(Japanese)* 3—9165
- Fe-base forged sintered materials, forged sintered, fatigue, fractographic anal. 3—24355
- Fe-Cr-Ni-Mo, corrosion resist. in marine environments, review 3—39293
- Fe-Si, fatigue limit, effect of low-intensity ultrasound 3—14725
- LiF, dislocation struct. and fracture under cyclic loading 3—18314
- Mg alloy, fatigue crack nucleation and growth, struct. state depend. 3—19413
- Mg-Al (0.8 wt.%) alloy, grain boundary sliding at high temp. in torsional fatigue 3—29148
- Mo, rapid heating thermal fatigue in ultra-high vacuum *(Japanese)* 3—50046
- Nb, fatigued single crystal, temp. and strain rate depend. of flow stress 3—39225
- Ni alloy compression springs, fatigue failure 3—26382
- Ni based heat resistant alloy Eh1698VD temp. effect on mech. props. 3—47872
- Ni, bending fatigue, obs. of surface zone hardening rate 3—14718
- Ni, corrosion fatigue behaviour 3—19450
- Ni, dislocation struct. development during fatigue, TEM study 3—37909
- Ni superalloys, fatigue and creep fatigue deform. at 650°C 3—14712
- Ni-Al-Mo, γ/γ'-α-Mo, directionally solidified eutectic superalloy, microstruct. and dimens. stability, effect of thermal cycling 3—24272
- Ni-base alloy, heat resistant, fatigue resist., 873-1073K, struct. effect 3—43953
- Ni-base eutectic composites, microstruct. and fatigue 3—43961
- Ni-base superalloy, crystallographic facet orientations on fracture surfaces, method of determ. 3—24442
- Ni-base superalloy, IN-738, cast, fatigue, low cycle, high temp., effect of environment 3—4121
- Ni-base superalloy, Nimonic 115, induced creep and creep-fatigue at ambient temps. 3—24347
- Ni-base superalloys, fatigue, low cycle, crack propag. and substructs. 3—4118
- Ni-base superalloys, fatigue, low cycle, high temp., metallurgical instabilities 3—34455
- ni-base superalloys, gas turbine component, creep and fatigue interactions 3—47963
- Ni-Cr-Co alloy, IN 738, high temp. low cycle fatigue, S containing environment effect 3—34480
- Ni-Cr-Mo-W, corrosion fatigue behaviour 3—19450
- Ni-Mo, corrosion fatigue behaviour 3—19450
- Pb, high purity, grain boundary sliding at high temp. in torsional fatigue 3—29148
- Pb-Sn-Sb alloys, fatigue, grain boundary reaction *(Japanese)* 3—29165
- Pb-Sn-Te(As), microstruct. and mech. props., effect of small addition of Te and As *(Japanese)* 3—29166
- SiC fibre reinforced Ti-Al-V 3—24345
- Si_3N_4 ceramics, hot-pressed, high-temp. strength and fatigue, effect of billet differences 3—9157
- Si_3N_4, hot-pressed, preoxidised, static fatigue 3—53190
- SiO_2 fibres, large flaw strength and fatigue 3—42046
- SiO_2 fibres, metal-coated, static fatigue in hermetic environments 3—58208
- SiO_2 optical fibres, UV cured, fatigue behaviour 3—32493
- β-Ti alloy, age-hardenable, cyclic stress/strain response 3—14732
- Ti alloy, high-temp. strength improvement methods 3—24251
- α-β Ti alloy, microstructural effect on susceptibility to internal H_2 embrittlement 3—14710
- Ti alloy, two-phase $\alpha+\beta$, high-strength, development trends 3—24247
- Ti alloys, physicomech. props., influence of high temp. Ar-vacuum annealing 3—29187
- $\alpha+\beta$ Ti alloys, welded joints, low cycle fatigue 3—14737
- Ti-Al (8 wt.%), cyclically deformed, dislocation struct., effect of comp. and temp. 3—58186
- Ti-Al-Mo, fatigue fracture kinetics of VT3-1 alloy 3—29186
- Ti-Al-Mo-V, shot blast treated, residual stresses in surface layers 3—43995
- Ti-Al-Sn-Zr-Nb (5.5, 3.5, 3, 1 wt.%), fretting fatigue strength, temp. depend. 3—58197
- Ti-Al-Sn(Mn) and Ti-Al-Cr(Zr)-Mo-Si, mech. props., laminated struct. influence 3—19389
- Ti-Al-V, cast, weld repaired, high cycle fatigue 3—4123
- Ti-Al-V, vacuum fatigue fracture 3—9193
- Ti-Al-V (6, 4 wt.%), fatigue behaviour, surface layer 3—34466
- Ti-Al-V (6, 4 wt.%), quenched, fatigue and microstruct. props. 3—53195
- Ti-Al-V (6,4 wt.%), fatigue crack retardation behaviour, evaluation of overload models 3—29151
- Ti-Al-V (6,4 wt.%), solution-treated and quenched, fatigue behaviour 3—43947
- Ti-Al-V (90, 6, 4 wt.%), fatigue strength, heat treatment effect 3—24280
- Ti-Al-V alloy, annealed microstructures, fatigue failure 3—14736
- Ti-Al-V alloy, impurities effect on working ability 3—24364
- Ti-Al-V alloy, mean stress effect on fatigue behaviour 3—14733
- Ti-Al-V alloy, metallurgical structures influence on fatigue props. 3—24362
- Ti-Al-V-Sn-Zr alloy, high-strength alloy development 3—24249
- Ti-Al-Zr welded joints, high temp. thermomech. treatment 3—14626
- β-Ti-Mo alloy, age hardening, deform. and fracture characts. 3—14684
- β-Ti-Mo-V-Fe-Al, metastable, direct ageing for optimum mech. props. 3—19355
- WC, Co-cemented, ion implantation effects on mechanical props., review 3—27957
- Zn-Al (0.4, 0.6 wt.%), superplastic, cyclic deform. 3—53154

fatigue cracks
- acoustic emission amplitude distrib. charact. during fatigue crack nucleation and propag. 3—48014
- alloys, fatigue crack closure induced by fracture surface roughness, geometric model 3—4126
- amorphous polymers, crack growth under static and fatigue loading, cold rolling effects 3—19407
- Astroloy, superalloy, fatigue crack propag., frequency and hold time effect 3—53230
- automatic measurement of crack length in crack resist. test in air and sprayed solns. 3—29254
- automatic US system for fatigue crack development anal. under nonstationary loading 3—58367
- centre-cracked plate, evaluation of J-integral under general and gross yielding *(Japanese)* 3—2005
- closure and delay of fatigue cracks in plane strain 3—33358
- closure behaviour of small fatigue cracks *(Japanese)* 3—56492
- closure effect on acoustic detection probability 3—39335
- closure stress and propag. rate, effect of overload 3—56483
- composite materials, viscoelastic, fatigue crack development 3—17893
- conference, Sheffield, England (Jan. 1982) 3—54568
- crack propagation under periodic overstressing, prediction of propag. rate *(Japanese)* 3—9171
- crack tip line blunting, used in J_{Ic} testing procedure, limitations 3—56506
- cylindrical specimens with ring-shaped notch, edge fatigue cracks growth kinetics study 3—9275
- eddy current NDT, COD as fracture mech. parameter 3—39334
- elastic media, general solution of mixed boundary value crack problem 3—27435
- electrochemical detection in steel 3—24444
- environmentally enhanced crack growth under cyclic loading, mechanical factors *(Japanese)* 3—9174
- fastener hole, crack detection using elec. current perturbation method 3—39342
- fatigue life, residual stress effect, fracture mechanics analysis 3—51017
- fatigue life, statistical invest. by separating crack initiation and crack propag. lives *(Japanese)* 3—9173
- FATMAC, fatigue machine for irradiation of fusion CT samples under fatigue load 3—58376
- fracture mechanics concepts, a summary 3—51016

fatigue cracks continued
- fracture toughness, plain strain, fatigue cracking loads effects, review 3—53315
- fracture toughness measurement, fatigue crack front shape effect 3—53316
- fusion reactor first wall, fatigue crack growth, effect on design 3—21534
- glass fibre reinforced plastics, laminate, diffuse light transmission rel. to cyclic loading 3—29153
- glass mat reinforced polyester laminate, fatigue crack growth *(Japanese)* 3—58218
- grass mat reinforced polyester laminate, fatigue crack growth behaviour *(Japanese)* 3—58220
- growth, description in terms of plastic work 3—13329
- growth equation for short cracks 3—56487
- growth mechanism for short cracks 3—57021
- growth parameters, strain intensity and cyclic J integral 3—56488
- high cycle damage to structures 3—27432
- IMI 829, Ti-Al-Sn-Zr-Mo, fatigue crack initiation, caused by high temp. fretting 3—39238
- in-reactor fatigue crack propagation testing 3—55544
- Incoloy 800, fatigue crack growth in molten $NaNO_3$ salt, compliance technique 3—53280
- Inconel 600, corrosion fatigue in boiling conc. NaOH 3—34539
- Inconel 718, Ni-base superalloy, crack growth under fatigue, creep and combined loading, effect of microstruct. and environment 3—24339
- inertial confinement fusion reactor chamber components, fatigue crack growth 3—45672
- initiation on slip bands 3—51702
- interfacial fracture of space-shuttle thermal-protection system [model] 3—32676
- J-integral blunting line for soft materials 3—17880
- J-integral concept, extension to fatigue cracks 3—17879
- linear elastic fracture mechanics, fatigue crack growth and residual stress 3—51024
- metal, corrosion fatigue, loss of strength action of aggressive media, physicochem. mechanism 3—58304
- metallic alloys, compendium of sources of fracture toughness and fatigue crack growth data 3—16105
- metallic materials, fatigue life distrib. rel. to surface defect distrib. 3—19390
- metals, pure, cyclic strain response anal. 3—47888
- notch fatigue crack initiation, J-integral anal. *(Chinese)* 3—17870
- nucleation at stable slip bands, semimicroscopic model 3—18383
- path-dependent nature of fatigue cracks 3—12595
- physical principles, models and expt. results, review 3—13325
- plastic zone size measurement, produced by overloads during fatigue crack propag. 3—24453
- poly(xylenol ether), impact modified, fracture morphology 3—34478
- polycarbonate, epsilon plastic zone of fatigue crack tip 3—19403
- polyethylene, water tree propag., mech. aspects 3—19062
- polymers, fatigue crack layer propag. law 3—53208
- polysulphone, epsilon crack tip plastic zone obs. during discontinuous fatigue crack growth 3—53183
- propagation rates, plastic zone size determ. by photogrid technique 3—22403
- PVC, broken fibrils at fatigue fracture, SEM obs. of fibril struct. rel. to craze size 3—19391
- PWR plant, primary coolant loop pipe fracture, probabilistic assessment 3—16972
- resonance controlled fatigue crack propag. 3—33352
- sectional struct., torsion box, fatigue damage, detection and effect on damping 3—53344
- short, fracture mechanics similitude 3—42707
- short crack growth, linear elastic fracture mechanics 3—27433
- short cracks, anomalous behaviour 3—56489
- steel, alloy, corrosion fatigue crack growth in simulated weld HAZ 3—39309
- steel, alloy, fatigue crack propagation in Mode III, effect of friction and high torque 3—34459
- steel, alloy, structural fatigue crack propag., overload effect 3—53228
- steel, austenitic, fatigue and creep crack propag. at elevated temps. *(Czech)* 3—58227
- steel, austenitic, fatigue fracture, at 293 and 11K, influence of microstructure 3—4104
- steel, austenitic, Mn, plastic zone at tip of fatigue crack, X-ray diffr. study *(French)* 3—9143
- steel, austenitic 30KhGSA, plane specimens, endurance prediction with combined forms of loading 3—47905
- steel, austenitic stainless, 18-8, fatigue crack propag. charact. under repeated impact loading 3—53231
- steel, austenitic stainless, corrosion fatigue in boiling conc. NaOH 3—34539
- steel, austenitic stainless, fatigue crack growth design curve, in air at 300°C 3—41153
- steel, austenitic stainless, fatigue crack propag., elevated temp., deform. 3—24344
- steel, austenitic stainless, fatigue crack propag. influence of gaseous environment 3—14707
- steel, austenitic stainless steel, type 304, fatigue fracture and creep with cracks *(Japanese)* 3—39195
- steel, C, fatigue, influence of overloads on crack initiation and propag. *(Japanese)* 3—9170
- steel, C, medium and low, cracked plate, fatique crack growth, effect of residual stress field *(Japanese)* 3—19399
- steel, carburised case with high retained austenite content, wear, influence of contact stress 3—4143
- steel, Cr-Mo, fatigue crack growth characts. *(Japanese)* 3—58215
- steel, Cr-Mo-V, fatigue crack initiation and growth rate in superheated steam environment *(Japanese)* 3—9176
- steel, eutectoid, fatigue crack behaviour in plain specimens *(Japanese)* 3—9166
- steel, fatigue crack propag., plastic work, calorimetric meas. 3—34456
- steel, fatigue crack propagation in Mode III, rubbing fracture surface influence 3—34435
- steel, fatigue crack propagation rel. to overload ratio, plastic zone obs. 3—53235
- steel, fatigue failure curve, interrelationship of parameters controlling boundaries of self-simulating crack growth area 3—58241
- steel, ferritic, with deform. twinning tendency, fatigue crack propag. 3—58240

fatigue cracks continued
- steel, ferritic stainless, fatigue crack growth, effect of corrosive environments 3—34457
- steel, heat-resistant, fatigue crack growth laws, effect of test temp. 3—19416
- steel, high strength, fatigue, impact and nonimpact, comparison of crack growth rates *(Japanese)* 3—9172
- steel, high-C, high strength, thickness effect on fatigue crack propag. 3—14690
- steel, HSLA, Cr plated, low cycle fatigue rel. to cooling conditions 3—43952
- steel, HSLA fatigue crack length distribs. *(Japanese)* 3—58224
- steel, low alloy, fatigue, determ. of threshold stress intensities 3—4109
- steel, low alloy, fatigue crack anal., use of fractography and fracture mechanics 3—24452
- steel, low alloy, high strength, plastic zone and residual stress near notch and fatigue crack 3—24307
- steel, low alloy, powder-forged, fracture, effect of inclusions 3—53207
- steel, low alloy, type 03G4AF, rupture strength rel. to struct. 3—47957
- steel, low alloy, welded joints, fatigue crack propag. and stress intensity factors 3—4110
- steel, low C, dual-phase, fatigue crack path, high mean stress, ferrite selection ratio *(Japanese)* 3—39241
- steel, low C plate, fatigue crack propag., effect of strain ageing history *(Japanese)* 3—9167
- steel, maraging, high strength, thickness effect on fatigue crack propag. 3—14690
- steel, medium C, fatigue crack propag., effect of H and microstruct. 3—43948
- steel, mild, fatigue crack propag., AE detection 3—53348
- steel, mild, fatigue crack propag. threshold, influence of strain ageing 3—47953
- steel, Mn, fatigue crack growth rate *(Chinese)* 3—53177
- steel, Ni-Cr-Mo-V, fatigue crack propag., near-threshold, influence of H_2 environment 3—4127
- steel, Ni-Cr-Mo-V rotor, and plain C, fatigue crack propagation under polymodal loading 3—58199
- steel, pearlitic eutectoid rail, cyclic deform. 3—24308
- steel, pipeline, X-65, fatigue cracking in air and NaCl soln., quantitative fractography 3—24351
- steel, Rayleigh spectroscopy for characterizing surface cracks 3—44026
- steel, stainless, type 304, fatigue crack growth, welding stress effect 3—29191
- steel, stainless, type SUS 304, fatigue strength in long life range and non-propagating fatigue crack 3—53178
- steel, tufftrided, fatigue strength, effect of compressive residual stresses *(Japanese)* 3—9164
- steel, two phase, fatigue crack growth, microstruct. effects 3—34437
- steel 22k acoustic emission amplitude distrib. charact. during fatigue crack nucleation and propag. 3—48014
- steel ferrite-martensite, coarse, deform. and fracture, micromech. concepts 3—43960
- steel laminates, soft soldered, fracture toughness in high vacuum 3—53239
- steel lower strength, fatigue crack propag., near threshold and higher growth rates, environmentally influenced 3—24350
- steels, JIS-SM50B, SM58 and HT80, crack initiation life, notch shape effect 3—4129
- steels, resistant to H_2S cracking, influence of Si alloying additions 3—29183
- steels, sintered, mech. props., review 3—24326
- surface crack recording instrument and method 3—58342
- threaded bolts, Ti and Inconel, fatigue cracks detection and meas. by a.c. potential difference method, theoretical anal. 3—24460
- weld-induced residual stress fields, numerical simulation of crack growth 3—51023
- Al alloy, acoustic emission during plastic deform. and crack growth in 2024 and 2124 specimens 3—39348
- Al alloy, fatigue crack front fragmentation 3—33353
- Al alloy 2024-T6, crack closure effects for real part-through fatigue cracks, US eval. 3—44025
- Al alloy 5083, crack initiation life, notch shape effect 3—4129
- Al alloy 7075-T6, fracture mechanics for short cracks 3—39253
- Al alloy 7075-T651, long wavelength Rayleigh wave scattering from microscopic surface fatigue cracks 3—44029
- Al alloy AK4-1, fatigue crack propag. kinetics, Al_9FeNi insoluble phase particles effect 3—34472
- Al alloy x7090-T6, growth, near threshold region 3—53226
- Al alloys, 7000 series, near-threshold fatigue crack growth, microstruct. control 3—9180
- Al alloys, fatigue crack growth resistance *(Japanese)* 3—9169
- Al alloys, fracture crack growth behaviour in 2000 and 7000 series, influence of corrosion deposits 3—34463
- Al alloys, high strength gel electrode imaging, bending and torsional testing 3—34572
- Al alloys, mode II fatigue crack growth, initiation from precrack and machined slit *(Japanese)* 3—9168
- Al alloys, powder metallurgy, fatigue crack propag., effect of Al_2O_3 particles and precipitate type 3—34482
- Al bolted structure, flaw detection using multisegment eddy current probe 3—39341
- Al-Cu, 2021, fatigue crack growth, effect of environment 3—29149
- Al-Cu(Si), cast and extruded, cyclic behaviour, fatigue crack propag. 3—58193
- Al-Cu(Si), cast and extruded, cyclic behaviour, electron fractographic study 3—58194
- Al-Mg alloy AMg6M, plane specimens, endurance prediction with combined forms of loading 3—47905
- Al-Zn-Mg-Cu, 7075-T6 alloy, small fatigue crack growth rel. to localized microplasticity 3—29154
- Al-Zn-Mg-Cu alloy, 7075, crack growth near threshold rel. to microstructure, four ageing treatments 3—34479
- Cu, fatigue crack growth, near-threshold 3—4125
- Cu, near-threshold fatigue crack growth, influence of oxide-induced crack closure 3—14688
- Fe, cast, nodular, fracture mechanism invest. *(Chinese)* 3—4102
- Fe, cleavage crack growth, cyclic, quantitative fractography 3—39228
- Fe, fatigue crack propag., near threshold, effect of grain size and cold work 3—29181
- α-Fe, polycrystalline, fatigue crack initiation mechanism 3—58200
- Fe-Si, fatigue crack threshold at low homologous temp., controlling parameters 3—53212

fatigue cracks continued
  Fe-Si(Ni), cleavage crack growth, cyclic, quantitative fractography 3—39228
  Mg alloy, fatigue crack nucleation and growth, struct. state depend. 3—19413
  Ni-Al (14.4 at.%) with coherent precipitates, fatigue crack evolution 3—47942
  Ni-base superalloy, Nimonic AP1, fatigue crack growth and surface damage 3—29152
  Ni-base superalloys, fatigue crack propag. process, phys. modelling 3—4119
  Ti alloys, α and $\alpha+\beta$, fracture-microstruct. relationships 3—9185
  Ti, fatigue crack propag., effect of stress freq. 3—14730
  Ti-Al (4-8 wt.%), fatigue crack growth, role of deform. 3—58252
  Ti-Al-Mo, resistance to crack growth in air and sea water 3—9249
  Ti-Al-Mo-V, fatigue crack growth, effect of load ratio 3—14698
  Ti-Al-Sn-Zr-Mo, fatigue cracks, short, effect of fracture surface roughness on growth 3—34468
  Ti-Al-Sn-Zr-Mo (6,2,4,6 wt.%), fracture mechanics for short cracks 3—39253
  Ti-Al-V, crack propag. rel. to mech. props. 3—9192
  Ti-Al-V, fatigue crack propag., effect of microstruct. 3—9187
  Ti-Al-V alloy, annealed microstructures, fatigue failure 3—14736
  Ti-Al-V(Sn), fatigue crack propagation under polymodal loading 3—58199
  Zr-Nb (2.5 at.%), H isotope solubility in stressed hydride forming alloy 3—53211

fatigue failure *see fatigue*

fatigue fracture *see fatigue*

fatigue life *see fatigue*

fatigue testing
  for corrosion fatigue testing, see corrosion testing
  acoustic emission amplitude distrib. charact. during fatigue crack nucleation and propag. 3—48014
  alloy, constructional component, cyclic strength in biharmonic loading 3—19487
  apparatus assembled in field-emission SEM, direct obs. of fatigue crack propag. *(Japanese)* 3—9283
  composites, fatigue strength anisotropy estimation 3—29247
  cylindrical specimens with ring-shaped notch, edge fatigue cracks growth kinetics study 3—9275
  DC potential probe method for fatigue crack propag. meas. *(German)* 3—53323
  extensometer extender for conversion of room-temperature extensometers for high-temperature applications 3—40595
  FATMAC, fatigue machine for irradiation of fusion CT samples under fatigue load 3—58376
  fusion first wall materials in-pile testing, ^{59}Ni enriched Ni samples, neutronics 3—55705
  glass fibre fabric reinforced epoxy laminate, fatigue test normalisation scheme, S-N curves 3—48024
  glass fibre reinforced plastic, eval. model for strength and endurance during variable cycle loading 3—24435
  glass fibre reinforced plastics, fatigue damage diagnosis using diffuse light transmission 3—53327
  graphite-epoxy composite laminate, fatigue and impact damage, US characterization 3—58385
  graphite-epoxy composite laminates, ply orientations, 2D US imaging using polar backscatt. 3—58386
  high-temperature low-cycle fatigue test installation 3—19491
  loading device with ampul accommodating two specimens for tests inside reactors 3—19494
  machine at liquid He temp., re-condensing type casting system, heat transfer and operational characts. 3—36012
  magnetoresonance unit with programmer for cantilever bend testing 3—58340
  material fatigue assessment in bump test *(Polish)* 3—9296
  metals, fatigue failure regularities 3—14800
  programmed testing rig for low-cycle fatigue with pure bending 3—58341
  reverse bending machine design, for fatigue testing at elevated temp. 3—53332
  review of methods 3—44005
  spot welded joints, fatigue testing *(Japanese)* 3—34585
  steel, C type, corrosion fatigue tests in nucl. reactor coolant water 3—58338
  steel, Cr-Mo, fracture testing in high temp. and press. H_2-H_2S environment, test chamber system 3—29238
  steel, ferritic, inductively heated, fatigue testing, influence of magnetomech. effect 3—9298
  steel, heat-resistant, fatigue crack growth laws, effect of test temp. 3—19416
  steel 22k acoustic emission amplitude distrib. charact. during fatigue crack nucleation and propag. 3—48014
  steel sheet, cyclic stress-strain, fatigue testing 3—53318
  surface crack recording instrument and method 3—58342
  test rig for superimposed mech. and thermal cyclic stresses *(German)* 3—14809
  US resonance, calc. of stress intensity for fatigue crack growth 3—4251
  variable amplitude stress, laboratory simulation methods for operational stresses *(French)* 3—34579
  Al, at 300°C, reverse bending machine design and expt. results 3—53332
  C_{ZZ} 3—21526
  Ti-Al-Sn-Zr-Nb (5.5, 3.5, 3, 1 wt.%), fretting fatigue strength, temp. depend. 3—58197
  TiC(N) low-Z coatings for Tokamak reactor, thermal fatigue testing 3—21526

fault currents
  see also flashover; leakage currents; overcurrent; short-circuit currents
  neutral beam injector performance, capacitive stored energy effect 3—55743

fault location
  electronic weighing machines, meas. stability rel. to component reliability and operational fault perceptibility 3—49331
  nuclear reactor fault detection and isolation methodology 3—50020
  optical fibre fault locator, max. measurable distances using stimulated Raman scatt. 3—7184
  optical fibres, detection of faults, breaks and attenuation using reflectometry *(French)* 3—32511

fault-tolerant computing
  Tritium Systems Test Assembly, redundant control system 3—26488

faults, electrical *see electrical faults*

f.d.m. *see frequency division multiplexing*

feature extraction *see pattern recognition*

feedback
  see also control theory
  climate, cloud feedback as stabilising effect for early Earth 3—15598
  DC motor with feedback control, used in variable speed light chopper 3—41969
  JT-60 fusion reactor control system, safety design 3—55650
  lung, ventilation control, positive feedback role 3—34868
  microprocessor based feedback controller for mechanical ventilation 3—44345
  millivoltmeter circuit, using 741 IC op amp, negative feedback 3—35972
  nuclear reactor, nonlinear coupled distributed parameter systems, bilinear control problem 3—50014
  optical hybrid bistability related to feedback configs. 3—22147
  proton synchrotron magnet power supply, high accuracy control 3—6478
  PWR power plant, optimal temperature controller design 3—6406
  resistance thermometer in reverse current loop, temp. and temp. difference meas. *(German)* 3—54736
  Ritz penalty method for solving the control of a diffusion equation 3—50900
  spatio-temporal feedback system stability 3—46167
  Tokamak plasma position control, feedback controller synthesis 3—12923
  X-ray lithography system, alignment, closed loop feedback control 3—40731

FEM *see field emission electron microscopy*

Fermi-Dirac statistics *see quantum statistical mechanics*

Fermi gas *see fermion systems*

Fermi level
  actihnide metals, cohesion and electronic struct. 3—23255
  alkali graphite intercalation cpds., electronic interlayer states, linearised APW calc. 3—52006
  alloys, random binary, charge fluctuations, CPA perturbation theory 3—3130
  amorphous semiconductors, localised states, two freq. light induced absorpt. and energy density 3—38832
  contactless measurement of voltage levels using photoemission 3—20870
  disordered systems with strong electron-phonon interaction, optical intraband absorpt. 3—19101
  electron spectroscopy, calibration of sample Fermi level 3—52875
  graphite:B, dielectric function and critical-point transitions 3—14244
  graphite, electronic interlayer states, linearised APW calc. 3—52006
  graphite intercalated with C, electronic struct. 3—13723
  graphite intercalation cpd., KC_8, electronic struct., XPS and EELS studies 3—19250
  graphite intercalation cpds., higher stage, band struct. and c-axis charge distribs. 3—38282
  III-V semiconductor thin films, prep., defects, and appls. 3—23210
  metal halides, chem. shifts, X-ray K and L_{III} absorpt. edges, plasma oscills. theory of solids 3—57995
  metal sulphides, chem. shifts, X-ray K and L_{III} absorpt. edges, plasma oscills. theory of solids 3—57995
  metal-semiconductor interface, localised states, capacitance spectroscopy 3—3314
  metal-semiconductor Schottky barrier contacts, interface Fermi level 3—18765
  n-type crystals, energy band parameters, heavy doping effects 3—13701
  oligophenols, polyconjugated, interaction of paramagnetism and elec. cond. *(Russian)* 3—47340
  p-n junction analysis, Auger voltage contrast method appl. 3—52239
  semiconductor, carrier lifetime and extrinsic photocond. at high excitation rate 3—38433
  semiconductor, electron density, Fermi-Dirac integrals appl. 3—23372
  semiconductor junctions, grain boundary barrier height, interface states *(French)* 3—23472
  semiconductors, doped, dislocation mobility theory 3—2559
  semiconductors, doped, impurity band, self-consistent theory 3—43105
  semiconductors, two-dimensional disordered, hopping cond., optical transitions, under weak localisation conditions 3—23382
  semiconductors with doping superlattices, electronic subband struct. and effective energy gap 3—57401
  solutions, Fermi level, theory 3—34628
  superconductor, impure, with anisotropic electron-electron interaction, generalised BCS theory 3—28476
  superexchange, correlation with superconductivity 3—3365
  TCNQ salt, TSeF-TCNQ, electron tunnelling meas., Peierls gap opening 3—52119
  $(TMTSF)_2X$, band struct. and Fermi surface 3—13724
  $(TMTSF)_2X$ organic superconductors, props. in fluctuating regime 3—52293
  transition metals, 3d, and their alloys, magnetocrystalline anisotropy, Fermi level depend. 3—57587
  Al, X-ray K absorption edge and singularity at Fermi level 3—28929
  Al-Mg-Si, quenched and aged, electron density of states, soft X-ray emission study 3—3029
  Au-Si(111) 7×7 interface growth, cryst. and electronic struct. 3—23190
  CO chemisorbed layer on Ni (111), $2\pi^*$-derived states, UV bremsstrahlung spectra study 3—43253
  Cd_3P_2, band struct., Fermi level and g-factor in mag. field 3—33634
  Cs^+ sputtered ions, electron tunnelling 3—34190
  Cu, conduction band gap at L point, photoemission and electron refl. meas. 3—8404
  $DyAl_2$, electron density of states at Fermi level 3—13704
  Fe-Ni, electronic and mag. structure evolution during ferromagnetic ordering *(Russian)* 3—28263
  $FePd_3$, electronic struct. and magnetism, LCAO calc. 3—28258
  GaAs, anion antisite defects and electron traps 3—42603
  GaInAs-AlInAs heterojunctions, enhanced electron g-factors, tilted field method 3—47416
  GaSe(s), SCL cond., two-barrier model, I-V characts. 3—18715
  Gd, band struct. and electronic density of states, mag. torque meas. 3—28257
  $GdAl_2(Ni_2)$, electron density of states at Fermi level 3—13704
  $Gd_{0.5}Dy_{0.5}Al_2$, electron density of states at Fermi level 3—13704
  GdMnAl, electron density of states at Fermi level 3—13704
  Ge:H,B(P), amorphous, elec. cond. and thermoelectric power 3—23393
  $Ge_{40-x}Sb_xS_{60}$ glasses, refr. index and DC elec. cond. 3—28813
  $Ge_{32}Se_{24+x}Te_{40-x}As$ ($x=0$, 8, 16, 24, 32) glasses, optical and elec. gaps, cond., glass transition temp., DSC study 3—34056

Fermi level continued
- $Hg_{1-x}Cd_xTe$, cleaved, stress-mediated Hg migration, photoemission and electrolyte electroreflectance study 3—47195
- $Hg_{1-x}Cd_xTe$-Al interface formation, local chem. comp. and Schottky barrier height, photoemission study 3—28220
- InAs-GaSb superlattices, electronic props. 3—23262
- $InAs_{1-x}P_x$, energy spectrum, tunnel spectroscopy study in mag. field 3—13708
- InP (100)-Al(Au) interface with etched or cleaned InP surfaces, Fermi level, XPS study 3—47419
- InSe, SCL cond., two-barrier model, I-V characts. 3—18715
- Mg, X-ray K absorption edge and singularity at Fermi level 3—28929
- MoO_2, electronic struct. and photoelectron spectra, $X\alpha$ calc. 3—13722
- Mo_3Si, neutron irrad., sp. ht., supercond. and phonon softening *(Russian)* 3—51819
- NbC, vacancy band in electronic struct., DV-$X\alpha$ cluster calc. 3—38306
- NbN, vacancy band in electronic struct., DV-$X\alpha$ cluster calc. 3—38306
- NbO, vacancy band in electronic struct., DV-$X\alpha$ cluster calc. 3—38306
- Ni alloys, Auger spectra correlation effects 3—52872
- Ni alloys, electronic struct., X-ray photoelectron spectra 3—52024
- Ni, band struct. and electronic density of states, mag. torque meas. 3—28257
- Ni, metal-insulator transition at 34 TPa, APW calc. 3—8420
- Ni-Zr alloys, band struct., specific heat, mag. props. 3—13715
- Ni_xFe_{1-x}, unoccupied electron states 3—13694
- Ni(110), spin-polarized inverse photoelectron spectra 3—3851
- $Pb_{1-x}Sn_xTe$:In, band edge motion in quantising mag. field and nonequilib. states 3—57275
- $Pb_{1-x}Sn_xTe$:In, energy spectrum in quantizing mag. field 3—18727
- Pd alloys, electronic struct., X-ray photoelectron spectra 3—52024
- Pd cluster growth in Xe matrix, photoemission study 3—43710
- PdH_x, normal and deuterated, electronic, struct., de Haas-van Alphen study 3—23244
- RU surface, clean and C-covered, electronic struct., self consistent LCAO calc. 3—23256
- Rh surface, clean and C-covered, electronic struct., self consistent LCAO calc. 3—23256
- Si (111)-Ag(Au)(Ni) interfaces, localised states, capacitance spectroscopy 3—3315
- Si, irradiated, defects determining Fermi level stabilisation 3—33674
- Si, oriented superlattices, electronic phenomena 3—13896
- Si Schottky contacts on n- and p-type surfaces, props. 3—52251
- Si:As(B), laser annealed, surface electron props. 3—57408
- Si:H, amorphous, gap state studies 3—23249
- Si:H, amorphous p-i-n^+ solar cell, thin n^+ window layers, elec. props. meas. 3—14942
- Si:H, Cl amorphous film, photocond. meas. 3—43225
- a-Si:H, doping and Fermi energy, Mott 8-N rule 3—8456
- a-Si:H, plasma deposited, SiH_3Cl impurity effect on props. 3—18583
- Si:H amorphous, low temp. anomalous magnetoresistance, Fermi level shift contrib. 3—3232
- Si:H amorphous film, elec. props. and solar cell characts. 3—53539
- a-Si:H films for photovoltaic appls., optical props. rel. to deposition conditions 3—57990
- a-Si:H n^+nn^+ films, SCL cond. 3—3209
- Si:H(H,P), amorphous, RF glow discharge deposited, photocond. and dark cond. meas. 3—38423
- Si:Pt, optically pumped photoconductivity and deep traps 3—57380
- Si/GaAs heterojunction form., surface antisite acceptor level effects 3—18771
- Si/GaP heterojunction form., surface antisite acceptor level effects 3—18771
- n-Si/n-Fe_2O_3, double layer solar cell electrode, interface states effects obs. *(Chinese)* 3—19581
- SiGe:H amorphous film, elec. props. and solar cell characts. 3—53539
- $Tb_{0.23}(Fe_{1-y}M_y)_{0.77}$ (M=V, Mn, Co, Cu), amorphous, mag. and magneto-optical props. 3—57897
- Ti-Cu hydrides, amorphous, proton NMR study of H diffusion and electronic struct. 3—34003
- Ti-Cu hydrides, proton NMR study of H diffusion and electronic struct. 3—34003
- Ti-Si and Ti-SiO_x-Si systems, silicide and Schottky barrier form. 3—3289
- TiH_x ($0 \leq x \leq 2$), nonstoichiometric, electronic struct. 3—38295
- $Ti_{1-x}V_xS_2$, photoemission study of elec. struct. 3—57273
- TlSe, elec. resist. and Hall effect, press. dependence meas. 3—33725
- $(V_{1-x}Al_x)_2O_3$, elec. resist., Seebeck coeff. and metal-insulator transition 3—13844
- V_2O_3, magnetic susceptibility and sp. ht. 3—3461
- VPd_3, electronic struct. and magnetism, LCAO calc. 3—28258
- W surface, testing of field electron energy spectrometer 3—20956
- P-$ZnGeAs_2$, H^+ irrad., elec. resist. and Fermi level 3—43173
- Zr-Nb-Mo-Re, electronic Gruneisen const. 3—23253
- Zr_2PdH_x, cryst. and amorphous, electronic struct., NMR studies 3—52644

Fermi liquid *see fermion systems*

Fermi resonance
- acetic acid, gaseous at 21°C, Raman spectrum 3—17291
- cyclopentanone, carbonyl resonance, forbidden level assignment 3—41558
- diacetylene, microwave vibr. rot. spectrum 3—32045
- ethylene-d_2, Fermi reson., IR obs. 3—26751
- methyl cyanide, $V_2-V_3+V_4$ Fermi doublet as a probe of mol. interactions 3—32035
- polyatomic molecules in liquids, picosec. lifetimes and efficient decay channels of vibr. models 3—34118
- CO_2, Raman spectra in different phases, Fermi doublet ν_1-$2\nu_2$ 3—41586
- fluoromethane, simultaneous anal. of ν_1, ν_4, $2\nu_2$, $\nu_2+\nu_5$, and $2\nu_5$ IR bands 3—41571
- HDO, high resolution rot. vibr. IR spectra of ν, and $2\nu_2$ bands 3—26723
- H_2O molecule, mech. anharmonic spectroscopic problem soln. 3—17264
- OF_2, ν_1-$2\nu_2$ Fermi diad investig. by IR-MW double reson. 3—50446
- SF_6, multiphoton excitation, vibr. ladders, transition probabilities calcs. 3—36820

Fermi surface
- alkali metals, positron annihilation characts., effect of CDW 3—28924
- alloys, random, conc. waves and Fermi surfaces 3—38288
- coherent composition modulated alloys, electronic struct. rel. to supermodulus effect 3—3047
- Compton profile, Fourier transformed, Fermi momentum determ., electron correlations effect 3—42998
- geometric props., Brillouin zones 3—38289
- history 1933-60 3—35827

Fermi surface continued
- IV-VI semiconductors, energy band struct. and Fermi surface, tight-binding calc. 3—57281
- metal, magnetoresistivity, linearised Boltzmann eqn. soln. using Fermi surface harmonics 3—33710
- metals, Fermi-liquid cyclotron-doppleron waves *(Russian)* 3—3035
- metals electron spectra meas., de Haas-van Alfven effect based instrument 3—45183
- nearly-free-electron model, deformation parameter and ultrasonic attenuation 3—51719
- noble metals, Fermi surface, eight-cone model 3—42996
- periodic Anderson Hamiltonian, ground state, appl. to mixed valence systems 3—52013
- polyvalent heavy liquid metals, electronic density of states, Fermi surface 3—18598
- positron annihilation meas., Fermi surface construction, for metals and alloys 3—13705
- rare earth alloys, RPd_3 (R=Lu, La, Y, SC), low temp. sp. ht. and elec. resist. 3—42801
- superconducting energy gap, effect of quasi-particle scatt. at electron topological transition *(Russian)* 3—18837
- superconductor, anisotropic, with approx. neutral electron-electron interaction, BCS-type theory 3—3366
- superconductor with dielectric gap at Fermi surface, diamagnetic effects 3—28474
- thin film ternary compounds, critical fields, flux pinning and Fermi surfaces, book contrib. 3—8635
- $(TMTSF)_2X$, ($X=ClO_4$, ReO_4, FSO_3, PF_6 and AsF_6), band struct. parameters 3—28264
- $(TMTSF)_2X$, band struct. and Fermi surface 3—13724
- $(TMTSF)_2X$, Fermi surface anisotropy and effective dimensionality 3—13706
- transition metals, Fermi surface averaged g-factors 3—13709
- Ag, electron-phonon scatt. rate for Fermi surface, time-of-flight effect meas. 3—38287
- Ag-Cu(Pd)(Pt)(Au) foils, dil., CESR linewidth 3—3534
- Ag-Pd, electronic struct. rel. to supermodulus effect 3—3047
- Al, band struct., photoemission study 3—43006
- Al, Fermi surface props. from phase shift parametrisation 3—13703
- Al, US attenuation in transverse mag. field, OPW calcs., Fermi surface study 3—13707
- Au-Ni, phonon dispersion and thermodynamic props. 3—14557
- Au_xNi_{1-x}, electronic struct. and density of states, KKR CPA calc. 3—43004
- Au_cPt_{1-c}, electronic struct., relativistic theory 3—3049
- Bi, electron spectrum parameters from high temp. magnetoresist. oscills. *(Russian)* 3—38405
- Bi-Sb, electron spectrum parameters from high temp. magnetoresist. oscills. *(Russian)* 3—38405
- $Bi_3Sr(Eu)$, band struct. and superconductivity 3—13726
- $C_{8n}AsF_5$ stage 2 intercalation cpd., charge transfer and band struct. 3—23268
- n-CdSb, Shubnikov-de Haas oscill. study 3—33745
- p-CdSb, Shubnikov-deHaas oscills., Fermi surface topology, hole cyclotron masses, Dingle temp. determ. 3—23245
- $CeAl_2$, mag. ordering, electronic struct., LMTO calcs. 3—57508
- CeB_6, de Haas-van Alphen study 3—8401
- $CePd_{3+x}$, low temp. sp. ht. and elec. resist. 3—42801
- CeSb, de Haas-van Alphen effects, p-f mixing theory 3—52011
- $CeSn_3$, Fermi surface props., dense Kondo and mixed valence models 3—52010
- Co, electronic band struct., Fermi surface, and optical props. under press. 3—3051
- Cr, antiferromag. and paramag. phases, phase transition effects on Fermi surface 3—38615
- Cr, band struct. in paramag. and antiferromag. phases, press. influence 3—3052
- Cr, electronic struct., effect of shear strains 3—52020
- Cs, Fermi surfaces, press. depend., de Haas-van Alphen study 3—42997
- Cs film, optical absorption study, band struct. 3—43653
- Cu, conduction spin density, Knight shift and Fermi surface, MAPW formalism 3—38707
- Cu dilute alloys, cluster model residual resistivities 3—33704
- Cu, Fermi surface, uniaxial strain derivatives 3—57258
- Cu, phonon anomalies, Fermi surface and dispersion relations 3—33623
- Cu whiskers, longit. magnetoresist. size effect, influence of real Fermi surface 3—18687
- Cu-3d transition metal dil. alloys, magnetoresistance calc. 3—38369
- Cu-Al(Si)(P)(Zn)(Ge), dil., Dingle temp. and Fermi surface changes, charge transfer effects 3—52009
- Cu-based dilute Hume-Rothery alloys Fermi surfaces, de Haas-van Alphen study 3—8400
- Cu-Ni, electronic struct. rel. to supermodulus effect 3—3047
- Cu-Zn system, electron phase stability, pseudopot. calc. 3—43056
- Fe-Co alloys, Fermi surface topology influence on kinetic props. 3—8405
- Fe-Ti sputtered alloys, magnetovolume effects 3—23770
- HgSe and $Hg_{1-x}Mn_xSe$, mag. breakdown and spin-split cond. band 3—57260
- $InBi(In_2Bi)$, intermetallic cpds., Fermi surface, transverse magnetoresist. and Shubnikov-de-Haas effect study 3—18601
- K, Fermi surface press. depend., KKR calc. 3—57257
- LaAg, magnetoacoustic oscills. and Fermi surface 3—18602
- LaB_6, de Haas-van Alphen study 3—8401
- LaH_2, electronic energy bands and optical props., APW calc. 3—43011
- LaSb, de Haas-van Alphen effects, band struct. calcs. 3—52011
- $LaSn_3$, Fermi surface props. 3—52010
- Lu, electronic struct. calcs. 3—28260
- Na, induced torque meas. by modulation method 3—57334
- Nb:Ta(Cr)(Fe)(Co)(Ni), effective valence for electromigration 3—42860
- Nb-H system at high H conc., elec. resist. and neutron diffr. studies 3—38366
- Nb-Mo, Fermi surface and electron-phonon mass enhancement 3—3037
- $Nb_3S_4(Se_4)(Te_4)$, quasi-one-dimensional, electronic struct. calc. 3—47249
- NdB_6, de Haas-van Alphen study 3—8401
- NdH_2, electronic energy bands and optical props., APW calc. 3—43011
- Ni_3Al, magnetocrystalline anisotropy and Fermi surface 3—28548
- Ni_cPt_{1-c}, paramag., electronic struct., relativistic KKR CPA calc. 3—52021
- NiTi, martensitic transforms., Fermi surface calc. 3—23031
- NiTi, theory of struct. transitions, Fermi surface calc. 3—18450

Fermi surface continued
$PbSe_{1-x}Te_x$, electron effective mass, Shubnikov-de Haas effect study 3−13710
Pd-Ni, Stoner factor, field depend., de Haas-van Alphen study 3−23243
PdH_x, normal and deuterated, electronic, struct., de Haas-van Alphen study 3−23244
PrB_6, de Haas-van Alphen study 3−8401
Rb, Fermi surfaces, press. depend., de Haas-van Alphen study 3−42997
Sb-Sn (Te), dil., Fermi surface characts. rel. to impurity conc. *(Russian)* 3−38286
$Ta_{0.5}W_{0.5}$ alloy, electronic density of states and Fermi surface calc. 3−23232
$TiBe_2$, de Haas-van Alphen spectra and induced magnetism 3−3038
$Ti_{1-x}Nb_xS_2(Se_2)$, electronic and optical props. *(French)* 3−23387
$Ti_{1-x}Ni_xS_2(Se_2)$, electronic and optical props. *(French)* 3−23387
Ti_nO_{2n-1}, metal-insulator transition mechanism 3−43029
$Ti_{1+x}S_2$, angle-resolved photoemission and transport props., stoichiometry effects 3−39004
$Ti_{1-x}V_xS_2(Se_2)$, electronic and optical props. *(French)* 3−23387
V, electron momentum distrib., positron annihilation study 3−47251
V, electronic struct., effect of shear strains 3−52020
V_nO_{2n-1}, metal-insulator transition mechanism 3−43029
V_3Si, Fermi surface and band struct., positron annihilation and LMTO studies 3−57261
Zn, Fermi surface strain depend. and sound vel. quantum oscill. 3−57259
Zr-Nb, Fermi surface and electron-phonon mass enhancement 3−3037
$Zr_xHF_{1-x}V_2$ superconducting Laves phase, electron spectrum peculiarities 3−3873
$ZrZn_2$, Fermi surface, field depend., de Haas-van Alphen study 3−33622

Fermi-Thomas model *see Thomas-Fermi model*

fermion systems
see also electron gas; liquid helium-3
1/*N* expansion, validity 3−16184
Bohm-Aharonov strings, functional integrals for order-disorder variables 3−508
central potentials, energy trajectories, geometrical theory 3−40481
charge fluctuations and fractional charge in 1+1 dimensions 3−45058
collective state excitation curve shape 3−30775
collisionless self-gravitating Fermi gas, semi-degenerate equilib. configurations 3−54222
correlated P-wave pairing theory, superfluid ^3He appl. 3−8289
dense Fermi systems, generalised Jastrow variational method 3−54672
determinantal wavefunctions, group representations for fermion systems 3−21605
disordered interacting fermions, metal-insulator transition and localisation, scaling theory 3−47265
distribution of zeros and eqn. of state, cluster series, ideal Fermi-Dirac gas 3−16323
dynamical equations for superfluid fermion systems from functional method 3−40486
electromagnetism, spin and statistics 3−6049
electron correlation, ground-state results in metallic density regime 3−23302
electron liquid, peak in static struct. factor 3−33654
electron liquids, mode-mode coupling anal. of memory functions 3−49253
ensemble-averaged level density, symm. effect 3−30774
exactly solvable one-dimens. problem for Fermi or Bose particles 3−10744
excitation spectrum and low-temperature thermodynamics of a one-dimensional interacting Fermi system 3−49257
Fermi fluids, chain diagrams, correlated RPA theory 3−25803
Fermi liquid, normal, viscoelastic behaviour, bulk and shear moduli 3−13573
FHNC variational theory for strongly interacting Fermi systems 3−11273
finite Fermi systems theory and self-consistency relations, review 3−49258
finite-dimensional fermion algebra decomposition into irreducible spaces 3−30764
Green's function Monte Carlo method 3−20758
hard-core square-well fermions, ground state props. 3−25804
harmonically interacting in a harmonic pot., chem. pot. study 3−35911
Hubbard model, electron excitations in Fermi liquids, paramagnetic-ferromagnetic phase transitions 3−13986
interacting and noninteracting, N representability of electron density and first-order density matrix 3−5708
interacting fermion gases, mass distrib. from Schrodinger eqn. TDHF anal. 3−36373
intermediate valence systems, theoretical and exptl. progress, local Fermi liq. theory 3−28525
isotropic Fermi superfluids, BCS and BW types, stability 3−13577
itinerant metamagnetism, Fermi liq. model 3−23572
Jastrow theory for dense Fermi system 3−20761
lattice field theories, Monte Carlo methods for fermions 3−31036
lattice gas, phase transition with infinite ranged interactions 3−30806
lattice gas with infinite-ranged interaction, phase transition, ground state props. 3−16250
many-electron systems in 3-dimens. space, quantum fluid dynamics 3−16248
metals, Fermi-liquid cyclotron-doppleron waves *(Russian)* 3−3035
normal Fermi liquids, dispersion and damping 3−33533
one dimensional disordered, conductance and insulator-ideal conductor transition 3−33714
one-dimensional fermion systems, Monte Carlo simulations 3−10743
one-dimensional fermions, solutions of integral equations, repulsive delta function potential 3−30767
one-dimensional many-body system, fermion clustering 3−30766
optimised mean-field description of N-fermion system 3−21606
paramagnetic Fermi liqs., induced interaction model 3−38152
partial coherent neutron fields, momentum representation *(German)* 3−45567
perturbation theory in deformed basis 3−45467
quantum model for commensurate-incommensurate transitions 3−35948
relativistic Fermi gas, mag. props. 3−5705
SO(2N+1) time-dependent Hartree-Bogoliubov eqn. 3−10741
spin polarised two-dimensional degenerate liquid in random potential, spin-rotation effect 3−57163
stability, consequences of gravit. theory based on nonsymmetric $g_{\mu\nu}$ 3−40031
superradiant phase transitions of Fermi and Bose operators with trilinear interaction 3−36976

fermion systems continued
Thomas-Fermi approximation ground state refinement for N electron atom 3−31903
Tomonaga-Luttinger model, vertex function method and Ward identities 3−40478
transition metal, Fermi liquid theory of mag. props. *(Russian)* 3−47469
two-dimensional degenerate Fermi liq., spin diffraction 3−33534
two-level hamiltonian, dynamic group 3−25782
Wigner lattices, one-dimensional, finite bandwidth effects 3−40521
H_2, liquid metal, ground-state struct. as two-component Fermi fluid at T=0 3−51885
^3He-^4He soln., transition from hydrodynamic to ballistic quasiparticle behaviour vibr. wire resonator response, 0.3 to 10 mK 3−47180
$(^3He)_4$ fermionic tetramer, binding energy, var. calc. 3−21944
Pd, electronic sp. ht., mag. field depend., Fermi liq. model 3−51824
$TiBe_2$3, electronic sp. ht., mag. field depend., Fermi liq. model 3−51824

fermions
see also baryons; fermion systems; leptons
chiral-invariant fermion models, path integral formulation of Thirring and Gross-Neveu models 3−16478
CP^{n-1} models with fermions, decoupling, chiral transformations 3−31017
fermion-boson metamorphosis in a chiral invariant theory 3−11064
finite lattice fermions and gauge fields in 1+1 dimensions, Schwinger model 3−30989
fractionization, Callis-Bott-Seeley theorem in 1-D, index theorem 3−31021
galactic halos of massive fermions and bosons 3−54535
gauge fields, generalised, external symm. group, interpretation of gravity 3−40765
gauge theories quantised on the light front *(Russian)* 3−544
generalised lattice fermion actions and appls., CP phase, vacuum energy density 3−20979
glueball states in reduced large- N Hamiltonians 3−20996
Higgs models, 3-dimens., topological mass term dynamical generation, composite fermions 3−11012
high temperature gauge theories, exact chiral invariance, effective fermion masses, QCD, GUT appls. 3−16499
indistinguishability interference 3−5573
Ising model, 2-dimens., fermionisation 3−20977
Ising model, 3-dimens., grassmannian integral derivation, fermionisation 3−20978
Kahler-Dirac equation in flat and curved space-times, fermionic degrees of freedom 3−11018
lattice analogue for chiral gauge theories, technicolour mechanism and fermion generation 3−5942
lattice gauge theories in strong coupling limit, meson and baryon spectra 3−49537
lattice gauge theory, mean field approx. corrections 3−30990
many-particle relativistic equations for Green's functions, connected structure of kernel 3−16508
mixing, parametrisation instability in the presence of P-violating interactions 3−6027
multiple bremsstrahlung in gauge theories, fermion helicities, QED formalism 3−6044
open fermion string with supersymmetric boundary conditions 3−11159
path integrals, time evolution in gauge theories 3−54826
regularized functional integral for fermions and anomalies, current divergences 3−16566
relativistic wave eqns. for fermions, Harish-Chandra degree four, causality 3−31016
S O(18) grand unified models with fractionally charged color singlet particles 3−40811
$SU(2)_L \times U(1)$ model with horizontal interactions, fermion masses, mixing angles 3−45326
supersymmetric dimensional regularisation, two-loop correction to axial current divergence in gauge theories 3−10991
supersymmetric three-scale hierarchies, Goldstone fermion coupling, effective potentials 3−49591
supersymmetry, radiative corrections for fermion mass, gravitinos 3−49588
Susskind lattice fermions, nondegenerate, unequal mass flavours 3−54843
t' Hooft's twisted functional integral for supersymmetric SU(N) gauge theory, quark confinement 3−20973
wave functions, finite extension in QCD, magnetic charge distribution 3−6068
Wilson fermions, chiral transform. and lattice regularisation 3−40755

fermium
see also nuclei with ......
No entries

fermium compounds
No entries

ferrimagnetic properties of substances
see also ferrimagnetism; ferrites; garnets; magnetic semiconductors
$CoFe_xAl_{2-x}O_4$, solid solution, Mossbauer and high field magnetisation studies 3−34019
dielectric layered structure, magnetostatic bulk and surface waves, power flow and energy distrib. 3−33872
ferrite, polycrystalline, mag. cryst. anisotropy const. and effective porosity meas. 3−18885
ferrite, porous, microstruct. and mag. props. 3−43395
ferrite, rectangular-loop, explosive working effect on EM and strength props. 3−53004
ferrites, disaccommodation, long term, prediction 3−14081
ferrites, hexagonal, ferroxplana-type, props., book contrib. 3−57550
ferrites, hexagonal, with magnetoplumbite struct., fundamental props., book contrib. 3−57549
ferrites, magnetization, additives effect 3−14078
first-row transition metal EDTA complexes, 1-dimens., ferrimagnetic-like coupling 3−8657
hard ferrites and plastoferrites, book contrib. 3−57709
oxide spinels, book contrib. 3−57548
permanent magnet materials, efforts to reduce Co consumption 3−47523
rare earth alloys, RMn_2Ge_2, single cryst., mag. props., magnetisation, elec. resist. and NMR studies 3−52477
rare earth oxides, $RFeMO_4$, (R=rare earth M=Mg, Co), magnetisation and neutron diffr. studies 3−57699
spinels, ferrimagnetic, elec. current carrier generation energy, mag. ordering influence 3−13835
sulphospinels, magnetic semiconductors, book contrib. 3−57551

ferrimagnetic properties of substances continued

Ba ferrite film with perpendicular magnetisation, form. by targets-facing sputtering 3—28994
Ba ferrite particles, perpendicular mag. recording props. 3—28641
$BaFe_{12}O_{19}:Ru^{3+}$ single cryst., mag. anisotropy 3—14044
$BaZn_2Fe_{16-x}In_x(Sn_x)O_{27}$, cation distrib., mag. props. and Mossbauer spectra 3—18868
$Ba(Zn_{1-x}Mn_x)_2Fe_{16}O_{27}$ hexaferrite, Mossbauer and mag. characterisation 3—57602
$Bi_xY_{1.2-x}Ca_{1.8}Sn_{0.3}V_{0.5}Ge_{0.5}Fe_{3.7}O_{12}$, solid state reaction 3—33939
Co-Gd amorphous film, mag. anisotropy, electron microscopy study 3—57578
Co_2TiO_4, semi-spin glass behavior 3—8652
$CrS_{1.17}:Mn(Te)$, ferrimagnetic-ferromagnetic transition 3—52475
$CsFeCl_3.2D_2O$, Ising chain systems, mag. struct. and relax. phenomena, neutron diffr. studies 3—57537
$Cu_{0.5}Fe_{2.5}O_4$-$ZnFe_2O_4$, initial permeability increase 3—14079
Dy-Fe amorphous film, magnetostriction meas. by cantilever capacitance method 3—14101
$DyCo_5$, spin reorientation and spontaneous magnetisation 3—52494
$Dy_{57}Co_{43}(Fe_{43})$, amorphous, mag. props. 3—57701
$Dy(Fe_{1-x}Al_x)_2$ Laves phases, mag. struct. and moments, neutron diffr. study 3—52375
$DyFe_5Al_7$, unusual ferrimagnetism, magnetisation and mag. hysteresis meas. 3—14073
$DyFe_5O_{12}$, magnetisation reorientation, torque meas. 3—57583
$DyMn_2$, Laves phase, mag. characts. 3—47480
Dy_6Mn_{23} and $Dy_6Mn_{23}H_x$, magnetisation and Mossbauer study 3—28528
$Dy_2Ni_{17-x}Al_x$, double demagnetisation and ferrimag. order-order transition 3—52535
$Er_6(Fe, Mn)_{23}$, mag. props. under high press. and in high mag. fields 3—28674
$ErFe_2$ hydride forming alloy, surface segregation, XPS and mag. susceptibility study 3—2816
$Er_{57}Fe_{43}(Co_{43})$, amorphous, mag. props. 3—57701
$ErFeO_3$, spin transitions, easy axis monitor 3—40646
$Er_3Fe_5O_{12}$ garnet, linear mag. birefringence and optical axis position 3—28844
$Er_3Fe_5O_{12}$, spin transitions, easy axis monitor 3—40646
$ErMn_2$, Laves phase, mag. characts. 3—47480
$ErTiO_3$, mag. struct., neutron diffr. study 3—14013
Eu_4As_3, crystallographic distortions, Mossbauer, mag. susceptibility and mag. moments studies 3—57837
γ-Fe O powders, mag. props., vol. concentration dependence meas. *(German)* 3—28642
Fe-Gd amorphous film, mag. anisotropy, electron microscopy study 3—57578
Fe-Ni Invar alloys, ferrimagnetism at low temps. 3—57555
$FeCo_{1.5}Ti_{0.5}O_4$, mag. struct., neutron study 3—52389
$FeCr_{2-x}In_xS_4$, ferrimagnetic, spontaneous magnetisation 3—18869
$FeCr_2S_2$ film, ferrimag. semicond., prep. and props. 3—58049
γ-Fe_2O_3 dispersion, mag. characts. for discs and tapes 3—28639
Fe_2O_3 needles prep. by decomp. of iron salt 3—39054
γ-Fe_2O_3, partial reduction to produce high coercivity particulate mag. media 3—28635
γ-Fe_2O_3 particles, adsorbed Co, ^{57}Co Mossbauer emission spectra 3—19030
γ-Fe_2O_3 particles, SiO_x adsorbed, high coercive force, ESCA study 3—23737
γ-Fe_2O_3, prep. from Fe_3O_4, coercivity, particle size depend., chem. struct. 3—23736
γ-$Fe_2O_3:Co$, epitaxial, orientation and dispersion, mag. recording appl. 3—23741
Fe_2O_3-rare earth oxide systems, amorphous, Mossbauer spectra and magnetisation meas. 3—57832
Fe_3O_4, ferrimag. ferroelectricity, hysteresis and piezoelec. consts. 3—57865
Fe_3O_4 film, reactive sputtering from two facing targets, high rate deposition 3—19269
Fe_3O_4, ionic configurations and electron ordering 3—56860
Fe_3O_4, low temp. phase, Fe^{3+} and Fe^{2+} hyperfine fields, NMR study 3—14150
Fe_3O_4, magnetite, biogenic in bacteria, animals and man 3—15124
Fe_3O_4 magnetite, dielec. const., mag. field depend. 3—57851
Fe_3O_4, magnetite, magnetocryst. anisotropy and magnetoelec. effect 3—57584
Fe_3O_4, μSR study 3—52698
Fe_3O_4-Fe_2O_3 film, prep. by reactive condensation, oxidation and coercivity 3—18954
γ-$Fe_2O_3(:Co)$ fine particles, mag. anisotropy, ^{57}Fe Mossbauer study *(Chinese)* 3—18942
FeS, cryst. struct. and ferrimag.-antiferromag. transition 3—51559
FeS, pyrrhotite, ferrimag. semicond., Hall effect studies 3—33743
$Fe_{1-x}S_{1-y}Se_y$, real struct. and mag. props. interrelation 3—52487
Fe_7Se_8, ferrimagnetism, 3d transition metal solute effects 3—57694
$FeTiO_3$ II, disordered, high temp. synthesis, mag. props. 3—14053
Gd-Co amorphous film, domain struct., SEM study technique 3—18964
Gd-Co amorphous film, perpendicular mag. anisotropy, influence of H_2 addition 3—28659
Gd-Co amorphous films, nonpenetrating mag. domains 3—52576
Gd-Co amorphous films, tetrode sputtered, uniaxial anisotropy meas. 3—43360
Gd-Co amorphous sputtered films, prep. for thermomagnetic recording 3—52932
Gd-Co powders, amorphised by milling, magnetisation props. meas. *(Russian)* 3—33928
Gd-Tb-Co film, amorphous, mag. props., magneto-optical recording appls. 3—57720
Gd-Tb-Fe amorphous films, magnetic and magneto-optic props., magneto-optical disc memory appl. 3—23927
GdCo amorphous films with large area uniformity and written bit stability, RF sputtering prep. 3—33942
GdCo film, amorphous, sputtered, compositional variation, mag. props. 3—18956
$GdCo_5$, mag. props., H_2 absorption effects 3—52537
$Gd_{1-x}Co_x$ film, amorphous ferrimag., Tsuya-Wangsness formula 3—18957
$Gd(Co_xAl_{1-x})$, mag. susceptibility and EPR study 3—3424
$Gd(Co_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3—52421
GdFe film, amorphous, sputtered, compositional variation, mag. props. 3—18956
$Gd(Fe_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3—52421

ferrimagnetic properties of substances continued

$Gd(Fe_yAl_{1-y})_3$, reciprocal susceptibility, saturation moment determ., EPR study 3—14019
$GdMn_2$, Laves phase, mag. characts. 3—47480
$Gd(Rh_{1-c}M_c)_2$ (M=Mn, Fe, Co), mag. props., magnetisation meas. 3—18936
$(Gd_xY_{1-x})Co_2$, thermal expansion and forced vol. magnetostriction 3—52589
$(Gd_xY_{1-x})Fe_3$, reciprocal susceptibility, saturation moment determ., EPR study 3—14019
Ho-Co sputtered thin films, magnetisation distrib. of submicron bubbles 3—52574
Ho-Co thin films, magnetisation distribs. in bubbles and domains, HVEM study *(Japanese)* 3—18960
$HoCo_2$, elastic moduli in mag. field, 4 to 200K 3—23777
$HoCo_2$, mag. excitation spectrum 3—3430
$HoCo_3$, mag. anisotropy and magnetisation curves *(Russian)* 3—38610
$HoCo_5$, magnetisation and mag. anisotropy meas. 3—3439
$HoMn_2$, Laves phase, mag. characts. 3—47480
$HoTiO_3$, mag. struct., neutron diffr. study 3—14013
$Ho_xY_{1-x}Co_{5+0.5x}$, mag. moments and magnetisation curves *(Russian)* 3—28520
$K(Al, Li, Fe)_x$ $(AlSi_3O_{10})(OH, F)_2$ mica, mag. susceptibility and ^7Li NMR 3—8658
Li ferrite, mag. props., Bi_2O_3 and Nb_2O_3 additives effects 3—43396
Li ferrites, substituted, hyperfine fields relaxation, temp. effect, Mossbauer study 3—13784
Li-Co(-Mn) ferrite, mag. anisotropy, order-disorder effects 3—33886
Li-Zn ferrites, mag. anisotropy 3—14043
LiF, ferrimagnets, magnetoelectric effects 3—23774
$LiFe_5O_8$, magnetoelectric effects, mag. domains and magnetisation 3—28675
$Li_{0.5-x/2}Zn_xFe_{2.5-x/2}O_4$, hyperfine field distribs. and spin canting, Mossbauer study 3—34013
$Mg_{0.75}Mn_{0.25}Fe_2O_4$, thin ferrite films, dielectric const., mag., permeability tensors 3—52562
MgO:Fe, magnesioferrite form., mag. resonance and electron diffr. 3—8726
$Mn_{1.88}Cr_{0.12}Sb$, mag. phase transition 3—47497
$Mn_{1.97}Cr_{0.03}Sb$, spin wave dispersion relations 3—57566
$Mn_2Mo_3O_8$, spontaneous magnetisation meas., mag. anisotropy 3—52367
$MnO:Mn_3O_4$, EPR study of Mn_3O_4 impurity 3—28689
Mn_2VAl, NMR satellite struct. and ferrimag. struct. 3—52370
$Mr_{1.9}Fe_{0.1}Sb$, spin wave dispersion relations 3—57566
Ni ferrite, transport props., AC elec. cond. and mag. after-effect 3—13818
Ni-Cu-Co ferrite, magnetoelastic surface wave vel. 3—18968
Ni-Zn ferrite, mag. props., Bi_2O_3 and Nb_2O_3 additives effects 3—43396
Ni-Zn ferrite, mol. field approx. 3-sublattice 3—13987
Ni-Zn perminvar ferrite with stable mag. domain configuration and linear $\mu_i(T)$ relation 3—14080
PbO-B_2O_3-Al_2O_3-Fe_2O_3-Y_2O_3 glass-ceramics, mag. props. 3—57833
$Pr_xY_{3-x}Fe_5O_{12}$ garnet, magneto-optic and mag. props. 3—28843
$RbFeCl_3.2D_2O$, Ising chain systems, mag. struct. and relax. phenomena, neutron diffr. studies 3—57537
$RbNiF_3$, magnon spectra calcs. *(Chinese)* 3—43357
$Sm_2(Co, Cu, Fe, Zr)_{17}$ magnets having high intrinsic coercive force and maximum energy product 3—14088
Sm(Co, Fe, Ni) system, mag. props. 3—14024
Sr ferrite, mag. props., H_3BO_3 and SiO_2 additions effect 3—14087
$SrO.xFe_2O_3$ anisotropic magnets, optimum prep. conditions and mag. props. *(Japanese)* 3—57705
$TbCo_{2-x}Ni_x$, unit cell parameters and magnetoelastic interaction *(Russian)* 3—38665
$TbFe_5Al_7$, unusual ferrimagnetism, magnetisation and mag. hysteresis meas. 3—14073
$Tb_{0.23}(Fe_{1-y}M_y)_{0.77}$ (M=V, Mn, Co, Cu), amorphous, mag. and magneto-optical props. 3—57897
$TbFeO_3$, magnons at spin-reorientation transition, Raman study 3—57573
$TbTiO_3$, mag. struct., neutron diffr. study 3—14013
$(TmBiPb)_3(FeGa)_5O_{12}$ epitaxial film, magnetooptic visualization and topographical study of magnetic fields 3—40652
$TmCo_2$, first order mag. phase transition and mag. struct., Mossbauer study 3—18892
$TmCo_3$, mag. anisotropy and magnetisation curves *(Russian)* 3—38610
$TmFeO_3$, magnons at spin-reorientation transition, Raman study 3—57573
Tm_6Mn_{23} and $Tm_6Mn_{23}H_x$, magnetisation and Mossbauer study 3—28528
Tm_6Mn_{23}, Mossbauer effect, mag. props., and lattice consts., effect of H_2 absorpt. 3—52679
$(Y,Re)_3(Fe,Ga)_5O_{12}$ films, mag. domain obs. using mirror electron microscopes 3—57724
$Y_3Al_xFe_{5-x}O_{12}$, mag. props., Mossbauer effect study 3—57827
$Y_{2.78}Ca_{0.25}In_{0.6}Ge_{0.25}Fe_{4.11}O_{12}$, magnetic properties study and Mossbauer spectrum *(Chinese)* 3—52413
YCo_5, mag. props., H_2 absorption effects 3—52537
$Y_{6-x}Er_xFe_{23}$, hydrides, mag. props., structural props., X-ray diffr. anal. 3—52524
$Y_3Fe_5O_{12}$, mag. props., Mossbauer effect study 3—57827
$(YGdYbBi)_3(FeAl)_5O_{12}$ epitaxial garnet films, magnetisation processes *(Russian)* 3—23745
YIG, ferrimagnetic echo bandwidth increase using field gradient synthesis 3—52633
YIG film, magnetostatic volume wave propag., ion implantation effect 3—43412
YIG film, stoichiometric, prep. by sputtering 3—19270
YIG film/dielectric/ground-plane struct., magnetostatic forward volume wave dispersion control 3—43413
YIG magnetodielectric plates, domain struct. period changes 3—57725
YIG, magnetoelectric effect, susceptibility and anisotropy 3—38669
YIG plate, dynamic changes in domain struct. period, polarising microscopy study 3—14097
YIG, polycryst., spinwave linewidths 3—33870
YIG single crystal, polarized neutron scatt., Pendellosung effect 3—51455
YIG, spin wave theory, mag. moment and magnetisation study 3—33873
YIG strip, magnetostatic forward volume wave propag. 3—43358
$YIG:Fe^{4+}$ film, conductive, microwave spectra and mag. relaxation 3—33951
YIG-Ga.YIG layered films, LPE growth, appls. 3—19299
$Y_2Ni_{17-x}Al_x$, double demagnetisation and ferrimag. order-order transition 3—52535

ferrimagnetic properties of substances continued
(YSmLuCa)(FeGe)O_{12}, surface-spin orientation, Mossbauer spectroscopy determ. 3—52685
$YTiO_3$, mag. struct., neutron diffr. study 3—14013
Zn ferrites, hyperfine fields 3—13783
Zn(-Cu) ferrite, mag. relaxation, Mossbauer spectroscopy study 3—14184
$Zn_2Ba_2Fe_{12}O_{22}$, magnetoresist. and magnetostriction 3—57368
ferrimagnetic resonance
ferrimagnetic particles without translation symmetry 3—38698
MgO:Fe, magnesioferrite form., mag. resonance and electron diffr. 3—8726
YIG, ferrimagnetic echo bandwidth increase using field gradient synthesis 3—52633
YIG inhomogeneously magnetised film, magnetostatic wave resonance 3—23811
$(Y_{3-x}La_x)(Fe_{5-y}Ga_y)O_{12}$ irradiated garnet film, annealing, mag. props. 3—33946
ferrimagnetism
see also ferrimagnetic properties of substances
ferrimagnets, magnetoelectric effects, thermodynamic approach 3—57729
ferrimagnets, magnetoelectric effects 3—23774
Hubbard model, ground state solns., two sublattice formalism 3—52342
Hubbard model, ground-state solns., two-lattice formalism 3—38579
Ising cubic lattices with four-spin interactions, mag. ground states 3—52333
isotropic ferrimagnet, nonlinear mag. dynamics, soliton solns. *(Russian)* 3—47485
lung, ferrimag. particles, model of magnetisation and relax. 3—19734
magnetic reson. in ferrimagnetic particles without translation symmetry 3—38698
magnetostatic surface wave propag. in layered ferrite structure 3—8662
minerals, mag. susceptibility anisotropy, rel. to finite strain in Permian redbeds of Maritime Alps *(French)* 3—25084
nonlinear Landau Lifschitz eqn., N-soliton solutions 3—8663
rare earth Fe garnets, pressed powders, mag. susceptibility, ferrimag. behaviour 3—3427
two-sublattice ferrimagnets with ang. mag. config., spontaneous magnetisation 3—8700
ferrite applications
see also ferrite devices
characteristics and appls. of ferrites *(German)* 3—28488
$Li_{0.5(1+x)}Ti_xFe_{2.5-1.5x-y}Mn_yO_4$, mag. and microwave data, appl. 3—33863
ferrite devices
see also ferrite applications; magnetostatic wave devices
cryogenic X-band ferrite phase shifter/attenuator 3—30870
excitation at freqs. 30 to 40 GHz 3—23595
resonantly-coupled ferrite-tuned buncher-cavity system for Los Alamos Proton Storage Ring 3—1102
$(MnO)_x(ZnO)_y(Fe_2O_3)_z$ single cryst. growth method for VRT heads *(Japanese)* 3—47763
Ni-Cu-Co ferrite, magnetoelastic surface wave vel. 3—18968
ferrites
see also ferrimagnetic properties of substances; ferrimagnetism; ferrite applications; ferrite devices
amorphous ferromag., hereditary mag. props. and stability 3—57703
axially magnetised, magnetic thickness gauging of small components 3—25850
$Ba_2Fe_2{}^{2+}Fe_{28}{}^{3+}O_{46}$ ferrites, mag. props. and Mossbauer spectra 3—57581
ceramic *(German)* 3—43402
characteristics and appls. of ferrites *(German)* 3—28488
conference, Kyoto, Japan (Sept.-Oct. 1980) 3—10520
coprecipitates from mixed soln. of Ni^{2+}, Zn^{2+} and Fe^{3+}, mag. props. 3—14076
disaccommodation, long term, prediction 3—14081
electron microscopy studies of microstructure-property relations 3—13054
epitaxial ferrite-garnate films, light diffr. on cylindrical mag. domain lattices 3—8808
ferrite-garnet film, with submicron cylindrical mag. domains, phase boundaries and growth kinetics 3—14512
ferrite-garnet magnetised films, triangular shape mag. domains with mag. bubbles 3—47536
ferrite-metal strip system, Bragg refl. of surface magnetostatic waves 3—33882
ferromagnetic materials, book 3—54595
film, ferrite-garnet, spectrum of exchange and exchangeless spin-wave excitations 3—52561
FMR line third and fourth moments, saturation magnetisation inhomogeneities effects 3—52632
FMR of nonsaturated single crystal platelets 3—33984
formation of metal-ion bearing ferrites by oxidation of aqueous suspension 3—14542
garnet-ferrite epitaxial films, domain struct., SEM study technique 3—18964
garnet-ferrite film, ion implanted region, cylindrical mag. domains on boundary, static characteristics 3—14098
hard ferrites and plastoferrites, book contrib. 3—57709
hexagonal, ferroxplana-type, props., book contrib. 3—57550
hexagonal, with magnetoplumbite struct., fundamental props., book contrib. 3—57549
hyperfine fields, new physics frame 3—13781
hyperfine interactions and electron diffusion 3—13782
losses and phases study by magnetomicrowave Kerr effect 3—38802
magnetic and electrical properties of ferrites with Curie temp. about 0°C *(Rumanian)* 3—8695
magnetic props. under hydrostatic press., closed porosity 3—14107
magnetization, additives effect 3—14078
magneto-microwave Kerr effect, effective linewidth, guided wave anal. and surface finish effects 3—34172
magneto-optical props., appl. to magneto-optical unidirectional TE-TM mode convertor 3—23926
magnetostatic surface wave refl. from periodically uneven segment of ferrite surface 3—23613
magnetostatic waves in uniaxial slabs with domain struct., theory 3—18877
metal-insulator-ferrite-insulator-metal struct., surface magnetostatic waves 3—52444
metal/ferrite multilayer struct., electron entrainment by magnetostatic waves 3—38480
mixtures, composition homogeneity, neutron activation technique *(Russian)* 3—19543
ferrites continued
orthoferrites, single cryst., induced coercivity study 3—33938
pellets for bipolar particulate electrolytic cells 3—19527
perlite, two-phase ferrite-cement mixture, domain struct., Barkhausen study 3—23693
permanent magnet, anisotropic, behaviour under excitation in two perpendicular directions 3—52551
perovskite related, O deficient, order-disorder phenomena 3—13444
plastic bonded permanent magnet, KOEROX P, appls. *(German)* 3—43403
plate, damping of surface magnetostatic waves propagating along rough surfaces 3—28541
polycrystalline, elec. cond., three-dimens. DC models 3—13821
polycrystalline, mag. cryst. anisotropy const. and effective porosity meas. 3—18885
polycrystalline, natural spin resonance in external applied fields 3—23812
polycrystalline, nonmagnetic inclusions on ferromag. reson., porosity effects 3—43442
porous, microstruct. and mag. props. 3—43395
powder, prep. by flux method 3—14544
powders, compressibility, evaluation, for classical die pressing appl. 3—14546
preparation and charact. of low firing temp. ferrites for ferrimag. pastes 3—14548
rare earth ferrites, $R_2Fe_4O_9$, $R_4Fe_6O_{15}$, trivalent Fe, obtained by air oxidation, cryst. struct. *(French)* 3—42574
rectangular-loop, explosive working effect on EM and strength props. 3—53004
sintered magnetically hard materials 3—3988
spin-reorientation, magnon light scatt. study 3—23924
spin-wave linewidth and effective volume of pore 3—18880
spinel ferrites, prep. by hydrolysis of metal acetylacetonates 3—14543
spinel ferrites, synthesizing technique by wet method, development and appl. 3—14539
spinels, disordered, with Jahn-Teller centres, mag. anisotropy, random field effects 3—18884
spinels, ferrimagnetic, elec. current carrier generation energy, mag. ordering influence 3—13835
thin film magnetooptical waveguides 3—22213
W-hexagonal, superexchange interaction paths 3—33884
Ba ferrite, single cryst., magnetisation processes, vibrating reed magnetometer meas. 3—28621
Ba ferrite film with perpendicular magnetisation, form. by targets-facing sputtering 3—28994
Ba ferrite particles, perpendicular mag. recording props. 3—28641
Ba hexaferrites, substituted M-type, mag. props. and microstruct. 3—14086
$Ba_{1-x}Ce_x(La_x)Fe_{18}O_{27}$ ferrites, mag. props. and Mossbauer spectra 3—57604
$BaFe_{12}O_{19}$, calcination process, sintering, and mag. props., effect of Fe_2O_3 aggregation 3—19309
$BaFe_{12}O_{19}$ ferrite, coaxial cylindrical domains, magnetostatic oscillations *(Russian)* 3—47555
$BaFe_{12}O_{19}$, ferrite, M-type, SiO_2 addition effect 3—14581
$BaFe_{12}O_{19}$ ferrites, mag. anisotropy, point charge model and perturbation theory 3—57585
$BaFe_{12}O_{19}$, magnetic domain width, cryst. thickness depend. 3—8698
$BaFe_{12}O_{19}$:Ru^{3+} single cryst., mag. anisotropy 3—14044
BaO-Fe_2O_3, molten ferrite system, elec. cond., viscosity, Fe^{3+} coordination *(Japanese)* 3—38107
BaO-transition metal oxide-Fe_2O_3 ferrite, microsyntactic intergrowth and composition fluctuation 3—13472
BaO.6Fe_2O_3 permanent magnet, oriented, fracture toughness and anisotropy 3—14741
$BaZn_2Fe_{16-x}In_x(Sn_x)O_{27}$, cation distrib., mag. props. and Mossbauer spectra 3—18868
$Ba_2Zn_2Fe_{12}O_{22}$, magnetostriction, temp. depend. *(Korean)* 3—38667
$Ca_4Fe_9O_{17}$, X-ray Fe $L_{\alpha1,2}$ emission lines, chemical shifts meas., electron microprobe anal. appl. 3—8906
$Ca_2LaFe_3O_8$, microdomain texture and O excess, TEM and electron diffr. anal. 3—42793
CaO-Fe_2O_3, molten ferrite system, elec. cond., viscosity, Fe^{3+} coordination *(Japanese)* 3—38107
Co ferrite, prep. by ageing and precipitation 3—39022
Co ferrite thin film form. by solid state CsO+Fe_3O_4 reaction 3—19266
Co-Zn ferrites, elec. cond., Seebeck coeff. meas., mag. props. 3—3190
$CoFe_{2-x}Al_xO_4$ ferrite, polar Kerr rotation and Faraday effect 3—28842
$CoFe_2O_4$ ferrite, crystal growth by vapour phase reaction method 3—24106
$CoFe_2O_4$, LPE grown, mag. and magneto-optical props. 3—14095
$Co_xFe_{3-x}O_4$ ferrite, polar Kerr rotation and Faraday effect 3—28842
$Co_{0.1}Mn_{1.7}Fe_{1.2}O_4$, ferromag. reson., mag. anisotropy and magnetisation for multi-domain struct. *(Russian)* 3—18993
CoO-P_2O_5-Fe_2O_3 system, amorphous, hereditary mag. props. and stability 3—57703
$Co_{0.5}Zn_{0.5}Fe_2O_4$, elec. cond. mechanism, Fe deficiency effects 3—23383
Cu-Ni ferrites, phase transition and cond. mechanisms, DC resist. and thermopower meas. 3—13820
$CuFe_2O_4$ ferrite, mag. anisotropy, magnetisation and ferromag. resonance study 3—18883
$CuFe_2O_4$, Jahn-Teller struct. phase transition, ferromag. resonance and mag. study 3—18446
$Cu_{0.5}Fe_{2.5}O_4$-$ZnFe_2O_4$, initial permeability increase 3—14079
$Cu_{1-x}Mn_xFe_2O_4$, Mossbauer study in external mag. field 3—34014
$Cu_xZn_{1-x}Fe_2O_4$, cation distrib., magnetisation, elec. switching 3—38648
$DyFeO_3$, mag. field induced transitions at low temp. 3—57607
$DyFeO_3$ orthoferrite, spin-reorientation, magnon light scatt. study 3—23924
$ErFeO_3$, orthoferrites, weak antiferromag., neutron diffr. study 3—14008
$FeBO_3$, magneto-optical props., appl. to magneto-optical unidirectional TE-TM mode convertor 3—23926
Fe_2O_3 powder specimens, charact. and sintering 3—14545
γ-Fe_2O_3:Co, coercivity, rot. hysteresis, mag. recording appls. 3—23734
γ-Fe_2O_3:Co, prep., coercivity, mag. recording appl. 3—23735
γ-Fe_2O_3:Co ferrite, epitaxial, coercivity, saturation magnetisation 3—23733
Fe_3O_4, low temp. phase, Fe^{3+} and Fe^{2+} hyperfine fields, NMR study 3—14150
Fe_3O_4:Co, coercivity, rot. hysteresis, mag. recording appls. 3—23734
$La_xBa_{1-x}Fe_{12-x}Zn_xO_{19}$ ferrites, mag. props. and high temp. composition 3—57698

ferrites continued

$La_xBa_{1-x}Zn_xFe_{12-x}O_{19}$ ferrite, high temp. comp. and mag. props. study *(Chinese)* 3—18887
$LaFeO_3$, mag. hyperfine interactions calc. with model covalency parameter 3—43133
$La_{0.5}Na_{0.5}Fe_{12}O_{19}$ ferrite, structural props., X-ray and Mossbauer studies *(Russian)* 3—13200
$La_{1-x}Na_xFeO_{3-\delta}$ defect perovskite system, Mossbauer effect and mag. props. 3—14187
Li ferrite, mag. props., Bi_2O_3 and Nb_2O_3 additives effects 3—43396
Li ferrites, substituted, hyperfine fields relaxation, temp. effect, Mossbauer study 3—13784
Li ferrites magnetoelectric effects, thermodynamic approach 3—57729
Li-Co(-Mn) ferrite, mag. anisotropy, order-disorder effects 3—33886
Li-Ni mixed ferrites, dielec. behaviour at low freqs. 3—3629
Li-Zn ferrites, mag. anisotropy 3—14043
Li-Zn-Ni-Co-Mn ferrites, microstruct. and memory core characts., effect of composite fluxes 3—14549
$Li_{0.5-x/2}Co_xFe_{2.5-x/2}O_4$, magnetisation and mag. switching, thermomag. treatment effects 3—23707
$LiFe_5O_8$, ferrite, cryst. struct. and cation ordering 3—13203
$LiFe_5O_8$, LPE growth from $PbO-B_2O_3$ flux 3—13684
$LiFe_5O_8$, magnetoelectric effects, mag. domains and magnetisation 3—28675
$Li_xFe_{3-x}O_4$, Verwey transition, Mossbauer effect 3—57601
$Li_2M^{4+}Fe_6O_{12}$ (M=Ti, Sn, Ge, Si) spinel ferrites, cryst. chem. 3—13204
$Li_{0.5(1+x)}Ti_xFe_{2.5-1.5x-y}Mn_yO_4$, mag. and microwave data, appl. 3—33863
$Li_{0.1}Zn_{0.8}Fe_{2.1}O_4$ ferrite, low temp. reconstructive transition, neutron diffr. study 3—38052
$Li_{0.5-x/2}Zn_xFe_{2.5-x/2}O_4$, hyperfine field distribs. and spin canting, Mossbauer study 3—34013
$LuFe_2O_4$, electron exchange between Fe^{2+} and Fe^{3+} 3—14182
$LuFe_2O_4$, high coercivity hysteresis loop below 200K 3—14077
Mg Zn ferrites, mech. strength, density and grain growth depend. 3—14740
Mg-Mn-Zn ferrite, sintering at low temp. 3—43778
$MgAl_{2-x}Fe_xO_4$, Mossbauer recoilless fraction 3—14183
MgMn-ferrite, monocrystalline epilayer, bubble domains 3—23763
MgMnCr-ferrite, monocrystalline epilayer, bubble domains 3—23763
$Mg_{0.6}Mn_{0.4}Fe_2O_4$, thin film angle crystals, mag. and domain struct. anisotropy induced by plastic strain 3—47535
$Mg_{0.75}Mn_{0.25}Fe_2O_4$, thin ferrite films, dielectric const., mag., permeability tensors 3—52562
$Mg_{1-x}Mn_xFe_2O_4$, FMR lineshift and line-width studies 3—38699
$Mg_{1-x}Mn_xFe_2O_4$ ferrites, mag. hysteresis obs. of saturation magnetisation and remanence 3—47521
Mn-ferrites, bulk and thin film, phys. props. 3—14094
Mn-Zn ferrite, mag. and dielec. relax., permeability and permittivity meas. 3—14214
Mn-Zn ferrite, polycryst., diffusional creep 3—2659
Mn-Zn ferrite, polycryst., creep deform. 3—14687
Mn-Zn ferrite, polycryst. high B, hot isostatic press prep., mag. props. 3—14550
Mn-Zn ferrite, static mag. props., action of fast neutrons *(Russian)* 3—57704
Mn-Zn ferrite, struct. defects, degree of inversion, X-ray and Mossbauer studies 3—46919
Mn-Zn ferrite film, on $MnGa_2O_4$ substrate, LPE growth and props. lattice match influence 3—14517
Mn-Zn ferrite particles, produced by hydroxide-carbonate coprecipitation, morphology 3—14547
Mn-Zn ferrites, 1/f noise, mag. aftereffect 3—28647
Mn-Zn ferrites, defects, grain boundary segregation, and secondary phases rel. to mag. props. 3—13240
Mn-Zn ferrites, high permeability, prep., choice of Fe_2O_3 grade and hot pressing conditions 3—14536
Mn-Zn ferrites, hysteresis loop under compressive stress 3—14108
Mn-Zn ferrites, particle accelerator appls. 3—11595
Mn-Zn ferrites, prep. by co-precipitation 3—14540
Mn-Zn ferrites, prep. by hydrolysis of metal acetylacetonates 3—14543
Mn-Zn spinel ferrites, grain orientation study, rel. to processing parameters 3—13471
MnFe-ferrite, monocrystalline epilayer, bubble domains 3—23763
$Mn_xFe_{3-x}O_4$, magneto-optical spectra meas. 3—14265
$(MnO)_x(ZnO)_y(Fe_2O_3)_z$ single cryst. growth method for VRT heads *(Japanese)* 3—47763
MnZn ferrite, CaO segregation 3—42778
MnZn ferrite, crystal growth by floating zone method 3—24119
MnZn ferrite, ferrospinel, electron irrad., Fe valency changes, Mossbauer study *(Russian)* 3—3605
MnZn ferrite, low loss, prep. method, O content effect on mag. props. 3—14082
MnZn ferrite crystals, mag. props. meas., VTR mag. head appl. 3—23726
MnZn ferrite crystals, composition controlled Bridgman growth, VCR mag. head appl. 3—24114
MnZn ferrites, mech. props. improvement by controlling O content 3—14739
MnZn, high-temp. strain props., heat pretreatment influence *(Russian)* 3—19306
MnZnFe ternary ferrite system, second order magnetocrystalline anisotropy consts. 3—57592
$Na_2O-Fe_2O_3$, molten ferrite system, elec. cond., viscosity, Fe^{3+} coordination *(Japanese)* 3—38107
$(Ni, Zn, Co)Fe_2O_4$, low temp. oxidation, TEM study 3—58262
$(Ni, Zn, Co)_2Fe_{16}O_{27}$:Ba, topotactic grain boundaries, TEM study 3—8057
Ni ferrite, transport props., AC elec. cond. and mag. after-effect 3—13818
Ni-Co ferrites with negative temp. coeff. of permeability 3—14083
Ni-Cu-Co ferrite, magnetoelastic surface wave vel. 3—18968
Ni-Cu-Co ferrite, metallisation by Ti alloy, direct reduction method, appl. to US vibrator 3—34500
Ni-Cu-Zn(-Co) ferrites, particle accelerator appls. 3—11595
Ni-Mn-Co-Cu ferrites, piezomag., mag. hysteresis of elastic moduli and internal friction 3—14106
Ni-Zn ferrite, 1/f noise, mag. aftereffect 3—28647
Ni-Zn ferrite, mag. props., Bi_2O_3 and Nb_2O_3 additives effects 3—43396
Ni-Zn ferrite, mol. field approx. 3-sublattice 3—13987
Ni-Zn ferrite powders, coprecipitated, sintered by hot pressing, mag. props. and microstruct. 3—52556
Ni-Zn ferrite:Sn, elec. props. 3—13819

ferrites continued

Ni-Zn ferrites, exoelectron emission study of surface damage after treatment *(Russian)* 3—39018
Ni-Zn ferrites, grain size rel. to domain wall dimensions 3—14071
Ni-Zn ferrites, hysteresis loop under compressive stress 3—14108
Ni-Zn perminvar ferrite with stable mag. domain configuration and linear $\mu_i(T)$ relation 3—14080
Ni-Zn(-Co) ferrites, particle accelerator appls. 3—11595
$Ni_{0.76-x}Co_xFe_{2.24}O_4$, magnetisation and mag. switching, thermomag. treatment effects 3—23707
$Ni_{1-x}Cu_xFe_2O_4$, lattice vibr. freq., Jahn-Teller distortion, IR spectra study 3—28066
$NiFe_2O_4$ ferrite, crystal growth by vapour phase reaction method 3—24106
$NiFe_2O_4$, precipitation from $SiO_2-Na_2O-NiO-Fe_2O_3$ glasses, ESR and Mossbauer studies 3—13468
$NiFe_2O_4$, precipitation in NiO:Fe, induced uniaxial anisotropy, FMR study 3—14139
$Ni_xFe_{3-x}O_4$, magneto-optical spectra meas. 3—14265
$Ni_{0.98-x-y}Mn_{0.02}Co_xCu_yFe_2O_4$, piezomag., magnetomech. effects, amplitude depend. 3—14105
$NiMn_{0.05}Fe_{1.95}O_4$, magnetostriction contrib. of Mn^{3+} and Mn^{4+} ions 3—23778
NiZnCo ferrites for particle accelerators, high freq. mag. losses, microstruct. effects 3—11594
$PbFe_{12}O_{19}$, photoelectrochemical studies 3—52195
$Sm_3Fe_5O_{12}$, easy magnetisation axis direction, magneto-optical study 3—28550
Sr ferrite, mag. props., H_3BO_3 and SiO_2 additions effect 3—14087
Sr hexaferrites, substituted M-type, mag. props. and microstruct. 3—14086
$Sr_{0.5}Ca_{0.5}Fe_{12}O_{19}$ ferrite, structural props., X-ray and Mossbauer studies *(Russian)* 3—13200
$SrFe_8Al_4O_{19}$ film, hexagonal, LPE-grown, mag. props. 3—14099
$SrFe_{12}O_{19}$, defects, grain boundary segregation, and secondary phases rel. to mag. props. 3—13240
$SrFe_{12}O_{19}$, ferrite, M-type, SiO_2 addition effect 3—14581
$SrO-Fe_2O_3$, molten ferrite system, elec. cond., viscosity, Fe^{3+} coordination *(Japanese)* 3—38107
$SrO.xFe_2O_3$ anisotropic magnets, optimum prep. conditions and mag. props. *(Japanese)* 3—57705
$(TbErCd)_3Fe_5O_{12}$ crystals, multiplet mag. domains, Faraday effect study 3—33924
$TmFeO_3$, nonlinear domain wall dynamics 3—28596
$TmFeO_3$ orthoferrite, spin structure, NMR study 3—23594
$(Y, Sm, Ca)_3$, $(Fe, ge)_5O_{12}$, ferrite garnet thin films, mag. bubbles, domain equilib. 3—28670
$Y_{2.6}Bi_{0.4}Fe_{3.75}Ga_{1.25}O_{12}$ ferrite-garnet epitaxial film, anomalous mag. viscosity and bubble struct. obs. 3—3498
$YFeO_3$, nonlinear domain wall dynamics 3—28596
$YFeO_3$ orthoferrite, spin structure, NMR study 3—23594
$YFeO_3$, orthoferrites, weak antiferromag., neutron diffr. study 3—14008
YFe_2O_4, high coercivity hysteresis loop below 200K 3—14077
YFe_2O_4, stoichiometric, elec. cond. and sp. ht. anomalies at Verwey transition 3—13868
YIG film, surface magnetostatic wave interaction with delayed EM wave 3—28664
YIG, grain size rel. to domain wall dimensions 3—14071
YIG, mag. props. rel. to spin and domain wall topography 3—14070
YIG single cryst. ferrite, high power microwave processes and parametric pumping 3—18879
YIG, three-magnon magnetostatic wave interaction 3—33880
$YbFeO_3$, orthoferrites, weak antiferromag., neutron diffr. study 3—14008
Zn ferrites, hyperfine fields 3—13783
Zn(-Cu) ferrite, mag. relaxation, Mossbauer spectroscopy study 3—14184
$Zn_2Ba_2Fe_{12}O_{22}$, temp. depend. of magnetostriction 3—57734
$ZnDe_2O_4$ ferrite, crystal growth by vapour phase reaction method 3—24106
ZnFe-ferrite, monocrystalline epilayer, bubble domains 3—23763
$ZnFe_2O_4$, formation by air oxidation of aqueous suspensions, charact. props. 3—14541
$ZnFe_2O_4$, order-disorder transition, mag. props. 3—28097
$Zn_{0.5}Fe_{2.5}O_4$ ferrite, X-ray synchrotron radiation diffr. for circular pol. anal. *(French)* 3—34165
$Zn_xFe_{3-x}O_4$, magneto-optical spectra meas. 3—14265
$Zn_{0.37}Mn_{0.58}Fe_2O_4$:Cr(In), hyperfine fields, Mossbauer study 3—47580

ferritic steel *see steel*

ferroacoustic resonance
Ni, spin reorientation, surface impedance and EM generation of sound 3—3502

ferroelastic transitions *see ferroelasticity; solid state phase transformations*

ferroelasticity
see also shape memory effects
detwinning cell for high transition temp. ferroelastic cryst. 3—37932
lattice stability and soft modes 3—33387
nonlinear cryst., Barkhausen effect and hysteresis 3—23704
Rochelle salt crystal, refr. and refl. of light at ferroelastic domain walls 3—28806
squaric acid, cluster theory of ferroelastic phase transition 3—42768
tetragonal system, ferroelastic, phase transition, incommensurate phase appearance, theory 3—18453
tetramethylammonium: copper tetrachloride, paraelastic-ferroelastic transition, hardness meas. 3—18449
tetramethylammonium copper tetrachloride, ferroelastic transitions, thermal and spectral studies 3—33424
transitions and related props., review 3—13317
$(AsO_4)_2H_2(UO_2)_2.8H_2O$, troegerite, ferroelasticity in phase II 3—8121
$BiVO_4$, absorpt. edge, temp. depend. 3—28814
$BiVO_4$, ferroelastic, elastic consts., US velocity study 3—47023
$BiVO_4$, single cryst., ferroelastic domain struct. 3—38095
$CsLiMoO_4$, ferroelec., elastic, dielec., and structural props. 3—19084
$CsLiSO_4$, ferroelastic phase transition, piezo-optical study 3—19107
$CsLiWO_4$, ferroelec. phase transitions, calorimetric study 3—38773
$CsPbCl_3$, Debye-Waller factor near ferrodistortive transition, soft modes 3—13389
$GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundary geometry 3—8784
$GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundaries, translation vector 3—8785

ferroelasticity continued
$Hg_2Cl_{1.2}Br_{0.8}$, ferroelastic transitions, spontaneous deformation and thermal expansion 3−18376
In rich solid solutions, surface morphology rel. to phase transformations 3−29079
In-Tl, martensitic transformation, crystallography 3−7952
$K_2Ba(NO_2)_4$, ferroelastic, cryst. struct., neutron diffr. study 3−27922
KCN, elastic and phonon softening, ferroelastic transition 3−2706
$K_{1-x}Cs_xSc(MoO_4)_2$-$K_{1-x}Cs_xSc(WO_4)_2$, phonon spectra and displacive phase transitions, permittivity meas. 3−28075
$KH_3(SeO_3)_2$, deuteration and defect influence on elastic props. 3−28024
$KH_3(SeO_3)_2$, ferroelastic and ferroelec. phase transition, radiation damage, absorpt. spectra 3−37963
$KH_3(SeO_3)_2$, normal and deuterated, ferroelastic transition, nonlinear elastic coeff. 3−8191
$K_2Mn_2(SO_4)_3$, vibr. spectra and phase transitions 3−23940
$Li_{0.02}Na_{0.98}NbO_3$, ferroelec.-ferroelastic coupling, transitions and optical props. *(French)* 3−47613
$Li_{0.2}Na_{0.98}NbO_3$, ceramic and single cryst., ferroelectric phase transitions *(French)* 3−8782
$(NH_4)_2Cd_2(SO_4)_3$, vibr. spectra and phase transitions 3−23940
$(NH_4)_3H(SO_4)_2$:VO^{2+}, phase transitions, EPR study 3−52745
NaCN, elastic and phonon softening, ferroelastic transition 3−2706
$NaH_3(SeO_3)_2$ single cryst., domain struct. rearrangement, Barkhausen effect study 3−23890
Nb_3Sn, polycryst., anomalous elastic softening below martensitic transform. temp. 3−39138
$Pb_3(AsO_4)_2$, ferroelastic transitions and domain struct. 3−22961
$Pb_3(PO_4)_2$, ferroelastic transition, domain wall struct. *(French)* 3−38046
$Pb_3(PO_4)_2$ ferroelasticity and ferroelastic transformations, rel. to cryst. structs. 3−2653
RbCN, elastic and phonon softening, ferroelastic transition 3−2706
$SmAlO_3$, ferroelasticity and ferroelastic transformations, rel. to cryst. structs. 3−2653
$Tb_2(MoO_4)_3$, Raman and Brillouin studies of acoustic anomalies 3−34104
α-TeO_2, ferroelectric, second order phase transition, Mossbauer study under hydrostatic press. 3−14180
$Tl_2Cd_2(SO_4)_3$, vibr. spectra and phase transitions 3−23940

ferroelectric Curie temperature
ferroelastic cryst., high transition, temp., detwinning cell appls. 3−37932
nonlinear press. depend., phenomenological theory 3−28800
polyvinylidene fluoride form I, phase transition below melting pt., ferroelec. Curie pt. proposition 3−52746
Rochelle salt, ferroelectric, surface photon emission, uniaxial press. effects 3−58028
semiconductor, Curie temperature, impurity effects, vibronic theory 3−14227
TGS:alanine, impurity unipolarity, critical temp. and pyroelec. props. 3−34044
TGS, anomalous electron energy loss at ferroelec. Curie temp. 3−13294
TGS, ferroelectric, surface photon emission, uniaxial press. effects 3−58028
TGS crystal, dielectric props., chloroacetic acid amide admixture influence 3−23882
TGS-L-alanine, internal bias, temp. depend. near Curie temp. 3−38781
vinylidene fluoride-trifluoroethylene copolymer, piezoelec. and ferroelec. props. 3−3648
$Ba_2NaNb_5O_{15}$, ferroelectric phase transition studies *(Chinese)* 3−3650
$BaTiO_3$, adsorption of O_2, H_2 and methyl.alcohol, effect on polarisation processes 3−2983
$BaTiO_3$, anomalous electron energy loss at ferroelec. Curie temp. 3−13294
$BaTiO_3$ ceramics, grain size effect on dielectric const. under DC biasing field 3−3634
$BaTiO_3$, semicond., initernal friction and elec. resist. meas. 3−8136
$Ba(Ti_{1-y}Zr_y)O_3$ ceramics, diffuse ferroelec. phase transition 3−28789
$K_{0.5}Bi_{0.5}TiO_3$, ferroelec. transitions and piezoelectricity, permittivity meas. 3−28798
$K(H_{1-x}D_x)_2PO_4$, Slater model and ferroelectric transition 3−43495
KIO_3, ferroelec. phase transition, low-temp., NQR study 3−43499
$K_{1-x}Li_xTaO_3$, elastic const. discontinuity, Brillouin spectra 3−3752
$KTaO_3$, soft mode freq., mag. field depend. at 20K 3−8779
$LiTaO_3$, ferroelectric phase transition studies *(Chinese)* 3−3650
$Na_{0.5}Bi_{0.5}TiO_3$, ferroelec. transitions and piezoelectricity, permittivity meas. 3−28798
$Pb_5Ge_{3-x}Si_xO_{11}$ glass-ceramic prep. with high transparency, permittivity and Curie temp. 3−53001
p-$Pb_{1-x}Sn_xTe$, ferroelec. phase transition under electron irrad. 3−3651
PbTiO-$Bi(Zn_{2/3}(Mg_{2/3})Nb_{1/3})O_3$, ferroelec. phase transition, X-ray, permittivity and dilatometric studies 3−38777
PbTiO-$La(Zn_{2/3}(Mg_{2/3})Nb_{1/3})O_3$, ferroelec. phase transition, X-ray, permittivity and dilatometric studies 3−38777
SbSI, adsorption of O_2, H_2 and methyl-alcohol, effect on polarisation processes 3−2983
SbSI, ferroelec. phase transition and permittivity, microwave field effects 3−19085
SbSI, single crystal, elec. and optical props. *(Korean)* 3−3653
$SbSI_xBr_{1-x}$, pressure-temp.-conc. phase diagram, Landau-Devonshire model 3−8780
$Sr_{0.6}Ba_{0.4}Nb_2O_6$, ferroelectric, dielec. props. press., temp. and freq. dependence meas. 3−23888
$SrTiO_3$, critical dynamics, Raman study of soft-mode lineshapes 3−47636

ferroelectric devices
Fabry-Perot interferometer-photocond. layer struct., US propag. 3−28392
micro-displacement transducers *(Japanese)* 3−25849
smectic cell prep. for electro-optical microsec. switches, alignment control using spacer edges 3−51476
PLZT ferroelectric ceramic controlled transparency arrays 3−27230

ferroelectric domains *see electric domains*

ferroelectric materials
see also antiferroelectric materials; electric domain walls; ferroelectric semiconductors; ferroelectric thin films; ferroelectric transitions; lattice dynamics of ferroelectric crystals
ammonium Rochelle salt, photoelastic study 3−3684
betaine arsenate, ferroelasticity and ferroelec. props. 3−8778
C K_2SeO_4, sp. ht. and thermal expansion meas. in paraelec., incommensurate, and ferroelec. phases 3−28120
ceramic, transparent, interf. effect on electro-optical props. using polarisation method 3−38800
ceramics, elec. and mech. losses 3−52747

ferroelectric materials continued
ceramics, piezoelectric consts. calc. 3−28783
ceramics for optical and electronic appls. 3−47809
crystallographic and polar groups, euclidean space E^4 *(French)* 3−22811
dicalcium lead propionate, high-temp. paraelec. phase, cryst. struct. and ferroelec. transition, X-ray study 3−18284
dicalcium strontium propionate, dielec. dispersion 3−43494
dicalcium strontium propionate, ferroelec. phase, partially disordered struct. study 3−27926
dicalcium strontium propionate single cryst., elec. cond. and stimulated thermocurrents 3−33740
diffuse X-ray diffraction and its applications to materials research, book contrib. 3−13032
diglycine nitrate, ferroelec., pyroelec. props. and spontaneous polarisation 3−34039
DTGS, optical rotatory power dispersion, 444 to 632.8 nm 3−8796
first order transition theory, calc. of elastic and electrostatic energies of inclusion 3−38024
incommensurate, phase transitions, solitons and phasons 3−19078
$LiTaO_3$, thermal diffusivity, relation to phase transition and crystal orientation 3−47174
lithium thallium tartrate, pyroelectric and dielectric props. meas. 3−19071
methylammonium aluminium sulphate dodecahydrate, dielec. behaviour, pseudo-spin-lattice coupled-mode model 3−23889
2-methylbutyl p-(p-n-alkoxy-benzylideneamino) cinnamates, ferroelec. smectic liq. cryst., reentrant disordered Sm C* under elec. field 3−42512
micro-displacement transducers application *(Japanese)* 3−25849
nOBAMBC, ferroelectric smectic, reentrant distorted smectic C* phase obs. in elec. field 3−51478
perovskite ferroelectrics, equiprobable directions of spontaneous polarisation 3−28804
perovskite phases, vibrational spectroscopy, evidence of ferro and antiferroelectric directions *(French)* 3−8776
photoferroelectrics, electrooptic effect, image storage, vol. phase holograms 3−1591
poly(vinylidene fluoride), feroelec. switching, effect of lamellar struct. 3−14226
polyvinylidene fluoride, β-phase, polarisation reversal associated with chain molecules rotation 3−52749
polyvinylidene fluoride, ferroelec. polarisation switching 3−23885
polyvinylidene fluoride form I, phase transition below melting pt., ferroelec. Curie pt. proposition 3−52746
RF EM radiation emission during domain-structure changes, theory 3−34045
Rochelle salt, degenerate convolution of surface and bulk acoustic waves near phase transition 3−8314
Rochelle salt, deuterated, dielec. relax. spectra meas. 3−3644
Rochelle salt, electron spin-lattice relax. at ferroelec. transition 3−23791
Rochelle salt, ferroelec., step-polarisation switching processes under laser irrad. 3−23861
Rochelle salt, ferroelectric, surface photon emission, uniaxial press. effects 3−58028
Rochelle salt, ferroelectric transition, X-ray topography study 3−52743
Rochelle salt, nonlinear dielec., elastic and electro-mechanical coeffs. at ferroelec. transition 3−43498
Rochelle salt, Rayleigh surface acoustic wave propag. near phase transition 3−8313
Rochelle salt crystal, refr. and refl. of light at ferroelastic domain walls 3−28806
Rochelle salt crystal, X-ray topographic study 3−43501
smectic C* phase liq. cryst., molecule asymmetry, ferroelectricity 3−2403
tetramethylammonium cobalt tetrachloride, ferroelectric-incommensurate transition, photoacoustic study 3−51779
TGS:alanine, impurity unipolarity, critical temp. and pyroelec. props. 3−34044
TGS:Cr^{3+}(α-alanine), elastic and thermal props., nature of anomalies 3−8148
TGS:Tl (Co)(Cu), polarised state stability, Barkhausen thermal effect study 3−23863
TGS, γ-irrad., detector specific material parameter, rel. to pyroelec. IR detectors 3−49451
TGS, anomalous electron energy loss at ferroelec. Curie temp. 3−13294
TGS, Barkhausen effect and polarisation switching, growth condition effects 3−23865
TGS, diffusive nonequilibrium trigger medium, mobile domains 3−13733
TGS, electrocaloric coeff. 3−8775
TGS, ferroelec. phase transition study, modified capacitor dilatometer technique 3−38104
TGS, ferroelec. surface domain struct., SEM obs. 3−14230
TGS, ferroelectric, surface photon emission, uniaxial press. effects 3−58028
TGS, optical, electro-optical props., in ferroelec. and paraelectric states, high accuracy universal polarimeter meas. 3−57880
TGS, optical rotatory power dispersion, 444 to 632.8 nm 3−8796
TGS, piezoelectric and elastic props. 3−34034
TGS, polarisation reversal, domain dynamics 3−8760
TGS, pure and doped, electret effect 3−47588
TGS, pure and Fe^{3+} doped, current-voltage characteristics *(Russian)* 3−47352
TGS, thermal Barkhausen effect and temp. gradients 3−23864
TGS cryst., ferroelec., step-polarisation switching processes under laser irrad. 3−23861
TGS crystal, 180° domain wall motion 3−52748
TGS crystal, dielectric props., chloroacetic acid amide admixture influence 3−23882
TGS monocrystal, dielectric nonlinearity near phase transition temp. 3−23883
TGS single crystals, ferroelec. domain morphology rel. to growth parameters 3−57867
TGS-L-alanine, internal bias, temp. depend. near Curie temp. 3−38781
TGSe:L-α alanine, admixture influence on dielectric props. 3−34041
thiourea, elastic const., C_{33}, in elec. field, Brillouin scatt. study 3−3753
transducers and sensors, book 3−25701
triglycenselenate, Barkhausen effect and polarisation switching, growth condition effects 3−23865
triglycine fluoroberyllate-selenate, deuterated, crystn. from aq. soln., elec. props. 3−14457
tris-sarcosine calcium chloride, ^1H to ^2H substitution, effects on ferroelectric props. 3−28787

ferroelectric materials continued
tris-sarcosine calcium chloride, electrostriction coeff., temp. depend. near ferroelec. phase transition 3−19081
tris-sarcosine calcium choride:Mn^{2+}, electron spin-lattice relax. at ferroelec. transition 3−23791
vinylidene fluoride-trifluoroethylene copolymer, piezoelec. and ferroelec. props. 3−3648
Ag_3AsS_3, cryst. symm., transitions, Raman study 3−43545
Ag_3AsS_3, proustite, phase transitions, sp. ht. study 3−2839
$(Ag_{x/2}Ge_{1-x}Sb_{x/2})Te$, ferroelec. phase transition, elec. cond. and optical absorption studies 3−43496
$AgNb_{1-x}Ta_xO_3$, solid soln., dielec. props., phase transitions, DTA study 3−38748
$Ba_2NaNb_5O_{15}$, ferroelectric phase transition studies *(Chinese)* 3−3650
$Ba_{0.4}Sr_{0.6}Nb_2O_6$, polarisation distrib. along polar axis, regularisation method from pyroelec. meas. 3−52741
$BaTiO_3$, 180° domain walls, interaction with defects, electron and optical microscopy studies 3−38783
$BaTiO_3$, anomalous electron energy loss at ferroelec. Curie temp. 3−13294
$BaTiO_3$ ceramic, ferroelec. phase transition, mag. field effects 3−47614
$BaTiO_3$ ceramic capacitors, DC leakage in Poole-Frenkel field 3−3208
$BaTiO_3$ ceramics, grain size effect on dielectric const. under DC biasing field 3−3634
$BaTiO_3$ ferroelectric, electrostatics, dielec. const. and spontaneous polarisation 3−34040
$BaTiO_3$, Raman spectra of oblique phonons, soft mode temp. depend. 3−57909
$BaTiO_3$ single domain cryst., permittivity, microwave dispersion 3−19035
$BaTiO_3$, soft mode spectroscopy, hyper-Raman scatt. 3−23953
$BaTiO_3$, soft X-ray emission spectra *(Russian)* 3−24059
$BaTiO_3$:Co Remeika crysts., excitation energies and optical absorpt. spectra 3−38853
$BaTiO_3$-$SrTiO_3$ solid solution, diffuse phase transition 3−28792
$BaTi_xZr_{1-x}O_3$, ferroelectric phases, domain-orientation process study 3−19086
Bi layer struct. cmpd., grain-oriented ceramic, prep. by unidirectional solidification of melt *(Japanese)* 3−58085
$Bi_xSb_{1-x}SI$, soft mode behaviour, microwave dielec. spectra 3−43497
$CaTiO_3$, soft X-ray emission spectra *(Russian)* 3−24059
$Cd_4Na(VO_4)_3$, dielec., thermal expansion and plastic deformation props. 3−38772
$Cd_2Nb_2O_7$, ferroelec. transitions and domain struct., permittivity study 3−28797
$Cd_2Nb_2O_7$, ferroelectric and electro-optical props., permittivity and tanδ study 3−28795
$Cd_2Nb_2O_7$, phase transition, 4 to 230K, Raman scatt. and permitt. meas. 3−8821
$CdTiO_3$, soft X-ray emission spectra *(Russian)* 3−24059
CsD_2PO_4, ferroelec., sp. ht. study 3−19077
CsD_2PO_4, interchain inverse correl. length, anisotropic three-dimens. Ising model 3−38778
CsD_2PO_4 single cryst., vibr. IR and Raman spectra 3−57907
CsH_2AsO_4, gamma-ray irrad. and annealed, temp. depend. of dielec. props. 3−2607
$CsH_{2(1-x)}D_{2x}PO_4$, quasi-one-dimens. ferroelectric, static dielec. props., deuteration effects obs. 3−19075
$CsH_{2(1-x)}D_{2x}PO_4$, ferroelectric, dynamic dielec. props., deuteration effects obs. 3−19076
CsH_2PO_4, ferroelec., sp. ht. study 3−19077
CsH_2PO_4, polycryst., IR spectra of paraelec. and ferroelec. phases 3−3729
CsH_2PO_4 quasi-1D ferroelec., permittivity and relax., Ising model study 3−23856
CsH_2PO_4 single cryst., vibr. IR and Raman spectra 3−57907
$CsLiMoO_4$, ferroelec., elastic, dielec., and structural props. 3−19084
$CsLiWO_4$, ferroelec. phase transitions, calorimetric study 3−38773
$Cu_3B_7O_{13}Cl$, low freq. dielec. relax. in paraelec. and ferroelec. phases 3−52716
$Fe_3B_7O_{13}I$, low freq. dielec. relax. in paraelec. and ferroelec. phases 3−52716
Fe_3O_4, ferrimag. ferroelectricity, hysteresis and piezoelec. consts. 3−57865
$GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundary geometry 3−8784
$GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundaries, translation vector 3−8785
$Gd(MoO_4)_3$, luminescence and polarisation reversal 3−8886
$Gd_2(MoO_4)_3$, ferroelec., step-polarisation switching processes under laser irrad. 3−23861
$Gd_2(MoO_4)_3$, ferroelec. domain struct. rearrangement 3−23892
$Gd_2(MoO_4)_3$ single cryst., electroluminescence, correlation with ferroelec. switching 3−24019
$In_3Sb_5O_{12}$, single cryst., exhibiting electroacoustic echo, growth, phys. and chemical props. 3−14228
$K_{0.5}Bi_{0.5}TiO_3$, ferroelec. transitions and piezoelectricity, permittivity meas. 3−28798
$K_{0.5}Bi_{0.5}TiO_3$-$Na_{0.5}Bi_{0.5}TiO_3$ ferroelec. ceramics, lattice parameters and phase transition, X-ray study *(Chinese)* 3−28785
$K_3Co_{1-x}Fe_x(CN)_6$, phase transition and soft mode 3−43493
KDP cryst., grown from gel, elec. cond. study 3−8247
KDP, nonlinear electrooptic effect and birefringence 3−43516
KD_2PO_4, anisotropic polarisation fluctuations 3−14197
KD_2PO_4-KH_2AsO_4, X-ray irrad., ferroelec. switching times, ESR study 3−57863
KH_2AsO_4, local pseudo freeze out of impurity dynamics, EPR study 3−3527
KH_2AsO_4:$AsO_4{}^{4-}$, electron spin-lattice relax. at ferroelec. transition 3−23791
$K(H_{1-x}D_x)_2PO_4$, Slater model and ferroelectric transition 3−43495
KH_2PO_4, Debye-Waller factor and thermal expansion coeff., logarithmic anomaly at ferroelec. phase transition 3−19072
KH_2PO_4, ferroelec. dirty crystals, coercive field meas. 3−14229
KH_2PO_4 ferroelectrics, dielectric permeability tensor 3−28754
KH_2PO_4, ferroelectric modes study 3−28790
KH_2PO_4, paraelec., LF Raman spectra 3−43540
KH_2PO_4, Raman spectra in paraelec. phase, coupled modes anal. 3−52783
KH_2PO_4, Rayleigh surface acoustic wave propag. near phase transition 3−8313
KH_2PO_4:Cr, local pseudo freeze out of impurity dynamics, EPR study 3−3527

ferroelectric materials continued
$(KH_2PO_4)_{1-x}(KD_2PO_4)_x$, low-lying longit. mode, Raman study 3−38813
KIO_3, ferroelec. phase transition, low-temp., NQR study 3−43499
$K_{1-x}Li_xTaO_3$, elastic const. discontinuity, Brillouin spectra 3−3752
$K_2Mn_2(SO_4)_3$, vibr. spectra and phase transitions 3−23940
$KNbO_3$, single-domain, IR refl. spectra in tetragonal phase 3−38812
$KNbO_3$, vibr. modes near ferroelec. transition, Raman scatt. study 3−47654
K_2SeO_4, birefringence, electrooptical effect and ferroelec. transitions 3−14255
K_2SeO_4, incommensurate phase transition, optical SHG obs. 3−22162
K_2SeO_4, shear stiffness in incommensurate phase 3−8116
$K(Ta_{0.55}Nb_{0.45})_3$, electrostrictive coeffs., temp. depend. meas. 3−14219
$KTa_{1-x}Nb_xO_3$, $(0<x\leq 0.04)$, solid soln., crystal growth by slow-cooling method 3−8959
$KTaO_3$, soft mode freq., mag. field depend. at 20K 3−8779
$Li_2Ge_7O_{15}$, ferroelec. phase transition study 3−38775
$LiH_3(SeO_3)_2$, soln. crystal growth using cylindrical seeds 3−34212
$LiNH_4SO_4$ and $LiND_4SO_4$, domain struct. revealed by liq. cryst. decoration 3−28802
$LiNH_4SO_4$, ionic thermocurrent studies 3−23869
$Li_{0.02}Na_{0.98}NbO_3$, ferroelec.-ferroelastic coupling, transitions and optical props. *(French)* 3−47613
$Li_{0.2}Na_{0.98}NbO_3$, ceramic and single cryst., ferroelectric phase transitions *(French)* 3−8782
$LiNbO_3$, effective polarisation, thermally stimulated polarisation study 3−14198
$LiNbO_3$, permittivity, dispersion anal. using Raman spectra 3−14194
$LiNbO_3$:$Cr^{3+}(Ni^{2+})$, absorption spectra, crystal field and Racah B parameters 3−14326
$LiNbO_3$:Fe, electrooptic crysts., photogalvanic and photorefractive effects 3−33762
$LiNbO_3$:Fe, photorefractive effect and surface elec. breakdown, space charges obs. 3−23898
$LiNbO_3$:Fe, Raman scatt., effect of induced photorefr. 3−14294
$LiNbO_3$:Fe photorefractive grating, electroacoustic and acoustooptic interactions 3−38797
$LiTaO_3$, ferroelectric phase transition studies *(Chinese)* 3−3650
$LiTaO_3$, ferroelectric phase transition, Raman-spectra study 3−28786
$LiTaO_3$, light scatt. intensity increase near phase transition 3−47668
$(NH_4)_2Cd_2(SO_4)_3$, vibr. spectra and phase transitions 3−23940
$NH_4Fe(SO_4)_2.12H_2O$, dielec. behaviour, pseudo-spin-lattice coupled-mode model 3−23889
NH_4HSeO_4, ferroelec. phase transition, high-resolution NMR study 3−28794
NH_4HSeO_4, optical and electrooptical props. near ferroelectric transition 3−28831
NH_4IO_3, NQR studies of phase transition *(Russian)* 3−28801
NH_4LiSO_4, Brillouin scatt. intensity near ferroelec. phase transition point, anomalous temp. depend. 3−57942
$(NH_4)_6(Mo_7O_{24}).4H_2O$, polycryst., ferroelectricity, pyroelec. thermal anal. investig. 3−47611
$(NH_4)_2SO_4$:$CrO_4{}^{3-}$, ferroelec. phase transition, $SO_4{}^{2-}$ dynamics, ESR study 3−34042
$(NH_4)_2ZnBr_4$, ferroelectric transitions, dielec. const. and spontaneous polarisation study 3−19073
$(NH_4)_2ZnCl_4$, ferroelec. phase transition, permittivity meas. 3−38780
$(NH_4)_2ZnCl_4$, weak ferroelectricity between ferro- and antiferro-elec. phases, dielec. study 3−19074
$Na_{0.5}Bi_{0.5}TiO_3$, ferroelec. transitions and piezoelectricity, permittivity meas. 3−28798
$NaH_3(SeO_3)_2$ ferroelec. domain struct. rearrangement and Barkhausen effect 3−23891
$NaH_3(SeO_3)_2$ single cryst., domain struct. rearrangement, Barkhausen effect study 3−23890
$NaNO_2$, ^{23}Na NMR, quadrupole coupling parameter 3−14144
$NaNO_2$, ferroelectric, ^{14}N nuclear quadrupole resonance, elec. field gradient tensor 3−14160
$NaNO_2$, orientational disorder of $NO_2{}^-$ ions, Raman study 3−14287
$NaNO_2$, phase diagram in appl. elec. field, neutron diffr. study 3−47612
$NaNO_2$, phonons near order-disorder transform 3−13360
$NaNO_2$, reson. secondary emission 3−57969
$Ni_3B_7O_{13}I$, dielec., mag., and magnetoelec. props. *(Russian)* 3−38782
PLZT ceramic ferroelec., ion implanted, optical imaging and information storage 3−1588
PLZT ceramics, grain boundary phenomena, electron microscopic study 3−18316
PLZT ceramics, transparent ferroelec., appl. field induced birefr. mechanism 3−28834
PLZT ferroelec. ceramic, dielec. props., permanent mag. field effects 3−57866
PLZT solid soln., piezoelec. props. comparison with PZT materials *(French)* 3−28782
$Pb_{0.85}Ba_{0.05}Sr_{0.12}(Zr_{0.565}Ti_{0.435}Sb_{0.02})O_{3.07}$, piezoelec. props., comparison with PLZT solid solns. *(French)* 3−28782
$Pb(Fe_{1/2}Nb_{1/2})O_3$, ferroelec. perovskites form. mechanism and ceramic process 3−14577
$Pb_5Ge_3O_{11}$, domain struct., existence of incommensurate phase *(Russian)* 3−19087
$Pb_5Ge_3O_{11}$, serpentine shaped ferroelec. domains due to internal stresses 3−3657
$Pb_5Ge_{3-x}Si_xO_{11}$ glass-ceramic prep. with high transparency, permittivity and Curie temp. 3−53001
$PbHPO_4$, ferroelec. transition, ^{17}O NQR study 3−28791
$PbHPO_4$, quasi 1-D H-bonded ferroelec., thermodynamic props., tunnelling model 3−2849
$PbMg_{1/3}Nb_{2/3}O_3$, ceramic, elastic moduli, Debye temp. and specific heat 3−51690
$PbMg_{1/3}Nb_{2/3}O_3$, fabrication scheme 3−19308
$Pb(Mg_{1/3}Nb_{2/3})O_3$, ferroelec. perovskites, form. mechanism and ceramic process 3−14577
$Pb(Sc_{1/2}Ta_{1/2})O_3$ ceramics, reversible pyroelec. effect under DC bias 3−38771
$PbTiO$-$Bi(Zn_{2/3}(Mg_{2/3})Nb_{1/3})O_3$, ferroelec. phase transition, X-ray, permittivity and dilatometric studies 3−38777
$PbTiO$-$La(Zn_{2/3}(Mg_{2/3})Nb_{1/3})O_3$, ferroelec. phase transition, X-ray, permittivity and dilatometric studies 3−38777
$PbTiO_3$, ferroelec. thin film, prep. by CVD 3−14501
$PbTiO_3$, soft X-ray emission spectra *(Russian)* 3−24059
$PbTiO_3$-$La(Zn_{2/3}Nb_{1/3})O_3$ ceramics, high-voltage photovoltaic effect, MnO_2 doping influence 3−33755

ferroelectric materials continued
$PbTiO_3$-$PbZrO_3$-$PbNb_{2/3}Zn_{1/3}O_3$-$PbSb_{2/3}Mn_{1/3}O_3$-$PbW_{1/2}Mg_{1/2}O_3$, region of morphotropic transition 3—9041
$Pb(Zr,Ti)O_3$ ceramics, ageing *(French)* 3—52739
$Pb(Zr,Ti)O_3$-MnO-$LaO_{1.5}$, oxide additions effect on band struct., diffuse refl. spectra 3—19155
$Pb(Zr,Ti)O_3$-type piezoelec. ceramics, physical props. 3—52733
$PbZrO_3$, permittivity and ferroelec. transitions, defect conc. effect 3—38779
$PbZr_{0.9}Ti_{0.1}O_3$, ferroelec., cryst. struct., X-ray and neutron diffr. study 3—56856
$Pb(Zr_{0.965}Ti_{0.035})O_3$ solid soln., ferroelec. transitions, calorimetric and dilatometric study *(French)* 3—3652
$PbZr_{1-x}Ti_xO_3$ ceramics, doped, low field poling, dielec. and piezoelec. props. 3—38750
$Pb(Zr_{1-x}Ti_x)O_3$:Nb, 95/5 PZT ceramics, cryst. and domain struct., TEM study 3—23894
$PbZr_xTi_{1-x}O_3$ textured ferroelec. piezoceramic, polarisation process 3—52709
$RbD_3(SeO_3)_2$, NMR study of incommensurate phase 3—28730
$RbHSO_4$, spontaneous polarisation, surface layers effect 3—38751
$RbH_3(SeO_3)_2$, transverse acoustic wave propag. near struct. phase transitions 3—18403
Rb_2ZnBr_4, X-ray study on successive phase transitions 3—28788
$Rb_2ZnBr_4(Cl_4)$, incommensurate phase, second order quadrupole shift, NMR study 3—52101
Rb_2ZnCl_4, disordered cryst. struct. study in paraelec. phase 3—46906
Rb_2ZnCl_4 incommensurate ferroelectric single cryst., anomalous temp. behaviour of phonon frequencies 3—42725
SbSBr, Raman spectra, ferroelectric transitions 3—3716
SbSI, ferroelec. phase transition and permittivity, microwave field effects 3—19085
SbSI, single crystal, elec. and optical props. *(Korean)* 3—3653
SbSI, specific heat and ferroelec. transitions 3—57103
$SbSI_xBr_{1-x}$, pressure-temp.-conc. phase diagram, Landau-Devonshire model 3—8780
$SbS_{0.7}Se_{0.3}I$, ferroelec. phase transition, MM reson. dielec. dispersion 3—57864
$SbSe_{0.4}S_{0.6}I$, diffuse ferroelec. transition, pyroelec. and polarisation study 3—19080
$SbSe_{0.5}S_{0.5}I$, pyroelec. effect in applied DC elec. field 3—52738
$SbSe_xS_{1-x}I$, tricritical point, pyroelec. current and dielec. const. meas. 3—19079
$Sc_3Sb_5O_{12}$, single cryst., exhibiting electroacoustic echo, growth, phys. and chemical props. 3—14228
$Sn_2P_2S_6$, uniaxial ferroelec. transition soft mode ang. dispersion, Raman study 3—19139
(Sr, Ba, Ca)Nb_2O_6, single cryst. ferroelectrets, electrooptic props. with broad phase transitions 3—34073
$Sr_{0.65}Ba_{0.25}Ca_{0.1}Nb_2O_6$, ferroelec., photoelectret state 3—14200
$Sr_{0.5}Ba_{0.5}Nb_2O_6$:Cu ceramics, ageing study, photovoltaic meas. 3—8524
$Sr_{0.6}Ba_{0.4}Nb_2O_6$, ferroelectric, dielec. props. press., temp. and freq. dependence meas. 3—23888
$Sr_{1-x}Ba_xNb_2O_6$, single cryst. glass-like behaviour in heat capacity meas. 3—13481
$Sr_{1-x}Nb_2O_6$, polarisation switching, polarisation, permittivity, and electrooptic coeff. meas. 3—28757
$Sr_2Nb_2O_7$, ESR study of orthorhombic Fe^{3+} centres 3—28692
$Sr_2Nb_2O_7$, ferroelectric, photolum. and photocond. 3—3814
$Sr_2Nb_2O_7$, incommensurate struct., high resolution electron microscopy study 3—13172
$Sr_2Nb_2O_7$, Raman scatt. from soft phonon for 117K phase transition 3—28855
$SrTiO_3$, critical dynamics, Raman study of soft-mode lineshapes 3—47636
$SrTiO_3$, SAW determ. of D_{4h} symmetry surface layer, ferroelec. transition region 3—51909
$SrTiO_3$, soft X-ray emission spectra *(Russian)* 3—24059
TGS, electron spin-lattice relax. at ferroelec. transition 3—23791
tetramethyl ammonium trichloromercurate, cryst. struct. and ferroelec. transitions 3—51585
$Tl_2Cd_2(SO_4)_3$, vibr. spectra and phase transitions 3—23940

ferroelectric phenomena *see ferroelectricity*

ferroelectric semiconductor materials *see ferroelectric semiconductors*

ferroelectric semiconductors
exciton-phonon oscills. near phase transition 3—3080
IV-VI ferroelec. semiconductors, band gap and energy spectra, temp. depend. 3—18617
narrow-band compensated, Curie temperature, impurity effects, vibronic theory 3—14227
narrow-gap, optical phonon damping under laser irrad. 3—2716
nonlinear-theory of acoustic instability *(Russian)* 3—23444
perovskite oxide ferroelec. semicond. electron mobility and TO phonon modes 3—43178
$BTiO_3$, perovskite oxide ferroelectric semiconductor, electron-scatt. model 3—43178
$BaTiO_3$, adsorption of O_2, H_2 and methyl.alcohol, effect on polarisation processes 3—2983
In-$BaTiO_3$, donor-doped, resist. profile meas. using liquid-metal-wetted four-point probe 3—23480
$BaTiO_3$, ferroelec. transition stimulated by strong EM wave 3—28799
$BaTiO_3$, initernal friction and elec. resist. meas. 3—8136
$BaTiO_3$, PTC device, grain boundaries, TEM study 3—51617
$BaTiO_3$, semiconducting, porous, factors, affecting positive temp. coeff. of resist. *(Japanese)* 3—3206
$BaTiO_3$:Pb,Ca semiconductor ceramics, liquid phase sintered, positive temp. coeff. resist. 3—52130
$KTaO_3$, perovskite oxide ferroelectric semiconductor, electron-scatt. model 3—43178
$Pb_{1-x}Ge_xTe$ narrow band-gap ferroelec. semicond., absorption edge near phase transition 3—34061
$Pb_{1-x}Ge_xTe$, quantum ferroelec. semicond., low temp. resist. enhancement 3—38406
$Pb_{1-y}Ge_yTe$, interaction and spontaneous formation of defects near ferroelec. transition 3—13383
p-$Pb_{1-x}Sn_xTe$, ferroelec. phase transition under electron irrad. 3—3651
SbSI, adsorption of O_2, H_2 and methyl-alcohol, effect on polarisation processes 3—2983
SbSI, ferroelec. semicond., Barkhausen effect and switching processes 3—23862

ferroelectric semiconductors continued
SbSI ferroelec. semicond., single-domain state stability, Barkhausen and electron microscopy study 3—23893
SbSi ferroelec. thin films, laser pulse prep., struct. and composition 3—3968
$Sn_2P_2S_6$ ferroelec. thin films, laser pulse prep., struct. and composition 3—3968

ferroelectric switching
Barkhausen effect, conf., Kalinin, USSR (Dec. 1980) 3—20562
DTGS, optical rotatory power dispersion, 444 to 632.8 nm 3—8796
lead phthalocyanine, monoclinic modification, quasi-one-dimensional, metal with charact. order of mol. dipoles 3—8028
poly(vinylidene fluoride), feroelec. switching, effect of lamellar struct. 3 14226
polyvinylidene fluoride, ferroelec. polarisation switching 3—23885
Rochelle salt, ferroelec., step-polarisation switching processes under laser irrad. 3—23861
smectic cell prep. for electro-optical microsec. switches, alignment control using spacer edges 3—51476
TGS, Barkhausen effect and polarisation switching, growth condition effects 3—23865
TGS, optical rotatory power dispersion, 444 to 632.8 nm 3—8796
TGS cryst., ferroelec., step-polarisation switching processes under laser irrad. 3—23861
triglycenselenate, Barkhausen effect and polarisation switching, growth condition effects 3—23865
$Gd_2(MoO_4)_3$, ferroelec., step-polarisation switching processes under laser irrad. 3—23861
$Gd_2(MoO_4)_3$ single cryst., electroluminescence, correlation with ferroelec. switching 3—24019
KD_2PO_4-KH_2AsO_4, X-ray irrad., ferroelec. switching times, ESR study 3—57863
$NaH_3(SeO_3)_2$ ferroelec. domain struct. rearrangement and Barkhausen effect 3—23891
SbSI, ferroelec. semicond., Barkhausen effect and switching processes 3—23862
$Sr_{1-x}Nb_2O_6$, polarisation switching, polarisation, permittivity, and electrooptic coeff. meas. 3—28757

ferroelectric thin films
polymer, containing TGS powder 3—52740
$(Ba_xSr_{1-x})TiO_3$, ferroelectric films, SIMS study 3—3008
$BaTiO_3$ ferroelectric films, RF sputtered on Si, photovoltaic props. and dielec. hysteresis meas. 3—33757
$BaTiO_3$, thin ferroelectric film, internal mech. stresses 3—33611
$K_3Li_2Nb_5O_{15}$, ferroelec., piezoelec., prep. by sputtering and CVD 3—14485
$PbTiO_3$ amorphous sputtered thin films, struct. and elec. cond. 3—33811
$PbTiO_3$, ferroelec. thin film, prep. by CVD 3—14501
$SrTiO_3$, ferroelectric, autoepitaxial vacuum deposition 3—29005

ferroelectric transitions
see also critical fluctuations; displacive transformations; ferroelectric Curie temperature; order-disorder transformations
antiferroelectric phase transitions, elec. field induced tricritical points 3—38774
betaine arsenate, ferroelasticity and ferroelec. props. 3—8778
betaine phosphate, single crystal anal., antiferroelectricity 3—34043
C K_2SeO_4, sp. ht. and thermal expansion meas. in paraelec., incommensurate, and ferroelec. phases 3—28120
dicalcium lead propionate, high-temp. paraelec. phase, cryst. struct. and ferroelec. transition, X-ray study 3—18284
dicalcium strontium propionate, dielec. dispersion 3—43494
dicalcium strontium propionate single cryst., elec. cond. and stimulated thermocurrents 3—33740
dipole pseudospin glass phase-ferroelec. phase transition, crit. phonon damping induced 3—3655
displacive and order disorder, soft modes, neutron and X-ray diffraction study 3—8783
displacive phase transitions, static and dynamic dipole interactions 3—28796
displacive type ferroelectrics, electron-ionic vibr. coupling const. in vibronic model 3—52744
EPR studies, review *(Rumanian)* 3—8714
excitonic insulator in external fields 3—3069
ferroelectric-antiferroelec. H-bonded systems, spin glass phase 3—3452
first order transition theory, calc. of elastic and electrostatic energies of inclusion 3—38024
first-order transition, ten-vertex model in two dimens., exact soln. 3—30795
incommensurate, phase transitions, solitons and phasons 3—19078
incommensurate phase of A_2BX_4-type crysts., shear stiffness 3—8116
independent defect approx. in ferroelec. transitions 3—23884
lattice stability and soft modes 3—33387
liquid cryst. smectic C^* transition, modulated to uniform phase 3—28102
$LiTaO_3$, thermal diffusivity, relation to phase transition and crystal orientation 3—47174
methylammonium aluminium sulphate dodecahydrate, dielec. behaviour, pseudo-spin-lattice coupled-mode model 3—23889
methylammonium iron alum., dielec. relax. in vicinity of ferroelec. transition 3—52712
NMR study, high-pressure, low-temp. apparatus 3—16376
perovskite ferroelectrics, equiprobable directions of spontaneous polarisation 3—28804
perovskite type cpds., expt. and theoretical studies, review *(Rumanian)* 3—8781
polyvinylidene fluoride form I, phase transition below melting pt., ferroelec. Curie pt. proposition 3—52746
quadratic electron-phonon interaction 3—28793
quadrupole moment, macroscopic, temp. depend. near displacive phase transition point 3—2785
quasione-dimensional interacting Ising and Mitsui type systems, thermodynamics 3—3654
RF EM radiation emission during domain-structure changes, theory 3—34045
Rochelle salt, degenerate convolution of surface and bulk acoustic waves near phase transition 3—8314
Rochelle salt, electron spin-lattice relax. at ferroelec. transition 3—23791
Rochelle salt, ferroelectric transition, X-ray topography study 3—52743
Rochelle salt, nonlinear dielec., elastic and electro-mechanical coeffs. at ferroelec. transition 3—43498

- **ferroelectric transitions** continued
  - Rochelle salt, Rayleigh surface acoustic wave propag. near phase transition 3—8313
  - Rochelle salt crystal, X-ray topographic study 3—43501
  - semiconductor, Curie temperature, impurity effects, vibronic theory 3—14227
  - semiconductors, ferroelectric, exciton-phonon oscills. near phase transition 3—3080
  - solid solns., ferroelectric structural phase transition mechanisms 3—19082
  - squaric acid, layered antiferroelec., proton spin-lattice relax. time near phase transition 3—43453
  - squaric acid crystal, statistical theory of phase transition 3—38776
  - susceptibility maximum temp., external field depend., for systems with broad phase transition 3—28077
  - tetramethylammonium cobalt tetrachloride, ferroelectric-incommensurate transition, photoacoustic study 3—51779
  - TGS, ferroelec. phase transition study, modified capacitor dilatometer technique 3—38104
  - TGS monocrystal, dielectric nonlinearity near phase transition temp. 3—23883
  - TGSe:L-α alanine, admixture influence on dielectric props. 3—34041
  - thiourea, elastic const., C_{33}, in elec. field, Brillouin scatt. study 3—3753
  - triglycine fluoroberyllate-selenate, deuterated, crystn. from aq. soln., elec. props. 3—14457
  - tris-sarcosine calcium chloride, ^1H to ^2H substitution, effects on ferroelectric props. 3—28787
  - tris-sarcosine calcium chloride, electrostriction coeff., temp. depend. near ferroelec. phase transition 3—19081
  - tris-sarcosine calcium choride:Mn^{2+}, electron spin-lattice relax. at ferroelec. transition 3—23791
  - university class for ferroelectrics 3—23887
  - Ag_3AsS_3, cryst. symm., transitions, Raman study 3—43545
  - Ag_3AsS_3, proustite, phase transitions, sp. ht. study 3—2839
  - $(Ag_{x/2}Ge_{1-x}Sb_{x/2})Te$, ferroelec. phase transition, elec. cond. and optical absorption studies 3—43496
  - $AgNb_{1-x}Ta_xO_3$, solid soln., dielec. props., phase transitions, DTA study 3—38748
  - $Ba(H_2PO_4)_2$, sp. ht. meas., 100 to 373K, antiferroelec. phase transition 3—42806
  - $Ba_2NaNb_5O_{15}$, ferroelectric phase transition studies *(Chinese)* 3—3650
  - $BaTiO_3$, adsorption of O_2, H_2 and methyl.alcohol, effect on polarisation processes 3—2983
  - $BaTiO_3$ ceramic, ferroelec. phase transition, mag. field effects 3—47614
  - $BaTiO_3$, ferroelec. transition stimulated by strong EM wave 3—28799
  - $BaTiO_3$, soft mode spectroscopy, hyper-Raman scatt. 3—23953
  - $BaTiO_3$-$SrTiO_3$ solid solution, diffuse phase transition 3—28792
  - $Ba(Ti_{1-y}Zr_y)O_3$ ceramics, diffuse ferroelec. phase transition 3—28789
  - $Bi_xSb_{1-x}SI$, soft mode behaviour, microwave dielec. spectra 3—43497
  - $Cd_2Nb_2O_7$, ferroelec. transitions and domain struct., permittivity study 3—28797
  - $Cd_2Nb_2O_7$, ferroelectric and electro-optical props., permittivity and tanδ study 3—28795
  - $Cd_2Nb_2O_7$, phase transition, 4 to 230K, Raman scatt. and permitt. meas. 3—8821
  - CsD_2PO_4, ferroelec., sp. ht. study 3—19077
  - CsD_2PO_4, interchain inverse correl. length, anisotropic three-dimens. Ising model 3—38778
  - $CsH_{2(1-x)}D_{2x}PO_4$, quasi-one-dimens. ferroelectric, static dielec. props., deuteration effects obs. 3—19075
  - $CsH_{2(1-x)}D_{2x}PO_4$, ferroelectric, dynamic dielec. props., deuteration effects obs. 3—19076
  - CsH_2PO_4, ferroelec., sp. ht. study 3—19077
  - $CsLiMoO_4$, ferroelec., elastic, dielec., and structural props. 3—19084
  - $CsLiWO_4$, ferroelec. phase transitions, calorimetric study 3—38773
  - GeTe, high press. phase transitions, elec. cond. 3—28095
  - $In_3Sb_5O_{12}$, single cryst., exhibiting electroacoustic echo, growth, phys. and chemical props. 3—14228
  - $K_{0.5}Bi_{0.5}TiO_3$-$Na_{0.5}Bi_{0.5}TiO_3$ ferroelec. ceramics, lattice parameters and phase transition, X-ray study *(Chinese)* 3—28785
  - $K_3Co_{1-x}Fe_x(CN)_6$, phase transition and soft mode 3—43493
  - KH_2AsO_4:AsO_4^{4-}, electron spin-lattice relax. at ferroelec. transition 3—23791
  - KH_2PO_4, Debye-Waller factor and thermal expansion coeff., logarithmic anomaly at ferroelec. phase transition 3—19072
  - KH_2PO_4, order parameter near ferroelec. tricritical point, X-ray diffr. investig. 3—2737
  - KH_2PO_4, paraelec., LF Raman spectra 3—43540
  - KH_2PO_4, Raman spectra in paraelec. phase, coupled modes anal. 3—52783
  - KH_2PO_4, Rayleigh surface acoustic wave propag. near phase transition 3—8313
  - $KH_3(SeO_3)_2$, ferroelastic and ferroelec. phase transition, radiation damage, absorpt. spectra 3—37963
  - KIO_3, ferroelec. phase transition, low-temp., NQR study 3—43499
  - $K_2Mn_2(SO_4)_3$, vibr. spectra and phase transitions 3—23940
  - $KNbO_3$, vibr. modes near ferroelec. transition, Raman scatt. study 3—47654
  - K_2SeO_4, birefringence, electrooptical effect and ferroelec. transitions 3—14255
  - K_2SeO_4, incommensurate phase transition, optical SHG obs. 3—22162
  - $Li_2Ge_7O_{15}$, ferroelec. phase transition study 3—38775
  - $LiNH_4SO_4$, ionic thermocurrent studies 3—23869
  - $Li_{0.02}Na_{0.98}NbO_3$, ferroelec.-ferroelastic coupling, transitions and optical props. *(French)* 3—47613
  - $Li_{0.2}Na_{0.98}NbO_3$, ceramic and single cryst., ferroelectric phase transitions *(French)* 3—8782
  - $LiTaO_3$, ferroelectric phase transition studies *(Chinese)* 3—3650
  - $LiTaO_3$, ferroelectric phase transition, Raman-spectra study 3—28786
  - $LiTaO_3$, light scatt. intensity increase near phase transition 3—47668
  - $(NH_4)_2Cd_2(SO_4)_3$, vibr. spectra and phase transitions 3—23940
  - $NH_4Fe(SO_4)_2.12H_2O$, dielec. behaviour, pseudo-spin-lattice coupled-mode model 3—23889
  - $(NH_4)_3H(SO_4)_2$:VO^{2+}, phase transitions, EPR study 3—52745
  - NH_4HSeO_4, ferroelec. phase transition, high-resolution NMR study 3—28794
  - NH_4HSeO_4, optical and electrooptical props. near ferroelectric transition 3—28831
  - NH_4IO_3, NQR studies of phase transition *(Russian)* 3—28801
  - NH_4LiSO_4, Brillouin scatt. intensity near ferroelec. phase transition point, anomalous temp. depend. 3—57942
- **ferroelectric transitions** continued
  - $(NH_4)_6(Mo_7O_{24}).4H_2O$, polycryst., ferroelectricity, pyroelec. thermal anal. investig. 3—47611
  - $(NH_4)_2SO_4$:CrO_4^{3-}, ferroelec. phase transition, SO_4^{2-} dynamics, ESR study 3—34042
  - $(NH_4)_2ZnBr_4$, ferroelectric transitions, dielec. const. and spontaneous polarisation study 3—19073
  - $(NH_4)_2ZnCl_4$, ferroelec. phase transition, permittivity meas. 3—38780
  - $(NH_4)_2ZnCl_4$, weak ferroelectricity between ferro- and antiferro-elec. phases, dielec. study 3—19074
  - $NaNO_2$, incommensurate antiferroelectric, phase transition, Brillouin scatt. study 3—19147
  - $NaNO_2$, phase diagram in appl. elec. field, neutron diffr. study 3—47612
  - Na_3NO_3, low-temp. forms, Guinier photographic obs. *(German)* 3—33224
  - $NaNbO_3$ antiferroelec. cryst., real domain struct. 3—43500
  - $Ni_3B_7O_{13}I$, dielec., mag., and magnetoelec. props. *(Russian)* 3—38782
  - $Pb(Fe_{1/2}Nb_{1/2})O_3$-$xPb(Mg_{1/2}W_{1/2})$ O_3 solid soln., diffuse antiferroelec.-paraelec. phase transition 3—23886
  - $Pb_5Ge_3O_{11}$, domain struct., existence of incommensurate phase *(Russian)* 3—19087
  - $Pb_{1-x}Ge_xTe$ narrow band-gap ferroelec. semicond., absorption edge near phase transition 3—34061
  - $Pb_{1-y}Ge_yTe$, interaction and spontaneous formation of defects near ferroelec. transition 3—13383
  - $PbHPO_4$, ferroelec. transition, ^{17}O NQR study 3—28791
  - $PbMg_{1/3}Nb_{2/3}O_3$, ceramic, elastic moduli, Debye temp. and specific heat 3—51690
  - $PbZrO_3$, permittivity and ferroelec. transitions, defect conc. effect 3—38779
  - $Pb(Zr_{0.965}Ti_{0.035})O_3$ solid soln., ferroelec. transitions, calorimetric and dilatometric study *(French)* 3—3652
  - $RbD_3(SeO_3)_2$, NMR study of incommensurate phase 3—28730
  - $RbHSO_4$, spontaneous polarisation, surface layers effect 3—38751
  - $RbH_3(SeO_3)_2$, transverse acoustic wave propag. near struct. phase transitions 3—18403
  - Rb_2ZnBr_4, X-ray study on successive phase transitions 3—28788
  - $Rb_2ZnBr_4(Cl_4)$, incommensurate phase, second order quadrupole shift, NMR study 3—52101
  - SbSBr, Raman spectra, ferroelectric transitions 3—3716
  - SbSI, adsorption of O_2, H_2 and methyl-alcohol, effect on polarisation processes 3—2983
  - SbSI, ferroelec. phase transition and permittivity, microwave field effects 3—19085
  - SbSI, specific heat and ferroelec. transitions 3—57103
  - $SbS_{0.7}Se_{0.3}I$, ferroelec. phase transition, MM reson. dielec. dispersion 3—57864
  - $SbSe_{0.4}S_{0.6}I$, diffuse ferroelec. transition, pyroelec. and polarisation study 3—19080
  - $SbSe_{0.5}S_{0.5}I$, pyroelec. effect in applied DC elec. field 3—52738
  - $SbSe_xS_{1-x}I$, tricritical point, pyroelec. current and dielec. const. meas. 3—19079
  - $Sc_3Sb_5O_{12}$, single cryst., exhibiting electroacoustic echo, growth, phys. and chemical props. 3—14228
  - $(Sr, Ba, Ca)Nb_2O_6$, single cryst. ferroelectrets, electrooptic props. with broad phase transitions 3—34073
  - $SrTiO_3$, critical dynamics, Raman study of soft-mode lineshapes 3—47636
  - $SrTiO_3$, SAW determ. of D_{4h} symmetry surface layer, ferroelec. transition region 3—51909
  - TGS, electron spin-lattice relax. at ferroelec. transition 3—23791
  - $Tb_2(MoO_4)_3$, Raman and Brillouin studies of acoustic anomalies 3—34104
  - tetramethyl ammonium trichloromercurate, cryst. struct. and ferroelec. transitions 3—51585
  - $Tl_2Cd_2(SO_4)_3$, vibr. spectra and phase transitions 3—23940
- **ferroelectricity**
  - *see also antiferroelectricity; ferroelectric devices; ferroelectric materials; ferroelectric switching; ferroelectric transitions*
  - betaine arsenate, ferroelasticity and ferroelec. props. 3—8778
  - bibliography, January to June 1981 3—5520
  - charged defect ferroelectrics, photovoltaic effects 3—47390
  - elastic ferroelectric dielec. relax., EM internal variables in EM continua 3—49174
  - electrically excitable mech. reson. in piezoelectric and ferroelectric materials 3—52735
  - electronic subsystem excitation during polarisation relax. with spatial distrib. of dielect. permeability 3—52711
  - ferroelectric crystals, piezoelectric and pyroelectric coeff. 3—14220
  - ferroelectric layers, ultrasonic intensity near critical angle for total internal reflection 3—51721
  - ferroelectrics, EPR line profile broadening and asymmetry 3—3512
  - layer media, dielectric, piezoelectric and elastic consts. 3—19070
  - nonlinear cryst., Barkhausen effect and hysteresis 3—23704
  - orthorhombic lattices, dipole field sums and Lorentz factors 3—14199
  - polarisation distrib. along polar axis, regularisation method from pyroelec. meas. 3—52741
  - polarisation switching, internal cold emission and luminesc., theory 3—19204
  - polymer film, containing TGS powder 3—52740
  - quasi 1-D H-bonded ferroelec. thermodynamic props., tunnelling model 3—2849
  - semiconductor composition modulated structs., ferroelasticity and piezoelectricity 3—8777
  - smectic C liq. cryst., chiral, kink excitations 3—42513
  - solid solns., ferroelectric structural phase transition mechanisms 3—19082
  - spontaneous polarisation, chemical bond model 3—47610
  - thin ferroelectric crystals, 180° domain wall motion 3—52748
  - KD_2PO_4-type crystals, anisotropic polarisation fluctuations 3—14197
- **ferrofluids** *see magnetic fluids*
- **ferromagnetic-antiferromagnetic transitions**
  - *see also metamagnetism; Morin temperature*
  - antiferromagnet, phase diagram with ferromag. integral of intersublattice exchange 3—3446
  - lattice stability and soft modes 3—33387
  - metamagnets, dil., phase transitions, field induced 3—52485
  - Potts model, ferromag. and antiferromag., on Bethe lattices 3—45079
  - superconductor, antiferromag. order, spin struct., and ferromag. transition 3—18811
  - Cr-Fe alloys, evolution of mag. order, onset of ferromagnetism 3—38590
  - Cr-Fe alloys, evolution of mag. order, ferromagnetism close to crit. conc. 3—38591
  - $(Cr_{1-x}Pd_x)_2As$, mag. props. study 3—52474

ferromagnetic-antiferromagnetic transitions continued
$Cu_xZn_{1-x}Cr_2Se_4$ $(0\leq x\leq 0.1)$, mag. props., phase transition, mag. struct., neutron powder diffr. study 3–38596
Dy, thermomagnetic energy conversion 3–34731
$DyFe_{1-x}Mn_xO_3$, $x=0.05$-0.335, mag. props. and spin reorientation transitions, Mn^{3+} Jahn-Teller ion effect 3–43371
$ErCrO_3$, spin reorientation, laser induced, time resolved spectra 3–52777
$ErFe_{1-x}Mn_xO_3$, $x=0.07$-0.33, mag. props. and spin reorientation transitions, Mn^{3+} Jahn-Teller ion effect 3–43371
$EuSe_{1-x}S_x$, $x\leq 0.03$, mag. phases, AC susceptibility, ^{153}Eu NMR studies 3–52483
$EuSySe_{1-y}$ and EuSe, mag. phase diagram under hydrostatic press. 3–18890
Fe-Cr, ferromagnetism, antiferromagnetism and spin glass states 3–52465
Gd-Y, onset of helimagnetism, transport props. 3–18894
$Hf_{0.8}Ta_{0.2}Fe_2$, mag. phase transitions 3–52469
$(La_{0.8}Ca_{0.2})MnO_{3+y}$, ferromag.-antiferromag. transition temp., press effects 3–57605
$Mn_5(Ge_{1-x}Si_x)_3$, ferromag.-antiferromag. transition, NMR study 3–52484
$Na_xCr_xTi_{1-x}S_2$, ferro-antiferromagnet transition study 3–43370
γ-$(Ni_{80-x}Cr_{20})Fe_x$, spin glass state and mag. transitions, neutron diffr. study *(Russian)* 3–23641
$Ni(S_{1-x}Se_x)_2$, insulator-metal and mag. transitions under high press. 3–57600
$NpAs_2$, mag. props., 4.2 to 300K 3–28565
$NpAs_2$, magnetic behaviour, Mossbauer study 3–23843
$NpAs_2$, magnetic ordering, neutron diffr. study 3–23590
$(Pd_xPt_{1-x})_3Fe$, specific heat meas. across ferromag.-antiferromag. conc. phase transition *(Russian)* 3–3462
UAs_xSe_{1-x}, mag. phase diagram 3–18895

ferromagnetic Curie temperature *see Curie temperature*

ferromagnetic-paramagnetic transitions
see also Curie temperature
amorphous ferromagnet, smeared crit. region anal. 3–23653
axial next-nearest-neighbour Ising model, perturbation expansions, phase transitions 3–43384
4-chloroanilinium copper chloride (bromide), phase transitions, ^{35}Cl NQR and mag. susceptibility study 3–47571
ferromagnetic liquids, mag. transition *(Russian)* 3–18898
film, domain struct. near paramag. to ferromag. phase transition 3–52570
Heisenberg ferromagnet, three-dimens., spin dynamics, effect of exchange anisotropy in crit. region 3–18927
Hubbard model, electron excitations in Fermi liquids, paramagnetic-ferromagnetic phase transitions 3–13986
Ising system, $S=3/2$, phase diagram and tetracritical point 3–23682
itinerant ferromagnet, amorphous, anomalous Stoner enhancement 3–23664
itinerant magnetism in paramag. phase, theory 3–57509
rare earth antimonides, R_5Sb_3 (R=Nd, Sm, Gd, Tb, Dy, Ho), elec. props. 3–3203
spin glass models, order parameters and magnetic transitions 3–38632
spin glasses, infinitely long-ranged bond-random anisotropic classical planar model 3–52506
spin wave-like excitation of magnetisation fluctuations 3–8666
steel, stainless, type 304, ferromagnetic-paramagnetic transform., irrad. induced 3–23628
surface phase transitions, Heisenberg model with cubic anisotropy 3–51944
transition metal magnets, spin density fluctuations, neutron scatt. studies 3–57520
XY ferromagnets, mag. transitions with random Dzyaloshinskii-Moriya interactions 3–38616
Bd, magnetic phases, SAW study 3–18891
Cr-Fe, ferromagnet, crit. correlations, small angle neutron scatt. study 3–23644
$CrBe_{12}$, mag. phase transitions under high press. 3–8669
$(Cr_{1-x}Pd_x)_2As$, mag. props. study 3–52474
$Er_{1-x}Ho_xRh_4B_4$, ferromag. and supercond. crit. behaviour, mean field study 3–18824
$ErRh_4B_4$, coexistence of magnetism and supercond., resist. and neutron diffr. studies 3–13947
$Eu_xSr_{1-x}S$, site-diluted Ising ferromagnet, spin glass, octahedron approx. on FCC lattice 3–3464
α-Fe, and α-Fe alloys, mag. order influence on Fe self-diffusion *(Czech)* 3–57666
Fe complex, bromobis(N,N-diethyldithiocarbamato)iron(III), heat capacity, λ-type ferromag. phase transition 3–52463
Fe, critical dynamics at Curie point, role of spin-nonconserving forces 3–3456
Fe, paramagnetic, ferromag. correls., polarised neutron scatt. study 3–28507
Fe-Cr, tempered, mag. trans. rel. to heat treatment *(French)* 3–52486
Fe-Ni, electronic and mag. structure evolution during ferromagnetic ordering *(Russian)* 3–28263
$Fe_{80-x}Cr_xB_{20}$, metallic glass, crit. indices for ferromag. ordering and spin glass state 3–23650
$(Fe_cMn_{1-c})_{80}P_{16}C_4$, metallic glass, ferromagnet, crit. correlations, small angle neutron scatt. study 3–23644
$Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. phases study by EPR 3–43430
$Gd_xY_{1-x}Rh_4B_4$, supercond. and magnetism 3–3357
$Hg_{1-x}Zn_xCr_2Se_4$ single cryst., mag. phase transition temp., heat treatment effect 3–57597
$Ho(Co_{1-c}Ni_c)_2$, mag. phase transition, magnetisation and spin echo NMR study 3–28563
$La_{0.8}Ca_{0.2}MnO_3$, prep. by co-precipitation method, mag. behaviour *(French)* 3–38651
MnAs, paramag.-ferromag. transition, coupling to struct. transition, theory 3–18897
γ-$(Ni_{80-x}Cr_{20})Fe_x$, spin glass state and mag. transitions, neutron diffr. study *(Russian)* 3–23641
Pd-Ni, ferromagnet, crit. correlations, small angle neutron scatt. study 3–23644
$Rb_2CuBr_4.2H_2O$, spin dynamics, effect of exchange interactions in crit. region, NMR study 3–18928
Tb, magnetic phases, SAW study 3–18891
USe(Te), magnetic excitations and crit. behaviour, neutron inelastic scatt. study 3–14056
Y_9Co_7, supercond. and mag. props. at high press. and high mag. field 3–47450

ferromagnetic properties of substances
see also ferromagnetic relaxation; ferromagnetic resonance; ferromagnetism; magnetic semiconductors
actinide compounds, magnetic excitation behaviour, neutron scatt. studies 3–52435
alloys, binary magnetic, electrodeposition, review 3–4207
Alnico, sintered magnetically hard materials 3–3988
Alnico 5 permanent magnets, non-metallic inclusions and mag. props. modification rel. to Mn content 3–52549
amorphous A_cB_{1-c} alloys, Curie temp., short range at. order study 3–23681
amorphous ferromagnetic metal powders, mechanical and magnetic props. after compaction 3–9022
amorphous ribbon, power loss, annealing conditions effect 3–28649
asbestos fibres, mag. props., basis for airborne conc. anal. 3–39759
bis(monomethylammonium)tetrachlorochromate(II), two-dimens. ferromag., heat capacity 3–23053
4-chloroanilinium copper chloride (bromide), phase transitions, ^{35}Cl NQR and mag. susceptibility study 3–47571
conducting materials, losses, physical origin 3–28624
copper manganese oxides, $ACu_3Mn_4O_{12}$, ferromag., synthesis and mag. characterization 3–14462
Elinvar, magnetic anisotropy, uniaxial 3–33885
erfar *(Russian)* 3–23716
Fe thin films mag. anisotropy where deposited by facing targets sputtering 3–38658
Fe-Si (3 wt.%), grain-oriented, with very high permeability, 180° domain wall spacing 3–52512
ferrites, amorphous ferromag., hereditary mag. props. and stability 3–57703
ferrites, sintered magnetically hard materials 3–3988
ferromagnetic semiconductor, spin wave damping *(Russian)* 3–23619
Heusler alloys, mag. props., spin-polarised energy band calc. 3–52341
insulators and metals, uniaxially anisotropic, nonsaturated, EM wave propag., theory 3–33985
Invar, local environment effect, ferromagnetic instability 3–52529
Invar, saturation induction, thermomagnetic anal., electron diffr. meas. *(German)* 3–47477
Invar alloys, mag. props., spin-polarised energy band calc. 3–52341
LUNA 20 soil samples, ferromagnetic reson. g-factor meas. 3–15860
magneto-optical props., appl. to magneto-optical unidirectional TE-TM mode convertor 3–23926
materials, book 3–54595
metal, ferromagnetic electromagnetic-acoustic method of receiving Rayleigh waves 3–57739
metal muon spin relax. due to hopping motion of positive muons, theory 3–3624
metal powders, ferromagnetic, development for mag. recording 3–24185
metallic ferromagnetic glasses for magnetic switches 3–8697
metallic glass, amorphous ferromagnetic, mag. permeability aftereffect 3–28646
metallic glasses, applications of amorphous metals 3–3930
metallic glasses, fabrication, mag. and supercond. props. 3–46855
metallic glasses research and new production techniques for application as alternative magnetic material *(Italian)* 3–43785
metals, elect. resistivity meas., laboratory project 3–5570
metals, ferromagnetic antiresonance region, expression for microwave surface impedance 3–8725
metals, uniaxial ferromag., anisotropic effects on spin fluctuation thermoelec. power 3–43157
micas, biotite and lepidomelane, paramag. props. and antiferromag. transition 3–47470
Permalloy, ferromagnetic films and heterogeneous double layers, mag. props., Brillouin scatt. from spin waves *(German)* 3–14314
permalloy bubble propag. elements, domain struct. and magnetisation processes 3–23756
Permalloy control elements in mag. bubble devices, magnetisation, magneto-optical study 3–14075
Permalloy film, sputtering, two-facing-targets type, high rate deposition 3–34229
Permalloy films, eddy-current losses and domain wall mobility 3–3496
Permalloy films, vacuum evaporated, $^{+}H_2$ ion implantation effects on coercive force and magnetoresist. 3–38492
Permalloy films preparation using targets facing type sputtering method 3–28996
Permalloy sheet, 65NP, large Barkhausen jumps, fluctuations under cyclic magnetisation *(Russian)* 3–52522
Permalloy thin films, circular Bloch line size determ. by electron microscope method 3–52568
Permalloy thin films, edge domain growth mechanism *(Russian)* 3–33954
permanent magnet materials, efforts to reduce Co consumption 3–47523
polycrystalline material, cubic struct., magnetization, field and stress depend. 3–28627
poly[bis(2,6-pyridinediylmethylidenenitrilohexamethylenenitrilomethylidene) iron sulphate], metamag. behaviour 3–33896
powders, mag. props., vol. concentration dependence meas. *(German)* 3–28642
rare earth alloys, R_5In_3 (R=Gd, Tb, Dy, Ho, Er, Tm, Y), mag. susceptibility, Neel temp. and Curie temp. 3–33865
rare earth alloys, RMn_2 (R=Gd, Tb, Ho, Er), mag. props. and thermal expansion anomaly 3–52588
rare earth compounds, $R_3Ni_7B_2$, mag. and struct. characts., magnetisation and Mossbauer studies 3–33934
rare earth intermetallics, RNi (R=Sm,Gd,Dy,Ho,Er), electrical resistivity and magnetic transitions, expt. study 3–18685
rare earth metals, electronic specific heat, spin wave enhancement 3–57107
rare earth oxides, $RFeMO_4$, (R=rare earth M=Mg, Co), magnetisation and neutron diffr. studies 3–57699
rare earth ternary compounds, mag. ordered superconds., exptl. studies review 3–57451
rare earth-3d transition metal alloys, vol. depend. of Curie temp. 3–38613
rare earth-Co alloys, sintered magnetically hard materials 3–3988
rare earth-Fe alloys, rapidly quenched, permanent mag. props. 3–33935
rare earth-iron alloys, cryst. struct. and mag. props., review *(Polish)* 3–13167
rare earth-Pt alloys, R_2Pt, mag. props. 3–57616
rare earth-transition metal Laves phase alloys, magnetovolume effects 3–57730

ferromagnetic properties of substances continued
rare earth-transition metal metallic glases, $(R_{80}Gas_{20})_{1-x}T\$xH_{y}$, mag. props., H effects 3−28553
semiconductor, conduction electron self-energy effects 3−52031
Si, grain oriented, laser irradiated, characts. 3−34174
soft ferromagnetic materials and heat treatment 3−39259
soft magnetic materials, polycrystalline and amorphous, eddy current losses 3−52521
steel, alloy, 40KhN2MA type, magnetisation props. in weak and moderate fields, analytical description *(Russian)* 3−28608
steel, austenitic stainless, ferromag. martensite surface layer anal. by electron diffr. 3−47540
steel, biaxial magnetoelasticity theory 3−23775
steel, C, 45, mag. hysteresis under simultaneous action of static and dynamic bending stresses 3−52595
steel, C, compacted particle core, AC mag. characts. 3−43397
steel, Co, magnetic diffusion equation, one-dimensional, incl. hysteresis, complex permeability approach 3−52447
steel, ferromagnetic magnetic state monitoring under magnetic fields and mech. loads in Rayleigh range 3−24467
steel, low alloy and C, type 45, 50, 40Kh and 30KhN2MPA, tempered, remanent magnetism, induction under alternating mag. field 3−58143
steel, low-alloy, graphitised, quench hardness and transform. during tempering, alloying effect 3−34364
steel, reluctivity, underrelaxation factor, numerical solns. 3−52548
steel, Si, grain oriented, high permeability, 0.23 mm thick 3−34350
steel, stainless, fatigue damage in hydrogen, elec. and mag. props. meas. *(Ukrainian)* 3−9146
steel, stainless, forgings of 03Kh12K12D2-VD, mag. and mech. props. 3−29129
steel, surface stresses inspection using magnetisation jump parameters 3−58336
steel, tool, tempered, annealing, Mossbauer effect 3−53246
steel, type 38KhGNM, quenching and tempering effect on mag., elec., and mech. props. 3−58142
steel 30Kh3MF, magnetic method of hardness inspection, heat treatment effects 3−24466
sulphospinels, magnetic semiconductors, book contrib. 3−57551
superconductors, ferromags., mixed states 3−38563
superconductors, surface magnetization, theory 3−18819
surfaces, mag. order, and electron capture spectroscopy 3−57531
tetramethylammonium nickel bromide, one-dimensional magnet, mag. excitations, ESR study 3−57752
thermoelectrode materials, nondestructive mag. testing 3−9273
thin wires, ferromag. reson. theory 3−23805
transition metal alloys, amorphous feromag., resist minimum 3−23352
transition metal alloys, destruction of ferromag. order by alloying, percolation approach 3−18905
transition metal alloys, spin fluctuation of impurity, Hubbard-type model 3−52458
transition metal-Sn Heusler alloys, $M_2M'Sn$, mag. and magneto-optical props. 3−52527
transition metals, 3d, itinerant magnetism, phase transition and paramag. phase props. 3−18847
transition metals, disordered local moments and thermodynamic props. of Hubbard model 3−33854
transition metals, electron-paramagnon coupling parameters, supercond. tunnelling studies 3−52439
trimethylammonium cobalt(II)chloride, deuterated 1-D ferromag., mag. props. 3−28532
trimethylammonium cobalt(II)chloride, quasi 1-D Ising ferromag., mag. props. 3−28531
trimethylammonium cobalt chloride.$2H_2O$, one-dimensional magnet, mag. excitations, ESR study 3−57752
trimethylammonium trichlorocobaltate, proton spin-lattice relax. in paramag. state 3−19005
two-phase particulate mag. composites, phase distrib. sensitive mag. props. 3−23730
Al-Ni-Co-Ti, Permag A-3290, thermomag. treatment for higher coercivity *(Czech)* 3−14615
AlNiCo permanent magnet alloys, struct. and props. book contrib. 3−57708
Au-Fe, longit. magnetoresist near percolation limit, spin glass and ferromag. props. 3−38372
Au-Fe (15 at.%), AC susceptibility near percolation limit 3−14021
Au-Fe (19 at.%), spin canting and ferromag., Mossbauer and susceptibility meas. 3−14012
Au_4V, magnetisation process under pulsed high mag. fields 3−57695
Bd, magnetic phases, SAW study 3−18891
$(CO_{100-x}Mn_x)_{76}B_{24}$ amorphous alloy, mag., thermal and elec. props. 3−28524
$Ca_{100-x}Al_x$ metallic glass, atomic and electronic struct., MNR and mag. susceptibility studies 3−27850
$CdCr_{2x}In_{2-2x}S_4$, spin glass, EPR study 3−28695
$CdCr_2Se_4$, ferromag. semicond. film, delayed Barkhausen jumps and mag. struct. 3−23705
$CdCr_2Se_4$, ferromag. semiconductor, $P(Se_2)$-a(CdSe) phase diagram 3−42751
$CdCr_2Se_4$, ferromag. semicond., negative differential resistances 3−52165
$CdCr_2Se_4$ film, synthesis, chem. composition, elec. and mag. props. 3−58050
$CdCr_2Se_4$ mag. semicond. film, domain boundary stabilisation, Kerr effect study 3−28669
$CdCr_2Se_4$, photoferromagnetic effect for local illumination 3−18970
$CdCr_2Se_4$:Ga mag. semicond., light effects on Barkhausen jumps and mag. noise 3−23708
$CdCr_2Se_4$:In(Ag), mag. semicond., elec. cond., mag. order effects 3−28362
$CdCr_2Se_4(S_4)$, ferromagnets, EPR linewidth critical behaviour 3−23799
$Cd_{1-x}Hg_xCr_2Se_4$ solid soln., cathodolum., temp. depend. 3−3829
$CdIn_{2-2x}Cr_{2x}S_4$, mag. diluted spinel, spin glass and ferromag. states, EPR, Mossbauer and magnetisation studies 3−23651
$Ce_{1-x}La_xSb(Bi)$, anomalous mag. and transport props. 3−52591
CePt, resist. and magnetisation meas. 3−47482
$CeSi_x$, mag. and nonmagnetic behaviour 3−52482
$CmCO_5$, interatomic forces, effective, from one-particle cryst. field parameters 3−23339
Co alloys, glassy and crystalline, mag. moment variation, chem. bonding and local symm. model 3−23598
Co, anisotropy const., band model calcs. 3−52452

ferromagnetic properties of substances continued
Co, electronic band struct., Fermi surface, and optical props. under press. 3−3051
Co ferromag. fine particle systems, Neel relax. study 3−52554
Co film, electroplated, for perpendicular mag. recording, microstruct. and mag. props. 3−28227
Co films on non-magnetic substrates, mag. moment, anomalous Hall effect study *(German)* 3−52565
Co, ideal reciprocal ferromagnetism *(Polish)* 3−47524
Co monolayer film on Cu (111), exchange splitting and ferromag. order 3−38656
Co particles, ferromagnetic, crit. size calc. for uniaxial anisotropy 3−52553
Co, reversible ideal ferromag., dipole eqns. *(German)* 3−18838
Co, spin wave theory, mag. moment and magnetisation study 3−33873
Co, thermal transport props. near Curie point 3−8275
Co thin film recording medium on Cr, origin of coercivity and high squareness 3−18953
Co $Ti_{1-x}Al_x$, NMR study of hyperfine coupling constants 3−57796
Co- B-Si metallic glasses, spin wave stiffness const., magnetisation study 3−28535
Co-Cr alloy, mag. props. and anisotropy 3−57589
Co-Cr film, perpendicular magnetisation struct. 3−28665
Co-Cr film, sputtered, magnetisation reversal 3−28654
Co-Cr film, vac. deposited, mag. and struct. props. 3−38654
Co-Cr film deposition by opposing targets sputtering method, plasma effects 3−28992
Co-Cr layers, RF sputtered, for perpendicular mag. recording, struct. props. 3−51987
Co-Cr layers, RF sputtered, for perpendicular mag. recording, mag. props. meas. 3−52564
Co-Fe-Ni-Mn-B-Si metallic glasses, near zero magnetostrictive, with very high saturation induction 3−28672
Co-Fe-Si-B, amorphous, short-range order, stability, and mag. props. *(Russian)* 3−37792
Co-Nb based alloy films, amorphous, mag. props. 3−43414
Co-Nb-B, amorphous and microcryst., mag. moments and bonding 3−57561
Co-Nb-B metallic glass, mag. moment, magnetisation and Curie temp. 3−28523
Co-Nb-Mn(Fe)(Ni)(Ti)(Mo), amorphous, saturation magnetisation and magnetostriction, comp. depend. 3−33962
Co-Ni films, sputter deposited, struct. and high coercivity props., additional elements effects 3−23744
Co-Ni:N film, high coercivity and microstruct. 3−18947
Co-P alloys, amorphous, temp. depend. of exchange inhomogeneity characts., spin wave reson. 3−57791
Co-P films, amorphous, struct. and mag. props., effect of heat treatment and ion irrad. *(Russian)* 3−27843
Co-rare earth 17:2 permanent magnets, precipitation hardened, coercivity rel. to microstruct. 3−23728
Co-Sn thin film, cryst. and amorphous, elec. and mag. props. 3−28454
Co-V films for perpendicular recording 3−28993
Co-W alloy based electrolytic thin films, mag. props. and chemical composition *(Russian)* 3−14092
Co-W alloys, electrocrystallisation during this mag. film deposition *(Russian)* 3−14514
Co-W-P alloys, electrocrystallisation during thin mag. film deposition *(Russian)* 3−14515
$Co_{66}B_{30}Si_4$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3−33932
$CoCl_2$ intercalation cpd. with graphite, mag. transitions, susceptibility and spontaneous magnetisation studies 3−57611
$CoCl_2$.2 pyridine, one-dimensional magnet, mag. excitations, ESR study 3−57752
CoCr based vertical recording materials, sputter deposited, mag. props. and microstruct. 3−57714
CoCr film, RF sputtered, magnetisation characts. 3−28655
$Co_{58}Fe_5Ni_{10}Si_{11}B_{16}$, amorphous ribbon, power loss, annealing conditions effect 3−28649
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloy, induced anisotropy reorientation kinetics 3−28547
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$, metallic glass, properties and appl. test *(Polish)* 3−52543
β-Co_xGa_{1-x}, elec. resist. near Curie temp. 3−43153
Co_xGa_{1-x}, mag. clustering, aftereffect, neutron depolarisation study 3−52558
$Co_2Ga_{2-x}Fe_x$, mag. order, Mossbauer effect and magnetisation study 3−52525
$CoGa_{1-x}Nb_x$, mag. and struct. props. 3−52369
$(Co_{1-x}Mn_x)_2P$, Curie temp., press. depend., AC susceptibility meas. 3−43364
CoO-P_2O_5-Fe_2O_3 system, amorphous, hereditary mag. props. and stability 3−57703
CoPt type alloys, twin microstruct. effects on mag. props. 3−18932
CoS_2, EPR and ferromagnetic resonance study 3−18996
CoS_2, magneto-optical spectrum and electronic struct. 3−57889
$Co(S_{1-x}Se_x)_2$, specific heat and low field mag. props. meas. 3−23662
$Co(S_xSe_{1-x})_2$, mag. resonance study 3−52631
$Co_{75}Si_{15}B_{10}$ amorphous alloys, mag. after-effects of H 3−23742
$Co_{3n+5}Sm_{n+1}B_{2n}$, permanent magnets, substitution of Fe for Co, effect on mag. props. 3−47500
Co_xSn_{1-x} amorphous alloy mag. ordering, magnetisation study 3−28615
$CoTi_{1-x}Al_x(Ga_x)$, coexistence of ferromagnetic and nonmagnetic Co 3−52468
$Co_2Ti_{1-x}V_xSn$, mag. moment and Sn hyperfine field, magnetisation and Mossbauer studies 3−28315
$Co_3V_2O_8$, mag. props., neutron diffr. study 3−57541
$Co_{90}Zr_{10}$, glassy, saturation magnetisation and magnetic anisotropy meas. 3−23723
Cr, excitonic ferromagnetism, coexistence of CDW and SDW phases 3−43380
Cr-Fe, ferromagnet, crit. correlations, small angle neutron scatt. study 3−23644
Cr-Fe, high field magnetisation curves 3−52539
Cr-Fe alloys, evolution of mag. order, onset of ferromagnetism 3−38590
Cr-Fe alloys, evolution of mag. order, ferromagnetism close to crit. conc. 3−38591
Cr-Fe alloys, high field mag. susceptibility meas. 3−14017
Cr-Te system, magnetisation isotherms 3−38650
$CrBe_{12}$, mag. phase transitions under high press. 3−8669

ferromagnetic properties of substances continued
$CrBr_3$, magnetic domain wall resonance, temp. dependence meas. 3−28706
$Cr_{1/3}NbS_2$, intercalation cpd., magnetisation and neutron diffr. studies 3−18871
CrO_2 powders, mag. props., vol. concentration dependence meas. *(German)* 3−28642
CrO_2:^{57}Fe particles, mag. struct., Mossbauer spectra 3−18860
$(Cr_{1-x}Pd_x)_2As$, mag. props. study 3−52474
$CrS_{1.17}$:Mn(Te), ferrimagnetic-ferromagnetic transition 3−52475
$CsNiF_3$, 1-D ferromag., elastic consts., Brillouin scatt. and US propag. studies 3−57013
$CsNiF_3$, elastic consts., ultrasonic propagation study 3−18365
$CsNiF_3$, semiclassical theory of planar spin states 3−38623
$CsNiF_3$, solitons, inelastic neutron scatt. studies 3−57572
$CsNiF_3$, sp. ht. anomaly due to mag. solitons 3−57638
$CsNiF_3$, sp. ht. meas., 4.3 to 7.25K, evidence for spin solitons 3−57639
Cu-Fe multifilamentary composites, in situ formed, permanent mag. props. meas. 3−28629
Cu-Ni compositionally modulated thin films, mag. props. 3−23746
Cu-Ni-Fe, ferromagnetic inclusions, phase transitions, AC susceptibility studies 3−33941
Cu-Ni-Fe, influence of mag. field on transition temp. to superferromagnetic state *(Russian)* 3−33890
$CuCr_2Se_4-Cu_{0.5}M_{0.5}Cr_2Se_4$, (M=In, Ga), spin glass state suppression by indirect exchange 3−52498
$CuCr_{2(1-x)}V_{2x}S_4$ solid soln., valence states of ions, NMR investig. 3−57792
Cu_2MnAl, optical absorpt. spectra from band struct. 3−28874
$Cu_2MnAl(Sn)$, Heusler alloys, dynamic spin susceptibility calcs. 3−52415
Cu_2MnSn, Heusler alloy, struct. and mag. props., effect of rapid quenching 3−34022
CuNi compositionally modulated structs., mag. props., linear muffin-tin orbital band calcs. 3−23571
$Cu_xZn_{1-x}Cr_2Se_4$ $(0 \leq x \leq 0.1)$, mag. props., phase transition, mag. struct., neutron powder diffr. study 3−38596
Dy, magnetic susceptibility, temp. modulation and temp. hysteresis studies 3−52425
Dy, thermomagnetic energy conversion 3−34731
$DyAl_2$, magnetisation and magnetocryst. anisotropy 3−3488
$Dy(Co, Ni)_2$, intrinsic mag. aftereffect mechanism 3−52557
Dy_2Fe_{17}, mag. props., ^{161}Dy and ^{57}Fe Mossbauer spectroscopy 3−14171
$DyFe_{1-x}Mn_xO_3$, x=0.05-0.335, mag. props. and spin reorientation transitions, Mn^{3+} Jahn-Teller ion effect 3−43371
$Dy_{0.73}Tb_{0.27}Fe_{1.95}$, mag. domain struct. and defects, X-ray topography obs. 3−18931
$Er_2Co_{17-x}Zr_x$ and $Er_{2-y}Pr_yCo_{16.4}Zr_{0.6}$, mag. props., effect of substitution 3−28636
$ErFe_{1-x}Mn_xO_3$, x=0.07-0.33, mag. props. and spin reorientation transitions, Mn^{3+} Jahn-Teller ion effect 3−43371
$ErGa_2$, metamagnetism, magnetisation and neutron diffr. study 3−23631
$Er_{1-x}Ho_xRh_4B_4$, ferromag. and supercond. crit. behaviour, mean field study 3−18824
$(Er_{1-x}Ho_x)Rh_4B_4$, ferromag. supercond., US attenuation near T_{c2} 3−57477
$ErNi_2$, quadrupolar pair interactions, spontaneous magnetisation meas. 3−52422
$ErRh_4B_4$, coexistence of magnetism and supercond., resist. and neutron diffr. studies 3−13947
$ErRh_4B_4$, domain-like mag. struct. in supercond. phases 3−23592
$ErRh_4B_4$, ferromag. supercond., mol. field theory for sf exchange model 3−57463
$ErRh_4B_4$, ferromagnetic superconductor, SF exchange interaction model 3−18817
$ErRh_4B_4$ single cryst., supercond. and mag. props., anisotropic 3−13952
$Er(Rh_{1-x}Co_x)_4B_4$, supercond. and magnetism 3−57495
Eu, quasi-ferromag. behaviour, excess ferromagnetism study *(Russian)* 3−18933
$Eu_{1-x}Gd_xO$ (SM_xO), carrier scatt. and transport phenomena 3−28363
EuH_2, ferromag. semicond., mag. and optical meas. 3−57553
EuO ferromagnetic thin films, Brillouin light scatt. by spin waves, magnetostatic theory 3−57943
EuO, magnetic moment, optically induced charge, microwave SQUID study *(Japanese)* 3−28682
EuO, spin dynamics at high temp., neutron scatt. meas. and theoretical models 3−57564
EuO_{1-8}, carrier scatt. and transport phenomena 3−28363
EuO(S), isotropic ferromagnets, dynamical crit. behaviour 3−14061
EuO(S), static and dynamic mag. props., self-consistent correl. theory 3−52335
EuO(S)(Se)(Te), ferromag. interactions, indirect exchange mediated by spin polarisation of chalcogen electrons 3−57577
EuS epitaxial films, ferromag. domains, magneto-optical study 3−18963
EuS, feromagnetic semiconductor, conduction electron self-energy effects 3−52031
EuS films on Si substrate, MBE growth and mag. props. 3−18951
EuS(Se)(Te), Mossbauer study of mag. hyperfine interaction press. depend. *(German)* 3−52694
EuSe, mag. props., ^{153}Eu NMR study 3−52638
$EuSe_{1-x}S_x$, $x \leq 0.03$, mag. phases, AC susceptibility, ^{153}Eu NMR studies 3−52483
$EuSe_{1-x}S_x(Te_x)$ and $Eu_{1-x}Sr_xSe$, magnetic phases, ^{153}Eu NMR and differential susceptibility study 3−18899
$(Eu_{0.2}Sr_{0.8})S$, susceptibility behaviour near freezing temp. 3−57562
$Eu_xSr_{1-x}S$, site-diluted Ising ferromagnet, spin glass, octahedron approx. on FCC lattice 3−3464
$Eu_xSr_{1-x}S$, spin correlations near ferromag.-spin glass crossover 3−57663
$EuSySe_{1-y}$ and EuSe, mag. phase diagram under hydrostatic press. 3−18890
Fe (110) epitaxial film on W (110) ribbon, spin polarised electron scatt. 3−23751
α-Fe, activation energy for self diffusion, ferromag. ordering effects 3−57121
Fe alloys, glassy and crystalline, mag. moment variation, chem. bonding and local symm. model 3−23598
Fe alloys, sintered, soft magnetic, props. and appl. 3−39065
Fe, amorphous, hyperfine field and atomic mag. moment 3−43132
α-Fe, and α-Fe alloys, mag. order influence on Fe self-diffusion *(Czech)* 3−57666
Fe, anisotropy const., band model calcs. 3−52452

ferromagnetic properties of substances continued
Fe, Armco, electromagnetic-acoustic technique for Rayleigh wave reception 3−57740
Fe, cast, grey, hardness testing by upper harmonics method *(German)* 3−9294
Fe complex, bromobis(N,N-diethyldithiocarbamato)iron(III), heat capacity, λ-type ferromag. phase transition 3−52463
Fe compounds, pressure-induced high spin-low spin transition, mag. props. 3−52532
Fe, critical dynamics above Curie point, polarised neutron study 3−52496
Fe, critical dynamics at Curie point, role of spin-nonconserving forces 3−3456
Fe, critical scattering of polarised neutrons above T_c 3−52394
Fe epitaxial film, FMR study, surface anisotropy effects 3−23807
Fe epitaxial films on GaAs substrates, growth and mag. props. 3−18950
Fe epitaxial garnet films, anisotropy and exchange parameter ferromag. resonance study 3−14093
Fe, epitaxial metal film sandwich, mag. moment var. 3−13683
Fe, ferromagnetic, electronic struct. of 3d impurities 3−3104
Fe, ferromagnetic, NMR under high press. *(Russian)* 3−52634
Fe, ferromagnetic, pseudopotential calcs. of ground state props. 3−57510
Fe, ferromagnetic antiresonance transmission meas. of critical exponent β 3−28704
Fe, ferromagnetic domain struct., neutron polarisation anal. 3−52519
Fe, ferromagnetic films and heterogeneous double layers, mag. props., Brillouin scatt. from spin waves *(German)* 3−14314
Fe ferromagnetic thin films, Brillouin light scatt. by spin waves, magnetostatic theory 3−57943
Fe film, correspondence of optical anisotropy to mag. anisotropy 3−28816
Fe film, Dy ion implantation at 400 kV, struct. and props. 3−57716
α-Fe film, γ magnetic resonance, polarisation detection method 3−8731
Fe film, mag. parameters determ. from spin wave Brillouin scatt. 3−19150
Fe film, magnetic phase transition verification 3−28560
Fe film, thermal spin waves and FMR modes, role of surface anisotropy 3−23748
Fe, fine electrolytic powders with organic coatings, reduction annealing, micropowder prep. 3−58066
Fe fine particles, mag. domain structs. and domain walls 3−3479
Fe, hard saturated, surface eqns. 3−52597
Fe, ideal reciprocal ferromagnetism *(Polish)* 3−47524
Fe interface, magnetism studied by neutron diffr. 3−57532
Fe, isotropic ferromagnets, dynamical crit. behaviour 3−14061
Fe, left-right asymmetry of polarised neutron scatt. above T_c 3−52395
Fe, light impurities, hyperfine fields and adiabatic pot. 3−52064
Fe, mag. domain walls at high temp. 3−28595
Fe, magnetic domain interactions with dislocations and grain boundaries, HVEM study 3−23699
Fe, magnetostriction 3−57731
Fe microcrystals, Barkhausen jump parameters 3−23715
Fe particle magnetic tape, Mossbauer study 3−19029
Fe particles, prep. for mag. recording tapes, coercive force, saturation magnetisation, grain props. 3−23739
Fe powders, sintered mag. cores, coercive force 3−47527
Fe pyrophonic powders, stabilising oxide layers effect on mag. props. 3−23731
Fe, reversible ideal ferromag., dipole eqns. *(German)* 3−18838
Fe, single cryst., ferromag., spontaneous magnetisation determ. *(French)* 3−23596
Fe, spin fluctuations rel. to photoemission line shape, cluster theory 3−57627
Fe, spin wave theory, mag. moment and magnetisation study 3−33873
Fe, spontaneous magnetisation and spin wave theory *(French)* 3−52412
Fe, surface (110) magnetism from polarized electron scatt. 3−18969
Fe, temperature-pressure phase diagram 3−34284
Fe, thermal transport props. near Curie point 3−8275
Fe thick film, ultrasonic generation and propagation 3−22979
Fe whiskers, low field FMR near T_c 3−57783
Fe:^{152}Sm, hyperfine mag. fields 3−3138
Fe-^{115}In(^{75}As), dil., hyperfine fields of impurity nucl., press. depend., NMR study 3−43445
Fe-Au-B sputtered amorphous alloys, high mag. moment 3−28521
Fe-B amorphous RF sputtered film, magnetoelastic wave excitation 3−38664
Fe-B-Si, amorphous, casting, max. melt spun thickness, composition effect 3−29027
Fe-B-Si amorphous ribbon, mag. props., Al and S additions effect 3−28648
Fe-B-Si(-C) amorphous ribbons, mag. props. limited by surface crystn. 3−28200
Fe-B(-Mo)(Ni-P)(-Cr) 3−28326
Fe-based amorphous alloys, Invar effect, magnetostriction meas. 3−57738
Fe-based metal pigments for mag. recording tapes, coercivity, porosity and particle size depend. 3−23740
Fe-C, ferrite 3−8202
Fe-C system, carbides and diamond formation under high temp. and press., mag. study 3−18390
Fe-Co alloys, Fermi surface topology influence on kinetic props. 3−8405
Fe-Co powders, mag. props., vol. concentration dependence meas. *(German)* 3−28642
Fe-Co-B-Si, amorphous, high-field magnetisation and spin wave const. meas. 3−23717
Fe-Co-Cr(V), magnetisation props. and fine cryst. struct., TEM, Mossbauer and X-ray diffuse scatt. studies *(Russian)* 3−33927
Fe-Co-Si ribbon, rapidly quenched, grain struct. and mag. props. 3−29110
Fe-Co-V, mag. props. stability, thermomag. treatment effects 3−43411
Fe-Cr, ferromagnetic, mag. correlations near crit. conc., neutron small-angle scatt. study 3−14055
Fe-Cr, ferromagnetism, antiferromagnetism and spin glass states 3−52465
Fe-Cr, Invar anomalies, magnetisation and thermal expansion meas. 3−57727
Fe-Cr, tempered, mag. trans. rel. to heat treatment *(French)* 3−52486
Fe-Cr, thermal expansion in range 4.2-300K 3−23063
Fe-Cr-B amorphous systems, mag. permeability after-effect 3−28643
Fe-Cr-Co permanent mag. alloy, high temp. X-ray diffr. study, effect of ageing *(Chinese)* 3−27892
Fe-Cr-Co permanent magnet alloy, atom probe FIM, microstruct. and comp., coercivity mechanism 3−14559
Fe-Cr-Mo magnet alloys, semi-hard, glass sealable, for remanent reed contacts 3−33936

ferromagnetic properties of substances continued
Fe-Cr(V), dil., hyperfine field and mag. moment, NMR study 3−19000
Fe-Cu-B amorphous systems, mag. permeability after-effect 3−28643
Fe-H system, phase transitions, phase diagrams and mag. props. 3−33425
Fe-Mn, amorphous, spin freezing below ferromag. transition, AC mag. susceptibility study 3−23647
Fe-Mn, amorphous ferromagnetic, mag. correlations near crit. conc., neutron small-angle scatt. study 3−14055
Fe-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3−14038
Fe-Ni, amorphous, spin freezing below ferromag. transition, AC mag. susceptibility study 3−23647
Fe-Ni, electronic and mag. structure evolution during ferromagnetic ordering *(Russian)* 3−28263
Fe-Ni, FCC, local mag. moments, magnetisation meas., magnetovol. effect 3−52531
Fe-Ni, Invar, phase diagram and mag. phases from studies on Santa Catharina meteorite 3−24212
Fe-Ni, magnetovolume effect, magnetostriction and thermal expansion anomalies 3−52584
Fe-Ni, rapidly quenched, mag. props. rel. to at. short-range order 3−52526
Fe-Ni alloys, mag. soft powder cpds., sintered, mag. props. study *(Polish)* 3−3476
Fe-Ni crystalline films, mag. anisotropy calc. 3−57718
Fe-Ni Invar alloys, mag. props., neutron irrad. effects 3−52471
Fe-Ni Invar sputtered films, anomalous mag. behaviour, Mossbauer study 3−52559
Fe-Ni-Al-Co high coercivity alloys, magnetisation curves and interaction domains *(Russian)* 3−28607
Fe-Ni-Al-Ti mag. alloy, semi-hard, struct. and mag. props. 3−58145
Fe-Ni-Cr-B-Si amorphous ribbons, Cr conc. effects, magnetisation study 3−28616
Fe-Ni-P-B amorphous ribbons, electron and proton irrad. effects on mag. props. 3−28554
Fe-Ni-Si (15, 12 wt.%), splat cooling to improve mech. workability and constancy of permeability 3−29111
Fe-Ni-Ti (-Co) austenitic alloys, martensitic transformation and strength, mag. ordering effects *(Russian)* 3−53048
Fe-Ni(-Ru), hysteresis loops and thermal expansion coeff., 4.2 to 300K 3−52530
Fe-P alloys, mag. soft powder cpds., sintered, mag. props. study *(Polish)* 3−3476
Fe-P amorphous Invar alloys, magnetoelastic props. and linear magnetostriction 3−3500
Fe-Pd, permanent magnet alloy, isothermal heat treatment, phase transform. mag. props. 3−58119
Fe-Pd Invar alloys, magnetostriction and field-induced transform. meas. 3−52586
Fe-Pd Invar alloys, thermal expansion and magnetisation anomalies 3−52587
Fe-Pd permanent magnet alloys, isothermal heat treatment and phase diagram *(Japanese)* 3−9032
Fe-Pd-Ag, coercive force, residual flux density, Ag conc. depend. 3−57706
Fe-Pd-H system, mag. props., Mossbauer emission spectra study 3−28742
Fe-Pd(Pt)(Ni) Invar alloys, susceptibility and magnetisation meas. 3−52417
Fe-Pt, mag. and magnetovol. props. around γ-α phase boundary 3−52585
Fe-Pt Invar alloys, disordered, lattice parameter meas., rel. to magnetovol. effect 3−51540
Fe-Se (3 wt.%) statically bent vibrating ferromagnetic plate, magnetoelastic effect 3−28680
Fe-Si, ferromagnetic antiresonance transmission meas. of critical exponent β 3−28704
Fe-Si, polycryst., with stress coating, demagnetization effects 3−33923
Fe-Si, spin and charge density changes, effect of Si, Mossbauer study 3−19021
Fe-Si (1 wt.%), (110)[001] oriented, secondary recrystn. textures 3−34347
Fe-Si (3 wt.%), domain refinement due to scatching 3−3478
Fe-Si (3 wt.%), electric sheets, magnetic props., meas. with induction anisometer *(German)* 3−49413
Fe-Si (3 wt.%), grain oriented, power loss 3−28600
Fe-Si (3 wt.%), grain oriented mag. props. and domain struct., Mg_2SiO_4 coating effect 3−28601
Fe-Si (3 wt.%), grain oriented, power loss, tensile stress effect 3−33963
Fe-Si (3 wt.%), grain oriented, mag. flux distrib., waveforms, stress and temp. effects 3−57741
Fe-Si (3 wt.%), high permeability grain oriented, texture changes during secondary recrystn. 3−29099
Fe-Si (3 wt.%), loss separation meas. 3−28626
Fe-Si (3 wt.%), magnetic props. for transformer core appls. 3−28588
Fe-Si (3 wt.%), nonoriented, loss calc. from classical viewpoint 3−28590
Fe-Si (3 wt.%), reversible magnetisation change due to repeatedly applied tensile stress 3−52578
Fe-Si (3 wt.%), rotational power loss and mag. field vector meas. method 3−30904
Fe-Si (3 wt.%), saturation magnetisation, 3.5 to 300K, FMR and ferromag. antireson. study 3−33987
Fe-Si (3 wt.%) grain oriented laminations, Bloch wall dynamics during magnetization 3−33922
Fe-Si (3 wt.%) grain oriented laminations, Bloch walls motion homogenisation effects due to mech. tension 3−52510
Fe-Si (3 wt.%) single crystal, electromagnetic acoustic conversion, magnetic charact. effect 3−23780
Fe-Si (3.25 wt.%), phase-shifted flux harmonics and magnetostriction 3−33965
Fe-Si (4 wt.%), dynamic domain wall motion, 30 Hz to 5 kHz 3−52511
Fe-Si (6.5 wt.%) ribbon, rapidly quenched, mag. props., thickness depend. 3−28656
Fe-Si (<4 wt.%) ribbons, high flux density 3−28612
Fe-Si alloys, mag. soft powder cpds., sintered, mag. props. study *(Polish)* 3−3476
Fe-Si coated sheets, magnetised, domain detection by computer-controlled field scanning 3−52509
Fe-Si cryst. ribbons, rapidly quenched, coercive force and mag. losses 3−52542
Fe-Si grain oriented sheet, bending effect on domain configurations and losses 3−33964

ferromagnetic properties of substances continued
Fe-Si single cryst., AC magnetostriction and magnetisation close to (110)[001] 3−38666
Fe-Si-Al, soft mag. props., heat treatment effect 3−28613
Fe-Si-Al-Ni, super Sendust films, mag. props., recording appls. 3−33943
Fe-Si-B amorphous alloys, Mossbauer spectra, hyperfine fields and mag. props. 3−28740
Fe-Si-B-C-Mn-S-N, secondary recrystn., cold work and C role 3−34348
Fe-Si-B-C-N alloy, high induction development, C content rel. to hot rolling temp. 3−29197
Fe-Tb-Gd magnetisation and perpendicular anisotropy, effect of columnar microstruct. 3−23747
Fe-Ti sputtered films, metastable BCC and amorphous, mag. props. 3−57719
Fe-W-Cr-V-C, mag. field induced first order phase transition 3−53051
Fe-Zr amorphous alloy, hydrogenation effects on mag. and thermal expansion props. 3−28125
FeB metallic glass, struct. determ. by polarised neutron diffr. 3−52392
$Fe_{1-x}B_x$ amorphous films, magnetisation and comp. 3−57722
$Fe_{40}B_{60}$ amorphous sputtered film, magnetism, Mossbauer study 3−28657
$Fe_{80}B_{20}$ amorphous ferromagnet, instantaneous reversible permeability 3−28610
$Fe_{83}B_{17}$, amorphous, mag. excitations, neutron scatt. study 3−14030
$Fe_{83}B_{17}$ glass, spin polarised Auger spectroscopy probe of mag. props. 3−28938
$Fe_{87}B_{11}Au_2$ amorphous ribbons, high mag.moments and magnetisation 3−28522
$FeBO_3$, magneto-optical props., appl. to magneto-optical unidirectional TE-TM mode convertor 3−23926
$(Fe_yB_{1-y})_{1-2x}R_xLa_x$ alloys, amorphous, low field mag. props. 3−28545
FeBSi amorphous alloys, microstructurally depend. mag. props. 3−28620
$Fe_{75.4}B_{14.2}Si_{10.4}$, amorphous ferromagnet, hyperfine field distrib. *(Korean)* 3−38735
$Fe_{78}B_{13}Si_9$ amorphous ribbon, mag. props., toroid radius influence 3−28611
$Fe_{78}B_{13}Si_9$ metallic glass, accelerated ageing, 60 Hz appl. 3−29109
$Fe_{78}B_{13}Si_9$, Metglas 2605 S2, magnetomechanical props. 3−23767
$Fe_{79}B_{16}Si_5$, Metglas 2605S3, magnetomechanical props. 3−23767
$Fe_{81.5}B_{14.5}Si_4$ amorphous particles, Curie temp. and ferromag. resonance 3−43441
$Fe_{79}B_{15.5}Si_{3.5}C_2$, amorphous, composite mag. annealing effect 3−28650
$Fe_{81}B_{13.5}Si_{3.5}C_2$ toroidal amorphous ribbon and polycryst. cores, step magnetization losses 3−43398
$Fe_{70.5}B_{15.5}Tb_7La_7$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3−33932
$(Fe_xB_{1-x})_{0.9}Tb_{0.05}La_{0.05}$, crystallized, coercive force and microstruct., composition depend. 3−33931
$Fe_{67}Co_{18}B_{14}Si_1$, amorphous ribbons, with transverse or oblique mag. anisotropy, domain studies 3−28594
$(Fe_6Co_{88}Ni_3V_3)_{75}Si_{10}B_{15}$, amorphous soft mag. material with extra low core loss at HF, mag. props. 3−28589
$Fe_{1-x}Co_xSi$, ESR spectra 3−52607
FeCoSiB amorphous alloy, zero-magnetostrictive, initial permeability produced by mag. annealing 3−28651
$Fe_5Co_{75}Si_4B_{16}$, amorphous metallic glass, mag. annealing kinetics 3−28652
$Fe_{70.3}Co_{4.7}Si_{15}B_{10}$, metallic glass, induced anisotropy reorientation kinetics, isotropic behaviour 3−28546
$Fe_5Co_{70}Si_{15}Bi_{10}$, amorphous ferromagnet, mag. noise, Barkhausen effect 3−23697
$Fe_4Co_{66}V_2Si_8B_{20}$, amorphous, mag. props., mag. head appls. 3−33930
$(Fe_{1-x}Co_x)_{90}Zr_{10}$, amorphous, giant forced vol. magnetostriction 3−3503
FeCr, mag. hyperfine fields, Curie temp. and mag. moments, Mossbauer study 3−52673
$Fe_{80-x}Cr_xB_{20}$, metallic glass, crit. indices for ferromag. ordering and spin glass state 3−23650
$Fe_{34}(Cr_xCo_{1-x})_{66}$ alloys, mag. behaviour 3−8699
$Fe_{80-x}Cr_xP_{13}C_7$, amorphous, Invar effect, thermal expansion and mag. props. study 3−52582
$Fe_{0.3}Cu_{0.7}Cr_2S_4$, mag. semicond., mag. props. and cryst. struct. 3−14018
$FeGaO_3$, noncryst. ferromag., cond. and mag. props. 3−28660
Fe(III) porphyrins, low temp. magnetisation study 3−38599
$(Fe_{1-x}M_x)_2A$ (M=Mn, Co, Ni, Al, A=Y, Zr, U), onset of magnetism, magnetisation 3−23720
$Fe_{77.6}Mn_{22.4}$-H, spontaneous magnetisation, ferromag. ordering 3−18870
$Fe_{1-x}Mn_xBe_2$, inhomogeneous magnetism, hyperfine interaction meas. 3−33892
$(Fe_{1-x}Mn_x)_{75}P_{16}B_6Al_3$ amorphous ribbon, ferromagnet-spin glass transition, magnetisation study 3−28551
$Fe_{100-x}Mn_xPB(C)$ metallic glasses, Mn hyperfine field distrib., NMR study 3−57799
$(Fe_cMn_{1-c})_{80}P_{16}C_4$, metallic glass, ferromagnet, crit. correlations, small angle neutron scatt. study 3−23644
$(Fe_{1-x}Mn_x)_2Y(B)$, mag. moments, magnetisation, neutron scatt., Mossbauer, and NMR meas. 3−3420
$Fe_{72.5}Mo_{7.5}B_{20}$, amorphous ferromagnets, relax. above Curie point 3−33986
$Fe_{16}N_2$, metastable, reactively sputtered, high saturation magnetisation meas. 3−28628
Fe_4N power, synthesis and mag. props., mag. tape appl. 3−23729
Fe_xNb_{100-x} sputtered amorphous alloy, mag. props., resistivity and Mossbauer spectra 3−28658
FeNi alloys, theory of Invar effect, forced vol. magnetostriction and bulk modulus 3−14102
FeNi dilute alloys, mag. aftereffect 3−28645
$Fe_{0.68}{}^{60}Ni_{0.32}$, mag. moment distrib. study 3−23586
$Fe_{40}Ni_{38}$, mag. hyperfine field, effects of B and Mo additions *(Korean)* 3−38734
$Fe_{65}Ni_{35}$ Invar alloy, mag. interactions, small angle neutron scatt. 3−3417
$Fe_{65}Ni_{35}$, sound velocity dispersion and volume magnetostriction *(Russian)* 3−51716
$Fe_{65}Ni_{35}$, thermal expansion in range 4.2-300K 3−23063
$Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. props., Mossbauer study 3−19027
$Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. phases study by EPR 3−43430
$Fe_{60}Ni_{20}B_{20}$ alloys, amorphous, magnetisation, mech. tensile stress effects 3−47537
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, amorphous, mag. hyperfine field distrib. 3−57835
$(Fe_xNi_{1-x})_{1-y}Mn_y$, mag. moment of Mn, neutron diffuse scatt. 3−52457
$Fe_{40}Ni_{38}Mo_4B_{18}$, amorphous, Mossbauer study and mag. props. *(Korean)* 3−14172

ferromagnetic properties of substances continued
- $Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous alloy, hydrogenation effects on mag. props. 3−28555
- $Fe_{40}Ni_{38}Mo_4B_{18}$, Metglas 2826 MB, domain dragging by elec. current 3−28598
- $Fe_{40}Ni_{38}Mo_4B_{18}$, Metglas 2826MB, anomalous elec. resist. 3−57329
- $Fe_{40}Ni_{40}P_{14}B_6$ amorphous ferromagnet, instantaneous reversible permeability 3−28610
- $Fe_{40}Ni_{40}P_{14}B_6$, domain struct. and behaviour 3−28593
- $Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, CW laser annealing, effects on magnetostriction and Young's modulus 3−37956
- $Fe_{15}Ni_{60}P_{16}B_6Al_3$ amorphous alloy, para, ferro and spin glass regions, high field magnetisation study 3−28614
- $Fe_{29}Ni_{49}P_{14}B_6Si_2$, amorphous ferromagnets, relax. above Curie point 3−33986
- Fe_2O_3, haematite, transverse quadratic galvanomag. effect near Morin temp. *(Russian)* 3−52181
- Fe_3O_4 ferromag. fine particle systems, Neel relax. study 3−52554
- Fe_2P, neutron scatt. study of mag. excitations 3−52383
- $FePd_3$, electronic struct. and magnetism, LCAO calc. 3−28258
- $Fe_{1-x}Pd_x$, FCC, lattice dynamics, mag. ordering effect 3−2701
- Fe_3Pt Invar alloy, mag. interactions, small angle neutron scatt. 3−3417
- Fe_3Pt, Invar behaviour and thermoelastic martensitic transform. 3−39140
- $Fe_{78}Si_{10}B_{12}$ amorphous alloy, struct. relax., elec. and mag. study 3−27847
- $Fe_7Si_8O_{22}(OH)_2$, grunerite, mag. behaviour from Mossbauer spectroscopy 3−52686
- FeTi, activation for H_2 absorpt. 3−48177
- $Fe_{83-x}V_xB_{14}Si_3$ amorphous N_2 containing alloy, thermal and mag. props. 3−28552
- $Fe_{90}Zr_{10}$, amorphous and microcrystalline, domain structure, Lorentz TEM 3−38643
- Fe(110) surface ferromag., exchange scatt. of spin polarised electrons 3−57711
- Fe_67B_{24}, amorphous, Mossbauer Zeeman spectrum, correl. effects 3−38740
- $Ga_{0.5}Mo_2S_4$, sp. ht. meas., cryst. struct. and mag. props., low temp. study 3−8655
- Gd, band struct. and electronic density of states, mag. torque meas. 3−28257
- Gd, elastic consts., anomalies, domain phase theory 3−18363
- Gd, ferromagnet, second mag. phase transition, mag. permeability study 3−33894
- Gd, magnetic hysteresis near Curie temp. 3−52541
- Gd, point contact spectra of magnons *(Russian)* 3−14027
- Gd, spin dynamics at high temp., neutron scatt. meas. and theoretical models 3−57564
- Gd, transport props., spontaneous magnetisation, in crit. temp. region 3−57331
- Gd-Fe-Co amorphous films, magneto-optic Kerr effect and Curie temp. 3−28841
- Gd-Fe(Co) amorphous films, FMR linewidth contrib. 3−57786
- Gd-Y, mag. struct. neutron diffr. study 3−52372
- Gd-Y, onset of helimagnetism, transport props. 3−18894
- $GdAl_2$, band struct. changes on mag. ordering, NMR anal. 3−28722
- $GdAl_2$, mag. form factors, polarised neutron study 3−52376
- $GdAl_2$, quadrupole interaction, pulsed NMR study 3−28736
- $Gd(Co,Cu)_5$, giant Barkhausen jumps and domain boundary displacement 3−23713
- $GdCu_{1-x}Ga_x$, cryst. struct. transforms. and mag. ordering phenomena 3−38595
- $Gd_{58}Ga_{32}B_{10}(Ni_{32}B_{10})(Al_{32}B_{10})$, glassy, random anisotropy magnet, phase transitions obs. 3−23625
- $GdIn_xAg_{1-x}$, cryst. struct. and mag. props. 3−28530
- $Gd_xLa_{1-x}Mg_2$, mag. props., spin echo NMR study 3−28738
- $GdMg_2$, mag. props., NMR and Mossbauer study 3−28738
- $Gd_xY_{2-x}Co_{17}$, saturation mag., electron exchange *(Russian)* 3−47494
- $Gd_xY_{2-x}Fe_{17}$, mag. props. and exchange interactions 3−38608
- $Gd_xY_{1-x}Rh_4B_4$, supercond. and magnetism 3−3357
- $HgCr_2Se_4$, magnetic semiconductor, magnetocryst. anisotropy 3−18886
- $HgCr_2Se_4$, spin disorder effects on plasma edge, IR reflectivity study 3−38825
- $Hg_{1-x}Zn_xCr_2Se_4$ single cryst., mag. phase transition temp., heat treatment effect 3−57597
- Ho, point contact spectra of magnons *(Russian)* 3−14027
- $HoAl_2$, ground state spin waves, inelastic neutron scatt. study 3−28538
- $Ho(Co_{1-c}Ni_c)_2$, mag. phase transition, magnetisation and spin echo NMR study 3−28563
- $Ho(Cu_{1-x}Ni_x)_2$, mag. struct., neutron study 3−52388
- $(Ho_{0.6}Er_{0.4})Rh_4B_4$, re-entrant superconducting-ferromagnetic transition, specific heat 3−3444
- $(Ho_xEr_{1-x})Rh_4B_4$, mean field behaviour of reentrant superconducting-ferromagnetic transition 3−43365
- $(Ho_xLu_{1-x})Rh_4B_4$, mean field behaviour of reentrant superconducting-ferromagnetic transition 3−43365
- $HoMo_6S_8$, domain-like mag. struct. in supercond. phases 3−23592
- $HoMo_6S_8$, ferromag. supercond., mol. field theory for sf exchange model 3−57463
- $HoMo_6S_8$, ferromagnetic superconductor, SF exchange interaction model 3−18817
- $HoMo_6S_8$, supercond., modulated mag. phase, small-angle neutron scatt. study 3−38592
- HoNi, magnetisation, mag. torque and struct. and metamagnetism 3−52536
- HoNi single cryst., magnetisation and elec. resist. 3−28623
- HoP, cubic cpd., mag. props., neutron diffr. results 3−14005
- $(Ho_xY_{1-x})Co_2$, spin reorientation temp. 3−18893
- $Ho_xY_{1-x}Co_{5+0.5x}$, mag. moments and magnetisation curves *(Russian)* 3−28520
- $K(Al, Li, Fe)_x(AlSi_3O_{10})(OH, F)_2$ mica, mag. susceptibility and ^7Li NMR 3−8658
- K_2CuF_4, magnetization, critical behaviour, magneto-optical study 3−52775
- $K_2O\text{-}Al_2O_3\text{-}B_2O_3\text{-}Fe_2O_3$ glass, Fe aggregation on heat treatment, optical and mag. study 3−13467
- $La_{0.8}Ca_{0.2}MnO_3$, prep. by co-precipitation method, mag. behaviour *(French)* 3−38651
- $(La_{0.8}Ca_{0.2})MnO_{3+y}$, ferromag.-antiferromag. transition temp., press effects 3−57605
- $LaCo_5H_x$, hydride phase transitions, magnetisation studies 3−28093
- $LaCo_2Ni_3$, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399

ferromagnetic properties of substances continued
- $La_{1-x}Na_xFeO_{3-\delta}$ defect perovskite system, Mossbauer effect and mag. props. 3−14187
- $La_xY_{1-x}TiO_3$, mag. susceptibility, magnetisation and elec. cond. 3−3421
- Li, metallic, total energy calcs. 3−43057
- $Li_{0.5-x/2}Co_xFe_{2.5-x/2}O_4$, magnetisation and mag. switching, thermomag. treatment effects 3−23707
- $LiNbO_3$:Ti(Fe), growth by Czochralski method, phys. props. *(Korean)* 3−3943
- $LiT6F_4$, Ising ferromagnet, ordered and disordered phases, magnetostriction meas. 3−3505
- $LiTb_pT_{1-p}F_4$, mag. eqn. of state 3−28557
- $LiTb_xY_{1-x}F_4$, ferromag., randomly diluted, uniaxial dipolar, crit. behaviour, high temp. susceptibility 3−57556
- $LiTb_xY_{1-x}F_4$, model singlet ground state system, spin dynamics, inelastic neutron scatt. 3−23591
- Mn-Al based permanent magnets, production and mag. props. *(German)* 3−43406
- Mn-Al-C, domain struct. and magnetisation processes, TEM study 3−52514
- Mn-Al-C permanent magnets with plane anisotropy *(Japanese)* 3−47525
- Mn-Al(-C), domain struct. and magnetisation processes, effect of cryst. defects 3−52513
- Mn-Ga amorphous films, crystn. and mag. domain struct., electron microscopic study 3−8704
- MnAl evaporated films for magnetic recording media 3−18958
- MnAs, ^{55}Mn and ^{75}As NMR study 3−23816
- MnAs, elec., galvanomag., and mag. props. 3−28360
- $Mn_{0.8}Co_{0.2}Sb$ films, polar Faraday rot. and optical absorpt. coeff. 3−8803
- $Mn_{1-x}Cr_xSb$, Curie temp. and compressibility, high press. effects *(Russian)* 3−52462
- $Mn_{1-x}Fe_x(Co_x)Sb$, thin films, mag. props., ferromag. and spin wave resonance studies 3−43440
- $Mn_{1-x}Fe_xSi$, spin fluctuation effects, resist., magnetoresist., and magnetisation meas. 3−57623
- MnPdFe, resistivity anomaly at spin-glass temp. 3−47509
- Mn_xSb_{1-x}, spin polarisation from tunnelling electrons 3−57437
- MnSb(As), mag. polarisation of anions 3−52384
- $MnSb_{1-x}In_x$ films, mag. props., ferromag. resonance study 3−23808
- MnSi, local spin density, temp. depend. 3−57630
- MnSi, ordered and paramag. phase, heavy Fermi liquid, spin fluctuations, neutron scatt. study 3−8672
- $Na_2O\text{-}Fe_2O_3\text{-}NiO\text{-}B_2O_3\text{-}P_2O_5$ glass ceramics, crystallised, mag. and elec. props. *(Japanese)* 3−58144
- $NdCo_5$, anisotropic, appl. to magnetic refrigeration 3−33897
- $NdCo_5H_x$, hydride phase transitions, magnetisation studies 3−28093
- NdPt, magnetisation and mag. struct. study 3−23593
- $(Nd_xY_{1-x})Co_2$, spin reorientation temp. 3−18893
- Ni (001), (110) surfaces, mag. critical behaviour 3−28622
- Ni (001) monolayer, energy bands and magnetisation 3−52560
- Ni (001) surface and thin films, spin-polarised electronic struct. 3−3277
- Ni (110), spin-depend. electron-hole pair excitations in spin-polarised secondary electron emission 3−34183
- Ni (110), surface magnetism, polarised low-energy positron study 3−28681
- Ni alloys, dil., multiplet splitting in high-polarity states, effect on magnetism, Auger study 3−28939
- Ni, anisotropy const., band model calcs. 3−52452
- Ni, band struct. and electronic density of states, mag. torque meas. 3−28257
- Ni, critical phenomena, μSR studies 3−57845
- Ni, exchange splittings, effect of nonlocal spin density exchange pot. 3−52448
- Ni ferromag. fine particle systems, Neel relax. study 3−52554
- Ni, ferromagnetic, deviations from Stoner theory behaviour, polarised neutron scatt. demonstration 3−38603
- Ni, ferromagnetic films and heterogeneous double layers, mag. props., Brillouin scatt. from spin waves *(German)* 3−14314
- Ni, ferromagnetic ground state, spin susceptibility, high field ^{61}Ni Knight shift 3−19003
- Ni ferromagnetic thin films, electronic structure near surface 3−23449
- Ni film, mag. parameters determ. from spin wave Brillouin scatt. 3−19150
- Ni film, surface layers formed by Dy ion implantation, mag. props. 3−57717
- Ni film on Cu substrate, mag. and electronic props. 3−28634
- Ni films on non-magnetic substrates, mag. moment, anomalous Hall effect study *(German)* 3−52565
- Ni, ideal reciprocal ferromagnetism *(Polish)* 3−47524
- Ni, interband transitions and exchange splitting, EELS study 3−43677
- Ni, isotropic ferromagnets, dynamical crit. behaviour 3−14061
- Ni, itinerant electron ferromagnetism, many-body effect 3−52344
- Ni, magnetisation, mag. field depend., 4.2 to 300K 3−23721
- Ni, magnetisation rotation, ΔE effect 3−23722
- Ni, reversible ideal ferromag., dipole eqns. *(German)* 3−18838
- Ni, single crystal, magnetisation high mag. fields, Holstein-Primakoff test *(French)* 3−23702
- Ni, sp. ht. in crit. region 3−3453
- Ni, spin dynamics at high temp., neutron scatt. meas. and theoretical models 3−57564
- Ni, spin fluctuations rel. to photoemission line shape, cluster theory 3−57627
- Ni, spin reorientation, surface impedance and EM generation of sound 3−3502
- Ni, spin wave theory, mag. moment and magnetisation study 3−33873
- Ni, spontaneous magnetisation and spin wave theory *(French)* 3−52412
- Ni, US vel. dispersion due to mag. domains, 8 to 270 MHz 3−52593
- Ni:^{152}Sm, hyperfine mag. fields 3−3138
- Ni:H, ferromagnetic, H props., multiple scatt. cluster-in-condensed-matter calc. 3−33666
- Ni-Al tunnel junctions, spin states resolution, cond. meas. 3−8628
- Ni-B amorphous alloys, sp. ht., elec. resist. and Debye temp. 3−28114
- Ni-Cr alloys, thermodynamic studies and mag. ordering close to critical composition 3−8671
- Ni-Cu, ferromag., sp. ht., crit. exponent anal. 3−57614
- Ni-Cu, ferromag., sp. ht., data anal. with correction terms 3−57615
- Ni-Cu, spin waves, neutron inelastic scatt. study 3−52429
- Ni-Cu alloys, spin wave stiffness const., RPA and cluster CPA studies 3−38605
- Ni-Cu-Pd spinodal alloy, superparamagnetic behaviour 3−52555

ferromagnetic properties of substances continued
Ni-Fe, anomalously prolonged Barkhausen jumps, resonance study 3−23711
Ni-Fe (0.5 at.%); Mossbauer spectra, room temp. to Curie point 3−52678
Ni-Fe crystalline alloy, induced anisotropy reorientation kinetics 3−28547
Ni-Fe-B alloys, chemically deposited, mag., elec., mech. props. 3−52985
Ni-Fe-Co-Ti foils, containing nonmag. precipitates, magnetisation processes, TEM study 3−52572
Ni-Fe-Co-Ti thick foils, mag. domain struct., TEM study 3−52573
Ni-Fe(Co) thin films, spin wave resonance obs. 3−57782
Ni-Mn, disordered, spin glass-to-ferromag. transition 3−23659
Ni-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3−14038
Ni-Rh(V), first magnetocrystalline anisotropy const. and press. effects, torque study 3−18881
Ni-V, spontaneous magnetisation, press. effects meas. 3−18863
Ni_xAl_{1-x}, weak itinerant ferromagnetism, disorder effects, spin fluctuation theory 3−57625
$Ni_{81.5}B_{18.5}$ amorphous alloys, mag. props., magnetisation and NMR study 3−28617
$Ni_x(BSi)_{1-x}$, amorphous, high field magnetisation meas.. 3−57702
$Ni_{1-x}Be_x$, dil. alloy, local vibr. broadening, inelastic neutron scatt. study 3−57048
NiCl intercalated in graphite, mag. transitions, susceptibility, magnetisation and sp. ht. studies 3−57612
$Ni_{0.76-x}Co_xFe_{2.24}O_4$, magnetisation and mag. switching, thermomag. treatment effects 3−23707
$(Ni_{1-x}Co_x)_2MnSn$ Heusler alloys, ferromagnetic and paramagnetic props. 3−3422
$Ni_{1-x}Cu_x(Cr_x)(V_x)(Mn_x)$, high-field mag. susceptibility meas. 3−52416
$Ni_{0.8}Fe_{0.2}$ film, mag. parameters determ. from spin wave Brillouin scatt. 3−19150
Ni_3Fe, configurationally disordered, mag. heat capacity 3−8673
Ni_3Fe, electron irrad. and cold worked, mag. disaccommodation 3−23743
Ni_3Fe, magnetocrystalline anisotropy const. meas. 3−57590
Ni_3Fe, slip-induced mag. anisotropy annealing effects near T_c 3−57586
$Ni_3Fe(Mn)$, critical behaviour of elec. cond. temp. derivative 3−28335
$Ni_2MnAl(Sn)$, Heusler alloys, dynamic spin susceptibility calcs. 3−52415
Ni_2MnSn, optical absorpt. spectra from band struct. 3−28874
$(Ni_{1-x}Pd_x)_2MnSn$, Heusler alloys, Sn mag. hyperfine field crossover 3−23842
$Ni(S_{1-x}Se_x)_2$, insulator-metal and mag. transitions under high press. 3−57600
$NiSiF_6$ $6H_2O$, press.-induced spin reorientation transition, magnetisation and susceptibility study 3−47499
Ni(001), spin polarised LEED, probing of exchange and spin-orbit interaction 3−28313
NpAs, metamagnetic transitions and magnetisation 3−52478
$NpAs_2$, form factor, mag. moment, valence state, polarised neutron diffr. study 3−57545
$NpAs_2$, mag. form factor meas., cryst. field wave function anal. 3−57546
$NpAs_2$, mag. props., 4.2 to 300K 3−28565
$NpAs_2$, magnetic behaviour, Mossbauer study 3−23843
$NpAs_2$, magnetic form factor and cryst. field model 3−23589
$NpAs_2$, magnetic ordering, neutron diffr. study 3−23590
$NpSb_2$, mag. and elec. props. 3−18937
$Pb_3(VO_4)_2$ single cryst., domain struct. and mag. switching 3−23690
Pd-Co, magnetocrystalline anisotropy and magnetostriction 3−57582
Pd-Fe, elec. and mag. props., order-disorder transition temp. effects *(Russian)* 3−23354
Pd-Fe-Au, elec. and mag. props., order-disorder transition temp. effects *(Russian)* 3−23354
Pd-Mn(Fe), longit. magnetoresist near percolation limit, spin glass and ferromag. props. 3−38372
Pd-Ni, ferromagnet, crit. correlations, small angle neutron scatt. study 3−23644
Pd-Ni, Stoner factor, field depend., de Haas-van Alphen study 3−23243
Pd-Ni-H system, phase diagram, cryst. struct., mag. and supercond., props. 3−33392
Pd-Si-Fe(Mn)(Cr), amorphous, magnetisation, AC susceptibility, and Mossbauer meas. 3−57560
PdCo alloy, ferromag., quadrupole interaction for Co, nucl. orientation study 3−3598
PdFe, mag. struct., neutron depolarisation studies 3−51453
$Pd_2MnAl(Sn)$, Heusler alloys, dynamic spin susceptibility calcs. 3−52415
Pd_2MnS_n, optical absorpt. spectra from band struct. 3−28874
Pd_2MnSb, magnetisation density, polarised neutron diffr. study 3−52397
Pd_2MnSn Heusler alloy, plastically deformed, mag. moment distrib. 3−33966
Pd_2MnSn, Heusler alloy, magnetisation rel. by plastic deform., mag. interactions 3−52583
PdNi, mag. correlations near critical conc. 3−23585
$(Pd_xPt_{1-x})_3Fe$, Hall effect, 13 to 400K, effect of mixed exchange interaction *(Russian)* 3−28338
$(Pd_xPt_{1-x})_3Fe$, specific heat meas. across ferromag.-antiferromag. conc. phase transition *(Russian)* 3−3462
$PrAl_2$, magnetostriction and magnetoelastic consts., point charge model 3−43419
$PrAl_2$, thermal conductivity, mag. contribution 3−52114
$PrCo_5H_x$, hydride phase transitions, magnetisation studies 3−28093
$PrCu_5$, enhanced nucl. ordering, neutron diffr. study 3−3416
Pr_2Fe_{17}, polycryst. magnetostriction and thermal expansion 3−57735
$(Pr_{80}Ga_{20})_{100-x}Fe_x$ metallic glass, mag. props. and crystallisation 3−28618
$PrNi_5$, nucl. ferromag., many-body nucl. Hamiltonian 3−43344
PrPt, magnetisation and mag. struct. study 3−23593
$PrPt_2(Rh_2)(Ir_2)(Ru_2)(Ni_2)$, mag. props. at low temps., neutron diffr. study 3−14023
$PrRu_2(Rh_2)(Ir_2)(Pt_2)$, cubic cpd., mag. props., neutron diffr. results 3−14005
PtFeSb, Heusler alloy, struct., mag. and magneto-optical props. and ^{57}Fe Mossbauer spectra 3−57898
PtMn spin glass, low-temp. props. 3−3458
PtMnSb, high magneto-optical Kerr effect obs. 3−38801
$PtMn_x(Sn)(Sb)$, exchange striction and press. effect on Curie temp. 3−52470
$RbCrCl_4$, magnetization, critical behaviour, magneto-optical study 3−52775
Rb_2CrCl_4, mag. moment distrib., neutron diffr. study 3−57539
$Rb_2CuBr.2H_2O$, spin dynamics, effect of exchange anisotropy in crit. region 3−18927

ferromagnetic properties of substances continued
$Rb_2CuBr_4.2H_2O$, low freq. spin dynamics in crit. region, nucl. spin-lattice relax. study 3−3473
$Rb_2CuBr_4.2H_2O$, spin dynamics, effect of exchange interactions in crit. region, NMR study 3−18928
$Rb_2CuBr_4.2H_2O$, spin dynamics at finite fields and temps. 3−18929
Sc_3In, sp. ht. in high mag. fields, 1.3 to 20K spin fluctuation quenching 3−52492
Sc_3In, spin fluctuation quenching in high mag. fields 3−57624
Si-Fe ribbon, mag. props., toroid radius influence 3−28611
Sm-Co, axially magnetised, magnetic thickness gauging of small components 3−25850
Sm-Co thin films prepared by oblique incidence method, mag. props. 3−14091
Sm-Co-Cu-Fe-Zr magnets, sintered, phase comp. and struct. 3−4043
Sm-Co(Fe) films, ferromagnetic, direct synthesis by selectively thermalised sputtering 3−28663
Sm-Zr-Co-Cu-Fe-epoxy resin metalloplastic permanent magnets 3−3487
$Sm(Co,Cu,Fe)_76$, permanent magnets, struct. phase transitions obs. during heat treatment *(Russian)* 3−33417
$Sm_2(Co,Fe,Cu,Zr,Cr)_{14.8}$ permanent mag., ferromag. coercivity 3−33937
$SmCo_5$, Barkhausen jumps, anisotropy of field 3−23714
$SmCo_5$, mag. anisotropy of Sm^{3+} near lattice defects 3−57591
$SmCo_5$, magnetisation reversal, 80 to 300K 3−52550
$SmCo_5$ powder and sintered compact, mag. props. rel. to milling medium 3−47526
Sm_2Co_{17}, mag. anisotropy of Sm^{3+} near lattice defects 3−57591
$Sm(Co\text{-}Cu\text{-}Fe\text{-}Ti)_{6.8}$ sintered magnet, magnetisation reversal at very low temp. 3−52540
$SmCo_{3.5}Cu_{1.5}$, magnetisation reversal at very low temp. 3−52540
$SmCo_{2.5}Ni_{2.5}$, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399
$SmFe_2$, remanent strain, effect of shock loading and initial mag. texture 3−39224
$(Sm_xY_{1-x})_2Co_{17}$, mag. anisotropy, conc. depend. *(Russian)* 3−23622
$SrFe_{1-x}Co_xO_3$, ferromagnetism and helical spin configurations, neutron diffr. study 3−57603
Tb, magnetic phases, SAW study 3−18891
Tb, point contact spectra of magnons *(Russian)* 3−14027
Tb, spontaneous magnetostriction meas. by X-ray. diffr. 3−18966
Tb-Fe, sputtered, props. for tunable SAW device appls. 3−51997
Tb-Fe film, magnetisation and perpendicular anisotropy, effect of columnar microstruct. 3−23747
$TbAgCu_4$, mag. struct. study 3−23587
$TbAl_2$, magnetostriction and magnetoelastic consts., point charge model 3−43419
$Tb(Cu_{1-x}Ni_x)_2$, mag. struct., neutron study 3−52388
$Tb_{0.27}Dy_{0.73}Fe_2$, magnetisation process and domain struct., X-ray topography study 3−3480
$TbFe_2$, amorphous, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399
$TbFe_2$, remanent strain, effect of shock loading and initial mag. texture 3−39224
Tb_xFe_{1-x} sputtered amorphous alloy, magneto-optical props. 3−28838
$Tb_{72}Ga_{18}B_{10}$, glassy, random anisotropy magnet, phase transitions obs. 3−23625
$Tb_{0.78}Gd_{0.22}$, magnetocaloric effect, magnetisation and mag. anisotropy *(Russian)* 3−23637
$Tb_xGd_{1-x}Al_2$, ESR in ferromag. and paramag. phases 3−18986
Tb_2Pt, mag. props. and cryst. struct. 3−18859
Tb_5Sb_3, mag. props. meas. 3−23725
$Tb(Zn_{1-x}Cu_x)$, hyperfine interactions, ^{156}Gd TDPAC study 3−52681
$TiBe_2$, de Haas-van Alphen spectra and induced magnetism 3−3038
$Ti(Be_{1-x}Cu_x)_2$, g value, spin-flip relax., ESR study 3−14121
$TmAl_2$, spin-lattice relax., ^{169}Tm Mossbauer spectroscopy study 3−19023
TmBi ferromagnetic film, bubble translation study *(Russian)* 3−23752
$Tm_{1-x}Eu_xSe$, intermediate valence cpd., elec. resist., vol. change, compressibility, energy gap meas. 3−52080
$TmNi_3(Co_3)$, ^{169}Mossbauer spectra, cryst. field calcs. 3−52675
$TmSe_{1-x}Te_x$, intermediate valence cpd., elastic consts., energy gap meas. 3−52080
UFe_2, ferromagnetic critical phenomena, itinerant-electron magnetism 3−57507
$U(Fe_xCo_{1-x})_2$, magnetisation and susceptibility meas. 3−57554
$U(Fe_xCo_{1-x})_2$, paramag. and ferromag. props., magnetisation and susceptibility meas. 3−33866
UGa_2, U^{4+} mag. form factor, polarised neutron diffr. study 3−57544
US, neutron fission damage, mag. disorder and mag. transition temp. 3−52480
US, neutron irrad. effects 3−16853
USe(Te), magnetic excitations and crit. behaviour, neutron inelastic scatt. study 3−14056
$(U_xTh_{1-x})S(Se)$, dilute alloys, specific heat and Kondo effect 3−57522
$(V_{1-x}Cr_x)BO_3$ $(0 \leq x \leq 0.5)$, synthesis and mag. props. 3−14085
V_3O_7, frequency pulling of ^{51}V NMR at ultralow temp., NMR mode coupling 3−43457
VPd_3, electronic struct. and magnetism, LCAO calc. 3−28258
Y-Al-Gd, amorphous, mag. interactions, AC susceptibility meas. 3−23620
Y-Co based alloys, cryst. growth by Bridgman method 3−19263
Y-Cu-Cd(Pr)(Eu), dilute amorphous alloy, crystal field, neutron diffr. study 3−23337
$Y_{3-x}Bi_xFe_5O_{12}$ single cryst., Curie temp. and Mossbauer spectra *(Chinese)* 3−43463
$Y_{3-x}Ca_xFe_{5-x}Ti_xO_{12}$ garnet, mag., elec. and thermoelec. props. 3−28352
YCo_3 amorphous films, mag. props., effect of incorporated O_2 3−57721
Y_4Co_3, magnetic and superconducting props. 3−23601
Y_4Co_3, phase transitions of ferromag. and supercond. 3−3359
Y_9Co_7, supercond. and mag. props. at high press. and high mag. field 3−47450
YFe_3, reciprocal susceptibility 3−14019
$Y_{1-x}Fe_x$ amorphous alloy, hydrogenation effects on mag. props. 3−28555
$Y_{1-x}Fe_x$ amorphous melt-spun alloy, magnetic props. and crystn. kinetics 3−18934
$Y(Fe_{1-x}Co_x)_2$, H_2 absorption effects on mag. props. 3−52423
$Y(Fe_xCo_{1-x})_2$, mag. clustering, aftereffect, neutron depolarisation study 3−52558
$Y(Fe_xCo_{1-x})_2$, thermal expansion and forced vol. magnetostriction 3−52589
$Y(Fe_{1-x}Mn_x)_2$ mag. props. and Mossbauer spectra, absorbed H effects 3−28631

ferromagnetic properties of substances continued
- $(Y_{1-x}Gd_x)_2Co_{17}$, Y and Co hyperfine fields, Gd contrib., NMR study 3—19012
- YIG, dislocation drag and damping, mag. subsystem effects 3—13225
- YIG plate, surface magnetostatic wave damping, inhomogeneity effects 3—47492
- YIG, three-magnon magnetostatic wave interaction 3—33880
- $Y_2MnAl(Sn)$, Heusler alloys, dynamic spin susceptibility calcs. 3—52415
- $Y_{3-x}Nd_xFe_5O_{12}$ system, mag. anisotropy and lattice consts. 3—28549
- YNi_3, magnetovolume effects, thermal expansion meas. 3—23779
- $Yb_2Co_{17-x}Zr_x$, mag. props., effect of substitution 3—28636
- $ZnFe_2O_4$, formation by air oxidation of aqueous suspensions, charact. props. 3—14541
- $Zn_{1-c}Mn_cTe$, semimagnetic semicond., spin correlations, neutron diffr. study 3—23584
- Zr-based alloys, mag. ordering, H_2 absorption effects 3—28632
- Zr-Cu-Gd, amorphous, mag. interactions, AC susceptibility meas. 3—23620
- Zr-Rh-Gd, amorphous, mag. interactions, AC susceptibility meas. 3—23620
- $(Zr_{1-x}Hf_x)Fe_2$, electronic struct., magnetisation and isomer shift 3—3048

ferromagnetic relaxation
- *see also ferromagnetic resonance*
- metal, ferromagnetic relax., nuclear spin wave-conduction electron interaction *(Russian)* 3—3542
- $Fe_{72.5}Mo_{7.5}B_{20}$, amorphous ferromagnets, relax. above Curie point 3—33986
- $Fe_{29}Ni_{49}P_{14}B_6Si_2$, amorphous ferromagnets, relax. above Curie point 3—33986

ferromagnetic resonance
- *see also ferromagnetic relaxation*
- bis-ethylammonium copper tetrachloride, antiferromag. transitions, press. effects 3—57613
- coaxial cylindrical domains, magnetostatic oscillations *(Russian)* 3—47555
- electron liquid with ferromagnetic impurities, spin wave spectrum and resonance *(Russian)* 3—33869
- ferrite, polycrystalline, mag. cryst. anisotropy const. and effective porosity meas. 3—18885
- ferrite single crystal plates, nonsaturated, FMR, theory and expt. 3—33984
- ferrites, FMR line third and fourth moments, saturation magnetisation inhomogeneities effects 3—52632
- ferrites, polycrystalline, nonmagnetic inclusions on ferromag. reson., porosity effects 3—43442
- ferro- and antiferromagnets, resonant freq. shifts in anisotropic exchange 3—57787
- ferromagnetic film, EM wave absorpt. by coupled electron-nuclear excitations with inhomogeneous FMR line broadening 3—3541
- ferromagnetic film-semiconductor structure, reson. thermomagnetic effects 3—18729
- ferromagnetic insulators and metals, uniaxially anisotropic, nonsaturated, EM wave propag., theory 3—33985
- garnet bubble films, anisotropy field meas. method 3—30898
- garnet bubble layers, Fe, Ga, As implanted, annealing mechanism, FMR study 3—33982
- garnet film, domain wall mass evaluation with reson. spectroscopy 3—18961
- garnet films, misoriented (111) films, anisotropy consts., FMR study 3—23809
- garnets, domain mode FMR for H normal to (111) specimens 3—33983
- Heisenberg ferromagnetic films, light scatt. and spin wave reson. 3—47530
- LUNA 20 soil samples, ferromagnetic reson. g-factor meas. 3—15860
- magnetoelastic gap, isotropic, in spin wave spectrum *(Russian)* 3—47487
- metallic film, spin-wave reson. mode linewidth, exchange-cond. contrib. 3—14138
- metals, ferromagnetic antiresonance region, expression for microwave surface impedance 3—8725
- metals, weakly elec. cond. ferromagnets, ferromag. reson., macroscopic theory 3—57780
- microwave absorpt. in ferromag., effect of dislocation vibrs. 3—18995
- NMR and magnetoelastic resonances, Mossbauer detection with equal NMR and FMR freqs. 3—23850
- nuclear echo phase in the region of coincidence of nuclear magnetic and ferromagnetic resonances *(Russian)* 3—23838
- semiconductor-ferromagnet layered struct., galvano-spin-wave resonance 3—8728
- thin wires, ferromag. reson. theory 3—23805
- weakly electrically conducting ferromagnets, antireson. theory 3—23806
- $Y_{3-x}Ca_xGe_yFe_{5-x}Fe_{x-y}O_{12}$ epitaxial films, mag. props. 3—33948
- $BaFe_{12}O_{19}$ ferrite, coaxial cylindrical domains, magnetostatic oscillations *(Russian)* 3—47555
- $CdCr_2Se_4$:Ag, impurity effect on FMR spectra 3—57784
- Co-P alloys, amorphous, temp. depend. of exchange inhomogeneity characts., spin wave reson. 3—57791
- $Co_{0.1}Mn_{1.7}Fe_{1.2}O_4$, ferromag. reson., mag. anisotropy and magnetisation for multi-domain struct. *(Russian)* 3—18993
- CoS_2, EPR and ferromagnetic resonance study 3—18996
- $Co(S_xSe_{1-x})_2$, mag. resonance study 3—52631
- $CuFe_2O_4$ ferrite, mag. anisotropy, magnetisation and ferromag. resonance study 3—18883
- $CuFe_2O_4$, Jahn-Teller struct. phase transition, ferromag. resonance and mag. study 3—18446
- Fe epitaxial film, FMR study, surface anisotropy effects 3—23807
- Fe epitaxial films on GaAs substrates, growth and mag. props. 3—18950
- Fe epitaxial garnet films, anisotropy and exchange parameter ferromag. resonance study 3—14093
- Fe, epitaxial growth on GaAs (100) by MOCVD, LEED, Auger and FRM studies 3—13652
- Fe, ferromagnetic antiresonance transmission meas. of critical exponent β 3—28704
- Fe film, magnetic phase transition verification 3—28560
- Fe film, thermal spin waves and FMR modes, role of surface anisotropy 3—23748
- Fe thick film, ultrasonic generation and propagation 3—22979
- Fe whiskers, low field FMR near T_c 3—57783
- Fe-Si, ferromagnetic antiresonance transmission meas. of critical exponent β 3—28704
- Fe-Si, ferromagnetic resonance and antiresonance linewidths 3—38700

ferromagnetic resonance continued
- Fe-Si (3 wt.%), saturation magnetisation, 3.5 to 300K, FMR and ferromag. antireson. study 3—33987
- $Fe_{81.5}B_{14.5}Si_4$ amorphous particles, Curie temp. and ferromag. resonance 3—43441
- $Fe_{72.5}Mo_{7.5}B_{20}$, amorphous ferromagnets, relax. above Curie point 3—33986
- $Fe_{29}Ni_{49}P_{14}B_6Si_2$, amorphous ferromagnets, relax. above Curie point 3—33986
- Fe_3O_4, magnetite, weakly elec. cond. ferromagnet, antireson. theory 3—23806
- Gd-Fe(Co) amorphous films, FMR linewidth contrib. 3—57786
- $GdAl_2$, ferromag. reson., exchange const. and surface anisotropy const. determ. 3—18992
- $Gd_{1-x}Co_x$ film, amorphous ferrimag., Tsuya-Wangsness formula 3—18957
- $Gd(Co_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3—52421
- $Gd(Fe_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3—52421
- $HgCr_2Se_4$:Ag, impurity effect on FMR spectra 3—57784
- K_2CuF_4, ^{19}F NMR, ultralow temp. anomaly 3—52668
- Li-Zn ferrites, mag. anisotropy 3—14043
- $Mg_{1-x}Mn_xFe_2O_4$, FMR lineshift and line-width studies 3—38699
- $Mn_{1-x}Fe_x(Co_x)Sb$, thin films, mag. props., ferromag. and spin wave resonance studies 3—43440
- $MnSb_{1-x}In_x$ films, mag. props., ferromag. resonance study 3—23808
- Ni film, surface layers formed by Dy ion implantation, mag. props. 3—57717
- Ni, nonresonance absorption near Curie temp., EPR and FMR obs. *(Russian)* 3—8718
- Ni-Fe(Co) thin films, spin wave resonance obs. 3—57782
- NiO:Fe, precipitation of $NiFe_2O_4$, induced uniaxial anisotropy, FMR study 3—14139
- $PbO.6Fe_2O_3$, magnetoplumbite, LPE growth from PbO-B_2O_3 flux and ferromag. reson. study 3—13684
- $(Y,Sm,Lu,Ca)_3(Fe,Ge)_5O_{12}$ garnet thin film, dynamic props., ferromag. resonance study 3—8727
- $(YBiCa)_3(FeSi)_5O_{12}$ epitaxial garnet films, mag. props. 3—33945
- $Y_{2.78}Ca_{0.25}In_{0.6}Ge_{0.25}Fe_{4.11}O_{12}$, magnetic properties study and Mossbauer spectrum *(Chinese)* 3—52413
- YCo_3 amorphous films, mag. props., effect of incorporated O_2 3—57721
- YIG film, stoichiometric, prep. by sputtering 3—19270
- YIG, parametric spin waves, Brillouin scatt. study 3—23618
- (YSmTmGd)(FeGaAl) epitaxial garnets, mag. props. 3—33944

ferromagnetism
- *see also ferromagnetic properties of substances; ferromagnetic relaxation; ferromagnetic resonance; Ising model; spin waves*
- abelian lattice systems, translation invariant equilibrium states 3—3463
- acoustic properties of many-domain ferromagnets, theory 3—3501
- amorphous, Curie temp. change incorporating effective field fluctuations 3—43369
- amorphous, spin g fluctuations, polarised neutron methods 3—57669
- amorphous alloys, hyperfine field distrib. from Mossbauer spectrum 3—34015
- amorphous alloys, mag. permeability aftereffect and struct. defects 3—57710
- amorphous ferromagnet, Curie temp., Bethe-Peierls-Weiss approximation 3—38614
- amorphous ferromagnet, Heisenberg, spin wave dispersion and temp. depend. of magnetisation 3—14028
- amorphous ferromagnet, Ising model 3—23677
- amorphous ferromagnet, random anisotropy model, singular behaviour in nonzero mag. field 3—23624
- amorphous ferromagnet, smeared crit. region anal. 3—23653
- anisotropic Heisenberg ferromagnet, low temp. spontaneous magnetism 3—3407
- asymptotics of certain random fields on a circle for mean field type ferromag. systems 3—16302
- Barkhausen effect, conf., Kalinin, USSR (Dec. 1980) 3—20562
- Barkhausen jumps and hysteresis, nonlinear theory 3—23709
- Barkhausen noise, second-order periodic group pulse process 3—28605
- bubble film, Raman and Brillouin scatt. from lattice fluctuations 3—28918
- bulk elastic wave conversion into electromagnetic field at ferromagnetic half-space boundary 3—46128
- Cerenkov amplification of exchangeless spin waves travelling along axis of ferromagnetic-dielec. circular cylinder 3—6867
- circular cylindrical coil in set of planar ferromagnetic regions, EM props. computing 3—12036
- classical ferromagnet in quenched random mag. field, critical dimension 3—26007
- classical ferromagnetic chain, with axial anisotropy, solitons and excitation spectrum 3—14034
- classical Heisenberg chain with anisotropies, statistical mechanics 3—43348
- collective oscillations, kinetic description in system of spin waves 3—33883
- conductor, mag. field distrib. 3—43354
- coupled ferromagnet/paramagnetic system, fluctuations and spin reorientation 3—33906
- critical point singularities. III. Three order parameters, order parameters and generalised susceptibilities, ordered phase 3—30831
- Curie-Weiss low spin susceptibility, electron-phonon interaction effect 3—52345
- cylinder, magnetostatic self-energy 3—46121
- degenerate system, domain growth fluctuations and kinetics, Monte Carlo study 3—52515
- dilute ferromagnet, crit. behaviour in two and three dimens. 3—38639
- dilute ferromagnetic alloy, Curie temp., influence of isostructural nucleation of second phase *(Russian)* 3—33891
- dilute ferromagnets, spin anisotropic interactions 3—33904
- dislocation drag and damping, mag. subsystem effects 3—13225
- dislocation in a ferromagnetic continuum, displacement and stress fields 3—51599
- disordered ferromagnet, magnetoelastic interactions, continuous medium model *(Russian)* 3—23765
- disordered ferromagnet, spontaneous magnetisation study *(Russian)* 3—43400
- domain nucleation due to dislocations 3—52518
- domain struct., neutron polarisation anal. 3—52519
- domain wall quasi-resonance displacement and Barkhausen jumps 3—23694

ferromagnetism continued
  - double exchange and spin wave approximation, s-d model *(Russian)* 3—23606
  - dynamic drag of domain walls 3—43393
  - easy plane ferromagnetic chain, soliton instability, magnons 3—18842
  - easy-plane ferromagnetic chain, statistical mechanics 3—13984
  - elastic ferromagnet spin-lattice relax., EM internal variables in EM continua 3—49174
  - electron liquid with ferromagnetic impurities, spin wave spectrum and resonance *(Russian)* 3—33869
  - EM and thermal processes in ferromag. material in pulse mode 3—8710
  - EM field discontinuities 3—6829
  - excitonic ferromagnetism, coexistence of CDW and SDW phases 3—43380
  - excitonic insulators, indirect interaction of Anderson impurities 3—14046
  - ferromagnetic plate, mag. domain lattices near Curie temp. 3—3481
  - ferromagnetic thin film on nonmagnetic metallic surface, mag. props. 3—8703
  - film, crit. indices, Valenta model 3—18949
  - film, domain struct. near paramag. to ferromag. phase transition 3—52570
  - film, EM wave absorpt. by coupled electron-nuclear excitations with inhomogeneous FMR line broadening 3—3541
  - film, Heisenberg, magnons, anharmonical effects and magnetisation 3—18872
  - film, layered stack, spin waves and light scatt. spectrum 3—33878
  - film, spin correl. time rel. to mag. susceptibility in crit. region 3—18948
  - generalised Heisenberg ferromagnetic spin chain, excitation spectrum 3—23610
  - harmonic chains, Green functions and impurities 3—44927
  - Heisenberg chain, interacting spin-wave theory 3—14033
  - Heisenberg chain, quantum continuous, energy spectrum and magnons 3—3405
  - Heisenberg chain, spin (1/2), multiple bound states 3—47518
  - Heisenberg chain, spin dynamics in mag. field, evidence for second magnon mode 3—38641
  - Heisenberg ferromagnet, anisotropic, with biquadratic exchange, Green function theory 3—28586
  - Heisenberg ferromagnet, continuous one-dimensional, with easy plane, quantum kink, picture of antiferromag. magnon 3—3404
  - Heisenberg ferromagnet, local coexistence of different phases 3—38573
  - Heisenberg ferromagnet, method for generating discrete soliton eqns. 3—30623
  - Heisenberg ferromagnet, uniaxial 1-D, pulse-like soliton soln. 3—52334
  - Heisenberg ferromagnet in paramagnetic region, correl. functions 3—47520
  - Heisenberg ferromagnetic chain, continuous S-matrix for magnons 3—23569
  - Heisenberg ferromagnetic chain, mag. soliton motion about lattice soliton 3—5741
  - Heisenberg ferromagnetic chains, anisotropic, double sine Gordon solitons 3—52507
  - Heisenberg ferromagnetic films, light scatt. and spin wave reson. 3—47530
  - Heisenberg ferromagnetic films, spin waves and response functions 3—47529
  - Heisenberg ferromagnetic insulators, surface exchange anisotropy effects 3—38574
  - Heisenberg ferromagnetic model, anisotropic, Green's function method anal. 3—18926
  - Heisenberg impurity ferromagnet, theory 3—3406
  - Heisenberg model, three-dimens., spin dynamics, effect of exchange anisotropy in crit. region 3—18927
  - Heisenberg model, three-dimens., spin dynamics at finite fields and temps. 3—18929
  - helical SDW state, spin waves due to antisymm. exchange interaction 3—52436
  - hierarchical model, collective variables method for scalar ferromagnet 3—30813
  - history and present role in industry and technology, book contrib. 3—54611
  - hollow cylinder, electromag. fields distrib. *(Ukrainian)* 3—12035
  - Hubbard Hamiltonian, ground state of alloy analogy approx. 3—52336
  - Hubbard model, ground state phase diagram 3—18846
  - Hubbard model, ground state solns., two sublattice formalism 3—52342
  - Hubbard model, ground-state solns., two-lattice formalism 3—38579
  - Hubbard model at $I=\infty$ for finite lattices 3—52343
  - Hubbard model on finite lattice, $I=\infty$ model, numerical anal. 3—18845
  - hysteretic materials modelling 3—52546
  - infinite-range random Ising model, limit distrib. 3—202
  - inspection of ferromag. objects in mag. fields and under stress, demagnetisation effects 3—29269
  - intermediate valence, spin wave theory and magnetisation 3—28542
  - internal friction in second-order spin-reorientation transitions *(Russian)* 3—23629
  - internal magnetic field of object magnetised between poles of electromagnetic 3—50579
  - intra-domain wall NMR lines, freq. shift in mag. field 3—47563
  - ions in insulators, indirect exchange interaction theory 3—3437
  - Ising chain, one-dimensional, with competing interactions, residual entropy 3—23562
  - Ising cubic lattices with four-spin interactions, mag. ground states 3—52333
  - Ising ferromagnet, bond-diluted, on triangular and honeycomb lattices, crit. frontiers 3—18925
  - Ising ferromagnet, correl. inequalities for truncated two-point function 3—28492
  - Ising ferromagnet, d-dimens., domain wall pinning transitions 3—14067
  - Ising ferromagnet, dilute, correlated effective field approx. 3—23563
  - Ising ferromagnet, Griffiths-Hurst-Sherman inequality improvement 3—33848
  - Ising ferromagnet, hypercubic d-dimens., crit. temp. and crit. energy 3—23670
  - Ising ferromagnet, surface anisotropy effects 3—18882
  - Ising ferromagnet, surface tension, real-space renormalisation group calc. 3—13992
  - Ising ferromagnet, Z-D, computation of structure factors by finite-size scaling and transfer matrix methods 3—47515
  - Ising ferromagnets, surface tension, percolation and roughening 3—28493
  - Ising model, anisotropic ferromagnetic, crit. temps., extended linear chain approx. 3—23680

ferromagnetism continued
  - Ising model, quenched bond mixed, ferromagnetic phase breakdown 3—23568
  - Ising model, random bond, on square lattice, ferromag. phase existence 3—8683
  - Ising model, two-dimens., percolation of unfrustrated plaquettes 3—18922
  - Ising model, two-dimensional, analytic continuation at first-order phase transitions 3—28584
  - Ising model in noninteger spatial dimension 3—38569
  - Ising random spin systems, mag. props., high temp. series expansion 3—38637
  - Ising-type chains, mag. field effects in spin dynamics 3—8689
  - isotropic ferromagnet, dynamic critical props. 3—28570
  - isotropic ferromagnet, longit. fluctuation spectrum in hydrodynamic crit. region below Curie point 3—52443
  - isotropic Heisenberg 1D ferromagnet, solitary waves 3—23689
  - itinerant ferromagnet, amorphous, anomalous Stoner enhancement 3—23664
  - itinerant ferromagnet, spin wave spectra, temp. depend. 3—23616
  - itinerant ferromagnetism and supercond., phase changes 3—3359
  - itinerant ferromagnets, effective Heisenberg Hamiltonian, effective exchange integral 3—38577
  - kinetics of interacting quasiparticles in strong external fields, review 3—33752
  - Landau-Lifschitz eqn., Riemann boundary problem on torus and inverse scatt. problem 3—52325
  - Landau-Lifschitz eqn. and Riemann boundary problem on torus 3—8641
  - lattice gas, site-bond correlated percolation, Bethe cluster approx. 3—30801
  - lattice systems, general theory 3—192
  - layers, dispersion eqn. for electromagnetic and spin waves 3—8661
  - long-range potential models, transition matrix, perturbation theory 3—14068
  - magnetic field calc., finite element versus classical series methods 3—46119
  - magnetic field induced ferromagnets, low temp. thermodynamical props., theory 3—23557
  - magnetic switching, noise and hysteresis loops, fluctuation phenomena 3—23710
  - magnetisation, statistical theory *(Russian)* 3—28606
  - magnetisation jumps, spatial field distrib. 3—23712
  - magnetoelastic damping, statistical theory *(Russian)* 3—33961
  - magnetoelastic resonance in domain walls 3—57728
  - magnetometer probe noise analysis, thermal-activation approach 3—352
  - magnetooptical high-vacuum setup, for ferromagnets meas. 3—16380
  - magnon gas, resonance excitation of secondary waves 3—47491
  - magnon-phonon couplings, dislocation influence, phenomenological approach 3—3499
  - magnon-phonon interaction theory 3—47484
  - materials, book 3—54595
  - mean-field model, continuous symmetry breaking 3—33847
  - metal-insulator-ferrite-insulator-metal struct., surface magnetostatic waves 3—52444
  - metal-metal friction phenomena between ferromagnetic materials under magnetic attraction 3—39254
  - metals, magnetoresist. quantum oscills. and chem. pot. 3—28677
  - metals, resist. due to spin wave scatt. *(Chinese)* 3—28333
  - metamagnets, dil., phase transitions, field induced 3—52485
  - microwave absorpt. in ferromag., effect of dislocation vibrs. 3—18995
  - microwave excitation, magnon number multivalued behaviour 3—14032
  - monoclinic ferro- and antiferromagnets, mag. props. 3—57593
  - monoclinic ferromagnet, thermal rotation of easy magnetisation axis, theory 3—23639
  - morphic effect, magnetostriction and Curie temp. *(Russian)* 3—23764
  - Mott transition, electronic model solutions 3—33876
  - multilayers, magnetostatic spin wave modes 3—52441
  - multisublattice ferromagnet, exchange interaction and cation distrib. determ. method *(Russian)* 3—23621
  - narrow-band magnetic semiconds., Hubbard and s-f models, effective spin Hamiltonian and phase separation 3—38580
  - neutron polarisation, conference, Grenoble, France (Oct. 1982) 3—49077
  - NMR relaxation 3—52660
  - nonlinear cryst., Barkhausen effect and hysteresis 3—23704
  - nonlinear ferromagnetic media, anal. study of eddy currents 3—36910
  - nonlinear spin waves, Landau-Lifshitz eqn., formulation, infinite-dimensional Lie algebra on solns. 3—33875
  - one-dimensional chain, S=1, spin dynamics, finite-ring calcs. 3—23608
  - one-dimensional magnets, dil., sp. ht. and inelastic neutron scatt., spin wave theory 3—47490
  - one-dimensional magnets, solitons, survey of expt. studies 3—23607
  - one-dimensional planar ferromagnet in an inclined field, soliton-like excitations 3—38629
  - one-dimensional quantum Heisenberg ferromagnet near T=0 3—57691
  - permanent magnets, characterization and materials development 3—3489
  - planar ferromagnets, topological instability of kinks 3—57502
  - planar uniaxial ferromagnet, two-point functions and bubbles 3—43385
  - plate, domain wall props. inhomogeneity effects *(Russian)* 3—52567
  - plate, surface magnetostatic wave damping, inhomogeneity effects 3—47492
  - Potts model, arbitrary q-state, Monte Carlo simulation 3—20777
  - Potts model, ferromag. and antiferromag., on Bethe lattices 3—45079
  - Potts model, three-state mag. and antiferromag., susceptibility and mag. transition 3—57675
  - quantum Heisenberg and XY models, Suzuki-Trotter transform. to Ising model, Monte Carlo studies 3—33853
  - quantum spin chain, easy-plane, soliton energy 3—13995
  - quasi-two-dimensional Ising models, crossover scaling function for lattice anisotropy, susceptibility 3—38635
  - random bond-diluted Ising ferromagnet, symm. breaking 3—8690
  - random Ising ferromagnets, weak singularity and absence of metastability 3—23674
  - random one-dimensional ferromagnet, spin waves 3—23611
  - random-bond Ising model, boundary between ferromagnetic and non-ferromagnetic phases 3—33909
  - re-entrant superconductor, ferromag., density of states 3—57462
  - residual magnetic field above surface of heavy body, normal component, NDT appl. 3—21970
  - resonant freq. shifts in anisotropic exchange 3—57787
  - reversible ideal ferromag., dipole eqns. *(German)* 3—18838
  - semiclassical theory of planar spin states 3—38623
  - semiconductor, dil., spin density around mag. ion 3—23583

ferromagnetism continued
  semiconductor, electron density of states, s-f exchange model 3−38280
  semiconductor, nonlinear absorption of EM field, electron-magnon interactions 3−19090
  semiconductor-ferromagnet layered struct., galvano-spin-wave resonance 3−8728
  semiconductors, magnetic, Hubbard and s-f model, spin Hamiltonian and phase separation instability 3−8643
  single domain particles, irreversible magnetisation, nonequilib. thermodynamics approach 3−52516
  singlet ground state systems, electronic and nucl. magnetism 3−38568
  spin glass, d-dimensional planar model with arbitrary exchange interactions, local magnetisation 3−8686
  spin glass-ferromagnetic transition, cluster model, magnetisation and susceptibility *(Russian)* 3−52461
  spin glasses, infinitely long-ranged bond-random anisotropic classical planar model 3−52506
  spin glasses, two-site cluster model 3−33900
  spin glasses, vector, coexistence of spin glass and ferromag. long range order 3−18901
  spin wave spectra in ferromagnetic conductors, strong const. elec. field, kinetic theory 3−3431
  spin-wave theory for Heisenberg magnets, Hubbard operators, single-ion anisotropy 3−14037
  spontaneous magnetisation, Landau-Ginsburg eqn. 3−38597
  square lattice, random-bond Ising model, spin-glass-ferromag. boundary 3−23678
  statistical mechanics of easy plane ferromag. chain 3−13985
  superconductor, ferromag., magnetisation in mixed state 3−57494
  superconductor, magnetisation and gap oscills., temp. depend. *(Russian)* 3−28479
  superconductor, mixed state, phenomenological theory 3−8634
  superconductor, surface effects, boundary problems and topological singularities 3−38532
  superconductor, surface magnetisation, field penetration, and surface ordering 3−38531
  superconductor-ferromagnetic metal-superconductor junction, crit. current oscills., exchange field depend. 3−8627
  superconductors, mag. ordered, neutron scattering studies, review 3−57523
  superconductors, mag. ordered, theories 3−57468
  superconductors, mixed state, Ginzburg-Landau eqns. and interphase surface energy 3−57498
  superconductors, thin films, mag. ordering 3−57449
  surface and interface studies using polarized neutrons 3−52401
  surface magnetism, spin polarised electron scatt. studies 3−57530
  surface spin waves on ferromag., inelastic neutron scatt. 3−14035
  surfaces, electron spin polarisation techniques, review 3−28516
  surfaces, low energy electron exchange scattering studies *(Japanese)* 3−28946
  thermo field dynamics and condensed states, book 3−10535
  thin ferromagnetic film, transition from homogeneous magnetisation state 3−38655
  thin ferromagnetic plate, magnetostatic wave exchange oscills. 3−3434
  thin film, autocorrelation time and mag. susceptibility above T_c 3−23750
  thin films, Brillouin light scatt. by spin waves, magnetostatic theory 3−57943
  thin films, Raman light scatt. by magnons 3−3848
  thin films, spin correlation time near Curie point 3−23749
  transition metal alloys, diffuse mag. scatt. meas. using polarised neutrons 3−52391
  transition metals, magnetic elec. struct., real space calcs. 3−52338
  Transport properties of ferromagnets, book contrib. 3−57330
  two-dimensional Potts model, magnetisation discontinuity 3−203
  two-dimensional Z(4) model, phase diagram, Monte Carlo study 3−18912
  uniaxial, charged domain wall, Landau-Lifshitz eqns. *(Russian)* 3−28591
  unmagnetised state, polarisation during neutron scatt. 3−52393
  XY ferromagnets, mag. transitions with random Dzyaloshinskii-Moriya interactions 3−38616
  Z_N symmetric quartet FCC model, phase props. 3−33914

ferromagnets *see ferromagnetic properties of substances; ferromagnetism*

ferrous alloys *see iron alloys*

Feshbach resonances *see atomic resonant states; molecular resonant states*

f.e.t. *see field effect transistors*

few-nucleon reactions *see nuclear reactions involving few nucleon systems*

few-nucleon scattering *see nuclear scattering involving few nucleon systems*

few-nucleon systems *see nuclei with mass number 1 to 5*

Feynman diagrams
  analytic continuation of dual Feynman amplitudes 3−16519
  Compton scatt. for circularly polarised light 3−11113
  divergent Feynman amplitudes, simple parametric integral representation 3−36165
  electron eighth-order mag. moment, Feynman diagrams contrib. 3−45334
  electron eighth-order mag. moment, Feynman diagrams contrib. 3−45335
  electron eighth-order mag. moment, Feynman diagrams contrib. 3−45336
  flavour-changing EM transitions in standard weak interaction model 3−16599
  high-energy nucl. reactions, transition matrix element structure 3−31360
  massless Compton scattering, twistor diagram representation 3−45317
  mean field critical point, perturbation 3−193
  QED, sixth-order vacuum polarisation contrib., parametric formula 3−45333
  quantum field theory of charges and monopoles, infinity subtraction 3−16594
  quarkonium effective Hamiltonian, spin-independ., scalar confining pot. 3−31177
  quarkonium spin-independ. effective hyperfine hamiltonian due to scalar confining pot. 3−21091
  renormalised Feynman amplitudes, Feynman graph low-energy limit in Minkowski space 3−20993
  spinor representations, application to internal and Poincare symmetries 3−5969
  Yang-Mills S-matrix determ., Feynman rules 3−16467
  ed, polarisation effects, one-photon exchange approx. 3−11189
  lh, deep inelastic scatt. structure functions, first power corrections 3−40911
  $p \to \gamma e^+$, Feynman diagram calc., pe^+ coupling strength 3−16572

Feynman diagrams continued
  πNN vertex function for pion production and absorption, organisational procedure 3−45562
  ^{2}H(e,e), polarisation effects, one-photon exchange approx. 3−11189

FFT *see fast Fourier transforms*

fibre optics
  Used for fibre optic instruments and their components e.g. fibre optic gyroscopes, endoscopes and fibre lasers. For optical fibre waveguides used in telecommunications, see optical fibres
  see also optical fibres
  acoustic sensor advances, non-interferometric 3−22238
  acoustic waves, fibre-optic noncontacting sensors 3−50873
  air shock, Mach-130, pseudo-three-dimens. isodensity and density profiles from fibre optic output 3−2141
  air-acoustic signal detect. using interferometric fibre-optic sensors 3−1787
  Antares pulse power system fibre-optic monitoring 3−17534
  balance method of measuring angular rotation rates with a fiber-optic interferometer 3−16339
  bearing monitoring by fibre-optic displacement sensors 3−258
  biomedical monitoring appls. 3−35022
  birefringence measurement in optical fibres by polarisation time-domain reflectometry 3−1774
  birefringent fibres, elliptical-core, polarisation holding 3−7190
  bow-tie highly birefringent optical fibres, single-polarisation operation 3−56331
  ceramics for optical and electronic appls. 3−47809
  coating materials for underwater optoacoustic sensors, environmental effects 3−50860
  coherent optical fibre sensors with modulated laser sources 3−32482
  condensed matter conference, Manchester, England (March 1982) 3−20571
  conference, Los Angeles, CA, USA (Jan. 1982) 3−20564
  couplers, single-mode, polarisation characts. 3−7194
  delivery system, variable section fibre, for high-power laser radiation for surgical use 3−39700
  detector of liquid level 3−17624
  digital radiography, fibre optically coupled diode array system 3−53813
  Doppler anemometer for sperm motility meas., bovine fertility prediction appls. 3−44350
  electric current measuring system using a magnetooptic sensor 3−7195
  electric field detection with piezoelec. polymer-jacketed single-mode optical fibre 3−27241
  electric field sensor, single mode fibre embedded in copolymer film 3−56324
  electro-optics/laser conf., Brighton, England (March 1982) 3−40320
  emitters for fiberoptic communications 3−17554
  encoding method, illuminated dot array, fibre-optic bundle *(Russian)* 3−41768
  endoscope, gradient index, chromatic aberration correction 3−39701
  endoscope, objective of simple design *(Russian)* 3−48367
  endoscope, therapeutic equipment for Ar laser photocoagulation *(Chinese)* 3−15178
  endoscopic CO_2 laser surgery, fibre optic systems 3−53745
  endoscopic photography using white-light flashlamp-pumped dye laser 3−50675
  engine pyrometry, use of fibre optics 3−42012
  fabrication *(French)* 3−37202
  Fabry-Perot interferometer, fibre sensing, optical coherence effects 3−22222
  Fabry-Perot interferometer and its sensor appls. 3−5844
  Fabry-Perot sensor, accelerometer appls. 3−56334
  fibre optic measurement *(Japanese)* 3−12348
  fibre-ring interferometer, light wave distortion, amplitude-phase noise 3−1791
  fluoride glasses for IR fibres, progress 3−41944
  fuel-air explosion detonation vel. meas. using fibre optic liquid detector probes 3−2089
  fused fibre optic arrays for image transforms, figuring methods 3−7176
  glass fibre waveguides, few-mode, with noncircular cores, polarisation props. 3−7209
  gradient-index rod prepared by photocopolymerisation of ternary monomer system 3−37154
  gyroscope, intensity depend. nonreciprocal phase shift for low coherent sources 3−32494
  gyroscope, using Sagnac interferometer 3−27254
  gyroscopes, fundamental precision limit 3−25935
  gyroscopes, optical Kerr effect, nonmonochromatic source effects 3−41989
  gyroscopes, source statistics and the Kerr effect 3−12353
  homodyne demodulation scheme for fibre optic sensors using phase generated carrier 3−7196
  hydroacoustic vibration detector sensitivity 3−22249
  hydrophone, extended, using microbend fibre-optic sensor 3−7356
  hydrophone, fibre-optic, homodyne and heterodyne methods 3−1892
  hydrophone, multimode fibre optic, based on photoelastic effect 3−1776
  image motion compensator construction principles 3−1790
  indoor illumination using conc. and piped sunlight 3−53485
  integrated optics elements for optical gyros 3−17638
  integrated optics II, conf., Los Angeles, CA, USA (Jan. 1982) 3−16072
  interferometer utilising 3×3 fibre coupler 3−7167
  interferometric sensors, dynamic thermal response of single-mode fibre 3−37193
  interferometric sensors using laser freq. switching, demodulation scheme 3−37197
  IR fibre advances, conf., Los Angeles, CA, USA (Jan. 1982) 3−40313
  IR fibres, material dispersion considerations 3−41940
  laser CW oscillation with ultralong optical fibre resonator 3−7025
  laser Doppler anemometer with Bragg frequency shift, using polarisation-preserving fibre 3−12790
  laser Doppler velocimeter with fibre-optic channels 3−32827
  laser Doppler velocimeter with optical fibre, appl. to blood flow velocity meas. 3−19873
  laser fluorescence-absorption measuring device for in-situ organ metabolism investigation 3−53751
  laser interferometer based on multimode fibres 3−54768
  laser speckle velocimeter utilising optical fibres 3−7673
  laser surgical system new generations, fibre optics delivery 3−53752
  lasers in medicine and surgery, conf., San Diego, CA, USA (Aug. 1982) 3−49071
  LED depolarised broadband source using polarisation fibre 3−46303

fibre optics continued
- lens, tapered gradient-index, image properties, ray path eqn. *(Chinese)* 3—41983
- line scanning system with fibre optic elements *(Russian)* 3—41988
- Mach-Zehnder interferometric sensors, polarisation fading 3—5846
- Mach-Zehnder type fibre interferometer, fringe visibility enhancement 3—46315
- medical applications 3—24834
- microbend sensors, single and multimode fibre, stabilisation 3—56332
- mid-IR fibre fabrication for medical appls. 3—50767
- multichannel spark gap, laser fibre optics triggered, space charge effects 3—27768
- multimode fibre-optic interferometer, mixing efficiency, theory *(Japanese)* 3—49439
- neutron imaging system calibration 3—1781
- optoelectronic components in fibre optic technology, proposed symbolic representation/ 3—42010
- phase-nulling fibre optic gyro development review 3—22229
- photo-induced Bragg filter growth in single mode fibre, freq. response *(French)* 3—1775
- photoacoustic spectroscopy of fibre-optic elements 3—37206
- photoelectroluminescent diodes for fibre optics 3—41993
- polarisation backscatter analysis of field distribs. 3—37189
- polariser, single-mode fibre type, fabrication 3—41961
- position-sensitive shadowmeter, using fibre-optic delay line 3—40560
- pressure sensor, microbend light attenuation, theoretically and expt. study 3—54722
- pulse intensity discriminator using birefr. fibres 3—1789
- radiometric applications of IR optical fibres 3—46298
- reflection coupler, PLZT based, for bidirectional transmission 3—7177
- remote displacement analysis using multimode fiber-optic bundles 3—5767
- remote holography, stability achieved using flexible multimode fibre image bundles 3—56159
- remote speckle metrology, incoherent light 3—22224
- remote surface deform. field, fibre optic meas. using numerically processed white light speckle 3—1778
- remote temperature distribution sensor using time-domain reflectometry 3—41999
- ring fibre interferometer, parameters optimisation for angular velocity determ. 3—7206
- ring laser, all-fibre, stimulated Brillouin, submilliwatt pump threshold 3—1672
- scanner, fibre bundle, for multispot laser photocoagulation system 3—4611
- scattering monitor for use with bulk opaque material 3—1779
- SELFOC technology in Japan 3—1780
- sensing, static and dynamic appls. 3—42011
- sensing devices, use of multimode optical fibres 3—22214
- sensing systems, review 3—22223
- sensor, US materials testing appl. *(Czech)* 3—39317
- sensor for refractive index meas. 3—10885
- sensor instrumentation research and development, electromagnetic field meas. appl. 3—42026
- sensors, review *(Japanese)* 3—7198
- sensors and instrumentation, review 3—46335
- single mode fibre, Raman amplification at 1.118 μm, limitation by Brillouin scatt. 3—12236
- single mode fibre couplers, birefringence correction 3—32495
- single mode fibre optic components, directional coupler, polariser and polarisation controller 3—22240
- single mode fibre optic directional coupler for use in reflectometers or gyroscopes 3—1773
- single mode fibre-optic variable delay lines, evanescently coupled taps fabrication 3—17621
- single polarisation fibre, transmission losses, polarisation characts. 3—37233
- single-mode fibre, stress-induced birefringence 3—32496
- single-mode fibre optic waveguides, fabrication, communication and sensor appls. 3—37208
- single-mode fibre systems for deep space communication network 3—22254
- single-mode fibre-type polariser, fabrication technique, polarisation characts. 3—7191
- single-mode lightguides with graded-index profiles, dispersionless, electromagnetic fields, field confinement and energy flow 3—22227
- solar energy transport with optical fibres 3—19561
- spark gap switches triggered by KrF laser through UV optical fibres 3—7851
- star coupler, diode laser array excited, for Fibernet II 3—22243
- status and outlook 3—22226
- switch with magnetic self-alignment 3—50772
- temperature distributed-line sensor, multimode silica-clad fibre with liq. silicone core 3—56319
- temperature sensor using crosstalk 3—37192
- thermometer for high temp. meas. 3—49362
- thermometry, high-speed, sensitive, using optical fibres 3—10847
- transducers, appls. *(Swedish)* 3—30845
- voltage measurement, liquid-core optical fibre sensor based on Kerr effect 3—45157
- water turbidity monitoring by fibre optics instrumentation 3—39564
- wide band differential interferometry appl. 3—46308
- $As_{15}Ge_{30}Se_{55}$ glass IR optical fibres for 2 to 11 μm band 3—41984
- Br_2-liquid-core optical fibre Raman-gain medium, broadband IR generation 3—12139
- GaAs/GaAlAs DH narrow diffused stripe lasers for fibre optic transmitter appls. 3—22109
- He-Ne 1.15 μm laser, CW oscillation with ultralong optical fibre resonator 3—7025
- SiO_2 imaging fibre system, fibrescope Sumiscope development 3—56335
- SiO_2 optical fibre blanks, γ-ray irradiation as impurity content test 3—13277
- Tb_2O_3 scintillating glass target, charm and beauty detect. appls. 3—45768
- TlBr-TlI KRS-5 polycryst. IR fibres for power transmission 3—41985
- TlBr-TlI optical fibre for CO_2 laser beam *(Japanese)* 3—46309
- VO_x films, use in fibre-optic temp. pickups 3—30858

fibre reinforced composites
- *see also carbon fibre reinforced composites; glass fibre reinforced plastics*
- acceleration waves, one dimens., in composite materials modelled as interpenetrating solid continua 3—27426
- adhesive strength estimation and struct. inhomogeneity effect 3—58389

fibre reinforced composites continued
- aeolotropic compressed cylindrical shells, stability and vibrs. 3—32662
- aligned discontinuous fibre reinforced polymers, complex moduli 3—24286
- anisotropic, longit. shear characts. determ. 3—32608
- anisotropic, three-dimens. reinforced, deform., struct. model 3—27408
- anisotropic matrix, effective elastic moduli, generalised plain strain 3—50944
- bending with imposed compressive stresses *(Russian)* 3—17820
- bimodular material plates, geom. nonlinear bending, finite element results 3—37359
- birefringent, applicability of absolute retardation techniques for stress separation 3—34065
- brittle fibre, fracture model 3—27448
- brittle layer coated single brittle fibres, deform. and fracture 3—53161
- bulk molding compound, flow state during compressive molding *(Japanese)* 3—58169
- coated fibres, deform. behaviour and tensile strength 3—4078
- components compatibility, quantitative assessment 3—39076
- composite panel buckling, comparison of numerical and experimental behaviours 3—56456
- damage determination from mechanical loads 3—29248
- deformation, nonlinear phenomenological models 3—50943
- deformation and fracture micromechanisms, dislocation, disclination theory 3—53140
- ductile layer coated single ductile fibre, deform. and fracture 3—53161
- elastic constant determination for shells of revolution *(Chinese)* 3—22407
- elastic end effects, Saint-Venant's principle 3—50941
- elastoplastic matrix, fibre stability *(Ukrainian)* 3—12547
- elastostatic resonances, effective elastic consts. calc. of composites 3—7421
- epoxy matrix, hygrothermally degraded, moisture meas. by CW NMR 3—30886
- epoxy resin laminates, impact fatigue strength under repeated impact loads *(Japanese)* 3—58225
- fibre reinforced Al and Al alloy composites, mech. props. anisotropy 3—24316
- flawed fibre array, elastodynamic backscatter, time-domain results 3—58387
- fracture characteristics of heterogeneous materials 3—53203
- fracture mechanics of composites in compression along cracks 3—53215
- fracture micromechanisms interaction, computer simulation 3—32678
- fracture toughness, double torsion test, transverse cracking eval. 3—24426
- fracture toughness improving design 3—34425
- glass fibre, cross-ply, crack propag., theoretical and expt. study 3—32674
- glass fibre reinforced Al, produced by powder metallurgy, mech. props. 3—43925
- graphite fibre reinforced Al, creep anal. 3—9127
- graphite fibre reinforced epoxy laminates, boundary-layer hygroscopic stresses 3—12515
- interface strength for FRP/FRP and fibre/matrix, temp. depend. *(Japanese)* 3—58222
- jute-glass hybrid fibre reinforced epoxy, compressive strength rel. to vol. fraction 3—53125
- Kevlar fibre reinforced epoxy composites, transverse tensile props., moisture effect 3—47892
- Kevlar fibre reinforced resin, thermal cond. 3—8279
- Kevlar/E-glass fibre reinforced phenolic resin, reusable sandwich beam composite for compressing testing 3—9282
- laminate, boundary layer effects, free-edge stress singularities 3—4074
- laminate, boundary layer effects, free-edge stress soln. and basic charact. 3—4075
- laminated, residual strength degradation model *(Japanese)* 3—58226
- laminated composites, free-edge stress under uniform extension, logarithmic singularity 3—7406
- laminates, fracture, unifying strain criterion 3—14696
- LMFBR, NADYP SURDYN codes, comparison, space kinetics, point kinetics 3—55101
- metal matrix composites, residual stress meas. 3—53352
- metal-matrix laminate plates, plasticity anal. 3—34416
- micromechanical fracture model 3—46488
- misoriented short fibres, effective longitudinal Young's modulus 3—4073
- optimum elastic design of reinforced beam 3—50942
- organic fibre reinforced plastics, damage susceptibility determ. by nondestructive methods 3—53326
- orthogonal fibre composites as micromorphic materials, static linearly elastic theory 3—1954
- photo-orthotropic elasticity, oblique incidence technique 3—32691
- plastic matrix, eqns. of state at high temp. under load, mech. damageability and physicochem. transforms. 3—51742
- plastics, with defective infiltrated layer, nondestructive inspection *(Japanese)* 3—58170
- plate, elastic, reinforced by fibres lying in concentric circles, stress 3—42129
- polyester fabric, PVC coated, boiling water treatment, 6 weeks, stake and socket fractures 3—39231
- polymer matrix, fibre-matrix interactions, mech. props. 3—28221
- polymer matrix, melt, rheology, review 3—27460
- polymers, fiber reinforced, acoustic emission, appl. to material evaluation, review 3—48009
- resin matrix composites, residual stresses 3—53169
- shell, two-layer axisymmetric, optimal study of interface axial shear stresses induced during curing 3—9028
- short fibre reinforced plastics, conf., Montreal, Canada, (Dec 1981) 3—25677
- slab, axially fibre-reinforced, elastic, instability under axial loads 3—50968
- spatially reinforced structural deform. model *(German)* 3—58183
- stability of two fibres in matrix under finite subcritical strains 3—27447
- steel, Al-Cu-Mg-Mn(-Ti), fibre reinforced composite, mech. props. evaluation by bend tests *(Slovak)* 3—58174
- steel, stainless, wire reinforced Cu, cold rolled, deform. 3—34379
- steel fibre reinforced Al, interphase interaction, influence of protective coatings on fibres 3—58266
- steel fibre reinforced concrete, effect of superplasticisers *(Japanese)* 3—58059
- steel fibre reinforced concrete, folded plate ridges under bending moment, ultimate strength *(Japanese)* 3—58231
- steel fibre reinforced concrete, fracture toughness eval. *(Japanese)* 3—58230
- steel fibre reinforced concrete beams, bending-torsion interaction 3—58175
- steel fibre reinforced concrete flexural fatigue, deterioration assessment 3—39249
- strength, probability distrib., effect of fibre arrangement 3—28041

fibre reinforced composites continued
strength of composites reinforced by arbitrarily directed fibres, impulse function use 3—50964
strength of hybrid composites, Monte Carlo simulation 3—51013
stress concentration at circular hole 3—27446
structural members, damping capacity 3—12580
thermal expansion, anisotropy depend. on struct. *(Ukrainian)* 3—13492
thermoelastic materials, fibre-reinforced with thermo-kinematic con straints, thermodynamic theory 3—12516
thermoelastic moduli derivation, differential scheme *(Chinese)* 3—29118
three-component with interphase layer, viscoelastic behaviour 3—32622
ultrasonic image histogram evaluation and enhancement 3—58388
unidirectional, conc. body force loading of elastically bridged penny shaped flaw 3—46497
unidirectional, time-dependent failure under local elastic load sharing 3—56485
unidirectional damage, math. modelling 3—56472
unidirectionally oriented, stiffness change due to crushing of fibres 3—33338
unidirectionally reinforced with elastic-plastic matrix, deformability 3—32621
woven fabric composites, stiffness and strength 3—18362
B fibre reinforced Al, contact stresses and force parameters during rolling *(Russian)* 3—39207
B fibre reinforced Al, room temp. tensile strength, function of annealing temp. and time 3—47960
B fibre reinforced Al, tensile strength, room-temp., function of annealing temp. and time 3—34484
B fibre reinforced epoxy, bonded repair anal. of damaged graphite fibre reinforced epoxy laminate 3—14834
B fibre reinforced epoxy, damping props., anisotropy 3—42714
B fibre reinforced epoxy laminates, fracture, unifying strain criterion 3—14696
B fibre reinforced Ti, room temp. tensile strength, function of annealing temp. and time 3—47960
B fibre reinforced Ti-Al-V, hot pressing and struct. 3—29038
B fibre-organic fibre reinforced plastics, deform., fibre fracture effect 3—34409
Mo wire reinforced Cu, cold rolled, deform. 3—34379
Ni wire reinforced Cu, cold rolled, deform. 3—34379
SiC coated B fibre reinforced Ti-Al-V, hot pressing and struct. 3—29038
SiC fibre reinforced Al alloys, fibre/matrix interaction, prep. and strength *(Japanese)* 3—47804
SiC fibre reinforced epoxy composites, wetting and adhesion 3—29059
SiC fibre reinforced Ni, phase boundary, effect of thermal cycling *(Japanese)* 3—9101
SiC fibre reinforced Ti-Al-V, hot pressing and struct. 3—29038
SiC reinforced Al alloy, fibre and particulate, microstruct. 3—47870
SiC reinforced Al alloy whisker and particle reinforcement, corrosion fatigue in salt laden moist air 3—53256
SiC whisker reinforced Al composite, hot rolling effect on microstruct. and tensile props. 3—53181
W helical fibre reinforced Cu, tensile fracture *(Japanese)* 3—9162
W wire reinforced Cu, cold rolled, deform. 3—34379

fibres
see also carbon fibres; composite materials; fibre reinforced composites; glass fibres; optical fibres
acrylic fibres, oriented, morphological rearrangements, oxidative stabilization 3—34506
asbestos fibre, Fourier-transformed IR photoacoustic spectroscopy 3—13345
brittle layer coated single brittle fibres, deform. and fracture 3—53161
diffusion collection efficiency in aerosol filtration 3—7685
dilute polymeric fibre suspensions, US attenuation obs. and theory 3—8141
dislocations, interfacial, within anisotropic and nonhomogeneous isotropic elasticity *(French)* 3—46933
ductile layer coated single ductile fibre, deform. and fracture 3—53161
electroflocculation, behaviour in var. elec. field *(Russian)* 3—4319
fibrous effluents meas. system *(French)* 3—20885
flexible filaments drawn through liquid, transverse oscills., stability *(Ukrainian)* 3—7473
graphite fibres, derived from benzene, Raman spectra and resist. meas., effect of intercalation 3—23951
heat insulating materials, effective thermal conductivity evaluation *(Japanese)* 3—17771
hollow elastic fibres in elastoplastic matrix, stability *(Ukrainian)* 3—22348
mullite, Ni coated, magnetic orientation of fine particles 3—47814
one-dimensional liquid fibers 3—2098
particulate air pollution, fibrous and nonfibrous material discrimination by light scatt. technique 3—19653
poly /p-/phenylenebenzobisthiazole fibres, high modules, axial bright field lattice images 3—37801
polyacetylene, morphology, polymerisation catalyst influence *(German)* 3—42538
polyester/other polyethylene-1,2 diphenoxyethane-p,p′-dicarboxylate, melt from fibres, polymorphic struct. 3—51505
polyethylene fibres, molecular conformations, chain dimensions, neutron scatt. obs. 3—51507
polyethylene filaments, highly oriented, tensile strength, mol. wt. distrib. effect 3—39218
polyethylene ultraoriented fibres, extended-chain morphology 3—18241
polyimide fibres, molecular mobility of chemical structures by NMR *(Russian)* 3—47556
polymer, thermotropic, oriented, drawn fibres and films, banded structures 3—51489
porous fibrous materials, acoustic absorpt. curves at normal incidence, parametric anal. *(French)* 3—50804
size measurement of transparent fibres using light scattering, approx. calc. 3—16335
suspensions, US inspection 3—19472
thermal insulators, low temp., outgassing props. 3—5800
Al_9Co_2 eutectic alloy fibres, elec. resist. 3—43154
Al_6Fe eutectic alloy fibres, elec. resist. 3—43154
Al_3Ni eutectic alloy fibres, elec. resist. 3—43154
Al_2O_3:MgO fibres, doped and undoped, exaggerated grain growth, microscopy study *(Japanese)* 3—51815
B, bare and SiC coated, mech. props. temp. depend. 3—34408
B, residual stress, determ. using length change on electropolishing, instrument design 3—9268

fibres continued
SiC, creep, temp. depend. 3—39201
SiO_2-Al_2O_3 refractory fibres, recrystn. study *(French)* 3—34357
$Si(OC_2H_5)_4$-H_2O-C_2H_5OH solutions, viscosity charge and spinnability on hydrolysis 3—38113

fibrinogen *see proteins*

field, crystal internal *see crystal field interactions*

field effect devices
see also field effect integrated circuits; field effect transistors; metal-insulator-semiconductor devices
MOS capacitors, set up for simultaneous meas. of quasistatic and high freq. C-V characts. 3—347
SOS small-size p^+nn^+ diodes, double injection phenomena, hot carrier effects obs. 3—13888

field effect integrated circuits
see also charge-coupled device circuits
CMOS LSI, halogen lamp annealing of ion implanted Si *(Japanese)* 3—46986
dosimeter with PMOS transistors for artificial satellites use 3—54235
MOSFET, CO sensitive Pd gate, design and IC sensor appl. 3—54727
pulse train analyser, hand-held instrument using CMOS IC 3—50222
VHSIC, double level metal interconnect technology using photo-CVD oxide process 3—39040
VLSI MOS IC, gettering effects on leakage currents in shallow junctions 3—52230
GaAs MESFET A/D converter and memory IC for ultra high speed transient recording 3—50216
GaAs-Al_xGa_{1-x}As heterojunction, 2D electron gas struct., FET and logic IC appl. 3—57420
Si MOSFET ring oscillator using laser recrystallised polycryst. Si islands 3—33295
Si-Ge alloys, epitaxial, device fabrication 3—28425
SiO_2 MOSFET using plasma anodised SiO_2 film, IC fabrication appl. 3—38337

field effect transistor circuits
Used for general papers and papers where the use of field effect transistors is significant
bioinstrumentation FET cascode preamplifier design criterion for interference minimisation 3—24930
low noise preamplifiers for fast pulse processing, working points optimisation 3—50219
Mosfet high-power pulsed RF emitter—a design for nuclear-magnetic-resonance imaging 3—365
radiation-hardened accelerometer preamplifier for nucl. power plants 3—41204

field effect transistors
see also field effect integrated circuits; insulated gate field effect transistors; junction gate field effect transistors; Schottky gate field effect transistors
buried metal gate vertical FET struct., MBE growth, interface compensating centres 3—3273
electrochemical, measurement techniques *(French)* 3—16352
flicker noise, distrib. model review 3—8545
ion-sensitive, biomedical appl. *(French)* 3—19840
ion-sensitive FET in monolithic pressure-pH sensor for esophageal studies 3—48444
microdielectrometry device for low-frequency dielectric props. of resins 3—340
microprobe ISFET sensors for extracellular ion-activity meas., Na and K sensitivity 3—10943
GaAs FET characteristics as an optoelectronic switch 3—36085
GaAs:Si, liquid doping in CVD, electron mobilities, FET devices 3—18323
GaAs:Sn FET, MBE growth using high throughput system 3—52951
Si films, recrystallised from melt, microelectronics appls. 3—23212

field electron microscopy *see field emission electron microscopy*

field emission, electron *see electron field emission*

field emission, ion *see field ion emission*

field emission electron microscopes
see also field emission electron microscopy
current stabilisation of field emission gun electron microscope field emission gun, beam current stabilisation 3—10945
work function dynamic meas., desorption kinetics determ. 3—49508

field emission electron microscopy
see also field emission electron microscopes
HV electron microscopy, alloy microstruct. determ. *(Japanese)* 3—51463
optical and electron microscopy, advances, book 3—10536
Ir field emitter, adsorption of O_2 studies using FEM 3—34202
Nb-Si system, silicide phase form. and dissociation, field electron microscopy study *(Russian)* 3—23043
W (100), adsorption of Bi, FEM study 3—13643
W surface, adsorbed Ag, work function and field emission microscopy study 3—23186

field emission ion microscopes
see also field emission ion microscopy
pulsed-laser time-of-flight atom-probe field ion microscope 3—479
Pt (110), reconstructed, cross-channel adatom diffusion, computer calc. and FIM study 3—2974

field emission ion microscopy
see also atom probe field ion microscopy; field emission ion microscopes
glasses, insulating, FIM and pulsed laser atom-probe mass spectroscopy studies 3—2424
HV electron microscopy, alloy microstruct. determ. *(Japanese)* 3—51463
ion sources for struct. determination of organic compounds, ionisation methods *(Japanese)* 3—36126
Monte Carlo simulation of atomic processes on the solid surfaces 3—18542
point projection imaging of unstained ferritin mols. on W substrate 3—4729
publications concerning microscopic equipment, methods, appls. and related topics 3—16106
review of principles and selected appl. 3—20954
steel, ion nitrided, struct. characterization 3—4209
Ir (110), reconstructed, cross-channel adatom diffusion, computer calc. and FIM study 3—2974
Ni_4Mo alloy emitters, thermal faceting, FIM study 3—7960
W (001) surface reconstruction, FIM and LEED obs. 3—38175
W (001) surface reconstruction, FIM and LEED study 3—38176
W (110), W, Re, Ir adatom surface diffusion, reflective plane boundaries 3—2977

field emission ion microscopy continued
W, defect prod., computer simulation of surface effects 3—13265
W-Zr field emitters investigation by field ion microscopy 3—19256
field evaporation
charge state distrib., post-ionisation 3—3928
liquid metal field ion emission source, emitter shape effects, theory 3—16443
liquid metal ion source optics, computer simulation 3—36593
self-consistent model, charge hopping and charge draining 3—8943
surface atom binding energy, elec. field depend. 3—8318
tunnelling and thermal evaporation rate consts., model calc. 3—24099
KCl:Ca, doped and undoped, (100) surface, field-enhanced evaporation, terrace-ledge-kink model 3—39015
LaB_6 (001) plane, APFIM anal. 3—51904
Mo, evaporation field temp. depend. for Gomer-type field evaporation mechanisms 3—24101
Mo, field evaporation, Gomer-type escape mechanism and heavy-ion tunnelling, theory 3—19253
NaCl (100) surface, field-enhanced evaporation, terrace-ledge-kink model 3—39015
Si, field evaporation voltage, temp. depend. 3—52904
W (001) surface reconstruction, FIM and LEED obs. 3—38175
W (001) surface reconstruction, FIM and LEED study 3—38176
W, evaporation field temp. depend. for Gomer-type field evaporation mechanisms 3—24101
W, field evaporation, Gomer-type escape mechanism and heavy-ion tunnelling, theory 3—19253
field intensity patterns (antenna) *see antenna radiation patterns*
field interactions (condensed matter)
see also crystal field interactions; hyperfine field interactions (condensed matter)
fluoroberyllate:$Nd^{3+}(Eu^{3+})$ glass, computer simulated struct., comparison with optical spectra 3—33128
oxide glass: Tl^+, stereochemistry and struct. model, ESR study 3—23798
phosphate:$Cr^{3+}(Mo^{3+})$ glasses, energy level splitting, effective g value, ESR study 3—33971
BeF_2-AlF_3-MgF_2-BaF_2:Cr^{3+} glass, energy level splitting, effective g value, ESR study 3—33971
$Ce_{89}Al_{11}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
$Ce_{80}Au_{20}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
$Ce_{72}Cu_{28}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
$Cr(oxalate)_3^{3-}$, forbidden d-d transitions 3—51
Li_2-K_2O-B_2O_3, glass, spectral absorption of Cu^{2+}, mixed alkali effect 3—47676
Na_2O-K_2O-B_2O_3, glass, spectral absorption of Cu^{2+}, mixed alkali effect 3—47676
field ion emission
ionisation probability of H-like atoms near metal surface 3—52906
liquid metal field ion emission source, emitter shape effects, theory 3—16443
liquid metal ion sources, field emission *(Japanese)* 3—20951
Al_2O_3, porous anodic thin film incorporating Ag ions within pores, elec. props. 3—38510
Ga, quasi-point ion source, for microfabrication *(Japanese)* 3—36125
field ion microscopy, atom-probe *see atom probe field ion microscopy*
field ionisation
alkali metal atoms, highly excited states, radiative and spectrosc. props. *(French)* 3—31969
FIM, principles and selected appl. 3—20954
highly excited atoms, tunnelling ionis. in alternating EM field 3—31972
inert gas ions formed by field ionisation, mass spectrometry and appearance spectroscopy 3—6591
ionisation probability of H-like atoms near metal surface 3—52906
H ions formed by field ionisation, mass spectrometry and appearance spectroscopy 3—6591
H_2 gas, ionis. in const. elec. field, electron distrib. function *(Russian)* 3—32839
He(n^1P) Rydberg atoms, electric field ionisation 3—6592
$Hg_{1-x}Cd_xTe$ p-n junctions, field ionisation of deep levels, theory 3—38467
In, Rydberg state spectroscopy, field ionisation technique 3—50359
Na+Ar(Kr)(Xe), Rydberg d states, collisional ang. momentum mixing meas. using selective field ionisation 3—6757
ZnO varistors, leakage currents, carrier trapping mechanism obs. 3—33738
field measurement, electric *see electric field measurement*
field measurement, magnetic *see magnetic field measurement*
field plotting
see also field strength measurement
body surface ECG mapping system, microprocessor based, for pot. patterns dynamic obs. 3—35007
body-surface pot. mapping, noise-reduction method 3—15263
dielectric waveguide end, near field distribution meas. around slanted end 3—25895
ECG body surface pot. mapping 3—9763
field strength measurement
see also electric field measurement; magnetic field measurement
homogeneous dielectrics, nondestructive meas. of spatial charge or field distrib., press. waves methods, anal. 3—10866
field theories, unified *see unified field theories*
field theory, classical *see classical field theory*
field theory, crystal *see crystal field interactions*
field theory, electromagnetic *see electromagnetic field theory*
field theory, meson *see meson field theory*
field theory, quantum *see quantum field theory*
fields, electric *see electric fields*
fields, magnetic *see magnetic fields*
filament lamps
incandescent lamp emitters, luminous intensity spatial distrib. calc. 3—373
radiance broadband lamp standard, for UV, visible and IR ranges 3—398
W-P elements, P conc. effect on props. 3—47119
file management *see file organisation*
file organisation
see also data handling; data structures; database management systems
electron interaction matrix construction from super file 3—1212
filled polymers
butadiene-styrene rubber, relax. transitions *(German)* 3—39189
elastomer, C black filled, nonlinear viscoelastic behaviour, stress relax. 3—19362
epoxide resins, SiO_2, Al_2O_3 or MgO filled, fracture toughness 3—34440
epoxies, Delta Bond 152 and EPO-TEK H20E, specific heat at low temp. 3—51818
epoxy, rubber modified, amine-cured, phase struct. characterisation 3—43798
flake filled, conf., Montreal, Canada, (Dec 1981) 3—25677
flake filled, melt, rheology, review 3—27460
glass fabric reinforced epoxy composite, human head phys. model appl. 3—35047
granular composite ABS plastics, dynamic characts. 3—29119
high filler content, mech. props. temp. and pressure depend., time analogies method appl. 3—27409
melts, two-phase, rheological props. 3—43883
metal filled, with self-lubrication, frictional props. 3—58255
mica filled, mech., thermal and dielectric props. and economics rel. to processing 3—29058
natural rubber, C filler effect on sorption and diffusion of CO_2 3—38136
natural rubber-butadiene rubber blend, C black filled, abrasion, SEM study 3—39255
organosilicon rubbers, crosslinked, filled and unfilled, mol. mobility *(Russian)* 3—12026
particulate-filled polymers, ultimate tensile strength model 3—19379
polybutadiene, glass bead filled, electron emission during fracture, crack vel. depend., free radical decay 3—14447
polybutadiene, glass-beam filled, positive ion emission in fracture, mass/charge ratio and kinetic energy 3—8947
polyester, filled, fracture characteristics of heterogeneous materials 3—53203
polyethylene, $CaCO_3$ filled, dynamic mech. behaviour 3—53109
polyethylene, $CaCO_3$ filled, morphology 3—37807
polyethylene, mica filled, hot rolling and forging, effect on mech. props. 3—29057
polyethylene melt, mica filled, rheology 3—27460
polyethylene/polystyrene blend, comparison of pure and tapered block copolymers, emulsification, mech. props. and morphology 3—37808
polypropylene, mica filled, interface charact. 3—28222
polypropylene, mica reinforced, mech. props. 3—29121
polypropylene, oriented, fine particle filled, elastic props. 3—9108
polypropylene base multicomponent systems, rheological props., optimum processing temp. *(German)* 3—27465
PTFE, filled, wear performance of commercially available materials 3—24372
PVC coatings, filled, struct. and mech. props. *(German)* 3—13128
reinforcement effect of microballoons and bubbles in polymer composites *(Japanese)* 3—58187
rocket propellant, damage field near crack tips 3—9147
rubber, C block filled, degree of dispersion rel. to elec. resist. and matrix phys. props. 3—14814
rubber, styrene-butadiene, tear fracture rel. to cross-links and reinforcing filler, SEM obs. 3—53187
rubber particle dispersion, toughening mechanism 3—43856
silicone rubber, electron emission during fracture, crack vel. depend., free radical decay 3—14447
styrene-butadiene rubber, C filler effect on sorption and diffusion of CO_2 3—38136
three-component with interphase layer, viscoelastic behaviour 3—32622
wear and friction up to 260°C 3—47966

film badges *see dosimeters*

films
see also adsorbed layers; coatings; foils; helium films; Langmuir films; liquid films; monolayers; optical films; polymer films; replicas; thick films; thin films
No entries

filtering and prediction theory
see also information theory; Kalman filters; random processes; Walsh functions
acoustic emission, inverse problem, explicit determ. of source time-functions 3—39343
aircraft, gradiometers, real time gravity filtering *(Japanese)* 3—39940
astronomical spectroscopy, appl. of derivative techniques 3—59222
astronomy, digital filter design and variational soln. of extended Whittaker problem *(Chinese)* 3—40043
background pattern removal by power spectral filtering 3—50620
brain potentials signal detection by linear filtering 3—58623
coherent light propagation in free space, filtration of periodic noise, signal separation 3—17452
digital image filtering, effect on automatic chromosome classifier 3—19871
DTS signals analysis, automatic deconvolution 3—47311
electrooptical system with sectoral grating, noise resistance *(Russian)* 3—30835
EMG signals, system identification and sequential signal estimation algorithm 3—19841
filtering properties of mathematical methods of line background suppression in absorption spectra 3—54719
frequency determination by autoregressive spectral estimator, accuracy 3—54261
heart valve modelling, digital processing of heart sounds 3—34925
His signal recording, noninvasive, using statistical filtering *(Spanish)* 3—48434
image restoration schemes for degradation by additive white Gaussian noise *(Japanese)* 3—46174
LWR, operation and data anal. with Kalman filters *(German)* 3—49912
Maximum Entropy Spectral Analysis, characteristic correl. time as estimate of optimum filter length 3—39909
measurement errors, adaptive method of real-time identification of covariational matrix *(Russian)* 3—30833
noise suppression using data-adaptive polarization filters, infrasonic array data appl. 3—17711
saccadic eye movements, velocity calc., frequency limitations of two point central differentiation algorithm 3—15082
signal detection model based on adaptive filter, relationship with sensory system detection 3—29542
sonar nonstationary reverberation simulation, using linear spectral prediction 3—42060

filtering and prediction theory continued
- subsurface sounding of earth layers using coherent radar with Doppler filtering 3−15659
- traffic noise environmental system, state estimation trial, semi-experimental 3−7298
- underwater acoustic wave propagation, corrected match for coherent part of time-variant channel 3−7309

filters
- *see also active filters; band-pass filters; digital filters; Kalman filters; low-pass filters; matched filters; notch filters; optical filters; passive filters; spatial filters*
- frequency response compensation of heat fluxmeters 3−54170
- Optimum second vertical derivatives in geologic mapping and mineral exploration, appl. in Ontario 3−39929
- seismic deconvolution by successive approx. method 3−39930

filters, optical *see optical filters*

filtration
- aerosol and gas deposition on fully rough blade-shaped elements, filtration model 3−12724
- aerosols, filtration, diffusion collection efficiency of fibres 3−7685
- air pollution control, particulate removal, electrostatically augmented gas cleanup devices 3−39558
- blood serum proteins, elemental anal. after pre-irradiation separation by gel filtration 3−9807
- curvilinear layers of variable thickness, filtration of fluid 3−22522
- dam, porous isotropic homogeneous 3D, fluid filtering, finite element soln. of free boundary 3−56607
- effective permeability of highly porous medium, soln. method 3−56609
- fabric dust collectors, surface electrostatic fields, reduction of flow resistance and penetration 3−39559
- fabric filter, electrostatically augmented, dust movement between electrodes 3−39560
- flow in ensemble of solid particles, theory *(French)* 3−17971
- incompressible viscous fluid flow through an array of fixed particles 3−22523
- Langmuir-Blodgett monolayers, cross-linked, hyperfiltration 3−39408
- liquid filtration eqns. in creeping porous medium 3−32799
- liquid filtration through porous dam, boundary variation method 3−7654
- magnetic, high gradient, nuclear power reactor appls., review 3−31644
- mica track microfilters appl. in cascade particle fractionator 3−26492
- power law approximation theory 3−7641
- respirable aerosols, electrostatically enhanced collection, granular bed filters 3−39557
- two-phase three-component filtration, nonlinear waves 3−32790
- ultrafiltration membranes, asymmetric, skin layer characterisation 3−19536
- up-wind finite element method 3−22524
- Al melts, inclusions precip. mechanism on active filter granules 3−7653
- ^{125}I effluent from protein iodinations, activated charcoal filter counting 3−44188
- Ti filters, powder metallurgical prep., mech. and hydraulic characts. 3−58070

FIM *see field emission ion microscopy*

FIM, atom-probe *see atom probe field ion microscopy*

financial administrative data processing *see financial data processing*

financial data processing
- distributed solar power systems, cost and price calc. by interactive computer program 3−58482

fine structure, atomic *see atomic fine structure*

fine structure, molecular *see molecular fine structure*

finite element analysis
- acoustic wave propagation along azimuthal direction in cylindrically layered waveguide 3−50820
- anisotropic beam theory and applications 3−22328
- annular plates, polar orthotropic variable thickness, natural freq. of transverse vibr. 3−32648
- anvils, transiently excited, acoustic radiation calc. by finite element computer program 3−17694
- arc, trial function quality in quadratic isoparametric representation 3−37342
- arch problems, accuracy of finite element models 3−22313
- ASDEX Upgrade, EM forces and mech. stresses in vacuum vessel 3−55617
- averaged Lagrangian-finite element technique for the solution of nonlinear vibration problems 3−17845
- axisymmetric solid, steady-state thermal field, discrete soln. *(Chinese)* 3−22307
- beam, simply supported, nonlinear vibration analysis, finite element formulation 3−1985
- beam vibrations, non-linear, Lagrange-type formulation for finite element anal. 3−32649
- beams with thin walled cross sections, finite element formulation 3−1964
- bimodular material plates, geom. nonlinear bending, finite element results 3−37359
- biomechanics, lumbar vertebral segment, human mechanical model *(French)* 3−48314
- Budiansky-Sanders shell model, penalty duality method 3−16133
- cardiovascular finite-element analyses, recent developments 3−9661
- centre-cracked plate, evaluation of J-integral under general and gross yielding *(Japanese)* 3−2005
- chemically reacting flow systems modelling in FORTRAN 3−4288
- circular bar, nonuniform stress field, finite element technique appl. to stress intensity factor calc. 3−7495
- circular plate with partially free, partially clamped edge, natural freqs. 3−12573
- cogged V-belt, cog-root strains, birefringent photoelastic coating, linear-elastic finite element analysis 3−32693
- combustor linear analysis 3−17872
- compact tension specimen, crack tip growth, elastic-plastic finite element analysis 3−27406
- complex axisymmetric structures under arbitrary loads, nonlinear dynamics 3−56427
- complex potential, anisotropic, 3D finite element soln. 3−26892
- composite laminates, free edge stresses, finite element method 3−22331
- composite structures, nonlinear FEM 3−22334
- composites, laminated, with bonds, longit. elastic wave propag. 3−27418
- composites, orthogonal fibre, as micromorphic materials, static linearly elastic theory 3−1954
- computer program, Lamcal, user manual 3−40369

finite element analysis continued
- concrete structures, elastic-plastic fracture anal., finite element method 3−37416
- conical optics, tangent mounted for diamond turning, finite element model 3−27274
- constitutive equations, inelastic, rel. to large deform. problems, finite element analysis 3−12535
- contact problems in elasticity, numerical analysis 3−17897
- contact problems of elasticity and plasticity theory, finite element soln. 3−17900
- contact problems of structural dynamics, linear finite element soln. of variational inequalities 3−12604
- contact problems with friction in general purpose finite element computer programs 3−17898
- convection diffusion equation, numerical solution 3−49297
- convection dominated flows, streamline upwind/Petrov-Galerkin formulation with incompressible Navier-Stokes eqns. 3−17936
- convection-dominated diffusion, combination of method of characts., finite element and finite difference procedures 3−16316
- crack arrest expts., finite element anal. 3−51004
- crack length determination, calibration of elec. pot. drop technique, comparison of theoretical and expt. methods 3−17906
- crack surface, conic-section simulation model, use of finite element method for determ. of stress intensity factors 3−17883
- cracks, elliptical surface, subjected to arbitrary loading 3−12594
- cracks, short, elastic-plastic finite element analyses 3−27434
- cracks emanating from ellipitical hole, J-integral anal. *(Japanese)* 3−56491
- crash simulation, triangular plate bending finite element 3−22345
- cubic isoparametric rolling/travelling finite elements 3−22330
- cylindrical vessel walls, temp. stress intensity coeffs. calc. for fissured defects *(Russian)* 3−42183
- dam, porous isotropic homogeneous 3D, fluid filtering, finite element soln. of free boundary 3−56607
- deformation behaviour, constitutive eqn. parameter change influence, rigid plastic finite element perturbation method 3−27398
- diffuse illumination systems, finite element anal. 3−27179
- disc, rotating, mixed-mode crack anal., finite element method 3−56481
- discrete elastic structures, steady nonlinear harmonic oscills. 3−22364
- disk circular, hydraulic bulging into axisymmetric dies, numerical anal. 3−1972
- duct flow, acoustic transmission finite element anal. 3−12767
- duct flow, four-pole parameters, finite element anal. 3−12777
- dynamic fracture, elastic-plastic finite element anal. 3−12593
- eddy current phenomena 3−39337
- eddy current problems finite element solution using magnetic scalar formulation 3−21978
- efficient elastic-plastic finite element analysis with higher order stress-point algorithms 3−56441
- elastic solid, eigenvalue analysis, finite element discretization, optimal design 3−42176
- elastic wave reflection by defects, computer simulation, motion picture 3−51705
- elastic wave scattering theory, unimoment method appl. 3−25766
- elastic waves, axisymm. scatt., global local finite element anal. 3−32660
- elastic-plastic fracture mechanics, finite element part of Lamcal program 3−17894
- elastic-plastic material cylinder, strain softening effect during void growth 3−42148
- elasticity, approx. of general arch problems by straight beam elements 3−27378
- elasticity 3D problem soln., 2D multiplane finite element technique 3−35847
- elastoplastic torsion problem, mixed method 3−37369
- elastostatics, contact problems with friction, numerical anal. 3−22395
- enriched fracture element, high precision, influence of forcing conforming boundaries 3−42182
- estimating singularity powers with finite elements 3−56469
- evacuated tubular solar collector transient performance model and program 3−39523
- fast reactor neutron kinetics with material motion, finite element method 3−45644
- femoral head osteonecrosis, nonlinear finite element anal. of some early collapse processes 3−9655
- FIDAP: a fluid dynamics analysis program 3−12617
- filtration problem, up-wind finite element method 3−22524
- finite element collocation methods for space-time reactor dynamics 3−869
- flow in porous media, nonlinear theory, finite element method 3−37552
- fluid-structure interaction, finite element methods with user-controlled meshes 3−10586
- fluid-structure transient dynamic interactions, Lagrangian-Eulerian finite element method 3−10587
- fracture mechanics, semi-radial singularity mapping theory for line singularities 3−46485
- frames, elasto-plastic, two- and three-dimens., finite element anal., natural approach 3−17818
- free surface flows through an outlet in 3-dimens., finite element calc. *(Chinese)* 3−51043
- gas-dielectric optical waveguide, design using finite-difference method 3−50759
- geometrically nonlinear structural problems, energy balancing method for large displacement analysis 3−22312
- graphite fibre reinforced epoxy, model composite, crack initiation and propagation 3−39237
- graphite fibre reinforced epoxy 3−19372
- graphite fibre reinforced epoxy laminate, damaged, bonded repair anal. with B fibre reinforced epoxy or Ti 3−14834
- heat equation, finite element Galerkin operator, L_∞-boundedness for parabolics 3−17770
- heat exchangers, shell-side flow and temperature patterns, continuum eqns. 3−46551
- heating a highly insulated building by heat pump, simulation 3−39504
- Helmholtz-type eqns. in unbounded domains, finite-element method 3−20644
- Higgs model, numerical expts., finite element Galerkin method calc. 3−54828
- hip joint, human, finite element study 3−4526
- horn loudspeaker, elastic diaphragm, acoustical characteristics calculation 3−32577
- hybrid stress elements, alternative ways for formulation 3−16136

fission reactor fuel continued
Pu, commercial value in early stages of commercial breeder programme 3−16906
Pu content in spent fuel by γ-spectrometry 3−45594
Pu determination in WWER fuel by X-ray fluorescence *(Russian)* 3−41121
Pu fuel fabrication for French fast breeders 3−16910
Pu fuel rods, irradiation and recycling in PWR 3−6380
Pu recycle in fast reactors 3−16918
Pu supply and demand for fast breeder program 3−19557
Pu-prototype fuel elements from LWRs, post-irradiation analysis 3−6379
Pu-recycle fuel, zircaloy-clad, axial distribution of tritium 3−6314
PuN, lattice parameter, O and C impurities effect 3−33196
$Pu(NO_3)_4$, limiting concentration measurement, average value for eta 3−36490
PuO_2-UO_2, fission gas deposition during reactor thermal transient in LMFBR 3−55161
PuO_2-UO_2 heterogeneous system, nuclear criticality 3−957
PuO_2-UO_2 sphere-pac fuel, irrad. behaviour at low-burnup, in PWR 3−41148
$PuO_{2.00}$, self-diffusion of O_2, meas. by isotopic exchange *(French)* 3−28151
^{A}Pu, A=239, 242, resonance parameter evaluation 3−6375
^{A}Pu(n,γ), A=240, 242, gamma-ray spectra, cross sections optical and statistical calcs. 3−45526
^{238}Pu(n,f), inferred cross section in MeV range 3−31558
^{239}Pu, fission product decay energy calc. in ADENA code 3−11386
^{239}Pu formation in hybrid reactor blanket 3−45696
^{239}Pu, in U ores, China, natural occurrence 3−45587
^{239}Pu(n,f), fast n, A=233, 235, fission product β-ray decay heat *(Japanese)* 3−26317
SiC coated, identificiation of Si 3−6315
$(Th,U)O_2$, chem. assay of U and Th, international comparison rel. to safeguards 3−26320
$(Th, U)O_{2+x}$ solid soln., O potentials 3−16849
ThO_2, neutron spectrum meas. 3−31557
ThO_2-UO_2, fuel mixture, irradiation performance 3−55201
^{232}Th, neutron total cross-section, resonance analyses 3−36467
^{232}Th-^{239}U, fuel cycle cost estimate in conjunction with ^{233}U-^{238}U 3−41322
Th(n,γ), 23 keV capture cross section 3−16866
$(U, Ce)O_2$, mixed oxide fuel, cation distribs., neutron scatt. study 3−26318
(U,PU)C fuel element, LIFE-4C anal. of TREAT transient test HC-2 3−6341
(U,Pu)C and (U,Pu)(C,O), fuels for fast breeder reactor, fracture surface energy, fracture toughness 3−55140
(U,Pu)C, fission gas content anal. 3−31528
$(U, Pu)O_{2+x}$, nonstoichiometric nuclear fuel, diffusion processes and surface effects 3−55137
U assemblies, fast neutron pulse decay 3−832
U, automated controlled-potential coulometric determ., report 3−6403
U, bulk, hydride phase development 3−16857
U extraction from seawater, adsorbents, cost assessment *(Japanese)* 3−11376
U isotropic analysis by neutron activation 3−29351
U logging using 14 MeV neutrons 3−30097
U market, yellowcake road 3−31578
U optimisation, breeding considerations for HTR and FBR from Th 3−41139
U, world reserves and resources 3−19556
U-Ti (0.75 wt.%) penetrators, US eval. by amplitude and frequency anal. 3−39330
$UC_{1\pm y}$, liq., thermochem. props., estimated by extrapolation of low temp. vapour press. 3−18480
UC_2, quenched in resistivity, physical properties from radiation damage 3−31531
$U_{1-y}Gd_yO_{2+x}$, nonstoichometric solid soln., thermodynamic props., 700 to 1100°C 3−16854
UO_2 ^{3}H release behaviour during fission reactor operation 3−55232
UO_2, 5% enriched, criticality anal. in MARACAS program 3−31548
UO_2, diffusional growth of overpressured fission-gas bubbles on grain boundaries 3−16855
UO_2, diffusivities of fission created or thermally doped T 3−16852
UO_2, dissolution mechanisms and leaching 3−6306
UO_2 enriched rods, critical expts. in highly borated water lattices 3−31553
UO_2 fast breeder oxide fuel, Redlich-Kwong eqn. of state 3−16858
UO_2, fission gas behaviour model 3−6288
UO_2, fission gas behaviour from irradiation of element 3−41142
UO_2, fission gas deposition during reactor thermal transient in LMFBR 3−55161
UO_2, fracture up to high strain rates, effects of pore shape 3−29158
UO_2 fuel, fission gas release under transient conditions 3−36483
UO_2 fuel oxidation and fission product release in air at 150 to 500°C 3−31547
UO_2 fuel pellets, microstructure effects on fracture strength 3−45586
UO_2 hyperstoichiometric, reaction with Na, kinetics and mechanism 3−55138
UO_2 interaction with MgO following HCDA 3−31732
UO_2, irradiated CANDU reactor fuel, dissolution kinetics in groundwater, report 3−6377
UO_2 molten, long-term interaction with MgO and concrete, FBR safety appl. 3−55506
UO_2 nondestructive testing; gamma-ray spectra analysis computing *(Croatian)* 3−16844
UO_2, PWR fuel pellet, cladding interaction, mechanical modelling with finite element codes 3−26288
UO_2 pellets, distribution of products, calcs. for LOCA in CANDU 3−55197
UO_2 pellets, O/U ratio determ. by potentiometric titration method 3−21371
UO_2, primary creep, effect of amorphous grain boundary phases 3−19374
UO_2, Ru transport, mechanistic anal. 3−41124
UO_2, short lived fission product behaviour within operating fuel elements 3−36457
UO_2, solid, thermal cond., critique and recommendations 3−28172
UO_2, stable and unstable fission product release 3−21431
UO_2, total vapour press., in-pile meas. 3−959
UO_2 vapour, saturated, thermal cond. 3−17992

fission reactor fuel continued
UO_2, vitreous, thermal accommodation coeffs. of inert gases, expt. determ. 3−41147
UO_2/Zircaloy-4, chem. interaction under severe fuel damage conditions 3−11374
UO_2-Gd_2O_3, sintered PWR fuel, thermal cond. meas. 3−26381
UO_2-MgO melt penetration mech., binary eutectic phase diagram 3−31733
UO_2-PuO_2 fuel mechanic and thermohydraulic design for advanced PWR 3−11388
UO_2-PuO_2 sphere-pac fuel, irrad. behaviour at low-burnup, in PWR 3−41148
UO_2-Zircaloy-4 pellet/clad interaction 3−55151
UO_{2-x}, chem. diffusivity of O, rel. to self-diffusion 3−18499
UO_{2+x}, mechanism for the ease of slip 3−16856
UO_{2+x}, nonstoichiometric nuclear fuel, diffusion processes and surface effects 3−55137
U_3O_{8-z}, phase transition from elec. cond. meas. and X-ray diffr. 3−58117
U_3O_{8-z}, phase transitions, heat capacity meas. 3−18438
UO_2^{2+}−H^+ cation exchange equilibria 3−49944
$(U_{0.8}Pu_{0.2})O_2$, fracture surface energy, Hertzian indentation technique 3−34443
US, neutron irrad. effects 3−16853
USiAl, 20% U density fuel, weapons disincentive 3−55199
^{A}U, A=233, 235, 238, resonance parameter evaluation 3−6375
^{A}U(n,f), fast n, A=233, 235, fission product β-ray decay heat *(Japanese)* 3−26317
^{233}U, neutron nuclear data, 10^{-5} eV-20 MeV 3−45563
^{233}U production, 'once-through' cycle for ^{232}Th, economics of system 3−55200
^{233}U-^{238}I, fuel cycle cost estimate in conjunction with breeding for ^{232}Th-^{239}U 3−41322
^{234}U, possibility of attaining criticality 3−45598
^{234}U(n,f), integral cross sections 3−16865
^{235}U enriched fast reactor, implications of system U requirements 3−16909
^{235}U, fission product decay energy calc. in ADENA code 3−11386
^{235}U, highly depleted, highly enriched, actinide decay heat 3−31556
^{235}U(n,f), fission neutron field, intermediate energy neutron field, NBS standards 3−55166
^{236}U(n,γ)^{237}U, cross-section measurement for prediction of transactinides buildup 3−41187
^{238}U capture, γ-counting and mass spectrometer meas. comparison for fast reactor design 3−16833
^{238}U, resolved resonance parameters from 4 to 6 keV 3−16864
^{238}U, resonance parameter discrepancies 3−21415
^{238}U(n,γ), gamma-ray spectra, cross sections optical and statistical calcs. 3−45526

fission reactor fuel preparation and reprocessing
see also isotope separation; radioactive waste
advanced concepts under development in the United States breeder fuel reprocessing program 3−16934
Ambersorb carbonaceous adsorbents, I species adsorption 3−45614
APEX fuel cycle for LWR fuel prod. and radwaste elimination 3−6384
Arkansas Nuclear One, fuel failure costs 3−6323
back-end activities in Federal Republic of Germany 3−925
Barnwell Nuclear Fuel Plant, failed fuel handling and management 3−6382
Barnwell Nuclear Fuel Plant, operability and maintainability 3−31622
Barnwell Nuclear Fuel Plant status, LWR and breeder fuel reprocessing 3−31623
boiling water reactor fuel and core development at ASEA-ATOM 3−21366
breeder reactor fuel, conf., London, England (May 1981) 3−16084
building for flexibility and safety in spent fuel storage 3−55207
BWR fuel management optimization and validation through operating data 3−36495
CANDU fuel cycles, heat from alpha-decay, WAD program, beta-chains 3−45616
ceramic pellets prod. with close shape tolerances, hot impact densification 3−969
Chemical Processing Facility (CPF) for Power Reactor and Nuclear Fuel Development Corporation *(Japanese)* 3−45610
commercial nuclear fuel reprocessing applying the SAFAR processing concepts 3−31625
commercial reprocessing initiatives 3−31635
commercial waste management and fuel cycle programs 3−6333
compacted spent fuel storage pool, natural convection 3−6390
conference, Canadian Nuclear Soc., Toronto, Ont., Canada (June 1982) 3−54584
conference on actinide recovery from waste and low grade sources, New York, USA (Aug. 1981) 3−49090
Connecticut Yankee power station, fuel failures, cost impacts 3−6322
control instrumentation, in-line heavy metal and oxidant reluctant monitors 3−26392
control instrumentation, in-line neutron poison and free and monitor 3−26391
core concept effect on fuel cycle of fast reactors 3−16920
criticality analysis of the ICPP zirconium dissolver using MONK 3−973
criticality assessment for oxide fuel dissolvers, calc. route 3−971
criticality of high-density, boral-poisoned fuel racks for Maine Yankee 3−956
criticality safety in the ICPP Rover fuel dissolution system 3−974
criticality safety of oil-uranium deposit in gaseous diffusion equipment 3−970
criticality safety of the ten-well insert for the pot dissolver 3−972
criticality safety philosophy evolution in ICPP electrolytic dissolver process 3−975
criticality safety practices in digestion systems 3−976
criticality safety within reprocessing 3−31621
dissolver off-gas cleaning installations in reprocessing plant, time depend. anal. 3−923
diversion resistant nuclear fuel reprocessing, progress report 1980-1 3−55209
diversion-resistant assessment methodology for nuclear fuel reprocessing techniques 3−49968
DOE's commercial waste management and fuel cycle programs 3−31629
dose levels and neutron reaction rates for HPRR and SHEBA 3−11532
dose limitation system, conf., Madrid, Spain (Oct. 1981) 3−10507

fission reactor fuel preparation and reprocessing continued
duplex fuel pellet manufacturing feasibility study 3—49967
Dyna-Canister spent fuel rack, dynamic absorber investigation 3—26327
enrichment processes 3—31632
enrichment technologies and relationships for US capacity 3—31633
ENVIROCOUNT code for nuclear fuel cycle simulation 3—16925
Eurodif uranium enrichment plant, gas diffusion process and plant technical details *(French)* 3—49965
Eurodif uranium enrichment plant energy supply and distribution *(French)* 3—49966
fabrication of advanced LMFBR fuels at BARC 3—16912
fast breeder compound doubling time, isotopic breeding weights factors for closed fuel cycle *(Czech)* 3—11400
fast breeder fuel fabrication within the German program 3—16913
fast breeder system, Pu economy dangers 3—19566
fast reactor and electricity supply, a utility view 3—16900
fast reactor fuel cycle design choices 3—16908
fast reactor fuel cycles, conf., London, England (Nov., 1981) 3—16083
fast reactor fuel fabrication and waste management 3—16911
FBR, fuel cycle prospects 3—16890
FBR, power cost break-even, fuel burn-up and reprocessing costs 3—16905
FBR, U savings 3—16891
FBR cycle, future reprocessing 3—16928
FBR design and operation effect on fuel cycle and waste management 3—16926
FBR fuel, India approach to reprocessing 3—16938
FBR fuel cycle, risk assessment and control 3—55210
FBR fuel cycle, worldwide and French prospects 3—16893
FBR fuel cycle evaluation, economics 3—16907
FBR fuel extraction cycles problems 3—16933
FBR fuel pin diameter optimisation for oxide and carbide fuel 3—16917
FBR fuel reprocessing, French R and D programme 3—16931
FBR fuel reprocessing technology, Japanese status 3—16932
FBR installation rates in U-Pu fuel system 3—16903
FBR spent fuel element shipment 3—16923
FBR spent fuel reprocessing, dissolves off-gas system 3—16936
FBR system role in EEC 3—16898
fissile fuel breeding, nuclear fusion and spallation sources, review 3—55212
fissile fuel production by linear accelerators 3—26387
French large reprocessing plant project, engineering and plant optimisation 3—31624
fuel breeding and fuel management prospects of hybrid and symbiont breeders 3—17069
fuel cycle conference, New York, NY, USA (Mar. 1982) 3—30558
fuel cycle issues of the 80s—a regulatory overview 3—31630
fuel cycle strategy for nuclear plants in the future energy programme of Yugoslavia *(Croatian)* 3—6378
fuel cycle supply and demand 3—31631
fuel element factories, licensing procedure *(German)* 3—55203
fuel management, Combustion Engineering methodology and validation, core follow anal. 3—36452
fuel management in a medium sized fast breeder reactor 3—16919
fuel management physics calcs., ballpark and differential methods 3—36491
fusion driven fissile fuel factory, systems aspects 3—21559
German fast breeder programme and fuel cycle activities 3—16892
Gronau U enrichment plant in Germany, construction start *(German)* 3—16885
high temperature reactor, operational flexibility with high and low-enriched fuel cycle 3—966
Hot Experimental Facility, fuel processing plant design, mockup of handling system 3—16889
HTGR fuel element head-end reprocessing tests 3—967
HWR, advanced fuel cycle transitions 3—6332
industrial experience of irradiated nuclear fuels reprocessing *(French)* 3—41193
irradiated fuel assemblies unloading operations automatic monitoring at La Hague reprocessing facility *(French)* 3—16884
irradiated fuel elements, reprocessing in European Community *(German)* 3—45608
isotope separation and nuclei melting using Vulcan and Helen Nd high power lasers *(German)* 3—45612
Italy, fast reactor prospects 3—16894
Japan, FBR development, U demand 3—16895
Japanese fuel fabrication technology for fast reactor 3—16914
LMFBR, 1300 MWe, neutronic performance for homogeneous and heterogeneous designs 3—16840
LMFBR, and fuel cycle plants, status in UK 3—55569
LMFBR design for safety and proliferation resistance, with excellent performance 3—16916
LMFBR development, USA view 3—16897
LMFBR reprocessing plant design, optimisation by risk assessment 3—55211
LMFBR spent fuel transport flask conceptual design 3—16922
LMFBR spent fuel transportation 3—16921
loss detection and alarm resolution in processing special nuclear material 3—31617
low enrichment fuel elements for research and materials testing reactors *(German)* 3—55205
LWR, APEX fuel cycle, removes lanthanides and short-lived fission products 3—45609
LWR, extended fuel burnup in Babcock and Wilcox operating units 3—6325
LWR, reprocessing spent fuel, removal of lanthanides etc. 3—41197
LWR extended burnup fuel, reprocessing consequences 3—31603
LWR extended burnup fuel performance, conf., Williamsburg, VA, USA (April, 1982) 3—20574
LWR fuel management methods *(German)* 3—55130
LWR fuel management status and development trends *(German)* 3—55129
LWR fuel storage pools, criticality calc. methods validation 3—955
LWR Pu recycling, R&D program, indirect nuclear action 3—11402
LWR spent fuel, wet and dry storage behaviour and safety 3—31535
LWR spent fuel elements, centralised storage in France, construction, operational experience 3—26342
LWR spent fuel interim storage, materials behaviour 3—31545
LWR spent fuel storage, US requirements projection 3—26341
material control, reprocessing plant safeguards 3—31618
material recovery and waste preparation, risk anal. 3—16886
mechanical headend for KNK II and SNR 300 subassemblies 3—16937

fission reactor fuel preparation and reprocessing continued
microwave heating appls. 3—965
mixed oxide critical expts., quality assurance procedures 3—978
MODREX dry spent fuel storage concept, adaptation for European licensing requirements 3—26326
monitored retrievable radwaste and spent fuel storage, economics 3—6329
monitored retrievable radwaste and spent fuel storage facilities, conceptual designs 3—6330
monitored retrievable spent fuel storage, background and historical perspectives 3—6327
monitored retrievable storage facility, location screening in USA 3—6328
MOX fuel rods for FBRs and LWRs *(German)* 3—55204
multipass batch-step advanced isotope separation campaign models 3—6386
neutron thermalisation of light atom in Monte Carlo codes, neutron spectra 3—49969
nondestructive assay of high enriched uranium in solvent extraction columns 3—26390
nuclear fuel cycle, front end, application of collective dose equivalent 3—11550
nuclear fuel cycle overview 3—961
nuclear technology transfer, conference, Buenos Aires, Argentina (Nov. 82) 3—16082
OXAL process for irrad. fuel treatment *(French)* 3—31529
oxide fuel-fission product solid solutions, stoichiometry of PuO_2-$NdO_{1.5}$ and PuO_2-$YO_{1.5}$ 3—21443
PFR fuel reprocessing 3—31576
PFR fuel reprocessing experience 3—16927
Phenix: an example of precise fuel management 3—16915
PHENIX, closed fuel cycle 3—16930
pressure transducers calibration, for use in safeguarding special nuclear materials 3—21444
PRF reprocessing, solid waste management 3—16929
Purex process, electro-redox procedures, state of development 3—16935
Purex process, Pu formation and recovery from phosphate esters 3—49979
PWR, EPRI-NODE-P nodal code, moderator temp. history effects incorporation 3—36449
PWR, fuel reinsertion strategies for System 80 reactors 3—6324
PWR, on site spend fuel storage, evaluation of alternatives 3—6388
PWR, optimal control for extending load following capability 3—6393
PWR, Pu/U operating cycle, maximised conversion ratio, neutron physics effects 3—45574
PWR core anal. in XY geometry, PSEUDAX code, in-core fuel management 3—36492
PWR fuel management, 2-dimens. nodal anal. 3—36494
PWR fuel management optimisation using perturbation theory, FULMNT code 3—6383
PWR fuel pin reprocessing, gaseous products anal. *(French)* 3—36496
radioactive accident generated aerosols, assessment methodology 3—24649
radioactive effluent retention in nuclear facilities, cost-benefit analysis for ^{3}H, ^{14}C, ^{85}Kl, ^{129}I and aerosols 3—11394
radon flux monitoring of covered uranium mill tailings at Grand Junction, Colorado 3—1086
reactor system selection for energy centre concept 3—16902
Reagan administration approach to nuclear nonproliferation 3—30585
recycle fuel rod, Zircaloy-clad, axial distribution of tritium 3—6314
regional waste treatment facilities with underground monolith disposal for all low-heat-generating nuclear wastes 3—41152
Remote Analytical Laboratory for Idaho Chemical Processing Plant reprocessing facility 3—31850
reprocessing, experience, economic and political implications for W Germany *(German)* 3—55202
reprocessing in US, future policy, environment influence 3—31627
reprocessing plant concepts and evolution, Consolidated Fuel Reprocessing Program 3—31626
reprocessing plant reliability improvement by appl. of computer technology and math. modelling 3—26395
reprocessing plant safeguards, microscopic process monitoring 3—6387
reprocessing spent fuel in France 3—55208
reprocessing strategy, economic influence on commercial breeder programme 3—16904
responsive fuel management physics methods 3—36493
safeguarded fabrication and reprocessing facility, design, safeguards, and diversion resistant charact. 3—45615
Secure Automated Fabrication line for LMFBR fuel, remote equipment testing 3—16888
Sellafield, dose control and reduction 3—11543
sensitivity analysis of the inherent neutron source strength 3—31499
separation nozzle system for U enrichment, X-ray lithography production technique 3—26386
shearing of bundles of irradiated nuclear reactor fuel for reprocessing 3—6381
shield design for fuel preprocessing and associated plants by ALARA principle 3—11538
short term material accounting, variance estimation 3—31537
short term materials accounting, performance evaluation 3—31538
simulation of process plant accidents 3—31620
solvent cleanup method, using hydrazine oxalate wash reagent 3—41199
spend nuclear fuel storage pool, gravity driven flow and heat transfer 3—41195
spent fuel, modular dry storage concept 3—6331
spent fuel element from KNK II, interim storage 3—16924
spent fuel management and decommissioning, costs probabilistic eval. 3—31615
spent fuel pins close-packed critical experiments analysis 3—954
spent fuel storage facilities at reactor site, cladding and containment failures, radiological impact 3—50061
spent fuel storage pool, capacity increase using Dyna-canister storage 3—6391
spent ion-exchange resins, vol. reduction by acid digestion 3—45613
spent nuclear fuel, high density storage for LWR plants 3—6389
spent nuclear fuel temporary storage facility at Atucha (Argentina) *(German)* 3—55127
spent-fuel, assay by gamma and neutron methods 3—49962
Super Phenix 1 fuel cycle, technical and economical outlooks 3—16899
supply assurance, uranium utilisation, fuel cycles for LWRs and FBRs 3—26340
tank liquid level measurement techniques at Savannah River 3—26393
technology transfer and safeguards considerations in reprocessing cooperation 3—31636
TOR project for FBR fuel reprocessing 3—16939

fission counters continued
spark counter appl. in fission fragments counting and energy degradation in air 3−55751
ultrahigh-sensitivity fission counter with transmission line electrode configuration 3−55222
Si surface barrier fission detector, pile-up correction method for fission work 3−45618
^{236}U fission fragment charge-mass-energy correl. using ionisation chamber-scintillation detector telescope 3−41459

fission of plutonium
tritium, axal distribution in zircaloy-clad Pu fuel rods 3−6314
Pu fuel rods, irradiation and recycling in PWR 3−6380
^{238}Pu(n,f), inferred cross section in MeV range 3−31558
^{239}Pu(n,f), 14.7 MeV, fission cross sections using associated particle method *(Chinese)* 3−55071
^{239}Pu(n,f), 1.0-5.6 MeV, absolute cross section meas. *(Chinese)* 3−49901
^{239}Pu(n,f), fast n, A=233, 235, fission product β-ray decay heat *(Japanese)* 3−26317
^{239}Pu(n,f), fast n, fission product, γ-decay heat *(Japanese)* 3−16947
^{244}Pu, spontaneous fission, kinetic energy and fragment mass distribs. 3−49902
^{244}Pu(γ,f), 12-30 MeV, kinetic energy and fragment mass distribs. 3−49902
^{244}Pu(n, f) 0.001-8 MeV, neutron-induced fission cross section meas. 3−31457

fission of uranium
C ^{238}U(^{12}C,X), 13-77 MeV/N, indept. cross sections for Na,K,Rb,Cs,Fr prod. 3−26270
fragments, nuclear pumping of He-Kr laser 3−50645
microanalysis of U using fission chamber, dynamic memories impurities appl. 3−53463
U(^{12}C,X), nonrelativistic collisions, linear momentum transfer 3−6254
U(^{4}He,X), nonrelativistic collisions, linear momentum transfer 3−6254
U(^{20}Ne,X), nonrelativistic collisions, linear momentum transfer 3−6254
U(^{16}O,X), nonrelativistic collisions, linear momentum transfer 3−6254
^{A}U(e,f), A=233, 235, 236, 238, electrofission study *(Russian)* 3−11352
^{A}U(e,f), A=234, 236, 238, ang. distrib. and E2 strength functions 3−6271
^{A}U(n, f), A=234, 236, symmetric thermal fission, kinetic energy distrib. meas. 3−31461
^{A}U(n, f) A=233,235, ^{125,126,128,130}Te production, relative yields 3−21356
^{A}U(n,f), fast n, A=233, 235, fission product γ-decay heat *(Japanese)* 3−16947
^{A}U(n,f), fast n, A=233, 235, fission product β-ray decay heat *(Japanese)* 3−26317
^{A}U(p,f), A=235, 236, 238, 12.7-25.5 MeV, fission fragment masses and energies meas. 3−26575
^{233}U, neutron nuclear data, 10^{-5} eV-20 MeV 3−45563
^{234}U(n,f), integral cross sections 3−16865
^{235}U(γ,f), 12-30 MeV, charge distributions, neutron emission curves from provisional and postneutron mass distributions 3−6151
^{235}U(n, f), alpha-accompanied fission. Monte Carlo studies 3−21359
^{235}U(n, f), thermal, fission fragment charge-mass-energy correl. 3−41459
^{235}U(n,f), 0.7-30 MeV, fission cross section meas. relative to ^{232}Th(n,f) 3−824
^{235}U(n,f), 14.7 MeV, fission cross sections using associated particle method *(Chinese)* 3−55071
^{235}U(n,f), fission neutron field, intermediate energy neutron field, NBS standards 3−55166
^{235}U(n,f) use for dating lunar surface material 3−48833
^{238}U, Coulomb fission, experimental features, induced by ^{238}U(^{184}W,^{184}W′) and ^{238}U(^{152}Sm,^{152}Sm′) 3−16809
^{238}U fission reactions obs. in dielec. track detector 3−6273
^{238}U(α,α'f), 120 meV, fission decay of isoscalar giant monopole reson. 3−21358
^{238}U(α,α'f), 172 MeV, isoscalar giant reson., fission decay 3−26253
^{238}U(γ, f), photofission yield meas. using quasimonochromatic photon beam 3−26529
^{238}U(γ,f), 12-30 MeV, charge distributions, neutron emission curves from provisional and postneutron mass distributions 3−6151
^{238}U(γ,f), ang. distribs., integral yield unfolding procedure 3−16808
^{238}U(γ,f), deformation potentials for subthreshold photofission 3−21360
^{238}U(p,p′f) reaction in resonance nucleus-excitation energy band *(Russian)* 3−31460

fission products
accident, fission product release model, SINGAR 3−55472
acoustic emission in liquid induced by fission product transport 3−47051
actinide oxides, irradiation in fast reactor, segmented pin design 3−55185
atmospheric dust, fission products and radionuclide conc. 3−44178
CANDU fuel, I, Cs, Te conc. in postulated LOCA 3−45602
carbide fuel, fission gas swelling in struct. zones III, IV, P_2 bubble populations, burnup 3−55134
dissolver off-gas cleaning installations in reprocessing plant, time depend. anal. 3−923
FISSPROD-3, expanded fission product accumulation program using ENDF/B-V data 3−55081
fragment ang. distribs. meas. technique using Makrofol 3−41460
gas bubbles in fission reactor materials, thermodynamics 3−36460
high resolution axial ionisation chamber for fission products 3−41429
HTGR, metallic fission products, diffusion in graphitic fuel elements, Cs, Ag, Ru concs. 3−21414
HTGR coated fuel particles under irradiation, fission gas release behaviour 3−45583
irradiated aluminide fuel, fission product release at high temp. 3−49928
LMFBR fuel pins, fission gas behaviour during fast transients 3−55439
low-level waste incinerator, decontamination factors, on-line real-time meas. 3−880
LWR fission products, gaseous, mass spectrometric identification 3−26426
LWR fission products, I release mechanistic prediction 3−26432
LWR fission products chemistry in primary system 3−26428
LWR fission products release in steam 3−26427
LWR fission products source term estimation uncertainties 3−26431
LWR fission products source term magnitude effect on accident predictions 3−26425
LWR fission products source terms, probability distribs. for risk assessments 3−26430
LWR fission products source terms, role of aerosols and volatiles 3−26429
LWR fuel, high burnup fission gas release data evaluation 3−21430

fission products continued
LWR fuel rod, cladding breach, prompt fission gas release model 3−41173
LWR fuel rod fission gas release 3−21434
LWR fuel rods, KWU fission gas release model 3−36461
neutron total cross sections of fission product nuclei and optical model fit 3−55004
noble metal recovery from fission products in nuclear waste, Ru, Rh, Pd 3−21392
nuclear charges of fission fragments, identification method using axial ionisation chamber 3−41428
oxide fuel-fission product solid solutions, stoichiometry of PuO_2-$NdO_{1.5}$ and PuO_2-$YO_{1.5}$ 3−21443
pair breaking in low energy fission, even-odd effects, combinatorial anal. 3−826
particle damage trails, electrochemically etched, amplification in nucl. track detectors 3−31879
pebble bed HTR, fission product release in core heatup accidents *(German)* 3−11468
photofission observations in reactor environment using fission product yield 3−55310
PWR coolant system, contamination by ^{58}Co and ^{60}Co, major potential sources 3−50023
PWR fuel fission gas release at high burnup 3−21433
PWR fuel fission product release at high burnup 3−21435
PWR fuel pin reprocessing, gaseous products anal. *(French)* 3−36496
PWR fuel rods, fission gas release 3−21432
rare earth fission products separation system 3−49963
reactor fission products, β and $\bar{\nu}_e$ correlated spectra, reactor neutrino expts. 3−26540
release to atmosphere, technical committee, Vienna, Austria (Aug. 1982) 3−54579
short lived fission products, average β-decay energy from β-strength function data 3−41102
spark counter appl. in fission fragments counting and energy degradation in air 3−55751
spent nucl. fuel reprocessing, 3,5-dimethoxybenzaldehyde effects in TBP-n-dodecane 3−49964
TMI-2, fission product deposition characterisation in coolant and auxiliary systems 3−21484
TMI-2 purification system, fission product transfer 3−21485
tomography of combustible elements obtained by gamma spectrometry *(French)* 3−55307
tritium, axal distribution in zircaloy-clad Pu fuel rods 3−6314
water coolant, fission product radioactivity, operative automated monitoring 3−11379
(γ,f), A=181-209, 300-1000 MeV, photofission yields and cross sections, resonances 3−6270
μ^- induced fission, μ^- final probability in four-state basis *(Chinese)* 3−49900
Ag(^{12}C,X), 86 MeV/A, angular distribution and mass of products 3−808
^{A}Ag(n,X), A=109, 110m, total cross sections, reactor appl. 3−45533
^{A}Ag(n,γ), 2.6-2000 keV, A=107, 109, cross sections, resonances, breeder reactor appl. 3−41030
^{241}Am(n, f), fast n, fission yield and mass distrib., isomer ratio 3−31458
^{197}Au(^{20}Ne,f), 5-42 GeV, peripheral collisions, momentum transfer to target, fission fragment correlations 3−26284
^{197}Au(α,f), 5 GeV, peripheral collisions, momentum transfer to target, fission fragment correlations 3−26284
^{197}Au(p,f), 5 GeV, peripheral collisions, momentum transfer to target, fission fragment correlations 3−26284
^{209}Bi(π^-, X), 0.87 GeV, deep spallation and binary fission yields, cross sections 3−21351
(^{12}C,f) on ^{181}Ta, W, Re, Pt, ^{197}Au, Pb, ^{209}Bi, complete fusion cross section meas. from fission fragment ang. distrib. *(Chinese)* 3−41051
^{252}Cf fragments, fine structure of electronic stopping powers in gases 3−36635
^{252}Cf, mass distribution of fission products *(Chinese)* 3−49899
^{252}Cf, spontaneous fission, fragment masses and kinetic energies 3−45564
^{252}Cf, spontaneous fission, prompt neutron emission, fragment-neutron coincidences 3−45565
^{244}Cm, spontaneous fission, fission-fragment energy correlation meas. 3−36439
^{244}Cm, spontaneous fission, fragment masses and kinetic energies 3−45564
^{244}Cm, spontaneous fission, prompt neutron emission, fragment-neutron coincidences 3−45565
^{129}I, contamination of biosphere, environmental effects 3−29768
$^{131}I_2$, absorption in geological materials 3−41144
Kr occlusion and storage in zeolites 3−31527
^{85}Kr, fixation studies for long-term storage, review *(Japanese)* 3−26316
^{A}La, A=146, 148, beta-ray end-point energy meas. 3−21258
^{259}Md, half life, production from ^{259}No, fragment energies from symmetric fission 3−6272
^{237}Np determination in spent nuclear fuel from fission product meas. 3−11382
^{239}Pu, fission product decay energy calc. in ADENA code 3−11386
^{239}Pu(n,f), fast n, A=233, 235, fission product β-ray decay heat *(Japanese)* 3−26317
^{239}Pu(n,f), fast n, fission product, γ-decay heat *(Japanese)* 3−16947
^{A}Rb, A=88, 94, 96, 98, beta-ray end-point energy meas. 3−21258
^{165}Tb isotope identification and half-life 3−54991
^{A}Te, A=125, 126, 128, 130, relative yields from ^{233,235}U(n, f) 3−21356
^{229}Th(n, f), thermal n, fission product yields, mass distrib. 3−31459
^{232}Th(γ,f), 5.45-6.85 MeV, pot. energy surface, vibr. states, fragment ang. distrib. 3−6274
^{232}Th($\tilde{\gamma}$,f), fragment ang. distribs., anal. power 3−827
(U,Pu)C, fission gas content anal. 3−31528
UO_2, diffusional growth of overpressured fission-gas bubbles on grain boundaries 3−16855
UO_2, fission gas behaviour model 3−6288
UO_2 fuel, fission gas release under transient conditions 3−36483
UO_2 fuel oxidation and fission product release in air at 150 to 500°C 3−31547
UO_2 pellets, distribution of products, calcs. for LOCA in CANDU 3−55197
UO_2, stable and unstable fission product release 3−21431
^{A}U(n, f) A=233,235, ^{125,126,128,130}Te production, relative yields 3−21356
^{A}U(n,f), fast n, A=233, 235, fission product γ-decay heat *(Japanese)* 3−16947

fission products continued
  - ^{A}U(n,f), fast n, A≐233, 235, fission product β-ray decay heat *(Japanese)* 3—26317
  - ^{235}U, fission product decay energy calc. in ADENA code 3—11386
  - ^{235}U, highly depleted, highly enriched, actinide decay heat 3—31556
  - ^{235}U-^{239}Pu binary mixture, alpha and fission track densities anal. 3—26611
  - ^{236}U fission fragment charge-mass-energy correl. using ionisation chamber-scintillation detector telescope 3—41459

fission reactor cooling and heat recovery
  - *see also cooling; fission reactor core control and monitoring*
  - 3D-AIRLOCAl. A LOCA analysis code for research and test reactors 3—11421
  - 19-tube once-through steam generator, steady state and transient prediction using RELAP5/MOD1 3—41242
  - acoustic noise measurements produced from steam injection into sodium 3—31721
  - Appendix K—a simple change 3—31686
  - ARIES model for LMFBR advanced reactor interactive engineering simulation 3—26302
  - automatic diagnosis of multiple alarms for reactor control rooms 3—16993
  - BOR 60 LMFBR power station, 30 MW Czechoslovak steam generator, expts. and operation 3—55236
  - breeder reactors, decay heat removal system, reliability anal. 3—31691
  - bubble motion turbulent stream flow effects 3—41241
  - Budapest Central Research Institute for Phys. research reactor emergency cooling system *(Hungarian)* 3—49995
  - BWR, bypass flow, thermal-hydraulic anal. 3—31671
  - BWR, H generation following HCDA 3—31769
  - BWR, one-point core model, power level and core flow rate predictions 3—980
  - BWR, prediction of events during power blackout 3—31768
  - BWR, water radiolysis, computer simulation 3—6284
  - BWR bypass heating, Monte Carlo calc., critical power ratio thermal limits 3—16955
  - BWR chugging desynchronization effects on multivent pressure suppression pool loads 3—11367
  - BWR containment, hydrodynamic loads during LOCA and SRV discharge 3—11369
  - BWR containment load mitigation due to safety/relief valve actuation by low-low set logic 3—31746
  - BWR coolant systems resonance instability modelling 3—41249
  - BWR core stability, time-domain anal. 3—55080
  - BWR flow transient anal. 3—11423
  - BWR fuel bundles, axial kinematic wave velocity profile 3—11438
  - BWR inlet flow blockage, fuel rod temp. prediction using MAYU-4b 3—11422
  - BWR internal recirculation pump, availability modelling 3—55248
  - BWR LOCA, chugging induced dynamic loads anal. 3—11365
  - BWR LOCA, chugging load evaluation coupled with system response 3—11366
  - BWR LOCA conditions, pipe whip tests, report 3—21492
  - BWR multivariable stability margins 3—36515
  - BWR post-LOCA dose rates on RHR system piping based on a particle settling model 3—11531
  - BWR primary cooling system stainless steel surface, radioactive crud buildup 3—41238
  - BWR recirculating loops, stability anal. 3—11439
  - BWR refill-reflood program test plan 3—21491
  - BWR suppression pool scrubbing model for severe accident risk assessment 3—31712
  - BWR system simulator, boil-off tests to evaluate bundle heat transfer and thermohydraulic flow conditions 3—6434
  - BWR water quality, influencing factors 3—26364
  - BWR/4, partial scram event anal. 3—6429
  - CANDU, critical heat flux prediction, experimental correlation technique 3—55344
  - CANDU, deaerator unit, simulation program 3—21445
  - CANDU, expt. obs. two-phase natural circulation, thermosyphoning phenomena 3—55341
  - CANDU, flow blockage detection, boiling or subcooled channels, methodology 3—55345
  - CANDU, moderator temperature meas. by instrumented probe 3—49994
  - CANDU, thermohydraulic behaviour in horizontal fuel channels, flow stratification 3—55342
  - CANDU, two-phase flow models, LOCA predictions 3—55343
  - CANDU power reactors, thermohydraulic behaviour during LOCA using FIREBIRD-III program, report 3—31515
  - CANDU-PHW reactors, safety research, LOCA, fuel behaviour, fission gases 3—31778
  - CCTF Core I test results 3—45638
  - CDFR, NaK thermal loop syphon system, reliability, decay heat removal 3—55263
  - ceramic reactor insulations, thermal conductivity 3—8278
  - CESEC verification against plant test data 3—11434
  - circular pipe ends, with flanged ends, thin shell theory anal. 3—27386
  - COMMIX predictions of a thermal mixing test 3—6426
  - components of high Co alloys, wear meas. methods 3—49948
  - condensate/feedwater flow system of Washington Nuclear Project Unit, real-time simulation 3—55246
  - condensation on a wall in the presence of noncondensable gas 3—31710
  - condensers, Ti tubed surface condensers, development, in-service performance 3—55347
  - containment modelling for post-LOCA gamma dose calcs. 3—31754
  - convection dominated flows, soln. method 3—26309
  - coolant, natural convection computer models for heat and mass exchanges 3—26403
  - coolant decontamination using anion exchange resin type AV-17 radiation-thermal degradation primary products formation kinetics 3—6402
  - coolant loop construction system 3—993
  - coolant recombiner, sponge metal catalyst for H_2O recombination 3—41230
  - core melt/concrete interaction, heat transfer enhancement by gas injection 3—41235
  - coupled system thermal hydraulic responses simulation using THYDE-P computer code, report 3—21364
  - Creys-Malville reactor, loss of decay heat removal funct., probabilistic anal. 3—55271
  - critical heat flux influence on 19 tube once through steam generator 3—11419

fission reactor cooling and heat recovery continued
  - critical two-phase flow models for safety anal. 3—55376
  - crud buildup and radiation field minimization through primary coolant chemistry 3—6397
  - decay heat calculations at SRP using ANS-5.1 3—11418
  - dissociating coolant, non-steady-state cooling study *(Russian)* 3—50002
  - drift flux eqn. derivation for two phase two component flows 3—11440
  - DRUFAN—an advanced best-estimate code for LWR blowdown analysis 3—862
  - dry pocket formation during water penetration into hot particle bed 3—11463
  - dryout heat transfer, steam-water two-phase flow during LOCA 3—45620
  - drywell flooding, effect on BWR vessel 3—11464
  - ducts, natural convective flow, appl. to reactor cooling after pump failure 3—16941
  - DYNODE programs for verifying system thermal hydraulic methods 3—11431
  - EBR-II, fuel performance test facility 3—55332
  - EBR-II in-vessel thermal-hydraulic transient simulation using the COMMIX-1A computer code 3—31720
  - ECCS licensing evaluation in Germany 3—31687
  - EDDY code for steam generator tube in-service inspection 3—45605
  - emergency coding characteristics in nuclear power stations with dissociating coolant *(Russian)* 3—31777
  - emergency core cooling system, test interval and procedure 3—999
  - EPR-II, instrumented subassemblies INSAT XX09, XX10, Na flow and temp. 3—55331
  - EPRI modular modeling system code, development for transient anal. 3—26303
  - EPRI program on pressurized water reactor thermal shock 3—6413
  - EPRI/PWR safety and relief valve test program 3—1010
  - EURDYN-1M, finite element code, user manual 3—49923
  - fast breeder fuel pin assembly velocity and temperature field calc. using CAFCA code 3—55082
  - fast breeder reactor, three loops engineering simulator 3—55086
  - fast power reactor, core disruptive accident, thermohydrodynamic simulation code 3—41280
  - fast reactor fuel assembly, convective transport of coolant *(Czech)* 3—11404
  - fast reactor with dissociating N_2O_4 coolant, radioactive corrosion products in loop 3—11381
  - FBR, post-accident heat removal, boiling and dryout predictions 3—45645
  - FBR intermediate heat transport system, cold trap regeneration 3—11416
  - FBR reflux vapour trap, development 3—45621
  - FBRs, Na-cooled, radioactive contamination in primary circuits, ^{24}Na, ^{3}H 3—11397
  - feedwater control system design 3—36498
  - feedwater material corrosion in PWR steam plants, release rates 3—50008
  - FFTF, CORA code anal. for cluster of core assemblies 3—55098
  - FFTF, decay heat removal by natural convection, transient testing 3—55259
  - FFTF in vessel thermal hydraulics, steady state simulation using COMMIX-1A 3—11444
  - FFTF natural circulation transients, COBRA-WC calcs. 3—31673
  - filtration, magnetic, high gradient, nuclear power reactor appls., review 3—31644
  - fission product γ-decay heat for fast n fission of ^{233,235}U, ^{239}Pu *(Japanese)* 3—16947
  - fluid velocity determ. in nuclear plant simulators, pulsed neutron activation technique appl. 3—21493
  - Fort St. Vrain HTGR, core temp. fluctuations 3—26398
  - fuel bed expansion calc. for rotating fluidised bed reactor 3—11358
  - fuel element assembly models, heat and mass exchange processes 3—11410
  - fuel elements, nonlinear two-dimens. heat conduction, Lanczos-Chebyshev method 3—55234
  - fuel pin roughened surfaces, heat transfer and friction factor performance 3—50907
  - fuel rod vibration due to cross flow through narrow gaps 3—26380
  - fuel rod with longitudinal cooling fins, hydrodynamic behaviour, numerical simulation 3—55235
  - fuel-to-sheath thermal conductance, influence on fuel temp. predictions 3—41223
  - gamma thermometers used as both power and core cooling monitors 3—11417
  - gas-liquid flow, flow pattern transition modeling 3—12758
  - gas-liquid flow pattern transition in a vertical rod bundle, PWR LOCA appl. 3—11403
  - GCFR core flow simulator, He gas meas. using vortex shedding flowmeter 3—6395
  - general Electric's realistic approach for emergency core cooling system analysis 3—31776
  - heat conduction in fuel pins with eccentrically placed pellet 3—994
  - heat flows on surfaces in high temp. gas flows *(Russian)* 3—31688
  - HEATP, heat transfer package for high press. steam-water system 3—36514
  - high powered channel reactor, stress state of forced circulation loop tube 3—11380
  - HTGR, squirrel cage motor for operation in high pressure/temp. He atmosphere, prototype development and test 3—26411
  - HTGR ducting, porous medium, three-dimensional natural convection, vertical curved insulation layer *(Japanese)* 3—982
  - HTGR He coolant chemistry data 3—21451
  - HTGR instrumentation concept *(German)* 3—49988
  - HTGR prospects 3—41289
  - hydrodynamic stability of natural circulation in a nuclear power plant with underboiling coolant 3—41245
  - hydrodynamics, mixing chambers, models and simulation expts. 3—41251
  - hypothetical loss of shutdown cooling accident, GCFR disrupted core, recriticality 3—45647
  - interfacial shear for two-fluid models 3—11426
  - ion-exchange materials, radiation induced corrosion of mild steel 3—41231
  - iterative method for fully implicit thermal hydraulic eqns. soln. 3—26308
  - KNK II, temp. fluctuations anal. at subassembly outlet 3—55280
  - Lagrangian-Eulerian computer codes, fluid mesh, continuous rezoning 3—26289
  - Leningrad Nuclear Power Plant, third block startup preparation, chemicotechnological regime 3—21449
  - liquid metal fast breeder reactor, power control system design 3—6407
  - liquid Na heated steam generators, heat exchange crisis 3—11409
  - liquid-gas column response to press. transients 3—31723

fission reactor cooling and heat recovery continued
  LMFBR, CFEM code, analysis of two-phase flow channel 3—55106
  LMFBR, cooling of molten fuel pool, ECCO free convection code anal. 3—55526
  LMFBR, CRAFT code, thermal bowing behaviour, kinetic response 3—55100
  LMFBR, Creys-Malville NSS, in-service inspection, specific application techniques 3—55469
  LMFBR, decay heat removal by natural convection and boiling 3—55279
  LMFBR, detection of coolant anomalies from neutron flux fluctuations 3—55289
  LMFBR, expt. model to simulate coolant flow through perforated plates 3—55282
  LMFBR, fuel-coolant interaction expt., subassembly accident modes, VULCAIN code 3—55519
  LMFBR, incipient boiling of superheated K, bubble growth and pressure transient 3—21447
  LMFBR, large pool, emergency decay heat removal systems, reliability anal. 3—6419
  LMFBR, locally blocked fuel subassembly, temp. rise due to fission gas release 3—55521
  LMFBR, LOF expts. in electrically-heated Na-cooled 37 pin bundle 3—55524
  LMFBR, Markovian based model, shutdown heat removal system reliability 3—55262
  LMFBR, Na boiling pattern in porous blockages 3—55273
  LMFBR, NADYP SURDYN codes, comparison, space kinetics, point kinetics 3—55101
  LMFBR, natural convection, considerations in all circuits 3—55264
  LMFBR, particle bed, boiling heat removal 3—55487
  LMFBR, permanent magnet flowmeter probes, development 3—55283
  LMFBR, post-accident heat removal, debris bed modelling 3—55489
  LMFBR, post-irradiation examination of coolant blockage expts. 3—55528
  LMFBR, re-entry and dry-out criteria, decay heat power levels 3—55272
  LMFBR, reactor flow distribution during shutdown cooling 3—55266
  LMFBR, risk predictions, comparison with LWR prediction 3—55468
  LMFBR, sodium heated once through steam generators, simulation using DYNOT-S computer code 3—55250
  LMFBR, stratified UO_2-Na particle bed, dryout heat removal 3—55485
  LMFBR, subassembly accident initiation, Na boiling and flaw, clad melting 3—55275
  LMFBR, temp. fluctuations of blocked subassembly from turbulent heat transfer study 3—55274
  LMFBR, thermal feed-back effects, PHENIX reactor 3—55102
  LMFBR, thermohydraulic modelling and simulation 3—55398
  LMFBR, TOP and LOF anal. using codes SAS3D/EPIC and FRAX-2 3—878
  LMFBR 15 pin triangular fuel pin sector, thermal-hydraulic safety study 3—31718
  LMFBR closed-pool boilup experiment 3—31726
  LMFBR COMMIX-1A code, analysis of decay heat removal system 3—55265
  LMFBR core cooling, microelectronic based surveillance *(German)* 3—49990
  LMFBR core meltdown, natural convection in confined flow geometry 3—41264
  LMFBR core thermohydraulic transients with thermohydrodynamic coupling, ORIFS TRANSIENT code 3—55380
  LMFBR flow recirculation in blanket assembly in convection conditions, COBRA-WC anal. 3—31674
  LMFBR flowing fuel particulate effects on bulk freezing predictions 3—6423
  LMFBR fuel assembly, natural circulation decay heat removal 3—55277
  LMFBR fuel bundle testing in THORS, data reproducibilty 3—11389
  LMFBR fuel dynamics during loss of flow transients 3—6421
  LMFBR fuel subassemblies, local Na boiling 3—55278
  LMFBR HCDA, SIMMER II freezing, melting, plugging calcs. 3—6422
  LMFBR HCDA, sodium thermophysical props. as functions of temp. and density 3—41259
  LMFBR HCDA early fuel dispersal, fuel vapour role 3—6424
  LMFBR internal fuel motion phenomenology: FUMO-E code analysis of PINEX experiments 3—6420
  LMFBR Na two-phase flow, 1-D steady state model, interface drag and pressure drop considerations 3—36501
  LMFBR outlet plenum, gas entrainment 3—31678
  LMFBR pin failure, thermodynamics, fluid dynamics and geometry changes, CALIPSO code 3—41269
  LMFBR pipe flow thermal stratification, elbow effects 3—31676
  LMFBR piping flow/thermal plume stratification 3—31677
  LMFBR porous retention plates for in-vessel core catchers 3—31526
  LMFBR rod bundle, impact of gas in Na flow, temp. variation 3—55281
  LMFBR single-subassembly SIMMER-II characterization of molten fuel-sodium interactions 3—31727
  LMFBR sodium valve failure rates, low probability event freq. estimation, risks 3—41265
  LMFBR steam generators, in-service monitoring and service after leak detection 3—41270
  LMFBR subassemblies, thermohydraulic anal. with BACCHUS program 3—55276
  LMFBR subassembly, boiling and clad movements in loss of flow accidents 3—55461
  LMFBR subassembly models, temp. distribs. in Na flow 3—55523
  LMFBR thermal buoyancy influence on vertical tube bundle heat transfer 3—31675
  LMFBR thermal striping evaluation 3—45651
  LMFBR turbulence in upper plenum 3—11445
  LMFBR two component two-phase pool dynamics modelling with SIMMER II 3—31724
  LOCA, critical flow prediction for hot water from orifices 3—11436
  LOCA, entrainment in two-phase flows 3—50030
  LOCA, transient nonhomogeneous equilibrium water-steam-air flow 3—55374
  LOCA expt. LOCE L3-6/L8-1, RELAP4/MOD6/U4/J3 code anal. 3—36557
  LOCA reflood stage anal. for two-phase flow in four fluid model 3—11442
  LOCA rule revision study 3—31773
  local heat transfer and hot-channel factors in a wire-wrapped tube bundle 3—11446
  LOF accident simulations for homogeneous and heterogeneous core LMFBRs: FD2/4 series 3—31719

fission reactor cooling and heat recovery continued
  LOFT, real time analysis and display of reactor system mass inventory 3—21455
  LOFT anticipated transient expts., RELAP5 post test anal. 3—11430
  LOFT expt., line pressure effects on differential pressure meas. 3—21456
  LOFT loss of feedwater test, RELAP5 anal. 3—11435
  LWR, liquid suspension modeling, effect on subcompartment pressurisation 3—6297
  LWR, transients, seperate effects tests for thermal hydraulics codes 3—11429
  LWR, undercooling accident, temp. distrib., pressure drop in volumetrically heated porous layer 3—11462
  LWR, Westinghouse-designed three and four loop power plants, Co sources 3—45650
  LWR coolant systems, two phase flow, Ledinegg and density wave instability 3—11441
  LWR core, cross flow characts. in rod bundles, report 3—21454
  LWR core melt accidents simulation of HF induction heated melt facility SASCHA *(German)* 3—45617
  LWR droplet deposition above a quench front during reflood 3—31503
  LWR droplet size distributions from flashing 3—31679
  LWR fission products chemistry in primary system 3—26428
  LWR fuel behaviour during reactivity initiated accident, gap heat transfer effects 3—55373
  LWR fuel rod heat transfer model for HCDA 3—31685
  LWR heat transfer augmentation in inverted annular film boiling 3—6399
  LWR hydrogen generation during molten fuel-coolant mixing 3—31770
  LWR LOCA, subcooled liquid critical flow, thermodynamic disequilibrium 3—41278
  LWR LOCA anal., flow boiling critical heat flux correlation for water and Freon-12 3—26421
  LWR nonhomogeneous nonequilibrium critical flow model 3—31502
  LWR primary coolant system transient anal., droplet field relations in COBRA-TF code 3—11427
  LWR rod bundle critical heat flux prediction, THERMIT-2 calcs. 3—41240
  LWR rod bundles under accident conditions, BUSH computer code for heat transfer calc. 3—6302
  LWR safety anal., RELAP5 constitutive relations modeling 3—11428
  LWR steam generator tube performance, experience during 1980 3—55214
  LWR steam systems, simplified nonequilibrium flashing model 3—6300
  LWR void drift, prediction using minimum entropy production principles 3—31501
  LWRs, inadequate core cooling detection using water level meas., proposed instrumentation review 3—50027
  marine water reactor, helically coiled once through steam generator, two-phase flow parameters 3—45619
  minimum plate noncavitating orifice design for LMFBR core components 3—11359
  modality characterisation in two-phase flow 3—31683
  nodal integral method for the numerical solution of incompressible fluid flow problems 3—26310
  nonboiling reactors, boiling detection by acoustic analysis applying linear discriminant functions 3—16945
  nonchemical decontamination methods for post-accident use, evaluation 3—45649
  NORCOOL-I—a best-estimate model for BWR emergency cooling during reflood 3—863
  Nordheim-Fuchs model for nonadiabatic reactor excursions 3—31496
  nuclear power plant, dynamic modelling 3—55254
  nuclear power plants, fluctuations of the mass velocity of the working fluid in separating superheaters 3—55215
  once through steam generators transient simulation with ALMOD/GDE 3—6400
  ORR Poolside Facility, PV surveillance irrad. expt. temp. control 3—55316
  parallel channels, cylinder-type turbulence promoters, flow patterns, heat transfer 3—16944
  particle bed, heat removal with subcooled sodium 3—41228
  particulate debris beds, dryout heat flux variation 3—55481
  PBR, pebble throughput strategies effect on fuel temp. 3—31669
  pebble bed reactor, heat transfer in inner and boundary region *(German)* 3—11450
  PFR, convective flows, low power natural circulation expts. 3—55260
  Phebus plant, PWR fuel behaviour under accident cooling conditions *(French)* 3—21464
  pipe stress and pipe support design, history 3—11385
  pipe welding machine, remote controlled for nuclear power plants 3—31849
  piping support design for the LaSalle county station 3—11361
  polarographic oxygen detector, use in high temp.-high pressure water 3—21448
  pool dynamic and dynamic loads in pressure suppression containment systems 3—11368
  pressure relief valves, acoustic emission monitoring 3—55351
  pressure wave propagation two-DD analysis of fluid-structure interaction, computation 3—31472
  pressurized thermal shock, NRC program 3—6414
  primary heat transport system leak due to cracked pressure tube 3—36513
  pumps, coolant and recirculating, properties, literature survey and recommended design studies 3—11449
  PWR, activity transport eqns. 3—21446
  PWR, ECC injection rate and duration, effects on reflood phase during LOCA 3—1001
  PWR, increased heat removal events, natural circulation evaluation 3—31670
  PWR, instrumentation concept for core surveillance *(German)* 3—49985
  PWR, liquid velocity estimation in hot leg during reflux cooling 3—31647
  PWR, LOCA, pump behaviour effect 3—41279
  PWR, LOCA reflood phase, system behaviour using CCTF 3—16968
  PWR, loss of coolant accident, core hydrodynamics during reflood phase 3—21459
  PWR, neutral oxygen-water chemical regime, effects on boilers and materials 3—11408
  PWR, safety anal., departure from nucleate boiling ratio, statistical limit development 3—11420
  PWR, secondary system. modifications 3—16949
  PWR, transient thermal mixing in downcomer during high pressure injection 3—36530

fission reactor cooling and heat recovery continued
PWR boiler mechanical components, effects of system fluctuations *(French)* 3—31649
PWR boilers, corrosion removal from boiler secondary, electrochemical meas., Fe ions behaviour 3—50006
PWR boilers at two power stations in France, thermal-hydraulic and chemical sampling data for computer codes 3—45634
PWR coolant system, contamination by ^{58}Co and ^{60}Co, major potential sources 3—50023
PWR core coolant vel. meas. using temp.-neutron noise correlation 3—31684
PWR core exit temp. noise RMS behaviour 3—31681
PWR dedicated shutdown heat removal system, probabilistic seismic design, LOCA 3—36544
PWR flow regimes and heat removal mechanisms in U-tube steam generator 3—31680
PWR fluid and thermal mixing in cold-leg and downcomer 3—6418
PWR ice condenser plant, hydrogen combustion during degraded core accidents 3—6430
PWR LOCA, continuous meas. of coolant liquid level 3—31745
PWR LOCA emergency core cooling anal. by TRAC-PD2 MOD1 3—6425
PWR LOCA SCTF expts. 3—45639
PWR LOCA vent valve flow, cold leg and downcomer, fluid and thermal mixing 3—36527
PWR LOCA/ECCS integral tests, ROSA-II expt. programme 3—17020
PWR main coolant line, preclusion of double ended circumferential rupture 3—21462
PWR model cold leg and downcomer, thermal mixing data evaluation 3—55240
PWR nuclear power stations, pipe connections *(German)* 3—6394
PWR once through steam generators, moisture separator drain routing effects 3—21450
PWR power plant, optimal temperature controller design 3—6406
PWR rod bundle dispersed flow film boiling heat transfer neat spacer grids 3—41243
PWR safety and relief valve test program 3—55389
PWR safety and relief valve test programme, test condition justification 3—55386
PWR safety and relief valves, overpressurisation transients, review 3—55390
PWR safety and relief valves, testing 3—55388
PWR safety relief valve discharge piping forces, RELAP5/MOD1 anal. 3—11424
PWR safety valve discharge, piping hydrodynamic loads, RELAP5/MOD1 appl. 3—55387
PWR safety/relief valve blowdown analysis experience 3—26423
PWR secondary water chemistry guidelines for corrosion reduction in steam plant 3—45633
PWR single steam generator cooldowns, radiation field control 3—55241
PWR steam generator tube burst, droplet size distribution of flashing high-pressure primary coolant 3—36529
PWR steam generators, instrumenting steam separators 3—50010
PWR steam generators simulation of heat transfer behaviour using RELAP4 and RELAP5 computer codes 3—55249
PWR system simulation, calculational limitations for accidents 3—55400
PWR systems, transient anal., reactor safety perspective 3—55399
PWR thermal and fluid mixing during high press. coolant injection 3—6293
PWR U-tube steam generators; modular modelling system simulation 3—55251
PWR-based differential pressure meas. during LOFT expts., sensing line effects obs. 3—21457
PWRs, corrosion damage reduction by improved steam purity 3—36497
R.E. Ginna PWR power plant, steam generator tube rupture 3—55364
reactivity coefficients for Bilibinsk nuclear power station 3—41247
reactor steam generators, heat transfer in primary water distribution *(Czech)* 3—11406
recirculating U-tube nuclear steam generators, modelling and simulation using ATHOS computer program 3—55247
reference electrode design for long term in reactor electrochemical potential meas. 3—21453
regulatory activities associated with revision of the ECCS rule 3—31774
RELAP5 anal. of LWR thermal hydraulic response 3—31672
RELAP5 nuclear plant analyzer capabilities 3—26305
relative freezing controlled penetration potential of carbide and oxide fuel 3—6370
RETRAN thermo-hydraulic models, improved soln. methods 3—26306
RETRAN-02 code for transient thermal hydraulic anal. 3—49924
Ringals 3 PWR power plant model 3—55253
risk evaluation of standby fluid systems 3—31703
rod bundle, asymm., parallel flow, turbulence and vel. distrib. 3—41234
rod bundles, heat transfer, hydraulic resistance *(Russian)* 3—50004
rod bundles with geometrical disturbances turbulent flow, shear stress 3—41239
safety relief valve discharges, loading effects on submerged struct. and piping load struct. 3—31713
safety relief valves, unsteady pipe forces caused by hot water discharge 3—26418
SASSYS LMFBR systems analysis code 3—55083
shock wave passage through two-phase mixtures 3—31725
simulated explosions inside flow network, exptal. and EVENT code results 3—55379
small break LOCA, uncovered core heat transfer under high pressure, low heat flux conditions 3—55381
SNR 2, SAS3D code, core dynamics, shut-down signals in LOF accident 3—55105
SNR-300, core protection, safety margins in system areas 3—55466
SNR-300 vessel failure, hypothetical unprotected loss of flow accident 3—55267
spring-loaded safety valve, dynamics and stability 3—26417
St. Lucie Nuclear Power Station Unit 1, in USA, secondary water chemistry control 3—50007
steady-state thermal cond. for fuel element with circular cooling channels *(Russian)* 3—50005
steam generator, structural stress measurements 3—55192
steam generator, tube failures, radiological consequences 3—55348
steam generator feedwater line rupture, pressure responses 3—36534
steam generator plate crack detection by radiography 3—55149
steam generators, earthquake isolation system 3—55372

fission reactor cooling and heat recovery continued
steam generators, heat exchangers for gas cooled reactors *(Russian)* 3—50001
steam impingement jet in postulated pipe rupture accident *(Japanese)* 3—26412
steel melting on contact with UO$_2$ vapour following LMFBR HCDA 3—6369
super high temp. gas cooled reactor, design features *(Russian)* 3—49919
Super PHENIX, decay heat removal system, CREYS MALVILLE, operating characteristics 3—55261
SUPER-PHENIX, decay heat removal by natural convection, calcs. and mock-up expts. 3—55269
Super-Phenix, French fast breeder nuclear reactor steam generator, discrete time model reference multivariable adaptive control 3—6405
SUPER-PHENIX, Na heat transfer by natural convection around internal core catches 3—55270
SuperPhenix 2 LMFBR, dynamic simulation of overall operation under natural circulation 3—55396
temperature monitoring, improved sensitivity 3—26402
thermal stratification in the FFTF heat transport piping following reactor scram 3—11443
thermal-hydraulic analysis of a steam generator tube break transient 3—11432
thermal-hydraulic analysis of Westinghouse Model 51 recirculating steam generator using computer code THIRST 3—45635
thermal-hydraulic aspects of pressurised thermal shock 3—6417
thermal-hydraulic transients in piping networks; anal. method 3—55383
thermohydraulic calculation of a diagnostic assembly of a NPS using cell-subchannel analysis *(Russian)* 3—41097
TMI-1 once through steam generator tube failure anal. 3—26371
TMI-2 primary cooling system, decontamination techniques comparison 3—55245
TRAC assessment at Los Alamos 3—11433
TRAN fuel freezing experiments 3—6371
transient simulation of a helical coil sodium/water steam generator 3—31656
transient two-phase flow, adjoint sensitivity anal. using partial differential eqns. 3—41261
transport of radioactive particles in the primary loop of a reactor 3—41248
TREAT upgrade, core design, control system and safety features 3—55540
true mass flowmeter, for nonsteady two-phase flow 3—41244
turbine disk and wheel cracking due to intergranular SCC 3—26409
turbulence model, finite element solution with one equation, numerical solutions 3—36446
turbulent flow characteristics, large horizontal tubes 3—55346
two phase flow modelling using modular modelling system 3—55252
two phase flow transients, constitutive eqns. for interfacial area 3—11425
two phase thermal hydraulic instrumentation 3—55242
two-bundle loop for LWR large-break integral tests 3—6427
two-phase expansion, EXCOBULLE code tests, comments and reply 3—26401
two-phase flow, air-water, countercurrent flow in vertical tubes 3—46630
two-phase flow measurement by CT scanner 3—31682
two-phase flow systems, single component vels. determ. using correl. methods 3—984
two-phase jet load models, pipe break consequence anal. 3—6401
two-temperature reactor model, bifurcation theory dynamics anal. 3—41108
UNDINE code for LMFBR thermohydraulic core anal. 3—41110
vibration response to random excitations, due to coolant flow 3—26321
virtual mass effects in two-phase flows—a review 3—12757
void fraction meas. using X-ray CT scanner in two phase flow 3—11437
VVER, vibro-acoustic diagnostics of circulating coolant pumps *(Czech)* 3—49999
VVER 440 core inlet coolant temp. distrib. 3—45625
water coolant, fission product radioactivity, operative automated monitoring 3—11379
water droplet removal efficiency in steam dryers 3—31660
water filled, thin walled piping systems, pressure pulse propag., FBR appl. 3—55496
water loop operation, microcomputer-controlled flowmeter *(Czech)* 3—11405
wet steam turbines for nuclear plant applications, materials aspects 3—26408
WWER reactor, thermal studies for power reactor reliability and safety *(Russian)* 3—41098
Zircaloy 2/UO$_2$ interfaces, solid spot thermal conductance 3—45623
Zircaloy fuel sheaths, deform. and failure under LOCA conditions 3—45660
Zircaloy-4 cladding deformation in LOCA, boundary effects 3—6372
^{10}B analyzer, CANDU power station, applications 3—55191
^{60}Co, impurity in coolant, from component wear 3—55195
D_2O vapour loss, infrared liquid isotropic analyser monitor 3—55190
Fe_3O_4, aqueous suspensions of magnetite, behaviour of Co, corrosion products in cobalt 3—18553
Fe_3O_4, dissolving and crevice studies with chelant solns., rel. to reactor cooling loop 3—41132
HTO, desorption rate of adsorbed molecules from sieve 3—47215
I, adsorption to surface of UO$_2$ pellets, transport in coolant 3—55198
K, film boiling characteristics, effects in fast breeder reactors 3—31646
N_2O_4 dissociating coolant, chemical reaction thermal effects on nuclear power station efficiency 3—11411
N_2O_4, initial non-equilibrium state influence on steam generator efficiency *(Russian)* 3—50003
N_2O_4, radiolysis in IRT-M reactor *(Russian)* 3—31573
Na coolant mist deposition, effect on barriers in LMFBR 3—31471
Na, vapour flow, 1-dimens. eqns., residual method of orthogonal collocations, LMFBR appl. 3—41258
Na-H_2O steam generator, flow dynamics of leaks for magnetic flowmeters 3—41250
T, removal system, from moderator and heat transport system, D cooled 3—55349
T, removal system for PGS, practical description 3—55350
UO$_2$, vitreous, thermal accommodation coeffs. of inert gases, expt. determ. 3—41147

fission reactor core control and monitoring
see also fission reactor safety; fission research reactors; nuclear engineering; nuclear reactor instrumentation
5 MW research reactor computerised power controller 3—45636
activity control for operational safety, innovative approach 3—17009
advanced BWR core performance calcs. *(German)* 3—49913
analog reactivity meter, theoretical principles, main elements, calibration, measuring experience 3—45641
annular absorber rod lattices, equivalence resonance integrals, cross sections 3—41221
ARIES model for LMFBR advanced reactor interactive engineering simulation 3—26302
automatic diagnosis of multiple alarms for reactor control rooms 3—16993
Browns Ferry 3 partial control rod insertion, neutronics anal. 3—11453
bubble reactivity worth calcs., probability table method 3—41215
BWR, ASEA-ATOM experience of gadolinia as a burnable adsorber 3—26406
BWR, gamma traversing incore probes, response anal. 3—16958
BWR, nuclear and thermohydraulic parameters determ. *(German)* 3—49989
BWR, one-point core model, power level and core flow rate predictions 3—980
BWR, power distrib. prediction system, on-line test 3—983
BWR, reactor management system, development 3—45624
BWR, Xe induced power distribution transients, diffusion code 3—36537
BWR 3D heterogeneous lattice, neutron field freq. response to localised perturbations 3—31639
BWR advanced control blade materials, critical expts. for B_4C and Hf 3—16867
BWR bypass heating, Monte Carlo calc., critical power ratio thermal limits 3—16955
BWR control blades, B_4C powder loss determ. by nondestructive testing 3—55237
BWR control blades inspection, neutron absorber standards method evaluation 3—55239
BWR control rods, B_4C loss, post-irrad. examination 3—41176
BWR core, COTRAN, coupled neutronic and thermal-hydraulic transient anal. code 3—17013
BWR core, RAMONA-III neutronics model qualification 3—17012
BWR core instrumentation concept and signal processing *(German)* 3—49987
BWR core stability, time-domain anal. 3—55080
BWR cylindrical fuel element heterogeneous lattice, incore neutron detector local sensitivity volume 3—41203
BWR fuel bundle design, TGBLA method validation 3—36450
BWR graphic display system, development and evaluation 3—16997
BWR graphics display system 3—31761
BWR in-core neutron noise detector sensitivity volume above 2 Hz calc. 3—16963
BWR load following operation, experience and analysis 3—16952
BWR long life control blade, HfO_2 based design 3—26410
BWR multivariable stability margins 3—36515
BWR stability margins, 3-dimens. coupling effects 3—17017
BWR startup, principles for control rod withdrawal strategy 3—985
BWR subcooled core dynamic behaviour during control rod drop accident 3—36556
CABRI experimental reactor for fast neutron reactions, programme and projects *(French)* 3—21465
CANDU, moderator temperature meas. by instrumented probe 3—49994
CANDU, shutdown systems, computer applications 3—55562
CANDU reactor vessel, moderator flow and temp. distrib., numerical simulation 3—45640
CANDU spatial neutron kinetics 3—17011
CANDU-PHW, probabilistic model of shutdown trip systems 3—55563
cell discretisation in reactor problems, power ratios, flux plots 3—41212
Clinch River LMFBR heterogeneous core, LOF event, Doppler and sodium void worth effect 3—36553
computer-based reactor protection system, fail-safe design 3—36560
computerised event-task analysis technique 3—847
conference, Canadian Nuclear Soc., Toronto, Ont., Canada (June 1982) 3—54584
control blades, ^{10}B depletion, methods of measurement 3—31530
control centre design, human factors role 3—55355
control room, design and operation, operator viewpoint 3—55352
control room, human factors, conf., Toronto, Canada (June 1982) 3—54588
control room design, incorporation of human factor engineering 3—845
control system parameters, auto tuning method, dynamic simulator 3—41229
core design, reloading optimality, control theory 3—36447
core neutronics problems, multigroup diffusion approx., calc. procedures 3—41217
critical core neutronics problem soln. 3—41202
critical mass, minimum, fuel distribution, mathematical theorem 3—36502
critical mass, minimum for flux ratio, single solution considerations 3—36503
diffusion equation, generalised first-order perturbation formula 3—41084
diffusion limit transport problems, numerical solns. 3—41086
digital image processor as a human factors engineering tool 3—989
digital low-pass filters design and appl. on core meas. *(German)* 3—49986
disturbance analysis in nuclear power plants 3—55356
EBR-II, expt. capability for off-normal testing of fast reactor fuels and systems 3—55546
effective homogenization method for heterogeneous assemblies 3—6279
ENDF/B-V data testing for thermal reactors 3—49921
EPR-II, instrumented subassemblies INSAT XX09, XX10, Na flow and temp. 3—55331
EPRI modular modeling system code, development for transient anal. 3—26303
error diagnosis/recovery system 3—31689
ex-core neutron detectors, spatial weighting factors, reevaluation 3—41226
explicit high-order perturbation formulation use in reactor anal. 3—41103
failed fuel element inspection and repair *(German)* 3—55131
fast breeder reactor shut-down system, safety oriented, microprocessor appl. 3—26434
fast neutron scatt. anisotropy, Boltzmann-Fokker-Planck eqn. treatment 3—41088
fast reactor; core restraint analysis; 75 MW power ascension tests, JOYO reactor 3—31645
fast reactor, hexagonal geometry nodal modelling, power distribs. 3—16837

fission reactor core control and monitoring continued
fast reactor, neutron noise, general formulation 3—26294
fast reactor, UO_2 reflector effects on prompt neutron kinetics 3—11415
fast reactor core monitoring, power distrib. model 3—981
fast reactor neutron kinetics with material motion, finite element method 3—45644
fast reactors, reflection-based interpolation in nodal reactor simulation 3—16838
FFTF Absorber Pin Performance Verification Test 3—55184
flux distortion effects in the Diagnostic Cores Phase I Assembly, fast reactor parameters 3—16954
Fort St. Vrain HTGR, dew-point moisture monitor testing 3—26399
fuel bed expansion calc. for rotating fluidised bed reactor 3—11358
fuel behaviour, effective energy deposition, power burst expt. in NSRR 3—1000
fuel burning, continuous monitoring device 3—45629
fuel management, matched power PSEUDAX in PDQ7 3—36512
FUGEN HWLWR, on-line core performance evaluation system *(Japanese)* 3—26397
gamma thermometers used as both power and core cooling monitors 3—11417
heterogeneous lattice of cylindrical fuel elements, 2-group Feinberg-Galanin kinetic adjoint eqns. 3—31638
high temperature reactor, operational flexibility with high and low-enriched fuel cycle 3—966
highly supercritical reactor, reciprocal period determ. methods 3—11413
HTGR, Xe density oscill. control concept *(German)* 3—49992
HTGR coated fuel particles under irradiation, fission gas release behaviour 3—45583
HTGR instrumentation concept *(German)* 3—49988
HTGR with low-enriched fuel, Xe oscill. stimulation *(German)* 3—50015
human engineering in nuclear power plant design 3—848
human factors, general introduction 3—55353
human factors engineering in Clinch River Breeder plant design 3—846
human factors framework 3—55354
HWR cluster type fuel lattices, cluster code MESSIAH, reactivity, criticality 3—16943
Idaho National Eng. Lab. thermal reactors, in-core instrument capabilities 3—55329
in-core fuel management optimisation, perturbation theory, FULMNT code 3—41213
in-core instrumentation techniques, status, importance and possible developments *(German)* 3—49993
in-core reactor instruments, temp. and neutron flux detectors *(German)* 3—49984
inelastic discrete level neutron collision mechanics, consequences for inelastic continuum scatt. 3—41067
irradiation induced structural material deformations, effect on core restraint design 3—31509
Japanese Special Committee on Reactor Physics, activities April 1979-March 1982 *(Japanese)* 3—16946
JENDL-1 benchmark tests for fast reactor core characteristics 3—6301
kinetics, with stationary or circulating fuel, bifurcations 3—41109
Kola reactor, neutron flux density calcs., vessel service life 3—41252
KUCA critical experiments using medium enriched uranium fuel 3—49982
KUCA medium enriched U core, neutron flux distrib. meas. 3—49983
Kyoto University, high flux reactor, rod control system 3—6404
light water moderated lattices, initial and near-equilib. cycles, conversion performance 3—36479
liquid metal fast breeder reactor, power control system design 3—6407
liquid waste reduction using variable temperature control 3—16862
LMFBR, 1300 MWe, neutronic performance for homogeneous and heterogeneous designs 3—16840
LMFBR, BOR-60 plant, safety problems, control systems 3—55405
LMFBR, CRAFT code, thermal bowing behaviour, kinetic response 3—55100
LMFBR, Creys-Malville NSS, in-service inspection, specific application techniques 3—55469
LMFBR, double heterogeneity effect of fuel pin and subassembly 3—41222
LMFBR, fuel motion modeling in hypothetical core disruptive accidents 3—6410
LMFBR, heterogeneous or homogeneous, safety anal., intrinsic reactivity feedback characts. 3—36552
LMFBR, inherent safety advantages, EBR-II expts. and testing 3—55404
LMFBR, intracell adjoint flux heterogeneity effects on FOP reactivity calcs. 3—16961
LMFBR, large development plant control and protection systems, design 3—55463
LMFBR, man-machine interface optimisation 3—55442
LMFBR, NADYP SURDYN codes, comparison, space kinetics, point kinetics 3—55101
LMFBR, permanent magnet flowmeter probes, development 3—55283
LMFBR, risk predictions, comparison with LWR prediction 3—55468
LMFBR axially heterogeneous core, breeding and safety performance 3—36555
LMFBR core cooling, microelectronic based surveillance *(German)* 3—49990
LMFBR core design for low capital cost and low sodium void 3—6283
LMFBR flux shape distortions, improved quasistatic calc. method 3—995
LMFBR heterogeneous core, physics, design and safety aspects 3—36550
LMFBR heterogeneous core, physics, safety and economy, French studies 3—36551
LMFBR heterogeneous core config. effects on hypothetical LOF accident sequences 3—36554
LMFBR safety, reactivity balance meter operation experience 3—55256
LMFBR vented control rods, absorber-cladding chemical interaction, out-of-pile study 3—55502
LOCA, core behaviour prediction and control *(German)* 3—36516
LWR, on-line recording and evaluation of measured core data *(German)* 3—49991
LWR, operation and data anal. with Kalman filters *(German)* 3—49912
LWR core anal., BWKIN development and validation 3—17015
LWR core melt accidents simulation of HF induction heated melt facility SASCHA *(German)* 3—45617
LWR fuel management status and development trends *(German)* 3—55129
LWR subcritical reactivity monitoring using ^{252}Cf-driven neutron noise method, feasibility 3—16962
Mil-Spec computers in nuclear power applications 3—16994
MIRA, microprocessor based reactor shutdown system 3—55286

fission reactor core control and monitoring continued
Monte Carlo point flux estimators with unbounded variance, confidence limits, stat. convergence 3—31640
Monte Carlo reaction rate estimators, zero variance biasing schemes 3—41220
Monte Carlo splitting, approx. optimisation using simplified transport model 3—41087
multigroup diffusion theory, inverse problem calcs., cross sections, diffusion coeffs. 3—41083
multiregional nuclear reactor multigroup approximation, criticality and neutron flux distribution determ. *(Spanish)* 3—45571
multivariable controller for a 600 MWe CANDU nuclear power plant *(French)* 3—55243
neutron distribution stability, 2-dimens. anal. 3—45627
neutron flux control system design using inverse Nyquist array method 3—49998
neutron flux density and energy release analysis 3—41253
neutron flux regulation by two-phase equilibrium reaction 3—45628
neutron moderation, operator representation using Pade approximation 3—41089
neutron streaming, molten, fuel assemblies, Trombay criticality formula 3—36468
nonlinear coupled distributed parameter systems, bilinear control problem 3—50014
Oconee-1 lead test assemblies, gadolinia fuel neutronics model 3—16870
OECD Halden Reactor Project, in-reactor instrumentation for fuel behaviour studies 3—55330
on-line automated gamma spectrometer for coolant at LOFT facility 3—55224
operator job description 3—55357
ORR Poolside Facility, PV surveillance irrad. expt. temp. control 3—55316
pebble bed high temp. reactors, computer code development for power distrib. reconstruction, report *(German)* 3—6303
pebble bed HTR steady state and Xe transient anal., ASTERIX-2 user manual 3—50009
performance characts. monitoring using minicomputers 3—41256
PHENIX LMFBR, surveillance, pattern recognition appl. 3—16964
power change, time optimisation 3—45572
power pulse self quenching from pulsed fast reactor 3—45626
power reactor kinetic spatial weighting factors calc. 3—36510
power reactors, in-core temp. instrumentation equipment *(Japanese)* 3—41208
power transient control system for the Engineering Test Reactor 3—16951
pressure relief valves, acoustic emission monitoring 3—55351
pulsed reactor thermocouples, neutron effects, thermoelectromotive force transient variations 3—45631
pulsed reactor thermocouples, type VR 5/20, thermoelectromotive force transient variations 3—45632
PWR, CASMO-2 for effective PDQ cross section generation 3—16959
PWR, EPRI-NODE-P nodal code, moderator temp. history effects incorporation 3—36449
PWR, fuel cycle optimization, reactor models 3—41106
PWR, instrumentation concept for core surveillance *(German)* 3—49985
PWR, power distrib. height stability, influence of steam reactivity effect 3—45575
PWR, reduced length burnable absorber design 3—26405
PWR, spectral shift reactivity control, variable water content method 3—31655
PWR axial blanket, neutronics anal., methods verification 3—26404
PWR boiler mechanical components, effects of system fluctuations *(French)* 3—31649
PWR control, diagnostic disturbance anal. system, methods 3—26400
PWR control rod materials, development of hafnium 3—41159
PWR core anal. in XY geometry, PSEUDAX code, in-core fuel management 3—36492
PWR core burnup calcs., time-depend. approach, TDB code 3—41214
PWR cores with Gd_2O_3 for reactivity parameter and power distrib. control 3—16873
PWR fuel element stresses caused by variations in power, problems and qualification tests *(French)* 3—31534
PWR fuel management, 2-dimens. nodal anal. 3—36494
PWR fuel management for slowing pressure vessel embrittlement 3—55110
PWR fuel performance, I escape rates through cladding, steady state consequences *(Japanese)* 3—49939
PWR individual fuel assemblies, optimal placement and poison control depletion, gradient projection method 3—26407
PWR load following, optimal control for Xe spatial oscillations 3—41218
PWR manoeuvres, optimal control appls. 3—41224
PWR power estimation algorithm, performance of Kalman filter 3—41273
PWR power plant, optimal temperature controller design 3—6406
PWR reactivity induced accidents, sensitivity anal. 3—31693
PWR spatial kinetics at Combustion Engineering, HERMITE code 3—16957
QUANDRY code for spatial neutron kinetics analyses 3—17014
reactivity coefficients for Bilibinsk nuclear power station 3—41247
reactivity coefficients from noise meas. 3—36454
reactivity meas. using pulsed neutron techniques, variable delayed neutron background effects 3—45630
reduced temperature return-to-power demonstration 3—41232
research reactors, critical assemblies with mixed enrichments, neutronics calcs. and meas. 3—16876
response matrix nodal methods, general separability formulation, TRILUX form for FBR 3—36451
RETRAN-02 spatial neutron kinetics methods 3—16956
S_n-diamond-difference low order transport operators, eigenvectors 3—41085
Safety Parameter Display concepts, evaluation, decision anal. 3—16999
sensitivity analysis of the inherent neutron source strength 3—31499
SNR 2, SAS3D code, core dynamics, shut-down signals in LOF accident 3—55105
SNR 300 subassembly faults accommodation, local faults role, core surveillance 3—55458
SNR-300, core protection, safety margins in system areas 3—55466
SNR-300 vessel failure, hypothetical unprotected loss of flow accident 3—55267
Sodium Loop Safety Facility, in-pile test, integrated digital expt. transient control, safety 3—55553
spectrum and kinetics parameters from the U9 critical assemblies 3—31667

fission reactor core control and monitoring continued
static neutron diffusion eqn. program MICRETE Version 4.1 user manual 3—26311
stochastic nonlinear reactor kinetics, probability distribs. 3—41093
SUPER-PHENIX core surveillance and protection system 3—55257
temperature monitoring, improved sensitivity 3—26402
thermal reactors, multigroup cross section correction for resolved resonance interference in mixed absorbers 3—41216
thorium cycle LMFBR, fuel pin design and neutronic/thermal characts. 3—16875
three-detector spectral density meas. for subcriticality, expt. at HFIR 3—36511
TMI-2 axial power shaping rod insertion test 3—21472
TMI-2 core examination, first results 3—21474
TMI-2 core examination plan overview 3—21475
training simulators, role in operator education 3—55359
Transition Control System for procedure prompting 3—17000
TREAT, upgrading of expt. capabilities for fast reactor safety 3—55539
TREAT upgrade, core design, control system and safety features 3—55540
TREAT Upgrade reactor, temp. feedback reactivity coeff. calc. 3—16960
two- and three-group neutron transport eqns., pseudodiscrete spatial decay modes 3—41068
two-core reactor, reactor kinetics parameters 3—31641
UNDINE code for LMFBR thermohydraulic core anal. 3—41110
unit first operator, challenges 3—55358
vibrating noise sources simulation for power LWRs 3—31481
VVER 400, simulation of main control circuit on hybrid computer *(Hungarian)* 3—36500
VVER-440 reactors, flux trap control assemblies, radial boundary condition calcs. 3—11412
^{10}B analyzer, CANDU power station, applications 3—55191
^{10}B measurement in Al_2O_3-B_4C burnable poison by prompt gamma activation 3—26357
D_2O vapour loss, infrared liquid isotropic analyser monitor 3—55190
UO_2-PuO_2 fueled system multiplication factor calc. 3—31473
^{238}U capture, γ-counting and mass spectrometer meas. comparison for fast reactor design 3—16833
Xe induced flux oscillations, nonlinearities and energy group struct. influence 3—41219

fission reactor decommissioning
see also fission reactor safety; radiation protection; radioactive waste
fuel cycle back-end activities in Federal Republic of Germany 3—925
maintenance time parameter effect on extended reactor shutdown problem 3—839
nuclear facility decommissioning, recent US and international experience 3—21574
nuclear power plants, robot techniques, appls., survey 3—31642
Shippingport, reactor vessel internals transportation for disposal 3—31853
spent fuel management and decommissioning, costs probabilistic eval. 3—31615
SUPER PHENIX shutdown system, design, manufacture and testing 3—55731
underwater cutting method 3—41233
Windscale AGR, demolition techniques and expertise 3—17100
U-graphite channel reactor, life-time estimates, practical problems 3—26504

fission reactor fuel
see also claddings; fission of plutonium; fission of uranium; fission reactor fuel preparation and reprocessing; isotope separation; radioactive waste
accounting system, computer database 3—36482
actinide oxides, irradiation in fast reactor, segmented pin design 3—55185
Advanced TREAT Loop, fuel failure events for Clinch River and PFR fuel 3—55542
annular fuel pellet design, LOCA anal. thermal response after extended burnup 3—31597
APEX fuel cycle for LWR fuel prod. and radwaste elimination 3—6384
Arkansas Nuclear One, fuel failure costs 3—6323
ASEA-ATOM BWR fuel rod experience at high burnup 3—21426
automated facility for investigating irradiated fuel elements by γ scanning 3—45597
barrier fuel, irradiation tests 3—31594
barrier fuels as solution to pellet-cladding interaction, O content effect in Zr 3—26372
boiling water reactor fuel and core development at ASEA-ATOM 3—21366
breach of evolution mechanisms 3—6342
BRIG 3000 fuel element test loop *(Russian)* 3—49946
bundles, neutron tomography at HFEF 3—29244
BWR, General Electric fuel design and performance improvements 3—26353
BWR burnup extension by spectral shift control 3—31611
BWR extended burnup fuel investigations in commercial reactors 3—21420
BWR fuel, DOE/GE/NSP extended burnup program 3—21423
BWR fuel bundle, gadolinia burnup model 3—16874
BWR fuel bundle design, TGBLA method validation 3—36450
BWR fuel channel bowing behaviour anal. 3—26379
BWR fuel cycle, extended burnup impact 3—31609
BWR fuel design improvements for extended burnup 3—26354
BWR fuel rod in-reactor pressurisation, He enigma 3—26374
BWR high burnup licensing assessment 3—31601
CANDU fuel, I, Cs, Te conc. in postulated LOCA 3—45602
CANDU fuel dimensional response to power changes 3—45603
CANDU-PHW reactors, safety research, LOCA, fuel behaviour, fission gases 3—31778
carbide fuel, fission gas swelling in struct. zones III, IV, P_2 bubble populations, burnup 3—55134
carbide fuel, in LMFBR, coolant interaction test for explosive reaction 3—41140
ceramic, sintering, pore geometry and interfacial energy 3—34268
ceramic pellets prod. with close shape tolerances, hot impact densification 3—969
coating failure, fuel particle Cs release failure 3—45588
conference, Canadian Nuclear Soc., Toronto, Ont., Canada (June 1982) 3—54584
conference on nuclear materials management, Washington, USA, (July 1982) 3—5474
Connecticut Yankee power station, fuel failures, cost impacts 3—6322

fission reactor fuel continued
  CRBR, flashing fuel simulant expansion into upper core structures, SIMMER-II validity 3−55511
  criticality accident experimental studies with high-enriched uranium solutions 3−1014
  criticality calculations, solid angle technique, KENO IV calcs. 3−31480
  crud buildup and radiation field minimization through primary coolant chemistry 3−6397
  cylindrical fuel rod with cladding, temp. and thermal stress, analytical determ. 3−36466
  DFR subassemblies, pin durability, local blockage formation and detection 3−55460
  downward penetration of UO$_2$ into limestone concrete following HCDA 3−31731
  driver fuel assemblies at FFTF 3−31565
  duplex fuel, British and Danish experience 3−31593
  duplex fuel pellet manufacturing feasibility study 3−49967
  EBR-II, breached fuel test facility 3−55333
  EBR-II, expt. capability for off-normal testing of fast reactor fuels and systems 3−55546
  EBR-II depleted U reflected configurations, blanket-pin burnup anal. 3−55111
  effective energy deposition, power burst expt. in NSRR 3−1000
  elastic stress-strain relation for restructuring sphere-pac fuel 3−26378
  electromechanical manipulator for Hot Cell Verification Facility 3−31571
  Eurodif uranium enrichment plant, gas diffusion process and plant technical details *(French)* 3−49965
  extended burnup, how far, how fast 3−31612
  extended burnup fuel, fission gas induced swelling during high temp. transients 3−31598
  extended burnup fuel, implementation, assessment and experience 3−31604
  extended burnup fuel, needed by whom 3−31614
  extended burnup fuel economics 3−31605
  fast breeder fuel pin assembly velocity and temperature field calc. using CAFCA code 3−55082
  fast breeder system, Pu economy dangers 3−19566
  fast reactor cladding, radial He profiles, origin and consequences 3−41133
  fast reactor fuel and structural materials radiation damage, effect on design 3−55154
  fast reactor fuel cycles, conf., London, England (Nov., 1981) 3−16083
  fast reactor fuels, oxide and carbide, crit. temps. estimation 3−55143
  fast reactor irradiation facilities at Grenoble Nuclear Research Centre, fuel pins, safety 3−55551
  fast reactors, conversion parameters 3−26291
  FBR, gas cooled, conceptual design *(Russian)* 3−49918
  FBR fuel, gas atoms in very small bubbles, anal. of thermodynamics, report 3−46680
  FBR fuel irradiation tests at JRC Petten, transient expts. 3−55183
  FBR fuel pin diameter optimisation for oxide and carbide fuel 3−16917
  FCYCLS−a one-group nodal method for fuel cycle design 3−26296
  FFTF fuel pins, improved specifications 3−26356
  FFTF reactor characterization program review 3−55304
  fissile material, energy level overlap with resonant energy levels, assay implications 3−16828
  fission product γ-decay heat for fast n fission of ^{233,235}U, ^{239}Pu *(Japanese)* 3−16947
  FISSPROD-3, expanded fission product accumulation program using ENDF/B-V data 3−55081
  FRAGEMA 17×17 fuel, high burnup irradiation test programs 3−21424
  fuel breeding and fuel management prospects of hybrid and symbiont breeders 3−17069
  fuel bundle ballooning tests in NRU reactor, thermal hydraulic design, computer methods 3−26313
  fuel cycle conference, New York, NY, USA (Mar. 1982) 3−30558
  fuel cycle supply and demand 3−31631
  fuel element assembly models, heat and mass exchange processes 3−11410
  fuel element bulging, creep in fast neutron flux *(Russian)* 3−49947
  fuel pellet fragments, thermoelastic stresses, fragment formation conditions 3−41129
  fuel rod vibration due to cross flow through narrow gaps 3−26380
  fuel rod with longitudinal cooling fins, hydrodynamic behaviour, numerical simulation 3−55235
  fuel-clad thermal gap conductance determ. by Kalman filter methods 3−891
  fuel-cladding gap conductance measurements using Kalman filter methods 3−958
  fuel-coolant interaction, molten, fragmentation of molten debris 3−26413
  fuel-to-sheath thermal conductance, influence on fuel temp. predictions 3−41223
  FUMAC model for LWR fuel relocation and PCI 3−26293
  gas bubbles in fission reactor materials, thermodynamics 3−36460
  geometry effects on solidification-induced stresses in growing fuel crust 3−31722
  German fast breeder reactor project, status and developments *(German)* 3−41287
  heat conduction in fuel pins with eccentrically placed pellet 3−994
  HEDL Shielded Materials Facility, breeder reactor fuel pin remote examination 3−16880
  high burnup fuel cycle characteristics 3−31608
  hologrammetry remote meas. on reactor fuel elements 3−41793
  hot cell examination techniques for the power reactor fuel assembly 3−31560
  hot cell facilities at Japan Materials Testing Reactor 3−31561
  hot cells at Oarai fuel monitoring facility 3−31562
  Hot Fuel Examination Facility, mockup testing of remote handling equipment 3−16879
  HTGR, metallic fission products, diffusion in graphitic fuel elements, Cs, Ag, Ru concs. 3−21414
  HTGR coated fuel particles under irradiation, fission gas release behaviour 3−45583
  HTGR fuel and materials, postirradiation tests, Tokai hot cell facilities 3−31564
  HTGR fuel element head-end reprocessing tests 3−967
  HTGR with low-enriched fuel, Xe oscill. stimulation *(German)* 3−50015
  HWLWR cluster type fuel assemblies, Gd$_2$O$_3$ poisoning, critical expts. 3−41127
  HWR, advanced fuel cycle transitions 3−6332
  image analysis in the remote examination of fuel pins 3−31569

fission reactor fuel continued
  in-core fuel management optimisation, perturbation theory, FULMNT code 3−41213
  in-situ material-motion diagnostics and fuel radiography with experimental reactors 3−55547
  inspection and repair of failed elements *(German)* 3−55131
  internal fuel motion in annular fuel for 50 cent/s and 3 dollar/s transient overpower accidents 3−31716
  irradiated aluminide fuel, fission product release at high temp. 3−49928
  irradiated fuel, techniques for underwater photographic inspection, report 3−31690
  irradiated nuclear fuels and vitrified wastes, dry storage 3−41122
  Joyo fast breeder reactor, failed fuel detection and location device design *(Japanese)* 3−21369
  KNK II, open fuel expt. for cladding failure 3−55525
  KNK-II test reactor, fuel element vibr. effects during power operation 3−55447
  KUCA critical experiments using medium enriched uranium fuel 3−49982
  laser applications, U isotope separation, radioactive waste cleanup and trace-impurity removal 3−21441
  light water moderated lattices, initial and near-equilib. cycles, conversion performance 3−36479
  LMFBR, ACRR coded aperture imaging system, fuel pin monitoring 3−55287
  LMFBR, CABRI fuel pin behaviour, rapid power transients 3−55104
  LMFBR, combined chemical and mechanical interactions 3−6346
  LMFBR, continued operation with defective fuel pins, joint French/German programme 3−55448
  LMFBR, cooling of molten fuel pool, ECCO free convection code anal. 3−55526
  LMFBR, fuel and cladding failure under TUCOP thermal and loading conditions 3−55527
  LMFBR, fuel cell UO$_2$, vapour pressure meas. 3−55162
  LMFBR, fuel cladding melting and motion in LOCA 3−55520
  LMFBR, fuel motion modeling in hypothetical core disruptive accidents 3−6410
  LMFBR, fuel-coolant interaction expt., subassembly accident modes, VULCAIN code 3−55519
  LMFBR, fuel-coolant interactions, modelling and calc. technique 3−55503
  LMFBR, fuel-sodium interaction, out-of-pile expts. using X-ray technique 3−55497
  LMFBR, HCDA anal., disruption stages w.r.t. fuel behaviour 3−55515
  LMFBR, irradiated mixed-oxide fuel, direct electrical heating expts. on LOF accidents 3−55522
  LMFBR, MELT-III/FUMO-E codes, fuel motion in annular fuel in hypothetical accidents 3−55107
  LMFBR, Mol 7C in-pile blockage expts., comparative discussions, pin failure 3−55434
  LMFBR, molten core material fragmentation by sodium, scoping expts. 3−55495
  LMFBR, molten fuel-coolant interaction, space-time anal. model 3−55499
  LMFBR, oxide fuel, chemomechanical interaction with coolant 3−6343
  LMFBR, role in meeting energy demand, fuel requirements 3−55158
  LMFBR, TOP and LOF-driven TOP accidents, material movement in bundle region 3−55462
  LMFBR, TRAFIC, fuel modelling and fission gas behaviour, OGRES, NEFIG, AFMOT 3−55432
  LMFBR, TREAT effects on data interpretation of fuel elements 3−55108
  LMFBR, TREAT hodoscope interpretation, fuel monitoring 3−55288
  LMFBR 15 pin triangular fuel pin sector, thermal-hydraulic safety study 3−31718
  LMFBR closed-pool boilup experiment 3−31726
  LMFBR fuel bundle testing in THORS, data reproducibilty 3−11389
  LMFBR fuel disruption, anal. of DEH, FGR and TREAT expts. 3−55437
  LMFBR fuel pins, fission gas behaviour during fast transients 3−55439
  LMFBR fuel pins, transient overpower expt. in Petten HFR 3−55182
  LMFBR fuel-coolant interaction, TEXAS code anal. 3−55504
  LMFBR fuel-coolant interactions, recent ANL expts. 3−55505
  LMFBR HCDA early fuel dispersal, fuel vapour role 3−6424
  LMFBR intersubassembly fuel penetration into a failed blanket subassembly 3−31728
  LMFBR oxide fuel pins, fuel adjacency effect mechanisms 3−6347
  LMFBR TOP hypothetical accident, fuel characterisation and transient evol. anal. 3−55426
  LMFBR-SAREF Program safety test fuel assembly, n and γ-tomographic imaging 3−26415
  Los Alamos Hot Cell Facility modifications for examining FFTF fuel pins 3−31567
  low enriched coated fuel particles, transuranium element diffusion coeff. *(German)* 3−36487
  low enrichment fuel elements for research and materials testing reactors *(German)* 3−55205
  low-cost nuclear fuel production using D:D neutrons 3−6385
  LWR, extended fuel burnup in Babcock and Wilcox operating units 3−6325
  LWR, high-burnup fuel rod design 3−6359
  LWR extended burnup, USA utility view 3−21422
  LWR extended burnup fuel, reprocessing consequences 3−31603
  LWR extended burnup fuel assembly development 3−31592
  LWR extended burnup fuel performance, conf., Williamsburg, VA, USA (April, 1982) 3−20574
  LWR extended burnup fuel performance 3−21418
  LWR Exxon fuel, high burnup performance 3−21419
  LWR fuel, appls. of post-irradiation data, review, fuel performance verification 3−55180
  LWR fuel, high burnup anal. 3−21421
  LWR fuel, improved designs for reliability and performance 3−26351
  LWR fuel, pellet cladding interaction, chemical aspects 3−6345
  LWR fuel, sphere-pac and annular coated pressurised, development 3−31596
  LWR fuel assemblies, design and development for burnup increase 3−31591
  LWR fuel assemblies with gadolinia, MICBURN-CASMO/CPM anal. 3−16872
  LWR fuel behaviour, cladding deformation with burnup 3−21428
  LWR fuel behaviour, post irradiation examination 3−21429
  LWR fuel behaviour during reactivity initiated accident, gap heat transfer effects 3−55373

fission reactor fuel continued
- LWR fuel behaviour under accident simulating conditions, world-wide expt. research *(Czech)* 3−50019
- LWR fuel burnup extension schedule 3−31613
- LWR fuel cycle benefits due to extended burnup 3−31610
- LWR fuel densification, swelling and microstructures through extended burnups 3−21440
- LWR fuel elements for higher burnup *(German)* 3−55128
- LWR fuel extended burnup phenomena 3−21436
- LWR fuel high burnup effects on the pellet-cladding interaction phenomenon 3−21438
- LWR fuel irradiation, European test facilities survey 3−55326
- LWR fuel management methods *(German)* 3−55130
- LWR fuel management status and development trends *(German)* 3−55129
- LWR fuel PCI limitations at extended burnup 3−21439
- LWR fuel performance characteristics at extended burnup 3−21417
- LWR fuel pins, gadolinia depletion ARMP model 3−16869
- LWR fuel rod, cladding breach, prompt fission gas release model 3−41173
- LWR fuel rod fission gas release 3−21434
- LWR fuel rod heat transfer model for HCDA 3−31685
- LWR fuel rods, KWU fission gas release model 3−36461
- LWR fuel secondary damage following PCI 3−6344
- LWR fuel utilisation and economics improvements 3−26352
- LWR high burnup Combustion Engineering fuel, operating experience 3−21416
- LWR high burnup fission gas release data evaluation 3−21430
- LWR high burnup performance of BN fuels 3−21427
- LWR poolside examination equipment and techniques, overview 3−55179
- LWR Pu recycling, R&D program, indirect nuclear action 3−11402
- LWR subcritical reactivity monitoring using ^{252}Cf-driven neutron noise method, feasibility 3−16962
- LWR transient fuel behaviour, FREY code, verification 3−36539
- machine for disassembly, examination, and reassembly of fuel bundles 3−31568
- magnetometer, superconducting, for nuclear fuel rod quality control 3−26396
- material control and accounting requirements 3−31619
- MATPRO: a handbook of LWR core materials properties models 3−31555
- MOX fuel rods for FBRs and LWRs *(German)* 3−55204
- Neitron-11, apparatus for studying reactor radiation effect on creep and strength of structural materials 3−45600
- nondestructive evaluation of sampling error for plutonium assay 3−26360
- nonlinear two-dimens. heat conduction, Lanczos-Chebyshev method for fuel element 3−55234
- NRC fuel rod behaviour rods for extended burnup, assessment 3−31599
- nuclear fuel cycle overview 3−961
- nuclear fuel element technology, book 3−10543
- nuclear fuel rods simulate by electrically heated rods 3−894
- nuclear material storage, computer network for monitoring 3−31518
- Oconee-1 lead test assemblies, gadolinia fuel neutronics model 3−16870
- OECD Halden Reactor Project, in-reactor instrumentation for fuel behaviour studies 3−55330
- OPERA 15-pin sodium expulsion test 3−31717
- oxide fuel, fission gas disposition in fast thermal transient, GRABB code 3−41277
- particles, coated with Si-alloyed pyrocarbon, irrad. performance, review 3−26319
- pellet-cladding interaction, mech. and chem. approach to modelling 3−49931
- PFR subassemblies, pin durability, local blockage formation and detection 3−55460
- PFR/TREAT fast reactor fuel testing programme, safety testing 3−55433
- Phebus plant, PWR fuel behaviour under accident cooling conditions *(French)* 3−21464
- pins, internal press. monitoring 3−44013
- porous, thermal conductivity bounds 3−55139
- postirradiation examination facility of JAERI for power reactor fuels 3−31559
- Power Burst Facility, LWR fuel rod testing under accident conditions 3−55537
- Power Burst Facility, severe fuel damage test series for PWR fuel rods 3−55538
- PWR, fuel reinsertion strategies for System 80 reactors 3−6324
- PWR, Pu/U operating cycle, maximised conversion ratio, neutron physics effects 3−45574
- PWR, variable void lattice design, energy gains, moderator/fuel ratio changes 3−26292
- PWR, vibrational behaviour, flow induced vibration in fuel rods 3−41141
- PWR axial blanket, neutronics anal., methods verification 3−26404
- PWR burnable poisons, Gd$_2$O$_3$ rel. to B, merits 3−41175
- PWR cores with Gd$_2$O$_3$ for reactivity parameter and power distrib. control 3−16873
- PWR electric power generation system refuelling schedule optimisation using PLANUM model 3−41255
- PWR extended burnup fuel cycles with Gd$_2$O$_3$, fuel management schemes 3−31607
- PWR fuel, dynamic response under impact loadings 3−26373
- PWR fuel element high burnup performance under steady state conditions 3−31589
- PWR fuel element stresses caused by variations in power, problems and qualification tests *(French)* 3−31534
- PWR fuel fission gas release at high burnup 3−21433
- PWR fuel fission product release at high burnup 3−21435
- PWR fuel management for slowing pressure vessel embrittlement 3−55110
- PWR fuel management optimisation using perturbation theory, FULMNT code 3−6383
- PWR fuel performance, I escape rates through cladding, steady state consequences *(Japanese)* 3−49939
- PWR fuel performance experience of high burnup fuel in RWE reactors 3−21425
- PWR fuel rod design over range testing 3−21437
- PWR fuel rods, corrosion behaviour obs. and anal. 3−31590
- PWR fuel rods, fission gas release 3−21432
- PWR gadolinia bearing fuel, analytic requirements 3−16871
- PWR high burnup licensing assessment 3−31602
- PWR individual fuel assemblies, optimal placement and poison control depletion, gradient projection method 3−26407

fission reactor fuel continued
- PWR nuclear material safeguards, 3-dimens. calc. of heavy metal isotope correlations 3−6326
- PWR tritium production and diffusion in U and Pu 3−31577
- radiation effects 3−55155
- radioactive waste disposal by long term isolation in deep geological formations USA programme 3−31532
- RBMK reactor cassette permutation to equalise energy distrib. and improve fuel cycle 3−41181
- reactivity synthesis algorithm for a multicore system 3−31479
- regulatory perspective on extended burnup fuel 3−31600
- relative freezing controlled penetration potential of carbide and oxide fuel 3−6370
- remote maintenance equipment for hot cell facilities 3−31572
- replicate identical test rods, temp., predicted and obs. scatter 3−41179
- reprocessing plant safeguards, microscopic process monitoring 3−6387
- research reactors, critical assemblies with mixed enrichments, neutronics calcs. and meas. 3−16876
- resonance parameter evaluation 3−6375
- retained fission gases, dynamic measuring apparatus 3−31570
- SEM of irradiated nuclear fuel, secondary electron detector design 3−10947
- sensitivity analysis of GPT methods of fast breeder cycle cost 3−31500
- simulated reactor accident expts., coded aperture imaging system design 3−6409
- sintering, densification kinetics, statistical analysis 3−36462
- SNR, flashing fuel simulant expansion into upper core structures, SIMMER-II validity 3−55511
- Sodium Loop Safety Facility, expt. P4, fuel pin local faults, fuel melting 3−55560
- Sodium Loop Safety Facility, post-expt. examination 3−55561
- special nuclear material control and accounting safeguards in USA 3−11456
- spent fuel, burnup and residual fissile content by nondestructive assay 3−49951
- spent fuel canisters, US immersion inspection technique development, report 3−26384
- spent fuel cask shipping system, torch fires tests 3−16883
- spent fuel radioactive isolation systems, engineered components, technical justification 3−6335
- spent fuel rods, metrology system based on photodiode arrays 3−55150
- spent fuel transport cask, expt. program for assessing thermal response 3−928
- spent nuclear fuel transportation by train, risk assessment 3−927
- sphere pac high burnup fuel rods, design fabrication, performance 3−31595
- sphere-pac fuel, effective thermal cond. during restructuring 3−892
- SSYST—a code system to analyze LWR fuel rod behavior 3−864
- stainless steel-clad, for use in current design LWRs, evaluation 3−55146
- structural anal., transient temp. calc. method 3−41178
- supply assurance, uranium utilisation, fuel cycles for LWRs and FBRs 3−26340
- surfaces, coatings, protection, diffraction anal., conf., Sellafield, England (Oct. 1981) 3−34
- TETACOUPLE expt., irradiation rig for pin bundle temp. distrib., on-line meas. 3−55339
- thermal reactor benchmarks, critical review 3−16836
- thermal reactor irradiation capabilities at the Petten High Flux Reactor 3−55328
- thorium cycle LMFBR, fuel pin design and neutronic/thermal characts. 3−16875
- THTR, sphere fracture rate determ. for spherical fuel elements *(German)* 3−36456
- TMI-2, fuel fines location and quantification in coolant system 3−21486
- TRAN fuel freezing experiments 3−6371
- TRAN molten UO$_2$ fuel expt. series at Sandia ACRR, HCDA research 3−55555
- transient electrical heating of irradiated stainless steel-clad fuel 3−31715
- transient fuel behaviour, ERUDITE database use 3−55392
- transportation system, Swiss elec. rail network, reliability assessment 3−26385
- TREAT, Mark III integral sodium loop for LMFBR safety expts. 3−55543
- TREAT F-series LMFBR loss-of-flow experiments, fuel behaviour 3−55557
- TREAT hodoscope fuel motion capabilities, fast neutron detection, FBR safety 3−55335
- TREAT RFT-CAL-L MARK III loop/prototypic fuel pin calibration experiment 3−55559
- U$_3$O$_8$ from resin for powder metallurgy fabrication of reactor fuel 3−26388
- U cycle, assessment and costing *(German)* 3−16845
- unrestructured sphere-pac fuel, model for effective thermal cond. 3−890
- UO$_2$ powder, airborne dust during pellet production, hazards 3−55213
- VIC sodium loop, irradiation device for transient testing of LMFBR fuel pins 3−55554
- vitroceramic nuclear fuel elements, refractory coating 3−16861
- VVER fuel elements, automatic γ-activity meas. in CAMAC system *(Czech)* 3−49942
- VVER fuel pellet, cracked thermoelastic, stresses and strains, numerical calcs. *(Czech)* 3−49941
- Zircaloy 2/UO$_2$ interfaces, solid spot thermal conductance 3−45623
- (α,n), 3.6-10 MeV, thick target yields for reactor and radwaste materials 3−31419
- Al-U alloys, thermal stability 3−41134
- Al-USiAl dispersion fuels, thermal stability 3−41134
- ^{10}B measurement in Al$_2$O$_3$-B$_4$C burnable poison by prompt gamma activation 3−26357
- ^{252}Cf driven neutron noise subcriticality meas., spectral densities using enriched UO$_2$F$_2$ 3−16887
- ^{252}Cf source driven neutron noise method for subcriticality meas. of fuel elements 3−31549
- Gd$_2$O$_3$ poison for extended burnup fuel management 3−31606
- Ho, bulk, hydride phase development 3−16857
- I, adsorption to surface of UO$_2$ pellets, transport in coolant 3−55198
- Na cooled reactor design for min. potential radiological release 3−55445
- NaCl-UCl$_3$-ThF$_4$, combination mixtures, density measurement of melts, argon bubble method 3−41191
- ^{237}Np determination in spent nuclear fuel from fission product meas. 3−11382

fission reactor fuel continued
Pu, commercial value in early stages of commercial breeder programme 3−16906
Pu content in spent fuel by γ-spectrometry 3−45594
Pu determination in WWER fuel by X-ray fluorescence *(Russian)* 3−41121
Pu fuel fabrication for French fast breeders 3−16910
Pu fuel rods, irradiation and recycling in PWR 3−6380
Pu recycle in fast reactors 3−16918
Pu supply and demand for fast breeder program 3−19557
Pu-prototype fuel elements from LWRs, post-irradiation analysis 3−6379
Pu-recycle fuel, zircaloy-clad, axial distribution of tritium 3−6314
PuN, lattice parameter, O and C impurities effect 3−33196
$Pu(NO_3)_4$, limiting concentration measurement, average value for eta 3−36490
PuO_2-UO_2, fission gas deposition during reactor thermal transient in LMFBR 3−55161
PuO_2-UO_2 heterogeneous system, nuclear criticality 3−957
PuO_2-UO_2 sphere-pac fuel, irrad. behaviour at low-burnup, in PWR 3−41148
$PuO_{2.00}$, self-diffusion of O_2, meas. by isotopic exchange *(French)* 3−28151
${}^{A}Pu$, A=239, 242, resonance parameter evaluation 3−6375
${}^{A}Pu(n,\gamma)$, A=240, 242, gamma-ray spectra, cross sections optical and statistical calcs. 3−45526
${}^{238}Pu(n,f)$, inferred cross section in MeV range 3−31558
${}^{239}Pu$, fission product decay energy calc. in ADENA code 3−11386
${}^{239}Pu$ formation in hybrid reactor blanket 3−45696
${}^{239}Pu$, in U ores, China, natural occurrence 3−45587
${}^{239}Pu(n,f)$, fast n, A=233, 235, fission product β-ray decay heat *(Japanese)* 3−26317
SiC coated, identificiation of Si 3−6315
$(Th,U)O_2$, chem. assay of U and Th, international comparison rel. to safeguards 3−26320
$(Th, U)O_{2+x}$ solid soln., O potentials 3−16849
ThO_2, neutron spectrum meas. 3−31557
ThO_2-UO_2, fuel mixture, irradiation performance 3−55201
${}^{232}Th$, neutron total cross-section, resonance analyses 3−36467
${}^{232}Th$-${}^{239}U$, fuel cycle cost estimate in conjunction with ${}^{233}U$-${}^{238}U$ 3−41322
$Th(n,\gamma)$, 23 keV capture cross section 3−16866
$(U, Ce)O_2$, mixed oxide fuel, cation distribs., neutron scatt. study 3−26318
(U,PU)C fuel element, LIFE-4C anal. of TREAT transient test HC-2 3−6341
(U,Pu)C and (U,Pu)(C,O), fuels for fast breeder reactor, fracture surface energy, fracture toughness 3−55140
(U,Pu)C, fission gas content anal. 3−31528
$(U, Pu)O_{2+x}$, nonstoichiometric nuclear fuel, diffusion processes and surface effects 3−55137
U assemblies, fast neutron pulse decay 3−832
U, automated controlled-potential coulometric determ., report 3−6403
U, bulk, hydride phase development 3−16857
U extraction from seawater, adsorbents, cost assessment *(Japanese)* 3−11376
U isotropic analysis by neutron activation 3−29351
U logging using 14 MeV neutrons 3−30097
U market, yellowcake road 3−31578
U optimisation, breeding considerations for HTR and FBR from Th 3−41139
U, world reserves and resources 3−19556
U-Ti (0.75 wt.%) penetrators, US eval. by amplitude and frequency anal. 3−39330
$UC_{1\pm y}$, liq., thermochem. props., estimated by extrapolation of low temp. vapour press. 3−18480
UC_2, quenched in resistivity, physical properties from radiation damage 3−31531
$U_{1-y}Gd_yO_{2+x}$, nonstoichometric solid soln., thermodynamic props., 700 to 1100°C 3−16854
UO_2 ${}^{3}H$ release behaviour during fission reactor operation 3−55232
UO_2, 5% enriched, criticality anal. in MARACAS program 3−31548
UO_2, diffusional growth of overpressured fission-gas bubbles on grain boundaries 3−16855
UO_2, diffusivities of fission created or thermally doped T 3−16852
UO_2, dissolution mechanisms and leaching 3−6306
UO_2 enriched rods, critical expts. in highly borated water lattices 3−31553
UO_2 fast breeder oxide fuel, Redlich-Kwong eqn. of state 3−16858
UO_2, fission gas behaviour model 3−6288
UO_2, fission gas behaviour from irradiation of element 3−41142
UO_2, fission gas deposition during reactor thermal transient in LMFBR 3−55161
UO_2, fracture up to high strain rates, effects of pore shape 3−29158
UO_2 fuel, fission gas release under transient conditions 3−36483
UO_2 fuel oxidation and fission product release in air at 150 to 500°C 3−31547
UO_2 fuel pellets, microstructure effects on fracture strength 3−45586
UO_2 hyperstoichiometric, reaction with Na, kinetics and mechanism 3−55138
UO_2 interaction with MgO following HCDA 3−31732
UO_2, irradiated CANDU reactor fuel, dissolution kinetics in groundwater, report 3−6377
UO_2 molten, long-term interaction with MgO and concrete, FBR safety appl. 3−55506
UO_2 nondestructive testing; gamma-ray spectra analysis computing *(Croatian)* 3−16844
UO_2, PWR fuel pellet, cladding interaction, mechanical modelling with finite element codes 3−26288
UO_2 pellets, distribution of products, calcs. for LOCA in CANDU 3−55197
UO_2 pellets, O/U ratio determ. by potentiometric titration method 3−21371
UO_2, primary creep, effect of amorphous grain boundary phases 3−19374
UO_2, Ru transport, mechanistic anal. 3−41124
UO_2, short lived fission product behaviour within operating fuel elements 3−36457
UO_2, solid, thermal cond., critique and recommendations 3−28172
UO_2, stable and unstable fission product release 3−21431
UO_2, total vapour press., in-pile meas. 3−959
UO_2 vapour, saturated, thermal cond. 3−17992

fission reactor fuel continued
UO_2, vitreous, thermal accommodation coeffs. of inert gases, expt. determ. 3−41147
UO_2/Zircaloy-4, chem. interaction under severe fuel damage conditions 3−11374
UO_2-Gd_2O_3, sintered PWR fuel, thermal cond. meas. 3−26381
UO_2-MgO melt penetration mech., binary eutectic phase diagram 3−31733
UO_2-PuO_2 fuel mechanic and thermohydraulic design for advanced PWR 3−11388
UO_2-PuO_2 sphere-pac fuel, irrad. behaviour at low-burnup, in PWR 3−41148
UO_2-Zircaloy-4 pellet/clad interaction 3−55151
UO_{2-x}, chem. diffusivity of O, rel. to self-diffusion 3−18499
UO_{2+x}, mechanism for the ease of slip 3−16856
UO_{2+x}, nonstoichiometric nuclear fuel, diffusion processes and surface effects 3−55137
U_3O_{8-z}, phase transition from elec. cond. meas. and X-ray diffr. 3−58117
$U_3O_{8\mp z}$, phase transitions, heat capacity meas. 3−18438
$UO_2{}^{2+}-H^+$ cation exchange equilibria 3−49944
$(U_{0.8}Pu_{0.2})O_2$, fracture surface energy, Hertzian indentation technique 3−34443
US, neutron irrad. effects 3−16853
USiAl, 20% U density fuel, weapons disincentive 3−55199
${}^{A}U$, A=233, 235, 238, resonance parameter evaluation 3−6375
${}^{A}U(n,f)$, fast n, A=233, 235, fission product β-ray decay heat *(Japanese)* 3−26317
${}^{233}U$, neutron nuclear data, 10^{-5} eV-20 MeV 3−45563
${}^{233}U$ production, 'once-through' cycle for ${}^{232}Th$, economics of system 3−55200
${}^{233}U$-${}^{238}I$, fuel cycle cost estimate in conjunction with breeding for ${}^{232}Th$-${}^{239}U$ 3−41322
${}^{234}U$, possibility of attaining criticality 3−45598
${}^{234}U(n,f)$, integral cross sections 3−16865
${}^{235}U$ enriched fast reactor, implications of system U requirements 3−16909
${}^{235}U$, fission product decay energy calc. in ADENA code 3−11386
${}^{235}U$, highly depleted, highly enriched, actinide decay heat 3−31556
${}^{235}U(n,f)$, fission neutron field, intermediate energy neutron field, NBS standards 3−55166
${}^{236}U(n,\gamma){}^{237}U$, cross-section measurement for prediction of transactinides buildup 3−41187
${}^{238}U$ capture, γ-counting and mass spectrometer meas. comparison for fast reactor design 3−16833
${}^{238}U$, resolved resonance parameters from 4 to 6 keV 3−16864
${}^{238}U$, resonance parameter discrepancies 3−21415
${}^{238}U(n,\gamma)$, gamma-ray spectra, cross sections optical and statistical calcs. 3−45526

fission reactor fuel preparation and reprocessing
see also isotope separation; radioactive waste
advanced concepts under development in the United States breeder fuel reprocessing program 3−16934
Ambersorb carbonaceous adsorbents, I species adsorption 3−45614
APEX fuel cycle for LWR fuel prod. and radwaste elimination 3−6384
Arkansas Nuclear One, fuel failure costs 3−6323
back-end activities in Federal Republic of Germany 3−925
Barnwell Nuclear Fuel Plant, failed fuel handling and management 3−6382
Barnwell Nuclear Fuel Plant, operability and maintainability 3−31622
Barnwell Nuclear Fuel Plant status, LWR and breeder fuel reprocessing 3−31623
boiling water reactor fuel and core development at ASEA-ATOM 3−21366
breeder reactor fuel, conf., London, England (May 1981) 3−16084
building for flexibility and safety in spent fuel storage 3−55207
BWR fuel management optimization and validation through operating data 3−36495
CANDU fuel cycles, heat from alpha-decay, WAD program, beta-chains 3−45616
ceramic pellets prod. with close shape tolerances, hot impact densification 3−969
Chemical Processing Facility (CPF) for Power Reactor and Nuclear Fuel Development Corporation *(Japanese)* 3−45610
commercial nuclear fuel reprocessing applying the SAFAR processing concepts 3−31625
commercial reprocessing initiatives 3−31635
commercial waste management and fuel cycle programs 3−6333
compacted spent fuel storage pool, natural convection 3−6390
conference, Canadian Nuclear Soc., Toronto, Ont., Canada (June 1982) 3−54584
conference on actinide recovery from waste and low grade sources, New York, USA (Aug. 1981) 3−49090
Connecticut Yankee power station, fuel failures, cost impacts 3−6322
control instrumentation, in-line heavy metal and oxidant reluctant monitors 3−26392
control instrumentation, in-line neutron poison and free and monitor 3−26391
core concept effect on fuel cycle of fast reactors 3−16920
criticality analysis of the ICPP zirconium dissolver using MONK 3−973
criticality assessment for oxide fuel dissolvers, calc. route 3−971
criticality of high-density, boral-poisoned fuel racks for Maine Yankee 3−956
criticality safety in the ICPP Rover fuel dissolution system 3−974
criticality safety of oil-uranium deposit in gaseous diffusion equipment 3−970
criticality safety of the ten-well insert for the pot dissolver 3−972
criticality safety philosophy evolution in ICPP electrolytic dissolver process 3−975
criticality safety practices in digestion systems 3−976
criticality safety within reprocessing 3−31621
dissolver off-gas cleaning installations in reprocessing plant, time depend. anal. 3−923
diversion resistant nuclear fuel reprocessing, progress report 1980-1 3−55209
diversion-resistant assessment methodology for nuclear fuel reprocessing techniques 3−49968
DOE's commercial waste management and fuel cycle programs 3−31629
dose levels and neutron reaction rates for HPRR and SHEBA 3−11532
dose limitation system, conf., Madrid, Spain (Oct. 1981) 3−10507

- **fission reactor fuel preparation and reprocessing** continued
  - duplex fuel pellet manufacturing feasibility study 3—49967
  - Dyna-Canister spent fuel rack, dynamic absorber investigation 3—26327
  - enrichment processes 3—31632
  - enrichment technologies and relationships for US capacity 3—31633
  - ENVIROCOUNT code for nuclear fuel cycle simulation 3—16925
  - Eurodif uranium enrichment plant, gas diffusion process and plant technical details *(French)* 3—49965
  - Eurodif uranium enrichment plant energy supply and distribution *(French)* 3—49966
  - fabrication of advanced LMFBR fuels at BARC 3—16912
  - fast breeder compound doubling time, isotopic breeding weights factors for closed fuel cycle *(Czech)* 3—11400
  - fast breeder fuel fabrication within the German program 3—16913
  - fast breeder system, Pu economy dangers 3—19566
  - fast reactor and electricity supply, a utility view 3—16900
  - fast reactor fuel cycle design choices 3—16908
  - fast reactor fuel cycles, conf., London, England (Nov., 1981) 3—16083
  - fast reactor fuel fabrication and waste management 3—16911
  - FBR, fuel cycle prospects 3—16890
  - FBR, power cost break-even, fuel burn-up and reprocessing costs 3—16905
  - FBR, U savings 3—16891
  - FBR cycle, future reprocessing 3—16928
  - FBR design and operation effect on fuel cycle and waste management 3—16926
  - FBR fuel, India approach to reprocessing 3—16938
  - FBR fuel cycle, risk assessment and control 3—55210
  - FBR fuel cycle, worldwide and French prospects 3—16893
  - FBR fuel cycle evaluation, economics 3—16907
  - FBR fuel extraction cycles problems 3—16933
  - FBR fuel pin diameter optimisation for oxide and carbide fuel 3—16917
  - FBR fuel reprocessing, French R and D programme 3—16931
  - FBR fuel reprocessing technology, Japanese status 3—16932
  - FBR installation rates in U-Pu fuel system 3—16903
  - FBR spent fuel element shipment 3—16923
  - FBR spent fuel reprocessing, dissolves off-gas system 3—16936
  - FBR system role in EEC 3—16898
  - fissile fuel breeding, nuclear fusion and spallation sources, review 3—55212
  - fissile fuel production by linear accelerators 3—26387
  - French large reprocessing plant project, engineering and plant optimisation 3—31624
  - fuel breeding and fuel management prospects of hybrid and symbiont breeders 3—17069
  - fuel cycle conference, New York, NY, USA (Mar. 1982) 3—30558
  - fuel cycle issues of the 80s—a regulatory overview 3—31630
  - fuel cycle strategy for nuclear plants in the future energy programme of Yugoslavia *(Croatian)* 3—6378
  - fuel cycle supply and demand 3—31631
  - fuel element factories, licensing procedure *(German)* 3—55203
  - fuel management, Combustion Engineering methodology and validation, core follow anal. 3—36452
  - fuel management in a medium sized fast breeder reactor 3—16919
  - fuel management physics calcs., ballpark and differential methods 3—36491
  - fusion driven fissile fuel factory, systems aspects 3—21559
  - German fast breeder programme and fuel cycle activities 3—16892
  - Gronau U enrichment plant in Germany, construction start *(German)* 3—16885
  - high temperature reactor, operational flexibility with high and low-enriched fuel cycle 3—966
  - Hot Experimental Facility, fuel processing plant design, mockup of handling system 3—16889
  - HTGR fuel element head-end reprocessing tests 3—967
  - HWR, advanced fuel cycle transitions 3—6332
  - industrial experience of irradiated nuclear fuels reprocessing *(French)* 3—41193
  - irradiated fuel assemblies unloading operations automatic monitoring at La Hague reprocessing facility *(French)* 3—16884
  - irradiated fuel elements, reprocessing in European Community *(German)* 3—45608
  - isotope separation and nuclei melting using Vulcan and Helen Nd high power lasers *(German)* 3—45612
  - Italy, fast reactor prospects 3—16894
  - Japan, FBR development, U demand 3—16895
  - Japanese fuel fabrication technology for fast reactor 3—16914
  - LMFBR, 1300 MWe, neutronic performance for homogeneous and heterogeneous designs 3—16840
  - LMFBR, and fuel cycle plants, status in UK 3—55569
  - LMFBR design for safety and proliferation resistance, with excellent performance 3—16916
  - LMFBR development, USA view 3—16897
  - LMFBR reprocessing plant design, optimisation by risk assessment 3—55211
  - LMFBR spent fuel transport flask conceptual design 3—16922
  - LMFBR spent fuel transportation 3—16921
  - loss detection and alarm resolution in processing special nuclear material 3—31617
  - low enrichment fuel elements for research and materials testing reactors *(German)* 3—55205
  - LWR, APEX fuel cycle, removes lanthanides and short-lived fission products 3—45609
  - LWR, extended fuel burnup in Babcock and Wilcox operating units 3—6325
  - LWR, reprocessing spent fuel, removal of lanthanides etc. 3—41197
  - LWR extended burnup fuel, reprocessing consequences 3—31603
  - LWR extended burnup fuel performance, conf., Williamsburg, VA, USA (April, 1982) 3—20574
  - LWR fuel management methods *(German)* 3—55130
  - LWR fuel management status and development trends *(German)* 3—55129
  - LWR fuel storage pools, criticality calc. methods validation 3—955
  - LWR Pu recycling, R&D program, indirect nuclear action 3—11402
  - LWR spent fuel, wet and dry storage behaviour and safety 3—31535
  - LWR spent fuel elements, centralised storage in France, construction, operational experience 3—26342
  - LWR spent fuel interim storage, materials behaviour 3—31545
  - LWR spent fuel storage, US requirements projection 3—26341
  - material control, reprocessing plant safeguards 3—31618
  - material recovery and waste preparation, risk anal. 3—16886
  - mechanical headend for KNK II and SNR 300 subassemblies 3—16937

- **fission reactor fuel preparation and reprocessing** continued
  - microwave heating appls. 3—965
  - mixed oxide critical expts., quality assurance procedures 3—978
  - MODREX dry spent fuel storage concept, adaptation for European licensing requirements 3—26326
  - monitored retrievable radwaste and spent fuel storage, economics 3—6329
  - monitored retrievable radwaste and spent fuel storage facilities, conceptual designs 3—6330
  - monitored retrievable spent fuel storage, background and historical perspectives 3—6327
  - monitored retrievable storage facility, location screening in USA 3—6328
  - MOX fuel rods for FBRs and LWRs *(German)* 3—55204
  - multipass batch-step advanced isotope separation campaign models 3—6386
  - neutron thermalisation of light atom in Monte Carlo codes, neutron spectra 3—49969
  - nondestructive assay of high enriched uranium in solvent extraction columns 3—26390
  - nuclear fuel cycle, front end, application of collective dose equivalent 3—11550
  - nuclear fuel cycle overview 3—961
  - nuclear technology transfer, conference, Buenos Aires, Argentina (Nov. 82) 3—16082
  - OXAL process for irrad. fuel treatment *(French)* 3—31529
  - oxide fuel-fission product solid solutions, stoichiometry of PuO_2-$NdO_{1.5}$ and PuO_2-$YO_{1.5}$ 3—21443
  - PFR fuel reprocessing 3—31576
  - PFR fuel reprocessing experience 3—16927
  - Phenix: an example of precise fuel management 3—16915
  - PHENIX, closed fuel cycle 3—16930
  - pressure transducers calibration, for use in safeguarding special nuclear materials 3—21444
  - PRF reprocessing, solid waste management 3—16929
  - Purex process, electro-redox procedures, state of development 3—16935
  - Purex process, Pu formation and recovery from phosphate esters 3—49979
  - PWR, EPRI-NODE-P nodal code, moderator temp. history effects incorporation 3—36449
  - PWR, fuel reinsertion strategies for System 80 reactors 3—6324
  - PWR, on site spend fuel storage, evaluation of alternatives 3—6388
  - PWR, optimal control for extending load following capability 3—6393
  - PWR, Pu/U operating cycle, maximised conversion ratio, neutron physics effects 3—45574
  - PWR core anal. in XY geometry, PSEUDAX code, in-core fuel management 3—36492
  - PWR fuel management, 2-dimens. nodal anal. 3—36494
  - PWR fuel management optimisation using perturbation theory, FULMNT code 3—6383
  - PWR fuel pin reprocessing, gaseous products anal. *(French)* 3—36496
  - radioactive accident generated aerosols, assessment methodology 3—24649
  - radioactive effluent retention in nuclear facilities, cost-benefit analysis for ^{3}H, ^{14}C, ^{85}Kl, ^{129}I and aerosols 3—11394
  - radon flux monitoring of covered uranium mill tailings at Grand Junction, Colorado 3—1086
  - reactor system selection for energy centre concept 3—16902
  - Reagan administration approach to nuclear nonproliferation 3—30585
  - recycle fuel rod, Zircaloy-clad, axial distribution of tritium 3—6314
  - regional waste treatment facilities with underground monolith disposal for all low-heat-generating nuclear wastes 3—41152
  - Remote Analytical Laboratory for Idaho Chemical Processing Plant reprocessing facility 3—31850
  - reprocessing, experience, economic and political implications for W Germany *(German)* 3—55202
  - reprocessing in US, future policy, environment influence 3—31627
  - reprocessing plant concepts and evolution, Consolidated Fuel Reprocessing Program 3—31626
  - reprocessing plant reliability improvement by appl. of computer technology and math. modelling 3—26395
  - reprocessing plant safeguards, microscopic process monitoring 3—6387
  - reprocessing spent fuel in France 3—55208
  - reprocessing strategy, economic influence on commercial breeder programme 3—16904
  - responsive fuel management physics methods 3—36493
  - safeguarded fabrication and reprocessing facility, design, safeguards, and diversion resistant charact. 3—45615
  - Secure Automated Fabrication line for LMFBR fuel, remote equipment testing 3—16888
  - Sellafield, dose control and reduction 3—11543
  - sensitivity analysis of the inherent neutron source strength 3—31499
  - separation nozzle system for U enrichment, X-ray lithography production technique 3—26386
  - shearing of bundles of irradiated nuclear reactor fuel for reprocessing 3—6381
  - shield design for fuel preprocessing and associated plants by ALARA principle 3—11538
  - short term material accounting, variance estimation 3—31537
  - short term materials accounting, performance evaluation 3—31538
  - simulation of process plant accidents 3—31620
  - solvent cleanup method, using hydrazine oxalate wash reagent 3—41199
  - spend nuclear fuel storage pool, gravity driven flow and heat transfer 3—41195
  - spent fuel, modular dry storage concept 3—6331
  - spent fuel element from KNK II, interim storage 3—16924
  - spent fuel management and decommissioning, costs probabilistic eval. 3—31615
  - spent fuel pins close-packed critical experiments analysis 3—954
  - spent fuel storage facilities at reactor site, cladding and containment failures, radiological impact 3—50061
  - spent fuel storage pool, capacity increase using Dyna-canister storage 3—6391
  - spent ion-exchange resins, vol. reduction by acid digestion 3—45613
  - spent nuclear fuel, high density storage for LWR plants 3—6389
  - spent nuclear fuel temporary storage facility at Atucha (Argentina) *(German)* 3—55127
  - spent-fuel, assay by gamma and neutron methods 3—49962
  - Super Phenix 1 fuel cycle, technical and economical outlooks 3—16899
  - supply assurance, uranium utilisation, fuel cycles for LWRs and FBRs 3—26340
  - tank liquid level measurement techniques at Savannah River 3—26393
  - technology transfer and safeguards considerations in reprocessing cooperation 3—31636
  - TOR project for FBR fuel reprocessing 3—16939

fission reactor fuel preparation and reprocessing continued
Total Systems Approach to spent fuel management 3—31637
U_3O_8 from resin for powder metallurgy fabrication of reactor fuel 3—26388
UK fast reactor fuel cycle, future development 3—16896
UK fast reactor program 3—16841
UO_2 powder, airborne dust during pellet production, hazards 3—55213
Zircaloy cladding, ThO_2 dissolution, in HNO_3/HF soln., Zr conc. effect 3—41200
$^{241}Am(n,f)$, 0.02 eV-20 MeV, fission cross section 3—41065
^{252}Cf driven neutron noise subcriticality meas., spectral densities using enriched UO_2F_2 3—16887
H_2O-HNO_3-$Pu(NO_3)_4$-TBP, extraction process, thermodynamic approach 3—41201
^{85}Kr from LWR reprocessing plants, long term storage in pressurised cylinders *(German)* 3—16881
$(Pu,U)NO_3$ solutions, criticality meas. 3—977
Pu and Am recovery from nitric acid waste streams 3—49952
Pu, commercial value in early stages of commercial breeder programme 3—16906
Pu conversion facility, personnel shielding, exposure calcs. 3—11539
Pu extraction, 3,5-dimethoxybenzaldehyde effects in TBP-n-dodecane 3—49964
Pu fuel fabrication for French fast breeders 3—16910
Pu fuel fabrication plant, reduction in external exposure of workers *(French)* 3—11548
Pu fuel rods, irradiation and recycling in PWR 3—6380
Pu recovery and purification by pyrochemical methods at Rocky Flats 3—49971
Pu recycle in fast reactors 3—16918
Pu scrap recovery at Savannah River Plant 3—49970
Pu use optimisation in nuclear strategy, country size depend. 3—16901
Pu-prototype fuel elements from LWRs, post-irradiation analysis 3—6379
Pu-U recycling economics to nucl. program in Spain 3—968
PuN, carbothermic synthesis from PuO_2 3—21442
$Pu(NO_3)_4$, critical expts. in 3 litre polyethylene bottles 3—979
$Pu(NO_3)_4$, limiting concentration measurement, average value for eta 3—36490
PuO_2 catalysed electrolytic dissolution for recovery from scrap and wastes 3—49955
PuO_2, impure, fused salt processing to pure metal 3—49972
$^{238}PuO_2$ fuel pellet fabrication for space vehicle isotopic heat sources 3—24187
^{239}Pu, breeding from Spallator 3—45609
Th, reprocessing, pulse column study 3—41198
ThO_2/YO_2 mixed oxide fuel pellet preparation 3—45611
ThO_2-UO_2, fuel mixture, irradiation performance 3—55201
U enrichment by lasers *(German)* 3—36489
U enrichment prospects for private investment and ownership 3—31634
U extraction, 3,5-dimethoxybenzaldehyde effects in TBP-n-dodecane 3—49964
U extraction from sea water, mag. scavenger 3—16940
U extraction from seawater, adsorbents, cost assessment *(Japanese)* 3—11376
U extraction from seawater, feasibility study 3—49973
U extraction from seawater, granulated hydrous TiO_2 as sorbent 3—49975
U fuel fabrication plant, dose limitation system appl. 3—11540
U recovery as by-product from wet-process phosphoric acid 3—49977
U recovery from nitrate media using polyurethane foam 3—49980
U recovery from seawater using hydrous TiO_2 microspheres 3—49974
U, recovery from wet phosphoric acid, extractants 3—49978
U resources, enrichment, reprocessing, and heavy water availability in Yugoslavia and adjacent countries *(Croatian)* 3—55206
U sorption from seawater, thermodynamics and kinetics for Thermoxide-5 3—49976
UF_6 enrichment monitor, for accountancy and surveillance, NaI(Tl) detector-based 3—45717
UF_6 feed stream in-line enrichment monitor 3—26389
UF_6 isotope separation using lasers, physics and practicability 3—41196
UF_6 to UO_2 conversion processes 3—11401
UO_2, 5% enriched, criticality anal. in MARACAS program 3—31548
UO_2 production by electrochemical reduction, pilot plant studies 3—49981
$UO_2(NO_3)_2$ solution, atom number densities 3—31616
$UO_2^{2+}-H^+$ cation exchange equilibria 3—49944
USiAl, 20% U density fuel, weapons disincentive 3—55199
^{233}U, breeding from Spallator 3—45609
^{233}U production, 'once-through' cycle for ^{232}Th, economics of system 3—55200
^{235}U enriched fast reactor, implications of system U requirements 3—16909

fission reactor instrumentation *see nuclear reactor instrumentation*

fission reactor materials
see also claddings; fission reactor fuel; fusion reactor materials; materials handling; moderators; radioactive waste
^{60}Ni-containing alloys, fast neutron activation anal. of corrosion products 3—6362
accident hazard protection and first aid 3—11475
acoustic noise measurements produced from steam injection into sodium 3—31721
atomic processes occurring during irradiation damage by neutrons 3—56995
barrier fuels as solution to pellet-cladding interaction, O content effect in Zr 3—26372
behaviour pattern prediction to avoid undesirable interactions 3—16846
BR2 high flux materials testing, dosimetry work 3—55303
BR3 fast neutron flux calcs., PV damage 3—55113
BWR, ASEA-ATOM experience of gadolinia as a burnable adsorber 3—26406
BWR, water radiolysis, computer simulation 3—6284
BWR advanced control blade materials, critical expts. for B_4C and Hf 3—16867
BWR control blades, B_4C powder loss determ. by nondestructive testing 3—55237
BWR control blades inspection, neutron absorber standards method evaluation 3—55239
BWR control rods, B_4C loss, post-irrad. examination 3—41176
BWR fuel channel deformation, large channel bowing 3—6358
BWR fuel channel lifetime, limiting factors 3—6374
BWR H water chemistry, operational aspect 3—26366
BWR long life control blade, HfO_2 based design 3—26410

fission reactor materials continued
BWR power plant main steam isolation valve seat leakage performance improvement, corrective actions, tests and meas. 3—11393
BWR primary cooling system stainless steel surface, radioactive crud buildup 3—41238
BWR water, O suppression by H additions 3—26365
BWR water chemistry O suppression expts. at Osharshamn-2 3—26367
BWR water quality, influencing factors 3—26364
cable materials, polythene and PVC, deterioration inside reactor containment 3—45593
CANDU, in-core moderator temp. meas., accident heat sink assessment 3—17010
CANDU reactor vessel, moderator flow and temp. distrib., numerical simulation 3—45640
CANDU-PHW reactors, safety research, LOCA, fuel behaviour, fission gases 3—31778
ceramic reactor insulations, thermal conductivity 3—8278
circular pipe ends, with flanged ends, thin shell theory anal. 3—27386
colemanite-baryte frit and polymer impregnated concrete as shielding materials 3—26322
components, US automatic inspection *(German)* 3—58354
components of high Co alloys, wear meas. methods 3—49948
concrete, behaviour mathematical description 3—6285
concrete, biological shield for fusion reactor neutron transport anal. 3—11533
concrete, long term interactions of molten UO_2, FBR safety appl. 3—55506
concrete construction, need for design to be constructable 3—859
condensers, Ti tubed surface condensers, development, in-service performance 3—55347
conference, Canadian Nuclear Soc., Toronto, Ont., Canada (June 1982) 3—54584
conference on fast, thermal and fusion reactor expts., Salt Lake City, USA (Apr. 1982) 3—54578
conference on nuclear materials management, Washington, USA, (July 1982) 3—5474
containment structive analysis, using impulse functions 3—16843
control blades, ^{10}B depletion, methods of measurement 3—31530
coolant decontamination using anion exchange resin type AV-17 radiation-thermal degradation primary products formation kinetics 3—6402
coolant recombiner, sponge metal catalyst for H_2O recombination 3—41230
copper, molten, boiling fragmentation in sodium 3—26424
corrosion fatigue characterization of reactor pressure vessel steels 3—55148
corrosivity measurement for high temp. water in fission reactors 3—50011
damage energy calc., use of thresholds 3—18355
damage parameter estimation uncertainties 3—55727
displacement damage calcs. using ENDF/B-V cross sections 3—55584
durability, under thermal cycling, based on creep results 3—13320
EDDY code for steam generator tube in-service inspection 3—45605
effluent monitor, noble gases from reactor waste, scintillation detector 3—55196
elevated temperature creep crack growth: state-of-the-art review and recommendations 3—29176
embrittled fission reactor vessels, thermal annealing, feasibility and methodology 3—11392
embrittled reactor vessel, thermal annealing program 3—49950
ENDF/A cross section and uncertainty file, ASTM standard recommended guide 3—55721
ENDF/B-V reference and guide-book, cross-section plots 3—20591
EPRI nuclear power plant structural mechanics programme, 1981 progress 3—45601
Esmeralda and sodium fires, fast neutron R&D *(French)* 3—21467
Experimental Breeder Reactor II, superheater duplex tubes, post-service examination 3—6368
Experimental Breeder Reactor II superheater, destructive examination 3—6367
Fast Flux Test Facility, Interim Examination and Maintenance cell training facility 3—16878
Fast Flux Test Facility, Materials Open Test Assembly, design and operation 3—55337
fast reactor component testing, Tripot facility in France 3—31533
fast reactor design, appls. of swelling and irradiation creep 3—31508
fast reactor fuel and structural materials radiation damage, effect on design 3—55154
fast reactor with dissociating N_2O_4 coolant, radioactive corrosion products in loop 3—11381
FBR core catcher, sodium borates as sacrificial materials 3—55493
FBRs, Na-cooled, radioactive contamination in primary circuits, ^{24}Na, ^3H 3—11397
feedwater nozzles in BWR, residual stress effects on ultrasonic detectability of surface cracks 3—50029
FFTF Absorber Pin Performance Verification Test 3—55184
finite element anal. computer program, Lamcal, user manual 3—40369
flame-resistant cables for PWR power plants with ethylene-propylene rubber and silicone elastomer insulation *(Japanese)* 3—11375
flaw size distrib. in welds 3—16815
flaws in ductile materials, evaluation by engineering flow assessment procedure 3—6299
fracture mechanisms, concept, tensile and notch impact bend test 3—24454
graphite, nuclear, fracture criterion 3—16851
graphite, nuclear, high reactivity, pore structure, effects of oxidation, diffusion studies 3—2867
GS heavy water plants, mass transfer modelling, point efficiency on GS sieve trays 3—881
GS heavy water plants, mass transfer modelling, tray efficiency on GS sieve trays 3—882
Hastelloy X, carburization protection by Si enriched layers in HTGR 3—4208
Heavy Section Steel Technology, neutron exposure parameters for metallurgical irrad. capsules 3—55176
high powered channel reactor, stress state of forced circulation loop tube 3—11380
hot cell facilities at Japan Materials Testing Reactor 3—31561
HTGR fuel and materials, postirradiation tests, Tokai hot cell facilities 3—31564
hydride VPE of III-V semiconductors, extraneous wall deposition suppression by HCl injection 3—8997

fission reactor materials continued
in-plant test using process monitoring data for nuclear material accounting 3−31536
in-reactor positions for neutron spectra and damage determ. *(French)* 3−55171
Inconel 600, mill-annealed, intergranular corrosion in PWR steam generator tubing 3−6365
Inconel 625, isothermal air oxidation behaviour, suitability for reactor cladding 3−6363
inlet feeders, single phase erosion corrosion, test program 3−55187
internal surface, chemical treatment before startup 3−11383
interstitial loop size distribs., analytical formulation 3−6290
iron, He buildup from neutron irradiation meas. 3−41189
irradiated nuclear-pressure vessel steel database 3−11391
irradiation induced structural material deformations, effect on core restraint design 3−31509
Japan material testing reactor, water loop, corrosion product deposition 3−41177
Leningrad Nuclear Power Plant, third block startup preparation, chemicotechnological regime 3−21449
LMFBR, austenitic steels, fracture mechanisms evaluation, cracks 3−24455
LMFBR, containment codes, mechanic developments 3−55090
LMFBR, Creys-Malville NSS, in-service inspection, specific application techniques 3−55469
LMFBR, fuel-coolant interactions, modelling and calc. technique 3−55503
LMFBR, fuel-sodium interaction, out-of-pile expts. using X-ray technique 3−55497
LMFBR, in-service inspection, safety standards 3−55471
LMFBR, KNK II, inspection and maintenance, general survey 3−55470
LMFBR, liquid metal coolant, critical temp. determ., appl. to Na 3−36463
LMFBR, molten core material fragmentation by sodium, scoping expts. 3−55495
LMFBR, molten fuel-coolant interaction, space-time anal. model 3−55499
LMFBR, protection devices for steam generators, SUPER PHENIX I 3−55530
LMFBR, RAPSODIE, PHENIX, component failure rate evaluation 3−55467
LMFBR, SEURBNUK containment code, HCDA effect on roof 3−55091
LMFBR, type 316 austenitic stainless steel, base and weld metals, creep behaviour 3−55159
LMFBR accident anal., CONACS code for sodium pool fire model 3−31735
LMFBR fuel-coolant interaction, TEXAS code anal. 3−55504
LMFBR fuel-coolant interactions, recent ANL expts. 3−55505
LMFBR HCDA, sodium thermophysical props. as functions of temp. and density 3−41259
LMFBR porous retention plates for in-vessel core catchers 3−31526
LMFBR steel irradiation facilities at the Petten High Flux Reactor 3−55181
LMFBR structural component benchmarking 3−36488
LMFBR vented control rods, absorber-cladding chemical interaction, out-of-pile study 3−55502
loading device with ampul accommodating two specimens for tests inside reactors 3−19494
LWR, Westinghouse-designed three and four loop power plants, Co sources 3−45650
LWR core debris, solubility in sacrificial floor material 3−16859
LWR fuel cladding, SEM-TEM sampling technique 3−6286
LWR integrity of components, ductile fracture concepts 3−24352
LWR pressure boundary safety and fracture conf. Stuttgart, Germany (Oct. 1981) 3−20569
LWR pressure vessel surveillance and lifetime prediction, uncertainty limitation 3−55173
LWR PV dosimetry, regulatory demands, status 3−55531
LWR PV surveillance capsules, dosimetry re-evaluation 3−55175
LWR reference system classification for European Reliability Data System 3−45658
materials dosimetry, UK trends 3−55164
MATPRO: a handbook of LWR core materials properties models 3−31555
metal monitoring, volume of monitoring required, forecast estimates 3−41185
metallic materials qualification for appl. in advanced HTGR 3−898
metallography cell at Oarai engineering center 3−31563
miniaturised disk bend test for postirradiation mechanical behaviour anal. 3−29282
molten core debris, downward heat transfer correlation for penetration into concrete 3−31734
multicomponent materials, proton retarding power, Bragg-Kleeman rule verification 3−22954
Neitron-11, apparatus for studying reactor radiation effect on creep and strength of structural materials 3−45600
neutron flux density and energy release analysis 3−41253
neutron techniques in Safeguards 3−55157
neutron transport through steel reinforced concrete, sensitivity study 3−11528
nozzle corner crack, elastic-plastic FEM anal., fracture mechanics concept 3−24456
nuclear fuel element technology, book 3−10543
nuclear power plant, inelastic structures, probabilistic anal. 3−16813
nuclear power plant, mechanical aspects of failure probability 3−16814
nuclear power station piping, high temp., stress corrosion cracking monitoring and evaluation using ultrasonic methods, methods review 3−11390
ORR pressure vessel simulator, damage flux meas. *(French)* 3−55177
pellet-cladding interaction, mech. and chem. approach to modelling 3−49931
pipe stress and pipe support design, history 3−11385
piping, grouped system seismic capability, forced vibrational test 3−55186
piping structures, photogrammetric anal. 3−11384
pressure tube, replacement in Bruce A, tools and techniques 3−55194
pressure vessel components, irradiation embrittlement 3−55167
pressure vessel integrity inspection, Marshall report (1976) assessment 3−21370
pressure vessel materials, irradiation response evaluation 3−51670
pressure vessel materials, neutron embrittlement eval. and prediction 3−55147
pressure vessel materials in PWR, environmentally assisted cracking 3−45607
pressure vessel steel, neutron dosimetry in irradiation capsules 3−55165
pressure vessels reliability, pre/in-service inspection and tests influence 3−16825
PWR, neutral oxygen-water chemical regime, effects on boilers and materials 3−11408
PWR, reduced length burnable absorber design 3−26405
PWR boiler mechanical components, effects of system fluctuations *(French)* 3−31649
PWR burnable poisons, Gd_2O_3 rel. to B, merits 3−41175
PWR control rod materials, development of hafnium 3−41159
PWR control rods, predicted service life 3−6360
PWR core melt probability, vessel rupture contrib. 3−16971
PWR fuel management for slowing pressure vessel embrittlement 3−55110
PWR LOCA, ballooning fuel rod cladding, temp. response prediction 3−26422
PWR main coolant line, preclusion of double ended circumferential rupture 3−21462
PWR overcooling accidents, effect on pressure vessel integrity 3−55534
PWR plant, primary coolant loop pipe fracture, probabilistic assessment 3−16972
PWR pressure vessel, US appl. for inspection 3−36484
PWR primary chemistry: prestartup to first refueling 3−26368
PWR RPV, pressurised thermal shock, USNRC materials research 3−21461
PWR secondary chemistry: containment transport and purification 3−26370
PWR secondary coolant controls for steam generator corrosion prevention 3−26369
PWR secondary systems, O_2 induced corrosion, minimisation by design of balance-of-plant systems and components, in USSR 3−11372
pyrocarbon sheaths for reactor fuel micropins, microstructure 3−41184
radiation damage, sink strengths calc. method 3−55156
radiation damage 3−55153
radiation damage assessment, related safety aspects 3−55174
radiation damage exposure, role in location dependency 3−55178
radiation effects on materials, conf., Philadelphia, USA (June 1982) 3−5494
radioactive materials containers, γ scintillation testing of shielding integrity 3−31833
ratchetting experiments on thin cylinders subject to axially moving temperature fronts 3−963
reactor pressure vessels, surface flaw assessment, current methods overview 3−55375
REAL-80 exercise, status report 3−55324
regenerated large cold trap, destructive examinations 3−897
reversing DC electrical potential method for crack extension meas. 3−50026
ROBIN: a method for collecting in-plant safeguards data with minimal inspector access 3−26361
safeguards upgrade activities at the Savannah River Plant Plutonium Finishing Facility 3−26359
safety-related spare parts quality determination 3−1004
San Onofre reactor core secondary long-lived neutron sources for startup 3−16868
short term material accounting, variance estimation 3−31537
short term materials accounting, performance evaluation 3−31538
simultaneous formation of both vacancy and interstitial loops under irradiation 3−6289
special nuclear material control and accounting safeguards in USA 3−11456
spent fuel storage with fuel rod consolidation, safeguards 3−41192
stainless steel, FBR cladding material Cs penetration behaviour in oxide film 3−55135
stainless steel, RuO_4 interaction study 3−55136
standards for materials behaviour under neutron irradiation 3−55169
steam generator, service degraded, examination prior to tubing strength research 3−6364
steam generator, structural stress measurements 3−55192
steam generator, tube failures, radiological consequences 3−55348
steam generator plate crack detection by radiography 3−55149
steel, alloy, 20 MnMoNi 5 5, fracture initiation and fracture opening under light water reactor conditions 3−24353
steel, alloy, 20 MnMoNi 5 5, neutron irradiation in VAK reactor, tensile strength, fracture toughness 3−22942
steel, alloy, 22 NiMoCr 3 7, fracture initiation and fracture opening under light water reactor conditions 3−24353
steel, alloy, 22 NiMoCr 3 7, neutron irradiation in VAK reactor, tensile strength, fracture toughness 3−22942
steel, alloy, corrosion fatigue crack growth in simulated weld HAZ 3−39309
steel, alloy, irrad. damage, electron, heavy-ion and fast-neutron, correl. 3−27976
steel, alloy, oxidised, H penetration, pressure effects of type KhN40B 3−23099
steel, austenitic, stainless, type 304, irradiated fatigue characteristics 3−41145
steel, austenitic and ferritic stainless, irrad., high temp. ductility 3−29159
steel, austenitic stainless, C content effect on neutron irrad. damage 3−26324
steel, austenitic stainless, Cr-Ni-TiN neutron irrad., microstruct. 3−28001
steel, austenitic stainless, fatigue crack growth design curve, in air at 300°C 3−41153
steel, austenitic stainless, fracture strength with flaws, residual stress effect 3−57025
steel, austenitic stainless, heat resistant, cyclic deform. resist. rel. to reactor irrad. 3−43897
steel, austenitic stainless, intergranular SCC 3−24418
steel, austenitic stainless, Ti modified, void swelling due to C^+ ion bombardment 3−22947
steel, austenitic stainless, type 10Kh18N9, strength, creep and heat resistance in alkali liquid Na 3−14673
steel, austenitic stainless cold-drawn, heavy ion irrad., radiation-induced recrystn. 3−28010
steel, C, BWR torus structural items, electrolytic decontamination 3−936
steel, C type, corrosion fatigue tests in nucl. reactor coolant water 3−58338
steel, Co and other impurity content 3−41183

fission reactor materials continued
steel, constructional, corrosion and low-cycle corrosion fatigue resist., boric regulation influence 3−58305
steel, embrittlement, radiation induced, Charpy impact data evaluation and uncertainty estimates 3−55172
steel, embrittlement in reactor press. vessel by neutron exposure 3−55168
steel, embrittlement surveillance in LWRs 3−55163
steel, ferritic, thermal neutron induced embrittlement in HTR *(French)* 3−55170
steel, irradiated pressure vessel type, Charpy impact testing, computer appl. 3−9284
steel, local stressed condition, determ. of crack resist. by criteria of similarity 3−29256
steel, low alloy pressure vessel type A533B, stress relaxation prediction under multiaxial stresses 3−53103
steel, low alloy RPV, radiation embrittlement annealing 3−43862
steel, LWR press. vessel, electrochemical potential at growing fatigue crack tip 3−29206
steel, nuclear pressure vessel, tensile props. and fracture mode, combined effects of neutron irrad. and H absorpt. 3−18353
steel, stainless, fuel element bulging, creep in fast neutron flux *(Russian)* 3−49947
steel, stainless, high-grade, nuclear technology, special smelting processes *(German)* 3−31517
steel, stainless, Kh20N45M4B, high temperature He embrittlement, bubbles in dislocation network 3−47955
steel, stainless, molten, boiling fragmentation in sodium 3−26424
steel, stainless, oxidised, 2Kh13, 12Kh18N10T, 0Kh16N15M3B, 1Kh13M2FB, 1Kh13F2M2, 0Kh18Yu2, H penetration, pressure effects 3−23099
steel, stainless, radiation buildup in BWR environment 3−26377
steel, stainless, thin-walled nuclear fuel element cladding tubes, standardised procedure for eddy current testing 3−4244
steel, stainless, type 12Kh18N10T, oxidation-reduction processing using SIMS 3−24410
steel, structural, low strength, fracture toughness data, fission reactor appl. 3−53217
steel, type A302-B 3−43871
steel, types 2Kh13, 48TS, 22K, oxidation-reduction processing using SIMS 3−24410
steel melting on contact with UO_2 vapour following LMFBR HCDA 3−6369
steel welds, type A533-B, annealing response, analytic predictions for RPV 3−43861
structural alloys, radiation effects 3−13289
structural and mech. components, probabilistic aspects of fracture 3−16981
structural reliability anal. for JRC-Ispra, response surface methodology approach 3−16970
surfaces, coatings, protection, diffraction anal., conf., Sellafield, England (Oct. 1981) 3−34
surveillance, unification and standardisation, Esarda Specialist Meeting *(German)* 3−16842
thermal reactor irradiation capabilities at the Petten High Flux Reactor 3−55328
TMI-1 once through steam generator tube failure anal. 3−26371
TMI-2, fission product deposition characterisation in coolant and auxiliary systems 3−21484
TMI-2, fuel fines location and quantification in coolant system 3−21486
TMI-2, hydrogen burn anal. 3−21483
TMI-2, hydrogen burn damage 3−21482
TMI-2, sample anal. for ZrO_2 using Molecular Optical Laser Examiner 3−21487
TMI-2 coolant system, chemical decontamination methods 3−21372
TMI-2 coolant system, nonchemical decontamination techniques 3−21373
TMI-2 mechanical component examination, information collection, recording and interpretation 3−50022
TMI-2 mechanical component survivability program, progress and plans 3−21480
TMI-2 primary pressure boundary, thermal anal., requalification plans potential impact 3−21481
TMI-2 purification system, fission product transfer 3−21485
TMI-2 reactor coolant system, contamination characterisation 3−45656
TMI-2 reactor vessel head removal and damaged core removal planning 3−21471
TRAN molten UO_2 fuel expt. series at Sandia ACRR, HCDA research 3−55555
transport regulations, changing policies 3−31550
turbine disk and wheel cracking due to intergranular SCC 3−26409
vacuum building, computer simulation, thermal response to environmental changes 3−55188
vacuum containment structures, leakage rate expts. 3−55193
vendor quality assurance programs 3−909
VHTR, graphite core-support posts, stress analysis by photoelastic expts. *(Japanese)* 3−11378
VHTR core support, testing of thermal insulation materials, C, Si_3N_4, SiO_2 *(Japanese)* 3−11377
vibration response to random excitations, due to coolant flow 3−26321
viscoplastic material behaviour at elevated temp., constitutive eqns. for 304 stainless steel 3−24310
void swelling theory, continuous gas generation effects 3−37895
VT-1, Ti alloy, oxidation-reduction processing using SIMS 3−24410
water coolant, fission product radioactivity, operative automated monitoring 3−11379
welding, explosive technique for reactor repair 3−55189
wet steam turbines for nuclear plant applications, materials aspects 3−26408
Zircaloy, creep fracture processes 3−29160
Zircaloy, SCC, in-reactor I_2, thermodynamic assessment 3−16860
Zircaloy, stress corrosion cracking by Cd, I, and metal iodides, irradiation effect 3−34535
Zircaloy 2, uniaxial in-reactor creep, stress, flux and temp. depend. 3−43894
Zircaloy $2/UO_2$ interfaces, solid spot thermal conductance 3−45623
Zircaloy cladding, transient failure model 3−26375
Zircaloy cladding SCC in dry storage 3−26362
Zircaloy fuel sheaths, deform. and failure under LOCA conditions 3−45660
zircaloy plate, mixed convection laminar flow, Three Mile Island accident 3−27514
Zircaloy spacer grid design optimisation for handling and safety 3−26355

fission reactor materials continued
Zircaloy tubes, SCC, distrib. of time to failure *(Japanese)* 3−58294
zircaloy-2, annealed, fast neutron irradiated, growth strain breakaway, temp. depend. 3−34385
Zircaloy-2, second-phase particles, morphology and comp. 3−29082
Zircaloy-2 cladding, irradiated, I-induced stress corrosion cracking 3−58290
Zircaloy-2 cladding, material condition effect on I_2 SCC susceptibility 3−19454
Zircaloy-2 tubing, I stress corrosion cracking susceptibility, neutron irradiation effects 3−16847
Zircaloy-4, high temp. internal friction, grain boundary relaxation 3−39188
Zircaloy-4, oxidation kinetics simulation, temp. transients, 600-800°C 3−39298
Zircaloy-4 cladding deformation in LOCA, boundary effects 3−6372
Zircaloy-4 tubing, I-induced SCC failure above 500°C, creep rupture test 3−39297
Zircaloy-4/UO_2, chem. interaction under severe fuel damage conditions 3−11374
(α,n), 3.6-10 MeV, thick target yields for reactor and radwaste materials 3−31419
(n,X), Z=24 to 73, 4-20 MeV, optical model parameters for neutron cross sections 3−41004
Al alloys, corrosion rate and H evolution in reactor containment spray solutions 3−34526
Al_2O_3-B_4C burnable absorber, annular type, fabrication development and appl. 3−41174
Al_2O_3-B_4C composite ceramics, sintering, densification, microstruct. development 3−47807
Al_2O_3-B_4C composite pellets, moisture adsorption, microstruct. 3−47221
B_4C neutron absorbers, behaviour in spent fuel storage pool 3−45592
^{10}B analyzer, CANDU power station, applications 3−55191
$^{209}Bi(n,X)$, fast n, resonance struct. 3−21280
C steel, neutron transport benchmarks expt. 3−55319
^{14}C releases from heavy-water-moderated reactors, dose limitation, production and release 3−11535
Co transport mechanism in BWR 3−26376
^{59}Co-contianing alloys, corrosion products fast neutron activation anal. 3−6362
^{60}Co, impurity in coolant; from component wear 3−55195
Cr(n, n), 1.0-4.5 MeV, total, elastic and inelastic cross sections, reactor appl. 3−41126
Cu foils, electron irrad., growth of dislocation loops 3−18349
D_2O vapour loss, infrared liquid isotropic analyser monitor 3−55190
Eu_2O_3-ZrO_2, cubic struct., thermal stability 3−9042
Fe, neutron transport benchmarks expt. 3−55319
Fe, U-contaminated, decontamination by smelting 3−937
Fe_3O_4, dissolving and crevice studies with chelant solns.; rel. to reactor cooling loop 3−41132
$^{56}Fe(n,\gamma)$, 1.15 keV resonance capture area, reactor appl. 3−41128
Fe(n,X), 4-100 MeV, optical model parameters for neutron cross sections 3−41004
Fe(n,X), fast n, resonance struct. 3−21280
He, buildup and release in reactor materials, new spectrometric facility 3−41188
He production in structural materials, quantitative analysis 3−41186
LiF, vaporisation study by mass spectrometry 3−889
MgO, long term interactions of molten UO_2, FBR safety appl. 3−55506
Mn-Zn ferrite, static mag. props., action of fast neutrons *(Russian)* 3−57704
N_2O_4 dissociating coolant, chemical reaction thermal effects on nuclear power station efficiency 3−11411
N_2O_4, initial non-equilibrium state influence on steam generator efficiency *(Russian)* 3−50003
N_2O_4, radiolysis in IRT-M reactor *(Russian)* 3−31573
N_2O_4-NO solutions, phase equilibrium *(Russian)* 3−31574
Na, air and ground concentrations from LMFBR, model and observed data comparison 3−24651
Na characteristics, standards for use 3−11399
Na combustion, reaction with containment materials, extinguishers 3−11398
Na coolant, C meter, electrochem. method 3−41236
Na coolant mist deposition, effect on barriers in LMFBR 3−31471
Na fire aerosols, physical and chemical behaviour, Na-cooled breeder reactor accidents 3−11473
Na fires, ignition and combustion, consequences 3−11472
Na fires in FBRs, protective systems, study at German FBR SNR-300 3−11471
Na, handling safety in LMFBRs, conf., Ispra, Italy (Nov. 1980) 3−10523
Na, impurity analysis, reactions, phase diagrams 3−14913
Na, liquid, electrochemical techniques for monitoring dissolved C, H and O 3−16848
Na, neutron transport benchmarks expt. 3−55319
Na-concrete reactions, cracking modeling 3−1015
Ni alloy compression springs, fatigue failure 3−26382
Ni alloys, H and He buildup, meas. 3−41190
Ni-Al-Ti, PE16 superalloy, small angle neutron scatt. studies 3−31575
Ni-C, irradiation enhanced decomposition 3−6291
Ni-C, irradiation enhanced decomposition 3−26383
Ti tubed surface condensers for nuclear steam generators 3−16863
TiO_2 adsorbent for Co removal in BWR 3−6361
$(U_{0.8}, Pu_{0.2})C_{0.8}N_{0.2}(N)$, LMFBR fuel, Hertzian indentation of with simulated burn-up 3−16850
UO_2-MgO melt penetration mech., binary eutectic phase diagram 3−31733
UO_2-Zircaloy-4 pellet/clad interaction 3−55151
V-Ti (20 wt.%), fate of implanted He 3−28008
Zr, irradiation by 100 keV Ne ions, simulation of neutron irradiation growth and creep 3−37970
Zr, polycrystals, high temp. internal friction, grain boundary relaxation 3−39188
Zr-base alloys, oxidation model 3−29208
Zr-Fe (0.025-1.0 wt.%), nuclear quality, nature of precipitation *(French)* 3−19343
Zr-Nb (2.5 wt.%), irradiation by 100 keV Ne ions, simulation of neutron irradiation growth and creep 3−37970
Zr-Nb (2.5 wt.%) alloy pressure tubes, tensile props. rel. to post-extrusion thermomech. treatment 3−43921
Zr-Nb texture influence on plastic tensile strain 3−45595

fission reactor operation
see also fission reactor cooling and heat recovery; fission reactor core control and monitoring; fission reactor safety
availability improvement, licensing issues 3—36506
availability improvement programme development 3—36507
BWR cores, axial void propagation velocity meas. method 3—11448
BWR fuel channel deformation, large channel bowing 3—6358
BWR full integral simulation test (FIST) program test plan for LOCA 3—55391
BWR performance and reliability improvement, effective utility/supplier interface 3—36509
BWR plant advanced central control panel PODIA 3—55227
cleaning reactor vessel closure head stud bolts using high-pressure Freon 3—31659
Clinch River Breeder, design for maintainability 3—843
complex reactor systems, reliability analysis, computer code 3—55088
conference, Canadian Nuclear Soc., Toronto, Ont., Canada (June 1982) 3—54584
configuration management—an overview 3—31662
diesel units, safety assessment for emergencies 3—55564
direct operating comparison between Candu and PWR, major Korean programme 3—55233
Enrico Fermi 2 BWR, startup test programme 3—31741
fast reactor operation, nonsteady and emergency conditions, safety systems 3—11457
fast reactors, conversion parameters 3—26291
FBR axially heterogeneous core concept, HCDA behaviour, power distrib., breeding 3—55450
FBR design and operation effect on fuel cycle and waste management 3—16926
FBRs technology 3—1020
FFTF startup and operation, safety related experience 3—55441
gas-cooled reactors, UK development programme *(Russian)* 3—50000
generators, standby, mathematical model, estimation of reliability 3—55565
Genkai PWR power station, operating and maintenance experience 3—31654
graduate engineers, role in plant startup and operation 3—990
human factors management—a tool for improved productivity and operations 3—988
in-core fuel management optimisation, perturbation theory, FULMNT code 3—41213
Japanese Special Committee on Reactor Physics, activities April 1979-March 1982 *(Japanese)* 3—16946
JOYO, LMFBR, power ascension tests, physical effects 3—55284
KNK-II test reactor, fuel element vibr. effects during power operation 3—55447
legislative and administrative reform at the US NRC 3—31737
licensing process, US NRC and DoE activities, safety and policy 3—31736
LMFBR, ACRR coded aperture imaging system, fuel pin monitoring 3—55287
LMFBR, comparison of safety features with PWR 3—55465
LMFBR, CONTAIN code, response to hypothetical severe accidents 3—55093
LMFBR, containment codes, mechanic developments 3—55090
LMFBR, continued operation with defective fuel pins, joint French/German programme 3—55448
LMFBR, fuel cell UO_2, vapour pressure meas. 3—55162
LMFBR, in-service inspection, safety standards 3—55471
LMFBR, KNK II, inspection and maintenance, general survey 3—55470
LMFBR, man-machine interface optimisation 3—55442
LMFBR, MELT-III/FUMO-E codes, fuel motion in annular fuel in hypothetical accidents 3—55107
LMFBR, protection devices for steam generators, SUPER PHENIX I 3—55530
LMFBR, RAPSODIE, PHENIX, component failure rate evaluation 3—55467
LMFBR, SEURBNUK containment code, HCDA effect on roof 3—55091
LMFBR, steam generator proposal, future reactors, PHENIX data 3—55268
LMFBR, thermal feed-back effects, PHENIX reactor 3—55102
LMFBR, TREAT effects on data interpretation of fuel elements 3—55108
LMFBR, TREAT hodscope interpretation, fuel monitoring 3—55288
LMFBR, US man-machine interface programme 3—55446
LMFBR operating personnel training at CEA France 3—55443
LWR, operation and data anal. with Kalman filters *(German)* 3—49912
LWR steam generator tubes, in-service inspection by multiple-frequency eddy current methods 3—6398
maintainability assessment and design for nuclear power 3—841
managing design changes in the construction/startup phase of nuclear plants 3—31652
neutron flux density and energy release analysis 3—41253
nuclear plant improvements storage facility 3—31658
nuclear power plant full scope training simulator, software development, maintenance and portability 3—55255
nuclear technology transfer, conference, Buenos Aires, Argentina (Nov. 82) 3—16082
optical techniques for nuclear reactor inspection 3—16942
outage critique reports, importance as planning element 3—16950
Palisades, operating history 3—17008
Palo Verde, design for plant maintainability and operation 3—842
PFR, safe operation under transient conditions, automatic protection system 3—55444
plant data need for operational training and safety anal. 3—6428
plant maintainability, NRC views 3—840
power plant construction, operation and maintenance, conf., Charleston, SC, USA, (March, 1982) 3—21
power plants, multifunctional simulation system *(Japanese)* 3—41210
preoperational component testing, use of operational phase maintenance planning and scheduling computer 3—31651
project management techniques 3—987
PWR, comparison of safety features with LMFBR 3—55465
PWR, worldwide load factor reduction following Three Mile Island accident 3—36499
PWR control rods, predicted service life 3—6360
PWR electric power generation system refuelling schedule optimisation using PLANUM model 3—41255
PWR nucl. power plant simulator, design and implementation 3—41100

fission reactor operation continued
PWR operation, radiological protection, dose limits and exposures 3—17078
PWR operational problems in France *(French)* 3—36505
PWR power station boilers, EM and graphite high-temp. filter tests 3—55238
PWR reactor vessel in-service inspection, quality and efficiency improvements 3—17018
PWR single steam generator cooldowns, radiation field control 3—55241
PWR training simulator, accident thermohydraulics modelling 3—36532
PWRs, 1300 MW, in France, improved control room design 3—31648
PWRs, corrosion damage reduction by improved steam purity 3—36497
PWRs and the United Kingdom conference, Birmingham, England (Mar. 1982) 3—16079
quality assurance experience 3—991
quality assurance scheme 3—992
refuelling outage improvements, recommendations 3—986
regulatory reform by US NRC, needs and progress 3—31738
reliability engineering at Westinghouse Water Reactor Division 3—36508
remote cutting, fitup, and welding for in-plant pipe repairs 3—844
retrofitting single-failure-proof crane hoists to implement NUREG-0612 3—16948
safety parameter display systems, appl. of verification and validation 3—55368
Seabrook Station Startup Test Department 3—31653
standardized format spare parts documentation 3—31664
startup scoping, experience in last ten years 3—31739
steam generator, service degraded, examination prior to tubing strength research 3—6364
Super-Phenix, French fast breeder nuclear reactor steam generator, discrete time model reference multivariable adaptive control 3—6405
SuperPhenix 2 LMFBR, dynamic simulation of overall operation under natural circulation 3—55396
Swedish stations, operator training *(German)* 3—36504
Systems Interaction Program for the Indian Point-3 nuclear power plant 3—31661
technical database transfer, important step to configuration control 3—31663
Tennessee Valley Authority power plants, data base application 3—31650
training simulators, role in operator education 3—55359
TV monitoring and observation systems 3—11414
underwater nuclear maintenance 3—31657
underwater viewing improvements demonstration 3—31767
VVER-1000 nuclear reactors with variable steam parameters, experiments into operation *(Russian)* 3—49997
VVER-40 fission reactor Xe poisoning under non-stationary operation *(Hungarian)* 3—49996
^{3}H release from UO_2, mechanisms 3—55232

fission reactor safety
see also fission reactor cooling and heat recovery; fission reactor core control and monitoring
3D-AIRLOCA1. A LOCA analysis code for research and test reactors 3—11421
19-tube once-through steam generator, steady state and transient prediction using RELAP5/MOD1 3—41242
accident consequences model, German risk study 3—41271
accidental radioisotopes release, guidance for protection of the public 3—34988
ACEC industrial electronic fail-safe systems *(French)* 3—41257
acoustic noise measurements produced from steam injection into sodium 3—31721
activity control for operational safety, innovative approach 3—17009
AD-MARC, atmospheric dispersion module for assessing radiological consequences of accidental releases 3—34754
advanced BWR core performance calcs. *(German)* 3—49913
advanced nucl. reactor control and protection system *(Japanese)* 3—41207
Advanced TREAT Loop, fuel failure events for Clinch River and PFR fuel 3—55542
ALARA considerations and review for power plant engineering 3—1081
ALARA engineering effectiveness in action 3—1083
Annular Core Research Reactor, experimental capabilities 3—55334
annular fuel pellet design, LOCA anal. thermal response after extended burnup 3—31597
ANS shielding standards for light water reactors 3—55296
Appendix K—a simple change 3—31686
ARIES model for LMFBR advanced reactor interactive engineering simulation 3—26302
Arkansas Nuclear One Unit 2, transient tests for use in comlputer code compilations 3—50024
atmospheric dispersion modeling for real-time offsite dose assessments 3—31841
automated isotopic measurements in operating power reactor systems 3—31753
automatic diagnosis of multiple alarms for reactor control rooms 3—16993
automatic failure detection in nuclear power plants by generalised likelihood ratio technique 3—17001
Bayesian parallel processing method for power plant diagnostics 3—26307
breeder reactors, international development *(German)* 3—17022
Browns Ferry 3 partial control rod insertion, neutronics anal. 3—11453
Budapest Central Research Institute for Phys. research reactor emergency cooling system *(Hungarian)* 3—49995
BWR, bypass flow, thermal-hydraulic anal. 3—31671
BWR, H generation following HCDA 3—31769
BWR, linked RETRAN-VIPRE thermal-hydraulic analyses 3—36533
BWR, prediction of events during power blackout 3—31768
BWR, Xe induced power distribution transients, diffusion code 3—36537
BWR bypass heating, Monte Carlo calc., critical power ratio thermal limits 3—16955
BWR chugging desynchronization effects on multivent pressure suppression pool loads 3—11367
BWR containment, hydrodynamic loads during LOCA and SRV discharge 3—11369
BWR containment failure analysis during degraded core accidents 3—11460
BWR containment load mitigation due to safety/relief valve actuation by low-low set logic 3—31746
BWR core, COTRAN, coupled neutronic and thermal-hydraulic transient anal. code 3—17013
BWR core, RAMONA-III neutronics model qualification 3—17012

fission reactor safety continued
  BWR core instrumentation concept and signal processing *(German)* 3—49987
  BWR cyclic stress fatigue evaluation, in-plant test data utilisation 3—31714
  BWR flow transient anal. 3—11423
  BWR fuel bundles, axial kinematic wave velocity profile 3—11438
  BWR full integral simulation test (FIST) program test plan for LOCA 3—55391
  BWR graphic display system, development and evaluation 3—16997
  BWR graphics display system 3—31761
  BWR inlet flow blockage, fuel rod temp. prediction using MAYU-4b 3—11422
  BWR LOCA, chugging induced dynamic loads anal. 3—11365
  BWR LOCA, chugging load evaluation coupled with system response 3—11366
  BWR LOCA, dynamic loads induced by chugging phenomena 3—45643
  BWR LOCA, refill-reflood research programme test facility 3—41283
  BWR LOCA conditions, pipe whip tests, report 3—21492
  BWR LOCA evaluation, expt. research and code development, review 3—11452
  BWR Mark III program for compliance with hydrogen control requirements 3—31747
  BWR parallel channel effects on ECC water distrib. after LOCA 3—55382
  BWR plant, fire vulnerability assessment, prob. risk assessment 3—36542
  BWR plant, Toshiba safety parameter display system development 3—55230
  BWR post accident hydrogen control, natural radiolytic recombination 3—31709
  BWR post-LOCA dose rates on RHR system piping based on a particle settling model 3—11531
  BWR power plant main steam isolation valve seat leakage performance improvement, corrective actions, tests and meas. 3—11393
  BWR primary cooling system stainless steel surface, radioactive crud buildup 3—41238
  BWR recirculating loops, stability anal. 3—11439
  BWR refill-reflood program test plan 3—21491
  BWR small break LOCA anal., RETRAN-02 MOD2 program 3—50031
  BWR stability, freq. depend. nodal anal., spatial kinetics model 3—41274
  BWR stability margins, 3-dimens. coupling effects 3—17017
  BWR standard plant, severe accident issues resolution 3—31485
  BWR subcooled core dynamic behaviour during control rod drop accident 3—36556
  BWR suppression pool scrubbing model for severe accident risk assessment 3—31712
  BWR system simulator, boil-off tests to evaluate bundle heat transfer and thermohydraulic flow conditions 3—6434
  BWR transient initiators, freq. uncertainties 3—31705
  BWR vessel wall neutron dosimetry, spectral analysis 3—55533
  BWR/4, partial scram event anal. 3—6429
  C-E in-containment nucl. press. transmitter, qualification status report 3—55219
  cable fires leading to LOCA and other transients, risk assessment 3—11454
  CABRI, hodoscope, fuel pin observations during accident, LMFBR 3—55285
  CABRI experimental reactor for fast neutron reactions, programme and projects *(French)* 3—21465
  CABRI project progress and status, fuel behaviour in TOP, LOF and TUCOP conditions 3—55440
  CANDU, flow blockage detection, boiling or subcooled channels, methodology 3—55345
  CANDU, in-core moderator temp. meas., accident heat sink assessment 3—17010
  CANDU, shutdown systems, computer applications 3—55562
  CANDU, two-phase flow models, LOCA predictions 3—55343
  CANDU, UO_2 pellets, distribution of products, calcs. for LOCA 3—55197
  CANDU power reactors, thermohydraulic behaviour during LOCA using FIREBIRD-III program, report 3—31515
  CANDU spatial neutron kinetics 3—17011
  CANDU-PHW, probabilistic model of shutdown trip systems 3—55563
  CANDU-PHW reactors, safety research, LOCA, fuel behaviour, fission gases 3—31778
  Caorso power plant primary containment, neutron environment characterisation 3—55532
  carbide fuel, in LMFBR, coolant interaction test for explosive reaction 3—41140
  Carolina Power and Light Company's corporate ALARA program 3—1080
  CDFR, NaK thermal loop syphon system, reliability, decay heat removal 3—55263
  CDFR, subassembly accident protection instrumentation systems 3—55258
  CDFR safety anal., incidents and accidents considered 3—55456
  CESEC verification against plant test data 3—11434
  Chalk River Nuclear Labs., in-reactor expt. facilities for LOCAs 3—55536
  circular pipe ends, with flanged ends, thin shell theory anal. 3—27386
  Clinch River Breeder, radiation protection ALARA program 3—1082
  Clinch River Breeder Reactor, part load conditions anal. using SSC/MINET 3—31744
  Clinch River LMFBR heterogeneous core, LOF event, Doppler and sodium void worth effect 3—36553
  colemanite-baryte frit and polymer impregnated concrete as shielding materials 3—26322
  Comanche Peak emergency response facility computer system 3—36547
  COMMIX predictions of a thermal mixing test 3—6426
  Commonwealth Edison Company nuclear safety department 3—31755
  complex reactor systems, reliability analysis, computer code 3—55088
  comprehensive plant safety monitoring system for SONGS 2/3 3—16995
  computer control of power, signal validation methodology 3—55225
  computer-based ALARA cost-benefit analysis for operating plants 3—1085
  computer-based reactor protection system, fail-safe design 3—36560
  computerised emergency assessment and response system, field implementation 3—55370
  condensation on a wall in the presence of noncondensable gas 3—31710
  conference, Canadian Nuclear Soc., Toronto, Ont., Canada (June 1982) 3—54584

fission reactor safety continued
  conference, reactor dosimetry, radiation metrology, Gaithersburg, MD, USA (March 1982) 3—54576
  containment integrated leak rate testing improvements 3—45653
  containment modelling for post-LOCA gamma dose calcs. 3—31754
  containment shell, earthquake response, deterministic and stochastic anal. 3—26419
  coolant recombiner, sponge metal catalyst for H_2O recombination 3—41230
  coolant systems, nonchemical decontamination methods for post-accident use, evaluation 3—45649
  copper, molten, boiling fragmentation in sodium 3—26424
  core debris accommodation following HCDA, research progress 3—55486
  core melt accident, siting considerations, doses, large population centre dangers 3—41276
  core melt probability contribution to Appendix K accident sequence 3—31775
  core melt/concrete interaction, heat transfer enhancement by gas injection 3—41235
  core meltdown accident, fission product releases and containment structure interactions *(German)* 3—16965
  core restraint analysis of a free-flowering large heterogeneous LMFBR 3—877
  core retention, passively cooled particle bed, demonstration 3—55480
  cost effective radiation risk management in generic nuclear plant design 3—55393
  coupled system thermal hydraulic responses simulation using THYDE-P computer code, report 3—21364
  CRBR, flashing fuel simulant expansion into upper core structures, SIMMER-II validity 3—55511
  CRBRP, heterogeneous, HCDA energetics in core 3—55517
  CREDO, Centralised Reliability Data Organisation, system and status, reactor data 3—36524
  CREYS MALVILLE—sub-assembly accident analysis 3—55459
  Creys-Malville reactor, loss of decay heat removal funct., probabilistic anal. 3—55271
  critical two-phase flow models for safety anal. 3—55376
  criticality accident experimental studies with high-enriched uranium solutions 3—1014
  criticality of high-density, boral-poisoned fuel racks for Maine Yankee 3—956
  criticality safety, communications role 3—31700
  criticality safety, importance of communications 3—31699
  criticality safety communication links 3—31702
  criticality safety communications 3—31701
  CRT based safety parameter display system design 3—55216
  CSSR State Nuclear Power Safety Regulatory Body, role in nuclear power station construction *(Czech)* 3—36518
  data concentrator requirements for safety parameter display system 3—55217
  DATATRAN data base and executive program for nuclear utility use 3—36519
  decay heat calculations at SRP using ANS-5.1 3—11418
  design features for dose reduction during maintenance and inspection operations 3—1084
  DFR subassemblies, pin durability, local blockage formation and detection 3—55460
  diesel units, safety assessment for emergencies 3—55564
  display system concept, history and overview 3—50017
  Disturbance Analyses and Surveillance System, scoping and feasibility study 3—16998
  dose levels and neutron reaction rates for HPRR and SHEBA 3—11532
  downward penetration of UO_2 into limestone concrete following HCDA 3—31731
  DRUFAN—an advanced best-estimate code for LWR blowdown analysis 3—862
  dry pocket formation during water penetration into hot particle bed 3—11463
  dryout heat transfer, steam-water two-phase flow during LOCA 3—45620
  drywell flooding, effect on BWR vessel 3—11464
  ducts, natural convective flow, appl. to reactor cooling after pump failure 3—16941
  dynamic analysis of thin structures in the PISCES 3 DELK code 3—876
  EBR-II, breached fuel test facility 3—55333
  EBR-II, expt. capability for off-normal testing of fast reactor fuels and systems 3—55546
  EBR-II, fuel performance test facility 3—55332
  EBR-II in-vessel thermal-hydraulic transient simulation using the COMMIX-1A computer code 3—31720
  ECCS licensing evaluation in Germany 3—31687
  EDF reactors, surveillance dosimetry program *(French)* 3—55293
  elevated temperature creep crack growth: state-of-the-art review and recommendations 3—29176
  embrittled fission reactor vessels, thermal annealing, feasibility and methodology 3—11392
  emergency assessment and response planning, architect/engineer role 3—17004
  emergency coding characteristics in nuclear power stations with dissociating coolant *(Russian)* 3—31777
  emergency core cooling system, test interval and procedure 3—999
  emergency information processing and display system for BWRs 3—31695
  emergency monitoring, needs, capabilities and practice in USA 3—1012
  emergency planning, Taiwan 3—17002
  emergency preparedness, impact of TMI 3—17006
  emergency preparedness—concept or condition? 3—11465
  emergency preparedness—status and outlook 3—17003
  emergency preparedness—status and outlook 3—55360
  Emergency Preparedness Appraisal Program, results 3—31749
  emergency response facility computer hardware and software 3—31763
  emergency response facility data acquisition processing and display 3—31760
  emergency response information system for Fermi-2 3—31766
  emergency response system process computers 3—31762
  engineering system reliability, integrated approach 3—16822
  Enrico Fermi 2 BWR, startup test programme 3—31741
  environmental monitoring, sampling overview 3—50056
  epidemiological and environmental radioactivity studies around the San Onofre nuclear power plant 3—1013
  EPR-II, instrumented subassemblies INSAT XX09, XX10, Na flow and temp. 3—55331
  EPRI Disturbance Analyses and Surveillance System program 3—16992

fission reactor safety continued
  EPRI modular modeling system code, development for transient anal. 3—26303
  EPRI program on pressurized water reactor thermal shock 3—6413
  EPRI/PWR safety and relief valve test program 3—1010
  Equipment Qualification Data Bank 3—1008
  equipment quantification 3—1006
  Esmeralda and sodium fires, fast neutron R&D *(French)* 3—21467
  explosive bubble, expansion in containment vessel, CARAVELLE 6 expt. results 3—55477
  extended burnup fuel, fission gas induced swelling during high temp. transients 3—31598
  fast breeder fuel pin assembly velocity and temperature field calc. using CAFCA code 3—55082
  fast breeder reactor shut-down system, safety oriented, microprocessor appl. 3—26434
  Fast Flux Test Facility loose parts monitor 3—55338
  fast neutron induced γ-ray spectra, R-parameter model modification 3—41331
  fast power reactor, core disruptive accident, thermohydrodynamic simulation code 3—41280
  fast reactor, recriticality accidents, computer anal. code, FASTRAN 3—55475
  fast reactor fuels, oxide and carbide, crit. temps. estimation 3—55143
  fast reactor irradiation facilities at Grenoble Nuclear Research Centre, fuel pins, safety 3—55551
  fast reactor neutron kinetics with material motion, finite element method 3—45644
  fast reactor operation, nonsteady and emergency conditions, safety systems 3—11457
  fast reactor with dissociating N_2O_4 coolant, radioactive corrosion products in loop 3—11381
  fast reactors, CASSANDRE, 2-D code, reactor transient analysis 3—55103
  fault detection and isolation methodology 3—50020
  FBR, component safety, design, construction, qualification, reliability, French approach 3—55420
  FBR, loop-type, MONJU, codes, standards safety, for major components 3—55419
  FBR, plant reliability anal. and prob. risk assessment, code development 3—36541
  FBR, post-accident heat removal, boiling and dryout predictions 3—45645
  FBR, post-HCDA pressurisation 3—55509
  FBR, USA development program political aspects 3—55401
  FBR axially heterogeneous core concept, HCDA behaviour, power distrib., breeding 3—55450
  FBR containment integrity anal. using ALICE II code 3—875
  FBR core catcher, sodium borates as sacrificial materials 3—55493
  FBR core during hypothetical accidents, changes in chemical constitution 3—55508
  FBR fuel, gas atoms in very small bubbles, anal. of thermodynamics, report 3—46680
  FBR fuel cycle, risk assessment and control 3—55210
  FBR fuel irradiation tests at JRC Petten, transient expts. 3—55183
  FBR intermediate heat transport system, cold trap regeneration 3—11416
  FBR safety research and development in United Kingdom 3—31694
  FBRs technology 3—1020
  feedwater material corrosion in PWR steam plants, release rates 3—50008
  feedwater nozzles in BWR, residual stress effects on ultrasonic detectability of surface cracks 3—50029
  FFTF, CORA code anal. for cluster of core assemblies 3—55098
  FFTF natural circulation transients, COBRA-WC calcs. 3—31673
  FFTF scram on high power, extremum type responses to adjoint sensitivity anal., safety 3—41262
  FFTF startup and operation, safety related experience 3—55441
  field adaptation to structural codes, standards, and regulations 3—850
  filtration, magnetic, high gradient, nuclear power reactor appls., review 3—31644
  fission product release model, SINGAR 3—55472
  fission product release to atmosphere, technical committee, Vienna, Austria (Aug. 1982) 3—54579
  FISSPROD-3, expanded fission product accumulation program using ENDF/B-V data 3—55081
  flame-resistant cables for PWR power plants with ethylene-propylene rubber and silicone elastomer insulation *(Japanese)* 3—11375
  flammable limit of H_2-air-steam mixtures, water fog effects 3—45654
  flaw detector for pipe inside surfaces in VVER power station 3—45648
  flaw size distrib. in welds 3—16815
  fluid velocity determ. in nuclear plant simulators, pulsed neutron activation technique appl. 3—21493
  fluid-cushioned impact between reactor fuel assemblies for seismic disturbances 3—1016
  Fort St. Vrain HTGR, core temp. fluctuations 3—26398
  Fort St. Vrain HTGR, prestressed concrete pressure vessel performance 3—26416
  Fort St. Vrain HTGR, radiology and shielding 3—26499
  Foxboro force balance pressure transducer, dynamic anal. 3—31668
  French plant equipment qualification 3—1009
  French safety and criticality testing programmes *(French)* 3—21468
  fuel behaviour, effective energy deposition, power burst expt. in NSRR 3—1000
  fuel bundle ballooning tests in NRU reactor, thermal hydraulic design, computer methods 3—26313
  fuel coolant mixing model, mixing time, fuel debris diameter predictions 3—11461
  fuel element reliability index, active region parameters 3—45578
  fuel pellet fragments, thermoelastic stresses, fragment formation conditions 3—41129
  fuel rod with longitudinal cooling fins, hydrodynamic behaviour, numerical simulation 3—55235
  fuel-cladding gap conductance measurements using Kalman filter methods 3—958
  fuel-coolant interaction, molten, fragmentation of molten debris 3—26413
  gamma-ray buildup factor approx. by modified geometrical progression 3—41332
  gamma-ray exposure rate due to inert gases released during a reactor accident, spectral composition 3—6411
  gas-cooled reactors, UK development programme *(Russian)* 3—50000
  gas-liquid flow pattern transition in a vertical rod bundle, PWR LOCA appl. 3—11403

fission reactor safety continued
  GCFR steam ingress, international fundamental mode benchmark calcs. 3—41272
  general Electric's realistic approach for emergency core cooling system analysis 3—31776
  generators, standby, mathematical model, estimation of reliability 3—55565
  geometry effects on solidification-induced stresses in growing fuel crust 3—31722
  German fast breeder reactor project, status and developments *(German)* 3—41287
  Ginna station steam generator incident—January 1982 3—11466
  HDR blowdown expt., fluid-structure interactions, impacts, FLUX code 3—55377
  heavy water reactor, operational radiation protection, radiation sources, dose limitation system 3—11549
  HECTR model for predicting containment response to hydrogen burns 3—6296
  high powered channel reactor, stress state of forced circulation loop tube 3—11380
  highly loaded organic resins from TMI-2, research and disposition 3—26345
  highly loaded organic resins from TMI-2, special handling requirements 3—26344
  highly loaded zeolites from TMI-2 SDS, vitrification programme 3—26350
  HTGR, Xe density oscill. control concept *(German)* 3—49992
  HTGR coated fuel particles under irradiation, fission gas release behaviour 3—45583
  HTGR core behaviour under seismic excitation, SONATINA-2V program 3—45659
  HTGR module designed for process heat and high temp. steam, safety philosophy *(German)* 3—21496
  HTGR with low-enriched fuel, Xe oscill. stimulation *(German)* 3—50015
  HTR, prestressed concrete pressure vessels, design criteria 3—45715
  human reliability data—the problem and some approaches 3—1003
  hydrodynamic stability of natural circulation in a nuclear power plant with underboiling coolant 3—41245
  hypothetical loss of shutdown cooling accident, GCFR disrupted core, recriticality 3—45647
  IAEA, recent nuclear safety activities 3—6412
  IAEA International Reactor Dosimetry File (IRDF-82) 3—55724
  IEEE 500, composite of nuclear reactor electrical and mechanical reliability data 3—36526
  Illinois real-time offsite dose assessment system 3—31751
  in-core flux monitoring, trends in instrument development 3—55220
  in-pile molten pool expts., pot-test material examinations 3—31730
  In-Plant Reliability Data System, commercial nuclear power plant component database 3—36521
  in-reactor fatigue crack propagation testing 3—55544
  in-service examinations and inspection methods *(Czech)* 3—26414
  in-service inspection ensures nuclear component integrity 3—31697
  in-situ material-motion diagnostics and fuel radiography with experimental reactors 3—55547
  information system, natural language retrieval 3—55371
  inlet feeders, single phase erosion corrosion, test program 3—55187
  integrated approach to job planning to minimise radiation problems 3—1002
  internal fuel motion in annular fuel for 50 cent/s and 3 dollar/s transient overpower accidents 3—31716
  irradiated aluminide fuel, fission product release at high temp. 3—49928
  irradiation induced structural material deformations, effect on core restraint design 3—31509
  Italy, safety philosophy and licensing procedures 3—55414
  JACS code study for criticality safety 3—873
  JACS code system for criticality safety 3—872
  JOYO, LMFBR, power ascension tests, physical effects 3—55284
  Kalkar fast breeder reactor in Germany, seismic risk study *(German)* 3—16966
  KNK II, open fuel expt. for cladding failure 3—55525
  KNK II, temp. fluctuations anal. at subassembly outlet 3—55280
  KNK-II test reactor, fuel element vibr. effects during power operation 3—55447
  large pipe flow meas. by pulsed neutron activation method, LOFT appl. 3—41211
  large scale steam explosions, anal. and modelling 3—41260
  large-scale high-energy line break qualification testing in reactor containment 3—31743
  legislative and administrative reform at the US NRC 3—31737
  licensing process, US NRC and DoE activities, safety and policy 3—31736
  liquid-gas column response to press. transients 3—31723
  LMFBR, 1000 MW(e) pool type, risk contribs. from accident initiators, comparison with LWR 3—55385
  LMFBR, 350, safe operation aspects *(Freneh)* 3—55422
  LMFBR, ABACUS study of subassembly blockages, computer codes 3—55518
  LMFBR, ACRR coded aperture imaging system, fuel pin monitoring 3—55287
  LMFBR, austenitic steels, fracture mechanisms evaluation, cracks 3—24455
  LMFBR, beyond design basis accident, accommodation criteria 3—55092
  LMFBR, BN 600, safety expts. 3—55403
  LMFBR, BOR-60 plant, safety problems, control systems 3—55405
  LMFBR, bubble growth in liquid sodium, noncondensables and vapour convection effects 3—41275
  LMFBR, CABRI fuel pin behaviour, rapid power transients 3—55104
  LMFBR, CMOT code simulation of LOF model expts. 3—55431
  LMFBR, comparison of safety features with PWR 3—55465
  LMFBR, CONTAIN code, response to hypothetical severe accidents 3—55093
  LMFBR, containment codes, mechanic developments 3—55090
  LMFBR, continued operation with defective fuel pins, joint French/German programme 3—55448
  LMFBR, cooling of molten fuel pool, ECCO free convection code anal. 3—55526
  LMFBR, core bubble interface modelling in post-disassembly phase anal. 3—55094
  LMFBR, CRAFT code, thermal bowing behaviour, kinetic response 3—55100

fission reactor safety continued
LMFBR, Creys-Malville NSS, in-service inspection, specific application techniques 3—55469
LMFBR, decay heat removal by natural convection and boiling 3—55279
LMFBR, design, fabrication, qualification, reliability, SNR 300 example 3—55417
LMFBR, detection of coolant anomalies from neutron flux fluctuations 3—55289
LMFBR, estimates of radionuclide releases, impact on environment 3—55160
LMFBR, expt. model to simulate coolant flow through perforated plates 3—55282
LMFBR, fuel and cladding failure under TUCOP thermal and loading conditions 3—55527
LMFBR, fuel and core design, safety aspects, for CDFR 3—55474
LMFBR, fuel cell UO_2, vapour pressure meas. 3—55162
LMFBR, fuel cladding melting and motion in LOCA 3—55520
LMFBR, fuel motion modeling in hypothetical core disruptive accidents 3—6410
LMFBR, fuel-coolant interaction, in-pile expt. programme 3—55479
LMFBR, fuel-coolant interaction expt., subassembly accident modes, VULCAIN code 3—55519
LMFBR, fuel-coolant interactions, modelling and calc. technique 3—55503
LMFBR, fuel-sodium interaction, out-of-pile expts. using X-ray technique 3—55497
LMFBR, HCDA anal., disruption stages w.r.t. fuel behaviour 3—55515
LMFBR, heterogeneous or homogeneous, safety anal., intrinsic reactivity feedback characts. 3—36552
LMFBR, heterogeneous type, HCDA safety advantages, rel. to homogeneous 3—55478
LMFBR, homogeneous and heterogeneous, FD2/4 in-core fuel disruption expts. simulating LOF 3—55435
LMFBR, hypothetical 0.1 $/sec transient overpower accident, comparative computer analysis 3—11469
LMFBR, hypothetical large scale vapour explosions, detonation waves, hydrodynamic fragmentation 3—55500
LMFBR, hypothetical transient overpower accidents, consequences of axial midplane failures 3—55514
LMFBR, in-core accident expts., visual observations of fuel disruption 3—55558
LMFBR, in-service inspection, safety standards 3—55471
LMFBR, incipient boiling of superheated K, bubble growth and pressure transient 3—21447
LMFBR, inherent safety advantages, EBR-II expts. and testing 3—55404
LMFBR, irradiated mixed-oxide fuel, direct electrical heating expts. on LOF accidents 3—55522
LMFBR, JOYO, safety-related expts. 3—55406
LMFBR, KNK II, inspection and maintenance, general survey 3—55470
LMFBR, KNK II, operational safety experience 3—55408
LMFBR, large development plant control and protection systems, design 3—55463
LMFBR, large pool, emergency decay heat removal systems, reliability anal. 3—6419
LMFBR, licensing procedures in Italy 3—55414
LMFBR, liquid metal coolant, critical temp. determ., appl. to Na 3—36463
LMFBR, liquid sloshing in flexible fluid filled systems, coupling effect, seismic response 3—26420
LMFBR, locally blocked fuel subassembly, temp. rise due to fission gas release 3—55521
LMFBR, LOF expts. in electrically-heated Na-cooled 37 pin bundle 3—55524
LMFBR, loop type, melting accident, core debris retention in vessel 3—55488
LMFBR, low-risk design guidelines for energetic events 3—55089
LMFBR, man-machine interface optimisation 3—55442
LMFBR, Markovian based model, shutdown heat removal system reliability 3—55262
LMFBR, MELT-III/FUMO-E codes, fuel motion in annular fuel in hypothetical accidents 3—55107
LMFBR, MIR, in-service remote controlled inspection device, SUPER PHENIX I 3—55290
LMFBR, Mol 7C in-pile blockage expts., comparative discussions, pin failure 3—55434
LMFBR, molten core material fragmentation by sodium, scoping expts. 3—55495
LMFBR, molten fuel-coolant interaction, expts. 3—55490
LMFBR, molten fuel-coolant interaction, space-time anal. model 3—55499
LMFBR, MONJU, safety aspects in design 3—55402
LMFBR, Na boiling pattern in porous blockages 3—55273
LMFBR, natural convection, considerations in all circuits 3—55264
LMFBR, particle bed, boiling heat removal 3—55487
LMFBR, PFR/TREAT LO1 and CO1 simulated TOP accident expts. 3—55529
LMFBR, PHYSURA, safety expt. interpretation code, accident anal. 3—55428
LMFBR, pool-type, SSC-P anal. of LOF transients 3—55429
LMFBR, post-accident heat removal, debris bed modelling 3—55489
LMFBR, post-irradiation examination of coolant blockage expts. 3—55528
LMFBR, postdisassembly expansion phase, model expts., SIMMER-II verification 3—55512
LMFBR, postdisassembly expansion phase, SIMMER-II anal. 3—55095
LMFBR, primary containment under HCDA 3—55507
LMFBR, protection devices for steam generators, SUPER PHENIX I 3—55530
LMFBR, RAPSODIE, PHENIX, component failure rate evaluation 3—55467
LMFBR, re-entry and dry-out criteria, decay heat power levels 3—55272
LMFBR, reactor flow distribution during shutdown cooling 3—55266
LMFBR, reactor pit design, accident behaviour of pit and safety vessel 3—55097
LMFBR, risk predictions, comparison with LWR prediction 3—55468
LMFBR, safety, rel. to component reliability 3—55418
LMFBR, safety assessment 3—17021
LMFBR, SEURBNUK containment code, HCDA effect on roof 3—55091
LMFBR, Severe Accident Rule appl. 3—55449
LMFBR, SIMMER as a safety analysis tool 3—55427
LMFBR, simulated postdisassembly expansions, SIMMER-II anal. 3—55096

fission reactor safety continued
LMFBR, SNR-300 type, safety, probabilistic anal. 3—55415
LMFBR, SNR-type homogeneous core, loss-of-flow accident, SIMMER-II code anal. 3—55483
LMFBR, sodium heated once through steam generators, simulation using DYNOT-S computer code 3—55250
LMFBR, sodium void reactivity anal. for CRBR 3—31497
LMFBR, source term anal., rel. to nuclear aerosols 3—55482
LMFBR, steam generator proposal, future reactors, PHENIX data 3—55268
LMFBR, stratified UO_2-Na particle bed, dryout heat removal 3—55485
LMFBR, subassembly accident initiation, Na boiling and flaw, clad melting 3—55275
LMFBR, Super Phenix 1, internal core catcher, fuel retention calc. 3—55476
LMFBR, temp. fluctuations of blocked subassembly from turbulent heat transfer study 3—55274
LMFBR, thermohydraulic modelling and simulation 3—55398
LMFBR, TOP and LOF anal. using codes SAS3D/EPIC and FRAX-2 3—878
LMFBR, TOP and LOF-driven TOP accidents, material movement in bundle region 3—55462
LMFBR, TRAFIC, fuel modelling and fission gas behaviour, OGRES, NEFIG, AFMOT 3—55432
LMFBR, TRAN expt. series in ACRR facility, HCDA molten fuel behaviour 3—55436
LMFBR, TREAT and SLSF recent ANL safety expts., review 3—55438
LMFBR, TREAT effects on data interpretation of fuel elements 3—55108
LMFBR, TREAT hodsocope interpretation, fuel monitoring 3—55288
LMFBR, type 316 austenitic stainless steel, base and weld metals, creep behaviour 3—55159
LMFBR, US man-machine interface programme 3—55446
LMFBR 15 pin triangular fuel pin sector, thermal-hydraulic safety study 3—31718
LMFBR accident, sodium retention factors for fission products and fuel, calc. 3—55484
LMFBR accident anal., CONACS code for sodium pool fire model 3—31735
LMFBR accident energetics potential and containability 3—55455
LMFBR accidents, aerosol production and behaviour, characterisation techniques 3—11474
LMFBR axially heterogeneous core, breeding and safety performance 3—36555
LMFBR closed-pool boilup experiment 3—31726
LMFBR commercial plant, structural design features, containment, steam supply 3—41104
LMFBR COMMIX-1A code, analysis of decay heat removal system 3—55265
LMFBR core cooling, microelectronic based surveillance *(German)* 3—49990
LMFBR core design for low capital cost and low sodium void 3—6283
LMFBR core meltdown, natural convection in confined flow geometry 3—41264
LMFBR core thermohydraulic transients with thermohydrodynamic coupling, ORIFS TRANSIENT code 3—55380
LMFBR design for safety and proliferation resistance, with excellent performance 3—16916
LMFBR designs, maintainability review 3—55078
LMFBR development, safety-related research 3—55409
LMFBR flow recirculation in blanket assembly in convection conditions, COBRA-WC anal. 3—31674
LMFBR flowing fuel particulate effects on bulk freezing predictions 3—6423
LMFBR flux shape distortions, improved quasistatic calc. method 3—995
LMFBR fuel assemblies, seismic anal. 3—55464
LMFBR fuel assembly, natural circulation decay heat removal 3—55277
LMFBR fuel bundles, THORAX code for Na boiling transients 3—55099
LMFBR fuel disruption, anal. of DEH, FGR and TREAT expts. 3—55437
LMFBR fuel dynamics during loss of flow transients 3—6421
LMFBR fuel pins, fission gas behaviour during fast transients 3—55439
LMFBR fuel pins, transient overpower expt. in Petten HFR 3—55182
LMFBR fuel subassemblies, local Na boiling 3—55278
LMFBR fuel-coolant interaction, TEXAS code anal. 3—55504
LMFBR fuel-coolant interactions, recent ANL expts. 3—55505
LMFBR HCDA, coolant slug impact, upper plenum dynamic pressure response 3—55452
LMFBR HCDA, SAS4A accident anal. code status and validation 3—55425
LMFBR HCDA, SIMMER II freezing, melting, plugging calcs. 3—6422
LMFBR HCDA, sodium thermophysical props. as functions of temp. and density 3—41259
LMFBR HCDA, structural loads, standards dev. beyond DBA requirements 3—55453
LMFBR HCDA early fuel dispersal, fuel vapour role 3—6424
LMFBR heterogeneous core, physics, design and safety aspects 3—36550
LMFBR heterogeneous core, physics, safety and economy, French studies 3—36551
LMFBR heterogeneous core config. effects on hypothetical LOF accident sequences 3—36554
LMFBR internal fuel motion phenomenology: FUMO-E code analysis of PINEX experiments 3—6420
LMFBR intersubassembly fuel penetration into a failed blanket subassembly 3—31728
LMFBR licensing and safety issues in the US 3—55412
LMFBR LOF, boiling pool blowdown, tank internal structs. hydromech. load sim. 3—55498
LMFBR molten pool, residual power distrib. between phases, out-of-pile data 3—55501
LMFBR operating personnel training at CEA France 3—55443
LMFBR oxide fuel, fission gas deposition during reactor thermal transient 3—55161
LMFBR pin failure, thermodynamics, fluid dynamics and geometry changes, CALIPSO code 3—41269
LMFBR porous retention plates for in-vessel core catchers 3—31526
LMFBR primary containment, roof loading results from JRC-COVA programme 3—55494
LMFBR reprocessing plant design, optimisation by risk assessment 3—55211
LMFBR rod bundle, impact of gas in Na flow, temp. variation 3—55281
LMFBR safety, conf., Lyon, France (July 1982) 3—54575

fission reactor safety continued
LMFBR safety, implications of LWR research 3−55410
LMFBR safety, local faults, taxonomic classification 3−55457
LMFBR safety, operational experience in USSR, BN 800 and BN 1600 extps. 3−55411
LMFBR safety, R and D status, future needs 3−55423
LMFBR safety, reactivity balance meter operation experience 3−55256
LMFBR safety, structural integrity role, US CDFR example 3−55421
LMFBR simulation, MIMIR-N2, code verification by JOYO power ascension test data 3−55424
LMFBR single-subassembly SIMMER-II characterization of molten fuel-sodium interactions 3−31727
LMFBR SNR-300, accident anal. using computer code SSC-L 3−55397
LMFBR sodium valve failure rates, low probability event freq. estimation, risks 3−41265
LMFBR sodium void worth sensitivity to design parameters 3−31498
LMFBR steam generators, in-service monitoring and service after leak detection 3−41270
LMFBR subassemblies, thermohydraulic anal. with BACCHUS program 3−55276
LMFBR subassembly, boiling and clad movements in loss of flow accidents 3−55461
LMFBR subassembly models, temp. distribs. in Na flow 3−55523
LMFBR system wide transient anal., state of the art, US validation needs 3−55430
LMFBR thermal striping evaluation 3−45651
LMFBR TOP hypothetical accident, fuel characterisation and transient evol. anal. 3−55426
LMFBR two component two-phase pool dynamics modelling with SIMMER II 3−31724
LMFBR vented control rods, absorber-cladding chemical interaction, out-of-pile study 3−55502
LMFBR-SAREF Program safety test fuel assembly, n and γ-tomographic imaging 3−26415
LMFBRs, internal core debris retention devices 3−55473
LOCA, core behaviour prediction and control *(German)* 3−36516
LOCA, critical flow prediction for hot water from orifices 3−11436
LOCA, entrainment in two-phase flows 3−50030
LOCA, transient nonhomogeneous equilibrium water-steam-air flow 3−55374
LOCA expt. LOCE L3-6/L8-1, RELAP4/MOD6/U4/J3 code anal. 3−36557
LOCA reflood, core mass balance calc. improvement in REFLA-1D/MODE1 3−50028
LOCA reflood stage anal. for two-phase flow in four fluid model 3−11442
LOCA rule revision study 3−31773
LOCA simulation and gamma-radiation, elec. and mech. props. 3−13279
LOCA simulation test period effect on durability of reactor cables 3−11470
LOCA-ECCS revisions: one utility's view 3−31772
LOF accident simulations for homogeneous and heterogeneous core LMFBRs: FD2/4 series 3−31719
LOFT, real time analysis and display of reactor system mass inventory 3−21455
LOFT, self-powered neutron detector, coolant density change response in LOCA 3−41225
LOFT anticipated transient expts., RELAP5 post test anal. 3−11430
LOFT expt., line pressure effects on differential pressure meas. 3−21456
LOFT loss of feedwater test, RELAP5 anal. 3−11435
LOFT LRTS-COBRA-FRAP safety anal. models, benchmarking 3−36535
loss-of-coolant transient, in low press./low temp. reactor, RELAP4 anal. 3−41281
LWR, liquid suspension modeling, effect on subcompartment pressurisation 3−6297
LWR, on-line recording and evaluation of measured core data *(German)* 3−49991
LWR, transients, seperate effects tests for thermal hydraulics codes 3−11429
LWR, undercooling accident, temp. distrib., pressure drop in volumetrically heated porous layer 3−11462
LWR, Westinghouse-designed three and four loop power plants, Co sources 3−45650
LWR accident consequences, source term assumptions, impact 3−11458
LWR circulation pump, two-phase flow performance 3−41285
LWR component test facilities and methods *(German)* 3−31698
LWR containment integrity 3−11370
LWR core, cross flow characts. in rod bundles, report 3−21454
LWR core anal., BWKIN development and validation 3−17015
LWR core melt accidents simulation of HF induction heated melt facility SASCHA *(German)* 3−45617
LWR core meltdown accident sequence phenomenology 3−6432
LWR debris thermal-hydraulic analysis in SCDAP 3−31771
LWR degraded core accident anal. by MIMAS code 3−11459
LWR design and safety, review and outlook 3−41266
LWR electric cable insulation ignition during potential nuclear containment hydrogen burns 3−6431
LWR fission products, gaseous, mass spectrometric identification 3−26426
LWR fission products, I release mechanistic prediction 3−26432
LWR fission products chemistry in primary system 3−26428
LWR fission products release in steam 3−26427
LWR fission products source term estimation uncertainties 3−26431
LWR fission products source term magnitude effect on accident predictions 3−26425
LWR fission products source terms, probability distribs. for risk assessments 3−26430
LWR fission products source terms, role of aerosols and volatiles 3−26429
LWR fuel behaviour during reactivity initiated accident, gap heat transfer effects 3−55373
LWR fuel behaviour under accident simulating conditions, world-wide expt. research *(Czech)* 3−50019
LWR fuel management status and development trends *(German)* 3−55129
LWR fuel rod, cladding breach, prompt fission gas release model 3−41173
LWR fuel rod heat transfer model for HCDA 3−31685
LWR heat transfer augmentation in inverted annular film boiling 3−6399
LWR hydrogen generation during molten fuel-coolant mixing 3−31770
LWR integrity of components, ductile fracture concepts 3−24352

fission reactor safety continued
LWR LOCA, fluid-structure interaction studies, computer codes STEALTH and WHAMSE 3−45652
LWR LOCA, subcooled liquid critical flow, thermodynamic disequilibrium 3−41278
LWR LOCA anal., flow boiling critical heat flux correlation for water and Freon-12 3−26421
LWR pressure boundary safety and fracture conf. Stuttgart, Germany (Oct. 1981) 3−20569
LWR pressure vessel monitoring, absolute or relative dosimetry 3−55535
LWR primary coolant system transient anal., droplet field relations in COBRA-TF code 3−11427
LWR Pu recycling, R&D program, indirect nuclear action 3−11402
LWR PV dosimetry, regulatory demands, status 3−55531
LWR reference system classification for European Reliability Data System 3−45658
LWR rod bundle critical heat flux prediction, THERMIT-2 calcs. 3−41240
LWR rod bundles under accident conditions, BUSH computer code for heat transfer calc. 3−6302
LWR safety anal., RELAP5 constitutive relations modeling 3−11428
LWR safety research programme in West Germany 3−31696
LWR safety studies, implications for LMFBR 3−55410
LWR steam generator tube performance, experience during 1980 3−55214
LWR steam systems, simplified nonequilibrium flashing model 3−6300
LWR transient fuel behaviour, FREY code, verification 3−36539
LWRs, inadequate core cooling detection using water level meas., proposed instrumentation review 3−50027
major core damage accidents, lessons learned 3−36548
McGuire reactor, in USA, fast neutron monitoring from core, using passive foil dosimetry 3−41254
metal monitoring, volume of monitoring required, forecast estimates 3−41185
microprocessor based safety monitoring system, software design approach 3−55369
microprocessor-based nuclear reactor safety systems, failure detection and reliability prediction 3−998
Mil-Spec computers in nuclear power applications 3−16994
minicomputer-based near-real-time reactor accident consequence predictions 3−31839
MIRA, microprocessor based reactor shutdown system 3−55286
model development expt. programs as part of NRC safety research 3−11455
molten core debris, downward heat transfer correlation for penetration into concrete 3−31734
molten fuel-coolant interaction expts., French-German cooperation 3−55492
monitoring and control of contaminated fluid leakage outside reactor containment 3−31748
MONK 6—a revised version of the UK criticality code 3−874
neutron induced radionuclide populations 3−41263
neutron streaming through steel walled annular ducts in reactor shields 3−45712
neutron techniques in Safeguards 3−55157
non-safety related equipment, qualification to NUREG-0588 3−1007
nonboiling reactors, boiling detection by acoustic analysis applying linear discriminant functions 3−16945
nonobvious costs of quality assurance 3−31750
NORCOOL-I—a best-estimate model for BWR emergency cooling during reflood 3−863
Nordheim-Fuchs model for nonadiabatic reactor excursions 3−31496
nozzle corner crack, elastic-plastic FEM anal., fracture mechanics concept 3−24456
NPRDS, Nuclear Plant Reliability Data System, importance to nuclear industry 3−36523
NRC experience in upgrading emergency preparedness at power reactors 3−17005
NRC fuel rod behaviour rods for extended burnup, assessment 3−31599
NRC plans for equipment qualification 3−1005
nuclear criticality safety experiments at JAERI 3−996
Nuclear Energy Agency Data Bank, function and compilation 3−6294
nuclear fuel pins, internal press. monitoring 3−44013
nuclear fuel rods simulate by electrically heated rods 3−894
nuclear plant liquid and airborne releases, Weather Information and Display emergency response system 3−41333
nuclear power plant, decisions in reliablity analysis [nuclear power plant] 3−16982
nuclear power plant, design load time history evaluation for aircraft impact 3−16818
nuclear power plant, dynamic modelling 3−55254
nuclear power plant, earthquake accel., time depend. freq. content estimation 3−16817
nuclear power plant, failure data problems with respect to system reliability anal. 3−16980
nuclear power plant, inelastic structures, probabilistic anal. 3−16813
nuclear power plant, items unavailability contributing to safety, operating procedures 3−16987
nuclear power plant, mechanical aspects of failure probability 3−16814
nuclear power plant, seismic safety, decision anal. 3−16985
nuclear power plant accident, doses received while crossing plume of radioactive material 3−4653
nuclear power plant seismic safety, system reliability anal. appl. 3−16974
nuclear power plant system, reliability anal., data anal. and surveillance role 3−16978
nuclear power plant wake region, diffusion of radioactive pollutants 3−44175
nuclear power plants, decision methods in risk anal. 3−16826
nuclear power plants, maintainability vs. disposability 3−16988
nuclear power plants, multistate reliability anal. 3−16821
nuclear power plants, seismic risk anal. and decisions 3−16986
nuclear power plants, system reliability anal. developments 3−16973
nuclear power plants, systems and structural reliability 3−16975
nuclear power station safety systems reliability anal. using Failure Modes and Effects Analysis *(French)* 3−31692
nuclear power stations, LWR-type, technical developments over last 20 years *(German)* 3−31780
nuclear power stations, safety and reliability 3−36558
nuclear power stations sited on river banks, flood water levels and safety aspects *(Croatian)* 3−50016
nuclear reactor, data analysis in risk assessments 3−16979

fission reactor safety continued
nuclear reactor safety in Germany, probabilistic methods 3—16984
nuclear reactor system, methods for probabilistic analysis 3—16823
nuclear reactors for spacecraft, safety and design features 3—26436
Nuclear Regulatory Commission, Div. of Accident Evaluation, reactor safety research data bank 3—36525
nuclear safety, systems and structural reliability anal. implications 3—16977
nuclear safety assessment—an integrated approach 3—31756
nuclear safety management at Consumers Power Company 3—31757
nuclear technology transfer, conference, Buenos Aires, Argentina (Nov. 82) 3—16082
occupational risk from nuclear power 3—1090
OECD Halden Reactor Project, in-reactor instrumentation for fuel behaviour studies 3—55330
on-line automated gamma spectrometer for coolant at LOFT facility 3—55224
once through steam generators transient simulation with ALMOD/GDE 3—6400
OPERA 15-pin sodium expulsion test 3—31717
operating nucl. power plants, coolant and effluent parameters remote meas. 3—55218
operational assessment at Northeast Utilities 3—31758
operator actions, plant design criteria 3—11476
optical techniques for nuclear reactor inspection 3—16942
optimised earthquake simulation for high-reliability aseismic design 3—16816
oxide fuel, fission gas disposition in fast thermal transient, GRABB code 3—41277
Palisades, operating history 3—17008
parameter display systems, appl. of verification and validation 3—55368
particle bed, dryout under forced flow and flooding 3—31707
particulate debris beds, dryout heat flux variation 3—55481
PBR, pebble throughput strategies effect on fuel temp. 3—31669
pebble bed HTR, fission product release in core heatup accidents *(German)* 3—11468
pebble bed HTR steady state and Xe transient anal., ASTERIX-2 user manual 3—50009
pebble bed HTR with central region of graphite spheres, design and safety *(German)* 3—49922
PEC, vibration tests on core element models 3—55516
PFR, safe operation under transient conditions, automatic protection system 3—55444
PFR subassemblies, pin durability, local blockage formation and detection 3—55460
PFR/TREAT fast reactor fuel testing programme, safety testing 3—55433
Phebus plant, PWR fuel behaviour under accident cooling conditions *(French)* 3—21464
pipe whip restraints: design versus constructibility 3—31740
piping qualification for hydrodynamic loads 3—11364
plant data need for operational training and safety anal. 3—6428
plastic scintillators, design and construction in nuclear safeguards 3—50146
pool dynamic and dynamic loads in pressure suppression containment systems 3—11368
Poolside Facility, fluence neutron dosimeters, interlaboratory comparison 3—55298
Poolside Facility, startup expts. calcs. 3—55297
post-accident containment atmosphere gamma-ray spectrometry 3—31752
post-accident instrumentation—retrofit design approach 3—31665
Power Burst Facility, LWR fuel rod testing under accident conditions 3—55537
Power Burst Facility, severe fuel damage test series for PWR fuel rods 3—55538
power plant construction, operation and maintenance, conf., Charleston, SC, USA, (March, 1982) 3—21
power plant design, dose rate data eval. for radiation exposure 3—55363
power pulse self quenching from pulsed fast reactor 3—45626
power transient control system for the Engineering Test Reactor 3—16951
preoperational component testing, use of operational phase maintenance planning and scheduling computer 3—31651
pressure relief valves, acoustic emission monitoring 3—55351
pressure signals in molten metal-water thermal interactions 3—31729
pressure tube, replacement in Bruce A, tools and techniques 3—55194
pressure vessel materials in PWR, environmentally assisted cracking 3—45607
pressure vessels reliability, pre/in-service inspection and tests influence 3—16825
pressurized thermal shock, NRC program 3—6414
probabilistic nuclear risk analysis and computer codes 3—50033
probabilistic risk assessment, data requirements 3—31706
probabilistic risk assessment, uncertainty propagation 3—45646
probabilistic risk assessment, value of safety system improvements estimation 3—6298
propagating fuel-coolant interactions in co-current flows of Freon-22 and water, LMFBR applicability 3—55491
Prototype Fast Reactor, Dounreay, safety-related operating experience 3—55407
Public Service Electric and Gas Company Independent Safety Engineering Group 3—31759
PWR, activity transport eqns. 3—21446
PWR, comparison of safety features with LMFBR 3—55465
PWR, computer Safety Assessment System 3—36546
PWR, ECC injection rate and duration, effects on reflood phase during LOCA 3—1001
PWR, increased heat removal events, natural circulation evaluation 3—31670
PWR, instrumentation concept for core surveillance *(German)* 3—49985
PWR, interface between structural and system anal. 3—16976
PWR, LOCA, pump behaviour effect 3—41279
PWR, LOCA reflood phase, system behaviour using CCTF 3—16968
PWR, loss of coolant accident, core hydrodynamics during reflood phase 3—21459
PWR, main steam line breaks, pump operation effects, overcooling, TRAC code 3—36538
PWR, microprocessor-based acoustic leak monitoring instrumentation 3—55226
PWR, power distrib. height stability, influence of steam reactivity effect 3—45575
PWR, small and large break LOCAs, design transients 3—16991

fission reactor safety continued
PWR, small break LOCA, physical phenomena 3—11451
PWR, spectral shift reactivity control, variable water content method 3—31655
PWR, transient thermal mixing in downcomer during high pressure injection 3—36530
PWR, upper plenum core support columns under blowdown loading, 2-dimens. anal. 3—41267
PWR, upper plenum core support columns under blowdown loading, 3-dimens. anal. 3—41268
PWR, worldwide load factor reduction following Three Mile Island accident 3—36499
PWR boilers, tube hydrodynamic loads in LOCA, CEFLASH computer code 3—45657
PWR components, analytical test bed for evaluating dynamic models, DSNP model 3—55085
PWR containment response with mitigation features for core meltdown 3—31708
PWR control, diagnostic disturbance anal. system, methods 3—26400
PWR coolant system, contamination by ^{58}Co and ^{60}Co, major potential sources 3—50023
PWR core melt probability, vessel rupture contrib. 3—16971
PWR dedicated shutdown heat removal system, probabilistic seismic design, LOCA 3—36544
PWR degraded core anal., accident risk study for proposed UK system 3—31779
PWR design for British safety and reliability requirements 3—41288
PWR flow regimes and heat removal mechanisms in U-tube steam generator 3—31680
PWR fluid and thermal mixing in cold-leg and downcomer 3—6418
PWR fuel performance, I escape rates through cladding, steady state consequences *(Japanese)* 3—49939
PWR generalised model for use on safety and reliability studies 3—16983
PWR ice condenser containment, hydrogen mitigation system 3—6295
PWR ice condenser plant, hydrogen combustion during degraded core accidents 3—6430
PWR LOCA, ballooning fuel rod cladding, temp. response prediction 3—26422
PWR LOCA, blowdown thrust force, transient anal. *(Japanese)* 3—16969
PWR LOCA, CATHARE code and thermohydraulic back-up system *(French)* 3—21463
PWR LOCA, continuous meas. of coolant liquid level 3—31745
PWR LOCA, ~~decay heat~~ removal experiments in U-tube boiler two-loop test facility 3—50021
PWR LOCA, PKL reflood test K5.4A, TRAC-PD2/MOD1 assessment 3—36528
PWR LOCA, reflooding period, effluence rate model 3—36531
PWR LOCA emergency core cooling anal. by TRAC-PD2 MOD1 3—6425
PWR LOCA SCTF expts. 3—45639
PWR LOCA vent valve flow, cold leg and downcomer, fluid and thermal mixing 3—36527
PWR LOCA/ECCS integral tests, ROSA-II expt. programme 3—17020
PWR main coolant line, preclusion of double ended circumferential rupture 3—21462
PWR operation, radiological protection, dose limits and exposures 3—17078
PWR overcooling accidents, effect on pressure vessel integrity 3—55534
PWR plant, primary coolant loop pipe fracture, probabilistic assessment 3—16972
PWR power estimation algorithm, performance of Kalman filter 3—41273
PWR power plant pump reliability data 3—41284
PWR power station risk assessment including human interactions treatment 3—36559
PWR pressure vessel, leak inspection using acoustic emission *(French)* 3—21460
PWR pressure vessel, US appl. for inspection 3—36484
PWR pressure vessel integrity, reponse to transients, safety design 3—16990
PWR pressure vessel integrity during overcooling accidents 3—6416
PWR pressure vessel integrity for pressurised thermal shock transients, probabilistic evaluation 3—36540
PWR pressure vessel neutronics calcs. and meas. *(French)* 3—55294
PWR pressurizer transients dynamic model 3—55384
PWR reactivity induced accidents, sensitivity anal. 3—31693
PWR reactor vessel in-service inspection, quality and efficiency improvements 3—17018
PWR RPV, pressurised thermal shock, USNRC materials research 3—21461
PWR safety and relief valve test program 3—55389
PWR safety and relief valve test programme, justification report 3—50032
PWR safety and relief valve test programme, test condition justification 3—55386
PWR safety and relief valves, overpressurisation transients, review 3—55390
PWR safety and relief valves, testing 3—55388
PWR safety relief valve discharge piping forces, RELAP5/MOD1 anal. 3—11424
PWR safety valve discharge, piping hydrodynamic loads, RELAP5/MOD1 appl. 3—55387
PWR safety/relief valve blowdown analysis experience 3—26423
PWR spatial kinetics at Combustion Engineering, HERMITE code 3—16957
PWR steam generator tube burst, droplet size distribution of flashing high-pressure primary coolant 3—36529
PWR surveillance dosimetry 3—55292
PWR system simulation, calculational limitations for accidents 3—55400
PWR systems, transient anal., reactor safety perspective 3—55399
PWR test facility, 1/30 scale, momentary loss-of-coolant, effects on a developing natural circulation 3—41282
PWR thermal and fluid mixing during high press. coolant injection 3—6293
PWR training simulator, accident thermohydraulics modelling 3—36532
PWR-based differential pressure meas. during LOFT expts., sensing line effects obs. 3—21457
PWRs, 1300 MW, in France, improved control room design 3—31648
PWRs, Westinghouse, steam generator channel heads, radiation fields compilation 3—11467
PWRs and the United Kingdom conference, Birmingham, England (Mar. 1982) 3—16079
QUANDRY code for spatial neutron kinetics analyses 3—17014

fission reactor safety continued
R&D projects, prioritisation, value impact methodology 3—26433
radiation damage assessment, related safety aspects 3—55174
radiation monitoring instrumentation and dose calcs. for real-time off-site dose assessments 3—31840
radiation-hardened accelerometer preamplifier for nucl. power plants 3—41204
radioactive pollution dispersal downwind of nucl. power plant, wind-tunnel expts. 3—44174
Rapsodie, primary sodium circuit and double envelope, tightness defects 3—55545
R.E. Ginna PWR power plant, steam generator tube rupture 3—55364
reactor core system model for Westinghouse advanced simulator 3—55394
reactor materials, fracture mechanisms, concept, tensile and notch impact bend test 3—24454
reactor pressure vessels, surface flaw assessment, current methods overview 3—55375
reactor transient simulation and analysis, computer codes survey 3—55395
reactor vessel integrity following LOCA 3—6415
reactor vessel thermal shock—a realistic, conservative evaluation 3—6292
real-time software for nuclear plant safety appls., validation 3—45655
reduced temperature return-to-power demonstration 3—41232
regulatory activities associated with revision of the ECCS rule 3—31774
regulatory cutoff policy based on minimum radiation dose criteria, potential benefits 3—31838
regulatory reform by US NRC, needs and progress 3—31738
RELAP5 anal. of LWR thermal hydraulic response 3—31672
RELAP5 nuclear plant analyzer capabilities 3—26305
relative freezing controlled penetration potential of carbide and oxide fuel 3—6370
reliability engineering at Westinghouse Water Reactor Division 3—36508
reload safety and code package uncertainty anal. 3—49920
reprocessing plant, fuel liquid level meas., pressure transducers calibration 3—21444
research and development projects selection through value impact anal. 3—55361
research programmes accessible through international cooperation agreements *(French)* 3—21469
RETRAN thermo-hydraulic models, improved soln. methods 3—26306
RETRAN-02 code for transient thermal hydraulic anal. 3—49924
retrofitting single-failure-proof crane hoists to implement NUREG-0612 3—16948
reversing DC electrical potential method for crack extension meas. 3—50026
risk evaluation of standby fluid systems 3—31703
risk management and assessment, quantitative safety goals 3—36517
risk reduction potential for filtered-vented containment systems with competing risks 3—31711
role of bearings *(Polish)* 3—16967
SACRD, data base for fast reactor safety computer codes 3—36520
Safety Parameter Display concepts, evaluation, decision anal. 3—16999
Safety Parameter Display System, availability, reliability interactive graphics system 3—36549
safety parameter display system, operating phase 3—31765
safety parameter display system 3—31764
safety related equipment qualification 3—1011
safety relief valve discharges, loading effects on submerged struct. and piping load struct. 3—31713
safety relief valves, unsteady pipe forces caused by hot water discharge 3—26418
safety-related spare parts quality determination 3—1004
SASSYS LMFBR systems analysis code 3—55083
Scarabee plant and programme for assembly accidents in fast neutron chain reaction *(French)* 3—21466
seismic capability, grouped piping system, forced vibrational test 3—55186
seismic qualification of equipment by means of probabilistic risk assessment 3—36543
seismic structure-soil-structure interaction problems, sensitivity study for power plants 3—55378
Sequence Coding and Search System, nuclear licencing database, conceptual development 3—36522
shock wave passage through two-phase mixtures 3—31725
shutdown system electronics, treatment as single component 3—55416
simulated explosions inside flow network, exptal. and EVENT code results 3—55379
simulated reactor accident expts., coded aperture imaging system design 3—6409
single and multiple component failures, statistical relation 3—36545
Sizewell PWR, design and safety considerations 3—31474
small break LOCA, reflux condensate flow phenomena 3—50025
small break LOCA, uncovered core heat transfer under high pressure, low heat flux conditions 3—55381
SNR300 breeder reactor in West Germany, parliamentary commission report *(German)* 3—21458
SNR, early recriticalities for ULOF accidents, parametric anal. with SAS 3D code 3—55513
SNR, flashing fuel simulant expansion into upper core structures, SIMMER-II validity 3—55511
SNR 2, SAS3D code, core dynamics, shut-down signals in LOF accident 3—55105
SNR 2 and SNR 300, safety concept with respect to sodium leakages 3—55454
SNR 300 fast Na reactor at Kalkan in West Germany, safety aspects *(German)* 3—55366
SNR 300 subassembly faults accommodation, local faults role, core surveillance 3—55458
SNR-300, core protection, safety margins in system areas 3—55466
SNR-300 vessel failure, hypothetical unprotected loss of flow accident 3—55267
sodium loop safety facility, cover gas system operation, fuel failure tests 3—55548
Sodium loop Safety facility, delayed neutron detection for fuel pin failure 3—55550
sodium loop safety facility, expt. P4, data acquisition 3—55549
Sodium Loop Safety Facility, expt. P4, fuel pin local faults, fuel melting 3—55560
Sodium Loop Safety Facility, expt. PS fuel pin plenum pressure transducer 3—55336
Sodium Loop Safety Facility, in-pile loop and test train for expt. P4 3—55552

fission reactor safety continued
Sodium Loop Safety Facility, in-pile test, integrated digital expt. transient control, safety 3—55553
Sodium Loop Safety Facility, post-expt. examination 3—55561
spent fuel management and decommissioning, costs probabilistic eval. 3—31615
spent-fuel, assay by gamma and neutron methods 3—49962
SPERT-I data, transient anal. using PARET code 3—36536
spring-loaded safety valve, dynamics and stability 3—26417
SSYST—a code system to analyze LWR fuel rod behavior 3—864
stability of reactors with nonlinear reactivity feedback 3—26298
startup scoping, experience in last ten years 3—31739
statistical methodology to establish safety system margins 3—21363
steam generator, structural stress measurements 3—55192
steam generator, tube failures, radiological consequences 3—55348
steam generator feedwater line rupture, pressure responses 3—36534
steam generator test facility, four loop, U-tube, natural circulation experiments 3—41286
steam generators, earthquake isolation system 3—55372
steam impingement jet in postulated pipe rupture accident *(Japanese)* 3—26412
steel, alloy, 20 MnMoNi 5 5, fracture initiation and fracture opening under light water reactor conditions 3—24353
steel, alloy, 20 MnMoNi 5 5, neutron irradiation in VAK reactor, tensile strength, fracture toughness 3—22942
steel, alloy, 22 NiMoCr 3 7, fracture initiation and fracture opening under light water reactor conditions 3—24353
steel, alloy, 22 NiMoCr 3 7, neutron irradiation in VAK reactor, tensile strength, fracture toughness 3—22942
steel, austenitic stainless, fracture strength with flaws, residual stress effect 3—57025
steel, stainless, molten, boiling fragmentation in sodium 3—26424
steel melting on contact with UO_2 vapour following LMFBR HCDA 3—6369
structural and mech. components, probabilistic aspects of fracture 3—16981
structural reliability anal. for JRC-Ispra, response surface methodology approach 3—16970
structural reliability anal. using extended second moment algebra 3—16819
structural vibration damper for corrosive or high-temperature gaseous environments 3—55365
super high temp. gas cooled reactor, design features *(Russian)* 3—49919
SUPER PHENIX shutdown system, design, manufacture and testing 3—55731
SUPER PHENIX under unprotected transient, dynamic behaviour 3—55451
SUPER-PHENIX, decay heat removal by natural convection, calcs. and mock-up expts. 3—55269
SUPER-PHENIX, Na heat transfer by natural convection around internal core catches 3—55270
SUPER-PHENIX, source term studies relative to HCDA 3—55510
SUPER-PHENIX core surveillance and protection system 3—55257
SuperPhenix 2 LMFBR, dynamic simulation of overall operation under natural circulation 3—55396
surveillance dosimetry of operating power plants 3—55291
system hardware reliability/availability, common cause failure probability anal. 3—31704
technical basis for LWR safety reevaluation 3—31506
technological plant, fake of reliability measures as absolutes 3—16989
Telford equation for aerosols, generalisation, appl. for radioactive releases 3—6408
TETACOUPLE expt., irradiation rig for pin bundle temp. distrib., on-line meas. 3—55339
thermal ageing anal. for safety related nuclear power equipment 3—31742
thermal reactor instability against Xe oscillations at zero power 3—6281
thermal stratification in the FFTF heat transport piping following reactor scram 3—11443
thermal-hydraulic analysis of a steam generator tube break transient 3—11432
thermal-hydraulic aspects of pressurised thermal shock 3—6417
thermal-hydraulic transients in piping networks; anal. method 3—55383
Three Mile Island accident analytical study by mixed convection over zircaloy plate 3—27514
threshold response helium accumulation fluence monitors for fast breeder reactor dosimetry 3—55301
THTR, sphere fracture rate determ. for spherical fuel elements *(German)* 3—36456
THTR-300 reinforced concrete pressure tank design; construction and installation *(German)* 3—41092
TMI-2, fission product deposition characterisation in coolant and auxiliary systems 3—21484
TMI-2, fuel fines location and quantification in coolant system 3—21486
TMI-2, hydrogen burn anal. 3—21483
TMI-2, hydrogen burn damage 3—21482
TMI-2, radioactive zeolite demineraliser liners, radiolytic gas control 3—26349
TMI-2, radioiodine mass balance study 3—21488
TMI-2, sample anal. for ZrO_2 using Molecular Optical Laser Examiner 3—21487
TMI-2, waste management issues, overview and update 3—26343
TMI-2 axial power shaping rod insertion test 3—21472
TMI-2 cleanup, regulatory perspective 3—21470
TMI-2 contamination control and dose reduction 3—21489
TMI-2 coolant system, chemical decontamination methods 3—21372
TMI-2 coolant system, nonchemical decontamination techniques 3—21373
TMI-2 core examination, first results 3—21474
TMI-2 core examination plan overview 3—21475
TMI-2 fuel debris, radiographic anal. using MINAC 3—21479
TMI-2 gross decontamination expt., surface deposition meas. 3—21490
TMI-2 in-containment radiation monitoring 3—21478
TMI-2 instrumentation and electrical program 3—21476
TMI-2 mechanical component examination, information collection, recording and interpretation 3—50022
TMI-2 mechanical component survivability program, progress and plans 3—21480
TMI-2 primary cooling system, decontamination techniques comparison 3—55245
TMI-2 primary pressure boundary, thermal anal., requalification plans potential impact 3—21481
TMI-2 purification system, fission product transfer 3—21485

fission reactor safety continued
- TMI-2 quick look examination 3−21473
- TMI-2 reactor building sump water, level meas. and removal 3−26347
- TMI-2 reactor building sump water and reactor coolant, zeolite processing 3−26348
- TMI-2 reactor coolant system, contamination characterisation 3−45656
- TMI-2 reactor vessel head removal and damaged core removal planning 3−21471
- TMI-2 SPND and thermocouple data analysis 3−21477
- TMI-2 wastes, alternative solidification route 3−36465
- TRAC assessment at Los Alamos 3−11433
- TRAN fuel freezing experiments 3−6371
- TRAN molten UO_2 fuel expt. series at Sandia ACRR, HCDA research 3−55555
- transient electrical heating of irradiated stainless steel-clad fuel 3−31715
- transient fuel behaviour, ERUDITE database use 3−55392
- transient reactor reactivity insertion accidents, anal. method, TREAT appl. 3−17016
- transient two-phase flow, adjoint sensitivity anal. using partial differential eqns. 3−41261
- Transition Control System for procedure prompting 3−17000
- TREAT, HCDA sequences anal. 3−1017
- TREAT, Mark III integral sodium loop for LMFBR safety expts. 3−55543
- TREAT, upgrading of expt. capabilities for fast reactor safety 3−55539
- TREAT F-series LMFBR loss-of-flow experiments, fuel behaviour 3−55557
- TREAT hodoscope fuel motion capabilities, fast neutron detection, FBR safety 3−55335
- TREAT overpower transients, instrument response 3−55340
- TREAT RFT-CAL-L MARK III loop/prototypic fuel pin calibration experiment 3−55559
- TREAT transition phase tests, design and feasibility, HCDA research 3−55556
- TREAT upgrade, Advanced Loop systems for FBR safety expts., overview 3−55541
- TREAT upgrade, core design, control system and safety features 3−55540
- TRIGA, $^{14}CO_2$ release meas. 3−55711
- two phase flow transients, constitutive eqns. for interfacial area 3−11425
- two-bundle loop for LWR large-break integral tests 3−6427
- two-phase expansion, EXCOBULLE code tests, comments and reply 3−26401
- two-phase jet load models, pipe break consequence anal. 3−6401
- two-temperature reactor model, bifurcation theory dynamics anal. 3−41108
- UK safety standards, assessment principles 3−55413
- underwater nuclear maintenance 3−31657
- underwater viewing improvements demonstration 3−31767
- UO_2 powder, airborne dust during pellet production, hazards 3−55213
- US flaw image evaluation for synthetic aperture focusing technique 3−19504
- US Nuclear Regulatory Commission Guide 1.150, reactor vessel welds, implementation 3−17019
- utility ALARA programs for ongoing engineering and construction 3−1079
- vacuum building, computer simulation, thermal response to environmental changes 3−55188
- vacuum containment structures, leakage rate expts. 3−55193
- value impact anal. for safety system design 3−26312
- VIC sodium loop, irradiation device for transient testing of LMFBR fuel pins 3−55554
- viscoplastic material behaviour at elevated temp., constitutive eqns. for 304 stainless steel 3−24310
- void fraction meas. using X-ray CT scanner in two phase flow 3−11437
- VVER, vibro-acoustic diagnostics of circulating coolant pumps *(Czech)* 3−49999
- VVER core with simulated LOCA, stress and strain parameters *(Czech)* 3−50018
- VVER fuel pellet, cracked thermoelastic, stresses and strains, numerical calcs. *(Czech)* 3−49941
- VVER-40, thermoelectric circuits performance diagnostics 3−41246
- water droplet removal efficiency in steam dryers 3−31660
- water filled, thin walled piping systems, pressure pulse propag., FBR appl. 3−55496
- Westinghouse perturbation expt. at Poolside Facility, calcs. 3−55295
- WWER reactor, thermal studies for power reactor reliability and safety *(Russian)* 3−41098
- X-ray CT scanner appl. to void fractions meas. in steady state two-phase flows 3−56630
- Zimmer nuclear plant emergency response facilities system development 3−16996
- Zion, risk identification and reduction 3−17007
- Zion-1 PWR, loss-of-feedwater transients, TRAC anal. 3−55362
- Zircaloy cladding, transient failure model 3−26375
- Zircaloy fuel sheaths, deform. and failure under LOCA conditions 3−45660
- Zircaloy spacer grid design optimisation for handling and safety 3−26355
- Zircaloy-2 tubing, I stress corrosion cracking susceptibility, neutron irradiation effects 3−16847
- Zircaloy-4 cladding deformation in LOCA, boundary effects 3−6372
- D_2O vapour loss, infrared liquid isotropic analyser monitor 3−55190
- I_2 adsorption to surface of UO_2 pellets, transport in coolant 3−55198
- ^{85}Kr purge at Three Mile Island in 1980, risks of local and global public health effects 3−29646
- LiF TLD beta dosimetry meas. using Lucite Beta Dosimetry Platform 3−31845
- Na combustion, reaction with containment materials, extinguishers 3−11398
- Na cooled reactor design for min. potential radiological release 3−55445
- Na fire aerosols, physical and chemical behaviour, Na-cooled breeder reactor accidents 3−11473
- Na fires, ignition and combustion, consequences 3−11472
- Na fires in FBRs, protective systems, study at German FBR SNR-300 3−11471
- Na, handling safety in LMFBRs, conf., Ispra, Italy (Nov. 1980) 3−10523
- Na, liquid, accident hazard protection and first aid 3−11475
- Na, vapour flow, 1-dimens. eqns., residual method of orthogonal collocations, LMFBR appl. 3−41258
- Na-concrete reactions, cracking modeling 3−1015

fission reactor safety continued
- Na-H_2O steam generator, flow dynamics of leaks for magnetic flowmeters 3−41250
- NaI(Tl), response calcs. in Monte Carlo code MNCP 3−31666
- Ni alloy compression springs, fatigue failure 3−26382
- PuO_2-UO_2 heterogeneous system, nuclear criticality 3−957
- ^{222}Ra, daughter nuclides concentration in atmosphere, reactor pollution 3−35233
- T, removal system, from moderator and heat transport system, D cooled 3−55349
- T, removal system for PGS, practical description 3−55350
- U-Ti (0.75 wt.%) penetrators, US eval. by amplitude and frequency anal. 3−39330
- UO_2, 5% enriched, criticality anal. in MARACAS program 3−31548
- UO_2 hyperstoichiometric, reaction with Na, kinetics and mechanism 3−55138
- UO_2 interaction with MgO following HCDA 3−31732
- UO_2 molten, long-term interaction with MgO and concrete, FBR safety appl. 3−55506
- UO_2, total vapour press., in-pile meas. 3−959
- UO_2-MgO melt penetration mech., binary eutectic phase diagram 3−31733

fission reactor theory and design
- *see also fission reactors; fission research reactors; neutron transport theory*
- 3D-AIRLOCAI. A LOCA analysis code for research and test reactors 3−11421
- (4Z−A) dependence of delayed neutron yields 3−16831
- acceleration of transport eigenvalue problems 3−867
- actinide formation correlations 3−45579
- actinide oxides, irradiation in fast reactor, segmented pin design 3−55185
- adaptation process, practical approach to plant cost reduction and standardisation 3−31483
- advanced BWR core performance calcs. *(German)* 3−49913
- advanced PWRs, with improved fuel utilisation 3−45573
- advanced simulator, reactor core system model 3−55394
- albedo-diffusion approximation for reflector calculations 3−45577
- analytical P_N and A_N transport solutions: slab and sphere criticality 3−26300
- annular absorber rod lattices, equivalence resonance integrals, cross sections 3−41221
- APPLE-2 code for neutron and gamma-ray flux plotting 3−45581
- ARIES model for LMFBR advanced reactor interactive engineering simulation 3−26302
- asymptotic behavior of the flux exiting a semi-infinite medium 3−26299
- automatic failure detection in nuclear power plants by generalised likelihood ratio technique 3−17001
- automatic importance estimation in forward Monte Carlo calculations 3−866
- Bayesian parallel processing method for power plant diagnostics 3−26307
- BR3, neutron flux density calcs. 3−55114
- BR3 fast neutron flux calcs., PV damage 3−55113
- breeder alternatives using multicomponent nuclear energy model *(Russian)* 3−31511
- breeder reactors, decay heat removal system, reliability anal. 3−31691
- Brown's Ferry Unit 3 cavity neutron spectral analysis 3−55118
- bubble reactivity worth calcs., probability table method 3−41215
- BWR, bypass flow, thermal-hydraulic anal. 3−31671
- BWR, General Electric fuel design and performance improvements 3−26353
- BWR, one-point core model, power level and core flow rate predictions 3−980
- BWR, prediction of events during power blackout 3−31768
- BWR, water radiolysis, computer simulation 3−6284
- BWR 3D heterogeneous lattice, neutron field freq. response to localised perturbations 3−31639
- BWR chugging desynchronization effects on multivent pressure suppression pool loads 3−11367
- BWR containment, hydrodynamic loads during LOCA and SRV discharge 3−11369
- BWR containment failure analysis during degraded core accidents 3−11460
- BWR containment load mitigation due to safety/relief valve actuation by low-low set logic 3−31746
- BWR coolant systems resonance instability modelling 3−41249
- BWR core, COTRAN, coupled neutronic and thermal-hydraulic transient anal. code 3−17013
- BWR core, RAMONA-III neutronics model qualification 3−17012
- BWR core simulation by nodal methods, effects of water gaps between fuel assemblies 3−837
- BWR core stability, time-domain anal. 3−55080
- BWR cyclic stress fatigue evaluation, in-plant test data utilisation 3−31714
- BWR flow transient anal. 3−11423
- BWR fuel bundle, gadolinia burnup model 3−16874
- BWR fuel bundle design, TGBLA method validation 3−36450
- BWR fuel channel bowing behaviour anal. 3−26379
- BWR fuel design improvements for extended burnup 3−26354
- BWR fuel management optimization and validation through operating data 3−36495
- BWR inlet flow blockage, fuel rod temp. prediction using MAYU-4b 3−11422
- BWR internal recirculation pump, availability modelling 3−55248
- BWR LOCA, chugging induced dynamic loads anal. 3−11365
- BWR LOCA, chugging load evaluation coupled with system response 3−11366
- BWR long life control blade, HfO_2 based design 3−26410
- BWR Mark III program for compliance with hydrogen control requirements 3−31747
- BWR of small rating for emerging nations, design concept *(German)* 3−21362
- BWR plant, multivariate anal. for neutron noise source identification 3−55079
- BWR post-LOCA dose rates on RHR system piping based on a particle settling model 3−11531
- BWR stability, freq. depend. nodal anal., spatial kinetics model 3−41274
- BWR standard plant, severe accident issues resolution 3−31485
- BWR startup, principles for control rod withdrawal strategy 3−985
- BWR suppression pool scrubbing model for severe accident risk assessment 3−31712

fission reactor theory and design continued
BWR/4, partial scram event anal. 3—6429
Byelorussian research design and expts. performed *(Russian)* 3—31510
CAD role and interconnection in engineering appl. programs 3—11363
CANDU, critical heat flux prediction, experimental correlation technique 3—55344
CANDU, deaerator unit, simulation program 3—21445
CANDU, shutdown systems, computer applications 3—55562
CANDU, two-phase flow models, LOCA predictions 3—55343
CANDU power reactors, thermohydraulic behaviour during LOCA using FIREBIRD-III program, report 3—31515
CANDU spatial neutron kinetics 3—17011
CANDU-PHW, probabilistic model of shutdown trip systems 3—55563
carbide fuel, in LMFBR, coolant interaction test for explosive reaction 3—41140
CDFR, NaK thermal loop syphon system, reliability, decay heat removal 3—55263
CDFR in UK, core design 3—6282
cell discretisation in reactor problems, power ratios, flux plots 3—41212
CESEC verification against plant test data 3—11434
Clinch River Breeder, design for maintainability 3—843
Clinch River Breeder Reactor, part load conditions anal. using SSC/MINET 3—31744
code-generated Monte Carlo importance function 3—865
COMMIX predictions of a thermal mixing test 3—6426
complex reactor systems, reliability analysis, computer code 3—55088
computer-based reactor protection system, fail-safe design 3—36560
computerised event-task analysis technique 3—847
concrete, behaviour mathematical description 3—6285
concrete construction, need for design to be constructable 3—859
configuration management—an overview 3—31662
constructability review 3—858
construction codes and standards, workability problem 3—853
construction problems, minimizing the impact of new regulatory requirements 3—854
construction simplification by identification system 3—852
containment modelling for post-LOCA gamma dose calcs. 3—31754
containment shell, earthquake response, deterministic and stochastic anal. 3—26419
containment structive analysis, using impulse functions 3—16843
control blades, ^{10}B depletion, methods of measurement 3—31530
control room design, incorporation of human factor engineering 3—845
control system parameters, auto tuning method, dynamic simulator 3—41229
controlling cost and schedule for nuclear support design and installation 3—11362
convection dominated flows, soln. method 3—26309
coolant, natural convection computer models for heat and mass exchanges 3—26403
core design, Combustion Engineering methodology and validation, core follow anal. 3—36452
core design, reloading optimality, control theory 3—36447
core neutronics problems, multigroup diffusion approx., calc. procedures 3—41217
core restraint analysis of a free-flowering large heterogeneous LMFBR 3—877
correlation procedure for nodal depletion analysis 3—31495
cost effective radiation risk management in generic nuclear plant design 3—55393
coupled system thermal hydraulic responses simulation using THYDE-P computer code, report 3—21364
CRBRP core assembly wire wrap hot spot factor 3—11360
CREYS MALVILLE—sub-assembly accident analysis 3—55459
critical core neutronics problem soln. 3—41202
critical mass, minimum, fuel distribution, mathematical theorem 3—36502
critical mass, minimum for flux ratio, single solution considerations 3—36503
criticality calculations, solid angle technique, KENO IV calcs. 3—31480
cross section requirements for nuclear energy design 3—31470
cross-section in reson. region of fertile and fissile nuclei, ENDF/B convention for representation 3—823
decay heat calculations at SRP using ANS-5.1 3—11418
deep penetration, first event source estimation, chain segmentation 3—31491
deep penetration by Monte Carlo 3—31489
delayed neutron spectral calculation using augmented ENDE/B-V data 3—16830
design and configuration control for large nuclear power plants 3—31482
design features for dose reduction during maintenance and inspection operations 3—1084
design review by construction specialists 3—857
DFR subassemblies, pin durability, local blockage formation and detection 3—55460
diffusion equation, generalised first-order perturbation formula 3—41084
diffusion limit transport problems, numerical solns. 3—41086
direct methods in neutron-physics reactor calculations 3—45576
divertors and impurity control, review 3—18135
documentation requirements for preapproved standard nuclear designs 3—31486
dose reduction during maintenance and inspection operation, design features 3—1084
DRUFAN—an advanced best-estimate code for LWR blowdown analysis 3—862
drywell flooding, effect on BWR vessel 3—11464
dynamic analysis of thin structures in the PISCES 3 DELK code 3—876
DYNODE programs for verifying system thermal hydraulic methods 3—11431
Ebasco nuclear reference plant approach 3—860
EBR-II depleted U reflected configurations, blanket-pin burnup anal. 3—55111
EBR-II in-vessel thermal-hydraulic transient simulation using the COMMIX-1A computer code 3—31720
effective homogenization method for heterogeneous assemblies 3—6279
effective parameters for periodic and random media and applications 3—31478
elastic stress-strain relation for restructuring sphere-pac fuel 3—26378
emergency assessment and response planning, architect/engineer role 3—17004
ENDF/B-V data testing for thermal reactors 3—49921
engineering system reliability, integrated approach 3—16822

fission reactor theory and design continued
EPRI modular modeling system code, development for transient anal. 3—26303
explicit high-order perturbation formulation use in reactor anal. 3—41103
fast breeder compound doubling time, isotopic breeding weights factors for closed fuel cycle *(Czech)* 3—11400
fast breeder fuel pin assembly velocity and temperature field calc. using CAFCA code 3—55082
fast breeder reactor, three loops engineering simulator 3—55086
fast critical assembly cells, neutron streaming, interference effect 3—833
fast neutron scatt. anisotropy, Boltzmann-Fokker-Planck eqn. treatment 3—41088
fast power reactor, core disruptive accident, thermohydrodynamic simulation code 3—41280
fast reactor; core restraint analysis; 75 MW power ascension tests, JOYO reactor 3—31645
fast reactor, hexagonal geometry nodal modelling, power distribs. 3—16837
fast reactor, neutron noise, general formulation 3—26294
fast reactor, recriticality accidents, computer anal. code, FASTRAN 3—55475
fast reactor benchmarks critical review 3—16832
fast reactor core monitoring, power distrib. model 3—981
fast reactor data testing of ENDF/B-V at ORNL 3—16829
fast reactor design, appls. of swelling and irradiation creep 3—31508
fast reactor fuel and structural materials radiation damage, effect on design 3—55154
fast reactor fuel assembly, convective transport of coolant *(Czech)* 3—11404
fast reactor neutron kinetics with material motion, finite element method 3—45644
fast reactors, CASSANDRE, 2-D code, reactor transient analysis 3—55103
fast reactors, conversion parameters 3—26291
fast reactors, reflection-based interpolation in nodal reactor simulation 3—16838
FBR, gas cooled, conceptual design *(Russian)* 3—49918
FBR, gas cooled, USA development *(Russian)* 3—49915
FBR axially heterogeneous core concept, HCDA behaviour, power distrib., breeding 3—55450
FBR containment integrity anal. using ALICE II code 3—875
FBR design and operation effect on fuel cycle and waste management 3—16926
FBR intermediate heat transport system, cold trap regeneration 3—11416
FBS fast critical assemblies, neutron energy spectra study 3—41107
FCYCLS—a one-group nodal method for fuel cycle design 3—26296
FERRET adjustment code—status/use 3—55121
FFTF in vessel thermal hydraulics, steady state simulation using COMMIX-1A 3—11444
FFTF natural circulation transients, COBRA-WC calcs. 3—31673
field adaptation to structural codes, standards, and regulations 3—850
field reversed mirror, one-dimensional hybrid code 3—31799
finite element collocation methods for space-time reactor dynamics 3—869
firt order Boltzmann eqn. and initial value problem, least squares derivation 3—41094
fissile material, energy level overlap with resonant energy levels, assay implications 3—16828
fitting multi-band probability tables to the unresolved resonance region 3—31492
flaw size distrib. in welds 3—16815
flaws in ductile materials, evaluation by engineering flow assessment procedure 3—6299
fluid-cushioned impact between reactor fuel assemblies for seismic disturbances 3—1016
flux distortion effects in the Diagnostic Cores Phase I Assembly, fast reactor parameters 3—16954
fuel bed expansion calc. for rotating fluidised bed reactor 3—11358
fuel bundle ballooning tests in NRU reactor, thermal hydraulic design, computer methods 3—26313
fuel coolant mixing model, mixing time, fuel debris diameter predictions 3—11461
fuel element reliability index, active region parameters 3—45578
fuel rod vibration due to cross flow through narrow gaps 3—26380
fuel-clad thermal gap conductance determ. by Kalman filter methods 3—891
fuel-to-sheath thermal conductance, influence on fuel temp. predictions 3—41223
FUMAC model for LWR fuel relocation and PCI 3—26293
gamma ray spectrometer for coolant surface radioisotope monitoring 3—21452
gas cooled fast reactors, technical and economic optimisation *(Russian)* 3—31513
gas-cooled reactors, UK development programme *(Russian)* 3—50000
gas-liquid flow, flow pattern transition modeling 3—12758
gas-liquid flow pattern transition in a vertical rod bundle, PWR LOCA appl. 3—11403
geometry effects on solidification-induced stresses in growing fuel crust 3—31722
graphite assemblies, neutron pulse decay, neutron scatt. kernel 3—41101
heat conduction in fuel pins with eccentrically placed pellet 3—994
HEATP, heat transfer package for high press. steam-water system 3—36514
HECTR model for predicting containment response to hydrogen burns 3—6296
heterogeneous lattice of cylindrical fuel elements, 2-group Feinberg-Galanin kinetic adjoint eqns. 3—31638
HEXAB-III-30—few-group three-dimensional diffusion program for hexagonal geometry *(Russian)* 3—41095
HEXAN analytic nodal code 3—871
highly supercritical reactor, reciprocal period determ. methods 3—11413
Hilbert space method for the numerical solution of reactor physics problems 3—49926
homogenization of boundary layer transport processes 3—31477
HTGR, current position, future developments, FGR *(Russian)* 3—49916
HTGR core behaviour under seismic excitation, SONATINA-2V program 3—45659
HTGR for process heat and steam, FGR R and D programme *(Russian)* 3—49917
HTGR He coolant chemistry data 3—21451
HTGR with block-type fuel, asiesmic design, interacting columns two dimens. vibr. 3—36445

fission reactor theory and design continued
HTGR with low-enriched fuel, Xe oscill. stimulation *(German)* 3−50015
HTR, prestressed concrete pressure vessels, design criteria 3−45715
human engineering in nuclear power plant design 3−848
human factors engineering in Clinch River Breeder plant design 3−846
human factors management—a tool for improved productivity and operations 3−988
hybrid reactor system, energy system parameters between component parts *(Russian)* 3−31514
hybrid reactors, cross-section uncertainties, effects, for SOLASE-H design 3−45695
hydrodynamics, mixing chambers, models and simulation expts. 3−41251
importance function biasing of the deep penetration Monte Carlo calculation 3−31488
inlet feeders, single phase erosion corrosion, test program 3−55187
integral transport method for deep penetration 3−31487
interfacial shear for two-fluid models 3−11426
interstitial loop size distribs., analytical formulation 3−6290
irradiated nuclear-pressure vessel steel database 3−11391
irradiation induced structural material deformations, effect on core restraint design 3−31509
iterative method for fully implicit thermal hydraulic eqns. soln. 3−26308
JACS code study for criticality safety 3−873
JACS code system for criticality safety 3−872
JENDL-1 benchmark tests for fast reactor core characteristics 3−6301
JOYO, LMFBR, power ascension tests, physical effects 3−55284
Joyo fast breeder reactor, failed fuel detection and location device design *(Japanese)* 3−21369
kinetics, with stationary or circulating fuel, bifurcations 3−41109
KUCA light water moderated core, temp. coeffs. calc. *(Japanese)* 3−49914
Lagrangian-Eulerian computer codes, fluid mesh, continuous rezoning 3−26289
legislative and administrative reform at the US NRC 3−31737
licensing process, US NRC and DoE activities, safety and policy 3−31736
linear nodal and linear characteristic solns. to transport eqns. 3−26297
LMFBR, 1300 MWe, neutronic performance for homogeneous and heterogeneous designs 3−16840
LMFBR, ACRR coded aperture imaging system, fuel pin monitoring 3−55287
LMFBR, beyond design basis accident, accommodation criteria 3−55092
LMFBR, CABRI fuel pin behaviour, rapid power transients 3−55104
LMFBR, CFEM code, analysis of two-phase flow channel 3−55106
LMFBR, comparison of safety features with PWR 3−55465
LMFBR, CONTAIN code, response to hypothetical severe accidents 3−55093
LMFBR, containment codes, mechanic developments 3−55090
LMFBR, CRAFT code, thermal bowing behaviour, kinetic response 3−55100
LMFBR, Creys-Malville NSS, in-service inspection, specific application techniques 3−55469
LMFBR, critical expt. cross-section processing technique validation, ZEBRA-8 anal. 3−16835
LMFBR, detection of coolant anomalies from neutron flux fluctuations 3−55289
LMFBR, double heterogeneity effect of fuel pin and subassembly 3−41222
LMFBR, expt. model to simulate coolant flow through perforated plates 3−55282
LMFBR, fuel and core design, safety aspects, for CDFR 3−55474
LMFBR, fuel-coolant interactions, modelling and calc. technique 3−55503
LMFBR, heterogeneous or homogeneous, safety anal., intrinsic reactivity feedback characts. 3−36552
LMFBR, in-service inspection, safety standards 3−55471
LMFBR, incipient boiling of superheated K, bubble growth and pressure transient 3−21447
LMFBR, intracell adjoint flux heterogeneity effects on FOP reactivity calcs. 3−16961
LMFBR, large development plant control and protection systems, design 3−55463
LMFBR, liquid sloshing in flexible fluid filled systems, coupling effect, seismic response 3−26420
LMFBR, low-risk design guidelines for energetic events 3−55089
LMFBR, Markovian based model, shutdown heat removal system reliability 3−55262
LMFBR, MELT-III/FUMO-E codes, fuel motion in annular fuel in hypothetical accidents 3−55107
LMFBR, MIR, in-service remote controlled inspection device, SUPER PHENIX I 3−55290
LMFBR, molten fuel-coolant interaction, space-time anal. model 3−55499
LMFBR, NADYP SURDYN codes, comparison, space kinetics, point kinetics 3−55101
LMFBR, natural convection, considerations in all circuits 3−55264
LMFBR, piping systems global vibrations from pressure pulses, load calc. 3−55087
LMFBR, primary containment under HCDA 3−55507
LMFBR, protection devices for steam generators, SUPER PHENIX I 3−55530
LMFBR, reactor flow distribution during shutdown cooling 3−55266
LMFBR, reactor pit design, accident behaviour of pit and safety vessel 3−55097
LMFBR, risk predictions, comparison with LWR prediction 3−55468
LMFBR, safety assessment 3−17021
LMFBR, SEURBNUK containment code, HCDA effect on roof 3−55091
LMFBR, Severe Accident Rule appl. 3−55449
LMFBR, SNR-type homogeneous core, loss-of-flow accident, SIMMER-II code anal. 3−55483
LMFBR, sodium void reactivity anal. for CRBR 3−31497
LMFBR, thermal feed-back effects, PHENIX reactor 3−55102
LMFBR, thermohydraulic modelling and simulation 3−55398
LMFBR, TOP and LOF anal. using codes SAS3D/EPIC and FRAX-2 3−878
LMFBR, TOP and LOF-driven TOP accidents, material movement in bundle region 3−55462
LMFBR, TREAT effects on data interpretation of fuel elements 3−55108
LMFBR commercial plant, structural design features, containment, steam supply 3−41104

fission reactor theory and design continued
LMFBR COMMIX-1A code, analysis of decay heat removal system 3−55265
LMFBR core design based on experimental fast breeder reactor 'JOYO' experience 3−31507
LMFBR core design for low capital cost and low sodium void 3−6283
LMFBR core design subchannel analysis code calibration and validation 3−11371
LMFBR design for safety and proliferation resistance, with excellent performance 3−16916
LMFBR designs, maintainability review 3−55078
LMFBR flow recirculation in blanket assembly in convection conditions, COBRA-WC anal. 3−31674
LMFBR flowing fuel particulate effects on bulk freezing predictions 3−6423
LMFBR flux shape distortions, improved quasistatic calc. method 3−995
LMFBR fuel dynamics during loss of flow transients 3−6421
LMFBR HCDA, coolant slug impact, upper plenum dynamic pressure response 3−55452
LMFBR HCDA, SIMMER II freezing, melting, plugging calcs. 3−6422
LMFBR heterogeneous core, physics, design and safety aspects 3−36550
LMFBR Na two-phase flow, 1-D steady state model, interface drag and pressure drop considerations 3−36501
LMFBR reprocessing plant design, optimisation by risk assessment 3−55211
LMFBR sensitivities and uncertainties using adjusted cross-section library ORACLE-1 3−16834
LMFBR single-subassembly SIMMER-II characterization of molten fuel-sodium interactions 3−31727
LMFBR sodium void worth sensitivity to design parameters 3−31498
LMFBR structural component benchmarking 3−36488
LMFBR turbulence in upper plenum 3−11445
LMFBR two component two-phase pool dynamics modelling with SIMMER II 3−31724
LOCA expt. LOCE L3-6/L8-1, RELAP4/MOD6/U4/J3 code anal. 3−36557
LOCA reflood stage anal. for two-phase flow in four fluid model 3−11442
LOFT anticipated transient expts., RELAP5 post test anal. 3−11430
LOFT loss of feedwater test, RELAP5 anal. 3−11435
loss-of-coolant transient, in low press./low temp. reactor, RELAP4 anal. 3−41281
LSL—a logarithmic least squares adjustment method 3−55120
LWR, high-burnup fuel rod design 3−6359
LWR, liquid suspension modeling, effect on subcompartment pressurisation 3−6297
LWR, neutron flux in pressure vessel cavity 3−55117
LWR, operation and data anal. with Kalman filters *(German)* 3−49912
LWR, reprocessing spent fuel, removal of lanthanides etc. 3−41197
LWR, transients, seperate effects tests for thermal hydraulics codes 3−11429
LWR containment integrity 3−11370
LWR debris thermal-hydraulic analysis in SCDAP 3−31771
LWR degraded core accident anal. by MIMAS code 3−11459
LWR design and safety, review and outlook 3−41266
LWR droplet deposition above a quench front during reflood 3−31503
LWR fission products, I release mechanistic prediction 3−26432
LWR fission products chemistry in primary system 3−26428
LWR fission products source term estimation uncertainties 3−26431
LWR fission products source term magnitude effect on accident predictions 3−26425
LWR fission products source terms, probability distribs. for risk assessments 3−26430
LWR fission products source terms, role of aerosols and volatiles 3−26429
LWR fuel, appls. of post-irradiation data, review, fuel performance verification 3−55180
LWR fuel, improved designs for reliability and performance 3−26351
LWR fuel cladding, SEM-TEM sampling technique 3−6286
LWR fuel rod heat transfer model for HCDA 3−31685
LWR heat transfer augmentation in inverted annular film boiling 3−6399
LWR hydrogen generation during molten fuel-coolant mixing 3−31770
LWR nonhomogeneous nonequilibrium critical flow model 3−31502
LWR plant dynamics, THYDE-P1 computer code, user's manual, report 3−21365
LWR pressure vessel surveillance and lifetime prediction, uncertainty limitation 3−55173
LWR primary coolant system transient anal., droplet field relations in COBRA-TF code 3−11427
LWR PV surveillance capsules, dosimetry re-evaluation 3−55175
LWR rod bundles under accident conditions, BUSH computer code for heat transfer calc. 3−6302
LWR safety anal., RELAP5 constitutive relations modeling 3−11428
LWR steam systems, simplified nonequilibrium flashing model 3−6300
LWR subcritical reactivity monitoring using ^{252}Cf-driven neutron noise method, feasibility 3−16962
LWR void drift, prediction using minimum entropy production principles 3−31501
magnetic fusion research, computational problems, survey 3−50054
maintainability assessment and design for nuclear power 3−841
maintenance time parameter effect on extended reactor shutdown problem 3−839
managing design changes in the construction/startup phase of nuclear plants 3−31652
metal monitoring, volume of monitoring required, forecast estimates 3−41185
metallic materials qualification for appl. in advanced HTGR 3−898
minimum plate noncavitating orifice design for LMFBR core components 3−11359
MIRA, microprocessor based reactor shutdown system 3−55286
Mol ΣΣ benchmark neutron spectrum evaluation 3−55321
monitoring and control of contaminated fluid leakage outside reactor containment 3−31748
MONK 6—a revised version of the UK criticality code 3−874
Monte Carlo point flux estimators with unbounded variance, confidence limits, stat. convergence 3−31640
Monte Carlo reaction rate estimators, zero variance biasing schemes 3−41220
Monte Carlo splitting, approx. optimisation using simplified transport model 3−41087
Monte Carlo treatment of neutron diffusion in lattices 3−31476

fission reactor theory and design continued
multigroup diffusion theory, inverse problem calcs., cross sections, diffusion coeffs. 3—41083
multigroup lattice scheme WIMS-CRNL, user manual 3—36453
multiregional nuclear reactor multigroup approximation, criticality and neutron flux distribution determ. *(Spanish)* 3—45571
multivariable controller for a 600 MWe CANDU nuclear power plant *(French)* 3—55243
neutron diffusion-transport benchmark problems, finite element anal., core storage considerations 3—31466
neutron distribution stability, 2-dimens. anal. 3—45627
neutron moderation, operator representation using Pade approximation 3—41089
neutron spectra analysis using information-computing system SAIPS 3—55123
neutron spectra unfolding of REAL-80 sample problems by ITER-3 and STAYSL codes 3—55124
neutron spectrum unfolding codes for different neutron spectra 3—55122
neutron streaming, molten, fuel assemblies, Trombay criticality formula 3—36468
neutron transport problem with temperature feedback effect, comparison and stability of solns. 3—49909
neutronics analysis for the materials testing module of TASKA 3—17057
nodal analysis, diffusion codes applicability 3—31494
nodal and characteristics methods appl. to transport theory 3—31490
nodal integral method for the numerical solution of incompressible fluid flow problems 3—26310
nodal transport methods based on exponential and polynomial expansions 3—26295
nonlinear discrete dynamic systems, nonparametric identification 3—26290
NORCOOL-I—a best-estimate model for BWR emergency cooling during reflood 3—863
Nordheim-Fuchs model for nonadiabatic reactor excursions 3—31496
NRC fuel rod behaviour rods for extended burnup, assessment 3—31599
nuclear data for fission reactors 3—49927
nuclear energetics, best routes for fuel breeding *(Russian)* 3—31512
Nuclear Energy Agency Data Bank, function and compilation 3—6294
nuclear plant, reliability parameters, estimation 3—16824
nuclear power plant, design load time history evaluation for aircraft impact 3—16818
nuclear power plant, earthquake accel., time depend. freq. content estimation 3—16817
nuclear power plant, failure data problems with respect to system reliabilty anal. 3—16980
nuclear power plant, inelastic structures, probabilistic anal. 3—16813
nuclear power plant, mechanical aspects of failure probability 3—16814
nuclear power plant, random field modelling development 3—16820
nuclear power plant, seismic safety, decision anal. 3—16985
nuclear power plant seismic safety, system reliability anal. appl. 3—16974
nuclear power plant system, reliability anal., data anal. and surveillance role 3—16978
nuclear power plants, decision methods in risk anal. 3—16826
nuclear power plants, multistate reliability anal. 3—16821
nuclear power plants, probabilistic modelling, review 3—16812
nuclear power plants, system reliability anal. developments 3—16973
nuclear power plants, systems and structural reliability 3—16975
nuclear reactor, data analysis in risk assessments 3—16979
nuclear reactor system, methods for probabilistic analysis 3—16823
nuclear reactors for spacecraft, safety and design features 3—26436
nuclear technology transfer, conference, Buenos Aires, Argentina (Nov. 82) 3—16082
OHRFSP, program to simulate operating characteristics 3—55125
once through steam generators transient simulation with ALMOD/GDE 3—6400
optimised earthquake simulation for high-reliability aseismic design 3—16816
ORNL Pool Critical Assembly PV Facility, neutron flux calc. 3—55318
Palo Verde, design for plant maintainability and operation 3—842
particle bed, heat removal with subcooled sodium 3—41228
PBR, pebble throughput strategies effect on fuel temp. 3—31669
PDX limiters, recyling reduction by pumping 3—17035
pebble bed high temp. reactors, computer code development for power distrib. reconstruction, report *(German)* 3—6303
pebble bed HTR with central region of graphite spheres, design and safety *(German)* 3—49922
pellet-cladding interaction, mech. and chem. approach to modelling 3—49931
PFR subassemblies, pin durability, local blockage formation and detection 3—55460
photofission observations in reactor environment using fission product yield 3—55310
pipe stress and pipe support design, history 3—11385
pipe whip restraints: design versus constructibility 3—31740
piping qualification for hydrodynamic loads 3—11364
piping support design for the LaSalle county station 3—11361
plant design standardization in France from 1974 to date 3—861
plant maintainability, NRC views 3—840
plant outage planning cycle 3—16827
plates, heated rectangular, temp. depend. props., finite deflection, postbuckling behaviour 3—27414
poloidal divertors, models 3—18136
poloidal divertors, operating regimes, calcs. 3—18062
pool dynamic and dynamic loads in pressure suppression containment systems 3—11368
Poolside Facility, startup expts. calcs. 3—55297
post-accident instrumentation—retrofit design approach 3—31665
power change, time optimisation 3—45572
power deposition and erosion rates for TFTR and INTOR/FED limiter designs 3—18063
power plant construction, operation and maintenance, conf., Charleston, SC, USA, (March, 1982) 3—21
power plant design, dose rate data eval. for radiation exposure 3—55363
power pulse self quenching from pulsed fast reactor 3—45626
power reactor noise, partial and multiple coherence analysis 3—838
power reactors, response matrix nodal simulation, compact formulation 3—16839
pressure relief valves, acoustic emission monitoring 3—55351
pressure vessel neutron fluence benchmarks for Brown's Ferry and Arkansas Nuclear One 3—55115
pressure vessels reliability, pre/in-service inspection and tests influence 3—16825

fission reactor theory and design continued
pressure wave propagation two-DD analysis of fluid-structure interaction, computation 3—31472
probabilistic risk assessment, value of safety system improvements estimation 3—6298
PWR, CASMO-2 for effective PDQ cross section generation 3—16959
PWR, comparison of safety features with LMFBR 3—55465
PWR, ECC injection rate and duration, effects on reflood phase during LOCA 3—1001
PWR, EPRI-NODE-P nodal code, moderator temp. history effects incorporation 3—36449
PWR, fuel cycle optimization, reactor models 3—41106
PWR, interface between structural and system anal. 3—16976
PWR, loss of coolant accident, core hydrodynamics during reflood phase 3—21459
PWR, neutron spectra calcs. in pressure vessel and cavity 3—55116
PWR, power distrib. height stability, influence of steam reactivity effect 3—45575
PWR, Pu/U operating cycle, maximised conversion ratio, neutron physics effects 3—45574
PWR, reduced length burnable absorber design 3—26405
PWR, secondary system. modifications 3—16949
PWR, small and large break LOCAs, design transients 3—16991
PWR, variable void lattice design, energy gains, moderator/fuel ratio changes 3—26292
PWR, vibrational behaviour, flow induced vibration in fuel rods 3—41141
PWR axial blanket, neutronics anal., methods verification 3—26404
PWR components, analytical test bed for evaluating dynamic models, DSNP model 3—55085
PWR core anal. in XY geometry, PSEUDAX code, in-core fuel management 3—36492
PWR core burnup calcs., time-depend. approach, TDB code 3—41214
PWR core melt probability, vessel rupture contrib. 3—16971
PWR dedicated shutdown heat removal system, probabilistic seismic design, LOCA 3—36544
PWR design methods 3—49925
PWR fluid and thermal mixing in cold-leg and downcomer 3—6418
PWR fuel management, 2-dimens. nodal anal. 3—36494
PWR fuel management for slowing pressure vessel embrittlement 3—55110
PWR fuel management optimisation using perturbation theory, FULMNT code 3—6383
PWR fuel pellet-cladding interaction, FRAGEMA and CEA codes 3—26288
PWR gadolinia bearing fuel, analytic requirements 3—16871
PWR generalised model for use on safety and reliability studies 3—16983
PWR ice condenser containment, hydrogen mitigation system 3—6295
PWR ice condenser plant, hydrogen combustion during degraded core accidents 3—6430
PWR LOCA emergency core cooling anal. by TRAC-PD2 MOD1 3—6425
PWR neutron fluence, three-dimens. discrete ordinates calc. 3—55109
PWR nucl. power plant simulator, design and implementation 3—41100
PWR nuclear power stations, pipe connections *(German)* 3—6394
PWR plant, primary coolant loop pipe fracture, probabilistic assessment 3—16972
PWR power estimation using Kalman filtering 3—31505
PWR pressure vessel integrity, reponse to transients, safety design 3—16990
PWR reactivity induced accidents, sensitivity anal. 3—31693
PWR safety relief valve discharge piping forces, RELAP5/MOD1 anal. 3—11424
PWR secondary systems, O_2 induced corrosion, minimisation by design of balance-of-plant systems and components, in USSR 3—11372
PWR thermal and fluid mixing during high press. coolant injection 3—6293
PWR U-tube steam generators; modular modelling system simulation 3—55251
PWRs and the United Kingdom conference, Birmingham, England (Mar. 1982) 3—16079
quantitative analysis of nuclear power plant licensing reform 3—31484
quasistatic approx. in reactor physics, mathematical foundations 3—31469
RBMK reator cassette permutation to equalise energy distrib. and improve fuel cycle 3—41181
reactivity coefficients for Bilibinsk nuclear power station 3—41247
reactivity coefficients from noise meas. 3—36454
reactivity synthesis algorithm for a multicore system 3—31479
reactor characteristics and critical parameters, perturbation theory inhomogeneous eqns. 3—11357
reactor coolant, turbulence model, element solution with one equation, numerical solutions 3—36446
reactor noise, appl. of theory of random matrices 3—6280
reactor vessel thermal shock—a realistic, conservative evaluation 3—6292
rebalance acceleration of time absorption eigenvalue searches 3—868
reference electrode design for long term in reactor electrochemical potential meas. 3—21453
reflected LWR, reactivity meas. by neutron noise, space-energy effects 3—836
regulatory codes and standards, overview and their impacts 3—849
regulatory reform by US NRC, needs and progress 3—31738
RELAP5 anal. of LWR thermal hydraulic response 3—31672
RELAP5 nuclear plant analyzer capabilities 3—26305
reload safety and code package uncertainty anal. 3—49920
remote cutting, fitup, and welding for in-plant pipe repairs 3—844
research and test reactors, benchmark calcs., for high-enriched conversion to reduced-enriched fuel 3—41105
research reactors, critical assemblies with mixed enrichments, neutronics calcs. and meas. 3—16876
response matrix nodal methods, general separability formulation, TRILUX form for FBR 3—36451
RETRAN, second international conf., San Diego, USA, 1982 April 3—30560
RETRAN thermo-hydraulic models, improved soln. methods 3—26306
RETRAN-02 code for transient thermal hydraulic anal. 3—49924
Ringals 3 PWR power plant model 3—55253
risk evaluation of standby fluid systems 3—31703
risk reduction potential for filtered-vented containment systems with competing risks 3—31711
rod bundles with geometrical disturbances turbulent flow, shear stress 3—41239

fission reactor theory and design continued
S_n-diamond-difference low order transport operators, eigenvectors 3—41085
safety relief valve discharges, loading effects on submerged struct. and piping load struct. 3—31713
scattering anisotropy and neutron leakage in a reactor lattice 3—31475
seismic capability, grouped piping system, forced vibrational test 3—55186
self-shielding factors for FFTF flux measurements 3—31493
sensitivity analysis of GPT methods of fast breeder cycle cost 3—31500
sensitivity analysis of the inherent neutron source strength 3—31499
SERKON program for compiling a multigroup library to be used in BETTY calculation 3—45580
short lived fission products, average β-decay energy from β-strength function data 3—41102
simultaneous formation of both vacancy and interstitial loops under irradiation 3—6289
single-null poloidal divertor in Doublet III, exptl. testing 3—18134
Sizewell PWR, design and safety considerations 3—31474
slab geometry problems, stationary Boltzmann eqn. multigroup discrete ordinates soln. for γ and n 3—41081
SLOWPOKE II, simulation contribution of (n,p) (n,α) in reactor 3—55077
SNR 2, SAS3D code, core dynamics, shut-down signals in LOF accident 3—55105
SNR 2 and SNR 300, safety concept with respect to sodium leakages 3—55454
SNR-300, core protection, safety margins in system areas 3—55466
SNR-300 vessel failure, hypothetical unprotected loss of flow accident 3—55267
spectrum and kinetics parameters from the U9 critical assemblies 3—31667
spectrum averaged cross section data, measured and evaluated, comparison 3—55076
sphere-pac fuel, effective thermal cond. during restructuring 3—892
SSYST—a code system to analyze LWR fuel rod behavior 3—864
stability criterion for nonlinear reactor models with linear reactivity feedback 3—870
stability of reactors with nonlinear reactivity feedback 3—26298
static neutron diffusion eqn. program MICRETE Version 4.1 user manual 3—26311
statistical characteristics of incipient two-phase noise for reactor diagnosis 3—31504
statistical methodology to establish safety system margins 3—21363
steam generator, structural stress measurements 3—55192
steel melting on contact with UO_2 vapour following LMFBR HCDA 3—6369
stochastic characteristics in parameter form *(Russian)* 3—41096
stochastic nonlinear reactor kinetics, probability distribs. 3—41093
structural reliability anal. for JRC-Ispra, response surface methodology approach 3—16970
structural reliability anal. using extended second moment algebra 3—16819
super high temp. gas cooled reactor, design features *(Russian)* 3—49919
Super PHENIX, decay heat removal system, CREYS MALVILLE, operating characteristics 3—55261
SUPER PHENIX under unprotected transient, dynamic behaviour 3—55451
surveillance capsule perturbation studies in the PSF 4/12 configuration 3—55112
symmetry considerations, PWR, LWR model calcs. 3—36448
system hardware reliability/availability, common cause failure probability anal. 3—31704
technical basis for LWR safety reevaluation 3—31506
thermal reactor benchmarks, critical review 3—16836
thermal reactor instability against Xe oscillations at zero power 3—6281
thermal reactors, multigroup cross section correction for resolved resonance interference in mixed absorbers 3—41216
thermal stratification in the FFTF heat transport piping following reactor scram 3—11443
thermal-hydraulic analysis of a steam generator tube break transient 3—11432
thermal-hydraulic analysis of Westinghouse Model 51 recirculating steam generator using computer code THIRST 3—45635
thermohydraulic calculation of a diagnostic assembly of a NPS using cell-subchannel analysis *(Russian)* 3—41097
thorium cycle LMFBR, fuel pin design and neutronic/thermal characts. 3—16875
THTR, sphere fracture rate determ. for spherical fuel elements *(German)* 3—36456
THTR-300 reinforced concrete pressure tank design; construction and installation *(German)* 3—41092
TRAC assessment at Los Alamos 3—11433
training simulators, real-time simulation, numerical stability calc. techniques 3—26304
transient simulation of a helical coil sodium/water steam generator 3—31656
transport of radioactive particles in the primary loop of a reactor 3—41248
TREAT, HCDA sequences anal. 3—1017
TREAT upgrade, core design, control system and safety features 3—55540
turbulent flow characteristics, large horizontal tubes 3—55346
two phase flow transients, constitutive eqns. for interfacial area 3—11425
two-phase jet load models, pipe break consequence anal. 3—6401
two-temperature reactor model, bifurcation theory dynamics anal. 3—41108
UK fast reactor program 3—16841
UNDINE code for LMFBR thermohydraulic core anal. 3—41110
vacuum building, computer simulation, thermal response to environmental changes 3—55188
value impact anal. for safety system design 3—26312
vectorised Monte Carlo methods for reactor lattice anal. 3—26301
vibrating noise sources simulation for power LWRs 3—31481
vibration response to random excitations, due to coolant flow 3—26321
virtual mass effects in two-phase flows—a review 3—12757
VVER fuel pellet, cracked thermoelastic, stresses and strains, numerical calcs. *(Czech)* 3—49941
VVER-40, thermoelectric circuits performance diagnostics 3—41246
VVER-440 reactors, flux trap control assemblies, radial boundary condition calcs. 3—11412

fission reactor theory and design continued
WWER reactor, thermal studies for power reactor reliability and safety *(Russian)* 3—41098
WWR-S, neutron spectra meas. 3—55119
Yellow Creek pipe support program, management 3—851
zero power reactor, counting statistics, time depend. backward Kolmogorov eqns. with delayed neutrons 3—41099
Zircaloy cladding, transient failure model 3—26375
Zircaloy spacer grid design optimisation for handling and safety 3—26355
(n,n), odd-mass actinides, cross sections, CC optical model calcs. 3—45525
^{A}Ag(n,X), A=109, 110m, total cross sections, reactor appl. 3—45533
^{A}Ag(n,γ), 2.6-2000 keV, A=107, 109, cross sections, resonances, breeder reactor appl. 3—41030
^{241}Am(n,f), 0.02 eV-20 MeV, fission cross section 3—41065
He diffusion model for materials under irrad. 3—6287
N_2O_4, initial non-equilibrium state influence on steam generator efficiency *(Russian)* 3—50003
Na coolant mist deposition, effect on barriers in LMFBR 3—31471
Na cooled reactor design for min. potential radiological release 3—55445
Na-concrete reactions, cracking modeling 3—1015
Na-H_2O steam generator, flow dynamics of leaks for magnetic flowmeters 3—41250
Ni-C, irradiation enhanced decomposition 3—6291
^{A}Pu(n,γ), A=240, 242, gamma-ray spectra, cross sections optical and statistical calcs. 3—45526
^{239}Pu, fission product decay energy calc. in ADENA code 3—11386
^{239}Pu(n,f), fast n, A=233, 235, fission product β-ray decay heat *(Japanese)* 3—26317
^{232}Th-^{239}U, fuel cycle cost estimate in conjunction with ^{233}U-^{238}U 3—41322
(U,PU)C fuel element, LIFE-4C anal. of TREAT transient test HC-2 3—6341
U optimisation, breeding considerations for HTR and FBR from Th 3—41139
U-graphite channel reactor, life-time estimates, practical problems 3—26504
UO_2, 5% enriched, criticality anal. in MARACAS program 3—31548
UO_2, fission gas behaviour model 3—6288
UO_2 fuel, fission gas behaviour in PWR 3—41142
UO_2-PuO_2 fuel mechanic and thermohydraulic design for advanced PWR 3—11388
UO_2-PuO_2 fueled system multiplication factor calc. 3—31473
^{A}U(n,f), fast n, A=233, 235, fission product β-ray decay heat *(Japanese)* 3—26317
^{233}U-^{238}I, fuel cycle cost estimate in conjunction with breeding for ^{232}Th-^{239}U 3—41322
^{234}U(n,f), integral cross sections 3—16865
^{235}U, fission product decay energy calc. in ADENA code 3—11386
^{238}U capture, γ-counting and mass spectrometer meas. comparison for fast reactor design 3—16833
^{238}U(n,γ), 4-6 keV, resonance parameters, neutron widths 3—41007
^{238}U(n,γ), gamma-ray spectra, cross sections optical and statistical calcs. 3—45526
Xe induced flux oscillations, nonlinearities and energy group struct. influence 3—41219

fission reactors
see also fission reactor decommissioning; fission reactor materials; fission reactor operation; fission reactor theory and design; fission research reactors; hybrid reactors; nuclear engineering; nuclear physics; nuclear power stations
300 MWe HTGR, in West Germany, technical position and development prospects *(German)* 3—21495
American Nuclear Society conf., Los angeles, CA, USA (June, 1982) 3—22
American Nuclear Society Winter meeting, Washington, DC, USA (Nov. 1982) 3—20572
boiling water reactor fuel and core development at ASEA-ATOM 3—21366
breeder alternatives using multicomponent nuclear energy model *(Russian)* 3—31511
breeder reactors, international development review *(German)* 3—17022
breeder reactors as renewable energy source 3—35808
breeder strategy to solve energy supply problems, French example 3—19567
construction quality—who is responsible? 3—856
construction quality assurance 3—855
cracks in BWR stainless piping, repair work by electric utilities, organisation aspects 3—6373
district heating, commercial heat source in Germany *(German)* 3—39451
fast breeder program, long term importance 3—19562
fast breeder reactor programmes in Germany, Japan, USA and USSR 3—19568
fast reactors, economic factors for introduction 3—19565
FBR, future role in electricity generation, in India 3—55570
FBR's role in energy, Japan 3—55571
FBR program, conf., London, England (May 1981) 3—16084
FBRs technology 3—1020
French nuclear energy programme, present and future requirements 3—1021
fuel breeding and fuel management prospects of hybrid and symbiont breeders 3—17069
gas-cooled reactors, application *(Russian)* 3—50035
German fast breeder reactor project, status and developments *(German)* 3—41287
HTGR, development aims and possibilities *(German)* 3—21494
HTGR experience, programs, and future applications 3—26435
HTGR module designed for process heat and high temp. steam *(German)* 3—21496
HTGR role in energy secure military installations 3—21499
HTR's physics, design and operation 3—1019
LMFBR, needs and perspectives *(French)* 3—55572
nuclear fuel cycle overview 3—961
nuclear science and power systems, conf., Washington DC, USA (Oct., 1982) 3—44890
power plants for spacecraft, state-of-the-art 3—21498
radiation training programmes in electric utilities operating nuclear reactors in USA 3—6433
siting Saudi Arabia, using fuzzy decision analysis 3—41340

fission reactors continued
SNR300 breeder reactor in West Germany, parliamentary commission report *(German)* 3—21458
standard PWR for Italian nuclear power stations, design 3—55567
thermal nuclear reactors, electricity and heat generation 3—1018
THTR 300, programme of nucl. commissioning expts. *(German)* 3—50034
VHTR-GCFR symbiotic energy system 3—17068
CO preionisation laser operating in active zone of stationary nuclear reactor 3—27002
CO_2 preionisation laser operating in active zone of stationary nuclear reactor 3—27002

fission research reactors
see also fission reactor core control and monitoring; fission reactor theory and design; nuclear reactor instrumentation
3D-AIRLOCAl. A LOCA analysis code for research and test reactors 3—11421
5 MW research reactor computerised power controller 3—45636
Advanced TREAT Loop, fuel failure events for Clinch River and PFR fuel 3—55542
Annular Core Research Reactor, experimental capabilities 3—55334
benchmark calcs., for high-enriched conversion to reduced-enriched fuel 3—41105
BR2 high flux materials testing, dosimetry work 3—55303
BR2 high flux materials testing reactor, fast, thermal and fusion reactor expts. 3—55573
Budapest Central Research Institute for Phys. research reactor emergency cooling system *(Hungarian)* 3—49995
Byelorussian research design and expts. performed *(Russian)* 3—31510
CABRI, hodoscope, fuel pin observations during accident, LMFBR 3—55285
CABRI experimental reactor for fast neutron reactions, programme and projects *(French)* 3—21465
CABRI project progress and status, fuel behaviour in TOP, LOF and TUCOP conditions 3—55440
CFRMF spectrum update and application to dosimeter cross-section data testing 3—55317
Chalk River Nuclear Labs., in-reactor expt. facilities for LOCAs 3—55536
Clinch River Breeder Reactor, part load conditions anal. using SSC/MINET 3—31744
conference on fast, thermal and fusion reactor expts., Salt Lake City, USA (Apr. 1982) 3—54578
control computer, error diagnosis/recovery system 3—31689
CRBRP core assembly wire wrap hot spot factor 3—11360
critical assemblies with mixed enrichments, neutronics calcs. and meas. 3—16876
EBR-II, breached fuel test facility 3—55333
EBR-II, expt. capability for off-normal testing of fast reactor fuels and systems 3—55546
EBR-II, fuel performance test facility 3—55332
EPR-II, instrumented subassemblies INSAT XX09, XX10, Na flow and temp. 3—55331
Esmeralda and sodium fires, fast neutron R&D *(French)* 3—21467
Experimental Breeder Reactor II, superheater duplex tubes, post-service examination 3—6368
Experimental Breeder Reactor II superheater, destructive examination 3—6367
Fast Flux Test Facility, Interim Examination and Maintenance cell training facility 3—16878
Fast Flux Test Facility, Materials Open Test Assembly, design and operation 3—55337
Fast Flux Test Facility loose parts monitor 3—55338
Fast Flux Test Facility startup status 3—17024
fast neutron facilities and testing capabilities in France and rest of Europe 3—55327
fast reactor; core restraint analysis; 75 MW power ascension tests, JOYO reactor 3—31645
fast reactor irradiation facilities at Grenoble Nuclear Research Centre, fuel pins, safety 3—55551
FBR, component safety, design, construction, qualification, reliability, French approach 3—55420
FBR, gas cooled, USA development *(Russian)* 3—49915
FBR, loop-type, MONJU, codes, standards safety, for major components 3—55419
FBR fuel irradiation tests at JRC Petten, transient expts. 3—55183
FBS fast critical assemblies, neutron energy spectra study 3—41107
FFTF gamma ray measurements 3—55300
FFTF in vessel thermal hydraulics, steady state simulation using COMMIX-1A 3—11444
FFTF reactor characterization program review 3—55304
FFTF scram on high power, extremum type responses to adjoint sensitivity anal., safety 3—41262
FFTF startup and operation, safety related experience 3—55441
fission-fusion hybrid blanket concept performance simulation in existing fission test facilities 3—55706
FMRB, Forschungs- und Messreaktor Braunschweig, 1981 operations report *(German)* 3—55244
FTR zero power physics tests 3—16953
fuel behaviour, effective energy deposition, power burst expt. in NSRR 3—1000
fuel pin roughened surfaces, heat transfer and friction factor performance 3—50907
fusion components and materials, fission based Integrated Test Facility, conceptual design 3—55704
fusion first wall materials in-pile testing, ^{59}Ni enriched Ni samples, neutronics 3—55705
fusion reactor materials research, fission reactor expts. for neutron effects 3—55690
fusion solid breeder materials, irradiation in fast neutron fission reactor 3—55703
gamma-ray spectrometry in light water reactor environments 3—55749
HDR blowdown expt., fluid-structure interactions, impacts, FLUX code 3—55377
IBR-reactor as a pulsed neutron source for scientific research 3—55738
Idaho National Eng. Lab. thermal reactors, in-core instrument capabilities 3—55329
in-reactor fatigue crack propagation testing 3—55544
in-situ material-motion diagnostics and fuel radiography with experimental reactors 3—55547

fission research reactors continued
irradiation facilities for fusion reactor first wall and blanket structural materials 3—41299
JOYO, activation dosimeter tests 3—55299
JOYO, LMFBR, power ascension tests, physical effects 3—55284
Joyo fast breeder reactor, failed fuel detection and location device design *(Japanese)* 3—21369
KNK-II test reactor, fuel element vibr. effects during power operation 3—55447
KUCA critical experiments using medium enriched uranium fuel 3—49982
KUCA light water moderated core, temp. coeffs. calc. *(Japanese)* 3—49914
KUCA medium enriched U core, neutron flux distrib. meas. 3—49983
LMFBR, and fuel cycle plants, status in UK 3—55569
LMFBR, BN 600, safety expts. 3—55403
LMFBR, BOR-60 plant, safety problems, control systems 3—55405
LMFBR, CABRI fuel pin behaviour, rapid power transients 3—55104
LMFBR, design, fabrication, qualification, reliability, SNR 300 example 3—55417
LMFBR, homogeneous and heterogeneous, FD2/4 in-core fuel disruption expts. simulating LOF 3—55435
LMFBR, in-core accident expts., visual observations of fuel disruption 3—55558
LMFBR, inherent safety advantages, EBR-II expts. and testing 3—55404
LMFBR, JOYO, safety-related expts. 3—55406
LMFBR, KNK II, operational safety experience 3—55408
LMFBR, Mol 7C in-pile blockage expts., comparative discussions, pin failure 3—55434
LMFBR, MONJU, safety aspects in design 3—55402
LMFBR, RAPSODIE, PHENIX, component failure rate evaluation 3—55467
LMFBR, SNR-300 type, safety, probabilistic anal. 3—55415
LMFBR, TRAN expt. series in ACRR facility, HCDA molten fuel behaviour 3—55436
LMFBR, TREAT and SLSF recent ANL safety expts., review 3—55438
LMFBR, TREAT effects on data interpretation of fuel elements 3—55108
LMFBR fuel bundle testing in THORS, data reproducibilty 3—11389
LMFBR fuel disruption, anal. of DEH, FGR and TREAT expts. 3—55437
LMFBR fuel pins, fission gas behaviour during fast transients 3—55439
LMFBR fuel pins, transient overpower expt. in Petten HFR 3—55182
LMFBR safety, operational experience in USSR, BN 800 and BN 1600 extps. 3—55411
LMFBR safety, structural integrity role, US CDFR example 3—55421
LMFBR steel irradiation facilities at the Petten High Flux Reactor 3—55181
LMFBR thermal striping evaluation 3—45651
LOFT, self-powered neutron detector, coolant density change response in LOCA 3—41225
low enrichment fuel elements for research and materials testing reactors *(German)* 3—55205
LWR fuel irradiation, European test facilities survey 3—55326
Mol ΣΣ benchmark neutron spectrum evaluation 3—55321
Mol cavity fission spectrum standard neutron field and its applications 3—55720
OECD Halden Reactor Project, in-reactor instrumentation for fuel behaviour studies 3—55330
ORNL Pool Critical Assembly PV Facility, neutron flux calc. 3—55318
ORR Poolside Facility, PV surveillance irrad. expt. temp. control 3—55316
ORR pressure vessel simulator, damage flux meas. *(French)* 3—55177
ORR PSF interlaboratory comparison, radiometric anal. methods 3—55323
PFR, convective flows, low power natural circulation expts. 3—55260
Power Burst Facility, LWR fuel rod testing under accident conditions 3—55537
Power Burst Facility, severe fuel damage test series for PWR fuel rods 3—55538
power transient control system for the Engineering Test Reactor 3—16951
Prototype Fast Reactor, Dounreay, safety-related operating experience 3—55407
Rapsodie, primary sodium circuit and double envelope, tightness defects 3—55545
reactor fission products, β and $\bar{\nu}_e$ correlated spectra, reactor neutrino expts. 3—26540
reactor irradiation facilities, neutron spectra characterisation, resonance integral evaluation 3—55320
reactor neutrinos, status and future prospects 3—50013
real-time neutron radiography at the Georgia Tech Research Reactor 3—6396
Resselaer Polytechnic Inst., crit. facility, reconfig. to low mass 3—41290
Scarabee plant and programme for assembly accidents in fast neutron chain reaction *(French)* 3—21466
SLOWPOKE II, simulation contribution of (n,p) (n,α) in reactor 3—55077
SNR 2 and SNR 300, safety concept with respect to sodium leakages 3—55454
SNR 300 subassembly faults accommodation, local faults role, core surveillance 3—55458
SNR-300, core protection, safety margins in system areas 3—55466
SNR-300 vessel failure, hypothetical unprotected loss of flow accident 3—55267
sodium loop safety facility, cover gas system operation, fuel failure tests 3—55548
Sodium loop Safety facility, delayed neutron detection for fuel pin failure 3—55550
sodium loop safety facility, expt. P4, data acquisition 3—55549
Sodium Loop Safety Facility, expt. P4, fuel pin local faults, fuel melting 3—55560
Sodium Loop Safety Facility, expt. PS fuel pin plenum pressure transducer 3—55336
Sodium Loop Safety Facility, in-pile loop and test train for expt. P4 3—55552
Sodium Loop Safety Facility, in-pile test, integrated digital expt. transient control, safety 3—55553
Sodium Loop Safety Facility, post-expt. examination 3—55561
spent fuel, dose rate meas. in air 3—26503
SPERT-I data, transient anal. using PARET code 3—36536
TETACOUPLE expt., irradiation rig for pin bundle temp. distrib., on-line meas. 3—55339

fission research reactors continued
thermal reactor irradiation capabilities at the Petten High Flux Reactor 3−55328
thermal stratification in the FFTF heat transport piping following reactor scram 3−11443
three-detector spectral density meas. for subcriticality, expt. at HFIR 3−36511
threshold response helium accumulation fluence monitors for fast breeder reactor dosimetry 3−55301
TRAN molten UO_2 fuel expt. series at Sandia ACRR, HCDA research 3−55555
TREAT, HCDA sequences anal. 3−1017
TREAT, Mark III integral sodium loop for LMFBR safety expts. 3−55543
TREAT, upgrading of expt. capabilities for fast reactor safety 3−55539
TREAT F-series LMFBR loss-of-flow experiments, fuel behaviour 3−55557
TREAT hodoscope fuel motion capabilities, fast neutron detection, FBR safety 3−55335
TREAT overpower transients, instrument response 3−55340
TREAT RFT-CAL-L MARK III loop/prototypic fuel pin calibration experiment 3−55559
TREAT transition phase tests, design and feasibility, HCDA research 3−55556
TREAT upgrade, Advanced Loop systems for FBR safety expts., overview 3−55541
TREAT upgrade, core design, control system and safety features 3−55540
TREAT Upgrade reactor, temp. feedback reactivity coeff. calc. 3−16960
TREAT Upgrade transient reactor reactivity insertion accidents, anal. method 3−17016
TRIGA, $^{14}CO_2$ release meas. 3−55711
two-core reactor, reactor kinetics parameters 3−31641
VIC sodium loop, irradiation device for transient testing of LMFBR fuel pins 3−55554
West Germany, demonstration and experimental plants *(German)* 3−17023
WWR-S, neutron spectra meas. 3−55119
He generation cross sections from ^6Li and ^{10}B in Mol BR1 expts. 3−55322
K, film boiling characteristics, effects in fast breeder reactors 3−31646
fissures *see cracks*
flame sprayed coatings
No entries
flame spraying
No entries
flameproofing
see also fires
polyolefin, protective layer formation under thermal stress in air 3−34516
flames
see also chemically reactive flow; combustion; fires
acetylene-O_2 flame, C_2 and OH simultaneous spatially resolved monitoring using diode array detector 3−14892
buoyant turbulent diffusion flame, with low Froude number, spectral characts. of aerodynamic field *(French)* 3−22437
burner-stabilized premixed laminar flames, boundary value solutions 3−19523
cellular flame structure and turbulent combustion 3−14871
convection jets, the slot fire, and fire safety 3−5563
detonations, shock and reaction front characterization 3−4290
diatomic molecules, Doppler-free polarisation spectroscopy in flame reactions 3−36770
diffusion flame, transient combustion state anal. 3−53385
diffusion flame turbulent jet, fluctuating temp. meas. 3−2097
distorted flame front, singularities in phase curves behaviour 3−53389
dust clouds of C, coal, Mg, Al, flame propagation in zero gravity, burning velocity, thickness, radiation heat loss 3−24537
FM-9 solutions, rheology rel. to flammability 3−27565
fuel derived, automated mass spectrometer complex for struct. investig. and thermal anal. *(Russian)* 3−40714
gas combustion dynamics in spherical vessel 3−39388
gas flame remote temp. meas. using the OH(0,0) middle-UV band 3−4286
gas-coal flame remote temp. meas. using the OH(0,0) middle-UV band 3−4286
gasdynamic discontinuity theory 3−22551
ionisation detector with two ionic components, current-voltage curve shape 3−44056
IR absorption spectroscopy, spatially resolved, by optical Stark modulation 3−24538
Karman vortex street, numerical study 3−4287
laminar, quenching by turbulence 3−32714
laminar flame front stability during propag. from closed end of tube 3−53404
laminar flame propag., finite element anal. 3−58426
laminar premixed flames, stability limits, hydrodynamics and diffusion effects 3−22424
liquid fuel gaseous suspension ignited by flame jet, pulsative combustion 3−29309
methane-air flame, two-line at. fluoresc. temp. meas. 3−19522
premixed, in large scale and high intensity turbulent flow 3−27614
premixed laminar system, flame flashback, numerical anal. 3−32812
propane-air flame temperature profile meas. using noncontact optoacoustic method 3−4289
radiative ignition, role in large explosion propagation 3−34625
rotating gas medium, flame extinction mechanism, free convection influence 3−53388
soot concentration in axisymmetric flames meas., using scanning optical densitometer 3−10879
temperature mapping by moire deflectometry 3−49359
thermoacoustics, acoustic wave generation and amplification 3−27297
turbulent flames, instantaneous CARS thermometry 3−30854
unattached turbulent diffusion flame, simplified mathematical model 3−14870
vapour clouds, combustion, estimation of pressure fields 3−46659
CO, CW flame chemical laser, CS_2-O_2-N_2O type, output characts. 3−27024
H_2-O_2-Ar flat flames, temp. meas. by two-line laser saturated OH fluoresc. 3−9319
O resonant multiphoton optogalvanic detection in flames 3−45914
flames continued
P, chemiluminescence flame, cool green, UV light amplification, stimulated emission 3−19525
P, chemiluminescence flame, cool green, UV light amplification, focussing phenomenon 3−24509
flares, solar *see solar flares*
flash lamps
control by digital electronic circuit, stroboscopic appl. 3−22181
dye laser, flash lamp pumped, energy transfer characts. in PTM operation *(Chinese)* 3−37015
SRJ-II flashlamp-pumped dye laser *(Chinese)* 3−41865
flash photolysis *see photolysis*
flashover
air, corona discharge study, electrostatic precipitators positive polarity operation 3−27784
atmospheric impulse arcs study using two-wavelength laser interferometry 3−27756
ceramic insulator, surface flashover in vacuum at room and liq. N_2 temps. 3−18180
cryo-diode, magnetically insulated; intense pulsed ion beam extraction 3−16445
magnetically insulated diode, plasma density meas. by visible spectroscopy 3−51382
organic dielectric solid, pulse flashover in vacuum 3−18181
pinch reflex diode, ion current enhancement over Child-Langmuir limit *(French)* 3−7770
polycarbonate plate, surface flashover in vacuum under nonuniform elec. field 3−18179
polymer sheet, dielectric surface arcs vel., optical meas. 3−38761
porcelain, insulator temp., flashover voltage meas. procedure in vacuum 3−8766
surface flashover, AC and DC, of solid insulators in vacuum, DC prestress effect 3−27801
surface flashover across divided insulator in vacuum, high speed photography study 3−27747
Teflon, electron-beam-charged, barriers to flashover discharge arcs 3−38762
thermoplastic materials in vac., surface deterioration under direct and alternating voltages 3−28778
He, cryogenic, dielectric strength of large gaps 3−43488
flaw detection *see crack detection*
flexible manufacturing systems *see manufacturing computer control*
flexoelectricity
hexapentoxytriphenylene, discotic liq. cryst., flexoelec. distortion of developable domains 3−46840
liquid crystals, flexoelec. effect, temp. depend. 3−33087
MBBA layers, symmetrically weakly anchored, flexoelec. domain wall struct. 3−13089
pentyl-cyano-biphenyl, nematic films, highly-reversed tilted, flexoelectric domain orientation in applied elec. field 3−46836
flexural strength *see bending strength*
flicker noise *see random noise*
flight control *see aerospace control*
flip-chip devices
see also thin film circuits
No entries
flip-flops
capacitance meter with digital readout for 1 nF to 999-99 μF range *(German)* 3−45126
magnetic, minor hysteresis loop, fine-particle interactions effect 3−43408
floating zone method (crystal growth) *see zone melting*
floating zone refining *see zone refining*
flocculation
see also colloids; sedimentation
cluster form., diffusion controlled, in 2-6 dimensional space 3−58454
colloids, sedimentation in high mag. field 3−34650
fibres, electroflocculation, behaviour in var. elec. field *(Russian)* 3−4319
magnetic field induced, particle behaviour 3−34649
magnetic separation, selective seeding 3−34652
porous body settling through density interface in focculated suspension 3−51210
floppy discs *see magnetic disc and drum storage*
flow
see also boundary layers; chemically reactive flow; compressible flow; Couette flow; electrohydrodynamics; external flows; flow instability; flow measurement; flow through porous media; Knudsen flow; laminar flow; magnetohydrodynamics; multiphase flow; non-Newtonian flow; pipe flow; plasma flow; Poiseuille flow; pulsatile flow; rotational flow; shear flow; stratified flow; supersonic flow; transonic flow
cylindrical shells, cantilevered and clamped-clamped, ovalling oscillations in cross-flow 3−12561
cylindrical shells, clamped-clamped, ovalling oscillations in cross flow 3−12562
ideal fluid, potential flow over axisymmetric solid body, finite element anal. 3−20637
MHD swirl combustor flowfield calc. using pressure-velocity finite-difference computer code 3−24614
nematic liquid cryst., disk-like, flow behaviour, positive Leslie viscosity 3−13508
Tornado Wind Energy Conversion Systems, flow characts. and power production capabilities 3−24549
viscous fluid layer flowing down a slope 3−22419
SiO_2, high density thermal, low oxidation temps., viscous flow model 3−24378
flow birefringence
gases of linear chain mols., flow birefringence 3−22573
polyamidebenzoxazole soln., aromatic, double refraction and molecule flexibility driving flow, comparison with polyamidebenzimidazole *(Russian)* 3−38796
polymer melts rheology as seen from Doi's slip-link model 3−32767
polyphenylsiloxane, ladder-type, conform. and optical props. *(Russian)* 3−12025
polyphenylsiloxane derivatives, chlorinated, ladder-type, conform. and optical props. *(Russian)* 3−12025
flow control
gas chromatography, flow controller and sensor for HP 5880A unit 3−39425
liquid metal fast breeder reactor, power control system design 3−6407

flow control continued
  - lithium hydrogen peroxide power cell system, microprocessor control of development system 3—29379
  - solar testing system, optimal control system 3—9405

flow instability
  - thick accretion discs, instability 3—10308
  - aerofoils, steady transonic pot. flows, multigrid algorithm using Newton iteration 3—27545
  - air flow separation structure over wind wave crests 3—12723
  - amplitude and phase modulations, role during transition to turbulence 3—12628
  - articulated tubes, three-dimens. motion, bifurcations, linear systems 3—7663
  - articulated tubes, three-dimens. motion, bifurcations, nonlinear anal. 3—7664
  - axisymmetric gas motion, stability analysis 3—56564
  - axisymmetric thermal convection in spheres/spherical shells, stability, appl. to planet interiors 3—42223
  - baroclinic instability, two-mode interaction in three-layer model 3—2029
  - binary fluid mixture in porous medium, amplitude eqn. near polycrit. point for convective instability 3—32798
  - binary mixture in porous medium, nonlinear effects in convective instability 3—37561
  - binary mixture with thermal diffusion, convective flow stability 3—42231
  - biological cell membrane motion, hydrodynamic stability, of viscoelastic thin film, dispersion equation 3—39601
  - boundary layer stability, spectral theory, diffusion eqn. 3—32713
  - boundary-layer flow stability over a spring mounted piston 3—32722
  - Boussinesq fluid of infinite Prandtl number, steady three dimensional convection 3—51110
  - buoyancy-thermocapillary instability, interfacial deformation in one- and two-component fluid layers 3—27518
  - cellular structures, pattern selection in a slowly varying environment 3—46520
  - circular cylinder with 2-dimens. slit, boundary layer suction effect 3—17923
  - circular pipe, Hagen-Poiseuille flow, amplitude depend. neutral modes 3—27609
  - closed vertical column, Soret diffusion and convective instability 3—8237
  - column of two-phase mixture, unsteady motion, shock waves 3—17962
  - columnar vortex flows, inviscid instability to 3-dimens. perturbations 3—51127
  - conditional symmetric instability in atmosphere, variational theorem for circulation integrals 3—15584
  - convection at small Prandtl numbers, stability criteria 3—32730
  - convection loop, natural, stability and transient behaviour, numerical analysis 3—2050
  - convective pattern evolution and secondary instabilities 3—32820
  - cosmology, gravit. instability in expanding universe rel. to cosmic density wave and observable effects 3—10492
  - Couette flow, circular with variable inner cylinder speed, stability 3—12629
  - Couette flow, impulsively initiated, for both axisymm. and nonaxisymm. disturbances, strong stability 3—32807
  - cylinder clusters in axial flow, fluidelastic instability study 3—12633
  - disperse stream, one dimensional two-speed flow, Cauchy problem, hyperbolicity, stability 3—42285
  - distorted rectangular tubes of large aspect ratio, flow at sharp corners, large Re flow 3—22532
  - double diffusive convection by coupled mol. diffusion 3—51084
  - double-diffusive convection with large variable gradients 3—34722
  - Ekman layer of elasto-viscous liquid, unsteady flow 3—42274
  - electrically conducting rarefield gas, oscillatory flow past porous plate, hydromag. free convection 3—42237
  - electrofluidised beds, stabilisation against bubbling and boundary value problems, elec. field effects 3—37581
  - emulsion stability, effects of bulk and interfacial properties on film mobility and drainage rate 3—51203
  - finite cylinders, circumferential flows, centrifugal instabilities, wide gap problem 3—27490
  - finite microscopic system, fluid dynamics, chaos 3—22416
  - flames, gasdynamic discontinuity theory 3—22551
  - flow, slow induced, instability and supercritical convection motions 3—2044
  - fluid filling a half-space, stability of thermocapillary convection 3—46544
  - forced convection laminar flow in inclined channel, vortices, ionic mass transfer stability 3—51125
  - free convective flow in vertical gaps 3—27517
  - fusion reactor first wall, melt layer instability following plasma disruption 3—18084
  - gas flow, glow discharge, review 3—42481
  - gas with variable physical props., flow is annular channel transitional section *(Russian)* 3—56619
  - Gortler vortex nonlinear evolution in nonparallel boundary layers, stability 3—7593
  - Gortler-type vortices in curved film flow 3—56553
  - gravitational instabilities, eqns. of motion for cross term modified gravit. field equations 3—35429
  - gravitational instability of streams 3—2083
  - gravity wave group evolutions, transition to envelope solitons 3—27538
  - growing boundary layer, two-dimens. wavepacket development, linear stability theory 3—27535
  - Hagen-Poiseuille pipe flow, axisymmetric disturbances stability 3—17982
  - Hartmann flow stability 3—27489
  - heat transport and temporal evolution near the Rayleigh-Bernard instability in cylindrical containers 3—32732
  - helical wave in type I comet tails, Kelvin-Helmholtz instability 3—20303
  - horizontal fluid layer, convective transitions, varying aspect ratio effects 3—32737
  - horizontal fluid layer, onset of instability rel. to step change in temp. 3—22457
  - hydrodynamic fluctuation due to the discontinuity of flow impedance 3—46669
  - hydrodynamic relaxation of the cloud of hot gas after laser breakdown in air 3—7550
  - hydrodynamic stability, generalised Lagrangian-mean eqns. 3—32710
  - hydrodynamics, perturbation potential of three-dimensional body 3—2031
  - ideal fluid with constant vorticity nonlinear stability of two-dimens. steady flow 3—7548

flow instability continued
  - incompressible fluid cylinder instability calcs. and cylindrical plasma column Alfven surface wave propag. 3—37629
  - infinite plate with variable suction, MHD fluctuating flow of non-Newtonian fluid, slip flow 3—12721
  - inhomogeneous liquid flow instability and surface layer separation theory *(Russian)* 3—27485
  - inviscid compressible fluid horizontal stratified shear flow stability 3—27589
  - inviscid stability of Long's vortex, mechanism for development of suction vortices in tornadoes 3—7600
  - ion wake, periodic flow instabilities 3—37449
  - Kelvin-Helmholtz flow, linear and nonlinear waves, gas motion inertial effects 3—42248
  - laminar free convection flow over horizontal and inclined surfaces, vortex instability 3—37442
  - laminar premixed flames, stability limits, hydrodynamics and diffusion effects 3—22424
  - laminar viscous fluid flow, decay inside retarded rotating cylindrical vessel 3—37444
  - laser ablation, hydrodynamic instabilities, nonlinear aspects 3—7715
  - liquid film, variable viscosity, flowing under hot gas stream action, wave generation on surface 3—51142
  - liquid films, viscous, heated by Gaussian laser beam, competition between capillary and gravity forces 3—2052
  - liquid metal films, stability of laminar flow in mag. field 3—37575
  - liquid-liquid systems, stability of jets 3—51058
  - LMFBR, subassembly accident initiation, Na boiling and flaw, clad melting 3—55275
  - Lorenz model, nonlinear stability anal. by Lyapunov's direct method 3—51057
  - LWR coolant systems, two phase flow, Ledinegg and density wave instability 3—11441
  - magnetogravitational instability of finitely-conducting medium with variable streaming motion, theory 3—59196
  - mean flows over infinite flat plate, Navier-Stokes eqn. stability anal. 3—12630
  - MHD unsteady Hele-Shaw flow of visco-elastic fluid 3—51240
  - micropolar rotating fluid layer, thermal instability, numerical soln. 3—56549
  - mixed convection flow over inclined surfaces, thermal instability 3—7584
  - molecular gases, kinetic phase transition effect on streamlines behind shock wave 3—32764
  - multiperiodic flows, chaos, Lyapunov exponents, statistical physical theory 3—32712
  - Navier-Stokes equation for oscillating stagnation point flow, boundary layer receptivity 3—7602
  - nematic liquid cryst., electrohydrodynamic instabilities, classification 3—12786
  - nematic liquid cryst., thermal instability in rotating annulus 3—51482
  - nematic liquid cryst. film, torsion pendulum oscills. caused by dissipative structs. 3—7905
  - non-Newtonian liquid, creeping flow instability *(German)* 3—51170
  - nonlinear discrete system, parametric modulation of instabilities 3—85
  - nonlinear dispersive wave system, instability and confined chaos 3—27537
  - nonlinear Taylor instability of a plane interface between two incompressible fluids with interfacial mass transfer 3—51056
  - nonlinear viscoelastic fluid, shearing flows, smooth solution nonexistence 3—17953
  - nonparallel developing flow in an annulus, stability 3—17974
  - nonsteady detached flow around solid profile lattice 3—32724
  - Oldroyd fluid, unsteady flow between two coaxial circular cylinders 3—7618
  - parallel boundary layer flows, spatial stability 3—12631
  - parallel flow in porous media, Kelvin-Helmholtz instability 3—7652
  - parallel flows, three-dimensional disturbances for plane Poiseuille flow in channel 3—22426
  - parametric resonance in a stratified fluid 3—2105
  - pipe networks with sharply edged offtakes, aerodynamic and aeroacoustic excitation *(French)* 3—50829
  - pipe vibrs. induced by internal liq. pulsations, fluid struct. interaction 3—12780
  - plane Poiseuille flow, stability, finite element anal. 3—51232
  - plane symmetric resistive tearing mode, long wavelength limit 3—27698
  - plane-parallel flow, instability of combined convection 3—37471
  - plate acceleration to hypersonic velocities, explosive method, air-drag instability effects 3—47046
  - polymer melts, flow instabilities (melt fracture), stress anal. in cylindrical capilliaries 3—32769
  - polymer melts, stratified liquids interfacial stability, shear thinning effect 3—32770
  - power law non-Newtonian-Newtonian liquid systems, breakup of jets 3—51059
  - radio sources, extended, role of instabilities in unsteady-beam models 3—49043
  - radio sources, extragalactic, influence of buoyancy on stability of jets 3—16024
  - Rayleigh-Benard convection, routes to chaos 3—46567
  - Rayleigh-Benard convection, time evolution in rectangular box 3—32736
  - Rayleigh-Benard convective structures in a cylindrical container 3—51106
  - rayleigh-Taylor instabilities in stratified fluids 3—2030
  - Rayleigh-Taylor instability, compressibility effect 3—51063
  - Rayleigh-Taylor instability in stratified fluid, dynamic stabilisation by mag. field appl. 3—35424
  - Rayleigh-Taylor instability of partially ionized medium, collisional effects 3—17925
  - receptivity, flow instability coupling with incident sound 3—7546
  - rectangular prisms excitation in smooth and turbulent flows, torsional flutter and vortex excitation 3—12678
  - rotating cone in axial flow, boundary layer transition 3—51134
  - rotating cone in still fluid, boundary layer transition 3—51135
  - rotating ferroliquid, flat surface viscoinertial instability 3—37450
  - rotating sheet of fluid, nonaxisymmetric instability 3—51130
  - rotational flows, nonlinear hydrodynamic stability of inviscid fluid 3—17926
  - semilinear heat eqns., channel and cylindrical flow of viscous fluids 3—51113
  - silicone oil, phase space diagrams through Poincare sections in prechaotic and chaotic regimes 3—22466
  - simple fluid, hydrodynamic fluctuations, spatially nonlocal fluctuation theories 3—12632

flow instability continued
smectics A, instability when submitted to alternating shear flow 3—37775
Soret driven instability of a reacting fluid in a porous medium 3—51060
spatially periodic parallel flows, stability theory 3—51120
steep gravity wave trains, nonlinear instabilities and evolution 3—22476
Stokes-flow, penalty approx. 3—17924
stratified power-law liquids, stability in Couette flow 3—27564
streaming fluids in porous medium, plane interface instability 3—2117
supersonic boundary layer, cooling influence on stability 3—42258
supersonic boundary layer, slightly nonparallel, development of small perturbations 3—56570
swirling axial flow, stability when subjected to disturbances 3—22427
Taylor instability, wavy vortex state, phase dynamics 3—46582
Taylor wavy vortex flow, deterministic transitions 3—42246
Taylor-Gortler vortices in fully developed or boundary-layer flows: linear theory 3—22470
thermal instability in porous medium in presence of suspended particles, rotation, solute gradients 3—32795
thermally stratified two layer shear flow, instability induced by composite internal wave 3—7630
thin film, viscoelastic, hydrodynamic stability, linear, dispersion equation 3—38270
thin vertical fluid layer, heated from below, oscillatory Hele-Shaw convection 3—51108
three dimens. fluid flows, spatial and temporal stability anal. 3—46523
time depend. viscous flows, nonlinear stability 3—51061
Tollmien-Schlichting-Stuart and Rayleigh-Benard-Thompson in stabilities, interaction in longitudinal mag. field 3—56525
turbulence formation around flow singularities 3—46524
two parallel rotating plates, second grade fluid flow and stability 3—42242
two-dimensional flow of stratified fluid over barriers, expt. study *(Chinese)* 3—27588
two-dimensional laminar flow near stagnation point, stability to massive blowing 3—27483
two-dimensional secondary flow regime between heated rotating cylinders 3—7595
two-layer density stratification, stability and vertical mixing on bottom heating 3—42284
two-phase flow, homogeneous state stability to disturbances 3—32788
unified instability criterion for heterogeneous shear flows 3—32711
unsteady flow around oscill. sphere in viscous fluid 3—32720
unsteady incompressible boundary layers near asymmetric stagnation point 3—51055
unsteady laminar boundary layer heat transfer, instant nonsimilarity solns. 3—7549
unsteady Newton-Buseman flow theory, freq. depend. and indicial response 3—27488
unsteady plane gas flow, shocks, gasdynamic eqn. soln. 3—27551
unsteady subsonic flow, far field conditions 3—37451
unsteady unidirectional flows of non-Newtonian fluid 3—27553
vertical mixed convection flow, stability and disturbance-amplification characteristics 3—51112
viscous wall jet, stability 3—46613
vortex arrays in incompressible inviscid fluid, stability to three dimens. disturbances 3—27529
vortex longitudinal instability in shear flow, wave induced 3—32742
water jet characts., high-speed macrophotography study 3—46614
wavy vortex flow, limits of stability and irregular flow pattern 3—46583
zonal flows, general stability conditions in one-layer model 3—51062
^{3}He-^{4}He normal liq. mixtures, Rayleigh-Benard instability, convective heat transfer 3—2920

flow measurement
see also anemometers; flow visualisation; flowmeters; laser velocimeters
aerosol microjets, high speed, optical investig. 3—39414
air flow over flat plate, turbulent Prandtl no. in inner boundary layer 3—46536
air unsteady velocity field meas. by fast US imaging system 3—2158
air-water flow, horizontal, effect of flow obstruction geometry on pressure drop 3—51200
airfoil, shockless transonic flow meas. 3—32755
axisymmetric flows, density distrib., by superposing spectral interferograms 3—32828
Benard convection onset and breakdown, holographic interferometry meas. 3—46674
bi-directional ultrasonic Doppler blood flow measurement with direct single-sideband separation *(Chinese)* 3—39698
bidirectional hot-wire anemometer 3—2157
blood, computer-based flow mapping system, intracardiac appl. 3—15174
blood, meas. in vivo by electromagnetic induction 3—34927
blood flow, in vivo meas. using radionuclides 3—34972
blood flow imaging techniques using NMR 3—15189
blood flow meas., photoplethysmography appl. 3—34945
blood flow meas. and partition coeff. of ^{133}Xe in bone 3—15212
blood flow meas. using Doppler shifted ultrasound 3—34924
blood flow measurement, appl. of props. of thermal waves in vascular media 3—9769
bubbles motion hydrodynamic local characts. meas. 3—2153
cardiac catheter including manometers and velocity probe, computerised anal. 3—29780
cardiovascular CT, quantitative, baseline subtraction 3—58801
cavitation noise monitoring and correl. to erosion capability 3—51177
cerebral blood flow, regional, meas. using continuous inhalation of $C^{15}O_2$ using positron emission tomography *(French)* 3—15205
cerebral blood flow, regional, noninvasive method for determ. *(French)* 3—15207
cerebral blood flow meas., conf., Toulouse, France (Sept. 1981) 3—10504
cerebral blood flow meas. in man, problems, review *(French)* 3—15204
cerebral blood flow measurement, restoration of contrast by spatial deconvolution *(French)* 3—15206
circular flow, velocity profile estimation, Kalman filter appl. *(Japanese)* 3—7662
coherent flow patterns in viscous wall region, multiple wall probe meas. 3—22432
cold wire response in turbulent gaseous flows, thermal prong-wire interaction effect 3—22554
colour shadow method 3—12286
concentrated suspensions of large spherical particles, shear stress meas. during rapid shear between concentric cylinders 3—46632

flow measurement continued
cryogenic flow calibration system, performance test of head type flowmeters 3—36015
density stratified, using six-mirror interferometer 3—22505
differential pressure measurement in liquid flow 3—12789
digital polar correlation meas. system for distance and flow transducers *(Chinese)* 3—45124
digital tachometer mean flow speed, design, error analysis 3—42341
DISA nozzle unit characts. obs., for hot-wire probes testing and calibration 3—51253
Doppler intrusive flowmeters, common questions 3—27621
Doppler US computerised blood flowmeter, noninvasive cardiac output meas. appl. 3—4575
double beam Doppler US method for quantitative blood flow vel. meas. *(Chinese)* 3—9683
drag-force miniature anemometer 3—7671
duct with highly turbulent recirculating flow, freq. shift LDV system meas. *(Chinese)* 3—17987
electrocaloric flowmeter with PTC thermistors, construction, heat meas. appl. 3—54737
ethylene mass flow measurement with an automatic CO_2 laser long-path absorption system 3—29480
extensional flow, viscous and elastic effects 3—27623
fission reactor two phase thermal hydraulic instrumentation 3—55242
flow prediction by discrete observations *(French)* 3—44494
flowmeters, selection criteria based on European market anal. *(German)* 3—7676
foetal vessels, quantitative assessment of blood flow by pulse Doppler techniques 3—15170
forbidden indicators in flow measurement using the saline dilution method 3—19837
fuel spray dispersion diagnostic meas. 3—12762
fuel-air explosions, two-phase, detonation vel. meas. using fibre optic light-detector probes 3—2089
gas chromatography, flow controller and sensor for HP 5880A unit 3—39425
gas conc. field in turbulent jets, Rayleigh scatt. meas. 3—46525
gas flow force on bodies, using multicomponent strain-gauge balances 3—42340
gas flow rate meas., line-averaged, using oscillating wing flowmeter 3—2144
gas flow rate meas. using universal gas/liquid test system 3—12796
gas flow rates, using transducers with rotating unsealed piston separators 3—2150
gas-liquid interface, conc. boundary layer charact. 3—27619
gas-liquid systems, liquid hold up fluctuations, microwave meas. of frequencies and amplitudes 3—51199
gas-solid fluidised bed, bubbles, slugs, pressure waves, rise vel. meas. 3—51194
gas-solid two-phase flow, laser diagnostic study 3—46667
gaseous supersonic flowfield simultaneous multiple-point vel. meas. using laser induced I_2 fluoresc. 3—32822
granular materials, velocity distribs. in slow flow 3—46666
heat transport and temporal evolution near the Rayleigh-Bernard instability in cylindrical containers 3—32732
height determination in fluidised bed by calorimeter probe *(Ukrainian)* 3—51262
high strain rate free surface boundary layer flows, laser Doppler anemometry study 3—51073
human forearm blood flow, in vivo evaluation of NMR flowmeter 3—34942
hydrodynamic fluctuation due to the discontinuity of flow impedance 3—46669
Idaho National Eng. Lab. thermal reactors, in-core instrument capabilities 3—55329
impeller three dimensional flow field meas. using periodic multi-sampling with slanted hot wire 3—51248
in-flow chromosome fluorescence meas., improved accuracy by digital processing of multi-parameter flow data 3—58892
jet-pipe flow issuing into cross stream vel. fluctuation meas. 3—51188
laminar pulsatile flow, wall heat/mass transfer meas. 3—46646
large pipe flow meas. by pulsed neutron activation method, LOFT appl. 3—41211
laser Doppler anemometer, simultaneous backward-forward scatter meas., in open channel flow 3—51249
laser Doppler anemometry appl. to boundary layer flows in cryogenic fluids 3—37596
laser Doppler meas. method, for particle size/velocity determ. 3—42331
laser Doppler velocimeter with optical fibre, appl. to blood flow velocity meas. 3—19873
laser-Doppler velocimeter, two-grating method for beam splitting and frequency shifting 3—27624
liquid flow metering accuracy, linearity and economics, state of art 3—2143
liquid flow rate meas., working standards calibration automation, statistical processing algorithm 3—2152
lser Doppler anemometer for flows with velocity grad., spectral anal. 3—7677
Maxwell model, finite element code for initial value problems 3—27568
microcirculatory blood flow assessment, laser-Doppler methods appl. 3—34946
micropolar fluid viscosity coeff. calc. formulae deduced from viscometric and thermal meas. 3—42333
multipass interferograms of flow media, shadow effect 3—40676
NMR 2-coil method for fluid flow meas., blood appl. 3—9695
non-Newtonian fluids, stream vel. meas. 3—42338
nonintrusive flowmeters for closed pipe meas., selection guide 3—27620
nuclear plant simulators, pulsed neutron activation technique appl. 3—21493
nuclear power station, contactless flow meas. *(Hungarian)* 3—12794
oceanographic instrumentation, Eulerian current meas. devices, laboratory testing framework 3—44565
on-line mass flow measurement by non-intrusive, nuclear techniques 3—27628
open channel flows, turbulent stress and velocity distribution 3—46648
oscillatory flow rate measurement *(Japanese)* 3—32829
oscillatory flow under gravity waves 3—51150
oscillatory velocity meas. of water particles, in breaking waves 3—32818
particle-gas, using piezoelectric transducer based instrument 3—27629
periodically turbulent flow meas. 3—32817
Pitot tube characts. in dilute polymer solns. 3—2139

flow measurement continued
- plate roughness and hydrodynamic drag 3—46512
- polymer solns., drag reduction, turbulent diffusion in pipe flow 3—46541
- polymer solutions, dilute, dynamic props., meas. using laser-Doppler velocimeter 3—27627
- porosimetry, mercury, influence of pore potential on hysteresis and entrapment 3—35962
- positive displacement flowmeters, performance 3—27622
- poststenotic flow, extraction and characterisation of underlying vel. waveforms 3—29769
- pressure distrib. around two cylinders immersed in turbulent boundary layer 3—51081
- pressure probe for incompressible flows, dynamic fast-response design and calibration 3—2142
- pressure transducers calibration, NBS Gas Mass Flow Facility 3—10833
- pulmonary blood flow monitor, modelling and design 3—15264
- pulp suspension flow measurement using ultrasonics and correlation 3—56636
- pyroelectric anemometer probe with improved sensitivity 3—27615
- recirculating flow, highly turbulent, in 2D duct, meas. using laser Doppler velocimeter *(Chinese)* 3—37589
- review of meas. methods for liquids and gases *(French)* 3—37590
- review of methods 3—37591
- sea flow, US obs. system over long distance, signal processing system 3—1864
- secondary flow component meas. by photon correl. velocimetry 3—46675
- separated flow direction and skin-friction meas. 3—7672
- shear layers in transonic flows, laser transit anemometer meas. 3—2085
- shock tube diagnostics utilising laser Raman scatt. 3—46588
- shock tube flow diagnostics, laser interferometry, appl. 3—56633
- single-coil pulsed-NMR method for fluid flow meas., theoretical and expt. anal. 3—24837
- spectral investigation of flow struct. is turbulent boundary layers 3—37456
- steady state two-phase flows, void fractions meas., X-ray CT scanner appl. 3—56630
- subsonic rectangular jet development, Mach number effect 3—56588
- supersonic free jet anal. using a new shadowgraph device 3—22556
- supersonic two-phase flow over bodies, meas. and visualisation 3—46671
- Taylor-Couette flow, time depend. motion transition, laser Doppler velocimetry meas. 3—42245
- three-dimensional, directionally insensitive pressure meas. using hollow porous sphere 3—51258
- throttle-type pneumatic transducers, high-pressure, for linear meas., design principles 3—40583
- transient flow field phenomenon meas. using digital heterodyne interferometer with 64 parallel phase recording channels 3—40673
- transit time flowmeter, for laminar water flow in pipe 3—56635
- transitional boundary layer, at a plate, intermittence and struct., laser anemometer meas. 3—42336
- transonic shock wave-boundary layer interactions, turbulence meas. 3—56531
- triaxial hot-wire probe, effect on flow disturbance obs. 3—51252
- tube rows subject to liq. crossflow, instability, expt. and anal. 3—32635
- turbulent, by triple hot-wire method combined roll and pitch angles effect 3—51251
- turbulent boundary layer separation, effects of periodic free stream unsteadiness 3—51075
- turbulent flow, velocity measurement by laser beam intensity fluctuations 3—17988
- turbulent flow meas., using automatic data acquisition as educational tool 3—25860
- two differential pressures type parallel mass flowmeter *(Japanese)* 3—22557
- two dimensional hydrofoil, turbulent breaking and nonbreaking wave resistance, wake meas. 3—51119
- two-phase, optical fibre transducer appl. *(Chinese)* 3—10824
- two-phase flow, measurements across shaped-edged circular orifices 3—22518
- two-phase flow, one dimensional, dynamic test *(Hungarian)* 3—17959
- two-phase flow measurement by CT scanner 3—31682
- unstable mixing layer impinging on edge, oscills. investig. 3—22425
- unsteady forced convection from a flat plate to oscillating air flow 3—56539
- unsteady gas flow instantaneous vel. field meas. by speckle velocimetry 3—46664
- US flaw detector for monitoring of fluid flow continuity 3—56629
- velocity gradient determination with scatt. light cross-correl. meas. 3—42328
- velocity meas. by cross correlation method, time delay estimation and filtering 3—5773
- venous gas emboli, detection and size meas. by Doppler US flowmeter 3—48347
- ventilation system, noise regeneration, data acquisition by decaying flow technique 3—56379
- vertical mixed convection flow, stability and disturbance-amplification characteristics 3—51112
- viscoelastic fluid, transitional processes in shear flow, interaction with meas. system 3—42267
- viscoelastic liquids, convection currents, interferometry *(German)* 3—56585
- volumetric flow measurements on circular cross-sections, numerical evaluation *(German)* 3—51254
- vortex shedding from circular cylinder, wall induced modification study 3—51140
- vortex shedding in cross flow, transducer for fluctuating forces meas. 3—22560
- VPE horizontal reactors, carrier gas flows and temp. profiles 3—43769
- water flow vel. meas. in pipe, positron annihilation coincidence detection and digital data anal. 3—51255
- wind waves of high freq., meas. using laser displacement gauge, wave variance spectra derivation 3—12792
- yawmeter for steady and low-frequency unsteady flows, using semiconductor strain sensors 3—42335
- He gas meas. in GCFR reactor, using vortex shedding flowmeter 3—6395

flow resistance *see viscosity*

flow separation
- air flow in two dimensional channel, backward facing step flow, experimental and theoretical investig. 3—46652
- air flow separation structure over wind wave crests 3—12723
- airfoil-cascade flows, thermal boundary layers devel., heat transfer 3—37476

flow separation continued
- arbitrary Prandtl number effect on forced convection in laminar separation 3—2065
- bluff bodies, vortex shedding, blockage effect 3—56548
- blunt bodies in hypersonic stream, flow separation, kinematic feature 3—27546
- boundary-layer flow stability over a spring mounted piston 3—32722
- cavity separation from a body, viscosity and surface tension effects 3—22497
- circular cylinder with wake control, fluid flow and heat transfer 3—56537
- compressible gas flow, turbulent separation, friction, heat transfer, boundary layer eqns. 3—37457
- confined jets in two-dimensional laminar flow, boundary layer eqns. 3—17955
- critical angle of incidence for the flow around spheroids *(German)* 3—46540
- drag force fluctuation on cylinder 3—46522
- flows around airplanes or missiles as function of angle of attack, separation *(French)* 3—7678
- forced convection on heated bottom surface of cavity 3—51114
- gas-liquid centrifugal separation, characts. in short vortex chamber 3—51124
- hypersonic flow over bodies in neighbourhood of separation point of thin shock layer, asymptotic soln. 3—2086
- incompressible fluid, laminar and turbulent boundary layer separation 3—27480
- incompressible ideal fluid flow with separation past a wing 3—37504
- inviscid flow and boundary layers for compressor cascades, simultaneous soln. 3—12642
- laminar channel flow with separation, spectral method solns. 3—32708
- laminar flows with finite region of separation, asymptotic theory appl. *(German)* 3—2023
- laminar heat transfer at bottom surface of cavity submerged in separated flow region of duct 3—7588
- nonsteady detached flow around solid profile lattice 3—32724
- Oseen model for internal separated flows 3—17978
- parabolic viscous shear past a cylinder, flow separation 3—37503
- planar nozzle firing in shock tubes, flow separation 3—32784
- Prandtl eqns. soln. for incompressible boundary layer at zero surface friction 3—7561
- pressure around inclined ogive cylinder with laminar, transitional or turbulent separation 3—12635
- pulsatile entrance flow in curved pipe 3—51231
- rotating annular cylinder, flow separation 3—12681
- separation regions in supersonic flow past spherical segment joined to inverted cone 3—37520
- spherical annulus heat exchanger, forced convection heat transfer 3—37499
- spiked cylinder, axisymmetric flow at subsonic and supersonic vels. 3—7613
- transonic flow, damped Euler eqn. calc. around wing-body combinations 3—12694
- turbulent boundary layer, near wall mean backflow vel. profile model 3—46533
- turbulent boundary layer, three-dimens. separation flows initiated by skewed compression shocks 3—56573
- turbulent boundary layer separation, effects of periodic free stream unsteadiness 3—51075
- turbulent heat transfer downstream from an abrupt pipe expansion 3—46566
- turbulent separation flows, computational model 3—27493
- turbulent shear stress across boundary layer 3—37462
- two dimensional flow past rectangular prism, numerical anal. by discrete vortex model 3—12676
- two-dimensional flow of stratified fluid over barriers, expt. study *(Chinese)* 3—27588
- two-phase flow, measurements across shaped-edged circular orifices 3—22518
- viscous incompressible fluid near leading edge of slender airfoil, short separation regions, asymptotic theory 3—2018
- viscous parabolic shear past a sphere, flow separation 3—37502
- viscous sublayer in two-dimens. incompressible turbulent wall boundary layer 3—27496
- vorticity determ. as viscosity tends to zero 3—2069
- wake effect on flow around cylindrical stay in diffuser 3—17947

flow through porous media
- axial dipsersion parameters for reciprocating plate extraction column *(French)* 3—42289
- batteries, sealed storage, calc. of capillary equilib. in space between electrodes during charging 3—53424
- binary fluid mixture in porous medium, amplitude eqn. near polycrit. point for convective instability 3—32798
- binary mixture in porous medium, nonlinear effects in convective instability 3—37561
- Bingham fluid in varying section permeable tube, Navier-Stokes variational eqn., quasiperiodic soln. *(Italian)* 3—42313
- boundary shape determ. for coolant flow through porous region 3—37563
- bounded by infinite vertical plate under magnetic field action, heat transfer 3—7646
- bubble nucleation during fluid motion in porous metals 3—37555
- capillary and creviced materials, sinuosity and Darcy's law 3—51218
- capillary systems, static solid-liquid friction, one-parameter model 3—12775
- conducting viscous incompressible fluid, MHD laminar flow through porous media in triangular tube 3—12784
- convection in porous medium *(French)* 3—32794
- couple stresses, effect on flow 3—42302
- curvilinear layers of variable thickness, filtration of fluid 3—22522
- cylindrical tube, velocity distribution due to suction change 3—12783
- dam, porous isotropic homogeneous 3D, fluid filtering, finite element soln. of free boundary 3—56607
- degenerate nonlinear diffusion problem, stabilisation of solns. 3—30815
- dispersion in flow through spatially periodic porous media, transport processes 3—7651
- drainpipe, head loss due to entrance resist. of water, filter bed effect *(German)* 3—56622
- effective permeability of highly porous medium, soln. method 3—56609
- electrically conducting rarefield gas, oscillatory flow past porous plate, hydromag. free convection 3—42237
- ensemble of solid particles, fluid flow, theory *(French)* 3—17971

flow through porous media continued
- fabric-covered cylinder in air cross-flow, heat transfer 3—17933
- fluid displacement, visualisation 3—46676
- fluid in porous medium, interface motion 3—7635
- fluid saturated porous material, heat conduction, phase progressive waves 3—46638
- foam, cellular, flow through plateau border 3—7639
- fractured rock groundwater flow by percolation theory 3—44482
- free boundary problems, up-wind finite element method 3—22524
- free convection flow past a vertical flat plate embedded in a saturated porous medium 3—56541
- free convection in porous medium adjacent to heated surface, asymptotic expansions 3—51096
- front tracking method applied to Burger's equation and two-phase porous flow 3—5611
- gas flow in pipe with porous insert 3—32796
- gas flow through seam between fixed contacting surfaces, gas press. effects 3—37556
- granular medium, porosity distrib., bounding surfaces effects 3—37558
- gravity waves over a permeable bed 3—56558
- half-infinite channel with moving and porous walls, viscous flow 3—42305
- harmonic analysis of a source identification problem 3—27597
- immiscible fluids in porous media, mutual displacement problem 3—7647
- incompressible micropolar fluid flow between parallel plates with fluid injection 3—46645
- incompressible viscous fluid flow through an array of fixed particles 3—22523
- infiltration of porous medium by liquid metal, effet of elec. current 3—12766
- laser isotope separation in filtration diffusion of gases 3—1499
- liquid filtration eqns. in creeping porous medium 3—32799
- liquid filtration through porous dam, boundary variation method 3—7654
- liquid in porous bodies, heat transfer with evaporation and boiling 3—12494
- liquid trickle flow through packed beds, axial dispersion processes 3—46641
- liquid-solid mass transfer in concurrent gas-liquid upflow fixed beds 3—7642
- MHD flow through porous straight channel, Hall effect 3—46656
- MHD free and forced convective flow through porous media, Hall effects 3—12658
- MHD free convective flow and mass transfer through porous media 3—46639
- MHD laminar free convection flow with Hall effects past a porous vertical plate 3—42319
- moving boundary problems 3—17970
- multicomponent chemically nonequilib. gas mixture in supersonic nozzle with porous walls, friction, injection effect 3—2138
- natural convection, 3-dimens., in confined porous medium with internal heat generation 3—46553
- natural convection driven by osmosis 3—46569
- non-Newtonian fluid nonsteady flow through a porous medium 3—37553
- nonlinear flow through double-porosity media 3—46643
- nonlinear theory, finite element method 3—37552
- oscillatory free stream flow past a porous rot. disc 3—56608
- parallel flow in porous media, Kelvin-Helmholtz instability 3—7652
- particle dynamics in granular media, discrete stochastic model 3—225
- permeable bed, oscillatory horizontal layer 3—37554
- plane porous radiators with surface combustion 3—32589
- polymer solutions, dilute, laminar and turbulent flow model 3—27574
- polymer solutions, dilute, viscoelastic flow in regularly packed beds 3—27469
- porosimetry, mercury, influence of pore potential on hysteresis and entrapment 3—35962
- porous bodies, viscoplastic flow, energy dissipation and melting effects on shock compression 3—32763
- porous circular cylinder immersed in moving stream, heat transfer 3—22460
- porous plates, turbulent boundary layer with gas injection 3—37461
- porous plug, ideal gas flow, reciprocity conditions 3—27596
- quasi-variational inequation approximation convergence *(French)* 3—17968
- radiant transport through adiabatic packed bed or porous solid, Monte Carlo simulation 3—17967
- radioactive waste, in rock salt repository, brine migration and water transport model 3—41137
- rotating porous medium, setting up of convection currents, variable viscosity effect 3—27516
- rotational flow of incompressible fluid in round pipe, Navier-Stokes eqns. self-similar solns. 3—7655
- seepage, free surface, from nonsymm. channels through homogeneous porous medium 3—12763
- similarity porous media systems, two phase compressible fluid flow 3—32800
- slow steady flow between impermeable and naturally permeable coaxially tapered tubes 3—2124
- Soret driven instability of a reacting fluid in a porous medium 3—51060
- Soret effect, intrinsic, of saturated porous medium *(French)* 3—42298
- spend nuclear fuel storage pool, gravity driven flow and heat transfer 3—41195
- steadily moving infinite vertical porous plate, constant heat flux, MHD flow 3—27613
- steady seepage flow under aprons in anisotropic ground 3—7645
- stratified fluctuating MHD flow through porous medium past porous plate, with variable suction 3—12785
- streaming fluids in porous medium, plane interface instability streaming fluids, plane interface instability 3—2117
- suddenly cooled vertical flat surface in saturated porous medium, heat transfer 3—22461
- supersonic gas jet dispersal of granular material, resultant flow study 3—46626
- thermal instability in porous medium in presence of suspended particles, rotation, solute gradients 3—32795
- three-dimensional natural convection, vertical curved insulation layer *(Japanese)* 3—982
- transient laminar flow in entrance region of porous pipe 3—2120
- turbulent boundary layers or porous surfaces with blowing 3—37458
- two-dimensional flow past a mesh 3—27598
- two-phase three-component filtration, nonlinear waves 3—32790
- UNSAT1D, unsaturated groundwater flow computer code manual 3—39571
- unsteady free convective flow through a porous medium 3—42299

flow through porous media continued
- vertical cylindrical annuli filled with porous medium, convective heat transfer 3—12666
- vertical porous heat storage system composed of fluid and spherical solid particle, heat transfer 3—7587
- viscoelastic liquid flow past infinite porous plate, response to main flow fluctuation 3—7544
- viscoplastic liq. vacuum forced impregnation of porous layer, technological process 3—37560
- wall jet flow of cond. gas over permeable surface in transverse mag. field 3—12734
- water, phase change in porous medium, phenomenological coeff. 3—13422
- water saturated porous medium, thermal convection and boiling 3—37545
- H_2O, convection flow at 4°C through porous medium bounded by a vertical surface 3—2064
- ^{4}He phase separators flow characts. 3—35998

flow visualisation
- air shock, Mach-130, pseudo-three-dimens. isodensity and density profiles from fibre optic output 3—2141
- bluff body oscillations, vortex shedding in synchronisation range, visualisation study 3—51139
- circular cylinder in rot. channel, on beta-plane, flow rel. to geophys. flow 3—4891
- circular tube turbulent heat transfer in the downstream of an orifice 3—37474
- co-planar slat-like surfaces, forced convection, flow visualisation 3—27512
- convection patterns in thin air channels, flat-plate solar collectors appl. 3—51257
- convective pattern evolution and secondary instabilities 3—32820
- electrostatic precipitators, exptl. study of EHD flow 3—51244
- evaporative convection in minute drops, by laser shadowgraphy 3—32823
- flow reactors, venturi inlets diagnostics studies 3—9321
- forced convection on heated bottom surface of cavity 3—51114
- free convective flow in vertical gaps 3—27517
- free turbulent mixing layer, turbulence struct., drag reducing additives effects 3—27576
- gas blown spark gap, flow visualisation using Mach-Zehnder interferometer system 3—7850
- gas-turbine combustors, turbulence, vortex, vel. meas. 3—51259
- Gortler-type vortices in curved film flow 3—56553
- image processing and flow visualisation *(Japanese)* 3—51256
- impinging jet arrays, heat transfer coeff. distrib., visualisation technique meas. 3—22459
- inlet vortex form. mechanisms 3—22469
- jets, acoustically excited, flow visualisation appl. of improved schlieren system 3—32777
- liquid flow, vel. field meas., cavitation flow visualisation 3—27617
- liquid storage tank, buoyant jet for stratification enhancement 3—51185
- mass transfer between sphere and liq. in motion at high Peclet numbers, electrochem. meas. 3—27593
- moire deflectometry with deferred analysis 3—46665
- moire-schlieren inexpensive system, large field retrorefl., for flow visualisation 3—42345
- natural convection fluid flow from heated plate-attached cylinder interaction 3—37500
- oscillatory flow through bifurcating tube, steady streaming flow visualisation 3—15130
- oscillatory jet in a cavity, flow visualisation study 3—12728
- photographic techniques of flow visualisation 3—56628
- porous medium, visualisation of unstable fluid displacements 3—46676
- rectangular cylinders, vortex shedding freq., Strouhal number variation 3—12682
- resonant entrainment of confined pulsed jet 3—51186
- skin friction time-resolved meas., modified gauge 3—27626
- soap bubbles, He-filled, visualisation study, appl. to combustor swirling flowfields 3—12641
- streamwise rot. obs. in near-wall region of turbulent boundary layer 3—56534
- streamwise vortices formation in flow past a corner 3—42243
- supersonic air flow visualisation using coherent laser light sheets 3—2156
- supersonic two-phase flow over bodies, meas. and visualisation 3—46671
- surface-streamline flow visualisation technique 3—32819
- thermal Marangoni convection in floating zone, μ g expt. *(German)* 3—7591
- turbulent boundary layer, conditional sampling and averaging techniques comparison 3—12649
- turbulent plane jets, vel. distrib., flow reversal study 3—51184
- two-phase flow, high-vel., multiexposure photographic recording of particle parameters 3—56631
- unstable mixing layer impinging on edge, oscills. investig. 3—22425
- velocity field visualisation, real-time 3—32821
- velocity mapping, laser speckle photography, optical filtering deblurring, retinal blood appl. 3—46274
- viscous fluid, slow flow through axisymmetric duct expansion or contraction 3—22526
- water, stratified layers, heating cooling, energy transfer 3—51190

flowmeters
- *see also anemometers; flow measurement; laser velocimeters*
- air mass flowmeter based on self-heated thermistor, performance and temp. stability 3—27616
- bend type, 180°, performance 3—56634
- biomedical NMR flowmeter, in vivo evaluation, human forearm blood flow obs. 3—34942
- blood flow meas. in vivo by electromagnetic induction 3—34927
- blood flow meas. using Doppler shifted ultrasound 3—34924
- calorimetric microflowmeter for gas flows 3—46673
- cryogenic flow calibration system, performance test of head type flowmeters 3—36015
- current meters, propeller type, directional response and turbulence effects 3—2155
- Doppler intrusive flowmeters, common questions 3—27621
- Doppler US computerised blood flowmeter, noninvasive cardiac output meas. appl. 3—4575
- dragforce, microcomputer-based 3—22559
- EM blood flowmeter, noninvasive, theoretical aspects and technical evaluation 3—19794
- EM flowmeter, rapid technique for dynamic calibration 3—19790
- gas flow meter, multirange *(Chinese)* 3—42330
- gas flow rates meas., using transducers with rotating unsealed piston separators 3—2150

flowmeters continued
gas ultrasonic flowmeter, microcomputer based correcting type *(Chinese)* 3—42329
liquid flow metering accuracy, linearity and economics, state of art 3—2143
microcirculatory blood flow assessment, laser-Doppler methods appl. 3—34946
microcomputer controlled, for water loop operation, in nuclear reactors *(Czech)* 3—11405
nonintrusive flowmeters for closed pipe meas., selection guide 3—27620
nuclear power station, contactless flow meas. *(Hungarian)* 3—12794
oceanographic vorticity meter, measurement accuracy of stream velocity vortical components *(Russian)* 3—44587
on-line mass flow measurement by non-intrusive, nuclear techniques 3—27628
oscillating wing flowmeter, for large line size gas flow meas. 3—2144
oscillatory flow rate measurement *(Japanese)* 3—32829
oscillatory velocity meas. of water particles, in breaking waves 3—32818
pipeline flowmeters, review 3—2145
pneumotachometer characteristics computerised determ. using calibrated syringe 3—19856
pocket calculator peripheral, flow meas. device *(German)* 3—37595
positive displacement flowmeters, performance 3—27622
powders, mass flowmeter 3—46672
pyroelectric anemometer probe with improved sensitivity 3—27615
review of available types *(German)* 3—37593
selection critera, comparison table *(German)* 3—42343
separated flow direction and skin-friction meas. 3—7672
slection criteria based on European market anal. *(German)* 3—7676
spent-liquor viscometer construction and calibration 3—37594
test system, universal operating characteristic 3—42339
transit time flowmeter, for laminar water flow in pipe 3—56635
true mass flowmeter, for nonsteady two-phase flow 3—41244
turbine low-cost design, water thermosyphoning appl. 3—42334
turbine-type, viscosity dependence reduction by parameter optimisation 3—12795
two differential pressures type parallel mass flowmeter *(Japanese)* 3—22557
ultrasonic and gyroscopic, evaluation at cryogenic temps. 3—32830
US, accuracy increase *(French)* 3—22555
US flowmeter, transit time, theory of operation 3—12791
US flowmeter, transit-time, clamp-on, high temp. 3—51263
US flowmeter hydrodynamic error reduction 3—2151
venturi, short laying length discharge coeffs. 3—51261
Vortex flowmeter using acoustic radar *(Polish)* 3—12798
vortex shedding from a ring and an application to a vortex flowmeter *(Japanese)* 3—7679
vortex-shedding, He gas meas. in GCFR reactor 3—6395

fluctuations
see also Brownian motion; critical fluctuations; current fluctuations; noise; random processes
acoustic wave saturation in a turbulent medium 3—32531
amorphous metal, local struct. fluctuations, glass transition 3—2801
antiferromagnet, fluctuation theory with collective-state electrons *(Russian)* 3—33862
atmospherics, struct. of quasi-periodic fluctuations of VLF hiss 3—15755
atomic resonance fluoresc. light in quasi-monochromatic chaotic fields, intensity correl. 3—31996
atomic systems, fluctuation studies with one-atom detection techniques 3—26799
attractors, fluctuations and mapping, simple tests on Heron mapping 3—20773
biomembranes, chemical oscills. simulation program 3—24689
cable, finite, nonstationary random response 3—37396
chaotic dynamics and fluctuations 3—40497
chemical reactions fluctuations, fine-grained master eqn. theory 3—53359
cholesteric liq. cryst., light propagation and scatt. 3—33085
classical particles in bounded region fluctuations in the low density limit 3—16285
coaxial scattering of Euler-equation translating V-states via contour dynamics 3—32743
columnar liquid crystals, X-ray scatt. 3—2384
complex dynamics in chemical reactions 3—16276
conserved passive scalars in turbulent flows 3—51065
critical binary liq., mixture, suppression of fluctuations at boundaries 3—2763
damped quantum systems, nonlinear relax. and fluctuations 3—25808
decimetre radio wave propag. in turbulent plasma near Sun, amplitude and freq. fluctuations 3—10295
diffusion, 1/f fluctuations in space dimensions less than 1 3—49295
diffusion flame turbulent jet, fluctuating temp. meas. 3—2097
dipolar fluids, sum rules and contact value theorem appl. 3—56793
disordered anharmonic chain, soliton dynamics in long-wavelength approx. 3—10765
domain growth kinetics, effect of thermal fluctuations, Monte Carlo simulation 3—23698
dynamic bootstrap percolation, crit. slowing down 3—16291
EFBT plasma, ion heating and containment 3—56734
electron degradation in finite regions of matter, fluctuations in ionisation yield 3—32228
elliptical galaxies dynamical evolution, fluctuations of energy distrib. function for one-dimensional gravit. system 3—59479
energy and temperature fluctuations 3—49302
excitonic phase transition system, crit. behaviour 3—38315
ferromagnets, magnetic switching, noise and hysteresis loops, fluctuation phenomena 3—23710
first-order transitions induced by fluctuations, universal ratios 3—47081
flow induced by rotational vibrations of infinite disc 3—46580
Gaussian fluctuations effect on model kinetic system exhibiting explosive behaviour 3—58427
heat engine and cold diode rectifier models 3—14984
high-speed turbulent boundary layers, one dimens. spectra 3—51077
hydrodynamic fluctuation due to the discontinuity of flow impedance 3—46669
hydrodynamic fluctuations, nonequilibrium sources, kinetic coeffs. 3—2166
IIIb-Te semiconductors, liq., struct. inhomogeneity and valence fluctuations 3—13070
inflationary Universe, supersymmetric, fluctuations 3—35759
interstellar medium, vel. fluctuations due to gravit. interaction with system of stars 3—54485

fluctuations continued
ionosphere irregularities, power law spectrum from mutual coherence function for transionospheric radiowaves 3—10135
irreversible processes under random thermal fluctuations, thermodynamic criteria 3—25837
jump Markov processes, weak convergence, stability props. 3—16259
kinetic equations for many-particle correlation functions 3—5711
laser light fluctuations; freq. depend. 3—32344
linear response theory, fluctuation, response and relaxation 3—30822
liquid, molecular relaxation, energy dissipation, quantum statistical estimation 3—37750
liquid binary mixtures, nonequilib. fluctuations relax. above consolute point 3—2812
liquid metal, local struct. fluctuations, glass transition 3—2801
liquid mixtures, decay of conc. fluctuations 3—33062
melting, two dimensional mechanism, Monte Carlo simulation study 3—57065
molecular fluids, refractive index theory 3—57873
molecular systems, fluctuation studies with one-atom detection techniques 3—26799
multimode convection eqns., time depend. solns. 3—32731
nematic liq. cryst., nonequilibrium steady state, light scatt. 3—47667
nematic-smectic-A transition, planar director fluctuations, scaling anal. 3—13448
non-equilibrium systems, macroscopic order, fluctuations 3—35921
nonlinear and linear systems, identification using externally applied random force 3—49260
nonlinear Langevin eqn. with quadratic noise 3—20768
nonlinear oscillator driven by white noise, short time evolution 3—20770
nonlinear wave interaction and fluctuations in nonequilib. plasmas 3—56679
nuclear power plants, fluctuations of the mass velocity of the working fluid in separating superheaters 3—55215
open systems class, Schrodinger eqn. 3—54678
optical bistability, laser frequency fluctuations effects 3—32405
N Pacific Ocean, annual temp. fluctuations at subtropical and subarctic fronts 3—15452
Permalloy sheet, 65NP, large Barkhausen jumps, fluctuations under cyclic magnetisation *(Russian)* 3—52522
plasma, nonequilibrium, nonlinear fluctuations and turbulence, theory *(Russian)* 3—46727
plasma confinement, microinstability and entropy production, variational calc. 3—12925
plasma potential fluctuations, effect on highly exited at. states populations *(Russian)* 3—32879
pressure fluctuations in statistical physics 3—5559
pulsed load effect on supply networks 3—56704
quantum optics, fluctuation theory 3—22016
quantum Universe with scalar field, conformal fluctuations 3—16054
quasi-one-dimensional electron system, ordered states 3—57296
quasiclassical Langevin eqn. 3—20679
random wavefront in free space, intensity fluctuations 3—30625
relativistic hydrodynamic fluctuations, stochastic Boltzmann eqn. 3—56627
relativistic thermoviscous fluids, equilib. and nonequilib. fluctuations 3—46662
reversed field pinch, quiescence, statistical MHD model, mag. fluctuations 3—56711
reversible chem. reactions, fluctuations 3—53358
ring lasers, natural frequency fluctuations meas. for radiation at $\lambda=3.39$ μm 3—12203
Rydberg-atom maser, millimeter-wave photon emission statistics, single mode superradiance fluctuations 3—26988
semiconductor, compensated completely, semiconductor-metal transition 3—23446
simple fluid, hydrodynamic fluctuations, spatially nonlocal fluctuation theories 3—12632
simple fluid, nonlocal hydrodynamics and transport coeff. dispersion 3—49166
small polaron, crit. quantum fluctuations and localisation 3—13751
sound wave backscattering by anisotropic sound vel. fluctuations 3—12396
spherical microemulsions, thermal fluctuations of size and shape 3—53447
spin glass, mean field theory, spectrum of fluctuations around Sompolinsky's soln. 3—33902
stochastic one-dimensional map, Lyapunov number for noisy 2^n cycle 3—25812
stochastically gated diffusion-influenced reactions 3—14838
superfluorescence tipping angles and delay times, fluctuations 3—6938
temperature fluctuations in steady state 3—49301
thermodynamic critical fluctuation theory 3—40495
thermodynamics and Marian Smoluchowski (1872-1917) 3—35824
turbulent intensity and heat transfer rate in mixing vessel 3—46561
turbulent wakes, two dimens., third order conditional transport correl. 3—51122
turbulent wall pressure fluctuations at large Reynolds numbers, field characts. 3—27500
underwater acoustic single-path wavefronts, temporal and spatial fluctuation, 43 nautical miles range 3—20020
underwater acoustic single-path wavefronts, temporal and spatial fluctuations, 270 nautical miles range 3—20021
underwater acoustic single-path wavefronts, temporal and spatial fluctuations, 540 nautical miles range 3—20022
underwater sound, phase and amplitude fluctuations at hydrophones spaced 1/2 to 2 wavelengths apart 3—20024
unsteady turbulent shear flows, wind tunnel design and flow calc. *(German)* 3—46538
water, subcooled pool boiling charact. curves, vapour bubbles and surface temp. var. 3—56418
wave struct. of turbulent mixing zone, quantum analogy of motion 3—37511
wavefront reversal efficiency in medium with time depend. fluctuations 3—27170
weakly ionised magnetised plasma, random fluctuation effects on cond. 3—51287
AgMn spin glass, fluctuation modes, muon spin relax. studies 3—57661
BaO-transition metal oxide-Fe_2O_3 ferrite, microsyntactic intergrowth and composition fluctuation 3—13472
Ga_2Te_3, liq., struct. inhomogeneity and valence fluctuations 3—13070
^3He-^4He mixture, critical dynamics, eqn. of motion approach with mode coupling 3—28183

fluctuations continued
LiI, fluctuation studies with one-atom detection techniques 3—26799
TbVO$_4$, cooperative Jahn-Teller phase transition, fluctuation dynamics, Brillouin scatt. study 3—47665

fluctuations in superconductors
used only for thermal (thermodynamic) fluctuations around the order parameter near the critical point
antiferromagnetic superconductor, spin struct., and ferromag. transition 3—18811
Coulomb superconductor, inhomogeneous state, theory 3—23535
DC SQUID, tunnel junction, flicker noise 3—57488
dirty 2-D superconductors, resistive transitions, Coulomb-gas model and vortex fluctuations 3—52318
dirty superconducting film, pair breaking parameter, fluctuation cond. 3—33830
nonlinear dynamics, fluctuation restoration of adiabatic behaviour, theory *(Russian)* 3—57482
one dimensional conductor, quasi-superconductivity, Cooper pairs and transition temp. 3—57467
rare earth cpds., superconducting phase transition in laser beam at high temp. 3—33812
reentrant superconductors, tunnelling in paramag. phase, order parameter and condensation energy 3—52315
small superconducting particles, NMR 3—43325
space-inhomogeneous superconductor, resist., temp. and characteristic length depend. 3—18825
superconductor-ferromagnetic metal-superconductor junction, crit. current oscills., exchange field depend. 3—8627
superconductor-normal-superconductor junctions, phase coherence, quantisation, and thermal fluctuations 3—3389
thin film devices, 1/f noise model, appl. to bolometers, Josephson junctions, SQUIDS 3—52314
(TMTSF)$_2$X, Fermi surface anisotropy and effective dimensionality 3—13706
(TMTSF)$_2$X, supercond. and metal-insulator transitions 3—57454
(TMTSF)$_2$X superconducting salts, one-dimensionality, review 3—23540
tunnel injection and tunnel stimulation, branch imbalance role 3—38546
Al film, interaction and localisation effects above supercond. transition temp., cond. and magnetoresist. meas. 3—33804
Al superconducting film, electron inelastic scatt. time in presence of fluctuations, magnetoresist. 3—38538
Nb-Ge multilayers, superconducting props. 3—13967
Nb$_3$Ga supercond. film, energy gap determ. by tunnel method 3—18832
V superconducting thin films, fluctuation cond. *(Russian)* 3—18823
Zr-Cu(Ni)(Co)(Fe) metallic glasses, superconductivity and spin fluctuations 3—57456

fluctuations of cross sections *see statistical theory of nuclear reactions and scattering*

fluid composition control *see chemical variables control*

fluid composition measurement *see chemical variables measurement*

fluid dynamics
see also aerodynamics; biological fluid dynamics; drag reduction; flow; hydrodynamics; liquid oscillations; Navier-Stokes equations; rarefied fluid dynamics; relativistic fluid dynamics; surface waves (fluid); turbulence; wakes
calculus of variations applied to continuum physics, inverse problem 3—30620
elongation flow, stress growth, creep, constitutive eqn. 3—27461
FIDAP: a fluid dynamics analysis program 3—12617
finite elements in nonlinear mech., conf., Stuttgart, Germany (Aug. 1981) 3—16068
flow field computations using finite boundary method 3—32703
flows around airplanes or missiles as function of angle of attack, separation *(French)* 3—7678
free surface flows through an outlet in 3-dimens., finite element calc. *(Chinese)* 3—51043
gas mixture, EM radiation absorpt. kinetic cooling, mol. vibr.-rot., transitions 3—37583
gasdynamics, invariance props. under a reciprocal Backlund transform. 3—12619
governing fluid eqns., generalised coordinate forms and associated geometrically induced errors 3—12615
group-theoretical approach to the ideal fluid problem 3—84
heat exchangers, parallel-flow and counterflow, response to sinusoidal flow rate changes of large amplitude 3—51088
hyperbolic conservation laws, upstream differencing and Godunov-type schemes 3—49168
integral of product of three associated Legendre functions *(Hungarian)* 3—35850
integration schemes based on concept of characteristics as appl. to ablated blunt body problem 3—12618
intermittency in 2-dimens. maps, renormalisation group fixed point eqns. 3—10592
Kadomtsev-Petviashvili eqn., infinite sequences of conservation laws 3—49574
liquid thermal cond. calcs. by perturbed molecular dynamics simulation 3—47172
Magnus effect on boattailed shells, computational study 3—12616
many-electron systems in 3-dimens. space, quantum fluid dynamics 3—16248
multiple bifurcations 3—37440
noncavitating inducers, fluid dynamics, review 3—51079
numerical fluid dynamics 3—49136
Poisson struct. elementary derivation 3—22549
potential flow analysis of arbitrary cascade using conformal transformation into a row of circular cylinders 3—37437
potential flow around a thin oblate body of revolution 3—56522
profiles, fluid flow around arbitrary systems 3—16137
prolongation structures of quasi-polynomial flows 3—30621
radiative gas dynamics, weakly nonlinear wave interaction 3—42327
reciprocal Backlund transformations of conservation laws 3—25754
self-gravitating and rotating fluids, models *(Japanese)* 3—5103
simulation of gas-flow in a pipe using minicomputer *(Italian)* 3—27599
solution-adaptive grids., transonic airfoil calcs. 3—56517
stable integrators for fluid dynamics simulation 3—51046
steady incompressible two-dimens. flow, numerical anal. using streamline coords. 3—51044
stiff and convection-diffusion eqns. solved by adaptive spline function 3—49163
Stokes flow, integral eqn. 3—32706

fluid dynamics continued
Stokes flow, integral eqn. 3—32707
turbulent closure model for geophysical fluid problems 3—25185
two-layer shallow water equations, numerical investig. 3—49165
two-step integration procedures for hyperbolic eqns., flow processes appl. 3—54626
velocity past cylinder for creeping motion, approx. calc. *(German)* 3—42219
viscous blob spreading on horizontal surface, nonlinear diffusion eqn. soln. 3—45099

fluid flow *see flow*

fluid instability *see flow instability*

fluid mechanics
see also capillarity; cavitation; compressibility of gases; compressibility of liquids; fluid dynamics; hydrostatics; Mach number
approaching flow types effect on straight conical diffusers performances 3—37438
biharmonic equations acting in unbounded sets, variational approach *(French)* 3—12620
equations of motion for particles, bubbles and drops in liq. *(Chinese)* 3—22520
incompressible fluid mechanics at brink of turbulence, regularity results 3—16140
integral method, transformation of system of partial differential equations *(French)* 3—22411
low gravity simulation methods 3—2159
nonuniformly heated fluid, mech. equilib. condition in variable cond. media *(Russian)* 3—1933

fluid rheology *see rheology*

fluid theory, dense *see liquid theory*

fluid valves *see valves*

fluidised beds
Adams-Welty model validation for heat transfer in large particle fluidised beds 3—17963
aerosol generator for dry, stable, high conc. aerosol production 3—39416
bubble hold up 3—51208
bubbles in fluidised bed, mass transfer and motion 3—7648
bubbling properties anal. using flow optic light probe 3—46642
cloud patterns around a bubble growing in a gas-fluidized bed 3—2112
coal delivery for combustion in a low temp. fluidised bed 3—7650
coke, combustion temp. in fluidised bed, heat transfer 3—7649
dehydration of low-melting-point crystalline hydrates in fluidized beds 3—51215
dispersion and channeling dynamic studies in fixed beds 3—17964
electrofluidised beds, AC and DC applied elec. fields, bubble rise velocity 3—37580
electrofluidised beds, stabilisation against bubbling and boundary value problems, elec. field effects 3—37581
flat surface in air fluidised bed, heat transfer, orientation effect 3—27595
gas fluidised bed in freeboard region, heat transfer to horizontal tubes 3—17965
gas-solid fluidised bed, bubbles, slugs, pressure waves, rise vel. meas. 3—51194
gas-solid fluidised bed, heat transfer coeffs. 3—12753
heat exchange between water coooled coil and steam fluidised bed 3—42300
heat exchange with containing walls, intensification, nonuniform gas distrib. effects 3—42301
heat transfer, coupled gas convection-unsteady conduction effects, single particle model 3—22456
heat transfer between a wall and a two dimensional fluidised bed *(French)* 3—42232
heat transfer between vertical tube and air fluidised bed 3—12754
heat transfer process and solid particle mixing, mathematical modelling 3—12765
height determination in fluidised bed by calorimeter probe *(Ukrainian)* 3—51262
horizontal boiler tubes, circumferential wall temperature variations 3—51217
horizontal particle mixing in a free fluidized bed 3—37559
horizontal tubes, bed-surface contact dynamics 3—51213
instantaneous heat transfer coeff. at wall of fluidisation columns 3—51095
inviscid flow field in 2-dimens. bubble contacting horizontal tube in gas fluidised bed 3—7644
liquid beds, solid layer inversion study 3—46640
liquid phase multicomponent adsorpt. in fixed beds, numerical soln. 3—17966
liquid trickle flow through packed beds, axial dispersion processes 3—46641
liquid-solid fluidised bed, particle motion, stochastic model anal., expt. 3—51195
liquid-solid fluidised beds, solid packing 3—51172
minimum spouting velocity for binary mixtures of particles 3—42290
mixed powders, segregation characts. of co-flow type electrostatic fluidised bed 3—37564
multistage fluidisation, residence time distrib. of solids 3—7640
oscillatory flow under gravity waves 3—51150
packed bed thermal storage system, heat transfer, transient anal. 3—27594
packed beds, input-response heat transfer meas., infinite bed assumption validity 3—46545
powders, fluidity and charact. in vibrating field *(Japanese)* 3—17969
pressurised fluidised-bed combustion facility, 1000 hr test programme, observations and analysis 3—34708
radar system for fluidised bed level detection, using microwave short-pulse generator 3—35961
radiant transport through adiabatic packed bed or porous solid, Monte Carlo simulation 3—17967
radiative heat transfer between fluidised bed and a surface 3—51099
radioactive ion-exchange resins, incineration in fluidised bed 3—41136
reactor for coal combustion, simulation procedure for mathematical modelling *(German)* 3—24506
solid particle form. from soln. in a gas-fluidized bed 3—51214
spherical packed beds, mean heat transfer and energy efficiency *(Russian)* 3—56610
structure with surface boiling of fluidising medium 3—12764
suspensions, radiative transfer meas. 3—37562
transient mass transfer with suction at phase boundary appl. to bubble in fluidised beds 3—51216
transitions between steady states, fluidising vel. effects 3—37557

fluidised beds continued
- tubed, asymptotic bubble size 3—7643
- two-phase gas-fluidised bed, bubble structure *(Polish)* 3—32797
- K_2SO_4 crystal growth in fluidized bed crystallizer, Peclet number determ. 3—47759

fluidised powders *see powders*

fluidity *see viscosity*

fluids

see also bubbles; classical theories of fluid structure; disperse systems; fluid mechanics; fluidised beds; gases; gravity waves; liquids; non-Newtonian fluids; quantum fluids; quantum theories of fluid structure

No entries

fluorescence

see also atomic fluorescence; fluorescent lamps; fluorescent screens; molecular fluorescence; nonradiative transitions; X-ray fluorescence analysis

- 2-2-'hydroxylphenyl-benzoxazole, excited state H^+ transfer, picosec. fluoresc. obs. 3—39377
- amphiphilic copclymers in aq. solns., fluoresc. quenching, kinetic model for Stern-Volmer-type plot 3—3777
- Anderson-localised many-particle excitations, optical props. 3—43584
- anthracene:tetracene, time resolved sensitised fluoresc., singlet exciton energy transfer 3—3818
- anthracene:tetracene glass, non-photochem. holes, temp. depend. 3—57963
- anthracene, charge transfer states, mag. modulation fluoresc. study 3—38882
- anthracene, fluorescence, temp. and solvent effects 3—52832
- anthracene-diethylanaline exciplex, fluorescence, temp. and solvent effects 3—52832
- anthracene-tetracyanobenzene cryst., CT complex, photoconductivity and fluoresc. 3—52194
- α-aryl-ω-N,N-dialkylaminoalkanes, exciplex form. and props., fluoresc. 3—52820
- benzenes, methyl- and methylene-substituted in condensed media, radiative and radiationless transitions 3—8862
- bromotrifluoromethane, VUV photolysis, radical form., fluoresc. obs. 3—45964
- cadmium arachidate Langmuir-Blodgett film with selectively laser excited perylene, low temp. dynamical processes 3—38945
- β-apo-14′-carotenal, fluoresc. and triplet yield quenching, H bonding effects 3—53428
- chlorotrifluoromethane, VUV photolysis, radical form., fluoresc. obs. 3—45964
- chrysene cryst., emissive states, absorpt. and fluoresc. spectra 3—28888
- colorimetry of fluorescent materials, interior and exterior daylight illuminants 3—5833
- cyanine dyes, solns. and in polymers, visible and fluoresc. spectra 3—19181
- 1,4-dibromonaphthalene, inhomogeneous broadened lowest triplet absorpt., delayed fluoresc. and phosphoresc. 3—3778
- dielectron spontaneous decay 3—24017
- digital emulation of analogue computer tech. for kinetic system soln. 3—58394
- diphenyl polyenes in stretched polyethylene films, linear dichroism and fluoresc. polarisation 3—57884
- 9,10-diphenylanthracene in cyclohexane, actinometric determ. of absolute fluoresc. quantum yields 3—53429
- dodecylcyanobiphenyl liq. cryst., excimer formation and phase transition, luminesc. probe 3—34133
- dye laser fluorescence spectroscopy on the Doublet III Tokamak 3—18034
- ethanol glass, conc. depolarisation of phosphoresc. compared with fluoresc. in energy transfer of like mols. 3—38890
- excitation energy transfer, photoluminescence and fluorescence decay time 3—52814
- F-centres, radiationless transitions and fluorescence, Dexter-Kllick-Russell mechanism 3—57976
- fluoroberyllate:$Nd^{3+}(Eu^{3+})$ glass, computer simulated struct., comparison with optical spectra 3—33128
- glass:Nd^{3+}, nonradiative decay rate, composition depend. 3—34139
- glass structure determ., review of recent developments 3—33114
- graphite fibre reinforced epoxy, charact. of stability mechanisms, NDT 3—39329
- in-flow chromosome fluorescence meas., improved accuracy by digital processing of multi-parameter flow data 3—58892
- index matching liquid fluoresc. for geometric meas. of optical fibre preforms 3—1815
- laser-fluorescence mass spectroscopy, for consts. meas. 3—45244
- liquid crystal-Eu(III) chelate mixture, electrochem. fluorescence quenching, electro-optical display. appl. 3—47684
- liquid penetrant method of NDT 3—34556
- malachite green leucocyanide, unimol. ion pair form., picosec. dynamics 3—39402
- medical fluorescence bronchoscopy for localisation for carcinoma in situ 3—53766
- membrane lateral mobility, detect. by fluoresc. recovery after photobleaching 3—9794
- 6-N-methyl-N-phenylamino-2-naphthalenesulfon-N,N-dimethylamides, fluoresc. emission, solvent and substituent effect 3—3783
- microprocessor-controlled pulsed laser fluorescence spectroscopy detection system 3—25958
- molecular crystals, luminesc. spectra in presence of impurities and defects 3—38874
- molecular crystals, polarised luminesc. study 3—38870
- multiple phase-coherent laser pulses in optical spectroscopy, tech. and appls. 3—54777
- naphthalene, triplet exciton transport and metal-nonmetal transition 3—47266
- naphthalene, triplet-triplet exciton annihilation, effect of spin relax. 3—43034
- naphthalene alloys, exciton transport, percolation to diffusion transition 3—28274
- naphthalene crystals containing tetracene impurity, reson. hot transfer of energy 3—3792
- naphthalene crysts., substitutionally disordered, singlet exciton transport, percolation and diffusion 3—33642
- oceanographic fluorescence lidar signals, computer simulations and theory, sea surface struct. effect 3—9922
- oil films, UV sources for lidar fluorosensing 3—29481
- oil spills, fluorescence spectral conversion efficiency, airborne meas. 3—29461

fluorescence continued
- organic dyes, glass matrix, radiative and nonradiative energy transfer to inorganic ions 3—52819
- organic solutes, photoionisation by far UV light, elect. field quenching of fluoresc. and photocurrent 3—8875
- organic solvents, fluoresc. lifetime meas., refractive index corr. to radiative rate const. 3—38884
- penetrant process, overremoval propensities of prewash hydrophilic emulsifier 3—58350
- phenylosazone D-glucose, liq., intersystem crossing, lifetimes, fluoresc. study 3—43586
- photon-counting spectrofluorometer, microprocessor-controlled, protein/polymer films obs. appl. 3—49472
- photosystem II, polarisation of rapid and delayed fluoresc. 3—39604
- phthalocyanine, metal free, carrier generation mechanism 3—43196
- picosecond fluorescence lifetime meas., single photon timing system design 3—30928
- plant leaves, fluoresc. rel. to temp. 3—24788
- polarisation degree determ. with polarisation filter efficient over wide wavelength range 3—5862
- poly(2-naphthyl methacrylate) soln., excimer form., fluoresc. study 3—28885
- poly-1-methoxy-4-vinylnaphthalene, fluid soln., normal and second excimers, fluoresc. 3—3779
- poly-N-vinylcarbazole film, photocond., carrier photogeneration, exciplex and charge transfer fluoresc. quenchings 3—57384
- polymer solutions, interfacial depletion layers, direct optical obs. 3—24002
- polystyrene, soln., interfacial depletion layers, direct optical obs. 3—24002
- polystyrene in dilute solution, time-depend. fluoresc. polarisation, end-bond and internal-bond relax, comparison 3—52847
- polyvinylcarbazole, amorphous, energy-dependent incoherent singlet exciton motion 3—3072
- porphin free base in organic glasses, optical dephasing, photochemical hole-burning 3—8858
- protein/polymer films exam., microprocessor-controlled photon-counting spectrofluorometer appl. 3—49472
- purple photosynthetic bacteria, photophys. processes in light-collecting pigments, mag. field influence 3—34880
- pyrene evaporated coatings, emission spectra and fluorescence decay times 3—52835
- pyrene in p-terphenyl, delayed excimer fluoresc. study 3—24003
- pyrrol pigments, fluoresc. and absorpt. picosecond spectroscopy, relax. kinetics 3—24679
- radiance factor and chromaticity coordinates of fluorescent films, calculator assisted evaluation 3—10880
- resin, soln., polymerisation effect on fluoresc. lifetime 3—36815
- rhodamine 6G soln., luminescent props. 3—19167
- rhodamine dyes, fluorescence quantum yields, temp. depend. 3—52836
- seawater, relations between reduced gases, nutrients and fluoresc. in surface waters off Baja California 3—20010
- secondary luminesc. classification, afterglow duration 3—38865
- silica glass:Ti(Eu)(Ce), absorption and fluorescence spectra, melting and heat treatment effects 3—34140
- solar chromosphere spectrum, fluoresc. mechanism for form. of Cl I 1351 Å line 3—54299
- spectrophotometer, crystat attachment for −150 to +150°C meas. of organic solutions 3—49426
- spectroscopy, microcomputer appls. 3—10918
- sputtered Mo at. densities in front of W VIIA beam dump, fluoresc. spectrosc. investig. 3—18036
- standards for colorimetric and photometric appls. 3—5832
- standards for sensitivity control of fluorimeters and spectrofluorimeters *(Russian)* 3—48109
- synchronous luminesc. spectroscopy, correl. techniques for scan param. selection 3—49465
- p-terphenyl, displacive phase transition, fluoresc. and excitation spectra study 3—19177
- p-terphenyl, triplet exciton trapping, delayed fluoresc. and phosphoresc. study 3—43604
- thermal imaging using temp. dependent fluorescent thin films for temp. profiling 3—30853
- time resolved laser induced fluorescence spectroscopy for collisional excitation transfer measurements *(French)* 3—41658
- time resolved resonant fluorescence spectroscopy, using chopper system with pulsed YAG laser 3—30934
- trapping centres, excitation transfer in presence of anisotropic diffusion 3—8445
- tris(2,2′-bipyridyl)ruthenium(II) in sodium dodecyl sulphate solns. below crit. micelle conc., fluoresc. and cluster model 3—48095
- UNITOR Tokamak, H transport, wall interactions, reson. fluoresc. meas. 3—18055
- X-ray portable fluoresc. spectrometer prototype 3—10977
- $Al_2O_3:V^{4+}$, Cr^{3+}, Raman scatt. of high freq. phonons by spin states 3—34101
- Al_2O_3-Cr_2O_3, dynamic Zeeman effect at microwave freq. 3—34077
- $BaPt(CN)_4.4H_2O$:Ni, doped and undoped, emission spectra and excited-state lifetimes, 10 to 50K 3—47693
- BaS:Cu, Bi phosphor, radiolum., radiative recomb. phenomena, thermolum. comparison 3—14356
- $BeAl_2O_4:Cr^{3+}$, excited-state absorpt. temp. depend. 3—56200
- $BeF_2:Gd^{3+}$ glass, vibronic fluoresc., polarised Raman, and IR spectra 3—38895
- $Bi_4Ge_3O_{12}$, calorimetric and fluorescent props., EM calorimetry appl. 3—52853
- $Bi_4Si_3O_{12}$, scintillation characts. for EM shower detectors 3—41414
- $CaCO_3:Mn^{2+}$, fluorescence, lifetime and quenching 3—52830
- CaF_2:Er, transverse Zeeman effect, optical absorpt. and fluoresc. spectra 3—3691
- CaF_2:Nd(Ce), Zeeman IR spectra, optical absorption and fluorescence meas. 3—19124
- $CdSO_4:Pr^{3+}$, complexes in soln., optical absorpt. spectra and fluoresc. obs. 3—8845
- $Cl+HNO_3$, rate consts., flash photolysis reson. fluoresc. 3—44036
- $Cl_2{}^+$ RF discharge plasma etching, laser-induced fluoresc. study 3—2286
- $CsCl:Ag^+$, F-H centre production under light irrad. 3—56896
- CsI:In, Tl, optical gain meas., amplified spontaneous emission study 3—23974
- $CsMnCl_3.2D_2O$, isotope effects in multiphonon relax., optical spectra study 3—38826
- $Cs_2UO_2Cl_{4-x}Br_x$, migration and trapping, electronic energy transfer 3—3790

fluorescence continued
- Cu-Ga(In), metal clusters, vaporisation, laser induced fluoresc. study 3−32125
- GaP:N, Te, Zn, impurity related radiative recombination 3−47701
- $Gd_2O_2SO_4$:Eu^{3+}, prep., fluoresc. spectra, and cryst. field anal. 3−43594
- H atomic densities near wall, laser-induced fluoresc. meas. 3−18038
- He plasma, electron density, laser and collision induced fluoresc. meas. 3−27746
- KBr:Eu^{2+} single cryst., precipitated phases, optical absorpt. and fluoresc. 3−3807
- LaF_3:Pr^{3+}, fluorescence-line shape temporal variation 3−3799
- LaF_3:Pr^{3+}, superexchange induced energy transfer, fluorescence study 3−14341
- $La_2O_2SO_4$:Eu^{3+}, prep., fluoresc. spectra, and cryst. field anal. 3−43594
- MgO with chemisorbed O_2, adsorption-luminescence spectrum *(Russian)* 3−19196
- MgO: Cr^{3+}, fluoresc. narrowing induced splitting of R line, effect of internal strains *(French)* 3−19182
- $MgSO_4$:Pr^{3+}, complexes in soln., optical absorpt. spectra and fluoresc. obs. 3−8845
- NH_4Br:Tl, photoluminescence spectra after phase transition 3−14346
- $(NH_4)_2SO_4$:Pr^{3+}, complexes in soln., optical absorpt. spectra and fluoresc. obs. 3−8845
- NaCl:Ag$^+$(Cu$^+$), electronic struct. and luminescent props., multiple scatt. Xα calc. 3−3060
- NaCl:Ca, Eu, precipitation of Ca, Eu^{2+} fluorescence studies 3−51806
- $NaPO_4$-$Na_3Eu(PO_4)_2$, phase structures, emission spectra studies 3−51567
- $NaSrPO_4$-$Na_3Eu(PO_4)_2$, phase structures, emission spectra studies 3−51567
- Nd:glass laser, stimulated emission anisotropy, polarized fluorescence line narrowing study 3−37045
- $Nd_xLa_{1-x}P_5O_{14}$, exciton diffusion and fluorescence quenching 3−13740
- $Pr_xLa_{1-x}P_5O_{14}$, fluoresc. quantum yield, modified Vavilov method 3−38862
- $Pr_2(SO_4)_3$:Pr^{3+}, complexes in soln., optical absorpt. spectra and fluoresc. obs. 3−8845
- SiN_4 bearing surfaces, fluorescent dye penetrant inspection 3−39324
- SrF_2:Nd(Ce), Zeeman IR spectra, optical absorption and fluorescence meas. 3−19124
- ThO_2:Er^{3+}(Eu^{3+}), site selective spectroscopy, fluoresc. and excitation spectra 3−19172
- Ti atoms, release, transport and ionis. at ASDEX divertor plates, fluoresc. obs. 3−18037
- Xe, liquid, high press., fluorescence excitation meas. for electron, α-particle and fission fragment irrad. 3−24023
- XeCl excimer fluorescence and laser emissions 3−1610
- YAG:Eu^{3+}, high temp. press. sensor using fluorescence spectrum press. dependence 3−20865
- YAG:Nd^{3+}, multiphonon relax. rate from pumped level to upper laser level 3−28892
- $Y_2O_2SO_4$:Eu^{3+}, prep., fluoresc. spectra, and cryst. field anal. 3−43594
- ZnS:Cu, Sm(Eu)(Pb)(Tm) crysts., bulk emission in const. elec. field 3−8867
- ZnS:Tm^{3+}, energy levels and cryst. field parameters, fluorescence and cathodoluminesc. study 3−43066
- $ZnSO_4$:Pr^{3+}, complexes in soln., optical absorpt. spectra and fluoresc. obs. 3−8845
- ZrF_4-BaF_2-AlF_3-LaF_3-EuF_3, glass, Eu(III) fluoresc. study 3−52818

fluorescence of atoms *see atomic fluorescence*

fluorescence of molecules *see molecular fluorescence*

fluorescent lamps
- spectral power distribution rel. to correl. colour temp. and general colour-rendering index *(Japanese)* 3−50726
- Hg-Ar discharge, low-press., air or CO_2 impurity effects, fluorescent lamp appl. 3−42461

fluorescent screens
- *see also electroluminescence*
- medical fluorescent screen-isocon camera system for X-ray imaging in radiology, evaluation 3−9727
- radiographic screens, high-speed rare-earth and par-speed, clinical comparison for diagnostic efficacy and radiation dosage 3−15218
- rare-earth intensifying screens, various, rapidly occurring radiographic processes detect. 3−34956
- X-ray intensifying phosphor screens, long-term persistency 3−49519

fluorimetry *see spectrochemical analysis*

fluorine
- *see also nuclei with ......*
- adsorbed on Si surface, removal by ion bombard., SIMS study 3−38990
- atom, static dipole polarisability, complete active space SCF and externally contracted multireference CI studies 3−1257
- atomic high purity beam source 3−49498
- atomic laser, RF preionised, without auxiliary electrodes 3−56225
- atomic laser action obs. in hollow cathode discharge 3−12122
- atoms, foil excited, X-ray spectrum, one- and two-electron one-photon satellite transitions 3−11735
- atoms, mag. nonequivalence in trifluoromethyl cpds. 3−11828
- chemisorption on Ti (0001), discrete variational Xα cluster method 3−52221
- crystals, interat. pot. model 3−2462
- foil excited fast ion beams, EUV spectroscopy, line widths and broadening 3−21686
- graphite:F$^+$, ion implanted, metallic IR reflectivity and elec. cond. 3−2444
- ions, moving in solid C, single and double K vacancies 3−47008
- isoelectronic sequence, ground state fine struct. using extended regular doublet law 3−21636
- isoelectronic sequence, ground-state doublet separations 3−55826
- mixtures in glow discharge positive column, spectral and elec. pumps. 3−2328
- molecule, KVV Auger spectrum, hole-hole correls. 3−56003
- nucleosynthesis, warm CNO process as possible enrichment mechanism for O and F isotopes 3−30161
- polyacetylene:F$^+$, ion implanted, metallic IR reflectivity and elec. cond. 3−2444
- silicate rocks, S, Cl and F determ., X-ray fluoresc. anal. 3−15442
- two-electron systems, 1s2s $^3S_1$-1s2p $^3P_{0,2}$ transitions, comparison between theory and expt. 3−21684
- D_2-F_2-CO_2 photoinitiated chemical laser, high-efficiency 3−1618
- F VIII and IX, laser plasma diagnostics by X-ray spectroscopy 3−42444

fluorine continued
- F^-, electronic structure, even-tempered basis functions, universal systematic sequences 3−11665
- F^-, static dipole polarisability, complete active space SCF and externally contracted multireference CI studies 3−1257
- F-like ions, 2-2 transition, relativistic calcs. 3−17235
- F-like ions, spin-orbit intervals in ground state, relativistic HF calcs. 3−6557
- $F+D_2^+ \rightarrow FD^+ + D$, reaction dynamics, 0.002-30 eV 3−58407
- $F+D_2 \rightarrow D+DF$, state-resolved ang. distrib., reactive IOS method calcs. 3−39356
- F+ethylene reaction, ab initio MO calcs., equilib. geom., transition struct. and vibr. freqs. 3−48059
- F+ethylene reaction, ab initio MO calcs., heats of reaction, barrier heights and bond dissoc. energies 3−48060
- $F+H_2$, reactive infinite order sudden approximation, adiabatic anal. 3−58393
- $F+H_2$, supersonic chemically reacting jets, laminar mixing 3−37582
- $F+H_2$, three dimens. reaction, quantum collinear reaction probabilities 3−44040
- $F+H_2 \rightarrow HF+H$, quantum dynamical IOS calcs. 3−58418
- $F+HN_3$, N_3 radical form., vacuum UPS obs. 3−21820
- F+He, X-ray satellite lines from doubly excited states of F^{6+}, F^{7+} 3−41664
- $F+Li \rightarrow F^- + Li^+$, chemi-ionisation collisions 3−36848
- F+methane, rate determ., chemiluminescence study 3−19524
- F+Xe(^{1}S), fine struct. transition, close-coupled study 3−32167
- $F^- + Ar^+(Ne^+)$, mutual neutralisation, Landau-Zener approx. 3−41673
- F^-+HF, pot. energy hypersurface, force consts., SCF theory 3−53367
- F^-+H(D), associative detachment reactions, product vibr. state distrib. 3−44051
- F^-+inert gas, charge neutralisation in thin target 3−26835
- $F^- + Li^+ \rightarrow F+Li$, mutual neutralisation collisions 3−36848
- F_2+H_2 explosion initiation due to pulsed laser radiation on reaction vessel surface 3−53405
- F_2+Xe photoexcitation, XeF* excimer form. mechanism 3−24521
- ^{18}F positron emitting isotopes production using collective accelerator 3−41387
- ^{18}F-labeled organic compounds, producton by $^6Li(n,\alpha)^3H$, $^{16}O(^3H,n)^{18}F$, effects of other anions on nucleophilic substitution 3−58813
- $^{19}F^{7+}$ 1s2p $^3P_1$-$^3P_2$ fine structure splitting meas. using fast beam laser interaction 3−21710
- H_2-F_2 chemical laser parameters, initial electron beam initiation influence 3−1621
- He-F_2 mixtures in glow discharge positive column, spectral and elec. pumps. 3−2328
- KCl:Eu,F crystals, absorpt. and luminesc. centre form. 3−43599
- Si:F, amorphous, chemical bonding 3−22777
- Si:F amorphous film, annealing behaviour of Si-F bonding struct., optical props. meas. 3−57988
- a-Si:F films, RF glow discharge prep., struct. props. 3−34243
- Si:F(H,F), amorphous, picosecond photocarrier trapping, photoinduced absorpt. study 3−57376
- Si:H, F, amorphous, electronic struct. CNDO calcs. 3−52018
- Si:H,F, amorphous, majority carrier drift mobility 3−23407
- Si:H,F, amorphous, optical props. 3−23908
- a-Si:H and a-Si:H,F, struct. order parameters, Raman scatt. study 3−56820
- SiO_2:F, vitreous, Raman spectral characts. 3−14289

fluorine compounds
- fluorides, mixed, $M_2M'_3F_{11}$, MM'_2F_7, and MM'_3F_{10}, structural relations with U_3O_8 *(French)* 3−42581
- fluorides, muonic Coulomb capture ratios 3−8750
- FBS, electronic props., struct., ab initio SCF calcs. 3−11650
- FBS, isomers, geometries and stabilities, STO calcs. 3−11649
- FCN, modified virtual orbitals on local Coulomb corr. holes 3−36695
- FH, diagrammatic perturbation theory using a universal even tempered basis set 3−1217
- FH, mol. dipole moment, dipole polarisability tensor, complete fourth-order many-body perturbation theory calcs. 3−45814
- $FH+Li \rightarrow LiF+H$ reaction, ab initio pot. energy surface, initial orientation effect 3−29295
- FNO, mag. susceptibilities and NMR chem. shifts theory in terms of localised quantities 3−55969
- F_2O_2 struct., theoretical predictions and comparisons with F_2 and F_2O 3−26641

fluoroscopy *see radiography*

flux (magnetic) *see magnetic flux*

flux (neutron) *see neutron flux*

flux creep
- *see also flux pinning*
- No entries

flux crystal growth *see crystal growth from solution*

flux flow
- *see also flux pinning*
- Josephson junction transmission lines coupled by resistive networks, fluxon propag. 3−18834
- Josephson junctions, overlap and long inline, fluxon dynamics, mag. field dependence, perturbation calc. 3−52311
- Josephson long tunnel junction, vortex mode multiconfiguration obs. 3−28482
- long Josephson junction, flux flow branch modulation 3−3381
- type II superconductors, flux line cutting losses 3−3396

flux-line lattice
- anisotropic superconducting bicrystal, vortex interaction with boundary *(Russian)* 3−57500
- elastic behaviour of flux line in a half space 3−8637
- thin film transformer, vortex lattice melting and resist. props. *(Russian)* 3−47461
- type II superconducting wires, nonideal, AC induced decrease in semiquasistatic magnetisation parallel to DC bias field, theory 3−23537
- type II superconductors, flux line cutting losses 3−3396
- type II superconductors, flux-line lattice instability prod. by flux-line pinning defects 3−38566
- vortex file memory, reading and writing scheme 3−47462
- V, superconducting props., impurity depend. 3−23538

- **flux line motion** *see flux flow*
- **flux pinning**
  - *see also flux creep; flux flow*
  - Pb-Bi alloy films, supercond., grain-boundary flux pinning 3—3395
  - periodically modulated superconductor, commensurate phases, singularities on NMR line 3—18822
  - precipitates, normal, elementary pinning force, Ginzburg-Landau theory 3—43339
  - superconductors with anisotropic defects, crit. currents, magnetisation and resistive meas. 3—47464
  - thin film ternary compounds, critical fields, flux pinning and Fermi surfaces, book contrib. 3—8635
  - type II superconductors, defect clustering effect on volume pinning force, statistical theory 3—38565
  - type II superconductors, flux pinning by thin planar defects 3—8636
  - type II superconductors, flux-line lattice instability prod. by flux-line pinning defects 3—38566
  - type II superconductors, grain-boundary flux pinning by electron scatt. 3—18835
  - volume pinning force for small defect densities 3—33837
  - vortex file memory, reading and writing scheme 3—47462
  - Cr/Pb-Bi layered films, flux pinning strength and upper crit. field 3—13977
  - Cu-Nb$_3$-Sn microfilamentary composite supercond., crit. current meas., supercond. magnet appl. 3—52321
  - (Mo$_{0.6}$Ru$_{0.4}$)$_{82}$B$_{18}$, glassy, superconducting, surface flux pinning obs. 3—23555
  - Nb-Ti thin film, vortex pinning effect on the RF parameters 3—33839
  - Nb$_3$Ge microbridges, vortex behaviour 3—57486
  - Nb$_3$Ge thin films, anomalous pinning behaviour 3—28487
  - NbN superconducting film, flux pinning and crit. current *(Chinese)* 3—13975
  - NbNm-C film, superconducting props., struct., deposition 3—13945
  - Nb$_3$Sn composite superconductor, flux pinning by supercond.-normal boundaries 3—3394
  - Nb$_3$Sn tape with high crit. current, liquid-phase diffusion fabrication 3—14527
  - NbTi, supercond., with anisotropic defects, crit. currents, magnetisation and resistive meas. 3—47464
  - Pb-Cd, flux vortex and dislocation pinning *(Russian)* 3—13976
  - Pb-In alloys, change of flow stress at superconducting transition, flux trapping 3—33818
  - Pb$_{60}$In$_{40}$, double-pinning force maxima for single pinning mechanism, crit. current meas. 3—33838
  - Ti$_{55}$Nb$_{30}$Si$_{15}$, amorphous alloy, supercond. props., stress effects 3—13943
  - V strips, controlled pinning during diffusion implantation of gases 3—43340
  - Zr-base amorphous superductors, anal. of upper crit. field curves 3—43337
- **flux vortex flow** *see flux flow*
- **flux vortex lattice** *see flux-line lattice*
- **fluxmeters**
  - *see also magnetic field measurement; magnetic flux*
  - helicon generator appl., selective frequency 3—40638
  - photobalancing magnetic flux meters, inductive transducer for expanding measuring range 3—40649
- **fluxoid array** *see flux-line lattice*
- **FMR** *see ferromagnetic resonance*
- **foams**
  - *see also bubbles*
  - alloys, unidirectional solidification, space expts. at Grenoble, review 3—4027
  - cellular, flow through plateau border 3—7639
  - plastics, rigid foam, breakdown under transient loading, statistical investigation 3—53205
  - polyurethane, open cell highly porous foam, acoustical structure 3—8144
- **focused collision sequences** *see sputtering*
- **focusing**
  - *see also self-focusing*
  - acoustic annular transducer with a nonelectronically achieved depth of focus ranging from 20 mm to 140 mm 3—50893
  - acoustic arrays, linear, focusing 3—50867
  - acoustic focusing source, acoustic field calc. 3—7267
  - acoustic imaging by wave field extrapolation, data acquisition methods 3—1868
  - acoustic imaging by wave field extrapolation, theory 3—1867
  - acoustic microscope, nonscanning reflection system, V(z) curves meas. by acoustic line-focus beam 3—46413
  - atmosphere ELF propagation, diffraction, refl. and focusing due to lateral ionospheric gradients 3—10035
  - axisymmetric electron-optical systems for electron beam shaping 3—6864
  - B-scan echography linear array, acoustic field, two dimensional model 3—50870
  - B-scan spherical focusing apertures, pulsed echographic response theory 3—4605
  - biplanar lens, symmetric single section, focusing props. 3—41750
  - bipolar electrostatic lenses, focusing properties, right-angle model 3—46153
  - charged particle beam deflection and focusing in electrostatic transaxial system 3—32290
  - combination harmonics in laser plasma, spectrum, focusing and recording lenses effects *(Russian)* 3—32981
  - combined electric-magnetic focusing-deflection system, relativistic aberration formulae 3—46148
  - confocal scanning microscope, dynamic focusing 3—10898
  - crossed lenses, electrode shape effect on electron-optics props. 3—17429
  - electric field lens, ion beam measurement and microfabrication *(Japanese)* 3—39430
  - electron microscope automatic focusing and astigmatism correction system for the SEM and CTEM 3—473
  - electron microscopy, high resolution, Fresnel fringe for defocus determ. 3—16451
  - electron microscopy, high resolution, improved low dose technique, corrective focusing method 3—10952
  - film camera, automatic focusing using CCD receptor *(German)* 3—45229
  - gradient index rod lens of CR-39 trifluoroethyl methacrylate copolymer by vapour phase transfer process 3—37153
  - gradient index rod lens with high numerical aperture, ion exchange fabrication 3—37150

- **focusing** continued
  - gradient-index rod prepared by photocopolymerisation of ternary monomer system 3—37154
  - high-speed camera image quality, influence of dynamic defocusing *(Russian)* 3—54789
  - integrated photography, non-Lippman mode *(Russian)* 3—20941
  - intense ion beam handling in magnetised plasma 3—6447
  - intense pulsed light-ion beam, generation, focusing, propag. and target irradiation 3—6480
  - ion beam, edge of field effects and aberrations *(Japanese)* 3—36931
  - ion beam, from reflex triode, focal spot size, anode plasma uniformity effects 3—41379
  - ion beam transport system, fundamental laws *(Japanese)* 3—36932
  - ion-optical system, double-focusing, linear approx. 3—41752
  - laser beams, high power, singlet aspheric lens for precision multiwavelength focusing 3—50728
  - laser systems, high-power, radiation parameters in the focus, apodisation effect 3—50688
  - light beam focusing with random phase modulation 3—36936
  - light ion prod. and focusing with pinch-reflex diodes 3—6481
  - light-ion ICF, system requirements 3—6445
  - line-focusing by means of a quadrupole lens, using novel shadow-image technique 3—30965
  - linear imaging systems, focus adjustments 3—20894
  - linear transducer array, dynamic focusing and compound scanning 3—4587
  - liquid sphere, sound wave focusing 3—27291
  - magnetic coaxial lens system for hollow ion beams 3—41369
  - magnetically insulated ion diode, applied-B$_\theta$, parameter studies 3—10940
  - neutron time-of-flight diffractometer for liq., amorphous and powder diffr. 3—7860
  - objectives, defocusing in coherent illumination, sensor output anal. *(Russian)* 3—56298
  - optical parametric oscillators with hemispherical resonator, singly reson., elliptical focusing optimum conditions 3—12220
  - optical probe/camera objective design with large focusing range 3—49483
  - parabolic trough annual performance effects of systematic rotation and receiver location errors 3—39450
  - periodic electrostatic focusing with finite-thickness electrodes, boundary electron paths calc. 3—50596
  - phased array semiconductor laser, high power 7700Å operation, focusing method 3—27093
  - photoacoustic detection, pulsed, electrostrictive limit and focusing effects 3—37997
  - piezoelectric polymer US transducers, conical and toroidal, for long range focusing 3—50895
  - plasma, ion cyclotron waves self-focusing 3—12858
  - polyvinylidene fluoride film piezoelec. transducers, single-element and array, for acoustic imaging 3—50894
  - proton beam, intense, pulsed, geometric focusing 3—10941
  - pulsed acoustic phased arrays, matched Gaussian apodisation 3—1920
  - radio fields, numerical method for extending ray trace calcs. into strong focusing regions 3—6842
  - random medium, plane wave fourth moment differential eqn. numerical soln. 3—26943
  - relativistic particle bunches, elongation invariance in electrostatic field 3—1538
  - SAW, nonlinear SHG and focusing phenomena, optical study *(French)* 3—17678
  - scanning acoustic microscope with transducer swing along beam axis 3—46414
  - single-mode fibre preform index profiling, immersionless technique 3—27247
  - sound focusing, lens, quasi-parallel-sided 3—50868
  - spherical Gaussian beam focusing through train of lenses or mirrors 3—46248
  - spherical particle beam, focusing by planar mag. fields 3—30962
  - stimulated multiphoton effects on a diffraction grating 3—27228
  - synchrotron radiation, high flux and high resolution VUV beam line 3—41365
  - underwater focused acoustic imaging system 3—1833
  - US focusing transducer systems 3—1910
  - US hyperthermia, focused transducer design 3—48359
  - US imaging, nonlinear focusing effects 3—46388
  - US NDE using focused US waves under oblique incidence, aberrations 3—56406
  - wavefront reversal efficiency in medium with time depend. fluctuations 3—27170
  - working material, ductility control using spherical focusing system, localized stress peaks *(German)* 3—7514
  - X-ray diffraction lens, magnifying cylindrical, image transmission 3—27805
  - X-ray dynamic focusing in crystal bending system, nonideal effects, theory 3—18186
  - CO$_2$ laser focusing elements, computer synthesis 3—36969
  - GaAlAs/GaAs high power phase-locked laser array beam 3—46240
  - P, chemiluminescence flame, cool green, UV light amplification, focussing phenomenon 3—24509
  - Si$_3$N$_4$ flaw detection, 50 MHz US three-dimensional synthetic focus system 3—4254
  - ZnO film lenses for surface acoustic waves 3—42904
- **focusing, particle** *see focusing; particle optics*
- **fog**
  - acid fog chem. comp. in Los Angeles Basin, USA 3—30042
  - drop-size distribution of fog droplets, determ. from transmission meas. in 0.53 to 10.1 μ wavelength range 3—25146
  - evaporation fog forecasting by quadratic discriminant analysis 3—48647
  - forecasting radiation and radiation-advective fogs 3—48646
  - industrial fugitive dust control with electrostatically charged fog devices 3—39556
  - inhalable particle control using electrostatically charged fog generator 3—39555
  - IR and visible extinction coeff. correl. 3—4960
  - laser radiation extinction by fog and rain (CO$_2$ laser) 3—4956
  - measurement of fog with laser equipment 3—44578
  - microstructure, aerosol effect 3—54124
  - radiation fog forecasting, statistical method for Rhein-Main-Airport *(German)* 3—15652
  - radiation propagation, contaminants effects computing, Electro-Optical Systems Atmospheric Effects Library 3—10056

fog continued
Ag halide, photographic emulsion microcrystals, latent image and fog formation under light and elec. pulse irrad. 3—54783
H_2O, cryodeposit instability, influence of fog sublayer formation 3—51920

foils
electroplated foils, ductility testing 3—53306
heavy metal foils, use for radiographic dose reduction 3—19813
metallic, thin, irradiated, interstitial loop growth 3—18294
polycarbonate foils, electrochemically etched, meas. of natural neutron background using ^{10}B radiators 3—36633
polyester foil, aged by partial discharges and UV irrad., static polarisation meas. 3—23867
polyethylene terephthalate, struct. changes from thermal treatment in glass transition region *(German)* 3—38070
polymer thin foil-metal interface, current-voltage characteristics, space charge effects *(French)* 3—23482
spin-flipper for polarised neutron beam, mag. field compensation 3—50095
Teflon FEP foils, electron beam irradiated, charge dynamics model 3—38399
thickness measurement in TEM, rapid in situ meas. method 3—470
vibrating-reed internal friction meas., apparatus with extended capabilities 3—40741
Ag-Cu(Pd)(Pt)(Au) foils, dil., CESR linewidth 3—3534
Ag-Pd composition modulated foils, biaxial elastic modulus meas. 3—47016
Al, electron energy loss calc. 3—26605
Al foil, point defect nature determ. from dislocation loops *(Russian)* 3—37902
Al laser irradiated foils, plastic deform. study *(Russian)* 3—37983
Au, elec. resist., temp. depend., size effect theory 3—13800
Au foils, surface-induced elec. resist., temp. depend. 3—43296
Be, electron energy loss calc. 3—26605
C foils, light element impurity content 3—27965
C foils manufacture and use for beam-foil spectroscopy 3—21945
C, heavy ion energy loss and energy loss straggling calcs. 3—36634
C, specific energy loss depend. on foil thickness 3—41463
C stripper foil, preparation and thickness monitoring *(Chinese)* 3—41377
C stripper foil shrinkage under heavy ion bombardment 3—45736
Cu, bursting diaphragm as a fast-acting valve, mechanical testing appl. 3—42203
Cu, electron energy loss calc. 3—26605
Cu irradiated thin foils, interstitial loop growth 3—18294
Cu laser irradiated foils, plastic deform. study *(Russian)* 3—37983
Cu-Au composition modulated foils, biaxial elastic modulus meas. 3—47016
Cu-Ni composition modulated foils, biaxial elastic modulus meas. 3—47017
Fe, oxidation to Fe_3O_4, electron transfer, XPS study 3—19248
α-Fe:Co, neutron irrad., Mossbauer study of point defects 3—57821
Ni based selective surface, Maxorb, high solar absorptivity with emissivity 3—19607
Ni-Fe-Co-Ti foils, containing nonmag. precipitates, magnetisation processes, TEM study 3—52572
Ni-Fe-Co-Ti thick foils, mag. domain struct., TEM study 3—52573
Ti foil, vac. evaporated, influence of MgF_2 and CaF_2 release agents 3—29013

Fokker-Planck equation
anisotropic liquids, angular-dependent rotational friction 3—27832
asymmetric bistable potentials, exact diffusion results 3—45096
axisymmetric mirror plasmas stabilisation by energetic ion injection 3—37680
binary interactions, adiabatic approx., master hierarchy of kinetic eqns. 3—45056
Brownian particle absorption by black sphere, Fokker-Planck eqn. and diffusion eqn. 3—54673
charged particle beam momentum and energy losses in non-Maxwellian plasma 3—27713
charged spherical Brownian particles, self-diffusion coeff. 3—20764
collision term in mag. field, mag. scalar potentials 3—46685
diffusion in a class of double-well potentials, Fokker-Planck eqn. 3—230
diffusion in bistable pot., exact soln. 3—25832
fast neutron scatt. anisotropy, Boltzmann-Fokker-Planck eqn. treatment 3—41088
fluids and plasmas, diffusion, Fokker-Planck transport model 3—37624
fusion pellet ignition anal. appl. 3—26483
heavy ion collisions, microscopic transport theory, neutron and proton transfer 3—21335
heavy ion deep-inelastic collisions, mass-energy correlations of fragments 3—31427
infinite-range Ising spin glass, internal field distrib. 3—47514
information diffusion, critical behaviour, nonlinear stochastic model 3—25820
information gain solns., stability anal. 3—54690
Josephson tunnel junction, capacitance effects on noise rounded current-voltage curves 3—23547
Josephson voltage steps, microwave phase noise effect 3—3379
Langevin eqns. with multiplicative coloured noise 3—16265
Langevin equation for harmonic oscillator in a fluid 3—180
laser Fokker-Planck equation for intensity and inversion, soln. 3—17474
magnetic fusion research, computational problems, survey 3—50054
magnetically confined fusion plasma, α-particle scatt. losses during slowing down 3—11479
nonlinear Langevin eqn. with quadratic noise 3—20768
nonlinear oscillator driven by white noise, short time evolution 3—20770
nonMarkovian Brownian harmonic oscillator, long time behaviour, relaxation processes 3—10750
nonMarkovian processes, long and short instants of time, appl. Brownian motion 3—40527
nonuniform gas, modified Fokker Planck eqn. for motion of Brownian particles 3—189
nuclear fission dynamics, Fokker-Planck eqn. for temp., time to scission, fragment kinetic energy 3—45566
optical bistability due to a two-photon absorption resonance with fluctuations 3—17556
oscillatory steady states, lifetime, problems of pendulum, shunted Josephson junction and charge-density 3—10773
physisorption, Kramers's eqn., friction coeff. derivation 3—33570
plasma ion-acoustic waves, ion collisionality effect on frequency and damping rate 3—27689

Fokker-Planck equation continued
probability density, differential eqns. and ordered cumulant technique 3—10749
quantum optics, Langevin eqns. with coloured noise and bistability 3—50694
renormalized diffusion in systems with periodic variables 3—16257
reversible chem. reactions, fluctuations 3—53358
semiconductor, conductivity influenced by strong EM radiation 3—38379
single-mode laser, adiabatic expansion, master eqn. 3—46190
spatially varying mag. mirror, collisional loss, self-consistent anal. 3—46760
steady one dimens. Brownian motion with an absorbing boundary 3—5717
superconductor, nonlinear dynamics, fluctuation restoration of adiabatic behaviour, theory *(Russian)* 3—57482
TMX-upgrade tandem mirror, electron cyclotron reson. heating, hot electron formation, Fokker-Planck calcs. 3—51339
Tokamak, neutral beam heating, power boost using compression, simulation study 3—18088
Tokamak reactors, vel. space-loss region effects on α-particle distrib. and losses 3—32869
transient phenomena near instability point, unified formulation using Fokker-Planck eqn. 3—30830
unstable systems, path-integral soln. 3—45065
velocity distrib. function for many-body systems, variational derivation 3—35907
$^{27}Al(p,\alpha)^{24}Mg$, 633 keV, blocking technique, lifetime-effect relations, multistring model and Fokker-Planck eqn. anal. 3—36636
UO_2, dechannelling of backscatt. protons, role of O sublattice 3—18357

forbidden gap *see energy gap*

Forbush decreases *see cosmic ray variations*

force
see also atomic forces; coercive force; Coriolis force; force measurement; molecular force constants; nuclear forces
body moving in viscous fluid, force acting on body 3—7540
cylinder in steady stream of viscous fluid at low Reynolds number, force acting on body 3—7541
geometrical treatment 3—35812

force constants *see lattice dynamics; molecular force constants*

force measurement
see also dynamometers
automated, for static calibration 3—20850
automatic compensating microdoublebalance 3—25874
compensation technique for force balance devices 3—35977
dynamometer characteristic, interpolability deviation *(Rumanian)* 3—35987
electromagnet suspension of accelerometer, accuracy increase 3—49348
load transducers up to 10 N, static calibration devices *(Rumanian)* 3—40594
magneto-elastic force transducers, with DC digital voltmeter readout *(German)* 3—285
multicomponent balance using piezo force elements for high press. wind tunnel expts. *(German)* 3—42344
parametric force transducer with resonant pump, analysis 3—296
shear transducer for meas. of forces under the foot 3—35006
shoe, instrumented, for ambulatory meas. of orthogonal components of ground reaction forces *(Japanese)* 3—19832
skin friction time-resolved meas., modified gauge 3—27626
transducer for fluctuating forces meas., vortex shedding in cross flow 3—22560
transducer using amorphous mag. ribbon material, AC appls. 3—25868
transducers for acceleration, vibration and shock *(French)* 3—16349
wire tension meas. method for MWPC and drift chambers *(Chinese)* 3—41474

force meters *see force measurement*

forecasting, technological *see technological forecasting*

forging
Astroloy, Ni-base superalloy, supersolidus sintered preforms, necklace struct. obtained by forging 3—9017
lens press forging for IR optical systems 3—7226
plasticity criteria for porous metals 3—58067
polyethylene, mica filled, hot rolling and forging, effect on mech. props. 3—29057
steel, Ni-Cr-Mo type 4340, thermomech. treatment effect on notch toughness 3—53098
steel, stainless, forgings of 03Kh12K12D2-VD, mag. and mech. props. 3—29129
steel, stainless, type (G)X-5 CrNiMo 16 5, casting and forging, props. and possible appls. *(German)* 3—47873
superalloys, hot isostatic pressed plus forged, mech. props. and struct. 3—52997
Al-Zn-Mg-Cu special purity high-strength alloy for forgings, props. 3—34401
Fe-base forged sintered materials, forged sintered, fatigue, fractographic anal. 3—24355
Ti-Al, recrystn. texture form. 3—24263
Ti-Al-Sn-Zr-Mo-Si, hot forging, nonisothermal, occurrence of shear bands 3—34399

form factors, atomic *see atomic structure*

form factors (elementary particles)
see also form factors (nuclear)
asymptotic behaviour, alternative model to dimens. counting rules 3—16640
causal functions, self-similar asymptotic behaviour, light cone behaviour 3—5979
hadron wave functions and pion decay constant 3—16642
Majorana neutrino EM props. 3—640
Majorana neutrinos transition mag. moment and electromagnetic form factors, comparison with Dirac neutrinos 3—26115
meson exchange, quark pairing and chiral bag models 3—11251
neutron structure in QCD 3—49685
nucleon form factors in the geometrodynamical model 3—40904
OBEP momentum-space, treatment with high order form factor 3—45379
pion EM form factor, phase representation 3—45396
polarised hyperon semileptonic decays, theorems on form factors determ. 3—45390
proton decay in SU(5) grand unified theory 3—11176
proton decays in SO(10) grand unified theory 3—11177
pseudoscalar mesons, weak decays 3—45387

form factors (elementary particles) continued
- pseudoscalar mesons EM form factors in anisotropic chromodynamics 3−40909
- soft hadronic processes and hadron structure 3−6083
- strictly confining models, form factor analytic props., branch point 3−16611
- subquark model, quark and lepton form factor structure 3−36221
- unpolarised hyperon semileptonic decay, form factors determ. 3−31208
- d, magnetic form factor, anal. parametrisation 3−49680
- $de \to e'np$, near break-up threshold at high momentum transfer, exchange effects 3−31219
- ed, polarisation effects, one-photon exchange approx. 3−11189
- e^+e^- annihilation, hadron prod., single gluon contrib. 3−646
- $e^+e^- \to \pi^-\tau\nu_\tau$, weak pion production, structure functions *(Russian)* 3−40892
- $e^+e^- \to q\bar{q}\pi^\pm$, three jet processes, P-odd effects for one-photon mechanisms *(Russian)* 3−11197
- $e^+e^-K_SK_L$, 1.06-1.40 GeV, neutral kaon formfactor meas. *(Russian)* 3 -6111
- η EM form factors in VDM and QCD 3−36249
- $\eta \to \mu^+\mu^-$, branching ratio study 3−21122
- $K^+ \to \gamma e\nu$, radiative decay and effective $q\bar{q}$ pot. near origin 3−21137
- K_{l3} decay, form factors, Bethe-Salpeter $q\bar{q}$ dynamics 3−26094
- K_{l3} form factor renormalisation, role of π' and K′ 3−21130
- $\bar{p}d \to e^+e^-n_s$, nonadiabatic effects, proton EM form factor 3−54921
- pp($\bar{p}$p), Coulombic-hadronic interference in eikonal model 3−16658
- π, form factors, sum rules in QCD 3−40905
- $\pi \to e\nu(e\nu\gamma)(e\nu_e e^+e^-)$ decays and related processes 3−16635
- π form factor asymptotics, enhanced power correction 3−11182
- π form factor at large p_T^2 from π^-p scatt. 3−45395
- Π form factors from RMS charge radii, incompatibility of Soviet-American expt. data 3−11185
- $\pi^0 \to e^+e^-$, branching ratio study 3−21122
- π^0 EM form factors in VDM and QCD 3−36249
- $\pi^+ \to \gamma e\nu$, radiative decay and effective $q\bar{q}$ pot. near origin 3−21137
- πNN form factor, chiral symmetry breaking and three-pion reson. 3−54914
- πNN form factor, nonlocality effects in pion quark coupling in chiral bag model 3−49681
- $Q\bar{q}$ heavy flavoured mesons, exclusive processes in QCD, form factors 3−11125
- $\tau \to \nu\pi X$, $X=\rho,\omega,\phi,\eta$, second class currents, weak current form factors 3−31209

form factors (nuclear)
- α-clustering levels, spectroscopic factors from optical anal. *(Russian)* 3−31260
- A=2-4, central phenomenological NN pots., binding energies, form factors 3−40970
- atomic nuclei dynamics form factors, Gram-Charlier expansion 3−11239
- deep inelastic scatt., longit. response function, test of Noble's hypothesis 3−6216
- deformed nuclei, form factors for inelastic excitation of vibr. bands 3−6148
- DWBA analysis of α-transfer reactions with microscopic formfactors 3−21268
- electromagnetic form factors and quark model 3−54948
- Fuda πN separable model for P wave interaction 3−54999
- heavy-ion reaction, deformed nuclei surface, classical treatment 3−11333
- off-shell πN amplitude, inverse scatt. solns., form factors 3−6161
- phenomenological study of nucl. currents 3−45446
- three nucleon bound state with isobaric and pionic degrees of freedom 3−54945
- trinucleon systems, three-body force contrib. hyperspherical harmonic method 3−11255
- two-nucleon transfer reactions, ^{3}H, ^{3}He projectiles and products, R-matrix anal., form factor models 3−36393
- (e,e′), virtual photon spectrum for relativistic electron scatt., second-order Born approx. 3−45522
- (e,e′) in medium and heavy nuclei, high spin mag. observables 3−49839
- (n,γ), fast n, imaginary dipole form factor strength, mass depend. 3−692
- (p,p) scatt. amplitudes, analytic approximations 3−31408
- (p,p′) at intermediate energies, nucl. information from proton spin observables 3−21312
- pp separable potential, Coulomb distortion, transition matrix derivation 3−45461
- ^{10}B(e,π^+e′)^{10}Be, 158.5-165.0 MeV, ang. distrib. and cross section meas. 3−11305
- ^{11}B(^{16}O, ^{15}N)^{12}C, nucl. compressibility and matching term effects, shell model interaction anal. 3−31429
- ^{9}Be(^{3}He,p)^{11}B, 38 MeV, CC ^{11}B study at high excitations 3−6239
- ^{9}Be(α,d)^{11}B, CC ^{11}B study at high excitations 3−6239
- ^{209}Bi, A=207, 208, mag. form factor, from (e,e′) 3−752
- ^{12}C(e,e), 4-10 MeV, application of second order monopole deformation, form factors from Born approx. 3−6174
- ^{14}C(p,n)^{14}N, role of tensor force in inelastic scattering *(Korean)* 3−11309
- ^{40}Ca(^{16}O,^{12}C)^{44}Ti, microscopic finite range form factor 3−21337
- ^{A}Cr(e,e), 30-400 MeV, A=50,52,54, elastic and inelastic, charge distrib., form factors 3−31283
- ^{2}H, form factors, e-d pol. obs. for PARIS and GRAZ-II pot. 3−54946
- ^{2}H, magnetic form factor, anal. parametrisation 3−49680
- ^{2}H, photodisintegration and radiative capture cross sections and form factor calcs. from deuteron wavefunct. 3−40962
- ^{2}H targets, Fermi motion effects, West's β correction 3−21099
- ^{2}H(e,e′), parity violating EM form factor, magnetisation and convection current 3−26192
- ^{2}H(e,e′n)^{1}H, near break-up threshold at high momentum transfer, exchange effects 3−31219
- ^{2}H(e,e), polarisation effects, one-photon exchange approx. 3−11189
- ^{2}H(e$^-$,e), recoil d polarisation, relativistic impulse approx. calc., form factors, NN forces 3−6211
- ^{3}H, bound state properties, from Faddeev eqn. perturbation anal. 3−40961
- ^{3}H, electromag. form factors, dependence on nucleon structure on NN interaction models 3−40965
- ^{3}H, pair current in constituent quark model 3−45444
- ^{A}H, A=2,3, internal nucleon struct. effect on nuclear charge, current operators 3−54947
- ^{3}He, charge distrib. short-range form 3−6150
- ^{3}He, elastic mag. form factor meas. 3−685

form factors (nuclear) continued
- ^{3}He, electromag. form factors, dependence on nucleon structure on NN interaction models 3−40965
- ^{3}He, internal nucleon struct. effect on nuclear charge, current operators 3−54947
- ^{3}He, pair current in constituent quark model 3−45444
- ^{3}He(e,e′), 185-380 MeV, mag. form factor, charge radius 3−31282
- ^{3}He(π^-,π^0)^{3}H, 285-575 MeV, cross section meas., reaction mechanism, form factor effects 3−21355
- ^{4}He, charge form factor and first excited state, shell model description 3−690
- ^{4}He, nucl. props., tensor and short-range correlations 3−31279
- ^{A}He(e,e′), A=3,4, inclusive inelastic scatt. cross section meas. 3−11304
- ^{A}He(π^-,n), A=3,4, 285-575 MeV, cross section meas., reaction mechanism, form factor effects 3−21355
- ^{165}Ho(e,e), form factors, spin magnetisation and orbital current density distrib. 3−36316
- ^{39}K(e,e), mag. form factor, core pol. and mesonic exchange current effects 3−31280
- ^{6}Li, (α-d) cluster model and muon capture rate 3−26219
- ^{6}Li, charge form factor, CM motion separation influence 3−16693
- ^{6}Li charge form factor and specific distortion effect in d-α system 3−6243
- ^{7}Li, 0.478 MeV state, excitation using (e,e′), form factor calc. 3−717
- ^{7}Li low lying levels study by electron scatt. 3−45443
- ^{24}Mg β-band excitation in collective model, coupled channel effects, form factors, from (h,h′) and (α,α') 3−11297
- ^{24}Mg(e,e′), inelastic form factors, transition strengths between 0^+ and 1^+ states 3−55029
- ^{93}Nb, magnetic form factor at high momentum transfers, mesonic exchange contribs. 3−686
- ^{58}Ni(e,e′), electric multiple strengths distrib., DWBA form factors 3−55035
- ^{A}Pb, A=207, 208, mag. form factor, from (e,e′) 3−752
- ^{208}Pb(α, α'), (60-85)/$A^{1/3}$ MeV, giant reson. strengths, DWBA and form factor calcs. 3−31372
- ^{87}Sr, magnetic form factor at high momentum transfers, mesonic exchange contribs. 3−686
- ^{181}Ta(e,e), form factors, spin magnetisation and orbital current density distrib. 3−36316
- ^{49}Ti, magnetic form factor at high momentum transfers, mesonic exchange contribs. 3−686
- ^{51}V, magnetic form factor at high momentum transfers, mesonic exchange contribs. 3−686
- ^{90}Zr(α, α'), (60-85)/$A^{1/3}$ MeV, giant reson. strengths, DWBA and form factor calcs. 3−31372

formal logic
- regularly full logics, uniqueness problem for observables 3−44988

formation, heat of *see heat of formation*

forming processes
- *see also casting; electroforming*
- creep mechanics, net-stress anal. 3−42145
- large plastic deforms. rel. to metal-forming processes, finite element approaches 3−12534
- metal, sheet, forming under biaxial stretching, local necking, shear instability criteria 3−53130
- metal sheets, in-plane compression forming technique, mech. props. rel. to large drawing deform. 3−53317
- sheet metals, forming limit diagrams, effect of strain path changes, dislocation treatment 3−14661
- steels, conf., Bethlehem, PA, USA (Oct. 1981) 3−2
- superplastic formability testing 3−4234
- superplastic forming, grain refinement and grain size control 3−9125
- Al-Cu (6%), flow stress, in warm working range 3−53124
- Cu-base alloy, forming limit diagram, new model, appl. to expts. 3−47898
- Nb and alloys, fabrication, deform. parameters 3−4081
- Ni-Fe alloy sheets, formability, tensile props. rel. to rolling direction 3−47917
- Ti alloys, superplastic forming characts., constitutive eqns. 3−58165
- Ti-Al-V (6, 4 wt.%), enhanced superplasticity in modified alloys 3−53160

FORTRAN
- cluster enumeration, FORTRAN program 3−25825
- liquid crystal director fields, numerical three-dimensional relaxation, FORTRAN program 3−13094

Foucault currents *see eddy currents*

fountain effect *see superfluid helium-4*

Fourier analysis
- *see also Fourier transforms; harmonic analysis; waveform analysis*
- acoustic array signal processing by composite complex sinusoidal modeling, computer simulation 3−32547
- acoustic multichannel FFT analyser for signal processing 3−12470
- p-chlorobenzoyl piperidine, cryst. struct., X-ray and Fourier anal. *(Chinese)* 3−42590
- classical Cepheids, Fourier decomposition of theoretical and observational light and vel. curves 3−54373
- correlation Stokes polarimeter using a dual channel SAW Fourier analyser 3−16404
- crystal struct., Fourier synthesis, use of Sim weight *(Chinese)* 3−27803
- deformed crystals, dislocation density determ. from X-ray diffr. *(Russian)* 3−51601
- electron spin echo modulation spectrometry, Fourier transform anal. 3−54761
- filtering properties of mathematical methods of line background suppression in absorption spectra 3−54719
- Gibbs's phenomenon, Fourier integral treatment 3−35813
- high frequency limit to Fourier analysis, reminder of Nyquist freq. and appl. to variable star data 3−59228
- ion range statistics by a Fourier series, implanted impurity distribution prediction 3−51650
- musical composition, Fourier anal. and information theory 3−56388
- narrow-band signal in broad-band correlated noise, high resolution spectral anal. 3−32545
- photographic prints, Fourier anal. immersion objective *(Russian)* 3−20937
- plates, bevelled, design by method of straight lines *(Russian)* 3−17819
- solid electrolyte electrodes, impedance spectra, Fourier anal. 3−57132
- surface, laser induced periodic struct., Fourier component anal. 3−42896
- two-level model with periodic external field, quantum mol. dynamics 3−40414

Fourier analysis continued
- US fields, finite amplitude, parametric interaction, Fourier anal. *(French)* 3—17677
- ventricular wall motion, regional and global, left, temporal Fourier anal. appl. to equilib. radionuclide cineangiography 3—9713
- waveguide with slightly perturbed wall, EM field accompanying bunch of particles *(French)* 3—41370
- X-ray diffr. profiles, Fourier deconvolution 3—37735
- $Ba_2Zn_3P_{10}O_{30}$, cryst. struct., X-ray diffr. and Fourier anal. 3—27907
- $Ce_2(MoO_4)_2(Mo_2O_7)$, cryst. struct., X-ray and Fourier anal. study 3—8000
- $Cs_4Nb_6O_{17}$, cryst. struct. and hydration mechanisms, X-ray study, Fourier Patterson anal. *(French)* 3—2511
- $In_6La_{10}O_6S_{17}$, cryst. struct., X-ray diffr. study, Fourier anal. *(French)* 3—2481
- $K_4Nb_6O_{17}$, cryst. struct. and hydration mechanisms, X-ray study, Fourier Patterson anal. *(French)* 3—2511
- $(NdO)_4Ga_2S_5$, cryst. struct., X-ray diffr. study, Fourier anal. *(French)* 3—2482
- $Rb_4Nb_6O_{17}$, cryst. struct. and hydration mechanisms, X-ray study, Fourier Patterson anal. *(French)* 3—2511

Fourier series *see series (mathematics)*

Fourier transform optics
- *see also Fourier transform spectroscopy*
- achromatic-Fourier-transform systems, polychromatic speckle anal. 3—32314
- acoustooptical light modulations, freq. charact. 3—7164
- binary multiplexing and the phase-retrieval problem 3—32317
- brightness distribution reconstruction, from fragments of modulus of Fourier image 3—46173
- cell metaphase selection by analysis of the Fourier transformed image 3—24939
- channelled spectra signatures removal in Fourier spectroscopy 3—40704
- coherent field complex amplitude distrib., interlens distance effect 3—6903
- deblurring filter, unconstrained single, made from blurred doubly blurred point spread function 3—27211
- discrete Fourier transforms, problems in modelling as narrow band filters *(Russian)* 3—50619
- electro-optical imaging system, MTF deterioration by image motion 3—42027
- electron Fourier holography reconstruction conditions and resolution 3—25993
- fibre index profile determ. from transverse interferograms using Fourier theory 3—37191
- holographic interferometry for stress anal., spurious translation delinking using speckle correl. technique 3—50632
- image quality of elliptical objects, influence of primary coma 3—22000
- laser pulse propagation in particulate media, split-step Fourier transform analysis 3—6883
- light modulation by US progressive wave associated with optical amplitude grating, irradiance, Fourier series 3—56139
- object restoration, regularized iterative and non-iterative procedures 3—26968
- optical fields in optoacoustic interaction, correl. anal. 3—50628
- optimal setup of optical Fourier transform 3—21999
- phase reconstruction stability from intensity distrib. at input and output of an optical differentiating operator 3—6902
- phase retrieval and diversity in adaptive optics 3—6900
- phase retrieval uniqueness far functions with disconnected supports 3—36948
- phase retrieval using the logarithmic Hilbert transform, zero influence extraction from image intensity 3—26965
- phase-restoration procedure, composite, two-dimens. 3—50625
- quasi-interferometry, mask functions 3—40679
- quasiperiodic spatial structure geometrical parameter anal. using a coherent optical spectrum analyser 3—27227
- rainbow holographic imaging, Fourier anal. *(Chinese)* 3—26974
- reduction by rotating aperture at Fourier transform plane 3—22001
- rotation-invariant digital pattern recognition using circular harmonic expansion 3—17445
- secondary flow component meas. by photon correl. velocimetry 3—46675
- signal detection measurements by 3-D Fourier transform holograms 3—36964
- signals recorded on pure phase medium, optical spectral anal. 3—32318
- specklegram automated analysis using 2-D Fourier transform, stress and strain contouring map appls. 3—46178
- spectral analyser, Fourier transformation beam deflector arrangement, electronic signals appl. 3—56305
- spectral profile reconstruction allowing for data on the residual instrumental function 3—41779
- surface roughness meas. with speckle intensity distrib. detected using linear image-sensor 3—46162
- surface wavelength spectrum obtained by optical Fourier transform. and profile meas. 3—40574
- Talbot effect appl. to meas. optical beam collimation *(Chinese)* 3—10891
- Talbot effect as a sequence of quadratic phase corrections of the object Fourier transform 3—26967
- two dimensions, computational examples in Fourier phase problems 3—1580
- two-dimensional scattered fields, description in terms of zeros of entire functions 3—32315

Fourier transform spectroscopy
- acetylene-hydrogen halide complexes, H-bonded, in solid Ar, Fourier transform IR spectra 3—6639
- air pollution, meas. of gaseous pollutants by mobile Fourier transform IR system 3—9527
- alkyne-HF complexes, substituted, in solid Ar, Fourier transform IR spectra 3—6640
- asbestos fibre, Fourier-transformed IR photoacoustic spectroscopy 3—13345
- astronomical spectroscopy, meas. and model computations of shifts of O_2 lines used as wavelength references 3—15617
- atmospheric extinction meas. using slant path spectra obtained with Fourier transform IR spectrometer 3—10054
- atmospheric hot gas, quantitative emission and absorpt. spectrometry from moderate resolution spectra 3—9526
- auroral emission, remote sensing using field-widened interferometer spectrometer 3—10084
- biological applications of Fourier transform IR, blood protein adsorption obs. 3—9798

Fourier transform spectroscopy continued
- channelled spectra signatures removal in Fourier spectroscopy 3—40704
- 1-chloro-2-methylpropene, barriers to internal rot. determ. by Fourier transform IR spectra 3—6630
- condensed phase spectra, IR, precision in determ. of spectral parameters 3—5875
- cryogenically cooled IR Fourier transform spectrometers 3—5881
- cyanoacetylene-d_1, hyperfine struct., quadrupole coupling, microwave obs. 3—50384
- cyclopropylisocyanide, quadrupole coupling, microwave obs. 3—50385
- p-dimethoxybenzene, chem. shift anisotropy, 2-dimens. Fourier transform CP/MAS NMR 3—57801
- dimethyl ether, barriers to internal rot., Fourier transform spectra, far IR region 3—6632
- dimethylamine, barriers to internal rot., Fourier transform spectra, far IR region 3—6632
- dimethyloxirane, cis- and trans-, barriers to internal rot. determ. by Fourier transform IR spectra 3—6630
- dimethylselenide and dimethylsulphide, barriers to internal rot. determ. by Fourier transform IR spectra 3—6630
- dispersive Fourier transform spectrometry, recent progress 3—5883
- double modulation IR circular dichroism meas. 3—5890
- Earth upper atmosphere, high resolution Fourier transform spectroscopy, from space 3—10055
- electric dipole moments, Fourier transform microwave obs. 3—36743
- electrolyte aqueous solutions, dispersive Fourier transform obs. of opt. consts. 3—8819
- energy-resolved tandem and Fourier-transform mass spectrometry 3—16440
- epoxy resin matrix-silane coupling agent interface in fibre-reinforced composites, spectroscopic characterisation 3—19313
- ethylisocyanate, rot. spectrum, N quadrupole coupling, microwave obs. 3—50383
- EXAFS, free atom absorpt., normalisation programs and algorithms 3—36714
- far IR Fourier transform spectroscopy, current research 3—5879
- fast Fourier transform technique for distortion effect simulation 3—54775
- fast-scanning Fourier spectrometer, S/N ratios in control channels 3—25960
- fast-scanning Fourier spectrometers, elec. circuit features 3—36096
- fields from harmonic sources in uniform motion, dyadic Green's function appl. 3—46123
- fluoroanthene, multiphoton ionis., FT mass spectrometric obs. 3—21830
- fluoroethanes, LF Fourier transform IR spectra, torsional pot. functions, gaseous, liq. and solid states 3—6633
- formaldehyde, ν_2 fundamental band study 3—41599
- formyl radical in solid O_2, photochemical oxidation at 13K, Fourier transform IR spectroscopy 3—4299
- FT-IR quantitative spectroscopic analysis of multicomponent samples, new least-squares methods, appl. to xylene isomers and mixtures 3—29337
- hexamethylbenzene, chem. shift anisotropy, 2-dimens. Fourier transform CP/MAS NMR 3—57801
- high information differential Fourier spectroscopy 3—5884
- interferometry data processing techniques of interest to remote sensing 3—5841
- IR, interferometer design *(German)* 3—40705
- IR, purged sample chamber 3—30939
- IR activity in Federal Republic of Germany 3—5886
- IR Fourier transform spectroscopy in Japan, history and current status 3—5885
- IR hardware developments 3—5880
- IR software, history of development 3—5888
- IR spectroscopy appls. in chem. laboratory 3—9371
- IR transform spectroscopy possibilities 3—5878
- Langmuir-Blodgett molecular monolayers anisotropic orientation, FT IR spectroscopy 3—38193
- laser transmissometer calibration, for long-path atmospheric transmission meas. 3—4983
- methane, line strength of $\nu_1+\nu_4$ IR band 3—32055
- methyl vinyl ketone, conformational barriers to internal rot., Fourier transform spectra in far IR region 3—6631
- Michelson scanning interferometer, aberrations effect evaluation 3—377
- microwave Fourier transform double reson., expt. and theory 3—20884
- microwave Fourier transform spectrometer construction 3—49417
- microwave spectrometer construction in 5.4 to 8 GHz range 3—49416
- naphthalene, multiphoton ionis., FT mass spectrometric obs. 3—21830
- NMR, four-dimens., spatially resolved high resolution spectroscopy 3—45181
- NMR spectra, Fourier transform type, exact interpolation and integration 3—49420
- NMR spectrometer, not equipped with proton phase shifter, polarisation transfer using SINEPT pulse sequence 3—45182
- oboe, Fourier spectra of notes on computer controlled spectrum analyser 3—37299
- ON-NO_2, N quadrupole coupling meas. using Flygare-Balle pulsed beam spectrometer 3—45970
- organosilane compounds, high resolution Fourier transform IR spectra, internal rot. barriers, vibr. assignments 3—6634
- organotellurium compounds, ^{125}Te Fourier transform NMR spectra 3—14141
- passive spectrometers comparison 3—10911
- perchloro-2-cyclopentenone, ^{35}Cl NQR Zeeman investig. using pulsed FT spectrometer 3—21786
- phase correction methods in IR spectroscopy 3—5873
- photoacoustic Fourier transform IR spectroscopy of solids 3—5882
- photometric accuracy and phase correction in IR spectroscopy 3—5874
- planets, results of Fourier IR spectroscopy on planetary missions including Voyager 3—10182
- polarisation Fourier spectrometer, spectrogram correction 3—40700
- polyethylene, methyl content determ., attenuated total reflectance Fourier-transform. IR spectroscopy 3—38819
- polyethylene oxide, soln. conformation, FT pulsed field gradient NMR self-diffusion obs. 3—19014
- polyethylene-vinyl acetate copolymers, vinyl acetate content determ., attenuated total reflectance Fourier-transform. IR spectroscopy 3—38819
- polyethyleneterephthalate, coextrusion drawn, Fourier-transform IR obs. 3—57917
- polyvinylacetate, emission spectra intensity by Fourier transform IR spectrometry *(Japanese)* 3—50558
- powdered solids, chem. shift anisotropy, 2-dimens. Fourier transform CP/MAS NMR 3—57801

Fourier transform spectroscopy continued
processing of data containing large no. of spectral lines 3—5889
pyrazine, mol. eigenstates spectrum 3—21802
resolution enhancement of IR spectra, second derivative and Fourier self-deconvolution approaches 3—5877
satellite contamination simulation facility with in situ IR analysis capability 3—10184
self-deconvolution for resolution of complex band contours in IR spectra 3—5876
semiconductor laser static, dynamic spectra, Fourier transform spectrometer high resolution meas. 3—20907
semiconductors, deep levels, Fourier photoadmittance spectroscopy technique 3—23312
SOSMOS accumulation layers, intersubband resonances, Fourier transform spectroscopy study 3—43293
spectrograms using a microcomputer in an advanced undergraduate laboratory 3—5548
spectrometer, fast scanning, mirror-movement velocity error analysis 3—30940
subMM region, high resolution meas. 3—5887
substituted alkenes-HF complexes, H-bonds, Fourier transform IR matrix isolation 3—32053
thermal analysis by Fourier transform IR 3—9370
thin film study by surface EM waves, Fourier spectrometry 3—10927
three-component system, with movable light divider and two concave confocal mirrors 3—16419
three-level microwave double reson. spectra, spectroscopic appl. 3—50445
trace gases in localised cloud, remote Fourier transform IR detection limit 3—9525
trimethylamine, barriers to internal rot., Fourier transform spectra, far IR region 3—6632
triphenylene, multiphoton ionis., FT mass spectrometric obs. 3—21830
two-dimensional reconstructions from one-dimensional data by maximum entropy 3—30914
violin, Fourier spectra of notes on computer controlled spectrum analyser 3—37299
^{12}C ^{13}C, Fourier spectroscopy of Phillips system 3—44648
^{13}C$_2$, Fourier spectroscopy of Phillips system 3—44648
AlCl$_3$(I$_3$), vapour phase Fourier transform far IR spectra obs., 100 to 500°C 3—6635
Ar II branching ratios for spectral intensity calibration, Fourier spectroscopic meas. 3—11741
BH(NH$_2$)$_2$, IR and Raman spectra, normal coord. anal. 3—50400
C$_2$ radical, reson. enhanced coherent anti-Stokes Raman scatt. 3—36769
CO aggregates in Ar and O$_2$ matrices, IR absorpt. freq. investig. 3—32052
CO, nonequilib. vibr. excitation, Fourier transform IR emission spectra obs. 3—6628
CO, vibrationally excited by hot Pt surface, internal energy distrib. 3—56050
CO$_2$, band parameters determ. by whole band analysis, collision broadening 3—6724
CO$_2$, Fourier transform IR spectral meas. of high temp. ^{13}C^{16}O$_2$ and ^{13}C^{16}O^{18}O 3—6629
CO$_2$, vibrationally excited by hot Pt surface, internal energy distrib. 3—56050
CO$_2$+N$_2$, cc CO$_2$ collisionally excited high-resolution emission spectroscopy, rot. distrib. 3—21884
^{12}C^{13}C, Fourier spectroscopy of Ballik-Ramsay system 3—30165
^{13}C$_2$, Fourier spectroscopy of Ballik-Ramsay system 3—30165
CdIn$_2$S$_4$, optical absorpt. spectrum, Raman active T$_{2g}$ mode obs. 3—34123
DBr, dipole moment, laser Stark and Fourier transform spectroscopy 3—26750
FeO, spectroscopic props. of $^5\Delta_i$ ground state 3—6711
γ-Fe$_2$O$_3$, behaviour of surface OH group, Fourier transform IR spectroscopy study 3—23738
Fe$_3$O$_4$, behaviour of surface OH group, Fourier transform IR spectroscopy study 3—23738
fluoromethane, simultaneous anal. of ν_1, ν_4, $2\nu_2$, $\nu_2+\nu_5$, and $2\nu_5$ IR bands 3—41571
GaCl$_3$, vapour phase Fourier transform far IR spectra obs., 100 to 500°C 3—6635
HDO, (001), (110) and (030) bands, line positions and strengths 3—55997
HDO, high resolution rot. vibr. IR spectra of ν, and $2\nu_2$ bands 3—26723
HDO line positions and strengths, 2400-3300 cm^{-1} region 3—1350
H$_2$^{16}O, H$_2$^{17}O, H$_2$^{18}O, HDO, secondary wave-number standards, 1066 to 2296 cm^{-1}, Fourier-transform spectrosc., ν_2 bands 3—36748
I$_2$, centrifugal distortion consts. (D$_V$, H$_V$, L$_V$, and M$_V$) in anal. of B$\leftarrow$X system 3—41551
Mg(NO$_3$)$_2$ aq. solns., polarised Raman spectra, Fourier transform. and band component anal. 3—14286
^{14,15}NH$_3$, high-resolution of IR and microwave FT spectra of ν_4 and $2\nu_2$ bands 3—32056
NO, $D^2\Sigma^+ \rightarrow A^2\Sigma^+$, $E^2\Sigma^+ \rightarrow D^2\Sigma^+$ and $E^2\Sigma^+ \rightarrow A^2\Sigma^+$ systems study by IR Fourier tranform spectrometry 3—32039
N$_2$O, band parameters determ. by whole band analysis, collision broadening 3—6724
Na$_2$, electronic states, Fourier transform fluoresc. spectrometry 3—36798
Nb$_{1-y}$Ti$_y$H$_x$ thin films, ^{1}H NMR Knight shift and mag. susceptibility 3—28721
OC-HF, electric dipole moments, Fourier transform microwave obs. 3—36743
Se$_2$, laser-induced fluoresc. studied by Fourier transform spectroscopy 3—21810
^{28}SiF$_4$, pot. consts. and IR spectrum 3—11794
SiO$_2$, plasma enhanced CVD, gate insulator for InSb MOS struct. 3—13917
Te salts, ^{125}Te Fourier transform NMR spectra 3—14141
VH$_{0.59}$, H diffusion, ^{1}H NMR and Fourier transform spectra studies 3—28145
VO^{2+}-H$_2$O complex in poly (vinyl alcohol) gels, electron spin echo and ESR studies, mol. cage size effect 3—48094
XeHBr, Br quadrupole coupling consts., mol. struct., microwave rot. spectra 3—32042

Fourier transforms
see also fast Fourier transforms; Fourier analysis; Fourier transform optics
A15 compounds, electron charge density distributions and Debye temps. 3—56863

Fourier transforms continued
acoustic source radiation near solid-fluid interface, numerical Fourier-Bessel transformation *(French)* 3—17672
actin helical system with cumulative random angular disorder, Fourier transforms 3—13116
analytic continuation of integrals for Wilson renormalisation group, Fourier transformation operator 3—11037
atomic radial distrib. function calc. methods comparison 3—42508
Bessel transform, paths of integration, reln. to Fourier, Watson and Kontorowich-Lebedev transforms 3—30596
charge, localised, in mol. cryst., polarisation energy, polarisability changes effects 3—47591
Compton profile, Fourier transformed, Fermi momentum determ., electron correlations effect 3—42998
crystal reciprocal morphological lattice, Fourier transform study 3—37835
cylinder, infinite, with circumferential crack, torsional impact response 3—2007
deconvolution artifact reduction technique for scintigraphic studies 3—15224
discrete Fourier transforms of nonuniformly space data, deconvolution techniques, astron. appl. 3—30220
elastic wave scattering from flaws near surfaces, Fourier elastodynamics appl. 3—56468
elastodynamics, comparison of three boundary element method approaches 3—35846
EM field anomalies due to local inhomogeneity, calculation 3—21964
EM wavescattering from randomly rough surfaces, stochastic Fourier transform of induced current 3—46139
exponential-type orbitals, Fourier transform of two-center prod., one- and two-electron multicenter integrals appl. 3—45015
Fourier-Chebyshev approximation for many term time series, celestial mechanics/lunar ephemerides appl. 3—30157
instantaneous heat sources in an infinite elastic solid with thermal relaxation 3—42127
inverse scattering from rough cracks 3—56467
ion cyclotron resonance software 3—448
isothermal batch crystalliser pulse response analysis for growth rate and dispersion estimation 3—33166
m-dimensional spaces and hyperspherical harmonics, angular integrations 3—10612
perfect cryst. electron block function, method of special points 3—8392
perfect crystal, electronic band struct., quasi-free electron case 3—8393
periodic heat flow into ground under building, Fourier transform 3—27361
plate thermoelasticity and thermoviscoelasticity, Fourier-Bessel integral transforms *(Ukrainian)* 3—7418
PTFE, helical system with cumulative random angular disorder, Fourier transforms 3—13116
radiowave propagation, remote determination of the structure constant profile from amplitude scintillation data using Tikhonov's regularized inverse method 3—48695
saccadic eye movements, velocity calc., frequency limitations of two point central differentiation algorithm 3—15082
seismic arrays, improved wavenumber resolution 3—44571
spectral approach to geophysical inversion by Lorentz, Fourier, and radon transforms 3—10096
spiral galaxies, automatic classification 3—30506
square rod corner junction, elastic stress wave generation 3—12576
stellar differential rotation from line broadening, Fourier transform, note 3—20249
stochastic Fourier transform approach to scattering from perfectly conducting randomly rough surfaces 3—26909
triatomic mols., vibr. energy levels, Schrodinger eqn. soln. by spectral method 3—36670
two-dimensional scattered fields, description in terms of zeros of entire functions 3—32315
CO, ESCA peak intensities in DA and GSA calcs., using Fourier transformed GTOs 3—50292
Fe$_{81}$B$_{19}$ metallic glass, struct., high resolution neutron diffr. study 3—18231
Ge, periodic surface damage, 1.06 μm YAG laser pulses, spectrum in $\vec{K}$ space 3—56952
(Ni$_{65}$Fe$_{35}$)$_{77}$B$_{23}$ metallic glass, short range order, neutron diffr. study 3—18233
Se, amorphous, correlation model and short range order, X-ray diffr. study 3—33096
V, Compton profiles and electron density distributions 3—38949

fractionation *see distillation*

fracture
see also brittle fracture; crack-edge stress field analysis; cracks; creep fracture; ductile-brittle transition; ductile fracture; embrittlement; fatigue; fracture toughness; stress corrosion cracking
AES application, review 3—14827
alloys, defect struct. and mech. props., computer-controlled X-ray diffr. study 3—37734
asteroids, complete fragmentation of parent bodies of Themis, Eos and Koronis families 3—59248
beam, dynamic fracture under tensile loading 3—12590
beam in pure bending, effect of shear and rotary inertia on dynamic fracture 3—32682
beam or plate, dynamic fracture in tensile loading, effect of shear and rotary inertia 3—56478
beam or plate, dynamic fracture under tensile loading, effect of bending moment 3—56477
beam or plate in pure bending, dynamic fracture, axial force effect 3—7504
bielastic medium, fracture problem 3—42191
block copolymers, viscoelastic props. and time-depend. morphology 3—14637
brittle layer coated single brittle fibres, deform. and fracture 3—53161
brittle materials, delayed fracture, observed in stress rate tests, quantitative anal. 3—18380
brittle particulate composites, crack bowing, fracture toughness prediction 3—42706
bronze-steel-bronze multilayer struct., fracture during high-temp. extension *(Russian)* 3—39236
capillary and cracked materials, sections 3—32679
ceramic materials, subcritical crack extension, combination with statistics 3—13332
cleaning fracture surfaces 3—39314

fracture continued

- compact specimen, side-grooved, 3-D elastic-plastic invest. 3—51005
- composite, rigid inclusions system, plane periodic problem 3—56494
- composite material with elastic-plastic matrix, fracture during compression 3—17889
- composites, deformation and fracture determ. by speckle-holographic interferometry 3—29249
- composites, unidirectional, damage, math. modelling 3—56472
- composites in compression along cracks, fracture mechanics 3—53215
- concrete, microfracturing, influence of coarse aggregate, appl. of fracture mapping 3—4101
- concrete structures, elastic-plastic fracture anal., finite element method 3—37416
- corrosion, fracture, description using logistic eqn. 3—29184
- crack problems, boundary element and Green's function methods 3—42181
- critical shear strain localisation in ligament region between parallel prolate holes 3—37347
- crystallographic facet orientations on fracture surfaces, method of determ. 3—24442
- cyclotetramethylene tetranitramine, mol. cryst., explosive, fracto-emission obs. 3—14446
- diamond, ion implanted, X-ray diffr. contrast, wavelength depend. 3—37736
- diglycine sulphate, anhydrous, deform., slip and fracture elements 3—33347
- diglycine sulphate, anhydrous, deformation study 3—51693
- ductile layer coated single ductile fibre, deform. and fracture 3—53161
- dynamics, nonlinear, path independent integrals 3—46489
- elastic contact fracture, tangential force effect 3—42197
- elastic-plastic behaviour of materials, deform. energy constancy, fractographic analysis 3—53166
- elastic-plastic finite element analysis of dynamic fracture 3—12593
- elastic-plastic fracture mechanics, finite element part of Lamcal program 3—17894
- elasto-plastic strain mechanics, structural representations appl. 3—7434
- energy relationships for deformation of specimen with crack 3—42712
- enriched fracture element, high precision, influence of forcing conforming boundaries 3—42182
- epoxy, US fractography study 3—4231
- ethylene glycol dimethacrylate glassy networks, fractography 3—4116
- eutectic, directionally crystallised, creep and fracture modelling *(Russian)* 3—53186
- fatigue crack growth, description in terms of plastic work 3—13329
- fatigue life, residual stress effect, fracture mechanics analysis 3—51017
- fibre reinforced Al and Al alloy composites, mech. props. anisotropy 3—24316
- fibre reinforced composites, brittle fibre, fracture model 3—27448
- fibre reinforced composites, damage determination from mechanical loads 3—29248
- fibre reinforced composites, fracture micromechanisms interaction, computer simulation 3—32678
- fibre reinforced composites, hybrid, strength, Monte Carlo simulation 3—51013
- fibre reinforced composites, stability of two fibres in matrix under finite subcritical strains 3—27447
- fibre reinforced composites, strength, probability distrib., effect of fibre arrangement 3—28041
- fibrous composites, deform. and fracture micromechanisms, dislocation, disclination theory 3—53140
- filled polymers, high filler content, mech. props. temp. and pressure depend., time analogies method appl. 3—27409
- flaw size distrib. in welds 3—16815
- glass, commercial crystallised, fracture features at internal fracture origins 3—14704
- glass fibre reinforced epoxy, fracture surface energy, effect of absorbed water 3—24329
- glass fibre reinforced polyester, interlaminar fracture behaviour, effect of water 3—34428
- glass fibres, positive ion emission accompanying fracture, time-of-flight meas. of mass-to-charge ratio 3—19397
- glass-graphite materials fracture characts. in partially ionised air flow 3—34447
- glassy state, vol. compliance investig. *(Russian)* 3—14676
- graphite, nuclear, fracture criterion 3—16851
- graphite fibre reinforced Al, room temp. tensile strength, function of annealing temp. and time 3—47960
- graphite fibre reinforced epoxy, fracture surface energy, effect of absorbed water 3—24329
- graphite fibre reinforced epoxy, interlaminar fracture 3—51014
- graphite fibre reinforced epoxy, model composite, crack initiation and propagation 3—39237
- heterogeneous materials, fracture characts. 3—53203
- β-HMX, mechanical deformation properties, twinning and fracture 3—4091
- hydraulically-driven fractures, general method-of-lines numerical approach 3—46487
- ice, polycrystalline, viscoelastic body, fracture kinetics, acoustic emission obs. 3—56507
- Inconel MA 754, dispersion strengthened Ni alloy 3—53137
- inelastic solids with defects and imperfections, plastic flow, instability 3—12530
- intense radial fracture zone accompanying explosion, calcs. 3—47040
- interfacial fracture of space-shuttle thermal-protection system [model] 3—32676
- liquid film, rupture, nonlinear theory 3—38170
- LWR pressure boundary safety and fracture conf. Stuttgart, Germany (Oct. 1981) 3—20569
- materials, fracture criteria determ., automation 3—58328
- mechanical props. at low temp., H_2 effects *(Japanese)* 3—9160
- mechanical testing, strain and fracture processes 3—14799
- mechanics, Soviet developments and problems 3—56495
- metal, X-ray diffr. topographic method *(Chinese)* 3—4218
- metals, fracture criteria under nonisothermal loading, endurance eval. from damage summation 3—14722
- metals, fracture criteria under nonisothermal loading, endurance eval. allowing for fracture type 3—14723
- micromorphic conditions at singular crack-borders as a consequence of frame-indifference 3—51000
- microstructure and mechanisms of fracture 3—58248

fracture continued

- minerals, mech. prepared pyrite and quartz, surface changes, electron spectroscopy and microscopy obs. 3—13608
- mixed mode fracture, caustic form created by stress singularities 3—46481
- mixed mode uncoupling, path independent integrals *(French)* 3—22389
- modelling of fracture process zones and singularity dominated zones 3—56471
- nozzle corner crack, elastic-plastic FEM anal., fracture mechanics concept 3—24456
- optical fibre breaking elongation meas. 3—42053
- optical fibres, fusion spliced, fracture characts. 3—42007
- parallel elements, fracture, Weibull expressions 3—42190
- pelvic ring fractures, unstable, external fixation, comparative rigidity of some current frame configurations 3—19847
- pentaerythritol tetranitrate, mol. cryst., explosive, fracto-emission obs. 3—14446
- peridotites, hydraulic fracturing during partial melting rel. to origin of high-temp. dikes 3—15433
- plastic deformation role in plane strain crack propag. 3—37991
- plastic zone size rel. to thickness, dislocation distribution, fracture theory 3—42186
- plastics, rigid foam, breakdown under transient loading, statistical investigation 3—53205
- plate, dynamic fracture under tensile loading 3—12590
- plate in pure bending, effect of shear and rotary inertia on dynamic fracture 3—32682
- plates, rectangular and circular, pulsed rupturing load parameter estimate 3—22391
- PMMA, dynamic crack propag., expt. study 3—14694
- PMMA, glassy, fracture processes, appl. of acoustic emission technique *(Japanese)* 3—58264
- PMMA, US fractography study 3—4231
- polybutadiene, glass bead filled, electron emission during fracture, crack vel. depend., free radical decay 3—14447
- polybutadiene, glass-beam filled, positive ion emission in fracture, mass/charge ratio and kinetic energy 3—8947
- polyethylene, high-density, slow stable crack growth phenomena 3—53206
- polyethylene, low density, strength, influence of thermodynamic factors 3—29190
- polyethylene, water tree propag., mech. aspects 3—19062
- polymer fibres, positive ion emission accompanying fracture, time-of-flight meas. of mass-to-charge ratio 3—19397
- polymer materials, deform. and fracture processes, simplified rheological rules use 3—57019
- polymer melts, flow instabilities (melt fracture), stress anal. in cylindrical capilliaries 3—32769
- polymers, atomic H shedding mechanism *(Russian)* 3—14689
- polymers, oriented, fracture criterion based on electron spin resonance spectroscopy 3—47934
- polymers, particulate-filled, ultimate tensile strength model 3—19379
- polymers, strength, rel. to elastic props. *(Russian)* 3—9182
- polymers, time-dependent failure, energy considerations 3—33143
- polymers, uniaxial tensile testing, specimen shape effect *(Japanese)* 3—58319
- polymrs, life-prediction methodology using crack growth kinetics 3—8132
- polypropylene, atomic H shedding mechanism during fracture *(Russian)* 3—14689
- polystyrene tensile yield, H_2O effect 3—4092
- polyurethane based blends, morphology and mech. props. 3—34436
- post yield fracture mechanics, J* integral comparison with other methods 3—42188
- probabilistic fracture mechanics, literature review 3—13328
- PVC, rigid pipes, impact strength and fracture morphology, processing and resin struct. effects 3—24324
- PVC and blends with rubber modifier, mech. behaviour and deformation *(Russian)* 3—14678
- PWR core melt probability, vessel rupture contrib. 3—16971
- PWR main coolant line, preclusion of double ended circumferential rupture 3—21462
- PWR plant, primary coolant loop pipe fracture, probabilistic assessment 3—16972
- PWR RPV, pressurised thermal shock, USNRC materials research 3—21461
- quartz glass, slow propagation cracks, acoustic emission and fracture mechanics studies 3—34444
- reactor materials, fracture mechanisms, concept, tensile and notch impact bend test 3—24454
- reactor pressure vessels reliability, pre/in-service inspection and tests influence 3—16825
- rock, tension fractures and extensional tectonics 3—29895
- rod, inelastic, supercritical strain and fracture 3—17828
- rod-shaped solids, damage by stress-relief waves 3—53213
- rubber, accelerated ageing tests in hot air, air change rate effect 3—24266
- rubber, accelerated ageing tests in hot air, air change rate effect on different cmpds. 3—24267
- rubber, styrene-butadiene, tear fracture rel. to cross-links and reinforcing filler, SEM obs. 3—53187
- SEM fractography, preservation and cleaning of fractures 3—14826
- SEM instrument guidelines for failure analysis and metallography 3—14824
- sheets, centre-cracked, fracture load, influence of load biaxiality 3—27439
- shell, spherical, fragment form. in destruction, law of unsteady motion determ. 3—56490
- silicate glasses, gas formation during fracture 3—18382
- silicon rubber, filled, electron emission during fracture, crack vel. depend., free radical decay 3—14447
- singular stress fields in piecewise uniform medium 3—7502
- singularity mapping theory, semi-radial, for line singularities in fracture mechanics 3—46485
- slot in elastic half space, one edge loading, stress-intensity factors 3—42192
- solids in compression along cracks, fracture mechanics 3—37425
- solids in compression along cracks, fracture mechanics 3—42194
- steel, A516, detection of general yielding by acoustic emission 3—14795
- steel, alloy, 20 MnMoNi 5 5, fracture initiation and fracture opening under light water reactor conditions 3—24353
- steel, alloy, 22 NiMoCr 3 7, fracture initiation and fracture opening under light water reactor conditions 3—24353
- steel, alloy, low C acicular ferrite, fracture mechanism rel. to microstruct. *(Italian)* 3—4137

fracture continued
- steel, austenitic stainless, films, tensile cracks, in situ obs. in HVEM 3—19392
- steel, austenitic stainless, fracture criterion, kinetic, for combined low cycle and quasistatic loading 3—43957
- steel, austenitic stainless, weld fracture, H-assisted, effect of comp. and microstruct. 3—34465
- steel, C, crack propag. transition temp. determ. method 3—24429
- steel, C, normalised, crack resist. rel. to macrofractographic features of fracture 3—29188
- steel, C, plate, projectile impact, critical fracture energy 3—14691
- steel, C-Mn, cleaning fracture surfaces 3—39314
- steel, cast, Mn-Ni-Mo-Cu, dark facet fracture, AlN and Ti precip., SEM study *(Chinese)* 3—34420
- steel, Cr-Mo, creep cavitation and fracture, segregation effects 3—14717
- steel, Cr-Mo, temper embrittlement, compositional effects 3—14728
- steel, Cr-Mo-V, stress relief cracking 3—39245
- steel, crack jumps determination, acoustic emission appl. 3—9276
- steel, deform., axisymmetric, bulk strain and grain strain 3—53118
- steel, dual phase, void damage during plastic deform. 3—43909
- steel, ferritic-austenitic stainless, H-charged, tensile props. *(Japanese)* 3—29167
- steel, fracture under mixed mode I and II loading, ferrite grain size effect 3—14695
- steel, grain boundary segregation of P, intergranular embrittlement, alloying element effect 3—58247
- steel, heat-resistant, delayed fracture under nonsteady loading 3—19417
- steel, hot ductility invest. by tensile testing of in situ solidified samples 3—58158
- steel, low alloy, dual phase struct., fracture and necking rel. to nonferritic phase comp. 3—53179
- steel, low C, fracture surface fine struct., X-ray diffr. obs. *(Russian)* 3—39234
- steel, low C alloy, cold rolled, splitting, effect of ageing *(Korean)* 3—39181
- steel, maraging, ultrahigh strength, delayed failure *(Japanese)* 3—24338
- steel, martensitic stainless, interrelation of plastic deform. and failure after reduction and drawing 3—19383
- steel, mild, caustic cracking in hot $NaOH-Na_2S$ soln., fracture mechanics study 3—43986
- steel, Mu-Si-C, solubility of S in austenite and S precip. on cooling *(French)* 3—29087
- steel, Ni-Cr-Mo, crack initiation, propag. and branching in delayed failure, effect of biaxial load *(Japanese)* 3—4115
- steel, nuclear pressure vessel, tensile props. and fracture mode, combined effects of neutron irrad. and H absorpt. 3—18353
- steel, rimmed sheet, plastic instability in uniaxial tension, 100-700K 3—14679
- steel, spheroidised, notch ductility and fracture, effect of H_2 charging 3—53196
- steel, spheroidised, plastic instability in U-notched bend specimens 3—34461
- steel, stainless, Cr-Ni, high-strength, mech. props. at low temps. 3—34406
- steel, stainless, forgings of 03Kh12K12D2-VD, mag. and mech. props. 3—29129
- steel, stainless, wire reinforced Cu, cold rolled, deform. 3—34379
- steel, stainless and mild, ductile, generalised fracture mech. 3—9151
- steel, structural, fracture criteria under nonisothermal loading, endurance eval. from damage summation 3—14722
- steel, structural, fracture criteria under nonisothermal loading, endurance eval. allowing for fracture type 3—14723
- steel, structural, fracture resist. as characterised by strength of plastic stress singularity 3—17907
- steel, texture effect on H embrittlement, impact, SEM study, dislocation model *(Chinese)* 3—34419
- steel, ultra-high strength, H induced delayed cracking for type III cracks *(Chinese)* 3—34422
- steel ferrite-martensite, coarse, deform. and fracture, micromech. concepts 3—43960
- steels, austenitic, LMFBR materials, fracture mechanisms evaluation, cracks 3—24455
- steels, sintered, mech. props., review 3—24326
- stress intensity factor determ., elec. analog technique 3—42202
- strip of viscoplastic work hardening material, numerical anal. of fast mode-I fracture 3—46496
- structural and mech. components, probabilistic aspects of fracture 3—16981
- superplastic alloys, cavity growth and failure 3—47947
- superplastic alloys, failure, review 3—34476
- thermally self-driven cracks, numerical modelling, thermoelastic-fracture solns., singular influence function distribs. 3—27437
- thermoelastic fracture solutions using singular influence function distribs., crack stress fields, dislocation distrib. 3—27436
- THTR, sphere fracture rate determ. for spherical fuel elements *(German)* 3—36456
- triacetylcellulose films, chem.-mech. failure, crit. strain *(Russian)* 3—43938
- unidirectional composite materials, failure under axial compression 3—53204
- viscoelastic body fracture, quasistatic crack growth 3—22388
- wear resistant coatings, fracture rel. to electrolytic prep. *(Russian)* 3—58281
- yield design and limit load analysis, static and kinematic methods *(French)* 3—42141
- Ag-Cu directional eutectic alloy, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3—24424
- Al alloy, fracture parameters, variation during process of subcrit. crack growth 3—14697
- Al, cold pressure bonding of single crystals in ultra-high vacuum interface deform. influence *(Japanese)* 3—9234
- Al, crack tips, dislocation emission, TEM obs. 3—19394
- Al, deformed by cyclic bending to fracture, polygonalisation study *(Russian)* 3—34433
- Al-Cu (4 wt.%), porosity and fracture development during superplastic flow *(Russian)* 3—39205
- Al-Cu-Li-Mn-Cd, alloy 2020, ductility, influence of grain struct. 3—34397
- Al-Cu-Mg alloys, acoustic emission during plastic deform. 3—34391
- Al-Cu(Fe), directional eutectic alloy, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3—24424
- Al-Li-Cu (2.7, 2.3 wt.%), fracture behaviour and tensile props., effect of grain struct. 3—29182

fracture continued
- Al-Mg (90, 10 wt.%), recovery heat treatment after natural ageing 3—34366
- Al-Ni-Fe-Ti, oxide phase hardened, heat and corrosion resist. 3—34543
- Al-Si (22 wt.%) alloy, subsurface damage during dry sliding wear 3—24369
- Al-Zn-Mg-Cu, ageing conditions and impurity content influence on struct. and fracture 3—34541
- Al-Zn-Mg-Cu, ingot and powder processed, deform. and fracture at elevated temps. 3—53159
- Al-Zn-Mg-Cu alloy, design strength 3—43955
- AlN, hot-pressed ceramics, high temp. fracture 3—39239
- Al_2O_3 coatings, positive ion emission accompanying fracture, time-of-flight meas. of mass-to-charge ratio 3—19397
- Al_2O_3, crack extension from inherent flaws, dye penetrant, SEM 3—58343
- $Al_2O_3-ZrO_2$ composites, critical microstruct. for microcracking 3—39240
- B fibre reinforced Al, room temp. tensile strength, function of annealing temp. and time 3—47960
- B fibre reinforced Al, tensile strength, room-temp., function of annealing temp. and time 3—34484
- B fibre reinforced Ti, room temp. tensile strength, function of annealing temp. and time 3—47960
- B fibre-organic fibre reinforced plastics, deform., fibre fracture effect 3—34409
- B fibres, bare and SiC coated, mech. props. temp. depend. 3—34408
- BaF_2, brittle, predeformation and fracture, high temp. study 3—37981
- C fibre reinforced epoxy resin, role of fibre surface-matrix combination 3—9156
- C fibre reinforced plastic, transverse tensile strength, time and temp. depend. *(Japanese)* 3—19377
- C fibre reinforced plastics, unidirectional, failure, fibre strength props. 3—29174
- C fibre reinforced plastic, fracture characteristics of heterogeneous materials 3—53203
- $CaO-P_2O_5$ glass-ceramics, high strength, prep. by unidirectional crystn. 3—29055
- $CaO(-ZnO)-Al_2O_3-SiO_2$ glass, surface crystallised, high strength, characterisation by electron microscopy 3—4162
- Co-Cr-Mo alloys, phase diagram calc., thermodynamic assessment of heat treatment 3—34279
- Cu, irrad. with He^+ and D^+, depth distrib. of bubbles and fracture 3—21511
- Cu-Al-Ni, shape memory bicrystals, intergranular fracture 3—43946
- Cu-Sb (0.5 at.%), bicrystals, segregation, obs. of fracture surface chem. 3—34332
- Cu-Zn-Al, bicrystal, transform. strain coherency at grain boundary, fracture 3—43839
- $F_5Co_{75}Si_{13}C_7$, amorphous, deform. and fracture, mech. props. and struct. regularities 3—53202
- Fe, cast, pearlitic grey, fracture behaviour, microstruct. and macrostruct. modelling 3—14731
- Fe, deform. and fracture, influence of gaseous H_2 3—29185
- Fe, oxidised, sulfur diffusion in oxide grain boundaries 3—43983
- $Fe_{40}Ni_{40}B_{20}$, amorphous, ductility, neutron-induced changes 3—51668
- $Fe_{40}Ni_{40}P_{14}B_6$, amorphous, deform. and fracture, mech. props. and struct. regularities 3—53202
- FeTi, activation for H_2 storage 3—48176
- LiF, dislocation struct. and fracture under cyclic loading 3—18314
- LiF, ductile, predeformation and fracture, high temp. study 3—37981
- LiF, fracture rel. to slip geometry 3—42708
- Mo wire reinforced Cu, cold rolled, deform. 3—34379
- Mo-W (5wt.%), thermomech. treatment effect on fracture mode and creep 3—47863
- Mo-Zr-Cr-B, microplastic deform., grain boundary segregation *(Russian)* 3—39206
- Nb-W, band struct., interatomic bonds 3—33185
- Ni, pressurised pores, growth and interconnection, rel. to stress rupture models 3—52993
- Ni wire reinforced Cu, cold rolled, deform. 3—34379
- Ni-Cr-Fe-Si-B self-fluxing coatings for stationary gas turbines, modification by Al_2O_3 protective scales 3—4211
- Ni-Cr-W-Co-Mo-Ti-Al superalloy, investment cost, tensile props., stress-rupture, corrosion resist., rel. to B/C modification 3—58161
- SiC, tribological props. in metal removal process 3—34488
- SiC whisker reinforced Al composite, hot rolling effect on microstruct. and tensile props. 3—53181
- SiC:Al(B), sintered, microstruct., inclusions, comp., STEM, AES, X-ray analysis 3—39077
- Si_3N_4, hot pressed, crack velocity at bending fracture *(Japanese)* 3—4131
- Si_3N_4, hot-pressed, fracture mechanics, up to 1400°C *(German)* 3—29155
- Si_3N_4, hot-pressed, high temp. environmental strength degradation 3—53252
- Ti alloys, α and $\alpha+\beta$, fracture-microstruct. relationships 3—9185
- Ti alloys, fracture micromechanism, influence of H *(Russian)* 3—24333
- Ti alloys, strength diagram, anal. of behaviour under plane strain conditions 3—9190
- Ti, fracture mechanics of oxide layers, SEM and AE obs. 3—14788
- Ti-Al-V-Sn alloy, slack quenching and tempering, microstruct. and mech. props. 3—14629
- W alloys, liquid phase sintered heavy metals, fracture props., sintering time effect *(German)* 3—58074
- W helical fibre reinforced Cu, tensile fracture *(Japanese)* 3—9162
- W wire reinforced Cu, cold rolled, deform. 3—34379
- W-Cu-Si(Zr) pseudoalloy, fractographic study, Si and Zr effects 3—24358
- W-Mo alloys, grain boundary fracture and cracks, energy characts. *(Russian)* 3—53185
- ZnS, IR transparent, liq. jet impact damage 3—1727
- ZrO_2, partially stabilised, PSZ, stress-induced transform. during subcrit. crack growth 3—29163

fracture strength *see fracture toughness*

fracture strength testing *see fracture toughness testing*

fracture toughness
- *see also notch brittleness; notch ductility; notch strength*
- ABS resins, fracture analysis 3—19410
- $\beta''-Al_2O_3-Na_2O-Li_2O-ZrO_2$, transform. toughening by ZrO_2 addition 3—34438
- alloys, model for plane strain ductile fracture toughness 3—53238
- angle ply laminate, layer thickness effect on strength 3—9128
- apparent, depend. on shear lip size below notch root radius *(Czech)* 3—34450

fracture toughness continued
  brittle materials, generalised fracture toughness 3–27440
  concrete, bend testing and comparison for different material types *(Japanese)* 3–58230
  crack arrest expts., finite element anal. 3–51004
  crack deflection processes, expt. 3–50997
  crack deflection processes, theory 3–50996
  crack shape, effect on fracture resist. of material 3–56474
  ductile materials, evaluation of crack resistance 3–19415
  elasto-plastic fracture mechanics, comparison of expressions *(Slovak)* 3–12600
  epoxide resins, SiO_2, Al_2O_3 or MgO filled, fracture toughness 3–34440
  fibre composites, designing for maximum toughness 3–34425
  fibre reinforced composite, adhesive strength estimation and struct. inhomogeneity effect 3–58389
  fibre reinforced composite laminates, fracture, unifying strain criterion 3–14696
  fibre reinforced polymer, fibre-matrix interactions, mech. props. 3–28221
  fracture mechanics concepts, a summary 3–51016
  fundamental basis of fracture mechanics 3–32670
  glass, tempered, fracture strength and internal stress distrib. 3–34446
  glass ceramic, commercial, flexural strength and fracture toughness, surface finish effects 3–34418
  glass chopped strand mat reinforced unsaturated polyester resin laminate, fracture toughness eval. 3–34439
  glass fibre reinforced Al, produced by powder metallurgy, mech. props. 3–43925
  glass fibre reinforced epoxy, linear fracture mech. principles appl. 3–9149
  glass fibre reinforced PET, microstruct. and fracture 3–19406
  graphite fibre reinforced epoxy, unidirectional dynamic fracture 3–9150
  graphite fibre reinforced epoxy angle ply laminate, layer thickness effect on strength 3–9128
  graphite fibre reinforced glass, compliant, high failure strain, prep. and characteris. 3–29056
  hard materials, future potential developments, mech. props. rel. to appl. 3–3981
  high strength materials, elastic-plastic fracture toughness, prediction using mech. model 3–14699
  indentation microfracture in Palmqvist crack regime, implications for fracture toughness eval. 3–19467
  IR transmitting materials, impact damage and erosion mechanisms, opt. quality 3–9145
  metallic alloys, compendium of sources of fracture toughness and fatigue crack growth data 3–16105
  metals, BCC, temp. and strain rate sensitive, double slip plane crack model appl. 3–28040
  multiphase materials, fracture toughness 3–57020
  nuclear reactor pressure vessel materials, neutron embrittlement eval. and prediction 3–55147
  optical ceramic, toughened materials selection rationale 3–7097
  PET-polytetramethylene terephthalate blends, characterisation of extruded films 3–42983
  plane stress system correl. with mech. props. 3–24334
  Plexiglas, spalling failure at normal and elevated temps. 3–19421
  polycarbonate, fracture toughness determ. using energy approach 3–47933
  polyethylene, mica filled, hot rolling and forging, effect on mech. props. 3–29057
  polyethylene, spalling failure at normal and elevated temps. 3–19421
  polymer, filled, reinforcement effect of microballoons and bubbles *(Japanese)* 3–58187
  polymer mixtures, rubber particle dispersion, toughening mechanism 3–43856
  polymers, toughness design, fracture mechanics 3–4103
  polystryene-polyphenylene oxide blends, fracture toughness and fatigue 3–53210
  polystyrene, high impact, rubber modified, fracture toughness rel. to thickness 3–47936
  PVC, crack growth anal. 3–53216
  PVC pipe materials, fracture toughness, tensile yield stress 3–58189
  PVC rigid pipe materials, fracture toughness, time and temp. effects 3–19409
  quartz, fracture toughness, empirical evaluation 3–4098
  α-silicon, hot pressed, bending strength and fracture toughness *(Japanese)* 3–9183
  sintered materials, tensile strength, prediction model 3–19480
  steel, alloy, 20 MnMoNi 5 5, neutron irradiation in VAK reactor, tensile strength, fracture toughness 3–22942
  steel, alloy, 22 NiMoCr 3 7, neutron irradiation in VAK reactor, tensile strength, fracture toughness 3–22942
  steel, alloy, high-strength, quenched and tempered, low-temp. behaviour 3–47887
  steel, austenitic stainless, fracture strength with flaws, residual stress effect 3–57025
  steel, C-Mn, controlled rolled plates, direct quenching, improved strength and toughness 3–9079
  steel, C-Mn weld metal, microstruct. and toughness, effect of reheating 3–47943
  steel, carburizing, temp. depend. of toughness 3–53193
  steel, case-hardened, fracture in bending 3–58195
  steel, cast, low C, high Mn, for cryogenic use, struct. and props. 3–24343
  steel, cleavage fracture in upper ductile brittle transition region 3–34430
  steel, controlled rolled, strength and toughness, metallurgical studies 3–24359
  steel, Cr, structural, optimisation for improved strength and toughness 3–34462
  steel, Cr-Al, ferritic, heat resistance, strength and embrittlement increase by thermal stress 3–47861
  steel, Cr-Ni-Si, ferritic-austenitic, heat resistance, strength and embrittlement increase by thermal stress 3–47861
  steel, dual-phase, obtained by various rolling schedules 3–43876
  steel, fatigue failure curve, interrelationship of parameters controlling boundaries of self-simulating crack growth area 3–58241
  steel, fatigue strength and toughness *(German)* 3–34424
  steel, ferritic, with deform. twinning tendency, fatigue crack propag. 3–58240
  steel, fracture toughness of C10, temp., loading rate and grain size influence *(German)* 3–4100
  steel, HSLA, weld metals, struct. and props., effect of inclusions 3–43959
  steel, low alloy, hardenability, sulphide stress cracking resist., fracture toughness, suitability for oil pipes 3–53268

fracture toughness continued
  steel, low alloy, heat treated, mech. props. correlations 3–34423
  steel, low alloy, type 03G4AF, rupture strength rel. to struct. 3–47957
  steel, low-alloy, crack resist., temp. depend., fracture features, 20 to −80°C 3–19414
  steel, low-alloy, sulphide cracking tendency rel. to mech. props., alloying elements influence 3–58301
  steel, low-C martensitic structural, design for high strength and toughness, struct.-prop. relations 3–39162
  steel, martensitic, tempered, struct. strength 3–53198
  steel, medium C, ultrahigh strength, heat treatment, fracture props. rel. to comp. 3–53240
  steel, mild, yield at very high strain rates 3–43927
  steel, Mn, low C, quenched and tempered, strength and toughness 3–43962
  steel, Mn-Al, high-alloy, struct. and mech. props., room and cryogenic temps. 3–39244
  steel, Mn-V-N, lamellar tearing susceptibility *(Chinese)* 3–53182
  steel, multiphase stainless, athermal, stress and strain induced transform. strengthening 3–43848
  steel, Ni, cryogenic, QLT-treated, fracture toughness, effect of microstruct. states 3–34362
  steel, Ni-Cr, fatigue failure, fracture toughness and critical crack length 3–53221
  steel, Ni-Cr-Mo, spall fracture comparison with tensile fracture 3–53223
  steel, predeformed, fracture toughness determ. from stretch zone width meas. 3–4239
  steel, stainless, spalling fracture resistance 3–53302
  steel, stress-rupture strength at high temp. and H_2 press., prediction using chem. comp. 3–58237
  steel, structural, fracture toughness, temp. and loading rate influence *(German)* 3–4099
  steel, structural, low strength, fracture toughness data, fission reactor appl. 3–53217
  steel, tool, fracture toughness, influence of microstruct. variations 3–4124
  steel, tool, hot worked, fracture toughness, influence of grain size 3–39230
  steel, ultrahigh strength, medium C, B addition effect on P grain boundary segregation and fracture 3–53070
  steel fibre reinforced concrete, folded plate ridges under bending moment, ultimate strength *(Japanese)* 3–58231
  steel laminates, soft soldered, fracture toughness in high vacuum 3–53239
  steels, sintered, mech. props., review 3–24326
  structural strength, in presence of cracks 3–17891
  Teflon, spalling failure at normal and elevated temps. 3–19421
  Al alloy, high-strength V95 sheet, struct., fracture and mech. props. w.r.t. impurity content 3–58233
  Al alloy, plane stress K_c, correl. with mech. props. 3–24334
  Al alloy, sheet, fracture toughness, plane stress state 3–58330
  Al alloy 2024-T3, reinforced double cantilever beam specimen, ductile, fracture, toughness determ. 3–4237
  Al alloys, high strength, factors influencing fracture toughness 3–53220
  Al and alloys, spalling fracture resistance 3–53302
  Al-Cu-Mg, fracture toughness rel. to struct. nonuniformity in AK4-1 alloy rolled plates 3–58331
  Al-Cu-Mg-Mn, wrought, props., comp. and struct. influence 3–34471
  Al-Cu-Mn, large slabs, struct. and mech. props. 3–34404
  Al-Cu-Mn-Mg-Si, heat-resist., struct. and mech. props., Si effect 3–34403
  Al-Mg-Si alloys, ductile fracture toughness, effect of dispersoids 3–34452
  Al-Zn-Mg-Cu, alloy plate, comparison of engng. props. 3–58192
  Al-Zn-Mg-Cu, metallurgical factor influence on fracture toughness *(French)* 3–24356
  Al-Zn-Mg-Cu special purity high-strength alloy for forgings, props. 3–34401
  Al-Zn-Mg-Cu-Zr plates, Zr effect on mech. and corrosion props. 3–34402
  AlN, hot-pressed ceramics, high temp. fracture 3–39239
  AlN-SiO_2 ceramics, containing long-period polytypes, charact. by fracture toughness 3–39093
  Al_2O_3, fracture toughness, depend. on grain size and test technique 3–29161
  Al_2O_3, fracture toughness, loading rate depend., high temp., second phase effect, J concept appl. 3–53188
  Al_2O_3, hot isostatically pressed, fabrication and fracture toughness for prosthetic use 3–29049
  β-Al_2O_3, polycrystalline, hot pressed or sintered, fracture toughness, temp. depend. *(Japanese)* 3–58219
  Al_2O_3, strengthening by heat treatment 3–43855
  Al_2O_3:Cr(Zr), ion implanted, surface struct. and props., annealing effects 3–2948
  Al_2O_3-Cr(Pt) cermet insulators, thermal-shock-resistant, prep. and characteris. 3–24198
  Al_2O_3-ZrO_2, slow growth of microcracks, evidence for ZrO_2 toughening 3–29162
  BaO.6Fe_2O_3 permanent magnet, oriented, fracture toughness and anisotropy 3–14741
  C fibre reinforced Si_3N_4, processing, characteris. and incompatibility problems soln. 3–29051
  Cr plate on steel, fretting resist.improvement, optimum grinding parameters 3–58307
  Cu, spalling fracture resistance 3–53302
  Fe, cast, pearlitic grey, fracture behaviour, microstruct. and macrostruct. modelling 3–14731
  Fe-Al-P, ternary amorphous alloys, mech. props., thermal stability, Al content depend. 3–47937
  Fe-Mn-Ni base maraging alloys, struct. and mech. props. of martensite, effect of thermomech. treatment 3–9093
  Fe-Ni-Cr-Ti austenitic alloy for cryogenic use, Ti and ageing effects on strength and ductility *(Japanese)* 3–9161
  GaP, single cryst., cleavage, fracture toughness meas. 3–33351
  Ge, optical grade, procurement specification 3–1725
  HfN coatings on cemented carbide tools, PVD and CVD, interrupted cutting tests 3–14763
  Li_2O-Al_2O_3-SiO_2 glass ceramic, flaw growth, indentation-produced 3–19393
  Mg alloy, plane stress K_c, correl. with mech. props. 3–24334
  $MgAl_2O_4$ spinel, hot pressed, fabrication and props. for UV, visible and IR requirements 3–7088
  MnZn ferrites, mech. props. improvement by controlling O content 3–14739

fracture toughness continued
NbC-graphite composites, strength with force and thermal loading 3—14726
Ni, spalling fracture resistance 3—53302
Ni, superalloy MAR-M247, Co effect on microstruct. 3—14618
Ni superalloy MAR-M247, Co effect on tensile and stress rupture props. 3—14713
Ni superalloy MAR-M247 single crystals, orientation effect on stress rupture props. 3—14711
Ni-Al-P, ternary amorphous alloys, mech. props., thermal stability, Al content depend. 3—47937
Ni-based alloys, dispersion strengthening, solid-solution strengthening, TaC and TiC additions 3—29092
$PbO-B_2O_3$ immiscible glasses, mech. props. 3—2661
$PbO-B_2O_3$ glasses, microcrack-branching and fracture toughness 3—34445
Si single crystal, lifetime subjected to loads of duration 10^{-6}-10 s 3—8133
Si wafers, backside laser irrad., microcracks, thermal annealing 3—27984
SiC:Cr, ion implanted, amorphous struct. and mechanical props. 3—4138
Si_3N_4, hot-pressed, fracture mechanics, up to 1400°C *(German)* 3—29155
Si_3N_4 powders, high press. hot pressing, densification, α to β phase transform., hardness, fracture toughness, temp. depend. *(Japanese)* 3—58084
Si_3N_4, reaction-bonded, dynamic fracture toughness 3—53189
Si_3N_4, tensile testing, optical and SEM obs. 3—39326
$\alpha+\beta$-Ti alloy, fracture toughness, strength and microstruct. 3—14734
Ti alloy, plane strain fracture toughness parameter, comp. and struct. depend. 3—14833
Ti alloy, plane stress K_c, correl. with mech. props. 3—24334
Ti alloy, two-phase $\alpha+\beta$, high-strength, development trends 3—24247
Ti alloy 662, two-phase, microstruct., US factors and fracture toughness interrelation 3—58229
Ti alloys, corrosion cracking and retarded fracture in air, heat treatment influence 3—58306
α-βTi alloys, fracture toughness, role of microstruct. 3—34458
Ti and alloys, H embrittlement, susceptibility 3—9191
Ti and alloys, hot deformability, H influence 3—24318
Ti-Al-Mo, VT9, cyclic fracture toughness, effect of strain history 3—43956
Ti-Al-Mo-Cr alloy, CORONA 5, moderate strength, high fracture toughness alloy development 3—24365
Ti-Al-Sn-Mo-Si alloy, $\alpha+\beta$ type, heat treatment variations effect on mech. props. 3—24363
Ti-Al-Sn(Mn) and Ti-Al-Cr(Zr)-Mo-Si, mech. props., laminated struct. influence 3—19389
Ti-Al-V, fatigue crack propag., effect of microstruct. 3—9187
Ti-Al-V, fracture toughness, microstruct. fracture appearance and specimen size 3—9184
Ti-Al-V alloy, impurities effect on working ability 3—24364
Ti-Al-V alloy, VT5L, rare earth additions effect on mech. props. and thermal stability 3—24367
Ti-Al-V-Sn alloy, slack quenching and tempering, microstruct. and mech. props. 3—14629
Ti-Al-V-Sn-Zr alloy, high-strength alloy development 3—24249
Ti-Al-Zr-Mo-Si, heat treatment effect on microstruct. and props 3—24281
Ti-Mo-V-Cr-Al metastable β system, deep hardenable alloy synthesis, design and props. 3—24250
β-Ti-Mo-V-Fe-Al, metastable, direct ageing for optimum mech. props. 3—19355
Ti-Mo(Ni) alloys, beta-type, strength and toughness, heat treatment effects 3—24366
TiB_2-CoB, boride additives effect on mech. props. 3—24323
TiB_2-Fe composite, sintered, transverse rupture strength, temp. depend. 3—58242
TiB_2-Ni ceramics, hot pressing, fracture, thermal expansion, microstruct., comp. depend. 3—43941
TiC coatings on cemented carbide tools, PVD and CVD, interrupted cutting tests 3—14763
(U,Pu)C and (U,Pu)(C,O), fuels for fast breeder reactor, fracture surface energy, fracture toughness 3—55140
$(U_{0.8}, Pu_{0.2})C_{0.8}N_{0.2}(N)$, LMFBR fuel, Hertzian indentation of with simulated burn-up 3—16850
UO_2 fuel pellets, microstructure effects on fracture strength 3—45586
$(U_{0.8}Pu_{0.2})O_2$, fracture surface energy, Hertzian indentation technique 3—34443
V, stress-rupture strength, solid soln. hardening influence 3—58239
WC-Co cement, fracture toughness, effects of nonstoichiometric C contents 3—4106
ZrC-graphite composites, strength with force and thermal loading 3—14726
ZrO_2, MgO partially stabilised, thermomech. props., effect of heat treatment 3—58210
ZrO_2, partially stabilised, two-wavelength X-ray analysis of transformed zone 3—14602
ZrO_2 single crystals, partially stabilished, fracture toughness and strength, temp. depend. 3—9158

fracture toughness testing
see also notch testing
alumina ceramic, biaxial tension strength testing 3—44002
bimetals, structural, methods for fracture toughness characts. determ., review 3—9274
brittle materials, fracture toughness testing, crack formation in test piece 3—58332
centre cracked panels, recommendations for R-curve meas. 3—4236
ceramics, Knoop and Vickers indentation, controlled flaws, residual stress field, fracture analysis 3—53312
ceramics, strength under mech. and thermal loading, acoustic emission studies 3—44018
Charpy impact testing, simplified method, below 5K 3—9262
composite, double torsion test, transverse cracking eval. 3—24426
composite failure determ. in plane stressed state by mech. luminesc. method 3—53328
correctness of experimental levels of crack resist. of materials, phenomenological approach 3—58362
crack initiation toughness testing, R curve approach 3—56505
crack tip line blunting, used in J_{Ic} testing procedure, limitations 3—56506
crack-line loaded specimens, stress intensity factor 3—22404
disc sample with centre crack, loading device design influence on stress intensity factor 3—58361

fracture toughness testing continued
experimental fracture mechanics, developments and state-of-the-art 3—56496
fatigue crack front shape effect 3—53316
fibrous silica material, transversely isotropic, fracture, double-cantilever beam testing 3—44003
Hertzian indentation technique appl. to fast breeder reactor carbide fuels 3—55140
impact loading, evaluation of dynamic fracture toughness *(Czech)* 3—14808
indentation microfracture in Palmqvist crack regime, implications for fracture toughness eval. 3—19467
metal, spalling fracture resistance determ. methods 3—53302
metallic materials, stress-rupture strength evaluation methods 3—14802
metals, electrodeposited, method for fracture toughness determ. 3—19501
methods of testing in fracture mechanics 3—14801
nonlinear fracture toughness parameters, comparison of geometry depend. 3—14794
notched bend specimens in impact loading 3—29230
optical ceramic, thermal shock testing techniques 3—9264
plain strain, fatigue cracking loads effects, review 3—53315
plane stress system correl. with mech. props. 3—24334
reinforced double cantilever beam specimen, ductile 3—4237
round bar and high strength wire, method of evaluating fracture toughness 3—29257
sheet material, biaxial loading, limiting equilib. and crack growth, fracture meas. method 3—44016
short rod and short bar fracture toughness specimens, compliance calibration 3—34569
single specimen fracture test augmented by finite element anal., J_{IC} eval. 3—56512
sintered materials, subcrit. crack growth determ. method 3—58363
steel, C type, 20k, brittle fracture susceptibility eval., nondestructive magnetomech. method, hot rolling and ageing effects 3—48017
steel, Cr-Mo, fracture testing in high temp. and press. H_2-H_2S environment, test chamber system 3—29238
steel, ductile, fracture toughness determ. based on J-integral 3—19493
steel, impact loading, specimen size factor in surface active media 3—29255
steel, linepipe, high toughness, drop weight tear test 3—24475
steel, local stressed condition, determ. of crack resist. by criteria of similarity 3—29256
steel, medium alloy low-C high strength, resist. to cold cracking estimation, implant welding appl. *(Russian)* 3—19471
steel, new method of determining J_{Ic} by means of single specimen 3—34568
steel, pressed notch specimens, fracture resist. in static and impact bend testing 3—19492
steel, structural, size of plastic region due to blunting of precrack tip, crit. stress intensity factor 3—29233
US factors and fracture toughness 3—58325
Al alloys, fracture toughness, comparison of results from short bar and compact specimens 3—29229
Al-Cu-Mg, fracture toughness rel. to struct. nonuniformity in AK4-1 alloy rolled plates 3—58331
Al_2O_3, fracture toughness, depend. on grain size and test technique 3—29161
Al_2O_3-ZrO_2 composites, K_{Ic} values, comparison of notched-beam and indentation strength technique 3—53313
$MgAl_2O_4$ spinel IR domes, thermostruct. eval. 3—9265
SiC refractories, deform. and fracture study by acoustic emission method under three-point bending *(Japanese)* 3—39252
ThO_2, Hertzian crack growth, serial sectioning obs. 3—14793
Ti alloy, plane strain fracture toughness parameter, comp. and struct. depend. 3—14833
Ti-Al-V (6, 4 wt.%), stable crack growth during fracture toughness testing *(Japanese)* 3—29164
TiC(N) low-Z coatings for JT-60, thermal shock testing 3—21525
WC-Co, diamond filled composites, cracking resist. determ. 3—39321

francium
see also nuclei with ......
No entries

francium compounds
No entries

Franck-Condon factors
aromatic hydrocarbons, Franck-Condon principle for radiationless transitions and Morse oscills. 3—32138
benzene-d_6 in cryogenic soln., absorpt. and emission spectra, intermolecular Franck-Condon shifts 3—6746
1,3-butadiene, $1^1A^-{}_g$-$1^1B_u{}^+$ transition, Franck-Condon anal. 3—55919
carbazole solutions with hydrogen bonding, electronic spectra, intermol. and intracomplex relax. manifestation 3—36811
chrysene, reson. CARS and Shpolskii spectra, mol. geom., vibr. freq. and relative intensities calcs. 3—26756
chrysene, third excited state, reson. Raman overtone spectrum 3—36762
1,2-di-β-naphthylethylene, in naphthalene cryst., absorpt. and fluoresc. intensity at 4.2K 3—1358
diatomic molecules, Franck-Condon type integration, FORTRAN program 3—21742
diatomic mols., vibronic bands, generalised Franck-Condon principle 3—21823
generalised r-centroid approx. 3—26788
interatomic potentials determ. from line shape studies 3—6741
molecules, Franck-Condon factors, harmonic oscillator approx. 3—17340
naphthalene, one-colour reson.-enhanced two-photon ionis. spectra 3—46032
reactivity of one-electron and two-electron processes, comparison 3—58398
separable potential energy surfaces, photodissociation and Condon refleC-tion principle 3—26802
triethylamine, laser multiphoton ionisation following collision-free IR multiple-photon excitation 3—6730
UV molecular transitions in sunspot umbrae 3—35579
AlH^+, low lying states, ab initio calcs. 3—1237
BH^+, low lying states, ab initio calcs. 3—1237
CN-violet band system, Franck Condon factors from quasi-Morse pots. 3—6725
CO, $(A\ ^1\Pi)$ state, reson. multiphoton ionisation, photoelectron spectra 3—32136
CS^-, PES, electron affinity and bond lengths 3—46026
$^{12}C^{18}O^+$, vibr. consts. of electronic transition $B^2\Sigma^+ \rightarrow X^2\Sigma^+$ 3—17253

- **Franck-Condon factors** continued
  - CaO molecule, r-centroids and Franck-Condon factors calc. 3—55998
  - $GdAlO_3:Cr^{3+}$, magnetic Franck-Condon effect 3—34142
  - HgCl, B→X transitions 3—6950
  - HgCl, D-X system, vibr. and rot. struct., Franck-Condon factors 3—1373
  - HgI, B→X transitions 3—6950
  - I_2, B and X states, pot. curves, Franck-Condon factors and intensity distrib. 3—1429
  - NO, VUV laser induced fluorescence 3—11853
  - NS, B and X states, pot. curves, Franck-Condon factors and intensity distrib. 3—1429
  - NS^-, PES, electron affinity and bond lengths 3—46026
  - $Ne+HCl \to Ne+HCl^+ + e^-$, Penning ionis. optical spectrosc. 3—32177
  - OH, Morse pot., Franck-Condon factors with vibr.-rot. interaction 3—11889
  - $PN+He(2^3S)(Ne(^3P_{0,2}))$, energy transfer, Penning ionisation, emission spectra 3—41666
  - PS, B and X states, pot. curves, Franck-Condon factors and intensity distrib. 3—1429
  - TiO, partial vibr. anal. of $f^1\Delta$-$a^1\Delta$ transition 3—17259
  - TiO_2, partial vibr. anal. of A-X transition 3—17259
- **Frank-Read sources**
  - Cu_2NiZn, ordering alloy, stress-strain, 77-343K, yield stress rel. to dislocation sources 3—43922
- **Fraunhofer lines** *see solar spectra*
- **free-electron approximation**
  - deformation parameter and ultrasonic attenuation 3—51719
  - free-electron metal, bulk and surface photoemission 3—52894
  - semiconductors and semimetals, effect of free electron terms on g-factor 3—18604
  - K, shear waves, EM generation and US attenuation 3—57034
- **free electron lasers**
  - accelerator physics rel. to free electron laser physics 3—17510
  - accelerators, high current high voltage, as free electron laser drivers 3—22103
  - ACO storage ring FEL, laser induced bunch lengthening 3—56218
  - amplifier gain for a nonmonoenergetic beam 3—12159
  - amplifier with guide mag. field, kinetic theory 3—22079
  - angular spread effect, small signal gain calc. 3—46223
  - axial guide field laser three-dimens. theory 3—56212
  - axial magnetic field effects on the operation of a millimeter-wave free electron laser 3—17506
  - axial magnetic guide field effect 3—22098
  - Bragg reflection resonator based free electron lasers, cyclotron autoreson. masers vs. ubitrons 3—56209
  - bunched electron beam diagnostic device, free electron laser diagnostics appls. 3—32299
  - coherent relativistic scatterer for UV generation 3—32286
  - coherent sources of IR and mm waves, scientific appls., book contrib. 3—1651
  - collective, in resonant pump conditions 3—17507
  - collective effects on the operation of free-electron lasers with an axial guide field 3—1646
  - collective mm-wave laser, design and operation 3—56216
  - colliding high-energy photon beams using free electron laser 3—41388
  - Compton scattering free-electron laser with axial electric field, design considerations 3—32370
  - conference on condensed matter techniques and materials, Argonne Nat. Lab., Argonne, IL, USA (Sept. 1981) 3—10514
  - cyclotron-undulator interaction based laser oscillator 3—56214
  - dense-beam laser amplifier, finite-temp. effects 3—56215
  - diagnostics of Stanford 3 μm free electron laser 3—17511
  - diffraction grating generators, nonlinear processes, free electron lasers 3—12162
  - diffraction radiation generator, polarization effects 3—22078
  - diffraction-emission generators, hysteresis effects 3—6993
  - diffraction-radiation generators, in higher modes of open resonator, operational characts. 3—27069
  - distributed feedback with corrugated resonator 3—12163
  - dynamically coupled free electron and mol. gas laser, kinetics 3—56221
  - efficiency increase by using electron cyclotron resons. with a combination wave 3—1644
  - electron pulse axial expansion in a free-electron laser 3—22085
  - electrostatic accelerator free electron lasers, UCSB electron beam system design 3—22124
  - energy transmission in space 3—32400
  - Fabry-Perot resonators, linear theory 3—17502
  - gain expansion free electron laser theory 3—17519
  - gain measurement at 10.6 μm, small signal 3—56254
  - gain-enhanced free-electron laser with an EM pump field 3—32372
  - gain-spread theorem of Madey 3—17520
  - Hamiltonian picture, multimode, super mode 3—22087
  - high-power electron and ion beam, conf., Palaiseau, France (June-July 1981) 3—5501
  - inverse, in far field accelerators, working group report 3—17105
  - IR free electron lasers for condensed matter studies 3—12207
  - klystron spontaneous emission and gain 3—17513
  - linear magnetic wiggler with axial guide field, electron drift 3—26922
  - Los Alamos free-electron laser expt. results 3—56223
  - Los Alamos free-electron laser expt. status report 3—22083
  - magnetic resonant three-dimens. kinetic theory 3—37057
  - maser, high power, CW, design for fusion appls. 3—36979
  - microtron free electron laser operating with single pass machine 3—22094
  - microtron free-electron laser experiment, mode locked far IR, tunable 100 to 400 μm 3—22093
  - millimetric, using spiraling relativistic electron beam 3—41851
  - multicomponent wiggler design optimisation for free electron laser oscillator 3—56235
  - multicomponent wiggler free-electron laser, gain and efficiency enhancement 3—1647
  - nonlinear saturation around gyroresonance 3—41850
  - nonlinear saturation mechanisms and improvement in free-electron lasers 3—32371
  - nonlinear theory in three dimens. 3—17508
  - nonlinear theory of the free-electron laser with an axial magnetic field 3—12161
  - nonwiggler collective free electron laser in uniform mag. field, theory 3—56213
  - operation with prebunched electron beam 3—17509
  - optical mode control 3—22088
- **free electron lasers** continued
  - optical pulse evolution in Stanford free-electron laser and in tapered wiggler 3—22084
  - orotron, high-order mode excitation, conditions, derivation 3—37056
  - orotron, tunable source of coherent MM wave radiation, expt. results 3—22095
  - oscillator evolution 3—56220
  - permanent magnetic undulator for FEL study on storage ring 3—45726
  - photon critical number, quantum effects, S-matrix theory 3—46224
  - power source for linac accelerating struct. 3—17106
  - principles, introductory, book 3—45
  - pulse propagation in a tapered wiggler 3—21983
  - quantised many-particle theory 3—46225
  - quantum/classical mode evolution in free electron laser oscillators 3—56208
  - radiation fields, three dimens., using Lienard-Wiechert fields 3—22090
  - Raman, free-electron laser, electron cyclotron resonance effects *(Japanese)* 3—50667
  - Raman free electron laser operation at MM wavelengths, axial mag. field effects 3—22097
  - relativistic electron beams propag. in longitudinal mag. wiggler, higher harmonic emission 3—1645
  - relativistic high freq. electronics, achievements and problems 3—33024
  - relativistic intense electron beams in combined guiding and wiggler mag. fields, MM wave emission 3—22096
  - relativistic solid electron beam, in helical wiggler field, free electron laser instability 3—41745
  - resonance ponderomotive effect for an open spherical screen 3—26926
  - resonant relativistic electron masers, automodulation and stochastic oscill. regimes 3—22023
  - resonator mode structure 3—22089
  - resonator modes, electron dynamics 3—12158
  - scalar wave equation with focused Gaussian gain, exact soln. 3—26993
  - self-focusing effects in free electron lasers 3—6992
  - side-band instability saturation 3—32373
  - simple pass high gain amplifier for 10.6 μm free electron laser 3—17505
  - simulation, three-dimens. 3—56210
  - simulation and two-dimens. theory 3—17504
  - single-pass Compton-regime variable-parameter free electron laser, MM wave generation 3—22092
  - space charge field effect due to finite length electron beams 3—22086
  - spontaneous emission of undulators and free electron lasers 3—26923
  - stimulated Cherenkov interaction at optical wavelengths 3—32287
  - stimulated Cherenkov optical klystron, gain and efficiency 3—56219
  - stochastic electron behaviour, variable parameter wigglers *(Chinese)* 3—41849
  - storage ring, Adone, free electron laser programme 3—17516
  - storage ring BESSY for proposed free electron laser 3—17517
  - storage ring expt. using superconducting undulator 3—17512
  - storage ring-free electron laser system, Brookhaven expt. status and perspectives 3—17514
  - superconducting linear accelerator at Stanford rel. to free electron laser programme 3—17131
  - tapered wiggler FEL amplifier, efficiency enhancement 3—22081
  - tapered wiggler free-electron laser, spontaneous spectrum and small-signal gain 3—22082
  - tapered wiggler free-electron laser, two-dimens. numerical model 3—32375
  - tapered-wiggler laser, electron spectrum meas. 3—56255
  - theory of steady state pulses in nonlinear swept-gain amplifier 3—32369
  - three-dimensional non-linear theory of the free-electron laser amplifier 3—22091
  - transverse optical klystron, gain curve in small signal regime, report 3—21588
  - transverse optical klystron (TOK) and convertor physics and figures, comparison with relative FEL gain 3—32285
  - transverse optical klystron amplifier, small signal gain 3—22077
  - transverse optical klystron harmonic generator, generalised description 3—56211
  - two-stage free electron lasers using electron-guns and depressed collectors 3—56234
  - UK laser proposal, 10 μm operation 3—17518
  - undulator for free electron laser expt. at the National Synchrotron Light Source 3—17515
  - unified quantum theory of free-electron devices 3—32288
  - variable parameter free-electron lasers, nonadiabatic corrections and detrapping 3—22080
  - variable wiggler free electron laser experiment and theory 3—17503
  - wiggler, planar, transverse mag. field errors, floating wire meas. 3—12160
  - wigglers, realisable, quantum approach 3—32374
  - workshop on free electron generators of coherent radiation, Sun Valley, IO, USA (June 1981) 3—16063
  - X-ray free electron laser prospects using stimulated reson. transition radiation 3—56217
- **free energy**
  - acenaphthene, thermodynamic functions, cell model 3—33470
  - adsorbate solid, dislocation interaction free energy near commensurate-incommensurate transition 3—8049
  - alkali halide electrolytes, aq., enthalpies of mixing, 373.15K 3—33451
  - alkali halides electrolytic aq. soln., McMillan-Mayer ion-ion pot., Coulombic contrib. correction 3—22753
  - alkali metal halides, solid, free energy based on $H_2{}^0{}_{98}$ 3—38101
  - alkali metals in liq. phase, entropy calc. from consideration of ionic atm. 3—2842
  - amorphous struct. modelling, free energy minimisation 3—42522
  - antiferroelectric phase transitions, elec. field induced tricritical points 3—38774
  - antiferromagnetic superconductor; magnetocaloric effect and spin waves 3—23638
  - antiferromagnetism, type I, statistical theory on FCC lattice, AB alloy superlattice theory 3—28489
  - asymptotics of certain random fields on a circle for mean field type ferromag. systems 3—16302
  - binary liquid alloys, free energy as function of comp., Gaussian-based formalism 3—33396
  - biomolecules, synthesis, accuracy, thermodynamic aspects 3—58592
  - blood cell, solid/vapour interfacial free energy and surface tension 3—47191
  - boiling liq., gaseous nuclei stability at liquid-solid interface, free energy analysis 3—2760

free energy continued
- chloropentamethylbenzene, heat capacity, Raman spectra and NQR meas. 3−18477
- cholesteric liquid crystals, blue phase, disclination lattice struct. 3−33084
- classical condensed matter, devil's staircase and order without periodicity 3−37819
- classical Heisenberg chain with anisotropies, statistical mechanics 3−43348
- classical partition function of a rigid rotator or polyatomic gases 3−35817
- clusters in Ising model, Monte Carlo calc., comparison with capillarity approx. 3−33908
- commensurate-incommensurate phase transitions of one dimens. chains, $T\to 0$ limit of Gibbs state 3−42746
- composition automodulated complex epitaxial films, struct. stability, thermodynamic anal. 3−13669
- corrosion prediction using EMF-pH diagrams 3−58276
- creep function symmetry, monotonicity and concavity in Day's information theory 3−57017
- crystal anisotropy, theory based on non-analytic free energy 3−22813
- crystal with continuous defect distribution 3−2848
- crystalline nucleus, two-dimensional, size and shape, depend. of interfacial tension 3−47190
- crystals with polarised defects, thermodynamic props. near phase transition 3−28123
- dimethylcobalt (DpnH), electron transfer far from equilib., free energy, reversibility 3−1472
- dipolar hard spheres, perturbation theory 3−33053
- disordered solids, low temp. specific heat, perturbation theory calc. 3−33465
- disordered spin systems, free energy, infinite range limit 3−38578
- elastic incommensurate transitions, Landau theory 3−33420
- elastic phase transitions, Landau theory appl. 3−23033
- electrolyte, binary mixture, excess free energy changes at vanishing ionic strengths 3−38072
- electron-transfer reactions of solvated electrons, electronic transmission coeff., free energy gap and temp. depend. 3−24491
- ellipsoidal harmonics, Lame function method, chemical free energy appl. 3−29329
- ferromagnetic abelian lattice systems, translation invariant equilibrium states 3−3463
- ferromagnetic superconductors, thin films, mag. ordering 3−57449
- fluids, perturbation theory, square-well 3−42500
- Frohlich polaron, galvanomagnetic phenomena for arbitrary coupling const. 3−23292
- Gibbs's phenomenon, Fourier integral treatment 3−35813
- Gibbs states, non-translation invariant, absence in two-dimens. Ising model 3−16303
- glass, phase separation and eutectic form., thermodynamic anal. 3−33449
- glass-forming systems, reduced thermodynamic functions at 0K 3−2852
- grain boundary migration and form., space charge distribs. 3−46948
- hard core fluid Helmholtz free energy with Yukawa tail, generalised mean spherical approx. 3−7891
- hard-sphere fluid mixture, equilib. props. in the semiclassical limit 3−22748
- hard-sphere nonadditive mix., equilib. props. in semiclassical limit 3−56791
- Heisenberg spontaneous metamagnet, thermodynamics, transitions and exchange parameter 3−33893
- Heisenberg XY quantum lattice systems, thermodynamics and ground state props., renormalisation approach 3−38640
- high spin-low spin transitions, thermal hysteresis effects 3−57619
- Hubbard model, spin-less fermion Hamiltonian, specific heat and CDW parameters 3−23574
- Hubbard one-dimensional model, free energy renormalisation transform. 3−5740
- hydrocarbon mixtures, binary, bubble press. and vapour-liq. equilibria 3−2761
- III-V pseudobinary alloys, mixing excess free energy, clustering parameter, phonon spectra anal. 3−13463
- III-V ternary and quaternary epitaxial solid solns., instability criteria 3−42954
- incommensurate epitaxial layer, first and second order transition to superstructures, discrete maps 3−57059
- ionic and dipolar fluid, thermodynamics, statistical mech., complementary variational principles 3−13061
- ionic solids, grain boundary segregation, space charge, elastic field and dipole contribs. 3−47113
- IRF model, order and disorder lines in systems with competing interactions 3−28494
- irreversible processes modelling by analogy methods of statistical mechanics 3−30829
- Ising chains, short-range random systems, thermodynamic limit and replica method 3−23675
- Ising model, layered, on triangular and honeycomb lattices 3−28579
- Ising model, random, systematic expansion 3−18919
- Ising model, randomly dilute, convergence of cluster expansion 3−52330
- Ising model, spin 1/2, thermodynamic props., approximation method 3−38570
- Ising model, two-dimensional, analytic continuation at first-order phase transitions 3−28584
- Ising model on closed Cayley tree 3−49303
- Ising models, internal energy and short-range order 3−23566
- Ising spin glass, free energy surface and hysteresis effects calc. 3−23667
- Ising spin glass, long-range, convergence of sub-extensive terms 3−18921
- isothermal Lane-Emden equation, canonical ensemble, mean field limit 3−40473
- JANAF thermochemical tables, 1982 supplement 3−25704
- Josephson array, Ginzburg Landau free energy 3−57483
- lCc Pb-Cu-Ag-S, thermodynamic behaviour of dil. solns. of S 3−29063
- Lennard-Jones fluid, binary, liq.-vapour interface, two-phase region, struct. and surface tension 3−42888
- lipid vesicles, interactions with solvent in heavy and light water, phase-transition props. 3−9362
- liquid, Perram-White perturbation term evaluation by Monte Carlo method and Kirkwood superposition approx. 3−27816
- liquid alloy, binary, free energy of mixing 3−57096
- liquid alloys, binary, free enthalpy of mixing, association and vol. contraction 3−51807
- liquid crystal director fields, numerical three-dimensional relaxation, FORTRAN program 3−13094

free energy continued
- liquid crystals, elastic consts. and continuum theory, free energy density expansion 3−33082
- liquid films, free energy loss during breakdown 3−51894
- liquid metals, high-temp. free-energy expansion 3−13488
- liquid mixtures, regular soln. theory, comparison with thermodynamic perturbation theory, mol. approach 3−38075
- long-range potential models, transition matrix, perturbation theory 3−14068
- magnetic anisotropy consts. of arbitrary order for cubic systems 3−52451
- mean-field calcs., exact, of continuous quantum systems in equilib. 3−30769
- mean-field model, continuous symmetry breaking 3−33847
- melting, mean-field theory based on Bogolyubov-Born-Green-Kirkwood-Yvon eqn. 3−38037
- metallic interfaces, thermodynamic props. and microchemical behaviour 3−2575
- metals, liq., supercooled, stability limit 3−57070
- metals, surface props. using inhomogeneous linear electronic response 3−23450
- microclusters, melting and surface tension, thermodynamic calcs. 3−33403
- Migdal-Kadanoff approx., free energy preservation 3−5758
- Migdal-Kadanoff approx. preserving free energy q-state Potts model 3−30809
- molecular fluids, linear, integral eqns., general formulation 3−2356
- molecular quantities, determ. by means of macroscopic systems 3−32239
- molecular quantities, determ. by meas. of macroscopic systems 3−32240
- nematic liq. cryst., pressure effects, isotropic phase free energy 3−13092
- nematic liquid cryst., pressure effects, phenomenological theory 3−13091
- nematic polymers, Landau-de Gennes theory 3−37777
- nematogens, Lebwohl-Lasher model, computer simulation studies 3−2388
- neutron star matter, BCS free energy taking account of relativistic effects 3−35649
- nitrobenzaldehyde anion radicals, formyl group restricted rot., EPR study 3−50544
- nucleation theory, Tolman correction for droplet surface tension, effect on reduced supercooling 3−42747
- one dimensional chains, vibr. entropy, short range order effects 3−42811
- one-dimensional spin system with long range random interaction, infinite differentiability 3−33844
- 4-n- pentyl-4′-cyanobiphenyl nematic liq. cryst., surface pretransition order 3−13095
- phase and domain boundary orientation, interface free energy minimisation 3−2571
- phase diagrams, strategies for calc. 3−13406
- phase transitions, tricritical behaviour, effect of surfaces, surface energy calcs. 3−33386
- polar fluids, shape factors, statistical mech., conformal-solution theory 3−37753
- polarisable multicomponent systems thermodynamics, nonequilibrium relativistic long-wave limit 3−20809
- polymer blends, interface struct., free energy density 3−38168
- polymer surface with close-packed monolayer of submicron monodisperse spheres just below surface, form. and thermodynamic stability 3−38172
- polymers, fatigue crack layer propag. law 3−53208
- polymorphic transitions, domain wall motion anal. 3−42560
- Potts model, first order transition from finite lattice extrapolation 3−5748
- Potts model, q-state, thermodynamics, cluster approx. study 3−35936
- Potts models an hierarchical lattices, defect free energies calc. 3−40509
- propargyl alcohol (bromide), dielec. dispersion in dil. soln. 3−47598
- protein solution, dynamics and time-averaged chem. pot., role in oligomer assoc. 3−9544
- pseudo-spin system, second order treatment, transverse-field Ising model 3−18841
- pseudo-spin system, self-consistency and thermal equilibrium, second order treatment 3−18844
- PTFE, conformational energies 3−12016
- quadrupole moment, macroscopic, temp. depend. near displacive phase transition point 3−2785
- quantum asymmetric clock model, commensurate-incommensurate transitions and Lifshitz point 3−38056
- quantum crystal free energy, contrib. due to interacting quasiparticles 3−42879
- quantum fluids, interface profiles and surface tension, generalised van der Waals theory 3−2923
- quasi 1-D H-bonded ferroelec. thermodynamic props., tunnelling model 3−2849
- quaternary ammonium iodide-$POCl_3$, charge transfer complexes, visible, UV obs. 3−32093
- random spin systems and frustration, thermal theory 3−57683
- rare earth intermetallics, quadrupolar interactions, third-order paramag. susceptibility study 3−52357
- renormalisation group transformations with periodic and aperiodic orbits 3−49278
- replica method inaccuracies in Sherrington-Kirkpatrick spin glasses 3−18918
- s-d spin glasses, nonlinear magnetisation and instability 3−43377
- selective ion solvation, solvent extraction 3−53375
- semi-infinite medium, nucl. surface props., temp. depend. 3−31324
- semiconductors, ionic, solute segregation near grain boundaries, space charge contrib. 3−51813
- simple cubic Ising lattice, free energy and entropy estimation by computer simulation 3−45081
- single chain lattice model, free energy, upper bound calcs. 3−40507
- single crystal plates, nonuniformly doped, equilib. states *(Russian)* 3−13243
- smectic liquid crysts., microscopic theory 3−2389
- solid electrolyte, mass-action law appl. *(French)* 3−47156
- solid solutions, binary, deviations from ideal mixing, thermodynamic models 3−42785
- solid solutions, binary and ternary, volume effects, review 3−19315
- solid/vapour interfacial free energy and surface tension 3−47191
- solids, vacancy formation free energy 3−2548
- spin glass, $\pm J$ Ising model, anal. by real replica method 3−57686
- spin glass, random bond model 3−57642
- spin glass, symmetry breaking in m-component Sherrington-Kirkpatrick model 3−23656
- spin glasses, annealed and quenched states, free energy, variational approach 3−18917

- **free energy** continued
  - spin glasses, asymptotic hierarchical Dyson models, limiting distribution and free energy 3–18916
  - spin glasses, freezing temp., two-dimens. ±J model 3–23668
  - spin glasses, Ising model, diagram method of high temp. expansions, free energy 3–8693
  - spin glasses, mean-field soln. as analytic continuation in replica number 3–47504
  - spin glasses, Sompolinsky's mean field theory, props. 3–33903
  - spin systems, renormalisation group and free energy calcs. 3–3465
  - spinel ferrites, disordered, with Jahn-Teller centres, mag. anisotropy, random field effects 3–18884
  - steel, austenitic stainless, grain boundary energy and extrinsic grain boundary dislocations, spreading time and temp. 3–13239
  - steel, low alloy, caustic cracking and local corrosion, thermodynamics 3–29217
  - steel, TRIP, isothermal martensitic transform., stress-assisted 3–24229
  - stochastic H-theorem for multidimensional diffusion processes 3–30782
  - strongly coupled one-component plasma, discontinuous mean spherical approx. 3–32856
  - superalloys, Ni-base and Fe-base, room temp. tensile props., influence of carburisation 3–19388
  - superconductor, space-inhomogenous, resist., temp. and characteristic length depend. 3–18825
  - superconductors, type II, critical mag. fields and Landau-Ginzburg parameter 3–28486
  - surface thermodynamics 3–38187
  - suspension rheology, elastic fluid theory appl. 3–12613
  - ternary alloy superlattice, free enthalpy 3–8219
  - Thom system, scaling phenomena, catastrophe theory *(Chinese)* 3–16320
  - triorganophosphates, in n-octane, osmotic and activity coeffs. meas. 3–34646
  - two-dimensional fluids, semiclassical statistical mechanics 3–32705
  - two-dimensional system, statistical theory of phase transitions, Gibbs free energy calc. 3–23011
  - water, models, excess free energy computed by Monte Carlo methods 3–28122
  - Al-GaAs (110) interface structure on Al chemisorption, energy minimisation study 3–8328
  - β''-Al_2O_3-Na_2O, activation enthalpy, Gibbs free energy, and entropy for cond. 3–23085
  - Ar gas, pair pot. determ. from thermodynamic props. 3–12806
  - Ar-methane solid solutions, thermodynamics and phase separation 3–57109
  - As sulphides, reactions, equilib. consts., thermodynamic data 3–5510
  - BaO-Ga_2O_3-SiO_2 glasses, ion exchange, effect of added ions 3–34617
  - $BaWO_4$-Na_2WO_4, solutions, solute-solvent interactions and solubility-temp. relations 3–42776
  - $CaWO_4$-Na_2WO_4 solutions, solute-solvent interactions and solubility-temp. relations 3–42776
  - $CdCr_2Se_4$, ferromag. semiconductor, $P(Se_2)$-a(CdSe) phase diagram 3–42751
  - Ce, Kondo vol. collapse and γ to α transition 3–3413
  - Co-Cr-Mo alloys, phase diagram calc., thermodynamic assessment of heat treatment 3–34279
  - $CsCaCl_3$:Gd^{3+}, paramagnetic resonance and displacive transitions 3–18987
  - $CsSO_4F$, low. temp. heat capacity, thermodynamic functions 3–33464
  - Cu, stacking fault energy, determ. from X-ray peak shift 3–22923
  - Cu-Al-Ni, single crysts., US vel. near martensitic transform. temp. 3–43816
  - Cu-Bi alloys, liq., activity of O 3–9036
  - Cu-Ni, phase equilib., thermodynamic anal. 3–39092
  - Cu-Ni S, ternary melts, extension of assoc. sol. model 3–4006
  - Cu-S system, thermodynamic stability of Cu_2S, EMF meas. at 1000-1450K 3–24214
  - Cu-Ti, liq. alloys, thermodynamic mixing functions 3–4015
  - CuCl-KCl-LiCl, molten, excess free energy and activity coeffs., EMF meas. 3–42814
  - Cu_2S, free energy of form. meas. using $CuZr_2(PO_4)_3$ 3–42841
  - $ErFeO_3$, spin transitions, easy axis monitor 3–40646
  - $Er_3Fe_5O_{12}$, spin transitions, easy axis monitor 3–40646
  - $ErRhB_4$, mag. supercond., Gibbs free energy, paramag. contrib. 3–8617
  - α-Fe, nitrided, surface Fe_xN form. under unfavourable thermochem. conditions, causes 3–14886
  - Fe, temperature-pressure phase diagram 3–34284
  - Fe-Mn alloys, α-γ phase boundaries and T_0 line 3–34283
  - Fe_3C, self-diffusion coeffs. of C meas. via kinetics of form. 3–13529
  - $Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, homogeneous flow, threshold stresses 3–14631
  - Fe_3O_4, ferrimag. ferroelectricity, hysteresis and piezoelec. consts. 3–57865
  - $(GaAs)_x(InAs)_{1-x}$, specific heat and thermodynamic functions, 5 to 300K 3–23055
  - $Ga_{1-x}In_xAs$, VPE growth, equilibrium thermodynamics *(Czech)* 3–47235
  - a-Ge, thermodynamics of equilib. and non-equilib. crystn. 3–22775
  - Ge_xSe_{1-x} glasses, broken chem. order and phase separation, Mossbauer study 3–42533
  - HF, thermodynamic props. calc., Bogolyubov inequality appl. 3–20816
  - H_2O, thermodynamic props., anomalous 3–51827
  - ^3He, superfluid, B-phase, Leggett angle, susceptibility, and longit. NMR, mag. field depend. 3–13576
  - HgH, thermodynamic props. calc., Bogolyubov inequality appl. 3–20816
  - In-Cd(Hg)(Tl)(Sn)(Pb) solid solutions, structural phase transformations, Landau theory 3–34312
  - In-Pb (12 to 14 wt.%), phase diagram, phase changes during ageing *(Japanese)* 3–9029
  - In-Te, liq., elec., mag., optical, thermodynamic, and struct. props. 3–56805
  - Kr-Xe, vapour-liquid equilib., crit. line, Gibbs energy, phase compositions 3–33397
  - LaSb:Dy single cryst., Jahn-Teller stress effects on magnetization and ESR props. 3–3134
  - MgO, press. depend. to 100 kbar of phonons, vibronic spectra, free energy contrib. 3–33367
  - Mn-Si system, thermodynamic props. in ranges of existence of Mn_9Si_2 and Mn_6Si 3–58099
  - MnSi, magnetoelastic effects in SDW phase 3–23776
  - Na, melting transition, pseudopot. model, mol. dynamics calc. 3–51757
  - $NaAl_{11}O_{17}$, Gibbs free energy of form. and thermal stability, galvanic cell study 3–42813

- **free energy** continued
  - $NaAl_5O_8$, Gibbs free energy of form. and thermal stability, galvanic cell study 3–42813
  - Na_2CdCl_4, $\Delta_f G^\circ$ meas. in galvanic cell, 548 to 668K 3–34644
  - Na_2O-B_2O_3-SiO_2 melt, thermodynamic activity of Na_2O 3–9046
  - Na_2O-SiO_2 and Na_2O-Ga_2O_3-SiO_2 glasses, ion exchange, effect of added ions 3–34617
  - Nd, magnetic struct. near Neel temp., magnetoelastic contribs. 3–28515
  - Ni-Fe olivines, cation ordering, Mossbauer spectroscopy study 3–13177
  - Pb-Cu-S, dil. soln. of S, thermodynamics 3–39095
  - PbO-SiO_2 system, phase diagram calc. 3–53035
  - $Pb(Zr_xTi_{1-x})O_3$, prep. by appl. of elec. field, sluggish transition between tetragonal and rhombohedral phases 3–14535
  - Pd, electronic sp. ht., mag. field depend., Fermi liq. model 3–51824
  - Pd-H phase diagram and thermodynamics, H-H interaction effects, Monte Carlo simulation 3–28078
  - Rb_2ZnCl_4, soliton density behaviour at phase transition, ^{87}Rb NMR study 3–19002
  - Si, electronically excited, phonon instabilities 3–38316
  - a-Si, thermodynamics of equilib. and non-equilib. crystn. 3–22775
  - Si-N, nitridation of Si, thermodynamics, effects of H_2 3–29067
  - SmC_x, vaporisation and thermodynamic props. 3–13425
  - Sn-Te liq. alloys, electronic props., compound-forming effect 3–28331
  - $SrWO_4$-Na_2WO_4 solutions, solute-solvent interactions and solubility-temp. relations 3–42776
  - Ta-H(D) system, solvus behavior 3–53022
  - Ti-Ni-(O), phase equilib. and thermodynamic studies 3–58102
  - $TiBe_23$, electronic sp. ht., mag. field depend., Fermi liq. model 3–51824
  - TiO-TiO_2, solid, thermodynamic activity, high temp. mass spectrometric study 3–19325
  - TiO_2-$BaCO_3$, disperse thin films, phase transition, TEM study, particle size effect 3–2786
  - Ti_2O_3-TiO_2, liq., thermodynamic activity, high temp. mass spectrometric study 3–19325
  - $UC_{1\pm y}$, liq., thermochem. props., estimated by extrapolation of low temp. vapour press. 3–18480
  - UO_2, molten, charge transfer, reaction free energy 3–2377
  - ZnO, $ZnGa_2O_4$, Gibbs energy of form., meas. by EMF method 3–9045
  - Zr-Nb (2 at.%), athermal $\alpha \rightarrow \omega$ transform., TEM study 3–19335
- **free field rooms** *see anechoic chambers*
- **free induction decay (optical)** *see optical coherent transients*
- **free radical reactions**
  - alkane radical cations, in low-temp. solids, struct. and reactions, ESR spectrosc. obs. 3–26770
  - methyl radical+methanol, reaction kinetics, 20-105K 3–53365
  - methyl radical recombination, 296-577K, rate const., press. and temp. depend. 3–39361
  - 3-methyl-3-hexyl radical, intramol. vibr. relax. 3–56039
  - radical pair P^F state in bacterial photosynthesis, kinetics, decay time, mag. field depend. 3–9331
  - radical pair reactions, influence of nuclear spin, mag. isotope and mag. field effects, review 3–53372
  - transient radicals, detect. by CIDEP and CIDNP of reaction products 3–19518
  - trifluoromethyl peroxy radical+NO, reaction kinetics, mass spectrosc. obs. kinetics 3–14845
  - CH+acetylene(ethene)(benzene)(toluene), reaction rate const., temp. depend., laser-induced fluoresc. 3–39362
  - H_2NO free radical π-complex with benzene, struct., quantum-chem. study 3–45852
  - HO_2+HO_2 radicals, disproportionation reaction rate coeff. meas. 3–14844
  - O+vinyl radical, reaction, IR chemiluminesc. obs. 3–14857
  - OD+CO reaction, press. depend. of rate const. 3–24492
  - $OH+Br_2$, reaction kinetics and products, EPR and laser-induced fluoresc. obs. 3–34612
  - OH+ethane (furan)(thiophene), absolute rate const. at room temp. 3–14851
  - OH°+acetylene, reaction, press. and temp. depend. 3–24497
- **free radicals**
  - *see also free radical reactions; paramagnetic resonance of free radicals*
  - acetate radical pairs, bimol. electron spin relax., time resolved electron spin-echo spectrosc. 3–11839
  - acetic acid radical, electronic states, config. interaction study 3–6549
  - aliphatic ketone radicals, spin polarisation CIDEP behaviour 3–41595
  - alkaline earth monohalides, rot. spectra, hyperfine struct., microwave absorpt. and MODOR spectra 3–6613
  - alkane radical cations, in low-temp. solids, struct. and reactions, ESR spectrosc. obs. 3–26770
  - n-alkanes, π-nonbonded and through-bonded interactions, ab initio study 3–31930
  - n-alkyl radicals, π-nonbonded and through-bonded interactions, ab initio study 3–31930
  - aminyl radical, trifluorothiomethyl substituted, config. and conformation anal. by EPR *(German)* 3–32119
  - anion radicals, low temp. ESR in single cryst. environment 3–3539
  - aromatic hydrocarbon in alkane solvents, laser photoionisation mechanism, solvent radical cation form. 3–9333
  - bemene, substituted, muonium-substituted free radical form., muon-electron hyperfine coupling 3–36883
  - benzyl radicals, free jet cooled, laser-induced fluoresc. spectra 3–55983
  - bicyclic nonalternating hydrocarbons, methylene derivatives, biradical states calcs. 3–36676
  - biomembrane transport, free radicals migration in long-chain hydrocarbon mols. 3–48251
  - p-bis(pentamethylbenzoyl)benzene radical anion, ESR spectra 3–6677
  - carbonyl molecules, $n\pi^*$ state inversion, semiempirical MO framework 3–11663
  - cholest-4-en-3-one, gamma irrad., EPR study of stable radical 3–52630
  - chromans, tricyclic, ESR and ENDOR spectrosc. of cation radicals 3–1396
  - cyclobutene cation radical→1,3-butadine cation radical, nonelectrocyclic path, MINDO and ab initio calc. 3–34618
  - cyclopentadienyl radicals, free jet cooled, laser-induced fluoresc. spectra 3–55983
  - 2,2di-(4-tert-octylphenyl)-1-picrylhydrazyl meas. standard for EPR study 3–30909
  - di-tert-butyl nitroxide, spin exchange freqs. in different solvents, EPR spectra 3–45986

free radicals continued
diatomic molecules, Doppler-free polarisation spectroscopy in flame reactions 3−36770
diatomic radicals, Stark effect meas. and rot. spectra at Freie Univ., Berlin 3−50453
N,N-dimethyl-amides, radical cation form., ESR spectroscopy 3−29316
N,N-dimethyl-thioformamide, radical cation form., ESR spectroscopy 3−29316
2,5-diphenyloxazole, pulse radiolysis, radical ion pairs, time resolved fluoresc. EPR obs. 3−32117
DMSO, radical cation form., ESR spectroscopy 3−29316
DPPH, free radical, solid soln. in paraffin wax, internal mag. viscosity induced by paramag. centres 3−28501
electron spins, unpaired, in mol. phys. and chem. 3−55778
ethyl radical, bridged and classical structs., neutralised ioon-beam spectrosc. obs. 3−56030
ethyl radical, general second-order MCSCF theory for large CI expansions appl. 3−17218
ethyl radical-$d_0(d_2)(d_3)(d_5)$, matrix isolated IR spectra by normal coordinate calcs. 3−45937
ethylene, gaseous, ozonolysis, free radical detect., microreactor-matrix ESR spectrosc. 3−45985
$(\text{fluoroanthenyl})_2{}^+PF_6{}^-$ radical cation salt, PMR, F NMR and ESR correl. 3−33997
fluoromethane radical cation, structs. and relative energies 3−21650
fluoromethane radical cation isomers, structs. and relative energies 3−21650
o-fluorophenyl radical, $n \leftarrow \pi$ vibronic spectrum and role in o-fluorobromobenzene photolysis 3−36739
fluorovinyl radical, form., identification and electronic struct., EPR investig. 3−26771
formic acid radical, electronic states, config. interaction study 3−6549
formyl radical, laser induced fluoresc. detection prod. by laser photolysis of formaldehyde 3−36801
Group II monohalide radicals, pot. energy curves calcs. 3−1453
heptafulvalene trianion radical, electronic struct., doublet instability of HF soln. and related phenomena 3−11700
hydroxamic acid radicals, X-irrad., hyperfine coupling consts. determ. 3−14134
1-hydroxyethyl, ESR, pot. function, dynamics and coupling consts. 3−17313
inorganic and organic radicals, thermodynamical props. and struct. data, MNDO-UHF calcs. 3−31943
kinetic gelation, Monte Carlo study on triangular lattice 3−45074
localised biradicals, singlet-triplet energy gap. ab initio electronic struct. theory 3−55777
methyl radical, ν_2 band, transition dipole moment meas. 3−36822
methyl radical, angular bending coordinate for description of deformation of methyl groups 3−26730
methyl radical, difference freq. laser spectroscopy of the ν_3 band 3−17273
methyl radical, intramol. motions and mol. struct. 3−32033
methyl radical, struct. and props., ab initio calcs. 3−55816
methyl radical, trifluorothiomethyl substituted, config. and conformation anal. by EPR *(German)* 3−32119
methyl radical+methanol, reaction kinetics, 20-105K 3−53365
methyl radicals, rot.-vibr., pot. function, mol. consts. 3−26727
3-methyl-3-hexyl radical, intramol. vibr. relax. 3−56039
methylammonium radicals, stability determ. from neutralised ion-beam spectroscopy 3−4272
methylene amidogen radical, electronic struct., vertical excitation spectrum, ab initio calcs. 3−50293
methylene radical, $^3B_1$ state, ν_2 band, laser mag. reson. obs. 3−21791
methylene radical, AGP propagator calculations 3−36663
methylene radical, rot., hyperfine struct., far-IR laser mag. reson. study 3−21790
methylene radical, X^3B_1 ground state, vibr.-rot., geometry, pot. function 3−21743
methylenefluoronium radical cation, structs. and relative energies 3−21650
monocyclic nonalternating hydrocarbons, methylene derivatives, biradical states calcs. 3−36676
2-nitro-3-aminopyridine, iterative computer anal. of dynamic EPR bandshapes in fast motional region 3−50438
nitroacetophenone anion radicals, acetyl group restricted rot. anal. 3−56102
nitrobenzaldehyde anion radicals, formyl group restricted rot., EPR study 3−50544
p-nitrobenzoate radical, iterative computer anal. of dynamic EPR bandshapes in fast motional region 3−50438
5-nitrofuran derivatives, radical anions, electronic struct., solvation effects 3−36681
non-rigid, torsional potential and hyperfine couplings, conform. dependences 3−55843
organic radicals, iterative computer anal. of dynamic EPR bandshapes in fast motional region 3−50438
pentafluorocyclopentadienyl radical, ESR spectrum 3−57777
peroxy radicals in atmos., measurement technique 3−4987
peroxy radicals in PTFE, 2-mm ESR spectra 3−17315
phenoxyl radical in solid Ar, absorpt. spectra 3−32095
phosphoramidyl radicals, struct., EPR obs. 3−32118
phosphoranyl radicals, single cryst. ESR obs. struct., dynamics 3−57778
polybutadiene, glass bead filled, electron emission during fracture, crack vel. depend., free radical decay 3−14447
polyethylene, prebreakdown free-radical states 3−53379
polymethylene radicals, π-nonbonded and through-bonded interactions, ab initio study 3−31930
promazine cation radical, soln. and solid state struct., EPR study 3−52629
pyridine radical cation and fluorine substituted derivatives, spectra and relax. in Ne matrices 3−11813
quinoxaline, ESR spectra, overlapping, separation by time-resolved spectroscopy, implications for CIDEP spectra 3−50439
resorcinol radicals, mol. geometry, INDO calcs. 3−55845
resorcinol radicals, substituted, mol. geometry, INDO calcs. 3−55845
short-lived, ODMR spectrum 3−1397
silicon rubber, filled, electron emission during fracture, crack vel. depend., free radical decay 3−14447
solids, radiation products dipolar hyperfine couplings in radiation effects, ENDOR study 3−14162
spin-density distrib., hyperfine coupling consts., INDO-RHF-CI calcs. 3−11689

free radicals continued
$[N+1]\pi$ streptopolymethine radicals, spectral props., rel. to polymethines, Mo LCAO calcs. 3−55788
tanol suberate, polarised neutron study of spin density 3−56036
TCNE radical anion dimer in ethanol, reson. Raman spectra 3−1363
tetramethylcyclooctatetraene anion radicals, low temp. ESR in single cryst. environment 3−3539
tetrazolyl radicals, isotropic hyperfine interaction 3−21792
thiocarbonyl molecules, $n\pi^*$ state inversion, semiempirical MO framework 3−11663
thymine radicals and anion, ab initio MO calcs. 3−11680
toluene radical formation, ESR study in decaying N plasma 3−14867
transient radicals in liq. soln., nucl. reson. detection 3−45977
trifluoroacetamide, single cryst., X-irrad., radical anion form., EPR obs. 3−57779
trifluoromethyl peroxy radical+NO, reaction kinetics, mass spectrosc. obs. kinetics 3−14845
trifluoromethyl radical, ν_3 band, IR diode laser spectrosc. 3−55935
trifluoromethyl radical, microwave spectrum, fine and hyperfine struct., rot. const. 3−1348
trifluoromethyl radical, quantum yields, pot. energy surface, visible and UV obs. 3−45955
trifluoromethyl radical, quenching, vibr. excitation, visible and UV obs. 3−45964
trifluoromethyl radical, reson. enhanced multiphoton ionis. 3−26801
trifluoromethyl radical, reson. enhanced multiphoton ionisation 3−11896
trifluoromethyl radical, UV emission obs. 3−45963
trifluoromethyl-radical, UV and visible emission spectra 3−45954
tryptamine hydrochloride, irrad. effects, H-addition radicals, ENDOR study 3−57815
vinoxy radicals, free jet cooled, laser-induced fluoresc. spectra 3−55983
vinyl radical+O, reaction, IR chemiluminesc. obs. 3−14857
vinylidene triplet radical+He, quenching in UV region 3−36771
ylide-TCNQ, charge transfer complexes, binding energy, XPES 3−17333
BCl_2 radical, form. by X-irrad., struct. investig. 3−36781
BaCl, $^2\Sigma$ radical, microwave rot. spectrum and hyperfine struct. 3−17269
BaF, $^2\Sigma$ radical, microwave rot. spectrum and hyperfine struct. 3−17269
BeF radical, pot. energy curves calcs. 3−1453
C_2 radical, emission spectrum, rel. to carbon tetrafluoride plasma diagnostics 3−2289
C_2, reson. enhanced coherent anti-Stokes Raman scatt. 3−36769
CF radical, mol. consts., rot. transition microwave obs. 3−32043
CF radical, term energy, bond lengths, vibr. $a^4\Sigma^-$-$X^2\Pi$ transition 3−55956
C_mF_n radical obs. in reactive ion beam etching 3−34502
CH radial, rot. transitions, microwave obs. 3−45995
$CH_2NH_3{}^+$, equilib. struct., ab initio UHF calcs. 3−36660
$^{13}CH^+$, $A^1\Pi$-$X^1\Sigma$ emission bands 3−50419
$^{14}C^{14}N$, $A^2\Pi$ to $X^2\Sigma^+$ red system, vibr. levels 3−45951
HCCC, ab initio spin-orbit coupling constants for potential interstellar molecule 3−48974
HCCO, ab initio spin-orbit coupling constants for potential interstellar molecule 3−48974
HNO jet-cooled radical, fluoresc. lifetimes and excitation spectra 3−55984
HO_2 radical dissoc., pot. energy surface study using mol. correl. energies calc. 3−55827
H_2O in Ar pulsed discharge, radical prod., photoabsorpt. spectrum 3−51405
H_2SCl radical, three electron bond ab initio MO calcs. 3−6532
H_2SClH^+, radical, three electron bond ab initio MO calcs. 3−6532
H_2SSH radical, three electron bond ab initio MO calcs. 3−6532
NH radical, rot. hyperfine spectrum around 1 TH_3 3−11791
NH radical prod. by glow discharge technique, matrix isolation MCD and absorpt. spectra 3−11850
NH_4 radical, Rydberg ground state, dissoc., ab initio MO study 3−36659
NH_4 radical, stability determ. from neutralised ion-beam spectroscopy 3−4272
$NH_2CH_3{}^+$, equilib. struct., ab initio UHF calcs. 3−36660
NO_2 photofragments from nitromethane, picosec. laser induced fluoresc. probing 3−39401
N_2XO radical (X=B,C;N), electronic struct., geometry, UHF MNDO PMO calcs. 3−11687
$N_3(X^2\Pi)$ radical, transient species, vacuum UPS 3−21820
$O_3{}^-$ radical decay in aq. $K_2S_2O_8$ solns. 3−14876
OD radical, EPR spectrum of mol. param. in ground state 3−6682
OD+CO reaction, press. depend. of rate const. 3−24492
OH, form. by H_2O photodissoc., polarised laser-induced fluoresc. obs. 3−41611
OH, Morse pot., Franck-Condon factors with vibr.-rot. interaction 3−11889
OH night airglow, vibr. population distrib. 3−59142
OH radical, IR emission spectrum 3−52
OH shock-tube absorpt. meas. using remotely located dye laser 3−48101
$OH+Br_2$, reaction kinetics and products, EPR and laser-induced fluoresc. obs. 3−34612
OH+ethane (furan)(thiophene), absolute rate const. at room temp. 3−14851
OH°+acetylene, reaction, press. and temp. depend. 3−24497
OT, rot. anal. of $A^2\Sigma^+ \rightarrow X^2\Pi$ system, merged mol. consts. for $A^2\Sigma^+$, $\nu \leq 4$ and $X^2\Pi$, $\nu \leq 3$ 3−6600
PH_2 radical, fine, hyperfine, rot. and spin-rotation parameters, MM spectra 3−45934
$PN+He(2^3S)(Ne(^3P_{0,2}))$, energy transfer, Penning ionisation, emission spectra 3−41666
SCl, vibr. freq., CEPA calcs. on open-shell mols. 3−45926
SF radial, vibration-rotation spectra, IR diode laser spectrosc. study 3−45940
SF, vibr. freq., CEPA calcs. on open-shell mols. 3−45926
SF_2-$H_2O(NO)$, free radical prod. by laser photolysis, LMR study 3−45984
$^{32}S^{17}O$ free radical, microwave spectrum, mag. hyperfine struct. and quadrupole coupling const. 3−17270
SrCl, $^2\Sigma$ radicals, millimetre wave spectra 3−21755
SrF, $^2\Sigma$ radicals, millimetre wave spectra 3−21755
SrF emission bands of C−X system, vibr. and rot. consts. 3−17329

freezing
see also refrigeration
biological freeze-etch specimens, cooling rate during impact freezing and liq.-jet freezing 3−24682

freezing continued
biological frozen suspensions for electron microscopy 3−44364
biological material, Balzers freeze etching system BAF 400, improved specimen table 3−4727
blood plasma membranes, low-temp. alteration of permeability due to dehydration 3−34805
cryomicrotomy appl. to rapid-freeze deep-etch replica method for unfixed tissues and cells 3−15297
flat-solar-collector panel, pressure/stress increase with freezing of channel water 3−44140
frustration effects on freezing transition 3−57673
ice, freezing kinetics light scatt. study *(German)* 3−7938
ice formation in aqueous systems, nucleation theory 3−13413
ice formation nucleation obs., automatic apparatus appl. 3−26001
leaf surface preparation for SEM, comparative study 3−44365
low temperature latent heat thermal energy storage: heat storage materials 3−58560
moving phase change front, Stefan eqns. 3−27371
protozoa rapid freezing, relative cooling efficiency of various fluids 3−15302
salol, freezing kinetics, light scatt. study *(German)* 3−7938
solid-liquid interface morphology in freezing solutions, image anal. 3−33408
water, transient freezing process with supercooling 3−57062
water dissolved in dielectric fluids, calorimetric meas. 3−2804
water inward freezing in circular and square pipes 3−17775
AuMn spin glass, high temp. susceptibility, freezing process precursors 3−57648
^{3}He-^{4}He liq. mixture, compressional cooling and liq.-solid phase transition 3−13417
RbCl, freezing theory based on partial liq. struct. factors 3−33407
SO_2-N-methyl-2-pyrolidinone system, freezing point, thermodynamic props. 3−51751
Sn point cell, temp. standards, Korean Standards Research Institue *(Korean)* 3−252
Xe, adsorbed on graphite, freezing transition, mol. dynamics study 3−51937
Xe near-monolayer film on graphite, 3−57068
Zn point cell, temp. standards, Korean Standards Research Institue *(Korean)* 3−252

Frenkel defects
charged Frenkel defects, annihilation in noncentrosymmetric systems, transient displacement currents, theory 3−22889
diamond, neutron irradiated, cryst. lattice expansion and ESR spectrum 3−14133
ionic materials, mixed lattice disorder, defect energies study 3−13220
phonon-defect coupling near phase transition point in crystals 3−13383
semiconductor, radiation defect formation mech. during ion bombardment 3−8109
tunnelling recomb. kinetics stimulated by defect motion 3−23083
Ag:He^+(H^+) ion-implanted films, Frenkel-type radiation defects form. and annealing 3−13249
AgBr, defect energy calc., dielec. and elastic props. 3−51593
AgCl:Cd, elec. cond. mechanism 3−3176
β-Ag_2Te, electronic and electrogalvanic props., Frenkel defect form. energy *(French)* 3−57347
BaF_2, vibr. entropy calc. of anion Frenkel defects 3−13489
CaF_2, vibr. entropy calc. of anion Frenkel defects 3−13489
CsBr, anion and cation exciton decay into anion and cation defects 3−3083
Fe-Al, electron and neutron irrad., defect production and recovery 3−42671
$Fe_{75}B_{25}$ amorphous and cryst. electron irrad., Frenkel-type defects, elec. cond. study 3−2611
Ge:As heavily doped solid soln., Frenkel pair form. in initial stage of precipitation 3−33247
^{193}Ir, neutron activated, Frenkel pair creation and annihilation, elec. resist. meas. 3−56882
KBr:I, F-centre accumulation efficiency, temp. depend. *(Russian)* 3−56888
KCl, exciton decay into F, H and α-I pairs, luminesc. study 3−23279
KCl, Frenkel pair annihilation kinetics, optical absorption study 3−46927
KCl, KCl:Ag, Frenkel defect creation, recombinational and excitonic mechanisms, at 4.2K *(Russian)* 3−56879
KCl:Br(I), exciton decay to Frenkel defects, tunnel recharge *(Russian)* 3−57287
KCl:Br(I), F-centre accumulation efficiency, temp. depend. *(Russian)* 3−56887
KCl:I, electron irrad., exciton decay, Frenkel defects, optical absorption study 3−8425
KCl:Na, exciton decay, creation of anion and cation defects *(Russian)* 3−57286
Mo, high energy He^{2+} irrad., lattice parameter change 3−33320
PbF_2, α- and β-phases, interat. pot. and phonon freqs., shell model 3−57040
$PuO_{2.00}$, self-diffusion of O_2, meas. by isotopic exchange *(French)* 3−28151
SrF_2, vibr. entropy calc. of anion Frenkel defects 3−13489

frequency changers *see frequency convertors*

frequency control
magnetic resonance spectroscopy, automatic freq. stabilisation system 3−45176

frequency convertors
see also mixers (circuits); optical frequency conversion
AM frequency detector, for mag. meas. of ferromag. semicond. and dielec. 3−10867
EM wave reflection from stationary gas perturbed by relativistically moving EM signal 3−50587
Josephson frequency downconverter for 2 mm wave band modulation superheterodyne radiometer 3−10216

frequency division multiplexing
couplers, wavelength division multiplexing type 3−22255
fibre coupler for wavelength division multiplexing insensitive to environmental factors 3−42002
fibre optic multifunction devices using single GRIN-rod lens for WDM transmission 3−1806
fibre-optics communication links, channel separator for freq.-division multiplexing 3−12365
image transforms, two-dimens., with wavelength multiplexing 3−6898
images transmitted over optical fibres, time depend. recording 3−1783

frequency division multiplexing continued
laser-fibre coupling and fibre combiner, loss analysis, appl. to wavelength division multiplexing 3−22253
optical fibres, single mode, WDM-systems, polarisation noise reduction 3−37234
optical matrix processors, freq. multiplexed and pipelined iterative systolic array 3−26950
optical single mode fibre couplers, wavelength multiplexing 3−37194
optical three channel wavelength multiplexing device 3−50792
wavelength division multiplexing, status and trends 3−42031
wavelength division multiplexing using GRIN lens based techniques 3−50787
wavelength division multiplexing without polarisation problems 3−42032
wavelength multiplexer, dual GRIN lens, ray tracing analysis 3−37238

frequency-domain analysis
proton synchrotron magnet power supply, high accuracy control 3−6478

frequency measurement
see also atomic clocks
astronomy, accuracy of frequency determination by autoregressive spectral estimator 3−54261
atomic clock using Cs beam resonator, application fields *(French)* 3−30834
biomedical signal maximum freq. indication, minima counting vs. zero-crossing counting 3−39735
electron-optical system for HVDC voltages determ. 3−54748
gas-liquid systems, liquid hold up fluctuations, microwave meas. of frequencies and amplitudes 3−51199
gravitational wave antennae quality factor metering instrument 3−10721
harmonic mixers realisation, Josephson point contacts fabrication 3−49399
optical radiation freq. meas. 3−40575
optimum signal frequency meas. using information from output of phase-measuring device, theory 3−10811
piezoelectric resonator, reflection coefficient association frequency, frequency meas. appl. 3−49400
standard for short-wave part of mm-band 3−10809
standards precision comparison 3−10808
standards state of art and prospects, spectroscopy appl. 3−10916
visible radiation heterodyne detection by MIM diodes, 2.5 THz freq. difference measurements 3−36082
Cs beam frequency standard, optically pumped fountain design with 10^{-15} accuracy 3−10805
Cs frequency standard, Rhode & Schwartz XSC standard *(French)* 3−54717
H clocks metrological characts. 3−10807
H oscillator frequency standard, magnetic screening methods 3−10806
He-Ne 473-THz (633-nm) laser I_2-stabilised, direct freq. meas. 3−46196
I_2 17-1 P(62) transition at 520 THz (576 nm) o hyperfine component meas. 3−46195
Ne 260 THz (1.15 μm) Lamb-dip-stabilised laser freq. meas. 3−46195

frequency meters
see also wavemeters
digital, 500 MHz, decimal point switching facility 3−5778
timer checking apparatus 3−49333

frequency modulation
acoustic microscopy, subsurface, using pulse compression techniques 3−56405
coil sensor for magnetic suspensions position control appl. 3−20841
diode lasers, FM sideband injection locking 3−17542
electrostatic voltage sensor using surface acoustic waves 3−49406
impulse frequency modulation in neural encoding model 3−15060
laser frequency fluctuation meas., modulation effect influence 3−56264
linear modulation, internal, equiv. electrical models method 3−7039
loudspeaker distortion, magnitude and audibility investigation 3−12481
semiconductor injection lasers, single-mode, FM noise theory, optical communication appl. 3−46244
semiconductor laser, phase delay between intensity and freq. modulation 3−41841
superheterodyne radiospectrometer with double-sideband modulation of SHF power 3−10871
GaAs-GaAlAs DH laser, high rate AM and FM characts. 3−22132
GaInAsP/InP BH lasers, current/freq. modulation characts. when directly modulated 3−6971

frequency regulation *see frequency control*

frequency response
B-scan spherical focusing apertures, pulsed echographic response theory 3−4605
CRO time base, Y-amplifier, frequency response calibration 3−35975
finite aperture sample-and-hold systems, freq. response 3−50215
ocean wave gauges, thin-wire, dynamic response 3−15636
pressure transducer, dynamic, sensing line configurations 3−20847
professional microphone quality, objective criteria *(Russian)* 3−1918
spatio-temporal frequency response to sine-wave and television noise by human vision 3−4502

frequency stability
see also frequency control; laser frequency stability
microwave generator freq. standards, effect of parameters of multiresonator system with superconducting resonator 3−10861
H clocks metrological characts. 3−10807
H oscillator frequency standard, magnetic screening methods 3−10806

friction
see also internal friction; lubrication
aerostatic carrier with elastic diaphragm, friction resist. to motion 3−22394
asymptotic stopping in presence of viscous friction 3−40351
beam, longitudinal vibrations in presence of dry friction 3−56378
brass, friction and wear of cartridge and free-cutting types 3−58258
bronze, phosphor, friction and wear behaviour, effect of ion implantation 3−34491
Brownian particle, fluctuating force formulation 3−173
capillary systems, static solid-liquid friction, one-parameter model 3−12775
clutch, frictional adhesion, dynamic criteria 3−34604
coated systems, energy-based model 3−2664
coated systems, energy-based model 3−2665
colloidal particles, diffusion, sedimentation and friction in soln. 3−58449
compressible gas flow, turbulent separation, friction, heat transfer, boundary layer eqns. 3−37457

friction continued
contact between cylindrical indenter and plastically deformed body, coeff. of friction determ. by caustics 3—27453
contact problems in elasticity, numerical analysis 3—17897
contact problems with friction in general purpose finite element computer programs 3—17898
critical velocity of stick-slip motion, discontinuous friction model 3—34493
cylinder, finite elastic, pressed against rough rigid sliding surface, end problem 3—37432
cylinder in longitudinal streamline flow variable props. external turbulence, effect on friction coeffs. *(Russian)* 3—51076
diamond: N(B)(C), ion implanted, mechanical props. enhancement 3—4154
diamond on diamond in air, purely elastic contrib. to friction 3—4146
disc, rotating, hydrodynamic drag versus roughness 3—46511
dissipative systems, connection between Schrodinger eqn. and master eqn. 3—20692
drag on surface with unequal mass blowing and suction 3—42225
elastomeric O-ring materials, empirical eqn. for abrasive wear 3—19428
elastostatics, contact problems with friction, numerical anal. 3—22395
flow curves in various forms of upsetting test execution *(German)* 3—32686
free stream turbulence effect on heat and mass transfer in boundary layer 3—37477
gas mixtures, separation in acoustic wave field 3—17693
Gaussian polymer chains, tracer and cooperative friction coeffs., conc. depend., multiple scatt. calcs. 3—50556
half-plane with initial stresses, dynamic contact problems 3—17902
half-space, two-dimens. contact problem with additional load applied outside a stamp 3—51031
ice, friction with rubber, effect of salt, expt. study 3—51703
incompressible flow, turbulent jet incident on heated plate, heat transfer 3—22454
interface slip caused by surface load moving at const. speed 3—32615
laminar flow in axial sealing gap inlet of radial compressors 3—46519
limiting static friction, nominal contact area planform influence 3—46510
lubricants, LFW-1 friction and wear test machine, mating material structure 3—29285
metal, classification and coating 3—47983
metal-metal friction phenomena between ferromagnetic materials under magnetic attraction 3—39254
metallic bodies reactions in tribological systems, surface analysis 3—19425
metals, contact processes under friction and cutting, fundamental regularities *(Ukrainian)* 3—8134
metals, ion implantation effects on mechanical props., review 3—27957
metals, ion implantation-modified, mech. props., Dept. of Defence appl. 3—2589
morphology of surface damage 3—34485
multicomponent chemically nonequilib. gas mixture in supersonic nozzle with porous walls, friction, injection effect 3—2138
nonlocal friction law *(French)* 3—7505
nonNewtonian liqs., flow simulation, Lagrangian finite element method 3—56580
organic adsorbed layer role in friction, shear props. of partial monolayers 3—51960
photoisomerisation dynamics in soln., freq. depend. friction effects 3—58414
physisorption, Kramers's eqn., friction coeff. derivation 3—33570
plane strain compression test, expt. study of friction test rel. to metallurgy of die and sheet 3—34599
plane strain compression test, expt. study of friction test rel. to transfer layers in boundary lubrication 3—34600
plane turbulent boundary layer, turbulent friction at transonic velocities 3—42226
plastic composites wear and friction up to 260°C 3—47966
plate roughness and hydrodynamic drag 3—46512
plates, Pfluger-like, Liapunov-like approach to stability 3—7462
polyethylene, unlubricated, friction behaviour 3—14743
polyethylene oxide, dilute soln., press. drop and mass transfer in turbulent pipe flow 3—22495
polyethylene oxide, soln. conformation, FT pulsed field gradient NMR self-diffusion obs. 3—19014
polyethylene-terephthalate monofilaments in liq. media, friction and adhesion determ. 3—29192
polyimide films, tribological props. and thermal stability 3—14742
polymer, metal filled, with self-lubrication, frictional props. 3—58255
polymer chains in soln., friction coeffs., conc. depend. 3—50555
polymer solns., dil., friction coeffs., conc. depend., cluster expansion calcs. 3—56799
polymer solns., dil. friction coeffs., conc. depend., multiple scatt. cluster expansion calcs. 3—56800
polymer solutions, dil., transport props., renormalisation group theory 3—38111
polyoxymethylene-steel pair, dry friction mechanism 3—34494
powder rolling, friction influence 3—24173
Prandtl eqns. soln. for incompressible boundary layer at zero surface friction 3—7561
projectile sliding forces in a rifled barrel 3—44958
pulsed slot suction effect on turbulent boundary layer 3—56532
rigid circular disk, in infinite plate, tensile and compressive stress, friction effects 3—17796
rod, semi-infinite uniform, surrounded by Winkler's medium, longit. elastic wave propag. *(Russian)* 3—42180
rod with dry friction, elastic wave propag., preliminary displacement effect 3—46477
rolling and sliding contacts, surface irregularities role in noise spectrum 3—46513
roughened surfaces, heat transfer and friction factor performance 3—50907
rubber, importance of accurate specification of sample prep. method and test conditions 3—24425
rubber block in contact with metal surface, stiffness 3—58253
shell, coiled cylindrical, stress-strain state, coil edges fastening effect 3—42154
Signorini problem with friction, existence and uniqueness results 3—32685
slider bearing anal. with visco-elastic lubricant 3—46500
sliding contact, concentrated, simple lubricate effect on deform. and wear 3—53243
solid bodies, sliding contact, formation of plastic and liquid layers 3—17899
solid-fabricated rolling-sliding contact, semiempirical model 3—34497

friction continued
static friction processes under dynamic loads and vibration 3—4142
steel, alloy, fatigue crack propagation in Mode III, effect of friction and high torque 3—34459
steel, alloy, friction surface layers, AES and X-ray microanal. study 3—4147
steel, fatigue crack propagation in Mode III, rubbing fracture surface influence 3—34435
steel, stainless, Ti and C implanted, friction and wear 3—4153
steel rubbing pairs, wear resist. improvement using polymer and metal polymer coatings 3—58303
subsonic turbulent boundary layer evolution characts. in gas veil region after porous section 3—51072
suspensions of interacting spheres, cooperative friction coeffs., conc. depend., cluster expansion calcs. 3—39410
tests, importance of accurate specification of sample prep. method and test conditions 3—24425
thermomechanical tests of friction *(French)* 3—2008
top motion on plane with friction, beating regime *(Russian)* 3—42112
tubes, heated, fluid friction and heat transfer at supercritical press. 3—2122
tuned blade disk dynamics, friction related mistuning 3—32684
turbulent air flow in horizontal pipes in gravity field, friction and heat transfer 3—51227
turbulent boundary layers, skin friction and entrainment correls. 3—51082
turbulent viscosity of external flow effect on heat transfer in boundary layer 3—37460
velocity fluctuation intensity meas. in turbulent plane Couette channel flow 3—12653
vortex chamber, friction of fluid flow against end-face surfaces 3—56551
water-bubble boundary layer as a hydrodynamic sound source 3—12413
wedge plane elastic contact with friction, stressed state singularities near wedge corners 3—7513
Al-Pb-Sn-(Sb)-(Mg)-Cu, antifriction, produced by compensation of gravit. segregation by electromag. forces 3—34261
Al-Si-Cu alloy, dry sliding friction, test of rule of mixtures 3—4150
Al-Sn-Pb antifriction alloys, contact zone, structure and adhesion strength meas. *(Russian)* 3—4141
Au, ion plated film on Ni and Fe substrates tribological props. and XPS studies 3—14746
BN film, hard, ion beam sputter deposited, prep. and props. 3—13673
Be-B, ion implantation prep., wear resistance and microstructure 3—4152
C film, hard, ion beam sputter deposited, prep. and props. 3—13673
Cu alloys, FCC, sliding wear, comparative study 3—58259
Cu, ion implantation, improvement of surface friction and wear 3—43700
Cu-Al-Mn system, diffusion redistrib. of alloying elements, surface struct. during deform. by friction 3—24206
Fe, ion implanted, surface layer characts. 3—56919
Fe-Cu bearing material containing $MnO.xP_2O_3$, sintered material prep., antifriction props. 3—58256
Fe-Ti-C, ion implanted friction and wear 3—4153
^{4}He, superfluid, mutual friction and vortex mode near the superfluid transition 3—18525
MgO single crystals, cathodoluminescence at frictional damage 3—24025
Mo-MoS_2, hot pressed powder, self-lubricating, friction and wear characts. 3—47967
MoS_2 film, sputtered, morphological and frictional behaviour 3—13687
NH_4^+ tetrahedron in NH_4O, rot. dynamics 3—33148
Ni, FCC, sliding wear, comparative study 3—58259
SiC, tribological props. and surface chem. to 1500°C, XPS and AES obs. 3—53244
Ti alloys, antiseizing properties under different chemical and heat treatment 3—19432
Ti-Cr-Mo-C, sintered, struct. and phase transforms. during friction, Mo effect 3—39257
WC, Co-cemented, ion implantation effects on mechanical props., review 3—27957

friction, internal *see internal friction*

frictional electricity *see triboelectricity*

fuel
see also coal; fission reactor fuel; pulverised fuels
alcohol as alternative vehicle fuel to gasoline, overview *(Hungarian)* 3—48118
alcohol fuels production by fermentation of pawpaw 3—53590
biogas production from mixed agricultural manure history and technology review *(Dutch)* 3—44151
biogas prospects, European point of view 3—48115
biogasplant: irritating problems for engineers *(German)* 3—39531
biomass flash pyrolysis reactor, solar-fired, design and generation for liquid fuels production 3—58559
coal and oil mix as power station fuel, market potential and preparation cost 3—58470
Colony Shale Oil Project 3—4353
composite system containing ferromagnetic additives, mag. field influence on burning rate 3—53399
crude oil reserves evolution, long range prospects *(French)* 3—44092
crude oil water/gas contents measurement *(Norwegian)* 3—44083
direct liquefaction of coal—accomplishments, status, and prospects 3—4354
energy sources other than oil and electricity for space heating *(German)* 3—39446
gas-permeable, basic combustion parameters 3—53390
health and safety impacts of residential wood heat 3—4357
hydrocarbon fuels, new source development, prospects *(French)* 3—34666
methanol as boiler fuel for electric power generation, combustion test and economics 3—29372
municipal solid waste as electric utility fuel, EPRI seminar 3—58472
municipal solid waste as electric utility fuel, technical and economic assessment 3—14917
oil prices and economic rent over next decade *(French)* 3—34665
oil production optimal rate determ., for OPEC-member countries 3—14915
premium transport fuel production by NCB coal liquefaction process 3—39529
recycling of wastes, methods of reuse *(German)* 3—39438
refuse gasification, thermodynamics 3—39530
solar energy conversion to electricity and fuels by chemical methods 3—53567
synthetic fuel—developments outside North America 3—4355

fuel continued
synthetic fuels, developing technologies and commercial prospects 3−39437
synthetic fuels, economic comparisons 3−4350
thermochemical conversion of biomass: gasification by flash pyrolysis study 3−24637
United States residential sector regional energy demands and economics 3−48113
Utah char-oil project 3−4352
warm water supplying stations burning solid fuels *(Hungarian)* 3−48117
H_2 economy in Europe, safety regulations 3−48197
H_2 production, thermochemical, by nickel-iodine-sulphur process 3−34742
H_2 production by decomposition of water in photoelectrochemical cell 3−34743
H_2 production by direct thermal decomposition of water, preliminary investigations 3−19624
H_2 production from H_2S using selective diffusion membranes 3−34741
H_2 production using U-GAS goal gasification process, pilot plant results, current status and economic projections 3−53594
H_2 production/storage using titanium electrodes and metal hydrides 3−39537
H_2, solar generation, biological approach 3−53591
H_2 storage, underground, implications of fingering 3−34744
H_2 storage using FeTi hydride beds, designs modelling and evaluation 3−39538

fuel batteries *see fuel cells*

fuel cells
advanced batteries and fuel cells, conf., Kelkheim, Germany, 1982, April 3−44118
alternative energy cogeneration technology potential 3−4408
electrochemistry, conf., Detroit, USA, 1982, Oct. 3−30561
energy resources, renewable, utilisation and storage, futuristic aspects 3−53492
energy storage systems for absorbing load demand fluctuations and power generating systems output variations 3−44110
futuristic aspects of battery technology 3−53495
molten carbonate, simple porous electrode models 3−48145
molten carbonate CO_2 concentrator, cathode performance at high CO_2 utilisation 3−48143
molten carbonate fuel cell cathodes, thickness effect on performance 3−44119
molten carbonate fuel cell performance model 3−48144
molten carbonate fuel cell using $La_{0.8}Sr_{0.2}CoO_3$ porous perovskite cathode 3−53497
molten carbonate fuel cells, electrolyte loss mechanisms 3−39464
phosphoric acid fuel cell cogeneration for a water pollution control facility 3−4382
potential market and economic impacts 3−48146
power stations, potential market in Japan *(Japanese)* 3−58497
residential solar energy system development 3−58533
test facility distributed data acquisition and control system 3−29381
H_3PO_4-methanol fuel cell design for silent power plant 3−39465
Pt electrocatalyst, hydrous oxide growth, improved activation technique 3−24528

fugacity
see also kinetic theory of gases
water, sp. ht., speed of sound, Joule-Thomson and fugacity coeff., and melting curves 3−42798

full wave rectification *see rectification*

function approximation
see also Chebyshev approximation; interpolation
acoustic wave scatt., inverse problem in three dimens., optimal soln. approx. 3−17653
linear first-order differential eqns. with polynomial coeffs., fractional approx., appl. to $E_1(X)$ 3−30760
quasi-variational inequation approximation convergence *(French)* 3−17968
truss design structural optimisation, Norm method, with Gauss-Seidel approx. 3−35841

function evaluation
stationary processes, laws of distrib. of evaluations of correl. functions *(Russian)* 3−49150

functional analysis
see also harmonic analysis
x^{2N} anharmonic oscillators, Laplace expansions of Wiener integrals for Bender-Wu formula 3−40402
additive decompositions of θ-functions of multiple arguments 3−5591
analytic continuation from data points with unequal errors 3−10617
Asknes' intermediary in artificial satellite main problem 3−25274
continual integrals and canonical transformations 3−49209
dielectrics, nonhomogeneous, potential energy, iterative calc. 3−52752
factorisation eqns., $Z_N \times Z_N$ symmetric solns., addition formula 3−20669
Feynman path integral, collapse in sector-confined motion, exact space-time propagator 3−40397
fitting polynomials to data in the presence of noise 3−17723
Fourier transform IR spectroscopy, phase correction methods 3−5873
front tracking method applied to Burger's equation and two-phase porous flow 3−5611
functional integrals in nuclear physics 3−21226
functional methods in quantum field theory 3−45309
generalised Hilbert problem 3−30671
generalized functions symmetrical theory, multiplication operator and differential operator 3−20690
generating functions in physics 3−49108
homoclinic tendency, rate of approach 3−16111
indistinguishable trimers on 3×N lattice space, occupational statistics 3−20794
integral transform, quantum operator to classical function, in Hilbert space 3−40401
kinetic energy density functional, functional derivative 3−10734
Kustaanheimo-Stiefel variables derivation 3−25299
level lines computation, use of Stiefel-Baumgarte stabilisation technique 3−25293
many-particle amplitudes as analytic funct. boundary values 3−54852
model for symmetrical theory of generalised functions 3−20689
multiplication operator commutant 3−30672
Navier-Stokes eqns., linearisation by functional transform *(French)* 3−30619
nonclassical fields with singularities on moving surface 3−30635
nonMarkovian processes, long and short instants of time, appl. Brownian motion 3−40527

functional analysis continued
$P(\phi)_2$ event, weakly coupled model, second Legendre transform 3−54823
quadratic eqns. with many variables, geometry of integer roots *(Russian)* 3−44991
quantum mechanical many-particle system, projection operator method for collective motions 3−40410
scattering theory, spline approximants, solving integral equations, projection collocation 3−31358
Schrodinger eqn., unique continuation theorem for solns. *(French)* 3−40387
Schrodinger operator, multidimensional with periodic pot. 3−20703
Schrodinger-type equations, asymptotic expansions in time 3−25779
Stark effect, atomic, temporal exponential decay 3−17247
symplectics unitarisation, appls. for field quantisation 3−25778
unstable systems, path-integral soln. 3−45065
Wigner distrib. funct. 3−35871
Wigner function for two-dimens. tori 3−40385

functional equations
elasticity, compactness of support in fourth-order problems 3−40367
elasticity, Ritz method based on successive minimisation of two functionals 3−44968
mechanics and waves, perturbation and asymptotic methods 3−46480
order parameter, quantum statistical generating functional, Green's function technique 3−166
order parameter, quantum statistical generating functional, density matrix and field theoretical struct. 3−167
renormalisation group, invariance principle, functional self-similarity in quantum field theory 3−21015
rotating pretwisted cantilever blading, coupled bending-torsion motion, Reissner functional appl. 3−12568

functionals *see functional equations*

functions
see also Bessel functions; Boolean functions; Green's function methods; random functions; recursive functions; transfer functions; vertex functions; Walsh functions
generalised functions, symm. theory 3−20693
generalised functions, symm. theory model, appls. 3−22492
periodic generalised functions, symm. theory 3−20694
Ruelle's zetafunction for one-sided subshift 3−16305

fundamental constants *see constants*

fundamental law tests
gravitational photon scattering in solar field, parametrised post-Newtonian formalism 3−20234
rotating system, relativistic tidal forces, possible relativity test 3−20755

fundamental particles *see elementary particles*

fundamental physics concepts *see physics fundamentals*

fundamentals of physics *see physics fundamentals*

furnaces
see also electric furnaces; refractories
graphite furnace in electrothermal atomiser for AAS, longit. nonisothermality elimination 3−53468
pressurised fluidised-bed combustion facility, 1000 hr test programme, observations and analysis 3−34708
regenerative glass furnace waste heat conversion to electricity, feasibility assessment 3−29378
solar, industrial prospects *(French)* 3−49377
PH_3 cracking furnace for MBE 3−52946

Furry theorem *see quantum electrodynamics*

fusion *see melting*

fusion, nuclear *see nuclear fusion*

fusion-fission reactors *see hybrid reactors*

fusion reactor fuel
ASDEX, fueling efficiency of gas puffing 3−18052
Canadian tritium experience and fusion project 3−26470
cleanup system, Pd diffuser, anal. and design *(Japanese)* 3−50045
FED-INTOR tritium issues review 3−26471
heavy ion driven ICF target studies and reactor chamber neutronics anal., review 3−41307
heliotron-H fusion reactor blankets, T breeding capability 3−17028
ICF, parameter space for magnetised fuel targets 3−55578
ICF concepts for advanced fuels 3−55655
ICF programme of US Electric Power Research Institute 3−26474
inertial confinement fusion, X-ray geometrical smoothing effect in indirect X-ray-drive implosion 3−50041
PDX Tokamak, plasma edge, gas-fueling study 3−18053
plasma-wall interactions, fuel particle recycling in Tokamaks 3−18056
SENRI-I laser fusion reactor, T cycle, model anal. *(Japanese)* 3−41294
TFTR Lithium Blanket Module Programme, neutron dosimetry, T breeding 3−55696
Tokamak, D-T fuel cycle 3−11504
Tokamak reactor, simulation of fuel pellet injection, plasma density 3−32976
tritium breeding meas. in $LiAlO_2$ blanket assembly using TLD 3−1027
Tritium Systems Test Assembly, expt. programme for D-T fuel handling 3−26473
^{11}B-p fuel potentiality for ICF 3−26459
D-^3He reactors, impurity radiation constraints for ^3He prod. from D based plasmas 3−26464
D-T and D_2 filled ICF expts., diagnostics by D-^3He proton yield 3−45683
D-T fusion plasma, neutron interaction nucl. fuel balance 3−31822
D-T fusion reactors, T permeation through stainless steel first walls 3−26472
D-T gas discharge in plasma focus device, neutron yield scaling laws, report 3−7806
H isotope separation, diffusion filter 3−21936
H isotope separation by gas chromatography, D_2-HD and H_2-HD-D_2 mixtures 3−1029
H isotope separation by metal membranes 3−45694
H isotope separation using Pd alloy membranes 3−55629
H pellet injection into PDX diverted plasmas, effect on stability, density, particle transport 3−11477
H_2/D_2 separation, thermal diffusion column design and performance 3−55633
H_2/H_2O exchange, multistage column, numerical simulation 3−45670
^3H inventory reduction in modified production scheme 3−21554
^3H recovery, HTO vapour adsorption by molecular sieves, silica gel and activated alumina 3−1028
^3He fuel cycle in fusion reactors *(Japanese)* 3−1035
^3He polarised intense beam source for fusion reactors 3−50076

fusion reactor fuel continued
T breeding blanket, thermal design 3—17064
T breeding in INTOR, materials and design solns. 3—55591
T breeding in Pb-Li blankets, neutronic implications 3—55644
T diffusivity in Li_2O-Al_2O_3 system 3—55630
T interaction study with liq. $Li_{17}Pb_{83}$ 3—55649
T production in large scale commercial facility 3—55592
T recovery from liq. $Li_{17}Pb_{83}$ 3—55646
T removal from inert gas glove box atmospheres with organic compounds 3—55729
T safety research for fusion reactors, current status 3—26469
T separation and recovery from spent fuel of fusion expts. 3—55631
T technology development at Tritium Systems Test Assembly 3—55628
T thermal release from neutron irradiated borosilicate glass 3—55632
T(D) permeation through fusion reactor first wall 3—55634

fusion reactor ignition
see also fusion reactor materials; plasma heating; plasma production
ablative acceleration of double-layer targets 3—32914
ablative acceleration of planar targets by laser irrad. at 10^{14} W/cm^2 3—31783
additional heating for reactor ignition 3—11498
Angara-5 module, pulsed electron accelerator for ICF 3—45693
Angara-I high current accelerator, current channel forming process, energy release 3—31825
Antares pulse power system fibre-optic monitoring 3—17534
atomic properties and simulation code for laser produced dense plasma 3—42421
Cat-D fusion plasma, nuclear elastic scatt. effects on ignition requirements 3—26467
charged particle beams transported through dense plasma, current instability 3—7757
charged particle slowing down in JET, meas. using neutron yield meas. 3—12819
controlled nucl. fusion research and plasma physics 3—44893
controlled thermonuclear fusion, status review *(Polish)* 3—1039
current-carrying plasma channels for intense ion beam transport, theory 3—6487
dense hot plasma generation by fast compression of shells 3—32978
deuterium high-power neutral beam species meas. by neutraliser fusion product anal. 3—1040
double foil acceleration by intense relativistic electron beam irrad. 3—45682
double foil acceleration by intense relativistic electron beam irradiation, optical shadowgraphy study 3—50042
double foil target acceleration and jet formation by relativistic electron beam 3—41315
EBT-S, power coupling through electrostatic shield on loop antenna for ICRF heating 3—56701
electron temp. requirements for neutralised ICF light ion beams 3—6449
field reversed mirror, one-dimensional hybrid code 3—31799
filamentation instability in heavy ion beams 3—6448
FRTP fusion ignition experiment 3—1050
glass microballoon, low-Z foam coated, laser implosion 3—42420
glass microsphere laser targets, X-ray spectra 3—7800
heavy ion beam fusion, target design for HIBALL reactor 3—11492
heavy ion beam ICF, thermodynamics of ignition and high gain achievement 3—1037
heavy ion beam slowing down in ionized metal target, inertial fusion appl. 3—11493
heavy ion driven ICF target studies and reactor chamber neutronics anal., review 3—41307
heavy ion fusion program development of acceleration demonstration facility at Argonne 3—1068
heavy ion ICF reactor, energy accounting study 3—55593
heavy ion targets, scaling laws 3—11491
heavy-ion fusion, driver-reactor interface design 3—1070
heavy-ion inertial fusion, disk heating and beam transport expts. on accelerator test facilities 3—1118
HIBALL, heavy ion beams for ICF 3—55597
high power long duration neutral beam injector ion source for JT-60 3—6477
high power neutral beam operation at 120 KeV with a single stage extraction system 3—55677
high-power electron and ion beam, conf., Palaiseau, France (June-July 1981) 3—5501
ICF, direct energy input to compressor, effective driving method 3—50053
ICF, heavy ion beam degradation, stripping effects from partial simulation code 3—1116
ICF, heavy ion beam transport in hard and near vacuums 3—1117
ICF, parameter space for magnetised fuel targets 3—55578
ICF anal. using light ion beam 3—6446
ICF of ablative pellets using voltage shaped ion beam, numerical study 3—50047
ICF research achievements 3—45689
ICF research by light ion beams 3—6444
ICF targets, spherical heavy-ion driven, irradiation uniformity 3—26458
IGNITOR, compact ignition fusion expt., feasibility study 3—31818
inductive storage for particle beam prod. and plasma implosions 3—17067
inertial confinement, ignition inhibiting, D-T plasmas, instabilities effect 3—45667
inertial confinement, laser heating *(Japanese)* 3—21530
inertial confinement fusion, ion beam propagation and focusing 3—1022
inertial confinement fusion, small, targets, suppression of ignition by instabilities 3—11490
inertial confinement fusion, X-ray geometrical smoothing effect in indirect X-ray-drive implosion 3—50041
inertial fusion research using pulsed power drivers 3—32964
intense ion beam diodes for inertial fusion 3—6479
intense ion beam handling in magnetised plasma 3—6447
intense pulsed light-ion beam, generation, focusing, propag. and target irradiation 3—6480
internal heat deposition in laser highly accelerated targets 3—18089
ion beam diode, plasma-filled, series field coil, performance 3—27751
ion beam target, tamped split-fuel type 3—11489
ion beam-pellet interaction simulation, energy deposition, collective and quantum modifications effect 3—1032
ion beams, intense, diagnostic method 3—27737
ion Bernstein waves, harmonic launching by mode transformation 3—42406
ion cyclotron heating, in EBT, numerical modelling 3—46756

fusion reactor ignition continued
ion-acoustic instability of reversed current in target plasma corona *(Russian)* 3—22654
ion-driven fusion targets, beam production acceleration, transport and focussing 3—1069
JET, large area ion source for neutral beam injection 3—55680
JET long pulse 160 keV neutral beam line, test bed development 3—55676
JET long pulse neutral injectors 3—55685
JET neutral beam line, component design features and assembly 3—55673
JFT-2, ICRF heating mechanism 3—17065
JT-60 Tokamak, neutral ion beam injector 3—17063
Kirchhoff's law violation in a turbulent plasma 3—46724
large aperture harmonic conversion expts. at Lawrence Livermore National Laboratory, inertial confinement fusion appls. 3—7067
laser fusion, one-dimensional three-temperature calc. *(Chinese)* 3—17026
laser fusion experiments, triple bounce illumination system 3—50692
laser fusion implosions, directly driven, wavelength scaling, symmetry requirements effect 3—50048
laser fusion systems, optical coating performance and technology 3—12166
laser inertial confinement fusion power 3—17051
laser-driven, technical problems and solutions 3—1066
lateral energy transport by hot electrons at 10.6 μm laser irradiation on fusion target 3—41312
light ion prod. and focusing with pinch-reflex diodes 3—6481
light-ion ICF, system requirements 3—6445
linear induction accelerator for ICF 3—17124
low aspect ratio, steady state Tokamak reactors, wave driver options 3—1024
low-emittance neutralised light ion beams for ICF 3—6450
magnetic compression heating, effect in burning Tokamak expts. 3—46742
magnetic-fluctuations, confinement of high energy particles 3—32952
magnetically confined fusion, intense pulsed ion beams, IREX and LONGSHOT propagation experiments 3—1115
magnetically confined fusion plasma, α-particle scatt. losses during slowing down 3—11479
magnetically insulated diode with cryogenically refrigerated anode for ion beam prod. 3—6486
microsphere irradiation with 2 Tw I_2 laser 3—31827
moving ring compact torus reactor, burn control 3—45664
multistage ablation, short-wave tailoring method 3—32913
neutral beam injector unit for JT-60, extraction of 70 A ion beam 3—55601
NIKE-M, HV pulse electron accelerator for ICF 3—17126
nuclear fusion technology, symp., Julich, Germany (Sept. 1982) 3—54577
Particle Beam Fusion Accelerator data handling and recording facility 3—17066
PBFA I pulsed power driver for ICF 3—17122
pellet, foam layered, implosion characteristics for laser fusion 3—41313
pellet implosion by green beam 3—41314
pellet implosions, planar target ablative acceleration to high vels. by lasers 3—50050
polarised nuclei enhancement or suppression of fusion reactor plasmas 3—11478
RF-ion source RIG for neutral injection 3—55746
self-ignited Tokamak, burn control, compression-decompression feedback control 3—6442
soft X-ray driven ablation, use for acceleration scheme 3—50089
spherical target heating and compression at Delfin-1 3—32933
start-up in INTOR, diffusion model 3—32867
sub-ignition Tokamak, thermal runaway expts., report 3—46773
T-15 Tokamak, characts. and research program 3—21531
tandem mirror reactor systems computer modelling code, impact of gyrotron characts. 3—36566
TCA Tokamak, Alfven wave heating 3—55681
TEXTOR, high power long pulse ion cyclotron resonance heating system 3—55678
thermonuclear fusion power, engineering aspects, conference, Ispra, Italy (June 1980) 3—10522
thermonuclear plasma with movable boundary, thermal instability, control system 3—51317
Tokamak, electromagnetic systems, magnet. field windings, ohmic heating 3—11497
Tokamak burn stability, conditions for profile independence 3—46765
Tokamak fusion experimental reactor, plasma design considerations, a-A diagram 3—21503
Tokamak fusion reactor, burn control scenario 3—31821
Tokamak plasma heating using high energy heavy ion beams 3—2256
Tokamak reactor, simulation of fuel pellet injection, plasma density 3—32976
Tokamak-reactor with divertor, beam injection, D-T ignition 3—32923
toroidal plasma, close to ignition, α-particle dynamics 3—31819
^{11}B-p fuel potentiality for ICF 3—26459
CO_2 guided plasma channel for light ion beam transport 3—7758
CO_2 laser system LEKKO VIII, booster amplifier for ICF 3—41802
D^- ion source for energetic neutral beam prod. 3—55742
D-^{3}He fusion plasma, nuclear elastic scatt. effects on ignition requirements 3—26467
D-T target plasma, anal. of target implosion irradiated by proton beam, report 3—46738
D_2-H_2 plasma in TFR Tokamak, ICRF heating, fast and slow modes obs. 3—37668
DT fusion in hollow shells, ignition, press. ionis. and electron cond. effects 3—31826
H^- ion beam for fusion reactor neutral beam injection 3—41305
I laser, nanosecond pulse amplifier with 2 kJ single beam output energy 3—12180

fusion reactor instrumentation *see nuclear reactor instrumentation*

fusion reactor materials
see also fission reactor materials; fusion reactor fuel; radioactive waste
alkali-metal coatings, plasma impurity influx, fusion reactor appl. 3—18073
ASDEX, diagnostics by mass spectrometry and press. meas. 3—18029
ASDEX, material deposition on wall samples 3—18047
ASDEX edge plasma, impurity transport, probes and SIMS anal. 3—18028
ASDEX plasma boundary, impurity fluxes meas. 3—18041
blanket, experimental studies, Argonne Nat. Lab. 3—55658
blanket and shielding candidate materials 3—41316
blanket cooling tube rupture anal. 3—21542

fusion reactor materials continued

- blanket energy deposition in inertial confinement fusion-fission hybrid reactors 3—21549
- blanket materials inpile-testing, lay-out studies and sub-modules 3—55643
- blankets, thermal-hydraulic and thermomech. testing in low-power fusion device, heat enhancement 3—55701
- carbide low-Z materials, surface comp. changes with ion bombardment and heat treatment 3—21522
- carbide materials, preferential sputtering due to light ion bombardment 3—26441
- ceramic materials for fusion reactors 3—26485
- coating, low-Z, development for JT-60 first wall 3—21527
- collective phenomena, conf., Moscow, USSR (April 1981) 3—5484
- components and materials, fission based Integrated Test Facility, conceptual design 3—55704
- composite, advanced materials development for in-vessel components, review 3—21519
- composition depth profile due to multidirectional ion bombardment 3—21533
- conference on fast, thermal and fusion reactor expts., Salt Lake City, USA (Apr. 1982) 3—54578
- controlled nuclear fusion devices, plasma-surface interactions, conf., Gatlinburg, TN, USA (May 1982) 3—16075
- Culham Conceptual Tokamak Reactor, Mk IIA, liquid lithium as coolant 3—55580
- density gradients and fluxes in DITE boundary layer, Langmuir double probe obs. 3—18032
- desorption and related phenomena relevant to fusion devices 3—2987
- displacement damage calcs. using ENDF/B-V cross sections 3—55584
- DITE, plasma edge, bias pot. effect on thermal desorption probe 3—18045
- DITE Tokamak, boundary layer impurity invest. 3—18043
- double walled steam generator design considerations 3—21539
- doublet III, small radius plasmas, limiter surface temp. profile 3—18138
- dye laser fluorescence spectroscopy on the Doublet III Tokamak 3—18034
- EBT, fusion device, Al erosion and deposition to and from walls meas. 3—18049
- EBT-P gamma-ray shielding analysis 3—17058
- EBT-S, plasma edge deposition probe meas. 3—18048
- edge plasma transport in Caltech Tokamak 3—18031
- falling liquid film condenser for He removal and H isotope separation, mathematical simulation 3—21557
- FATMAC, fatigue machine for irradiation of fusion CT samples under fatigue load 3—58376
- first wall, blanket and shield engineering technology, US DOE programme 3—55693
- first wall, experimental studies, Argonne Nat. Lab. 3—55658
- first wall, extended local mixing model for H retention and isotope exchange 3—17041
- first wall, fatigue crack growth, effect on design 3—21534
- first wall, implanted tritium permeation experiments 3—55692
- first wall, in-pile T permeation expt. 3—21507
- first wall, melt layer instability following plasma disruption 3—18084
- first wall, plasma disruption effects 3—18083
- first wall, T permeation calcs. 3—21508
- first wall and blanket structural materials, irradiation facilities 3—41299
- first wall and breeding blankets, operating conditions, material selection and design 3—11502
- first wall candidates, surface deformations energy depend. of He bombard 3—41318
- first wall components, creep deform. by plasma disruption 3—18081
- first wall lifetime estimation in fusion reactor, FWLTB computer program 3—36563
- first wall materials in-pile testing, ^{59}Ni enriched Ni samples, neutronics 3—55705
- first wall simulation tests using electron beam heating in TPE-I program 3—21535
- first walls, thermodynamic response during plasma disruption 3—18082
- fission reactor expts. for neutron effects 3—55690
- fission-fusion hybrid blanket concept performance simulation in existing fission test facilities 3—55706
- fission-suppressed direct enrichment fusion breeder concept 3—21546
- flowing Li target, expt. results 3—21537
- furnace system for high energy neutron source expts. for fusion materials 3—55748
- Fusion Materials Irradiation Test Facility, high flux test assembly design 3—55699
- Fusion Materials Irradiation Test Facility 3—55698
- gas-cooled thorium salt beryllium fusion breeder blanket concept 3—21548
- glass fabric filled epoxy resins, flexural and compressive strength, gamma irradiation effect 3—34386
- graphite, electron bombardment enhanced reactivity with atomic H, temp. depend., methane yield 3—26445
- graphite, erosion due to energetic ion bombardment, room temp. to 4000K 3—26449
- graphite, implanted with D, trapped states, chem. sputtering, thermal desorption 3—26448
- graphite, neutron leakage spectra meas. 3—55648
- graphite, pyrolytic, implanted He retention, re-emission and thermal desorption 3—21509
- graphite, pyrolytic, reaction of atomic H, hydrocarbon form., synergistic effect of Ar ion bombardment 3—26447
- graphite, pyrolytic, sputtering yield enhancement at elevated temps. 3—26450
- graphite, TiC coated, outgassing characts. 3—21528
- graphite and TiC-coated graphite, methane prod. under electron and atomic H impact 3—26446
- heat flux in DITE boundary layer, pulse obs. 3—18039
- heat flux influence on H recycling from Tokamak walls 3—18057
- heliotron-H fusion reactor blankets, T breeding capability 3—17028
- high-temperature fusion blanket for synfuel and electrical production 3—1054
- hybrid blankets, neutronic performance with conventional and actinide waste fuel 3—21545
- hybrid reactor, natural U blankets for fusion reactor, mathematical model 3—41323
- impurity evolution, transport and accumulation, plasma edge pot. effects 3—18030
- Inconel 600/316-stainless steel Na-heated steam generator, cracks and deposits due to Na-to-water leak 3—6366
- Inconel 625, interaction with 316 stainless steel, materials testing in linear theta pinch 3—26455

fusion reactor materials continued

- Inconel 625, thermal fatigue testing of low-Z coatings 3—21526
- Inconel 625, thermal shock testing of low-Z coatings 3—21525
- Inconel-600 membrane, bulk and surface props., H_2 interaction 3—17031
- inertial confinement fusion reactor chamber components, fatigue crack growth 3—45672
- inertially cooled limiters, thermal props., scaling laws 3—17037
- insulating materials for HV machines for nuclear power plants 3—11396
- Intense Pulsed Neutron Source-I, neutron irradiation facilities for fusion magnet materials 3—55697
- INTOR, first wall, permeation, inventory in and outgassing out study 3—17032
- ion impact desorption cross sections, data compilation and eval. 3—21518
- irradiation facilities, neutron flux, spectral meas. 3—55583
- Kola reactor, neutron flux density calcs., vessel service life 3—41252
- laser fusion targets with small defects, light scatt., depolarised components 3—26437
- light impurity desorption and release in Tokapole II 3—18033
- liquid first wall, dynamic stability 3—26462
- low activation materials, effect on accident consequences 3—31795
- low activation materials, systems implications to use 3—31796
- low Z wall coatings for JET, deuteron trapping meas., report 3—11487
- low-activation fusion rationale 3—31798
- low-activation materials for fusion applications: an overview 3—31794
- low-temperature irradiation facility at Kyoto University Reactor 3—35996
- materials, fast neutron irrad., radiation study *(Japanese)* 3—2614
- maximum tritium production in toroidal fusion reactors with no inboard breeding 3—1053
- metal, He implantation investigs. using monoenergetic positrons 3—24046
- metal light ion sputtering yield data, 25 to 100 keV 3—21515
- metal-adsorbate systems, ion impact desorption mechanisms and energy distribs., fusion plasma relevance 3—26454
- metallic coatings struct. for impurity control in MACROTOR 3—18077
- microfabrication methods for inertial confinement fusion 3—11485
- miniaturised disk bend test for postirradiation mechanical behaviour anal. 3—29282
- Mo limiters, TiN and TiC coated, for JFT-2 Tokamak 3—41317
- molten-salt blanket of thermonuclear reactor, neutron spectrum unfolding method appl. 3—26549
- neutral gas blanket effects in a gaseous divertor 3—18064
- neutronics analysis for the materials testing module of TASKA 3—17057
- Ni(n,X), 14.6 MeV, activation cross sections leading to long lived reaction products 3—21501
- nuclear fusion technology, symp., Julich, Germany (Sept. 1982) 3—54577
- particle exhaust in pump limiters, Monte Carlo calcs. 3—18060
- parylene coating thickness meas., real-time, using optical reflectometry 3—262
- plasma-wall interaction simulator dynamics, H recycle and wall inventory 3—17046
- poloidal coils for Reacting Plasma Project, performance test of model coil under 200 T/sec pulsing rate 3—41320
- poloidal conductors, high current, at JAERI, advances 3—41319
- preferential sputtering effects on surface coatings 3—26481
- pump limiter on Macrotor Tokomak, IR thermographic obs. 3—18061
- radiation damage, sink strengths calc. method 3—55156
- radioactive waste decay, inclusion in structural materials, report 3—26487
- radioactive waste management, health and safety aspects 3—50044
- reacting plasma, wall interactions transport eqns., temp. and density profiles 3—18072
- reference breeder blanket design development 3—21544
- remote handling demonstration tests for the FMIT facility 3—31812
- research, review 3—17052
- RTNS-II, 14 MeV neutron source for fusion materials, irradiation programme 3—55747
- scrape-off plasma, impurity transport, probe meas. in JIPP T-II 3—18042
- shield system, experimental studies, Argonne Nat. Lab. 3—55658
- solid breeder blanket for MARS, neutronics anal. 3—21541
- solid breeder blankets, pulsed mode operation effects 3—21543
- solid breeder materials, irradiation in fast neutron fission reactor 3—55703
- sputtered Al in EBT-S, density and vel. distrib., laser-induced fluoresc. obs. 3—18035
- sputtered Mo at. densities in front of W VIIA beam dump, fluoresc. spectrosc. investig. 3—18036
- stainless steel AISI 304L and Carpenter 18-18 Plus for Ignitor Tokamak vacuum vessel 3—55608
- STARFIRE, activation impact on materials recycling 3—31790
- STARFIRE, fuel and He behaviour 3—55659
- STARFIRE-DEMO breeding blanket, thermal hydraulics design 3—1051
- steel, alloy, irrad. damage, electron, heavy-ion and fast-neutron, correl. 3—27976
- steel, austenitic stainless, cold worked, irrad. creep, effect of flux and temp. gradients 3—28011
- steel, austenitic stainless, cold worked, irrad. creep, stress and stress transient effects 3—28009
- steel, austenitic stainless, fatigue crack growth design curve, in air at 300°C 3—41153
- steel, austenitic stainless, He embrittled, modelling high temp. mech props, 3—19398
- steel, austenitic stainless, interaction with Inconel 625, materials testing in linear theta pinch 3—26455
- steel, austenitic stainless, JRC fusion materials programme in-pile creep and fatigue facilities 3—55691
- steel, ferritic, Cr-Mo, creep rupture design eqns. 3—6439
- steel, martensitic stainless, mag. considerations for use in tandem mirror reactors 3—21553
- steel, modified for low activation fusion reactor design 3—31797
- steel, stainless, austenitic, He implanted, trapping and surface permeation of D 3—17038
- steel, stainless, He ion bombardment, blistering obs. 3—21512
- steel, stainless, implanted D retention and release, dynamic meas. 3—21505
- steel, stainless, Li exposed, X-ray induced released of H 3—17029
- steel, stainless, membrane, re-emission of implanted D^+ from back surface 3—17047
- steel, stainless, neutron leakage spectra meas. 3—55648
- steel, stainless, test line for low hybrid heating grill launcher 3—55683
- steel, stainless, type 304, implemented D movement, simulated fusion reactor conditions 3—17049
- steel, stainless, type 304 and 316, He^+ irrad., surface roughness factor of blistered and exfoliated surfaces 3—21513

fusion reactor materials continued
steel, stainless, type 304LN, D trapping and re-emission, fusion reactor wall relevance 3—17044
steel, stainless, type 304LN, He damaged, D retention and detrapping energy 3—17050
steel, stainless, type 316, fatigue failure, effects of multienergy ion bombardment, neutron irrad. and stress/temp. cycling 3—24336
steel, stainless, type 316, H ion impact desorption of adsorbed D, SIMS obs. 3—21516
steel, stainless, type 316, irradiated fatigue behaviour 3—41308
stellarator, impurity flux at plasma edge probe meas. 3—18044
stopping power for electrons below 10 keV *(Japanese)* 3—1181
structural alloys, radiation effects 3—13289
structural reliability anal. for JRC-Ispra, response surface methodology approach 3—16970
superconducting materials development and testing at Karlsruhe Research Centre 3—41302
suppressed-breeding fusion-fission reactor blankets 3—21547
surface data for fusion devices, progress report by US, Japanese and IAEA data centres 3—21517
surface processes under H isotope bombardment, SIMS obs., Tokamak relevance 3—17039
surface studies of wall materials at AFI 3—6435
TASKA, possibilities for fusion material testing 3—41304
TASKA fusion technology device, testbed for engineering, materials and safety 3—41303
tetrafluoroethylene film, permeation, diffusion and dissoln. of H isotopes, methane and inert gases 3—18511
TFR Tokamak, gas recycling study at plasma edge 3—18051
TFTR, material activation, systematic study 3—1049
TFTR Lithium Blanket Module Programme, neutron dosimetry, T breeding 3—55696
thermionic hybrid blankets, (D,T) driven 3—21550
thermonuclear fusion power, engineering aspects, conference, Ispra, Italy (June 1980) 3—10522
thermonuclear reactor structural materials, helium induced embrittlement from (n,α) reactions 3—45692
Tokamak, NbTi-Cu-CuNi superconducting stranded cables stability obs. in pulsed field Tokamak reactor appl. 3—31830
Tokamak wall, H flux, permeation probe charact. 3—18058
Tokamaks, plasma behaviour and interactions, cine photographic obs. 3—18027
TPE-I and experimental studies of fusion first wall components in ESURF 3—55694
void swelling theory, continuous gas generation effects 3—37895
wall coating, low-Z, for JET, D trapping and re-emission during ion bombardment 3—17040
Al, 2H implanted depth profiles, using (^{3}He,p) 3—55577
Al alloys, irradiation by He ions, surface blistering temp. depend. 3—45690
Al alloys, radiation blistering from He^+ and D^+ simultaneous irradiation 3—45691
Al first-wall model for INTOR reactor, thermomech. behaviour, finite element calcs. 3—26438
Al, implanted with He, bubble density and press. 3—21510
Al, low energy backscattered light atoms, angular and energy correls. calcs. 3—26452
Al, suitability to reduce residual radioactive inventories 3—31792
Al-Li alloy, first wall material, sputtering props., surface comp. and segregation 3—21521
Al-Zr getters for CO and O_2 impurities control in H plasma 3—55615
^{7}Be transport in Li loop, FMIT test 3—26480
^{9}Be(n,2n), cross sections, sensitivity anal. for random mirror hybrid reactor 3—1055
C, first wall material, electron and H bombardment, methane prod. 3—53438
C, implanted D retention and release, dynamic meas. 3—21505
C, ion-induced release of D, plasma-wall interactions 3—17043
C, radiation damage effect on D trapping and re-emission 3—17042
C_{ZZ} 3—21526
Cd(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
Co(n,X), 14.6 MeV, activation cross sections leading to long lived reaction products 3—21501
Cr film gettering for fusion reactors 3—21520
Cr-Mo steel, for fusion reactor first wall and blank, review 3—26461
Cu, irrad. with He^+ and D^+, depth distrib. of bubbles and fracture 3—21511
Cu-W divertor plates for INTOR fusion reactor, expt. tests 3—55624
CuPd, order-disorder transform. under 148 MeV neutron and 1.8 MeV electron irradiations 3—55576
Cu(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
D-D Tokamak fusion reactor, nuclear characteristics of blanket/shield design 3—21504
D-T fusion reactors, T permeation through stainless steel first walls 3—26472
D-T neutron source, high intensity, Monte Carlo anal. 3—21538
Fe, gamma-rays associated with 14 MeV neutron inelastic scatt. 3—41291
Fe-Cr-Al alloys, H permeation characts. 3—28155
Fe-Cr-Mo (9.5, 0.78 wt.%), cavity form., Ni^+ and He^+ irrad., TEM 3—37968
Fe-Ni-Cr, Incoloy 800 heat exchange material, oxide films, SIMS anal. 3—14766
Fe(n,X), 14.6 MeV, activation cross sections leading to long lived reaction products 3—21501
H atomic densities near wall, laser-induced fluoresc. meas. 3—18038
H recycling, thermally activated processes in fusion devices 3—18050
H transport theory, dimensionless parameter for max. H inventory and release 3—17045
H_2O, tritiated, solid oxide electrolysis cell 3—45675
^3H control in DEMO $Li_{0.17}Pb_{0.83}$ liq. metal blanket design 3—1052
He diffusion model for materials under irrad. 3—6287
He distribution, high Ni-alloy using TEM for radiation effects 3—41310
He migration and clustering under irradiation pulsing 3—26482
In(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
K boiling in vertical tube in transverse mag. field, fusion reactor cooling appl. 3—17027
Li liquid target design for FMIT 3—21536
Li, neutron leakage spectra meas. 3—55648

fusion reactor materials continued
Li-Al-N ceramics in liq. Li, thermodynamic stability 3—55645
Li-Al-O ceramics in liq. Li, thermodynamic stability 3—55645
Li-Pb alloy, solubility of D, temp. and comp. depend. 3—39094
Li-Pb liq. blanket designs for fusion Tokamak power reactors 3—55640
Li_2O blanket, materials and design solns. for breeding T 3—55591
$Li_{17}Pb_{83}$ blanket, materials and design solns. for breeding T 3—55591
$Li_{17}Pb_{83}$ eutectic alloy, breeding material for fusion reactor, thermodynamic props. 3—57111
$Li_{17}Pb_{83}$ high temperature blankets, neutronics study 3—21540
$Li_{17}Pb_{83}$, liq., blanket material, T recovery 3—55646
$Li_{17}Pb_{83}$, liq., blanket material, T interaction study 3—55649
Li_2SiO_3 blanket, materials and design solns. for breeding T 3—55591
Li_2TiO_3, vaporisation of solid, mass spectrometric study 3—18433
$^6Li(n,t)$, 10 eV-325 keV, ang. distribs. and forward/backward emission ratios 3—41032
Mn(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
Mo, chemically deposited, He ion irrad. 3—28013
Mo, collapse of He platelets 3—26456
Mo, He ion irrad., small angle X-ray scatt. 3—28012
Mo, neutron activation cross sections 3—31398
Mo, rapid heating thermal fatigue in ultra-high vacuum *(Japanese)* 3—50046
Mo, thermal fatigue testing of low-Z coatings 3—21526
Mo, thermal shock testing of low-Z coatings 3—21525
Mo, TiC coated, outgassing characts. 3—21528
Mo(n,X), 14.6 MeV, activation cross sections leading to long lived reaction products 3—21501
Mo(n,X), $X=p,\alpha,Zn$, 14.6 MeV, activation cross sections for fusion reactor materials 3—21500
Na, bombarded by D, energy distribs. and charge-state fractions of reflected D 3—26453
Na_2O-B_2O_3-SiO_2, fabrication of hollow glass microspheres from metal alkoxides, laser fusion targets 3—6438
Nb membrane, $D_2(D_2{}^+)$ superpermeability meas. 3—14888
Nb, sputtering by high-energy protons, backward and transmission sputtering yields, neutron sputtering relevance 3—26451
Nb_3Sn coil, large high current, for fusion research 3—55668
Ni, implanted with He, bubble density and press. 3—21510
Ni, implanted with He, bubble obs. using small-angle X-ray scatt. 3—21514
Ni-W (1.2 at.%), cold worked, irrad. creep, stress and stress transient effects 3—28009
PLZT electro-optic filters for fusion reactor material testing appls. 3—7143
Pb blanket, investigation of neutron spectrum, spherical blanket 3—41311
Pb shells, neutron multiplication meas. 3—55648
Pb-Li blankets for fusion reactors, neutronic implications 3—55644
Pd, surface recomb. coeff. of H, implications for H recycle in Tokamaks 3—21506
SiC coatings on graphite, thermal shock behaviour, suitability fur fusion reactor first wall 3—1030
SiC, He^+ ion irrad., surface structure meas., fusion reactor wall appl. 3—33543
Sr(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
T gas target, high pressure operation 3—41381
T storage in cement blocks, leaching expts. *(Japanese)* 3—36562
T-D isotope separation using resonant optical radiation absorption 3—41293
Te(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
Ti alloys, first wall material, plasma interactions D implantation study 3—18046
Ti atoms, release, transport and ionis. at ASDEX divertor plates, fluoresc. obs. 3—18037
Ti, hot getter behaviour at plasma edge in Tokamaks 3—21523
Ti oxide coated, sputtering yields, laser fluoresc. and AES obs., oxidised surface influence 3—26443
Ti, sputtering yields due to light ion bombardment, laser induced fluoresc. 3—26442
Ti test line for low hybrid heating grill launcher 3—55683
Ti-Al-V (6, 4 wt.%), single-and dual-ion irrad., radiation-induced precip. 3—28007
Ti-V-Al, implanted He behaviour mech props., temp. depend. 3—26463
TiB_2 coated long pulse high heat flux component for fusion reactor, thermal fatigue 3—21529
TiC chem. sputtering yields on H^+ bombardment, methane prod. 3—26444
TiC coated limiter expt. in JIPP T-II Tokamak 3—18065
TiC coated materials, outgassing characts. w.r.t. fusion device ultrahigh vac. environment 3—21528
TiC in-situ coating in JT-60 first wall 3—55603
TiC low-Z coatings, surface erosion and re-emission behaviour under H and He ion bombardment 3—21524
TiC/Mo limiter for JFT-2 Tokamak with neutral beam injection, thermal load tests 3—51351
TiC(N) low-Z coatings for JT-60, thermal shock testing 3—21525
TiC(N) low-Z coatings for Tokamak reactor, thermal fatigue testing 3—21526
Ti(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
V alloys for low activation fusion reactor design 3—31797
W, He implantation effects 3—41309
W, low energy backscattered light atoms, angular and energy correls. calc. 3—26452
Y(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
Zn(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
Zr-Al alloy getter system for Tokamak, diffusivities of H and D 3—17048
Zr(n,X), 14.6 MeV, activation cross sections leading to long lived reaction products 3—21501
Zr(n,X), $X=p,\alpha,Zn$, 14.6 MeV, activation cross sections for fusion reactor materials 3—21500

fusion reactor theory and design
see also fusion reactor ignition; fusion reactor materials; plasma confinement; plasma heating; plasma production
ASDEX ion sources, long pulse operation with edge cooled extraction grids 3−55679
ASDEX Upgrade, EM forces and mech. stresses in vacuum vessel 3−55617
ASDEX Upgrade, Tokamak expt. with reactor compatible poloidal divertor 3−55599
axial power flow in open-ended fusion devices, effect of gas recycling and secondary electron emission 3−12821
barrier tandem mirror reactors, D-D cycle comparison with D-T 3−45662
beam dump, tubes locally heated by high energy beams, heat flux evaluation 3−45684
blanket cooling tube rupture anal. 3−21542
blanket energy deposition in inertial confinement fusion-fission hybrid reactors 3−21549
blanket nucl. design guide lines 3−55647
blanket testing, neutron calcs. for Engineering Test Reactor 3−45671
blankets, thermal-hydraulic and thermomech. testing in low-power fusion device, heat enhancement 3−55701
bundle divertor for Fusion Engineering Device, optimisation 3−45678
bundle divertor plasma, supersonic gas target 3−2182
charged particle beam momentum and energy losses in non-Maxwellian plasma 3−27713
compact reversed-field pinch reactor, high power density approaches to mag. fusion energy 3−56730
computational methods for fast ion slowing 3−1058
computational methods for the study of impurities in fusion plasmas 3−1064
controlled nuclear fusion in the USSR 3−31824
controlled thermonuclear fusion, status review *(Polish)* 3−1039
Coulomb-nuclear thermalisation of fusion products in hot plasma, variance reduction technique 3−31801
CTR blankets, benchmark expts. enhancement 3−55642
Culham Conceptual Tokamak Reactor, Mk IIA, liquid lithium as coolant 3−55580
cyclic temperature and thermal stress fluctuations in fusion reactors 3−45666
deep penetration, first event source estimation, chain segmentation 3−31491
demonstration Tokamak power plant design study 3−55639
dense fusion plasma, fusion product slowing down, nucl. elastic scatt. effect 3−51329
divertor plate, tubes locally heated by high energy beams, heat flux evaluation 3−45684
Doublet III, heat load reduction by remote radiative cooling 3−1067
EBT, numerical modelling 3−46756
EBT plasma numerical modeling 3−1060
EBT-P gamma-ray shielding analysis 3−17058
EBT-S, power coupling through electrostatic shield on loop antenna for ICRF heating 3−56701
electron cyclotron resonance heating by gyrotron oscillator, fusion research 3−32884
electron tubes for controlled thermonuclear fusion systems 3−55686
ELMO Bumpy Torus advanced fuel reactor, energy and particle confinement 3−1026
ELMO Bumpy Torus Proof-of-Principle device design 3−55598
ELMO Bumpy Tours, reactor magnetics and particle confinement 3−1023
EM beam nonlinear interaction with plasmas 3−32872
end plug radiation streaming in a TMR neutral beam port 3−31808
energy hybrid Tokamak reactor parameter optimisation 3−31831
energy transport by cyclotron radiation 3−45680
ergodic mag. limiter, electron thermal cond. 3−51277
fast charged particles slowing down and fusion reaction energy gain, theory *(Chinese)* 3−17025
fast-ion slowing, unified theory, calc. methods 3−46691
FDX, activation anal., systematic approach 3−31811
FED, maintenance equipment concepts 3−31815
FED, shielding design, anal. using SENSIT-2D, two-dimens. cross section sensitivity code 3−17055
FED activation and biological dose anal. 3−31791
FED compact bundle divertor optimisation 3−1065
FED inboard shield, neutronics anal. 3−17054
FED reactor engineering features 3−55660
FED-INTOR tritium issues review 3−26471
FED-R2, low cost compact option for FED 3−21556
first wall, extended local mixing model for H retention and isotope exchange 3−17041
first wall, fatigue crack growth, effect on design 3−21534
first wall, T permeation calcs. 3−21508
first wall and breeding blankets, operating conditions, material selection and design 3−11502
first wall gas protection, computer code simulation 3−50037
first wall lifetime estimation in fusion reactor, FWLTB computer program 3−36563
fission-suppressed direct enrichment fusion breeder concept 3−21546
FIVA device, low power excitation, rf coupling, MHD waves 3−50036
focus device, neutron yield and discharge symm. reproducibility 3−12989
Fokker-Planck equation application to pellet ignition analysis 3−26483
Frascati FT heating system, configuration and operating experience 3−55674
FT lower hybrid heating system coupling structure, technological problems 3−55682
FTU device, vacuum vessel and short-time-constant Cu shell, preliminary anal. 3−55610
FTU Frascati Tokamak, main features 3−55594
fuel cleanup system, Pd diffuser, anal. and design *(Japanese)* 3−50045
Fusion Engineering Device, design description 3−45668
Fusion Engineering Device, remote maintenance equipment 3−17062
fusion materials test facility, bulk shield design 3−45698
fusion product anomalous slowing-down, microinstabilities, simulation studies 3−26466
fusion-fission hybrid reactor model for stability anal. 3−26489
GAMMA 10, tandem mirror, design, fabrication, construction 3−55667
gas-cooled thorium salt beryllium fusion breeder blanket concept 3−21548
general transport formalism applied to neutron anisotropic scattering problems 3−31809
HBTXIA reversed field pinch, completion and operation 3−55663

fusion reactor theory and design continued
heavy ion beam ICF, thermodynamics of ignition and high gain achievement 3−1037
heavy ion driven ICF target studies and reactor chamber neutronics anal., review 3−41307
heavy ion ICF reactor, energy accounting study 3−55593
heavy ion induced inertial fusion, accelerator aspects *(German)* 3−45661
heavy-ion fusion, driver-reactor interface design 3−1070
helical mag. configuration using ferromagnetic materials 3−46763
Heliotron E fusion machine, circular magnetic-multipole bucket ion source performance 3−32919
Heliotron E NBI, cryogenic system design with closed-loop He refrigerator 3−36568
heliotron-H fusion reactor blankets, T breeding capability 3−17028
HIBALL, heavy ion beams for ICF 3−55597
HIBALL, heavy ion driven inertial confinement fusion power plant, conceptual design 3−41306
high power neutral beam dump as source of DT and DD neutrons 3−17060
high power neutral beam operation at 120 KeV with a single stage extraction system 3−55677
high power pulse generating and transmitting circuits for nuclear fusion *(German)* 3−26439
high-temperature fusion blanket for synfuel and electrical production 3−1054
hybrid blankets, neutronic performance with conventional and actinide waste fuel 3−21545
hybrid reactor, natural U blankets for fusion reactor, mathematical model 3−41323
hybrid reactors, cross-section uncertainties, effects, for SOLASE-H design 3−45695
HYFIRE power/electrolysis reactor design 3−55654
ICF, direct energy input to compressor, effective driving method 3−50053
ICF, parameter space for magnetised fuel targets 3−55578
ICF concepts for advanced fuels 3−55655
ICF reactor cavities, radiative energy transport 3−26478
ICF reactor design, two-temp. model of thermal radiation transport 3−26477
ICF tandem mirrors, Monte Carlo studies 3−31803
ICRF wave enhanced beam-driven current, scaling law 3−51341
Ignitor Tokamak vacuum vessel design 3−55608
impurities, numerical anal. 3−46754
inertial confinement fusion engineering evaluation, opportunities on existing and planned facilities 3−26484
inertial confinement fusion reactors, design concepts and engineering problems 3−11509
INTOR, electricity producing and tritium breeding blanket sector design 3−55641
INTOR, materials and design solns. for breeding T 3−55591
INTOR, ripple transport, control of power output 3−50052
INTOR activation and biological dose anal. 3−31791
INTOR fusion programme 3−32957
INTOR J-II expt. Tokamak reactor, design consideration and remote maintenance 3−55636
INTOR Tokamak reactor, divertor collector plate cooling 3−55627
INTOR/NET, cold struct., heat deposition by eddy currents 3−55669
INTOR/NET, safety and environmental studies 3−55652
INTOR/NET power Tokamak reactor, mech. config. and system integration studies 3−55635
ion beam-pellet interaction simulation, energy deposition, collective and quantum modifications effect 3−1032
JET, large area ion source for neutral beam injection 3−55680
JET, neutron diagnostic systems 3−55582
JET, provisions for radioactive operation 3−31789
JET first wall, status and perspectives 3−55590
JET long pulse 160 keV neutral beam line, test bed development 3−55676
JET long pulse neutral injectors 3−55685
JET neutral beam line, component design features and assembly 3−55673
JET neutral injection cryopumps, LHe and LN_2 cryosupply and distribution system 3−36567
JET neutral injection deflection magnet 3−55684
JET neutron diagnostics, neutron transport calcs. 3−56757
JET remote handling status 3−55637
JET vacuum vessel, manufacture, testing and assembly prep. 3−55605
JT-60 fusion reactor control system, safety design 3−55650
JT-60 multitorus system, eddy current anal. 3−55621
JT-60 vacuum vessel, fatigue strength evaluation using dynamic response anal. 3−55623
large toroidal fusion reactors, power supply requirements 3−11501
large twisted coils, support concept 3−55671
laser fusion power plant, parametric anal. 3−31820
laser fusion reactor,, neutron calcs. in pellets and blankets 3−45685
laser thermonuclear fusion, review of work in the USSR *(Russian)* 3−51345
lateral energy transport by hot electrons at 10.6 μm laser irradiation on fusion target 3−41312
LIB fusion device, sausage instability of z-discharged plasma channel 3−6443
LIB-fusion device, z-discharged plasma channel formation, report 3−7779
light ion beam fusion, beam transport by z-discharged plasma channel, computer simulation 3−50039
light ion beam fusion, beam transport by z-discharged plasma channel, sausage instabilities 3−50040
limiter and divertor impurity control systems, emission and redeposition anal. 3−18074
line density measurements on a two-stage neutralizer 3−55687
liquid first wall, dynamic stability 3−26462
LITE (long pulse ignited test expt.) alternative to TFTR-upgrade 3−21555
low activation materials, effect on accident consequences 3−31795
low activation materials, systems implications to use 3−31796
low aspect ratio, steady state Tokamak reactors, wave driver options 3−1024
low-activation fusion rationale 3−31798
low-shear-stress toroidal magnet for 'OMITRON': an ohmic ignition tokamak 3−55661
MACROTOR, large area pumped limiter expts. 3−17034
magnetic confinement fusion engineering, future work plans 3−11486
magnetic confinement theory 3−46767

fusion reactor theory and design continued
magnetic islands and turbulence in thermonuclear plasma *(Russian)* 3—51320
maintenance facility design for a Tokamak reactor 3—31813
major plasma disruption, canister Tokamak blanket, neutronics, photonics, thermal calcs. 3—45665
mathematical modeling of burning plasmas in magnetic fusion reactors 3—1062
Mather's type plasma focus device, thermonuclear reaction intensity optimisation 3—11488
Maxwellian reactivities, simple computational form 3—45676
mechanical divertors in Macrotors, particle accumulation and removal 3—12829
MFTF-B, mirror fusion test facility, supercond. magnet system design and fabrication 3—55596
MHD effects on transport time scale in Tokamaks 3—1057
mirror fusion reactor concepts., engineering problems, review 3—11508
modular stellarator magnet, computational aspects 3—55672
Monte Carlo methods overview 3—31802
moving ring reactor, limitation on burn time from impurity accumulation 3—45686
muon catalyzed DT hybrid reactor conceptual design 3—21551
NET/INTOR first wall and blanket safety anal. 3—55651
neutron flux, photo neutrons from runaway electrons 3—31782
neutron induced radionuclide populations 3—41263
neutron role in controlled fusion 3—55581
neutron wall flux, spatial variation with polarised D and T reactants 3—26479
Next European Tokamak, aims and design features 3—11507
particle motion under wave action in fusion reactors, elec. current generation 3—55574
particle simulation codes, appl. to fusion 3—45679
particle simulation codes appl. in reactor engineering 3—1063
plasma, fusion, properties of low-temp. plasmas, appls. *(Dutch)* 3—50049
plasma confinement in multiple mirror mag. trap 3—12944
plasma focus device, D-T gas discharge, neutron yield scaling laws, report 3—7806
plasma heating, neutral beam injector, double bifurcation optimisation for secondary loading reduction 3—27715
plasma-wall interaction simulator dynamics, H recycle and wall inventory 3—17046
PLT vacuum vessel, activation meas. interpretation 3—27719
process heat fusion blanket, Monte Carlo geometrical perturbation anal. 3—31800
prototype fusion reactors, inspection and maintenance 3—11480
pump limiters, mag. divertors, design studies 3—17033
pumped neutralisers design for neutral beams using Monte Carlo methods 3—31806
R-Tokamak, wall-lapping plasma, mag. islands form. 3—18059
radiation hardening of diagnostics for fusion reactors 3—31787
radiation streaming calculations through three-legged laser beam port of SENRI-I, 3—31810
reacting and burning plasma, wall interactions, review 3—18075
reference breeder blanket design development 3—21544
relativistic electron beam generators, appls. to inertial thermonuclear fusion *(Russian)* 3—22652
relativistic high freq. electronics, achievements and problems 3—33024
remote maintenance, development plan 3—17061
remote maintenance, repair operations simulation using computer graphics 3—11484
remote maintenance of the TASKA fusion reactor barrier coil 3—31817
remotely maintainable connectors for fusion development 3—11483
remotely maintainable fusion first wall, blanket, and shield 3—11482
research and development review *(Japanese)* 3—1034
reversed field pinches, EM design optimisation criteria 3—55664
reversed-field pinch plasmas, Joule heating optimisation 3—32973
REXIMPLO spherical pinch, improved neutron prod. and 3-dimens. computational anal. 3—12952
RFC-XX, megawatt power transfer system 3—55675
RFX vacuum vessel design, elec., thermal and mech. aspects 3—55620
safety, environmental aspects, radiological protection, waste disposal 3—11510
seal components, instrumentation cables for fusion reactor service, design considerations 3—31785
SENRI-I laser fusion reactor, T cycle, model anal. *(Japanese)* 3—41294
shielding containing W, sensitivity anal. for γ-rays and neutrons 3—45714
solid breeder blanket for MARS, neutronics anal. 3—21541
solid breeder blankets, pulsed mode operation effects 3—21543
spheromak fusion reactor conceptual design 3—26457
SPICA II, high beta expt., construction 3—55665
sputtering in plasma devices, semiempirical law 3—42412
STARFIRE, activation impact on materials recycling 3—31790
STARFIRE, fuel and He behaviour 3—55659
STARFIRE-DEMO breeding blanket, thermal hydraulics design 3—1051
start-up in INTOR, diffusion model 3—32867
steady currents in plasma, field reversal by rotating waves 3—2198
steady currents in plasma field reversal by rotating waves 3—2197
steel, stainless, type 316, irradiated fatigue behaviour 3—41308
structural reliability anal. for JRC-Ispra, response surface methodology approach 3—16970
superconducting magnet technology advancements 3—36570
superconducting magnet technology for magnetic confinement systems 3—11503
superconducting magnets for fusion reactor, review 3—1033
superconducting materials development and testing at Karlsruhe Research Centre 3—41302
superconducting Tokamak development, Nb_3Sn test module coil for cluster test program 3—36569
superconductivity magnets, engineering development 3—41301
suppressed-breeding fusion-fission reactor blankets 3—21547
surface data for fusion devices, progress report by US, Japanese and IAEA data centres 3—21517
swimming pool Tokamak reactor, vacuum vessel replacement techniques 3—31816
T-15 Tokamak, main characts., EM system 3—55602
tandem mirror computational methods 3—1059
tandem mirror fusion reaction, end plug neutronics shielding analysis 3—1025
tandem mirror reactor, axial nonuniformity of electron temp. calcs. 3—32971
tandem mirror reactor end plugs, light-atom neutral beams 3—46744

fusion reactor theory and design continued
tandem mirror reactors, computation methods 3—46755
tandem mirror rectors, prospects *(Japanese)* 3—1036
target chamber, propagation of target explosion, to first wall, computer code 3—50038
TASKA fusion technology device, testbed for engineering, materials and safety 3—41303
TCA Tokamak, Alfven wave heating 3—55681
temperature profile calc. theory, in Tokamak plasmas 3—46684
TEXTOR, high current vacuum bushing for liner-heating 3—55607
TEXTOR, high power long pulse ion cyclotron resonance heating system 3—55678
TEXTOR, structure performance under rated loads 3—55666
TEXTOR first wall under thermal plasma load, H recycling calc. 3—56693
TEXTOR long pulse high power ion cyclotron resonance heating generator 3—55688
TEXTOR Tokamak, advanced limiter test, concept and expt. design 3—55625
TEXTOR Tokamak, helical coil system to perturb mag. surfaces at boundary 3—55626
TFTR, JET and JT-60 large Tokamaks, design, parameters, construction status 3—11499
TFTR, two-dimensional scalar flux remeshing technique for Tokamak nucleonics 3—17056
TFTR in-vessel manipulator system, dynamic and geometric simulations 3—11481
TFTR Lithium Blanket Module Programme, neutron dosimetry, T breeding 3—55696
thermionic hybrid blankets, (D,T) driven 3—21550
thermonuclear fusion power, engineering aspects, conference, Ispra, Italy (June 1980) 3—10522
thermonuclear reactions, average energy of interacting particles 3—41295
thermonuclear research and plasma radiation *(Russian)* 3—51292
Tokamak, active feedback control, thermal runaway, numerical calcs. 3—50051
Tokamak, electromagnetic systems, magnet. field windings, ohmic heating 3—11497
Tokamak, magnetic field evaluations 3—11496
Tokamak, superconducting magnets technology development 3—37711
Tokamak design for reacting plasma experiment at IPP Nagoya 3—55656
Tokamak first wall, localised heat deposition due to suprathermal ions ripple trapped loss 3—2229
Tokamak fusion experimental reactor, plasma design considerations, a-A diagram 3—21503
Tokamak fusion generators for nucl. radiation effects testing 3—41292
Tokamak fusion reactor, high-Q thermally stable operation 3—56735
Tokamak optimum feedback equilibrium controller design 3—45687
Tokamak plasma, MHD stability anal. by time-depend. codes 3—51300
Tokamak power plant, systems integration criteria 3—11506
Tokamak reactor, α-particle bootstrap current generation 3—32951
Tokamak reactor, MHD theory RF heating, neutral atom transport 3—45677
Tokamak reactor, slowing down, α-particle ripple losses 3—32866
Tokamak reactor blanket designs with Li-Pb liq. breeders 3—55640
Tokamak reactors, vel. space-loss region effects on α-particle distrib. and losses 3—32869
Tokamak with adiabatic plasma compression and strong mag. field, physical and eng. problems 3—21532
Tokamak-type, first-wall, cellular structure, plasma exposure, thermomechanical behaviour 3—26438
Tokamaks, compression heated, sufficient stability condition for alpha-driven vel. space mode 3—56666
Tokamaks, D-fueled, sychrotron radiation, transport effects 3—45673
Tokamaks, neutral transport, Monte Carlo calcs. 3—31805
Tokamaks, optimal control for maintaining plasma equilibrium 3—56709
Tokamaks, thermal processes, fusion reactor design 3—17036
Tore Supra toroidal field mag., eddy current calcs. 3—55670
TORE SUPRA vacuum vessels design, mech. calcs., tests of models 3—55604
TORE-SUPRA thermal radiation shield design 3—55606
toroidal devices, α-driven anomalous heating and spatial transport, engineering models 3—26465
toroidal field coils, vibr., finite element anal. using Laplace transform 3—6441
toroidal plasma, close to ignition, α-particle dynamics 3—31819
toroidal plasma equilib. and stability 3—32959
toroidal plasmas, 1 and $1^1/_2$ D profile calcs. 3—1056
toroidal superconducting magnets, magnetomechanics, finite element method 3—26460
torsatron configuration optimisation using Monte Carlo methods 3—31804
track-mounted remote handling system for the Tokamak Fusion Engineering Test 3—31814
transport of cyclotron radiation 3—1061
vacuum arcs, cathode erosion rate in transverse mag. field 3—18150
vacuum vessel of Ignitor expt., dynamic anal. 3—55619
vectorized Monte Carlo for nonlinear radiation transport 3—31807
wall erosion and heat transfer, blistering behaviour 3—28015
waveguide-plasma coupling, three dimens. theory 3—46730
WENDELSTEIN VII-AS, modular mechanical design 3—55662
WENDELSTEIN VII-AS advanced stellarator design 3—55595
WILDCAT, DD-Tokamak reactor, nuclear anal. 3—17059
Z-pinch, neutron emission study 3—12955
μ catalysis of nuclear fusion in D-T mixtures 3—31823
μ^-- catalysed DT fusion, cross section, barrier penetration factor 3—26468
^{9}Be(n,2n), cross sections, sensitivity anal. for random mirror hybrid reactor 3—1055
D based fusion, branching process anal. 3—45674
D partially catalysed fuel cycle, plasma characts. 3—45663
D-^{3}He burner coupling system to ^{3}He producing reactor, model 3—21552
D-^{3}He reactors, impurity radiation constraints for ^{3}He prod. from D based plasmas 3—26464
D-D Tokamak fusion reactor, nuclear characteristics of blanket/shield design 3—21504
D-T fusion plasma, neutron interaction nucl. fuel balance 3—31822
D-T fusion reactors, T permeation through stainless steel first walls 3—26472
H transport theory, dimensionless parameter for max. H inventory and release 3—17045
He cryogenic system for fusion technology development 3—31828

fusion reactor theory and design continued
LiD, 14 MeV neutron driven sphere, cross sections, T prod., S_N calcs. 3−41296
$Li_{17}Pb_{83}$ high temperature blankets, neutronics study 3−21540
T breeding blanket, thermal design 3−17064
T(D) permeation through fusion reactor first wall 3−55634
TT fusion, blanket neutronics and photonics 3−17053

fusion reactors
see also fusion reactor ignition; fusion reactor materials; fusion reactor theory and design; hybrid reactors; plasma heating
absolute fission chambers for high-energy neutron fields meas. in TFTR and JET 3−31786
American Nuclear Society conf., Los angeles, CA, USA (June, 1982) 3−22
American Nuclear Society Winter meeting, Washington, DC, USA (Nov. 1982) 3−20572
capacitor bank for pulsed nuclear fusion expt. 3−6436
conference, Moscow, USSR (Sept. 1981) 3−5493
controlled nuclear fusion, local-area networks for research 3−41321
controlled nuclear fusion reactor technology developments *(German)* 3−36565
cryopump system for JET neutral beam test-bed 3−55622
cryopumping for nucl. fusion expts., recent developments 3−40623
Culham Conceptual Tokamak Reactor Mk. II, remote servicing operations 3−11505
development of reactor systems 3−46768
EFBT plasma, ion heating and containment 3−56734
field-reversed configurations with component of energetic particles 3−27722
FTU Tokamak power supply system design 3−55763
fusion engineering and academia 3−1043
fusion power systems program, Electric Power Research Institute 3−1044
Fusion Technology Development Facility for system testing 3−55700
fusion technology in the Karlsruhe Nuclear Research Center 3−41300
Fusion-Blanket Dosimetry Program at the Idaho National Engineering Laboratory 3−55587
Fusion-Blanket Dosimetry Program at the Idaho National Engineering Laboratory 3−55695
HIBALL, heavy ion beam ICF reactor concept 3−26475
high-beta multipole fusion reactors 3−56725
ICF, feasibility 3−1038
ICF education, 1982 perspective 3−1041
ICF programme of US Electric Power Research Institute 3−26474
imaging X-ray spectrometer for laser fusion applications 3−12967
inertial fusion reactor studies at Lawrence Livermore National Laboratory 3−55657
INTOR, test programme features 3−55588
ion beam measurements in cylindrical ion implosion fusion facilities 3−12990
Japanese research, April 1980 to March 1981 3−26486
Japanese Special Committee on Reactor Physics, activities April 1979-March 1982 *(Japanese)* 3−16946
JET, injection heating components supplied by Sulzer 3−46748
JET gas leaking and cooling plant 3−55616
JET multi-Megawatt beam line HV control and protection system 3−55766
JET neutral injector extraction grid power supply and protection system 3−55762
JET project, aims, parameters, and apparatus 3−11500
JET Tokamak research programme, components supplied by Sulzer and Escher Wyss 3−46798
JT-60 Tokamak reactor, ohmic heating power supply system using DC thyristor cct. breaker 3−55771
JT-60 vacuum vessel, cooling and heating system model tests 3−55618
laser fusion facility, processing system, hardware and software 3−50063
laser-driven, technical problems and solutions 3−1066
laser-triggered thermonuclear fusion 3−36564
Lawrence Livermore National Laboratory Tandem Mirror Program 3−1045
linear magnetic mirror fusion reactor *(German)* 3−6440
low gain ICF facility, technical characts., costs, potential 3−26476
magnetic confinement devices, RF technology R&D plan for USA 3−55600
magnetic confinement expts. 3−46766
magnetic confinement fusion, high current ion sources *(Japanese)* 3−36600
magnetic confinement machine, industry's role and experience in fusion technology 3−55589
magnetic containment of plasma by stellarator and Tokamak principles 3−2277
magnetic fusion, unconventional approaches, conf., Stockholm, Sweden (June 1982) 3−54565
magnetic fusion energy and its cryogenic applications 3−32975
manpower requirements and supply for magnetic fusion energy 3−1042
Mirror Fusion Test Facility, superconducting yin-yang magnet cooldown and testing 3−37692
multicomponent separating cascade, mathematical simulation model for porous membrane method 3−41297
nuclear fusion, energy source of the future *(Finnish)* 3−31781
nuclear fusion and spallation sources for breeding fissile fuel, review 3−55212
nuclear fusion technology, symp., Julich, Germany (Sept. 1982) 3−54577
OHTE reactor, introduction 3−45669
oil shale retorting, nuclear fusion reactor appl., feasibility 3−48124
particle beam fusion accelerators, status 3−1047
PDX Tokamak, vertical instability strength expt. determ. 3−37683
plasma fusion test reactor, turbomolecular pumps 3−55613
PLT and PDX results 3−1046
power station, hypothetical occupational radiation exposures 3−45697
R and D, German contribution *(German)* 3−6437
radioactivation characteristics for D-T fusion reactors 3−31793
relativistic electron beam plasma heating INAR and GOL-1 devices 3−2254
reversed field pinch expts., status 3−1048
review *(French)* 3−55579
single transient oscillographic recorders with GHz bandwidth for ICF research 3−50043
soft X-ray diagnosis of inertially confined fusion plasmas, use of sharp autoionising resonances 3−12966

fusion reactors continued
SPICA II expt., power crowbar battery and predischarge ccts., design construction and tests 3−55767
status of magnetic and inertial confinement fusion programmes 3−55689
stellarator closed helical mag. axis, reactor aspect 3−32953
superconducting Japanese LCT coil, construction and cool-down test 3−36571
TASKA fusion technology device, testbed for engineering, materials and safety 3−41303
TEXTOR, thyristor controlled pulsed power supply, performance evaluation 3−55764
TEXTOR neutral injectors, HV divider 3−55769
TEXTOR nucl. fusion expt., main power supplies 3−55761
TEXTOR RG-discharge cleaning system 3−56694
TEXTOR safety and security system 3−55653
TEXTOR vacuum vessel heating and cooling system using organic heat transfer fluid 3−55609
TFTR, fusion reaction products diagnostics 3−55585
TFTR, plasma diagnostics instrumentation problems 3−31784
TFTR, potential as fusion neutron test facility 3−55702
TFTR, radioactivation characteristics for Q=1 program 3−31788
TFTR Li blanket module program, neutron dosimetry 3−55586
TFTR neutral beam power supply system 3−55772
TFTR system, pre-operational testing 3−55614
thermonuclear fusion energy prospects, demands imposed on cryotechnology *(German)* 3−45688
thermonuclear fusion power, basic principles 3−11494
thyristor chopper for plasma equilibrium in TFR 600 Tokamak 3−55760
Tokamak de Varannes, divertor pumping systems comparison 3−55612
Tokamak fusion device, thyristor phase control system development 3−55773
Tokamak fusion reactors, concept and physics, confinement props. 3−11495
Tokamak magnetic confinement, theory and expt. 3−7781
Tokamak plasma, electron temp. and density meas. by Thomson scatt. 3−2290
Tokamak reactor, poloidal field power supply, power and energy feeding study 3−55770
Tokamak reactor segments remote removal, gas cushion technique 3−55638
Tokamak reactors, catalysed D, studies on operational characts. 3−1031
Tokamak remote inspection and repair, key issues 3−56761
Tor-Liner, generation transport and trapping expts. 3−22704
toroidal fusion expt., flexible cryogenic transfer lines 3−31829
toroidal vacuum vessel, dimens. survey 3−55611
torus device first wall, ECR discharge cleaning 3−56692
Tritium Systems Test Assembly, redundant control system 3−26488
US energy program, review 3−17030
Varennes Tokamak power supply characts. and operating scenarios 3−55765
World Survey of controlled fusion research 3−41298
Z pinches, dense plasma expts. 3−56722
Z pinches in hollow gas cylinder 3−56723
D-^{3}He fusion, using compact tori 3−55575
DT reacting plasma expt., R-project, studies on site and facilities, environmental impacts 3−55730
He accumulation neutron dosimetry for fusion neutron test environments 3−55726

fuzzy set theory
grey tone image quality evaluation criterion based on fuzzy measures 3−29673
meteorological forecasting appl. 3−20077
nuclear power plant, siting in Saudi Arabia 3−41340
uncertain data, reduction by fuzzy set theoretic estimation 3−54720
X-ray images, edge detection using fuzzy sets 3−39710

g-factor
see also gyromagnetic ratio; Zeeman effect
chloronaphthazarin derivative-triethanolamine charge transfer complexes, EPR and visible spectra study 3−50440
cholest-4-en-3-one, gamma irrad., EPR study of stable radical 3−52630
deformed axially symmetric nuclei, collective gyromagnetic ratio from density depend. HF calc. 3−45451
dibarium copper formate tetrahydrate, ligand field behaviour, EPR spectra 3−23789
ESR powder pattern, g and hyperfine tensors, least squares anal. 3−38680
fluorobenzene, g-factor, mag. and electric moments, rot. Zeeman effect 3−11852
formaldehyde-$d_0(d_2)$, excited vibr. state, electric dipole moment, rot. Zeeman effect 3−50449
glass, EPR of Fe^{3+} and Mn^{2+}, site symmetries 3−43429
inert gases, g-factor meas., using colour centre laser 3−55899
LUNA 20 soil samples, ferromagnetic reson. g-factor meas. 3−15860
magnetically diluted solids, spin polarisation effect on phase relax. 3−38679
merocyanine dye Langmuir films, ESR 3−38678
6-methylmercaptopurine riboside, S-substituted, ESR study H and alkoxy radicals at 20K 3−14135
methyltrifluorosilane, avoided-crossing mol. beam spectroscopy 3−17343
nuclei in ferromag. medium, g-factor meas., γ-resonance scatt. effects from impurities 3−36319
overlapping paramagnetic species, study using ESR modulation spectrometer 3−57754
pentafluorocyclopentadienyl radical, ESR spectrum 3−57777
peroxy radicals in PTFE, 2-mm ESR spectra 3−17315
phosphate:$Co^{2+}(Ni^{2+})$ glasses, effective g value, chem. bonding, ESR study 3−33972
phosphate:$Cr^{3+}(Mo^{3+})$ glasses, energy level splitting, effective g value, ESR study 3−33971
PMDR spectra, quantum chem. calcs. 3−17317
polyacetylene films, π electron character, ESR and ENDOR studies 3−57816
ruby, far-IR ESR in very high mag. fields 3−3514
semiconductor, conduction electron g-factor sign determ. by Hanle effect 3−3039
semiconductor spin superlattice with tunable minigap 3−3303
semiconductors and semimetals, effect of free electron terms on g-factor 3−18604
semimagnetic semiconductors 3−23642
spin conc. determ. by EPR spectroscopy 3−14114

g-factor continued
spin flipping in Penning trap, motional mag. field appl. 3−49679
TCNQ salt, diethylmorpholinium $(TCNQ)_2$, phase transitions, ESR and microwave cond. 3−3264
TCNQ salt, TMTSF-DMTCNQ, weakly irrad., ESR study 3−8712
$(TMTSF)_2ClO_4$, TMTTF doped, transport and EPR studies, doping effect 3−14112
$(TMTSF)_2PF_6$, weakly irrad., ESR study 3−8712
transition metals, Fermi surface averaged g-factors 3−13709
^{215}Ac, γ-spectroscopy and proton pairing 3−49806
Al, ESR linewidth and g-anisotropy, temp. and freq. depend. 3−52628
^{A}Ba, A=144, 146, g-factors meas. of 2_1^+ states 3−54951
BeF_2-AlF_3-MgF_2-BaF_2:Cr^{3+} glass, energy level splitting, effective g value, ESR study 3−33971
BeF_2-AlF_3-MgF_2-BaF_2:Co^{2+} glass, effective g value, chem. bonding, ESR study 3−33972
$Ca(OD)_2$:$^{109}Ag^{2+}$, EPR spectrum 3−47546
$8CaO.8SiO_2.3Fe_2O_3.2FeO$, amorphous slag, EPR study 3−18977
Cd_3As_2, free electron term in g-factor calcs. 3−28251
$Cd_3As_{2-x}P_x$, g-factor, effect of free electron terms 3−18604
$CdCr_2S_4(Se_4)(O_4)$, ESR line width and line broadening 3−33978
$CdCr_2X_4$ (X=O,S,Se), spin-orbit interaction, bond form. effects, g-factor study 3−8462
Cd_3P_2, band struct., Fermi level and g-factor in mag. field 3−33634
$CoTiO_3$, magnetic anisotropy 3−14045
$Cs_2NaHoCl_6$, quadrupolar ordering in Γ_3 doublet system, NMR study 3−28713
Cu complex, bis-(N-phenylsalicylaldiminato) Cu II, ESR obs. 3−47542
Cu complex, bis(N,N′-dimethylethylenediamine) copper II thiocyanate, polycryst., ESR studies 3−38682
Cu complex, bis(N-2(hydroxyethyl)ethylenediamine) copper II salts 3−38682
Cu complex, bis(N-methylethylenediamine) copper II thiocyanate, polycryst., ESR studies 3−38682
Cu complex, β:bis(N-methyl salicylaldimine) copper (II), g-shift and exchange interaction, EPR study 3−52604
$CuCr_2S_4(O_4)$, ESR line width and line broadening 3−33978
CuII compounds, EPR spectra for determ. of perpendicular mag. params. 3−23788
CuO-MnO-B_2O_3-K_2O glasses, Cu^{2+}-Mn^{2+} interaction, EPR and mag. susceptibility study 3−23792
$Dy(OH)_3$, mag., optical, thermal and crystal field props. 3−33867
^{154}Er, $T_{1/2}$=35 ns yrast isomeric state g-factor meas. 3−31292
Fe-C magnetic films, RF reactively sputtered, phys. props. and struct. 3−52563
GaInAs-AlInAs heterojunctions, enhanced electron g-factors, tilted field method 3−47416
GaP, ion implanted, highly disordered layers, dangling bonds, ESR study 3−52624
Gd alloys, conc., EPR g-shift 3−33976
$Gd_{1-x}Co_x$ film, amorphous ferrimag., Tsuya-Wangsness formula 3−18957
$Gd(Co_xAl_{1-x})$, mag. susceptibility and EPR study 3−3424
$Gd(Co_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3−52421
$Gd(Fe_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3−52421
a-Ge:H, B(P), ESR spectra and transport props. 3−43435
Ge:Li, impurity ion-dislocation dangling bond complex in EPR spectra 3−18989
Ge-Si-P alloys, ESR spectrum and g-factor, hyperfine components 3−14131
^{3}He-^{4}He liq. mixture, negative ions, ESR relax. time and g-factor studies 3−51886
$Hg_{1-x}Cd_xSe$, g-factor, effect of free electron terms 3−18604
$Hg_{1-x}Cd_xTe$, g-factor, effect of free electron terms 3−18604
$HgCr_2S_4(Se_4)$, ESR line width and line broadening 3−33978
$HgCr_2X_4$ (X=O,S,Se), spin-orbit interaction, bond form. effects, g-factor study 3−8462
HgSe, g-factor, effect of free electron terms 3−18604
HgTe, g-factor, effect of free electron terms 3−18604
^{190}Hg, interpretation of 21 ns isomer as $(\nu i_{13/2})^2$ from g-factor meas. 3−45437
I, $5p^4ns$ and $5p^4np$ (n=6,7) configs., wave functions of intermediate coupling, energy levels, Lande factors 3−31949
^{121}I levels investigation in ^{121}Sb(^{3}He,3n) 3−6154
InP:Co^{2+}, EPR study 3−43426
InP:Co^{2+}, g-value of $^4A_2$ ground state, EPR study 3−38684
n-InSb, ESR at submillimeter wavelengths 3−28686
Ir(II) paramagnetic cpds., ESR 3−17314
KCl:Eu^{2+}, ODMR study of $4f^65d$ excited state 3−34010
KI, mag. circular dichroism of lowest exciton bands 3−57888
K_2SO_4:CrO_4^{2-}, electronic struct. of CrO_4^{3-}, EPR and ENDOR study 3−18976
$K(UO_2)(NO_8)_3$, γ-irrad., NO_3^{2+} radical EPR study 3−18990
$K_2(UO_2)(NO_3)_4$, γ-irrad., NO_3^{2+} radical EPR study 3−18990
$Mg_{1-x}Mn_xFe_2O_4$, FMR lineshift and line-width studies 3−38699
$Mg(NH_4)_2(SO_4)_2.6H_2O$:CrO_4^{2-}, radicals at paramag. defects in X-ray irrad. cryst., EPR study 3−23802
Mn_2 in inert-gas matrices, ESR spectra 3−36817
Mn_5 in inert-gas matrices, ESR spectra 3−36817
$Mn_{1-x}Fe_x(Co_x)Sb$, thin films, mag. props., ferromag. and spin wave resonance studies 3−43440
Mn(II) complexes, with bipyridyls, ESR and optical absorpt. spectra 3−8716
MnO:Mn_3O_4, EPR study of Mn_3O_4 impurity 3−28689
$MnSb_{1-x}In_x$ films, mag. props., ferromag. resonance study 3−23808
$MoS_2(Se_2)$, cond. band struct. from g-values of excitons 3−28250
NO_2, g-factor and fluoresc. depolars., mag. reson. expts. 3−55980
$NO_2(\tilde{A}\ ^2B_2)$ state, Zeeman quantum beats, fluoresc. 3−32127
Na in Xe matrix, Jahn-Teller splitting, absorpt. and MCD spectra 3−45888
NaI, mag. circular dichroism of lowest exciton bands 3−57888
β''-Na_2O-Al_2O_3:Mn^{2+}, ESR study 3−8719
Na_2O-B_2O_3-SiO_2:Cu^{2+} glass, optical absorpt. and ESR spectra 3−33119
$NaPdF_4$, characterisation of +III oxidation state of Pd *(French)* 3−23795
^{192}Os g-factors, transient hyperfine field meas. in (^{32}S, ^{32}S′) and (^{58}Ni, ^{58}Ni′) 3−36323
$Pb_{1-x}Sn_xTe$:In, energy spectrum in quantizing mag. field 3−18727
^{96}Pd 8^+ isomer, lifetime and g-factor from ^{64}Zn(^{36}Ar, ZpZn) 3−31289
Pt, g-factor, conduction electron, cyclotron orbit, meas. 3−52012
^{A}Pt, A=192, 194, two quasiparticles coupled to quad. collective core, projected coherent states, g-factors 3−40978

g-factor continued
^{198}Pt g-factors, transient hyperfine field meas. in (^{32}S, ^{32}S′) and (^{58}Ni, ^{58}Ni′) 3−36323
RbI, mag. circular dichroism of lowest exciton bands 3−57888
Ru, g_I-factors ratio and HFS anomalies of ^{99}Ru and ^{101}Ru 3−26679
^{97}Ru, $21^+/2$ state, g-factor meas. 3−40968
Sc-Gd dil. alloy single crystals, ESR study of dynamics of local moments and cond. electrons 3−38690
Si, g-tensor for defects with dangling bonds 3−47296
Si inversion layers, g-factor and mag. susceptibility, influence of effective pot. 3−57429
Si:Fe,S, ESR of Fe-S pairs, g-factor and excited states 3−43425
SiC:B, paramag. defects, ESR study 3−3533
$Si_{1-x}C_x$:H amorphous film, defects, ESR, optical props. and photocond. 3−23199
SiN_x films, low press. CVD growth, comp. and struct. control, EPR, optical and He backscatt. studies 3−52970
$Si_{1-x}N_x$, g-value, ESR linewidth and hyperfine struct. const. 3−38696
SiO_2-$Li_2O(Na_2O)(K_2O)$, glass, X-ray induced hole centres, ESR studies, struct. model 3−3530
SiO_xN_y amorphous films, reactive evaporation prep., ESR, XPS and resist. studies 3−52287
^{112}Sn 6^+ state g-factor, neutron effective charge 3−36320
^{113}Sn $11/2^-$ state, g-factor, neutron effective charge 3−36320
SrF_2:Ni^+, X-ray irrad., EPR g-factor studies 3−52618
SrF_2:Yb^{3+}, trigonal centre, electron spin-lattice relaxation and g-factors 3−14125
$^{130}Te_2$, rovibronic levels, lifetime and Lande factors meas., collisional relax. 3−17337
^{232}Th, g-factors, yrast levels, collective and quasiparticle ang. momentum, cranking model calcs. 3−31287
$^{235}UIr_2$ thin-film target, for g-factor meas. in fission isomers 3−50081
^{238}U, g-factors, yrast levels, collective and quasiparticle ang. momentum, cranking model calcs. 3−31287
^{238}U, high spin states, g-factor and moment of inertia calcs. 3−36325
^{46}V, self-conjugate, 3^+ state mag. moment meas. 3−31291
$WS_2(Se_2)$, cond. band struct. from g-values of excitons 3−28250
^{129,131}Xe, hyperfine struct. of 7p(3/2)2 and 7p(5/2)2 levels *(French)* 3−45874
Xe_2, lowest g-state two-photon excitation 3−11908
^{123}Xe, EM transition strength and nucl. moments 3−11288
$ZnCr_2Se_4$, ESR line width and line broadening 3−33978
$ZnCr_2X_4$ (X=O,S,Se), spin-orbit interaction, bond form. effects, g-factor study 3−8462

gadolinium
see also nuclei with ......
alkaline earth fluorides, defect struct. and defect-defect interactions, Gd^{3+} EPR study 3−38691
anisotropy const., band model calcs. 3−52452
atom, autoionisation reson., elec. field effect 3−32011
atom, partial photoionis. cross-sections in 4d reson. region 3−41534
band struct. and electronic density of states, mag. torque meas. 3−28257
elastic consts., anomalies, domain phase theory 3−18363
ferromagnet, second mag. phase transition, mag. permeability study 3−33894
film, photoemission of spin-polarised d states 3−19251
magnetic hysteresis near Curie temp. 3−52541
magnetic phases, SAW study 3−18891
martensitic transition to cubic phase, electron diffr. study 3−37846
$N_{4,5}$ appearance potential spectra interpretation *(Russian)* 3−34171
point contact spectra of magnons *(Russian)* 3−14027
rare earth fluorides, RF_3, defect struct. and defect-defect interactions, Gd^{3+} EPR study 3−38691
spin dynamics at high temp., neutron scatt. meas. and theoretical models 3−57564
surface magnetic order and electron capture spectroscopy 3−57531
transport and mag. props. in critical region 3−18684
transport props., spontaneous magnetisation, in crit. temp. region 3−57331
BeF_2:Gd^{3+} glass, vibronic fluoresc., polarised Raman, and IR spectra 3−38895
CaF_2:Gd^{3+}, F atom structural position, proton backscatt. study 3−22866
CeO_2:Gd, solid electrolyte, prep. by thermal decomposition of mixed Ce-Gd oxalate 3−39078
$CsCaCl_3$:Gd^{3+}, paramagnetic resonance and displacive transitions 3−18987
$EuAlO_3$:Gd^{3+}, Gd^{3+} ESR spectra, Eu^{3+} $^7F_1$ levels influence, expt. study 3−18988
Gd film, photoemission of spin-polarised d states 3−19251
Gd^{3+} doped rare earth trifluorides, point charge and induced dipole model anal. of spin Hamiltonian parameters 3−57321
Gd^{3+}, ground state splitting of $^8S_{7/2}$ state 3−18669
$KTaO_3$:Gd^{3+}, EPR line broadening by elec. fields 3−3525
$La_xCe_{1-x}F_3$:Gd^{3+}, EPR linewidth study 3−43431
$LiYF_4$:Gd^{3+}, zero field splittings, ESR studies 3−57770
$R(OH)_3$:Gd^{3+}, (R=La, Sm, Eu, Tb, Ho, Y), host lattice effects, zero field splitting, EPR study 3−18982
Si:Gd, electron localisation at mag. phase transition, elec. resist. study 3−3099
$ThBr_4$:Gd^{3+}, EPR study 3−18984
$TmPO_4$:Gd^{3+}, slowly fluctuating random strains, EPR fine struct. spectrum 3−38692
YH_2:Gd, proton spin-lattice relax. times, effect of impurities 3−3574
ZnS:Eu, Gd, single cryst., struct., impurities effects 3−2512

gadolinium alloys
digital information recording, cylindrical domain stability anal. *(Polish)* 3−47501
EPR g-shift in conc. systems 3−33976
$(Ce_{1-x}Gd_x)Ru_2$, mag. supercond., NMR study 3−57476
Co-Gd amorphous film, long range order in struct. 3−2415
Co-Gd amorphous film, mag. anisotropy, electron microscopy study 3−57578
Co-Gd-B system, mag. moments and coercive forces 3−33919
Co-Gd-Mo amorphous film, long range order in struct. 3−2415
Fe-Gd amorphous film, long range order in struct. 3−2415
Fe-Gd amorphous film, mag. anisotropy, electron microscopy study 3−57578
Fe-Tb-Gd magnetisation and perpendicular anisotropy, effect of columnar microstruct. 3−23747
$(Fe_{82}B_{18})_{90}Gd_5La_5$, amorphous, low field mag. props. 3−28545

gadolinium alloys continued
Gd-Al, amorphous spin glass, crit. region size and mag. susceptibility scaling 3—23645
Gd-Co amorphous film, domain struct., SEM study technique 3—18964
Gd-Co amorphous film, elec. cond. 3—28455
Gd-Co amorphous film, perpendicular mag. anisotropy, influence of H_2 addition 3—28659
Gd-Co amorphous films, nonpenetrating mag. domains 3—52576
Gd-Co amorphous films, tetrode sputtered, uniaxial anisotropy meas. 3—43360
Gd-Co amorphous sputtered films, prep. for thermomagnetic recording 3—52932
Gd-Co powders, amorphised by milling, magnetisation props. meas. *(Russian)* 3—33928
Gd-Fe-Co amorphous films, magneto-optic Kerr effect and Curie temp. 3—28841
Gd-Fe(Co) amorphous films, FMR linewidth contrib. 3—57786
Gd-Tb-Co film, amorphous, mag. props., magneto-optical recording appls. 3—57720
Gd-Tb-Fe amorphous films, magnetic and magneto-optic props., magneto-optical disc memory appl. 3—23927
Gd-Y, mag. anisotropy study 3—52453
Gd-Y, mag. struct. neutron diffr. study 3—52372
Gd-Y, onset of helimagnetism, transport props. 3—18894
$GdAl_2$, band struct. changes on mag. ordering, NMR anal. 3—28722
$GdAl_2$, ferromag. reson., exchange const. and surface anisotropy const. determ. 3—18992
$GdAl_2$, mag. form factors, polarised neutron study 3—52376
$GdAl_2$, quadrupole interaction, pulsed NMR study 3—28736
$GdAl_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3—8233
$Gd(Al_{1-x}Cu_x)_2$, thermoelec. power, exchange interaction, partial wave expansion 3—3164
$GdAl_2(Ni_2)$, electron density of states at Fermi level 3—13704
$Gd(Co,Cu)_5$, giant Barkhausen jumps and domain boundary displacement 3—23713
GdCo amorphous films with large area uniformity and written bit stability, RF sputtering prep. 3—33942
GdCo film, amorphous, sputtered, compositional variation, mag. props. 3—18956
$GdCo_2$, magnetic anisotropy meas. 3—33887
$GdCo_5$, mag. props., H_2 absorption effects 3—52537
$Gd_{1-x}Co_x$ film, amorphous ferrimag., Tsuya-Wangsness formula 3—18957
Gd_3Co, zero gravity solidification expts. and mag. props. 3—38033
Gd_4Co_3, bulk amorphous alloy, mag. props. meas. 3—52456
$Gd(Co_xAl_{1-x})$, mag. susceptibility and EPR study 3—3424
$Gd(Co_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3—52421
$Gd(Co_{1-x}Ni_x)_5$, metallographic study of stability and decomposition mechanism *(German, English)* 3—24208
$GdCu_{1-x}Ga_x$, cryst. struct. transforms. and mag. ordering phenomena 3—38595
$Gd_{0.5}Dy_{0.5}Al_2$, electron density of states at Fermi level 3—13704
$Gd(Fe, Rh)_2$, hyperfine interactions, Mossbauer study 3—19022
GdFe amorphous films, calibration for quantitative Auger analysis 3—28241
GdFe film, amorphous, sputtered, compositional variation, mag. props. 3—18956
$GdFe_2$-Tb(Nd), hyperfine struct. anisotropy, ^{57}Fe Mossbauer meas. 3—52684
$Gd(Fe_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3—52421
$Gd(Fe_yAl_{1-y})_3$, reciprocal susceptibility, saturation moment determ., EPR study 3—14019
$Gd(Fe_{1-x}Co_x)_3H_y$, NMW spin-echo study 3—52666
$Gd_{58}Ga_{32}B_{10}(Ni_{32}B_{10})(Al_{32}B_{10})$, glassy, random anisotropy magnet, phase transitions obs. 3—23625
$GdGa_4Ni$, synthesis and struct. 3—37857
$GdIn_xAg_{1-x}$, cryst. struct. and mag. props. 3—28530
$Gd_xLa_{1-x}Mg_2$, mag. props., spin echo NMR study 3—28738
$GdMg_2$, mag. props., NMR and Mossbauer study 3—28738
$GdMn_2$, Laves phase, mag. characts. 3—47480
$GdMn_2$, mag. props. and thermal expansion anomaly 3—52588
GdMnAl, electron density of states at Fermi level 3—13704
GdNi, electrical resistivity and magnetic transitions, expt. study 3—18685
$GdPd_2Si_2$, magnetic susceptibility meas. 3—8648
Gd_2Pt, mag. props. study 3—57616
$Gd_{1-x}R_xAl_2$, mag. susceptibility and elec. resist., random cryst. elec. field effect 3—38376
$(Gd_{1-x}R_x)Tl$, R=Y, La, structural transform. and mag. props. 3—51780
Gd_5Rh_3, cryst. struct., X-ray diffr. study 3—2470
$Gd(Rh_{1-c}M_c)_2$ (M=Mn, Fe, Co), mag. props., magnetisation meas. 3—18936
$Gd(Tl_{1-y}My)$, M=In, Ag, structural transform. and mag. props. 3—51780
$(Gd_xY_{1-x})Co_2$, thermal expansion and forced vol. magnetostriction 3—52589
$Gd_xY_{2-x}Co_{17}$, saturation mag., electron exchange *(Russian)* 3—47494
$(Gd_xY_{1-x})Fe_3$, reciprocal susceptibility, saturation moment determ., EPR study 3—14019
$Gd_xY_{2-x}Fe_{17}$, mag. props. and exchange interactions 3—38608
$Gd_{1-x}Y_x(Fe_{1-z}Co_z)_2$, CC ^{59}Co NMR study 3—28711
$(La, Gd)B_6$, spin glass behaviour, elec. resist. and thermoelec. power meas. 3—43379
$LaGd_3$, γ-γ perturbed angular correlation study 3—52687
$La_{1-x}Gd_xAl_2$ spin glass, ESR resonance position shifts, internal field effects 3—57769
$(La_{70}Gd_{30})_{80}Au_{20}$, amorphous spin glass, DC mag. susceptibility, press. depend. 3—52491
Mg-Zn-Gd, amorphous, mag. interactions, AC susceptibility meas. 3—23620
Ni-Gd, amorphous, positive and negative magnetoresist. 3—23361
Pd-Si-Gd, amorphous, EPR, crystallisation studies 3—52619
Sc-Gd dil. alloy single crystals, ESR study of dynamics of local moments and cond. electrons 3—38690
$Tb_{0.78}Gd_{0.22}$, magnetocaloric effect, magnetisation and mag. anisotropy *(Russian)* 3—23637
$Tb_xGd_{1-x}Al_2$, ESR in ferromag. and paramag. phases 3—18986
$Tb(Zn_{1-x}Cu_x)$, hyperfine interactions, ^{156}Gd TDPAC study 3—52681
$Tb(Zn_{1-x}Cu_x)^{156}Gd$, hyperfine field of ^{156}Gd, γ-γ perturbed angular correlation study 3—14165
$U_{1-x}Gd_xAl_2$, spin-glass behaviour, susceptibility 3—18910
Y-Al-Gd, amorphous, mag. interactions, AC susceptibility meas. 3—23620

gadolinium alloys continued
Y-Gd anisotropic spin glasses, susceptibility and magnetisation meas. 3—14062
$Y_9(Co_{1-x}Gd_x)_7$, magnetism and supercond., effect of Gd additions 3—57696
$(Y_{1-x}Gd_x)_2Co_{17}$, Y and Co hyperfine fields, Gd contrib., NMR study 3—19012
Zr-Cu-Gd, amorphous, mag. interactions, AC susceptibility meas. 3—23620
Zr-Rh-Gd, amorphous, mag. interactions, AC susceptibility meas. 3—23620

gadolinium compounds
see also gadolinium alloys
HWLWR cluster type fuel assemblies, Gd_2O_3 poisoning, critical expts. 3—41127
Al/V/$GdSi_2$/Si Schottky contacts, V diffusion barrier, backscatt., X-ray and elec. study 3—8588
BaF_2-GdF_3-ZrF_4, optical fibres, for transmission in mid-IR 3—12356
BaF_2-GdF_3-ZrF_4, optical fibre prep., transmission in mid-IR 3—12357
$BaGd_{2-x}Nd_x(MoO_4)_4$ crystal, Nd^{3+} $^4I_{11/2}$ level population relax. probability determ. from luminesc. dumping in external sample 3—38903
$Cs_3Gd_2Br_9$, mag. behaviour of Gd^{3+}-Gd^{3+} pair *(French)* 3—23703
$Dy_xGd_{1-x}VO_4$, phase transitions, crystallographic and magnetic 3—8192
$DyVO_4$-$Gd_3Ga_5O_{12}$, composite material to achieve mag. refrigeration using cycle with internal heat transfer 3—8670
$(Gd,Bi)_3(Fe,Ga)_5O_{12}$ epitaxial film, nuclear tracks from Xe and U ion irrad. 3—3493
$(Gd,Y)_3(Fe,Mn,Ga)_5O_{12}$ garnet bubble films, LPE growth and mag. props. 3—52569
Gd I, elec. dipole transitions, Coulomb approx. oscillator strengths 3—21703
Gd-Se, phase diagram determ. 3—4017
Gd-Ta(Re)-Se, thermoelec. props. 3—23414
$GdAl_2$, intermetallic compounds, surface strain removal by ion beam planing 3—34508
$GdAl_3(BO_3)_4$, cryst. struct. determ. 3—8010
$GdAlO_3:Cr^{3+}$, magnetic Franck-Condon effect 3—34142
GdB_6-LaB_6, thermionic emission and vaporisation meas. 3—52891
$GdCl_3$, polymorphism, phase equilib. and cryst. growth meas. 3—18274
Gd_2CuO_4 semicond., antiferromag. ordering, mag., X-ray and EPR studies 3—38601
$GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundary geometry 3—8784
$GdDy(MoO_4)_3$, ferroelec. ferroelastic, antiphase domain boundaries, translation vector 3—8785
$GdFe_2H_x$, prep. and decomp., Debye-Scherrer X-ray study 3—2807
$GdGa_5O_{12}$ 3—33898
$Gd_3Ga_5O_{12}$, gyromag. Faraday effect 3—19112
$Gd_3Ga_5O_{12}$, IR window material, multiwavelength laser rate calorimetry 3—7096
$Gd_3Ga_5O_{12}$ refrigeration characts. obs. below 20K 3—33899
$Gd_3Ga_5O_{12}$, thermal and optical props. 3—28117
$Gd_3Ga_5O_{12}$:Cr, Nd crystal, spectral and luminesc. props. 3—1639
$Gd_3Ga_5O_{12}:Cr^{3+}$ crystals, luminesc. absolute quantum efficiency 3—38905
$Gd(H_2PO_4)_3$, preparation, chem. and X-ray crystallographic analyses 3—58058
GdIG epitaxial film, nuclear tracks from Xe and U ion irrad. 3—3493
GdIG:Ho, hyperfine interation, NMR spin echo study 3—19013
$GdIn_3S_6$, photoconductivity, temp. and IR quenching meas. 3—23436
$Gd_{1-x}La_xAlO_3$, mixture of solvents for cryst. growth 3—43720
$Gd(MoO_4)_3$, luminescence and polarisation reversal 3—8886
$Gd_2(MoO_4)_3$, ferroelec., step-polarisation switching processes under laser irrad. 3—23861
$Gd_2(MoO_4)_3$, ferroelec. domain struct. rearrangement 3—23892
$Gd_2(MoO_4)_3$, ion beam irrad. area meas. using surface etching technique 3—20829
$Gd_2(MoO_4)_3$, orthorhombic, sp.ht., adiabatic meas. method 3—8217
$Gd_2(MoO_4)_3$, refr. indices, temp. depend., IR spectrosc. obs. 3—3665
$Gd_2(MoO_4)_3$ single cryst., electroluminescence, correlation with ferroelec. switching 3—24019
$GdMo_6S_8$, cluster compounds, band struct., book contrib. 3—8418
$GdNbO_4$, positional and temp. parameters, interatomic coords., polymorphic transform. 3—22870
Gd_2O_3 for reactivity parameter and power distrib. control in PWR cores 3—16873
Gd_2O_3 in BWR fuel bundle, gadolinia burnup model 3—16874
Gd_2O_3 in LWR fuel pins, gadolinia depletion, ARMP model 3—16869
Gd_2O_3, MICBURN-CASMO/CPM anal. for LWR fuel assemblies with gadolinia 3—16872
Gd_2O_3, Oconee-1 lead test assemblies, gadolinia fuel neutronics model 3—16870
Gd_2O_3, PWR gadolinia bearing fuel, analytic requirements 3—16871
$(GdO)_3PO_4$, molar thermal capacity, temp. depend. *(Czech)* 3—13482
$Gd_2O_2SO_4:Eu^{3+}$, prep., fluoresc. spectra, and cryst. field anal. 3—43594
$Gd(PO_3)_3$, Raman spectra 3—34099
$Gd(ReO_4)_3$, vibr. interaction, low-temp. investig. 3—52790
$GdRh_3B_2$, NMR, mag. and superconducting studies 3—23819
$GdRh_4B_4$, mag. supercond., muon spin relax. mechs. 3—57844
Gd_2S_3, bulk photovoltaic effect and photocond. 3—18746
Gd_2S_3, photoconductivity 3—8525
Gd_5Sb_3, magnetic susceptibility, 77-800K 3—8654
$GdScGa:Cr^{3+}$, fluoresc. lifetime and CW tunable room-temp. laser action 3—50664
$Gd_{3-x}Sc_xGa_5O_{12}:Cr^{3+}$ crystals, luminesc. absolute quantum efficiency 3—38905
Gd_2SiO_5:Ce single crystal scintillator, luminescence props. meas. 3—28883
$Gd_2(SmO_4)_3$, selenite vibr. and cryst. field effects Raman and IR study 3—3703
$GdVO_4$, antiferromagnetic phases, NMR study 3—3442
$GdVO_4$, antiferromagnetic, ^{51}V NMR 3—52664
$Gd_xY_{1-x}Rh_4B_4$, supercond. and magnetism 3—3357
$^{154}GdZrFe_2$, time differential perturbed ang. correl. meas., resolving time effect 3—41465
$La_{1-x}Gd_xTaO_4$, solid solns., formula vol., X-ray study 3—22869
$(LaLuSmGd)_3(FeGa)_5O_{12}$, very thin films, Curie temp. and anisotropy fields 3—57715
$NaGdGeO_4:Nd^{3+}$, stimulated emission, $^4F_{3/2}\rightarrow{}^4I_{11/2}$ and $^4F_{3/2}\rightarrow{}^4I_{13/2}$ transitions 3—8851
$NaGd(MoO_4)_2:Nd^{3+}$ disordered laser cryst., stimulated emission 3—41847
Nd, Cr:$Gd_3Ga_5O_{12}$ lasing properties 3—1639

gadolinium compounds continued
- $Nd_xCd_{1-x}P_5O_{14}$, oscillator strengths of stark level transitions 3−8831
- $Sr_2Gd_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
- $U_{1-y}Gd_yO_{2+x}$, nonstoichiometric solid soln., thermodynamic props., 700 to 1100°C 3−16854
- UO_2-Gd_2O_3, sintered PWR fuel, thermal cond. meas. 3−26381
- (Y,Ce,Gd,Tb)F_3 system, energy transfer phenomena 3−8871
- (Y, Gd, Yb, Bi)$_3$(Fe, Al)$_5O_{12}$ garnet films, epitaxial, pulsed remagnetisation, magneto-optical and high-speed photography studies 3−23761
- (Y, Gd)F_3:Ce^{3+}, Eu^{3+}, energy transfer from Ce^{3+} to Eu^{3+}, quantum efficiency 3−43607
- $(Y_{1-x}Gd_x)Rh_4B_4$, effect of supercond. on spin dynamics 3−57478
- $(YGdYbBi)_3(FeAl)_5O_{12}$ epitaxial garnet films, magnetisation processes *(Russian)* 3−23745
- $(YSmLuGd)_3(FeGa)_5O_{12}$ garnet film for 1.5 μm bubble devices, mag. props. 3−38660
- (YSmTmGd)(FeGaAl) epitaxial garnets, mag. props. 3−33944
- ZrF_4-BaF_2-GdF_3-AlF_3 glass, Rayleigh scatt., melt cooling rate effects 3−38840

gain (amplification) *see amplification*

gain measurement
- electron photomultipliers, microchannel plate, X-ray photon counting 3−54231
- spatially scanning gain meas. in CW lasers, using simple arrangement 3−27119
- $In_{1-x}Ga_xAs_yP_{1-y}$ DH lasers, optical gain measurement as function of injected current density 3−22057

gait analysis *see biomechanics*

galactic cosmic rays
- 3-30 MeV neutrinos effect on solar neutrino detector meas. 3−44634
- 10^{18} eV and above, origin with intergalactic suprathermal dust grains accel. 3−20189
- acceleration in plasma, time depend. props. from random walk model 3−35386
- anisotropy at boundary of high speed solar wind stream 3−15784
- anisotropy in heliomagnetosphere, modulation, average sidereal daily motion 3−5065
- antiprotons, origin, production, detection methods *(French)* 3−39977
- antiprotons, sub-GeV excess, neutron oscillation source 3−5107
- Coma cluster of galaxies (Abell 1656), relativistic particles intergalactic reacceleration 3−59484
- Crab Nebula relativistic electrons diffusion coeffs. determ. 3−48999
- diffusion in solar wind with ellipsoidal modulation region 3−15780
- diurnal variation, distrib. function kinetic eqn. soln. 3−35385
- double radiosources, collimated beam model involving electron-positron showers of black hole origin 3−16023
- electron interstellar density fluctuations due to shock waves random deflection *(Russian)* 3−20469
- electrons, density from gamma-ray colour of Milky Way 3−49027
- electrons in bright spiral galaxies propag. and prod. 3−25600
- gamma ray emission as tracer of local interstellar medium struct. 3−54466
- gamma-ray diffusion >100 MeV middle/high galactic latitude radiation 3−48780
- gamma-rays rel. to interstellar gas density 3−15781
- intensity increase of Sept. 17 to 18 1979 due interplanetary structs. 3−30133
- intensity variation of mesons/neutrons effect of two high speed solar streams types 3−39978
- interstellar clouds, electron energy spectra, propag. and interactions, bremsstrahlung γ-ray luminosity 3−20188
- massive monopole galactic flux from limits on X-ray flux from neutron stars 3−11178
- neutrino haloes to galaxies, acquisition 3−44850
- neutrino production and diffusion from supernova shocks 3−25493
- neutrinos from collapsing degenerate stellar cores, interaction with degenerate matter 3−40115
- non-decaying cosmic rays, age distrib. and lifetime, galactic wind effects 3−25269
- nuclei composition 3−20191
- Perseus OB2 association SNR, cosmic rays accel. evidence 3−54465
- protons in supercluster, mean energy density 3−39976
- relativistic electrons in Seyfert galaxy X0459+034 from radio/X-ray spectra 3−30527
- shock acceleration in presence of self-excited MHD waves 3−48779
- solar modulation, three-dimensional model including diffusion, drift effects 3−39979
- solar modulation indicated by meteorite nuclides 3−15787
- steady state transport perpendicular to galactic plane 3−20190
- superheavy nuclei evidence from path meas. in meteorites *(Russian)* 3−10165
- ultraheavy nuclei, propag. and source comp. 3−30132
- variability evidence from meteorite and lunar rock tracks anal. 3−48784
- Fe group nuclei average spectra over past few million years 3−10170

galactic nuclei
- α-ω dynamo in supermassive noncollapsed rotator in active nuclei 3−30484
- accretion discs, shock propag. and disc transient destruction 3−59209
- active, thick supercritical accretion discs around supermassive black holes, nature 3−5106
- active galactic nuclei, absence of rapid X-ray variability 3−30490
- active galactic nuclei, anal. of jets from geometrically thick accretion disc 3−10203
- active galactic nuclei, contrib. to diffuse γ-ray background 3−54551
- active galactic nuclei, dynamics and fuelling of massive black hole 3−54513
- active galactic nuclei, evolution of accretion tori orbiting black holes 3−59476
- active galactic nuclei, origin of broad emission lines in Seyfert galaxies and featureless spectra in BL Lacertae objects 3−54509
- active galactic nuclei, origin of relativistic particles and gamma-rays 3−49047
- active galaxies, central black hole model, flux variations time scale anal. 3−25652
- active galaxies, H I velocities, UHF obs. 3−25590
- active galaxies, radiation press. from nucleus sweeping gas/dust out of galaxy 3−59457
- active galaxies, search for short period variations, SHF obs. 3−10451
- active galaxies and X-ray emission, review 3−30529

galactic nuclei continued
- active galaxies narrow-line regions, reddening from intrinsic Balmer decrement 3−54252
- active nuclei reddening from visible obs. 3−30496
- activity nature 3−35721
- black holes spherical accretion and quasars 3−59497
- bubbles, jets, and clouds in active galactic nuclei 3−35706
- 3C 345 nucleus axisymmetric struct., SHF obs. 3−40246
- cD galaxies, props. implications for origin and evolution 3−54533
- Centaurus A, H I absorpt. spatial struct., nucleus nature, UHF obs. 3−35734
- Centaurus A (NGC 5128), radio and X-ray props. of galactic nucleus 3−25610
- Centaurus A nucleus, model and UHF VLBI obs. 3−54529
- central body mass in active galactic nuclei and quasars *(Russian)* 3−16012
- Circinus galaxy, obs. of intense nuclear H_2O maser emission 3−5426
- compact radiosources, spectra, SHF obs. 3−5436
- cosmic rays from active nuclei 3−39976
- Cygnus A, nucleus continuum and underlying galaxy absorpt. lines 3−54534
- disc galaxies with emission lines not excited by stellar photoionisation, spectra anal. 3−15991
- double galaxies, nuclei characts. and radioemission freq. of occurrence 3−59456
- double radiosources, collimated beam model involving electron-positron showers of black hole origin 3−16023
- energy sources in radio galaxies and active galactic nuclei, nature 3−25615
- extragalactic radio sources, symposium, Albuquerque, New Mexico (1981 August 3 to 7) 3−20573
- field disc galaxies, spectroscopic surveys 3−44844
- funnels in thick accretion disks, luminosity limits 3−16002
- Galaxy, compact ionised gas clouds, generation, ionisation mechanism and disruption 3−15995
- Galaxy, content and mass *(French)* 3−30498
- Galaxy, detect. of formyl ion-^{17}O ($HC^{17}O^+$) (Sagittarius B2) 3−35693
- Galaxy, discovery of new H_2O masers in centre region 3−40110
- Galaxy, gas dynamics and Sagittarius A precessing jets model 3−15994
- Galaxy, near-IR spectroscopic obs. of two very red objects 3−49013
- Galaxy, probability of occurrence of recent supernova, Sagittarius A East 3−48939
- Galaxy, struct. and props. of nucleus from IR, radio and X-ray data 3−49032
- Galaxy central region structure and dynamics from 21 cm line obs. 3−10453
- gaseous disks in Seyfert 1 nuclei 3−20475
- gravitational waves and activity of galactic nuclei and quasars, theory *(Russian)* 3−35725
- IC 342, spiral galaxy, NH_3 obs. rel. to temps. and sizescales of giant cloud complexes 3−5416
- isolated galaxies, near IR photometry of nuclei rel. to massive stars form. 3−10452
- jets, production in thick accretion disks, relativistic Navier-Stokes solutions 3−20416
- BL Lacertae objects, arc second radio structure of 12 objects 3−54501
- BL Lacertae objects and associated galaxies, CCD photometry 3−25617
- low ionisation nuclear emission-line regions, photoionisation and shock heating models rel. to spectroscopic characts. 3−30491
- M31, CCD photometry of central region 3−54518
- M31, probability of occurrence of recent supernova, S Andromedae 3−48939
- M33, Sc galaxy, X-ray emission origin and star form. rate anal. 3−59448
- M33, structure and stellar population from IR and visible obs. 3−25592
- M51, optical spectrophotometry of central region rel. to activity in galactic nucleus 3−54515
- M81, 2.3 and 8.3 GHz VLBI obs. 3−20476
- M87, high-resolution X-ray obs. of nucleus, jet and radio halo 3−10440
- M87, VLBI obs. of nucleus and jet at 18 cm wavelength 3−30485
- Markarian 279, Seyfert 1 galaxy, imaging X-ray obs. rel. to identification with X-ray source (3A 1349+700) 3−59481
- Markarian 309, emission-line galaxy, discovery of Wolf-Rayet features in spectrum of nucleus 3−10442
- milliarcsecond structure of radio galaxies and quasars, results from VLBI mapping 3−25616
- MR 2251−1178, QSO in Seyfert galaxy nucleus, surrounding giant H II cloud nature 3−30524
- nearby galaxies with Seyfert-like nuclei, optical, X-ray and radio obs. 3−54512
- NGC 1052, elliptical radiogalaxy, 1972-81 radio outbursts, EHF obs. 3−59461
- NGC 1052, emission line region ionisation and physical state 3−54528
- NGC 1068, Seyfert 2 galaxy nucleus, struct., UHF obs. 3−40261
- NGC 1068, Seyfert galaxy, central region struct. and emission, SHF obs. 3−10460
- NGC 1275, nucleus axisymmetric struct., SHF obs. 3−40246
- NGC 2110, X-ray galaxy, nucleus radiosource, mapping and spectrum, visible/SHF/UHF obs. 3−30497
- NGC 2196, spiral peculiar nucleus galaxy, X-ray emission obs. 3−5451
- NGC 315, active galaxy nucleus, H I detect., struct. and vel. 3−54530
- NGC 3351, hot-spot nucleus galaxy, photometric obs. of inner ring of H II regions 3−35720
- NGC 3660, barred spiral galaxy, nature of activity in nucleus from radio, optical, UV and X-ray obs. 3−54525
- NGC 4151, nucleus radio jets, UHF/SHF obs. 3−16022
- NGC 4594, 3031, 5194 and 4258, spirals, stellar population from UV/IR/visible obs. 3−5423
- NGC 4631, radiocontinuum morphology, UHF/SHF obs. 3−35712
- NGC 5253, centre star form. history from IR obs. 3−20482
- NGC 6240, double nucleus in interacting radio galaxy 3−44840
- NGC 6503, emission line galaxy, rot., mass and phys. conditions 3−49023
- NGC 6764, emission-line galaxy, discovery of Wolf-Rayet features in spectrum of nucleus 3−10442
- NGC 7793, stellar population in nucleus of Sd galaxy 3−16003
- PKS 0548−322, BL Lacertae object, UV and X-ray spectrophotometry 3−10436
- PKS 0812+02, QSO in cluster galaxy nucleus, optical/radio struct. 3−40283
- PKS 2158-380, extended ionised gas, nucleus UV emitter as ionising source, obs. 3−20520

galactic nuclei continued
- Q 09157+561, gravit. lens, main galaxy core compact radio source detect., nature 3—54546
- QSO-galaxy interactions, colour imaging of 1229+204 and (0351+026) 3—5446
- quasars, kinematics of broad-line emission gas 3—10437
- quasars, model of multiple stellar remnants in galactic nuclei 3—54511
- radio galaxies, optical polarisation position angle versus radio source axis 3—5428
- radio galaxies, physical mechanisms for jets 3—25613
- radio jets in quasars and active galactic nuclei, consequence of asymmetry of plasmoids ejection 3—25622
- radiogalaxies, influence of buoyancy on stability of jets near galactic nucleus 3—16024
- self gravitating rotating gaseous discs, gravothermal and gravogyro catastrophes 3—40027
- Seyfert 1 galaxies, composite UV emission spectrum 3—54524
- Seyfert 1 galaxies, profiles and intensities of C IV and Lyman-α emission lines 3—10438
- Seyfert galaxies, model of multiple stellar remnants in galactic nuclei 3—54511
- Seyfert galaxies, spherical component vol. luminosity and nucleus luminosity *(Russian)* 3—20502
- Seyfert galaxies, type 1, prominent UV emission lines obs. 3—54502
- Seyfert galaxies discovery, visible obs. 3—35708
- Seyfert galaxies nuclei, gravitational lensing model for quasars 3—44865
- Seyfert galaxy nuclei, kinematics of broad-line emission gas 3—10437
- Shapley-Ames galaxies nuclear regions Na-rich interstellar matter, obs. 3—5414
- shock waves in active galactic nuclei, review of optical obs. 3—15987
- southern compact bright-nucleus galaxies, redshifts, characts. and spatial distrib. 3—59472
- spiral galaxies, composite spectral index for line strengths rel. to nucl. bulge absolute magnitude 3—25340
- spiral galaxies, spiral arms ejection-rotation model rel. to preferred pitch angle 3—16005
- spiral galaxies nuclei, correl. with radio emission 3—44832
- stars distribution around black hole, numerical soln. of kinetic eqn. with collisions 3—10380
- stellar wind mass supply for active galactic nuclei, quasar theory 3—35736
- thick accretion discs, instability 3—10308
- Virgo cluster galaxies, optical emission line fluxes rel. to constraints on galaxy-intergalactic medium interactions 3—30509
- X-ray active galactic nuclei, luminosity function and cosmological evolution 3—54548
- X-ray active galactic nuclei, wind and shock model 3—54527
- X-ray selected active galactic nuclei, optical and X-ray props. 3—10441

galactic radio waves *see radiofrequency cosmic radiation*

galaxies
- *see also BL Lacertae-type objects; clusters of galaxies; galactic nuclei; H I regions; H II regions; intergalactic matter; Magellanic Clouds; Markarian galaxies; nebulae; radiogalaxies; Seyfert galaxies; The Galaxy*
- 10.7 GHz radio continuum emission as star form. tracer 3—25601
- 1107+036, unusual QSO-galaxy pair, radio, spectrographic and photographic obs. 3—49038
- Abastumani catalogue ion machine-readable form 3—5157
- Abell cluster galaxies, CCD photometry, mags. and Z of brightest member 3—35729
- active galaxies, broad emission-line regions, dust heating sources 3—25588
- active galaxies, contrib. to diffuse γ-ray background 3—54551
- active galaxies, jets physical processes *(Italian)* 3—16004
- active galaxies number-magnitude and colour magnitude relation (for complete variable sample to B=21) 3—40289
- active galaxies origin and evolution 3—25606
- Andromeda Galaxy, spiral arm S4, brightest star age and density gradient 3—5411
- angular correlation function estimates 3—49031
- angular correlation functions estimation technique 3—20252
- angular momentum in clusters/early Universe, effects of gravit. interactions/tides 3—10450
- angular momentum/mass relation 3—59182
- anonymous galaxy in Horologium, supernova discovery, approximate position and photographic magnitude estimates 3—54411
- anonymous galaxy in Hydra, supernova discovery, approximate position and photographic magnitudes, (January and February 1983) 3—44775
- anonymous galaxy in Puppis, supernova discovery and apparent photographic magnitude (1982 October 19) 3—15935
- anonymous galaxy in Triangulum, supernova discovery, precise position and photographic magnitude 3—20405
- anonymous galaxy in Ursa Major, confirmation of supernova (1983 February 12) 3—59375
- anonymous galaxy in Ursa Major, supernova discovery and apparent magnitude (1983 February 4) 3—44774
- anonymous galaxy of Fornax, supernova apparent photographic magnitude (1982 October 10) 3—15935
- anonymous galaxyin Pavo, supernova discovery, position and photographic magnitude (1983 March 12) 3—59375
- bar equilib., stellar dynamical counterparts of S-type Riemann ellipsoids 3—30432
- barred spiral galaxies, nature of stellar orbits in realistic bar potentials 3—54522
- barred spiral galaxies, periodic orbits and gas flow theory 3—5424
- bars, regular and irregular orbits 3—5365
- Berkeley automated supernova search 3—30400
- blue compact galaxies, survey of distrib. of 2.8 cm radio continuum 3—40256
- bright galaxies, data reduction for intermediate band filter spectrophotometry 3—35718
- bright galaxies, radio props., UHF obs. 3—10447
- bright spiral galaxies, 4.8 and 10.7 GHz mapping and cosmic ray electrons props. 3—25600
- 3C 196, quasar, intervening galaxy model for 21 cm H I absorpt. at z=0.437 against extended radio struct. 3—30523
- Case low-dispersion northern sky survey 3—48839
- cD galaxies centred on extended X-ray sources, H I 21 cm line obs. 3—10459
- cD galaxies in clusters, rel. to morphological classification of Einstein X-ray images 3—25629

galaxies continued
- centralization of extragalactic data 3—5470
- chemical evolution, nucleosynthesis in pair creation supernovae rel. to pregalactic metal enrichment 3—54450
- Circinus galaxy, obs. of intense nuclear H_2O maser emission 3—5426
- classification scheme for molecular morphology 3—25607
- cluster spiral galaxies, relations between morphological type and quantitative measures in cluster environment 3—20501
- in cluster surrounding 3C 295, colours and cluster luminosity function 3—49036
- clustering, gravitational evolution of struct. in scale-free universe 3—16047
- colliding galaxies, numerical simulation techniques 3—16015
- colliding galaxies, tidal disruption 3—44848
- Coma cluster field, 6724 galaxies, magnitudes, colours, ellipticities and position angle catalogue 3—30241
- compact galaxies in/near Abell 2255 galaxy cluster, morphology and brightness profiles 3—44856
- companion galaxies to quasars, Arp's statistics 3—25650
- companion galaxies with discordant red shifts, spectral peculiarities 3—25589
- complete samples, obs. cutoff bias, non-parametric elimination 3—44841
- conference on galaxies origin and evolution and cosmology, at Erice, Silicy (May 1981) 3—35780
- corona, heating by MHD waves 3—59438
- coronae, theory of magnetic neutral sheets in evolving fields 3—35565
- coronae around spirals, mass considerations 3—15996
- cosmic density wave, galaxy distrib., quasar absorption-line redshifts 3—20530
- disc galaxies, evolution rel. to S0 galaxies problem 3—10464
- disc galaxies, luminosity-vel. dispersion ($L\propto\sigma^n$) for bulge components from vel. dispersion meas. 3—49002
- disc galaxies undergoing stochastic self-propag. star form., time evolution 3—40248
- disc galaxy evolution, effect of star induced star formation 3—40253
- disk galaxy with massive ellipsoidal halo, structure 3—44851
- disk structure growth in shearing, viscous media 3—40013
- distances to spiral and lenticular galaxies using inner ring structure diameter 3—49022
- double galaxies, red shift periodicity 3—15990
- Draco dwarf galaxy, vel. dispersion+mass/light ratio from C star anal. 3—49019
- dust lane widths correl. with galaxy luminosity and cluster membership 3—5418
- dwarf ellipticals, pair correlation 3—20440
- dwarf galaxies, three-dimensional computer simulations of star form. 3—54516
- dwarf galaxies in M81/M82 group, new photometric data 3—35717
- dwarf spheroidal galaxies, evolutionary link with dwarf irregular galaxies 3—49021
- dwarf spheroidal galaxies, nonluminous matter constraints, neutrinos and black holes possibility 3—49021
- dwarf spheroidal galaxies, nonluminous matter evidence from tidal mass anal. 3—49020
- dwarf spheroidal galaxies, relation to extended globular cluster population in Galaxy 3—10409
- dynamics, Vlasov eqn. as collisionless Boltzmann eqn. 3—10198
- early type galaxies with dusty lanes, JHK obs. 3—5422
- early Universe, phase transitions, grand unification and hot big bang 3—30533
- edge-on disc galaxies, global struct. from surface brightness anal. 3—40266
- edge-on galaxies orientations and distrib. as indicator of Universe mass distrib. 3—44834
- elliptical, central resonant periodic orbits, characteristic curves 3—25279
- elliptical galaxies, absolute UV fluxes obs. 3—15998
- elliptical galaxies, energy distrib. function for one-dimensional gravit. system 3—59479
- elliptical galaxies, gas/dust orbital configs. and galaxy axes 3—59463
- elliptical galaxies, intrinsic principal axes twists in N-body models 3—59480
- elliptical galaxies, rel. dispersion profiles and rot. curves rel. to dynamics 3—54514
- elliptical galaxies, struct. and evolution, star form. effects 3—40257
- elliptical galaxies, structure rel. to hierarchical merging model 3—49001
- elliptical galaxies, supernova rates within binary model and observed 3—48940
- elliptical galaxies and spheroidal components, dynamics 3—25529
- elliptical galaxies colours and gas content rel. to Type I supernovae progenitor stars nature 3—44772
- elliptical galaxies globular clusters colours rel. to halo stars 3—54462
- elliptical galaxies intrinsic shape testing, use of vel. dispersion and surface brightness data 3—5410
- elliptical galaxies of high luminosity, H I UHF obs. 3—35709
- elliptical like galaxies with dust lanes, stellar and gaseous rot. axes 3—30499
- ellipticals, Newtonian potentials and dynamics 3—44661
- ellipticals, oblate spheroids with anisotropy, models 3—49029
- ellipticals, oblate spheroids with realistic rotation curves, models 3—49030
- ellipticals, quasi-stable morphologies, model 3—49028
- ellipticals with slow figure rotation, triaxial equilib. models 3—30483
- emission-line objects, accurate optical positions for University of Michigan lists I-IV 3—44845
- ESO 150-G20, in Phoenix, discovery and apparent photographic magnitude (1982 October 19) 3—15935
- ESO 308-G16, supernova discovery and photographic magnitude (1982 November 11) 3—20404
- ESO 323-G25, Sc galaxy, supernova discovery, precise position and photographic magnitude, (1983 January 13) 3—35642
- ESO 323-G25, SN confirmation and photographic mag. (Jan. 1983) 3—40155
- evolution, stellar populations and integrated light 3—35728
- extragalactic distance scale, Malmquist bias and Hubble const. 3—30535
- faint elliptial galaxies, kinematic props. 3—54503
- flat galaxy gaseous subsystem, gravitating plasma disc in poloidal mag. field, nonlinear effects *(Russian)* 3—20237
- formation, contrib. of weakly non-linear effects in zero-pressure cosmology 3—59515
- formation, effect of cosmic density wave on galaxies large-scale distrib. 3—10492
- formation, mass scales in universe of dust and blackbody radiation 3—59510

galaxies continued
formation, role of massive neutrino halos in expanding universe 3—16040
formation, role of massive neutrinos in large-scale gravit. clustering 3—30489
formation, significance of galaxy clusters gravit. radii correl. with vel. dispersion 3—30511
formation, vacuum polarisation theory *(Russian)* 3—5469
formation collapse phase, collision free N-body simulation 3—20492
formation from adiabatic and isothermal modes 3—40303
formation from adiabatic linear density perturbations growth in variable-G cosmologies 3—40305
formation from supernovae cumulative effects in a seed galaxy 3—30404
formation in proto-superclusters, implications for quasars Lyman-alpha absorption lines clustering 3—5445
formation models, effect of Universe primeval mag. field 3—40304
Fornax dwarf elliptical galaxy, S-type star DK 54 discovery, nature 3—48918
Fornax-Leo-Sculptor Stream, origin 3—20498
galaxy distances redshift-distance laws and influence of local extragalactic effects 3—20487
gaseous halo, dynamical behaviour in disc galaxy 3—35434
giant voids in the Universe 3—25627
grand design spirals form. on collisions with other galaxies in group 3—59483
grand unified theories, Z_2 vortex strings, Higgs mechanism, broken gauge theories, galaxies form. 3—11091
gravitational interactions between galaxies, review 3—54537
gravitational lens observations used to determine deceleration parameter 3—20537
halo gas existence, review 3—25556
haloes, anal. of dynamics of galactic fountains 3—15986
haloes, N V and O VI prod. by photons emitted by massive photinos 3—44825
halos, composition of axions 3—59482
halos missing mass and neutrinos 3—26032
halos of massive fermions and bosons 3—54535
homogeneous spherical system, pulsational and lateral oscillation modes 3—44853
Hubble sequence of masses, evidence from H I 21 cm line width 3—44836
IC 1613, nearby galaxy, data on unusual Wolf-Rayet star 3—10364
IC 342, spiral galaxy, NH_3 obs. rel. to temps. and sizescales of giant cloud complexes 3—5416
induced ellipticity due to tidal extension of galaxies co-expanding with Universe 3—40300
inner ring structure diameter as distance indicators for spiral and lenticular galaxies 3—49022
inner ring structures as distance indicators, appl. to Hercules Supercluster and Hubble constant 3—54500
interacting galaxies, literature review and computer simulations 3—16014
interacting galaxies, physical conditions from visible obs. 3—59454
interstellar CO along line of sight to high Z QSOs, absorpt. line anal. 3—44868
interstellar gas stripping in clusters of galaxies, rel. to intracluster gas mixing 3—16018
investigating the Universe, book 3—10524
IR absolute magnitude-H I rel. width-surface brightness relation, rel. to cosmological expansion *(Russian)* 3—35724
irregular galaxies, survey of distrib. of 2.8 cm radio continuum 3—40256
isolated galaxies, multiaperture near IR photometry 3—10452
isolated galaxies, physical conditions from visible obs. 3—59454
Kapteyn Selected Area 28, UV excess galaxies catalogue 3—35459
Kazarian 26, struct. and characts. from visible obs. 3—59453
kinematics in flattened superclusters, model 3—35733
BL Lacertae objects and associated galaxies, CCD photometry 3—25617
late-type galaxies, supernova rates within binary model and observed 3—48940
lenticular galaxies, 21-cm line obs. cm line obs. 3—44842
Leo II dwarf galaxy, colour, surface brightness and absolute magnitude, UBV obs. 3—35711
Lick galaxy counts, appl. to estimation of reddening at low galactic latits. 3—48993
Local Group galaxies, near-IR transmission grating prism survey and spectrophotometry of C stars 3—30376
Local Group galaxies, review of double stars 3—40193
low ionisation nuclear emission-line regions, photoionisation and shock heating models rel. to spectroscopic characts. 3—30491
luminosity classification of galaxies in Revised Shapley-Ames Catalogue revised Shapley-Ames Catalogue 3—20499
Lynx-Ursa Major supercluster, struct. from galaxy counts and redshifts distrib. 3—10468
M101, distance from M-type supergiants 3—35595
M101, giant spiral galaxy, interstellar matter collapse to H I-H II assoc. and star form. 3—25598
M31, abundance gradients from SNR spectra 3—30463
M31, anal. of warping of H I disc 3—10466
M31, bulge novae and X-ray sources, numbers rel. to Milky Way 3—10454
M31, CCD photometry of central region 3—54518
M31, comparison of H I gas distrib. with optical data and star form. rate 3—10467
M31, gravitationally induced spur, 21 cm line obs. 3—35707
M31, H I kinematic props. and density wave theory 3—16008
M31, interstellar absorption in Baade fields I, II and III *(Russian)* 3—16011
M31, M33, ages and dimensions of star complexes *(Russian)* 3—35680
M31, N contribution to interstellar medium from novae and planetary nebula 3—10462
M31, nova discovery, 1983 January 8, approximate position and photographic magnitude 3—35626
M31, optical and UV obs. of X-ray globular cluster (Bo 158) 3—10444
M31, probability of occurrence of recent supernova, S Andromedae, near nucleus 3—48939
M31, probable nova discovery, approximate position and magnitude, (1982 December 16) 3—30391
M31, radio continuum survey at 4850 MHz 3—40276
M31, survey for Wolf-Rayet stars, B obs. 3—25624
M31 (NGC 224), distance from apparent size distrib. of dark clouds 3—35716
M31 globular clusters, struct. props. and X-ray emission rel. to galactic globular clusters 3—5413

galaxies continued
M31 nova hole as an age effect 3—10454
M31 star associations, blue/red supergiants ratios and photometric anal. *(Russian)* 3—20503
M33, distance revision from Cepheids anal. 3—59464
M33, H II region NGC 595, struct., Hα and SHF obs. 3—54489
M33, WR candidates, spectrophotometry 3—10346
M33 H II region IC 132, ionising source WR nature and characts. 3—59439
M51, molecular gas distrib. from CO mapping, EHF obs. 3—40249
M51, optical spectrophotometry of central region rel. to activity in galactic nucleus 3—54515
M51 and NGC 5195 system, starlight reradiation by dust and star form. props. 3—5406
M81 dwA, extremely faint dwarf irregular galaxy, H I distrib. obs. 3—49007
M81 nucleus, 2.3 and 8.3 GHz VLBI obs. 3—20476
M82, knots accurate optical positions 3—10455
M83, SN 1923a and SN 1957d, progenitor stars masses and lifetimes 3—30397
M83, UBVRI photoelectric sequences 3—20438
M87, high-resolution X-ray obs. of nucleus, jet and radio halo 3—10440
M87 globular cluster system, accretion from less massive galaxies, photometric anal. 3—30493
M 101, Sc I galaxy, CO emission distrib. and star form., EHF obs. 3—54531
magnitude-redshift relation in homogeneous relativistic model, correction to Hubble law behind clusters 3—16041
mass distribution evolution in rich clusters of galaxies, effects of relaxation and tidal stripping 3—30510
mass-to-light ratio, large-scale vars. 3—20507
massive halo models, semi-degenerate equilib. configurations of collisionless self-gravitating Fermi gas 3—54222
massive neutrinos distribution 3—20225
MCG 6-2-22A (Cartwheel galaxy), elliptical comparison mass estimate 3—20497
MCG 6-49-36, SN 1978e, distance and absolute magnitudes from photometry/spectral obs. 3—25488
Metacatalogue, data retrieval 3—5156
Metacatalogue and large scale structures in Universe 3—5155
molecular clouds distrib., review 3—25607
narrow emission line galaxies, optical linear polarisation meas. 3—54510
nearby galaxies Tully-Fisher relation, morphological type depend. and distances 3—40243
nearby galaxies with Seyfert-like nuclei, optical, X-ray and radio obs. 3—54512
nearby spiral catalogue of IR magnitudes and H I vel. widths 3—44846
nearly axisymmetric galaxies, periodic orbits determ. 3—20208
neutrino haloes acquisition 3—44850
neutrinos, massive, formation of halos in Gamow cosmology 3—49062
NGC 1052, IR emission from elliptical galaxy 3—30486
NGC 1079, low-visibility H I rich spiral galaxy, optical studies 3—49014
NGC 1187, precise position of supernova 3—20405
NGC 1187, spectroscopic and photometric obs. of supernova 3—10375
NGC 1187, supernova discovery, photometry and low-dispersion spectra 3—10374
NGC 1265, identification of supposed supernova as late-type foreground star 3—44773
NGC 1265, SN discovery and mag. estimate (1983 Jan. 29-30) 3—40154
NGC 1313, barred spiral galaxy, obs. of morphology of ionised gas 3—44678
NGC 1566, spiral galaxy, IR mapping and UBVRi photometry 3—49003
NGC 1566 spiral galaxy, H II distrib. and kinematics 3—10458
NGC 1961, disc galaxy mass determ. and link with surrounding galaxy cluster 3—40270
NGC 1961, peculiar supermassive Sb galaxy, stripping from H I survey obs. 3—25596
NGC 224, NGC 2841, NGC 7331, Sb-type galaxies, distances from apparent size distrib. of dark clouds 3—35716
NGC 253, late type edge-on spiral galaxy, globular cluster candidates nature 3—40250
NGC 2639, obs. of nearby paired quasars rel. to quasars in galaxy superclusters 3—54545
NGC 2712 and 5301, isolated spiral galaxies, H I maps and mass 3—30495
NGC 3044, supernova discovery, position and photographic magnitude (1983 March 13) 3—59375
NGC 3347, brightness and colour var. (1975 to 1976) 3—20489
NGC 3351, hot-spot nucleus galaxy, photometric obs. of inner ring of H II regions 3—35720
NGC 3379, elliptical galaxy, two-dimens. luminosity distrib. 3—35710
NGC 3628 and 4244, X-ray search for hot coronae around edge-on spirals 3—30480
NGC 3660, barred spiral galaxy, nature of activity in nucleus from radio, optical, UV and X-ray obs. 3—54525
NGC 3893, spiral galaxy, mass, rot. excitation and luminosity, visible obs. *(French)* 3—59465
NGC 3913, SN 1976b, distance and absolute magnitudes from photometry/spectral obs. 3—25488
NGC 3998, active lenticular galaxy, vel. field and physical conditions 3—49025
NGC 4038/39, interacting galaxies, X-ray components anal. and obs. 3—49018
NGC 404, lenticular galaxy photometric obs. 3—20486
NGC 4258, spiral galaxy, anomalous arms struct. from UHF obs. 3—25595
NGC 4319, spiral galaxy, luminous connection with Markarian 205, anal. 3—49015
NGC 4319, spiral galaxy, Markarian 205 quasar as ejected black hole 3—20525
NGC 4321, giant Sc galaxy, H II regions spatial distrib. 3—40247
NGC 4321, SN 1979c, distance and absolute magnitudes from photometry/spectral obs. 3—25488
NGC 4449, 21 and 6 cm obs. of bright SNR, age determ. 3—59430
NGC 4490, photographic B-band obs. of supernova 3—10373
NGC 4490/85, M51 type system, rotation direction 3—5412
NGC 4536, SN 1981b, absolute magnitude and light curve obs. 3—25487
NGC 4536, SN 1981b photometric props. 3—54414
NGC 4565, edge-on spiral galaxy, surface brightness, colour distrib. and stellar population 3—44843
NGC 4656, radio obs. of candidate SNR, luminosity problem 3—59430

galaxies continued
NGC 4696, Centaurus cluster galaxy, optical filaments discovery 3—5427
NGC 4762, edge on S0 galaxy, stellar population from UBVI obs. 3—16006
NGC 4874, NGC 4889, cD galaxies in Coma cluster, mass/luminosity ratios rel. to diffuse X-ray emission 3—10470
NGC 5204, extragalactic H II region, X-ray and UV obs. 3—54519
NGC 524, lenticular galaxy photometric obs. 3—20486
NGC 5334 field, spectroscopic obs. of 13 QSOs 3—10480
NGC 5430 (Markarian 799), barred spiral galaxy, obs. of Wolf-Rayet stars in extraordinary star-forming region 3—20500
NGC 5485, precise position of supernova 3—30398
NGC 5485, supernova discovery and photographic magnitude, (1982 December 14) 3—25490
NGC 5485, supernova spectrum obs. rel. to type, state of evolution and emission and absorpt. features 3—30399
NGC 55, edge-on spiral galaxy, search for assoc. globular clusters 3—30433
NGC 55, Sculptor group galaxy, obs. of globular clusters 3—10443
NGC 5813, elliptical galaxy rot. curve and vel. dispersion profile from visible obs. 3—20493
NGC 584, S0 galaxy, rel. dispersion profile and rot. curve rel. to dynamics of galactic bulge 3—54514
NGC 6764, emission-line galaxy, discovery of Wolf-Rayet features in spectrum of nucleus 3—10442
NGC 6946, SN 1980k absolute magnitude and light curve obs. 3—25487
NGC 6946, spectra of Type II SN 1980k past max. 3—10372
NGC 6946, spiral galaxy kinematics and morphological struct. *(French)* 3—10457
NGC 7331, Sb galaxy, evidence for massive mol. ring around nucl. bulge, JK obs. 3—25602
NGC 7479, barred spiral galaxy, UBVRI obs. 3—30503
NGC 7793, stellar population in nucleus of Sd galaxy 3—16003
NGC 891, edge-on Sb galaxy, unseen halo mass/luminous disc mass ratio 3—59447
optical counterparts of radio sources from 5 GHz surveys, identifications between RA=4^h and RA=14^h 3—40277
origin and evolution, review 3—54538
particle orbital eccentricity in galaxy with logarithmic pot. 3—30152
peculiar accelerations effect on q_0 determ. from red shift time evolution 3—10489
peculiar galaxies in clusters of galaxies, optical and H I obs. 3—10449
periodic orbits properties in dynamical systems with three degrees of freedom 3—25303
photographic images on new and old POSS prints, comparison 3—20254
POX 4, blue compact galaxy, H II regions S abundance 3—48981
pressureless inhomogeneous spheroids gravit. collapse, cosmological implications 3—59208
properties from evolutionary sequence operating in pregalactic phase 3—44849
protogalaxy formation in Lemaitre cosmology 3—35825
Q 0028+003, QSO, halo rel. to absorpt. line system in QSO (Q 0029+003) 3—5444
Q 09157+561, gravit. lens, main galaxy core compact radio source detect., nature 3—54546
QSO 0351+026 in interacting galaxy pair, nature from UHF/visible obs. 3—35737
QSO-galaxy interactions, colour imaging of 1229+204 and (0351+026) 3—5446
QSOs of low luminosity, nebulosity as underlying galaxies, visible spectral obs. 3—25646
quasar density around companion galaxies 3—25651
quasi-stable morphologies, model 3—49028
radiative transfer, inverse problems and evolution of stars and galaxies *(Russian)* 3—54350
radio sources with flat spectra, optical identifications 3—49041
ring galaxies, appl. of MHD theorem 3—5100
ring-like galaxies, radial vels. *(Russian)* 3—16010
rotating gravitating gaseous disks, nonlinear stability theory *(Russian)* 3—48818
rotating stellar bars, long term evolution 3—49006
rotation of elliptical galaxies, tidal torque theory appl. 3—35703
S0 galaxies, rot. vels. and central vel. dispersions meas. 3—49004
Sandage-Tammann extragalactic distance scale re-examination 3—5460
satellite galaxy orbital decay, numerical simulations 3—35675
Sb galaxies, rot. props. from visible spectra 3—5404
Sculptor dwarf galaxy, radial vels. of C stars and rel. to Magellanic Stream 3—30376
self-gravitating flat disks, global density waves 3—35704
Shane-Wirtanen galaxy distribution, statistical anal. of filamentary struct. 3—35714
small galaxy moving in large galaxy halo, wake gravit. effect on small galaxy 3—40019
SNR optical survey at Mt. Stromlo 3—30464
SO galaxies and Type I supernovae 3—44772
spatial distributions and clustering from galaxy fields computer models 3—20480
spectroscopy of galaxies in distant clusters 3—30477
spherical galaxies, dynamics of models with anisotropic rel. dispersions 3—54504
spherical galaxies, simple model for three-dimensional light distrib. 3—49024
spherical galaxy formation and self-regulating star form., rate limit set by ionising photons 3—49017
spheroidal galaxy, stellar collision term for system with rare Coulomb encounters 3—44802
spheroidal tumbling galaxy, preferred orbital planes 3—35676
spiral arm dynamics, appl. of compressible fluid infinite cylinder MHD gravit. instability 3—20223
spiral galaxies, 12-division morphological system 3—20494
spiral galaxies, 21-cm line obs. 3—44842
spiral galaxies, cloud and star form. dimensions from H II region strings anal. 3—59471
spiral galaxies, H I mass, total mass and distances, UHF obs. 3—5415
spiral galaxies, integrated 21 cm line profiles 3—5419
spiral galaxies, mathematical and physical implications of preferred pitch angle 3—16005
spiral galaxies, origin of mag. field distrib. 3—59451
spiral galaxies, shock wave propag. rel. to spiral arm pitch angle *(Russian)* 3—35726
spiral galaxies, steady wave model appl. to cosmogony 3—20481

galaxies continued
spiral galaxies, struct. and evolution, star form. and rot. effect 3—40257
spiral galaxies in binary/multiple groups, H I distrib. masses and motion 3—30492
spiral galaxies in clusters, flocculent and grand design spiral arm struct. 3—20495
spiral galaxies in Local Supercluster, orientation in space 3—44837
spiral galaxies mass trends anal. *(Spanish)* 3—54539
spiral galaxies nuclei, luminosities and stellar population estimation, spectroscopic method 3—25340
spiral galaxies of low surface brightness, M/L ratio and IR Fisher-Tully diagram 3—25591
spiral galaxies surface brightness, Freeman's law and spheroidal component 3—59473
spiral motions in projective relativity, spiral galaxies 3—54654
spiral structure, global shearing modes of galactic disks 3—59452
spiral structure, wave theory history 3—20505
spiral structure density wave theory, one-dimens. periodic flows with shock transition 3—59190
spirals, automatic classification 3—30506
spirals, density-radius power-law relation 3—35705
spirals in small groups rel. to collision rate 3—30479
spurs dynamic evolution 3—25599
star formation, role of interstellar gas in propagating star form. 3—54517
star formation bursts in young galaxies, contrib. to microwave background, theory constraints 3—30516
static properties in spherical supercluster cells 3—20479
steady rotational transonic winds, models 3—59189
stellar dynamics, Jeans' theorem application to nonspherical systems 3—5366
stellar dynamics, ordered and ergodic 3—40205
stellar orbits, galactic dynamics, isolating integrals 3—20439
stellar spheroids, colour gradients rel. to luminosity and morphology 3—59450
supernova statistics 3—30403
supernovae, automated search using IIIaJ Schmidt plate pairs 3—30401
triaxial S0 galaxies, theory of stable polar gas discs 3—35715
Ursa Minor dwarf galaxy, vel. dispersion+mass/light ratio from C star anal. 3—49019
velocity dispersion determ. methods 3—40040
in Virgo cluster, observational constraints on galaxy-intergalactic medium interactions 3—30509
Virgo cluster disc galaxies, H I masses and diameters 3—59446
Virgo cluster galaxies, digital surface photometry rel. to quantitative classification 3—10463
Virgo cluster galaxies, magnitudes, diameters and axis ratios, BVR obs. 3—5433
Virgo cluster galaxies, middle UV photometry 3—10435
voids in galaxy distrib., origin 3—20511
voids in galaxy distribution, anal. of space distrib. of Markarian galaxies 3—54507
warping of disk galaxies, inclined disks and spiral formation 3—30487
wind effect on cosmic ray age distrib. and lifetimes 3—25269
X-ray cD galaxies, calibrated BV surface photometry 3—44839
young galaxies explosions in early Universe, shock wave struct. and expansion law 3—49061
Zwicky galaxies position cross-correlation with Shane Wirtanen galaxies 3—10461
H I survey of southern galaxies, results from Parkes telescope obs. 3—35719
H II regions in galaxies, history and present status of optical surveys 3—10419

gallium
see also nuclei with ......
alkali halide:Ga^+, impurity excited state struct., polarised luminesc. study 3—38871
atom, $4s^26p$ $^2P_{3/2,1/2}$ levels, natural radiative lifetimes and hyperfine struct. 3—26697
atom, highly ionised, mag. dipole transitions in Texas Exptl. Tokamak 3—55882
atoms, slow-electron excitation, cross section calc. by strong-coupling method 3—11986
configuration interaction effects in $4s^2nd^2D_{3/2,\ 5/2}$ Rydberg series 3—11748
coupling for deep interior plane acoustic microscopy 3—4257
discontinuous films, crystallisation, electron diffr. study 3—23214
film, melting, reflectance meas. 3—28083
heat capacity in two solid phases and one liq. phase, laser flash calorimetry 3—42802
implanted bubble garnet layers, annealing mechanism, FMR study 3—33982
ion source, quasi-point, for microfabrication *(Japanese)* 3—36125
island films, melting and crystn., electron diffr. study 3—3005
liquid, atomic radial distrib. function calc. methods comparison 3—42508
liquid, electronic density of states, perturbation and Green function calcs. 3—43003
photoionic beam production by laser photoionisation of atoms 3—26706
rare earth metal-Ga liquid interface, interdiffusion, diffusion couple technique 3—13560
solar cell properties, production, and materials 3—39468
solution in $NaClO_4$, dielec. const. in diffuse part of double layer 3—53418
specific-heat close to melting point 3—13418
superconducting, sound attenuation, deviations from BCS relationship *(Russian)* 3—38536
superconducting, surface resist., inelastic electron-phonon scatt. influence 3—28477
superconducting, ultrasonic attenuation *(Russian)* 3—13958
triple point temp. determ. *(French)* 3—54734
$Bi_{12}SiO_{20}$:Ca, electrooptic props., doping effects 3—23918
$CdCr_2Se_4$:Ga mag. semicond., light effects on Barkhausen jumps and mag. noise 3—23708
CdP_2:Ga, impurity effect on elec. cond. type *(Russian)* 3—47350
Ga I, III, lifetimes beam-foil study 3—21707
Ga I, nsnp(n+1)p configurations 3—1292
Ga II hollow cathode discharge, CW laser action obs. at 6335, 7199 Å 3—27007
Ga-Hg, liquid-liquid phase equilib., miscibility gap with upper or lower crit. point 3—47098
Ga-Pb system, liq.-liq. interfacial tension between monotectic and crit. temps. *(French)* 3—18531

gallium continued
^{68}Ga intense positron source prep. by electrodeposition of ^{68}GeCu$_3$ 3—41375
^{69,71}Ga, 6p $^2P_{3/2,1/2}$ levels, hyperfine struct. and lifetime 3—11747
Ge:Ga, electron irrad., hole trapping defects, DLTS study 3—43083
Ge:Ga, growth rate depend. of interface distrib. coeff. in Ge-Ga system 3—13144
n-Hg$_{0.8}$Cd$_{0.2}$Te:Ga$^+$, ion implanted, IR refl. study 3—18327
InP-Ga, vapour press. and melting equilib., activity coeffs. *(German)* 3—2753
KCl:^{69}Ga crystals, triplet excited state ESR, optical detect. 3—38726
Nb$_3$Sn:Ga multifilamentary superconductor, external-diffusion processing, Ga effects 3—52320
Pb$_{1-x}$SnTe:Ga, obs. of local modes, absorpt. spectra 3—43566
Pb$_{1-x}$Sn$_x$Te homostruct. diode lasers with Ga-doped cladding layer, LPE growth and long wavelength operation 3—41826
RbCl:Ga crystals, triplet excited state ESR, optical detect. 3—38726
Si:Co,B,Al,Ga, pairing reactions of interstitial Co and acceptors, Mossbauer study 3—42623
Si:Fe,B,Al,Ga, deep impurity levels, photocapacitance photocond. and Hall effect studies 3—43080
Si:Ga, electron irrad., defect studies and minority carrier lifetime, DLTS studies 3—57306
Si:Ga, epitaxial layers, sublimation in vacuum 3—13660
Si:Ga, IR photodetectors, performance under reduced background 3—59220
Si:Ga, ion implanted, dopant distrib., elec. activity and damage annealing 3—27970
Si:Ga, X-acceptors 3—28303
Si:Ga epitaxial layer, impurity distrib. and diffusion 3—51648
Si:Gz, ion implanted, morphological instability and cell form. during pulsed laser annealing 3—8093
SiC:Ga, ESR spectra 3—38677
ZnO:Ga, doped and undoped, luminesc. study in UV region 3—38881
ZnS:Ga,Al, ODMR of strongly coupled donor-acceptor pairs 3—3593
ZnSe: Ga, impurity diffusion and luminescence centres 3—23096
ZnSe:Ga, donor and acceptor levels, photocond. and Schottky diode studies 3—18661
ZnSe:Ga, impurity diffusion, two-sample luminescence study 3—18513

gallium alloys
see also gallium compounds
rare earth alloys, R$_2$Ni$_2$Ga, mag. and crystallographic props. *(Russian)* 3—28503
rare earth alloys, RNiGa$_2$, magnetic susceptibility and cryst. structure *(Russian)* 3—47474
rare earth-transition metal metallic glases, (R$_{80}$Gas$_{20}$)$_{1-x}$TxH_y$, mag. props., H effects 3—28553
al-Ga, dil., magnetoresist., low-field, anisotropic relax. time effect 3—13802
AlGa, dilute alloys, electric field gradient calcs. 3—52091
AlGaAs heterostructures, electroluminescence photon yield study 3—3823
CeGa$_6$Ni$_{1-x}$, cryst. struct. 3—33190
Co-Ga spin glass, equilibrium mag. behaviour 3—57563
CoGa, interaction energies, defect struct., thermodynamic props. 3—23058
β-Co$_x$Ga$_{1-x}$, elec. resist. near Curie temp. 3—43153
Co$_x$Ga$_{1-x}$, mag. clustering, aftereffect, neutron depolarisation study 3—52558
Co$_2$Ga$_{2-x}$Fe$_x$, mag. order, Mossbauer effect and magnetisation study 3—52525
CoGa$_{1-x}$Nb$_x$, mag. and struct. props. 3—52369
Co$_2$MnGa$_{0.98}$Sn$_{0.02}$, Mossbauer study of Sn hyperfine fields 3—28743
CoTi$_{1-x}$Ga$_x$, coexistence of ferromagnetic and nonmagnetic Co 3—52468
Cr-Ga, dil., mag. phase diagram, neutron diffr. study 3—57598
Cu-Al(Ga)(Si)(Sn), binary alloys, rapidly quenched, struct. and props. 3—19381
Cu-Ga, massive transform., nucleation, correl. between transform. temp. and cooling rate 3—39110
Cu-Ga (23.7 at.%), $\beta \rightarrow \zeta_m$ massive transform., crystallography 3—39109
DyGa$_2$Ni and DyGa$_4$Ni, synthesis and struct. 3—37857
ErGa$_2$, metamagnetism, magnetisation and neutron diffr. study 3—23631
ErGa$_2$Ni and ErGa$_4$Ni, synthesis and struct. 3—37857
(Fe$_{1-x}$M$_x$)$_3$Ga, M=Cr, Mn, Co, Ni, mag. moments, Mossbauer spectra 3—52418
Ga-In eutectic alloys, solid and liq., sputtering, ion scatt., AES, and Rutherford backscatt. study 3—52885
Ga-Te liquid alloys, specific heat study 3—33460
GdCu$_{1-x}$Ga$_x$, cryst. struct. transforms. and mag. ordering phenomena 3—38595
GdGa$_4$Ni, synthesis and struct. 3—37857
Hf-Sc-Ga, isothermal sections of phase diagrams at 800°C 3—4013
Hf-Ti-Ga, isothermal sections of phase diagrams at 750°C 3—4013
HoGa$_2$Ni and HoGa$_4$Ni, synthesis and struct. 3—37857
In-Ga wetted four-point probe for resist. profile meas. of n-type oxide semicond. 3—23480
La-Ga, phase diagram and phase structs., X-ray diffr. and DTA studies *(Chinese)* 3—42750
La$_{1-x}$(Al$_{0.5}$Ga$_{0.5}$)$_x$, metallic glasses, partial pair correlation functions 3—18223
LaCo$_{5-x}$Ga$_x$, hydriding property modification by partial substitution, X-ray study 3—2809
La$_{1-x}$Ga$_x$, metallic glasses, partial pair correlation functions 3—18223
LaGa$_6$Ni$_{1-x}$, cryst. struct. 3—33190
Li$_3$Ga$_4$, cryst. struct., X-ray diffr. study 3—27893
LuGa$_2$Ni and LuGa$_4$Ni, synthesis and struct. 3—37857
Mg-Ga-Cu, phase diagrams and cryst. struct. 3—4011
Mn-Ga amorphous films, crystn. and mag. domain struct., electron microscopic study 3—8704
Nb$_3$Ga, NQR studies of relax. process 3—23829
Nb$_3$Ga supercond. film, energy gap determ. by tunnel method 3—18832
(Pr$_{80}$Ga$_{20}$)$_{100-x}$Fe$_x$ metallic glass, mag. props. and crystallisation 3—28618
SmGa$_4$Ni, synthesis and struct. 3—37857
TbGa$_2$Ni and TbGa$_4$Ni, synthesis and struct. 3—37857
TiBe$_{2-x}$Ga$_x$, Laves phase, expansion by Ga addition 3—33189
Ti$_7$Ga, ordered phase form. and struct. 3—4010
TmGa$_2$Ni and TmGa$_4$Ni, synthesis and struct. 3—37857
UGa$_2$, U^{4+} mag. form factor, polarised neutron diffr. study 3—57544
V$_3$Ga microcomposite, powder metallurgical prep. and supercond. props. 3—52322

gallium alloys continued
V$_3$Ga, monofilamentary, solid-state diffusion prep., growth kinetics 3—58076
V$_3$Ga, NMR line breadth, spin-spin relax., and spin echo *(Russian)* 3—52649
V$_3$Ga, superconducting, four-dimensional crit. surface including crit. strain 3—43326
YGa$_2$Ni and YGa$_4$Ni, synthesis and struct. 3—37857
YbGa$_2$Ni and YbGa$_4$Ni, synthesis and struct. 3—37857
Zn-Ag(Ga), single crysts., plastic deform. and dislocation distrib., effect of Ag and Ga 3—29133

gallium arsenide
(001)-(2×4) surface electronic struct., XPS study 3—3280
(100) with adsorbed Bi, surface atomic struct. determ. 3—2946
(110) bound and resonant surface states 3—28406
absolute hydrostatic deform. pot., LMTO-ASA calcs. 3—13717
acoustic charge transport device, monolithic 3—46381
adsorption of H and H$_2$ on MBE grown (100) and $(\bar{1}\bar{1}1)$ surfaces, photoemission spectroscopy study 3—42925
adsorption of O, orientation depend., UPS and XPS study 3—24096
amorphous, low temp. epitaxial regrowth by ion irradiation 3—38266
amorphous, pulsed laser annealing, nonthermal effect, time-resolved refl. study 3—46997
angle resolved local density of states Green's function calc. 3—8390
anion antisite defects and electron traps 3—42603
anisotype graded p-n heterojunctions, nonequilibrium behaviour 3—33784
annealed, 1.35 eV photoluminesc. emission centre, diffusion coeff. meas. 3—23997
annealing, material-process interactions, review 3—58146
antisite and vacancy electron states, local density of states 3—43096
antisite defect electron energy states, Green's function calc. 3—47306
antisite defect form. during plastic deform., EPR and photoluminescence study 3—2553
antisite defect formation by gliding dislocation-interstitial interaction 3—22892
band-edge phonons, magnetoresist., magnetophonon reson. study 3—3230
bicrystal, grain boundaries, elec. characterisation 3—52061
bulk-crystal growth technology, Bridgman and LEC techniques 3—3940
channel injection laser-intraresonator photoreceiver integrated pair 3—50796
chemical and electrical characterisation 3—23404
chemisorption of H on (100) and $(\bar{1}\bar{1}\bar{1})$ surfaces, LEED and photoemission study 3—33574
compensation by low energy ion irrad., defect diffusion and carrier mobility 3—57001
concentrator solar cells using Al-cored printed circuit bases 3—53527
conference, Perpignon, France (Sept. 1982) 3—20568
coupled LO phonon-plasmon modes, anisotropic Raman excitation 3—43054
crystal growth from solution under microgravity conditions, defects 3—42594
CVD, low-press., review 3—8992
CW laser processing *(French)* 3—13271
dark line defects form. due to dislocation-point defect interactions 3—42615
deep donor band in photoluminesc. spectrum 3—3805
deep level associated optical cross sections 3—14325
deep level defects, self-consistent cluster calcs. 3—47300
deep level point defects, annealing behaviour 3—43085
deep levels, EL2 level, impurity superlattice model and DLOS results 3—18645
defects study by projection etching 3—33263
dielectric constant, temp. and press. dependences 3—57854
dielectric films on GaAs, book 3—49101
dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
dielectric-semiconductor interface analysis using spectroscopic ellipsometry *(French)* 3—28438
diffuse X-ray scatt. obs. of optically excited near-zone-edge phonons 3—14385
diode, radiative recomb. allowing for impurity scatt. 3—19198
diodes, n-type negative differential cond. localised development 3—38391
direct band-gap semiconductor, minority carrier transport, radioactive recombination effects 3—52171
direct-gap semicond., transient optical spectra of dense exciton gas 3—14317
dislocation density and distrib. in 3 in. diam. LEC grown GaAs cryst. 3—42610
dislocation effect on electron mobility, theory 3—33724
dislocation glide, recombination enhanced, cathodoluminesc. microscopy study 3—42609
dislocation line, elastic energy, integral formalism 3—46930
doping superlattices, tunable electrolum. 3—14357
drag effect in interband transitions, photocurrent spectra 3—3255
E3 trap annealing, DDLTS study 3—3117
EL2 emission band, photoluminescence and photoluminescence excitation spectroscopy 3—43589
electrodes, room temp. chloroaluminate molten salt interfaces, Mott-Schottky analyses 3—52243
electroliquid epitaxy, mass transfer effects 3—33604
electron bombarded and plastically deformed, intrinsic emission intensity 3—24102
electron capture by multiphonon emission at native levels 3—3106
electron irrad., anisotropic defect production, electron and hole traps 3—42667
electron irrad., optical props. thermal stability 3—43577
electron irrad. damage, elec. cond. and defect levels 3—42666
electron irrad.-induced defects, electron traps 3—42668
electron transport, transient behaviour, investigation using Monte Carlo simulations 3—33731
energy diffusion eqn. for electron gas interacting with polar optical phonons, non-parabolic case 3—43142
epitaxial, photoluminescence study of exciton-ionised donor complexes 3—3806
epitaxial and bulk, S$^+$(Si$^+$)(Se$^+$) implanted, chemical and elec. profiles 3—27968
epitaxial film, heat treatment, ellipsometric and AES studies 3—14621
epitaxial films, laser irrad., photoluminesc. meas. 3—34147
epitaxial films, structural imperfections and their effect on Schottky-barrier characts. 3—13671

gallium arsenide continued
epitaxial layer, minority carrier diffusion length meas. with high spatial resolution 3−52180
epitaxial layer electro-optically controlled directional coupler switch at 1.15 *μ*m 3−12314
epitaxial layers, conditions for MO-CVD growth at low temps. 3−33600
epitaxial layers, dislocation density study *(Russian)* 3−22901
epitaxial layers, GaAs substrate in situ etching using AsCl$_3$ in MOVPE 3−14756
epitaxial layers, vapour phase growth by hydride technique 3−43757
epitaxy, chemical vapour deposition modelling 3−33594
etalon, bistable, external switching on and off, regenerative pulsations, transverse effects and lasing 3−17559
etched (100) surface, Auger anal. 3−34181
etching in Cl$_2$ plasma, temp. depend. 3−24376
evaporated Au-Ge ohmic contacts, role of Ge 3−33793
evaporation and ripple formation under laser irrad. 3−38968
exciton luminescence, collisional broadening and spin-relax. time 3−28277
FET characteristics as an optoelectronic switch 3−36085
film, Dember EMF theory 3−28387
film, epitaxial, CVD grown, analytical evaluation 3−28231
film, triode sputtering prep., elec. characts. 3−28995
film growth by MBE 3−19272
films, *α*-irrad., defect migration, hall effect study 3−47167
films, *α*-irrad. defect migration, elec. study 3−47168
Ga$_{1-x}$Al$_x$As superradiance diode, high-power low-divergence operation and coupling efficiency 3−1655
GaAs:B, elec. cond., impurity effects 3−23398
GaAs:Cr, semi-insulating, impurity centres study by measurement of photoconductivity spectra *(Czech)* 3−47285
gas-phase deposition, equilib. distrib. of Te and Zn 3−8082
grain boundary energy states 3−23314
grating structures preparation by photochemical etching *(Slovak)* 3−46357
Hall EMF meas. in high resistance low charge carrier mobility materials by two-frequency method 3−49398
Hall factor for isotropic media, mag. field dependence 3−43206
heavily doped, impurity band tails based on semiempirical pseudopotentials 3−52075
heavily doped, photoluminescence edge calc. 3−38860
heterolayer, hot electrons, phonon scattering 3−8499
heterostructure, electrochemical study 3−47415
heterostructure, polaron effective mass 3−47278
high pressure structural transitions, planar defects, X-ray diffr. study 3−2769
highly excited, picosec. spectroscopy, free carrier relax. in continuum states 3−38910
highly excited semiconductors, relax. processes 3−14351
homojunctions, plasticity and strength studies *(Russian)* 3−47035
hot electron relax. and saturated current dispersion, DC to 1200 GHz 3−33749
hot electron transport characts. in crossed elec. and mag. fields 3−38419
hot wall epitaxial growth 3−47782
hot-electron photoluminescence, spectrum and polarisation 3−19191
impact ionisation including quantum effects, Monte Carlo simulation 3−33730
impurity analysis with SIMS *(Japanese)* 3−48106
impurity and mobility profiling techniques 3−23395
impurity cond., AC and DC hopping cond., extended pair approx. 3−38386
impurity deep levels, electronic props. and stability 3−52072
inner stripe laser, v-channelled substrate, highly reliable and mode-stabilised operation, visible wavelength emission 3−27056
integrated multilayer DH lasers separated by tunnel junctions 3−1654
interdiffusion and nucleation of Al monolayers on (001)c(2×8) surface, AES study 3−13626
internal strain parameter and elastic consts., self consistent electronic calc. 3−18367
intervalley scattering, nonequilib. phonon spectroscopy technique appl. 3−45217
ion beam assisted maskless etching by 50 keV focused ion beam 3−34503
ion implantation, void form. and swelling, electron microscopy study 3−22926
ion implantation damage annealing with graphite heaters 3−57004
ion implanted, annealing characts., Rutherford backscattering-channelling study 3−33315
ion implanted, EL2 center, defect formation chem. study 3−33663
ion implanted, non-planar solid phase epitaxial growth processes 3−3012
ion implanted, point defect segregation, dislocation struct., annealing 3−33317
ion implanted, pulsed laser annealed, photolum. 3−57977
ion implanted, radiation damage, IR absorption spectra and lattice deformation 3−2619
ion implanted, radiation disorder depend. on type of ion 3−28005
ion implanted, solid phase epitaxy, interface structures and twins obs. 3−33591
ion source extraction grid, fabrication and use 3−459
ion-bombarded layers, emission centres, surface effects on excitons *(Russian)* 3−38889
ion-implanted and crystalline, laser annealing, surface ripples obs. 3−46990
IR windows for high-speed airborne applic., development 3−7093
isovalent doping during melt growth, residual impurity level lowering 3−34219
laser, DH, group velocity refr. index dispersion 3−37036
laser annealing, mechanisms and appl. in microelectronics, book contrib. 3−13273
laser coupled to external resonator transient and stationary props. in bistable operation 3−37039
laser generated heat pulse propagation 3−23112
laser irrad., O incorporation, effect of O$_2$ pressure 3−22936
lateral epitaxial overgrowth by organometallic chemical vapour deposition 3−3956
lattice defects in quenched and irradiated single crysts. 3−2613
lattice thermal cond., 4-700K 3−2897
layers, anisotropy in growth rate 3−38252
layers irradiated by H$^+$ ions, elec. props. study 3−23517
LEC crystal, undoped, semi-insulation mech., role of dislocations 3−22898
LEC crystals, doped and undoped, EL2 deep donor level distribution 3−47282

gallium arsenide continued
LEC grown, deep levels and dislocations, photoluminescence study 3−43086
LEC grown, leakage current variation rel. to dislocation density 3−3181
LEC grown, twin form., melt stoichiometry effect 3−8056
LEC semi-insulating wafers for IC appls., resist. and Hall mobility meas. technique 3−20878
light scatt. on free electrons, electron-relax. processes 3−23965
liquid phase electroepitaxial growth, layer thickness monitoring by resistance meas. 3−3972
longitudinal photocurrent spectral characts. 3−47387
LPE grown facets, atomically flat, seen by scanning tunnelling microscopy 3−13666
LPE growth from solns. with evaporating solvent 3−52981
LPE layer, grown-in deep level defects, thermal annealing effect 3−18799
magnetoplasma surface polariton excitation, resonant emission of odd harmonics 3−38322
MBE, selected-area growth on ion implanted GaAs substrates 3−3958
MBE films, cryst. defects rel. to fabrication process *(French)* 3−42971
MBE grown, control of Schottky barriers height 3−38457
MBE grown, deep states and surface processes, DLTS study 3−43068
MBE grown, exciton-like features in low temp. photoluminescence spectra 3−3804
MBE growth, impurity incorporation, optical and elec. props. 3−8378
MBE growth of high-purity layers and elec. props. meas. 3−34231
MBE growth of planar doped barrier structures 3−43738
MBE growth of undoped semi-insulating layers, elec. and photoluminesc. props. 3−39033
MBE layer, capless and Si$_3$N$_4$ encapsulated annealing, photoluminescence and DLTS study 3−8441
MBE layers, defect deep levels, optical excitation study 3−47307
MBE layers, microtwinning and growth defects 3−8359
MBE single crystal *(Chinese)* 3−3957
MBE substrate prep. method 3−4170
MBE substrates, oxide removal mechanisms, XPS study 3−39260
MESFET A/D converter and memory IC for ultra high speed transient recording 3−50216
metallic impurity donor band, elec. cond., Hall effect, luminescence 3−23313
metalorganic CVD growth, review *(Japanese)* 3−29015
metalorganic MBE grown, thermal decomp. of reactants, mass spectrometer anal. 3−43739
microinclusion-induced mech. prop. degradation 3−57023
microwave noise of hot carriers, temp. depend. 3−13873
MIS and electrolyte-insulator-semicond. systems, cond. of anodic oxide films *(Russian)* 3−47429
MO-CVD film, residual donor impurities, far IR magneto-optic study 3−2592
MOCVD grown, atmos. and reduced press. growth and elec. props. 3−23197
MOCVD growth 3−52966
n-type, AuGe ohmic contact formation, improved method for reducing contact resistivity 3−13906
n-type, collisional-narrowing of Raman spectrum for electron spin density fluctuations 3−47652
n-type, epitaxial growth, impurity redistribution, theory 3−18582
n-type, Ge doped, MBE grown elec. and photolum. props. 3−33807
n-type, intervalley picosecond electron relax. times, nonlinear optical susceptibility study 3−37100
n-type, light-scatt. spectrum for single-particle excitations 3−38841
n-type, MCD in 10.6 *μ*m range, rel. to free carrier conc., homogeneity determ. of doped semicond. 3−28868
n-type, ohmic contacts, specific contact resistance, model for $N_D{}^{-1}$ depend. 3−13902
n-type, photoanodes, polymer coated, in contact with aqueous electolytes, regenerative photoelectrochemical cells 3−48157
n-type, pulsed laser annealing in high press. Ar gas ambience 3−33296
n-type, thin highly doped layer creation for ohmic contact form. 3−18781
n-type, with electrons and holes, kinetic control of anodic dark and photodissolution 3−52242
n-type etching under laser illum., cryst. defects study 3−42612
native oxide props., use in planar devices and integrated optics *(Chinese)* 3−14752
negative differential cond. and low freq. elec. instabilities 3−8500
neutron transmutation doping, ESR study 3−3532
nonequilibrium direct-gap polar, ultrafast transient transport 3−57341
nonlinear ring resonators using GaAs with photon energy below band gap, transient response 3−17558
OMCVD grown using trimethyl and triethyl gallium sources 3−24144
OMVPE grown, using diethylgalliumchloride-triethylarsine 3−43755
optical bistability, guided wave approaches 3−7057
optical constants, Kramers-Kronig analysis, calc. accuracy 3−52760
optical constants, Kramers-Kronig analysis, Philipp-Taft method improvement 3−52759
optical constants, subtractive Kramers-Kronig anal. method and Leveque method 3−8793
optical directional coupler, rib waveguide struct. n$^-$/n$^+$ GaAs, insertion loss analysis 3−42037
optical waveguide fabrication by drive-in diffusion technique 3−50753
optical waveguides, GaAs film-Si substrate graphoepitaxy struct., fabrication 3−22206
organometallic VPE growth on large scale 3−43751
oscillatory magnetoabsorption and diamagnetic excitons 3−38806
oxidation, anal. of oxide films of XPS *(Japanese)* 3−3915
oxyfluoride layer, plasma deposited, props. 3−8604
p$^+$-p^0-n^0-n$^+$ structs., minority carrier diffusion length, electron-probe-induced-current meas. 3−18722
p-conductivity study, intrinsic double acceptor evidence 3−3178
p-type, electron irradiated, deep levels, DLTS and deep level optical spectroscopy study 3−33664
p-type, heavily-doped compensative material, exponential band-tails and lasing characts. *(Chinese)* 3−32355
p-type, lasers, PtTi ohmic contact formation using ion-beam sputtering technology 3−41870
p-type MOS struct., interface states and internal photoemission 3−52257
permeable base transistor, GaAs VPE overgrowth over W gratings, TEM study 3−28998
phase factor in EXAFS 3−43662
photocathodes, electron diffusion, radiative and Auger recombination, luminesc. 3−34199
photoconductive detectors, laser stimulated MOCVD fabrication 3−45201

gallium arsenide continued
  photoelastic light modulators 3—22197
  photoluminescence, annealing behaviour, As_{Ga} antisite detect. 3—28884
  photoluminescence spectra and meas. *(French)* 3—28882
  photoluminescence under intense laser excitation 3—52851
  photovoltaic solar energy conversion appl., principle, development trends and future potential *(Czech)* 3—24575
  picosecond dynamics of optical gain due to electron-hole plasma, under near band gap excitation 3—47688
  picosecond high-resolution modulation spectroscopy of near interband resons. 3—36099
  picosecond laser pulse annealing, carrier and lattice temp. calcs. 3—56947
  piezoelectric film, total-reflection-mode SAW amplification, theory 3—51907
  plastically deformed As antisite defects as main electron traps, DLTS meas. 3—52055
  point charge nonlinear-screening, spatial dielec. function 3—38329
  point defects and dislocations, effect on devices, review 3—13216
  point defects and impurities assessment 3—22931
  polycrystalline, grain boundary passivation by H plasma, surface barrier diode appl. 3—43064
  proton bombard. and annealed, dislocation and void form. 3—47005
  proton bombarded, extended cryst. defects, annealing, TEM study 3—57000
  pulsed laser breakdown thresholds using two laser beams 3—37959
  quantum well lasers, threshold current calc. 3—27053
  Raman line intensity ratio, first-order rel. to lattice perfection scale 3—43524
  reactive ion beam etching damage, annealing behavior 3—2617
  residual double acceptor, IR absorption, photoluminescence and Hall effect meas. 3—38334
  room temperature molten salt electrolytes for photoelectrochemical applications 3—14963
  Schottky junctions, sputter etching effects 3—43972
  Schottky-barrier diodes, γ-ray irrad., thermal annealing of E3 centres, elec. field effects 3—18657
  Schottky-barriers, γ-irrad., radiation defect accumulation, DLTS study 3—13278
  semi-insulating, deep levels and compensation, math. model 3—43062
  semi-insulating, thermal equilib. current oscills., deep donor EL2 electron emission 3—13759
  semi-insulating, undoped, EL2 deep level, direct obs. by IR absorpt. 3—57305
  semi-insulating substrate, spatially resolved cathodolum. study 3—8888
  semiconducting and other major props., review 3—13690
  semiconductor, radiation defect formation mech. during ion bombardment 3—8109
  semiinsulating, electrical characterisation using galvano-magnetic measurements *(Slovak)* 3—47364
  semiinsulating, $p-n-i-n^+$ struct., IR and visible radiation detector 3—5861
  single cryst., damaged surface layer, laser-annealing restoration, 3-cryst. X-ray diffr. 3—42903
  solar cell test facility 3—53528
  solar cells, grain boundary effects 3—53562
  solar cells, homogeneous temp. characts. 3—44122
  solar cells, polycryst., charge collection characts., SEM/EBIC study 3—53563
  solar cells, thin film, review 3—44124
  solar cells for concentrator and flat plate arrays, fabrication and characts. 3—58530
  solar-cell dielectric-metal-dielectric coatings optical props. for application as antireflection coatings 3—4391
  sputtered films, cryst. struct. and comp., effect of laser irrad. *(French)* 3—23211
  substrate, semi-insulating, in situ etching using $AsCl_3$ in MOVPE 3—14756
  substrate, Si_3N_4 film, ellipsometry study 3—8896
  substrate for Ta_2O_5 and ZrO_2 films, thickness determ. using electron probe analysis 3—49326
  substrate for VPE ZnSe 3—8863
  substrate growth, low dislocation density, liq. encapsulated Czochralski method 3—28977
  surface, (001) and (111), He^+ and Si^+ ion implantation, deform. anisotropy, X-ray diffr. study 3—27963
  surface, adsorbed $Fe(CO)_5$, UV photolysis at 77K 3—44068
  surface, doped, EELS calc., multiple losses and gains 3—19237
  surface, rotationally relaxed (110), tight-binding calc., saturating slab model 3—28400
  surface, tetracene thin film, mol. fluoresc. quenching 3—43587
  surface (001), MBE grown, initial Al growth, temp. and reconstruction depend. 3—18585
  surface (100), initial growth of Ge epilayers, LEED and AES study 3—42978
  surface (100), interaction with $N_2(H_2)$ plasma, chem. and electronic props. 3—52212
  surface (100), one- and two-photon absorpt. due to surface state excitons 3—43559
  surface (1×1) (111), dangling bond surface state dispersion curves 3—3283
  surface and redox reactions in various electrolytes 3—52245
  surface barrier diodes, deep level mobility in elec. field, DLTS study 3—8271
  surface dissociation by pulsed laser irrad., AES study 3—8095
  surface transitions, gradual, induced by multiple picosec. laser pulses 3—28936
  surfaces (100), (110) and (111), laser annealed, LEED, AES and RBS studies 3—57197
  thin film growth by MBE and CVD 3—38269
  thin film Wannier exciton energy levels structure and effective radius *(Chinese)* 3—8422
  thin films, optical props. 3—24038
  thin layers metalorganic CVD growth on W substrate 3—14496
  thin-film solar cells, review of progress 3—14949
  time-resolved cathodoluminescence in scanning electron microscopy 3—52857
  transient transport and transferred electron behaviour under high energy electron injection 3—38396
  two-phonon Raman spectroscopy as probe of nonequilibrium HF acoustic phonons 3—14304
  two-spin reson. transitions of optically oriented nuclei 3—28739
  n-type, nonradiative recomb., electron probe investigation 3—18773

gallium arsenide continued
  uniaxially compressed, metastable excitons, photo-EMF spectra study 3—13741
  vacancies and anti-struct. defects, electronic density of states 3—47301
  vacancy deep levels, pseudo-atomic orbitals cluster model *(Chinese)* 3—38338
  velocity overshoot effect anal. *(Chinese)* 3—13822
  velocity overshoot of electrons with space charge and nonuniform field 3—43188
  VPE, low press., dopant incorporation study 3—42962
  VPE, low press., growth rate limiting processes 3—42963
  VPE and LPE grown, electron traps, DLTS and C-V meas. 3—43069
  VPE grown, deep-level defects vs. growth param., electron traps meas. 3—33670
  VPE grown using novel $AsCl_3$ reactor, photoluminescence, elec., DLTS meas. 3—19276
  VPE growth, use of low press. 3—42960
  VPE growth and characterisation for microwave applications 3—19281
  VPE growth by halide process, large scale reactor 3—43770
  VPE layer, elec. props. improvement by cooling HCl liq. source 3—23514
  wafers, laser chemical etching of vias 3—47972
  X-ray diffraction, external photoeffect 3—3925
  (Al, Ga)As DH lasers, cooling rate effect on short-time LPE growth of active layers 3—9005
  (Al,Ga)As laser, single quantum well, visible CW operation 3—37020
  (Al,Ga)As, luminesc. centre form. during pulsed laser irrad. 3—47699
  (Al,Ga)As, Mg diffusion profiles alteration due to p-n junctions 3—13549
  (Al,Ga)As:Mg, diffusion across p-n junction during LPE growth 3—23098
  (Al,Ga)As/GaAs DH lasers, ageing-induced degradation (or lifetime) vars. statistical anal. 3—56259
  Al/GaAs Schottky barriers, evaluation using Norde's modified current-voltage anal. 3—38455
  Al-GaAs (110) interface structure on Al chemisorption, energy minimisation study 3—8328
  Al-GaAs structures, anodic oxidation for prep. of dielectric passivation layers *(Slovak)* 3—47226
  AlAs-AlGaAs-GaAs quantum well heterostructures, induced disorder effects on luminescence 3—18519
  AlAs-GaAs multilayer struct. for increasing solar cell efficiency 3—19591
  AlAs-GaAs superlattice intermixing by Zn diffusion 3—18518
  AlGaAS/GaAS p-n junction solar cells, conversion efficiency 3—53516
  AlGaAs 0.8 μm lasers, distortion characts. 3—41842
  AlGaAs CW DH lasers, longit. mode partition noise in gain spectrum shift and gain suppression 3—22068
  AlGaAs CW high power single-mode laser diodes, review and comparison 3—22055
  AlGaAs DH injection lasers, nonwaveguide mode operation 3—22116
  AlGaAs DH laser, LPE growth in sapphire boat 3—37066
  AlGaAs DH laser, room temp. CW operation, 680-700 nm 3—6966
  (AlGa)As diode laser with deposited waveguide, monolithic-hybrid integration 3—41861
  AlGaAs Gaussian channel substrate planar laser diodes, high performance, single mode 3—32379
  AlGaAs graded-index waveguide separate-confinement heterostruct., lasers with proton-delineated stripe, LPE and MBE grown 3—56193
  AlGaAs high power multiple-stripe injection lasers with channel guides 3—12149
  AlGaAs injection heterolaser based optoelectronic readout 3—56155
  AlGaAs injection lasers, theory and obs. of optical nonlinearities 3—22062
  AlGaAs LPE heterostructures, luminesc. efficiency improvement by CW laser annealing 3—47700
  AlGaAs laser, freq. stabilisation based on $^{85}Rb-D_2$ line 3—1676
  AlGaAs laser, picosecond single-mode pulse generation by injection locking 3—41890
  AlGaAs laser amplifier, bias current reson., refr. index change 3—6963
  AlGaAs laser amplifiers, Fabry-Perot and travelling-wave type, noise characts. 3—56265
  AlGaAs laser diode, optical disc and communication applications *(Dutch)* 3—7003
  AlGaAs laser diode coupled to single-mode fibre cavity, optical feedback effects on oscill. field spectrum 3—7046
  AlGaAs laser diodes, high-power CW single-mode operation 3—27080
  AlGaAs laser facets, contamination reduction by reactive outdiffusion 3—41880
  AlGaAs laser preamplifier and linear repeater system, S/N and error rate performance 3—7008
  AlGaAs laser spectrometer, near IR, high-resolution *(Japanese)* 3—10925
  AlGaAs lasers, AM and FM quantum noise, theoretical and expt. result comparison 3—32362
  AlGaAs lasers, coherence props. of picosecond pulses 3—41839
  AlGaAs, metalorganic CVD growth, review *(Japanese)* 3—29015
  AlGaAs multi-purpose low-noise laser, shallow proton implant, appls. 3—7007
  (AlGa)As multimoded laser for digital communication appl., functional life testing 3—1662
  AlGaAs narrow stripe lasers using double current confinement, operation and appl. 3—12142
  AlGaAs optical source masterslice, custom metallizations for lasers and LEDs 3—22112
  AlGaAs semiconductor laser, injection locked, optical phase modulation 3—7038
  AlGaAs single mode lasers for fibre-optic appls. 3—22060
  AlGaAs single mode lasers for fibre-optic communications 3—50672
  AlGaAs TJS single mode diode lasers, anomalous tuning 3—27115
  AlGaAs window V-channelled substrate inner shape laser, high power visible CW operation 3—46207
  AlGaAs:Ge, effect of Ge on liquidus and solidus in LPE domain 3—42956
  (AlGa)As/GaAs DH laser, negative resistance effect at low temp. *(Chinese)* 3—12145
  AlGaAs/GaAs heterointerface, compositional fine line patterning by Zn implantation 3—51637
  AlGaAs/GaAs laser diode based monitoring amplifier, operating condition elec. diagnostics 3—56262
  AlGaAs/GaAs multilayer graded-gap avalanche photodiodes for 0.8-1.8 μm wavelength region 3—49447
  AlGaAs/GaAs multiple segmented stripe contact lasers, longit. vars. in current injection and carrier conc. 3—32361
  AlGaAs/GaAs multiquantum-well lasers with ridge-waveguide, MBE 3—46237
  AlGaAs/GaAs photodiode permanent damage effects due to total dose exposure 3—40688

gallium arsenide continued
- AlGaAs/GaAs superlattice, graded band gap, channeling and staircase avalanche photodiodes: towards a solid-state photomultiplier 3—47418
- AlGaAs/GaAs systems for integrated optical circuits 3—32507
- AlGaAs/GaAs twin-channel substrate-mesa-guide injection lasers fabricated by OMVPE 3—46238
- AlGaAs-GaAs, VPE monolithic cascade solar cell 3—4383
- AlGaAs-GaAs cascade solar cell, MBE grown, conversion efficiency 3—19582
- (AlGa)As-GaAs DH, MBE grown, minority carrier props. effect of As species 3—41834
- AlGaAs-GaAs DH planar LED using junction current confinement, coupling to large core dia. fibres using lenses 3—12362
- AlGaAs-GaAs fibre coupler laser using front-mirror leaked light for feedback control *(Chinese)* 3—37061
- AlGaAs-GaAs single mode DH laser with channel-guide struct., theoretical anal. 3—27055
- AlGaAs-GaAs solar cells, high energy proton irrad. damage 3—53504
- $Al_{0.08}Ga_{0.92}As$ MBE-grown proton-bombarded, stripe laser based optical transmitter, 45 Mbit/s, characterisation, functional reliability 3—32363
- $Al_{0.22}Ga_{0.78}As$, laser induced recombination centers, photoluminesc. measurements 3—38857
- $Al_{0.25}Ga_{0.75}As$-GaAs modulation doped structs. grown by MBE, light sensitivity 3—52279
- $Al_{0.28}Ga_{0.72}As$, shallow acceptors, photoluminescence study 3—43590
- $Al_{0.3}Ga_{0.7}As$ LPE layer, grown-in deep level defects, thermal annealing effect 3—18799
- $Al_{0.5}Ga_{0.5}As$-$In_xGa_{1-x}As$ heterostructs. lattice mismatch effects on radiative recombination 3—38926
- p-$Al_{0.7}Ga_{0.3}As$-p-GaAs-n-GaAs, thick window concentrator solar cell 3—9429
- $Al_{1-x}Ga_xAs$ diode laser, freq. stabilisation using optogalvanic effect in Ar I 3—1675
- $Al_{1-x}Ga_xAs$, organometallic VPE layers, improved photoluminesc. using AsH_3 source gettering technique 3—34235
- $Al_{1-x}Ga_xAs$ solar convertors for solar concentrators, ohmic loss reduction 3—34700
- $Al_xGa_{1-x}As$, core exciton spectra studied with synchrotron radiation 3—18625
- $Al_xGa_{1-x}As$ DH picosec. lasers, optoelectric diode response rate meas. appls. *(Chinese)* 3—41829
- $Al_xGa_{1-x}As$ epitaxial layer on GaAs:Cr, elec. cond. and transfer doping effect 3—23509
- $Al_xGa_{1-x}As$ graded index heteroepitaxial waveguides, refractive index profile 3—12332
- $Al_xGa_{1-x}As$ graded-gap cryst., elec. cond., hydrostatic and uniaxial compression effects meas. 3—13817
- $Al_xGa_{1-x}As$, LPE grown, composition and minority carrier diffusion length meas. *(Chinese)* 3—38242
- $Al_xGa_{1-x}As$ lasers, optically integrated coherently coupled laser pair 3—41860
- $Al_xGa_{1-x}As$ layers, compositionally graded, electron drift vel. meas. by time resolved optical reflectivity 3—52285
- $Al_xGa_{1-x}As$, luminescence and minority carrier transport 3—28889
- $Al_xGa_{1-x}As$ MBE layers, Si doped, elec. props. 3—23512
- $Al_xGa_{1-x}As$, OMVPE growth, effects of trimethylaluminium interaction with graphite 3—42966
- $Al_xGa_{1-x}As$ organometallic VPE layer, electron traps, transient capacitance study 3—3340
- $Al_xGa_{1-x}As$, organometallic VPE growth, review of method, comparison with other growth techniques 3—19280
- $Al_xGa_{1-x}As$ planar stripe lasers with deep Zn diffusion, active layer injection carrier spatial distrib. anal. *(Chinese)* 3—41828
- $Al_xGa_{1-x}As$ variable-gap epitaxial films, exciton reflection and electroreflection spectra 3—14372
- $Al_xGa_{1-x}As$ variband layer strain gauge resistors, sensitivity and comp. depend. 3—5780
- $Al_xGa_{1-x}As$: Si, MBE growth, effect of H_2 on elec. and optical props. 3—51973
- $Al_xGa_{1-x}As$:Si, doped and undoped, MBE grown, elec. and optical props., effect of growth conditions and alloy comp. 3—43596
- $Al_xGa_{1-x}As$:Si, Si doping during MBE growth 3—24133
- $Al_xGa_{1-x}As$:Si epitaxial layer on GaAs; Hall effect and photocond., heterojunction phenomena 3—47438
- $Al_xGa_{1-x}As$:Si MBE layers, elec. props. and precipitation 3—38509
- $Al_xGa_{1-x}As$:Te, impurity states, electron mobility 3—33681
- $Al_xGa_{1-x}As/Al_yGa_{1-y}As$ visible lasers, contaminated, MOCVD grown, elec. and optical characts. 3—41871
- $Al_xGa_{1-x}As/Al_yGa_{1-y}As$ multiquantum wells, pulsed MBE grown, photoluminesc. spectra 3—52823
- $Al_xGa_{1-x}As$/GaAs, weak luminesc. spectra, meas. by photoemission technique 3—3787
- $Al_xGa_{1-x}As$/GaAs heterostruct., MBE grown, mobility enhancement using superlattice struct. 3—57413
- $Al_xGa_{1-x}As$/GaAs multiple quantum well junction laser, MBE grown, performance 3—17495
- $Al_xGa_{1-x}As$-GaAs heterostruct., MBE growth, minicomputer control system, software *(German)* 3—39053
- $Al_xGa_{1-x}As$-GaAs heterostructures, MBE growth conditions effect on elec. and optical props. 3—42965
- $Al_xGa_{1-x}As$-GaAs heterostructure, hopping cond. in Landau level tails between 10 mK and 1K 3—43274
- $Al_xGa_{1-x}As$-GaAs heterojunctions, plasticity and strength studies *(Russian)* 3—47035
- $Al_xGa_{1-x}As$-GaAs modulation doped heterostruct., current transport meas. at moderate fields 3—8562
- $Al_xGa_{1-x}As$-GaAs quantum well heterostruct. lasers and superlattices, high press. optical measurements 3—1631
- $Al_xGa_{1-x}As$-GaAs superlattice, impurity band tails calc. 3—57310
- $Al_yGa_{1-y}As$ solid soln., multistage solar cell with p-n heterojunctions 3—19589
- AlGaAsGaAs multiple quantum well stripe lasers, CW longit. mode spectra 3—6972
- $Al_xGa_{1-x}As_{1-y}P_y$, LPE growth on $GaAs_{0.61}P_{0.39}$ (100) 3—39050
- AlGaAsSb long-wavelength (1.3 to 1.6 μm) photodetectors for fibre optical communications, review 3—12361
- AlGaAsSb, on GaSb, low temp. LPE growth conditions and props. 3—42955
- AlGaAsSb/GaSb p-n junction solar cells, conversion efficiency 3—53516
- $Al_xGa_{1-x}As_ySb_{1-y}$, spinodal decomp. and clustering 3—18466

gallium arsenide continued
- $(Al_{0.5}Ga_{0.5})_{0.48}In_{0.52}As$, MBE growth on InP substrate, Schottky diode and MESFET fabrication 3—8985
- $(Al_xGa_{1-x})_yIn_{1-y}As$, lattice matched to InP, MBE growth and elec. and optical props. 3—24132
- $Al_xGa_yIn_{1-x-y}As$, solid-phase miscibility gap and spinodal decomposition, theory 3—42780
- $Al_{0.3}Ga_{0.7}P_{0.01}As_{0.99}$ laser heterostruct., MBE growth 3—1666
- $Al_xGa_{1-x}P_yAs_{1-y}$, organometallic VPE growth, composition control 3—18576
- AlSb film on GaAs, MBE growth and elec. and struct. props. 3—58051
- AuGe-GaAs ohmic contact, laser beam annealed, surface and subsurface morphology 3—57196
- $Cd_{1-x}Zn_xS$/p-GaAs heterojunction, trap states in space-charge region, AC admittance study 3—23470
- CraAs:Cr, semi-insulating, Cr lattice location, ion channelling and PIXE studies 3—56916
- Ga-In-As-Ge(Sn), liquid quaternary phases, melting diagram meas. and calc. 3—13410
- GaAS:Cr, electrical conductivity and Hall effect meas., using two electrometers 3—45164
- (GaAl)As /GaAs DH lasers for optical communication systems *(Czech)* 3—6983
- GaAlAs buried optical guide laser, linewidth enhancement factor, theory and meas. 3—41825
- GaAlAs CW lasers, cavity length effects on 20 μm stripe laser waveguiding 3—22067
- GaAlAs CW room temp. laser *(Chinese)* 3—41864
- GaAlAs closely coupled twin stripe lasers, bistability obs. 3—22065
- GaAlAs composite CW laser module 3—22119
- GaAlAs DH injection laser amplifier, parameters determ. from superlum. characts. 3—27057
- GaAlAs DH laser, long-lived, Cu identification by SEM, cathodoluminesc., EBIC and electron probe anal. 3—50661
- GaAlAs DH laser, subnanosec., pulsed current driven 3—27047
- GaAlAs DH lasers, effects of 140 Mbit/s operation on degradation 3—37028
- GaAlAs diode laser, actively mode-locked, 7 Gbit/s coherent pulse generation 3—1677
- GaAlAs diode laser, pulse-current pumped, ps light pulse obs. 3—12192
- (GaAl)As dual wavelength lasers *(French)* 3—41876
- GaAlAs dual-wavelength laser 3—6970
- (GaAl)As GHz bandwidth lasers and optical detectors for signal processing appls. 3—17494
- GaAlAs gain-guided-stripe DH laser with high kink power grown by organometallic VPE 3—46239
- GaAlAs heterojunction laser diodes, harmonic and intermodulation distortion 3—46214
- (GaAl)As heterostructure laser, slider-induced convection simulation in horizontal LPE slider system 3—34249
- GaAlAs heterostructure laser, operational life improvement 3—37043
- GaAlAs injection lasers, commercial, high-freq. characts. 3—6978
- GaAlAs injection locked lasers, locking bandwidth asymmetry 3—17496
- p-GaAlAs, LPE growth on GaAs, Be and Zn diffusion obs. 3—52982
- GaAlAs, LPE system for semicond. heterostructure laser growth, slider induced convection 3—24160
- GaAlAs laser, direct pumping, high-speed source development 3—7004
- (GaAl)As laser, gain guided diode, CW high power, Al_2O_3 coated mirror facets, reflectivity 3—37076
- GaAlAs laser, phase locked arrays, optical output power 3—27042
- GaAlAs laser diode, antireflection-coated, polarisation control by external optical feedback 3—41889
- (GaAl)As laser diode phase-locked array emitting 2.6 W CW 3—46212
- GaAlAs laser diodes, reliability improvements, review 3—6982
- GaAlAs laser electronic difference freq. control 3—41877
- GaAlAs laser freq. stabilisation using Doppler-free spectrum of Cs D_2-line 3—37037
- GaAlAs laser frequency stability, effect of intensity noise reduction by electronic feedback 3—41892
- GaAlAs lasers, correl. of low-freq. intensity and freq. fluctuations 3—12197
- GaAlAs lasers, forward bias voltage characts. 3—22069
- GaAlAs multiple quantum-well heterostruct. laser development and characterisation for optical communication appls. 3—56239
- GaAlAs, organometallic VPE growth on large scale 3—43751
- GaAlAs proton stripe geometry laser, MOCVD grown, characts. 3—22110
- GaAlAs quantum well heterostructure laser uniformity 3—1625
- GaAlAs, recombination enhanced defect processes and device degradation 3—56909
- GaAlAs red ultra-high brightness 500 mcd LED, LPE, optical communication appls. 3—22257
- GaAlAs, scintillator, with monolithically integrated photodiode, detector 3—50165
- GaAlAs single mode injection laser diode performance, under conditions of fluid immersion and hydrostatic press. 3—22099
- GaAlAs single mode semicond. laser, relax. resonance effects in field spectrum 3—41823
- GaAlAs single-mode lasers, phase noise and spectral line shape 3—56195
- GaAlAs TJS laser optical detector for detect. at Gbit/s rates 3—42030
- (GaAl)As TS lasers with reduced facet reflectivities, noise and longit. mode characts. 3—56260
- GaAlAs, VPE growth, use of low press. 3—42960
- GaAlAs:H_2S(Se), doping relationships during MOCVD growth 3—42632
- GaAlAs:Mg one-watt CW visible single-quantum-well lasers grown by OM-VPE 3—37026
- (GaAl)As/GaAs channelled substrate injection laser prep. and props. 3—46232
- GaAlAs/GaAs DH lasers, Sn doped and undoped, MBE grown, p-n junction positioning study 3—41835
- GaAlAs/GaAs double heterostructure junction lasers, fine struct. of freq. spectrum *(Japanese)* 3—56253
- GaAlAs/GaAs high power phase-locked laser array 3—46240
- GaAlAs/GaAs laser, current injection induced acoustic signals 3—1632
- GaAlAs-GaAs DH laser diodes for gain-switched picosecond pulse generation 3—22064
- GaAlAs-GaAs heteroface solar cell, design optimisation, reflection loss effect 3—29386
- GaAlAs-GaAs oxide-stripe lasers, 880 nm, pulse-power perform. and stability 3—22061
- GaAlAs-GaAs superlattice, third order nonlinear optical susceptibility 3—27129

gallium arsenide continued
GaAlAs-GaAs wavelength division solar cells, MOCVD growth 3−53515
p-$Ga_{0.2}Al_{0.8}As$/p-$Ga_{1-y}Al_yAs$/n-$Ga_{1-y}Al_yAs$ solar cells, conversion efficiency 3−53517
$Ga_{1-x}Al_xAs$, coherent off-axis epitaxial layers, X-ray multiple diffr. patterns 3−13665
$Ga_{1-x}Al_xAs$, electron irrad., electron trap optical ionisation cross-sections, DLTS meas. 3−43092
$Ga_{1-x}Al_xAs$, electron mobility and deformation pots, meas. in X-conduction band minima 3−18703
$Ga_{1-x}Al_xAs$, electron traps due to electron irrad. 3−33675
$Ga_{1-x}Al_xAs$ epitaxial films, band gap energy, photoacoustic method 3−51992
$Ga_{1-x}Al_xAs$ epitaxial layer characterization by X-ray double diffr. *(French)* 3−28226
$Ga_{1-x}Al_xAs$ epitaxial multi-layer solar cell fabrication and testing, progress report 3−53545
$Ga_{1-x}Al_xAs$, exciton emission, luminescence study 3−52850
$Ga_{1-x}Al_xAs$ film, capillary liq. epitaxy 3−43776
$Ga_{1-x}Al_xAs$ heterojunction injection laser, monolithic-hybrid joining to As_2S_3 glass waveguide 3−22259
$Ga_{1-x}Al_xAs$ lasers, visible and IR, catastrophic degradation level meas. 3−27114
$Ga_{1-x}Al_xAs$, MBE grown, comp. anal. by atomic absorpt. spectroscopy and X-ray diffr. *(French)* 3−52954
$Ga_{1-x}Al_xAs$ variable gap films, photoelectron spectra, electron diffusion length 3−14440
$Ga_{1-x}Al_xAs$ variable-gap structs., isothermal liq. epitaxy 3−28234
$Ga_{1-x}Al_xAs$ visible laser (740 nm), improved lifetime by reducing bonding stress 3−27076
$Ga_{1-x}Al_xAs$:N, ion-implanted, x=0.2-0.8, photoluminescence studies *(Chinese)* 3−34132
n-$Ga_{1-x}Al_xAs$:Se, elec. resist., Hall effect meas., impurity energy levels 3−23510
p-$Ga_{1-x}Al_xAs$:Zn, elec. resist., Hall effect meas., impurity energy levels 3−23510
$Ga_{1-x}Al_xAs$:Zn, LPE grown, shallow Zn diffusion obs. at 600°C 3−33499
$Ga_{1-x}Al_xAs$/GaAs heterojunctions, epilayer and interface, Raman scatt. meas. 3−14266
$Ga_{1-x}Al_xAs$-GaAs cascade solar cell using n-p-n struct. 3−19590
$Ga_{1-x}Al_xAs$-GaAs quantum well wires, MBE growth and cathodoluminesc. props. 3−3825
$Ga_{1-x}Al_xAs$-GaAs quantum well heterostructs., MOVPE growth 3−3965
$Ga_{1-x}Al_xAs$-GaAs solar cell, role of photoluminesc. in efficiency 3−58539
$Ga_xAl_{1-x}As$ layered stripline rib waveguide, mode selection 3−32470
$Ga_xAl_{1-x}As_yP_{1-y}$, vacancy and antisite defect deep levels, alloy composition effects 3−43097
$Ga_{0.8}Al_{0.2}As_ySb_{1-y}$:Be implanted avalanche photodetectors, tunnelling in reverse dark current charact. 3−20895
$Ga_xAl_yIn_{1-x-y}As/Al_xIn_{1-x}As$ optically pumped double heterostructure laser, room temp. lasing action 3−41824
$Ga_{1-x}Al_xSb_{1-y}As_y$/GaSb, LPE growth and phase diagram 3−3970
$Ga_{1-x}Al_xSb_{1-y}As_y$-GaSb, LPE, liquid phase composition stabilisation obs. 3−33610
GaAs (001)-Al, MBE grown, band bending, angle-resolved UPS study 3−52252
n-GaAs metal-semiconductor-metal stripline photodetectors, first order optoelectronic correlations meas. 3−49445
GaAs photoconducting picosecond switch, appl. to direct gain modulation of semicond. laser 3−27095
GaAs:Al, diffusion through surface layers, X-ray and photoluminescence study 3−8258
GaAs:Al, local lattice dynamical force const. variations caused by isoelectronic impurities 3−47071
GaAs:Al, spatial distrib. profile of Al form $^{27}Al(p,\gamma)^{28}Si$ resonant reaction 3−46975
GaAs:B, ion implanted, compensation mechanisms, study 3−33665
GaAs:Be MBE layers, impurity and defect levels 3−3102
GaAs:C, MOVPE grown, photoluminescence study 3−43752
GaAs:C(Si), host isotope fine struct. of local modes 3−18418
GaAs:C(Zn)(Si)(Ge), shallow acceptors, luminesc. study 3−52828
GaAs:Cr, 3 inch diameter crystal growth by horizontal Bridgeman technique, characts. 3−24115
GaAs:Cr, APR study, dynamic Jahn-Teller effect 3−8721
GaAs:Cr, boat grown bulk, Cr level and EL2 electron traps, DLTS study 3−8443
GaAs:Cr, carrier lifetime determ., dynamic phase grating method 3−18720
GaAs:Cr, Cr-related intracentre photolum. 3−23994
p-GaAs:Cr, epitaxial, photo-Hall effect and photocond. 3−18735
GaAs:Cr, impurity trigonal sites, model for luminescence lines 3−42624
GaAs:Cr, ion implanted, Cr redistribution at surface, elec. fields effects, thermodynamic model 3−46979
GaAs:Cr, LEC grown, radiotracer determ. of Cr distrib. 3−13255
GaAs:Cr, no-phonon photoluminescence spectra, energy level scheme 3−8877
GaAs:Cr, O, steady-state photoconductivity response 3−18738
GaAs:Cr, phonon spectroscopy using supercond. tunnel junctions 3−2695
GaAs:Cr, photoinduced transient optical absorption of Cr^{4+} 3−23982
GaAs:Cr, photolum., models 3−19171
GaAs:Cr, positive identification of $Cr^{4+} \rightarrow Cr^{3+}$ thermal transition, Hall effect meas. 3−23409
GaAs:Cr, Se, ion implanted, damage annealing, Rutherford backscatt. and TEM studies 3−33311
GaAs:Cr, semi-insulating, nonuniformity and dislocations, photoluminesc. intensity study 3−38858
GaAs:Cr, semi-insulating, thermal conversion, cathodoluminesc., photoluminesc. and SIMS study 3−43635
GaAs:Cr, semi-insulating, Cr conc. distribution determination by illumination induced cond. changes 3−51647
GaAs:Cr, thermal cond. stress depend. and tunnelling 3−47175
GaAs:Cr, Zeeman spectroscopy meas. of absorption and luminescence lines 3−8807
GaAs:Cr,Te, photoconductivity, defect struct. 3−28384
GaAs:Cr S-diodes, current-volt. characts. and current instability in mag. field 3−38468
GaAs:Cr substrate for $Al_xGa_{1-x}As$ epitaxial layer, elec. cond. and transfer doping effect 3−23509
GaAs:Cr substrates, Cr conc. distrib., non-destructive determ. 3−33283

gallium arsenide continued
GaAs:Cr wafer, Si diffusion from thin film by pulsed laser irrad. 3−57145
GaAs:Cr^{2+}, vibronic coupling in trigonal field, luminesc. spectra 3−33685
GaAs:Cr^{2+} deep levels and Jahn-Teller effect 3−52095
GaAs:Cr(Cu)(Fe), deep levels related to transition metal impurities, ionisation energy meas. 3−3105
GaAs:Cr(S)(Si)(Se), lattice incorporation of n-type dopants 3−22924
GaAs:Cu, deep impurity centres, Jahn-Teller effect suppression under uniaxial press. 3−28307
n-GaAs:Cu, electron irrad., photoluminesc. meas. 3−3798
GaAs:Cu, electron irrad., defect interaction with Cu atoms, photoluminescence study 3−37949
GaAs:Er, ion implanted, luminescence line profile 3−19187
GaAs:Fe, diffusion, masking props. of SiO_2 film 3−8257
GaAs:Fe p-π-ν-n struct., photoconductivity under forward bias 3−18777
GaAs:Fe VPE layers, deep level activation energy and optical cross section 3−47286
GaAs:Fe^{2+}, photons and phonons stimulated emission study 3−52809
GaAs:Ge, doped and undoped, MBE grown, elec. and optical props., effect of As vapour species 3−43595
GaAs:Ge, homojunction interfaces, carrier compensating centres, luminescence and DLTS study 3−3273
GaAs:Ge MBE layer doping, thermodynamic study 3−2580
GaAs:H, amorphous, RF sputtered, microstructure, correlation with electronic props. 3−18572
GaAs:H, passivation of dominant deep level EL2 3−23308
GaAs:H amorphous, mol. vibr., H bridges, IR spectra study 3−3719
GaAs:H_2S(Se), doping relationships during MOCVD growth 3−42632
GaAs:He, ion implanted, depth distrib. and range parameters for He, SIMS study 3−13252
GaAs:In, Sb, isovalent impurity interaction with system of point defects 3−37950
GaAs:In(Sb), Czochralski grown, doping effect on struct. perfection 3−33281
GaAs:Mg, anomalous diffusion behaviour 3−23089
GaAs:Mg, carrier profile, correlation with Mg atomic profiles, SIMS and Hall effect study 3−3218
GaAs:Mn, optical-transition cross sections involving impurities 3−38855
GaAs:Mn; impurity electronic struct., SCF multiple scatt. $X\alpha$ calc. 3−8451
GaAs:N dislocation-free cryst. growth by N doping 3−8964
GaAs:O, DLTS anal. using lock-in amplifier *(French)* 3−20872
GaAs:O, deep level, photoluminec. study 3−14331
GaAs:O S-type diodes, charging kinetics of impurity levels 3−8572
n-GaAs:O-Au Schottky barrier diode, deep level studies 3−18646
GaAs:O(B)(Ne), ion implanted, electron trap EL2, photocapacitance transients study 3−28294
GaAs:O(Fe)(Cr), deep impurity centre ionisation 3−28304
GaAs:S, Te, dislocation-point defect-dopant interaction, effects on recombination processes 3−37951
GaAs:S, VPE grown, doping anisotropy, Hall effect and photoluminescence studies 3−42631
n^+-GaAs:S polycrystalline films, MOCVD growth using S_2Cl_2 dopant source, solar cell appl. 3−33278
GaAs:Sb heterojunction photodiodes used for solar corona Fe XIII 10747 Å line 3−20240
GaAs:Sb(In) epitaxial films, elec. props. and acceptor centres 3−57441
GaAs:Se, defect struct. after Se implantation through Si_3N_4 encapsulant layer 3−18322
GaAs:Se, Sn, semi-insulating, AlN capped annealing 3−37940
GaAs:Si, 1.4 eV Si-related emission, luminesc. characts. 3−43613
GaAs:Si, Cr, multiply scanned electron beam annealing 3−56991
GaAs:Si, ion implanted, IR rapid thermal annealing, MESFET appl. 3−8071
GaAs:Si, LEC grown, dislocation distrib., etching study 3−42607
GaAs:Si, LPE growth, cond. inversion 3−8603
GaAs:Si, liquid doping in CVD, electron mobilities, FET devices 3−18323
GaAs:Si, MBE grown, cryst. orientation depend. of Si autocompensation 3−13650
GaAs:Si, MBE growth of high-purity layers and elec. props. meas. 3−34231
GaAs:Si, MBE growth on heat-treated semi-insulating GaAs:Cr substrate, SIMS study 3−39034
GaAs:Si, post-implantation annealing, capless technique, carrier conc. and mobility 3−53096
GaAs:Si p-n structures, radiative recomb. characts., effect of In impurities 3−38920
GaAs:Si^+, ion implanted, TEM damage studies and elec. profile meas. 3−47006
GaAs:Sn, dopant electronic config., Mossbauer study 3−43091
GaAs:Sn, epilayers, low pressure metal-organic CVD growth using tetraethyltin Sn source 3−34236
GaAs:Sn, MBE grown, surface segregation model for Sn profile, SIMS study 3−13663
GaAs:Sn, MBE growth, Sn doping using $SnSe_2$, photoluminesc. studies 3−37941
GaAs:Sn FET, MBE growth using high throughput system 3−52951
GaAs:Te, dislocation loops with stripe contrast, high resolution electron microscopy study 3−18310
GaAs:Te, heavily doped crystals influence of polarity on facet effect *(Chinese)* 3−2591
GaAs:Te, microdefects and microprecipitates investig. *(Chinese)* 3−8050
GaAs:Te, Zn, defect struct. induced by Zn diffusion, TEM study 3−27944
GaAs:Te crystals impurity nonuniformity determ., by interference microscopy 3−46981
GaAs:Te epilayers, luminescence study of Te donor 3−43621
GaAs:Ti, ion implanted, photoluminescence spectra 3−43626
GaAs:Zn, LPE grown, shallow Zn diffusion obs. at 600°C 3−33499
GaAs:Zn, sputtering, ionisation of sputtered atoms and substrate surface excitations 3−52877
GaAs:Zn, Te, N, Zn diffusion profiles, Hall effect and elec. cond. study 3−8085
GaAs:Zn, VPE growth for negative electron affinity photocathodes 3−47779
n-GaAs/(Se^{2-}/Se_n^{2-})/Pt liquid solar cell *(French)* 3−29395
GaAs/$Al_xGa_{1-x}As$ LPE grown heterojunctions, two dimens. electron gas 3−43278
GaAs/$Al_xGa_{1-x}As$ multilayer reflector for surface emitting laser diode 3−50679

gallium arsenide continued
GaAs/AlGaAs heterostructures, two-dimens. electron gas, magnetophonon reson. 3−23479
GaAs/AlGaAs multi-quantum-well laser diodes, polarisation depend. gain 3−46211
GaAs/AlGaAs/BeO constricted DH large optical cavity laser, LPE grown, multichannel optical recording appl. 3−27074
$GaAs/Ga_{1-x}Al_xAs$ multiple quantum well struct., room temp. optical absorpt. saturation spectra 3−7082
GaAs/GaAlAs DH narrow diffused stripe lasers for high speed integrated optical transmitters 3−22109
GaAs/GaAlAs GRIN-SCH very low threshold laser structs. grown by MOCVD 3−56238
GaAs/GaAlAs graded refractive-index separate confinement heterostructure grown by OM-VPE, low threshold 3−6969
GaAs/GaAlAs multi-quantum well struct., Rayleigh scatt. at exciton resonance 3−8843
GaAs/Ge epitaxial heterostructures prep. by scanned CW laser annealing 3−57248
$In\text{-}GaAs/n\text{-}Al_xGa_{1-x}As$ heterostructures, organometallic VPE grown, interface states study 3−28416
GaAs/Si layers, thickness, refr. index, m-lines and refl. spectroscopy techniques, waveguide appl. 3−28916
$n\text{-}GaAs/SiO_2$ MOS diodes, spin-on layer prep. and elec. characts. 3−23493
GaAs-(AlGa)As multilayer structures, automated conductivity profiles 3−346
$GaAs\text{-}Al_{0.3}Ga_{0.7}As$, quantised Hall resist., fine struct. consts. 3−23411
$GaAs\text{-}Al_{1-x}Ga_xAs$ modulation doped heterostructure, high-mobility electrons, electric field induced heating obs. 3−28417
$GaAs\text{-}Al_xGa_{1-x}As$, electron probe microanalysis, improved spatial resolution 3−9369
$GaAs\text{-}Al_xGa_{1-x}As$ DH, photolum. spectra, anomalous bands 3−3816
$GaAs\text{-}Al_xGa_{1-x}As$ heterostructure, photo-EMF, forward current flow mechanism, electrolum. study 3−18774
$GaAs\text{-}Al_xGa_{1-x}As$ heterojunction, subband struct. and light scatt. spectra 3−28423
$GaAs\text{-}Al_xGa_{1-x}As$ heterojunction, low temp. mobility 3−28424
$GaAs\text{-}Al_xGa_{1-x}As$ heterostruct., MBE, minicomputer controlled substrate and effusion cell operation *(German)* 3−34234
$GaAs\text{-}Al_xGa_{1-x}As$ heterostructures, modulation doped, electron or γ-irrad., transport props. 3−38461
$GaAs\text{-}Al_xGa_{1-x}As$ heterostructure, selectively doped, two-dimens. electron gas mobility and conc. 3−52231
$GaAs\text{-}Al_xGa_{1-x}As$ heterostruct., intersubband scatt. study 3−57418
$GaAs\text{-}Al_xGa_{1-x}As$ n-n heterojunction, photovoltaic response *(Chinese)* 3−33782
$GaAs\text{-}Al_xGa_{1-x}As$ semicond. superlattice with tunable electronic props. 3−38462
$GaAs\text{-}Al_xGa_{2-x}As$ heterostructure, magneto-quantum transport at low temp. 3−3306
GaAs-AlAs heterostructures, modulation doped, mobility enhancement 3−3300
GaAs-AlAs interface, antisite and vacancy defects, electron states 3−43096
GaAs-AlAs superlattices, homopolar interface structural and electronic props. 3−23473
GaAs-AlGaAs, effusion processes, in MBE 3−28242
GaAs-AlGaAs DH laser, transverse mode selection, ambipolar excess carrier diffusion 3−46215
GaAs-AlGaAs heterojunctions and superlattices, electron transport *(Japanese)* 3−28426
GaAs-AlGaAs multi-quantum-well laser diode, dynamic behaviour 3−46213
GaAs-AlN MIS structures, reactive MBE growth 3−24142
n-GaAs-Al(Au)(Sn), MIS-type Schottky barrier, electron traps in oxide layer, detrapping study 3−23499
GaAs-anodic oxide interface, struct. and elec. props. 3−33800
GaAs-Au thin film interface, microstruct. and colour, heating effects 3−51963
n-GaAs-Au/Ni/Au-Ge ohmic contacts, characts., Auger and SEM anal., ageing effects 3−52250
n-GaAs-Au-Ge ohmic contacts, characts., Auger and SEM anal., ageing effects 3−52250
$GaAs\text{-}Ga_{1-x}Al_xAs$ DH lasers, MBE growth at high substrate temp. 3−43740
$GaAs\text{-}Ga_{1-x}Al_xAs$ heterostructures, quantum well and modulation doped, MOVPE growth 3−43271
$GaAs\text{-}Ga_{1-x}Al_xAs$ laser, direct gain modulation by GaAs picosecond optoelectronic switch 3−27095
$GaAs\text{-}Ga_{1-x}Al_xAs$ quantum well structures, energy spectrum of donors 3−8447
$GaAs\text{-}Ga_{1-x}Al_xAs$ quantum wells, elec. field effect on luminescence 3−34143
$GaAs\text{-}Ga_{1-x}Al_xAs$ quantum well structs., Wannier exciton binding energies 3−47273
$GaAs\text{-}Ga_{1-x}Al_xAs$ quantum well structs., hydrogenic impurity state energy levels 3−47308
GaAs-GaAlAs, OM-VPE growth, effect of graphite baffles. 3−43768
GaAs-GaAlAs DH laser, high rate AM and FM characts. 3−22132
GaAs-GaAlAs graded barrier single quantum well lasers, CVD grown, threshold current densities 3−12143
GaAs-GaAlAs heterostructures, high-mobility selectively doped, grown by LP OM-VPE 3−28418
GaAs-GaAlAs laser, dielectric guiding due to inverted gain profile 3−1630
GaAs-GaAlAs lateral surface superlattice, transport 3−57416
GaAs-GaAlAs p-n-p-n negative resistance laser with low threshold current density 3−22117
GaAs-GaAlAs quantum well laser structs., MOVPE growth 3−43767
GaAs-GaAlAs stripe geometry multiple quantum well lasers, CW high-power single-mode operation 3−37029
GaAs-GaN MIS struct., thin film, passivation interface state density study 3−52262
GaAs-Ga(As), interphase tension of solutions in metals 3−8300
GaAs-In interface, metallurgical props., effect on elec. prop. of ohmic contacts to GaAs 3−13908
$GaAs\text{-}In_xGa_{1-x}As(GaAs_{1-x}P_x)$ strained superlattice lasers, CW operation at 300K 3−50656
n-GaAs-Ni/Au-Ge ohmic contacts, characts., Auger and SEM anal., ageing effects 3−52250

gallium arsenide continued
GaAs-O-Cs photocathode, (110) surface electronic struct., photoelectron spectra study 3−52892
GaAs-oxide interface electron state theory 3−43255
$n\text{-}GaAs\text{-}p\text{-}GaAs\text{-}p\text{-}Al_xGa_{1-x}As$ heterocells, design and test results in 200 W photovoltaic unit 3−9423
GaAs-polymer interface, polymer film plasma polymerisation and MIS struct. elec. props. 3−24155
GaAs-Pt interface, interfacial reaction and Schottky barrier 3−51868
$GaAs\text{-}SiO_2\text{-}SiC$, photosensitivity of semiconductor-insulator-semiconductor structures 3−33779
GaAs-V, superconductive tunnelling study 3−8629
$GaAs\text{-}V_3Si$, superconductive tunnelling study 3−8629
GaAs-ZnO composite struct., guided wave acoustooptic interactions 3−43513
$GaAs_{1-x}\text{-}GaAs$ superlattices, strained, absorpt. meas. at high press. 3−47619
$(GaAs)_x(Ge_2)_{1-x}$ solid soln., composition depend. phase transition 3−13440
$(GaAs)_x(InAs)_{1-x}$, specific heat and thermodynamic functions, 5 to 300K 3−23055
GaAsP, electron beam annealing of defects during SEM meas. 3−42669
GaAsP, MOCVD growth 3−52966
GaAsP, NEA, energy- and spin-anal. of polarised photoelectrons 3−47751
GaAsP, quantitative anal., electron backscatt. coeff. meas. 3−19541
GaAsP, time-resolved cathodoluminescence in scanning electron microscopy 3−52857
$GaAs_{0.11}P_{0.89}$:N, Te, Zn LED, yellow, current dependent electroluminescence decay and degradation behaviour obs. 3−3822
$GaAs_{0.15}P_{0.85}$ waveguides, light wave diffr. by dynamic gratings 3−7159
$GaAs_{0.4}P_{0.6}\text{-}GaP$ strained-layer superlattice, photocurrent spectroscopy 3−43273
$GaAs_{0.6}P_{0.4}$ epilayer photoelectrochemical cells, stabilisation and luminesc. props. 3−14958
$GaAs_{0.82}P_{0.18}$, high efficiency solar cells, MOCVD grown 3−24576
$GaAs_{1-x}P_s$ waveguide, light wave diffr. by optically induced dynamic gratings 3−7158
$GaAs_{1-x}P_x$ epitaxial films, secondary electron emission 3−19232
$GaAs_{1-x}P_x$; negative electron affinity cathodes, spin polarised photoemission obs. 3−24084
$GaAs_{1-x}P_x$, organometallic VPE grown, optical and SEM anal. 3−43753
$GaAs_{1-x}P_x$, photoluminescence and Raman scatt. 3−43625
$n\text{-}GaAs_{1-x}P_x$, semicond.-liq. junction solar cell 3−29387
$GaAs_{1-x}P_x$, VPE, deep level electron traps, transient capacitance spectroscopy study 3−52054
$GaAs_{1-x}P_x$:Cd, acceptor photoionisation, IR absorption spectra study 3−19164
$GaAs_{1-x}P_x$:N, luminescence decays of bound excitons 3−52849
$GaAs_{1-x}P_x$:N, thermal quenching of no-phonon emission bands and phonon sidebands 3−19192
$GaAs_{1-x}P_x$:N, transfer of excitons bound to N traps, time resolved luminesc. study 3−47689
$GaAs_{1-x}P_x$:N, Zn epitaxial layers, cathodoluminesc. doping level influence 3−8889
$GaAs_xP_{1-x}$, epitaxial, EXAFS study 3−38958
$GaAs_yP_{1-y}$ MBE growth on VPE $GaAs_{0.63}P_{0.37}$ substrate, struct. and comp. control 3−13664
$GaAs_{1-x}P_x-GaAs_{1-y}P_y$ superlattices stimulated emission and photoluminescence 3−43564
GaAsSb, equilib. diagrams, influence of chemical disorder and epitaxial substrate *(French)* 3−42957
$GaAs_{1-x}Sb_x$ p-n junctions, avalanche breakdown voltage, misfit dislocations 3−8569
$GaAs_{1-y}Sb_y$, OMVPE grown using trimethylarsenic and trimethylantimony, review 3−24145
GaAs;Si, implanted, high temp. thermal and laser annealing, luminesc. data *(Russian)* 3−38888
$Ga_{1-x-y}In_xAl_yAs$, LPE growth on GaAs and near IR optical props. 3−3973
GaInAs and GaInAsP, low-press. CVD, review 3−8992
GaInAs p-i-n detectors for fibre optic communication appls. 3−32506
GaInAs, VPE growth, use of low press. 3−42960
GaInAs-AlInAs heterojunctions, quantum transport, intersubband scatt. effect 3−3305
GaInAs-AlInAs heterojunctions, enhanced electron g-factors, tilted field method 3−47416
$Ga_{0.47}In_{0.53}As$ film, MBE grown, optical quality 3−19273
$Ga_{0.47}In_{0.53}As$ planar doped barrier photodetectors, detectivity calcs. 3−45202
$Ga_{0.47}In_{0.53}As$, single longitudinal-mode optical phonon scatt. obs. 3−47334
$n\text{-}Ga_{0.47}In_{0.53}As$, VPE growth and characterisation for microwave applications 3−19281
$Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$ heterojunctions, electron mobility, spacer thickness and electron density effects 3−47412
$Ga_{0.47}In_{0.53}As/InP$ p-i-n photodiodes, performance characts. and life test data 3−40692
$Ga_{0.80}In_{0.20}As$ high quantum efficiency junction, OMVPE grown, solar cell appl. 3−14939
$Ga_{1-x}In_xAs$, atomic-scale struct., EXAFS study 3−14388
$Ga_{1-x}In_xAs$, OMVPE grown using trimethylarsenic and trimethylantimony, review 3−24145
$Ga_{1-x}In_xAs$, VPE growth, equilibrium thermodynamics *(Czech)* 3−47235
$Ga_{1-x}In_xAs$, vibrations and optical props., coherent pot. approx. 3−33370
$Ga_xIn_{1-x}As$, n- and p-type, on InP substrate, optical, crystallographic, and transport props. 3−43597
GaInAsP 1.3 μm simple stripe geometry and advanced struct. laser comparison monomode fibre optic communication system appl. 3−41878
GaInAsP DH, LPE growth and props., effect of different active layer thickness 3−43774
GaInAsP DH laser material assessment by photoluminesc. 3−22058
GaInAsP, equilib. diagrams, influence of chemical disorder and epitaxial substrate *(French)* 3−42957
GaInAsP laser based optical emitter for 1.3 μm wavelength multimode fibre systems 3−56345
GaInAsP lasers, forward bias voltage characts. 3−22069
GaInAsP long wavelength buried-crescent laser struct. on channelled substrates, formation by LPE 3−22114
GaInAsP, shallow proton stripe laser diodes, life tests rel. to LPE and MOVPE prep. techniques 3−37075
GaInAsP, VPE growth, use of low press. 3−42960

gallium arsenide continued
GaInAsP VPE layer, elec. props. improvement by cooling HCl liq. source 3−23514
GaInAsP/InP 1.3 micron buried optical waveguide lasers with low threshold 3−46220
GaInAsP/InP BH lasers, current/freq. modulation characts. when directly modulated 3−6971
GaInAsP/InP DFB 1.3 μm lasers, room-temp. CW operation 3−6967
GaInAsP/InP etched mirror and groove-coupled laser device for integrated optics 3−7009
GaInAsP/InP lens-like strip waveguide lasers, single transverse mode condition 3−6977
GaInAsP/InP V-groove-laser for 1.3 μm wavelength region 3−41838
GaInAsP-InP, lattice-matched, dopant conc., photoluminesc. study 3−52827
GaInAsP-InP 1.3 μm DFB lasers, InP surface corrugations preserved from thermal deformation during LPE 3−50673
GaInAsP-InP 1.5 μm DFB BH laser fabrication, single-longit. mode operation 3−17528
GaInAsP-InP 1.5 μm BH laser with reactive ion etched facet mirrors, CW operation 3−50660
GaInAsP-InP double heterostructure MBE lasers, 1.3 μm wavelength 3−22104
GaInAsP-InP lasers, lens-like strip waveguide, single transverse mode condition, theory 3−32356
GaInAsP-InP lasers, short cavity, multilayer reflector design 3−32387
GaInAsP-InP monolithic two section lasers, single longit. mode light pulse generation by current modulation 3−7037
GaInAsP-InP monolithic photovoltaic power converter at 1.06 μm 3−14946
GaInAsP-InP passive optical waveguides, fabrication 3−37178
GaInAsP-InP:Be DH laser diodes, Be implantation fabrication 3−37038
$Ga_{0.29}In_{0.71}As_{0.61}P_{0.39}$/InP laser diode, Auger recomb., free-carrier losses 3−12144
$Ga_{0.55}In_{0.45}As_{0.1}P_{0.9}$ crystal, conduction electron g-factor sign determ. by Hanle effect 3−3039
$Ga_{1-x}In_xAs_{1-y}P_y$ monolithic coupled-cavity laser, single mode operation 3−27043
$Ga_{1-x}In_xAs_{1-y}P_y$-InP mushroom stripe laser, fabrication and low threshold CW operation at 1.27 μm 3−22111
$Ga_xIn_{1-x}As_YP_{1-y}$ high purity layers lattice matched to InP, LPE growth 3−42958
$Ga_xIn_{1-x}As_yP_{1-y}$ LPE layer, electron and hole mobilities and scatt. 3−18798
$Ga_xIn_{1-x}As_yP_{1-y}$, lattice matched to InP, high freq. elec. transport 3−13850
$Ga_xIn_{1-x}As_yP_{1-y}$, lattice-matched to InP and GaAs, thermal resist. 3−18522
$Ga_xIn_{1-x}As_yP_{1-y}$ stripe lasers, influence of press. on temp. sensitivity 3−1628
$Ga_xIn_{1-x}As_yP_{1-y}$, VPE growth and characterisation for microwave applications 3−19281
$Ga_yIn_{1-x}As_xP_{1-x}$, constituent ternary compounds, band struct., appl. of virtual cryst. approx. modification 3−47264
$Ga_xIn_{1-x}As_yP_{1-y}(Sb_{1-y})$, spinodal decomp. and clustering 3−18466
GaInPAs/InP CW buried meas-stripe heterostruct. lasers emitting in 1.5-1.6 μm range 3−56198
GaInPAs/InP heterolaser with external dispersive resonator tunable CW emission in 1.3 μ range 3−27058
GaInPAs/InP injection lasers, emission characts., temp. depend. 3−56199
GaInPAs-InP DH injection lasers, nonwaveguide mode operation 3−22116
GaInPAs-InP mesa-stripe heterostruct., injection laser, leaky mode emission 3−12152
GaInPAs-InP quaternary buried heterostruct. injection laser, high-power leaky mode operation 3−7012
GaP-$GaAs_{1-x}P_x$ superlattice, strained, Zn impurity induced disordering obs. 3−38236
GaP-$GaAs_{1-x}P_x$ superlattices, stimulated emission and photoluminescence 3−43564
GaPAsSb quaternary single cryst. growth from binary component alloyed mixture 3−34216
$GaP_xAs_ySb_{1-x-y}$, solid-phase miscibility gap and spinodal decomposition, theory 3−42780
GaP(Sb), amorphous, defects, elec. cond. and optical absorpt. studies 3−22778
Ge/GaAs epitaxial system, coherency of interphase boundary and elastic strain 3−51977
Ge-GaAs (110) interface, preparation and electronic props. 3−13889
Ge-GaAs heterojunctions, plasticity and strength studies *(Russian)* 3−47035
Ge-GaAs heterojunctions, gamma ray effects on noise characts. 3−52237
Ge-GaAs superlattice, MBE grown, ion channelling studies 3−47225
Ge-GaAs system, metastable continuous solid solns., prep. and props. 3−8369
$Ge_{2x}(GaAs)_{1-x}$ solid soln., band struct., LCAO calc. 3−8413
$Ge_{2x}(GaAs)_{1-x}$ solid solns., band struct., LCAO calc. 3−8415
$(Ge_2)_x(GaAs)_{1-x}$ solid soln., luminescence and electrophysical props. 3−14352
In-Ga-As-P batch prep. melts, prep. and props. rel. to LPE 3−9006
In-Ga-As-P system, phase equilibria, thermodynamic analysis 3−34287
In_x $Ga_{1-x}As_yP_{1-y}$, high-field electron transport 3−23396
InGa AsP systems for integrated optical circuits 3−32507
InGaAs epitaxially grown layers, Sn-doping effects on some properties 3−51634
InGaAs, hydride VPE growth on (100), (110), (111), (311) and (511) InP 3−8363
InGaAs, LPE on InP, self-supersaturation, simplified LPE technique 3−43766
InGaAs/GaAs strained superlattice structs., MBE growth and characts. 3−42964
InGaAs/InP:Be DH laser diodes room temp. pulsed operation 3−47365
InGaAs-InP, LPE growth rate, substrate orientation dependence 3−23203
InGaAs-InP DH laser, subjected to optical excitation, threshold characts. 3−6984
p-$In_{0.53}Ga_{0.47}As$, absence of Gunn effect, theory 3−47351
$In_{0.53}Ga_{0.47}As$, electron transport, compositional clustering effects 3−8482
$In_{0.53}Ga_{0.47}As$, high purity LPE growth and characterisation 3−43777
$In_{0.53}Ga_{0.47}As$ high-purity LPE layers, postgrowth heat treatment effects on elec. characts. 3−52278
$In_{0.53}Ga_{0.47}As$, LPE growth effects on structured InP substrates 3−42947

gallium arsenide continued
$In_{0.53}Ga_{0.47}As$, photoluminesc. spectra, band assignments 3−34145
n-$In_{0.53}Ga_{0.47}As$, temp. depend. electron vel.-field characts. at high elec. fields 3−28366
$In_{0.53}Ga_{0.47}As$, transferred-electron effect obs. in travelling-domain mode 3−52160
p-$In_{0.53}Ga_{0.47}As$-Al Schottky barrier, barrier height meas. 3−13883
p-$In_{0.53}Ga_{0.74}As$:Zn VPE layers, elec. and optical props. 3−18800
$In_{1-x}Ga_xAs$ epitaxial layers lattice matched to InP substrates, MBE growth 3−42970
$In_{1-x}Ga_xAs$, LPE growth on (100), (111)B faces, impurity and carrier concs. 3−8360
$In_{1-x}Ga_xAs$, liquid-solid equilibrium phase diagram calc. for solid solns. with miscibility gaps 3−43790
$In_xGa_{1-x}As$, current controlled LPE on InP (100) 3−19292
$In_xGa_{1-x}As$ diode simulator of solid-state laser 3−37147
$In_xGa_{1-x}As$ LPE growth on InP near solid instability 3−42951
$In_xGa_{1-x}As$ photocathodes, electron emission probability with negative electron affinity 3−47755
$In_xGa_{1-x}As$, thermal oxidation and native oxide-substrate reactions 3−4171
$In_xGa_{1-x}As$-GaAs superlattice, free enthalpy 3−8219
InGaAsP 10 kHz linewidth 1.5 μm external cavity laser with 55 nm tuning range 3−37030
InGaAsP, Auger recombination, phonon-assisted, theory 3−52813
InGaAsP BH 1.3 μm lasers with high T_0 3−6981
InGaAsP DFB lasers, InP surface corrugations fabricated using electron lithography 3−6968
InGaAsP DH laser, LPE growth, enhanced InP substrate protection 3−47784
InGaAsP distributed feedback lasers, hybrid LPE/MOCVD growth 3−32380
InGaAsP double channel BH laser diode with effective current confinement 3−12176
InGaAsP, growth by MBE, optical and elec. props. 3−24131
InGaAsP injection laser, transient spectra and mode partition noise obs. 3−6974
InGaAsP injection lasers, fast excitation, picosecond freq. chirping and dynamic line broadening obs. 3−37022
InGaAsP LPE growth on InP, appl. to DH lasers 3−29021
InGaAsP, LPE growth and charact., doping conditions 3−42959
InGaAsP LPE layers, electron irrad., defect states, DLTS study 3−57304
InGaAsP laser, freq. locking to first overtone vibr.-rot. lines of HF 3−27092
InGaAsP laser, threshold current, carrier heating effect 3−27041
InGaAsP laser spectrometer, near IR, high-resolution *(Japanese)* 3−10925
InGaAsP lasers, high power single mode, single step LPE fabrication 3−37021
InGaAsP lasers, lightly doped, radiative and nonradiative recomb. law 3−46209
InGaAsP lasers with lightly doped active layers, meas. of radiative recombination coeff. and carrier leakage 3−27049
InGaAsP long-wavelength (1.3 to 1.6 μm) photodetectors for fibre optical communications, review 3−12361
InGaAsP low threshold current 1.3 μm CW lasers, nonplanar VPE growth 3−50677
InGaAsP mode stabilised terrace lasers on semi-insulating InP 3−27054
InGaAsP, photoexcited carrier lifetime and Auger recombination 3−43192
InGaAsP quantum well lasers, Auger recombination rates calc. 3−50662
InGaAsP quaternary alloys, analytical model for gain spectra 3−22059
InGaAsP, recombination enhanced defect processes and device degradation 3−56909
InGaAsP short-cavity single-frequency BH lasers 3−37027
InGaAsP single mode lasers for fibre-optic appls. 3−22060
InGaAsP single mode lasers for fibre-optic communications 3−50672
p-InGaAsP solid soln., Auger recombination rate and luminescence 3−19186
InGaAsP superluminescent diode, lateral confinement at 1.3 μm 3−37034
InGaAsP/InP 1.3 μm BH lasers, linearity and noise characts. 3−41842
InGaAsP/InP DH laser diodes, high-speed modulated, mode partition noise characts. 3−27051
InGaAsP/InP DH laser, LPE grown, proton-defined stripe geometry 3−32357
InGaAsP/InP DH LEDs, dark defects, TEM obs. 3−43632
InGaAsP/InP DH lasers, dark defects under accelerated aging 3−50663
InGaAsP/InP distributed feedback lasers, lasing characts. in 1.5 μm range, temp. depend. 3−32358
InGaAsP/InP groove transverse junction laser, mode stabilisation mechanism 3−56257
InGaAsP/InP laser diodes, V-grooved-substrate buried heterostruct., etching, ageing 3−41869
InGaAsP/InP layers, struct. study of alloyed Au metallisation contacts 3−23188
InGaAsP/InP mode-stabilised terrace-large optical cavity laser fabricated on InP substrate 3−1664
InGaAsP/InP optoelectronic devices, monolithic integration 3−6995
InGaAsP/InP p^+n diodes, deep level electron and hole traps, DLTS study 3−47414
InGaAsP/InP p-i-n sensors for laser based optical emitter for 1.3 μm wavelength multimode fibre systems 3−56345
InGaAsP/InP V-grooved substrated buried heterostruct. laser emitting at 1.3 μm 3−7011
InGaAsP/InP:Cd(Zn) lasers, LPE grown, high quantum efficiency 3−27072
InGaAsP-InP 1.3 μm planoconvex waveguide lasers, characts. and optimum designs 3−22115
InGaAsP-InP 1.5 μm V-grooved substrate buried heterostruct. laser 3−50676
InGaAsP-InP buried heterostruct. stripe CW laser, fabrication by hybrid liq./gas phase epitaxy 3−41875
InGaAsP-InP DH laser, optical and current excitation of nonequilib. carriers, lasing thresholds 3−6985
InGaAsP-InP DH buried rib waveguide laser, 1.5 μm operation 3−41832
InGaAsP-InP DH wafer, nonradiative processes, piezoelec. photoacoustic spectroscopy 3−47709
InGaAsP-InP heteroepitaxial rib waveguide directional coupler struct., insertion loss analysis 3−42037
InGaAsP-InP injection laser, low threshold, with microleaved mirrors, for monolithic integration 3−7001

gallium arsenide continued
InGaAsP-InP quantum-well heterostruct. lasers, Auger recomb. calc. 3—6980
InGaAsP-InP quaternary 1.5 micron buried crescent lasers with separate optical confinement 3—37031
InGaAsP-InP single freq. injection lasers, index-guided and gain-guided, beam parameters meas. 3—6973
InGaAsP-InP undercut mesa laser, LPE fabrication and planar polyimide passivation 3—46206
InGaAsP-InP:Zn, Mg p^+-n abrupt heterojunction, LPE growth techniques 3—3971
InGaAsP-InP:Zn double heterostructures, luminescence study 3—38922
InGaAsP-oxide interface, comp. profiles, AES ESCA and ion sputtering studies *(Chinese)* 3—38237
$In_{0.7}Ga_{0.3}As_{0.63}P_{0.37}$, photoluminesc. spectra, band assignments 3—34145
$In_{0.75}Ga_{0.25}As_{0.55}P_{0.45}$, LPE growth effects on structured InP substrates 3—42947
$In_{1-x}Ga_xAs_{1-y}P_y$ quantum well lasers, threshold current density, Auger recombination effects 3—27044
$In_{1-x}Ga_xAs_{1-y}P_y$ with narrow photolum. spectrum, LPE growth 3—23196
$In_{1-x}Ga_xAs_{1-y}P_y$-InP heterojunction laser, low threshold, for 1.5-1.6 μm interval, LPE growth 3—22121
$In_{1-x}Ga_xAs_{1-y}P_y$-InP low threshold terrace mass transport laser, LPE growth 3—27075
$In_{1-x}Ga_xAs_yP_{1-y}$ buried stripe lasers, LPE fabrication *(French)* 3—43773
$In_{1-x}Ga_xAs_yP_{1-y}$ DH lasers, optical gain measurement as function of injected current density 3—22057
$In_{1-x}Ga_xAs_yP_{1-y}$, material parameters derivation from linear interpolation scheme 3—33632
$In_{1-x}Ga_xAs_yP_{1-y}$, near-equilibrium LPE growth on ⟨100⟩ InP 3—34248
$In_{1-x}Ga_xAs_yP_{1-y}$, optical props. from 1.5 to 6.0 eV 3—38844
$In_{1-x}Ga_xAs_yP_{1-y}$/InP DH lasers with low threshold current density, LPE growth *(French)* 3—43772
$In_xGa_{1-x}As_yP_{1-y}$ (λ=1.5 μm), LPE growth, luminesc. and photoelec. props. 3—47243
$In_xGa_{1-x}As_yP_{1-y}$ lattice matched to InP, LPE grown, interface spinodal decomposition 3—42952
$In_xGa_{1-x}As_yP_{1-y}$, VPE growth, laser spectroscopy monitoring 3—19279
$In_{0.5}Ga_{0.5}P$-InGaAsP double heterostructs., nonequilib. carrier lifetime in active region, effect of emitter recomb. 3—38900
$In_{0.5}Ga_{0.5}P$-InGaAsP double heterostructs., photoluminesc. characts., effect of emitter recomb. 3—38902
$In_xGa_{1-x}P$/GaAs, film form., relax. process, liquidus diagram study 3—38245
$In_{1-x}Ga_xP_{1-z}As_z$ solid solution, intrinsic exciton luminescence 3—47720
InP/InGaAsP epitaxial layers, laser diagnostic probes for CVD 3—3966
InP/InGaAsP/InGaAs/InP structure, LPE growth for avalanche photodiodes, circumferential meltback prevention 3—43765
InP-InGaAsP heterojunction optoelectronic devices prep. and properties *(Slovak)* 3—47783
InP-InGaAsP LEDs, luminescence study of dark spot defects 3—3824
InP-InGaAsP multilayer struct., damage-free grooving method 3—4159
InP-InGaAsP system, Au based ohmic contacts, metallurgical behaviour 3—23481
InP-InGaAsP-InP DH, misfit dislocations, optically induced glide motion, photoluminesc. study 3—51608
InSb-GaAs heteroepitaxial structures, galvanomagnetic coeffs. *(Russian)* 3—8565
laser diode, mode shifting, temp. depend. rate 3—1636
Si/GaAs heterojunction form., surface antisite acceptor level effects 3—18771
p-Si/n-GaAs heterojunctions, MBE growth, elec. and photoelec. props. 3—43277
Si_3N_4 film on GaAs substrate, null ellipsometry study technique 3—49429
Zn diffusion via SiO_2 layers *(Rumanian)* 3—8255

gallium compounds
see also gallium alloys; gallium arsenide
Cu-Ca-S-Sn, solid-liquid equilibria, crystalline solids at liquidus surface 3—33404
$Ga_xIn_{1-x}P$, LPE growth on GaAs(100), lattice mismatch and photoluminescence 3—8356
p-GaSb, Auger recombination, role of dielectric screening 3—3225
high pressure structural transitions, planar defects, X-ray diffr. study 3—2769
optoelectronic devices for optical transmission systems 3—6975
zeolites, structural chem., X-ray and magic-angle-spinning NMR studies 3—37873
$AgGaS_2$ gyrotropic isoindex filter 3—17609
$AgGaS_2$, thermostimulated currents, thermoluminescence, 10-270K 3—57984
$AgGaS_2:Co^{2+}$, EPR study 3—3516
AlGaAsSb, on GaSb, low temp. LPE growth conditions and props. 3—42955
AlGaInP, VPE growth, thermodynamic anal. 3—33587
$Al_xGa_yIn_{1-x-y}P(As)$, solid-phase miscibility gap and spinodal decomposition, theory 3—42780
$Al_xGa_{1-x}N$ epitaxial film, photoluminescence and cathodoluminescence 3—28904
$Al_xGa_{1-x}N$ MBE films, struct., elec. and optical props 3—8355
$Al_xGa_{1-x}N:Zn$, photoluminescence and Raman scatt. 3—43625
$Al_xGa_{1-x}P$ epitaxial layers, lattice consts., X-ray diffr. study 3—18588
$Al_{0.3}Ga_{0.7}P_{0.01}As_{0.99}$ laser heterostruct., MBE growth 3—1666
AlGaSb, on GaSb, low temp. LPE growth conditions and props. 3—42955
$Al_xGa_{1-x}Sb$, OMVPE grown using trimethylarsenic and trimethylantimony, review 3—24145
$Al_xGa_{1-x}Sb$ solid solns., production of heterostructures by LPE *(Russian)* 3—13662
$Al_xGa_{1-x}Sb$-InAs heterostructure, LPE growth 3—38243
$Al_{0.5}In_{0.5}P$-$Ga_{0.5}In_{0.5}P$ DH lasers optically pumped at 90K, MO-CVD growth 3—46231
$Al_{0.5}In_{0.5}P$-$Ga_{0.5}In_{0.5}P$ DH visible lasers, MOCVD growth and optical pumping at 90K 3—50657
Au/Langmuir-Blodgett film/n-GaP diode, electrolum. 3—38923
BaO-Ga_2O_3-SiO_2 glasses, ion exchange, effect of added ions 3—34617
$Ca_3Ga_2Ge_4O_{14}$, cryst. struct. study 3—37885
Cd-GaSb solid solutions, retrograde solubility, mechanical and optical study 3—2805
$CdGa_2Se_4$, oblique phonon Raman scatt. 3—3700
$CdInGaS_4$, Raman scatt. at high press. 3—43546

gallium compounds continued
CdSb-GaSb solid solutions, retrograde solubility, mech. and optical props. 3—2805
$Cs_{10}Ga_6Se_{14}$, structural anal. from Bragg reflex. phases *(German)* 3—51447
$Cu_{1-x}Ag_xGaSe_2$, energy gap, lattice consts., and transmission spectra *(Korean)* 3—13721
$CuGa_xIn_{1-x}Se_2$ solid solns., optical absorpt. spectra in fundamental absorpt. band edge region 3—19153
$CuGaSe_2$ crystals, bound exciton low-temp. luminesc. 3—14344
$CuIn_{0.3}Ga_{0.7}SeTe$ solid solution, variable range hopping cond. 3—3189
$FeGaO_3$, noncryst. ferromag., cond. and mag. props. 3—28660
GASe, exciton transition oscill. strength temp. depend. *(Russian)* 3—23287
Ga-Al-P ternary system, low temp. phase diagram rel. to growth 3—14578
Ga-Se system, phase diagram study 3—4020
GaAlAs low-threshold MO-CVD single quantum well lasers with Mg as p-type dopant 3—27048
$Ga_{1-x}Al_xAs$ epitaxial layers, Al conc., Auger spectroscopy, ion microprobe anal., photoluminescence meas. 3—23993
GaAlAsSb, equilib. diagrams, influence of chemical disorder and epitaxial substrate *(French)* 3—42957
$Ga_{1-x}Al_xP$, homogeneous, temp. difference LPE growth and photo- and electro-luminesc. meas. 3—39051
$Ga_{1-x}Al_xP$/GaP p-n structures, cathodoluminescence from p and n regions 3—8890
$Ga_{1-x}Al_xSb$, electron and hole impact-ionisation coeffs. 3—13826
$Ga_{1-x}Al_xSb$, solid soln., LPE, liq. and solid phase comp. 3—39099
$Ga_{1-x}Al_xSb$-GaSb heterostructure, epitaxial layers, growth characts. 3—38244
$Ga_{1-x}Al_xSb_{1-y}As_y$/GaSb, LPE growth and phase diagram 3—3970
GaAs, electron-hole pair ODMR signals, donor-acceptor pair separation effect 3—8742
GaAsP, NEA, energy- and spin-anal. of polarised photoelectrons 3—47751
$GaAs_{0.15}P_{0.85}$ waveguides, light wave diffr. by dynamic gratings 3—7159
$GaAs_{0.4}P_{0.6}$-GaP strained-layer superlattice, photocurrent spectroscopy 3—43273
$GaAs_{1-x}P_s$ waveguide, light wave diffr. by optically induced dynamic gratings 3—7158
n-$GaAs_{1-x}P_x$, semicond.-liq. junction solar cell 3—29387
$GaAs_{1-x}P_x:N$, thermal quenching of no-phonon emission bands and phonon sidebands 3—19192
$GaAs_yP_{1-y}$ MBE growth on VPE $GaAs_{0.63}P_{0.37}$ substrate, struct. and comp. control 3—13664
GaAsSb, equilib. diagrams, influence of chemical disorder and epitaxial substrate *(French)* 3—42957
$GaAs_{1-x}Sb_x$, organometallic VPE growth 3—28230
$GaCl_3$, vapour phase Fourier transform far IR spectra obs., 100 to 500°C 3—6635
$GaCl_3$-$SOCl_2$ soln., CC Nd^{3+} ions, absorpt. spectra, luminesc., lasing props. 3—22054
$Ga_{12}Ge_{6.5}Si_{6.5}As_{25}Te_{50}$, amorphous-crystalline magnetodiodes, threshold switching effects 3—13895
GaI_3, press. effects on elec. cond. 3—47136
GaInAsP, equilib. diagrams, influence of chemical disorder and epitaxial substrate *(French)* 3—42957
GaInAsP, shallow proton stripe laser diodes, life tests rel. to LPE and MOVPE prep. techniques 3—37075
GaInAsP, VPE growth, use of low press. 3—42960
GaInAsP VPE layer, elec. props. improvement by cooling HCl liq. source 3—23514
GaInAsP/InP DH laser, current blocking layer made by Be implantation 3—12147
$Ga_{0.55}In_{0.45}As_{0.1}P_{0.9}$ crystal, conduction electron g-factor sign determ. by Hanle effect 3—3039
$Ga_xIn_{1-x}As_YP_{1-y}$ high purity layers lattice matched to InP, LPE growth 3—42958
$Ga_yIn_{1-x}As_xP_{1-x}$, constituent ternary compounds, band struct., appl. of virtual cryst. approx. modification 3—47264
GaInP, equilib. diagrams, influence of chemical disorder and epitaxial substrate *(French)* 3—42957
$Ga_{0.5}In_{0.5}P$, two-spin reson. transitions of optically oriented nuclei 3—28739
$Ga_{1-x}In_xP$, picosecond high-resolution modulation spectroscopy of near interband resons. 3—36099
$Ga_xIn_{1-x}P$, electron-phonon interaction effects, refl. and photoluminesc. spectra 3—3764
$Ga_{1-x}In_xSb$, vibrations and optical props., coherent pot. approx. 3—33370
$Ga_{0.5}Mo_2S_4$, sp. ht. meas., cryst. struct. and mag. props., low temp. study 3—8655
GaN epitaxial film, cathodoluminescence after irrad. with fast electrons 3—14360
GaN epitaxial films, low press. MOCVD growth, ion implantation and elec. props. 3—47775
GaN epitaxial films, VPE growth on sapphire, rel. to nonuniformity of cathodoluminesc. emission 3—57981
GaN films, reactive MBE growth on AlN-sapphire substrates and elec. and luminescent props. 3—47771
GaN highly excited semiconductors, relax. processes 3—14351
GaN-GaAs MIS structure, thin film passivation, interface state density study 3—52262
Ga_2O_3, defect energies study 3—13220
β-Ga_2O_3, single cryst., Raman spectra and valence force field 3—28856
β-$Ga_2O_3:Cr$, thermoluminescence study *(Russian)* 3—43642
GaP, acoustic phonon modes from specific heat meas. 3—33371
GaP amorphous thin film, crystallisation using laser beam annealing 3—37957
GaP, angle resolved local density of states Green's function calc. 3—8390
GaP, antisite and vacancy electron states, local density of states 3—43096
GaP, bright dislocation halos, dislocation-point defect interactions 3—42615
GaP, computer controlled LEC growth, struct. and elec. props., LED appls. 3—14464
GaP cryst., external photoeffect and reflection from polar (111) $(\bar{1}\bar{1}\bar{1})$ faces near K-absorpt. edge of Ga 3—34198
GaP crystal based photoelastic light modulators 3—22197
GaP, crystal growth by Czochralski method with reduced dislocation density 3—28983
GaP, deep level associated optical cross sections 3—14325
GaP, deep level defects, self-consistent cluster calcs. 3—47300

gallium compounds continued
GaP, defects study by projection etching 3—33263
GaP, dielectric constant, temp. and press. dependences 3—57854
GaP, dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
GaP, dislocation line, elastic energy, integral formalism 3—46930
GaP, dispersion curves of stimulated Raman effect 3—41923
GaP, edge dislocations, stress-induced birefr. images, TEM study 3—3683
GaP, electron or neutron irrad., band edges modification by defects, optical absorpt. and photocond. study 3—23975
GaP epitaxial film on Si 3—57238
GaP, ground state struct. props., local density functional formalism 3—57300
GaP, impurity deep levels, electronic props. and stability 3—52072
GaP, indirect exciton, lineshape and electron-phonon coupling 3—38313
GaP, ion implanted, diagnosis by Raman scatt. and photoluminescence techniques 3—42628
GaP, ion implanted, highly disordered layers, dangling bonds, ESR study 3—52624
GaP LED's, IR to visible up-conversion 3—38917
GaP, LPE, current controlled, mass-transfer parameters 3—14511
n-GaP, Langmuir-Blodgett multilayers and adsorbed monolayers, surface pot. studies 3—38514
GaP, MOCVD growth 3—52966
GaP MOS photocells, photoelectric charact. study 3—53543
GaP microcrystals, Raman scatt. from surfaced phonon mode 3—34108
n-GaP, minority carrier diffusion length, photoelectrochem. determ. in aq. solvent 3—33788
GaP, NMR spin-lattice relax. *(German)* 3—3567
GaP, native defect conc., vapour press. dependence meas. 3—37903
GaP, nonlinear photoinduced desorption of P 3—38204
GaP, ODMR study of antisite related luminescence 3—19185
GaP, optical detect. of ESR and electron spin-lattice relax. 3—38725
GaP p-n junction solar cells, conversion efficiency 3—53516
GaP, phonon dispersion, polarisability effects 3—22996
p-GaP, photoelectrochem. kinetics meas. 3—9455
p-GaP photoelectrode, interfacial chemistry 3—4292
GaP, photoinduced IR absorpt. obs. 3—43521
n-GaP, poly(octadecene-1-maleic anhydride) Langmuir-Blodgett monolayer deposition, Schottky barrier height 3—38486
GaP polycrystalline thin films, MO-CVD growth using $[Et_2Ga-PEt_2]_3$, Raman study 3—24150
GaP, recombination enhanced defect processes and device degradation 3—56909
GaP, reson. Raman scatt. from surface phonons 3—47658
GaP semiconductor surface, diffr. grating produced by laser beam annealing 3—12304
GaP, single cryst., cleavage, fracture toughness meas. 3—33351
GaP, slip-induced elec. resist. anisotropy 3—57350
n-GaP solutions, dark and photo-current voltage curves, kinetic anodic processes *(German)* 3—52203
GaP surface single adsorbate, local density of states, local charges and adsorpt. energy calc. 3—3275
GaP, synthesis solute diffusion technique, Zn impurity conc. 3—39025
GaP thermally-stable two-color light source 3—37148
GaP thin films, electron beam induced carrier excitation, quantum yield 3—43301
GaP, time-resolved cathodoluminescence in scanning electron microscopy 3—52857
GaP, triplet antisite centre, spin depend. form. and decay, ODMR study 3—43462
GaP, two-photon absorpt. *(Russian)* 3—23909
GaP, wavelength modulated reflectivities of direct exciton edge 3—57951
n-GaP with electrons and holes, kinetic control of anodic dark and photodissolution 3—52242
GaP, zero-phonon recombination spectra of donor-acceptor pairs 3—28891
GaP: Ge, lattice distortions around single donor Ge, self-consistent pseudopot. method 3—28298
GaP:Bi(S), ODMR study 3—47576
GaP:Cr epitaxial layers, MOCVD grown, high temp. resist., capacitance and I-V meas. 3—13930
GaP:Cr(Cu)(Fe), deep levels related to transition metal impurities, ionisation energy meas. 3—3105
GaP:Cu, interband excitation induced absorption by deep impurities 3—57960
GaP:Er, ion implanted, luminescence line profile 3—19187
GaP:Fe, electron irrad., radiation defects, ESR study 3—14123
GaP:Fe, photoluminesc. excitation spectroscopy 3—43614
GaP:Fe epitaxial layer photosensitive valve struct. *(Russian)* 3—3344
GaP:H(He), ion implanted, photoelectrochemical meas. 3—42627
GaP:Mn, impurity centres, internal friction and ESR study 3—18660
GaP:N, deep electron trap 3—43088
GaP:N, Te, Zn, impurity related radiative recombination 3—47701
GaP:N, Te, Zn LED, green, current dependent electroluminescence decay and degradation behaviour obs. 3—3822
GaP:N, thermal quenching of no-phonon emission bands and phonon sidebands 3—19192
GaP:N epitaxial film, deep level electron trap, absolute energy, DLTS and I-V charact. study 3—43072
GaP:N VPE layers, (111) oriented, N doping conc., lattice parameter meas. 3—8366
GaP:N^-, binding to pair of marginal pots., N^- stability 3—28297
GaP:Ni, photoconductivity, impurity states 3—23427
GaP:O, electronic states of O, weak bonding example 3—47303
GaP:O, electronic struct., MS-X_α method 3—52063
GaP:O, quasimolecular model of impurity states 3—47310
p-GaP:Ru photoelectrochemical solar cells, chemically-induced interface states 3—57422
n-GaP:S, proton implanted fabrication, visible and IR waveguiding 3—17615
GaP:Si, N, LPE growth with N doping from NH_3, Si incorporation kinetics 3—34250
GaP:Sn, dopant electronic config., Mossbauer study 3—43091
GaP:Te (2n), inhomogeneous distrib. of doping elements 3—8080
GaP:Te(S), homoepitaxial layers, mechanical stresses *(Russian)* 3—51995
GaP:Ti, ion implanted, photoluminescence spectra 3—43626
GaP:Zn, as-grown and electron irrad., defect study by DLTS and EPR 3—43087
GaP-Au interface, Schottky barriers, γ irrad. effects 3—43283
GaP-Au structure, photocurrent due to electron emission from metal, elec. field effect 3—38434

gallium compounds continued
GaP-based epitaxial structs., isoelectronic N impurities spectrosc. obs. 3—3820
GaP-$GaAs_{1-x}P_x$ superlattice, strained, Zn impurity induced disordering obs. 3—38236
GaP-$GaAs_{1-x}P_x$ superlattices, stimulated emission and photoluminescence 3—43564
GaP-Si heterojunction, GaP metalorganic CVD epitaxy and elec. and photoelec. props. meas. 3—19285
GaPAsSb quaternary single cryst. growth from binary component alloyed mixture 3—34216
GaP(Sb), (110) bound and resonant surface states 3—28406
GaP(Sb), amorphous, defects, elec. cond. and optical absorpt. studies 3—22778
GaS, Faraday effect up to 20 T 3—14261
GaS, high press. polymorph, cryst. struct. 3—18277
GaS, ionicity, effective charges, bond angles, optimised bond orbital model 3—13156
GaS, layered cryst., thermal expansion behaviour 3—28127
GaS, SCL cond., two-barrier model, I-V characts. 3—18715
GaS:Yb, single cryst., isothermal relax. currents 3—43202
Ga_2S_3-CoS system, phase diagram, DTA, metallography and X-ray diffr. studies *(French)* 3—38032
$GaS_{0.6}Se_{0.4}$-InSe heterojunctions, elec. and photoelec. props. 3—18776
GaS_xSe_{1-x} crystals, linear and nonlinear optical props. 3—28827
GaS_xSe_{1-x}, thermoreflectance spectra, 3 to 9 eV 3—38807
GaSb (110), surface atomic geometry, elastic LEED intensity anal. 3—57187
GaSb, dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
n-GaSb, elastic consts. meas., electronic effects 3—33335
GaSb, excess Ga and Sb, nature of solid solns., lattice parameters study *(German)* 3—22855
GaSb film on AlSb, MBE growth and elec. and struct. props. 3—58051
n-GaSb, intervalley picosecond electron relax. times, nonlinear optical susceptibility study 3—37100
GaSb laser, heavily doped, high power and optical damage resist. attainment 3—12182
GaSb, lattice thermal cond., 4-700K 3—2897
GaSb, OMVPE grown using trimethylarsenic and trimethylantimony, review 3—24145
GaSb, organometallic VPE growth 3—28230
GaSb, p- and n-type, metallisation techniques for ohmic contact prep. 3—43281
GaSb, photoluminescence lines, stress effects, linear polarisation study 3—28894
GaSb:Sn, dopant electronic config., Mossbauer study 3—43091
n-GaSb:Te, electron mobility, elec. cond. Hall effect 3—8506
GaSb:Te, LEC growth with uniform carrier conc. distrib. 3—14470
GaSb-Ge, phase diagram and solid solubility, DTA and X-ray diffr. study 3—18427
GaSb-InAs synthesised superlattices, mag., optical, elec., magneto-optical props. and cyclotron reson. 3—13899
GaSb-InAs-GaSb heterostructure, hybrid cyclotron intersubband reson. 3—8724
GaSb(:Te), shaped melt lowering growth technique, photoluminesc. and Hall meas. 3—34214
$(GaSb)_{1-x}Ge_x$ films, cryst. and amorphous, Raman scatt. study 3—47725
$(GaSb)_{1-x}Ge_x$, metastable, RF sputtering deposition ion-beam mixing effects 3—3955
GaSe amorphous film, flash evaporated, spherulite growth during crystn. 3—51974
GaSe, bound excitons, light polarisation transformation, mag. field induced, phenomenological theory 3—43518
GaSe, Faraday effect up to 20 T 3—14261
GaSe films, spherulite growth by heating in vac. 3—33589
GaSe, inelastic exciton-exciton collision rate constant, determ. from absorpt. measurements 3—23275
GaSe, ionicity, effective charges, bond angles, optimised bond orbital model 3—13156
GaSe, layered cryst., thermal expansion behaviour 3—28127
GaSe, luminescence study of screening of optical phonon-hole interaction 3—14349
GaSe, picosec. relax. kinetics of highly photogenerated carriers 3—38913
GaSe, SCL cond., two-barrier model, I-V characts. 3—18715
GaSe, semicond. interband transitions, optical refl. effect, saturation photoacoustic spectra 3—13348
GaSe thin films, guided wave polaritons, near forward Raman scatt. study 3—43040
GaSe, third order nonlinear susceptibility 3—28819
GaSe:Sn, γ and neutron irrad. effects on photoluminescence 3—19188
GaSe-Al Schottky diode struct., nonequilibrium band flattening 3—47406
GaSe-In_2Te_3 p-n heterojunctions, elec. characts. 3—38475
GaSe-Pb-Li, intercalated semiconductor, optical props. *(Russian)* 3—14247
β-Ga_2Se_3, cryst. struct. of superstructural phase, X-ray diffr. study 3—2510
Ga_2Se_3, slow relax. and residual photocond. 3—43233
Ga_2Se_3-CoSe system, phase diagram, DTA, metallography and X-ray diffr. studies *(French)* 3—38032
GaTe, photoconductivity spectra 3—43234
GaTe, semicond. interband transitions, optical refl. effect, saturation photoacoustic spectra 3—13348
Ga_2Te_3, liq., struct. inhomogeneity and valence fluctuations 3—13070
Ga_2Te_3, resist. studies under high press. 3—3179
Ga_2Te_3-Fe, solid solubility 3—57091
GdScGa:Cr^{3+}, fluoresc. lifetime and CW tunable room-temp. laser action 3—50664
$Hg_5Ga_2Te_8$, vacancy compound, elastic behaviour under press. 3—22981
In-Ga-As-P batch prep. melts, prep. and props. rel. to LPE 3—9006
In-Ga-As-P system, phase equilibria, thermodynamic analysis 3—34287
In-GaSe-Sn, impurity photocond., spectral distrib., I-V, lux-ampere characts., photocurrent kinetics 3—18741
InAs-GaSb heterojunctions and superlattices, electron transport *(Japanese)* 3—28426
InAs-GaSb superlattices, electronic props. 3—23262
$InAs_ySb_{1-y}$-GaSb, LPE heterostructure, charact. study 3—19293
InGaAlP DH laser diodes grown by MBE, 0.66 μm room-temp. operation 3—46210
$In_{0.72}Ga_{0.28}As_{0.6}$ $P_{0.4}$, hot carrier multiphonon scatt., 1.3 μm photoluminesc. study 3—38886
InGaAsP DH laser, LPE growth, enhanced InP substrate protection 3—47784

gallium compounds continued
InGaAsP, LPE growth and charact., doping conditions 3−42959
InGaAsP mode stabilised terrace lasers on semi-insulating InP 3−27054
InGaAsP/InP layers, struct. study of alloyed Au metallisation contacts 3−23188
InGaAsP-InP buried heterostruct. stripe CW laser, fabrication by hybrid liq./gas phase epitaxy 3−41875
InGaAsP-InP DH wafer, nonradiative processes, piezoelec. photoacoustic spectroscopy 3−47709
InGaAsP-InP injection laser, low threshold, with microleaved mirrors, for monolithic integration 3−7001
InGaAsP-InP:Zn, Mg p^+-n abrupt heterojunction, LPE growth techniques 3−3971
$In_{1-x}Ga_xAs_{1-y}P_y$ with narrow photolum. spectrum, LPE growth 3−23196
$In_{1-x}Ga_xAs_yP_{1-y}$, near-equilibrium LPE growth on ⟨100⟩ InP 3−34248
$In_xGa_{1-x}As_yP_{1-y}$ (λ=1.5 μm), LPE growth, luminesc. and photoelec. props. 3−47243
$In_xGa_{1-x}As_yP_{1-y}$ lattice matched to InP, LPE grown, interface spinodal decomposition 3−42952
$In_{0.5}Ga_{0.5}P$-InGaAsP double heterostructs., nonequilib. carrier lifetime in active region, effect of emitter recomb. 3−38900
$In_{0.5}Ga_{0.5}P$-InGaAsP double heterostructs., photoluminesc. characts., effect of emitter recomb. 3−38902
$In_xGa_{1-x}P$ epitaxial layers, phase diagram meas. 3−39100
$In_xGa_{1-x}P$:N LPE layers (x<0.01), minority carrier diffusion length meas. 3−13933
$In_xGa_{1-x}P$/GaAs, film form., relax. process, liquidus diagram study 3−38245
$In_{0.2}Ga_{0.8}Sb$, MBE growth, cond. props. and donor levels 3−33588
$In_{0.2}Ga_{0.8}Sb$, undoped and S doped, MBE and elec. props. 3−52945
InP-InGaAsP heterojunction optoelectronic devices prep. and properties *(Slovak)* 3−47783
InP-InGaAsP multilayer struct., damage-free grooving method 3−4159
InP-InGaAsP system, Au based ohmic contacts, metallurgical behaviour 3−23481
InSe/$Ga_{0.98}Bi_{0.02}$Te p-n heterojunctions, I-V characts. 3−43275
InSe-GaSe heterojunctions, noise and current flow mechanism 3−28428
InSe-GaSe p-n heterojunction, majority carrier injection under strong illumination 3−57419
K_2O-ZnO-Na_2O-Ga_2O_3, vibr. modes, ionic cond., IR and Raman study 3−3721
$La_3Ga_5SiO_{14}$:Nd^{3+}, stimulated emission and luminescence 3−38848
Mn_3GaC, magnetostrictive spontaneous metamagnet model 3−23633
Na_2O-Ga_2O_3-SiO_2 glasses, ion exchange, effect of added ions 3−34617
$(NdO)_4Ga_2S_5$, cryst. struct., X-ray diffr. study, Fourier anal. *(French)* 3−2482
Si/GaP heterojunction form., surface antisite acceptor level effects 3−18771
$TlGaS_2(Se_2)$, high-press. Raman spectra 3−3718
Y-Ga-Tb garnet phosphor, thermolum. and phosphoresc., V_2O_3 additions effect 3−24029
YIG-Ga.YIG layered films, LPE growth, appls. 3−19299
Yb_2O_3-Ga_2O_3-CoO(NiO)(CuO)(ZnO), phase diagrams, X-ray diffr. study 3−2745

galvanising *see surface treatment*

galvanoluminescence *see luminescence*

galvanomagnetic effects
see also Hall effect; magnetoresistance; Suhl effect; thermomagnetic effects
conductor, press. depend. of elec. cond. in high mag. fields 3−3143
electron-hole pair concentration, in crossed electric and magnetic fields 3−33742
heterogeneous layer media, transport coeffs., thermoelec., galvanomag., and thermomag. props. 3−38474
semiconductor, impurity and defect clusters, charge and distrib., photoelec. and galvomag. study 3−13258
semiconductor, quantum transport theory in mag. fields 3−18723
semimagnetic semiconductor, threshold scatt. of cond. electrons by mag. impurities in strong mag. field 3−38407
two-dimensional random electron system, dynamic diffusion coeff., in quantising mag. field 3−18724
Ag film, magneto-conductance, influence of electric field on weak localisation 3−28453
Au film, magneto-conductance, influence of electric field on weak localisation 3−28453
Bi thin film, anti-localisation effect, cond., temp. and mag. field depend. 3−47435
$Bi_{2-x}In_xTe_3$, constant energy surface anisotropy 3−3056
$Bi_{2-x}Sb_xTe_{3-y}Se_y$, constant energy surface anisotropy 3−3056
$Bi_2Te_{3-x}Se_x(S_x)$, constant energy surface anisotropy 3−3056
$CdCr_2Se_4$, ferromag. semicond., negative differential resistances 3−52165
p-Cd_xHg_{1-x}Te solid soln., single cryst., photocond., transverse mag. field influence 3−8537
Cu bicrystals, galvanomagnetic phenomena near internal grain boundary, expt. study 3−23363
Cu film, disordered, spin-orbit interaction and electronic conduction 3−13928
Cu-Ag(Au) film, disordered, spin-orbit interaction and electronic conduction 3−13928
Fe-Ni-Cr-Si-B metallic glass, resistivity and galvanomag. coeffs. 3−28325
$Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glass, resistivity and galvanomag. coeffs. 3−28325
$Fe_5Co_{75}Si_{15}B_5$ metallic glass, resistivity and galvanomag. coeffs. 3−28325
Fe_2O_3, haematite, transverse quadratic galvanomag. effect near Morin temp. *(Russian)* 3−52181
InSb, magnetoplasma waves, slow, on surface 3−23418
Mg, disordered multiply-connected conductor, mag. flux quantisation effect 3−18686
Na, induced torque meas. by modulation method 3−57334
Ni-Ti alloy composite supercond., crit. current depend. on non-monotonic field depend. 3−47465
NiFeGe amorphous thin film, structural and galvanomag. props., electron diffraction study 3−47230
$Pb_{1-x}Sn_xTe$:In, band edge motion in quantising mag. field and nonequilib. states 3−57275

galvanomagnetism *see electromagnetism*

galvanometers
No entries

galvanothermomagnetic effects *see thermomagnetic effects*

game theory
see also information theory
random-signal recognition system, determ. of parameters in presence of noise *(Russian)* 3−5915

gamma fission reaction *see photofission*

gamma radiation *see gamma-rays*

gamma-ray absorption
mass attenuation and energy-absorption coeffs., 1 keV to 20 MeV 3−44908
nonequilibrium distribution, absorbed dose and space charge calcs., γ irradiation 3−27994
orthopaedic casts, effect on scintigraphy, ^{99m}Tc and ^{125}I γ-ray absorpt. obs. 3−19796
particle size analysis using γ-absorpt. method, math. model of polydisperse absorbent exam. 3−29279
Al, photon absorption cross sections 3−764
^{208}Pb, photon absorption cross sections 3−764
Si, photon absorption cross sections 3−764

gamma-ray angular distribution
see also gamma-ray spectra
heavy ion inelastic scattering to 3^- state, spin alignment meas. method 3−26608
^{142}Ce($\vec{p}$,γ), isovector E2 giant resonance excitation in direct-semidirect model 3−16749
^{164}Er, interacting negative-parity bands 3−6138
^{147}Gd, coexistence of spherical and oblate config., high-spin isomer decay study 3−11233
^{154}Gd, angular correlation and lifetime meas. 3−727
Ge(Li) detection, gamma-gamma correlations and geometric correction factors *(Spanish)* 3−41406
^{121}I levels investigation in ^{121}Sb(^{3}He,3n) 3−6154
^{97}Mo(p,nγ), 2.0-5.2 MeV, ^{97}Tc level structure J^π, decay scheme, from n-γ and γ-γ coincidence 3−6155
^{195}Pt, low lying negative parity levels via Coulomb excitation 3−40966
^{216}Ra excited state spectroscopy 3−11283
^{A}Rh, A=99, 101, high spin states and band structs. 3−6137
^{94}Zr(^{6}Li, 3n), 18-30 MeV, ^{97}Tc high spin states and band structure 3−6140

gamma-ray applications
see also radiation therapy
automated facility for investigating irradiated fuel elements by γ scanning 3−45597
density measurement of Fe-C melts using penetrating γ-radiation 3−37980
density measurement using gamma rays 3−272
gamma densitometry for bulk measurements, review 3−29362
particle size analysis using γ-absorpt. method, math. model of polydisperse absorbent exam. 3−29279
spent-fuel, assay by gamma and neutron methods 3−49962
tomographic imaging of LMFBR SAREF-program safety-test fuel assembly 3−26415

gamma-ray astronomical observations
burst source in Dorado, new manifestation of activity, (1981 and 1982) *(Russian)* 3−35744
bursts, SAS-2 anticoincidence dome data, supplementary information (1972-3) 3−44869
CG 195+4 region, low energy gamma ray obs. 3−40292
cosmic diffuse gamma radiation in energy range 4 to 100 MeV, spark chamber meas. 3−10485
galactic anticentre, gamma-ray emission at MeV energies 3−30488
Galaxy gamma-ray emission, anal. of diffuse gamma radiation of local spiral arm *(German)* 3−54523
local interstellar gas traced by gamma-ray obs. 3−20461

gamma-ray astronomy
see also gamma-ray sources (astronomical)
COS-B mission results and future prospects 3−5086
diffuse galactic γ-ray line emission due to radionuclides decay nucleosynthetic 3−20403
emission as tracer of local interstellar medium struct. 3−54466
High Energy Astrophysics Panel of Astronomy Survey Committee, recommendations 3−30243
interstellar clouds, electron energy spectra, propag. and interactions, bremsstrahlung γ-ray luminosity 3−20188
transfer eqn. for linearly polarized radiation, asymptotic soln. 3−44663

gamma-ray detection and measurement
see also gamma-ray spectrometers; radioactivity measurement
$4\pi\beta$-γ coincidence efficiency functions, meas. using multisource $4\pi\beta$-counter 3−31884
4π(α-^{7}Li)-γ coincidence technique for thermal neutron flux absolute meas. 3−45795
ARGUS electron-photon calorimeter for low-energy EM shower detection 3−41413
automated spectrometer for differential disturbed ang. $\gamma\gamma$ correl. meas. 3−50120
benchmark gamma-ray skyshine experiment 3−55722
BWR, gamma traversing incore probes, response anal. 3−16958
BWR, nuclear and thermohydraulic parameters determ. *(German)* 3−49989
Consultative Committee on Standards for the Measurement of Ionising Radiations, recent work of Section I 3−11625
counting rate problems, analysis from pulsed neutron beams, multiple ADC system 3−50211
DATEP, photomultiplier HV regulator 3−17177
Doppler-shift attenuation meas. after (n,n′γ) 3−1175
dose-rate surveillance system 3−31852
drift chamber, with intrinsic convertor, for γ-ray angle meas. 3−50128
electron-photon coincidences with polarised electrons and without plane symmetry invariance 3−26860
emission-type luminesc. gamma spectrometer with liq. Xe 3−50119
energy peak efficiency determ. by sum-peak and coincidence spectrometer 3−45792
environmental γ-rays, intensity variation using Ge(Li) spectrometer 3−45708
environmental samples, γ-ray peak efficiency, self-adsorpt. correction *(Japanese)* 3−48225
FFTF gamma ray measurements 3−55300
gamma exposure rate near nuclear power plants, short term fluctuation simulation 3−21577

gamma-ray detection and measurement continued
gamma-ray spectrometer for low activity meas. 3—1[illegible]
gas sampling calorimeter using conductive plastic tubes 3—36617
gas sampling saturated avalanche EM calorimeter testing in positron beam 3—[illegible]
gas-filled photodiodes characts. for light flash detection in scintillators 3—26581
glass shower detector, response measurement for 2-17.5 GeV positrons 3—36146
graphite phantom, ionometric determ. of absorbed dose, perturbation correction for ^{60}Co γ-rays 3—59834
heavy ion inelastic scattering [illegible] alignment meas. method 3—26608
HIDAC, electron avalanche chamber with wire chamber for positron emission tomography 3—59615
high range survey meters for β- and γ-dose rates 3—6459
high-sensitivity on-line monitor for radioactive effluent 3—21575
hodoscope, fine grained scintillator shower position measurement 3—[illegible]
HR 400 microchannel photomultiplier, light pulse shape study from scintillators 3—[illegible]
in-situ high-resolution γ spectrometric survey of burial ground monitoring wells 3—6454
ionisation chambers, response and wall correction factors for ^{60}Co γ-rays 3—29759
ionisation chambers, response and wall correction factors for ^{60}Co γ-rays 3—29760
ionisation tubes for high energy electrons and photons 3—26566
life-time meas. in heavy-ion reactions, centroid shift method 3—[illegible]
liquid photocathode, electron extraction into low pressure wire chamber, γ-detection 3—26598
liquid scintillation counter stability study using neutron and gamma sources 3—[illegible]
methane, liquid ionisation chamber, incidence directivity meas., low energy X-rays 3—[illegible]
Mossbauer backscatter electron counter for low temp. 3—[illegible]
multichannel analyser, selective signal anal. with recording of spectra distributions over memory 3—[illegible]
multidetector arrays, design and application, gamma-rays 3—50[illegible]
multidetector setup for (n, xnγ) studies at 14 MeV 3—45750
multidetector system using NaI(Tl) and Ge(Li) detectors for high spin nuclei study 3—26554
multistep proportional chamber for Cherenkov ring imaging photon detection and localisation 3—[illegible]
multiwire chamber for positron and photon beam scanning 3—[illegible]
ORNL off-site radiological survey program, γ-ray detection instrumentation appl. 3—6456
penetration effects due to plane sources 3—[illegible]
plastic scintillators, design and construction in nuclear safeguards 3—50[illegible]
polymeric track detectors, γ-ray induced sensitization 3—55[illegible]
portable beta-gamma dose-rate meter, pulse shape discrimination 3—50[illegible]
portable nuclear instruments 3—50254
positron lifetime spectrometer, amplitude selection stabilisation in multichannel registration channels 3—50[illegible]
pulse-shape discrimination in scintillation detectors 3—[illegible]
Radial gamma thermometers, reactor testing and experience 3—55221
radioactive materials containers, γ scintillation testing of shielding integrity 3—[illegible]
radiometric apparatus, readout system for basic parameters determ. 3—[illegible]
reactor in-core flux monitoring, trends in instrument development 3—[illegible]
[illegible] assay of radionuclides by [illegible] 3—[illegible]
recoil distance Doppler shift lifetime meas. of nuclear excited states, plunger system 3—[illegible]
semiconductor detector, high resolution, with black absorber for resonant γ-ray emission probe meas. 3—[illegible]
small increments due to local sources, detect. by meas. of X-ray exposure over water 3—[illegible]
solar cells, γ-ray dose rate monitoring, directional depend. 3—[illegible]
spin spectrometer 4π γ-ray multidetector system, design, instrumentation and response characts. 3—[illegible]
standard spectrometer gamma sources, X-ray radiation intensity changes obs. 3—45257
Tc-phantom irradiated by fast neutrons, dosimetric methods comparison 3—[illegible]
time differential perturbed ang. correl. meas., resolving time effect 3—[illegible]
TLD, ^{60}Co γ-rays response for in-phantom dosimetry 3—31835
VVER fuel elements, automatic γ-activity meas. in CAMAC system (Czech) 3—[illegible]
water samples, Ge detector [illegible] method 3—[illegible]
weak energy γ-ray dose using scintillation spectrometer, background estimation method (Japanese) 3—[illegible]
wide range environmental γ-ray dosimeter 3—[illegible]
β-γ coincidence system, performance characts. 3—[illegible]
γ-ray attenuation coeffs. from 40 keV to 15 MeV, interpolation technique 3—41454
Ar liquid ionisation chamber incidence directivity meas., low energy X-rays 3—50235
Au extended source activity meas. using 4πβ-γ coincidence technique 3—[illegible]
BaF_2 scintillator for subnanosecond timing 3—[illegible]
$CaSO_4$:Dy Teflon TLD, low dose meas., N_2 flushing during readout 3—[illegible]
CaF_2:Mn TLD, portable γ- and neutron dosimeter checking in γ-, neutron and mixed fields (Hungarian) 3—[illegible]
CaF_2:Tm TLD, quality and intensity of low energy photon radiation determ. 3—[illegible]
$CaSO_4$:Dy Teflon discs based TLD badge, X- and γ-ray response 3—[illegible]
$CaSO_4$:Dy Teflon TLD sensitised, for in-phantom dosimetry for ^{60}Co γ-rays 3—[illegible]
$CaSO_4$:Dy Teflon TLD disc dosimeters, energy response to photons and electrons 3—[illegible]
[illegible] portable γ-sensitive detector, calibration and spatial props. [illegible] 3—[illegible]
[illegible] photon dosimetry, neutron insensitive [illegible] 3—[illegible]

gamma-ray detection and measurement continued
^{60}Co half-life determ. using 4πγ ionisation chamber and 4πβ-γ coincidence techniques 3—[illegible]
^{152}Eu activity determ. using 4πβ-γ spectroscopic coincidence method 3—[illegible]
$FeSO_4$ dosimeter for ionisation chamber dosimetry control of electron, ^{60}Co γ-beams 3—24886
Ge coaxial detector, pulse height correction technique for γ-ray spectra 3—1149
Ge four-detector system, for γ-γ angular correl. studies 3—50233
Ge, high-purity, cameras, γ-ray detection efficiency improvement 3—50172
Ge(Li) crystal, double escape probability of photons from positron annihilation (French) 3—[illegible]
Ge(Li) detection, gamma-gamma correlations and geometric correction factors (*Spanish*) 3—41406
Ge(Li) detector efficiency calibration using primary standard sources and Monte Carlo calcs. 3—26575
Ge(Li) detector γ-spectra anal., [illegible] program 3—[illegible]
Ge(Li) detectors in close geometry, efficiency calibration 3—[illegible]
Ge(Li) [illegible] detector [illegible] Compton spectrometer 3—[illegible]
Ge(Li) spectrometer for γ-ray emission meas. in proton-nucleus inelastic interactions 3—[illegible]
^{178m}Hf decay use for intensity calibration 3—1177
HgI_2 coupled to scintillator, detection of γ-rays, α-particles 3—50153
HgI_2 crystals, spectrometric and operational parameters of detectors, for X and γ-rays 3—26599
HgI_2 detector thick crystal, characteristics and developments 3—50116
HgI_2, rel. dielec. behaviour under direct bias, γ-ray detector appl. 3—52718
[illegible] calibration for type [illegible] ionisation chamber (*Spanish*) 3—[illegible]
[illegible] half-life meas. using MCA-computer system 3—[illegible]
^{6}Li-glass scintillators, gamma-ray sensitivity 3—41430
NaCl:Ca, thermoluminesc., γ-dosimetry appl. 3—57982
NaI (Tl) sample posture converter for nondestructive activation analysis with a neutron generator 3—1173
NaI detector, computerised response funct. generation (*Japanese*) 3—55753
NaI scintillation detector, estimation method for response curve generation for γ-ray anal. 3—41431
NaI(Tl) Crystal Box detector at LAMPF, signal processing 3—50267
NaI(Tl) scintillation spectrometer stabilisation method 3—[illegible]
NaI(Tl) scintillator position-energy-timing resolution 3—[illegible]
Si(Li) detector efficiency calibration using primary standard sources and Monte Carlo calcs. 3—[illegible]
Si(Li) detectors, accuracy of time recording 3—[illegible]
Xe filled [illegible] emission gamma-camera 3—[illegible]
Xe ionisation-type drift chamber for gamma-ray spectrometry 3—11610
Xe, liq., position sensitive detector for γ-rays 3—50179
ZnS:Ag scintillators, superlinear effects and sensitivity to α-particles and γ-rays 3—[illegible]
ZnSe gamma radiation detectors 3—17175

gamma-ray diffraction
Mossbauer scatt. system, nonresonant, design at low temp. 3—25994
K intercalation into graphite, real time γ-ray diffr. study 3—42584
Si, Mossbauer γ-ray diffr. integrated refl. power determ. 3—42497
Si surface, integrated reflecting power meas. by Mossbauer γ-ray diffr. 3—[illegible]

gamma-ray effects
see also biological effects of gamma-rays; radiolysis
CR-39 solid state track detector, anomalous track development, γ-ray effects 3—[illegible]
N,N-dimethyl-amides, radical cation form., ESR spectroscopy 3—29316
N,N-dimethyl-thioformamide, radical cation form., ESR spectroscopy 3—[illegible]
DMSO, radical cation form., ESR spectroscopy 3—[illegible]
epoxy resin, LOCA simulation and gamma-radiation, elec. and mech. props. 3—13279
ethylene-propylene rubbers cured by dicumyl peroxide, radiation resist. 3—42659
ethylenepropylene rubber, LOCA simulation test period effect on durability of reactor cables 3—[illegible]
glass fibre filled epoxy resins, flexural and compressive strength, gamma irradiation effect 3—[illegible]
Hypalon, LOCA simulation test period effect on durability of reactor cables 3—[illegible]
InAs epitaxial IR detectors, radiation effects 3—[illegible]
Langmuir-Blodgett films, polymerization reactions, mol. arrangement effect 3—[illegible]
leaching kinetics of nuclear waste-form materials, γ radiation effects 3—[illegible]
manganese(?) tetraphenylporphyrin oxidation by γ-rays, ESR and optical detection 3—[illegible]
MOS dosimeter, reducing errors caused by ^{60}Co low energy components and [illegible] X-ray sources 3—[illegible]
MOS dosimeters using MOST and MOS capacitors, positive charge buildup in silica film 3—36574
MOST dosimeter using PMOS device in space radiation environment, error estimation and reduction 3—[illegible]
nonequilibrium distribution, absorbed dose and space charge calcs., γ irradiation 3—[illegible]
optical fibre, metal coated, hermeticity testing and spectral absorpt. studies 3—[illegible]
optical fibres, gamma-ray induced changes, ^{60}Co source, colour centre form., losses 3—42008
organic insulating materials for HV machines for nuclear power plants, gamma-ray effects testing 3—11396
oxide glass: [illegible], stereochemistry and struct. model, ESR study 3—[illegible]
[illegible] single cryst. explosive, γ-irrad., detonation, plane shock initiation 3—[illegible]
plastic construction materials, thermal and mech. props., ionising radiation effect (*German*) 3—[illegible]
poly-4-methylpentene-1, γ-irrad. effects on solubility, viscosity and mech. props. (*Russian*) 3—51661
polyamides, linear, γ-irrad., radioluminescence 3—[illegible]
polyamides, linear aromatic, Zγ-irrad., radiothermoluminescence 3—[illegible]
polyethylene, DC-conductivity following irradiation with ^{60}Co-γ-rays, [illegible] effects (*German*) 3—[illegible]
polyethylene, gamma-irrad., oxidation in presence of [illegible]-type antioxidant (*Russian*) 3—[illegible]

gamma-ray effects continued

- polymer resins, thermal cond., γ-ray radiation effect 3−28170
- polymers, insulating materials, radiation induced current and fine struct. 3−8100
- quartz, gamma-ray irrad., adhesion levels, TSC study 3−52059
- quartz, smoky, γ-irrad., dielec. relax., audiofreq. meas. 3−3643
- quartz, smoky, elec. dipole echoes, 5 to 25 mK 3−14231
- quartz, vibr. cryst., SEM patterns, γ-irrad. effect 3−14222
- quartz glass, photoluminescence peaks, neutron and gamma radiation effects 3−47704
- radiation-hardened accelerometer preamplifier for nucl. power plants 3−41204
- radioactive waste, disposal material, leaching, gamma radiolysis effects 3−41166
- SYNROC-B, radioactivity release, effect of high level γ-ray irrad. 3−948
- synthetic zeolites for HLW immobilisation, γ-ray effects during interim storage 3−21411
- TGS, γ-irrad., detector specific material parameter, rel. to pyroelec. IR detectors 3−49451
- vascular-graft material, effect of irrad. in the therapeutic dose range 3−58873
- Al-si interface struct., γ-irradiation effects *(Russian)* 3−47229
- AlGaAs/GaAs photodiode permanent damage effects due to total dose exposure 3−40688
- Al_2O_3:Cr, γ-irrad., Cr^{2+} obs. by linear thermal expansion meas., 3 to 9K 3−42816
- $Bi_4Ge_3O_{12}$ crystal, radiation damage due to γ-rays, protons and fast neutrons 3−45757
- CaF_2:Ce^{3+}(Eu^{3+})(Dy^{3+}), vacuum UV excitation spectra of luminescence 3−14320
- $Ca(NO_3)_2$, γ-ray irrad., chem. radiation damage, annealing kinetics 3−2606
- $Ca_2Nd_8(SiO_4)_6O_2$, apatite struct., radiation damage 3−27977
- $Cd(NO_3)_2$, hydration effect on annealing of chem. radiation damage 3−39368
- CdSe:La γ-irrad. films, photoconductivity and dark conductivity 3−38508
- CsH_2AsO_4, gamma-ray irrad. and annealed, temp. depend. of dielec. props. 3−2607
- GaAs, lattice defects in quenched and irradiated single crysts. 3−2613
- GaAs, Schottky-barrier diodes, γ-ray irrad., thermal annealing of E3 centres, elec. field effects 3−18657
- GaAs Schottky-barriers, γ-irrad., radiation defect accumulation, DLTS study 3−13278
- GaAs-Al_xGa_{1-x}As heterostructures, modulation doped, electron or γ-irrad., transport props. 3−38461
- GaP-Au interface, Schottky barriers, γ irrad. effects 3−43283
- GaSe:Sn, γ and neutron irrad. effects on photoluminescence 3−19188
- Ge, γ-irrad., layer inhomogeneities, piezoresistance and mobility anisotropy 3−28359
- Ge n^+p diodes, reverse biased, mobility of γ-ray induced defects 3−18650
- Ge:H, reduction in γ-ray damage, DLTS study 3−18345
- Ge:O, γ-irrad. and quenched, deep donor levels 3−43101
- Ge:Pb(Sn), γ-ray irrad., deep level defects, DLTS study 3−13764
- Ge:Sb, P, shallow donors, photoexcitation line quenching by γ-irrad. 3−8454
- Ge:Sb(P), impurity photoexcitation spectra, gamma-bombard. fine struct. 3−38436
- Ge-GaAs heterojunctions, gamma ray effects on noise characts. 3−52237
- Ge-Si alloy, electron and X-ray irrad.-induced acceptors, elec. cond. study 3−18653
- GeSi:Sb solid solns., γ-irrad., carrier mobility and magnetoresist. 3−38410
- In_2Te_3, effect of hard γ-irrad. on positron annihilation *(Russian)* 3−8901
- $(In_2Te_3)_{0.95}Cu_{0.05}$, effect of hard γ-irrad. on positron annihilation *(Russian)* 3−8901
- KCl, gamma irrad., plastic deform., effect on thermolum. spectra 3−47721
- KCl, gamma-ray irrad., optical destruction of radiation induced F- and V-centres 3−2605
- KCl with F_A-centres, nonlinear optical activity *(Russian)* 3−19104
- KCl:Ca(Sr), gamma irradiated, thermal bleaching of V_2^M centres, oscillator strengths 3−8047
- KCl:Na, Pb, γ-irrad., Pb-centres, thermoluminesc. study 3−3830
- KCl-KBr mixed crystals, γ-irrad., thermoluminescence study 3−34155
- KCl(Br), γ-irrad., thermoluminescence study 3−34155
- $KCrO_3Cl$, γ-irrad., pseudo-V_k centre, EPR study 3−47549
- $KHCO_3$ cryst., normal and deuterated, gamma-ray irrad., EPR spectra 3−43438
- $KH_3(SeO_3)_2$, ferroelastic and ferroelec. phase transition, radiation damage, absorpt. spectra 3−37963
- $KMg_3(AlSi_3O_{10})F_2$:V, γ and neutron irrad., absorption spectra study 3−23983
- $K(UO_2)(NO_8)_3$, γ-irrad., NO_3^{2+} radical EPR study 3−18990
- $K_2(UO_2)(NO_3)_4$, γ-irrad., NO_3^{2+} radical EPR study 3−18990
- LiCl, γ-irrad., vacuum UV absorpt. spectra 3−43571
- LiF, F_2^- colour centres after γ-irrad., laser passive shutter charact. 3−17612
- LiF, gamma-ray sensitised, thermoluminesc. glow curves and supralinearity 3−3831
- LiF, thermolum. response to ions, gamma-rays and X-rays 3−38927
- LiF, thermoluminescence sensitisation factors, post-annealing temp. effects 3−19213
- LiF:Mg, γ-irrad., OH^- ions effect on thermolum., ESR obs. 3−28905
- $LiIO_3$:Fe, γ radiation defects and impurity defects, positron annihilation study 3−33248
- $LiNbO_3$:Fe, γ radiation defects and impurity defects, positron annihilation study 3−33248
- $MgCl_2$, γ-irrad., ESR and optical absorpt. spectra study 3−43434
- $Mg(NH_4)_2(SO_4)_2.6H_2O$, host lattice effects on EPR of VO^{2+} 3−57756
- $(NH_4)_3VO_2F_4$, gamma-irrad., mol. dynamics and phase transition, EPR spectra 3−8717
- NaCl, gamma irrad., plastic deform., effect on thermolum. spectra 3−47721
- NaCl, gamma-ray irrad., optical destruction of radiation induced F- and V-centres 3−2605
- NaCl, γ-irrad., IR extinction of photoplastic effect 3−2656
- NaCl, γ-irrad., mechanical electron emission *(Russian)* 3−19257
- NaCl:Ca^{2+}(Sr^{2+})(Ba^{2+}) (Li^+), γ-ray irrad., luminescence from M and N centres 3−24005
- NaCl:OH^-, γ-ray and UV light irrad., hydrogen evolution on annealing 3−29324

gamma-ray effects continued

- NaF:Mn^{2+}, doped and undoped, γ-ray irrad., thermoluminesc. study 3−14362
- Na_2O-SiO_2 glasses, high water content, effect of γ radiation 3−8101
- Si, dislocation effect on radiation defect annealing process 3−27993
- Si, gamma-ray irrad., charge carrier recombination at defect clusters 3−3226
- Si, irradiated, defects determining Fermi level stabilisation 3−33674
- Si irradiated by photons with energies up to 2 MeV, initial electron energies calc. 3−27992
- Si p-i-n photodiode permanent damage effects due to total dose exposure 3−40688
- Si solar cells, effective surface recombination velocity and minority-carrier lifetime meas. 3−44128
- Si:Au, gamma-ray irrad.-induced Au diffusion, Schottky barrier study 3−33509
- Si:Cu(Ni), deep level states, DLTS study 3−52060
- Si:Er, γ-ray irrad., photocond. and elec. props. 3−43235
- Si:H, reduction in γ-ray damage, DLTs obs. 3−18346
- Si/SiO_2/Al MIS structs., irrad. effects on built-in charge form. 3−38485
- Si-SiO_2, gamma irrad., effect of bias on paramagnetic defects 3−3319
- Si-SiO_2 interface, γ-irrad., induced paramag. centers, ESR study 3−52261
- Si-SiO_2 MOS structures, γ-radiation induced paramagnetic defects, EPR study 3−43287
- SiO_2 core fibres, ^{60}Co irradiated, laser diode-induced photobleaching at low temp. 3−41935
- SiO_2 irradiated by photons with energies up to 2 MeV, initial electron energies calc. 3−27992
- SiO_2 optical fibre blanks, γ-ray irradiation as impurity content test 3−13277
- SiO_2 pure-silica core optical fibre and fibre cable for radiation fields 3−46327
- SiO_2 silica fibre and radiation hard optical transmission, radiation effects 3−46328
- SiO_2, vitreous, absorption band at 300 nm, radiation colour centres 3−23986
- SiO_2:Ge(P) graded-index optical fibres, γ-ray-induced loss and colour centre conc. 3−32481
- V complex, hexakisurea vanadium (III) triiodide, normal and γ-irrad., mag. props., EPR study 3−57757

gamma-ray interactions

- *see also gamma-ray scattering*
- No entries

gamma-ray lasers

- optically pumped γ-ray laser feasibility 3−12105
- relativistic electron beam, gamma-ray prod. by interaction with two interfering laser fields 3−26990
- superfluorescence, mean field theory, possible X-ray and gamma-ray lasers *(Chinese)* 3−36972

gamma-ray polarisation

- synchrotron radiation polarisation by Dirac particle 3−50590
- ^{56}Co β-decay, Fermi-Gamow-Teller interference 3−6196
- ^{158}Er, 84 MeV, γ-ray transition linear polarisation meas. using Compton polarimeter 3−36621
- ^{21}Ne, parity mixing, evidence for weak neutral currents in nuclei 3−49803
- ^{58}Ni(^{16}O,X), deep inelastic collision, multipolarity of statistical γ-rays from f-p shell nuclei 3−54978
- ^{48}Ti(^{16}O,X), deep inelastic collision, multipolarity of statistical γ-rays from f-p shell nuclei 3−54978

gamma-ray production

- coherent bremsstrahlung in crystal to produce high energy photon 3−36591
- concrete, neutron inelastic scatt., 14 MeV, γ-ray ang. distrib. 3−55713
- LADON photon beam, production, use in ^{2}H(γ,n) 3−45748
- muon inelastic scatt., energy loss calcs. 3−50245
- penetration effects due to plane sources 3−31863
- ^{137}Cs γ-sources and irradiation tech., nuclear waste by-product 3−21390
- ^{56}Fe(n,n′γ), 14 MeV, γ-ray prod. differential cross section 3−41291

gamma-ray scattering

- *see also Compton effect; gamma-ray interactions*
- atoms, X-ray and γ-ray elastic scatt., review 3−36729
- Compton collisions, ejected-electron trajectories *(French)* 3−21929
- elastic γ-ray photon scatt. at small momentum transfer, form factor theories 3−32009
- multiple backscattering from Al, Fe, Cu, Pb, saturation depth Z-dependence 3−47577
- sea ice, density and salinity from gamma-ray scattering method *(Russian)* 3−20150
- Pb, elastic γ-ray photon scatt. at small momentum transfer, form factor theories 3−32009
- β-SiC, Compton profile and valence electron profile 3−28922

gamma-ray sources *see gamma-ray production*

gamma-ray sources (astronomical)

- GBS 0117−29, X-ray emission from γ-ray burst source 3−30528
- active galaxies, contrib. to diffuse γ-ray background 3−54551
- burst source, 1978 November 19, magnitudes and precise position for new optical candidate 3−25656
- burst source, 1978 November 19, RI photometry of optical candidates 3−10484
- burst source in Dorado, new manifestation of activity, (1981 and 1982) *(Russian)* 3−35744
- burst sources, Coulomb bremsstrahlung and cyclotron emissivity in hot magnetized plasmas rel. to cyclotron lines form. 3−44791
- burst sources, experimental data in favour of heliospheric origin 3−16035
- burster of 1978 November 19, optical emitting region size limit 3−54549
- bursts, isotropic cumulative rate 3−40291
- bursts, SAS-2 anticoincidence dome data, supplementary information (1972-3) 3−44869
- bursts multidimensional thermonuclear runaway, deflagration wave burning vel. 3−5268
- Centaurus A, H I absorpt. spatial struct., nucleus nature, UHF obs. 3−35734
- Centaurus A nucleus, model and UHF VLBI obs. 3−54529
- 2CG 006−00, evidence for assoc. with supernova remnant W28 from high-resolution radio and X-ray obs. 3−54481
- CG 195+04 field, search for radio counterpart, SHF/UHF obs. 3−10482
- CG 195+4 region, low energy gamma ray obs. 3−40292

gamma-ray sources (astronomical) continued
Cygnus X-3, pulsar in close binary model, gamma ray emission and particle accel. 3-5264
discrete sources, molecular cloud nature and irradiation by cosmic ray electrons/nuclei 3-25655
galactic gamma-ray emission, rel. to reddening estimation at low galactic latits. from Lick galaxy counts 3-48993
Galaxy gamma-ray emission, anal. of diffuse gamma radiation of local spiral arm *(German)* 3-54523
GB 790305 model involving white dwarf collapse to neutron star 3-10483
KONUS sources positions rel. to Venera 11/12 spacecraft position 3-35460
low-mass binaries as γ-ray burst sources 3-40190
Milky Way, gamma-ray colour rel. to cosmic ray electron density 3-49027
neutron stars, γ-ray bursts prod. by fission of superheavy nuclei 3-59507
point gamma-ray sources, contrib. to gamma-ray colour of Milky Way 3-49027
pulsars gamma-ray and optical emission model, appl. to Vela pulsar 3-40160
quasars, origin of relativistic particles and gamma-rays 3-49047
spectrograph, with ang. resolution for cosmic bursts and sources obs. 3-54242
Vela pulsar, gamma-ray and optical emission model 3-40160
Vela pulsar, model from polarisation and pulse profile intensity depend., UHF obs. 3-40157

gamma-ray spectra
see also gamma-ray angular distribution; gamma-ray spectra of liquids and solids; nuclear decay theory
γ-ray spectroscopy, E1 interband transitions and probabilities 3-16685
analysis program, in FORTRAN IV, from Ge detectors 3-50262
computer progrma GAMMA for evaluation on ES computers *(Russian)* 3-1189
computerised anal., FORTRAN program 3-20834
derivative method unfolding of gamma-ray spectra from NE-213 spectrometers 3-31871
fast neutron induced γ-ray spectra, R-parameter model modification 3-41331
fast neutron radiative capture spectroscopy in giant multipole resonance region 3-785
high-speed program for the analysis of complex γ spectra 3-45800
life-time meas. in heavy-ion reactions, centroid shift method 3-26556
light particles from nuclear reactions in Sun 3-30134
γ-magnetic resonance in presence of electronic spin relax. 3-52688
Monte Carlo based calibration method for X-ray fluorescence and prompt gamma-ray analyzers 3-29357
Mossbauer spectrum acquisition and use of derivatives 3-45253
neutron capture, gamma spectroscopy *(Dutch)* 3-55042
perturbed angular correlations, appl. to materials research, review 3-54821
photon from positron annihilation, energy spectrum and spatial distrib., Monte Carlo calc. 3-26531
proton induced γ-ray emission method for heavy element determ. 3-44078
protoporphyrin IX; ^{111}In-apohaemoglobin system, TDPAC obs. 3-41562
pulse height analyzer circuit with constant window width 3-36629
standard levels for spectrum meas., 450-600 keV 3-50111
(γ,γ), resonance scatt., time behaviour, excited nuclei γ-spectrum shape 3-31382
$(n,X\gamma)$, fast n, consistent description of γ-spectra 3-721
^{215}Ac, γ-spectroscopy and proton pairing 3-49806
^{228}Ac decay, internal conversion coeff. meas. 3-36356
Ag(^{165}Ho,X), 1400 MeV, ang. momentum transfer and alignment, γ-multiplicity, Q-values 3-55056
^{201}Bi, high-spin states study populated in ^{203}Tl(α,6n) 3-6129
Bi(n, X), 14.2 MeV, production cross section of discrete γ-rays, Monte Carlo anal. *(Chinese)* 3-49852
^{74}Br, in-beam study using γ-ray spectroscopy 3-31333
^{12}C(^{12}C,X) 9.1-11.9 MeV, resonance observations from γ-ray yield and α angular distribution 3-16748
^{12}C(^{18}O,X), binary and fusion-evaporation channels, correl. among intermediate structures 3-16799
^{16}C$\rightarrow^{16}$N, $0^+\rightarrow0^-$ beta decay obs. 3-54994
CaF$_2$, proton irrad., lattice defects 3-47003
^{102}Cd, n-deficient, excited states study via ^{102}In decay and nucl. reactions 3-26188
^{140}Ce γ-transition energies and intensities, ICE spectra, levels from ^{140}La and ^{140}Pr decay 3-36359
^{52}Cr(^{16}O, X), X=2n or 3n, 35-51 MeV, absolute cross section, gamma de-excitation effect 3-817
^{160}Dy, vibrational band mixing, γ-ray spectra study 3-16727
^{158}Er, 84 MeV, γ-ray transition linear polarisation meas. using Compton polarimeter 3-36621
^{147}Eu low lying level structure from γ-γ directional correl. meas. 3-54979
^{56}Fe(n,γ), fast n, γ-spectra, pre-equilibrium model 3-722
^{56}Fe(n,n$'\gamma$), 14 MeV, γ-ray prod. differential cross section 3-41291
^{57}Fe nucleus, γ-magnetic resonance in presence of electronic spin relax. 3-52688
^{145}Gd excited states study from (^{3}He,2n) 3-49807
^{147}Gd, coexistence of spherical and oblate config., high-spin isomer decay study 3-11233
^{147}Gd, particle octupole multiplet study by in-beam γ-ray and conversion-electron spectroscopy 3-31276
Ge coaxial detector, pulse height correction technique for γ-ray spectra 3-1149
Ge(Li) detector γ-spectra anal., GWENN program 3-50276
^{179}Hf(n,n$'\gamma$), ^{179}Hf excited rotational states, study from γ-ray spectra *(Russian)* 3-16766
^{183}Hf, excited states props. following ^{183}Lu decay 3-31628
^{178m}Hf decay use for intensity calibration 3-1177
^{150}Ho, decay props. study 3-732
^{166}Ho^m decay, gamma-ray energies and intensities meas. 3-26212
^{121}I levels investigation in ^{121}Sb(^{3}He,3n) 3-6154
^{124}In, 3^+ isomer half-life meas. using MCA-computer system 3-40989
^{75}Kr, first cascade, in-beam study using γ-ray spectroscopy 3-31333
^{79}Kr high-spin states determination from ^{78}Se(α, 3n), quasi particle-plus rotor model calcs. 3-6139
^{81}Kr, shape change and fast M1 transitions 3-31281

gamma-ray spectra continued
^{140}La γ-transition energies and intensities, ICE spectra, levels from ^{140}Ba β-decay 3-36359
^{24}Mg(^{20}Ne, X), 45-105 MeV, total and fusion cross sections, inclusive γ spectra 3-31465
NaI detector, computerised response funct. generation *(Japanese)* 3-55753
^{58}Ni(^{16}O,X), deep inelastic collision, multipolarity of statistical γ-rays from f-p shell nuclei 3-54978
^{16}O(^{12}C,^{12}C$'$), 19.7 to 22.6 MeV, reson. scatt., spin alignments 3-31285
^{29}P, highly excited states spectroscopy 3-26218
^{A}Pb, A=194, 196, collective bands above $J^\pi=12^+$ isomers 3-54941
^{207}Pb(μ^-, ν), (μ^-, xn), delayed gamma rays, energies and intensities in $^{201-207}$Tl, impulse approx. and shell models 3-31394
Pb(n, X), 14.2 MeV, production cross section of discrete γ-rays, Monte Carlo anal. *(Chinese)* 3-49852
^{105}Pd level structure 3-54975
^{207}Po γ- and internal conversion electron spectra, e-γ coincidences from ^{207}At β^+-decay 3-31329
^{208}Po ICE and γ spectra, transition multipolarities from ^{208}At β^+-decay 3-31328
^{144}Pr γ-transitions from ^{144}Ce decay 3-26221
^{240}Pu level assignments and decay scheme 3-21259
^{216}Ra excited state spectroscopy 3-11283
^{226}Ra and daughters, absolute gamma intensity meas. 3-45484
^{A}Rh, A=99, 101, high spin states and band structs. 3-6137
^{32}S, mean lifetime of 4.281 MeV state, Doppler-shift attenuation meas. 3-1175
^{148}Sm(^{165}Ho,X), 1400 MeV, ang. momentum transfer and alignment, γ-multiplicity, Q-values 3-55056
^{154}Sm(^{86}Kr,X) 610 MeV, deep inelastic, ang. momentum transfer, energy depend., stat. anal. 3-16792
SrF$_2$, proton irrad., lattice defects 3-47003
^{A}Sr, A=80, 82, level struct., from ^{78,80}Kr(α, 2nγ) 3-31294
^{181}Ta, γ-482 keV transition, M1 component, penetration effect *(Russian)* 3-45487
^{159}Tb level scheme, from (n,n$'\gamma$) reaction *(Russian)* 3-54954
^{99}Tc, levels and transitions, nucl. spectroscopic study 3-26213
^{218}Th, low lying Yrast states, and α-decay from ^{206}Pb(^{16}O,4n) 3-11216
^{231}Th, nuclear energy level struct., γ-ray spectroscopy *(Korean)* 3-36330
^{232}Th(γ,f), photofission spectrum near threshold, cross section, vibr. state excitation 3-825
^{232}Th(n,2n)^{231}Th, averaged cross section meas. with fission plate 3-41025
^{48}Ti(^{16}O,X), deep inelastic collision, multipolarity of statistical γ-rays from f-p shell nuclei 3-54978
U isotropic analysis by neutron activation 3-29351
^{235}U, absolute gamma intensity meas. 3-45484
^{238}U(n,γ), fast n, γ-spectra, pre-equilibrium model 3-722
^{238}U(u, X), 14.2 MeV, gamma ray spectra meas. *(Chinese)* 3-49852
^{45}V, mirror nuclide β^+ decay 3-731
^{182}W, levels and transitions following ^{182}Ta decay 3-31332
W(n, X), 14.2 MeV, gamma ray spectra meas. *(Chinese)* 3-49852
^{123}Xe, EM transition strength and nucl. moments 3-11288
^{132}Xe decay from ^{132}I, CC gamma-gamma angular correlation study 3-40987
^{135}Xe levels, spin and parity assignments, shell model description 3-21261
^{152}Yb level scheme and isomeric 10^+ state half-life study 3-31351
^{160}Yb, prolate to oblate shape change at high spin 3-11234
^{163}Yb high spin states, band crossing and signature splitting from ^{149}Sm(^{18}O, 4n) 3-36305
^{176}Yb(^{165}Ho,X), 1400 MeV, ang. momentum transfer and alignment, γ-multiplicity, Q-values 3-55056

gamma-ray spectra of liquids and solids
see also Mossbauer effect
graphite-InCl$_3$ intercalation cpd., TDPAC study 3-47579
nuclei in ferromag. medium, g-factor meas., γ-resonance scatt. effects from impurities 3-36319
perturbed angular correlation attenuation factor for relaxing systems 3-14164
resonant scattering of neutron capture γ-rays for mol. orientation studies in solids 3-3622
Ag dilute alloys, impurity interaction and elec. field gradients, PAC study 3-38731
Ag-In, highly dil. alloy, TDPAC study of internal oxidation of impurities 3-43475
Ca-Fe, dilute, positive mag. hyperfine field for impurities, perturbed angular distrib. obs. 3-57836
Ce ions recoil implanted into metallic elements, local mag. moment form. 3-47476
Cr-Hf-H, local condensation of hydrogen on ^{181}Hf, PAC study *(French)* 3-28107
Fe, isotropic ferromagnets, dynamical crit. behaviour, PAC spectra 3-14061
Fe-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3-14038
Ge (Li) gamma ray spectra analysis, non-destructive uranium determination appl. *(Croatian)* 3-16844
HfFe$_2$, γ-γ perturbed angular correlation study 3-52687
HfS$_2$, ^{181}Ta nucl.-quadrupole freq. doubling, TDPAC study 3-8746
Ho-Er, γ-γ perturbed angular correlation study 3-52687
I determination in blood serum by epithermal neutron activation analysis 3-4336
In surface, elec. quadrupole hyperfine interaction, PAC study 3-23343
In$_5$Bi$_3$:Cd, temp. and press. depend. of electric field gradient, TDPAC study 3-34017
LaGd$_3$, γ-γ perturbed angular correlation study 3-52687
La$_{1-x}$Pr$_x$Al$_2$, γ-γ perturbed angular correlation study 3-52687
MnF$_2$, dynamic recovery of magnetism in collision cascades after ion implantation, PAD study 3-57667
(NH$_4$)$_3$HfF$_7$, quadrupole interaction and elec. field gradient, γ-ray study 3-13788
Nb crystal, gamma-ray emission spectrum from relativistic electron impact 3-14411
Nb, N impurity, lattice location using reaction ^{15}N(p,$\alpha\gamma$)^{12}C 3-57841
Ni, isotropic ferromagnets, dynamical crit. behaviour, PAC spectra 3-14061
Ni, single cryst., quadrupole interactions at different ion implanted probe ions, β-γ TDPAC study 3-3599

gamma-ray spectra of liquids and solids continued
- Ni-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3—14038
- PdCo alloy, ferromag., quadrupole interaction for Co, nucl. orientation study 3—3598
- Pt, trapping of C impurity at ^{181}Hf probe atoms, TDPAC study 3—57840
- Rb, liq., isolated ^{88}Y ions, anomalously small Knight shift and nucl. relax. rate 3—14175
- Re:^{184,185}Ir, low temp. elec. quadrupole orientation, elec. field gradient 3—13787
- Sb—^{181}Ta, quadrupole interaction, temp. depend., TDPAC study 3—3604
- Si crystal, gamma-ray emission spectrum from relativistic electron impact 3—14411
- Si:In, recoil implanted, electric quadrupole interaction, ^{111}Cd TDPAC study 3—43473
- TaS_2-2H intercalates, hyperfine spectroscopy, charge transfer, reaction kinetics 3—23342
- $Tb(Zn_{1-x}Cu_x)$, hyperfine interactions, ^{156}Gd TDPAC study 3—52681
- $Tb(Zn_{1-x}Cu_x)^{156}Gd$, hyperfine field of ^{156}Gd, γ-γ perturbed angular correlation study 3—14165
- TeSn, hyperfine interaction, perturbed angular distrib. meas. 3—14166
- TiB_2, Compton profile 3—52689
- $^{192}Tl(8^-)$ nuclei in hexagonal Tl and tetragonal In, electric quadrupole interaction, TDPAD study 3—18674
- VB_2, Compton profile 3—52689
- W crystal, gamma-ray emission spectrum from relativistic electron impact 3—14411
- $(Zr_{0.5}Hf_{0.5})Fe_2$, hyperfine mag. field, TDPAC study 3—23845

gamma-ray spectrometers
- *see also gamma-ray spectra*
- automated spectrometer for differential disturbed ang. $\gamma\gamma$ correl. meas. 3—50120
- CCD transversal filter for nucl. pulse shaping system 3—50218
- Compton spectrometer with ^{241}Am source 3—19222
- derivative method unfolding of gamma-ray spectra from NE-213 spectrometers 3—31871
- emission-type luminesc. gamma spectrometer with liq. Xe 3—50119
- environmental monitoring methods comparison for nuclear power plants 3—58581
- gamma-ray spectrometry in light water reactor environments 3—55749
- GG-2M on Kosmos 856 and 914, description 3—35443
- ionisation chamber, cylindrical filled with compressed Xe, for low-energy γ-ray spectrometry 3—1157
- low activity meas., γ-ray spectrometer design and results 3—41397
- LWR coolant surface radioisotope monitoring 3—21452
- microanalysis system of PPM-order ^{10}B conc. in tissue for neutron capture therapy 3—44312
- microcomputer controlled Mossbauer spectrometer 3—40735
- microprocessor-based multiscaler for Mossbauer spectroscopy 3—17178
- Mossbauer, isomer shift compensation with reson. detectors 3—1123
- Mossbauer effect at high and ultrahigh press., techniques for generating and measuring press. 3—10852
- Mossbauer effect at hydrostatic press. to 17 kbar and 78 to 450K, cylinder-piston type chamber 3—6499
- Mossbauer scatt. system, nonresonant, design at low temp. 3—25994
- Mossbauer spectrometer with reversing address register in AI-4096-3M analyser 3—11600
- Mossbauer spectroscopy, new reson. detector 3—5934
- multidetector arrays, design and application 3—50117
- multidetector setup for (n, xnγ) studies at 14 MeV 3—45750
- multidetector system using NaI(Tl) and Ge(Li) detectors for high spin isomers study 3—26554
- neutron-capture prompt gamma-ray spectrometry as a quantitative analytical method 3—1124
- on-line automated gamma spectrometer for coolant at LOFT facility 3—55224
- post-accident containment atmosphere gamma-ray spectrometry 3—31752
- recoil distance Doppler shift lifetime meas. of nuclear excited states, plunger system 3—21589
- sodium loop safety facility, cover gas system operation, fuel failure tests 3—55548
- spin spectrometer, 4π γ-ray multidetector system, design, instrumentation and response characts. 3—36611
- spin spectrometer parallel processor 3—50266
- standard spectrometer gamma sources, X-ray radiation intensity changes obs. 3—45257
- Ge(Li) detector, spectra and cross-section meas. from inelastic neutron reactions *(Chinese)* 3—50112
- Ge(Li) detectors in close geometry, efficiency calibration 3—17169
- Ge(Li) spectrometer for γ-ray emission meas. in proton-nucleus inelastic interactions 3—50121
- HgI_2 crystals, spectrometric and operational parameters of detectors, for X and γ-rays 3—26599
- HgI_2 detector thick crystal, characteristics and developments 3—50116
- NaI(Tl) scintillation spectrometer stabilisation method 3—45760
- Xe ionisation-type drift chamber for gamma-ray spectrometry 3—11610

gamma-ray transport *see photon transport theory*

gamma-rays
- buildup factor approx. by modified geometrical progression 3—41332
- multiplicity of gamma families, quasiscaling model 3—48783
- single crystals, high-energy γ-photon birefringence 3—51660

gamma transition *see glass transition (polymers)*

Gamow-Teller transitions *see beta-decay*

garnets
- *includes ferrimagnetic insulators, $M_3Fe_5O_{12}$; for rock-type garnets, $MM'(SiO_4)_3$, see minerals*
- *see also ferrimagnetic properties of substances*
- almondine, O positional parameters, X-ray powder diffr. intensity ratio study 3—46813
- bubble films, anisotropy field meas. method 3—30898
- bubble films, ion implanted, strain distrib. using X-ray dynamical theory 3—47532
- bubble films, refractive index meas. 3—34050
- bubble layers, Fe, Ga, As implanted, annealing mechanism, FMR study 3—33982
- domain mode FMR for H normal to (111) specimens 3—33983
- DyAG, metamagnet, high resolution magneto-optical meas., mag. dipole effects 3—57892
- epitaxial ferrite-garnate films, light diffr. on cylindrical mag. domain lattices 3—8808

garnets continued
- epitaxial films, induced coercivity study 3—33938
- exchange coupled films, mag. props. 3—33950
- ferrite-garnet film, ion implanted region, cylindrical mag. domains on boundary, static characteristics 3—14098
- ferrite-garnet film, with submicron cylindrical mag. domains, phase boundaries and growth kinetics 3—14512
- ferrite-garnet magnetised films, triangular shape mag. domains with mag. bubbles 3—47536
- film, (110)-oriented, with orthorhombic anisotropy, fast well encoded mag. bubbles 3—18962
- film, as-grown LPE, contraction motions of stripe domains 3—47533
- film, domain wall mass evaluation with reson. spectroscopy 3—18961
- film, ferrite-garnet, spectrum of exchange and exchangeless spin-wave excitations 3—52561
- film, ion implanted, charged walls and coupled bubbles motions 3—28667
- film, magnetisation reversal characts., obs. of pulsed crit. fields 3—38661
- film, magneto-optic domain wall oscill. spectrum analyses 3—30902
- film, submicron magnetic bubbles, memory device appl. *(Japanese)* 3—3497
- films, appl. of simple method for complete optical anal. 3—38790
- films, mag. anisotropy and magnetostriction meas. 3—30897
- films, mag. bubbles with high mobility and max. vel. 3—23759
- films, misoriented (111) films, anisotropy consts., FMR study 3—23809
- films, stability of wall coded mag. bubbles 3—33956
- films, standing wave vibr. direct excitation 3—57692
- garnet-ferrite epitaxial films, domain struct., SEM study technique 3—18964
- high temp. solvent for garnet growth; O ion concentration and melt struct. 3—43719
- implanted, bubble motion control by charged walls 3—52571
- iron garnet films, epitaxial, ion implantation effect on surface struct. 3—8074
- low loss, prep. by modified ceramic method 3—19311
- magnetic garnet thin films growth 3—34246
- magnetic props. under hydrostatic press., closed porosity 3—14107
- magnetic stripe domain stretching in ion implanted channels, bubble memory appls. 3—28666
- magneto-microwave Kerr effect, effective linewidth, guided wave anal. and surface finish effects 3—34172
- magnetooptical props. and applications, review 3—23923
- mixtures, composition homogeneity, neutron activation technique *(Russian)* 3—19543
- phosphors, cathode ray luminesc. efficiency improvement using V_2O_3 additive 3—47717
- polycrystalline, natural spin resonance in external applied fields 3—23812
- rare earth iron garnets, amorphous, Mossbauer spectra and magnetisation meas. 3—57832
- rare earth iron garnets, elec. cond. and thermoelec. power meas. 3—23377
- space group, coupling coeff. for irreducible representations 3—2452
- surface defect inspection apparatus, mag. bubble memory applications 3—30899
- thin films, magnetostriction, magnetoelastic tensor determ., pair-ordering model 3—23754
- thin films, multidimensional elastic waves excited by oscillating domain walls 3—18967
- $Y_{3-x}Ca_xGe_yFe_{5-x}Fe_{x-y}O_{12}$ epitaxial films, mag. props. 3—33948
- YAG:Nd^{3+}, Nd^{3+} $^4I_{11/2}$ level population relax. probability determ. from luminesc. dumping in external sample 3—38903
- YAG:Nd laser rods, spectrophotometric anal. 3—16423
- YAG CW ring laser emitting single-mode linearly polarised radiation, intracavity SHG in $LiIO_3$ 3—17501
- YIG, Bloch lines, one-direction motion during nonlinear oscillation, polarization microscope study 3—57693
- YIG coupling circuit, 4-port cross-wire, eigenvalue anal. 3—46290
- $(BiTm)_3$ $(FeGa)_5O_{12}$ film, multilayer struct., mag. anisotropy, dynamic study 3—43416
- $(BiTm)_3(FeGa)_5O_{12}$ epitaxial films, spin-reorientation phase transition in mag. field 3—33952
- $(BiTm)_3(FeGa)_5O_{12}$, mag. bubble lattices, thermal and field stability 3—38663
- $Bi_xTm_{3-x}Fe_yGa_{5-y}O_{12}$ films, mag. props. 3—33949
- $Bi_xY_{1.2-x}Ca_{1.8}Sn_{0.3}V_{0.5}Ge_{0.5}Fe_{3.7}O_{12}$, solid state reaction 3—33939
- $Ca_3Fe_2Ge_3O_{12}$ garnet, single ion magnetic anisotropy model correction 3—47495
- $Ca_2NaMg_2V_3O_{12}$, photoinduced reduction of V^{4+} ESR signal, photocond. and refl. meas. 3—38685
- $Ca(Tb)Ga_2Ge_3O_{12}$ luminescent garnets with Tb on dodecahedral lattice sites 3—28886
- $DyFe_5O_{12}$, magnetisation reorientation, torque meas. 3—57583
- $Dy_3Fe_5O_{12}$ garnet, Faraday rotation and magnetisation 3—57882
- DyIG, linear mag. birefr., phenomenological anal. 3—28845
- DyIG, linear mag. birefringence, phenomenological anal. 3—57895
- $Er_3Fe_5O_{12}$ garnet, linear mag. birefringence and optical axis position 3—28844
- ErIG, Faraday rot. anisotropic behaviour 3—23920
- $(Eu,Tm,Y,Ca)_3(Fe,Ge)_5O_{12}$ epitaxial garnet films, domain wall resonance 3—8705
- $(EuEr)_3(FeGa)_5O_{12}$, domain struct. of (111) crystal plates with uniaxial anisotropy 3—52520
- $(EuLaCa)_3(FeGeAl)_{5O12}$, garnet films, LPE grown, mag. props., growth atm. effects 3—23753
- $(EuTmCa)_3(FeGe)_5O_{12}$ film, ion-implanted layers, defects study 3—18328
- Fe epitaxial garnet films, anisotropy and exchange parameter ferromag. resonance study 3—14093
- Fe garnet epitaxial films, stratification, refractive index study by guided light propag. 3—18587
- Fe garnets, substitutional dilution, mag. transitions and mag. struct. 3—28569
- $(Gd,Bi)_3(Fe,Ga)_5O_{12}$ epitaxial film, nuclear tracks from Xe and U ion irrad. 3—3493
- $(Gd,Y)_3(Fe,Mn,Ga)_5O_{12}$ garnet bubble films, LPE growth and mag. props. 3—52569
- $Gd_3Ga_5O_{12}$, IR window material, multiwavelength laser rate calorimetry 3—7096
- $Gd_3Ga_5O_{12}$, thermal and optical props. 3—28117
- $Gd_3Ga_5O_{12}$:Cr^{3+} crystals, luminesc. absolute quantum efficiency 3—38905
- GdIG epitaxial film, nuclear tracks from Xe and U ion irrad. 3—3493
- GdIG:Ho, hyperfine interation, NMR spin echo study 3—19013
- GdScGa:Cr^{3+}, fluoresc. lifetime and CW tunable room-temp. laser action 3—50664

garnets continued
$Gd_{3-x}Sc_xGa_5O_{12}:Cr^{3+}$ crystals, luminesc. absolute quantum efficiency 3−38905
$Ho_3Fe_5O_{12}$ garnets, temp. evolution of mag. struct. 3−52387
HoIG, hyperfine interation, NMR spin echo study 3−19013
HoIG, mag. props. in high mag. field, optical absorpt in IR region 3−28604
$(LaLuSmGd)_3(FeGa)_5O_{12}$, very thin films, Curie temp. and anisotropy fields 3−57715
$NaCa_2Cu_xZn_{2-x}V_3O_{12}$, garnet, Jahn-Teller effect, X-ray diffr. and Young's moduli meas. 3−18672
$Na_3Sc_2V_3O_{12}$:Fe, spin Hamiltonian ESR spectra, numerical parametrisation 3−38681
Nd:YAG laser, intracavity freq. doubled, active mode locking, transient pulse evolution 3−17566
$Nd_3Ga_5O_{12}$ garnet, crystal growth by Czochralski method, crystn. front shape obs. 3−28980
$Pr_xY_{3-x}Fe_5O_{12}$ garnet, magneto-optic and mag. props. 3−28843
$\phi_3(Fe_{2-x}Ga_x)(Fe_{3-y}Ga_y)O_{12}$ garnet, magneto-optical props. 3−38805
$Sm_3Fe_5O_{12}$, easy magnetisation axis direction, magneto-optical study 3−28550
$Sm_3Fe_5O_{12}$, magnetisation in high mag. field 3−57697
$(SmLuCa)_3(FeVSi)_5O_{12}$ garnet films, mag. props. 3−33947
$(SmLuCa)_3(FeVSi)_5O_{12}$ garnet film for ion implanted bubble devices, prep. and high temp. bubble propagation 3−38659
$(SmLu)_3(FeSc)_5O_{12}$, submicron bubble garnets, LPE grown 3−23758
$Sr_3Y(Tb)_2Ge_3O_{12}$ luminescent garnets with Tb on octahedral lattices sites 3−28886
$(TbErCd)_3Fe_5O_{12}$ crystals, multiplet mag. domains, Faraday effect study 3−33924
$Tb_3Fe_5O_{12}$, 4f-electron asphericity 3−57276
$(TmBi)_3(FeGa)_5O_{12}$ films, domain wall dynamics, effect of elevated coercivity 3−38662
$(TmBiPb)_3(FeGa)_5O_{12}$ epitaxial film, magnetooptic visualization and topographical study of magnetic fields 3−40652
$(Y,Bi)_3(Fe,Ga)_5O_{12}$ garnet films, stripe domain dynamics, photography study 3−8706
$(Y, Gd, Yb, Bi)_3(Fe, Al)_5O_{12}$ garnet films, epitaxial, pulsed remagnetisation, magneto-optical and high-speed photography studies 3−23761
$(Y,Re)_3(Fe,Ga)_5O_{12}$ films, mag. domain obs. using mirror electron microscopes 3−57724
$(Y, Sm, Ca)_3$, $(Fe, ge)_5O_{12}$, ferrite garnet thin films, mag. bubbles, domain equilib. 3−28670
$(Y,Sm,Lu,Ca)_3(Fe,Ge)_5O_{12}$ garnet thin film, dynamic props., ferromag. resonance study 3−8727
$(Y,Sm,Lu,Ca)_3(Fe,Ge)_5O_{12}$ garnet epitaxial films, uniaxial mag. anisotropy, high press. effects 3−18952
Y-Ga-Tb garnet phosphor, thermolum. and phosphoresc., V_2O_3 additions effect 3−24029
Y-Sc ferrogarnets expt. data comparison with local spin deviation model 3−8700
YAG, crystal growth from melt at high temps., acoustic-emission flaw detection technique 3−28982
YAG, IR window material, multiwavelength laser rate calorimetry 3−7096
YAG, laser window materials characts. 3−7098
YAG:Co^{2+}, ESR study of interstitial Co^{2+} 3−57760
YAG:Cr^{3+}, ESR spectrum, computer calc. 3−3519
YAG:Cr^{3+}, Nd^{3+} solid-state lasers active media efficiency enhancement, luminesc. sensitisation 3−6989
YAG:Eu^{3+}, high temp. press. sensor using fluorescence spectrum press. dependence 3−20865
YAG:Fe, coloration on reduction, absorpt. spectra and luminesc. quenching studies 3−47674
YAG:Nd, absorpt. photolum. and X-ray luminesc. spectra obs., 190 to 900 nm 3−28901
YAG:Nd, nonradiative relax. kinetics from upper active level 3−28902
YAG:Nd CW ring laser, freq. doubling, single freq. output 3−41929
YAG:Nd^{3+}, multiphonon relax. rate from pumped level to upper laser level 3−28892
YAG:Nd^{3+} single cryst., thermostimulated luminesc. and thermostimulated cond. 3−8893
$Y_3Al_5(Fe_5)O_{12}$ garnets, segregation in LPE 3−9007
$Y_3Al_xFe_{5-x}O_{12}$, mag. props., Mossbauer effect study 3−57827
$(YBiCa)_3(FeSi)_5O_{12}$ epitaxial garnet films, mag. props. 3−33945
$Y_{2.6}Bi_{0.4}Fe_{3.75}Ga_{1.25}O_{12}$ ferrite-garnet epitaxial film, anomalous mag. viscosity and bubble struct. obs. 3−3498
$Y_{3-x}Bi_xFe_5O_{12}$ single cryst., Curie temp. and Mossbauer spectra *(Chinese)* 3−43463
$Y_{3-x}Ca_xFe_{5-x}Ti_xO_{12}$ garnet, mag., elec. and thermoelec. props. 3−28352
$Y_{2.78}Ca_{0.25}In_{0.6}Ge_{0.25}Fe_{4.11}O_{12}$, magnetic properties study and Mossbauer spectrum *(Chinese)* 3−52413
$(YEuDy)_3(FeGa)_5O_{12}$ bubble film, domain walls, saturation vel. 3−43418
$Y_{2.6}Eu_{0.4}Fe_{3.8}Ga_{1.2}O_{12}$ garnet films, epitaxial, domain struct. near Neel temp. 3−23762
$Y_{2.6}Eu_{0.4}Fe_{3.8}Ga_{1.2}O_{12}$, mag. bubble lattices, thermal and field stability 3−38663
$(YEuLuCa)_3(FeGe)_5O_{12}$ 3−23753
$Y_3Fe_{5-2x}Co_xGe_xO_{12}$, broad mag. transitions from Mossbauer spectra 3−33895
$Y_3Fe_5O_{12} : Si^{4+}$, 1/f noise, mag. aftereffect 3−28647
$Y_3Fe_5O_{12}$, 1/f noise, mag. aftereffect 3−28647
$Y_3Fe_5O_{12}$, mag. props., Mossbauer effect study 3−57827
$(YGdTm)_3(FeGa)_5O_{12}$ epitaxial films, elastic stresses effect on mag. props. 3−52575
$(YGdYbBi)_3(FeAl)_5O_{12}$ epitaxial garnet films, magnetisation processes *(Russian)* 3−23745
YIG, ATR mode of surface magnon polaritons 3−43536
YIG, cationic self-diffusion 3−13543
YIG, crystal growth on seed from soln. in melt 3−8953
YIG crystallisation in $Na_2O-SiO_2-Y_2O_3-Fe_2O_3$ glass system, effect of nucleating agents 3−29196
YIG crystals, floating zone growth and IR transparency meas., magneto-optical device appl. 3−24120
YIG crystals, isothermal growth by $PbF_2-B_2O_3$ solvent evaporation, phase diagram determ. 3−24108
YIG, dislocation drag and damping, mag. subsystem effects 3−13225
YIG, domain structure, resonant dynamic changes in alternating mag. field, magneto-optical study 3−23700
YIG, domain walls, Bloch lines generation and resonant motion obs. 3−23701

garnets continued
YIG epitaxial film, nuclear tracks from Xe and U ion irrad. 3−3493
YIG epitaxial film, Mossbauer studies 3−28747
YIG, Faraday rotation and optical transparency 3−57883
YIG, ferrimagnetic echo bandwidth increase using field gradient synthesis 3−52633
YIG film, Bitter patterns in polarised light, microfields probe 3−28597
YIG film, diffuse domain wall dynamics 3−43415
YIG film, guiding magnetostatic surface waves with nonuniform in-plane fields 3−52428
YIG film, magnetostatic volume wave propag., ion implantation effect 3−43412
YIG film, Ne implanted, variation of saturation magnetisation 3−38653
YIG film, optical guided-wave interactions with magnetostatic waves at microwave frequencies 3−8804
YIG film, stoichiometric, prep. by sputtering 3−19270
YIG film, surface magnetostatic wave interaction with delayed EM wave 3−28664
YIG film, wall dynamics depend. on damping const. 3−33958
YIG film/dielectric/ground-plane struct., magnetostatic forward volume wave dispersion control 3−43413
YIG, grain size rel. to domain wall dimensions 3−14071
YIG, gyromag. Faraday effect 3−19112
YIG inhomogeneously magnetised film, magnetostatic wave resonance 3−23811
YIG, low loss, prep. by modified ceramic method 3−19311
YIG, mag. props. rel. to spin and domain wall topography 3−14070
YIG magnetodielectric plates, domain struct. period changes 3−57725
YIG, magnetoelastric effect 3−57737
YIG, magnetoelectric effect, susceptibility and anisotropy 3−38669
YIG multiple layer film, magnetostatic volume wave propagation obs. 3−33874
YIG, neutron irrad. effects on mag. props. 3−8701
YIG optical isolator and circulator for optical fibre transmission system 3−22252
YIG, optically induced spin reorientation transitions 3−43421
YIG, parametric spin waves, Brillouin scatt. study 3−23618
YIG, photomagnetisation by circularly polarised light 3−8696
YIG plate, dynamic changes in domain struct. period, polarising microscopy study 3−14097
YIG plate, surface magnetostatic wave damping, inhomogeneity effects 3−47492
YIG, polycryst., spinwave linewidths 3−33870
YIG, pure nucl. reflexes and combined hyperfine interactions, Mossbauer study 3−43465
YIG single cryst. ferrite, high power microwave processes and parametric pumping 3−18879
YIG single crystal, polarized neutron scatt., Pendellosung effect 3−51455
YIG single crystal growth by chem. transport using $FeCl_3$ transporting agent, $YFeO_3$ source material 3−14452
YIG, spin wave theory, mag. moment and magnetisation study 3−33873
YIG strip, magnetostatic forward volume wave propag. 3−43358
n-YIG, sublattice contrib. to magnetoresistance 3−57367
YIG, surface magnetostatic wave propag., mag. field effects 3−33881
YIG thin films, ion implanted, saturation magnetisation, temp. dependence meas. 3−14090
YIG, three-magnon magnetostatic wave interaction 3−33880
YIG, very thin films, Curie temp. and anisotropy fields 3−57715
YIG:Ca, V, densification mechanism 3−19302
YIG:Ca film, p-type semicond., elec. cond., mag. field gradient dependence meas. 3−33806
YIG:Co epitaxial films, domain structure and magnetisation 3−28668
YIG:Fe^{4+} film, conductive, microwave spectra and mag. relaxation 3−33951
YIG:Gd film optical isolator, low-cost compact design, LPE growth technology 3−7199
YIG:Ho, hyperfine interation, NMR spin echo study 3−19013
YIG:Ru^{4+}; magnetic easy axis spin transition under reduction in H_2 3−28562
YIG:Sb, near IR magnetooptical effects 3−57896
YIG:Si(Ge)(Sn)(Hf)(Th), elec. cond. meas. 3−52147
YIG-Ga.YIG layered films, LPE growth, appls. 3−19299
$(Y_{3-x}La_x)(Fe_{5-y}Ga_y)O_{12}$ irradiated garnet film, annealing, mag. props. 3−33946
$(Y_{1-x}Lu_x)_3Al_5O_{12}$ solid soln., annealing effects on acoustic wave absorption 3−13349
$Y_{3-x}Nd_xFe_5O_{12}$ system, mag. anisotropy and lattice consts. 3−28549
$(YSmCa)_3(FeGe)_5O_{12}$ bubble film, domain walls, saturation vel. 3−43418
$(YSmCaTm)_3(FeGe)_5O_{12}$ films, H_2^+ ion implanted, conversion electron Mossbauer spectroscopy study 3−57831
$(YSm)_3(FeAl)_5O_{12}$, submicron bubble garnets, new characterisation methods 3−23758
$(YSm)_3(FeGa)_5O_{12}$ {211} LPE films, anisotropic motion of steps 3−18569
$(YSm)_3(FeGa)_5O_{12}$ bubble film, domain walls, saturation vel. 3−43418
$Y_{2.6}Sm_{0.4}Fe_{3.8}Ga_{1.2}O_{12}$, mag. bubble lattices, thermal and field stability 3−38663
$Y_{2.6}Sm_{0.4}Fe_{3.9}Ga_{1.1}O_{12}$ garnet epitaxial film, Jackson factor and growth kinetics 3−29023
$(YSmLuCa)(FeGe)O_{12}$, surface-spin orientation, Mossbauer spectroscopy determ. 3−52685
$(YSmLuCa)_3(FeGe)_5O_{12}$ ion implanted films, Kerr rotation study 3−34076
$(YSmLuCa)_3(FeGe)_5O_{12}$ garnet film for 1.5 μm bubble devices, mag. props. 3−38660
$(YSmLuCa)_3(FeGe)_5O_{12}$ epitaxial films, elastic stresses effect on mag. props. 3−52575
$(YSmLu)_3(FeGa(Al)Sc)_5O_{12}$, submicron bubble garnets, new characterisation methods 3−23758
$(YSmLuGd)_3(FeGa)_5O_{12}$ garnet film for 1.5 μm bubble devices, mag. props. 3−38660
$(YSmTmCa)_3(FeGe)_5O_{12}$, small bubble domain dia. materials for high density devices 3−23757
(YSmTmGd)(FeGaAl) epitaxial garnets, mag. props. 3−33944
YbIG broadband Faraday magneto-optic isolator 3−42039
YbIG, gyromag. Faraday effect 3−19112

gas *see gases*
gas analysis *see chemical analysis*
gas blast circuit breakers
  SF_6 thermophysical properties: engineering approach 3—12807
  SF_6 gas electrical breakdown phenomena in non-uniform fields 3—37717
gas breakdown *see electric breakdown of gases*
gas bubbles *see bubbles*
gas-discharge displays
  excimer fluorescence for display applications 3—21817
  multichannel indicator on the control panel of a physics facility 3—45127
  specular reflection measurement in multilayer structures 3—49431
gas discharge lamps *see discharge lamps*
gas-discharge tubes
  see also gas-discharge displays; ion sources; thyratrons
  AC arc column and external electric circuit, coupling effects *(Chinese)* 3—18145
  hollow cathode discharge tube for excitation source of metal vapour lasers 3—1665
  laser system based on H_2O and D_2O vapour, orthogonal polarisations generation 3—46234
  plasmatrons, HF capacitance, possibilities of and some new designs 3—51389
  probes as elements of gas analysis meas. devices *(German)* 3—53471
  spectral tubes pulsed power source for atomic absorption and atomic fluorescence spectrometers 3—16420
  two-section waveguide discharge tube for CO_2 laser 3—17531
gas discharges *see discharges (electric)*
gas dynamic lasers *see gasdynamic lasers*
gas dynamics *see aerodynamics*
gas ionisation *see ionisation of gases*
gas lasers
  see also chemical lasers; excimer lasers; gasdynamic lasers; ion lasers
  air, electron beam energy branching, appl. to gas lasers *(French)* 3—22567
  cavity alignments method, appl. to Brewster angle He-Ne laser 3—27089
  coherent detection telemetry with CW CO_2 laser *(French)* 3—56269
  commercial lasers, reliablity 3—17523
  conference, laser science, Ankwei, China (May 1982) *(Chinese)* 3—5
  developments in non-semiconductor lasers, review *(Japanese)* 3—22101
  dimethyl ether submillimeter lasing, CO_2 laser pumped, passive Q switching, laser spectroscopy 3—1615
  distributed-feedback gas lasers, struct., waveguiding book contrib. 3—1652
  dynamically coupled free electron and mol. gas laser, kinetics 3—56221
  electric discharge and electron beam pumped gas lasers *(Japanese)* 3—1612
  electric field distrib. in active gas, laser appl. *(Chinese)* 3—22038
  ethyl chloride, CW far IR laser action at 447, 698, 1306, 1669 μm 3—6953
  fission pumped IR laser, expt. study 3—1670
  fluoromethane, helical DFB gas laser 3—27019
  fluoromethane laser, optically pumped, 496 μm, relax. oscills. and stability 3—27012
  formic acid far IR laser, growth of emission 3—37004
  formyl fluoride deuterated, optically pumped, FIR laser lines 3—27009
  free complex mol. vapours, luminesc. with elec. excitation 3—36796
  fundamentals and appl. *(German)* 3—6997
  gain saturation in gaseous active media, influence of diffusion 3—36983
  He-Ne lasers wavelength determ., in 633 nm range, length unit establishment appl. *(Slovak)* 3—22141
  high-repetition-rate electron beam for laser pumping, resonant transformer construction and operation 3—17524
  HV pulser for supplying e-beam controlled CO_2 laser power amplifier 3—27070
  I_2 laser with broad-band optical pumping by multichannel cumulative discharge of magnetoplasma compressor 3—22120
  inhomogeneous active medium lasers, lasing zone shape 3—6947
  metal vapour, high-power high-frequency switching 3—37059
  methanol, deuterated, CH_3OD and CD_3OH, optically pumped lasers, Stark effect 3—12124
  methanol, optically pumped, line assignments rel. to competitive and cascade couplings 3—27011
  methanol, opto-acoustic spectra, optical pumping of far IR methanol laser *(Chinese)* 3—22040
  methanol laser, optically pumped, far IR 251 μm line selective enhancement using capacitive Al mesh mirror 3—41881
  methanol submm. laser, intracavity double reson. 3—56174
  methanol-d_3 laser, high power pulsed far-IR lines 3—41813
  mode-locking using an external acoustooptic modulator with pot. appl. to passive ring gyroscopes 3—17547
  molecular ions+electrons, dissociative recombination 3—11995
  multimode, Lamb's equations of motion 3—22024
  operating principles and appls. *(French)* 3—1648
  partial pressure accurate determ., mass spectrum quantitative analysis *(Chinese)* 3—12165
  photolytically pumped cylindrical laser cavity, optical distortion due to gas-dynamic motion 3—56256
  plasma laser pumping by modulated electron beam 3—7000
  principles, introductory, book 3—45
  pumping by electron beam from nanosecond skimming discharge plasma 3—12179
  quantum and quasiclassical lasing regimes 3—56169
  rare-gas halide high average brightness laser technology 3—12169
  rate equations cct. analogy *(Polish)* 3—6944
  reliability of lasers and laser systems, conf., Los Angeles, CA, USA (Jan. 1982) 3—9
  ring gas laser in a mag. field, nonlinear interaction between elliptically polarised waves 3—17489
  ring lasers, light induced optical nonreciprocity 3—17539
  ring lasers, monomode, stability, influence of Doppler broadening 3—41885
  safe operation rules of lasers *(Chinese)* 3—37058
  semi-self-maintained volumetric discharge in own mag. field 3—56171
  TE-CO_2 laser with Q-switched ruby laser, synchronisation and adjustable delay system for plasma diagnostics 3—42453
  two-mode laser with phase-anisotropic resonator, power reson. parameter improvement 3—32390
  uniformly broadened line laser, mode competition with different Q-factors 3—17484
  Al I segmented plasma recomb. lasers employing foil electrodes 3—12125
  Ar commercial air-cooled laser, reliability 3—17523

gas lasers continued
  Ar laser, active synchronisation mode stabilisation 3—46245
  Ar-Xe mixture, electron-beam pumped, lasing at 1.73 μm 3—32348
  Ar-Xe powerful electroionisation laser on Xe IR atomic transitions 3—36997
  Ba CW laser oscillation, superlong pulses on the 6^1P_1-5^1D_2 transition 3—17486
  Bi vapour laser, decay of Bi atom $6p^3$ $^2D^0_{3/2}$ metastable levels in interpulse period 3—6956
  Br, laser action obs. in hollow cathode discharge 3—12122
  Br_2-CO_2-He mixture, solar energy conversion, lasing power and efficiency 3—26998
  C, laser action obs. in hollow cathode discharge 3—12122
  CO active medium props., mol. isotopic composition influence, numerical kinetics calcs. in anharmonic oscillator system 3—27022
  CO CW IR laser system *(Chinese)* 3—22044
  CO electric discharge laser with selective and nonselective resonators 3—27020
  CO laser, sealed, energy characts. rel. to impurities 3—56179
  CO laser, struct. in generation lines by active element spectroscopy 3—40707
  CO laser, vibrational-kinetics methods, appls. to mol. lasers and laser chemistry 3—6769
  CO preionisation laser operating in active zone of stationary nuclear reactor 3—27002
  CO pulsed electron beam controlled laser with selective resonators, emission spectra 3—6957
  CO pulsed electron beam controlled high press. laser, emission spectrum characts. 3—6958
  CO sealed waveguide CW laser, energy and spectral characts. 3—7020
  CO sealed-off branch-selected laser operating at room temp., lifetime results *(Chinese)* 3—37001
  CO-N_2-H_2 laser discharge, plasma kinetics, N_2 and H_2 additions effects meas. 3—17483
  CO_2 10.6 μm lasers, damage in optical materials 3—41801
  CO_2 10.6 μm lasers, heterodyne expts. 3—7048
  CO_2 50-J system, subnanosecond high-voltage 50-Ω calibrated attenuator appl. 3—27120
  CO_2, CC TlBr-TlI optical fibre for laser beam *(Japanese)* 3—46309
  CO_2 CW closed-cycle laser with nonself-sustained discharge 3—32385
  CO_2, CW flowing-gas, small signal gain meas. 3—26997
  CO_2 CW laser, grating tuned, spectral power output, rotational temp. and population ratio determ. *(Korean)* 3—12200
  CO_2 CW laser, line tunable orthogonally polarised dual wavelength operation 3—1668
  CO_2 cascade lasing due to 00^01-02^00-01^10 transitions, pulsed gas discharge pumping 3—36989
  CO_2, double discharge TEA laser modified electrode system, V-I characteristics *(Korean)* 3—37069
  CO_2, dual wavelength pulsed lidar, groundlevel and airborne correlation meas. 3—35300
  CO_2 elec. discharge laser with emission energy of 500 J 3—7017
  CO_2 fast-flow closed-cycle industrial laser, active medium investigation 3—37072
  CO_2 fast-flow laser with mixing, optical inhomogeneities of active medium 3—56172
  CO_2 gas lasers with inhomogeneous active med., lasing zone shape 3—6947
  CO_2 helical transversely excited laser, rotating mirror Q-switching, theory 3—37086
  CO_2 heterodyne laser systems, acousto-optic modulators 3—56249
  CO_2, high power, appl. to industrial materials processing 3—22100
  CO_2, high power, beam profile meas. system *(Japanese)* 3—54763
  CO_2, high quality TEA, corona preionization type, output energy 3—26999
  CO_2, high repetition rate mini TEA CO_2 laser using a semiconductor preionizer 3—17480
  CO_2 high-power electric-discharge lasers, dynamic saturation of optical transitions 3—22030
  CO_2 intracavity-waveguide lasers, gain, saturation intensity and internal losses *(Chinese)* 3—36984
  CO_2 isotopic wavelengths, atmos. water vapour absorption 3—54113
  CO_2 large volume testbeds with unstable resonators, analytical and numerical laser mode prediction comparison with expt. data 3—41883
  CO_2 laser, appls. in inorganic chemistry 3—24524
  CO_2 laser, emission modulation by discharge current 3—17543
  CO_2 laser, intracavity SF_6 saturable absorber, optical bistability 3—36986
  CO_2 laser, miniature, with sealed-off electron source 3—41874
  CO_2 laser, passive Q-switching, bistability with CH_3I saturable absorber 3—37083
  CO_2 laser, pulsed, passive frequency stability 3—22140
  CO_2 laser, regenerative amplification of nanosecond pulses, numerical simulation 3—6948
  CO_2 laser amplifier, vibr.-rot. transition line shape parameter anal. 3—56170
  CO_2 laser amplifier gain mapping using wavefront analyser 3—41855
  CO_2 laser as IR spectroscopic light source *(French)* 3—9373
  CO_2 laser beam, acousto-optic deflection by optically active Te 3—47620
  CO_2 laser discharge, non-self-sustaining, limited energy input *(Russian)* 3—33006
  CO_2 laser fibre optics in endoscopy, surgical use 3—53745
  CO_2 laser for optical pumping of methanol in far IR, opto-acoustic spectra *(Chinese)* 3—22040
  CO_2 laser media, with high pumping level, characts. 3—46191
  CO_2 laser operating at difference freqs. with optical pumping under saturation conditions, output parameter theory 3—46192
  CO_2 laser output stabilization for use in subMM wave laser *(Japanese)* 3—1669
  CO_2 laser passive Q-switching by bleachable filters based on heterocyclic compounds 3—32345
  CO_2 laser radiation absorption meas., high-temp. 10 μm absorption cell 3—32397
  CO_2 laser resonator, Fabry-Perot type, beat freq. meas. between transverse modes *(Korean)* 3—12190
  CO_2 laser system, large, optical design and assembly, use of Zernike polynomials and interferometry 3—7005
  CO_2 laser system LEKKO VIII, booster amplifier for ICF 3—41802
  CO_2 laser system using two-section waveguide discharge tube 3—17531
  CO_2 lasers, ion aging effects on the dissociative-attachment instability 3—12111
  CO_2 lasers, pulsed, transverse mode formation time 3—41887

gas lasers continued
CO_2 mini-TEA laser, high efficiency, medium repetition rate 3—46236
CO_2 mini-repetitively pulsed lasers, improved performance using H_2 buffered gas mixtures 3—1607
CO_2, mol. laser, optical pumping difference freq. excitation under saturation conditions 3—17477
CO_2, opto-acoustic frequency lock system for pulsed lasers 3—27077
CO_2 partly sealed-off laser of 500 W output power, design and technology *(Chinese)* 3—12174
CO_2 powerful laser beams, self-focusing in collisional plasmas 3—7085
CO_2 preionisation laser operating in active zone of stationary nuclear reactor 3—27002
CO_2 pulse-periodic electron-beam-controlled laser with cooled active mixture, energy charact. calc. 3—36991
CO_2 Q-switched laser, subharmonic bifurcations, multistability and turbulence 3—12112
CO_2 quasi-CW electric-discharge laser having an unstable resonator, radiation divergence 3—36987
CO_2, radiation up conversion to UV in Na vapours 3—27149
CO_2 rangefinder with two independ. stabilised CW CO_2 lasers, nonlinear heterodyne detect. 3—27203
CO_2 rapid-flow combined-action industrial laser 3—37071
CO_2 sealed-off waveguide laser, reliability factors 3—1657
CO_2 simple TEA lasers, scaling laws for mode purity 3—1608
CO_2 single-mode laser, output-beam parameters, active-medium inhomogeneity and aperture stop influence 3—17553
CO_2 single-mode laser system for Raman scatt. in p-H_2 3—41812
CO_2 TEA helical laser, improved performance and rot. spectral characts. 3—36985
CO_2 TEA laser, photoionization sources 3—6945
CO_2 TEA laser, shock waves due to discharge 3—42259
CO_2 TEA laser, vibr. temp. kinetics 3—36988
CO_2 TEA laser amplifier, rot. relax. influence on nanosec. radiation pulse shape 3—56263
CO_2 TEA laser gas mixture optimization, use of topographical plot 3—22027
CO_2 TEA laser power conditioner, long-life spark gap development 3—7848
CO_2 TEA laser with UV preionisation, active medium composition influence on 00^02-$[10^01, 02^01]_1$ band gain 3—27001
CO_2 TEA laser without selective elements, output radiation spectra *(Chinese)* 3—12110
CO_2 TEA lasers, injection-locking by orthogonally-polarised injection source 3—7016
CO_2 TEA lasers, injection-locking, polarisation coupling effects and single axial mode operation 3—27094
CO_2 TEA lasers with integral semiconductive preionisation 3—27083
CO_2 TEA lasers with plane-plane resonators, transverse mode struct. meas. 3—17537
CO_2 TEA pulsed laser with preliminary photoionisation and high specific energy input 3—32384
CO_2 TEA rapidly tunable laser 3—17548
CO_2 TEA sealed laser, 100 Hz, using high CO_2 concentrations and SnO_2-Pd catalyst 3—32383
CO_2 TEA wide-aperture lasers, injection locking 3—37088
CO_2 tunable laser, mode locking by intracavity saturable absorber synchronous modulation 3—27110
CO_2 tunable lasers with Fabry-Perot resonators *(Chinese)* 3—37077
CO_2 unstable-resonator TEA laser mode selection by injection from waveguide laser 3—12188
CO_2 waveguide laser employing RF electrodeless discharge, amplification 3—36990
CO_2 waveguide laser with modulated parameters 3—27003
CO_2 waveguide lasers, RF excited, problems and status of reliability 3—1656
$^{13}CO_2$ laser pumped $^{15}NH_3$ far IR laser, dispersion, laser fulling effects 3—12123
CO_2-N_2-He laser, operating efficiency, kinetics model 3—26996
CO_2-N_2-He TEA laser, circuit modelling and discharge modelling 3—1609
CO_2-TEA laser, sealed-off review *(Rumanian)* 3—12113
Ca I segmented plasma recomb. lasers employing foil electrodes 3—12125
CdI, discharge pumped laser, 653 to 662 nm operation 3—27006
Cl, laser action obs. in hollow cathode discharge 3—12122
Cl, UV laser transitions *(Chinese)* 3—1611
Cu halide lasers, interpulse kinetics 3—37003
Cu halide vapour lasers, output parameters, influence of electron heating during Cu recomb. 3—32352
Cu I segmented plasma recomb. lasers employing foil electrodes 3—12125
Cu vapour, high average power, design *(Bulgarian)* 3—46199
Cu vapour laser, high-temperature insulation 3—1614
Cu vapour laser, multisection transverse-discharge, time spread 3—7018
Cu vapour laser, sealed-off high repetition rate *(Chinese)* 3—12173
Cu vapour laser pumped dye laser system for laser isotope separation 3—1500
Cu vapour lasers, interpulse kinetics 3—37003
Cu vapour transversely excited laser using nanosec. pulse modulator 3—56250
CuBr vapour laser, output power, service life 3—56237
CuCl pulsed high-gain laser oscillator and amplifier, high-resolution lineshape anal. 3—56173
CuCl vapour laser, sealed-off, with self-heated design *(Chinese)* 3—22108
D_2O 385 μm laser linewidth meas. to −60 dB 3—32350
D_2O in Raman and laser regimes, backward and forward far IR emission characts. 3—56175
D_2O oscillator emitting at 385 μm, single-mode pulse generation 3—37007
D_2O vapour laser, room temp. modulation of 118, 176 μm lines in InSb 3—46282
D_2O-fluoromethane far IR lasers, pulsed, optically pumped *(Chinese)* 3—41809
F, laser action obs. in hollow cathode discharge 3—12122
F RF preionised laser without auxiliary electrodes 3—56225
H_2 blue-green second Stokes amplifier design, XeF-pumped 3—27081
H_2O and D_2O vapour discharge laser, orthogonal polarisations generation 3—46234
H_2O CW laser, operating conditions at 28, 47, 78, 79 and 119 μm 3—46200
H_2O vapour laser, CW, 28 μm, high power operation 3—41872
He-Cd, commercial, reliability 3—17523
He-Cd laser, effect of weak axial mag. field 3—7047
He-Cd lasers, oscill. and striation effects on emission charact. 3—6955

gas lasers continued
He-Cd^+ laser, electron impact excitation of Cd^+, laser transitions 3—32219
He-Cs VUV and soft X-ray lasing based on charge-exchange mechanisms 3—12119
He-Kr high-press. laser excited by U fission fragments 3—50645
He-Ne, commercial, reliability 3—17523
He-Ne, design of I_2 filled absorption cell 3—6996
He-Ne, frequency stabilization *(Japanese)* 3—22102
He-Ne 1.15 μm laser, CW oscillation with ultralong optical fibre resonator 3—7025
He-Ne 3.39 μm lasers, heterodyne expts. 3—7048
He-Ne 473-THz (633-nm) laser I_2-stabilised, direct freq. meas. 3—46196
He-Ne continuous laser, oscill. period doubling chaos 3—22032
He-Ne discharge, 6328 Å line gain analysis using freq. modulation spectroscopy 3—26989
He-Ne for sensitive electro-optical system measuring elec. fields with piezoelec. $LiNbO_3$ cryst. 3—35968
He-Ne internal mirror laser, correl. change during warm-up period 3—5538
He-Ne intra-cavity laser beam polarisation effect on refl. beam intensity *(Chinese)* 3—41895
He-Ne laser, $^{127}I_2$ stabilized, I_2 saturation dispersion effects 3—46193
He-Ne laser, 3.39 μm, anomalous dispersion mechanism *(Japanese)* 3—46197
He-Ne laser, 3.39 μm, freq. stability improvement using mag. field 3—17481
He-Ne laser, basic struct., capillary design, elec. components, gas factors and optical elements 3—41867
He-Ne laser, dimensional measurement applications, review 3—27124
He-Ne laser, energy transfer collisions, 6328 Å line pumping process 3—6772
He-Ne laser, internal mirror, amplitude and freq. stabilisation by cooling fan method 3—7034
He-Ne laser, mode competition with different Q-factors 3—17484
He-Ne laser, mode effects in SHG, use for laser stabilisation 3—46194
He-Ne laser, radiation output power, excitation by transverse microwave discharge, 0.6328 μm 3—22035
He-Ne laser, reliability factors 3—1657
He-Ne laser, reprographics, optical storage, gauge and medical appls. 3—56271
He-Ne laser acupuncture mechanism, expt. study *(Chinese)* 3—24793
He-Ne laser beam intensity stabiliser 3—46252
He-Ne laser line generation in hollow Cu cathode, 1.15 to 1.20 microns range 3—22031
He-Ne laser operating with coupled modes, intensity modulation 3—12194
He-Ne laser tubes, breakdown voltage lowering mechanism *(Chinese)* 3—36993
He-Ne laser with inhomogeneous mirrors, non-Gaussian intensity profile form. 3—37092
He-Ne laser with internal-mirror plasma tube, freq. stabilization system 3—46229
He-Ne lasers, real cost for original equipment manufacturer user 3—1658
He-Ne methane stabilised laser with mode spacing/spatial shift independent variation, mode competition 3—27004
He-Ne multitransverse mode intermol. mirror laser, polarisation phenomenon *(Chinese)* 3—41803
He-Ne ring laser, emission amplitude characts. 3—12114
He-Ne ring lasers, use of circular dichroism to obtain unidirectional lasing 3—22033
He-Ne stabilised laser, type LG-149-1, active medium perturbation effect on emission-freq. instability 3—32347
He-Ne three-mode laser in self-locking operation, beat-freq., fluctuation suppression 3—22034
He-Ne two-freq. laser in a transverse mag. field 3—27005
He-Ne/methane two-mode lasers, freq. shifts, axial mag. field influence 3—22037
He-Xe, fission pumped IR laser, expt. study 3—1670
He-Xe laser radiation bistability and polarisation due to $5d[3/2]_1^0$-$6p[3/2]_1$ transition in ^{136}Xe in weak mag. field 3—22036
He-Xe pulsed plasma jet recombination laser, stimulated emission at 2.026 μm 3—6949
^{3}He-^{116}Cd, high press. mixture, lasing activity at 441.6 nm 3—17487
Hg Cc CW optically pumped laser, output power charact. at 546.1 nm *(Japanese)* 3—50649
I_2, Iskra IY, 2 Tw, fusion ignition appls. 3—31827
I* anti-Stokes Raman laser, UV and VUV laser emission 3—12116
Li I segmented plasma recomb. laser employing foil electrodes 3—12125
LiI recombination laser in the VUV 3—12117
N, laser action obs. in hollow cathode discharge 3—12122
N_2, miniature TEA laser with diffracion limited sub-nanosec. output pulses 3—1667
NH_3 12-μm laser, Raman gain 3—12130
NH_3 laser output, buffer gas effects 3—12121
NH_3 optically pumped Raman lasers gain meas. using tunable-diode-laser 3—32396
$^{15}NH_3$ CW far IR laser, $^{13}CO_2$ laser pumped, dispersion, laser pulling effects 3—12123
NH_3-N_2 high-power laser, characts. with passive longit. mode locking 3—7040
N_2O laser with saturable NH_3 absorber, optical bistabilities, phase transitions and Q-switch characts. 3—37091
N_2O-$O_2(N_2)$-^{3}He nuclear reactor pumped laser excited by ion-ion neutralisation, theory 3—41810
$^{14}NH_3$ CW two-photon pumped laser lines 3—50651
$^{15}NH_3$ CW two-photon pumped and Raman FIR laser lines 3—50651
Nd laser, mode locking, spatial coherence of optical harmonics 3—7075
Ne 260 THz (1.15 μm) Lamb-dip-stabilised laser freq. meas. 3—46195
O, laser action obs. in hollow cathode discharge 3—12122
O_2-Ar, electron beam energy branching, appl. to gas lasers *(French)* 3—22567
Pb vapour laser at 7229 Å *(Chinese)* 3—41863
Tl* anti-Stokes Raman laser, UV and VUV laser emission 3—12116
Tl* anti-Stokes Raman laser, threshold and dispersion effects 3—12129
Xe CW laser oscillators, dispersion-induced instability 3—12108
Xe laser, high gain 3.5 μm operation, asymmetrical Lamb dip obs. 3—36995
Xe laser, high gain 3.5 μm operation, asymmetrical Lamb dip, theory 3—36996
Xe laser, optically pumped 3—56009
Xe, optically pumped laser 3—1324

gas lasers continued
Xe-Cs laser, amplification by solar radiation 3—27017
ZnI, discharge pumped laser, 599 to 606 nm operation 3—27006
gas permeability *see permeability*
gas phase electron diffraction
benzene cluster formation in supersonic jets, electron diffr. studies 3—36899
bicycloalkanes, conform., gas phase electron diffr. 3—36860
bicycloalkanes, conform., gas phase electron diffr. 3—36861
p-bis(trimethylsilyl)benzene mol. struct. determ. from gas phase electron diffr. 3—32203
3-butenenitrile, gas phase, mol. struct., electron diffr. obs. 3—50519
4-chloro-pyridine-N-oxides, mol. struct., gas phase electron diffr. meas. 3—21920
1-chlorobutane, mol. struct. and conform., gas-phase electron diffr. and mol. mechanics investig. 3—36858
2-chlorocyclohexanone, mol. struct. and conform., gas phase electron diffr. obs. 3—21918
m-chloronitrobenzene, gas phase mol. struct., vibr., electron diffr. study 3—50522
cyan trichloride, mol. struct., gas phase electron diffr. obs. 3—50521
2-cyclopropylpropene, mol. struct., ab initio calcs., gas phase electron diffr. obs. 3—50518
1,1-dichloroethylene, mol. equilib. struct. determ. by gas electron diffr. and microwave data and model anal. 3—32205
1,12-dimethyl-1,12-dicarba-closo-dodecaborane, mol. struct., electron diffr. obs. 3—11975
m-dinitrobenzene, gas phase mol. struct., vibr., electron diffr. study 3—50522
1,1,1,3,3,3-hexachloro-1,3-disilapropane, mol. struct. determ. by electron diffr. 3—32204
mesitylene, mol. struct., gas phase electron diffraction obs. 3—36862
methyl vinylether, gas-phase mol. struct., electron diffr. IR Raman and microwave obs. 3—50520
4-methyl-pyridine-N-oxide, mol. struct., gas phase electron diffr. meas. 3—21920
MOGADOC interactive computerised search/retrieval system 3—50540
molecular structure determination by electron diffr., microwave spectrosc. and calcs. 3—50374
4-nitro-pyridine-N-oxide, mol. struct., gas phase electron diffr. meas. 3—21920
norbornane, gas phase mol. struct., electron diffr., microwave, Raman and IR study 3—56074
norbornane, gas-phase mol. struct., electron diffr. IR Raman and microwave obs. 3—50520
octachloro-1,3-disilapropane, mol. struct. determ. by electron diffr. 3—32204
supersonic jets, electron diffr. studies, apparatus and method 3—36130
vinyldimethylchlorosilane, mol. struct. and conformation determ. by gas phase electron diffr. 3—32206
CO_2, anharmonic force field, gas phase electron diffraction obs. 3—21919
Cu complex, bis(acetylacetonato)Cu(II), gas phase mol. struct., electron diffr. obs. 3—36859
TiF_4, equilib. geometry and vibr. freqs., gaseous electron diffr. obs. 3—11976
gas-surface interactions *see sorption*
gas technology, natural *see natural gas technology*
gas turbine power stations
Brayton cycle solar central receiver experimental system, planning and design 3—29374
Closed Cycle Vapor Turbogenerator for remote telecommunication sites 3—39511
liquified natural gas turbine exhaust-heat thermoelectric generator system design 3—14974
pressurised fluidised-bed combustion facility, 1000 hr test programme, observations and analysis 3—34708
Texaco coal gasification process, economic evaluation 3—29457
gas turbines
see also gas turbine power stations; turbogenerators
combustor linear analysis 3—17872
thermal receiver high-temp. ceramic-metal heat exchanger element 3—39521
Ni alloy EI826, thermal cycling resistance in high-temperature gas flow 3—14724
Ni-Cr-Fe-Si-B self-fluxing coatings for stationary gas turbines, modification by Al_2O_3 protective scales 3—4211
ZrO_2, modified abradable seal coating for high temp. gas turbine appls. 3—4210
gasdynamic lasers
active media for gasdynamic lasers 3—12128
jets in supersonic nozzle, turbulent mixing, vibr. relax. effects calcs. 3—37534
pumping fast-flow laser, glow discharge, review 3—42481
rapid-flow laser, gas-discharge plasma elementary processes, mechanism and rate const. reconstruction 3—7703
CO, gasdynamic laser, supersonic nozzle shape influence on vibr. levels 3—32351
CO, parametric eqns. for working medium characts. estimation 3—56177
CO_2, active media for gasdynamic lasers 3—12128
CO_2 and N_2O laser emission energy comparison in systems with mixing 3—17479
CO_2 CW gasdynamic laser 3—17530
CO_2, combustion driven, with narrow throat and high area ratio and nozzles *(Chinese)* 3—17476
CO_2 gasdynamic continuous laser, high temp. selective 3—50674
CO_2 gasdynamic laser with mixing, recomb. reaction, levels, chem. pumping 3—22029
CO_2 gasdynamic laser with local inhomogeneities in active medium flow, output spectrum 3—32346
CO_2, nozzle flow of vibr. nonequilib. medium 3—27000
CO_2, unstable telescopic resonator calc. by approximate method 3—27091
CO_2-N_2-H_2 gasdynamic laser 3—22028
CO_2-N_2-H_2O gas mixture for gasdynamic laser, active medium and optical resonators 3—12189
CO_2-N_2-H_2O gasdynamic lasers, operating mode selection and organisation 3—6946
CO_2-N_2-H_2O laser optimisation and vibr.-relax. const. anal. 3—17478
CO_2-Ne gasdynamic laser, 18.4 μm operation 3—22123
CS_2 laser with an aim of increased efficiency and expanded spectral range 3—17485
gasdynamic lasers continued
HCl, DCl, thermal gasdynamic laser using rot. transitions, energy transfer from H_2 3—27021
HF, DF, thermal gasdynamic laser using rot. transitions, energy transfer from H_2 3—27021
N_2O, active media for gasdynamic lasers 3—12128
N_2O and CO_2 laser emission energy comparison in systems with mixing 3—17479

gaseous insulation
air, dry and moist, positive switching impulse breakdown of sphere-plane gap 3—7840
compressed gas insulation breakdown, influence of steep-fronted pulses and insulator interfaces 3—27643
compressed gases, elec. breakdown for steep fronted pulses and insulator interfaces 3—17996
discharge voltage/time characteristic calc. *(German)* 3—37726
electric breakdown in gases, space charge effects 3—17995
electric breakdown of gases, corona and space charges occurrence 3—27642
electron attaching gases mixtures, calc. of breakdown mixtures 3—2171
fluoroform+SF_6+perfluorocarbon ternary gas dielectric, breakdown strengths, insulation appl. 3—7693
gaseous dielectrics, conf., Knoxville, TN, USA (March 1982) 3—5495
hexafluoropropylene, HV insulation, homogeneous field breakdown strength characts. 3—7695
insulating gases, dielectric strength, boiling point and toxicity 3—2173
perfluoropropane, HV insulation, homogeneous field breakdown strength characts. 3—7695
SF_6 thermophysical properties: engineering approach 3—12807
CO_2 gas, lightning impulse breakdown of rod-plane gaps 3—17997
CO_2/CCl_2F_2 gas mixture, lightning impulse breakdown of rod-plane gaps 3—17997
He, supercritical, elec. breakdown with partial discharge in short gaps, cable insulation appl. 3—42465
N_2, insulator surface flashover, predischarge current and surface field meas. 3—7842
N_2+SF_6+perfluorocarbon ternary gas dielectric, breakdown strengths, insulation appl. 3—7693
N_2O, HV insulation, homogeneous field breakdown strength characts. 3—7695
SF_6 and SF_6/perfluorocarbon mixtures, spark decomposition products, expt. studies 3—13014
SF_6, electric breakdown, effects of stochastic processes *(German)* 3—7827
SF_6 gaseous insulation, prebreakdown processes influencing volt-time characts. 3—7691
SF_6, impulse breakdown strengths, HV insulation systems 3—7838
SF_6/air gaseous insulation, prebreakdown processes influencing volt-time characts. 3—7691
SF_6/He gaseous insulation, prebreakdown processes influencing volt-time characts. 3—7691
SF_6/N_2 binary mixtures, impulse breakdown strengths, HV insulation systems 3—7838
SF_6/N_2/perfluorocarbon ternary mixtures, impulse breakdown strengths, HV insulation systems 3—7838
SF_6-air mixtures, impulse breakdown behaviour of negative rod-plane gaps 3—2172
SF_6-air-mixtures breakdown voltage measurement, AC and impulse voltage stress *(German)* 3—42353
SF_6-CO_2 mixtures, impulse breakdown behaviour of negative rod-plane gaps 3—2172
SF_6-N_2 mixtures, impulse breakdown behaviour of negative rod-plane gaps 3—2172
SF_6+c-C_4F_8+CO 3—7694

gases
see also aerodynamics; compressibility of gases; density of gases; dielectric properties of gases; diffusion in gases; electric breakdown of gases; electrical conductivity of gases; equations of state of gases; ionisation of gases; kinetic theory of gases; liquefaction of gases; luminescence of gases; Scott effect; Senftleben-Beenakker effect; specific heat of gases; thermal conductivity of gases; thermal diffusion in gases; viscosity of gases
cylindrical cavity in liquid, linear and nonlinear acoustical excitation 3—12391
limit dynamics of dense gases 3—16242

gate turn-off devices *see thyristors*

gauge field theory
see also Weinberg model; Yang-Mills theory
(4+N) dimensional gauge theory of gravitation 3—152
ν_α-ν_β oscillations, $\alpha,\beta=e,\mu,\tau(\alpha s\neq\beta)$, associated mixing in $SU(2)\times SU(2)_R\times U(1)$ guage theory 3—26054
CP^{n-1} models, elliptic solns., mesons and instantons 3—5985
abelian and nonabelian dyon solns. in curved space-time 3—16488
Abelian gauge theory, gauge dynamical symmetry breaking in 2-D 3—31089
Abelian gauge theory, self-dual 3—515
Abelian Higgs model, continuum limit 3—16531
Alder-Bell-Jackiw anomaly, pseudo-scalar gauge invariant operators 3—26020
anomalous expectation values, multicomponent fields 3—31062
antisymmetric tensor fields, gauge invariance, space-time topology 3—11035
antisymmetric tensor gauge fields, phase structure 3—11024
asymptotic freedom, absolute in SUSY theories 3—31137
axial electrodynamics, dynamical mass generation 3—16589
axial vector Ward identities, dimensional regularisation 3—45266
axially symmetric monopoles for arbitrary gauge group 3—16538
axially symmetric multimonopole solutions 3—16544
axion signal from positronium decay, branching ratio, mass 3—6809
bag formation in three-quark chromostatics 3—45368
baryons, semirelativistic QCD, inc. SU_3 flex-tube dynamics, asymptotic freedom 3—26068
Bethe-Salpeter equation with relativistic harmonic oscillator kernel, nonexistence of discrete bound states 3—5972
Bogomolny inequality for Einstein-Maxwell theory 3—16210
Bose-Einstein condensation, spontaneous gauge symmetry breaking 3—54670
broken Abelian gauge theories, mass hierarchies and scalar field self-couplings 3—54827
broken QCD and photon-photon collisions 3—40862

- **gauge field theory** continued
  - BRS transformations, Lie algebra cohomology and gauge transformation groups 3—30980
  - BRS transformations and superfield formalism in gauge theories 3—30971
  - canonical and covariant quantisation of general gauge theories 3—26003
  - canonical quantisation, gauge invariance 3—30972
  - canonical quantisation of EM field and duality transformations 3—577
  - canonical quantisation of gravit. field and Gribov ambiguities 3—10704
  - causality versus gauge invariance in quantum gravity and supergravity 3—49239
  - central extensions of some Abelian finite gauge groups on lattices 3—16521
  - charged leptonic current, V, A structure study 3—16569
  - charged particle in gauge theory of gravitation approx. soln. with torsion 3—45042
  - charged scalar soliton Q-stability domain, EM correction 3—40771
  - classical coloured particle concept limitations, particle in nonAbelian gauge field 3—36184
  - classical gauge transformation, simple example 3—44938
  - classical solutions; leading-logarithm approximation, nontrivial topology 3—31057
  - collective phenomena, conf., Moscow, USSR (April 1981) 3—5484
  - coloured spinning classical particle in external SU(2) gauge field 3—537
  - complex, self-dual Euclidean SU(2) gauge fields with finite real actions 3—49581
  - complex Hopf bundle, Morse theory, vortex soln., solitons, fractional charges 3—5947
  - composite field condensation and renormalisation group 3—16473
  - composite model, leptons and quarks, SU(2) gauge, subcomponent symmetry, SU(2)×U(1) model 3—31178
  - composite quarks and leptons, mass generation mechanism 3—11155
  - conference on grand unified theories, Kyoto, Japan (June-July 1981) 3—10509
  - confinement phenomenon in quantum field theory 3—45310
  - conformal point transformations, invariance conditions and Lie derivatives 3—20991
  - conformal symm. breaking, instantons and merons *(Russian)* 3—6018
  - conformally invariant coupled nonlinear field eqns., meron-like solns. 3—16503
  - constrained Hamitonian systems, gauge generators and symmetries 3—20968
  - continuous and discontinuous transitions in spin and gauge systems 3—45087
  - continuum QCD, reduced large-N model 3—590
  - Corrigan-Goddard conditions for n monopoles for small values of parameters, explicit soln. 3—16545
  - cosmological consequences of homogeneous homothetic gauge field 3—25669
  - cosmology and unified gauge theory, correlations 3—30168
  - CP_1 model, instanton contribution on torus 3—30987
  - CP_1 periodic model, numerical analysis, fugacity factor, periodic conditions 3—30988
  - CP^{N-1} coupled to gauge fields, mean field theory and Monte Carlo results 3—534
  - CP^{n-1} models, gauge boson dynamical generation 3—40759
  - CP^{n-1} models on sphere, topological susceptibility, semiclassical approx. 3—20998
  - CP^{n-1} models with fermions, decoupling, chiral transformations 3—31017
  - CP nonconservation in weak interactions in SU(2)×U(1) gauge model 3—26034
  - $d=3$ Z_2 gauge theory, fermionic loop correlation, Yang-Mills formulation 3—31024
  - de Sitter and Poincare gauge-invariant fermion lagrangians and gravity 3—26010
  - deconfining phase transition, nonexistence in spin systems and lattice gauge theories 3—40865
  - decoupling in theories with spontaneous symmetry breakdown 3—11025
  - deep inelastic scattering at small x, QCD gluon ladder diagram 3—40852
  - differential geometry and topology 3—16117
  - Dirac's conjecture on first-class secondary constraints, validity 3—49540
  - Dirac and Majorana neutrinos, EM props. and decays in gauge theory $SU(2)_L\times U(1)$ and $SU(2)_L\times SU(2)_R\times U(1)$ 3—11082
  - Dirac field, Wilson lattice fermions, evolution kernel 3—49531
  - disordered QCD, quark confinement for supersymmetric model 3—31145
  - dynamic quark confinement in Z(N) gauge fields 3—45355
  - dynamical criteria in superunified theories 3—5688
  - dynamical symmetry breaking without fundamental scalars, dynamics and stability 3—49592
  - dyon-fermion dynamics 3—11112
  - dyons quaternionic formulation, potential, current and field 3—36186
  - E_6 grand unified gauge model 3—6032
  - E(2)-like little group for massless particles and neutrino polarisation, gauge invariance consequence 3—31047
  - effective low-energy lagrangian based on spontaneously broken local supersymmetry 3—26011
  - effective quark mass under momentum-subtraction renormalisation condition 3—611
  - Eguchi-Kawai model, quenching method 3—54844
  - Eguchi-Kawai model weak coupling phase, U(1) breaking 3—5960
  - Einstein principle, gauge theory of gravitation and quantum geometrodynamics 3—10701
  - Einstein-Cartan theory, reduced fibre bundles, symmetries, rigid reductions 3—30735
  - Einstein-Maxwell metrics, solutions to axially symmetric static self-dual SU(3) gauge fields 3—5678
  - electroweak gauge models with two weak neutral currents 3—16582
  - electroweak gauge theories, correction geometry for symmetry breaking 3—6026
  - electroweak interactions, conf., Schladming, Austria (February-March 1982) 3—25675
  - electroweak interactions, gauge theories 3—26026
  - electroweak interactions and QCD, introduction 3—45328
  - electroweak theories based on $SU(2)_L\times U(1)\times U(1)\times U(1)$ gauge group, neutral currents 3—16583
  - elementary particle interactions unification 3—10708
  - elementary particles and field theory review *(Rumanian)* 3—11029
  - energy flux vector for the EM field and gauge invariance 3—25732
  - energy-momentum tensor for gauge theories, trace anomaly 3—40748
  - entropy of random surfaces 3—5965
  - entropy of self-avoiding surfaces on the lattice, field theory phase struct. 3—40787

- **gauge field theory** continued
  - equivalence principle and multidimensional unified gauge theories 3—148
  - Euclidean ϕ_3^4 theory in an electromagnetic potential 3—5937
  - Euclidean field theories in 4-dimens., planar diagrams 3—40745
  - euclidean four-dimensional space, self-dual solns. for SU_2 gauge fields 3—40772
  - Euclidean gauge theories, behaviour in strong fields 3—31038
  - exceptional groups and elementary particle structures 3—6031
  - extended Z(4) lattice gauge theory, massless phases and confinement 3—45297
  - external SU(2) gauge field, wave packet motion, coloured particle classical mechanics 3—538
  - F type spontaneously broken supersymmetry, perturbative restoration 3—11068
  - Faddeev-Popov formula nonperturbative modification, naive vacuum banishment 3—30981
  - families, the invisible axion, and domain walls, instantons in hypercolor 3—591
  - fermion path integrals, time evolution in gauge theories 3—54826
  - fermions in gauge theories quantised on the light front *(Russian)* 3—544
  - fermions scatt. by monopole in presence of CP nonconservation 3—45280
  - Feynman rules for reducible gauge theories, ghost langrangian 3—31025
  - finite lattice fermions and gauge fields in 1+1 dimensions, Schwinger model 3—30989
  - finite-component field wave eqn., local conformal invariance 3—11009
  - finite-component field wave eqn., local conformal-invariance 3—11008
  - flavour violation, scalar particles and leptoquarks 3—11081
  - flavour-changing EM transitions in standard weak interaction model 3—16599
  - four-dimensional HP_1 σ-model, functional integration around one-instanton solns. 3—523
  - four-dimensional SU(2) non-Abelian lattice gauge theory, permanent confinement 3—54836
  - four-dimensional U(2) gauge theory, Monte Carlo studies of Wilson loops 3—506
  - free gluon propagator in temporal gauge, Gauss's law appl. 3—11128
  - free relativistic massive quantum particle, mass shell, gauge fixing conditions 3—5986
  - freedom and confinement, unified geometric mech. in gauge theory 3—31015
  - fundamental and composite monopoles 3—16547
  - Furry theorem for non-Abelian gauge Lagrangians, Lie group representation, C parity, vertex functions 3—11114
  - gauge geometrodynamics, conceptual development, study of properties, review 3—40791
  - Gaussian limit of compact spin systems, Wilson and Wilson-Villain U(1) methods 3—16517
  - general relativity analogy to nonlinear sigma modes, consequences for gauge theory of gravitation 3—16192
  - generalised, external symm. group, interpretation of gravity 3—40765
  - generalised gauge hierarchies, subgroups of unifying group 3—20997
  - generalised lattice fermion actions and appls., CP phase, vacuum energy density 3—20979
  - generalised spin-structures on four-dimensional space-times 3—10697
  - geometric techniques in gauge theories, conf., Scheveningen, Netherlands (Aug. 1981) 3—5500
  - geometrical approach to magnetic monopoles 3—11046
  - geometrical models with torsion, monopole like solns. 3—45261
  - ghosts and BRS symmetries, geometric interpretations 3—31030
  - Gibbs perturbations of a two-dimensional gauge field 3—16529
  - global supersymmetry at finite temps. 3—16511
  - glueball calculations in lattice gauge theories 3—40760
  - glueball mass, estimation, plaquette-plaquette correlation in lattice gauge theory 3—26062
  - glueball mass estimate from strong coupling series in lattice QCD 3—11144
  - glueball mass from variant actions in lattice Monte Carlo simulations 3—40872
  - glueball mass ratios, strong coupling expansion parameters, SU(3) lattice gauge theory 3—40851
  - glueball mass spectrum, SU(3) lattice Monte Carlo calc. 3—6058
  - glueball mass spectrum in lattice QCD, Monte Carlo calc. 3—31155
  - glueball masses, 0^+ and 2^+ in SU(2) compatibility with the renormalisation group behaviour 3—26071
  - glueball masses from lattice QCD, SU(2) and SU(3) appl., Monte Carlo simulation 3—40858
  - glueball states in reduced large- N Hamiltonians 3—20996
  - glueballs, bound states of massive gluons, study with Schrodinger eqn. 3—36202
  - gluon self-energy non-transversality and Dokshitzer-Dyakonov-Troyan anal. 3—36191
  - graded fibre bundles and unified field theories 3—6034
  - graded gauge theories over supersymmetric space 3—45272
  - gradient model, conformal operator prod. expansions, field eqns. of motion 3—20994
  - grand unification, supersymmetric gauge theories, supersymmetric SU(5) GUT 3—11104
  - grand unification, week interaction phenomenology and low-mass parity restoration 3—16581
  - grand unification and group theory: the Higgs problem 3—6033
  - grand unified theories, gauge hierarchy problem, supersymmetric soln. 3—573
  - grand unified theories, supergravity effect on vacuum state 3—21036
  - grand unified theories, Z_2 vortex strings, Higgs mechanism, broken gauge theories, galaxies form. 3—11091
  - gravitation and unified covariant formalism of classical gauge fields in equiaffine space 3—5680
  - gravitational quadrupole radiation-reaction force, gauge transform 3—35900
  - gravitational theories, general relativity for ghosts and tachyons, spin-projection operator formalism 3—5685
  - gravitational-electronuclear unification, local transformation invariance 3—5679
  - group theory of unified gauge models and tumbling 3—6035
  - GUT electroweak radiative corrections 3—40821
  - GUT monopole search 3—36173
  - hadron spectrum calculations at strong coupling in lattice QCD 3—45354
  - hadron-quark transition, effective dielectric theory 3—606
  - Hamiltonian lattice gauge theories, d+1 dimens., variational method 3—20980
  - Hamiltonian lattice gauge theories, gauge invariance constraints 3—16509

gauge field theory continued
Hamiltonian U(I) lattice gauge theory, weak coupling limit 3—49558
Hamiltonian U(N) SU(N) lattice gauge theories, variational calc., phase transition 3—54841
heavy quark potential, calcs. in SU$_2$ lattice gauge theory 3—31054
(Higgs)$_{2,3}$ quantum fields in finite volume, vacuum energy upper bound 3—10987
Higgs model, vortices, existence and uniqueness from Ginzburg-Landau theory 3—31008
Higgs models, 3-dimens., topological mass term dynamical generation, composite fermions 3—11012
high energy supersymmetry breaking to low energy physics through decoupling 3—559
high temperature gauge theories, exact chiral invariance, effective fermion masses, QCD, GUT appls. 3—16499
high-energy scatt., path-integral formulation 3—49566
higher order, over multiple fibre bundles 3—45271
historical review 3—20604
hot, finite temp. and external field effects, SU(2) 3—40742
hot SU(N) gluon matter, thermodynamic props. 3—36343
imaginary part of the effective Lagrangian 3—5988
induced gravitational constant, Adler-Zee formula, Planck zeros 3—20236
infinite range pot. lattice gauge theory 3—45283
instanton calculus 3—31060
instantons, connection with symmetry breaking in (2+1) dimensional gauge theories 3—11054
instantons, dynamical mass generation, chiral Ward identities, topological charge correl. function 3—31136
instantons within instantons, antiscreening, weak to strong coupling crossover 3—30984
interacting gauge theories, reduced large-N matrix and chiral models 3—16471
internal supergauges 3—6011
introduction to gauge field theories, book 3—10537
invariance identities for finite gauge transforms., particle in gauge field motion 3—36149
invariant physical fields with gauge freedom 3—5956
Ising model, 2-dimens., fermionisation 3—20977
Ising model, 3-dimens., grassmannian integral derivation, fermionisation 3—20978
Ising-gauge Ising-Higgs system in two-dimensions, gauge-invariant correl. functions 3—36146
Jost-Schroer theorem for string fields 3—30976
Kahlerian chiral model reduction, CP(2) model, gauge transformation method 3—11074
Kaluza-Klein manifolds, PCT invariance, orientability, O(2) gauge theory 3—21028
Kosterlitz-Thouless transition and self-duality in three dimens. 3—507
L⊗U(1) gauge theory of gravitation, charged mass point solns. 3—144
large N theories, quenched momentum prescription, stochastic quantisation 3—40786
lattice ϕ^4 theory, effect potential calcs. 3—31053
lattice analogue for chiral gauge theories, technicolour mechanism and fermion generation 3—5942
lattice and continuum QCD, gauge theory coupling, implications of change in lattice actions 3—11132
lattice compact QED, universal critical behaviour 3—576
lattice compact QED with scalar matter fields, mean field anal., phase diagrams 3—26037
lattice field theories, Monte Carlo methods for fermions 3—31036
lattice gauge model, analogue of spin system on Cayley tree, phase transition 3—49541
lattice gauge system, arbitrary external sources, generating functional, strong coupling expansion 3—49539
lattice gauge theories, 4-dimens., phase transitions and local minima of the action 3—20984
lattice gauge theories, confinement and phase transitions 3—5945
lattice gauge theories, finite renormalisations of currents 3—54840
lattice gauge theories, finite temp., quark deconfinement at high temp. 3—31159
lattice gauge theories, mean field theory with radiative corrections 3—54825
lattice gauge theories, mean-plaquette method for energy and coupling calcs. 3—16475
lattice gauge theories, method for updating SU(N) matrices in computer simulation 3—26016
lattice gauge theories, Monte Carlo results, lattice QCD, string tensions 3—11041
lattice gauge theories, plaquette formulation and Bianchi identity 3—16480
lattice gauge theories, precocious scaling, two-loop contributions 3—21003
lattice gauge theories, SU(N) and U(N), Monte Carlo simulation program 3—54829
lattice gauge theories, U(1) and SU(2), in 2+1 dimens., string tensions 3—10999
lattice gauge theories, variational anal. 3—21011
lattice gauge theories, Wilson loop expectation values, correlation length, varied boundary conditions 3—5964
lattice gauge theories 3—40763
lattice gauge theories and Monte Carlo simulations 3—11042
lattice gauge theories in strong coupling limit, meson and baryon spectra 3—49537
lattice gauge theories on body-centered hypercubic lattice 3—21014
lattice gauge theories with matter fields, order parameter 3—45287
lattice gauge theory, iterative methods convergence to compute quark propagator 3—40871
lattice gauge theory, mean field approx. corrections 3—30990
lattice gauge theory, Monte Carlo calcs., vectorisation 3—499
lattice gauge theory, quark degrees of freedom in nuclei 3—49794
lattice gauge theory, reduced quenched large N hamiltonian 3—21010
lattice gauge theory, strong coupling, duality, roughening 3—11045
lattice gauge theory and statistical mechanics 3—40764
lattice gravity or Riemannian structure on piecewise linear spaces 3—10705
lattice QCD$_2$, $\langle \det U_p \rangle$ evaluation, weak coupling 1/N expansion 3—6061
lattice QCD, trilinear gluon condensation parameter, SU(2) theory 3—26065
lattice QCD with SU(3) gauge, hadronic masses and decay constants 3—31154
lattice SU(2) gauge theory in 3-dimens., gauge invariant variable 3—26018

gauge field theory continued
lattice systems, derivations commuting with abelian gauge actions 3—30977
lattice theory, approach to non-Abelian antisymmetric tensor gauge field theory 3—40752
lattice theory of quark confinement 3—49634
lattices in group manifolds, appl. to lattice gauge theory 3—503
Lie groups, tensor products reduction with definite permutation symmetry 3—30997
little groups, quark model and gauge transformations 3—6073
local BRST symmetry and gauge-fixing geometry 3—501
local SU(2) gauge theory renormalisable at infinite coupling constant 3—31050
locally supersymmetric grand unification 3—557
loop expansion, 3-D massless QED 3—31126
loop space Hamiltonians for large-N gauge theories and 3—45265
magnetic monopoles, dualities and fermions 3—16550
magnetic monopoles and EM duality conjectures 3—16548
magnetic monopoles construction in gauge theories 3—16512
mass scale of supersymmetry breaking and proton decay 3—31110
massive Schwinger model in external background field, local hamiltonian Monte Carlo study 3—49647
massive vector field in Friedmann matric, regularisation and renormalisation 3—522
massless chiral fermions from dimens. reduction of higher dimens. gravity 3—30743
massless spin-two particle exchange 3—20745
massless vierbein spin-5/2 fields and hypergravity 3—10696
matter field only unified gauge and gravity theory 3—143
matter-antimatter transition operators 3—49604
Maxwell eqns. in axiomatic field theory, covariant and noncovariant gauges 3—11006
membrane dynamics, single and multicomponent scalar field models 3—40881
meron background, functional determinant 3—54832
merons, index theorem ambiguity 3—36154
minimal surface theory, nonlinear eqns. general solns. 3—45304
minimal Weinberg-Salam model, suppression of lepton number violation 3—21041
mixed action SU(2) lattice gauge theory, coupling expansions and nonperturbative configs. 3—40799
mixed U(1) model; Z(2) strings and monopoles, phase diagram 3—40788
model Einstein-Maxwell system, quantum theory of wormholes 3—30750
monopole catalysis of proton decay in grand unified gauge theories 3—40817
monopole field config. quantisation, semiclassical methods 3—16549
monopole geometry 3—16532
monopole solitons 3—5993
monopole solutions in SU(3), spherically symmetric, in limit of cylindrical symmetry 3—40746
monopole with Dirac mag. charge, quark confinement and unified field theory 3—26055
monopoles in Atiyah-Ward formalism 3—16535
monopoles in present and early Universe 3—16588
multi-instanton configurations for summations in quantum mechanics and field theory 3—11043
multiple bremsstrahlung in gauge theories, fermion helicities, QED formalism 3—6044
muon anomalous magnetic moment in broken supersymmetric theories 3—11181
N=1 supergravity and inverted gauge hierarchy 3—45048
N=1 supersymmetric theories, Lagrangian approach, mass splitting, gluino and photino masses 3—26022
N=2 supergravity, minimal sets of auxiliary fields 3—20753
N=4 supergravity theory with scalar pot. 3—54662
N=8 supergravity and Kaluza-Klein axial anomalies 3—49248
natural supersymmetric SU(5) gauge theory, gauge hierarchy 3—11083
neutrinoless double-β decay in left-right symmetric model 3—16737
non-Abelian, gauge independence of renormalised mass 3—40768
non-Abelian, vanishing of S-matrix elements to pure gauge states 3—40767
non-Abelian gauge field charge conjugation 3—40793
non-abelian gauge models, structure of vacuum 3—16487
non-Abelian gauge theories, 2-dimens., effective action, 4-dimens. extension 3—40785
non-Abelian gauge theories, loop-space formulation 3—31043
non-Abelian gauge theories, quantisation, Dirac bracket formalism 3—31018
non-Abelian gauge theory, arbitrariness in perturbation series 3—5944
non-Abelian SU(2) gauge Higgs model, two-meron config. 3—49553
non-Abelian supersymmetric theories, supercurrent anomaly, regularisation 3—49575
non-minimal N=1 supergravities, linearised superfield formulation 3—159
nonAbelian gauge field of N-dimensional monopole and SO(N) top operator, ang. momentum operator 3—31003
nonAbelian gauge fields in Finsler spaces, indicatory gauge 3—5948
nonabelian gauge theories, charge definition, monopole mag. charge, dyon electric and mag. charge 3—539
nonAbelian monopole internal structure 3—16540
nonlinear evolution equations, Backlund transformations from isospectral deformation equations 3—16485
nonlinear gauge fixing with auxiliary fields, renormalisability and divergences 3—16498
nonlinear R$_\xi$ gauge condition, general treatment 3—5963
nonlinear spinor theory, gauge field proliferation 3—543
nonperturbative aspects of quantum field theory, conference, St Felia de Guixols, Spain, (June 1982) 3—10508
nonstandard weak bosons and standard electroweak gauge model 3—26031
nonsymmetric gauge theory of gravitation 3—30738
nonuniform external fields in vacuum properties in a two-dimensional gauge theory 3—16592
O(3) nonlinear sigma model, lattice coupling constant renormalisation, instanton effects 3—16476
off-shell N=2 supersymmetry for massive scalar multiplet 3—49589
one plaquette Manton gauge theory, large-N limit soln., Gross-Witten phase transition 3—16501
one-component lattice fermions, spinor algebra 3—502
one-dimensional quark gas, thermodynamical props. 3—21095
one-loop divergences, quadratic and quartic, cancellation in supergravity 3—45047

gauge field theory continued
one-plaquette Hamiltonian lattice QCD with mixed fundamental-adjoint pot., exact phase structure 3—21072
one-plaquette lattice QCD with fermions in 1/N topological expansion, phase structure 3—11131
one-wormhole processes, generating functional Z_0, quantum corrections 3—30751
operator product expansion and vacuum instability 3—45299
operator product expansion in minimal subtraction scheme 3—36160
particle physics, book 3—5511
path-ordered phase factors as generators of gauge fields 3—5951
perturbation theory gauge-invariant time-depend., degenerate bound states 3—49617
perturbative QCD, consistency anal. in renormalisation scheme depend. 3—11121
perturbative QCD, renormalisation prescription ambiguity 3—11134
photon interaction in medium and vacuum, polarisation selection rules 3—16593
plane rotor with time-depend. mag. flux, gauge invariance 3—44995
plaquette spectral density, Monte Carlo study for SU(2) gauge group, vortices 3—26009
Poincare and de Sitter gauge theories of gravity with propagating torsion 3—30747
Poincare gauge field theory and gravitation 3—5682
Poincare group representation by higher-order field eqns. and unified field models 3—6030
point monopoles in quantum field theory 3—16553
pointlike gauge symmetry, second-order differential eqns., polynomial first integrals 3—30998
Polyakov's string in arbitrary dimensions, canonical quantisation 3—31185
Polyakov loop eqns., solns. for U(1) and SU(2) gauge theories on lattice 3—31064
Polyakov string theory, Liouville eqn. with boundary conditions 3—54896
Potts gauge theory, plaquette percolation problem 3—20982
preon model, three fermions, three generation quarks and leptons 3—36223
proton decay structure in SO(n) family unification schemes 3—565
pure spinor model with composite gluons 3—617
QCD, 2-dimens., gauge invariant treatment in large-N limit 3—16606
QCD, a SU(3,C) gauge field theory 3—11139
QCD, gluon condensation and field strength formulation 3—11122
QCD, infrared asymptotic behavior of gluon Green's functs. 3—54881
QCD, moment ratios as upper bounds to ground state of hamiltonian 3—49627
QCD, nonperturbative confinement, Mandelstam's gluon propagator 3—11120
QCD, numerical study 3—11142
QCD, operator product expansion at short distance, quark propagators in gluon field 3—11118
QCD, product of two gauge-invariant currents, light-cone expansion 3—31135
QCD, quenched reduction for topological limit 3—21070
QCD, renormalisation group and compositeness conditions 3—6056
QCD, renormalisation scheme, β function 3—31149
QCD, renormalisation-group functions, gauge depend. 3—11133
QCD, spontaneous breakdown of chiral symmetry, flavour-independent mechanism 3—36190
QCD, sum rules for spontaneous chiral symmetry breaking parameters 3—16604
QCD Hamiltonian and nonlinear quantum mechanics 3—26059
QCD planar diagram summation, reduced model, translation invariance 3—11123
QCD vacuum, perturbative ground state 3—11140
QCD vacuum as glueball condensate 3—11135
QED, infrared problem, nonperturbative approach, construction of charged states 3—31121
QED, Power-Zienau-Woolley Hamiltonian derivation by gauge transformation 3—31123
quadratic Poincare gauge field solns. 3—49542
quadratic Poincare gauge field theory, vacuum solns. with double duality props. 3—10698
quantised gauge fields, main features, quantisation for QED *(Spanish)* 3—11028
quantised Hall effect, gauge transform. study 3—23344
quantum field theory and statistical mechanics, book 3—5516
quantum gauge theories, superspace approach 3—26002
quantum gravity, BRS identities for general axial gauge 3—153
quantum gravity, superspace approach to extended BRS symmetries 3—25796
quantum mechanical power operator, energy theorem for charged particle in classical electromagnetic field 3—5656
quantum string theory, Monte Carlo simulation on N×N lattice 3—11160
quantum symmetries, association with classical symmetry 3—40750
quark and lepton masses, radiative contrib. in grand unified theories 3—31116
quark deconfinement; liberation above critical temperature, SU(2) lattice gauge theory 3—26072
quark mass in lattice gauge theories and on the continuum 3—11023
quarkonia multijet decays, three-gluon vertex testing 3—11171
quenched master field eqns., variational method 3—40781
quenched momentum prescription for large-N theories, quenched lattice and continuum theories, loop equations 3—10990
quenched reduced U(∞) chiral model, spontaneous symmetry breaking in weak coupling 3—31033
R-gauge theories, 2-dimens. electrodynamics, Wilson integral 3—5981
random fields in stat. mech. and QFT, conf., Esztergom, Hungary (June, 1979) 3—16089
random lattice gauge theory, Wilson string tension, strong coupling limit 3—10997
reduced hamiltonian model for U(∞) gauge theories 3—31034
reduced large- N lattice gauge theory without spontaneous symmetry breaking 3—5959
reduced models in large N limit, analytic investigation 3—21009
reduced QCD in Veneziano limit, meson and baryon amplitudes 3—36192
reduced quenched large-N gauge theories in four dimens., high statistics study 3—49557
reducible gauge theories, generalised canonical formalism and quantisation 3—45290
regularized functional integral for fermions and anomalies, current divergences 3—16566

gauge field theory continued
relativistic, spinor particle in external gauge field, Green's function as path integral in superspace 3—36163
relativistic wave functions and EM gauge group 3—5955
renormalisation group theory, strong coupling ultraviolet cut-off, hypothesis investigation 3—31007
renormalisation structure 3—45305
Riemann-Hilbert infinitesimal transformation, hidden symmetry of chiral fields 3—11063
rotationally symmetric gauge fields in arbitrary dimens. space, Lagrangians 3—5983
roughening singularity in lattice gauge theories, fluctuation in quark-antiquark pair flux tubes 3—40864
Savvidy symmetrised chromomagnetic vacuum, Fock space construction, one-loop contributions to effective Lagrangian 3—6062
scalar QED, classes of invariances and IR divergences 3—31124
scalar theory, strong coupling method with two sources 3—31063
scattering, charged particles by magnetic strings 3—31052
Schwinger model, scalar fields, conservation of vacuum 3—31061
Schwinger model soln. using path integral 3—16483
self-dual multimonopole construction by ADHM method 3—16536
self-dual SU(3) gauge fields, generating solns. 3—31049
sigma model, 2-D, parallel arguments to gauge theories in 4-D 3—45279
sigma model, 4-dimens., instanton and meron solns. 3—11038
simply connected gauge group and unbroken symmetry subgroup, strings, electric charge 3—16477
skewsymmetric tensor gauge fields, supermanifold description of BRS symmetries 3—45269
smectic A liquid crysts., dislocations, gauge field theory 3—51483
SO(14) grand unification model with confining model of weak interactions 3—569
SO(14) unified model with elementary electron, muon families and composite γ family 3—571
SO(N) grand unified theories, low-energy left-right symmetry restoration 3—568
SO(N) Higgs problem with adjoint+vector representation and nonlinear pot. 3—16470
softly broken supersymmetry theories, gauge hierarchy, SU(5) and SU(6) GUTs 3—11092
soliton problems in SL(2,R) gauge theories for soliton problems 3—16514
soliton theory, gauge transforms. 3—44976
spherically symmetric monopoles 3—16542
spin(1,4) gauge model with Kaluza-Klein symmetry, unification of gravitation and electromagnetism 3—25795
spin glasses, annealed and quenched states, free energy, variational approach 3—18917
spin-1 particles scatt. by quantum gravitational field 3—150
spinning test particle in external geometric fields, presymplectic dynamics in free case, pole approx., and pole-dipole approx. 3—20725
spinor monopole harmonics and Pauli spin equation 3—45315
spontaneously broken gauges theories, mag. monopole solns. 3—21042
spontaneously broken supersymmetric systems of nonlinear fields and gauge fields 3—45295
spontaneously broken supersymmetry, low-energy phenomenology, supersymmetric partners 3—11069
Stiefel bundles embedding 3—31001
Stokes's theorem for non-Abelian gauge fields 3—40796
string mass structure in high-dimensional unified theory 3—11085
string models at finite temp. and deconfinement, general props. 3—31170
string tension in four-dimensional compact U(1) lattice gauge theory, Monte Carlo study 3—31010
string tension struct. in mixed action SU(2) gauge theory 3—6090
strong gravity, classical solutions in generalised metrics 3—30718
strong-coupling lattice gauge theories and composite models of quark and leptons 3—31182
structure of a gauge supersymmetry theory in superspace 3—10707
$SU_2 \otimes U_1$, electroweak interaction; renormalisation with S-changing charged current 3—40789
SU(16) gauge theory, low-energy restoration of parity and maximal symmetry 3—21049
$SU(2)_L \times SU(2)_R \times U_{B-L}(1)$, possible alternative to standard model at low energies 3—49608
SU(2)×U(1) gauge theory, CP nonconservation superweak model 3—21046
SU(2) and SU(3) gauge theories, deconfinement and chiral symmetry restoration at finite temp. 3—40869
SU(2) axially symmetric multimonopole generation, review 3—16533
SU(2) compactification, integral topological charges 3—31009
SU(2) Euclidean lattice gauge theory, finite temp., string tension, strong coupling expansions 3—31187
SU(2) gauge field eqn., SO(5) invariant solns., geometric technique 3—49564
SU(2) gluon dynamics, classical eqns. of motion, gluon condensation 3—45351
SU(2) lattice gauge theories, boundary effects in Monte Carlo calc. 3—535
SU(2) lattice gauge theories, finite volume effects, Monte Carlo methods 3—26008
SU(2) lattice gauge theory, large distance correl. functions 3—36145
SU(2) lattice gauge theory, phase structure and renormalisation trajectories 3—21012
SU(2) lattice gauge theory universality 3—31035
SU(2) lattice gauge theory with quintet representation, Monte Carlo study 3—40774
SU(2) lattice mean field theory, approx. calcs. for small Wilson loops 3—11002
SU(2) theory, fermion quantum numbers restriction and anomaly 3—11016
SU(2) Yang-Mills theory, multifurcations 3—45298
$SU(3)_{HC} \times SU(6)_L \times SU(6)_R$ model, composite quarks and leptons for restricted anomaly matching 3—620
SU(3)×SU(2)×U(1) grand unified models with softly broken supersymmetry 3—16573
SU(3) gauge theory in four dimensions, numerical studies of Wilson loops 3—11026
SU(3) gluon condensate from lattice Monte Carlo data 3—36187
SU(3) monopole construction 3—16534
SU(5) axion model and dark matter of Universe 3—49069
SU(5) model, Peccei-Quinn symmetries without domains 3—11098
SU(8) grand unification, symmetry breaking mass scales and fermion mass relations 3—21048

gauge field theory continued
SU(∞) guage theory, planar diagram expansion convergence 3—10983
SU(*N*) gauge theories with quarks, order parameters for confinement-deconfinement phase transition 3—21092
SU(N), anomaly-free complex representation 3—31005
SU(N) antisymmetric-tensor Higgs fields, spontaneous symmetry breaking, SU(7) example 3—5975
SU(n) bundles over configuration space of three identical spinless particles moving on R^3 3—45313
SU(N) gauge fields with spherical symmetry 3—16510
SU(N) gauge theory, Bohm-Aharonov effect 3—16556
SU(N) gauge theory, static and spherically symmetric monopole solns. 3—36162
SU(N) grand unified theories, analytic dyon soln. 3—11086
SU(N) lattice gauge theories with N→∞, phase transitions 3—10981
SU(N) lattice gauge theory, large N, twisted model 3—31027
SU(N) static and spherically symmetric gauge potentials, general forms from phase factors in standard differential loops 3—16506
SU(N)/Z_N lattice gauge theories in four dimens., Monte Carlo studies 3—505
superconductivity solutions, application to particle physics, Green's functions 3—31120
supergraphs and applications 3—40762
supergravity, coupling to supersymmetric sigma model 3—30753
supergravity, stability, supersymmetry, and cosmological contribution 3—20748
supergravity and gravity construction from fundamental spinorial field constituents 3—25797
supergravity theory with propagating Lorentz connexion, coupling consistency 3—40461
supergravity with propagating Lorentz connexion, local tensor calculus 3—16221
superhair, Ravita-Schwinger solutions in O(2) supergravity 3—30758
superheavy gauge fields, decoupling from light particles at low energies 3—31104
superspace in light-cone frame, ultraviolet finiteness of N=4 3—45264
superstring theories and their field theory limits 3—40458
superstring theory, review 3—26052
supersymmetric, radiative quark and lepton mass suppression, Higgs supermultiplets 3—11097
supersymmetric dimensional regularisation, two-loop correction to axial current divergence in gauge theories 3—10991
supersymmetric gauge fields with heavy gauge superfields, phase structure 3—49590
supersymmetric gauge models of fundamental interactions 3—26033
supersymmetric gauge theories, flavour changing neutral currents natural suppression 3—16571
supersymmetric gauge theories, gauge symmetry breaking condition 3—16491
supersymmetric gauge theories, spontaneous supersymmetry breaking 3—11109
supersymmetric gauge theories of particles and gravity 3—49577
supersymmetric gauge theory, CP violation problem 3—31029
supersymmetric gauge theory on lattice 3—21008
supersymmetric hierarchy models, gauge-fermion masses 3—31114
supersymmetric Kaluza-Klein theory 3—40769
supersymmetric lattice gauge theory 3—45286
supersymmetric models, Witten's mass hierarchy 3—21038
supersymmetric pure spinor theory, gauge invariance 3—49563
supersymmetric SU(7) gauge theory, gauge hierarchy problem 3—31111
supersymmetric subconstituent models 3—616
supersymmetric theories, θ effects, 1/N expansion investigation 3—49587
supersymmetric unified models and renormalisation group, scale fixing by dimensional transmutation 3—31100
supersymmetric Weinberg-Salem model, Weinberg angle 3—560
supersymmetric-particle masses from (g-2)μ, lower bounds 3—572
supersymmetry violation, complex vacuum struct. effects *(Russian)* 3—6019
SUSY GUTs, super B prod., matter stability and gauge hierarchy, cosmological baryon asymmetry 3—49613
SUSY SU(5) model with complete Higgs structure 3—54874
symmetry as a clue to the physics of elementary particles 3—6020
tetrad gravity, Poisson brackets of constraints in Hamiltonian formulation 3—45045
Thirring models and gauge techniques 3—16482
three-dimensional Z(N) lattice gauge models at large N 3—509
time symmetries involving magnetic monopoles 3—520
topological excitations in gauge theories 3—5991
topology of quantised flux fields 3—16596
toy model, supersymmetry breaking at intermediate energy 3—31113
triplet Z(N) model in a triangular lattice, phase structure 3—513
twistor description of linear fields 3—5994
twistor techniques in gauge theories 3—5995
two-dimensional gauge theory, many-quark problem 3—21094
two-dimensional QCD with flavour, bosonisation 3—40853
two-dimensional SO(1,1)×SO(2) gauge model, classical relativistic string 3—45308
two-dimensional SU(2)×SU(2) lattice sigma model, effective pot. method 3—40773
two-loop background calcs. for arbitrary background fields 3—16474
two-loop background field calcs. 3—49543
two-loop renormalisation group beta functions 3—49544
two-proton annihilation, B and L violation, $\mathrm{SU_L}(2)\times\mathrm{U}(1)\times\mathrm{SU_C}(3)$ and SU(5) GUT models 3—16580
U′(1) gauge group requirement of SU(3)×SU(2)×U(1),, supersymmetric U boson 3—54839
U(1), Z(N) and SU(N) gauge theories, critical behaviour at finite temp. confinement transitions 3—20976
U(1) lattice gauge theory, five dimensions, upper critical dimension for abelian theories 3—11022
U(1) lattice gauge theory, monopole-flux tube repulsion in strong coupling 3—31125
U(1) lattice gauge theory, space of variant mixed actions renormalisation 3—40780
U(1) problem and QCD 3—11136
U(3) four-dimensional lattice gauge theory and Monte Carlo calculations 3—11001
U(N) and SU(N) lattice gauge theories, gaussian fluctuations in mean field approx. 3—10996
U(N) and SU(N) lattice gauge theories, mean field approx. 3—30999

gauge field theory continued
U(N) and SU(N) lattice gauge theories, phase transitions and latent heats 3—45288
U(N) lattice gauge theories, comparison of Monte Carlo data with strong-coupling expansion 3—45300
U(N) lattice gauge theories and spin systems with mixed actions 3—36144
unification and extended supergravity 3—40822
unified field theory of elementary particles, symp., Munchen, Germany (July 1981) 3—10516
unitary, of noncompact internal symm. groups, from internal metric field 3—49569
upper bound on gauge-fermion masses 3—40805
vacuum alignment by broken gauge interactions 3—16601
vacuum band theory, bag model derivation, background strength 3—49652
vacuum structure and θ-vacua existence for gauge differential forms 3—11014
vector gauge boson covariant generation, nonlinear background field generation 3—5949
vierbein gauge theory of gravitation and existence of black holes 3—40163
weak, strong, EM unification, gauge transforms and fields 3—49612
weak interaction breakdown induced by supergravity 3—30757
weak interactions of quarks in SU(2)×U(1) gauge model 3—26028
weak interactions theories, review 3—6052
weak vertex, nonrenormalisation in gauge theories with integrally charge quarks 3—40836
weak-electromagnetic gauge theories, effective Weinberg angle 3—566
Wilson action, axial anomaly depend., π-η-η′ mass difference 3—31028
Wilson fermions, chiral transform. and lattice regularisation 3—40755
Wilson loop short distance expansion, SU(2) gluodynamics, Monte Carlo lattice results 3—20983
Witten's mass hierarchy, effective potential 3—541
Witten's model, nosonomy of upside down hierarchy model 3—31103
XY model, two-dimensional, variational estimates for mass gap 3—36159
Yang-Mills field eqns. in Minkowski space, real solns. 3—31000
Yang-Mills theories, field strength gauge-fixing, SU(2) embedding 3—5974
Yang-Mills theory as Schrodinger quantum mechanics on space of gauge group orbits 3—31042
Yang-Mills-Higgs system, gauge choice for strong-coupling expansion 3—21013
Z_2 gauge model on square lattice in (2+1) dimens., frustrated phase 3—20992
Z_2 lattice gauge theory coupled to radially variable scalar field, phase structure 3—49536
Z_2 lattice gauge theory with radially varied Higgs field, Monte Carlo study of phase structure 3—542
Z_2-gauge-plus-matter model on a fractal lattice 3—40517
Z_4 lattice gauge theory and spin system, Migdal-Kadanoff study 3—49532
Z_n lattice gauge theory with generalised actions, phase structure and duality 3—36147
Z(2) four-dimens. gauge theory, continuum limit, Wilson loops, order-disorder loops 3—21002
Z(2) gauge theory in four dimens., second order transitions 3—45284
Z(2) model, variational approach, modified mean field method appl. 3—31044
Z(2) monopoles in SU(2) lattice gauge theories, addition of SO(3) symmetric term 3—11021
Z(N) lattice gauge theories, mean-field analysis, Coulomb-Higgs phase transition 3—11020
Z(N) lattice gauge theories, mean-field approach, dynamical generation of Coulomb phase 3—40757
Z(N) spin model in 1+1 and 2+1 dimens., phase transition, variational approach 3—510
zeros in amplitude, gauge theory and radiation interference 3—532
zeros of the partition function for some generalized Ising models 3—16301
Zinn-Justin equation, S-matrix dependence on solution 3—11034
Zwanziger local quantum field theory of charges and monopoles, infinity subtraction 3—30995
$\hat{e}^{\pm}$d, SU(2)×U(1)×U′(1) and SO(10) gauge models, distinguishability from Weinberg-Salam model 3—6041
e^+e^- annihilations, electroweak interactions 3—26027
$e^+e^-\to e^+e^-\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3—6092
$e^+e^-\to e^+e^-\gamma\gamma\to e^+e^-+\text{twojets}+X$, broken colour gauge analysis 3—36263
$e^+e^-\to e^+e^-q\bar{q}(e^+e^-g\bar{g})$, two-photon jet expts. anal. in integer charge quark model 3—21093
$e^+e^-\to\gamma\gamma\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3—6092
$e^+e^-\to\tilde{H}\tilde{H}$, light neutral Higgsino pair prod. at LEP energies 3—31226
$e^+e^-\to$jets, pol. beams., ang. distribs., broken colour gauge theory 3—11214
$e^+e^-\to\mu^+\mu^-\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3—6092
$e^+e^-\to$two jets, cross section in QCD 3—11193
$e^+e^-\to W^+W^-$, W-pair prod. in quantum flavour dynamics based on SU(2)×U(1) symmetry 3—629
$\hat{e}^{\pm}$p, SU(2)×U(1)×U′(1) and SO(10) gauge models, distinguishability from Weinberg-Salam model 3—6041
G(1440), chiral Ward identities, pseudoscalar mesons, gluonic bound state 3—26076
$\nu\bar{\nu}\to\gamma\gamma$, cross section with massive neutrino in $\mathrm{SU}(2)_L\times\mathrm{U}(1)$ gauge theory 3—16630
$q_i\to q_j\gamma$, flavour changing EM vertex in nonlinear R_ξ gauge 3—49644
t-quark mass, gauge-independent computation 3—604
τ decay in nonstandard electroweak gauge models 3—40903
Z-U mixing, influence of light supersymmetric U-boson in SU(3)⊗SU(2)⊗U(1)⊗U′(1) 3—45339
Z^0 heavy boson decay, leptonic branching ratio 3—570
$Z^0\to W^{\pm}X^{\mp}$, hadronic final state and weak boson self-coupling 3—16568
^{48}Ca→^{48}Ti, neutrinoless double-β decay, Higgs boson exchange contrib. 3—734
^{2}H(γ,pn), gauge invariant amplitudes *(Russian)* 3—26233
^{4}He, vortex lines gauge field theory, and superfluid phase transition 3—23120

Gaussian noise *see random noise*
Gaussian orbital calculations *see GO calculations*
Gaussian-type orbital calculations *see GTO calculations*
Ge-Si alloys
  $\alpha\rightarrow\beta$ phase transition at high press., EDAX study 3—2781
  amorphous, sputtered, XPS study 3—3913
  electron and X-ray irrad.-induced acceptors, elec. cond. study 3—18653
  epitaxial, device fabrication 3—28425
  fine-grained alloy technology development for thermoelectric conversion 3—14981
  modified alloys, long-term cross-doping effect models 3—14982
  thermocouple degradation by dopant precipitation, kinetics 3—14980
  thermoelectric conversion, conference, Arlington, TX, USA (March 1982) 3—10513
  Ge-Si:H, amorphous RF sputtered vibr. props., IR absorpt. and Raman scatt. meas. 3—18420
  Ge-Si:Mn solid solns., photoconductivity and impurity levels 3—3251
  Ge-Si-P alloys, ESR spectrum and g-factor, hyperfine components 3—14131
  GeSi:Sb solid solns., γ-irrad., carrier mobility and magnetoresist. 3—38410
  $Ge_{0.9}Si_{0.1}$, energy band parameter study 3—52030
  $Ge_{1-x}Si_x$ epitaxial layer prep. using graphite heaters 3—57004
  SiGe:H amorphous film, elec. props. and solar cell characts. 3—53539
  a-SiGe:H tandem-type solar cells 3—58534
  $Si_{1-x}Ge_x$:H, amorphous, optical absorpt., photoconductivity meas., alloying effects 3—43510
  Si_xGe_{1-x}:H amorphous film, cond. and photocond. props., solar cell appl. 3—33719
gegenschein *see zodiacal light*
Geiger counters
  calorimeter, Geiger mode discharge cells, for PEP-4 3—50239
  dosimetric methods comparison TE-phantom irradiated by fast neutrons 3—45700
  gas counter, avalanche growth along anode wire 3—26582
  low-level counting system for α and β particles *(Rumanian)* 3—6507
  ZP1320, absolute meas. of neutron sensitivity using the associated-particle technique 3—36623
  Ar-CO_2 filled wire chambers, large saturated pulse obs. 3—26583
  $^{14}CO_2$ detection in radiotoxicology, liq. scintillation and Geiger-Muller detector thresholds 3—58826
  ^{222}Rn daughter conc. in soil air, automatic monitoring instrument 3—30065
  Si cathode gas-filled counters for radioactivity meas., background level meas. 3—41437
Geiger Muller counters *see Geiger counters*
gelatin
  see also gels
  bichromated layers, holography, guided birefringence *(Russian)* 3—50640
  inert gelatines, polarographic investigation *(Russian)* 3—58463
gels
  agarose, gel, conc., viscoelasticity, alkali metal ion effects 3—7536
  agarose gel, proton diffusion, quasielastic neutron scatt. study 3—15039
  agarose gels, ultrasonic relax., solvent effects 3—8149
  amphiphilic systems, phase transitions, EPR study using hydrophilic spin probes 3—14136
  bilayer membrane, conformational entropy derived from mol. dynamics simulation 3—41700
  kappa-carrageenan, gel, conc., viscoelasticity, alkali metal ion effects 3—7536
  carrageenan gels, ultrasonic relax., solvent effects 3—8149
  dextran gel sephadex G-25 dispersed in aq. phase, dielec. props. 3—47597
  elastomeric microgels, effect on struct. and mech. props. of polyethylene and PVC *(Bulgarian)* 3—7925
  finite closed systems, gelation theory analytic soln. 3—9360
  gelatin swollen polymeric network, diffusion of methyl red dye by forced Rayleigh scatt. and time-lag technique 3—13497
  gelation transition, critical kinetics 3—24533
  glass, synthesis from gels, problem of monolithic gels 3—24203
  glass synthesis, comparison of gel pore vol. obtained by three methods 3—24204
  kinetic gelation, Monte Carlo study on triangular lattice 3—45074
  membrane lipids of Acholeplasma laidlawii B, gel to liq. cryst. transition 3—48257
  milk gel and milk, dynamic mech. props. 3—58695
  optical fibre fabrication by sol-gel method 3—56358
  photographic layer, mass cond. mathematical description *(Russian)* 3—20933
  photographic theory of crosslinking resists, gel point exposure 3—5902
  photon scattering, gel microviscosity and channel size probe, sickle haemoglobin appl. 3—58889
  poly(propylene oxide) polyurethane, gels, hypersonic props., Brillouin scatt. 3—34120
  polyacrylamide gels, collapse and mech. behaviour, effect of crosslinking agent conc. at network form. 3—34656
  polyacrylamide gels, local protein distrib., photoacoustic spectroscopy study 3—19853
  polymer gels, saturated porous media, sound propagation *(French)* 3—17661
  polymer solutions, ionic gels, salt effect on phase transition 3—23028
  polymer solutions, microgel containing, scattered light meas. eval. *(German)* 3—39418
  polypropylene, radiation processes, emission intensity influence *(Russian)* 3—42661
  polyvinyl alcohol anomalous gel, rheological props., complex Young's modulus 3—51038
  powders, gel-processes, for plasma spraying 3—3983
  protective coatings, sol-gel type, for black chrome solar selective films 3—19611
  silicon ethoxide, hydrolysis and gelling process, rel. to glass prep. 3—34654
  styrene-meta-divinylbenzene, radical copolymerisation, dynamic light scatt. study 3—34622
  transition metal oxide gels and colloids, review 3—9363
  water liquid, H bond network, gelation and mol. dynamics model simulation 3—42504
  Br^- self diffusion in 1:1 electrolytes, radiotracer obs. 3—51832
  SiO_2, gel, platinised, exoelectron emission studied by IR spectroscopy 3—8944
gels continued
  SiO_2, ion-exchanged Na-free gel, growth of $KClO_4$ and $RbClO_4$ single crystals 3—3938
  VO^{2+}-H_2O complex in poly (vinyl alcohol) gels, electron spin echo and ESR studies, mol. cage size effect 3—48094
  WO_2, thermally evaporated layer, xerogel struct. 3—18579

general relativity
  see also cosmology; gravitation; gravitational red shift; Schwarzschild metric; space-time configurations; unified field theories
  accelerated coloured particles in general relativity, Yang-Mills field eqns. 3—5665
  accelerated observer or detector, isotropic thermal radiation detection 3—30724
  apparent cosmological constant 3—16061
  arbitrary spin field equations on curved manifolds with torsion 3—40425
  asymptotic structure, recent developments 3—10661
  Backlund transformations and superposition principle for gravit. fields with symmetries 3—35898
  Backlund transformations of the Einstein equations 3—136
  Bianchi class A solutions, Einstein eqns., constraints on self-duality 3—40426
  Bianchi type-V cosmological models from Einstein-Cartan theory, effective energy-momentum tensor 3—20548
  binary system, eqns. of motion, Einstein's field eqns. 3—45033
  black holes, collapsing matter trajectory in Penrose diagram 3—44786
  black holes, density fluctuations in early Universe, evaporation 3—35753
  black holes, second law, violation by tachyons 3—40433
  Bogomolny inequality for Einstein-Maxwell theory 3—16210
  Brans-Dicke scalar field theory with variable cosmological term 3—5456
  Brans-Dicke theory, Demianski-type metric 3—10652
  Brans-Dicke theory, static plane symmetric disordered radiation 3—45037
  bundles of geometric objects on differentiable manifold, constructive approach 3—30717
  Cauchy gravitation problem and Yang-Mills fields 3—10655
  causal structure and curvature relation for a space-time 3—135
  causality violation in spatially closed space-times 3—49219
  charged dust in Einstein zero-mass scalar theory 3—137
  charged particle, general form of eqn. of motion 3—35896
  charged particle in mag. field, negative energy states on Kerr space-time 3—20741
  charged relativistic spheres, Einstein-Maxwell eqn. soln. *(Russian)* 3—20736
  charged testbody motion, symmetry props. 3—40440
  classical limit of quantum mechanics in the large 3—35874
  classical radiation reaction calcs., use of hyperfunctions 3—16200
  classical singularities and black holes life, quantum gravity effects 3—10699
  classical solutions in generalised metrics, quark confinement similarities 3—30718
  clocks in gravitational fields, meas. constraints 3—35901
  conference, Trieste, Italy, (July, 1979) 3—5496
  conference on galaxies origin and evolution and cosmology, at Erice, Silicy (May 1981) 3—35780
  confinement and hadron-hadron interactions, general relativistic methods using scaled down Einstein eqns. 3—6055
  conformal Minkowski space-time, relative infinity and proper time 3—40427
  conservation laws and topology *(German)* 3—30709
  continuous groups and Backlund transformations generating asymptotically flat solns. 3—10666
  cosmic censorship hypothesis, proof 3—49216
  cosmological and stellar models, role of shear 3—54226
  cosmological testing of Mach's principle, theory for isotropic expanding universes *(German)* 3—35428
  cosmologies, principles 3—40302
  cosmology, perturbation of magnitude-redshift relation in homogeneous relativistic model 3—16041
  cosmology, perturbation of magnitude-redshift relation in inhomogeneous relativistic model 3—44838
  covariant two tensors on R^3, space decomposition 3—130
  cross term modified gravit. field equations, eqns. of motion 3—35429
  curved space-time, conservation theorems 3—20727
  cylindrically symmetric Einstein-Maxwell and scalar fields and stiff fluid distributions 3—40448
  de Sitter Universe, geodesic coordinates 3—49066
  de-Sitter gauge invariance and gravitational geometry 3—5689
  differential geometry, role in relativity, quantum mechanics, and group theory 3—35891
  Dirac cosmology, unification with general relativity, single time-scale 3—45038
  discrete dynamics, comparison of discrete and continuous time formalisms 3—40428
  dominant energy condition, stability of energy-momentum tensor 3—16191
  early Universe, cosmological constant and absence of particle creation, gravitons 3—59519
  Earth's gravitational field, fourth test of general relativity *(Chinese)* 3—40467
  Earth-Moon system, relativistic dynamics 3—25356
  Einstein's eqns. coupled to quantum scalar field, open Universe soln. 3—54656
  Einstein's equations, slice theorem for space of solns. 3—16202
  Einstein's equations near spatial infinity 3—16188
  Einstein's evolution equations, nonlinear approximation scheme 3—16195
  Einstein's field equations, solution for empty space, consequences for post gravitational collapse 3—20724
  Einstein's theory of gravitation, energy problem 3—16203
  Einstein's vacuum and electrovac field eqns., general soln. 3—40430
  Einstein and the physics of the second half of the twentieth century 3—5681
  Einstein eqn. stationary soln. for rigidly rot. fluid source 3—5669
  Einstein eqns., coordinate conditions 3—40436
  Einstein eqns., two-soliton soln. using inverse scatt. method 3—30727
  Einstein eqns., Yang-Mills eqns. and classical field theory, compatibility conditions of linear eqns. 3—21007
  Einstein eqns. solns. admitting super-covariantly constant spinors 3—40432
  Einstein eqns. solns. discontinuities 3—40435
  Einstein equation solns. by inverse scatt. techniques 3—10665
  Einstein equations, associated linear system, supersymmetry *(French)* 3—20715

general relativity continued
- Einstein equations, characteristic initial data and wavefront singularities 3—30721
- Einstein equations, connection with nonlinear sigma model 3—16196
- Einstein equations, globally regular solns., review 3—132
- Einstein equations and null symmetric spacetimes 3—10662
- Einstein equations from analytic mappings, solns. 3—49229
- Einstein equations in vacuum, plane and spherical solutions 3—25774
- Einstein field eqns., Kerr-Schild vacuum and pure radiation fields 3—49220
- Einstein field eqns. with cosmological constant, type D vacuum solns. 3—20720
- Einstein gravitational eqn. quantisation, general relativity—wave mechanics accordance 3—20717
- Einstein Kahler eqns. on five-dimens. manifold with Kaluza-Klein symmetry 3—45027
- Einstein linear eqns. solns. 3—40438
- Einstein principle, gauge theory of gravitation and quantum geometrodynamics 3—10701
- Einstein space-times separability 3—10667
- Einstein vacuum eqns., 5-dimens., time independent spherically symmetric solns. 3—134
- Einstein-Cartan theory, field equations for perfect fluid 3—16209
- Einstein-Cartan theory, massive ghost Dirac fields 3—20728
- Einstein-Maxwell eqns., exact axially symmetric static electrovac. solns. 3—45034
- Einstein-Maxwell eqns., exterior and interior solutions 3—35897
- Einstein-Maxwell eqns. accurate soln. 3—5667
- Einstein-Maxwell eqns. accurate solns. 3—40439
- Einstein-Maxwell field equations, Bianchi-Kantowski-Sachs solns. for stiff matter and dust 3—40451
- Einstein-Maxwell massless scalar fields with Einstein-Rosen metric 3—30740
- Einstein-Maxwell metrics, solutions to axially symmetric static self-dual SU(3) gauge fields 3—5678
- Einstein-Maxwell solns. for interaction of massless scalar field with charged dust 3—45029
- Einstein-Rosen cylindrically symmetric non-static space-times, integrability conditions 3—10650
- Einstein-Weyl eqns. in general relativity, nonexistence of static solns. 3—20718
- Einstein-Yang-Mills theory, Weyl-Mazumdar relation 3—40431
- Einstein-Yang-Mills theory as phase-space transformations, local symmetries 3—45044
- Einstein-Yukawa theory, fluid spheres, rel. to neutron stars 3—59205
- electric charge in the Kruskal space-time and the Jeans conjecture, matter from white holes 3—40299
- electrically charged test particle in external static field, inverse problem of relativistic mechanics 3—40437
- electromagnetism, energy-momentum tensor uniqueness 3—10653
- electrostatic potential of point charge, equivalence principle and Schwarzschild space-time expressions 3—49222
- EM field invariance in static space-times 3—20729
- EM fields, viscous fluid interpretation 3—30733
- empty Bianchi type IX model, fluctuations produced by cosmological const. 3—5455
- equation solutions, generated from Laplace's equations 3—30728
- Ernst eqn. study using Backlund transformation 3—10668
- Ernst equation as a chiral model 3—30710
- Euclidean quantum gravity with R^2 term, conformal divergences, space-time foam 3—16215
- extended spinning test particle in geometric fields 3—49228
- fast motion approach, third order eqns. of motion 3—25791
- field equations, Higgs mechanism, symmetry breaking 3—10671
- field-dependent coordinate transformations, realisation in phase space 3—45041
- fields with secondary constraints, Rarita-Schwinger, Dirac, Scalar, commutation relations 3—16201
- Finsler spaces, intrinsic behaviour of internal variable, conservation laws, micro-gravitational field 3—5662
- flat space longitudinal momentum, general soln., initial value problem 3—35893
- force, geometrical treatment 3—35812
- Friedmann cosmology with torsion 3—25665
- fundamental frames of reference of momentum mechanics 3—54657
- generalised charged static dust in relativity 3—20740
- generalised quaternions and space-time symmetries 3—11057
- generalised Zipoy-Voorhees metric, three-parameter vacuum soln. 3—30726
- geodesic deviation and first integrals of motion 3—30713
- geometric constraints on nonsingular, momentarily static, axisymmetric systems 3—45030
- Godel's Universe, geodesic motion and confinement 3—49067
- Godel-type universe, perfect fluid and scalar field 3—30719
- Gowdy 3-torus spacetimes, constant mean curvature foliations 3—10649
- Gowdy S^1⊗ S^2 and S^3 inhomogeneous cosmological models 3—35748
- gravitation, scalar-tensor theory, static plane-symmetric soln. 3—40452
- gravitation without black holes 3—20721
- gravitational field equations with cross-terms and static equilib. configurations 3—10648
- gravitational fields algebraic structure and geodesic deviation *(Russian)* 3—20713
- gravitational theories, general relativity for ghosts and tachyons, spin-projection operator formalism 3—5685
- gravitational to inertial mass ratio, Eotvos experiment with fluid fibre 3—10711
- gravitational-inertial field energy 3—5668
- gravitational-neutrino field eqns., stationary axially symmetric solns. 3—45028
- gravity theories, stability props. 3—10710
- group covariance and spin motion in gravitational theory 3—155
- Hamiltonian cosmology and gravitational solitons, variational outlook 3—30749
- Hamiltonian formalism, algebraic programming, inhomogeneous space-time appl. 3—54653
- Hauser type-N soln., wavelike form 3—54655
- high-energy expt. fit to reveal three-dimensional time, theoretical proposal 3—45052
- holistic methods in quantum logic 3—16177
- homogeneous cosmology, action-principle surface terms, geometrical perturbation theory 3—20719

general relativity continued
- homogeneous isotropic cosmological model in scalar-tensor theory 3—35764
- indefinite-metric quantum field theory of general relativity, tensorlike commutation relation 3—16213
- inductive approach to Einstein's gravitational field equation 3—45032
- inertial mass, no physical meaning 3—30730
- inhomogeneous cosmological models in general relativity 3—44875
- inhomogeneous cosmological models with flat slices generated from Einstein-de Sitter universe 3—35746
- interacting spin-two field in the light front 3—16495
- interior NUT solution, cosmological models 3—20722
- inverse square law of gravitation, modified Cavendish experiment 3—10712
- inverse square law of gravitation, source-independent null experiment, Laplacian detection 3—10713
- Jordan-Brans-Dicke theory cosmological soln. and general relativity 3—44885
- Kalunza-Klein type general relativistic theory with true de-Sitter covariance 3—5670
- Kerr black hole in EM field, charged particle orbit off equatorial plane 3—5329
- Kerr gravitational field, radiation reaction 3—20738
- Kerr metric derivation 3—40470
- Kerr-Newman metric in Robertson-Walker Universe background 3—5453
- Kerr-Tomimatsu-Sato family of spinning mass solns. 3—10670
- Killing fields and Einstein-Yang-Mills eqns. space of solns. 3—25790
- Killing tensors in vacuum space-times 3—30720
- kinetic theory and conformal transformation 3—40441
- laser probes of general relativity, cosmology and quantum mech. 3—7054
- light rays in gravitating refractive media, general relativistic eqn. of motion 3—10191
- linear Einstein eqns. 3—20733
- linear gravitational waves 3—40444
- linkages and Hamiltonians at null infinity 3—30714
- local conserved quantities and equations of motion 3—10675
- magnetic neutron stars, red shifts turning into blue shifts, simultaneous shifts 3—59469
- mapping of pseudo-Riemann into Riemann spaces, Kerr congruences determ. by algebraic methods 3—20735
- Markarian 205 quasar as massive black hole ejected from spiral galaxy NGC 4319, general relativistic anal. 3—20525
- massive scalar field generation by conformal transformation 3—5467
- massive stars with constant densities 3—40018
- massless field eqns., weak solns. 3—25792
- matter and general relativity, book 3—54590
- matter creation and gravitational constant evaluation, rotation expts., precision rotors 3—10715
- Maxwell and Proca eqns. in space with torsion 3—20734
- Michelson-Morley 1887 expt. re-examination 3—5547
- Minkowski space, square root 3—20726
- modified Robertson-Walker metric, matter-antimatter asymm. 3—54553
- Moon, relativistic perturbations in ELP 2000 calcs. 3—25353
- neutrino wave automodel collision in general relativity *(Russian)* 3—35899
- neutron stars, gravitational field, internal and external solns. 3—25508
- nongeodesic motions of rotating test body in general relativity 3—30729
- nonlinear sigma model analogy, consequences for gauge theory of gravitation 3—16192
- nonstatic sphere, Gauss-Tolman theorem and total energy-mass positivity *(Russian)* 3—138
- nonsymmetric gauge theory of gravitation 3—30738
- null geodesics, propagation eqn., singularity restrictions 3—49221
- null strings, Bianchi identity anal., complexified Einstein-Weyl eqns. 3—49223
- numerical relativity, initial value problem, formalism for Einstein eqns. soln. 3—25793
- numerical relativity, review 3—10677
- one way speed of light, meas. and Earth's absolute velocity 3—10672
- one-dimensional inhomogeneous cosmologies, wave propag. 3—16045
- oscillating fluid sphere, Nariai's singularity-free model 3—25794
- Palatini variational principle modification 3—45031
- parametrised post-post-Newtonian formalism for the Solar System 3—5170
- perfect and viscous fluid, geodesic normal flow 3—20739
- perfect-fluid-filled Kantowski-Sachs cosmological models, Hamiltonian formulation and canonical quantisation 3—35761
- petrov classification: an elementary approach 3—35793
- plane symmetric charged dust distrib., complete soln. set 3—49227
- plane symmetric interacting perfect fluid and zero mass scalar field, exact relativistic solns. 3—16185
- planet orbit influenced by Sun's gravity as test of relativity 3—30323
- pp waves, Brinkmann's theorem in general relativity 3—35894
- pressureless matter, general relativistic collapse 3—10676
- quadratic gravitational theory, Maxwellian and superenergy tensors for space-time 3—16186
- quadratic Poincare gauge field theory, vacuum solns. with double duality props. 3—10698
- quantum field theory on curved background 3—10702
- quantum gravity, canonical approach 3—30748
- quantum gravity, hamiltonian approach 3—20747
- quantum theory reconciliation, quantum gravitodynamics 3—16194
- Reissner Nordstrom spacetime, chiral flux from black holes 3—40445
- Reissner-Nordstrom geometries, spin radiation field Debye potential calc. 3—16193
- relativistic congruences, with degrees of freedom of classical rigid motions *(French)* 3—20716
- relativistic fluid dynamics equations, variational principles 3—5666
- Relativity Gyroscope experiment, 1976-79 3—16222
- Riemann-Cartan space time, supersymmetric Dirac particles 3—131
- Riemann-Cartan space-time, compute coeffs. for operator on geometry 3—40424
- rigidly rotating relativistic generalised dust cylinder, Einstein's field equation solns. 3—20723
- rotating charged dust, solutions in Newton-Maxwell theory and general relativity 3—20730
- rotating system, relativistic tidal forces, possible relativity test 3—20755
- scale invariant cosmology with and without variable G 3—5461
- scale-invariant gravity, variable-mass embedding for general relativity 3—54223
- second order symmetric tensors and quadric surfaces 3—16187

general relativity continued
self-gravitating gas, transient thermodynamic props., in general relativity 3—20742
separation of variables in Einstein spaces 3—10673
SHEEP, interactive computing language for general relativity calcs. 3—133
solitary wave propagating of matter 3—16198
sourceless weak gravit. waves in linearised gravit. theory 3—54659
space like hypersurfaces with prescribed boundary values and mean curvature 3—16189
space-like boundaries, Lorentzian manifold, Plateau's problem 3—10659
space-time, orthogonal 2+2 decomposition, initial value problem examples 3—49225
space-time synchronisation, rigid vector field *(French)* 3—20714
spacetimes with constant vacuum energy density and conformal Killing vector 3—49230
spatially homogeneous space-times, perfect fluid sources 3—54660
spherically symmetrically charged star with general relativity struct. 3—35648
spin coefficient eqns., solns. with nongeodesic eigenrays 3—10657
spinning fluid in Einstein-Cartan theory, Eulerian variational principle 3—49231
spinning fluids, equations of motion from variational principle 3—16197
spinning mass metric soln., Kerr-Tomimatsu-Sato class soln. 3—10669
spinning test particle in external geometric fields, presymplectic dynamics in free case, pole approx., and pole-dipole approx. 3—20725
spinning test particles in general relativity, quadratic conserved quantities for two classes of space-times 3—20731
spinor field in isotropic space-time, n-wave regularisation for renormalisation 3—40429
spinors, conformal rescaling, torsion 3—49215
spiral motions in projective relativity, spiral galaxies 3—54654
spontaneous compactification of subspaces, interaction of Einstein gauge fields 3—30731
stars gravitational collapse, rot. and mag effects with general relativistic phenomena 3—20350
static balance, two-charged particles in general relativity 3—30723
static spherically symmetric cosmologies, mathematical aspects of stellar systems 3—35749
static spherically-symmetric scalar-field theory in general relativity 3—35890
stationary axisymmetric space-times, twistor approach 3—49217
stationary cylindrically symmetric cluster of charged particles 3—16199
stellar model, analytical solution, Einstein's field eqn. 3—35592
strong coupling quantum gravity, dynamical properties 3—16216
Strong Equivalence Principle and variable G 3—5102
Sun quadrupole moment meas., consequences for gravitation theory 3—49249
superconductivity current flowing over infinite homogeneous slab, gravitational actions influence 3—43318
surfaces of constant mean curvature in Schwarzschild, Reissner-Nordstrom, and lattice spacetimes 3—10674
Szekeres cosmological models, singularities and evolution 3—35760
thermodynamics, nonminimally coupled scalar field effects, cosmological model and second law applications 3—16190
thin-wall vacuum domain evolution, eqn. of motion, black holes 3—30725
Thorpe-Hitchin inequality for compact Einstein 4-manifolds, generalised Hirzebruch index formula 3—30716
tidal forces, relativistic, in metric theories of gravitation, appl. to binary pulsar (PSR 1913+16) 3—35417
timelike curves, restrictions of limited integrated accel. 3—49224
torsional pendulum, forced oscills. in nonequatorial orbit in Lenze-Thirring metric 3—20618
twistor appeal 3—10658
two-body problem, radiation damping *(French)* 3—5096
uniformly accelerated particle metrics, soliton techniques 3—49218
Universe, large-scale struct. and vacuum energy *(Russian)* 3—5469
vacuum Einstein eqns., stationary axially symmetric, symmetries and exact solns. 3—49226
vacuum field eqns. solns. 3—10651
vacuum fields, Papapetrou stationary axially symmetric solns., generalisation to Hermitian theory 3—35895
van Vleck-DeWitt determinant, path-integral representation 3—49232
variation of G and the quantum theory of gravitation 3—5686
vector-tensor interaction of gravitation *(Chinese)* 3—40450
wave equation, null field solns. in n-dimens. Minkowski space-time 3—30715
wave fronts in perfect relativistic fluid *(Italian)* 3—40434
Yang-Mills theory and gravitation: a comparison 3—5691
zero-helicity gravitational waves in relativistic expanding medium, dispersion relations 3—5459

generator coordinate method
see also nuclear structure theory
Arima-Iachello interacting boson model, relation with Bohr-Mottelson collective model 3—31315
cluster model, spin-orbit coupling kernels, analytical expression *(Chinese)* 3—49791
deformed nuclei, rotational motion, generator coordinate method 3—36308
heavy ion reactions, time evolution of coherent ground-state correlations, TDHF approach 3—54967
interacting boson model of Arima-Iachello and collective model of Bohr-Mottelson 3—49787
isoscalar nuclear vibrs., normal modes, generator coordinate method 3—26177
large amplitude vibrations, generator coordinate method, path integrals, TDHF eqns. 3—16687
mass parameter in generator coordinate method 3—31312
nucleus-nucleus scatt., integral kernal systematic anal. in generator coordinate theories 3—26272
pion condensation, appl. 3—21245
relation to IBM and collective model 3—706
^{40}Ca, generator coordinate method and corrective Hamiltonians for isoscalar monopole vibrations 3—40949
^{40}Ca, isoscalar monopole resonances and Jastrow correlations 3—16751
^{140}Ce, generator coordinate method and corrective Hamiltonians for isoscalar monopole vibrations 3—40949
^{4}He, isoscalar monopole resonances and Jastrow correlations 3—16751
^{16}O, isoscalar monopole resonances and Jastrow correlations 3—16751

generator coordinate method continued
^{208}Pb, generator coordinate method and corrective Hamiltonians for isoscalar monopole vibrations 3—40949
^{90}Zr, generator coordinate method and corrective Hamiltonians for isoscalar monopole vibrations 3—40949

generators, acoustic *see acoustic generators*

genetics *see cellular biophysics*

geochemistry
see also Earth structure; geology
Aleutian magmas, origin, geochemical constraints 3—58937
Alpine Fault zone, New Zealand, Fe-Mg partitioning between biotite and garnet rel. to shear heating 3—35132
alteration in IRDP drill hole in E Iceland 3—19991
Amazon plume, Cu, Ni, and Cd mass balances rel. to salinity 3—25103
Atlantic region, mantle density transitions from seafloor relief 3—58918
basalts from Gulf of California, fractionation and geochem. 3—44416
basalts from mid-ocean ridges, C isotopes and concs. 3—44413
Betts Cove ophiolite, Newfoundland, REE geochem. 3—25045
binary diffusion finite difference solution, FORTRAN programs 3—29902
bituminous coal seam in Illinois, geochemical anal. 3—4865
blind mineral deposits discovery, geochemical methods 3—10083
boninite volcanic rocks, geochem. and source 3—25044
calcite shock induced chem. decomposition 3—19952
Canada and USA NW-Pacific rivers rare earth element concs. 3—19947
carbonate marine sediment diagenesis and isotope chemistry 3—25073
coal D/H isotope ratios rel. to palaeolatitude of deposition 3—58915
Coastal Batholith of Peru, segmented struct. 3—25029
Coldwell Complex, Ontario, Canada, geochronology of Precambrian rocks 3—19945
lower continental crust, implications of isotopic and geochemical studies of nodules in kimberlite 3—19968
inner-outer core struct. due to radioactive dioxides distrib. 3—4818
cosmogeochemical distribution of elements, classification rel. to periodic system 3—4833
Mt Etna, heavy metal contamination of environment 3—48526
FAMOUS region ocean ridge segment, crust evolution and chem. characts. 3—58928
ferrobasalts from Spiess Ridge segment of SW Indian Ridge, comp. and petrogenesis 3—9906
fly ash as standard material for instrumental neutron activation analysis 3—4337
Fuji volcano groundwater, Rn content and environmental radioactivity *(Japanese)* 3—25139
Galapagos hydrothermal vent water ^{238}U, ^{226}Ra, ^{210}Pb concs. 3—4848
Galapagos Rift Zone, major element chem. of basalts 3—19953
Galapagos Spreading Centre, basalt petrology and geochem. 3—15383
gap-containing data, correlation coeff. matrix program, in FORTRAN, geochemical example 3—276
geobarometer based on alumina solubility in orthopyroxene-garnet 3—30089
geothermal area prospecting by soil Hg concentrations 3—59118
geothermal groundwater system geochemistry, review 3—44409
Golda Zuelva anorogenic complex (N Cameroons), isotope geochemistry 3—19950
Grenville Province (Canada), U mineralization in granites and pegmatites 3—53954
hydrogarnet substitution in pyrope, mantle water content 3—44411
hydrothermal alteration and secondary mineralization in IRDP basalts from E Iceland 3—19990
hydrothermal mineral assemblages from Reydarfjordur, Iceland, geochemistry from electron micrograph anal. 3—19992
hydrothermal vents and mineral deposits of E. Pacific Rise 3—25077
Iceland crust, thermal props., water chemistry, stress and mag. props. 3—58921
E Iceland lava pile, trace element comp. of lavas and dikes, igenous processes anal. 3—19958
Iceland Research Drilling project, chemical stratigraphy 3—19989
Iceland Research Drilling Project, conf. at Reykjavik, Iceland (May 1980) 3—10503
Idaho batholith, USA, K-Ar ages affected by uplift and metamorphism 3—19963
Ile Bizard intrusion, Quebec, Canada, kimberlite or lamprophyre? 3—25038
inert gas content and isotope geochem. of submarine pillow volcanic glasses 3—35106
inert gas isotopes of rocks originating from mantle 3—15384
iodobromide metalliferous solutions (fluid ores) of Byelorussia, comp. and appls. *(Russian)* 3—39847
island-arc volcanic rock ^{10}Be concs. and subduction process 3—9898
Kilauea Iki lava, neutron activation anal. 3—9918
Koloula Igneous Complex, Guadalcanal, Pliocene-Pleistocene oceanic-arc plutonic complex, geochemistry 3—19967
lavas of Vulsinian District, Central Italy, O and Sr isotope study rel. to mantle metasomatism 3—9867
lesser Antilles, volcanic ash water soluble constituents *(French)* 3—44422
Lesser Antilles island arc, inert gas geochem. and tectonic history 3—39836
loess $CaCO_3$ content rel. to climate changes 3—48663
lower mantle chem. composition geophys. constraints 3—35109
magma formation, role of water *(Russian)* 3—15441
Manaslu leucogranite, Nepal, geochem. study of origin 3—25047
mantle evolution and ^{40}Ar/^{36}Ar ratios 3—4830
Mathematician Ridge, gabbroic rocks of failed rift 3—29874
Mboutou anorogenic complex (N Cameroons), isotope geochemistry 3—19950
metamorphic fluids in deep crust, evidence from Adirondacks 3—35126
methyltin species in seawater, concentrations and fluxes 3—29951
Mid-Atlantic Ridge basalt, discovery of two noble gas components 3—53958
mid-ocean ridge hot spring chemistry 3—25076
Mohorovicic discontinuity as phase change 3—4822
monazite, preferential leaching of radiogenic isotopes 3—896
Monts-Dore, pumice flows, geochronology and geochemistry *(French)* 3—53969
mudrock composition and texture determ. by electron microscopy method 3—44583
multielemental trace anal. by synchrotron radiation induced X-ray fluoresc. 3—34657
New Hebrides active margin, geochem. of sediment incorporation during subduction 3—53955

geochemistry continued
  Norwegian ice cap, preferential elution of strong acids by melting snows 3—19638
  ocean chemistry changes rel. to cyanophyte calcification 3—15489
  ocean floor hydrothermal black smoker chimneys, geochemistry rel. to growth history 3—48532
  ocean island basalts, Sr and Nd isotopic comps. rel. to mantle reservoirs 3—35149
  ocean O_2 minimum zones, nitrite and nitrate distributions model 3—15486
  oceanic basaltic rock minor element geochem. discriminant and petrogenesis 3—35107
  oceanic element residence time 3—44462
  ores origin and resources *(Russian)* 3—29917
  Pantelleria Island, Italy, groundwater temp. and geochemistry 3—58997
  parental magma of subduction zone volcanic areas and continent evolution 3—19964
  prebiotic organic matter synthesis during early geological times 3—4867
  prospecting, Orsat stack-gas analyser modifications 3—59127
  Early Proterozoic climates and tectonic motion from Canadian geology 3—10049
  Late Proterozoic mantle event indicated by seawater Sr isotope content 3—53956
  pyroxene-carbonate reactions in upper mantle 3—35108
  quartz-coesite transition in presence of other substances 3—19986
  rare earth element anal. of geological materials by neutron activation anal. 3—9917
  recycled continental material in mantle, isotope ratio investigation 3—19948
  regional interpreting, using optimal interpolation, FORTRAN program 3—4977
  seawater, relations between reduced gases, nutrients and fluoresc. in surface waters off Baja California 3—20010
  marine sediments, carbonate chem. of pore waters 3—29899
  Sherwood Sandstone aquifer, England, hydrochemical evolution 3—25142
  short-lived nuclides in geological materials, epithermal neutron activation anal. 3—30086
  silicates, liquid, pressure enhancement of ion mobilities from computer simulation studies to 800 kbar 3—29915
  silicic magma chamber, thermal boundary layer convection, temp. depend. rheology, thermogravitational chem. fractionation 3—35134
  Sn species in seawater, concentrations and fluxes 3—29951
  Southern Ocean, chemical characts. of bottom water in Australian-New Zealand sector 3—15459
  spectroscopic method for simultaneous S, N and C detection in geological materials *(Russian)* 3—48719
  sphalerite composition, press. and temp. depend. rel. to exptl. calibration of cosmobarometer 3—48864
  stable isotope reference samples, comparison 3—53957
  Stockdale Rhyolite, England, ^{87}Sr chronology and geochem. evolution 3—29869
  streamflow, evaluation of chemical mixing model for contrib. of throughflow to storm runoff 3—29955
  subducted lithosphere, influence on basalt petrogenesis, crust evolution and mantle dynamics 3—29873
  subducted lithosphere, phase transformations and differentiation 3—29873
  sulphide deposit prospecting by induced polarisation method 3—54151
  sulphide deposition at mid-ocean ridges 3—25075
  sulphide deposition in submarine hydrothermal systems aided by boiling 3—25079
  sulphide deposits of Galapagos rift 3—25078
  sulphide deposits of seafloor spreading centres 3—25080
  sulphide deposits on seamounts of E. Pacific Rise 3—25048
  Tadami River area, Hukusima Prefecture, hot springs chemical study *(Japanese)* 3—39864
  Tama River, chemical study *(Japanese)* 3—39863
  tektites (Australasian), ^{10}Be content indicating terrestrial origin 3—29926
  Terceira, Azores Islands, mantle mixing hypothesis for Sr and Pb isotopic vars. 3—4829
  titanomaghemite, magnetic props. and thermal decomposition 3—54022
  titanomagnetite maghemitization process of oceanic rock 3—15379
  ultramafic cumulates from North Arm Mountain massif, mineral chemistry and oceanic basalt fractionation 3—35122
  Villa de Reyes geothermal area, Mexico, ground water, D and ^{18}O investig. 3—39862
  volcanic gas and condensates from NE Japan, isotope ratios 3—35133
  volcanoes of Japan Island arcs, B isotopes of fumarole condensates 3—25056
  Yellowstone Plateau volcanic field, origin of rhyolite-basalt association 3—4825
  Yilgarn Block, SW Australia, chem. weathering and groundwater chem. 3—54028
  Yongping mine, Jiangxi Province, China, blast effect on groundwater Rn conc. *(Chinese)* 3—48577
  C geodynamic cycle, anal. rel. to sediment injection into mantle 3—19969
  C in elemental form in mantle causing elec. cond. enhancement 3—29828
  CO_2, hydrothermal soln., high temp. and press. 3—28849
  $CaCO_3$, solubility of aragonite and calcite in water 3—51797
  Fe in NE Pacific Ocean waters, meas. of dissolved Fe concs. 3—4896
  Fe pyrites, neutron activation anal. 3—9918
  Fe-FeO-MgO system thermodynamics at Earth core conditions 3—48511
  Fe-partitioning of mantle composition and convection implications 3—15385
  H_2S in Sicily thermal springs, isotopic composition 3—29959
  K, Th, U vertical distribution in crust 3—58910
  K-Ca method for petrogenetic studies 3—44564
  Lu-Hf isotopic system, importance in studies of planetary chronology and chemical evolution 3—48513
  Mn nodule growth rate 3—25074
  P partitioning between metal and silicate phases, exptl. investigations rel. to Earth, Moon and Eucrite Parent Body 3—48514
  ^{210}Pb in sediment samples, direct anal. by γ-ray technique 3—48683
  Pu in seasonally anoxic lake waters, aquatic chemistry 3—19632
  Rn variation in groundwater and earthquake source region strain adjustment *(Chinese)* 3—48479
  ^{222}Rn non-diffusive transport in soil 3—19988
  S isotope abundance of Precambrian rocks and implications for early atmos. 3—59112
  Sr isotope content of sea water during Proterozoic indicating mantle event 3—53956
  U and Th decay series application to geologic and geochronologic problems 3—10087

geochemistry continued
  V in soil, meas. technique *(Russian)* 3—48721
  Xe, isotopic comp. vars. rel. to appl. as geodynamic tracer 3—9868

geochronology
  see also radioactive dating
  Alaska, USA, Cainozoic tephra bed geochronology 3—25043
  Algiers massif, age data at 85 Myr, ^{39}Ar-^{40}Ar method *(French)* 3—48509
  Alpine-Himalayan belt, eastern region, isotopic age data and tectonics 3—53993
  Andean Cordillera, pre-Andean metamorphism and magmatism 3—25031
  Andes of Colombia, magmatic evolution 3—25027
  Andes of Ecuador, chronology of tectonic-magmatic events 3—25028
  Antarctic ice, ages and comp. of gas trapped in Allen Hills and Byrd core ice 3—9941
  Arctic Ocean, seismic refr. profile of crust struct. 3—15354
  Atlantic Ocean opening time, calc. from model of kinematics of lithospheric plates of variable mass 3—4845
  Banda Sea, E Indonesia, age determ. rel. to tectonics and palaeogeography 3—35127
  biostratigraphic data, seriation, FORTRAN program 3—4978
  Brookville Gneiss, New Brunswick, Canada, age and geology 3—25042
  Canadian Arctic Archipelago, palaeomagnetism of Siluro-Devonian sedimentary rocks rel. to equatorial palaeo-latit. *(French)* 3—4765
  Canadian cave deposit palaeomagnetism and ages, 5.4 to 2.1 ka BP 3—24960
  Canelo Hills, Arizona, USA, palaeomag. of Jurassic rocks 3—19897
  Cerro Galan caldera, NW Argentina, ignimbrite eruption, K-Ar dating 3—29883
  Chara sheet zone, E Kazakhstan, tectonics and chronology 3—4863
  chronostratigraphy, critique 3—48508
  Coldwell Complex, Ontario, Canada, geochronology of Precambrian rocks 3—19945
  Comores Archipelago, W Indian Ocean, age progressive volcanism rel. to Somali plate tectonics 3—9880
  Dabi Volcanics, Papua New Guinea, isotope dating study 3—25046
  Damara orogenic belt, Namibia, tectonic origin and Rb/Sr geochronology 3—35138
  deglaciation of Atlantic Canada, reconstruction of chronology from postglacial relative sea level 3—48578
  Devensian age ice southern limit in South Wales 3—15496
  Earth formation time rel. to meteorites, implications of terrestrial Xe isotopic comp. 3—9868
  East Pacific Rise, P-wave vel.-depth function with age 3—35114
  Ediacarian period and system, metazoa inherit Earth 3—4861
  Elba Island, Italy, geochronology of quartz-monzonite rocks *(French)* 3—9866
  ESR dating in geology *(Japanese)* 3—48518
  Faeroe-Shetland Escarpment, struct. and origin rel. to early opening history of N Atlantic 3—39843
  Fraser glacial maximum lag in Pacific Northwest Canada, pollen and macrofossil evidence 3—48662
  geomagnetic dipole variations, statistical anal. of virtual dipole moments (VDMs) for past 5 million years 3—9839
  geomagnetic field palaeointensity determ., comparison of Thelliers' and Shaw's methods using <5 Myr basalts 3—9838
  glaciation, pre-Pleistocene, on Earth, implications for climatic history of Mars 3—4950
  granulite xenoliths from Lesotho kimberlite pipes, age and cumulate origin 3—4827
  graywacke of Slave Province, Canada, origin of zircon grains 3—25037
  Grenville Province, Labrador, geochronology and metamorphism 3—19949
  Grenville Province (Canada), U mineralization in granites and pegmatites 3—53954
  Hudson River and estuary, New York, chlorinated hydrocarbons and radionuclide chronologies in sediments 3—19630
  Iberian Range, Spain, Oligocene transcurrent shearing rel. to curving deformation zones *(French)* 3—35156
  ice-sheet age determin. method based on ^{10}Be/^{36}Cl ratios 3—59274
  Iceland Research Drilling project, chemical stratigraphy 3—19989
  Idaho batholith, USA, K-Ar ages affected by uplift and metamorphism 3—19963
  Isernia La Pineta, early Lower Palaeolithic site in Central Italy, reversed mag. polarity 3—19900
  La Borie, Haut-Allier, France, dating of eclogite and tectonic implications *(French)* 3—58911
  Lake Agassiz, Ontario, Canada, age of moraine and beach 3—25140
  Lake Huron, Late Quaternary sedimentation and remanent magnetisation 3—44478
  Lake St. Martin, Manitoba, geomag. and age of meteorite crater 3—19998
  loess deposits in China, magnetostratigraphical age determ. 3—25049
  Maar deposits, Clermont-Ferrand, France, dating of volcanic eruption *(French)* 3—44425
  magnetic poles of earth, motions of dip poles and geomag. poles 3—35069
  mammoth Cave, Kentucky, magnetostratigraphy of clastic sediments 3—4775
  Massif Central (France), Ordovician age of anatexis event *(French)* 3—25023
  Mediterranean Sea, sediment ages and sedimentation rates 3—15421
  molybdenite radioactive dating using ^{187}Re/^{187}Os chronometer 3—29868
  Monts-Dore, pumice flows, geochronology and geochemistry *(French)* 3—53969
  Nagata Seamount, N Pacific, geophys. and geologic study 3—48515
  E Notre Dame Bay area, Newfoundland, structural interpretation rel. to regional post-Middle Silurian thrusting and asymmetrical folding 3—48542
  oceanic crust, age rel. to regional dispersion of first-order overtone Rayleigh waves 3—39821
  oceans abyssal water ^{14}C distrib. and ocean ages 3—58990
  Ordovician dolerites of Crozon Peninsula (France), magnetisation ages rel. to palaeomagnetism 3—39774
  Pacific Ocean, plate tectonics rel. to trans-Pacific faunal similarities among Mesozoic and Cenozoic invertebrates 3—48544
  Lower Palaeozoic rocks of Europe, magnetisation dates rel. to Mid-European Ocean and apparent polar wander paths 3—39776
  Patagonian Andes, chronology of granitic plutonism 3—25033
  Patagonian Cordillera, Jurassic-Cretaceous volcanism 3—25034
  Pleistocene time scale, rel. to astronomical theory of Pleistocene ice ages 3—4949
  Precambrian-Cambrian boundary, numerical dating 3—29875

geochronology continued
- pyrite from Geco ore body, Ontario, Canada, ^{40}Ar/^{39}Ar dating 3−9875
- quartz thermoluminescence, Z 3−34156
- Quaternary Atlantic Coastal Plain, of USA, amino acid dating of mollusc deposits 3−35130
- Reydarfjordur, Iceland, exposed lava section east of IRDP drill hole, magnetostratigraphy 3−15335
- Reydarfjordur, Iceland, stratigraphy and correl. 3−15435
- sea-level fall during latest Miocene in Mediterranean region, stable isotopic evidence 3−20034
- Seligdar apatite field, Aldan Shield, chronology of development of tectonic structs. 3−4862
- Sierra Nevada batholith, California, U-Pb age study 3−4824
- South Carolina Piedmont, tilting, and diabase dykes age and magnetism 3−24975
- South Carolina Piedmont, USA, mafic intrusions palaeomagnetic obs. 3−58901
- Stevns Klint, Denmark, Cretaceous-Tertiary boundary stratotypes palaeomagnetic dating 3−19966
- Stockdale Rhyolite, England, ^{87}Sr chronology and geochem. evolution 3−29869
- stratigraphic event scaling algorithms in FORTRAN 3−4980
- Stromboli, activity (April, July 1981) and age of volcano *(French)* 3−53968
- sulphide deposits of East Pacific Rise at 21°N, ages and implications 3−19983
- Terceira, Azores Islands, geochronology rel. to Sr and Pb isotopic vars. 3−4829
- Thompson Belt, Manitoba, geochronologic interpretations of Pb isotope ratios in Ni sulphides 3−48510
- Unicoi basalts (latest Precambrian/Cambrian), Blue Ridge Province, palaeomagnetism rel. to Taconic deform. 3−9824
- United States, Atlantic Coastal Plain, amino acid geochronometry 3−35131
- SW United States, migration of Tertiary volcanism rel. to subduction of Mendocins fracture zone 3−9881
- Winslow intrusive and assoc. hornfels, Canada, age and palaeopole position 3−9832
- Yukon Territory, Cainozoic tephra bed geochronology 3−25043
- K-Ar study of IRDP borehole, E Iceland 3−19960
- K-Ca method for geological age determin. 3−44564
- ^{138}La-^{138}Ce geochronometer, new dating method 3−25244
- Lu-Hf isotopic system, importance in studies of planetary chronology and chemical evolution 3−48513
- ^{210}Pb in sediment samples, direct anal. by γ-ray technique 3−48683
- ^{187}Re-^{187}Os systematics 3−48865
- U and Th decay series applications 3−10087
- U-Pb zircon method, error estimation theory 3−25219

geodesic lenses *see aspherical lenses; integrated optics; lenses*

geodesy
- *see also gravity*
- 18.6 year modulation of gravity tide at South Pole 3−15315
- absolute geodetic singularities, existence theorem 3−39770
- adjustment methods for space systems data and terrestrial meas. 3−25214
- anholonimity and reduction of obs. to reference ellipsoid using development method 3−44378
- anomalous gravitational field, regularity of variation with survey altitude *(Russian)* 3−15313
- Asal-Ghoubbet rift, Djibouti, tectonic deform. anal. from seismic geodetic meas. *(French)* 3−44427
- SE Asia and Pacific Ocean region, geoid 3−39764
- astronomic geology, problems of secular changes in Earth shape 3−20000
- atmospheric turbulence and its effects on direction measurements 3−25208
- S Australia free-air geoid from gravity data 3−39763
- Australian Geodetic VLBI experiment 3−39907
- Benioff zones, geoid undulations and mantle convection 3−25071
- Boso Peninsula, Japan, crust uplift following mining operations 3−39842
- boundary value problem solution 3−39762
- S California, radioastronomy interferometric obs. of crust motions 3−15409
- S California, stress changes near faults, borehole meter obs. 3−4753
- Canadian networks, least squares prediction of horizontal coord. distortions 3−24945
- Cape Verde Rise, geoid height anomalies 3−4754
- crust strain analysis from geodetic data, correl. adjustment anal. method appl. *(Chinese)* 3−48527
- digital cartography system at Defense Mapping agency Aerospace Center, using digital image technology 3−24950
- Earth dynamical ellipticity, revised value 3−39768
- Earth rotation monitoring by MERIT international program 3−15319
- Earth tides, origin and measurement 3−44381
- El Asnam earthquake, Algeria, deformation due to Oct. 1980 event 3−39803
- electro-optical distance meters, geodetic appl. *(Czech)* 3−36073
- Elsinore, San Jacinto and San Andreas faults, CA, USA, strain accumulation 3−48530
- free network, least-squares adjustment 3−44374
- free networks, min. norm. soln. from inner adjustment constraint method 3−24944
- general least-squares soln., equiv. forms 3−20608
- geodynamic eqn., solution in elliptical coordinate system for whole Earth 3−58893
- geoid anomalies compensation due to subducting slabs 3−35055
- geoid anomalies corresponding to Cretaceous plate boundaries 3−58939
- geoidal height and vertical deflection estimation using Navstar Global Positioning System meas. 3−30105
- geopotential of spherical cylinder object, inverse problem soln. 3−4752
- global geodesy and geodetic surveying *(German)* 3−39772
- global gravity field and interior lateral density distrib. 3−15382
- gravimetric prospecting inverse problem soln. for 2-D and 3-D potentials 3−48461
- gravity anomalies of buried objects, theory of inverse problem *(Chinese)* 3−35053
- gravity anomaly ω-function characts. 3−4747
- gravity anomaly data anal. using residual filters 3−4746
- gravity anomaly interpretation using inverse theory 3−48687
- gravity changes due to local topography changes 3−19883
- gravity field mapping of mantle by satellite techniques 3−15662
- gravity field meas. using AChF-3 precision pendulum clock 3−48705

geodesy continued
- gravity field of Earth, Goddard Earth Model 3−58894
- gravity field prospecting, soln. to 3-D inverse problem 3−48462
- gravity measurements frequency for levelling reduction 3−39765
- gravity model using Lageos satellite ranging obs. 3−29814
- gravity surveying, distant terrain correction method 3−19879
- gravity surveying by intersatellite tracking, EHF propag. problems 3−25260
- gyrotheodolite, azimuth accuracy of MOM Gi-B2 instruments 3−4971
- Hawaii seamount gravity anomalies and crust thickness 3−25052
- hydrostatic flattening and gravity anomaly interpretation 3−35057
- hydrostatic leveler, based on light reflection, automated design 3−4993
- ice sheet topography meas. technique using satellite laser altimetry 3−25237
- India, mean free-air anomalies and gravimetric and astrogeodetic geoids 3−24943
- inertial systems for geodesy using land vehicles *(French)* 3−20155
- inverse problem calc. with minimal part trace *(German)* 3−24955
- laser ranging application to astronomy and Earth science *(Japanese)* 3−25245
- least squares adjustment in Euclidean spaces, duality relation 3−24942
- least squares collocation, generalised method 3−53909
- lithosphere stress field deduced from satellite gravity data 3−58943
- local geodynamics with two-colour instruments 3−24959
- Los Angeles basin, relative lateration using laser ranging 3−44377
- Manitoba and N.W. Ontario crust struct. and geology 3−25041
- Mark III VLBI for astrometry, geodesy and aperture synthesis 3−54258
- mean Earth ellipsoid from radar satellite altimetry obs. 3−15316
- Mediterranean area, determ. of sea surface height from SEASAT altimetry obs. 3−44452
- Messina area of Italy, tectonic activity since 1900 AD 3−53982
- midlatitude formulae for inverse positioning computation *(German)* 3−24954
- Modular Transportable Laser Ranging System use for plate motions 3−5001
- murine geoid construction by GEOS 3 altimeter data adjustment 3−35296
- Musicians Seamounts (N.Pacific), isostatic compensation 3−9896
- network orientation by gyro-azimuth obs. methods *(German)* 3−15318
- network theory, criterion matrices in Cartesian coords. *(German)* 3−24953
- network vertical deformation by adjustment model 3−53911
- networks optimisation, review 3−24952
- North America, relevelling data implications for plate interiors vertical motion 3−54008
- oceanic geoid height variations, rel. to thermomechanical model of oceanic upper mantle 3−9871
- orthometric height accuracy using bore hole gravimetry 3−44375
- palaeogeoid variation due to geodynamics effect on natural resources form. in Africa 3−35166
- phototachymetric measurement accuracy, ambient temp. effect 3−30096
- phototriangulation 3−25710
- plate tectonic motions derived from US Navy Navigation Satellite obs. 3−48531
- platform localisation using satellites, Doppler location eqns. 3−4745
- position determin. by satellite Doppler radionavigation method, meteorological errors 3−54171
- position measurement, use of satellite laser ranging system *(German)* 3−4755
- quadratic unbiased estimation, collocation technique 3−44376
- radar altimetry, near-nadir techniques 3−44567
- San Andreas fault, Palmdale, CA, USA, strain accumulation obs. 3−39771
- satellite laser ranging observatory and obs. at Penc, Hungary 3−4748
- satellite orbits from laser ranging using finder at Metsahovi Space Geodetic Station of Finnish Geodetic Institute 3−35409
- satellite radio-Doppler systems, antenna phase centres 3−25236
- satellite radioaltimeter accuracies due to atmospheric propag. effects 3−25275
- satellites used to improve accuracy of terrestrial geodetic networks 3−4744
- sea level measurement, appl. of S-band radio interferometer to meas. of phase shift of coherently refl. radio waves 3−10099
- sea slope problem 3−20025
- seamount isostatic compensation estimated by satellite altimetry 3−9896
- Seasat radar altimetry of sea surface topography 3−25136
- seismic and geodetic network (in Japan) for earthquake prediction 3−39943
- Shanghai-Effelsberg VLBI experiment, baseline vector *(Chinese)* 3−59225
- techniques used in geodynamics 3−54174
- tectonic deformation due to groundwater changes 3−48503
- Thessaloniki area earthquake of June 1978 and subsequent gravity changes 3−25016
- Travale geothermal field, Tuscany, Italy, gravity and elevation changes 3−29893
- VLBI uses in geodesy *(German)* 3−4999
- Wind River Mountains, Wyoming, USA, gravity anomaly interpretation 3−29813
- Nd-YAG laser ranging system at Wettzell Station for geodesy *(German)* 3−5000

geodetics *see geodesy*

geoelectricity *see terrestrial electricity*

geography
- India, climate areas based on human physiological response 3−25199
- mountainous area, spatial reasoning in remotely sensed data 3−44572
- Pacific Ocean, Mesozoic and Cenozoic palaeogeography rel. to plate tectonics and trans-Pacific faunal similarities 3−48544

geology
- *see also geomorphology; rocks; topography (Earth)*
- Adirondack anorthosite, shallow emplacement evidence from ^{18}O depletion evidence 3−25089
- Adirondack Mountains, mineral assemblages in metasediments rel. to metamorphic fluids in deep crust 3−35126
- Afghanistan, stratigraphy and tectonics and magmatism 3−53987
- West African craton, magnetotelluric *(French)* 3−53939
- Alaska, tephra layer from volcanic eruption of late Pleistocene 3−29884
- Andean Cordillera, pre-Andean metamorphism and magmatism 3−25031
- Andes mountain chain magmatic evolution 3−25213
- Andes of Chile, geochronology of magmatic events 3−25032
- Andes of Colombia, magmatic evolution 3−25027
- Andes of Ecuador, chronology of tectonic-magmatic events 3−25028

geology continued
- Andes of N Chile, Cainozoic volcanism and tectonism 3—25062
- Andes of N Chile and Argentina, tectonic and magmatic evolution 3—25063
- S Appalachians, strain pattern and shortening in folded thrust sheet 3—44434
- S Appalachians (USA), struct. geology from seismic data 3—35079
- Aravalli Range, Rajasthan, India, Quaternary tectonism 3—44433
- Armorican orogeny, crustal shortening rel. to pre-Hercynian mafic belt reactivation 3—9905
- astronomic geology, subject and general problems 3—20000
- barrier beach evolution rel. to Holocene sea-level rise 3—44439
- basalt petrogenesis, implications of lithosphere subduction 3—29873
- basalts from Gulf of California, fractionation and geochem. 3—44416
- boninite volcanic rocks, geochem. and source 3—25044
- Brookville Gneiss, New Brunswick, Canada, age and geology 3—25042
- Byelorussia, discovery and props. of fluid ores *(Russian)* 3—39847
- calcite shock induced chem. decomposition 3—19952
- Canadian Arctic Archipelago, palaeomagnetism of Siluro-Devonian sedimentary rocks rel. to equatorial palaeo-latit. *(French)* 3—4765
- Cape Verde Islands, palaeomag. and geological implications 3—53923
- carbonate marine sediment diagenesis and isotope chemistry 3—25073
- Caucasus Mountains, testing ground for geological hypotheses, history of geological studies *(Russian)* 3—35823
- Cayman Islands, coastal morphology and L.Quaternary history 3—54017
- Cezanenque gneissic rocks, Massif-Central, France, Hercynian deformation *(French)* 3—44408
- Chalk River, Ontario, seismic study of shallow rocks 3—4778
- Chara sheet zone, E Kazakhstan, geological struct. and tectonics 3—4863
- chronostratigraphy, critique 3—48508
- coal D/H isotope ratios rel. to palaeolatitude of deposition 3—58915
- coal deposit at Hat Creek, BC, Canada 3—53475
- Coastal Batholith of Peru, segmented struct. 3—25029
- conference (7th UK Geophys. Assembly), April 1983, Leicester, England 3—49074
- conference on Africa held in Paris, France (July 1980) 3—30545
- creep in polycrystalline aggregates containing some liquid 3—4854
- Cretaceous-Tertiary boundary clay, clay mineralogy 3—58971
- Cretaceous-Tertiary species extinctions due to meteorite dust cloud optical effects 3—48676
- W Crete, origin and geology of Phyllite-Quartzite Nappe 3—9888
- Crozet Islands, S Indian Ocean, volcanic evolution *(French)* 3—44424
- Crozon Peninsula (France), palaeomagnetism of Ordovician dolerites 3—39774
- Cuddapah basin, India, palaeomagnetism and igneous activity 3—53918
- Cyprus, mag. survey of sulphide ore body in Troodos ophiolite complex 3—24971
- Damara Orogen (Namibia), mechanisms of nappe emplacement at southern margin of orogen 3—35162
- Damara orogenic belt, Namibia, tectonic origin and Rb/Sr geochronology 3—35138
- deformation processes in tectonics, conference, Glen Helen, Northern Territory, Australia, (1981 August 9 to 15) 3—30553
- disseminated mineralisation, electrical transient response anal. 3—48475
- Earth rotation during Precambrian fossil stromatolites 3—24951
- Ediacarian period and system, metazoa inherit Earth 3—4861
- ESR dating appl. *(Japanese)* 3—48518
- evolution of crust, mantle and core 3—48519
- expert system in underground geology, LITHO *(French)* 3—39849
- extinction events at geological boundaries due to volcanism and rel. changes 3—44448
- Faeroe-Shetland Escarpment, struct. and origin rel. to early opening history of N Atlantic 3—39843
- Finland, crust elec. cond. from magnetotelluric obs. 3—15338
- flood basalt homogeneity due to thermal convection in magma 3—15440
- Fongen-Hyllingen basic intrusion, Norway, discordant layering relations 3—4860
- Franciscan Complex of Stanley Mt. area, California, deformational events 3—35103
- Galapagos hydrothermal vent water ^{238}U, ^{226}Ra, ^{210}Pb concs. 3—4848
- Galapagos Rift Zone, major-element chem. of basalts 3—19953
- Galapagos Spreading Centre, basalt petrology and geochem. 3—15383
- Gas Hills uranium district, seismic obs. of crust struct. 3—19914
- geobarometer based on alumina solubility in orthopyroxene-garnet 3—30089
- Geoshare: the development of a databank of geological records 3—15432
- geothermal groundwater system geochemistry, review 3—44409
- S Germany, subcrustal lithosphere petrology and seismic struct. 3—39827
- Ghost Range complex, Ontario, palaeomag. and structural history 3—24962
- Giant's Causeway, columnar basalt, vertical crack propag. model 3—54025
- Gobi desert, geology and hydrology obs. *(Russian)* 3—4816
- Golda Zuelva anorogenic complex (N Cameroons), isotope geochemistry 3—19950
- gouge microstructure rel. to energy release during faulting 3—53948
- granitic rocks in Maine and New Hampshire, gravity studies of subsurface mass distribs. 3—9915
- graywacke of Slave Province, Canada, origin of zircon grains 3—25037
- Grenville Province, Labrador, geochronology and metamorphism 3—19949
- Grenville Province (Canada), U mineralization in granites and pegmatites 3—53954
- Hat Creek coal deposit, BC, Canada, geophys. exploration 3—53475
- SW Hellenic arc, Greece, L. Cainozoic faulting 3—9889
- Hercynian orogenic belt, palaeomagnetism rel. to Mid-Europe Ocean and Lower Palaeozoic apparent polar wander 3—39776
- Himalaya, basic igneous activity and tectonic history 3—53994
- Himalaya, geodynamic evolution, review 3—53991
- Himalaya, Geological Survey of India status report 3—53992
- Himalaya regions of Ladakh, Himachal, Garwhal-Kumaum and Arunachal Pradesh 3—53990
- Holocene rainfall for Rajasthan, India, pollen and deductions 3—54112
- Hudson Bay Lowlands, Canada, multiple deglaciation events 3—54062
- Hungary, Zala and Drava basins, deep geology from siesmic anal. *(Hungarian)* 3—29916
- Huronian Dollyberry Lake basalts, Canada, geology and palaeomagnetism 3—53913
- hydrothermal vents and mineral deposits of E. Pacific Rise 3—25077
- Iberian Range, Spain, curving deform. zone due to rot. deform. in transcurrent shearing regime *(French)* 3—35156

geology continued
- Iceland, geology and tectonic setting from Iceland Research Drilling Project 3—15434
- Iceland, IRDP hole, γ-γ density log and n-n porosity log 3—19994
- Iceland Research Drilling project, chemical stratigraphy 3—19989
- Iceland Research Drilling Project, conf. at Reykjavik, Iceland (May 1980) 3—10503
- Iceland Research Drilling Project core, inclined features 3—19993
- Idaho batholith, USA, K-Ar ages affected by uplift and metamorphism 3—19963
- Ile Bizard intrusion, Quebec, Canada, kimberlite or lamprophyre? 3—25038
- impact craters rel. to shaping of planetary surfaces, reviews 3—29922
- India geomagnetic induction anomalies rel. to geology 3—19891
- E Indonesia, geological history of microcontinents rel. to age of Banda Sea 3—35127
- Iran, tectono-plutonic episodes 3—53985
- W Ireland, ophiolitic melange separating ortho-and paratectonic Caledonides 3—53980
- Isernia La Pineta, early Lower Palaeolithic site in Central Italy, reversed mag. polarity 3—19900
- S Italy, geometry of neotectonic stress field 3—44428
- Italy, subduction and scattered crumpling models for northern Palaeoapennines 3—19980
- central Japan, Bouguer anomaly map rel. to geology 3—19885
- Kazakhatan, geology of ore-mining regions rel. to development of Earth crust and upper mantle *(Russian)* 3—39848
- Klamath Mts. and SW Oregon, palaeosubduction region 3—25050
- Koloula Igneous Complex, Guadalcanal, Pliocene-Pleistocene oceanic-arc plutonic complex, geochemistry 3—19967
- Lake Char fault zone, eastern USA, geometry and kinematics of fault 3—35102
- Lake Moondarra area, Mount Isa, Australia, tectonic vein and fibre growth assoc. with multiple slaty cleavage development 3—35161
- laterite formation in SW Australia 3—54028
- Latir volcanic field near Questa, New Mexico, tectonic/igneous history from palaeomag. obs. 3—15438
- Leech River complex, Vancouver I., Canada, geology and tectonic history 3—19946
- Lesser Antilles island arc, inert gas geochem. and tectonic history 3—39836
- Lesser Antilles subduction zone, underthrusting of undeformed sediment beneath accretionary complex 3—29894
- Little Dal lavas, Mackenzie Mts., Canada, Proterozoic palaeomag. and stratigraphy 3—24961
- loess deposits in China, magnetostratigraphical age determ. 3—25049
- loess particles originating from desert aeolian processes 3—25096
- Lublin region, Poland, geological structure rel. to heat flux distrib. 3—29865
- Maar deposits, Clermont-Ferrand, France, dating of volcanic eruption *(French)* 3—44425
- mammoth Cave, Kentucky, magnetostratigraphy of clastic sediments 3—4775
- Manaslu leucogranite, Nepal, geochem. study of origin 3—25047
- map digitisation, graphic cell method, FORTRAN program 3—4979
- mapping, use of optimum second vertical gravity derivatives, appl. in Ontario 3—39929
- Massif Central (France), Ordovician age of anatexis event *(French)* 3—25023
- Mathematician Ridge, gabbroic rocks of failed rift 3—29874
- Mboutou anorogenic complex (N Cameroons), isotope geochemistry 3—19950
- McCoy Mountain Formation (SE USA), palaeomag. evidence for tectonic deformation 3—35061
- Mesozoic ribbon radiolarites, palaeo-oceanography 3—9916
- meteorite cratering forming dense mosaic pattern 3—44445
- mid-ocean ridge hot spring chemistry 3—25076
- Missouri, Precambrian rift, digital image processing 3—35119
- molybdenite radioactive dating using ^{187}Re/^{187}Os chronometer 3—29868
- monazite, preferential leaching of radiogenic isotopes 3—896
- Monticello Reservoir site, S Carolina, USA, geology and seismic risk 3—19962
- mudrock composition and texture determ. by electron microscopy method 3—44583
- multielemental trace anal. by synchrotron radiation induced X-ray fluoresc. 3—34657
- Nagata Seamount, N Pacific, geophys. and geologic study 3—48515
- New Hebrides active margin, geochem. of sediment incorporation during subduction 3—53955
- Newfoundland, evolution of Bay of Islands ophiolite complex 3—19951
- Newfoundland, lower Cambrian tidally deposited rocks 3—25039
- Notch Peak pluton, Utah, palaeomag. of metamorphosed contact zone 3—15334
- E Notre Dame Bay area, Newfoundland, structural interpretation rel. to regional post-Middle Silurian thrusting and asymmetrical folding 3—48542
- ocean chemistry during glacial times 3—15487
- oceanic basaltic rock minor element geochem. discriminant and petrogenesis 3—35107
- oceanic crust, lithostratigraphic reference section through Layer 2 at DSDP Hole 504B, Costa Rica Rift 3—29901
- oil shale, r.f. electromagnetic sounding method for mining operations 3—15634
- ophiolite obduction in Oman, tectonic setting 3—4823
- palaeoclimate, the faint young Sun-climate paradox 3—15612
- Pan-African granite intrusion in response to tectonic volume changes in a ductile shear zone from northern Saudi Arabia 3—19995
- parental magma of subduction zone volcanic areas and continent evolution 3—19964
- Patagonian Andes, chronology of granitic plutonism 3—25033
- Austral Patagonian Andes, magmatic evolution 3—25035
- Patagonian Cordillera, Jurassic-Cretaceous volcanism 3—25034
- Penokean Orogeny in Precambrian Thomson Formation of Minnesota, USA 3—25040
- peridotites, origin of high temperature dikes by hydraulic fracturing 3—15433
- Permian palaeoclimate from varved evaporite rocks of USA 3—15611
- Peru, E Cordillera mountains magmatic evolution 3—25030
- phase equilibria of rocks, design of high-press. furnace 3—4986
- planar sections of polyhedrons, freqs. of n-polygons 3—14807
- Pleistocene ice ages, historical review of astronomical theory 3—4949

geology continued
prebiotic organic matter synthesis during early geological times 3—4867
Precambrian rocks, S isotopes and early atmospheric implications 3—59112
Precambrian-Cambrian boundary, numerical dating 3—29875
Early Proterozoic climates and tectonic motion from Canadian geology 3—10049
Late Proterozoic mantle event indicated by seawater Sr isotope content 3—53956
Pyrenees, gneiss and plutonic dome diapiric emplacement 3—9864
Quaternary Atlantic Coastal Plain, of USA, amino acid dating of mollusc deposits 3—35130
radioactive waste disposal, geotechnical siting considerations 3—44163
Red Sea floor, television obs. of sediments, volcanic rocks etc. 3—15422
Red Sea rift underwater volcanoes 3—15404
remote sensing, appl. of shuttle imaging radar expt. 3—29918
Reydarfjordur, Iceland, stratigraphy and correl. 3—15435
rock folding, Kelvin-Helmholtz instability in layered Newtonian fluid model 3—48543
rock microfractography quantification, digital multi-image anal. 3—39844
rock squeeze and related geological process 3—25086
rocks (granitic), phys., mechanical and thermal props. at high-temp. 3—54021
E Sahara Desert, subsurface valleys and geoarchaeology revealed by shuttle radar 3—35158
Salinian composite block, California, migration and fragments disappearance 3—35139
salt dome struct. exploration by borehole EM and seismic methods 3—48688
Sanbagawa belt, E Shikoku, SW Japan, tectonic deform. history *(French)* 3—25059
sea-level changes in Canada during Ordovician to Devonian 3—25100
sediment transported to oceans by rivers, world-wide budget 3—44438
Seligdar apatite field, Aldan Shield, palaeotectonic features 3—4862
Serpent Mound disturbance, Ohio, USA, struct. and origin 3—35101
shear crack interaction mechanism of fault rupture 3—19937
short-lived nuclides in geological materials, epithermal neutron activation anal. 3—30086
Sierra Nevada batholith, California, U-Pb age study 3—4824
Slate Islands, Ontario, Canada, meteorite crater shatter cones 3—54026
Snow Mt. Volcanic Complex, CA, USA, an on-land seamount 3—44418
subglacially erupted volcanoes in Canada and Iceland 3—29882
sulphide deposit prospecting by induced polarisation method 3—54151
sulphide deposition at mid-ocean ridges 3—25075
sulphide deposition in submarine hydrothermal systems aided by boiling 3—25079
sulphide deposits of Galapagos rift 3—25078
sulphide deposits of seafloor spreading centres 3—25080
sulphide deposits on seamounts of E. Pacific Rise 3—25048
sulphide ores near geological boundaries 3—44448
supernova record in thermoluminesc. of marine sediments 3—54412
Sydney Basin, Australia, palaeotemps. from geol. and palaeomag. obs. 3—15378
Taupo volcanic zone, New Zealand, faults and crust struct. 3—53953
tektites (Australasian), ^{10}Be content indicating terrestrial origin 3—29926
tephra soils of Alberta, Canada, magnetite classification 3—25055
Texas Panhandle, geology rel. to evaporite dissolution and karst features development on Rolling Plains 3—29954
Texas Panhandle, storm erosion of potential nucl. waste disposal site 3—44444
thermal inertia mapping for reconnaissance geological exploration using Heat Capacity Mapping Mission satellite 3—39926
Thompson Belt, Manitoba, geochronologic interpretations of Pb isotope ratios in Ni sulphides 3—48510
thrust belt tectonic structs., terminology 3—9885
thrust faults, decollement type, examples 3—25068
titanomaghemite, magnetic props. and thermal decomposition 3—54022
titanomagnetite maghemitization process of oceanic rock 3—15379
E Transbaikal, USSR, gold mineralisation and tectonic-magmatic activity 3—35159
United States, Atlantic Coastal Plain, amino acid geochronometry 3—35131
Variscan wildflysch and nappe tectonics in Saxothuringian zone of W Germany 3—35104
volcanic glasses from Pacific seafloor, inert gas geochem. 3—35106
NE Walvis Ridge, geologic nature of sedimentary cover, seismic obs. 3—58917
Wisconsin (USA), watershed alluvial processes during Holocene climate changes 3—54063
Yellowstone Plateau volcanic field, origin of rhyolite-basalt association 3—4825
Yerington district, Nevada, palaeomag. study of structural deform. 3—15430
Yerington District, Nevada, total and pre-Oligocene tectonism of Mesozoic basement from palaeomag. study 3—15431
Yilgarn Block, SW Australia, chem. weathering and groundwater chem. 3—54028
$CaCO_3$, solubility of aragonite and calcite in water 3—51797
Cu-Ni ore fields of northern area of central Siberia, geological and tectonic factors 3—4864
Fe ore, Precambrian rich of Minas Gerais, Brazil, tectonic structs. 3—9897
K-Ca method for petrogenetic studies 3—44564
Mn nodule growth rate 3—25074
^{222}Rn non-diffusive transport in soil 3—19988
Sr isotope content of sea water during Proterozoic indicating mantle event 3—53956
U and Th decay series applications in geology and geochronology 3—10087

geomagnetic storms *see magnetic storms*

geomagnetic variations
see also micropulsations
activity during declining phase of June/July 1974 proton flare region 3—4760
activity effects on atmospheric press., temp. and movement 3—29824
activity forecasting use of interplanetary scintillation of radiosources 3—15324
activity forecasting using radio scintillation obs. 3—4985
American sector, solar and lunar seasonal var. 3—44385
analytical models of 1400 to 2050 mag. fields 3—9830

geomagnetic variations continued
annual variations of equatorial electrojet field 3—35067
Ap-index, 3 and 4-months cyclic vars. and correl. with atmospheric and Earth rot. vars. 3—44373
Arctic Basin, struct. of natural ELF EM field 3—15522
auroral activity, use of jam jar magnetometer as warning device 3—30078
Australia region secular variation and IGRF models 3—53936
bidiurnal variations associated with mesosphere wind var. 3—44391
Brazil daily variations anal. and equatorial electrojet characts. 3—44605
Canada, 1979, Annual Report for magnetic observatories 3—15331
Cobb Mountain polarity event (1 Myr BP), Coso Range, California 3—29829
Late Cretaceous geomagnetic excursion, from Pacific core obs. 3—53917
D_{st} decreases when magnetosphere enters complex interplanetary streams, shock wave effect 3—15328
D_{ST} index coupling function with solar wind, observed values comparison with predicted values 3—5062
Early Devonian pole positions and apparent polar wander for Canada 3—19886
dipole moment variations, statistical anal. of virtual dipole moments (VDMs) for past 5 million years 3—9839
disturbances correlation with flare assoc. bipolar sunspot group mag. field 3—15748
diurnal variation at equatorial latits., correl. with measured E-region current 3—35354
dynamo theory with core-mantle EM coupling 3—9833
East Asia quiet day field var. and S_q current representation validity 3—44387
electrojet geomag. field variations 3—35066
elements mean annual values, time series inner struct. from spectral-temporal anal. 3—15629
EM field vars. in Buryata ASSR and Maritime Territory of USSR 3—4764
equatorial electrojet, characts. at Huancayo and Eusebio (Fortaleza), in S American region 3—5028
equatorial region Sq var., contrib. of currents induced by electrojet 3—39778
field model solar cycle effects 3—24972
Fisher distrib. statistical anal. and application to geomag. secular variations 3—54154
geomagnetic activity quantitative model 3—29830
geomagnetic and solar wind cycles between 1900 and 1975 AD 3—5048
global magnetovariational sounding, world ocean cond. anomalies effect 3—19893
groundwater flow mag. field changes assoc. with seismicity 3—48499
Harang discontinuity variability, radar and magnetometer chain meas. 3—59151
high speed solar wind streams effects 3—15325
Holocene secular variations from Alaska lake sediment obs. 3—4767
Hyderabad, India, solar and lunar daily mag. var. 3—44384
IGRF model of secular variation 3—53937
India, Sq induction anomalies due to crust struct. 3—24967
Indian geomagnetic induction anomalies effect on long and short period var. 3—19891
Indian region geomag. solar/lunar daily var., effect of equatorial counter-electrojet 3—44390
internal geomag. field and variations determined from very quiet nighttime currents 3—4772
ionosphere, equivalent currents representing solar daily variations 3—15729
polar ionosphere, geomag. activity rel. to ionospheric irregularities and spread-F occurrence 3—5026
ionosphere, mid-latitude electron conc. distrib., mag. field effects 3—35344
K_p-index, no correlation with radar meteor rates at Christchurch, (1960 to 1965) 3—59272
Kp-index, implications for relations between Birkeland currents, auroral electrojet indices and high latit. Joule heating 3—5030
Lake Huron, Late Quaternary sedimentation and remanent magnetisation 3—44478
Laschamp/Olby (France) geomag. field excursion explanation 3—29835
Level Mountain volcano, BC, Canada, palaeomag. and secular variation 3—53919
low frequency geomag. variations, rel. to morphology of spatial patterns in Pi 1-2 pulsation activity 3—35375
low latitude variations, contrib. of ionospheric and magnetospheric currents 3—59126
magnetic poles of earth, motions of dip poles and geomag. poles 3—35069
magnetosphere, geomag. effect of non-perpendicular/parallel solar wind shock waves 3—15779
maximum entropy spectral anal. method for geomag. data anal. 3—9825
negative bays, rel. to morphology of spatial patterns in Pi 1-2 pulsation activity 3—35375
nondipole magnetic field separation into drifting, nondrifting and growth-decay fields 3—9829
normal and anomalous field separation by eigenvalue problem soln. 3—44392
North America geomagnetic obs. compared to IGRF models 3—53934
palaeointensity variations, comparison of Thelliers' and Shaw's methods using <5 Myr basalts 3—9838
Pc 3 micropulsations at middle latits., polarisation determ. rel. to geoelectric section inhomogeneity 3—15756
Precambrian polar wander from palaeomag. obs. in Wisconsin, USA 3—53914
quiet day electric variation currents in ionosphere 3—53920
recurrent and flare disturbances and solar wind generators, props. 3—15327
reversal event frequency since Late Cretaceous 3—58896
S_q(H) focus position on abnormally quiet days 3—44389
S_q regular variations, due to three-dimens. plasmasphere current systems 3—44388
S_q variations, external origin component, geomag. depth sounding anal. 3—44393
S_q-variations, local changes in Carpathians 3—4763
San Andreas fault, CA, USA, ocean tide caused current channeling in fault 3—48470
seasonal lunar and solar variations 3—44386
secular variation, 1890 to 1975, rel. to rot. vars. and mean monthly temp. anomaly *(German)* 3—15520
secular variation, 1980-5 AD, IGRF model 3—53929
secular variation, IGRF models 3—53932

geomagnetic variations continued
secular variation (1980-5), IGRF models compared with obs. 3—53933
secular variation during 1980 to 1985 period, IGRF model 3—53927
secular variation field, IGRF model for 1965 to 1985 AD 3—53930
secular variations, IGRF candidate model comparisons 3—53935
secular variations of Zo-se, China, data record (1876 to 1975 period) 3—9825
secular variations since 1600 AD 3—48471
E Senegal variations rel. to equatorial electrojets characts. *(French)* 3—44394
solar eclipse caused magnetic field variations and ionospheric currents, 3—59166
solar eclipses causing geomagnetic variations 3—59165
time series anal., identification of mixed freq. components 3—53938
westward drift and mag. field global models 3—35070

geomagnetism
see also geomagnetic variations; magnetic storms
Alfven waves in ionosphere, rel. to artificial modulation of precipitating particle streams 3—15718
anomalies, dipole equivalences in three-dimens. mag. field. 3—29822
anomalies, satellite-derived data, optimal processing 3—35071
anomalies, three dimensional direct problem soln., use of surface integrals 3—30069
anomalies above isometric basin 3—58898
anomalies due to sea-floor spreading, variations of remanent intensity 3—44443
anomalies potential field, freq. domain representation *(Chinese)* 3—9814
anomalous magnetic field, statistical characts. rel. to Earth upper magnetoactive shell *(Russian)* 3—15323
anomaly, three dimensional pot. field, analytical continuation, use of Carleman function 3—29811
Arctic Basin, struct. of natural ELF EM field 3—15522
Arctic Ocean, aeromagnetic survey results 3—9841
Arctic Ocean (Canada Basin), aeromagnetic data and tectonics 3—9842
Mid-Atlantic Ridge crest, magnetism from FAMOUS and DSDP 3—58902
Mid-Atlantic Ridge spreading rate from geomag. data 3—15418
Australia, IGRF models compared to regional field 3—53936
Baikal-Amur Mainline route, USSR, deep EM sounding 3—4776
NE Baltic Shield, crust/mantle struct. from magnetotelluric obs. 3—9874
SW Canada, elec. cond. struct. of crust, mag. variation study 3—4761
Carpathians, local changes and S_q-variations 3—4763
Charvak Reservoir, USSR, filling, local geomag. field var. as tectonomagnetic effect 3—9831
coast effect, implications of inductive coupling between idealised conductors 3—58899
coincident loop transient EM meas., sign reversals interpretation 3—15321
Curie depth isotherm by satellite mag. anomaly method 3—4771
Cyprus, mag. survey of sulphide ore body in Troodos ophiolite complex 3—24971
digital data interpretation of induced polarisation resistivity and magnetic data 3—54157
distribution of mag. field for nonmagnetic building *(Japanese)* 3—58895
dynamo for given vel. fields with var. cond. 3—15326
dynamo theory, possible mechanism of geomag. field generation 3—15330
dynamo theory, weak-field Benard type dynamo 3—44395
dynamo theory involving perturbation theory 3—44396
dynamo theory with core-mantle EM coupling 3—9833
East African Rift system, geomagnetic and gravity anomalies, tectonics, seismic data, crust model 3—35110
N East Pacific Rise, evolution (Late Oligocene to present), bathymetry/mag. data anal. 3—15412
N East Pacific Rise tectonic history from seafloor spreading mag. anomalies and bathymetric data 3—15411
EM induction in heterogeneous spherical Earth model with near surface cond. realistic distrib. 3—9837
EM probing with surface magnetic loop induction scheme 3—44573
EM response of buried cylindrical conductor for sheet and line current sources 3—29840
EM sounding, for lateral waves 3—6843
EM sounding, new formulas for $E_{1\phi}$ and E_{1z} for lateral waves 3—6844
EM sounding, study of methods for EM field calc. using thin wire integral equations 3—46126
EM sounding, theoretical considerations for inverse scattering 3—48473
deep EM sounding of Earth, inverse problems 3—15329
Falkland Plateau position near Africa during Cretaceous 3—19976
field origin model 3—35063
fields reduction to inclined and vertical planes in lower half-space 3—59122
four-vector magnetic potentials, analytical continuation singularities determ. method 3—30070
geothermal energy resource location in Italy by aeromagnetic methods 3—44556
Greenland, mag. anomaly map 3—19889
Greenland Sea, aeromagnetic survey results 3—9841
groundwater flow mag. field changes assoc. with seismicity 3—48499
Hudson Bay, 1975-8 shipborne magnetic survey 3—4773
Iceland crust, thermal props., water chemistry, stress and mag. props. 3—58921
Icelandic crust, natural magnetization of 3 km section 3—19894
IGRF candidate model comparisons 3—53935
IGRF main field models and comparison with observations 3—53932
India geomagnetic induction anomalies rel. to geology 3—19891
S Indian Ocean, geomag. induction analogue model and coast effect 3—58900
E Indian Ocean, sea floor spreading history 3—4841
Indian peninsula, anomalies at southern tip 3—35072
induction vectors and their two dimens. inversion 3—29823
internal geomag. field and variations determined from very quiet nighttime currents 3—4772
International Geomagnetic Reference Field, comparison of candidate models 3—53931
International Geomagnetic Reference Field, third version 3—53927
International Geomagnetic Reference Field model 3—53937
International Geomagnetic Reference Field spherical harmonic model 3—53930
International Geomagnetism Reference Field model 3—53929
inverse gravity and magnetic problems, physical meaning of complex-valued masses and multipoles 3—15631

geomagnetism continued
ionosphere, electric and mag. fields meas. by equipment on Intercosmos-Bulgaria 1300 satellite 3—20197
ionosphere, geomag. field model rel. to theoretical derivation of f_0F_2 and improvement of ionospheric maps 3—48762
Lake St. Martin, Manitoba, geomag. and age of meteorite crater 3—19998
lightning-associated phenomenon, related geomag. meas. 3—30026
Lough Derg Complex, Donegal, Ireland, magnetic anomaly 3—19890
magnetic moments from closed surface meas. 3—9828
magnetic poles of earth, motions of dip poles and geomag. poles 3—35069
magnetisation distribution of three-dimens. bodies of high susceptibility *(Chinese)* 3—10077
magnetosphere, collisionless tearing modes in presence of shear flow 3—59197
magnetosphere, current system determ. and geomagnetic models development, IMP-HEOS data 3—10157
magnetosphere, electric and mag. fields meas. by equipment on Intercosmos-Bulgaria 1300 satellite 3—20197
magnetosphere, field model, energetic particle losses and trapping boundaries 3—10158
magnetotelluric impedance, computation by selected fluctuations, energy criterion 3—9827
magnetotelluric impedance determ. technique 3—15628
magnetotelluric long period variations, stochastic model 3—35290
magnetotelluric modeling, one dimens., parameter trade-off 3—39779
magnetotelluric response on vertically inhomogeneous Earth having conductivity varying linearly with depth 3—24965
magnetotelluric sounding above bounded conducting layer 3—9834
magnetotelluric sounding above horizontally stratified anisotropic for two dimens. EM field 3—35062
main field and anomaly spherical harmonic model 3—53928
main field models (IGRF) and comparison with obs. 3—53933
Manitoba and N.W. Ontario crust struct. and geology 3—25041
marine magnetic source layer modelling 3—58925
mechanoelectrodynamic theory of mag. field origin 3—48466
Nagata Seamount, N Pacific, geophys. and geologic study 3—48515
non-stationary EM fields continuation methods for geoelectricity problems 3—58897
nonzero-flow-rate (accretion) semidynamo, two simple examples 3—44664
North America geomagnetic obs. compared to IGRF models 3—53934
Norwegian Sea, aeromagnetic survey results 3—9841
ore body mag. prospecting by ungrounded loop method 3—48696
Pacific Rise, magnetotellurics in ROSE area 3—35068
palaeointensity variations, comparison of Thelliers' and Shaw's methods using <5 Myr basalts 3—9838
passive continental margins, assoc. gravity and mag. anomalies 3—53966
reversal event frequency since Late Cretaceous 3—58896
Rocky Mts. foothills (Alberta, Canada), geothermal anomaly magnetovariational study 3—48469
San Andreas fault, CA, USA, ocean tide caused current channeling in fault 3—48470
seafloor rift system mag. anomaly patterns 3—29834
seismic amplitude anomalies, evaluation by gravity and geomag. means, Louisiana/Arkansas case studies 3—39928
Senegal Basin (West Africa), oceanic-continental crust transition, gravity/mag. anomalies anal. 3—29877
solar wind interaction, effect on Pc 1 distrib. 3—15747
harmonic spline model of geomag. field 3—4766
survey data analysis method to remove temporal variation effects 3—20146
susceptibility log of IRDP drill core in E Iceland 3—19896
tectonic plate palaeoposition determin. using dipole field reference frame 3—15417
three-dimensional homogeneously magnetised bodies, ΔZ anomalies multipole anal. 3—30071
TI-59 pocket calculator magnetic modeling program 3—29820
transient EM measurements, anomalous response due to near surface superparamagnetic material 3—15320
two-dimensional bodies, spectra modification for depth determ. 3—29921
United States, Atlantic continental margin struct. from sediments, mag., seismic and gravity obs. 3—58932
W United States, intermediate wavelength spatial variation power spectra 3—39780
United States, long-wavelength mag. anomaly model 3—4770
upper atmosphere dynamics, Dynamics Explorer satellite mission 3—15737
USA, lower crust magnetisation causing long-wavelength anomalies 3—44398
Xizang Plateau, China, crust/mantle magnetotelluric obs. along Nagqu-Yadong line *(Chinese)* 3—9823

geometrical optics
aperture, angular and apodised, imaging performance 3—50627
atmosphere, refracting spherically symmetric, ray tracing 3—15618
blood vessels, geometrical optics method for inverse scattering assessing, multistatic single frequency approach 3—44306
blood vessels, geometrical optics method for inverse scattering assessing, monostatic multifrequencies approach 3—44307
Brewster polarisers, light extinction, shadowlike phenomenon 3—56134
Cassegrain system, view field aspherical plate corrector, design and characts. *(Chinese)* 3—59217
catadioptric magnifier simple system, design and fabrication 3—50729
catadioptric systems, aberration anal. *(Korean)* 3—1740
caustics for slant cracks in biaxially loaded disc, optically exact eqns. 3—46483
characteristic function class in Hamiltonian optics 3—26934
characteristic functions, restricted, concatenation 3—26935
characteristic functions concatenation in Hamiltonian optics 3—12066
coherence theory and caustic corrections 3—41760
conic concentrators. generalised quadratic surface coeffs. 3—12264
conical lens, complex amplitude distrib. using transmission function 3—22186
coupled parallel-plate waveguides, radiation pattern from ray-optical anal. and exptl. results 3—6839
curvilinear diffraction gratings, generalised ray equations and caustics 3—46278
curvilinear generalised diffraction gratings, image diffr. patterns 3—46277
cylindrical system, simplified ray tracing 3—1549
diffraction theory, general, new approach 3—1524
disc, circular or elliptical, diffr. for point source within near field 3—46161

geometrical optics continued
distributed-index planar micro-lens, ray tracing 3—1811
double-cusp unfolding of $^0X_9$ diffr. catastrophe 3—21989
eikonal structure synthesis for directing families of light rays *(Russian)* 3—17410
EM wave diffr. from wedge, perfectly absorbing and with reflecting faces, use of virtual rays 3—46140
EM wave propag. in photoelastic material, geometrical optics 3—36934
fibre, Selfoc, controlled non-linear evolution of TE and TH ps-pulses 3—12349
fibre lens, tapered gradient-index, image properties, ray path eqn. *(Chinese)* 3—41983
first-order optical systems with loss or gain, generalised mode propag. 3—6873
first-order optics, operator representation for systems with loss or gain 3—6872
focal volume maximum wave intensity 3—12088
focline, parabolic cylindrical, number of ray refls. 3—32442
Fresnel optical systems used in laser radiation and reception *(Rumanian)* 3—12277
Fresnel systems, ray tracing 3—46154
gas-dielectric optical waveguide, asymmetric, loss of light calc., geometrical optics 3—7173
Gaussian beams in a smooth transition between two square-law media 3—21986
Gaussian brackets and their appl. to paraxial theory, generalised Gaussian consts. 3—56135
graded index curved media, ray-trace aberrations 3—36945
graded index multimode fibre splices, mode splitting 3—37190
gradient index medium, nonrotation-symm., imaging and transforming transmission 3—36944
gradient-index rod lens, algebraic formula for fifth-order distortion 3—37151
gradient-index rod lenses, spherical aberration 3—36946
grazing incidence systems, aberration reduction or toleration 3—7115
GRIN material, pupil effect, effective transmittance function 3—56147
Hamiltonian method application to analogous optics problems, optical fibre appl. 3—41986
high speed flow lasers, mode struct., power output, stable oscillation condition 3—41800
hyperbolic convex mirrors, null test, ray tracing results 3—27187
ice crystals, hexagonal, polarised light scatt. model 3—1550
inhomogeneous dielectric cylinder, Gaussian beam scatt., ray optics 3—12043
laser nonstationary absorption wave in a solid transparent dielectric 3—32306
Lie algebraic theory, optical aberrations, comment on similarity to known results in electron optics 3—32305
luneburg lens, generalised, ray trace improvements, refr. index gradient 3—37155
merit function formation from system impact diagram *(Spanish)* 3—1581
micro-optics *(Japanese)* 3—12085
mirage production using a laser 3—49119
mirrors, geometric optics for illumination 3—27200
modern optics, mathematical appls., conf., San Diego, CA, USA (Aug. 1982) 3—40314
monoaxial optical components, ray tracing formulas 3—41754
multimode fibres, nonlinear oscillator theory 3—46318
multimode fibres with arbitrary profile exponents, transmission loss caused by angular misalignment 3—56322
multiple scattering of wave packets, geometrical theory, low density limit 3—17415
nonprojective transformations in optics 3—1576
operator algebra approach to optics 3—1554
photometric properties of objects analysis by back reflection 3—25919
planar microlens, distributed-index, three-dimens. ray optics 3—32430
planar microlens, distributed-index ray traces 3—1808
planar optical waveguides, ray representation 3—12313
quasi-spherical wave scalar diffraction, vector analysis 3—1560
radio fields, numerical method for extending ray trace calcs. into strong focusing regions 3—6842
random inhomogeneous layer, light scatt., fluctuating field, ray description 3—17444
random screen, one-dimensional refracting, intensity fluctuations in short wavelength limit 3—21988
rays in optics, Euclid-Newton different concepts, link between resolving power and radiometry 3—5553
refractive index distributions, classification scheme and nomenclature 3—36933
second-order aspherical surfaces, plotting of reflected beams *(Russian)* 3—26932
self-focusing of powerful CO_2 laser beams in collisional plasmas 3—7085
slab waveguide taper, near- and far-field radiation patterns 3—32471
spherical Gaussian beam focusing through train of lenses or mirrors 3—46248
strongly refracting object computer tomography, ray optics formulation 3—41759
synchrotron radiation optical components and systems, introduction 3—7114
thermal imaging systems, narcissus effect, refls. on retrorefls. 3—392
transformation of spherical nonuniform lenses 3—27188
transparent wedge, incident three-dimens. beam, field expression, geometric optics 3—46141
trigonometrical verification of optical ray tracing *(Italian)* 3—1552
unstable resonator misalignment in ring and linear toroidal resonators 3—41879
unstable telescopic resonator calc. by approximate method 3—27091
water waves refraction, Monte Carlo approach using geometrical optics approximation 3—15456
wavefront reversal efficiency in medium with time depend. fluctuations 3—27170
wavelength multiplexer, dual GRIN lens, ray tracing analysis 3—37238

geometry
see also space time configurations
analytic mappings, particle prod. by accelerated observers 3—10703
angular momentum theory, Desarguesian nature and Hilbert's constructions 3—35868
area preserving polynomial mapping, stability limits, celestial mechanics appl. 3—25302
arterial branching, local geometry 3—24747

geometry continued
circle, mapping onto itself, scaling behaviour 3—40346
complex polarisations on symplectic manifolds and projective geometry 3—36152
conic umbilic catastrophes, singular coord. sections 3—62
differential, role in relativity, quantum mechanics, and group theory 3—35891
differential geometry and topology 3—16117
duality transformation, Poincare duality in differential geometry 3—16306
Fiber spaces, connections and Yang-Mills fields 3—5989
force, geometrical treatment 3—35812
gauge geometrodynamics, conceptual development, study of properties, review 3—40791
general mechanical systems, differential geometric structure from Lagrangian point of view 3—20616
geodesic deviation and first integrals of motion 3—30713
geometric introduction to Yang-Mills-equations 3—5990
geometric techniques in gauge theories, conf., Scheveningen, Netherlands (Aug. 1981) 3—5500
homogeneous cosmology, action-principle surface terms, geometrical perturbation theory 3—20719
Kepler's cosmological theories, their agreement with observation 3—20602
Kostant complex, spectral props. 3—10616
Lie groups, geometrical invariance, covariance in * quantisation 3—40403
monopole geometry 3—16532
moving frames and prolongation algebras 3—21024
N=1 Yang-Mills theory in curved superspace, geometry 3—20750
non-Noethar constants of motion using differential geometry 3—30660
nonrotating sphere complexification, Newman-Janis algorithm extension 3—30712
particles and geometry 3—10644
quantisation, in presence of EM field 3—49182
random geometry and Yang-Mills theory 3—16526
supergravity, geometrical aspect, different formulations 3—16218
surfaces, differential geometry in thermodynamic spaces of states *(Ukrainian)* 3—10780
symmetry conservation law duality, Runge-Lenz vector 3—44960

geomorphology
see also topography (Earth)
Agassiz, Ontario, Canada, water level fluctuations 3—25140
N Alpine foothills, Quaternary glacial terrace sequence correl. with Lower Rhine Valley 3—25097
Antarctic Peninsula Quaternary glacial history 3—35199
Aravalli Range rivers, Rajesthan, India, river profiles and Quaternary uplift 3—44433
arroyo development in Henry Mountains, Utah, USA 3—35163
barrier beach evolution rel. to Holocene sea-level rise 3—44439
Cayman Islands, coastal morphology and L.Quaternary history 3—54017
Colombia, llanos, natural vegetation, geomorphology and river drainage *(French)* 3—44446
S Dakota, USA, pre-glacial valley location using Landsat 3—44451
fluvial geomorphology, study of concave-bank benches and associated floodplain formation 3—29953
frozen ground, downward motion of water into underlying frozen ground 3—54059
glacial erosion in ice-divide zone in Scotland 3—44485
Goa coastline, photogrammetry anal. 3—48546
Gobi desert, geology and hydrology obs. *(Russian)* 3—4816
Hatsu island, Sagami Bay, Japan, uplift terraces 3—25070
Himalayan arc river gradients rel. to tectonic development 3—39841
Horn Island, Mississippi, beach morphology and inshore bathymetry 3—19982
ice cover in Atlantic Canada, morphology during deglaciation from postglacial relative sea level 3—48578
India coast (10°N, 76°E), waves, longshore currents, erosion 3—54041
landform analysis by SEASAT-SAR imagery, appl. of elevation models 3—20125
Lower Rhine Valley, Quaternary glacial terrace sequence correl. with N Alpine foothills 3—25097
meteorite cratering forming dense mosaic pattern 3—44445
Great Nafud Desert, Saudi Arabia, appearing as cloud-like feature in satellite imagery 3—58972
permafrost phenomena in N Canada, and implications for human habitation 3—44486
remote sensing, appl. of shuttle imaging radar expt. 3—29918
river bedload transport rates affected by bed armouring 3—44471
river meander formation from straight rivers 3—4898
river meander planform asymmetry 3—44483
river sedimentation processes affected by log-jams and landslides 3—44470
Rolling Plains of Texas Panhandle, evaporite dissolution and karst features development 3—29954
sand dunes on Skeleton Coast, Namibia (South West Africa), geomorphology and grain size relationships 3—29919
shingle beaches of modern and Pleistocene Venezuela, rel. to climate 3—29924
slope stability, Monte Carlo simulation methods 3—4981
subglacially erupted volcanoes in Canada and Iceland 3—29882
Texas Panhandle, storm erosion of potential nucl. waste disposal site 3—44444
Ungava Peninsula, postglacial marine emersion rel. to landscape features *(French)* 3—29923
volcanic sediment depositional features, of Mt. St Helens eruption 3—9883
volcanic structures anal. from Landsat imagery 3—19997
Wisconsin (USA), watershed alluvial processes during Holocene climate changes 3—54063
Yilgarn Block, SW Australia, chem. weathering and groundwater chem. 3—54028

geons *see gravitons*

geophones *see seismometers*

geophysical aspects of cosmic rays
antiproton flux, atmospheric correction factor 3—44627
atmosphere gamma-ray flux in energy range 4 to 100 MeV, spark chamber meas. 3—10485
atmospheric propagation simulation from hadron-hadron interactions at 10^{15}-10^{16} eV *(Chinese)* 3—44633
Cherenkov detector Sea Urchin, deep underwater muon and neutrino detector array development 3—30216
diurnal variation, phase and amplitude variations 3—44626

geophysical aspects of cosmic rays continued
- fractionally charged particle search in cosmic-rays at sea level, PSPD telescope 3—5118
- gamma-rays in atm., quasiperiodic var. due to internal gravity waves effects, solar oscill. link 3—54211
- hadron energy spectra at Mt. Kambala 5500 m above sea level *(Chinese)* 3—44629
- high-energy cosmic rays, prompt muons effect 3—20194
- intensity, dependence on declination with primary energies $\approx 10^{16}$ eV 3—25270
- intensity increase before Forbush effect 3—5068
- muon vertical spectra in atmos. at superhigh energy 3—30137
- muons detection, using Cherenkov radiation in sea 3—48828
- neutrino sources, detection at DUMAND site, high-energy obs. *(Japanese)* 3—10168
- neutron energy spectrum at sea level 3—48782
- relativistic muons, detection, using Cherenkov radiation in sea 3—48829
- sediments of Tyrrhenian Sea, supernova caused thermoluminescence 3—54412
- short-period pulsations of particle flux in auroral stratosphere 3—5070
- spallation reactions in Antarctic ice, rel. to ^{14}C dating of trapped gas 3—9941
- X-ray photons transport at balloon altitudes, second order scatt. approx. 3—35390
- ^{26}Al/^{10}Be production ratio in atmosphere, determ. from accelerator mass spectrometry meas. 3—48708

geophysical equipment
- *see also atmospheric measuring apparatus; data loggers; geophysical prospecting; geophysical techniques; meteorological instruments; oceanographic equipment; seismometers*
- airbourne geophysical equipment, integration of EM mol. magnetometric channels *(Russian)* 3—44585
- chemical analysis (C$_1$-C$_6$ carbohydrate) gas chromatograph *(Russian)* 3—59131
- dilatometer for determ. of free water content of snow; design and appl. 3—39919
- Earth Radiation Budget Experiment, calibration of radiometers 3—5091
- electrical props. of soft ground, meas. by single probe method 3—25234
- electro-optical distance meters, geodetic appl. *(Czech)* 3—36073
- feature identification and location expt. on space shuttle, design and performance 3—30147
- deep geoelectric sounding in noisy areas, data anal. and equipment 3—48693
- geological high-press furnace for rock phase equilibria studies 3—4986
- geothermal heat flow determination by borehole method *(French)* 3—4967
- geothermal well logging, thick-film hybrid IC electronic monitoring ccts. appl. 3—59119
- gravimeter, portable, tectonics appl. 3—15650
- absolute gravimetry, new research and development *(Chinese)* 3—35054
- gravity gradient compensators for orbital expts., rel. to existence theorem for absolute geodetic singularities 3—39770
- gravity gradiometer system development experience 3—35326
- gyrotheodolite, azimuth accuracy of MOM Gi-B2 instruments 3—4971
- hot-film anemometers used in NaCl solutions, statistics interpretation 3—22553
- hydrostatic leveler, based on light reflection, automated design 3—4993
- ice sheet topography meas. technique using satellite laser altimetry 3—25237
- inertial systems for geodesy using land vehicles *(French)* 3—20155
- IR electro-optical array (Si thick film) for remote sensing satellite 3—40597
- jam jar magnetometer, as aurora activity warning device 3—30078
- magnetotelluric prospecting by remote-reference technique: equipment and procedures 3—48689
- measurement and computing complex for geophysics, based on Elektronika-60 microcomputer *(Russian)* 3—59130
- measuring system microcomputer control *(Hungarian)* 3—35287
- Michelson interferometer for local geodynamics 3—24959
- Modular Transportable Laser Ranging System use for plate motions 3—5001
- multiple sensor type borehole thermometer for buried thermistor probe method 3—25218
- neutron moisture meters, soil parameter effects, Australian soil appl. 3—44584
- optical anchor strainmeter for shear strain meas. in crust upper 24 m 3—20139
- optically recording strong motion accelerographs, optimum freq. and damping 3—15624
- Orsat stack-gas analyser modifications for geochemical exploration 3—59127
- pendulum astronomical clock as precision gravitation instrument 3—48705
- photogrammetry digital plotting table performance parameters 3—48714
- phototachymetric measurement accuracy, ambient temp. effect 3—30096
- radioactivity meas. efficiency of Ge(Li) and Ge detectors 3—41417
- remote sensing camera (LISS), radiometric accuracies 3—54144
- remote sensing multispectral radiometer 3—4866
- remote sensing optical sensors and techniques, conf., May 1982, Arlington, USA 3—40312
- salt dome struct. exploration by borehole EM and seismic methods 3—48688
- satellite laser rangefinder at Metsahovi Space Geodetic Station of Finnish Geodetic Institute 3—35409
- satellite-borne Earth flux radiation balance meas., using self-calibrating cavity radiometers 3—5090
- sedimentation, acoustic measuring system, multichannel 3—54175
- seismic accelerometric sensors based on piezoelectric ceramic transducers *(Italian)* 3—39914
- seismic air gun sources, desired seismic characts. determ. 3—15626
- seismic airgun arrays on ships, efficiency and design 3—25222
- seismic and geodetic network (in Japan) for earthquake prediction 3—39943
- marine seismic array design 3—54149
- seismic source airgun, radiation pattern depend. on design parameters 3—48686
- seismic source designs for downhole operation 3—48685
- marine seismic streamers; hardwired or digital systems? 3—15660
- seismic transductors, characts. *(Italian)* 3—39922
- seismic vibrator signals, amplitude characts. 3—25223
- shuttle multispectra IR radiometer, initial results in mineral identification from orbit 3—30095

geophysical equipment continued
- SLR 35 mm photogrammetric system for glacier meas. 3—10097
- soil permittivity and permeability meas. 3—39917
- space based radiotelescope KRT-10 use for remote sensing 3—35439
- Space Shuttle IR radiance instrumentation, contamination effects obs. 3—10085
- spaceborne thermal detectors calibration, earth radiation budget expt. appl. 3—400
- spacecraft gravity gradiometer using supersensitive accelerometer 3—30106
- Zeiss Stereotop modified into analytical stereoplotter 3—10098
- Nd-YAG laser ranging system at Wettzell Station for geodesy *(German)* 3—5000

geophysical prospecting
- *see also minerals*
- acoustic logging, effect of pore-filling material on vel. and absorpt. of elastic waves 3—9913
- Africa, natural resources formation, effect of palaeogeoid var. due to geodynamics 3—35166
- apparent resistivity profiling of buried object, effect of interface impedance 3—54153
- azimuth-radial acoustic logging, theory 3—30064
- blind mineral deposits discovery, geochemical methods 3—10083
- borehole (fluid filled) sonic logging using full wave train 3—29845
- bottom-hole temperature stabilisation with continued stabilisation of drilling mud 3—39773
- Central Ranges, Honshu, Japan, Bouguer anomaly map compilation and interpretation 3—44380
- coal deposit at Hat Creek, BC, Canada 3—53475
- coal seams, absorpt. effect on Love-type seismic waves 3—39816
- coincident loop transient EM meas., sign reversals interpretation 3—15321
- conference on Africa held in Paris, France (July 1980) 3—30545
- E-polarisation EM induction in two thin half-sheets 3—53921
- electric resistivity measuring by borehold-to-surface method 3—54152
- electric self-potential modeling (elec. pot. due to groundwater flow) 3—53916
- electric well logging for cylindrical multi-layered mode, direct problem soln. *(Hungarian)* 3—4774
- electrical prospecting, anal. method for noisy voltage records 3—44555
- electrical resistivity and induced polarisation probing near to spherical anomaly 3—24969
- EM depth sounding for high-resistnce shielding case *(Chinese)* 3—35059
- EM induction for two-dimens. struct., modeling with finite element method 3—35058
- EM probing with surface magnetic loop induction scheme 3—44573
- EM prospecting method using horizontal loop, multipole excitation 3—53926
- EM prospecting of overburden anomalies with loop antenna 3—53915
- EM response of mineralized ore zone, model 3—24970
- EM sounding, theoretical considerations for inverse scattering 3—48473
- EM sounding of layered media, Helmholtz eqn. theory 3—53912
- explosion seismology, seismic waves excited by deformation shot with finite front velocity 3—4813
- four-vector magnetic potentials, analytical continuation singularities determ. method 3—30070
- geoelectric profiling, use of various electrode arrays, asymmetry sensitivity *(Hungarian)* 3—30088
- geoelectric prospecting in noisy areas, data anal. and equipment 3—48693
- geothermal area prospecting by soil Hg concentrations 3—59118
- geothermal energy exploration by seismic methods, review 3—48692
- geothermal energy resource location in Italy by aeromagnetic methods 3—44556
- geothermal well logging, thick-film hybrid IC electronic monitoring ccts. appl. 3—59119
- gravimetric prospecting inverse problem soln. for 2-D and 3-D potentials 3—48461
- gravimetry, 2-D inverse problem necessary conditions 3—9819
- gravity anomalies, interpretation using two-dimens. filtration 3—30073
- gravity anomalies of buried objects, theory of inverse problem *(Chinese)* 3—35053
- gravity anomaly interpretation using inverse theory 3—48687
- gravity field meas. using gravit. field induced EMF 3—54150
- gravity field prospecting, soln. to 3-D inverse problem 3—48462
- gravity inverse problem, ϵ-equivalent redistributions method appl. 3—35289
- Hat Creek coal deposit, BC, Canada, geophys. exploration 3—53475
- heavy metals in environment, 'maple tree stress' remote sensing method 3—54139
- high-bandwidth induction sensor coil for EM prospecting 3—342
- homogeneous electric field deform. in presence of perfectly conducting hemisphere 3—29821
- hydrocarbon trap productivity from clay elec. anisotropy 3—35305
- induced polarisation prospecting of buried spherical object 3—54155
- induced polarisation resistivity and magnetic data digital interpretation 3—54157
- inverse gravimetric problem, two dimens. case, equivalent solns. construction 3—9818
- Kalahari Desert, Botswana, geophysical exploration 3—35165
- magnetic anomalies, three dimensional direct problem soln., use of surface integrals 3—30069
- magnetic moments from closed surface meas. 3—9828
- magnetic/gravity fields reduction to inclined and vertical planes in lower half-space 3—59122
- magnetotelluric apparent resistivity sound method 3—54156
- magnetotelluric impedance, computation by selected fluctuations, energy criterion 3—9827
- magnetotelluric modeling, one dimens., parameter trade-off 3—39779
- magnetotelluric prospecting by remote-reference technique: equipment and procedures 3—48689
- magnetotelluric response on vertically inhomogeneous Earth having conductivity varying linearly with depth 3—24965
- magnetotelluric sounding above bounded conducting layer 3—9834
- magnetotelluric sounding above horizontally stratified anisotropic for two dimens. EM field 3—35062
- maritime EM prospecting equipment, methodical errors anal. *(Russian)* 3—44586
- mathematical analysis of spatial anomaly fields 3—54167
- microcomputer based seismic processing system 3—44560
- mineral exploration use of optimum second vertical gravity derivatives, appl. in Ontario 3—39929

geophysical prospecting continued

- Nagpuzha graphite prospect, Ernakulam District, Kerala, shallow-induced polarisation surveys 3—48472
- neutron scintillator spectra analysis method 3—30063
- SW Nigeria, water resource prospecting by seismic refr. method 3—54060
- oil prospecting, computer appl. *(Norwegian)* 3—59132
- oil/gas prospecting, laser resonance optoacoustic atmospheric spectrometer *(Russian)* 3—35291
- ore body mag. prospecting by ungrounded loop method 3—48696
- ore-body prospecting by magneto-electric passive source method *(Chinese)* 3—35060
- Orsat stack-gas analyser modifications for geochemical exploration 3—59127
- potential field, freq. domain representation *(Chinese)* 3—9814
- prospecting of layered crust struct., Elektronika-60 computer system design *(Russian)* 3—59130
- radar remote sensing of land surface from Space Shuttle 3—25091
- refractor, three dimens. attitude and true vel. determ. technique 3—15627
- remote sensing of Earth, digital image processing systems 3—54141
- remote sensing research by space shuttle, recent results and future prospects 3—30094
- resistivity interpretation, use of seismic dynamic deconvolution algorithm 3—25227
- resistivity numerical modeling of complex structural problems, interpretation methods 3—39913
- resistivity sounding, comparison of five least squares inversion techniques 3—4984
- resistivity transform computation from Wenner sounding data, numerical technique 3—25229
- salt dome struct. exploration by borehole EM and seismic methods 3—48688
- satellite-borne synthetic-aperture radar real-time signal processing 3—35302
- seismic amplitude anomalies, evaluation by gravity and geomag. means, Louisiana/Arkansas case studies 3—39928
- seismic anomalous wave velocity of lenslike layers, effect on object imaging 3—35100
- marine seismic array design 3—54149
- seismic arrays, improved wavenumber resolution 3—44571
- seismic data anal. using digital image anal. 3—10103
- seismic hydrocarbon exploration using pattern recognition methods 3—35284
- seismic inverse one-dimensional kinematic problem, soln. using refr. waves hodograph 3—58903
- seismic refl. profiling, thin-layer response and spectral bandwidth 3—53943
- seismic refl. sounding, 3-D migration method 3—48485
- seismic refl. sounding in three-dimensions, data migration method 3—48484
- seismic reflection profiling, sensitivity of Born inversion method 3—53946
- seismic reflection profiling method, model for stacking velocity anomalies 3—48487
- seismic reflection sounding technique for U deposit location 3—19914
- seismic refraction, vel. inversion and hidden layer problems anal. 3—24991
- seismic source designs for downhole operation 3—48685
- seismic surveying, algorithm for direct 2-D dynamic problem 3—10092
- seismic velocity inversion problem 3—29844
- seismic vibrator shear-wave radiation pattern in shale 3—53944
- seismic wave 3—35095
- seismic wave theory and seismic exploration 3—44400
- seismic well logging for seismic attenuation coeffs. 3—15633
- spontaneous potential logging with closed form soln., convolutional operation 3—15322
- subsurface sounding of earth layers using coherent radar with Doppler filtering 3—15659
- sulphide deposit prospecting by induced polarisation method 3—54151
- thermal inertia mapping for reconnaissance geological exploration using Heat Capacity Mapping Mission satellite 3—39926
- thermal inertia remote sensing for reconnaissance geological exploration using Heat Capacity Mapping Mission satellite 3—39926
- three-dimensional homogeneously magnetised bodies, ΔZ anomalies multipole anal. 3—30071
- TI-59 calculator program for determining the gravity anomaly of a 2-D geologic body 3—29810
- transient EM measurements, anomalous response due to near surface superparamagnetic material 3—15320
- two dimensional body, centre of gravity and mass determ. from gravity pot. 3—29920
- two-dimensional bodies, spectra modification for depth determ. 3—29921
- underground tower gravity vertical gradient, appl. to exploration 3—39927
- VLF response of underground struct. below stratified overburden 3—48467
- water resource (groundwater) prospecting by seismic refr. method 3—54060
- well logging, velocity estimation from short-time temporal and spatial frequency estimates 3—7317
- well logging by nucl. physics methods, inverse problem soln. 3—44591
- well logging data anal., soln. of linear inverse problem 3—48697
- wells abnormally pressured sedimentary rocks anal. from seismic data 3—4787
- West Siberian Plate faults identification method by seismic means and hydrocarbon searching 3—35304
- U mineralisation zones, broadband gamma ray logs, correction for photoelec. absorpt. 3—25228

geophysical techniques

- *see also atmospheric techniques; hydrological techniques; ionospheric techniques; oceanographic techniques*
- accelerator mass spectrometry, appl. to meas. of cosmogenic ^{26}Al in terrestrial and extraterrestrial matter 3—48708
- acoustic logging, effect of pore-filling material on vel. and absorpt. of elastic waves 3—9913
- acoustic stratigraphy for oceanic crust vel. struct. determ. 3—59134
- apparent resistivity profiling of buried object, effect of interface impedance 3—54153
- blind mineral deposits discovery, geochemical methods 3—10083
- borehole (fluid filled) sonic logging using full wave train 3—29845
- chemical analysis (C_1-C_6 carbohydrate) gas chromatograph *(Russian)* 3—59131
- chronostratigraphy, critique 3—48508

geophysical techniques continued

- climatic analysis from ice core O isotope profiles, correction for wind scouring 3—35196
- computer treatment of seismological station bulletin, appl. of stored data for seismological investigations 3—15345
- crust strain analysis from geodetic data, correl. adjustment anal. method appl. *(Chinese)* 3—48527
- crustal Curie depth isotherm by satellite mag. anomaly method 3—4771
- crystalline rock, fluid flour determ. from intersecting borehole temp. meas. 3—30077
- crystallography crystal size location of Fe and trace elements in Mg-Fe olivine 3—10100
- S Dakota, USA, pre-glacial valley location using Landsat 3—44451
- data analysis procedure for correction and detection of errors 3—15638
- digital mapping, topographic information processing system 3—4750
- digital terrain models, lake and river fills, computerised techniques 3—9919
- Earth rotation and polar motion from Global Positioning System Satellite data anal. 3—30102
- Earth rotation techniques intercomparability and stability 3—25253
- Earth tides, origin and measurement 3—44381
- earth-observation satellites, datastream and data interpretation *(Dutch)* 3—39942
- Earth-observation satellites, instrumentation aspects, optical, thermal-IR and microwave obs. *(Dutch)* 3—39941
- earthquake algorithms, conf., July 1981, London, Canada 3—20570
- earthquake danger areas determ. method *(Chinese)* 3—48682
- earthquake epicentre location using M-estimates method 3—24998
- earthquake fault plane parameter determination by statistics of first motion data 3—25004
- earthquake focal mechanism determination, theoretical-methodological elements 3—9854
- earthquake focal mechanism determination method using SV/P amplitude ratios 3—25003
- earthquake hypocentre depth estimation methods 3—35085
- earthquake hypocentre determ. technique, by inversion of teleseismic data *(Chinese)* 3—35077
- earthquake hypocentre parameter determ. using 3-D focal zone vel. models 3—25001
- earthquake joint hypocentre determination algorithm 3—24999
- earthquake magnitude determination using homogeneous seismic station system 3—25002
- earthquake parameter determ. by teleseismic wave inversion technique *(Chinese)* 3—53942
- earthquake risk as probability of exceeding peak ground accel. on free surface, determ. method 3—30099
- earthquake source parameter and local Q-value by simultaneous inversion method 3—25006
- earthquake source parameter estimation by synthetic waveform method 3—25010
- earthquake source-parameter determ. method using regional waveform data 3—25005
- earthquake strong motion calculation method statistical model development 3—15351
- large earthquakes recurrence time from freq. magnitude distrib. conversion to M^s 3—20138
- electric resistivity measuring by borehold-to-surface method 3—54152
- electrical props. of soft ground, meas. by single probe method 3—25234
- electrical prospecting, anal. method for noisy voltage records 3—44555
- electrical resistivity and induced polarisation probing near to spherical anomaly 3—24969
- electrical sounding, effective electrical props. of heterogeneous Earth models 3—48474
- electrical sounding, transient response anal. for disseminated mineralisation 3—48475
- EM depth sounding for high-resistnce shielding case *(Chinese)* 3—35059
- EM prospecting method using horizontal loop, multipole excitation 3—53926
- EM prospecting of overburden anomalies with loop antenna 3—53915
- EM response of mineralized ore zone, model 3—24970
- EM sounding, anal. of horizontal circular loop antenna near planar interface 3—10029
- EM sounding, appl. in zone of Baikal-Amur Mainline (BAM) route, USSR 3—4776
- EM sounding, asymptotic approximation of waves due to dipole on two-layer medium 3—6841
- EM sounding, for lateral waves 3—6843
- EM sounding, new formulas for $E_{1\phi}$ and E_{1z} for lateral waves 3—6844
- EM sounding, study of methods for EM field calc. using thin wire integral equations 3—46126
- EM sounding, theoretical considerations for inverse scattering 3—48473
- EM sounding beneath oceans using dipole sources, theory 3—15333
- deep EM sounding of Earth, inverse problems 3—15329
- EM sounding of layered media, Helmholtz eqn. theory 3—53912
- evaporation from non-vegetated surface, use of D 3—35299
- explosion seismology, seismic waves excited by deformation shot with finite front velocity 3—4813
- fault location at active volcano, Rn and Hg^0 detection 3—25243
- fault plane solutions from P-wave first motion data, determ. method 3—25217
- fault system in Quaternary deposits, anal. using geoelectric soundings 3—24966
- faulting probability assessment method 3—54173
- fly ash as standard material for instrumental neutron activation analysis 3—4337
- four-vector magnetic potentials, analytical continuation singularities determ. method 3—30070
- frequency soundings (geoelectric) in horizontal layer medium, nomographs for soln. of inverse problem *(Russian)* 3—48720
- geobarometer based on alumina solubility in orthopyroxene-garnet 3—30089
- geobarometry at Mt. Moosilauke NH using Al_2SiO_5 triple point 3—15377
- geochronological age determination by amino acid racemization 3—35131
- geodesy, anholonomity and reduction of obs. to reference ellipsoid using development method 3—44378
- geodesy least squares collocation, generalised method 3—53909
- geodetic adjustment methods for space systems data and terrestrial meas. 3—25214
- geodetic altimetry, near-nadir radar techniques 3—44567
- geodetic collocation technique, quadratic unbiased estimation 3—44376

geophysical techniques continued
geodetic networks, least squares prediction of horizontal coord. distortions in Canada 3—24945
geodetic satellite laser ranging observatory at Penc, Hungary 3—4748
geodetic satellite radio-Doppler systems, antenna phase centres 3—25236
geodetic techniques in geodynamics 3—54174
geoelectric profiling, use of various electrode arrays, asymmetry sensitivity *(Hungarian)* 3—30088
geoelectric prospecting in noisy areas, data anal. and equipment 3—48693
geoelectricity problems, non-stationary EM fields continuation methods 3—58897
geoidal height and vertical deflection estimation using Navstar Global Positioning System meas. 3—30105
geological age determin. by K-Ca method 3—44564
geological applications of U and Th decay series 3—10087
geological high-press furnace for rock phase equilibria studies 3—4986
geology remote sensing by radar, importance of speckle and resolution 3—25230
geomagnetic activity forecasting using radio scintillation obs. 3—4985
geomagnetic daily variation at equatorial latits., internal component separation rel. to ionospheric current determ. 3—35354
geomagnetic elements mean annual values, time series inner struct. from spectral-temporal anal. 3—15629
geomagnetic field palaeointensity determ., comparison of Thelliers' and Shaw's methods using <5 Myr basalts 3—9838
geomagnetic inverse problem used for induction vectors anal. 3—29823
geomagnetic pulsations, polarisation determ. method for Pc 3 pulsations at middle latits. 3—15756
geomagnetic variations at low latitude, separation of ionosphere and magnetosphere current contrib. 3—59126
geothermal area prospecting by soil Hg concentrations 3—59118
geothermal dry rock reservoir, seismic obs. of rock fractures 3—14923
geothermal energy exploration by seismic methods, review 3—48692
geothermal heat flow determination by borehole method *(French)* 3—4967
geothermal modelling and data acquisition using VAX-11/780 computer 3—15661
geothermometry at Mt. Moosilauke NH using Al_2SiO_5 triple point 3—15377
granitic pluton identification by statistical analysis of aerial radiometric data 3—4982
gravity anomalies, interpretation using two-dimens. filtration 3—30073
gravity anomaly interpretation using inverse theory 3—48687
gravity field inverse problem for layered media struct. 3—15314
gravity field mapping of mantle by satellite techniques 3—15662
gravity optimum second vertical derivatives used for geological mapping and mineral exploration 3—39929
gravity surveying, distant terrain correction method 3—19879
gravity surveying by intersatellite tracking, EHF propag. problems 3—25260
ground-penetrating radar in characterizing and monitoring waste burial sites 3—4452
groundwater design level prediction from piezometer recordings and rainfall data 3—39860
gyrotheodolite, azimuth accuracy of MOM Gi-B2 instruments 3—4971
heavy metals in environment, 'maple tree stress' remote sensing method 3—54139
high-precision instrumental neutron activation analysis of meteoritic, lunar, and terrestrial samples 3—9378
Himawari remote sensing data processing system *(Japanese)* 3—44553
hydrocarbon trap productivity from clay elec. anisotropy 3—35305
ice sheet topography meas. technique using satellite laser altimetry 3—25237
ice-sheet age determin. method based on $^{10}Be/^{36}Cl$ ratios 3—59274
impedance determination from magnetotelluric field anal. 3—35290
impedance of layered isotropic medium, matrix method, crust/mantle appl. 3—30072
induced polarisation prospecting of buried spherical object 3—54155
induced polarisation resistivity and magnetic data digital interpretation 3—54157
inverse gravity and magnetic problems, physical meaning of complex-valued masses and multipoles 3—15631
inverse problem, ϵ-equivalent redistributions method appl. 3—35289
inversion by Lorentz, Fourier and Ru transforms, spectral approach 3—10096
isotope geochemistry, comparison of stable isotope reference samples 3—53957
isotope hydrology methods appl. to river flow rate meas. using tritium 3—20151
landform analysis by SEASAT-SAR imagery, appl. of elevation models 3—20125
Landsat image data, multispectral classification rel. to higher-order components 3—39932
laser ranging application to astronomy and Earth science *(Japanese)* 3—25245
magnetic anomalies, three dimensional direct problem soln., use of surface integrals 3—30069
magnetic field disturbance as measure of auroral activity, use of jam jar magnetometer 3—30078
magnetic survey data analysis method to remove temporal variation effects 3—20146
magnetic/gravity fields reduction to inclined and vertical planes in lower half-space 3—59122
magnetisation distribution of three-dimens. bodies of high susceptibility *(Chinese)* 3—10077
magnetotelluric apparent resistivity sound method 3—54156
magnetotelluric impedance determ. technique 3—15628
magnetotelluric long period variations, time-spectral transform. methods 3—35290
magnetotelluric prospecting by remote-reference technique: equipment and procedures 3—48689
mantle shear wave vel. distrib. from torsional oscills., inverse problem soln. methods 3—44581
map digitisation, graphic cell method, FORTRAN program 3—4979
marine seismology, hypocentral resolution of microearthquake surveys carried out at sea 3—39931
Mark III VLBI for astrometry, geodesy and aperture synthesis 3—54258
mathematical analysis of spatial anomaly fields 3—54167
Maximum Entropy Spectral Analysis, characteristic correl. time as estimate of optimum filter length 3—39909
maximum-likelihood seismic deconvolution 3—44570

geophysical techniques continued
microwave radiometry for remote sensing of Earth's atmos. and surface, future 3—35303
mineral identification from orbit, initial results from shuttle multispectral IR radiometer 3—30095
mineral matter identification in coal, multielemental anal. and multivariate statistical methods 3—10101
mineral refr. index meas. techniques 3—24461
mineral streams, hydrogen determination by neutron techniques 3—30098
minerals, elastic constants pressure derivatives determ. from ultrasonic differential path phase comparison method 3—15635
molybdenite radioactive dating using $^{187}Re/^{187}Os$ chronometer 3—29868
mudrock composition and texture determ. by electron microscopy method 3—44583
multielemental trace anal. by synchrotron radiation induced X-ray fluoresc. 3—34657
multiple sensor type borehole thermometer for buried thermistor probe method 3—25218
multiple time series anal. of geophys. data 3—48690
murine geoid construction by GEOS 3 altimeter data adjustment 3—35296
neutron applications in the applied earth sciences 3—59133
neutron scintillator spectra analysis method 3—30063
nuclear explosion seismic monitoring, source depth as discriminator 3—25015
nuclear explosion verification, use of broad band Rayleigh waves 3—39934
oil shale, r.f. electromagnetic sounding method for mining operations 3—15634
oil shale underground retort monitoring by EM probe method 3—25235
oil well elemental analysis using 14 MeV neutrons and NaI(Tl) detector 3—29365
on-line neutron-capture gamma analysis of ore concentrates 3—5002
ore-body prospecting by magneto-electric passive source method *(Chinese)* 3—35060
overcoring method for rocks absolute stress meas. in ground 3—54172
palaeomagnetism, two-tier anal. method for study multi-site data 3—9826
periodicities, random fluctuations, persistence and quasi-persistence 3—25248
photogrammetry, mathematical models, accuracy aspects and quality control, conference, Otaniemi, Finland (1982 June 7 to 11) 3—16086
polarization imaging and mapping 3—59223
prospecting of layered crust struct., Elektronika-60 computer system design *(Russian)* 3—59130
pulse method to measure the impedance of semi-natural soils 3—12454
radar for peat and underground water soundng in Latvian SSR *(Russian)* 3—20154
radar remote sensing of land surface from Space Shuttle 3—25091
radioactive dating by U-Pb zircon method, age error estimation 3—25219
radioactivity meas. efficiency of Ge(Li) and Ge detectors 3—41417
radionavigation by satellite Doppler method, meteorological errors 3—54171
rare earth element anal. of geological materials by neutron activation anal. 3—9917
remote sensing, appl. of shuttle imaging radar expt. 3—29918
remote sensing, feature identification and location expt. on space shuttle 3—30147
remote sensing, mathematical models, accuracy aspects and quality control, conference, Otaniemi, Finland (1982 June 7 to 11) 3—16086
remote sensing, multispectral classification, method for ancillary information use 3—39937
remote sensing camera (LISS), radiometric accuracies 3—54144
remote sensing in visible region, spectral characts. of objects and land surface types *(Czech)* 3—44450
remote sensing of Earth, digital image processing systems 3—54141
remote sensing of land surface multispectral date, use of contextual classifier 3—25092
remote sensing of land topography with airborne pulsed CO_2 lidar system 3—35300
remote sensing optical sensors and techniques, conf., May 1982, Arlington, USA 3—40312
remote sensing research by space shuttle, recent results and future prospects 3—30094
remote sensing with multispectral scanner, slope-aspect corrections 3—54027
resistivity and EM sounding curves, linear filter design 3—20147
resistivity interpretation, use of seismic dynamic deconvolution algorithm 3—25227
resistivity numerical modeling of complex structural problems, interpretation methods 3—39913
resistivity sounding, comparison of five least squares inversion techniques 3—4984
resistivity transform computation from Wenner sounding data, numerical technique 3—25229
rock quality (fracture content) assessment by seismic technique 3—35283
rock thermal param. determ., transient technique 3—10089
rotation of Earth, monitoring by MERIT international program 3—15319
salt, geotechnical meas., problems 3—54158
salt dome struct. exploration by borehole EM and seismic methods 3—48688
seamount isostatic compensation estimated by satellite altimetry 3—9896
SEASAT synthetic aperture radar imagery, range cell migration curves 3—54143
seismic air gun array signature determ. from near-field meas. 3—19917
seismic amplitude anomalies, evaluation by gravity and geomag. means 3—39928
seismic and geodetic network (in Japan) for earthquake prediction 3—39943
marine seismic array design 3—54149
seismic arrays, improved wavenumber resolution 3—44571
seismic correlation noise suppression, use of combisweep and encoded sweep techniques 3—25224
seismic data analysis by optical coherent optical method *(Chinese)* 3—44559
seismic data deconvolution, recursive decision directed estimation of reflection coeffs. 3—35073
seismic data migration using WKB approx. 3—35080
seismic data recording by sign-bit digitisation 3—30060
seismic deconvolution by successive approx. method 3—39930
seismic deconvolution in presence of noise and high signal rate 3—35083
seismic deconvolution method for seafloor refl. profiling data 3—29851
seismic event location by hybrid adaptive filtration method 3—39933

geophysical techniques continued
seismic hydrocarbon exploration using pattern recognition methods 3—35284
seismic inversion method for 3-D crust struct. (using teleseismic waves) *(Chinese)* 3—35077
Seismic inversion problem, method for traveltime curves transform. into intercept-time section 3—15648
seismic lateral waves detection in ocean bottom seismic profiling by refl. wave method 3—48712
seismic longitudinal waves in earthquake epicentre region, vel. distrib. determ. method 3—59121
seismic migration, imaging of acoustic energy by wave field extrapolation, book 3—35787
seismic migration and inversion by multidimens. techniques 3—35082
seismic moment tensor determination from P-wave anal. 3—35288
seismic phase shifted wavelets deconvolution 3—15340
seismic profiling by common-depth-point (using ABCD method) 3—29847
seismic recording, common mode attenautor for interference reduction in data 3—39925
seismic refl. profiling, thin-layer response and spectral bandwidth 3—53943
seismic refl. profiling data anal using principal components anal. 3—35084
seismic refl. sounding, 3-D migration method 3—48485
seismic refl. sounding in three-dimensions, data migration method 3—48484
seismic reflected waves, analytic minimum entropy deconvolution 3—15341
seismic reflection coeffs., MAP detection and estimation 3—29864
seismic reflection profiling, sensitivity of Born inversion method 3—53946
seismic reflection profiling method, model for stacking velocity anomalies 3—48487
seismic reflection sounding technique for U deposit location 3—19914
seismic reflectivity method for synthetic seismograms calc. for layered inhomogeneous media *(Chinese)* 3—10076
seismic refr. profile system for development in Arctic Ocean area (CANBARX) 3—15354
seismic refraction sounding method using time-term anal. 3—39800
seismic refractor, three dimens. attitude and true vel. determ. technique 3—15627
seismic sections, offset continuation appl. 3—25225
seismic signal processing 3—30066
seismic sounding, travel time curve eqn. and algorithm for estimating parameters of inclined reflecting boundary 3—4812
seismic sounding, travel time curves of longit. waves from shots in Baikal region 3—4814
seismic source airgun, radiation pattern depend. on design parameters 3—48686
seismic source designs for downhole operation 3—48685
seismic source location by passive method 3—35086
seismic source moment and radiated energy determ. by broadband method 3—25007
seismic source parameter determ. methods for standard network 3—24996
seismic source parameter estimation methods for seismic network 3—24997
seismic stacking, use of dip-moveout correction technique based on offset continuation 3—25226
marine seismic streamers; hardwired or digital systems? 3—15660
seismic surface wave inversion method for crust-mantle struct. lateral var. 3—35273
seismic surface waves identification/group and phase vels. using display equalised filtration 3—44590
seismic three-dimensional modelling technique 3—39923
seismic travel time inversion technique for case where triplication exists 3—40054
seismic two-dimensional faults, static stress-slip solns., analytical techniques 3—20137
seismic vel. determ. in mine shaft rocks *(Hungarian)* 3—4810
seismic velocity determination in ocean sedimentary layers by seismo-acoustic sonobuoys 3—48711
seismic velocity inversion problem 3—29844
seismic vibrator shear-wave radiation pattern in shale 3—53944
seismic waveform syntactic anal. using augmented transition network grammars 3—35087
seismic waves, instantaneous freq. determ., use of Hilbert transform *(Hungarian)* 3—4811
seismic waves interval vel. direct estimation 3—39924
seismic well logging for seismic attenuation coeffs. 3—15633
seismogram plane-wave decomposition method 3—19915
seismological technique for determ. of 3-D crust vel. struct. 3—4805
seismology, appls. of seismograms from phaseless seismographs 3—39823
seismology, joint hypocentre location and velocity inversion technique appl. to Central Aleutians 3—39819
seismology, location of nearby seismic events from wave arrival times differences *(German)* 3—15344
seismology, point source inversion techniques 3—25009
short-lived nuclides in geological materials, epithermal neutron activation anal. 3—30086
slope stability determ., Monte Carlo simulation methods 3—4981
soil moisture determin. by radar method, effect of vegetation cover 3—25233
soil moisture remote sensing by microwave radiometry 3—25232
spaceborne synthetic-aperture imaging radars: Applications, techniques, and technology 3—15655
spectrochemical anal. using laser to breakdown sample 3—29340
spectroscopic method for simultaneous S, N and C detection in geological materials *(Russian)* 3—48719
surface type analysis, use of albedo spectral variability 3—39938
synthetic aperture imaging radar, remote sensing appl. including penetration of Earth surface 3—59115
synthetic aperture radar, data processing 3—4974
synthetic-aperture radar real-time signal processing 3—35302
tectonic plate palaeoposition determin. from geomag. and hot spot reference frames 3—15417
temperature of rock formation, determ. by borehole methods 3—30074
terrain remote sensing by microwaves, comparison of active and passive methods 3—25093
thermal inertia mapping for reconnaissance geological exploration using Heat Capacity Mapping Mission satellite 3—39926
thermal inertia remote sensing for reconnaissance geological exploration using Heat Capacity Mapping Mission satellite 3—39926

geophysical techniques continued
three-dimensional homogeneously magnetised bodies, ΔZ anomalies multipole anal. 3—30071
tidal loading computations, mass conservation methods 3—39767
time series signal correlation by inverse theory method 3—4992
tsunami prediction, estimation of efficiency of new indicators of earthquake tsunamigenicity 3—15350
twinned mineral grains, boundary electron using polarizing microscopy, appl. of stripe discrimination 3—30101
underground tower gravity vertical gradient, appl. to exploration 3—39927
VHF radar sounding of thawed active layers overlying permafrost, appl. to dielectric props. meas. 3—9946
VLBI uses in geodesy *(German)* 3—4999
well logging by nucl. physics methods, inverse problem soln. 3—44591
well logging data anal., soln. of linear inverse problem 3—48697
West Siberian Plate faults identification method by seismic means and hydrocarbon searching 3—35304
Au content determ. in ore 3—48715
^{10}Be content meas. in rocks mass spectroscopic meas. using tandem van de Graaff accelerator 3—30222
^{138}La-^{138}Ce geochronometer, new dating method 3—25244
Lu-Hf isotopic system, importance in studies of planetary chronology and chemical evolution 3—48513
^{210}Pb in sediment samples, direct anal. by γ-ray technique 3—48683
^{222}Rn daughter conc. in soil air, automatic monitoring instrument 3—30065
U logging using 14 MeV neutrons 3—30097
V content in soil determ. method *(Russian)* 3—48721

geophysics
see also Earth; erosion; geochronology; geodesy; geology; geomagnetism; geophysical aspects of cosmic rays; geophysical techniques; hydrology; meteorology; oceanography; radiation belts; rocks; seismology; solar-terrestrial relationships; space research; terrestrial atmosphere; time and latitude; upper atmosphere
conference (7th UK Geophys. Assembly), April 1983, Leicester, England 3—49074
conference on geophysics high press. research at Hakone, Japan (January 1981) 3—44888
cosmogeochemical distribution of elements, classification rel. to periodic system 3—4833
IGARSS 82, Munich conf. (June 1982) 3—27
International Ursigram and World Days Service 3—4964
latitude variations, periodogram of nearly diurnal vars. at Gor'kii 3—44382
magnetogravitational instability of finitely-conducting medium with variable streaming motion, theory 3—59196
marine microearthquake surveys, hypocentral resolution 3—39931
Missouri, Precambrian rift, digital image processing 3—35119
oceanic crust, geophysical reference section through Layer 2 at DSDP Hole 504B, Costa Rica Rift 3—29901
stable isotope reference samples, comparison 3—53957
trends in physics, conf., Istanbul, Turkey, Sept. 1981 3—30555
turbulent closure model for geophysical fluid problems 3—25185

geophysics computing
see also computerised instrumentation
advection-diffusion eqns. in atmos. environments, testing subroutines solving 3—35223
atmosphere modelling for horizon sensor performance analysis computing 3—4959
binary diffusion finite difference solution, FORTRAN programs 3—29902
biostratigraphic data, seriation, FORTRAN program 3—4978
clouds, three-dimensional representation from satellite pictures and computer imagery 3—15578
DEFIL for seismic data processing 3—44590
digital mapping, topographic information processing system 3—4750
digital plotting table for photogrammetry, performance parameters 3—48714
digital terrane models, lake and river fills, computerised techniques 3—9919
EM sounding of layered media, Helmholtz eqn. theory 3—53912
fine grained materials, electron probe microanalysis, inclusions effects 3—29903
free oscillation modelling 3—19911
geochemical gap-containing data, correlation coeff. matrix program, in FORTRAN 3—276
geochemistry, regional interpreting, using optimal interpolation, FORTRAN program 3—4977
geological map digitisation, graphic cell method, FORTRAN program 3—4979
Geoshare: the development of a databank of geological records 3—15432
geothermal modelling and data acquisition using VAX-11/780 computer 3—15661
granitic plutons, aerial radiometric identification, statistical anal. 3—4982
ground-based optical observatory for obs. of airglow and thermospheric dynamics, remote computer control 3—54179
ice sheet collapse modelling 3—15492
induced polarisation resistivity and magnetic data digital interpretation 3—54157
ion temp. in space plasma determ., retarding potential analyser graphical results computing 3—20157
landform analysis by SEASAT-SAR imagery, appl. of elevation models 3—20125
LITHO, an expert system in underground geology *(French)* 3—39849
measurement and computing complex for geophysics, based on Elektronika-60 microcomputer *(Russian)* 3—59130
measuring system microcomputer control *(Hungarian)* 3—35287
meteorological appls. *(German)* 3—59026
microwave atmospheric attenuation, 30 to 300 GHz propagation models using RADTRAN and MWTRAN 3—39893
mining, brokenness of rock masses, seismic investigation using microcomputer 3—20142
Northern Hemisphere snow cover (November 1966 to December 1980), digital archive 3—20039
oceanography, mathematical programming and nonlinear inverse theory for box models and circulation tracers 3—15451
oil prospecting appl. *(Norwegian)* 3—59132
oil/gas prospecting, laser resonance optoacoustic atmospheric spectrometer *(Russian)* 3—35291
psychrometric chart plotting program, eqns. and procedures 3—35272
pulse method to measure the impedance of semi-natural soils 3—12454

- **geophysics computing** continued
  - radiation propagation, contaminants effects computing, Electro-Optical Systems Atmospheric Effects Library 3—10056
  - rainfall distribution in space, computer display and simulation *(French)* 3—48620
  - real-time data processing in earthquake forecasting system *(Russian)* 3—59113
  - remote sensing of Earth, digital image processing systems 3—54141
  - rock dilatancy, split shear-wave arrival interpretation, FORTRAN program 3—4779
  - ROSE seismic data storage and exchange facility 3—35270
  - satellite imagery for resource appl., interactive computer analysis 3—44595
  - seismic data recording by sign-bit digitisation 3—30060
  - seismic discrimination using syntactic pattern recognition 3—35088
  - seismic hydrocarbon exploration using pattern recognition methods 3—35284
  - seismic processing system 3—30103
  - seismic waveform syntactic anal. using augmented transition network grammars 3—35087
  - seismological bulletin, computer treatment and appl. of stored data for seismological investigations 3—15345
  - ships for multipurpose geophysical research, integrated research automation systems 3—20126
  - silicates, liquid, pressure enhancement of ion mobilities from computer simulation studies to 800 kbar 3—29915
  - slope stability, Monte Carlo simulation methods 3—4981
  - soil permittivity and permeability meas. 3—39917
  - stratigraphic event scaling algorithms in FORTRAN 3—4980
  - terrestrial exploration from space by digital image processing 3—35164
  - TI-59 calculator program for determining the gravity anomaly of a 2-D geologic body 3—29810
  - TI-59 pocket calculator magnetic modeling program 3—29820
  - tidal flows in Arabian Gulf, finite difference model 3—29927
  - tropospheric absorption and dispersion of millimeter and submillimeter waves, in extended BASIC 3—54085
  - UNSAT1D, unsaturated groundwater flow computer code manual 3—39571
- **geopotential** *see geodesy*
- **geothermal power**
  - costs and occurrence in eastern USA 3—58474
  - district heating in France using geothermal power *(French)* 3—44094
  - economics for geothermal direct use 3—4365
  - electric power generation from a geothermal source utilising a low-temperature organic Rankine cycle turbine 3—24552
  - electricity market potential of geothermal energy: a regionally aggregative analysis 3—34670
  - encouraging greater support for geothermal development: an issue requiring industry concern and action 3—4364
  - energy conversion systems using geopressured-geothermal fluids 3—24551
  - exploration, the economic strategies 3—53481
  - geomagnetic anomaly survey methods for geothermal exploration in Italy 3—44556
  - geothermal energy in New Zealand—a resume of the last ten years 3—9392
  - geothermal resources developed in Azores 3—14921
  - heating plants, variables affecting viability 3—53483
  - Heber Binary Cycle Plant for demonstrating commercial viability 3—58473
  - hot dry rock geothermal reservoirs—expanding the resource 3—24553
  - low-enthalpy geothermal well discharge enhancement by noncondensable gas lift 3—44093
  - non-electric potential in USA 3—4362
  - reinjection and utilisation of geothermal energy reservoir 3—4363
  - rotary separator turbine enhances geothermal power recovery 3—14922
  - Steamboat Springs, Colorado, geothermal power exploration using helium and ground temp. surveys 3—53482
  - Sunshine Project of Japan, current research and development status 3—4369
  - world-wide resources and utilisation potential 3—4366
- **geothermal power stations**
  - energy conversion systems using geopressured-geothermal fluids 3—24551
  - Heber Binary Cycle Plant for demonstrating commercial viability of geothermal power 3—58473
  - steel, stainless, corrosion and pitting in dil. acidic geothermal brines, goethermal power plant appl. *(Japanese)* 3—47987
- **germanate glasses**
  - bulk modulus of inorganic glasses, struct. depend. 3—2643
  - fibres, single-mode with elliptical cores, birefr. caused by thermal stress 3—12344
  - IR low loss fibre materials 3—41942
  - IR transmitting, optimum comp. selection and development 3—7102
  - vibr. IR and Raman spectra and nonlinear susceptibility 3—34086
  - viscosity, temp. depend. at const. fictive temps. 3—33478
  - BaO-B_2O_3-GeO_2 and B_2O_3-GeO_2 glass struct., NMR and Raman scatt. study 3—2428
  - Cu_2O-Al_2O_3-SiO_2-M_xO_y (M=Na, Ca, Fe, B, Ge, P) glass, thermal expansion, comp. depend. 3—42817
  - GeO_2 glass, microheterogeneity detection by small angle X-ray scatt. 3—33131
  - GeO_2, vitreous, optical props. rel to those of crysts. 3—19262
  - GeO_2-Sb_2O_3 glass optical fibres for 2 to 3 μm fabricaed by vapour phase axial deposition 3—46295
  - Li_2O-GeO_2 glasses, electrical conductivity and optical absorption meas. 3—23384
  - $Na_4Ge_9O_{20}$, vitreous, optical props. rel. to those of crysts. 3—19262
  - Na_2O-GeO_2 glass, chemical state anal., EXAFS study 3—3863
  - Na_2O-GeO_2 glass, vibr., struct., Raman and IR study 3—18227
  - Na_2O-GeO_2 glasses, electrical conductivity and optical absorption meas. 3—23384
  - $Pb_5Ge_{3-x}Si_xO_{11}$ glass-ceramic prep. with high transparency, permittivity and Curie temp. 3—53001
  - TiO_2-GeO_2 glass, thermal expansion coeffs. 3—33472
- **germanium**
  - *see also nuclei with ......*
  - (111), adsorbed Ag surface diffusion, AES study 3—57206
  - γ-irrad., layer inhomogeneities, piezoresistance and mobility anisotropy 3—28359
  - absolute hydrostatic deform. pot., LMTO-ASA calcs. 3—13717
- **germanium** continued
  - acceptor pairs, unlike group III impurities, heteronuclear molecular ion model 3—18644
  - adsorption of O on (100) surface, thermal desorption, work function, AES and EELS studies 3—38224
  - adsorption of O on Na, K, Cs-covered (100) surface, AES, EELS, thermal desorption and work function meas. 3—38225
  - adsorption on Si (111), struct. and electronic props. 3—18539
  - alkali halide:Ge^{2+}, impurity excited state struct., polarised luminesc. study 3—38871
  - allotropic modifications, allo- and 4H-, Raman spectra 3—47653
  - amorphised, epitaxial regrowth rate, effects of electrically active impurities 3—3011
  - amorphous, AC and DC hopping cond., extended pair approx. 3—38386
  - amorphous, crystallisation processes in multipulse low power laser irradiation 3—57088
  - amorphous, melting during rapid heating, internal flaw effects 3—2757
  - amorphous, random network model 3—22776
  - amorphous, Rayleigh waves, tunnelling defects 3—33551
  - amorphous, thermodynamics of equilib. and non-equilib. crystn. 3—22775
  - amorphous film, laser-stimulated cond. 3—38422
  - amorphous film, short pulsed laser irrad., crystn. mechanism 3—13688
  - amorphous film, transient effects in electron pulse annealing, time-resolved TEM 3—7910
  - amorphous state, struct., scanning HEED study 3—13044
  - amorphous vibr. states, effective local environment model 3—8162
  - anisotype graded p-n heterojunctions, nonequilibrium behaviour 3—33784
  - anomalous muonium hyperfine parameters, temp. depend. 3—38741
  - atom, highly ionised, mag. dipole transitions in Texas Exptl. Tokamak 3—55882
  - atom, photon scatt. from K-shell, Compton cross sections 3—11750
  - average electron density using MeV δ-rays from channelled projectiles 3—8113
  - band gap meas. technique using p-n diode 3—35805
  - band struct., self consistent APW calc. 3—47259
  - band structure, semiempirical construction of Slater-Koster parameters 3—57270
  - bolometer operation, influence of temp. fluctuations in vacuum pumped liq. He bath *(French)* 3—10851
  - bound states of a heavy hole and a phonon 3—38324
  - carrier concentration, nonequilib., depend. on laser excitation intensity *(Russian)* 3—38426
  - carrier concentration under high mag. fields 3—47362
  - carrier recombination heat treatment and dislocation density effects 3—38401
  - channelled relativsitic particles, characteristic X-ray radiation 3—3855
  - charged grain boundaries, electronic struct. 3—22917
  - chemical vapour transport of Ge by GeI_4, convection influence on growth *(French)* 3—14453
  - cleaved surface, struct. and phases 3—57189
  - coated Ag and Au, IR surface plasmon attenuation coeffs. 3—34059
  - conductivity and Hall coeff. meas., microcomputer-controlled expt. 3—40331
  - conference, Perpignon, France (Sept. 1982) 3—20568
  - core-level reflectance spectroscopy 3—3282
  - current filament, secondary breakdown, effects of temp. on stability 3—34033
  - Czochralski growth, uniform radial segregation, pronounced dopant striations 3—8962
  - deep levels due to isolated single and pair vacancies 3—13761
  - defects in semiconductors, conf., Amsterdam, Netherlands (Aug.-Sept. 1982) 3—44894
  - dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
  - dislocation loop thermal shrinkage and self-diffusion mechanism 3—46941
  - dispersive phonons, isotope scatt. 3—42726
  - electrical cond. relax. due to warm carriers 3—57355
  - electrical cond. transition, Hall coeff. meas., neutron irrad. effect, percolation theory 3—38445
  - electrical props. caused by impurity atmospheres left behind by dislocations 3—18707
  - electron irrad., electron traps, ionisation free energy emission rates and capture cross sections 3—28300
  - electron irrad., vacancy and interstitial clustered defect form. 3—47000
  - electron-hole drop luminesc. damping by high power CO_2 laser radiation 3—43601
  - electron-hole liq. correlation factor, density depend. 3—13737
  - electron-hole liquid, ground state, variational approach 3—3074
  - electron-hole liquid, ground state props., thermodynamics and systematics 3—43033
  - electron-hole plasma drift in inhomogeneous mag. field 3—18734
  - electronic charge redistrib. associated with zone-centre phonons, local field effects 3—57044
  - epitaxial growth on (100)GaAs, RF sputter deposition, controlled doping, hole conc. and mobility 3—43730
  - epitaxial layers, initial growth on GaAs (100), LEED and AES study 3—42978
  - exciton luminesc., mag. field depend. 3—3808
  - exciton molecules, luminesc. study, stability in mag. field 3—38868
  - film, amorphous, low-power multi-pulse laser annealing 3—46992
  - film, epitaxial growth onto CaF_2/Si struct. 3—13658
  - film, vapour-deposited, struct. as function of substrate temp. 3—23200
  - films, graphoepitaxy on SiO_2 by zone melting recrystallisation 3—13659
  - grain boundary energy states 3—23314
  - grain boundary microstructure, HREM obs. *(French)* 3—46954
  - grain boundary struct., intergranular dislocations, TEM study *(French)* 3—46937
  - grain boundary struct., TEM obs. *(French)* 3—22910
  - graphoepitaxy on gratings, on SiO_2 substrate 3—2993
  - heavily doped, four electron pockets, magnon-like modes 3—52067
  - heavily doped, many-valley, phonon attenuation study 3—22993
  - heteroepitaxial film, electron beam polishing technique 3—57198
  - hexagonal crystal structure in polycrystalline matrix 3—42566
  - hole relax. time and transport coeffs., intervalence band interaction effects 3—43197
  - hot hole noise at liq. He temps., expt. and Monte Carlo calc. 3—13874
  - impurity and exciton photocond. kinetics, submm. 3—23432
  - impurity energy levels of group V and VI elements using unified theoretical model 3—8455
  - interatomic bonds, vacancy formation potential at diffusion temp. 3—8043
  - interstitial ion migration energy, pseudopot. calc. 3—28160
  - intervalley phonons, magnetoresist., magnetophonon reson. study 3—3230

germanium continued
intrinsic, effective creep, cryst. orientation effects *(French)* 3—42703
inversion layers, elec. subbands, Shubnikov-de Haas study 3—47403
ion implanted, annealing behaviour 3—37939
ion implanted, damage to surface, TEM study 3—8106
ion irrad., defect accumulation, magnetoconcentration effect study 3—13291
IR Faraday rotation due to hot carriers, trapping parameters 3—34078
jet electropolishing soln. for thinning semiconductors and oxides, prep. and props. 3—10818
laser generated heat pulse propagation 3—23112
laser-induced defects, H_2 passivation, DLTS study 3—46993
laser-induced periodic surface struct., time-resolved evolution 3—42899
laser-induced periodic surface struct. 3—42897
lattice dynamics, ab initio pseudopot. theory 3—2707
lattice thermal cond., 4-700K 3—2897
liquid, radioactive/non-radioactive, evaporation by effusion method 3—51764
magnetic susceptibility, separation into diamagnetic and paramagnetic components 3—8645
MBE growth on Si vicinal surface 3—33605
microcrystals, Raman study 3—3727
misfit dislocation formation in epitaxial struct., substrate thickness influence 3—2560
muonium impurity screening 3—38348
muonuim hyperfine freq., direct meas. 3—38743
n^+p diodes, reverse biased, mobility of γ-ray induced defets 3—18650
n-type, band gap, narrowing, effects of nonlinear impurity scatt. 3—47263
n-type, Benedicks thermo-emf meas. 3—47375
n-type anisotropic hot-carrier thermo-EMF 3—52184
neutron irrad., VHF dislocation cond. *(Russian)* 3—8502
neutron scatt. cross section for intraband transitions 3—8395
neutron transmutation doped, elec. props., annealing effects 3—46971
nonohmic hopping cond. of samples compensated by fast reactor neutron irradiation 3—8504
nuclear radiation detector at low temp., operating characts. 3—11613
nuclear radiation detectors, carrier trapping by impurity clusters 3—57362
ohmic contacts to GaAs using Au-Ge, role of Ge 3—33793
optical coefficients of single-crystal and amorphous Ge at elevated temp. and 6328 Å 3—28815
optical grade, procurement specification 3—1725
orientational effects, piecosec. transient grating meas. 3—1690
oxidation to GeO_2 through Au layer contacts, Ge nucl. radiation detectors storage appl. 3—34505
p-n homojunctions, secondary breakdown under dynamic conditions 3—18779
p-type, Auger recombination, role of dielectric screening 3—3225
p-type, CW laser induced dynamic grating and subpicosecond hole relax. time 3—46254
p-type, galvanomagnetic effects, hole distrib. functions 3—43207
p-type, laser induced dynamic grating, subpicosec. hole relaxation time, Bragg diffr. study 3—50696
p-type, lightly doped, interimpurity absorpt. of IR radiation 3—38856
p-type, photon drag IR detector, p-Ge element optimal parameters calc. *(Chinese)* 3—40685
phase factor in EXAFS 3—43662
phonon anisotropic scatt. by holes 3—52127
photodiodes fibre optic communication appls. 3—32506
photoexcited, Coulomb gas, Mott and liq.-gas transitions, photoluminescence study 3—23272
photoexcited electron drift vel. space overshoot, Monte Carlo method calc. 3—52191
photometric determination in quartz glass *(Russian)* 3—48111
picosecond laser excited, transmission at various wavelengths, carrier diffusion role 3—38837
picosecond optically induced anisotropic state filling, transient orientation gratings 3—7062
planar channelling, diffusion eqn. approach 3—47009
positron annihilation radiation and bremsstrahlung at 1 GeV *(Russian)* 3—43658
pressure induced phase transition, cryst. stability 3—23035
proton and α-particle stopping power calcs. 3—37976
quartz:Ge, short-lived optical absorption, influence of pulsed electron irradiation 3—14324
quartz:GeO_2, luminescence parameters 3—38896
reactor neutron compensated, elec. cond., simulation of amorphous semicond. 3—43174
resistance thermometers, ruggedized, temp. shifts due to induced strain 3—35993
resonant photoemission at 3p threshold 3—8937
segregation of O on dislocation core, EELS study 3—28108
shallow acceptor ground state wavefunctions 3—33668
single cryst., internal friction, amplitude depend., in brittle fracture temp. range *(Russian)* 3—2670
solar thermophotovoltaic cells using selective radiators of Er_2O_3 and Yb_2O_3 3—58540
solid phase epitaxy and VPE on Ge(Si) 3—38266
spectral dependence of energy deposited in hole plasma by optical radiation 3—38417
stressed, containing electron-hole liqs., spectroscopic studies, review 3—13745
stressed, far IR absorpt. spectrum of excitons in high stress limit 3—57927
subharmonic transit resonance, carrier cyclic motion effects on harmonic generation 3—8521
substitutional transition metal impurities, electronic struct. 3—52065
surface, (111), pyridine chemisorption, UPS study 3—38201
surface, (111)-(2×1), dangling-bond band, angle-resolved photoemission 3—47402
surface, spin centres, interaction with adsorbed mols., EPR study 3—38451
surface, thermal nitridation to produce Ge_3N_4 films 3—33592
surface (001), limitation of LEED struct. determ. 3—13048
surface (001), reconstructed, intrinsic surface states, angle resolved photoelectron spectra 3—57404
surface (111), laser annealed, surface core level states, photoemission study 3—58039
surface damage, periodic, 1.06 μm YAG laser pulses, spectrum in $\vec{K}$ space 3—56952
surface phonon focusing 3—51915
surface struct., changes due to metal ion adsorption, electron diffr. study 3—2937
surfaces (2×1) and (1×1) (111), dangling bond surface state dispersion curves 3—3283
third order elastic consts. and Gruneisen coeff., US vel. study 3—47018
tilt grain boundaries, symmetrical, electro microscopy and diffr. studies 3—51620
time-resolved images of electron-hole droplets 3—43036
transition metal impurities, electronic struct. calcs. 3—18651
transverse photovoltaic effects under laser pulses 3—57389
ultra-pure, shallow acceptor levels, nature and interconversion 3—43084
wideband semiconductors, charge carrier conc. meas. using magnetic circular dichroism, NDT 3—58370
X-ray scattering by thermal waves, geometrical condition 3—34167
X-ray spectrometer using concave curved crystals, plasma diagnostics appl. 3—51378
AlGaAs:Ge, effect of Ge on liquidus and solidus in LPE domain 3—42956
As_2Se_3:Ge glasses, transport props. 3—38425
Bi-Sb:Ge, electrophys. props., n-type thermoelec. alloy 3—3235
CdTe:Ge, deep impurity centre ionisation 3—28304
CdTe:Ge, impurity states and carrier recombination *(Russian)* 3—52078
Co-Ge-Te system, isothermal cross section, microstruct., DTA and X-ray anal. 3—51749
film on Si ⟨111⟩, heteroepitaxial growth by vacuum deposition, elec. props. 3—24130
Ga-In-As-Ge(Sn), liquid quaternary phases, melting diagram meas. and calc. 3—13410
GaAs:Ge, homojunction interfaces, carrier compensating centres, luminescence and DLTS study 3—3273
GaAs:Ge, MBE grown, elec. and optical props., effect of As vapour species 3—43595
GaAs:Ge, shallow acceptors, luminesc. study 3—52828
GaAs:Ge MBE layer doping, thermodynamic study 3—2580
GaP: Ge, lattice distortions around single donor Ge, self-consistent pseudopot. method 3—28298
Ge (111)-Au interface form., AES, LEED, and electron microscopy study 3—38240
Ge, dilation and vibr. contrib. to exciton temp. shift at melting point 3—3088
Ge, electrically detected EPR in single crystals 3—57772
Ge:^{129}I (^{125}Te), nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3—8464
Ge:Al, laser multistage ionisation technique for Al impurity conc. determ. 3—58462
Ge:Al(Na), laser photoionisation impurity detect. 3—14891
Ge:As, metal-nonmetal transition under ⟨111⟩ stress, NMR study 3—57283
Ge:As heavily doped solid soln., Frenkel pair form. in initial stage of precipitation 3—33247
Ge:As; laser processed, ^{73}Ge Mossbauer effect 3—57839
p-Ge:Au, recombination wave instability in injected electron-hole plasma 3—38420
Ge:Au,Sb, impurity photoconductivity spectra oscills. 3—13860
p-Ge:Au diode, generation-recombination noise under ambipolar injection conditions 3—3270
Ge:Au p-n junction diodes, forward current, inhomogeneous illum. effect 3—18744
Ge:B single cryst., CW laser beam annealing and junction formation 3—56974
Ge:Cr(Co)(Cd)(Te)(S)(Se)(Zr)(Ti), deep donor centres, H plasma passivation 3—47287
Ge:Cu, impurity states, piezospectroscopy 3—3118
Ge:Fe, electronic struct. calcs. 3—18651
Ge:Ga, growth rate depend. of interface distrib. coeff. in Ge-Ga system 3—13144
Ge:Ga(In)(As)(Sb), electron irrad., hole trapping defects, DLTS study 3—43083
a-Ge:H, B(P), ESR spectra and transport props. 3—43435
Ge:H, reduction in γ-ray damage, DLTS study 3—18345
Ge:H,B(P), amorphous, elec. cond. and thermoelectric power 3—23393
Ge:Li, impurity ion-dislocation dangling bond complex in EPR spectra 3—18989
Ge:Ni, Ni-related defect acceptor level, H passivation, DLTS study 3—43065
Ge:O, amorphous, oxygenation effects on elec. props. 3—28350
Ge:O, γ-irrad. and quenched, deep donor levels 3—43101
Ge:O_2, combined HREM and STEM microanalysis on decorated dislocation cores 3—8055
Ge:O_2, donor deep level transient spectra 3—18652
Ge:O(Sb), annealed, photoluminescence at thermal defects 3—3810
Ge:Pb(Sn), γ-ray irrad., deep level defects, DLTS study 3—13764
Ge:Sb, Czochralski growth, uniform dopant distrib., Faraday effect study 3—2593
Ge:Sb, impurity state ionisation, connection with L- and X-valleys 3—38344
Ge:Sb, P, shallow donors, photoexcitation line quenching by γ-irrad. 3—8454
Ge:Sb(P), impurity photoexcitation spectra, gamma-bombard. fine struct. 3—38436
Ge:Si, ultra-pure, muonium spin precession signals 3—43477
Ge:Te^+, ion implanted, damage, cryst. orientation depend., TEM, RHEED and channelling studies 3—56999
Ge:Zn, double acceptor bound exciton, photoluminesc. study 3—33645
Ge/Au interface form., photoemission at Cooper minimum 3—52897
Ge/Av interface, electronic props., EELS study 3—18785
Ge/GaAs epitaxial heterostructures prep. by scanned CW laser annealing 3—57248
Ge/GaAs epitaxial system, coherency of interphase boundary and elastic strain 3—51977
Ge/Si interfaces, depth profile and depth resolution evaluation, by KARMA technique 3—51965
Ge-GaAs (110) interface, preparation and electronic props. 3—13889
Ge-GaAs heterojunctions, plasticity and strength studies *(Russian)* 3—47035
Ge-GaAs heterojunctions, gamma ray effects on noise characts. 3—52237
Ge-GaAs superlattice, MBE grown, ion channelling studies 3—47225
Ge-GeO_2 structure, energy diagram determ. from photocharging spectra 3—52271
Ge-MBBA interface, photoelec. effects 3—52190
Ge+^{4}He ion, K-shell ionisation cross sections 3—6774

germanium continued
$Ge+H^+$, K-shell ionis. cross-section meas. 3−41670
GeAs:Ge, MBE growth, elec. and photolum. props. 3−33807
GeXXI, $3s^2\ {}^1S_0$-$3s3p\ {}^3P_1$ Mg sequence intercombination lines obs. in PLT tokamak 3−2292
InP:Ge single cryst., high resolution TEM obs. of defect struct., electron beam induced degradation 3−18304
InP-Ge, vapour press. and melting equilib., activity coeffs. *(German)* 3−2753
InSb:Ge, H ion irrad., conduction type inversion by isochronous annealing 3−43180
LiH:Ge^{2+}, photoluminescence of S^2 configuration ions 3−47690
$LiNbO_3$-Ge, acoustoelectric oscillator, SAW single mode generation 3−50882
Nb-Ge multilayers, superconducting props. 3−13967
Si:As, Ge, laser processed, ^{73}Ge Mossbauer effect 3−57839
Si:Ge, ion implanted, characterisation by ellipsometry and channelling 3−46977
Si:Ge, ion implanted, Ge ion distrib., X-ray microanalysis 3−8087
Si:Ge, ion implanted X-ray microanalysis determ. of integrated dose 3−8086
SiO_2:Ge graded-index optical fibres, γ-ray-induced loss and colour centre conc. 3−32481
Sn-Ge granulated films, elec. cond. and supercond. props. *(Russian)* 3−38516
YIG:Ge, elec. cond. meas. 3−52147

germanium alloys
see also Ge-Si alloys
rare earth alloys, RMn_2Ge_2, single cryst., mag. props., magnetisation, elec. resist. and NMR studies 3−52477
rare earth alloys RCu_2Ge_2, X-ray spectroscopic study 3−57998
Ag-Ge, molten, positron annihilation *(Japanese)* 3−47734
Ag-Ge amorphous film, struct., elec. and optical props., free electron model 3−37787
$(Ag_{0.5}Cu_{0.5})_{1-x}Ge_x$ amorphous films, electron transport props., extended Ziman theory 3−3150
Al-Ge, dil., magnetoresist., low-field, anisotropic relax. time effect 3−13802
Al-Ge, Ge precipitate amorphisation by electron bombardment, TEM study 3−56981
Al-Ge (30.3 at.%), eutectic, rapidly solidified submicron powders, metastable phase form. 3−43788
Al-Ge alloy, internal friction by second phase particles 3−57027
Al-Ge dilute alloys, quenched in vacancies, positron annihilation study 3−56883
Al-Si-Ge system, phase diagram study *(Chinese)* 3−34278
Al-Si(-Ge), eutectic, modification of Si phase *(Chinese)* 3−53024
AlGe, dilute alloys, electric field gradient calcs. 3−52091
As-Ge-Se chalcogenide glasses, controlled crystallisation in nucleated system 3−33123
Au-Cu-Ge solder for cantilever-type displacement sensor using diffused silicon strain gauges 3−282
Au-Ge, molten, positron annihilation *(Japanese)* 3−47734
Au-Ge amorphous film, struct., elec. and optical props., free electron model 3−37787
Au-Ge-Ni films, structural changes during heating *(Chinese)* 3−42938
AuGe ohmic contact formation on n-GaAs, improved method for reducing contact resistivity 3−13906
AuGe-GaAs ohmic contact, laser beam annealed, surface and subsurface morphology 3−57196
$Co_2MnGe_{0.98}Sn_{0.02}$, Mossbauer study of Sn hyperfine fields 3−28743
Cr-Ge, dil., mag. phase diagram, neutron diffr. study 3−57598
Cr-Ge (0.5 at.%), spin density wave state, press. effects, neutron diffr. study 3−18854
Cr-Ge dilute alloys, mag. phase diagram, mag. susceptibility study 3−14020
Cu-Ge, dil., Dingle temp. and Fermi surface changes, charge transfer effects 3−52009
Cu-Ge, rolled alloys, deform. mechanism, microstruct., grain orientation 3−53165
Cu-Ge (2 at.%), solid soln. and neutron irrad. hardening 3−34337
Cu-Ge (7 and 15 wt.%), struct. form. on solidification 3−4032
$ErCo_2Ge_2$, mag. props., magnetisation and neutron diffr. meas. 3−43352
Fe-Ge, molten, positron annihilation *(Japanese)* 3−47734
β-$Fe_{1.67}$ Ge, spin struct., Mossbauer study 3−19018
FeGe, elec. field gradient sign in paramag. state, Mossbauer study 3−23848
$FeGe_2$, magnetic transition, magnetisation *(Russian)* 3−38612
n-GaAs-Au-Ge-based ohmic contacts, characts., Auger and SEM anal., ageing effects 3−52250
$HoCo_2Ge_2$, magnetic structure, neutron diffr. study 3−14003
InGe films, upper crit. field near percolation threshold 3−33829
$LaNi_2Ge_2$, and related intermetallics, supercond. obs. 3−3347
Mg_2Si-Mg_2Ge-Mg_2Sn alloy for thermoelectric conversion devices 3−14979
Mn-Ge system, Invar-type, nonferromag., thermal expansion, mag. and elec. props. 3−42821
Mn-Ge(-Fe)(Co)(Ni), Vocoloy, antiferromag., influence of Fe, Co and Ni *(Japanese)* 3−9197
ζ-$Mn_{2.6}Ge$, mag. transitions, X-ray diffr. study 3−52460
ζ-$Mn_{2.6}Ge$, mag. transitions and magnetisation 3−52467
Mn_3Ge, mag. struct. and weak ferromagnetism 3−52386
$Mn_5(Ge_{1-x}Si_x)_3$, ferromag.-antiferromag. transition, NMR study 3−52484
$Mo_{8-x}Ge_x$ ($x=2, 3$), heat capacity meas. on irrad. and nonirrad. samples 3−18821
Nb-Ge superconducting magnet technology advancements, for fusion power generation 3−36570
Nb-Ge-Si, heat capacity study at low temp. 3−8214
$Nb_3Al_{0.75}\ Ge_{0.25}$, A15 struct., possible ordering struct. from X-ray struct. factors *(Chinese)* 3−33187
NbGe, tunnelling $\alpha^2F(\omega)$ as function of composition 3−57490
NbGe, tunnelling $\alpha^2F(\omega)$ as function of composition 3−57491
Nb_3Ge, A15, surface oxidation, XPS study 3−39304
Nb_3Ge A15 supercond. films, upper crit. field and transitions temp. meas. 3−28484
Nb_3Ge A15 supercond. film, TEM study of microstruct. *(Chinese)* 3−51968
Nb_3Ge A15 superconducting films, high T_c, electron beam codeposited, tunnelling, resist. and crit. currents meas. 3−33813

germanium alloys continued
Nb_3Ge films, A15 phase, bias sputtering and supercond. props. 3−52933
Nb_3Ge microbridges, vortex behaviour 3−57486
Nb_3Ge, NQR studies of relax. process 3−23829
Nb_3Ge, supercond., bias sputtering prep. 3−42942
Nb_3Ge superconducting thin film synthesis on sapphire substrates, reactive sputtering in germane *(Japanese)* 3−34227
Nb_3Ge superconductor-normal-superconductor microbridges, fabrication and Josephson behaviour 3−52306
Nb_3Ge thin films, anomalous pinning behaviour 3−28487
$NdCo_2Ge_2$, mag. props., magnetisation and neutron diffr. meas. 3−43352
Ni-Ge, molten, positron annihilation *(Japanese)* 3−47734
Ni-Ge liquid alloy, struct. and elec. cond. *(Russian)* 3−7902
NiFeGe amorphous thin film, structural and galvanomag. props., electron diffraction study 3−47230
Pd-Ge, metallic glass, prep. by melt-spinning technique 3−52994
Pd-Ge, rapidly solidified, transform. behaviour of metastable phases 3−37793
Pd-Ge ribbons, glassy and cryst., elec. resist. and thermoelec. power 3−28332
$PrFe_2Ge_2$, mag. props., magnetisation and neutron diffr. meas. 3−43352
Sn-Ge bicrystal, In diffusion along single twist phase boundaries 3−18515
Ta_3Ge, phase transform., X-ray powder diffr. data 3−2774
Ta_3Ge, phase transformation., high to low temp. struct., X-ray and metallography studies 3−2773
$TbCo_2Ge_2$, magnetic structure, neutron diffr. study 3−14003
Te-Sn(Pb)(Ge)(Cu), chalcogenide glasses, obtained by rapid cooling from liq., crystn., morphological aspects 3−7913
V_3Ge, E_g optical phonon damping by interband electronic excitations, Raman scatt. study 3−57926
V_3Ge, supercond., X-ray diffr. study of lattice parameters 3−37856
V_3Ge, valence electron density distrib., X-ray diffr. study 3−7963
Zr-Gl, amorphous binary alloys, superconducting props. 3−23523
Zr-Nb-Ge alloys, amorphous, supercond. props. 3−28473
$Zr_{85}Ge_{15-x}M_x$($M=B$, Al, C, Si or Sn), superconducting transition temp., comp. depend. 3−38517

germanium compounds
see also germanium alloys
chalcogenide glasses, photoinduced struct. changes, IR absorpt., Urbach tail features 3−52804
electron energy dissipation and carrier intervalley redistrib. under strong high freq. fields 3−57357
GeO_2-ZnO-K_2O glass as the cladding material of hollow-core optical waveguides for CO_2 laser light 3−22212
intermediates, double bonds and carbene-like unsaturations calcs. 3−21654
magnetite:Ge, mag. and elec. props. *(Korean)* 3−38733
oxide layer, CO electron stimulated desorption 3−8322
zeolites, structural chem., X-ray and magic-angle-spinning NMR studies 3−37873
$(Ag_{x/2}Ge_{1-x}Sb_{x/2})Te$, ferroelec. phase transition, elec. cond. and optical absorption studies 3−43496
$AsGeSe_x$ vitreous chalcogenide film, electron induced cond. meas. 3−28460
$As_{15}Ge_{30}Se_{55}$ glass IR optical fibres for 2 to 11 μm band 3−41984
$(As_2S_3)_x(GeS_2)_{1-x}$ system, refractive index variation *(Russian)* 3−19102
BaO-GeO_2 system, phase relations, 20 to 70 kbar, 750 to 1200°C 3−19327
$Bi_{12}GeO_{20}$ substrate for acousto-optical devices, planarity monitoring of polished surfaces 3−45106
$Bi_{12}GeO_{20}$ transparent material optical uniformity monitoring, using holographic interferometry 3−16406
γ-$6Bi_2O_3.GeO_2$, monocryst. growth by temp.-gradient furnace technique using double crucibles *(Japanese)* 3−8966
$Bi_xY_{1.2-x}Ca_{1.8}Sn_{0.3}V_{0.5}Ge_{0.5}Fe_{3.7}O_{12}$, solid state reaction 3−33939
$CdGeAs_2$, energy band structure 3−8417
$CdGeAs_2$, glass crystallisation, determ. of activation energy from thermal anal. 3−37795
$Fe_{3-x}Ge_xO_4$, hyperfine fields and electron diffusion, Mossbauer study 3−14181
$(GaAs)_x(Ge_2)_{1-x}$ solid soln., composition depend. phase transition 3−13440
$Ga_{12}Ge_{6.5}Si_{6.5}As_{25}Te_{50}$, amorphous-crystalline magnetodiodes, threshold switching effects 3−13895
GaSb-Ge, phase diagram and solid solubility, DTA and X-ray diffr. study 3−18427
$(GaSb)_{1-x}Ge_x$, metastable, RF sputtering deposition ion-beam mixing effects 3−3955
Ge based materials, reactively sputtered optical thin film developments 3−12372
Ge-As-S-Se evaporated films, giant photocontraction, mol. models 3−3004
Ge-Bi-Te, phase transition temp., lattice periods and electrophysical props. 3−9057
Ge-GaAs system, metastable continuous solid solns., prep. and props. 3−8369
Ge-GeO_2 structure, energy diagram determ. from photocharging spectra 3−52271
Ge-S:Mn, glass, neutron irrad., EPR meas. 3−8715
Ge-Te amorphous film, transient effects in electron pulse annealing, time-resolved TEM 3−7910
$Ge_{38}As_8I_8$, clathrate semicond., prep., struct. and elec. props. 3−13814
$Ge_{22.5}As_{10}Se_{67.5}$, thin films, sputtered, optical energy gap and refr. index meas. 3−8979
$Ge_{10}As_{40}Se_{25}S_{25}$, thin films, sputtered, optical energy gap and refr. index meas. 3−8979
$GeCl_6^{2-}$, intra-molecular force fields and ionic constants 3−2697
GeF_6^{2-}, intra-molecular force fields and ionic constants 3−2697
$Ge_{0.03}Fe_{2.97}O_4$, doped magnetite, mag. and elec. props. *(Korean)* 3−38733
$Ge_{2x}(GaAs)_{1-x}$ solid soln., band struct., LCAO calc. 3−8413
$Ge_{2x}(GaAs)_{1-x}$ solid solns., band struct., LCAO calc. 3−8415
$(Ge_2)_x(GaAs)_{1-x}$ solid soln., luminescence and electrophysical props. 3−14352
GeH_4, continuous wave stimulated Raman spectroscopy 3−34096
GeH_4 in Jupiter's NEB, mole fraction in troposphere from IR spectrum 3−20287
GeI_2, UV PES 3−46022
Ge_3N_4 films grown by thermal nitridation, comp., struct. and refractive index meas. 3−33592
GeO film, heat treatment effect on struct. and props. 3−14612

germanium compounds continued
GeO_2, cryst. growth, optical props. rel. to those of vitreous samples 3−19262
GeO_2 low-loss optical waveguide fabrication using low deposition rate RF sputtering 3−22260
GeO_2, resonant photoemission at 3p threshold 3−8937
GeO_2 thin film waveguide, high-efficiency prism coupler configs. 3−56311
GeO_2, vitreous, IR, Raman and neutron vibr. spectra, comparisons 3−43531
$GeO_2{:}Nb^{4+}(Mo^{5+})(W^{5+})$, nd^1 ions, superhyperfine interactions, EPR study 3−13789
GeO_2-BaO amorphous thin film complex, DC cond. meas. prior to electroforming 3−3346
GeO_2-PbO-$Bi_2O_3(Tl_2)$, glass-forming systems, study using X-ray diffr., DTA and thermomech. anal. 3−13108
GeO_2-SiO_2 elliptical-core optical fibre, third-harmonic and three-wave sum-freq. light generation 3−46263
GeO_2-ZnO-Fe_2O_3 system, phase diagram at 1000°C 3−19328
GeO_x, suboxide thin films, refractive index and absorpt. coeff., thermal changes, optical storage appl. 3−38933
GeS, cryst. and sputtered thin film, U trace distrib., using SSNTDs 3−56924
GeS, layer crystal, phase transition, Raman study 3−18452
GeS:In filamentary crysts., prep., morphology, elec. and photoelec. props. 3−57344
GeS_2, mol. vibr., Raman spectra of mols. and crystals 3−51729
GeS_2, vitreous, optical props. rel. to prep. conditions 3−23901
GeS_2, vitreous, short-range struct., IR and Raman spectra study 3−37782
$Ge_{1-x}S_x$, non-crystalline, optical gaps from 'mean' bond energy 3−3669
$Ge_{1-x}S_x$ noncrystalline system, average energy gap, compositional depend. 3−52753
$Ge_{1.08}S$, amorphous, optical consts., reflectivity meas. 3−38791
Ge_2S_3:Au chalcogenide glass, impurity effects on EPR and photoluminescence 3−28895
$Ge(S_xSe_{1-x})_2$ glasses, local modes, Raman spectra study 3−3723
GeS(Se)(Te), vapour phase crystal growth under microgravity environment 3−3933
$Ge_{40-x}Sb_xS_{60}$ glasses, refr. index and DC elec. cond. 3−28813
$Ge_kSb_mS_n$, non-crystalline, optical gaps from 'mean' bond energy 3−3669
GeSe, amorphous, optical consts., reflectivity meas. 3−38791
GeSe amorphous film, far IR absorption, composition depend. 3−8835
GeSe amorphous film, local struct., XPS and UPS studies 3−33111
GeSe films, ion beam induced densification, species and deposition angle depend. 3−13647
$GeSe_2$ amorphous film, low temp. AC conductivity 3−47349
$GeSe_2$, cryst. and amorphous, electronic struct., optical and photoemission props. 3−23265
$GeSe_2$ film, amorphous self-supporting, laser induced optical anisotropy 3−19220
$GeSe_2$ glass and evaporated films, switchable microcrystallisation near threshold in laser annealing 3−56941
$GeSe_2$, glassy, photostimulated processes, configurational model and transmission spectra 3−19158
$GeSe_2$, glassy and single cryst., radiative recombination mechanisms 3−28896
$GeSe_{3.5}$:Bi chalcogenide glasses, doping-induced struct. changes 3−51502
$Ge_{25}Se_{75}$, thin films, sputtered, optical energy gap and refr. index meas. 3−8979
Ge_xSe_{1-x} glasses, broken chem. order and phase separation, Mossbauer study 3−42533
Ge_xSe_{1-x} glasses, struct. and luminesc. props. 3−8883
$Ge_{40}Se_{60-x}Te_x$ thin films, prep. by flash evaporation, comp., I-V characts. 3−29011
$Ge_{32}Se_{24+x}Te_{40-x}As$ (x=0, 8, 16, 24, 32) glasses, optical and elec. gaps, cond., glass transition temp., DSC study 3−34056
GeTe, amorphous film, local struct., crystn. and thermal annealing effects, UPS and XPS study 3−14438
GeTe, bonding in cubic and rhombohedral crystals, valence bands 3−47261
GeTe, characteristics of $\alpha \rightarrow \gamma$ phase transform. 3−9056
GeTe, cryst. and glassy, imperfections, positron annihilation study 3−18229
GeTe, ferroelec. semicond., band gap and energy spectra, temp. depend. 3−18617
GeTe, high press. phase transitions, elec. cond. 3−28095
GeTe, low temp. thermoelectric power 3−28372
GeTe melt, Hall effect 3−23412
GeTe:Cu, solubility of Cu and ionised donor states 3−51800
GeTe-Co_2Ge system, polythermal cross section, microstruct., DTA and X-ray anal. 3−51749
GeTe-GeSe, solid solutions, mag. susceptibility 3−14016
GeTe-SnTe:Bi, rhombohedral distortion, phase transition point 3−13430
$GeTe_{1.1}$, amorphous, optical consts., reflectivity meas. 3−38791
$GeTe_4$:Au, amorphous film, diffusion and structural aspects *(French)* 3−2889
$Ge_{0.957}Te$, phase transformations and ordering of nonstoichiometric struct. defects 3−56881
$Ge_{15}Te_{81}S_2Sb_2$ amorphous thick films, switching and memory phenomena, thermophonic investigation 3−38441
$Ge_{15}Te_{81}S_2Sb_2$ chalcogenide films, switching and memory phenomena, thermophonic investigation 3−12476
$Ge_{0.5}Te_{0.5}(Se_{0.5})$ chalcogenide glass, struct., continuous random network approach 3−33106
$GeXH_3(D_3)$, X=F, Cl, Br, I, vibr. anal., kinetic consts. method 3−36737
$Pb_{1-x}Ge_xTe$ narrow band-gap ferroelec. semicond., absorption edge near phase transition 3−34061
$Pb_{1-x}Ge_xTe$, quantum ferroelec. semicond., low temp. resist. enhancement 3−38406
$Pb_{1-x}Ge_xTe$:In, Hall coeff., thermoelec. effect and absorption coeff. 3−38409
$Pb_{1-x}Ge_xTe$:Sb injection lasers, stimulated emission delays, temp. depend. 3−37040
$Pb_{1-y}Ge_yTe$, interaction and spontaneous formation of defects near ferroelec. transition 3−13383
SiO-GeO based supermultilayer films, barrier conduction 3−43305
$Sr_2Dy_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
$Sr_2Eu_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
$Sr_2Gd_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
$Sr_2La_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
$Sr_2Nd_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
$Sr_2Sm_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735

germanium compounds continued
Te-Ge-Sb glasses, photocond. decay 3−3250
TiO_2-GeO_2 glass, thermal expansion coeffs. 3−33472
WO_3-WO_2-GeO_2 system, phase diagram and equilibrium, electron microscope and X-ray diffr. study 3−2742
$Y_{2.78}Ca_{0.25}In_{0.6}Ge_{0.25}Fe_{4.11}O_{12}$, magnetic properties study and Mossbauer spectrum *(Chinese)* 3−52413
$ZnGeAs_2$, energy band struct. and optical props. 3−28265

getters
see also vacuum techniques
Ti ion getter pumps, new developments *(German)* 3−25889
vacuum technology, book 3−35765
Al-Zr getters for CO and O_2 impurities control in H plasma 3−55615
$Al_{1-x}Ga_xAs$, organometallic VPE layers, improved photoluminesc. using AsH_3 source gettering technique 3−34235
Ba surface, interaction with hydrocarbons, XPS study, appl. to electronic vac. devices 3−39014
Cr film gettering for fusion reactors 3−21520
Si, backsurface gettering of metal impurities 3−8254
Si, bending gettering of cryst. defects 3−19348
Si, laser induced backside damage, characterization for gettering 3−56973
Si wafer, minority carrier lifetime, extent of LID gettering effect, nondestructive SAW technique 3−48025
Si:Au, impurity gettering using Ar-, O- and Cl-ion implantation, MOS study 3−2594
Si:O wafer, Czochralski grown, defect engineering, VLSI substrate development 3−42593
Ti, hot getter behaviour at plasma edge in Tokamaks 3−21523
Zr-Al alloy getter system for Tokamak, diffusivities of H and D 3−17048

GFRP *see glass fibre reinforced plastics*

giant pulsations (earth) *see micropulsations*

giant resonances *see nuclear collective states and giant resonances*

giant stars
see also supergiant stars
1252+103, CH star near North Galactic Pole, distance, photometry and spectra 3−54402
Σ2367 AB, evolved binary system, orbital elements from visual and spectroscopic obs. 3−20435
ADS 7780 (β Leonis Minoris), visual-spectroscopic binary orbit 3−10401
λ Andromedae, long-period RS Canum Venaticorum star, obs. of flare in UV emission lines 3−44797
λ Andromedae, RS Canum Venaticorum star, discovery of new periodicity from obs. of V-band polarisation vars. 3−48957
Z Andromedae, symbiotic star, spectroscopic obs. of new outburst, (August to October 1982) 3−10361
Z Andromedae, symbiotic star, visual magnitude estimates (1982 June 15 to November 3) 3−15928
Z Andromedae, symbiotic star, visual magnitude fluctuations, (1974 to 1982) 3−20393
Z Andromedae, UV spectra variability and JHKL obs. in 1982 November 3−20388
R Aquarii, IUE UV spectra of jet 3−20385
R Aquarii, symbiotic star, JHKL photometry rel. to IR variability and nature of components 3−59365
asymptotic giant branch star, C star characts. form. and neutron rich isotopes prod. 3−25428
asymptotic giant branch stars, He shell flashes rel. to origin of low mass Wolf-Rayet stars 3−35638
asymptotic giant branch stars, pulsation and evolution 3−54338
asymptotic giant branch stars in Magellanic Cloud red globulars, IR survey 3−30362
BD+63°0003, new semi-regular variable in field of HD 108, discovery and photometric obs. 3−25447
α Bootis, oscills. or running waves detect., visible obs. 3−40123
α Bootis (Arcturus), Ca I non-resonance line spectra 3−40127
α Bootis (Arcturus), far UV and soft X-ray obs. rel. to evolution of stellar chromospheres and coronae 3−30349
VZ Cancri, RRs-type variable star, spectroscopic obs. 3−10353
Y Canum Venaticorum, semiregular variable C star, minimum light times and light elements 3−44753
Y Canum Venaticorum C star, photometric and spectroscopic investigation 3−30387
RS Canum Venaticorum eclipsing subgiant systems, spectra anal. 3−54442
GG Carinae, model of VV Cephei-like system from photoelectric photometry 3−59405
TX Carum Venaticorum, Z And. star, radiation var., VBVRIJHK obs. *(Russian)* 3−44767
R Cassiopeiae, Mira variable circumstellar 86 GHz SiO maser emission 3−5301
ω Centauri globular cluster, metal poor red giants, chem. comp. 3−25535
π Cephei, quadruple star model from giant primary orbital elements, masses and luminosities determ. 3−59401
CG 1, age and struct., star evolution and form. 3−59440
chemically peculiar red giants, post-main sequence evolution rel. to enrichment of C and s-process elements 3−40117
circumstellar envelopes around evolved late-type stars, H I content from VLA obs. 3−54343
composite spectrum stars, line and continuum indices for giants and dwarfs from scanner spectra 3−5348
cool giant and supergiant stars, obs. at 20, 25 and 33 μm 3−20369
cool giant stars, envelope mass loss, hybrid model 3−48909
cool giant stars and Mira-type variables, IR props. determ. from JHKL photometry 3−15929
cool giants, 5 min. oscills. 3−54360
cool M and C stars identification technique, appl. to 47 Tucanae 3−35445
coronal boundary line in cool star region of H-R diagram, X-ray obs. 3−20357
Crab Nebula jet, origin from mass ejection during progenitor star red giant phase 3−44823
R Crateris, semi-regular variable, rapid optical var., visible obs. 3−35606
N1016 Cygni, bipolar nebula detect., mass flows and visible obs. 3−54380
BF Cygni, brightness fluctuations of symbiotic star 3−20401
NML Cygni, evolutionary state, mass loss, mass and luminosity and H II region anal. 3−59504
R Cygni, long period variable, YO and CeO identification, visible obs. 3−10337

giant stars continued
CI Cygni, symbiotic eclipsing binary, three colour photoelectric obs. during 1980 eclipse 3—59339
CH Cygni, symbiotic star, circumstellar spectra in 1981, visible obs. 3—25442
CI Cygni, symbiotic star, giant absolute magnitude, mass transfer and wind, spectral obs. 3—30381
CI Cygni, symbiotic star, giant viscous accretion discs evolution rel. to light vars. 3—5281
CH Cygni, symbiotic star, high-dispersion spectroscopic obs., 1981 to 1982, rel. to transformation into shell star 3—59370
CI Cygni, symbiotic star, optical emission lines vars. during 1980 eclipse 3—25467
CH Cygni, symbiotic star, radial vel. during 1977 outburst (to 1981) 3—10341
CH Cygni, symbiotic star, review of props. from optical and UV obs. 3—25466
CH Cygni, symbiotic star, UBV obs. 3—25439
V1016 Cygni, symbiotic star as very young planetary nebula, line profile anal. 3—30382
CH Cygni, symbiotic star binary model and stable/unstable accretion disc, photometry anal. 3—54379
V1016 Cygni, UBVRJHKLMN photometry and spectrophotometry 3—40137
V1016 Cygni, UV shell formation obs. from IUE spectra 3—35613
CH Cygni, wide-band photometry (1978-82) *(Russian)* 3—48935
diamagnetic plasmoid ejection and coronal winds 3—40074
DK 54, S-type star in Fornax dwarf elliptical galaxy, absolute magnitude and nature 3—48918
AG Draconis, brightness fluctuations of symbiotic star 3—20401
AG Draconis, IUE obs. during active phase of high-vel. symbiotic star 3—59345
DK Draconis, RS CVn star, BV obs. anal. 3—25518
AG Draconis symbiotic star, X-ray detect. 3—25465
early type stars, photometric anal. 3—54403
δ Eridani, very bright new RS CVn variable star, V-band obs. and photometry period 3—35622
extremely metal deficient red giants, effective temp. and photometry 3—54368
G-type star with circumstellar refl. nebula in Centaurus, polarisation characts. 3—59334
galactic bulge late-type giants, density functions, RGU photometry 3—59466
galactic poles giant stars, kinematic and abundance surveys 3—35713
globular cluster giants in Galaxy and Magellanic Clouds, four-colour photometry 3—54366
π^1 Gruis, S-type star, identification of new CeO features in optical spectrum 3—59337
π^1 Gruis, S-type star, mol. features, visible obs. 3—35611
HD 139216 (τ Serpentis), irregular variable, circumstellar shell spectra peculiarities, visible obs. 3—25441
HD 1833, new RS CVn-type variable star, photometric obs. 3—15945
HD 185510, possible new RS CVn variable star photometric obs. 3—15947
HD 190540, new RS CVn variable star, photometric obs. 3—15948
HD 205249, new RS CVn variable star, photometric obs. 3—15949
HD 207739, interacting binary, F8 IIe+B star, nature, UV obs. 3—30421
HD 37847, new RS CVn-type variable star, photometric obs. 3—15946
105 Herculis, binary, primary giant orbital anal. 3—59401
YY and V443 Herculis, brightness fluctuations of symbiotic star 3—20401
high-velocity giants, kinematics rel. to velocity of escape from Galaxy in solar neighbourhood 3—16001
HR 2557, δ Scuti star, photoelectric photometry rel. to frequencies and pulsation modes 3—59341
HR 454 (KO III), new bright Ca II emission star, objective-prism obs. 3—35600
HR 6434, pulsation modes anal. rel. to factors limiting pulsational amplitudes of δ Scuti stars 3—20396
HR 8580, spectroscopic binary orbit and radial vel. 3—25526
HV 2379 variable C star in LMC, shell ejection, visible/IR obs. 3—40147
Hyades cluster, link with open cluster NGC 2423 within Hyades supercluster, red giants anal. 3—59408
intermediate/late types, absolute magnitudes and kinematics 3—59336
IR Mira variables, discovery of large-amplitude periodic vars. in OH/IR stars from JHKLM photometry 3—59358
IRC+10216, CO movements and outflow 3—25550
IRC+10216, methane ν_3 band and HCl fundamental vibr.-rot. lines at 3 microns 3—5315
IRC 10216, shell SiS maser emission, SHF obs. 3—59505
K-type giants, Fe and Ti abundances and atm. parameters, visible obs. 3—20363
K-type stars, Fe abundance method, determ. from very strong lines 3—30226
K-type stars, random sample duplicity and radical vel., globular cluster implications 3—48951
Kuwano's peculiar object, red giant plus low luminosity star, nature 3—44769
late type, absolute magnitudes and galactic struct. 3—35723
late type, first overtone SiO band obs. 3—15918
late type M giants in Galaxy nucl. bulge, kinematics 3—54361
late type stars, Zr and Ti abundances from LTe photospheric line anal. 3 48906
late type stars in galactic centre region, space density 3—40290
late-type, space density distrib. in solar neighbourhood 3—25422
late-type stars contribution to galactic plane IR diffuse emission 3—16032
light axion, astrophysical mass constraints in the Sun, red giants, white dwarfs 3—10204
light axion constraints from nuclear decay and red giant star stability 3—582
long period variable stars, J=5-4 SiO masers detect., EHF obs. 3—54381
long-period M-type stars in galactic bulge, super metallicity 3—48910
long-period variable stars, optical polarisation rel. to IR excess, circumstellar dust shells anal. 3—59343
long-period variables, OH maser main-line emission, Stokes polarimetry 3—25412
low mass zero metal giant stars, evolution up to He flash 3—20359
luminosity functions of C stars and late M-type giants 3—20358
M15(NGC 7078), globular cluster central region giant stars, luminosity distrib. from V obs. *(Russian)* 3—15966
M22, globular cluster, evidence for chemical inhomogeneity from spectroscopic survey 3—54454

giant stars continued
M22 globular cluster red giants, element abundances in six stars, visible obs. 3—25530
M5 globular cluster red giants, CN bimodal distrib., mixing implications, visible obs. 3—30365
M71, globular cluster, metal abundances in giant stars from IPCS spectra 3—59415
M92, metal-poor globular cluster, giant stars C and N abundances 3—5372
M-type giant stars toward galactic centre, near-IR obs. rel. to interstellar extinction 3—10432
M-type giants and supergiants, circumstellar dust shell, IR emission and raditive transfer 3—40128
masses and evolution of giant and supergiant stars, implications of obs. of hot companions 3—40194
metal-poor giant stars in M71, errors in high-resolution abundance anals. 3—59321
metal-poor late-type stars, abundance anal. from theoretical standpoint 3—59322
metal-poor stars, systematic effects in abundance determs., conference, Patras, Greece (August 1982) 3—54570
metal-poor stars in globular clusters, abundances 3—20361
Mira variables, UBVRI photometry parameters and TiO absorpt. intensity relation 3—35607
Mira variables in globular cluster NGC 6293, B obs. 3—30379
Mira-type variables and other cool stars, IR props. determ. from JHKL photometry 3—15929
molecular self-shielding in outflows from late-type stars 3—35585
N-type C stars, UV spectra and atm. features 3—48912
new variable stars in M13, photometric obs. 3—15925
NGC 1851, globular cluster, CN strong stars identification, radial vel. and abundances, visible obs. 3—30378
NGC 1866, young LMC star cluster, evolutionary tracks for red giants rel. to cluster age 3—59416
NGC 2058 and 2065, LMC open clusters, age determ. from red giants anal. 3—54458
NGC 2423, open cluster link with Hyades cluster within Hyades supercluster, red giants anal. 3—59408
NGC 2447, open cluster, red giants luminosity/interstellar absorpt. 3—59407
NGC 6171 field, RGU three-colour photometry *(German)* 3—5275
NGC 7006, remote globular cluster giants, C, N and Fe abundances, visible obs. 3—54457
in NGC 7089 (M2), globular cluster, radial vars. of projected densities of red giants and horizontal branch stars 3—40207
O-type stars, models and mass loss, JHKLM obs. 3—40122
OH 26.5+0.6, radiative transfer model rel. to IR spectrum and interstellar grain comp. 3—49053
RS Ophiuchi, recurrent nova, visual magnitude estimates (1982 August 11 and 15) 3—15927
δ Orionis, Hα profile phase depend. var., orbit, radius, shell anal. 3—25423
Palomar 13, remote globular cluster giants, C, N, Fe abundances, visible obs. 3—54457
AR Pavonis, eclipsing symbiotic star, photometric and spectroscopic props. 3—25468
peculiar emission-line stars, spectrophotometry *(Russian)* 3—15934
56 Pegasi system, cool wind accretion onto WD, UV and X-ray obs. 3—20375
AX Persei, brightness fluctuations of symbiotic star 3—20401
planetary nebulae nuclei that experience final He shell flash, evolution 3—35596
Population I G and K giant stars, C and N abundances from DDO photometry 3—5298
Population II, uvby photometry 3—54256
Population II giants, Hα emission, metal abundance, microturbulence, mass loss and luminosity 3—30366
Population II globular cluster stars, He diffusion effect on evolution 3—30367
pulsating stars, nonlinear hydrodynamical theory of convection 3—10309
RX Puppis, symbiotic star, JHKL photometry rel. to IR variability and nature of components 3—59366
RX Puppis, symbiotic stars, IUE obs. of UV spectrum 3—25469
c Puppis (HD 63032), B-type companion for cluster K-type giant 3—59328
red giant core collapse, neutrino distrib. 3—141
red giant evolution to planetary nebula, ionized nebular shell interaction with remnant circumstellar envelope 3—25564
red giant stars, contrib. to Galaxy near-IR radiation 3—10316
red giants, appl. of narrow band photometry in 1-4 micron region 3—54255
red giants, O rich, chromosphere UV radiation effect on circumstellar shell comp. 3—59333
red giants, warm CNO nucleosynthesis as possible enrichment mechanism for O and F isotopes 3—30161
red giants disruption by collisions as origin for galactic centre gas clouds 3—15995
new red variable star in Aquila, precise position and light curve 3—30384
RGU photometry of late-type giants in southern starfield near galactic centre (SA 158) 3—44734
rotation acquisition from companion ang. momentum transfer, horizontal branch implications 3—48900
HM Sagittae, symbiotic star, spectrum and continuous emission and binary star model 3—25470
HM Sagittae, UBVRJHKLMN photometry and spectrophotometry 3—40137
semi-regular stars, optical polarisation rel. to IR excess, circumstellar dust shell anal. 3—59343
semi-regular variables, UNVRI photometry parameters and TiO absorpt. intensity relation 3—35607
spectroscopic binary stars in Clube Selected Areas, orbits from photoelectric radial vels. 3—15953
stellar winds, theory of closed and open mag. fields 3—54346
symbiotic stars, anal. of IR variability and spectra rel. to nature of components 3—59367
symbiotic stars, conference, Observatoire de Haute Provence, France (1981 August 26 to 28) 3—20579
symbiotic stars, evolution of viscous accretion discs rel. to brightness vars. 3—5281
symbiotic stars, evolutionary status 3—25473
symbiotic stars, fifty years of research 3—25457

giant stars continued
  symbiotic stars, flux calibrated spectra and Hα line profiles for twelve objects 3—25462
  symbiotic stars, implications of radio obs. 3—25458
  symbiotic stars, IR photometry and spectroscopy 3—25459
  symbiotic stars, models and evolutionary status 3—25474
  symbiotic stars, near IR spectra 3—25460
  symbiotic stars, props. from studies in optical region 3—25461
  symbiotic stars, search for mag. fields 3—10334
  symbiotic stars, single star and binary star models 3—25472
  symbiotic stars, UV line emission spectra 3—25463
  symbiotic stars, UV props. from IUE obs. 3—25464
  symbiotic stars as binary stars, models and evolutionary stages 3—25471
  symbiotic stars in SMC, identification and nature, spectral obs. 3—59470
  α Tauri, oscills. or running waves detect., visible obs. 3—40123
  RR Telescopii, obs. of IR variability rel. to nature of symbiotic stars 3—48931
  RS Telescopii, R Coronae Borealis star, new fading, visual magnitude estimate (1983 January 20) 3—35634
  RR Telescopii, slow nova, IUE spectra and other new obs. 3—48930
  temperature dependence of rotation and turbulent vel., spectrum anal. 3—20353
  in Tombaugh 1, open cluster, photoelectric photometry of red giants and subgiants 3—59413
  47 Tucanae, globular cluster, metal abundances in giant stars from IPCS spectra 3—59415
  47 Tucanae, globular cluster giant branch, TiO band strengths 3—15963
  47 Tucanae, globular cluster giant stars, CN and Na lines and comp. 3—5373
  ι Virginis, late type subgiant star, outer atmosphere struct. from far UV emission lines obs. 3—5272
  W92, fast-rotating late-type star in NGC 2264, UBVRI photometry and spectrum 3—59340
  C star, very faint, very real, at high galactic latit., BV magnitudes and spectrum 3—10367
  extreme C star near open cluster NGC 1960, photometric, spectroscopic and polarimetric obs. 3—59359
  C stars, circumstellar dust shells, radiative transfer model 3—40146
  C stars, distrib. in galaxy and catalogue 3—54407
  C stars, dust shell model, pulsations anal. from photometric anal. 3—54378
  C stars, theoretical study of SiC_2 3—54221
  C stars in dwarf spheroidal galaxies, galaxies mass/light ratio and vel. dispersion determ. 3—49019
  C stars in galactic/Magellanic Cloud clusters, dredge-up and evolution, visible obs. 3—30393
  C stars in Local Group galaxies, near-IR transmission grating prism survey and spectrophotometry 3—30376
  C stars in Magellanic Clouds star clusters, effects on clusters integrated IR photometry 3—54453
  CNO abundances of G8-K3 giant stars 3—20360
  Ca II and K-fluxes, depend. on convective envelope dynamo action 3—5287
  OH/IR stars, 1-20 μm obs. along galactic equator 3—20383

Gibbs free energy *see free energy*

Gibbs function *see free energy*

Ginzburg-Landau theory
  A15 compounds, disorder effects on density of states, Fermi vel. and Drude plasma freq. 3—3370
  Abelian Higgs model, disorder version, Ginzburg Landau param., superconductive tricritical point 3—23533
  Aharanov-Bohm currents in thin superconducting cylinders 3—57460
  anharmonic oscillator system with quenched random interactions, freeze-in transition 3—18424
  Cooper pairs, correlated, Ginzburg-Landau expansion, appl. to spin glasses 3—28576
  Coulomb superconductor, inhomogeneous state, theory 3—23535
  critical dynamics, quantum-classical crossover 3—49305
  ferromagnetic film, domain struct. near paramag. to ferromag. phase transition 3—52570
  ferromagnetic media, spontaneous magnetisation, Landau-Ginsburg eqn. 3—38597
  ferromagnetic superconductor, mixed state, phenomenological theory 3—8634
  ferromagnetic superconductor, surface magnetisation, field penetration, and surface ordering 3—38531
  hot gauge theories finite temp. and external field effects, SU(2) 3—40742
  Josephson array, Ginzburg Landau free energy 3—57483
  Josephson effect, DC, in SINS junction *(Chinese)* 3—13963
  martensitic phase transitions 3—34300
  microbridges, variable thickness, static current-phase relation *(Chinese)* 3—13962
  mixed state, Ginzburg-Landau eqns. and interphase surface energy 3—57498
  nontrivial solutions, topological estimation 3—13951
  shape memory alloys, martensitic domain boundaries, solitary wave model 3—34321
  superconductive micronetworks, mag. phase boundary 3—13968
  superconductive tunnel junctions, phenomenological theory *(Chinese)* 3—52307
  superconductivity and itinerant ferromagnetism, coexistence 3—23534
  superconductivity current flowing over infinite homogeneous slab, gravitational actions influence 3—43318
  superconductor, space-inhomogenous, resist., temp. and characteristic length depend. 3—18825
  superconductor with dielectric gap at Fermi surface, diamagnetic effects 3—28474
  superconductors, normal precipitates, elementary pinning force, Ginzburg-Landau theory 3—43339
  superconductors, Poisson structures, irreversible thermodynamics 3—33822
  superconductors, two-dimensional, Anderson localisation and Ginzburg-Landau eqns. 3—18818
  surface impedance and tunnelling, data compilation, 1957-76 period 3—5504
  thin wire networks, superconductivity, percolation approach 3—38528
  $(TMTSF)_2ClO_4$, Meissner effect and diamag. shielding, anisotropy 3—3371
  type II superconductors, critical mag. fields and Landau-Ginzburg parameter 3—28486
  type II superconductors, flux pinning by thin planar defects 3—8636

Ginzburg-Landau theory continued
  type II superconductors, grain-boundary flux pinning by electron scatt. 3—18835
  vortices, existence and uniqueness in Higgs model 3—31008
  $ErRhB_4$, mag. supercond., Gibbs free energy, paramag. contrib. 3—8617
  ^3He superfluid A and B phases, rotating, struct. of isolated vortex lines 3—42875
  Nb_3Se_4, superconducting critical field and elec. cond. 3—28485
  Ni_3Al, weak ferromagnet, mag. props., small angle neutron scatt. study 3—28537
  V, superconducting props., impurity depend. 3—23538
  Zr-Gl, amorphous binary alloys, superconducting props. 3—23523
  $Zr_{85}Ge_{15-x}M_x$(M=B, Al, C, Si or Sn), superconducting transition temp., comp. depend. 3—38517
  $Zr_{85}Si_{15-x}M_x$(M=B, Al, C, Ge or Sn), superconducting transition temp., comp. depend. 3—38517

glaciology
  Antarctic ice core D isotopes and humidity of palaeoclimate 3—10048
  Antarctic Peninsula Quaternary glacial history 3—35199
  Antarctica, ages and comp. of gas trapped in Allen Hills and Byrd core ice and comp. of gas trapped in Allen Hills and Byrd core ice 3—9941
  Atlantic Canada, ice morphology during deglaciation reconstructed from postglacial relative sea level 3—48578
  British Columbia, pollen and macrofossil evidence rel. to lag of Fraser glacial maximum in Pacific Northwest Canada 3—48662
  climate and palaeoclimate determ. from obs. of glaciers *(Russian)* 3—35256
  climate model of ice ages with delayed albedo feedback 3—10046
  climatic ocean-atmosphere-ice system, one-dimensional model *(Russian)* 3—20114
  climatic records from ice core O isotope profiles, effect of wind scouring 3—35196
  dating of Antarctic ice by $^{10}Be/^{36}Cl$ ratios 3—59274
  deglaciation effect on Australia sea level and gravity accel. var. 3—39761
  deglaciation effect on gravity secular var. 3—39760
  Devensian age ice southern limit in South Wales 3—15496
  erosion by glacier in ice-divide zone in Scotland 3—44485
  glacial cycles and ice-sheet modelling 3—29957
  glacier (polythermal), flow and temp. distrib. model 3—9942
  global ice budget and sea level during Holocene 3—58980
  S Greenland, S Dome ice core, climatic variables analysis 3—30047
  Greenland ice core dating to 90000 yr BP, climate record 3—39902
  high-pressure eqn. of state of ice VII phase 3—28048
  Holocene deglaciation history from Holocene Pacific Ocean sea level 3—30056
  Hudson Bay Lowlands, Canada, multiple deglaciation events 3—54062
  ice ages, appl. of climate models to astronomical theory 3—4951
  ice ages, effect of variable ice albedo on climatic response of Earth to orbital vars. 3—4952
  ice sheet (polythermal), flow and temp. distrib. model 3—9942
  ice sheet collapse modelling 3—15492
  Ladakh Himalayas, India, chem. composition of fresh snow at high altitude 3—48580
  modelling of ice and climate 3—30046
  Norwegian ice cap, preferential elution of strong acids by melting snows 3—19638
  Ordovician glaciation in Crozon Peninsula (France), evidence from palaeomagnetism of Ordovician dolerites 3—39774
  permafrost phenomena in N Canada, and implications for human habitation 3—44486
  Late Pleistocene glacial equilib.-line altitudes in Colorado Mts., USA 3—35200
  Pleistocene ice ages, historical review of astronomical theory 3—4949
  polar ice sheets, cyclic behaviour, numerical ice flow model 3—58996
  pre-Pleistocene glaciation on Earth, implications for climatic history of Mars 3—4950
  Quaternary sea level, glacial isostasy models and mantle viscosity parameter 3—54007
  Queen Charlotte Is., BC, Canada, ice free conditions during glacial max. 3—29963
  satellite laser altimeter design for ice-sheet topography meas. 3—25237
  SLR 35 mm photogrammetric system for glacier meas. 3—10097
  Ungava Peninsula, postglacial marine emersion rel. to landscape features *(French)* 3—29923

glass
  for semiconductor glasses see amorphous semiconductors and chalcogenide glasses
  see also aluminosilicate glasses; amorphous semiconductors; borate glasses; chalcogenide glasses; germanate glasses; glass fibre reinforced plastics; glass fibres; glass industry; glass-metal seals; optical glass; phosphate glasses; phosphosilicate glasses; vitreous state; vitrification
  alkali oxide-WO_3 systems, rapidly quenched glasses prep. and characteris. 3—29054
  alkali silicate, AES on fractured surfaces, comp. obs. 3—14903
  alkali silicate glasses, inert pair chem., Tl^{2+} ESR study 3—33977
  alkali sulphate -$ZnSO_4$ glasses, elec. cond., mixed alkali effect 3—13533
  basalt glass melt, viscosity meas. during separation and crystallisation 3—13511
  basaltic glass from Mid-Atlantic Ridge, comp. and latitude 3—58964
  beads in viscoelastic polyisobutylene soln., suspension, shear and extensional flow *(German)* 3—7535
  ceramic, commercial, flexural strength and fracture toughness, surface finish effects 3—34418
  ceramic-glass fibre powder, crystallinity determ., X-ray diffr. study using Ruland's method 3—56825
  ceramic-glass systems, crystn., microstructure, heat treatment effects, elec. resist. and thermal anal., review 3—33116
  ceramics, glass, appl. to radioactive waste diposal and as thermal shock resist. material 3—879
  chemical durability 3—34511
  China, glass research and development, review 3—33113
  colouring mechanism of PbX and CdX (X=S, Se, Te), transmission spectra 3—34122
  commercial crystallised, fracture features at internal fracture origins 3—14704
  composite, matrix/dispersed glass particles, hot pressed, Young's modulus rel. to microcracks *(Japanese)* 3—58154
  composite sphere, viscoelastic analysis of thermal stresses 3—42149
  conference, Beijing, People's Republic of China (Aug. 1981) 3—30548

glass continued

- continuous cooling diagrams and critical cooling rates for glass form. 3—33107
- crack healing, using double torsion loading config. 3—39247
- critical cooling rates from melt and defects 3—37783
- crown silicate, hardness response, time depend. 3—4223
- crystallisation, activation energy from DDTA curves 3—7914
- devitrified, heterogeneous, electron microprobe anal., quantitative *(Czech)* 3—14896
- diaplectic labradorite glass, from Manicouagan impact order, phys. props. 3—35168
- dielectric glasses, dynamic behaviour at low temps. in acoustic and electric fields 3—18405
- dissolution model 3—13462
- elastic contact fracture, tangential force effect 3—42197
- elastic moduli, three-band theory and characteristic temps. 3—33337
- electrical cond. and discharge propag. vel. meas. 3—39998
- electrical conductivity and discharge propag. in spacecraft thermal control dielecs., elec. cond. and discharge propag. 3—13811
- engineering material, composition, thermal expansion, thermal shock resistance, permittivity *(Italian)* 3—24240
- epoxy-glass composite, laser drilling, photoacoustic signal monitoring 3—27327
- EPR of Fe^{3+} and Mn^{2+}, site symmetries 3—43429
- EXAFS spectra for local atomic order determ., use of synchrotron radiation 3—46862
- excitations in disordered systems, NATO Advanced Study Institute, East Lansing, MI, USA (Sept. 1981) 3—1
- fabric reinforced epoxy composite, human head phys. model appl. 3—35047
- fluoride glasses, heavy-metal, heat capacities 3—28115
- fluoroberyllate:$Nd^{3+}(Eu^{3+})$ glass, computer simulated struct., comparison with optical spectra 3—33128
- formation kinetics 3—51501
- fracture statistics, normal, Weibull and Type I extreme value distributions 3—43939
- fused beads, water-saturated, tortuosity and acoustic slow waves 3—28055
- glass:Eu^{3+}, homogeneous spectral line broadening, luminesc. study 3—28899
- glass-ceramic femoral cups, comp., manufacture and related props. 3—35026
- glass-graphite materials fracture characts. in partially ionised air flow 3—34447
- glass/Si struct., laser annealing, thermal model 3—56965
- graphite fibre reinforced, compliant, high failure strain, prep. and characteris. 3—29056
- heterogeneities, small angle scatt. studies 3—13106
- high level radioactive calcined alumina waste, candidate glasses for vitrification 3—21407
- homogeneity measurement by Shelyubskii's method, optimum sample prep. condition *(Japanese)* 3—9385
- inorganic glasses, struct. depend. of bulk modulus 3—2643
- insulator surface flashover, predischarge current and surface field meas. 3—7842
- ion exchange treated, props. meas. using stratorefractometer *(Czech)* 3—53311
- leaching kinetics of nuclear waste-form materials, γ radiation effects 3—24658
- Lennard-Jones glass, longitudinal and transverse excitations 3—13386
- liquid phase separation phenomena in glass development 3—2818
- microballoon, low-Z foam coated, laser implosion 3—42420
- molten, near IR absorpt. coeff., emissivity spectroscopy 3—3662
- molten, thermal gradient induced migration of bubbles 3—8302
- molten glass spreading on liq. Sn surface 3—13597
- multicomponent glasses, short range order and optical absorption edges 3—33121
- multicomponent inorganic glass, vibr. IR and Raman spectra and nonlinear susceptibility 3—34086
- NMR and Mossbauer spectroscopy, review 3—3612
- non-isothermal crystallisation, kinetic study by thermal anal. 3—2421
- nonresonant absorption of acoustic and EM radiation 3—18404
- nuclear waste glass, durability, inhibition of leaching by chemisorption 3—6317
- nuclear waste glass, hydration ageing 3—6320
- nuclear waste glasses, microstruct. obs. 3—49932
- obsidian, Mossbauer absorption spectra study 3—39428
- opal glasses, X-ray diffr. anal. of minority crystalline phases *(Slovak)* 3—18232
- oxide, containing Ag granules, microstruct. and optical absorpt. 3—33104
- oxide glass: Tl^+, stereochemistry and struct. model, ESR study 3—23798
- oxide glasses:Mn^{2+}, short range ordering superposition model anal. 3—22780
- particulates, electron probe microanalysis, expt. and Monte Carlo simulation 3—44084
- phase separation and eutectic form., thermodynamic anal. 3—33449
- photoelastic particles, stress distrib. determ. 3—7515
- planar rings, intermediate order 3—18230
- porous, alkali treatment effect on props. during firing, devitrification 3—34270
- porous, phase transitions of water, NMR broad line technique 3—47561
- porous, surface heterodiffusion, NMR spectroscopy study 3—18593
- porous glass, vycor type, rel. between pore struct. and doping 3—33127
- protonated, surface profiling, invest. by spectrochem. anal. of sputter-induced radiation 3—28203
- Pyrex, FIM and pulsed laser atom-probe mass spectroscopy studies 3—2424
- quartz, fused, FIM and pulsed laser atom-probe mass spectroscopy studies 3—2424
- quartz, photometric determ. of Ge *(Russian)* 3—48111
- quartz, slow propagation cracks, acoustic emission and fracture mechanics studies 3—34444
- quartz glass, photoluminescence peaks, neutron and gamma radiation effects 3—47704
- quenched and annealed, struct. recovery 3—13107
- radiation induced effects at paramagnetic centres 3—13275
- radioactive liquid waste immobilisation in water glass 3—21408
- rare earth doped, Raman mechanism for homogeneous linewidth 3—23943
- review of glass science, state of the art and prospects 3—33112
- shell, spherical composite, joint imperfection effect on bearing capacity 3—17794

glass continued

- shielding window design using lead glass, lead acrylic and plate glass 3—48427
- silica core glass fibre, low freq. light scatt. 3—34121
- silica glass:Ti(Eu)(Ce), absorption and fluorescence spectra, melting and heat treatment effects 3—34140
- silica glass, dephasing of extrinsic tunnelling systems 3—2723
- silica glass, radial distrib. function and correlation function, comparison with bonding topologies 3—33109
- silicate, N^+ ion implantation effects, microhardness and refr. index meas. 3—33133
- silicate glass: $Nd^{3+}(Eu^{3+})$, optical dephasing, coherent transients and hole burning meas. 3—27173
- silicate glass, radiation effects., rel. to use as radioactive waste form 3—41164
- silicate glasses, gas formation during fracture 3—18382
- silicate glasses, specific heat consumption in melting *(Slovak)* 3—18478
- silicate glasses, struct. change at solid-liquid transition, absorption spectra study 3—13453
- silicate glasses, structural role of F, expt. evidence 3—46865
- silicate glasses, thermal cond., rel. to composition and struct. 3—33525
- silicate glasses, viscosity, temp. depend. at const. fictive temps. 3—33478
- sintered materials, subcrit. crack growth determ. method 3—58363
- sitallizing glasses, TiO_2-activated, Raman spectra 3—19316
- slow crack growth, rel. between power and exponential laws 3—13331
- soda-lime, container glass, melting behaviour, viscosity, Li_2CO_3 addition effect 3—51750
- soda-lime glass plate, stress distrib. effects on crack-branching 3—53176
- soda-lime silicate glass, hydration and chemical interdiffusion 3—51869
- softening temperature meas. technique and device 3—53310
- sputtering process during ion implantation 3—33279
- static struct. factor and mode softening, neutron scatt., theory 3—13038
- strength, effect of metal-oxide coatings 3—24384
- strength evaluation using six-point bend method 3—44001
- stress meas., by laser scattered-light photoelasticity method *(Chinese)* 3—12606
- stress-strain relations, detection and measurement methods 3—22962
- structural props., optimal polynomial method, quantum mech. basis 3—2431
- structural study using synchrotron radiation *(French)* 3—13112
- structure, glass transition and phys. props. *(Polish)* 3—2426
- structure, review of NMR studies 3—33115
- structure determ., review of recent developments 3—33114
- sulphate glass:Eu^{3+}, internal vibrs., electron-vibr. and Raman spectra study 3—14311
- sulphate glass, AC cond. and dielectric props. 3—2880
- Suprasil I glass capacitance thermometer for mK temp. range 3—36009
- surface, H_2O vapour attack kinetics, $^{23}Na(p,\alpha)^{20}Ne$ nuclear reaction study 3—28168
- surface anal., fast atom bombard. mass spectrometry 3—8926
- surface profiling, invest. by spectrochem. anal. of sputter-induced radiation 3—28202
- synthesis, comparison of gel pore vol. obtained by three methods 3—24204
- synthesis from gels, problem of monolithic gels 3—24203
- technical grade, strengthening by deep etching in acid influence on strength in axial tension 3—19441
- tempered, fracture strength and internal stress distrib. 3—34446
- thermal fatigue life under mechanical load 3—19395
- thermal props. 3—13479
- thermal shock effects rel. to laser beam heating *(Polish)* 3—19350
- thermally created tunnelling states in glasses 3—23006
- thermodynamic functions, reduced, at 0K 3—2852
- transparent, indentation, microscopic obs., indentation testers design 3—24436
- transport processes, kinetic-particle method 3—23071
- US attenuation at low temp. 3—2691
- vibrational spectrum, average dynamical matrix calc. 3—33377
- volume relaxation, nonsymmetry paradox 3—13124
- volume relaxation, nonsymmetry paradox and spectrum of relax. times 3—13109
- wedges, SAW refl., conversion and transmission at normal incidence 3—38182
- Williams-Watts function inversion for large relax. times 3—52719
- window, double glazed, sound insulation improvement by double glass panes *(German)* 3—42063
- Zerodur, heat capacity from 1.8 to 20K 3—33461
- AgCl photochromic glass, short range order and optical absorption edges 3—33121
- AlF_3-ThF_4-BaF_2-RF_3 (R=rare earth), glass composition and transition temp. 3—23042
- B_2S_3-Li_2S-LiI glass, prep. and ionic cond. props. 3—51845
- BaO-Ga_2O_3-SiO_2 glasses, ion exchange, effect of added ions 3—34617
- BaO-Na_2O-SiO_2, hydrated, microstruct., small angle X-ray scatt. study 3—53253
- BaO-SiO_2, phase-separated, positron annihilation 3—58111
- BaO-TiO_2-SiO_2 glasses, alkaline durability 3—34513
- BeF_2:Gd^{3+} glass, vibronic fluoresc., polarised Raman, and IR spectra 3—38895
- BeF_2-AlF_3-MgF_2-BaF_2:Cr^{3+} glass, energy level splitting, effective g value, ESR study 3—33971
- BeF_2-AlF_3-MgF_2-BaF_2:Co^{2+} glass, effective g value, chem. bonding, ESR study 3—33972
- CaO-FeO-SiO_2 liquid-phase separation processes 3—23050
- $CaTiSiO_5$ glass for radioactive waste disposal medium 3—6319
- Co oxide glasses, local struct., EXAFS obs. 3—14390
- CuO-PbO-TeO_2 glasses, mag. props. and EPR spectra 3—23603
- KNO_3-$Ca(NO_3)_2$, glass, elastic props., Brillouin scatt. study 3—47664
- KNO_3-$Ca(NO_3)_2$-$Mg(NO_3)_2$ glasses, discrete anion site struct., Raman study 3—46861
- K_2O-BaO-Nd_2O_3-Pr_6O_{11}-SiO_2 glasses, colour and absorpt. spectra, effect of added Mn^{3+}, Co^{2+}, Ni^{2+} 3—34130
- La-Si-O-N oxynitride glass, microhardness and transparency 3—58209
- Li_2O-$2SiO_2$, glass and glass ceramic, aqueous durability 3—34499
- Li_2O-$Cs_2O(Rb_2O)$-SiO_2 glass systems, immiscibility isotherms 3—28105
- Li_2O-MO-Nb_2O_5 system (M=Ba, Ca, Mg), twin-roller quenching, glass formation, IR spectra 3—53012
- Li_2O-SiO_2 glass, non-isothermal crystallisation, kinetic study by thermal anal. 3—2421
- $Li_2O.2SiO_2$, kinetic parameters from DTA meas. 3—38023
- ^6Li-glass scintillators, gamma-ray sensitivity 3—41430

glass continued
$(Na,Cs)_2O-SiO_2$ glass, impurity alkali diffusion, ^{86}Rb tracer, comp. depend. 3—57134
Na_2-SiO_2 glass prep. by gel-glass transformation, IR reflection spectra study 3—34271
$NaCl-KCl-ThCl_4$ system, glass forming region, DTA and IR spectra study 3—22786
$NaO-CaO-SiO_2$, glass, crack healing, using double torsion loading config. 3—39247
Na_2O-CaO microslide glass detector, thermal stability of fission tracks 3—6502
$Na_2O-CaO-SiO_2$, crack growth, effect of water and other dielectrics 3—22972
$Na_2O-CaO-SiO_2$, crack growth, effect of basic and acidic D_2O solns. 3—39266
$Na_2O-CaO-SiO_2$ glass, electrochem. treated, surface durability 3—43969
$Na_2O-CaO-SiO_2$ glasses, electron irrad., field-assisted Na migration 3—2894
$Na_2O-CaO-SiO_2$ glasses, N-containing, struct., mech., optical, and elec. props. 3—33129
$Na_2O-Cs_2O(Rb_2O)-SiO_2$ glass systems, immiscibility isotherms 3—28105
Na_2O-SiO_2, disc, crack branching, biaxial flexure 3—43942
Na_2O-SiO_2, hydrated, microstruct., small angle X-ray scatt. study 3—53253
Na_2O-SiO_2 and $Na_2O-Ga_2O_3-SiO_2$ glasses, ion exchange, effect of added ions 3—34617
Na_2O-SiO_2 glass, gel-derived, liquidus temp., X-ray diffr. 3—51754
Na_2O-SiO_2 glass, Na^+/Ag^+ interdiffusion from melt 3—33518
Na_2O-SiO_2 glasses, high water content, effect of γ radiation 3—8101
Na_2O-SiO_2 glasses, mech. props., effect of dissolved water 3—9159
Na_2O-SiO_2 silicate glass, Na^+ and nonbridging O^{2-} conduction, TSC study 3—51842
$Na_2O-SiO_2:Ar$ glass, ion implanted, XPS, charge correction method 3—43707
$Na_2O-SiO_2-Fe_2O_3$ glass, optical absorption, luminescence and Raman spectra 3—3710
$Na_2O-SiO_2-Fe_2O_3-Y_2O_3$, Mossbauer and EPR spectroscopy study 3—3603
$Na_2O-SiO_2-Li_2O(K_2O)(Ca_2O)(Ba_2O)(Mg_2O)(Y_2O)$, glass transition temp., network modifier mixing effects 3—51791
$Na_2O-SiO_2-MgO(CaO)(SrO)(PbO)(BaO)(ZnO)$, glasses, chem. durability in water 3—9205
$Na_2O-SiO_2-UO_3$ glass, IR spectra, heat capacity and electron microscopy studies 3—14306
$Na_2O-SiO_2-Y_2O_3-Fe_2O_3$ glass, effect of nucleating agents on YIG crystallisation 3—29196
$(Na_2O)_{33-m}(R_2O)_m.(SiO_2)_{67}$, (R=Li, K, Rb), gradient element form., refr. index 3—3664
$Na_2O.3SiO_2:Tb^{3+}$, tunnel recombination luminesc. 3—24010
PbO binary glasses, Pb^{2+} coordination determ. by EPR *(Japanese)* 3—38693
$PbO-SiO_2$, spherulitic crystal growth from P_2O_5-nucleated lead silicate glasses, morphology rel. to growth temp. 3—33102
$PbO-SiO_2$ glass, effect of added metal oxides on secondary electron emission 3—14407
$PbO-SiO_2$ glass, short range struct., X-ray diffr. study 3—33110
$Rb_2O.SiO_2$, conc. fluctuations, DC cond. meas. 3—37796
$Sb_2O_3-V_2O_5$, glass formation by splat cooling, ESR and thermal analyses *(French)* 3—13111
Si-O-OH polymer glasses, network parameters, melting point and viscosity 3—7918
SiO_2, crystalline and vitreous, Si-O-Si bond angle distribution, steric theory 3—33195
SiO_2 glass, acoustic saturation at low temps. 3—57031
SiO_2 glass, microheterogeneity detection by small angle X-ray scatt. 3—33131
SiO_2 glass, spectral density of AE signals, crack detection appl. 3—58364
SiO_2 glass, TiO_2 effect on props., glass struct., molten and cryst. states 3—33118
SiO_2 glass films, undoped and P doped, step coverage during CVD 3—52963
$SiO_2:Nd^{3+}$, optical homogeneous linewidth meas. with picosec. accumulated photon echoes 3—37141
SiO_2-K_2O $(Na_2O)(Li_2O)$ glass, IR transmission and absorption spectra 3—34087
$SiO_2-Li_2O(Na_2O)(K_2O)$, glass, X-ray induced hole centres, ESR studies, struct. model 3—3530
$SiO_2-Li_2O(Na_2O)(K_2O)$, glass, Cu ion, exchange diffusion layers, ESR and optical study 3—52605
SiO_2-Na_2O, glass, retarded elasticity rel. to viscosity, compressive method *(Japanese)* 3—4076
SiO_2-Na_2O glass melt, corrosion of vitreous SiO_2 under weightless conditions 3—39269
$SiO_2-Na_2O-BaO-ZnO:Eu^{3+}$, optical dephasing meas. by spectral holeburning 3—50715
$SiO_2-Na_2O-CaO-MgO-Fe_2O_3$ glass, ferric Fe reduction, EPR and optical spectra studies 3—34616
$SiO_2-Na_2O-NiO-Fe_2O_3$ glasses, precipitation of $NiFe_2O_4$, ESR and Mossbauer studies 3—13468
$SiO_2-Na_2O(-CaO)$ glasses, proton irrad., field-assisted Na migration 3—2895
Sn on glass, CVD of hot-end coatings from $SnCl_4$ 3—34237
$TeO_2-PbO-La_2O_3$ glass, elastic moduli, temp. and press. depend. 3—58150
$TeO_2-PbO-WO_3$ glass, elastic moduli, temp. and press. depend. 3—58150
TiO_2-SiO_2 glass, thermal expansion coeffs. 3—33472
$V_2O_5-TeO_2$ glasses, amorphous semicond., DC cond. under annealing 3—8486
$V_2O_5-TeO_2$ glasses, elec. threshold switching in sandwich geometry 3—52153
$V_2O_5-TeO_2$ glasses, elec. cond. and dielec. const., 0.1 to 100 kHz, 77 to 400K 3—57346
$WO_3-CaO-TeO_2$ glasses, density, optical absorption edges, IR spectra 3—57952
Y-Si-Al-O-N glass, crystn. and characterisation 3—27852
ZnO-glass interface, Stoneley wave propagation study 3—38185
Zn_2SiO_4 glass-ceramic, He diffusion, density, refractive index, thermal expansion coeff., thermal history depend. 3—56827
ZrF_4 glass, Raman spectra of irradiated samples 3—14296
$ZrF_4-BaF_2-AlF_3-LaF_3-EuF_3$, glass, Eu(III) fluoresc. study 3—52818
$ZrF_4-BaF_2-AlF_3-NaF$ glass, low temp. acoustic props., glass transition temp., two-level systems model 3—28053
$ZrF_4-BaF_2-BaCl_2$ glass, IR and Raman vibr. spectra and struct. 3—22785

glass continued
$ZrF_4-BaF_2-GdF_3-AlF_3$ glass, Rayleigh scatt., melt cooling rate effects 3—38840
$ZrF_4-BaF_2-LaF_3-AlF_3$ glass, low temp. sp. ht., transient pulse technique 3—51823
$ZrF_4-BaF_2-ThF_4$ glass, low temp. sp. ht., transient pulse technique 3—51823
$ZrF_4-ThF_4-LaF_3$ glass, low temp. acoustic props., glass transition temp., two-level systems model 3—28053

glass fibre reinforced plastics
ablative radome materials, thermal-ablation and erosion modelling 3—9263
applications and processing advances 3—58093
chopped strand mat reinforced unsaturated polyester resin laminate, fracture toughness eval. 3—34439
cross-ply laminated plates with elastically restrained angles, postbuckling analysis 3—42161
endurance and strength during variable cycle loading, eval. model 3—24435
epoxy laminate, fatigue test normalisation scheme, S-N curves 3—48024
epoxy matrix, accelerated ageing in water 3—34334
epoxy matrix, aligned discontinuous fibre, complex moduli 3—24286
epoxy matrix, damping props., anisotropy 3—42714
epoxy matrix, environmental SCC 3—58278
epoxy matrix, fracture surface energy, effect of absorbed water 3—24329
epoxy matrix, laminates, fracture, unifying strain criterion 3—14696
epoxy matrix, linear fracture mech. principles appl. 3—9149
epoxy matrix, modelling of hydrothermal ageing 3—4062
epoxy matrix, uniaxially aligned, compressive failure and kinking under hydrostatic press. 3—29157
epoxy matrix 3—4002
epoxy resin laminates, impact fatigue strength under repeated impact loads *(Japanese)* 3—58225
epoxy resin matrix-silane coupling agent interface, spectroscopic characterisation 3—19313
epoxy-glass composite, laser drilling, pulsed, transient photoacoustic monitoring 3—45220
failure determ. in plane stressed state by mech. luminesc. method 3—53328
fatigue damage diagnosis using diffuse light transmission 3—53327
fatigue life, frequency depend. *(Japanese)* 3—58221
fatigue strength anisotropy estimation 3—29247
flawed, AE under accelerated weathering and falling weight impact tests *(Japanese)* 3—19402
jute-glass hybrid fibre reinforced epoxy, compressive strength rel. to vol. fraction 3—53125
laminate, fatigue damage, diffuse light transmission, cyclic loading effect 3—29153
laminates, fracture, unifying strain criterion 3—14696
laminates, method for stress-strain state determ. during prod. process 3—14820
optical waveguides, NDT method 3—44012
polybutylene terephthalate moulding compounds, props. and appls. in telecommunications 3—19312
polyester laminate, fatigue crack growth *(Japanese)* 3—58218
polyester laminate, fatigue crack growth behaviour *(Japanese)* 3—58220
polyester laminate, substances contributing to generation of osmotic press. 3—34427
polyester matrix, compressive fatigue behaviour, 77K and 300K 3—58191
polyester matrix, interlaminar fracture behaviour, effect of water 3—34428
polyester resin matrix, long-term strength in dil. sulphuric acid 3—24335
polyetherimide matrix, short fibre reinforced, fatigue initiation 3—29147
polyethylene terephthalate matrix, microstruct. and fracture 3—19406
polyoxymethylene copolymer matrix, short glass fibres, modulus development 3—24283
polypropylene matrix, fiber-polymer interface strength 3—19473
PTFE matrix, self-lubricating, for extreme environmental appls. 3—24373
pultruded rods, SCC in HCl environment, crack propagation 3—58261
research at Liverpool University 3—14813
sheet molding compound laminates, component quantity effect on mechanical props. *(Japanese)* 3—58168
shell, cylindrical, load-carrying capacity under combined thermal and mech. loading 3—17793
shell, cylindrical, strain state, local load effect 3—53151
strength of fibreglass under complex stressed state, struct. parameters effect 3—53141
structural integrity assessment using liquid crystal kit 3—58348
surface strain meas. 3—9137
vinyl ester matrix, diffusion of liq. into thick sections 3—23090
vinyl ester resin matrix, high strength sheet moulding cpd., fatigue damage 3—24328
wear and friction up to 260°C 3—47966

glass fibres
see also fibre optics; optical fibres
acoustic material, specific impedance, layer struct. influence 3—37275
active fibrelaser glasses, generation parameter var. due to action of pump radiation 3—37047
chalcogenide semiconductor fibres, optical props. 3—1793
diameter meas. by interference method 3—265
electroconducting, with metallic grain dispersion, prep. by ion exchange and reduction method 3—14551
metallised, automated flaw inspection 3—53343
multicomponent-glass optical fibers for long-wavelength application 3—32478
optical fibres, tension monitoring device during production 3—42042
positive ion emission accompanying fracture, time-of-flight meas. of mass-to-charge ratio 3—19397
production, physical characteristics and applications *(Polish)* 3—53013
$BaF_2-GdF_3-ZrF_4$, for transmission in mid-IR 3—12356
$BaF_2-GdF_3-ZrF_4$, optical fibre prep., transmission in mid-IR 3—12357
$BaO-SiO_2-TiO_2$ glass fibres, alkaline durability *(Japanese)* 3—4175
$BaO-TiO_2-SiO_2$ glasses, alkaline durability 3—34513
GeO_2-doped fibres radiation induced colour centres 3—41936
$GeO_2-Sb_2O_3$ glass optical fibres for 2 to 3 μm fabricaed by vapour phase axial deposition 3—46295
$Na_2O-FeO_n-B_2O_3-SiO_2$ glass system, elec. resist., semicond. props. 3—33721
$Nd_xR_{1-x}P_5O_{14}(R=La,Gd,Y,Bi)$, glass fibre 1.055 μm lasing characteristics 3—56205

glass fibres continued
- SiO_2 fibres, tensile strength statistics 3—43936
- SiO_2, high purity, prep. from quartz sand and C black for solar grade Si prep. 3—34253
- SiO_2 optical glass fibres, SCC, delayed failure 3—9203
- Tb_2O_3, scintillating glass target, charm and beauty detect. appls. 3—45768

glass formation *see vitrification*

glass industry
- conference, Beijing, People's Republic of China (Aug. 1981) 3—30548
- molten glass contactless level sensing by laser beam reflection 3—257
- regenerative glass furnace waste heat conversion to electricity, feasibility assessment 3—29378
- temperature measurements in the production of glasses under conditions of microgravitation 3—45144

glass-metal seals
- Josephson point contacts fabrication, for submillimetre-wavelength mixers 3—49399
- separable glass-metal junction for use under pressure, using double Teflon-4 cone 3—36033

glass structure *see glass; noncrystalline state structure*

glass transition (glasses)
- *see also vitrification*
- alkali borate glasses, thermal expansion, glass transform. 3—57112
- alkali oxide-WO_3 systems, rapidly quenched glasses prep. and characteris. 3—29054
- amorphous metal, local struct. fluctuations, glass transition 3—2801
- bis-(4-dimethylamino-2-methylphenyl)phenylmethane, hopping transport 3—3200
- borate glasses, struct. change at solid-liquid transition, absorption spectra study 3—13453
- cluster model, cluster size as order parameter 3—18457
- conference, Beijing, People's Republic of China (Aug. 1981) 3—30548
- cooperatively rearranging regions, correl. lengths 3—42775
- fluoride glasses, heavy-metal, heat capacities 3—28115
- formation kinetics 3—51501
- inorganic glasses, structure, glass transition and phys. props. *(Polish)* 3—2426
- metallic glasses, structure, defects, crystallisation and glass transition temp. 3—33108
- silicate glasses, struct. change at solid-liquid transition, absorption spectra study 3—13453
- simple model for a glass transition 3—47112
- structural recovery of quenched and annealed glasses 3—13107
- temperature dependence of relax. processes 3—2728
- $AgI-Ag_2O-B_2O_3$ glassy electrolytes, struct. and glass transition 3—22783
- $AgI(Br)-Ag_2O-B_2O_3$ superionic conducting glasses, IR spectra, glass transition temp. and cond. studies 3—33495
- $AlF_3-ThF_4-BaF_2-RF_3$ (R=rare earth), glass composition and transition temp. 3—23042
- Al_2O_3, temp. depend. of strength ionisation, relationship with structure *(Russian)* 3—14706
- As-Sb-Se glass system, struct. and elec. props. 3—22788
- As_2S_3:Au glass, structural, optical and electrical props. *(Japanese)* 3—56822
- $(Ca,K)NO_3$, short time struct. relax. process, glass transitions, expt. and computer simulation 3—38068
- $CsNO_2$, around 40K, adiabatic calorimeter with built-in cryo-refrigerator 3—30860
- $GeO_2-PbO-Bi_2O_3(Tl_2)$, glass-forming systems, study using X-ray diffr., DTA and thermomech. anal. 3—13108
- $Ge_{32}Se_{24+x}Te_{40-x}As$ (x=0, 8, 16, 24, 32) glasses, optical and elec. gaps, cond., glass transition temp., DSC study 3—34056
- $KNO_3-Ca(NO_3)_2$, glass, elastic props., Brillouin scatt. study 3—47664
- $NaCl-KCl-ThCl_4$ system, glass forming region, DTA and IR spectra study 3—22786
- $Na_2O-B_2O_3$ glass melt struct. rel. to glass struct. 3—2378
- $Na_2O-B_2O_3-SiO_2$ glasses, tie-line direction in liq. phase separation region, temp. effect 3—2820
- $Na_2O-CaO-SiO_2$ glasses, N-containing, struct., mech., optical, and elec. props. 3—33129
- Na_2O-SiO_2 glasses, mech. props., effect of dissolved water 3—9159
- $Na_2O-SiO_2-Fe_2O_3-Y_2O_3$ glass, Mossbauer and EPR spectroscopy study 3—3603
- $Na_2O-SiO_2-Li_2O(K_2O)(Ca_2O)(Ba_2O)(Mg_2O)(Y_2O)$, glass transition temp., network modifier mixing effects 3—51791
- $Pd_{82}Si_{18}$ amorphous alloy, thermal stability and crystn. behaviour under H press. 3—22779
- $Pt_6(NH_3)_{10}Cl_{10}(HSO_4)_4$, partially oxidised Magnus green salt, quasi-one-dimens. conductor, expt. study 3—18689
- Se-P glasses, transition temp., bulk modulus, comp. depend. US vel. meas. 3—13307
- a-Si:F films, RF glow discharge prep., struct. props. 3—34243
- Si-O-OH polymer glasses, network parameters, melting point and viscosity 3—7918
- $SiO_2-Na_2O-NiO-Fe_2O_3$ glasses, precipitation of $NiFe_2O_4$, ESR and Mossbauer studies 3—13468
- Te-Sn(Pb)(Ge)(Cu), chalcogenide glasses, obtained by rapid cooling from liq., crystn., morphological aspects 3—7913
- $Ti_{50}Be_{40}Zr_{10}$, Metglas 2204, thermoelec. power anomalies, resist. meas., press. study 3—28341
- Tl-V-S system, glass form. 3—57090
- $ZrF_4-BaF_2-AlF_3-NaF$ glass, low temp. acoustic props., glass transition temp., two-level systems model 3—28053
- $ZrF_4-BaF_2-BaCl_2$ glass, IR and Raman vibr. spectra and struct. 3—22785
- $ZrF_4-ThF_4-LaF_3$ glass, low temp. acoustic props., glass transition temp., two-level systems model 3—28053
- $ZrO_2-Y_2O_3$ (15 wt.%), temp. depend. of strength ionisation, relationship with structure *(Russian)* 3—14706

glass transition (polymers)
- Autovibron for glass transition determ. 3—18458
- epoxy copolymers, brominated, moisture absorption, glass transition temp. 3—47223
- epoxy resins, cured, glass transition temp. of highly crosslinked networks 3—2802
- epoxyamine network polymers, dense, glass transition temp. and struct. *(Russian)* 3—51793
- ethylene vinyl acetate copolymer, dynamic glass transition zone limits determ. *(German)* 3—38071
- gas permeability selectivity *(Russian)* 3—51870

glass transition (polymers) continued
- graphite fibre reinforced polyimide resin 3—24284
- linear polymers, durability above glass-transition point under complex loading *(Russian)* 3—9114
- linear polymers, viscosity rise in prestationary stage of uniaxial extension *(Russian)* 3—9115
- mixtures containing novolak resins, compatibility 3—42790
- network polymers, glass transition temp. calc., and mol. mass of chain fragment between crosslinks determ. *(Russian)* 3—51792
- nylon, secondary relaxation detected by US pulse echo technique 3—13352
- organosilicon rubbers, crosslinked, filled and unfilled, mol. mobility *(Russian)* 3—12026
- plastic, amorphous, thermal stresses w.r.t. opt. performance, thermoelastic effect 3—8797
- PMMA, mol. orientation development in plane strain compression 3—51503
- poly(2,6-dimethyl-1,4-phenylene oxide)/styrene-maleic anhydride copolymer blends, characterisation 3—14642
- poly(N-vinylcarbazole) and mixtures with poly(N-epoxypropylcarbazole), holes drift mobility in glass transition region 3—8492
- poly-4-methyl-pentene-1, ultraquenched glass, chain mobility and crystallisation 3—13127
- poly-n-butyl acrylate/polystyrene, interpenetrating network, review and anal. 3—43882
- poly-N-vinylcarbazole, T_g depend. on steric microstruct. and mol. wt. 3—13452
- 1,2-polybutadiene, linear, durability above glass transition point under complex loading *(Russian)* 3—9114
- polybutylmethacrylate, viscosity rise in prestationary stage of uniaxial extension *(Russian)* 3—9115
- polyester/Saran blends, miscibility, DSC, glass transition temp. 3—51808
- polyethylene terephthalate, struct. changes from thermal treatment in glass transition region *(German)* 3—38070
- polyimide fibres, molecular mobility of chemical structures by NMR *(Russian)* 3—47556
- polylactone-chlorinated polymer blends, miscibility, DSC, dynamic mech. obs. 3—38091
- polymer, amorphous, dielectric studies at high press. 3—14206
- polymer blends, miscible, charact. techniques, review 3—38089
- polymers, amorphous, cooperative relax. props. and glass transition temp., press. effect 3—8201
- polymers, crystallizable, compatibility 3—42792
- polymers, dielec. principal relax. above and near glass transition 3—34032
- polymers, insulating materials, radiation induced current and fine struct. 3—8100
- polymers, synthetic, segment size by spin-probe method 3—3509
- polyoxy-2,2′-dimethylazoxybenzene-4,4′-diyloxydodecanedioyl, phase transitions, DSC, optical microscopy 3—38063
- polyphenylquinoxaline, dynamic and mech. props. *(German)* 3—39190
- polypivalolactone, ultraquenched glass, chain mobility and crystallisation 3—13127
- polysilastyrene, mol. motion, pulsed ^1H NMR meas. 3—19006
- polystyrene, amorphous, enthalpy, temp. depend. near glass transition *(Russian)* 3—47127
- polystyrene, high mol. wt., viscous and viscoelastic props. in soln., solvent depend. 3—17824
- polystyrene, thermolum. curves analysis using relax. phenomenology methods 3—19214
- polytetrahydro-4H-pyranyl-2-methacrylate, dil. soln., chain flexibility, glass transition temp., light scatt. 3—51471
- polyurethane elastomer, liquid, p-V-T studies 3—13395
- polyvinylidene fluoride, phase I poled unoriented film, piezoelec. and pyroelec. response, press. and temp. depend. 3—14218
- PVA, amorphous, enthalpy, temp. depend. near glass transition *(Russian)* 3—47127
- PVC, dielec. permittivity and loss, thermal history influence 3—19048
- PVC-post chlorinated PVC blends, compatibility, mech. criteria 3—14641
- relaxation time spectra resolution above glass transition point *(Russian)* 3—9107
- rubber, butadiene-styrene, filled and unfilled, relax. transitions *(German)* 3—39189
- silicone oil, polydimethyl siloxane, thermal cond. and sp. ht., temp. and press. dependence meas. 3—33523
- simple model for a glass transition 3—47112
- structural recovery of quenched and annealed glasses 3—13107
- styrene-acrylonitrile copolymer miscibility with polyacrylates and polymethacrylates 3—2813
- thermoplastics, liq.-liq. transition studied by torsion impregnated cloth anal., glass form. 3—2766
- vinyl chloride-maleimide copolymers, glass temp. and thermal stability *(German)* 3—38069
- C fibre reinforced epoxy resin, dynamic shear props., temp. depend. 3—58149

glasses *see glass*

glassy state *see vitreous state*

glide, dislocation *see slip*

globular star clusters
- age calibrations of Magellanic cloud clusters 3—35677
- ages and compositions from colours and absolute magnitudes 3—30434
- Bo 158, X-ray globular cluster in M31, optical and UV obs. 3—10444
- ω Centauri, metal poor red giants, chem. comp. 3—25535
- central black hole dynamics 3—10408
- collision term for system with rare Coulomb encounters 3—44802
- colour-mag. diagrams for oldest clusters, evolution 3—48967
- core mass and density var. 3—25536
- dynamical evolution, determ. method 3—25534
- element abundance determinations for metal-poor stars, systematic effects, conference, Patras, Greece (August 1982) 3—54570
- elliptical galaxies globular clusters colours rel. to halo stars 3—54462
- in Galaxy, four-colour photometry of giant stars 3—54366
- Galaxy, globular cluster system, evidence for two populations of clusters 3—10409
- hierarchical merging rel. to struct. of globular clusters and elliptical galaxies, theory 3—49001
- internal motions and radical vel. *(German)* 3—35589
- isothermal cores, stability limits for two-component systems 3—35678
- Large Magellanic Cloud, cluster flattening 3—25604
- RR Lyrae stars in globular clusters, metal abundances 3—5368
- M13, discovery of two new variable stars, L66 and (L598) 3—15925

globular star clusters continued
  M13, halo gas towards Barnard 29 star, obs. 3−40208
  M15, anal. of props. of double-mode RR Lyrae variables 3−54370
  M15, metal-poor globular cluster, C and N abundances in giant stars 3−54455
  M15, positions, magnitudes and colours of stars 3−40206
  M15(NGC 7078), central region giant stars, luminosity distrib. from V obs. *(Russian)* 3−15966
  M22, evidence for chemical inhomogeneity from spectroscopic survey 3−54454
  M22 red giants, element abundances in six stars, visible obs. 3−25530
  M31 globular clusters, struct. props. and X-ray emission rel. to galactic globular clusters 3−5413
  M3, photometry of bright stars in nucleus 3−54456
  M5, stellar content and synthetic models, UV obs. 3−48965
  M5 red giants, CN bimodal distrib., mixing implications, visible obs. 3−30365
  M71, errors in high-resolution abundance anals. of giant stars 3−59321
  M71, metal abundances in giant stars from IPCS spectra 3−59415
  M87 globular cluster system, accretion from less massive galaxies, photometric anal. 3−30493
  M92, metal-poor globular cluster, giant stars C and N abundances 3−5372
  in Magellanic Clouds, four-colour photometry of giant stars 3−54366
  Magellanic Clouds, red globular clusters, IR survey of asymptotic giant branch stars 3−30362
  metal-poor stars in globular clusters, abundances 3−20361
  motion, effect of central neutrino mass conc. 3−20225
  motion in galaxy, wake gravit. effect on cluster 3−40019
  NGC 1851, 6441, 7724 and 6712, X-ray globular clusters, searches for pulsed X-ray emission 3−54547
  NGC 1851, CN strong stars identification, radial vel. and abundances, visible obs. 3−30378
  NGC 1851, four new variable stars, periods 3−5369
  NGC 1851, radial vel. meas. for possible binary star (NGC 1851-UV5) 3−20364
  NGC 1866, young LMC star cluster, age determ. 3−59416
  in NGC 253, late type edge-on spiral galaxy, cluster candidates nature 3−40250
  NGC 362, bright stars colour magnitude and evolutionary anal., UBV obs. 3−44806
  NGC 5466, Cepheid V19, pulsation mode, mass, effective temp. and gravity 3−20373
  in NGC 55, edge-on spiral galaxy, search for assoc. globular clusters 3−30433
  in NGC 55, Sculptor group galaxy, spectra and photometry of globular clusters 3−10443
  NGC 6171, RGU three-colour photometry of nearby star field *(German)* 3−5275
  NGC 6293, distance and parameters for 11 newly discovered variable stars, B obs. 3−30379
  NGC 7006, giants, C, N and Fe abundances, visible obs. 3−54457
  NGC 7089 (M2), colour-magnitude diagram for stars in central part of cluster 3−40207
  NGC 7099 (M30), UBV photometry in cluster central region 3−5371
  orbital eccentricity in galaxy with logarithmic pot. 3−30152
  pair correl. in astron. bound gravitating systems 3−20440
  Palomar 13, giants, C, N, Fe abundances, visible obs. 3−54457
  Population II giants, $H\alpha$ emission, metal abundance, microturbulence, mass loss and luminosity 3−30366
  Population II stars, He diffusion effect on evolution 3−30367
  red star clusters in Magellanic Clouds, anal. of integrated spectra 3−10445
  RICHFLD photographic photometry of faint stars 3−54452
  spectra used to determine population models for late type spiral galaxy nuclei 3−25340
  stellar duplicity anal. from K-type giants random sample obs. 3−48951
  47 Tucanae, central region C and M-type stars identification 3−35445
  47 Tucanae, giant branch TiO band strengths 3−15963
  47 Tucanae, globular cluster giant stars, CN and Na lines and comp. 3−5373
  47 Tucanae, metal abundances in giant stars from IPCS spectra 3−59415
  X-ray bursters nature and origin 3−5354
  X-ray source neutron stars and white dwarfs 3−44810
  X-ray sources, properties anal. 3−15964
glossaries
  photo-ergonomy, glossary of some terms used 3−4544
  skin injuries, glossary of terms useful in photoergonomy 3−4543
  space terms 3−35785
glow curves *see thermoluminescence*
glow discharge deposition *see plasma deposition*
glow discharge lamps *see discharge lamps*
glow discharge microphones *see microphones*
glow discharges
  afterglow plasma, metastable Ar role, time-resolved emission and absorpt. 3−42479
  air, axial discharge, anode voltage drop, probe meas. 3−2321
  atomic emission spectrosc. solution anal., using glow discharge device 3−16424
  boundary conditions effect with a hollow cathode 3−27781
  capacitive HF discharge, current density effect at moderate pressure 3−42482
  cathode visualisation in high voltage stationary glow discharge 3−13002
  cold-cathode discharge, contracted in crossed fields, existence and struct. 3−33020
  decaying plasma, shock wave propag. 3−32899
  dye laser, opto-galvanic wavelength determ. by Ne resonant response monitoring in glow discharge lamp 3−46251
  electric and gas dynamic correl. meas. *(Russian)* 3−2313
  entrained charges in fast longit. gas flow, positive ion transport *(Russian)* 3−27759
  fast electron beam from DC glow discharge, interaction with metallic surface 3−2608
  gas flow, glow discharge, review 3−42481
  glow discharge, particle excitation mechanism, relax. studies 3−2320
  high voltage glow discharge for neutron generation 3−41392
  high-voltage, model 3−46800
  high-voltage discharge, axial constructions and maximal voltage and current charact. 3−51411
glow discharges continued
  hollow cathode source, for gas phase refractory metal atom prod. 3−24070
  hollow-cathode discharge for XUV lasers and radiation sources 3−12997
  HV, using heating from focused electron beam from cathode *(German)* 3−2334
  internal processes, spatial and temporal studies obs. 3−2332
  ISABELLE, DC glow discharge cleaning 3−17138
  mixtures in glow discharge positive column, spectral and elec. pumps. 3−2328
  molecular gas glow discharges, photoionisation effects 3−33018
  molecular ions+electrons, dissociative recombination 3−11995
  neutron tube, high voltage discharge breakdown 3−17155
  optical detection by glow discharge in DC mag. field, injection locking effect 3−32999
  optogalvanic spectroscopy using hollow cathode lamps, wavelength calibration *(Chinese)* 3−36710
  plasma-wall interaction simulator dynamics, H recycle and wall inventory 3−17046
  polychlorinated benzenes, decomposition in RF glow discharge plasmas 3−34607
  polysiloxane thin films, prep. in glow discharge, struct., IR spectrosc. obs. *(Russian)* 3−47660
  positive mol. ion prod., MM and subMM absorpt. spectra 3−56768
  pre-anode instability, high press. numerical study *(Russian)* 3−2314
  RF for Josephson junction fabrication, HF RF oxidation techniques to fabricate thermally stable junctions 3−18826
  shock wave propagation obs. 3−33022
  stationary, fast electron oscillation effects, scattering from cathode surface *(Russian)* 3−27761
  UV radiation radial distrib. and neutral flow from hollow cathode glow discharges 3−12998
  Ar glow discharge, metastable atom density, theoretical model 3−33009
  Ar, optogalvanic spectrum in glow discharge lamps 3−17244
  Ar-xylene, glow discharge preparation of thin polymer films, plasma density and temp. 3−14504
  Bi hollow cathode ion laser, 680.9, 660.0, 571.9 nm Bi II lines, 1.1711 μm Bi I line 3−27008
  CCl, $A^2\Delta$ state, radiative lifetime and collisional quenching in AC glass discharge 3−17338
  Cs, 7S-nP transitions, optogalvanic detect. 3−36713
  Cu hollow cathode, He-Ne laser line generation in 1.15 to 1.20 microns range 3−22031
  Ga II hollow cathode discharge, CW laser action obs. at 6335, 7199 Å 3−27007
  He atoms, excited, multiphoton ionisation in glow discharge by ruby laser 3−17250
  He, cathode region, electron swarm, Monte Carlo anal. 3−18152
  He, DC hollow cathode discharges using Al cathode, glow-to-arc transition, report 3−46804
  He glow discharge, metastable atom density, theoretical model 3−33009
  He glow discharge electron beam, luminosity study 3−42472
  He II 468.6 nm line intensity radial distrib. in high voltage hollow cathode discharge tube 3−51425
  He-Cd lasers, oscill. and striation effects on emission charact. 3−6955
  He-F_2 mixtures in glow discharge positive column, spectral and elec. pumps. 3−2328
  He-H_2O positive column plasma, number density and electron temp., numerical model 3−37716
  He-I_2 discharge plasma study 3−2310
  He-Kr hollow cathode ion laser investigation *(Chinese)* 3−41862
  He-Ne glow discharge, reson. interaction of laser emission 3−27782
  Hg atoms, excited, multiphoton ionisation in glow discharge by ruby laser 3−17250
  Kr-He mixture, DC hollow cathode discharges using Al cathode, glow-to-arc transition, report 3−46804
  Li, self-broadened first reson. line wing asymm. 3−50353
  N_2, axial discharge, anode voltage drop, probe meas. 3−2321
  N_2-air mixture ionisation in contracted glow discharge, energy balance 3−51336
  Na, self-broadened first reson. line wing asymm. 3−50353
  Ne atom, 632.8 nm spectral line, collisional broadening and shift obs. in Ne and He-Ne glow discharges 3−55891
  Ne, dynamical optogalvanic effect, collisional mixing, atom role near cathode surface 3−36712
  Ne glow discharge, metastable atom density, theoretical model 3−33009
  Ne obstructed glow discharge, optogalvanic effects 3−42462
  Ne, optogalvanic spectrum in glow discharge lamps 3−17244
  Ne positive glow discharge column, electron energy distrib. functions and inelastic processes 3−2319
  Ne/O_2 RF diode sputtering glow discharges, optical emission study 3−52937
  Ne+Cl_2 positive glow discharge column, electron energy distrib. functions and inelastic processes 3−2319
  O_2, electrokinetic props. and dissoc. in O glow discharge 3−51427
  O_2, glow discharge, particle excitation mechanism, relax. studies 3−2320
  a-Si:H, glow discharge deposited, initial growth region 3−42977
  SiH_4, electron impact dissoc., total cross sections 3−32224
  SiH_4 glow discharge plasma, neutral species detection by CARS 3−51377
  SiH_4 plasma, neutral species detection using CARS 3−42440
  Si_2H_6, electron impact dissoc., total cross sections 3−32224
glueballs *see colour model; quark confinement*
gluonia *see colour model; quark confinement*
GO calculations
  see also GTO calculations
  ab initio energy gradients efficient algorithm using s,p Cartesian Gaussians 3−1218
  axial Gaussian lobe 3d and 4f orbitals, spherically symmetric 3−1220
  DODS-FSGO model 3−21625
  polyatomic mols., gaussian and continuum functions integrals, addition theorem for solid harmonic gaussians 3−11642
  small mol. ions, floating spherical Gaussian functions calcs. 3−11672
  small mols., floating spherical Gaussian functions calcs. 3−11672
  BH, mag. susceptibility, screening const., ab initio calcs. 3−50310
  Be, correlation energy, explicitly correl. Gaussian geminals, 2nd order perturbation calcs. 3−41487
  BeH^-, mag. susceptibility, screening const., ab initio calcs. 3−50310
  CH^+, mag. susceptibility, screening const., ab initio calcs. 3−50310
  HF, coupled Hartree-Fock polarisability dipole moments, perturbation correl. corrections 3−50294

GO calculations continued
- He, correlation energy, explicitly correl. Gaussian geminals, 2nd order perturbation calcs. 3—41487
- $NiSi_2$, self-consistent energy bands and bonding 3—33629
- Zn, Hartree-Fock function approximation, by linear combination of Slater and Gaussian orbitals 3—26638

gold
- *see also nuclei with ......*
- adsorbed Ar and Xe, excited states, EELS and UPS study 3—47399
- adsorption, of pyridine, surface enhanced Raman scatt., excitation profiles and temp. depend. 3—42918
- band struct, initial level population, and channelling radiation 3—47012
- clusters, binding energies, configs., diatomics in mols. approx. 3—17397
- colloidal particle deposition in monolayers and multilayers 3—38265
- colloidal particles, of dyes, surface enhanced Raman spectra 3—8826
- Compton scattering, L-shell integral, cross-section meas. 3—3850
- concentration in Fawakhir ore, Egypt 3—48715
- contact electroplating, modern techniques, review 3—3976
- corona discharge O_3 production, influence of nature of electrode material 3—9358
- density meas. up to 1400°C *(Japanese)* 3—49329
- diffraction gratings, polystyrene thin film coated, Raman scatt. 3—38811
- diffusion in to Si during low energy Ar^+ bombardment 3—2887
- diffusion into Sn thin films, attenuated total refl. study 3—23102
- diffusion of Al, low temp., grain boundary migration and recrystn. 3—38141
- discontinuous thin film, elec. resist. and activation energy, thickness depend. 3—38496
- electrical resist., temp. and size depend., surface contribs. 3—52111
- electrical resist. at low temp., deviations from Matthiessen's rule 3—33702
- electrical resist. at low temp., effect of electron-dislocation scatt. 3—33703
- electrode surface, potentiostatically polarised, SEM study 3—34527
- electrodeposited, diamond-turned, laser-induced damage at 492 nm 3—18337
- electron microscope images of cryst. lattices, computer model 3—33048
- electron-fluid shell models 3—42731
- electron-phonon interaction, microcontact spectroscopy study *(Russian)* 3—2713
- electronic struct. and d^ns^1 impurity states 3—3046
- electroplated, wear resistant coating for Ru elec. contacts 3—43991
- energy loss meas., low-velocity ion effective charge 3—14418
- epitaxial growth on Pd (111), transition from pseudomorphic to nonregistered state 3—47242
- FCC structures, cryst. growth and forms, Monte Carlo study *(Russian)* 3—51524
- Fermi surface, eight-cone model 3—42996
- film, (111) surface struct. and inclined planar defects, electron microscopy 3—8373
- film, conductance, influence of electric field on weak localisation 3—28453
- film, electron backscatt. coeff. using double layers 3—58010
- film, evaporated, absorpt. coeff. determ. from phase change meas. in transmission 3—14368
- film, fractal clusters near percolation threshold 3—13668
- film, polycryst., grain boundary diffusion of K 3—3017
- film, superimposed on metallic base, elec. cond. 3—38494
- film, transmission sputtering by low energy Xe ions, system and meas. 3—19241
- film, vacuum evaporation, nucleation and growth, real-time computer simulation 3—23221
- film on industrial diamond, nondestructive thickness meas. using acoustic microscope, SAW dispersion curve 3—16334
- film on pure NaCl surfaces, nucleation data 3—23224
- films, thin, on KCl, crystn. front perimeter 3—38254
- films, vacuum deposition, nozzle beam vapour source 3—52947
- foil, electronic stopping power for 50-230 keV D^+ and He^+ 3—28019
- foil, energy loss and straggling of p, d and α-particles 3—57009
- foil, laser irrad., XUV radiation transport 3—22680
- foils, elec. resist., temp. depend., size effect theory 3—13800
- foils, surface-induced elec. resist., temp. depend. 3—43296
- grain boundary at. struct., X-ray diffr. study 3—46955
- granular film, plasma reson. band oscill. strengths, dielec. const. effect 3—8790
- ion bombarded, sputtering yield data, 25 to 100 keV, fusion reactor material relevance 3—21515
- ion plated film on Ni and Fe substrates, tribological props. and XPS studies 3—14746
- island film optical storage, long-life produced by amorphous Si overcoat 3—57987
- islet film, Hall EMF meas. by two-frequency method 3—49398
- isotope shift determ. in D_1 line between ^{197}Au and ^{195}Au 3—32005
- lattice dynamics, phenomenological model 3—2702
- low energy electron reflectance spectra and band struct. 3—23257
- metallic films, resistivity depend. of 1/f noise 3—43243
- metallisation contacts, alloyed, on InGaAsP/InP layers 3—23188
- microcrystal, microdiffr. patterns using STEM with opt. analyser, multiple twinning obs. 3—13238
- monitoring in carbon-in-pulp process, online flameless atomic absorpt. spectrometer 3—48112
- monolayers, growth and chemisorptive props. on Pt, AES, desorption, and LEED study 3—8334
- native particles, Ag content variation, ESCA depth profiling 3—33288
- ohmic contact to InP-InGaAsP system, metallurgical behaviour 3—23481
- optical properties in IR and far IR 3—57868
- optical surface angle resolved light scatt. meas. in 75 to 750 eV range 3—7125
- particles, vacuum evaporated, icosahedral, STEM study 3—28239
- particles in fused SiO_2 matrix, fault struct. form. during coalescence and growth 3—13234
- plasmon struct. in XPS spectra 3—28961
- polarisable sphere, adsorbed mol. enhanced Raman scatt., EM aspects 3—19122
- reflection of H and He in single-collision model 3—52890
- rough Au deposit, surface height and slope distribs. 3—5764
- Schottky barriers fabrication, Au thermal vacuum deposition on n-InP 3—18764
- SEM, electron currents in specimen chamber analysis 3—49506
- small particles, electron microdiffr. patterns 3—46817
- sols, amphiphilic and polymer mol. sub-monolayer coverage, surface enhanced Raman scatt. 3—52782

gold continued
- specific heat, S-electron effective thermal mass, electron-electron and electron-phonon interaction *(Chinese)* 3—51816
- sputter coating, LV sputter coating, grain size reduction 3—52941
- stopping power for nucleon α-particles and C ions, $Z_1{}^3$ deviation 3—57006
- surface, He and D ion bombardment, energy reflection coeffs. 3—43688
- surface (100), struct. model from LEED diagram, Monte Carlo simulation *(French)* 3—18564
- surface (110), secondary electron emission, spin polarization 3—8911
- thermally stimulated exoelectron emission after low energy electron excitation 3—8945
- thin film, magnetoresist. and inelastic scatt. time in weakly localised regime 3—57438
- thin film, microwave transmission coeff. phase meas. 3—28935
- thin film, roughness spectrum and surface plasmons 3—43650
- thin film, surface-plasmon radiation 3—43649
- thin films, effective conductivity and microwave reflectivity 3—38493
- thin island film, dielectric props., statistical theory 3—3635
- ultradisperse particles, influence of surface composition on melting temp. 3—2756
- vacuum deposited film, struct., vel. to impact vel. of vac, deposited atoms 3—51986
- VLSI, use of EHD ion source, ion beam measurement and microfabrication *(Japanese)* 3—39430
- volume dependence of spin-orbit splitting in d-band 3—3135
- wire coils, dislocation elasticity *(Russian)* 3—33340
- X-ray transmission gratings, fabrication and appl. in spectroscopic laser produced plasma diagnostics 3—22195
- Ag-Ge coated, IR surface plasmon attenuation coeffs. 3—34059
- Al-Al_2O_3-Au electroformed struct., SEM and XPS studies 3—2991
- Al-Al_2O_3-Au/MgF_2 tunnel diode on holographic grating, light emission 3—12263
- Al-Au, dose enhancement factor meas. by ^{60}Co gamma-rays 3—36575
- Al-insulator-Au tunnel sandwich, rear light emission by inelastic tunnelling 3—19197
- Al-polymer-Al, thin film form. by plasma polymerisation, elec. property meas. 3—13921
- As_2S_3:Au glass, structural, optical and electrical props. *(Japanese)* 3—56822
- Au, (e, 2e) reaction, relativistic and nonrelativistic HF calc. 3—1485
- Au and Al particle arrays, surface-enhanced Raman scatt. 3—3708
- Au foil+Si(Cl), equilibrium charge state distribs. of fast ions 3—32190
- Au I lifetime meas. using beam-foil and fast-beam/laser spectroscopy 3—21711
- Au in Ar, Kr and Xe matrix, absorpt. spectra, line shape anal., Jahn-Teller effect 3—1345
- Au XIX, Pm-like lines and transitions of interest to fusion research 3—21872
- Au^{n+}, proton stopping power between 0.1 and 10 MeV 3—6784
- Au/a-Se/Al struct., aging effect of capacitance and photoelec. characts. 3—33802
- Au/Ag epitaxial struct., metastable phase form. by pulsed beams and ion beam mixing 3—2627
- Au/Ag two layer films, grain boundary diffusion, elec. resist. study 3—13556
- Au/Co multilayer system, metastable phase form. by ion beam mixing 3—57002
- Au/Ge interface, electronic props., EELS study 3—18785
- Au/In thin film couples, low temp. interdiffusion, backscatt. spectrometry study 3—57149
- Au/Langmuir-Blodgett film/n-GaP diode, electrolum. 3—38923
- Au/$Ni_{0.55}Nb_{0.45}$ couples, Au and Nb interdiffusion, Rutherford backscatt. study 3—2891
- Au/Si multilayer film, metastable phase form. on ion irrad., Si diffusion 3—2624
- Au/Si multilayer struct., metastable phase form. by ion mixing 3—2628
- Au/Sn thin film couples, interdiffusion and phase formation, Rutherford backscatt. study 3—23107
- Au-Al thin film couple, intermetallic form. and grain boundary diffusion 3—8269
- Au-$As_{30}Te_{48}Ge_{10}Si_{12}$-Au struct., thermal switching at electrode-amorphous semicond. interface 3—8542
- Au-C clusters electronic struct., XPS, AES studies 3—43251
- Au-C-poly(butene-1 sulfone) three-layered system, soft X-ray induced energy deposition 3—37962
- Au-GaP structure, photocurrent due to electron emission from metal, elec. field effect 3—38434
- Au-Ge (111) interface form., AES, LEED, and electron microscopy study 3—38240
- Au-H solutions, H-vacancy interactions, entropy anomaly 3—28111
- Au-InP Schottky barrier diodes, noninvasive anal. of InP surface 3—13881
- Au-InP Schottky diodes, elec. characts., interfacial layer effects 3—8582
- Au-merocyanine-TiO_2, sandwich cells, photovoltaic props., transient effects 3—33758
- Au-merocyanine-TiO_2, sandwich cells, photovoltaic props., electron acceptor doping effects 3—33759
- Au-MgO selective cermets optical props., application in solar absorber-convertors 3—29451
- Au-PbI_2 system sensitometric characts. in case of physical development in negative photographic process *(Russian)* 3—54793
- Au-Si (111) interfaces, localised states, capacitance spectroscopy 3—3315
- Au-Si trilayer struct. films for optical recording 3—1726
- Au-SiO_2, fault struct. form., mechanism in fine particles 3—13235
- Au-Si(111) 7×7 interface growth, cryst. and electronic struct. 3—23190
- Au-SmS, point contact spectroscopy 3—28415
- Au-Sn metal film second sound detectors and their appl., exptl. study 3—42870
- $Au+Cu^{4+}(Nb^{6+})$, K- and L-vacancy production in asymmetric 1 MeV/N collisions 3—11954
- $Au+H^+(He^+)(C^+)(N^+)(Ne^+)$ high energy collisions, electrons and X-rays angular distrib. 3—41646
- $Au+N_2(CO)$, nonspherical scatt. study using thermomagnetic effect in Knudsen gas 3—52881
- $Au^{2+}+He(Ne)$, electron capture, target ionisation, coincidence meas. 3—32185
- $^{79}Au+{}_1{}^1H^+({}_2{}^4He^+)$, M-shell X-ray prod. cross sections meas. 3—6759
- $CdCr_2Se_4$:Ag, impurity effect on FMR spectra 3—57784
- Cu/Au thin layer system, ion irrad.-induced atomic mixing 3—2623
- (Cu_2S+Au)-PbI_2 system sensitometric characts. in case of physical development in negative photographic process *(Russian)* 3—54793

gold continued
n-GaAs:O-Au Schottky barrier diode, deep level studies 3—18646
n-GaAs-Au, MIS-type Schottky barrier, electron traps in oxide layer, detrapping study 3—23499
GaAs-Au thin film interface, microstruct. and colour, heating effects 3—51963
GaP-Au interface, Schottky barriers, γ irrad. effects 3—43283
p-Ge:Au, recombination wave instability in injected electron-hole plasma 3—38420
Ge:Au,Sb, impurity photoconductivity spectra oscills. 3—13860
p-Ge:Au diode, generation-recombination noise under ambipolar injection conditions 3—3270
Ge:Au p-n junction diodes, forward current, inhomogeneous illum. effect 3—18744
Ge/Au interface form., photoemission at Cooper minimum 3—52897
Ge-Au, oxidation to GeO_2 through Au layer contacts, Ge nucl. radiation detectors storage appl. 3—34505
Ge_2S_3:Au chalcogenide glass, impurity effects on EPR and photoluminescence 3—28895
$GeTe_4$:Au, amorphous film, diffusion and structural aspects *(French)* 3—2889
$HgCr_2Se_4$:Ag, impurity effect on FMR spectra 3—57784
InP (100)-Au Schottky contact with etched or cleaned InP surfaces, Fermi level, XPS study 3—47419
p-InSb:Au, deep acceptor impurities, magneto-optical detection 3—14260
Kr^+ beams stopping power meas., time of flight method, Au target 3—51677
MgO:Au^+, ion implanted, precipitation and defects 3—2827
MgO:Au^{3+}d, Eiffel Tower-shaped dislocation dipoles and loops, optical microscopy study 3—2566
Ni/Au films, vacuum deposited on Si (111) substrate, interfacial phenomena, SEM study 3—33516
Ni/lead phthalocyanine/Au photocells, I-V characts. and conversion efficiency 3—38428
Ni-Au(111) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3—23219
Ni-Au(111) epitaxial couples, interfacial dislocations obs. *(French)* 3—23220
Pd-Au(111) and Au-Pd(001) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3—23219
Pd-Au(111) and Au-Pd(001) epitaxial couples, interfacial dislocations obs. *(French)* 3—23220
Si:Au, deep level defects prod. by quenching, DLTS study 3—57309
Si:Au, diffusion and solubility, neutron activation anal. 3—42852
Si:Au, effective mass states, luminesc., photoconductivity meas. 3—52841
Si:Au, electric field enhanced electron emission from acceptor level and A-centre 3—43073
Si:Au, gamma-ray irrad.-induced Au diffusion, Schottky barrier study 3—33509
Si:Au, H, deep level passivation study 3—33676
Si:Au, impurity gettering using Ar-, O- and Cl-ion implantation, MOS study 3—2594
Si:Au, impurity profile meas. *(Chinese)* 3—8078
Si:Au, low temp. diffusion, radioactive Au conc. profile study 3—8264
Si:Au, minority carrier lifetime, recombination mechanisms 3—3219
Si:Au, temperature fluctuation method for direct determ. of thermal activation energy of deep levels 3—57307
Si:Au, transient conductance meas. during pulsed laser annealing 3—57352
Si:Au, zero-phonon photoluminescence study 3—43624
Si:Au diode struct. with strong carrier accumulation, noise spectra 3—13870
Si:Au reverse-biased n^+-p junction diodes, Ag donor level motion, DLTS study 3—28293
Si:Cu/Au Schottky diodes, I-V and photoelec. meas. 3—47422
Si/Au/Ni, vacuum deposited metal films, interface phenomena 3—51961
Si/SiO_2 interface, Au doped, interface states, chem. bond model 3—38484
Si-Au, laser beam annealing of interface, diffusion 3—42657
Si-Au interface, solid-state reaction, initial stage *(Japanese)* 3—28166
Si-Au interface, struct. and behaviour under O_2 exposure, UPS and XPS study 3—52898
Ti/TiO_2/Au anodised layers, current-voltage characts., Schottky effect and types of breakdown 3—47408
Ti-W/Au, RF diode-sputtered film coating on Si substrate, diffusion barrier props. 3—14482
V-oxide-Au tunnel junctions, tunnelling density of states 3—3390
W/Au DC magnetron-sputtered film coating on Si substrate, diffusion barrier props. 3—14482

gold alloys
see also gold compounds
binary systems, equilib. distrib. coeffs. of admixtures *(Czech)* 3—58097
rare earth alloys, R-Au, magnetoelastic coupling studies 3—23769
Ag-Au, sputtering effects, correction factors in quantitative AES 3—14425
Ag-Au foils, dil., CESR linewidth 3—3534
AgMn, spin glass alloy, short range order, small angle X-ray diffusion study 3—13166
Al-Cu melt, X-ray struct. study *(Russian)* 3—46833
$(Au,Cu)_3Zn$, domain struct., periodic lattice twinning 3—2828
Au alkali liquid alloys, electronic and atomic struct. 3—13729
Au Be ohmic contacts to p-InP 3—13904
Au-Cd, (hhl) habit planes in martensite growth wave models 3—47835
Au-Cd (47.5 at.%), martensitic interfaces, TEM 3—34319
Au-Cd (47.5at.%), single cryst., pseudoelasticity 3—43820
Au-Cd (75 at.%) phase transform. 3—9059
Au-Cd-Ag-Cu, Ag and Cu additions, order and quenched-in defect effects on martensitic transform. 3—43832
Au-Cs melts, short-range ionic correls., neutron diffr. study 3—2381
Au-Cu, quantitative AES, backscatt. factor, preferential sputtering exam. 3—14902
Au-Cu, surface conc. of Au during low temp. sputtering 3—13604
Au-Cu (4.5 wt.%), static strain ageing, strain depend. 3—47882
Au-Cu films, electroless autocatalytic deposition 3—9004
Au-Cu-Ge solder for cantilever-type displacement sensor using diffused silicon strain gauges 3—282
Au-Cu-Zn alloys, anharmonicity and martensitic phase transition, elastic consts. determ. 3—29076
Au-Fe, dil., absolute thermoelec. power at low temps., spin glass-Kondo effects 3—8474

gold alloys continued
Au-Fe, longit. magnetoresist near percolation limit, spin glass and ferromag. props. 3—38372
Au-Fe, spin glass crit. relax. time, SQUID meas. 3—8677
Au-Fe (15 at.%), AC susceptibility near percolation limit 3—14021
Au-Fe (19 at.%), spin canting and ferromag., Mossbauer and susceptibility meas. 3—14012
Au-Fe alloys, magnetoresist., theory and expt. 3—38368
Au-Fe spin glass, low-field AC susceptibility and DC magnetisation, SQUID meas. 3—14059
Au-Fe spin glasses, transverse magnetoresist. and Hall resist. 3—38371
Au-Fe(Mn)(Cr) spin glasses, resist. 3—13799
Au-Ge, molten, positron annihilation *(Japanese)* 3—47734
Au-Ge amorphous film, struct., elec. and optical props., free electron model 3—37787
Au-Ge-Ni films, structural changes during heating *(Chinese)* 3—42938
Au-Mg (20 at.%), double hexagonal superstructure, high resolution HVEM study 3—56851
Au-Mn (25-28 at.%), ordered structs., HVEM study 3—2469
Au-Mn spin glass, Curie-Weiss law deviations, DC susceptibility meas. 3—47513
Au-Mn spin glasses, transverse magnetoresist. and Hall resist. 3—38371
Au-Ni, phonon dispersion and thermodynamic props. 3—14557
Au-Ni alloys, elec. cond., anomalous behaviour 3—8471
Au-Ni/stainless steel, brazing, joint strength, wetting and spreading 3—29107
Au-Pd, sputter coating, LV sputter coating, grain size reduction 3—52941
Au-Pd binary alloy system SIMS obs. 3—3909
Au-Pt-Pd-Ag-Fe-Sn, dental alloy, internal oxidation, O ion diffusion, Fe_2O_3 and SnO_2 distrib. 3—51854
Au-Zn alloys for ohmic contacts, alloy deposition by electroplating on semiconductor 3—38478
Au_xAg_{1-x} metallic films, resistivity depend. of 1/f noise 3—43243
$AuAl_2$ alloys, struct., correlation with heat of form. *(German)* 3—22825
AuCd, martensitic transform., internal friction *(Chinese)* 3—43803
$Au_{2+x}Cd_{1-x}$, two-dimensional antiphase-domain struct., modulated struct. anal. 3—38092
$AuCu_3$, anharmonicity in ordered phase, neutron diffr. study 3—18407
AuFe, magnetic behaviour, atomic order, Mossbauer spectra 3—57649
AuFe, magnetic double transition, Mossbauer investig. 3—57652
AuFe spin glass, dilute, random static polarization, μSR study 3—57659
AuFe spin glass, nonlinear mag. susceptibility 3—57657
AuFe, spin glass transition, Mossbauer investig. 3—57651
AuGe ohmic contact formation on n-GaAs, improved method for reducing contact resistivity 3—13906
AuGe-GaAs ohmic contact, laser beam annealed, surface and subsurface morphology 3—57196
β-AuMn, intermetallic phase, antiferromagnetism 3—3428
β'-AuMn, nonstoichiometric phase, thermodynamic props. 3—24213
AuMn spin glass, high temp. susceptibility, freezing process precursors 3—57648
AuMn-AuZn, quasibinary, antiferromag., martensitic transform. and elastic const. 3—39134
Au_2Mn, shear transform. obs., domain struct. 3—39139
Au_4Mn, disordered, local ordering and mag. props. 3—52493
Au_xNi_{1-x}, electronic struct. and density of states, KKR CPA calc. 3—43004
$Au_{55}Pb_{22.5}Sb_{22.5}$, surface phase separation, SEM study 3—28197
Au_cPt_{1-c}, electronic struct., relativistic theory 3—3049
Au_cPt_{1-c}, $N_{6,7}$ soft X-ray emission spectra, electronic struct. 3—3870
Au_4V, magnetisation process under pulsed high mag. fields 3—57695
β'-AuZn, ordered B2-phase, diffusion mechanism, isotope effect *(German)* 3—33490
Au_4Zn, one- and two-dimensional long-period antiphase boundaries, high-resolution electron microscopy studies 3—56912
CaAu, cryst. struct. 3—2471
$Ce_{80}Au_{20}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
Cs-Au, liq. alloys, showing metal non-metal transition, NMR studies 3—3583
Cu-Au, diffusion coeff. using molten salt electrolyte, chronoamperometric determ. 3—47153
Cu-Au, dilute, low temp. sp. ht., Green function theory 3—28116
Cu-Au (14-25 at.%), Zener relax. 3—53101
Cu-Au alloys, stability of $L1_0$ ordered phase *(Japanese)* 3—24210
Cu-Au composition modulated foils, biaxial elastic modulus meas. 3—47016
Cu-Au dilute alloy, thermal and fast neutron irrad., isochronal recovery spectra 3—42674
Cu-Au dilute alloys, fast neutron induced defects, dose depend. 3—42675
Cu-Au film, disordered, spin-orbit interaction and electronic conduction 3—13928
CuAu/CdTe low resistance elec. contact, vacuum deposition prep. 3—18783
Cu_3Au alloy, crit. behaviour and scaling law in ordering process kinetics 3—34297
Cu_3Au Ising spin system, ordered cluster evolution from disordered state 3—57082
Cu_3Au, ordered and disordered, electron irrad. damage 3—13283
Cu_3Au, ordering and disordering, HVEM study 3—13282
Cu_3Au, point-contact spectra of electron-phonon interactions *(Russian)* 3—13380
CuAuMn, spin glass behaviour 3—57658
$CuAu_{14-y}Pd_y$ quasibinary alloy, $L1_0$-type, lattice parameters, axial ratio change 3—13164
Dy-Au, amorphous, random anisotropy effects, sp. ht. and spontaneous magnetisation study 3—23623
Fe-Au-B sputtered amorphous alloys, high mag. moment 3—28521
$Fe_{87}B_{11}Au_2$ amorphous ribbons, high mag.moments and magnetisation 3—28522
n-GaAs-Au-Ge-based ohmic contacts, characts., Auger and SEM anal., ageing effects 3—52250
$La_{1-x}Au_x$, metallic glasses, partial pair correlation functions 3—18223
$(La_{70}Gd_{30})_{80}Au_{20}$, amorphous spin glass, DC mag. susceptibility, press. depend. 3—52491
Nb_3Au, electronic struct., superconductivity and spin fluctuations 3—38299
NiAu/Si system, Ni silicide growth, Au impurity effects 3—47171
Pb-Bi-Au Josephson junction counterelectrodes, film microstructure and thermal stability 3—47238

gold alloys continued
- Pb-In-Au/Pb-Bi thin-film diffusion couples, Kirkendall voids ring form. 3—8266
- Pb-In-Au/oxide/Pb-Au Josephson tunnel junction, high precision potentiometer appl. 3—36038
- PbInAu, Josephson tunnel junction, fabrication and basic props. *(Japanese)* 3—38550
- Pd-Au, diffusivity and solubility of H 3—42850
- Pd-Fe-Au, elec. and mag. props., order-disorder transition temp. effects *(Russian)* 3—23354
- PdAu, modulated struct., electronic struct. and magnetism 3—57267
- Pt-Au dilute alloys, neutron irrad. and annealed, recovery spectra, resistivity method 3—42676
- a-Si$_{1-x}$Au$_x$ films, supercond. and metal-insulator transition 3—3265
- Sn-Au, amorphous, elec. props., effect of average electron conc. 3—43149
- TbAuCu, mag. susceptibility and magnetisation meas. 3—57552
- Ti-Au metallic glasses formed by ion mixing 3—7920
- Ti-Au metastable electron cpd. form. by ion irrad. 3—42684
- V$_3$Au, electronic struct., superconductivity and spin fluctuations 3—38299

gold compounds
- *see also gold alloys*
- Au cluster cpds., XPS characterisation 3—6822
- Au-Si compound formation in Si-SiO$_2$ interface structures 3—38484
- Eu(Pd$_{1-x}$Au$_x$)$_2$Si$_2$, valence and mag. ordering instabilities, global phase diagram 3—28566

goniometers
- computer-controlled four-axis goniometer, for photometry of retroreflectors 3—36063
- digital electrogoniometer for clinical use 3—44338
- electrogoniometry system using a microprocessor for clinical use 3—9766
- qualifying instrument tests by OPMIN method *(Hungarian)* 3—35956
- residual stress meas. by Bragg law diffractometry *(French)* 3—4238
- retroreflection measurement, goniometer mechanism of CIE angular system 3—5830
- two-axis liq. He cooled goniometer for channelling meas. 3—40722
- X-ray diffractometer, double-cryst. stabilisation of angles, attachment design 3—7854

GP zones *see Guinier-Preston zones*

grain boundaries
- *for grain boundary diffusion, see diffusion in solids; for gain boundary segregation, see segregation*
- *see also bicrystals; subboundary structure; twin boundaries*
- alloys, grain boundary at. struct. and intergranular diffusion 3—46957
- BCC crystal, dissociation of lattice dislocations in coincidence boundaries 3—56903
- BCC metals, asymmetric tilt boundaries, free vol., geometric approach 3—27954
- bicrystallography, framework and methodology 3—47228
- bicrystals, grain boundaries, struct. and mech. props., expt. studies *(French)* 3—46962
- bronze-steel-bronze multilayer struct., fracture during high-temp. extension *(Russian)* 3—39236
- ceramics, electronic 3—51617
- ceramics, grain boundary struct., TEM and diffr. studies, review 3—46956
- chemical bonding impurity embrittlement 3—46960
- Coble creep, effect of impurities 3—28038
- coincidence grain boundaries, geometrical approach 3—46949
- conference, Caen, France (Sept., 1982) 3—44892
- conference, Perpignon, France (Sept. 1982) 3—20568
- corrosion of grain boundaries, initiation processes and testing 3—47978
- creep, cavity growth mechanisms 3—47038
- crystallites, joints of boundaries, elastic stresses, self-distortion effects 3—46450
- Cu-Zn, new etchant for study of grain boundary-induced migration 3—48001
- cubic crysts., triple grain junctions, geometric theory 3—22920
- deformation, axisymmetric, bulk strain and grain strain 3—53118
- diamond, dislocation struct. in low-angle grain boundaries 3—51611
- diamond type lattices, native defects 3—51595
- diffusion of grain boundaries and dislocations 3—47146
- diffusion-induced grain boundary migration, driving force 3—53067
- dislocation-grain boundary interactions 3—46984
- dunite, deform. mechanisms, results of high temp. testing 3—54023
- electrical props. in metals, semiconductors and insulators, review 3—46961
- electron energy loss spectroscopy performance and application in STEM 3—5921
- embrittlement model, effective fracture energy rel. to surface energy 3—29146
- FCC crystal, dissociation of lattice dislocations in coincidence boundaries 3—56903
- ferrite, porous, microstruct. and mag. props. 3—43395
- ferromagnetic polycrystalline material, cubic struct., magnetization, field and stress depend. 3—28627
- ferrous alloys, extrinsic dislocations, intergranular segregation and grain boundaries mobility *(French)* 3—13465
- film interdiffusion, phenomenological description, diffusion-induced grain boundary migration 3—18517
- fine-grained materials, low stress creep at intermediate temps., diffusional creep vs. grain boundary sliding 3—24304
- geometrical models 3—46950
- hard-disk arrays, computer-generated, order and deterministic chaos, hexatic configs. 3—23014
- hardsphere FCC crystal, tilt boundaries, dense faceted configs. 3—13237
- high angle, programming method for TEM 3—56785
- III-V semiconductor thin films, prep., defects, and appls. 3—23210
- IN597, Ni-base superalloy, creep cavitation and prestrain-induced particle microcracking 3—53173
- IN 738LC, Ni-base superalloy, cast, low cycle fatigue in air and hot corrosive environments 3—47941
- Incoloy 800, intergranular corrosion, Strauss test, electrochemical potentiokinetic reactivation and magnetic permeability meas. 3—39275
- Inconel 600, mill-annealed, intergranular corrosion in PWR steam generator tubing 3—6365
- Inconel 718, Ni-base superalloy, crack growth under fatigue, creep and combined loading, effect of microstruct. and environment 3—24339
- Inconel MA 754, oxide dispersion strengthened, creep fracture processes 3—34464
- interfacial props. of crystals, symm. constraints on orientation depend. group of Wulff plot 3—46879

grain boundaries continued
- intergranular diffusion and grain boundary struct., vacancy mechanism, mol. dynamics approach *(French)* 3—46952
- intergranular diffusion and grain boundary widths *(French)* 3—47147
- ionic solids, grain boundary segregation, space charge, elastic field and dipole contribs. 3—47113
- lattice dislocation theory 3—51613
- limited solubility systems, thermodynamics of adsorption at grain boundaries *(Russian)* 3—33440
- low C, fatigue limit, distribs. characts. of microcracks and role of cyclic strain ageing *(Japanese)* 3—58214
- martensite, high C, quantitative geometric characterisation 3—53052
- metallic interfaces, thermodynamic props. and microchemical behaviour 3—2575
- metallic materials, fatigue life distrib. rel. to surface defect distrib. 3—19390
- metallic thin films, elec. cond., Mayadas-Shatzkes model, grain boundary scatt. 3—8594
- metals, characterisation of H by time-of-flight atom probe 3—4214
- metals, cubic, grain boundaries, computer modelling 3—46951
- metals, cubic, tilt grain boundaries, struct. and props. 3—46965
- metals, FCC, symmetrical tilt boundary struct. 3—46963
- metals, grain boundaries, struct. 3—37934
- metals, grain boundary at. struct. and intergranular diffusion 3—46957
- metals, grain boundary diffusion mechanisms 3—33484
- metals, grain boundary struct., hard sphere modelling method 3—46953
- metals, grain boundary vacancies and interstitials, self-diffusion, mol. dynamics study 3—46923
- metals, internal oxidation, grain boundary diffusion, oxide particle size 3—43994
- metals, polycrystalline, elec. cond. and grain boundary scatt. *(Russian)* 3—52109
- metals, yield stress grain-size depend., finite element anal. 3—14669
- migration and form., space charge distribs. 3—46948
- migration of grain boundaries, recent theoretical and expt. advances, review 3—47162
- MIS solar cells, grain boundary shunt current effects on performance 3—19587
- misfit dislocation occurrence at grain boundaries under high press. 3—2558
- multiplicity of structures 3—51615
- nonequilibrium to equilib. changes, model 3—56913
- p-n junction, grain boundary shunt currents, solar cell and dark diode characts. 3—52241
- particle blocking in grain boundary sliding, assoc. internal friction 3—37931
- Pb-Bi alloy films, supercond., grain-boundary flux pinning 3—3395
- phase and domain boundary orientation, interface free energy minimisation 3—2571
- phase transitions and equilibria among grain boundary structures 3—46958
- phonon scatt. by strain and rot. fields of cryst. defects 3—42736
- photovoltaic solar energy, conf. Stresa, Italy (May 1982) 3—54583
- PLZT ceramic, hysteresis loops 3—28803
- point defect segregation at grain boundaries, effect of elastic interaction 3—27934
- polar materials, surface and interface asymmetry 3—23142
- polycrystalline materials, structural superplasticity 3—2658
- pore geometry and interfacial energy 3—34268
- segregation, AES study 3—53065
- segregation, sources of variability 3—39151
- semiconductor, disordered polycrystalline, nonlinear percolation theory of elec. cond. with grain boundary barriers 3—18698
- semiconductor, phonon-assisted carrier transport across a grain boundary 3—28345
- semiconductor, single crystal-polycrystal phase transition 3—8194
- semiconductor, surface recombination velocity at grain boundary, EBIC determ. 3—43195
- semiconductor films, polycrystalline, electronic and optical props. 3—23515
- semiconductor junctions, grain boundary barrier height, interface states *(French)* 3—23472
- semiconductors, grain boundaries, conf., Boston, MA, USA (Nov. 1981) 3—49091
- semiconductors, grain boundary energy states 3—23314
- semiconductors, grain boundary struct. *(French)* 3—22908
- semiconductors, ionic, solute segregation near grain boundaries, space charge contrib. 3—51813
- semiconductors, polycrystalline, grain boundary space-charge region potential barrier 3—43194
- semicondutors, grain boundary energy 3—22913
- Si:H photovoltaic cells, H passivation 3—24581
- sliding, role in deform. and meas. 3—42697
- slip transfer across high-angle grain boundaries, prismatic glide mechanism 3—37925
- solar cells, polycrystalline, crystallite shape and size effects on performance 3—39481
- solar cells, polycrystalline thin film, struct. and performance, review 3—9439
- solids, initial sintering, free energy theory *(Japanese)* 3—39059
- stainless steel, Cr depletion at grain boundaries, STEM spatial resolution for compositional anal. 3—7889
- steel, alloy, impurity-induced embrittlement, effects of thermal history and alloying elements 3—4096
- steel, austenitic and ferritic stainless, irrad., high temp. ductility 3—29159
- steel, austenitic stainless, Cr-Ni (15, 15 wt.%) ion irradiated, void-assisted grain boundary migration 3—33313
- steel, austenitic stainless, Cr-Ni-TiN neutron irrad., microstruct. 3—28001
- steel, austenitic stainless, creep, tensile and fracture props. 3—34395
- steel, austenitic stainless, creep behaviour, pre-ageing effect 3—47927
- steel, austenitic stainless, creep rate, effect of grain size, invest. at 873 and 973K 3—47900
- steel, austenitic stainless, duplex scale form., kinetic model of oxidation 3—4197
- steel, austenitic stainless, films, tensile cracks, in situ obs. in HVEM 3—19392
- steel, austenitic stainless, grain boundary energy and extrinsic grain boundary dislocations, spreading time and temp. 3—13239
- steel, austenitic stainless, He embrittled, modelling high temp. mech props, 3—19398
- steel, austenitic stainless, martensite form. at grain boundaries 3—34308

grain boundaries continued
- steel, austenitic stainless, Mn, tensile props., effect of H 3−24349
- steel, austenitic stainless, segregation, grain boundary, AES study 3−34326
- steel, austenitic stainless, solution heat treated, high temp. fatigue, mode of failure, electron microscopy 3−53233
- steel, austenitic stainless, Ti and Nb stabilised 3−53062
- steel, austenitic stainless, type 304, review of intergranular corrosion 3−14772
- steel, austenitic stainless cold-drawn, heavy ion irrad., radiation-induced recrystn. 3−28010
- steel, austentic stainless, sensitised, SCC in thiosulphate solns. 3−24403
- steel, bainitic, high and low cycle fatigue fracture, dislocation cells 3−53232
- steel, BCC, grain boundary segregation and H embrittlement 3−47839
- steel, boride precipitation during cooling *(Chinese)* 3−53059
- steel, C-Mn weld metal, microstruct. and toughness, effect of reheating 3−47943
- steel, cast, Mn-Ni-Mo-Cu, dark facet fracture, AlN and Ti precip., SEM study *(Chinese)* 3−34420
- steel, Cr-Mo, grain boundary segregation of P, role of carbides 3−34331
- steel, Cr-Mo-V, creep ductility, effect of P and S 3−34390
- steel, Cr-Mo-V, stress relief cracking 3−39245
- steel, dual phase, deform. and fracture, metallographic study 3−14667
- steel, dual phase, void damage during plastic deform. 3−43909
- steel, grain boundary segregation of P, intergranular embrittlement, alloying element effect 3−58247
- steel, HSLA, hot-rolled, ferrite grain refinement 3−43877
- steel, low alloy, low C, weld metal, role of O rich inclusions rel. to microstruct. 3−22906
- steel, low alloy, ultrahigh strength, grain boundary phase obs. in laser heat treated samples 3−22919
- steel, low C alloy, cold rolled, splitting, effect of ageing *(Korean)* 3−39181
- steel, martensitic, tempered, 0.4%C, yield strength, influence of lath boundaries and carbide distrib. 3−14659
- steel, martensitic, tempered, struct. strength 3−53198
- steel, medium C, plastic deform. development in packet martensite *(Russian)* 3−39203
- steel, Mn-Mo-Ni, low alloy, temper and H embrittled, acoustic emission, indentation loading studies 3−24348
- steel, multiphase stainless, athermal, stress and strain-induced transforms. 3−43810
- steel, Ni-Cr, embrittlement, role of N 3−24346
- steel, Ni-Cr-Mo-V, tempered, Mn effect on P segregation kinetics 3−9067
- steel, Si, grain oriented, secondary recrystn., effect of second stage cold reduction *(Korean)* 3−39172
- steel, stainless, duplex, precipitation at austenite/ferrite interfaces 3−9068
- steel, temper brittle, thermodynamics of interactive co-segregation of P and alloying additions 3−14596
- steel, temper embrittlement, ductile-brittle transition 3−53171
- steel, ultrahigh strength, medium C, B addition effect on P grain boundary segregation and fracture 3−53070
- steels, austenitic and ferritic, creep crack growth tests 3−4135
- STEM and TEM, thickness fringe contrast at grain boundaries, top-bottom effect comparison 3−14823
- STEM spatial resolution for compositional anal. 3−7889
- stress relaxation around grain boundary particles, relevance to high temp. cavity nucleation 3−2572
- structure, diffr. studies 3−46955
- structure, surface dislocation and Burgers circuit description 3−18318
- superplastic deformation, grain boundary sliding model 3−34407
- superplastic flow, grain-boundary porosity level 3−22969
- superplasticity, interpretation of flow in terms of threshold stress 3−39211
- superplasticity, low-stress Regime I, mechanisms 3−53157
- symmetrical grain boundaries and coincidence site lattices 3−33270
- transition metals, BCC, atomic and electronic structs. of tilt grain boundaries 3−33269
- twinned mineral grains, boundary detection using polarizing microscopy, appl. of stripe discrimination 3−30101
- type II superconductors, flux pinning by thin planar defects 3−8636
- type II superconductors, grain-boundary flux pinning by electron scatt. 3−18835
- unrelaxed extrinsic grain boundary dislocations, appl. to grain boundary processes 3−8060
- Zircaloy-4, high temp. internal friction, grain boundary relaxation 3−39188
- Ag-based solid solns., grain boundary segregation and diffusion, AES and scanning radioactive anal. 3−47115
- AgI, ionic cond. and dielec. const., grain boundary effects 3−13527
- Al alloy, stress corrosion reinstant, high strength, type 7075, microstruct. study, TEM obs. 3−9096
- Al alloys, low cycle fatigue, back stress variation along the hysteresis loop 3−53225
- Al alloys, oxide film rupture, reanodisation and stress corrosion cracking 3−43985
- Al alloys, powder metallurgy, fatigue crack propag., effect of Al_2O_3 particles and precipitate type 3−34482
- Al, asymmetrical tilt boundary struct. 3−46964
- Al bicrystals, formed using ⟨100⟩, ⟨111⟩ and single glide crystals, plastic deform. 3−57016
- Al, cold rolled, microstruct. and deform. mechanisms in polycryst. samples 3−43929
- Al, cyclic hardening and grain boundary crack in high purity specimens *(Chinese)* 3−53078
- Al, grain size form. as a result of dynamic recrystn. under US loading *(Russian)* 3−22978
- Al, inhomogeneous deform. at high temp., subgrain misorientation 3−47924
- Al, Stoneley waves at grain boundaries 3−42905
- Al-Cu (4 wt.%), porosity and fracture development during superplastic flow *(Russian)* 3−39205
- Al-Cu-Li-Mn-Cd, alloy 2020, ductility, influence of grain struct. 3−34397
- Al-Fe, dil., solute segregation and boundary struct. changes during grain growth 3−53057
- Al-Mg-Si alloy, crack extension micromechanisms, dispersoid effect 3−58205
- Al-Mg-Zn-Cu, precip. hardening alloy, flow stress-grain size relationship 3−43923

grain boundaries continued
- Al-Mg(Si) alloy, inhomogeneous deform. at high temp., subgrain misorientation 3−47924
- Al-Mn alloys, intergranular corrosion mechanism *(Japanese)* 3−9235
- Al-Zn-Mg, high strength, H-induced cracking and SCC 3−19449
- Al-Zn-Mg alloy, weldable, solute segregation and white zone cracking 3−4044
- $AlN-SiO_2$ ceramics, containing long-period polytypes, charact. by fracture toughness 3−39093
- α-Al_2O_3, liquid phase sintered, grain boundary microstruct., TEM study 3−46966
- Al_2O_3:Fe,Ti, Nabarro-Herring diffusional creep, dopant conc. depend. 3−53136
- Al_2O_3:Mn, Ti, polycryst., diffusional creep, enhancement by simultaneous doping 3−9122
- Al_2O_3-ZrO_2, slow growth of microcracks, evidence for ZrO_2 toughening 3−29162
- Al_2O_3-ZrO_2 composites, critical microstruct. for microcracking 3−39240
- Au film, polycryst., grain boundary diffusion of K 3−3017
- Au/Ag two layer films, grain boundary diffusion, elec. resist. study 3−13556
- Au/Al, diffusion couples, low temp., grain boundary migration and recrystn. 3−38141
- Au-Al thin film couple, intermetallic form. and grain boundary diffusion 3−8269
- Au-Pt-Pd-Ag-Fe-Sn, dental alloy, internal oxidation, O ion diffusion, Fe_2O_3 and SnO_2 distrib. 3−51854
- $BaTiO_3$, PTC device, grain boundaries, TEM study 3−51617
- Bi films with Ag, Fe, Cr island layers, elec. resistance 3−43304
- Ca thin films, elec. cond., grain boundary effects 3−23507
- Cd bicrystals, slip deform., grain boundary sliding 3−13233
- CdS, vapour-grown, interface morphology and sub-grain struct. obs. 3−7935
- $CeMg_{12}$, hydride form. mechanism and kinetics 3−48051
- CeO_2 ceramics, doped, grain boundary type Maxwell-Wagner peak in thermally stimulated depolarisation 3−8756
- $Ce_{1-x}Y_xO_{2-x/2}$ ceramic, impedance, AC and DC, inhomogeneity contrib. 3−3188
- Co ferrite thin film form. by solid state $CsO+Fe_3O_4$ reaction 3−19266
- Co-Ni:N film, high coercivity and microstruct. 3−18947
- CoO:In, grain boundary segregation 3−24235
- Co_5Sm permanent magnet, mag. domain struct. and microstruct., TEM and electron diffr. study 3−28603
- Cr film, resistivity and TCR *(Russian)* 3−3338
- Cu, asymmetrical tilt boundary struct. 3−46964
- Cu, cold worked single crystal, SEM in situ obs. of grain boundary migration during recrystn. 3−14608
- Cu, Stoneley waves at grain boundaries 3−42905
- Cu wire, grain boundary anelasticity, triple contacts and internal friction *(Russian)* 3−51709
- Cu/Al, diffusion couples, low temp., grain boundary migration and recrystn. 3−38141
- Cu/Ni thin film couples, low temp. interdiffusion 3−57148
- Cu-Ag, liq. phase sintered, low energy grain boundaries 3−2576
- Cu-Al thin film couple, intermetallic form. and grain boundary diffusion 3−8269
- Cu-Al_2O_3 polycrystals, dispersion hardened, strengthening mechanisms 3−43850
- Cu-Al-Ni, shape memory bicrystals, intergranular fracture 3−43946
- Cu-Al-Ni-Ti, shape memory alloy, grain refinement rel. to Ti addition, transform. hysteresis 3−47832
- Cu-Al-Si-Co, superplastic flow, role of grain boundary dislocations 3−53156
- Cu-based solid solns., grain boundary segregation and diffusion, AES and scanning radioactive anal. 3−47115
- Cu-Fe, dil., solute segregation and boundary struct. changes during grain growth 3−53057
- Cu-Ni, $\Sigma=27$ coincidence grain boundary 3−22907
- Cu-Sb solid soln., slip band growth and crack form. *(Russian)* 3−24294
- Cu-Ti(Cr)(Mu)(Fe)(Co)(Ni), grain boundary enrichment, thermoelec. study 3−39185
- Cu-Zn-Al, bicrystal, transform. strain coherency at grain boundary, fracture 3−43839
- Cu-Zn-Al, thermoelastic alloy, dynamic fatigue curves, −196 to 40°C 3−43944
- $CuInTe_2$, polycrystalline thin film, elec. transport props., H_2 effect, grain boundary scatt. 3−52282
- $Cu_2S/Cd_{1-x}Zn_xS$ solar cells prepared by solution reaction method, junction geometry 3−58505
- Cu_2S/CdS solar cells prepared by solution reaction method, junction geometry 3−58505
- CuZnAl shape memory alloys, austenite microstruct. effects on martensitic transform. 3−43830
- Fe alloys, sintered, plain-mixed, detrimental effect of Mo on ductility 3−19368
- Fe, cast, white, rapidly solidified, superplasticity 3−14665
- Fe, grain boundary diffusion of Sn and Cr, microautoradiographic obs. 3−57140
- Fe, magnetic domain interactions with dislocations and grain boundaries, HVEM study 3−23699
- Fe, oxidised, sulfur diffusion in oxide grain boundaries 3−43983
- α-Fe, polycrystalline, fatigue crack initiation mechanism 3−58200
- Fe, pure, cold rolling and annealing textures, effect of grain boundaries 3−29103
- Fe, thermodynamics of interactive co-segregation of P and alloying additions 3−14596
- Fe/Zn system, diffusion driven grain boundary migration during zincification of Fe 3−2573
- Fe-based alloys, grain boundary segregation and H embrittlement 3−47839
- Fe-based solid solns., grain boundary segregation and diffusion, AES and scanning radioactive anal. 3−47115
- Fe-C alloy, coarsening of carbide precipitates 3−53071
- Fe-Co, FCC to HCP transformation, electron microscopy study 3−8190
- Fe-Cr, oxidation at 600°C, influence of prior oxide film 3−19448
- Fe-Cr (8 wt.%), ferrite to austenite, isothermal transform. *(Japanese)* 3−9058
- Fe-Ni, austenitic alloys, rapid solidification microstruct. 3−53038
- Fe-Ni alloys, martensite plates, semithickness-to-radius ratio 3−43809
- Fe-Ni-based superalloys, γ'-phase precip., yield strength improvement, heat treatment study *(Chinese)* 3−34335

grain boundaries continued
Fe-Si (3 at.%), inhibitor phase parameters, grain boundary migration effects *(Russian)* 3−24253
Fe-Si (3 wt.%), plane-matching grain boundaries, recrystallisation struct., electron channelling patterns 3−37933
α-Fe-Sn, intergranular creep fracture, high temp., enhanced by grain boundary migration 3−53219
GaAs bicrystal, grain boundaries, elec. characterisation 3−52061
GaAs, chemical and electrical characterisation 3−23404
n-GaAs epitaxial layer, minority carrier diffusion length meas. with high spatial resolution 3−52180
GaAs film, triode sputtering prep., elec. characts. 3−28995
GaAs, grain boundary energy states 3−23314
GaAs, polycrystalline, grain boundary passivation by H plasma, surface barrier diode appl. 3−43064
GaAs solar cells, grain boundary effects 3−53562
n-GaAs solar cells, polycryst., charge collection characts., SEM/EBIC study 3−53563
n-Ge, charged grain boundaries, electronic struct. 3−22917
Ge, grain boundary energy states 3−23314
Ge, grain boundary microstructure, HREM obs. *(French)* 3−46954
Ge, grain boundary struct., TEM obs. *(French)* 3−22910
Ge, grain boundary struct., intergranular dislocations, TEM study *(French)* 3−46937
Ge, symmetrical tilt grain boundaries, electro microscopy and diffr. studies 3−51620
HfO, Er_2O_3-stabilised, polycryst., self-diffusion of Er and Hf 3−13528
In-Pb (30 to 40 at.%), phase changes during ageing *(Japanese)* 3−47866
InP, carrier mobility, grain size depend., elec. cond. and Hall effect studies 3−47343
InP polycrystalline solar cells minority carrier diffusion length inhomogeneity induced by grain boundaries 3−39483
Ir-W:Th, Th segregation to grain boundaries in alloys containing 5-1000 ppm 3−47837
KH_2PO_4 crystals, mosaic struct. and stresses 3−57100
$LiNbO_3$ crystal defects, optical imaging using polarizing filters and laser source 3−42596
$LiNbO_3$ crystals defects characterisation using X-ray diffraction topography 3−8061
Li_2O-Al_2O_3-SiO_2 glass ceramics, microstruct. and grain growth 3−4003
Mg-Al (0.8 wt.%) alloy, grain boundary sliding at high temp. in torsional fatigue 3−29148
Mg-Li (12.5 at.%), hot-rolled, texture and grain boundary strengthening 3−29106
Mg-Ni (10 wt.%), hydride form. mechanism and kinetics 3−48051
Mg-Tl (5 at.%), hot rolled sheet, grain boundary strengthening, importance of texture 3−53095
MgO, twist boundaries, coincident site lattice type, stability, impurity effects 3−46932
MgO:Cr, grain boundary diffusion of ^{51}Cr rel. to dopant conc. and dislocation orientation 3−57135
MgO:Fe, grain boundary chem., analytical electron microscope study 3−46959
Mn-Zn ferrite, polycryst., diffusional creep 3−2659
Mn-Zn ferrites, defects, grain boundary segregation, and secondary phases rel. to mag. props. 3−13240
MnZn ferrites, mech. props. improvement by controlling O content 3−14739
Mo bicrystals, $\Sigma=41$ grain boundry, high resolution study 3−27953
Mo, chemically deposited, He ion irrad. 3−28013
Mo, grain boundary microstructure, HREM obs. *(French)* 3−46954
Mo-Zr-Cr-B, microplastic deform., grain boundary segregation *(Russian)* 3−39206
Mo-Zr-Ti based alloys, internal oxidation and precip. of oxides *(French)* 3−4190
Nb and alloys, fabrication, deform. parameters 3−4081
Nb bicrystals, growth and struct. *(Russian)* 3−34220
Nb thin film, current-induced superconducting transition 3−43316
Nb_3Sn superconducting wire, multi-filamentary, prep. by 'bronze route', presence of voids 3−18291
$(Ni, Zn, Co)_2Fe_{16}O_{27}$:Ba, topotactic grain boundaries, TEM study 3−8057
Ni, α-particle irrad., grain boundary deformation 3−43895
Ni base superalloy IN-100, powder consolidated, microstruct. changes during superplastic determ. 3−9131
Ni, grain boundary chem. bonding, impurity embrittlement study 3−46960
Ni, H embrittlement intergranular, influence of S, P and Sb segregation 3−53194
Ni polycrystals, slip bands at low temp., scanning electron microscopy 3−34412
Ni, pressurised pores, growth and interconnection, rel. to stress rupture models 3−52993
Ni-Al (0.55 to 4.10 wt.%), intergranular oxide development at high temp., high stress effect 3−53286
Ni-Al (1 to 4 wt.%) alloys, internal oxides formation and development at high temp. 3−51858
Ni-based alloys, grain boundary segregation and H embrittlement 3−47839
Ni-Cr (1-5 wt.%) alloy, high temp. internal oxidation, intergranular oxides 3−34521
Ni-Cr-W-Ti, cast superalloy, reversible reaction between MC and $M_{23}C_6$ *(Chinese)* 3−53061
Ni-Cr-(Sb, Zr) alloy, creep fracture, Sb and Zr traces effect 3−47964
Ni-CrAl-Zr, Al_2O_3 scale form., ^{18}O tracer studies 3−4204
NiAl/Ni diffusion couples, Ni_3Al layer growth, early stages 3−23106
$Ni_{77}Cr_{16}Fe_7$, S atomic behaviour in grain boundaries, embrittlement *(French)* 3−29175
NiO, tilt boundaries, relative energy 3−51618
PLZT ceramics, grain boundary phenomena, electron microscopic study 3−18316
Pb, high purity, grain boundary sliding at high temp. in torsional fatigue 3−29148
Pb-Sn-Sb alloys, fatigue, grain boundary reaction *(Japanese)* 3−29165
Pd-Fe solid solutions, proton irradiation damage, dislocation loops, voids, TEM 3−37969
Re, adsorbed benzene, thermal desorption and photoelectron spectroscopy 3−23159
Sc film, resistivity and TCR *(Russian)* 3−3338
Si CVD films, polycryst., enhanced grain boundary diffusion 3−23094

grain boundaries continued
Si CVD films, polycryst., grain boundary induced deep levels, transport props. meas. 3−23316
Si, CVD grown, P doping and oxidation effects on grain growth, TEM study 3−51624
Si, CVD layer, grain boundaries, HREM obs. 3−51619
Si, chemical and electrical characterisation 3−23404
Si, electronic and struct. props. of grain boundaries 3−23315
Si, grain boundary anal. by TEM 3−22909
Si, grain boundary barrier height and interface states, laser beam photocond. study 3−38335
Si, grain boundary energy states 3−23314
p-Si, grain boundary I-V characts., tunnelling 3−23380
Si, grain boundary impurity distrib., SIMS and ion bombard. studies 3−51625
Si, grain boundary microstructure, HREM obs. *(French)* 3−46954
Si, grain boundary struct., EBIC contrast *(French)* 3−22915
Si, grain boundary struct. rel. to growth technique and elec. props. 3−51626
Si, laser induced backside damage, characterization for gettering 3−56973
Si, laterally seeded, on SiO_2, microstruct. 3−18306
p-Si, minority carrier recomb. vels. at grain boundaries, temp. depend. 3−13828
Si, neutron irrad., minority carrier lifetime study 3−23403
Si p-n junction solar cell, minority carrier effective lifetime 3−44133
Si, polycryst., grain boundary effects on elec. props. and photovoltaic response *(French)* 3−22918
Si, polycryst., grain boundary passivation and analysis for solar cell applications 3−51629
Si, polycryst., MIS processing rel. to grain boundary activity, solar cell appls. 3−52272
Si, polycrystalline, electron-beam induced current response of grain boundary, surface recomb. vel. 3−33737
Si, polycrystalline, grain boundaries, TEM study 3−22911
Si, polycrystalline, grain boundary struct., EBIC study *(French)* 3−22912
Si, polycrystalline, grain boundaries, electronic props., photoelec. study *(French)* 3−23430
Si, polycrystalline, Hall mobility and resistivity, model 3−18725
Si, polycrystalline cast, solar grade, grain boundary props., heat treatment effect, EBIC study 3−51628
Si polycrystalline film grain-boundary trapping model 3−3343
Si polycrystalline islands, laser recrystallised, grain boundaries and diffusion paths, MOSFET and ring oscillator appl. 3−33295
Si polycrystalline laser-recrystallized Schottky diodes 3−57409
Si, polycrystalline solar cell, grain boundaries, EBIC and light induced currents characterisation 3−53541
Si ribbons, Stepanov growth, SiC inclusion form. 3−2547
Si sheets, grain boundaries, TEM and EBIC studies 3−22916
Si solar cell efficiency as affected by minority carrier diffusion length and silicon quality 3−24599
Si solar cells, EFG polycryst., ion implantation and laser annealing prep., SEM characts. 3−24584
Si solar cells, polycryst., photovoltaic conversion efficiency, plasma hydrogenation effects 3−53506
Si solar cells, polycryst., I-V characts., effect of grain boundary recomb. and grain size 3−58524
Si, solar grade, impurity segregation at grain boundaries and other comp. inhomogeneities 3−51812
Si, zone-melting recrystn. on SiO_2 using halogen lamp *(French)* 3−24118
Si:As(P), heavily doped, grain boundary segregation 3−23047
Si:B(P), grain boundary diffusion of dopants 3−51863
Si:H solar cells, H annealing from recombination defects *(French)* 3−24582
Si:P, heavily doped polycryst. film, thermal oxidation 3−9351
Si:P film, segregation of P at grain boundaries, STEM X-ray microanal. study 3−13456
Si:P(Sb), polycryst., intergranular diffusion *(French)* 3−23093
Si/NiAu system, Ni silicide growth, Au impurity effects 3−47171
Si-O-N-M (M=Mg, Y, Ca, Be or Zr,) reaction bonded and hot pressed ceramics, phase equilib. and mech. props. 3−58112
Si-on-insulator wafers, lateral zone growth and device quality characterisation 3−24116
SiC fibre reinforced Ni, phase boundary, effect of thermal cycling *(Japanese)* 3−9101
SiC, grain boundary films, characterisation, TEM study 3−51622
SiC:Al(B), sintered, microstruct., inclusions, comp., STEM, AES, X-ray analysis 3−39077
Si_3N_4, hot pressed with Y_2O_3+MgO, oxidation kinetics 3−34507
Si_3N_4, hot-pressed, electron microscopy obs. of microstruct., grain boundary struct. 3−51612
Si_3N_4, hot-pressed, fracture mechanics, up to 1400°C *(German)* 3−29155
Si_3N_4, reaction bonded, prep. and additives effect on vitrification of grain boundary phases 3−29040
Si_3N_4-Y_2O_3-Al_2O_3, hot pressed, microstruct., grain boundary comp., electron microscopy 3−43782
Sn-Ge bicrystal, In diffusion along single twist phase boundaries 3−18515
Sn-Pb (2, 38.1 wt.%), superplastic, role of Coble creep and interface control 3−39210
$SrFe_{12}O_{19}$, defects, grain boundary segregation, and secondary phases rel. to mag. props. 3−13240
α-Ti alloys, intergranular fracture at temps. above $0.5T_m$ 3−9188
Ti-Al-Nb-Zr alloys, defect struct. evolution rel. to deform. parameters at 4.2K 3−24302
TiB_2-Ni ceramic, struct. and comp., analytical electron microscopy obs. 3−14900
TiO_2-$BaCO_3$, disperse thin films, phase transition, TEM study, particle size effect 3−2786
(U,Pu)C and (U,Pu)(C,O), fuels for fast breeder reactor, fracture surface energy, fracture toughness 3−55140
UO_2, diffusional growth of overpressured fission-gas bubbles on grain boundaries 3−16855
UO_2, LWR fuel rods, KWU fission gas release model 3−36461
UO_2, primary creep, effect of amorphous grain boundary phases 3−19374
V, electron beam irrad., channelling and X-ray anal. 3−56980
W-Fe-C, grain boundary segregation characts. *(Russian)* 3−39153
W-Mo alloys, grain boundary fracture and cracks, energy characts. *(Russian)* 3−53185
W-Zr-C, grain boundary segregation characts. *(Russian)* 3−39153
WC-Co, intergranular cracking, appl. of von Mises criterion 3−53172
WSi_2 film, cosputtered, resistivity, grain boundary effects 3−8595

grain boundaries continued
- Y_2O_3-$(Zr_{1-x}Hf_x)O_2$, Zr-Hf interdiffusion coeffs., lattice and grain boundary 3−18496
- Zn-Al (1.1 wt.%), superplastic, deform. texture *(Czech)* 3−14657
- Zn-Al (22 wt.%), superplastic, steady state flow data 3−34392
- ZnO, ceramic semicond., nonlinear cond., potential barriers, voltage contrast imaging in secondary electron microscope 3−52162
- ZnO, microstructure, plastic deform., microhardness anisotropy, SEM study 3−37992
- ZnO varistor, grain boundaries, TEM study 3−51617
- ZnS, doped powder, compaction kinetics 3−9012
- Zr, polycrystals, high temp. internal friction, grain boundary relaxation 3−39188
- Zr spark machined surfaces, ZrC dendritic growth 3−34538
- Zr-base alloys, oxidation model 3−29208
- ZrO_2, Y stabilised, impedance spectrum of single grain boundary 3−18508
- ZrO_2-Al_2O_3-$Y_2O_3(Yb_2O_3)$, high cond., Al_2O_3 as sintering aid, microstruct. anal. 3−14534
- ZrO_2-MgO, subeutectoid aged alloys, microstructural development 3−39156
- $(ZrO_2)_{0.83}(YO_{1.5})_{0.17}$, sintering and cond., effect of impurities 3−19307

grain boundary diffusion *see diffusion in solids*

grain growth
- α-brass, cold-worked, differential resistivity meas. for monitoring annealing 3−53324
- domain kinetics in two dimens., temp. depend., Monte Carlo simulation 3−33567
- Pb alloy, grain-size reduction of vapour-deposited thin films 3−57234
- PLZT, effects of impurities on phys. props. *(Korean)* 3−3631
- steel, austenitic stainless, grain boundary energy and extrinsic grain boundary dislocations, spreading time and temp. 3−13239
- steel, austenitic stainless, powder, hot ductility and recrystn., effect of oxide inclusions 3−58159
- steel, cold-rolled rimmed, recrystallisation annealing, microstructure and texture changes during grain growth *(Russian)* 3−9083
- steel, low alloy, high strength, reheating behaviour, quantitative metallographic techniques 3−24449
- two-dimensional connected assembly, growth kinetics using Monte Carlo method 3−53018
- Ag, evaporated thin films, recovery and recrystn. 3−3016
- Al alloys, powder metallurgy, fatigue crack propag., effect of Al_2O_3 particles and precipitate type 3−34482
- Al-Fe, dil., solute segregation and boundary struct. changes during grain growth 3−53057
- α-Al_2O_3, dehydration prep., X-ray peak broadening due to twin form. 3−8059
- Al_2O_3:MgO fibres, doped and undoped, exaggerated grain growth, microscopy study *(Japanese)* 3−51815
- Au particles in fused SiO_2 matrix, fault struct. form. during coalescence and growth 3−13234
- $BaTiO_3$, anomalous grain growth below eutectic temp. *(German, English)* 3−47862
- $Ca_9H(PO_4)_6.(OH).3.3H_2O$, densification by hot isostatic pressing 3−58089
- Cu and Cu-Sb, secondary recrystallisation kinetics meas. *(Russian)* 3−34345
- Cu, cold-worked, differential resistivity meas. for monitoring annealing 3−53324
- Cu, grain growth, irregular, nucleus-free mechanism 3−29102
- Cu, grain growth 3−4046
- Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%) superplastic alloy, strain rate sensitivity 3−34414
- Cu-Fe, dil., solute segregation and boundary struct. changes during grain growth 3−53057
- α-Cu-Zn, grain growth, irregular, nucleus-free mechanism 3−29102
- Fe particles, prep. for mag. recording tapes, coercive force, saturation magnetisation, grain props. 3−23739
- Fe-Si (3 wt.%), high permeability grain oriented, texture changes during secondary recrystn. 3−29099
- Fe-Si (3 wt.%), plane-matching grain boundaries, recrystallisation struct., electron channelling patterns 3−37933
- α-Fe_2O_3, dehydration prep., X-ray peak broadening due to twin form. 3−8059
- Li_2O-Al_2O_3-SiO_2 glass ceramics, microstruct. and grain growth 3−4003
- Mg Zn ferrites, mech. strength, density and grain growth depend. 3−14740
- MgO, dense and porous compacts, normal grain growth 3−8248
- Ni, grain growth, irregular, nucleus-free mechanism 3−29102
- NiAl, recrystn. and grain growth 3−4056
- Pb superconducting films, polycryst., vapour deposition, grain size reduction using grain growth barriers 3−47780
- Pt-W (8 wt.%) alloy wire, high-temp. strain gauges, causes of drifting *(German)* 3−30848
- Si, polycrystalline, Bridgman growth, crystallographic anal., photovoltaic appls. 3−22807
- Si, polycrystalline ingot, crystallographic orientation study after directional solidification *(French)* 3−13148
- Si/Si_3N_4/Si struct., electron beam recrystallisation of Si 3−56989
- Ti, dispersion hardening 3−29098
- Ti-Al-V (6.4 wt.%), strain and concurrent grain growth effect on superplastic behaviour 3−39197
- β-Ti-Mo-Zr-Su, dispersion hardening 3−29098
- Ti(C,N)-Ni-Mo, sintered alloy, grain growth, effect of N content 3−24180
- $Ti_{1-x}Nb_xC_{0.5}N_{0.5}$, sintered, grain growth, annealing conditions effect 3−39075
- TiO_2:Ba, second phase development 3−38135
- W-Ni (0.5 wt.%), powder compacts, activated sintering, directional grain growth 3−34263
- WC-Co cement, fracture toughness, effects of nonstoichiometric C contents 3−4106
- YIG:Ca, V, densification mechanism 3−19302
- Zn-Al (22 wt.%) alloy, creep, grain growth kinetic eqns. 3−47893
- ZnO varistor, fabrication, grain growth control using seed grains 3−53010

grain refinement
- Fe-Ni(25wt.%), supercooled, nucleation and grain refinement, relationship in absence of gravitational field *(Croatian)* 3−51761

grain refinement continued
- steel, austenitic stainless, cyclic recrystallisation after deformation 3−29101
- steel, controlled rolled, strength and toughness, metallurgical studies 3−24359
- steel, Cr, structural, optimisation for improved strength and toughness 3−34462
- steel, low-alloy structural, γ-α transform., hot working and austenticity conditions influence 3−9060
- steel, spring, strength and ductility, heat treatment influence 3−29112
- superalloy castings, surface grain refinement investigation *(Chinese)* 3−4001
- superplastic forming, grain refinement and grain size control 3−9125
- Al alloys, superplastic, thermomech. method of grain-refinement 3−4054
- Al, cast, grain refining efficiency of PM122 wire inoculant 3−52995
- Al-Ti alloys, contrib. to nucleation and solidification *(German)* 3−58115
- Cu base alloys, shape memory stability, grain size refinement, optical refl. obs. 3−43836
- Cu-Al-Ni-Ti, shape memory alloy, grain refinement rel. to Ti addition, transform. hysteresis 3−47832
- Cu-Zn-Al, shape memory alloys, fatigue props. rel. to grain refinement and texture 3−43945
- Fe-Al (39.8 at.%), B2 aluminide plastic flow props., elevated temps., influence of thermomech. processing 3−34393
- Ni base superalloy IN-100, powder consolidated, microstruct. changes during superplastic determ. 3−9131
- Ti alloys, refining methods for coarse-grained structures 3−19349
- Ti-Al-V alloy, VT5L, rare earth additions effect on mech. props. and thermal stability 3−24367

grain size
- *see also grain growth; grain refinement*
- alloys, fatigue crack closure induced by fracture surface roughness, geometric model 3−4126
- ammoniacal photographic emulsion series exposed to light, relation between speed and grain size 3−9340
- ammoniacal photographic emulsions, grain-size series, chemical sensitisation 3−9339
- α-brass, dynamic recryst. during high temp. tensile tests 3−29105
- α/β brass, superplastic, second-phase volume fraction effect on grain size stability and flow stress 3−9124
- ceramics, brittle polycrystalline, role of cracks in creep deform. 3−34384
- Coble creep, effect of impurities 3−28038
- composites, granular, with different types of grains, microstress fields 3−53102
- crystalline powder, grain size distrib., X-ray diffr. determination 3−13024
- Fe-Si (3 wt.%), grain-oriented, with very high permeability, 180° domain wall spacing 3−52512
- ferrite, porous, microstruct. and mag. props. 3−43395
- ferrite, spin-wave linewidth and effective volume of pore 3−18880
- fine-grained materials, low stress creep at intermediate temps., diffusional creep vs. grain boundary sliding 3−24304
- fracture, microstruct. and mechanisms 3−58248
- graphite discs, hot pressed, crystallite orientation *(Japanese)* 3−39083
- ice, artificial, torsion, deform. effects, shear 3−18369
- Inconel 718, Ni-base superalloy, crack growth under fatigue, creep and combined loading, effect of microstruct. and environment 3−24339
- martensite, high C, quantitative geometric characterisation 3−53052
- metals, crit. grain size for transition to superplastic flow *(Russian)* 3−24296
- metals, yield stress grain-size depend., finite element anal. 3−14669
- Pb alloy, grain-size reduction of vapour-deposited thin films 3−57234
- Permalloy films, vacuum evaporated, $^+H_2$ ion implantation effects on coercive force and magnetoresist. 3−38492
- polycrystal, strength fundamentals, temp./strain rate combinations 3−37988
- polycrystalline materials, US attenuation, freq. depend., grain size distrib. effect 3−2693
- pore geometry and interfacial energy 3−34268
- quartz, fracture toughness, empirical evaluation 3−4098
- recrystallisation, primary, in one dimension, distrib. of grain lengths and kinetics 3−14609
- rocks, effect of particle shape on effective electrical props. of heterogeneous Earth models 3−48474
- semiconductor, single crystal-polycrystal phase transition 3−8194
- sintering, microstruct. evolution, role of evaporation/condensation 3−47794
- steel, alloy, low C acicular ferrite, fracture mechanism rel. to microstruct. *(Italian)* 3−4137
- steel, alloy, mech. props., effects of thermal cycling *(Korean)* 3−29170
- steel, austenitic, fatigue fracture, at 293 and 11K, influence of microstructure 3−4104
- steel, austenitic and ferritic stainless, irrad., high temp. ductility 3−29159
- steel, austenitic stainless, AISI 304, cracking and microstruct. development under time dependent fatigue modes 3−58245
- steel, austenitic stainless, creep limit, effect of reactor irrad. 3−43905
- steel, austenitic stainless, creep rate, effect of grain size, invest. at 873 and 973K 3−47900
- steel, austenitic stainless, creep resist. reactor irrad. effect 3−43898
- steel, austenitic stainless, elevated temp. transient isotropic hardening, microstruct. based eqn. 3−47919
- steel, austenitic stainless, elevated temperature deformation, grain size depend. 3−47925
- steel, austenitic stainless, H-assisted cracking, types 304L and 316L, grain size and heat treatment effects 3−19396
- steel, austenitic stainless, Mn, tensile props., effect of H 3−24349
- steel, C (0.50 wt.%), grain size determ. by US testing 3−34562
- steel, C-Mn weld metal, microstruct. and toughness, effect of reheating 3−47943
- steel, Cr-Mo, temper embrittlement, compositional effects 3−14728
- steel, Cr-Mo-V, creep ductility, effect of P and S 3−34390
- steel, eutectoid, plain C, isothermal form. of austenite 3−53083
- steel, fatigue lives at stress levels near fatigue limit, grain size effect *(Japanese)* 3−58223
- steel, ferritic stainless, tensile props. and fracture, influence of heat treatment 3−9155
- steel, fracture toughness of C10, temp., loading rate and grain size influence *(German)* 3−4100
- steel, fracture under mixed mode I and II loading, ferrite grain size effect 3−14695

grain size continued
steel, hardenability prediction, continuous cooling transform. data, regression analysis 3—58123
steel, high speed, R6M5, strength and phase comp. 3—53029
steel, high-Ni carbon type, thermal stabilisation of retained austenite 3—39148
steel, HSLA, weld metals, struct. and props., effect of inclusions 3—43959
steel, HSLA tempered martensitic, adiabatic shear bands, projectile impact loading, electron microscopy 3—34375
steel, low alloy, high strength, reheating behaviour, quantitative metallographic techniques 3—24449
steel, low C, dual-phase, fatigue crack path, high mean stress, ferrite selection ratio *(Japanese)* 3—39241
steel, low C, fatigue limit, effect of initial dislocation locking *(Japanese)* 3—58213
steel, low C, sheet, Luder's strain, effect of solutes 3—34398
steel, maraging, ductility characts., struct. sensitivity in age hardening 3—29139
steel, mech. props., US techniques 3—4215
steel, medium C, plastic deform. development in packet martensite *(Russian)* 3—39203
steel, Mn-(Nb), yield and impact strength, plate gauge depend., cooling rate effect 3—43914
steel, Ni-Cr, Charpy impact toughness, effect of heat treatment *(Korean)* 3—53192
steel, Ni-Cr-Mo-V, fatigue crack propag., near-threshold, influence of H_2 environment 3—4127
steel, plain low C, thermomech. treatment, effect on struct. and mech. props. 3—43874
steel, rapidly quenched, transform. behaviour and mech. props. 3—43910
steel, stainless, type SUS 304, fatigue strength in long life range and non-propagating fatigue crack 3—53178
steel, temper rolled strip, discontinuous yielding, Luder's bands nucleation and propagation 3—53164
steel, tool, fracture toughness, influence of microstruct. variations 3—4124
steel, tool, hot worked, fracture toughness, influence of grain size 3—39230
steel, V, microalloyed, dynamic recrystn. during transient deform. 3—53077
steels, austenitic and ferritic, creep crack growth tests 3—4135
strengthening mechanisms, fundamentals, review 3—58126
subgrain size, stress depend., dislocation generation and annihilation 3—18312
superplastic deformation, grain boundary sliding model 3—34407
superplasticity, low-stress Regime I, mechanisms 3—53157
Zircaloy-4, high temp. internal friction, grain boundary relaxation 3—39188
Ag-$RbAg_4I_5$ heterogeneous struct., admittance meas. 3—8344
Al, cyclic hardening and grain boundary crack in high purity specimens *(Chinese)* 3—53078
Al, grain size form. as a result of dynamic recrystn. under US loading *(Russian)* 3—22978
Al, high purity, creep behaviour, effect of stress and subgrain size 3—53120
Al, high purity single crystals, X-ray integrated intensity, effect of microstruct. 3—24260
Al, pure ultrafine-grained, Luders deform. 3—24305
Al, sputtered, step coverage, influence of bias sputtering and wafer preheating 3—43676
Al-Fe-Mn (2.0, 0.8 wt.%), fine-grained, tensile deform. 3—47911
Al-Mg-Si alloys, ductile fracture toughness, effect of dispersoids 3—34452
Al-Mg-Zn-Cu, precip. hardening alloy, flow stress-grain size relationship 3—43923
Al-Mn-Mg (1, 1 wt.%), strip-cast, thermomech. treatment, creep response 3—24301
Al-Zn-Mg-Cu, 7075-T6 alloy, small fatigue crack growth rel. to localized microplasticity 3—29154
Al_2O_3 bend specimens, slow crack growth, increase of crack resist. 3—34442
Al_2O_3, fracture toughness, depend. on grain size and test technique 3—29161
Al_2O_3:Mn, Ti, polycryst., diffusional creep, enhancement by simultaneous doping 3—9122
Ar discontinuous film, atom mean-square displacements, sample size effect 3—8365
Au, LV sputter coating 3—52941
Au-Ge-Ni films, structural changes during heating *(Chinese)* 3—42938
Au-Pd, LV sputter coating 3—52941
Ba hexaferrites, substituted M-type, mag. props. and microstruct. 3—14086
$BaTiO_3$ ceramics, grain size effect on dielectric const. under DC biasing field 3—3634
$BaTiO_3$, semiconducting, porous, factors, affecting positive temp. coeff. of resist. *(Japanese)* 3—3206
$BaTiO_3$:Pb,Ca semiconductor ceramics, liquid phase sintered, positive temp. coeff. resist. 3—52130
Cd-Zn, directionally solidified eutectic alloy, tensile deform., metallography 3—53134
CdTe films, large grain, vacuum evaporation on Sb-Bi alloy coated Ta for solar cell appl. 3—24580
CoCr based vertical recording materials, sputter deposited, mag. props. and microstruct. 3—57714
Cu base alloys, shape memory stability, grain size refinement, optical refl. obs. 3—43836
Cu, dynamic recryst. during high temp. tensile tests 3—29105
Cu, grain size prediction using acoustic attenuation measurements 3—58384
Cu, large-grained polycrysts., random strain cycling 3—14672
Cu wire, grain boundary anelasticity, triple contacts and internal friction *(Russian)* 3—51709
Cu-Al-Ni-Ti, shape memory alloy, grain refinement rel. to Ti addition, transform. hysteresis 3—47832
Cu-Al-Zn-V, shape memory alloys, β-grain size and mech. props. rel. to V addition 3—43888
Cu-Ni system, ultrafine powders, diffusional homogenisation 3—58072
Cu-Zn-Al (26, 4 wt.%), shape memory alloy, stress-strain response rel. grain size 3—43889
CuZnAl shape memory alloys, austenite microstruct. effects on martensitic transform. 3—43830
Fe, fatigue crack propag., near threshold, effect of grain size and cold work 3—29181

grain size continued
Fe particles, prep. for mag. recording tapes, coercive force, saturation magnetisation, grain props. 3—23739
Fe, pure, cold rolling and annealing textures, effect of grain boundaries 3—29103
Fe-C, US attenuation, microstruct. and ductile to brittle transition temp. 3—58228
Fe-Co, electrodeposition from acid tartrate bath, effect of superimposed AC 3—47785
Fe-Co, fracture and stress relax., effect of at. ordering *(Russian)* 3—24332
Fe-Co-Si ribbon, rapidly quenched, grain struct. and mag. props. 3—29110
Fe-Ni film, electroplating, comp. rel. to AC to DC ratio 3—34251
Fe-Ni-Cr, superalloy, additive strengthening 3—9081
Fe-Si (6.5 wt.%) ribbon, rapidly quenched, mag. props., thickness depend. 3—28656
$FeNi_{45}Cr_{20}Al_5Y_{0.02}$, austenitic alloy, oxidation kinetics, influence of struct. parameters 3—34534
GaAs solar cells, grain boundary effects 3—53562
InP, carrier mobility, grain size depend., elec. cond. and Hall effect studies 3—47343
Kr discontinuous film, atom mean-square displacements, sample size effect 3—8365
Mg, strongly textured, grain boundary strengthening, prod. by hot rolling 3—34353
Mg-Li (12.5 at.%), hot-rolled, texture and grain boundary strengthening 3—29106
Mn-Zn ferrite, polycryst., diffusional creep 3—2659
Mn-Zn ferrite, polycryst., creep deform. 3—14687
Mn-Zn spinel ferrites, grain orientation study, rel. to processing parameters 3—13471
Mo alloys, structure factor influence on surface roughness form. *(Ukrainian)* 3—47932
Mo, chemically deposited, He ion irrad. 3—28013
Mo, explosively consolidated, struct. and hardness 3—34454
Mo, yield and flow stresses, grain size depend., 300-500K 3—29142
Mo-W (5 wt.%) alloy, creep resist., stress and microstruct. depend. 3—47921
NaCl, deformed under dynamic recrystn. conditions, struct. and props. 3—2657
Nb and alloys, fabrication, deform. parameters 3—4081
Nb thin film, current-induced superconducting transition 3—43316
Ni electron beam evaporated coating on Si(111), oriented growth of Ni and Ni_2Sn 3—42973
Ni-Cr-Co, wrought superalloys, creep, 800°C, strengthening mechanisms 3—47922
Ni-Zn ferrites, grain size rel. to domain wall dimensions 3—14071
NiAl, recrystn. and grain growth 3—4056
NiZnCo ferrites for particle accelerators, high freq. mag. losses, microstruct. effects 3—11594
Pb superconducting films, polycryst., vapour deposition, grain size reduction using grain growth barriers 3—47780
Pb-Sn, eutectic, high temp. deform., constitutive relations 3—43893
Pb-Sn alloy deposition, chloride bath comp. 3—58057
$Pb(Zr,Ti)O_3$-type piezoelec. ceramics, physical props. 3—52733
Pt, LV sputter coating 3—52941
Si CVD film, solid-phase-recrystallised, on fused SiO_2, thin film transistors fabrication 3—43727
Si, CVD grown, laser irrad., grain enlargement, optical microscopy, SEM studies 3—56968
Si, CVD grown on amorphous substrate, shaped beam laser recrystallised, structural and elec. characts. 3—57244
Si film, plasma enhanced CVD, doped during deposition, props. 3—8358
Si, grain boundary struct. rel. to growth technique and elec. props. 3—51626
Si, polycrystalline, grain size influence on mobility, lifetime and diffusion length 3—43167
Si, polycrystalline, Schottky diodes, grain size, laser annealing study 3—33777
Si, polycrystalline film, ion implanted laser annealing, struct., resist., carrier mobility *(Chinese)* 3—43299
Si polycrystalline film growth on liq. Sn layer, growth mechanism and elec. props. 3—58046
Si polycrystalline laser-recrystallized Schottky diodes 3—57409
Si solar cell efficiency as affected by minority carrier diffusion length and silicon quality 3—24599
Si solar cells, polycryst., photovoltaic conversion efficiency, plasma hydrogenation effects 3—53506
Si solar cells, polycryst., I-V characts., effect of grain boundary recomb. and grain size 3—58524
Si:B, polycrystalline, MESA diodes on photocells, electronic props. rel. to grain size and intragrain defects 3—38470
Si:P CVD coatings, incoherent light annealing, elec. cond. study 3—42646
Si-Ge fine-grained alloy technology development for thermoelectric conversion 3—14981
SiC:Al(B), sintered, microstruct., inclusions, comp., STEM, AES, X-ray analysis 3—39077
Sn-Pb, acoustic wave emission during superplastic deform. *(Russian)* 3—24295
Sn-Pb (2, 38.1 wt.%), superplastic, role of Coble creep and interface control 3—39210
Sr hexaferrites, substituted M-type, mag. props. and microstruct. 3—14086
$Sr_{0.5}Ba_{0.5}Nb_2O_6$:Cu ceramics, ageing study, photovoltaic meas. 3—8524
Ti alloys, α and $\alpha+\beta$, fracture-microstruct. relationships 3—9185
α-βTi alloys, fracture toughness, role of microstruct. 3—34458
Ti alloys, superplastic forming characts., constitutive eqns. 3—58165
Ti, brittleness, grain size effect 3—29172
Ti, fracture behaviour, effect of temp., interstitial content and grain size 3—9186
Ti sheet and strip, commercially pure, anisotropic props., processing and heat treatment influence 3—24321
Ti, ultrafine grained, processing and deform. studies 3—24265
α-Ti-Al, age-hardened, ductility, grain size influence 3—24319
Ti-Al-Mo-V, fatigue crack growth, effect of load ratio 3—14698
Ti-Al-V, fracture toughness, microstruct. fracture appearance and specimen size 3—9184
β-Ti-Mo, age-hardened, ductility, grain size influence 3—24319
β-Ti-Mo alloy, age hardening, deform. and fracture characts. 3—14684

grain size continued
  β-Ti-Mo-V-Fe-Al, metastable, direct ageing for optimum mech. props. 3−19355
  TiB_2-Ni ceramics, hot pressing, fracture, thermal expansion, microstruct., comp. depend. 3−43941
  TiN film, reactively DC sputtered, composition, struct. and elec. props., substrate bias influence 3−13678
  TiO_2 ceramic, cation contamination effects on elec. resist., microstruct. and discoloration 3−33718
  TiO_2-$BaCO_3$, disperse thin films, phase transition, TEM study, particle size effect 3−2786
  TiO_2-SnO_2, system, precipitation from soln., grain growth *(Japanese)* 3−58082
  $TiSi_2$ amorphous thin film, elec. resist. and crystallisation 3−3187
  UO_2, diffusion of ^{147}Pm, 2273-1873K 3−13545
  UO_2, primary creep, effect of amorphous grain boundary phases 3−19374
  WC-Co, cemented carbide prod., influence of trace elements 3−3999
  WSi_2 film, cosputtered, resistivity, grain boundary effects 3−8595
  Xe discontinuous film, atom mean-square displacements, sample size effect 3−8365
  YIG, grain size rel. to domain wall dimensions 3−14071
  Zn-Al, acoustic wave emission during superplastic deform. *(Russian)* 3−24295
  Zn-Al, crit. grain size for transition to superplastic flow *(Russian)* 3−24296
  Zn-Al (0.4, 0.6 wt.%), superplastic, cyclic deform. 3−53154
  Zr, polycrystals, high temp. internal friction, grain boundary relaxation 3−39188
  Zr-Nb (2.5 wt.%) alloy pressure tubes, tensile props. rel. to post-extrusion thermomech. treatment 3−43921
  ZrO_2-CaO-B_2O_3, densification with borate additions 3−53007
grain structure *see crystal microstructure*
grain subboundaries *see subboundary structure*
gramophones
  No entries
Granato-Lucke theory *see dislocation damping*
grand unified theory *see unified field theories*
granular materials
  see also granular structure
  aggregates of regular packings of uniform spheres, diffusion analogy const. calc. 3−1948
  bonded granulates, stress/strain relations for case of elastic, viscoelastic components 3−42130
  composites, granular, with different types of grains, microstress fields 3−53102
  cyclic behaviour, rate independ., complex slip mechanisms *(French)* 3−8118
  dispersal by supersonic gas jet, resultant flow study 3−46626
  failure props., shear testing 3−48007
  ferrite pellets for bipolar particulate electrolytic cells 3−19527
  hopping cond., variable-range, metal-insulator transition 3−47346
  hydraulic resistance of cylindrical and annular particles under transition conditions of flow 3−22521
  ideal, plane deforms., flow rule based on double-shearing model 3−56452
  Love waves in granular medium over a half-space under gravity 3−18385
  porosity, mathematical model calc. 3−48008
  rapid flow, constitutive equations 3−27562
  semiconductors, Hall effect rel. to carrier density 3−18726
  strength, expt. micromech. evaluation, particle rolling effects 3−29124
  velocity distribs. in slow flow 3−46666
  Al, Hall effect meas. near metal-insulator transition 3−3163
  In-In_2O_3 thin film composite, reactively sputtered, struct. phase transition study 3−28989
  Ni superalloys, Z 3−39074
granular metallic thin films *see discontinuous metallic thin films*
granular structure
  see also granular materials
  No entries
graph theory
  see also trees (mathematics)
  achromatic doublet design, double-graph technique evaluation 3−37156
  arterial branching, local geometry 3−24747
  classification and coding of chem. reactions with a linear mechanism 3−9304
  coronary arterial segments, reconstruction from two projections, network flow algorithm 3−15219
  cyclic conjugated system with degenerate orbitals, London susceptibility, general graph theoretical formula 3−55797
  extended connectivity in chemical graphs 3−11646
  matrice eigenvectors, appl. of graph theory to group theory 3−117
  pending bonds in cpds., characteristic polynomials 3−6802
  total scatt. cross sections beyond glory region, direct inversion 3−32162
  total scatt. cross sections in glory region, direct inversion, graphical-numerical method 3−32161
  virial coefficients for thermodynamic system pressure, overlap graph representation of B_6 and B_7 3−10784
  vision, graphical analysis of prism adaptation, convergence accommodation, and accommodative convergence 3−24709
graphics, computer *see computer graphics*
graphite
  adsorbed ethane in monolayer range, LEED study 3−51947
  adsorbed Kr, phase transitions, lattice gas models 3−51951
  adsorbed Kr monolayer, behaviour near commensurate-incommensurate transition 3−23163
  adsorbed Kr monolayer, weakly incommensurate phase, mol. dynamics simulation 3−28214
  adsorbed methane monolayers, dynamics, NMR study 3−13628
  adsorbed monolayers of tetrafluoromethane, synchrotron X-ray diffr. study 3−13637
  adsorbed n-butane, lattice vibrs., neutron spectrum 3−8316
  adsorbed Ne, Ar, Kr, Xe and methane, electrodynamic screening of van der Waals interaction 3−42927
  adsorbed tetrafluoromethane, commensurate-incommensurate transitions and melting 3−38198
  adsorbed tetrafluoromethane, phase transitions, role of walls and dislocations 3−51952
  adsorbed tetrafluoromethane submonolayers on (001) surface, synchrotron X-ray diffr. study 3−51948
  adsorbed Xe, freezing transition, mol. dynamics study 3−51937

graphite continued
  adsorption of Ar, pot. energy function determ. 3−51930
  adsorption of CO_2, N_2O, and C_2N_2, phase diagrams 3−57219
  adsorption of N_2, LEED intensity isotherms, fluid to solid transition, multilayer condensation, phase diagram 3−18554
  adsorption of trimethylaluminium, rel. to OMVPE growth effects of $Al_xGa_{1-x}As$ 3−42966
  alkali metal-graphite intercalation compounds, phase diagrams 3−23015
  binding between layers, Thomas-Fermi-Kirzhnits method calc. 3−18258
  body in hypersonic gas stream, thermochem. breakdown 3−46660
  Bragg-reflection profiles obs., double-axis and triple-axis X-ray spectrometer results comparison 3−42491
  bricks, creep and refractories, high temp. testing in non-oxidising atmosphere 3−47996
  cathodes in vacuum arcs, erosion rate in transverse mag. field 3−18150
  chemical reaction with atomic H, electron impact influence on methane prod. 3−26446
  composite, Al infiltrated, elec.-discharge sintering 3−24200
  core support posts in VHTR, stress analysis by photoelastic expts. *(Japanese)* 3−11378
  dense graphite matrix for rad. waste conditioning 3−950
  diamagnetic anisotropy and electronic energy band parameters, 4 to 300K 3−33858
  discs, hot pressed, crystallite orientation *(Japanese)* 3−39083
  dust clouds, ignition energy and flame quenching meas., quenching distance formula 3−24536
  electrode erosion rate in spark gaps for pulsed power systems 3−7846
  electrode in plasmatron, temp. field investig. 3−42457
  electronic interlayer states, linearised APW calc. 3−52006
  electronic struct. and X-ray form factors, self consistent calc. 3−23263
  electronic structure, single particle and collective excitations, EELS and secondary electron emission study 3−58011
  emitters for thermophotovoltaic converters, characteristic parameters 3−9460
  erosion charact. in CO gas blown rail-type spark gaps 3−7847
  erosion due to energetic ion bombardment, room temp. to 4000K 3−26449
  exfoliated, elec. resist., temp. depend., 1.5 to 300K 3−43148
  fibre, effects of intercalation on microstructure 3−33459
  fibre reinforced Al, creep anal. 3−9127
  fibres, derived from benzene, Raman spectra and resist. meas., effect of intercalation 3−23951
  fibres, highly ordered, high field magnetoresist., X-ray diffr., and Raman spectra 3−57333
  fine powder suspensions, non-Newtonian flow props. *(Japanese)* 3−56577
  furnace in electrothermal atomiser for AAS, longit. nonisothermality elimination 3−53468
  fusion reactor first wall, extended local mixing model for H retention and isotope exchange 3−17041
  fusion reactor material, neutron leakage spectra meas. 3−55648
  glass-graphite materials fracture characts. in partially ionised air flow 3−34447
  grains, Planck mean absorpt. efficiency, appl. to interstellar grains 3−59193
  graphite: B(p)(As), ion implanted, lattice damage and implant distrib., SEM, STEM and AES study 3−2597
  graphite:B, dielectric function and critical-point transitions 3−14244
  graphite:F^+, ion implanted, metallic IR reflectivity and elec. cond. 3−2444
  graphite trifluoromethylsulphate intercalation cpd., formation and charact. 3−8816
  graphite-alkali metal intercalation cpds., chemisorpt. of H_2, ESR and elec. resist. investig. 3−51927
  graphite-Br intercalation cpds., dil., commensurate-incommensurate transition and disordering 3−8193
  graphite-epoxy composite laminate, fatigue and impact damage, US characterization 3−58385
  graphite-epoxy composite laminates, ply orientations, 2D US imaging using polar backscatt. 3−58386
  graphite-$FeCl_3$, stage depend. intercalant in-plane density, Mossbauer study 3−23844
  graphite-H_2SO_4, cryst. expansion during galvanostatic intercalation, dilatometer study 3−25875
  graphite-K-Amalgam intercalates, Raman modes 3−19134
  graphite-polymer composites, positron annihilation rates, moisture depend. 3−3856
  graphite-PVC composite for loudspeaker diaphragm *(Japanese)* 3−37313
  graphite-quartz sand dispersed mixture, elec. cond. 3−43246
  graphite-Rb intercalation compound, STEM of multiphases 3−22848
  graphite-to-diamond struct. transform., microscopic model *(Chinese)* 3−28089
  graphitic fuel elements in HTGR, diffusion of metallic fission products, Cs, Ag, Ru concs. 3−21414
  heat shield coatings, dispersity of microparticles effect on radiation attenuation in hypersonic layer 3−54217
  incompletely graphitised C, Raman scattering model 3−34082
  intercalated, charge transfer and maximum cond. 3−18691
  intercalated with C, electronic struct. 3−13723
  intercalated with $FeCl_3$, mag. props., AC susceptibility meas. 3−3426
  intercalates, conduction mechanism anisotropy *(French)* 3−23371
  intercalation compound, C_8Rb, lattice dynamics, neutron scatt. study 3−2712
  intercalation compound, $C_{9.3}AlCl_{3.3}$, electrical cond., counter-EMF obs. during phase transition 3−23349
  intercalation compound, KC_8, electronic struct., XPS and EELS studies 3−19250
  intercalation compound, LiC_6, first-order phase transition, elastic neutron scatt. and DSC study 3−23037
  intercalation compound with Br, $C_{28}Br_2$, commensurate-incommensurate transition, X-ray scatt. study 3−13435
  intercalation compound with BrF_3, composition and struct. 3−13183
  intercalation compound with KC_{24} and dimethoxyethane, struct., X-ray diffr., thermogravimetric and dilatometric study 3−42591
  intercalation compound with Li, structural and elastic props., in-plane density 3−33213
  intercalation compound with $SbCl_4$, commensurate-incommensurate transition, TEM and elec. resist. meas. 3−13437
  intercalation compounds, 2D band struct., optical props. *(French)* 3−23266
  intercalation compounds, charge transfer, bond lengths 3−21909
  intercalation compounds, effects on lattice constants 3−22849

graphite continued
intercalation compounds, KC_8 and $KHgC_4$, supercond. transition temp., anomalous press. depend. 3—23527
intercalation compounds, staging transition mechanism, role of domain walls 3—38061
intercalation compounds, thermal cond., electronic and lattice contribs. 3—42866
intercalation compounds with alkali metals, electronic interlayer states, linearised APW calc. 3—52006
intercalation compounds with alkali metals, higher stage, relaxed incommensurate struct. of intercalant layer 3—22858
intercalation compounds with alkali metals, layer-bending modes, neutron scatt. study 3—22999
intercalation compounds with AsF_5, charge transfer, optical refl. study, 10 to 300K 3—57956
intercalation compounds with K, neutron diffr. study rel. to appls. as monochromators 3—7876
intercalation compounds with K and $FeCl_3$, c-axis elec. resist. and thermopower, temp. depend. 3—8475
intercalation compounds with SbF_5, stage one cpd., order-disorder transform. study 3—8182
intercalation cpd., $C_{24}SbCl_5$, magnetostriction detection in static fields by capacitance technique *(Japanese)* 3—28678
intercalation cpd., $KHgC_8$, stage 2, supercond. transition temp., press. depend. 3—18813
intercalation cpd., light scattering, Brillouin and Raman spectra, book 3—46
intercalation cpd., Raman scatt., lattice dynamics and internal modes, book contrib. 3—3742
intercalation cpd., stage transformations, X-ray diffr. study 3—42772
intercalation cpd., thermal cond., lattice and electronic contrib. 3—2905
intercalation cpd., third and fourth stage, band struct., LCAO calc. 3—23267
intercalation cpd. with $CoCl_2$, mag. transitions, susceptibility and spontaneous magnetisation studies 3—57611
intercalation cpd. with $CoCl_2$ thermal cond. and thermopower at mag. transition 3—47324
intercalation cpd. with Cs, nonhexagonal superlattice observation, STEM study 3—42586
intercalation cpd. with $CuCl_2$, pitch-based fibre, elec. and mechanical props. 3—52106
intercalation cpd. with $FeCl_3$, air stability, Mossbauer study 3—52693
intercalation cpd with $FeCl_3$, ferric and ferrous ion arrangement, Mossbauer study 3—18278
intercalation cpd. with $FeCl_3$, interplanar distance, low temp. X-ray diffr. study 3—33193
intercalation cpd. with $FeCl_3$, spin glass state, mag. susceptibility and Mossbauer studies 3—43375
intercalation cpd. with $InCl_3$, TDPAC study 3—47579
intercalation cpd. with K, c-axis resist. and metal-insulator transition 3—28321
intercalation cpd. with $NiCl_2$, mag. transitions, susceptibility, magnetisation and sp. ht. studies 3—57612
intercalation cpd. with O, elec. cond. reduction, tight-binding and cluster calcs. 3—28320
intercalation cpd. with Rb, interpretation of electron diffraction pattern 3—42585
intercalation cpd. with Rb, lattice dynamics, Raman scatt. from low freq. phonons 3—28859
intercalation cpd. with $SbCl_5$, thermal transport props., commensurate-incommensurate transition 3—2904
intercalation cpds., higher stage, band struct. and c-axis charge distribs. 3—38282
intercalation cpds., stage 2, orientational in-plane ordering and phonon dispersion 3—56862
intercalation cpds., structural phase transitions, X-ray diffr. studies, review 3—13201
intercalation cpds. with Li, K, Rb, Cs, cond. bands, low energy photoelectron spectroscopy study 3—28968
intercalation with K, real time γ-ray diffr. study 3—42584
ion implanted lattice damage and annealing, Raman spectra study 3—3746
ion implanted with D, trapped states, chem. sputtering, thermal desorption 3—26448
islands, adsorbed on Ir, bond nature 3—33579
K-graphite intercalate, lattice dynamical model 3—13379
lattice dynamical model, Raman spectrum calcs. 3—13362
limiter and armour damage in Doublet III 3—56695
localised Compton scatt. using EELS 3—24041
monolayer, total energy calc. method 3—13756
monolayer adsorbed on Ir, AES study 3—2984
nuclear, fracture criterion 3—16851
nuclear, high reactivity, pore structure, effects of oxidation, diffusion studies 3—2867
nuclear grade, Young's modulus rel. to thermal expansion coeff. 3—34372
outgassing characteristics of TiC coated fusion reactor materials 3—21528
oxidation by water, feasibility as rad. waste isolating material 3—31520
physisorbed Ar-Xe films, synchrotron X-ray diffr. study 3—51949
physisorbed N_2, struct. and orientational ordering, LEED study 3—51946
physisorbed N_2, uniaxial incommensurate phase obs. 3—13635
physisorbed rare gas monolayers, static props. in solid phases 3—51941
physisorbed tetrafluoromethane monolayer, orientational walls and complex phase diagram 3—13622
physisorption, of Xe overlayers on basal plane, vibr. amplitudes 3—38189
physisorption of ^3He (^4He), mean field theory, desorption kinetics 3—13630
plasma limiter analysis after operation in T-10 3—22699
plasmon excitation by electron energy loss 3—43053
polycrystalline, macrostructural charact. by electroconductivity and magnetoresist. 3—43205
polycrystalline, pressure-dependent volume strain, under fast neutron irradiation 3—21367
porous composites, US transmission spectra 3—51723
powder composite, Cu clad, high-speed shaping 3—24199
pyro-graphite, high energy ion irradiation, ESR study 3—28701
pyrolytic, highly oriented, substrate for ^4He film, third sound vel. meas. 3—2909
pyrolytic, implanted He retention, re-emission and thermal desorption 3—21509
pyrolytic, neutron radiation monochromators and filters 3—2345

graphite continued
pyrolytic, reaction of atomic H, hydrocarbon form., synergistic effect of Ar ion bombardment 3—26447
pyrolytic, sputtering yield enhancement at elevated temps. 3—26450
pyrolytic, thermal conductivity parameters 3—47173
pyrolytic monochromator, reflectivity, Darwin formulism 3—10971
reactivity with atomic H, electron bombardment enhanced, temp. depend., methane yield 3—26445
rod atomiser for AAS using radioactive isotopes, profile optimisation 3—53467
shear elastic modulus meas. 3—47019
structural and elastic props., density-functional approach 3—51537
substrates with CVD-SiC and HSC-SiC coatings, thermal shock behaviour, suitability for fusion reactor first wall 3—1030
surface, (0001), laterally averaged interaction pot. calcs. for $^1H_2$ and $^2H_2$ 3—38987
surface, adsorbed O_2, X-ray diffr. study 3—57226
surface, adsorbed tetramethyl tin monolayers, melting and phase props., Mossbauer study 3—23166
surface, basal plane, interaction with inert gases 3—58020
surface (0001), adsorbed Xe, surface vibrs., H scatt. study 3—42917
surface (0001), layer-by-layer intercalation of K, LEED study 3—57190
surface properties, struct. and reactivity, from carbon black to carbon composites, review 3—24527
surface with near-monolayer Xe film, Xe melting transition, mol. dynamics simulations 3—57068
surfaces, low energy electron incidence, total yield energy depend. 3—19234
vacancies, positron studies 3—47733
vaporization and vapour press. determ. 3—51770
Al_2O_3/graphite mixture, microstructure development during carbothermic reduction 3—39079
C fibres, vapour grown, piezoresistance effect 3—8485
$C_{8.4}AsF_6$, intercalate, composition, IR spectra 3—23954
$C_{8n}AsF_5$ stage 2 intercalation cpd., charge transfer and band struct. 3—23268
C_6Eu intercalate, high-field magnetisation, spin fluctuations 3—52533
$C_{8.4}HOTeF_5$ intercalate, cryst. struct. *(German)* 3—22864
C_8KHg, pressure effect on superconductivity 3—3361
$C_{24}Rb$ intercalation cpd., phonon dispersion relations, neutron scatt. study 3—33374
C_8RbHg, pressure effect on superconductivity 3—3361
$C_{7.3}SbF_6$, intercalate, composition, IR spectra 3—23954
Cs-graphite intercalate, lattice dynamical model 3—13379
$CxF(MgF_2)_y$, intercalation compound, prep. at 20-350°C, ESCA and ^{19}F NMR 3—24168
D-D Tokamak fusion reactor, nuclear characteristics of blanket/shield design 3—21504
EuC_6, intercalation cpd., electronic and mag. props. 3—33690
Fe-graphite compact undergoing sintering, diffusion obs., thermal microscopy 3—58068
$FeCl_3$ intercalated graphite, Mossbauer study of mag. props. 3—3616
He-graphite, forced convective heat transfer at high temp. 3—51204
KC_{24}-tetrafuran, cryst. struct. stoichiometry *(French)* 3—23051
KC_{24}-tetrahydrofuran, cryst. struct. stoichiometry *(French)* 3—23051
KC_{24s}-tetrahydrofuran intercalate, molecular motion, ^1H NMR study *(French)* 3—22991
KC_8, press. induced staging transitions, fractional stage obs. 3—42769
$KHgC_x$ (x=4, 8) intercalation compound, optical reflectivity 3—8847
LiC_6 intercalation cpd., phonon modes, inelastic neutron scatt. study 3—57043
NbC-graphite composites, strength with force and thermal loading 3—14726
Ni-Ce-Y-C, graphite morphology and microdistrib. of Ce and Y modifying agents 3—39108
Rb-graphite intercalate, lattice dynamical model 3—13379
$SbCl_5$-graphite intercalate, c axis elec. resistivity 3—52156
SbF_5-graphite intercalate, ^{19}F NMR study 3—23817
TiC-coated graphite, outgassing characteristics meas. 3—49388
ZrC-graphite composites, strength with force and thermal loading 3—14726

graphitic steel *see carbon steel*

graphitisation
C fibres, vapour grown, piezoresistance effect 3—8485

graphitising
steel, alloyed with graphitising elements, damping and mech. props. 3—4072
steel, low-alloy, graphitised, quench hardness and transform. during tempering, alloying effect 3—34364
Fe, cast, white, graphitising kinetics of cementite *(Japanese)* 3—9099
Fe, cast, white, mischmetal effect on microstructure and mech. props. 3—24327

graphs
see also nomograms
atmosphere differential refraction, graphs for optimal slit orientation for astronomical spectrophotometry 3—10225
atmospheric humidity measurement, graph use 3—40618
nested Rosenberg equations, graphical structure 3—45494
strength characteristics of metals for various strain rates, temp. depend., accelerated determ. method 3—19488
CO_2 TEA laser gas mixture optimization, use of topographical plot 3—22027

gratings (diffraction) *see diffraction gratings*

gratings (optical) *see diffraction gratings*

gratings (spectra) *see diffraction gratings*

gravimeters
see also geodesy
airborne gradiometers, real time gravity filtering *(Japanese)* 3—39940
electric cell gravimetry using gravit. field induced EMF 3—54150
gradiometer system, development experience 3—35326
absolute gravimetry, new research and development *(Chinese)* 3—35054
gravitational radiation antenna, capacitive reson. transducer type 3—54247
pendulum clock (AChF-3 type) for precise gravity field meas. 3—48705
portable apparatus for absolute gravity meas., tectonics appl. 3—15650
transportable absolute gravimeter for determining the acceleration due to the Earth's gravity 3—15649
transportable gravimeter for absolute gravity acceleration meas. 3—39935

gravimetric instruments *see gravimeters*

gravimetry *see density measurement; weighing*

gravitation
see also general relativity; gravitational collapse; gravitational lenses; gravitational red shift; gravitational waves; quantum field theory of gravitation; Schwarzschild metric; unified field theories
algebraic structure of gravitational field and geodesic deviation *(Russian)* 3−20713
astronomical testing of gravitational theories, Viking mission and POINTS satellite 3−10714
axisymmetric gravitational compression of a body, exact solns. 3−5597
Bianchi type-V cosmological models from Einstein-Cartan theory, effective energy-momentum tensor 3−20548
big bang, pregeometric origin, gravity effective action 3−59514
bimetric Machian gravitation, Newtonian limit 3−16206
black holes, energy mining proces 3−59381
black holes assoc. with extragalactic radio sources, gravit. field 3−25635
Bonnor's equation demonstration, density fluctuations in Newtonian approx. 3−145
Brans-Dicke equations with cosmological constant, solutions in spatially flat Robertson-Walker metric 3−20546
Brans-Dicke scalar field theory with variable cosmological term 3−5456
Brans-Dicke theory, static plane symmetric disordered radiation 3−45037
bundle connections and Backlund transformations for gravitational fields with isometries 3−156
celestial body, harmonic coeffs. of gravitational pot., translation effect of ref. system 3−48815
charged black hole, Klein-Gordon equation for interior normal modes 3−20417
charged dust in Einstein zero-mass scalar theory 3−137
classical relativistic multiperiodic systems, Maxwell-Boltzmann distrib. from Rayleigh-Jeans spectrum 3−49235
clocks in gravitational fields, meas. constraints 3−35901
conference, Trieste, Italy, (July, 1979) 3−5496
conservation laws and topology *(German)* 3−30709
continuous groups and Backlund transformations generating asymptotically flat solns. 3−10666
cosmology, gravitational evolution of struct. in scale-free universe 3−16047
cross term modified gravit. field equations, eqns. of motion 3−35429
differential parameters in the normal gravity field 3−5663
Einstein's theory of gravitation, energy problem 3−16203
Einstein's vacuum and electrovac field eqns., general soln. 3−40430
Einstein eqns., coordinate conditions 3−40436
Einstein eqns. solns. admitting super-covariantly constant spinors 3−40432
Einstein-Cartan space-time, perfect fluid energy momentum tensor with spin 3−149
Einstein-Cartan theory, field equations for perfect fluid 3−16209
Einstein-Cartan theory, reduced fibre bundles, symmetries, rigid reductions 3−30735
Einstein-Cartan theory, static cosmological model 3−5457
Einstein-Cartan theory for Zel'dovich fluid, Birkhoff's theorem analogue 3−10685
Einstein-Cartan-Moffat theory 3−30739
Einstein-Dirac eqns., exact soln. for anisotropic cosmological space-time 3−30711
Einstein-Maxwell eqns., exact axially symmetric static electrovac. solns. 3−45034
Einstein-Maxwell eqns. accurate soln. 3−5667
Einstein-Maxwell eqns. accurate solns. 3−40439
Einstein-Maxwell massless scalar fields with Einstein-Rosen metric 3−30740
Einstein-Maxwell solns. for interaction of massless scalar field with charged dust 3−45029
Einstein-Weyl eqns. in general relativity, nonexistence of static solns. 3−20718
Einstein-Yang-Mills-Higgs system, wormhole solns. 3−45035
electrothermodynamic theory, screening effect of large mass (Earth) 3−147
EM fields, viscous fluid interpretation 3−30733
EM wave polarisation plane rotation due to gravitational field 3−140
energy of gravitational-inertial field 3−5668
Ernst's equation, brute force soln., Kinnersley-Chitre soln. limits 3−5664
ether theory and etheron elementary particles *(Rumanian)* 3−16057
false vacuum decay, bubble nucleation and gravity 3−40454
Feige 24, white dwarf, gravit. redshift determ. from highly ionised species in UV spectrum 3−35597
field equations with cross-terms and static equilib. configurations 3−10648
Finsler spaces, intrinsic behaviour of internal variable, conservation laws, micro-gravitational field 3−5662
galaxies in clusters/early Universe, ang. momentum, effects of tides/gravit. interactions 3−10450
gauge fields, generalised, external symm. group, interpretation of gravity 3−40765
Geganbauer equation, toroidal solns. 3−25310
general coordinate transformations, realisation in phase space 3−45041
general relativity, charged test body motion, symmetry props. 3−40440
general relativity, gravitation without black holes 3−20721
general relativity and matter, book 3−54590
general scalar-tensor theory, static conformally flat solutions 3−16205
generalised charged static dust in relativity 3−20740
geodetic deviation equation, const. of the motion 3−10683
geometric techniques in gauge theories, conf., Scheveningen, Netherlands (Aug. 1981) 3−5500
Godel's Universe, geodesic motion and confinement 3−49067
Gowdy $S^1 \otimes S^2$ and S^3 inhomogeneous cosmological models 3−35748
grand unification and gravity, family problem, fermion mass hierarchy 3−10686
gravitational wave Newtonian buoy system interaction, Brans-Dicke theory 3−5671
gravitational-neutrino field eqns., stationary axially symmetric solns. 3−45028
group covariance and spin motion in gravitational theory 3−155
hermitian gravity, effective phenomenological Lagrangian, N=1 supergravity for spin-$^3/_2$ particles 3−35904
homogeneous, isotropic cosmological model in scalar-tensor theory 3−35764
index theorems in gravity and supergravity 3−10695
induced gravitational constant, Adler-Zee formula, Planck zeros 3−20236

gravitation continued
induced gravitational constant, analyticity and positivity constraints on sign 3−20235
initial value formulation in a new theory of gravity 3−10691
invariantive mechanics, gravitational interaction 3−142
inverse square law, modified Cavendish experiment 3−10712
inverse square law, source-independent null experiment, Laplacian detection 3−10713
Jordan-Brans-Dicke theory, astrophysical consequences 3−44885
Kalunza-Klein type general relativistic theory with true de-Sitter covariance 3−5670
Kaluza-Klein theories, study with Riemann geometry with conformal symmetries 3−40447
Kaluza-Klein theory, five dimens., classical dyonic black hole solns. 3−40446
Kerr black hole field with fluctuating perturbations, test particle motion 3−44788
Kerr metric derivation 3−40470
Kerr-Newman black hole soln., proof of uniqueness 3−5326
light rays in gravitating refractive media, general relativistic eqn. of motion 3−10191
linear Einstein eqns. 3−20733
linear gravitational field equations with Heavisidian monopoles, Dirac-like form 3−16207
linear gravitational waves 3−40444
linearised gravitation field, measurability anal. 3−35902
massive bodies, eqns. of motion, nonsymmetric gravitation theory 3−20230
massive bodies, periodic perturbation in generalised theory of gravitation 3−20231
massive vector field in Friedmann matric, regularisation and renormalisation 3−522
massless field-gravitational field interaction, conformal transformations and examples 3−146
Maxwell and Proca eqns. in space with torsion 3−20734
Maxwell-Dirac coupled eqns., global solns. 3−30734
mean curvature of gravitational fields 3−154
neutron stars, gravitational field, internal and external solns. 3−25508
Newman-Unti-Tamburino four-momenta 3−20743
Newton-Cartan theory with preferred vector field and perihelion shift 3−44878
Newtonian cosmology; gravit. Debye-Huckel theory 3−59511
Newtonian potentials and dynamics of a stratified ellipsoid 3−44661
nonmetric theories of gravity anal., electromagnetism 3−45040
nonsymmetric $g_{\mu\nu}$ based gravit. theory implications 3−40031
parametrised-post-Newtonian formalism of gravitation, ellipticity of static perfect fluids 3−5676
particles and geometry 3−10644
perfect and viscous fluid, geodesic normal flow 3−20739
petrov classification: an elementary approach 3−35793
photon scattering in solar field, parametrised post-Newtonian formalism 3−20234
photons gravitational deflection in Newtonian physics 3−35804
physical interpretation of a new theory of gravitation 3−10690
pure spinor theory, general space-time covariance 3−40453
red shift, equivalent description from electrodynamics of continuous media 3−5421
Reissner-Nordstrom black hole perturbations 3−15939
Reissner-Nordstrom geometries, spin radiation field Debye potential calc. 3−16193
relativistic tidal forces in metric theories of gravitation, appl. to binary pulsar (PSR 1913+16) 3−35417
Riemannian space-times admitting complete set of gauge conditions for higher spin fields 3−5672
rotating black holes, vacuum polarisation of massive fields in Kerr space-time 3−59382
scalar-invariant scalar-tensor theory, gravitational constant and particle mass origins 3−16208
scalar-tensor theory, static plane-symmetric soln. 3−40452
scale covariance, post-Newtonian approx. *(French)* 3−49238
scale covariant formalism, post-Newtonian approx. 3−25309
scale-invariant gravity, variable-mass embedding for general relativity 3−54223
Schwarzschild black hole, null geodesics in static Ernst space-time 3−35651
Schwarzschild horizon, EM test fields 3−54423
solar system, gravitational freq. shift effect 3−40028
static dust sphere in Einstein-Cartan theory, conformally flat soln. 3−5674
stationary axially symmetric Brans-Dicke-Maxwell fields 3−10688
stationary cylindrically symmetric gravitational fields, scalar tensor theory, Brans-Dicke solutions 3−5675
streams, gravitational instability 3−2083
Szekeres cosmological models, singularities and evolution 3−35760
three-body problem, new coordinate system 3−35834
Titius-Bode law of planetary distances from quantum gravity theory 3−20209
two Schwarzschild black holes, closed trapped region and apparent horizon 3−5325
unified field theory of gravtitation and electromagnetism, metric hypothesis 3−5673
variable-G gravitational theories, cosmological tests *(Polish)* 3−48817
vector-tensor interaction of gravitation *(Chinese)* 3−40450
very early Universe, first-order phase transitions, bubble nucleation and collisions, primordial black hole formation 3−20549
Yang-Mills theory and gravitation: a comparison 3−5691

gravitational acceleration *see gravitation*

gravitational collapse
see also black holes; cosmology
black hole transformation into grey holes from neutrino constraints 3−15938
black holes, implications of barytinos for violation of baryon number conservation 3−59200
classical singularities and black holes life, quantum gravity effects 3−10699
cold stars collapse dynamics due to interior phase transition, appl. to neutron stars 3−5273
collisionless particles superclustering, two-dimens. simulation, galaxy appl. 3−40269

gravitational collapse continued
core collapse, shock wave production and outward propagation model 3—25494
core collapse hydrodynamic anal. with and without neutrino losses, shock wave anal. 3—25495
cosmology, gravit. instability in expanding universe rel. to cosmic density wave and observable effects 3—10492
coupled modes on generic spherically symmetric space-times 3—10678
dark clouds dense cores, star form. and gravit. collapse evidence, NH$_3$ SHF 3—54469
dense objects, relativistic continuum mechanics 3—15839
Einstein's field equations, solution for empty space, consequences for post gravitational collapse 3—20724
equations of motion, for cross term modified gravit. field equations 3—35429
galaxies active nuclei, nature of gravitational energy source 3—25615
galaxy clusters, dynamical evolution rel. to radio source morphology 3—59489
galaxy formation collapse phase, collision free N-body simulation 3—20492
GB 790305, gamma ray source model involving white dwarf collapse to neutron star 3—10483
general relativity, geometric constraints on nonsingular, momentarily static, axisymmetric systems 3—45030
general-relativistic cosmological and stellar models, role of shear 3—54226
interstellar clouds, anisotropic collapse rel. to relation between mag. fields and gas density 3—30446
interstellar clouds, gravit. collapse and fragmentation of isothermal nonrotating cylindrical clouds 3—54486
interstellar clouds, hydrodynamic collapse and star form. 3—44650
interstellar clouds, mag. field direction and RF lines polarisation 3—59420
interstellar clouds and protostar formation *(Polish)* 3—40114
interstellar clouds and star formation, review 3—20346
interstellar clouds collapse, effects of vel. fluctuations due to gravit. interaction with system of stars 3—54485
interstellar magnetic clouds, quasistatic contraction due to plasma drift, grain friction effect 3—40241
interstellar magnetic gas cloud collapse, ambipolar diffusion effects 3—30441
interstellar molecular clouds, collapse rel. to C depletion in turbulence cloud core 3—10413
interstellar rotating isothermal clouds collapse, equilib. analytical solns. 3—44824
interstellar shocked gas cloud, dynamical destruction 3—20465
M101, giant spiral galaxy, interstellar matter collapse to H I-H II assoc. and star form. 3—25598
massive molecular clouds under collapse, embedded H II regions evolution 3—25560
massive stars collapse, bounce and shock form. 3—25492
neutron stars and stellar cores, role of phase transitions 3—44656
open cluster formation from mol. cloud contraction 3—30435
Poisson equation, soln. in spherical coordinates 3—5105
pre-main sequence M$\simeq$0.3M$_\odot$ stars, contraction time scales from Pleiades obs. 3—30437
pressureless inhomogeneous spheroids gravit. collapse, cosmological implications 3—59208
pressureless matter, general relativistic collapse 3—10676
radio galaxies, nature of gravitational energy source 3—25615
Reissner-Nordstrom black hole perturbations 3—15939
relativistic gravity testing, space expt. using multiple time-correlated radio signals 3—54225
rotating stellar cores, gravit. radiation, rot. effects 3—25498
solar nebula collapse and early Solar System nature, supernova effect 3—30247
star collapse, neutrino flux data, precise timing with coordinated time meas. system 3—35966
star core in supernovae, struct. and self-similar soln. 3—48886
star formation, shock induced, interstellar turbulence and mag. field effects 3—10425
star gravitational collapse to black hole, collapsing matter trajectory in Penrose diagram 3—44786
stars gravitational collapse, rot. and mag effects with general relativistic phenomena 3—20350
stellar core collapses numerical model for collapse calculations 3—44736
stellar degenerate core, neutrino emission spectra and interactions 3—40115
stellar rotation and gravitational collapse, a/m issue 3—5278
supermassive objects in galactic nuclei and quasars, nonsymmetrical collapse rel. to gravit. waves *(Russian)* 3—35725
supernova explosions, neutrino trapping effects 3—20406
supernova precursors, neutrino transport in accretion flows 3—141
supernovae, collapse and explosion, models computer simulation for rotating and non-rotating cases 3—25497
supernovae, gravitational radiation from collapsing rotating stellar cores 3—10371
supernovae, homologous collapse and deleptonisation of evolved stellar core 3—10307
supernovae, neutrino escape and nuclear dissociation rel. to core collapse and/or explosion 3—35641
time-loop formalism in quantum field theory 3—11047
very massive stars, explosion-collapse boundary anal. 3—25416
Fe core collapse, spherically symmetric numerical stellar model 3—20343

gravitational constant
Adler-Zee formula, Planck zeros 3—20236
artificial-satellite systems, for determ. of gravit. const. and search for gravit. radiation in cosmic laboratory *(German)* 3—35430
bimetric Weyl-Dirac theory and the gravitational constant 3—49237
conformally coupled field theory in five space-time dimensions 3—5108
ether theory and etheron elementary particles *(Rumanian)* 3—16057
induced by dynamical symmetry breaking, analyticity and positivity constraints on sign 3—20235
large number theory, modification for constant G 3—49251
matter creation and gravitational constant evaluation, rotation expts., precision rotors 3—10715
scalar-invariant scalar-tensor theory, gravitational constant and particle mass origins 3—16208
thermodynamics, nonminimally coupled scalar field effects, cosmological model and second law applications 3—16190
time variant gravit. constant, cosmologies 3—49250
variability, effect on 1 M$_\odot$ star stability and evolution 3—54349

gravitational constant continued
variability, effect on evolution of Zero Age Main Sequence models 3—5277
variability and scale invariant cosmology 3—5461
variability and Strong Equivalence Principle 3—5102
variability in gravitational theories, cosmological tests *(Polish)* 3—48817
variability in gravitational theories *(Polish)* 3—35905
variable-G cosmologies, galaxy form. 3—40305
variation of G and the quantum theory of gravitation 3—5686

gravitational experiments
artificial-satellite systems, for determ. of gravit. const. and search for gravit. radiation in cosmic laboratory *(German)* 3—35430
astronomical testing of gravitational theories, Viking mission and POINTS satellite 3—10714
Beijing-Guangzhou gravitational wave experiment Al alloy antennae, progress report 3—10720
clocks and relativity experiments 3—10733
conference, Trieste, Italy, (July, 1979) 3—5496
Crab pulsar, upper limit for gravitational radiation 3—10724
detecting gravitational radiation with quartz crystals 3—10730
detector effectiveness on quantum state interference *(Russian)* 3—5699
Earth's gravitational field, fourth test of general relativity *(Chinese)* 3—40467
electrothermodynamic theory, screening effect of large mass (Earth) 3-147
Fermi normal co-ordinate system, electromagnetic detectors of gravitational waves, metric tensor calc. 3—5698
gravitational radiation and the binary pulsar 3—5700
gravitational radiation antenna, capacitive reson. transducer type 3—54247
gravitational radiation antennae, non-linear excitation explanation, Weber bar results 3—10719
gravitational radiation detection, Nb antenna sensitivity and cryostat 3—10718
gravitational to inertial mass ratio, Eotvos experiment with fluid fibre 3—10711
gravitational wave detector program at University of Rochester, high quality factor materials 3—10722
gravitational wave detectors, recent progress 3—5701
inverse square law of gravitation, modified Cavendish experiment 3—10712
inverse square law of gravitation, source-independent null experiment, Laplacian detection 3—10713
inverse square law of gravitation, source-independent null test 3—25801
laser interferometer for gravitational radiation detection, noise investigation and elimination 3—10717
laser probes of general relativity, cosmology and quantum mech. 3—7054
low frequency antennas of the University of Tokyo 3—10727
LSU cryogenic facility for gravitational radiation research 3—10725
matter creation and gravitational constant evaluation, rotation expts., precision rotors 3—10715
Michelson-Morley 1887 expt. re-examination 3—5547
multimode antenna for the detection of short pulses of gravitational radiation 3—10732
parametrised post-post-Newtonian formalism for the Solar System 3—5170
passive and active seismic isolation for gravitational radiation detectors and other instruments 3—161
planet orbits affected by solar gravity, general relativity test 3—30323
quality factor of gravitational wave antennae, metering instrument 3—10721
quantum limit for a quartz crystal antenna for grav. wave detection 3—10731
radiation antennae, background thermal fluctuations, space time curvature meas. 3—10716
Relativity Gyroscope experiment, 1976-79 3—16222
Rome gravitational wave experiment, progress report 3—10729
rotors, inertial spin-down, precise gravitational measurements 3—35906
Stanford low temperature gravitational radiation detector, sensitivity 3—10723
Sun quadrupole moment meas., consequences for gravitation theory 3—49249
superconducting L band dual cavity accelerometer for LSU grav. rad. detector 3—10726
torsional pendulum, precision study *(Chinese)* 3—40352
tunable antenna to detect continuous low-freq. gravitational wave *(Chinese)* 3—40466
ultra-low phase noise superconducting-cavity stabilised microwave oscillator with application to gravitational radiation detection 3—40468
unified theory of gravitational radiation detectors for pulses and monochromatic signals 3—10728

gravitational lenses
0957+561, double quasar, motion of short-wavelength photons 3—35418
3C 196, 21 cm H I absorpt. at z=0.437 against extended radio struct. rel. to gravit. lenses 3—30523
cosmological density of compact objects and high-z quasar props. 3—30532
deceleration parameter measurement 3—20537
galaxy cluster transverse motion measured by influence on gravitational lens effect 3—59487
general discussion *(Russian)* 3—30170
H1340 No.10, high-redshift QSO with very narrow emission lines, gravitationally-lensed Seyfert 2 galaxy model 3—59502
Q 09157+561, gravit. lens, main galaxy core compact radio source detect., nature 3—54546
QSO 0957+561, double quasar, increase in brightness of A component (May to November 1982) 3—20528
QSOs, high redshift, and gravitational lenses, discovery and observed props. 3—16031
quasar optical variability and gravitational lenses in galactic haloes 3—44867
quasars, X-ray and optical props. rel. to gravitationally lensed Seyfert nuclei model 3—44865

gravitational radiation *see gravitational waves*

gravitational red shift
see also cosmology
HD 149499B, hot DO white dwarf, gravit. red shift and mass. UV obs. 3—48905
magnetic neutron stars, red shifts turning into blue shifts, simultaneous shifts 3—59469

gravitational red shift continued
Markarian 205 quasar as massive black hole ejected from spiral galaxy NGC 4319, general relativistic anal. 3—20525
relativistic gravity testing, space expt. using multiple time-correlated radio signals 3—54225
Schwarzschild black hole, null geodesics in static Ernst space-time 3—35651

gravitational waves
see also gravitons
antenna for gravitational radiation measurement 3—54247
antenna noise, non-linear excitation explanation, Weber bar results 3—10719
artificial-satellite systems, for determ. of gravit. const. and search for gravit. radiation in cosmic laboratory *(German)* 3—35430
axisymmetric system, emitted gravitational radiation and gravitational field energy-momentum pseudotensor calc. *(Chinese)* 3—16204
Bardeen discs, effects of gravit. radiation and viscosity on normal modes of uniformly rotating incompressible discs 3—48890
Bardeen discs, gravit. radiation rel. to normal modes of sequence of n=2 polytropes 3—48891
Beijing-Guangzhou gravitational wave experiment Al alloy antennae, progress report 3—10720
binary starts, radiation damping force due to gravitation wave emission 3—15961
black hole radiation, asymptotic behaviour in Vaidya space-time, energy-momentum tensor 3—10381
cataclysmic binaries, effect on orbit of gravitational wave emission 3—15962
circular binary system evolving through gravit-radiation and degenerate component Roche lobe overflow, mass loss rate 3—25527
collapsing rotating stellar cores, gravit. radiation, rot. effects 3—25498
conference, Trieste, Italy, (July, 1979) 3—5496
coupled modes on generic spherically symmetric space-times 3—10678
Crab pulsar, upper limit for gravitational radiation 3—10724
cryostat for gravitational radiation detection, Nb antenna sensitivity 3—10718
detecting gravitational radiation with quartz crystals 3—10730
detector program at University of Rochester, high quality factor materials 3—10722
detectors, recent progress 3—5701
Einstein equations from analytic mappings, solns. 3—49229
energy, momentum and ang. momentum from particle plunging into nonrotating black hole 3—49234
Fermi normal co-ordinate system, electromagnetic detectors of gravitational waves, metric tensor calc. 3—5698
field theory with minimal coupling, pseudo-Euclidean space-time 3—10694
galactic nuclei, effect of disruption of stars by gravit. waves *(Russian)* 3—35725
general relativity, spinors, conformal rescaling, torsion 3—49215
generation in source theory 3—10680
gravitational radiation and the binary pulsar 3—5700
gravitationally collapsed objects, evidence of existence of gravitational radiation 3—15840
gravitons, comparison between classical and quantum theory on macroscopic scale 3—20737
High Energy Astrophysics Panel of Astronomy Survey Committee, recommendations 3—30243
Kerr gravitational field, radiation reaction 3—20738
laser interferometer for gravitational radiation detection, noise investigation and elimination 3—10717
low frequency antennas of the University of Tokyo 3—10727
LSU cryogenic facility for gravitational radiation research 3—10725
massive black holes, indirect existence evidence 3—15940
multimode antenna for the detection of short pulses of gravitational radiation 3—10732
neutrino wave automodel collision in general relativity *(Russian)* 3—35899
neutron stars, near-ellipsoidal configs. of magnetized homogeneous fluid 3—44662
neutron stars cooling due to interior lattice gravit. radiation 3—59379
Newtonian buoy system interaction, Brans-Dicke theory 3—5671
observations with low-temp. reson. mass gravit. radiation detector, new upper limit 3—5117
passive and active seismic isolation for gravitational radiation detectors and other instruments 3—161
PSR 1913+16, binary pulsar, orbit var. and gravit. radiation, UHF obs. 3—10379
PSR 1913+16, binary pulsar gravit. radiation 3—44777
quadrupole radiation-reaction force, gauge transform 3—35900
quality factor of gravitational wave antennae, metering instrument 3—10721
quantum limit for a quartz crystal antenna for grav. wave detection 3—10731
quasars, effect of disruption of stars by gravit. waves *(Russian)* 3—35725
radiation antennae, background thermal fluctuations, space time curvature meas. 3—10716
radiation detection, terrestrial and spacecraft expts. 3—40469
relativistic gravity testing, space expt. using multiple time-correlated radio signals 3—54225
Robertson-Walker backgrounds, grav. radiation, radiative perturbations 3—54658
Rome gravitational wave experiment, progress report 3—10729
sourceless weak gravit. waves in linearised gravit. theory 3—54659
Stanford low temperature gravitational radiation detector, sensitivity 3—10723
subquantum origin, Dirac eqn. wavefunction 3—139
superconducting L band dual cavity accelerometer for LSU grav. rad. detector 3—10726
supernovae, gravitational radiation from collapsing rotating stellar cores 3—10371
synchrotron radiation in metric of new gravitational theory 3—10679
tunable antenna to detect continuous low-freq. gravitational wave *(Chinese)* 3—40466
two-body problem, gravitational quadrupole radiation reaction 3—45033
ultra-low phase noise superconducting-cavity stabilised microwave oscillator with application to gravitational radiation detection 3—40468
unified theory of gravitational radiation detectors for pulses and monochromatic signals 3—10728
Universe background gravit. radiation upper limit from SR 1237+25 pulse arrival times 3—49054

gravitational waves continued
Universe isotropic gravitational radiation background upper limit from pulsar timing anal. 3—49055
Vela pulsar, gravitational radiation detection, tuning fork antenna with collective mass *(Chinese)* 3—30215
weak gravitational field eqns. study 3—40444
weak waves in isotropic background Universe 3—40306
zero-helicity gravitational waves in relativistic expanding medium, dispersion relations 3—5459

gravitons
black holes, entropy evaporation through emission of massless radiation 3—59210
general relativity reconciliation with quantum theory, quantum gravitodynamics 3—16194
geons, quantum, internal symmetry groups 3—30745
macroscopic effects, from comparison between quantum and classical theory 3—20737
N=1 supergravity, irreducible sets of lower spin auxiliary fields 3—40456
N=8 supergravity and N=4 supersymmetric Yang-Mills theories, bound states 3—160
nonlinear superposition of plane waves, H-space realisation 3—16212
one-wormhole processes, generating functional Z_0, quantum corrections 3—30751

gravity
see also gravitation
18.6 year modulation of gravity tide at South Pole 3—15315
absolute geodetic singularities, existence theorem 3—39770
algorithmization of computations in a discretely observed gravitational field 3—29812
Amirante Arc in west Indian Ocean, gravity anomalies 3—19878
Amirante Basin, in west Indian Ocean, gravity anomalies 3—19878
anomalies, interpretation using two-dimens. filtration 3—30073
anomalies and hydrostatic flattening of Earth 3—35057
anomalies potential field, freq. domain representation *(Chinese)* 3—9814
anomalous gravitational field, regularity of variation with survey altitude *(Russian)* 3—15313
anomaly, three dimensional pot. field, analytical continuation, use of Carleman function 3—29811
Antarctica run-off winds *(Russian)* 3—30037
Atlantic type margin dynamics, gravity energy decline and metastable basalt phase transition 3—54015
Australia, gravity accel. var., effect of deglaciation delayed response 3—39761
S Australia free-air geoid from gravity data 3—39763
Baikal-Stanovoy seismic belt, geodynamics 3—35146
Bay of Bengal, 85°E buried ridge formation model from negative free air gravity anomaly 3—15393
bore hole gravimetry, orthometric height accuracy 3—44375
VZ Cancri, RRs-type variable star, effective temp. and surface gravity from spectroscopic obs. 3—10353
Central Ranges, Honshu, Japan, Bouguer anomaly map compilation and interpretation 3—44380
China gravity anomalies rel. to mantle convection *(Chinese)* 3—53971
compressible fluid infinite cylinder, gravit. instability, appl. to galactic spiral arm dynamics 3—20223
crust struct. determin. from borehole and surface gravity obs. 3—15314
crustal gravity anomaly interpretation using inverse theory 3—48687
distant terrain correction method for gravity survey data 3—19879
Dunantul region, Hungary, geoelectric survey rel. to gravity/seismic data *(Hungarian)* 3—29832
Earth, lateral density distrib. from global gravity 3—15382
Earth, secular variation due to surface loads rearrangement 3—39760
Earth crust gravity anomalies of buried objets, theory *(Chinese)* 3—35053
Earth gravity field, Goddard Earth Model 3—58894
Earth gravity model using Lageos satellite ranging obs. 3—29814
Earth lithosphere stress field deduced from satellite gravity data 3—58943
Earth pole position biases computation from Navy Navigation Satellites, gravity field effects 3—29819
Earth tides, conservation of mass in tidal loading computations 3—39767
East African Rift system, geomagnetic and gravity anomalies, tectonics, seismic data, crust model 3—35110
East Pacific Rise, tectonic struct. and seismic struct. from gravity anal. 3—35118
fields reduction to inclined and vertical planes in lower half-space 3—59122
galaxies, spherical, gravit. potential calc. from simple model for three-dimensional light distrib. 3—49024
gaseous mass, gravitational polytrope equations, solution by quasi-invariance group *(French)* 3—44737
geodesy, gravity anomaloy ω-function characts. 3—4747
geodetic gravity anomaly data anal. using residual filters 3—4746
geoid anomalies corresponding to Cretaceous plate boundaries 3—58939
geoidal height and vertical deflection estimation using Navstar Global Positioning System meas. 3—30105
geophysical prospecting, inverse problem soln. for 2-D and 3-D potentials 3—48461
geophysical prospecting, soln. to 3-D inverse problem 3—48462
geopotential lumped coeffs. near 15th order orbital reson. from 1974-70A 3—10190
absolute gravimetry, new research and development *(Chinese)* 3—35054
Greenland Sea, crust struct. and tectonics 3—9901
Hat Creek coal deposit, BC, Canada, geophys. exploration 3—53475
Hawaii seamount gravity anomalies and crust thickness 3—25052
India, mean free-air anomalies and gravimetric and astrogeodetic geoids 3—24943
induced initial stresses, effect on disturbances in elastic half-space due to moving load 3—42172
inverse gravimetric problem, two dimens. case, equivalent solns. construction 3—9818
inverse gravimetry problem, ϵ-equivalent redistributions method appl. 3—35289
inverse gravity and magnetic problems, physical meaning of complex-valued masses and multipoles 3—15631
inverse problem in 2-D, necessary conditions 3—9819
central Japan, Bouguer anomaly map 3—19885
Japan, Bouguer gravity anomalies rel. to P-wave travel time anomalies 3—24984
jets, 2-dimens. rising and falling under gravity 3—22501
La Margeride, France, granitic massif struct., heat meas., gravity and seismic anal. *(French)* 3—44407

gravity continued
S Labrador Sea, crust struct. and tectonics 3−9901
levelling reduction, required freq. of gravity meas. 3−39765
lithospheric doubling, thermal events and assoc. upper mantle gravity instabilities 3−35128
Love waves in granular medium over a half-space under gravity 3−18385
low gravity simulation methods 3−2159
Maine, gravity studies of subsurface mass distribs. of granitic rocks 3−9915
Manitoba and N.W. Ontario crust struct. and geology 3−25041
mantle convection rel. to gravity anomaly and heat transfer values 3−15405
mantle viscosity from free air gravity anomalies 3−48523
Massif Central, France, geothermic and geodynamic evolution and gravimetric anal. *(French)* 3−44406
Mauna Loa, Hawaii, crustal vel./density struct., seismic refr. and gravity data anal. 3−19942
measurement of Earth's gravity field using precision pendulum clock 3−48705
Missouri, Precambrian rift, digital image processing of anomalies 3−35119
Moon, deflections of vertical and anomalous masses depth 3−5176
Moon, relief rel. to gravitational acceleration, correlation analysis 3−30253
Musicians Seamounts (N.Pacific), isostatic compensation 3−9896
Nagata Seamount, N Pacific, geophys. and geologic study 3−48515
Nansen Ridge (Arctic Ocean), tectonics of spreading centre 3−9902
New Hampshire, gravity studies of subsurface mass distribs. of granitic rocks 3−9915
nonisotropic turbulent gravity flow, two eqn. model 3−56540
Norwegian Sea, crust struct. and tectonics 3−9901
N Ontario, Canada, Bouguer gravity field power spectrum anal. 3−39929
Optimum second vertical derivatives in geologic mapping and mineral exploration, appl. in Ontario 3−39929
N Oregon, heat flow, arc volcanism and subduction and gravity meas. 3−35123
σ Orionis E, shell and photosphere parameters and model, from UV/IR obs. 3−25446
Pacific Ocean basin, intraplate volcanic features distrib. 3−9869
Pan-African orogenic belt in Mali/Algeria, Precambrian continental collisions and gravity anomalies *(French)* 3−35141
particle orbital eccentricity in galaxy with logarithmic pot. 3−30152
passive continental margins, assoc. gravity and mag. anomalies 3−53966
planets, inclined rings precession as a gravity quadrupole moment effect, appl. 3−59240
potential field anomalies profiles, field transforms *(German)* 3−4749
pulsating variable star, particle motion in gravitational field 3−40011
Reydarfjordur, Iceland, gravity survey and anal. 3−15317
Rio Grande rift extension from gravity anal. 3−35120
seamount isostatic compensation estimated by satellite altimetry 3−9896
seasonal dependence of mass variation, rel. to forecasts of mean monthly temp. anomaly *(German)* 3−15520
seismic amplitude anomalies, evaluation by gravity and geomag. means, Louisiana/Arkansas case studies 3−39928
Senegal Basin (West Africa), oceanic-continental crust transition, gravity/mag. anomalies anal. 3−29877
Seychelles Plateau, gravity anomalies and tectonics 3−19878
spacecraft gravity gradiometer using supersensitive accelerometer 3−30106
sphere in inclined channel, gravitational and zero-drag motion at low Reynolds number 3−22531
Sun, coronal loops in hydrostatic equilibrium, thermal stability, gravity effects 3−10283
Sun, thermally isolated coronal loops in hydrostatic equilib., press. scaling law gravity effects 3−20327
thermal convection induced by g-jitter in space environment 3−2042
Thessaloniki area earthquake of June 1978 and subsequent gravity changes 3−25016
TI-59 calculator program for determining the gravity anomaly of a 2-D geologic body 3−29810
local topography changes causing gravity changes 3−19883
Travale geothermal field, Tuscany, Italy, gravity and elevation changes 3−29893
two dimensional body, centre of gravity and mass determ. from gravity pot. 3−29920
two-dimensional bodies, spectra modification for depth determ. 3−29921
underground tower gravity vertical gradient, appl. to exploration 3−39927
United States, Atlantic continental margin struct. from sediments, mag., seismic and gravity obs. 3−58932
upper mantle gravity field mapping by satellite techniques 3−15662
Uranus, gravit. potential and oblateness rel. to rot. period 3−5220
Uranus, gravity field and rot. rate rel. to internal struct. 3−5218
Venus, Beta Regio, gravity and topography maps comparison 3−30279
West Congo System crystalline basement fracture zones 3−35140
Wind River Mountains, Wyoming, USA, gravity anomaly interpretation 3−29813
world-wide tidal gravity rel. to lithospheric heterogeneities and flattening 3−35056

gravity meters *see gravimeters*

gravity waves
acoustic-gravity waves, 3-dimens., in model nonisothermal atmospheres, propag. 3−39901
acoustic-gravity waves in non-isothermal, compressible, ionized and viscous atmospheres 3−54229
acoustic-gravity waves in non-isothermal atmosphere, radiative damping *(Russian)* 3−20084
atmosphere, breaking internal gravity waves rel. to control of homopause level 3−5004
atmosphere, generation by jet streak in two-layer nonlinear primitive eqn. model 3−59023
atmosphere, internal gravity waves generation by horizontal roll vortices in inversion-capped planetary boundary layer 3−15583
atmospheric internal gravity waves interaction with wave induced turbulence 3−44507
atmospheric large amplitude waves, induced heat flux 3−59138
atmospheric waves shear excitation 3−15525
capillary-gravity waves on fluid of infinite depth, method of multiple scales study 3−32749
deep-water waves, 3-dimens., steady, calcs. 3−22478
detector cooling using large dilution refrigerator 3−36007

gravity waves continued
electrically conducting liq., nonlinear gravity waves on free surface 3−51146
evolution, transition to envelope solitons 3−27538
F-region, night-time, over Cachoeira Paulista (22°S, 45°W), gravity wave induced ionisation layers 3−5025
finite-amplitude interfacial waves in the presence of a current 3−12689
fluid, semi-infinite layer, dilatational and gravitational wave propagation, numerical analysis 3−37509
ionosphere, planetary waves generation, Rossby soliton excitation 3−39956
ionosphere, possible existence of isolated internal gravity wave in boundless isothermal atmosphere 3−15671
Lake Michigan, anal. of remotely sensed long period wave motions 3−15494
long internal wave resonant interaction with surface wave packet 3−7603
magnetoacoustic-gravity waves, propagating and standing vertically in atmosphere 3−35433
nonlinear dispersive wave system, instability and confined chaos 3−27537
oscillatory flow under gravity waves 3−51150
period doubling bifurcations of internal gravity waves 3−42251
planetary atmospheres, breaking internal gravity waves rel. to control of homopause level 3−5004
radiative damping effects in solar atmosphere 3−20308
rotating stratified fluid, phase configuration of waves around accelerating disturbance 3−51148
short internal atmosphere waves swelling as cause of thermosphere/mesophere turbulence 3−15666
small amplitude wave attenuation on free surface of gravitating incompressible viscous fluid overlying a porous bed 3−56558
solitary waves, leapfrogging, internal, resonant energy transfer 3−4872
steep gravity wave trains, nonlinear instabilities and evolution 3−22476
stratosphere internal gravity waves due to solar oscills., effect on cosmic gamma-ray flux 3−54211
thermally stratified two layer shear flow, instability induced by composite internal wave 3−7630
thermosphere internal gravity waves characts. during substorm, depend. on auroral electrojet elec. field 3−15667

greasing *see lubrication*

Green's function methods
see also CPA calculations; KKR calculations
πN, modified normalisation conditions, $G_{NN\pi}$ calc. 3−36269
acoustic plane wave diffr. by bodies which mixed boundary conditions, Green's function method 3−27289
analytic Green function and bound states for the screened Coulomb potential $V(r)= F/ r^2+ G/ r+ H/(r+ z^2)$ 3−49204
Anderson tight binding model for large disorder or low energy 3−49272
anharmonic cryst., isotopically disordered, thermal cond. and sound attenuation 3−51874
anharmonic oscillators Green's function 3−30697
anisotropic materials, modelling local defects, discrete lattices appl. 3−27449
antiferromagnet, local magnon modes, Green's function theory 3−52442
antiferromagnet, two magnon Raman spectra, effect of two magnon two phonon interactions 3−57918
atomic systems, relativistic Green's functions calcs. 3−31896
black hole field, vacuum polarisation and effective temp. 3−44789
buoyancy-driven convection, integral equation formulation 3−27503
chemisorbed layer on metal, electronic states, Green's function calc. 3−33771
chemisorption, Anderson-Newns Hamiltonian, Green's function formalism 3−18556
chemisorption binding energy nonperturbative calcs. 3−33572
chiral-invariant fermion models, path integral formulation of Thirring and Gross-Neveu models 3−16478
clusters, one dimensional, local vibr. and electronic state study 3−12027
composite field condensation and renormalisation group 3−16473
crack propagation and arrest in plastic medium 3−50998
crystals with correlated defect positions, dynamics 3−33369
cubic crystals, phonon theory of lattice dynamics 3−51730
decoupling in theories with spontaneous symmetry breakdown 3−11025
degenerate Bose system, Green's functions low-freq. asymptotic singularities *(Russian)* 3−42873
dielectric cryst., nonradiative transition of electron excitation energy between impurity centres *(Russian)* 3−52824
dielectric waveguide, guided mode scatt. by inhomogeneous part 3−56317
diffraction, external problems, method of nonorthogonal series and Rayleigh hypothesis 3−36920
dipole, radiation in presence of grounded gyromagnetic slab 3−26914
disordered electronic systems, Lagrange formulation without replica trick, density of states scaling law 3−18596
disordered electronic systems, symm. relations, algebraic derivation 3−42987
disordered film, density of electron states and Feynman path integral 3−33617
distortions, elimination by phase conjugation without losses or gains 3−22167
dynamic loads acting on layered Earth strata explicit closed form soln. 3−19996
dynamic Stark splitting in two-photon resonance fluorescence 3−50348
dynamical equations for superfluid fermion systems from functional method 3−40486
elastic solid, surface phonon focusing 3−51915
electric sources in stratified spherical and prolate spheroidal volume conductors, surface potentials 3−58637
electrodynamics, conformal-invariant field theory, gradient model 3−5619
electron beam, focused, irradiation of solid target, temp. profiles calc. 3−51664
electron gas quasiparticle props., Green's function and random phase approx. 3−8433
electron Green's function in external EM field 3−40840
electron Green function and vacuum polarization in a Coulomb field 3−21055
electron in random potential, representation in one-particle Green function 3−23233
electron transport in ionosphere, photoelectron fluxes, energy spectra 3−15744
electronic struct. calc., Green's function methods 3−23242
electrons in quantising mag. field, Green's function at $T=0$, integral representation 3−57250

Green's function methods continued
electrostatics, Green's functions in rectangular domains with Dirichlet or Neumann boundary conditions 3—21962
EM wave diffr. problems, Green's function, spectral series, rate of convergence 3—46142
EM wave propagation in multilayered media, anal. using dyadic Green's functions 3—6840
EM wave scattering from tubular cylinder, double series expansion of Green's function 3—46138
Euclidean gauge theories, behaviour in strong fields 3—31038
excited impurity electronic state, vibr. relax. and configurational coord. 3—38343
exciton effective mass temp. depend., interaction with polar phonons 3—28282
fermion systems, Green's function Monte Carlo method 3—20758
ferromagnetic continuum, displacement and stress fields due to dislocations 3—51599
ferromagnetic Heisenberg chain, interacting spin-wave theory 3—14033
ferromagnetic thin film on nonmagnetic metallic surface, mag. props. 3—8703
ferromagnets, amorphous A_cB_{1-c} alloys, Curie temp., short range at. order study 3—23681
few-body anharmonic oscillators, matrix continued fractions 3—40400
Feynman-Green function of presence of spontaneous symm. breaking *(Portuguese)* 3—45314
fields from harmonic sources in uniform motion, Fourier spectra anal. 3—46123
film-substrate interface superstruct., soft phonon theory 3—18547
finite-temperature corrections to kink free energies 3—16324
Fourier coeff. evaluation method 3—23228
Fourier component determ. method 3—23229
fractionally charged kinks in a 1:3 Peierls system, electronic structure 3—33615
fracture mechanisms, boundary element and Green's function methods 3—42181
Frohlich polaron, galvanomagnetic phenomena for arbitrary coupling const. 3—23292
gas, moderately dense, density corrections to positron annihilation rate 3—26863
generating functions in physics 3—49108
harmonic chains, Green functions and impurities 3—44927
Heisenberg antiferromagnet, semi-infinite, surface nucl. spin waves 3—3429
Heisenberg ferromagnet, anisotropic, with biquadratic exchange, Green function theory 3—28586
Heisenberg ferromagnetic films, light scatt. and spin wave reson. 3—47530
Heisenberg ferromagnetic films, spin waves and response functions 3—47529
Heisenberg ferromagnetic model, anisotropic, Green's function method anal. 3—18926
Helmholtz equation, exterior problems 3—101
hexagonal crystal, with and without adlayer, elastic interaction of point defects with surface and with other defects *(French)* 3—13618
hydrogenic Hamiltonian, Coulomb Green's function, generating integral for matrix elements 3—31902
III-V semiconductors, diamagnetic susceptibility, Green's function calc. 3—28502
III-V semiconductors, internal electronic config. of Sn donors and acceptors, Mossbauer isomer shift anal. 3—47302
insulator crystals with impurities, optical absorption spectra study 3—23977
integral equations for the Green function in the theory of relaxation processes 3—5710
interstellar molecules, vertical valence ionis. energies, Green's function calcs. 3—5502
ions, highly charged, relativistic and correl. effects, Green's function of Dirac's eqn. 3—31897
Kerr gravitational field, radiation reaction 3—20738
kinetic equations for many-particle correlation functions 3—5711
Kondo effect and mag. ordering, Green's function theory 3—3412
Kondo regime, temperature-dependent susceptibility in the Anderson model and its universality 3—38584
lattice, connection with bond percolation theory and Polya random walk 3—30798
lattice field theory props., projector Monte Carlo anal. 3—49565
lattice gauge theories in strong coupling limit, meson and baryon spectra 3—49537
lattice vibrational relaxation following electronic transition in centres with quadratic vibronic interaction 3—2711
Legendre transform, self-consistent approximations 3—54664
light interaction with dielectric slab, Green's function in microscopic theory 3—41743
liquid metals, electronic density of states, perturbation and Green function calcs. 3—43003
local density of states and EXAFS in the small scattering atom approximation 3—28249
localised defects in solids, cluster-extended Green's function for electronic struct. 3—43095
many-particle relativistic equations for Green's functions, connected structure of kernel 3—16508
massive Thirring models, strong coupling expansion 3—54849
membrane, fluid loaded, line force excited, Green's function calc. 3—37287
mesomorphic monolayer and bilayer membranes, phase transitions 3—58606
metal, disordered, local electron densities, Green's function formalism 3—8459
metal, disordered, local electronic densities, multiple scatt. Green's function theory 3—8458
metal, electronic struct. of H impurity, jellium model 3—13763
metal, slow ion stopping power, exchange-correlation approx. 3—51678
metal group VIII carbonyls, Koopmans' defects, many-body INDO calcs. 3—1244
metal strip, magnetostatic surface wave reflection 3—52566
metal-insulator transition, electron scattering, Hubbard model 3—52210
metallic microcontacts, nonlinear cond. in variable elec. field, theory *(Russian)* 3—57411
metallocenes, closed shell, ground and hole states, struct., INDO calcs. 3—11698
metals, FCC and BCC, static lattice Green functions 3—28061

Green's function methods continued
metals, localised magnetic states, Green's function calcs. *(Russian)* 3—8642
modified techniques rel. to Helmholtz eqn. boundary integral eqns. 3—10602
molecular anions, electron propagator of Green's function method calcs. 3—36652
molecular cryst., dielec. props., effect of exciton-exciton and exciton phonon interactions 3—47058
molecular cryst., one dimens., Frenkel excitons interaction with local and extended perturbations, Green's function formalism appl. 3—23276
molecular crystal, exciton Green's function calc. from two-site dynamical CPA model 3—23274
molecular crystals, dynamical theory, pseudoharmonic approx. 3—57052
molecular systems, relativistic Green's functions calcs. 3—31896
multiple scattering, path integral approach 3—46163
narrow-band magnetic semiconds., Hubbard and s-f models, effective spin Hamiltonian and phase separation 3—38580
Navier-Stokes linearised equations, first boundary-value problem *(Ukrainian)* 3—5610
nonequilibrium processes, relation between many-particle Green's function and correlation functions 3—40485
nonlinear response theory, closed time path Green's functions *(Chinese)* 3—40474
nonlinear response theory, closed time path Green's functions *(Chinese)* 3—40475
normal Fermi liquids, dispersion and damping 3—33533
nuclear partition functions, collective states, Green's functions and RPA calcs. 3—31269
one-dimensional conductor, electron scatt. due to impurities, Green's function study 3—43161
one-dimensional conductor, impurity scatt. and elec. cond. 3—43158
one-dimensional disordered system, exact evaluation of Green's functions 3—42991
one-wormhole processes, generating functional Z_0, quantum corrections 3—30751
order parameter, quantum statistical generating functional, Green's function technique 3—166
order parameter, quantum statistical generating functional, density matrix and field theoretical struct. 3—167
organic crystals, electronic energy transfer, incipient Anderson transition 3—23273
$P(\phi)_2$ event, weakly coupled model, second Legendre transform 3—54823
paramagnet, tetragonal $J=1$, transverse sound velocity and magnetoelastic interactions *(German)* 3—38668
particle velocity and wave intensity in US diffracting systems 3—1829
photographic material noise anal. using radiative mass transfer stochastic integro-differential eqn. *(Russian)* 3—54791
plate, circular, damped vibrations, steady state response calc. 3—50977
plate bending, exact soln. of mixed problem 3—7451
point monopoles in quantum field theory 3—16553
QCD, infrared asymptotic behavior of gluon Green's functs. 3—54881
QCD, product of two gauge-invariant currents, light-cone expansion 3—31135
quantised scalar field theories in soliton sector, adiabatic switching 3—5970
quantum field theory, covering space method 3—45306
quantum gravity unpredictability 3—30742
quantum statistical mechanics, book 3—10539
quantum theory of magnetism, multiparticle systems, approx. integrals of notion estimation 3—5709
quasi-equilibrium states of open systems via quantum dynamical master equations, Josephson junc. appl. 3—13965
quasi-one-dimensional systems and localized defects: some results of the Green's matrix formalism 3—33672
rare earth metal ions, multiphoton transitions rate calcs. 3—11770
rectangular wedge disclination loops, elastic anisotropy influence 3—37906
relativistic, spinor particle in external gauge field, Green's function as path integral in superspace 3—36163
relativistic charged particle motion in static elec. field *(Russian)* 3—5984
renormalised optical pot. approx. for one-electron Green's function calcs. 3—6512
rough periodic surface wave scatt. anal. 3—41739
S-matrix structure in $m \to m$ interaction, irreducible kernels and nonperturbative expansions 3—49572
scalar field theory in four-dimension, perturbations of expanding bubble soln. 3—45291
scalar wave scatt. from rough interface using single integral eqn. 3—49171
scattering function structure at m-particle threshold, S-matrix and Green's function nonholonomic character 3—45311
Schrodinger eqn., analytic continued fractions and exact wavefunctions 3—30667
Schrodinger equation, anharmonic oscillator soln. from Feynman path integral 3—49203
Schwinger 2-D model, Green's function investigations using renormalisation group methods *(Russian)* 3—26017
selfconsistent electronic struct. calcs., application of complex energy integration 3—18595
semi-infinite isotropic media, Green functions and fluctuation spectra for acoustic-thermal modes 3—33368
semiconductor, exciton states, effect of polar phonons 3—43038
semiconductor alloys, disorder scattering, Brooks mobility formula 3—38377
semiconductors, doped, impurity states calcs. 3—33669
semiconductors, elemental, deep levels due to isolated single and pair vacancies 3—13761
semiconductors, heavily doped, impurity band tails based on semiempirical pseudopotentials 3—52075
semiconductors, radiation defects electronic struct. 3—38350
semiconductors, tetrahedrally coordinated, diamagnetic susceptibility, Green's function calc. 3—28502
shortwave approximation in Kreichnan equation for mean field in randomly inhomogeneous medium 3—36924
sigma model, nonlinear, infrared finite expectation value in perturbation expansion 3—40756
single ion magnetic anisotropy model correction 3—47495
SO(N) invariant statistical models with long range interactions 3—35931
solid solutions, ordering process of spatially periodic struct., fermion theory *(Russian)* 3—33382
space-time diffusion eqn. higher-order boundary condition 3—32308

Green's function methods continued
stress concentration analysis on body surface, energy method appl. 3—12602
superconducting exciton laser possibility 3—37055
superconducting small particles, NMR 3—43325
superconducting weakly coupled struct. of semicond. surface, critical currents 3—33840
superconductivity of amorphous metals, Green's function theory *(Russian)* 3—57461
superconductivity solutions, application to particle physics 3—31120
superconductor, anisotropic bicrystal, vortex interaction with boundary *(Russian)* 3—57500
surface polariton mode densities, EM field Green function calc. 3—43259
surface tension, grand potential, shape dependence 3—38165
tetrafluoroethene, valence-electron shake-up satellite bands in ionisation spectra, HAM/3 calcs. 3—50285
Thirring models and gauge techniques 3—16482
three-cluster system, cpd. resonances 3—31317
three-level atoms, reson. fluoresc. in bichromatic field, induced two-photon transitions 3—45892
tight-binding quasiparticle motion in Poisson correlated discrete stochastic pot., density of states calc. 3—3025
tight-binding systems, real space rescaling method for spectral props. 3—42992
time dependent linear quantum systems 3—35879
time-varying media, transport processes, Green's function calcs. 3—40531
Tomonaga-Luttinger model, vertex function method and Ward identities 3—40478
transition metal compounds, Koopman's theorem nonvalidity, semiempirical MO calc. 3—11701
transition metal cpds., photoelectron spectra, reorganisation effects, Green's function INDO calcs. 3—17335
transition metal oxides, optical absorption in weak mag. field, Green's function calc. 3—14264
transition metal tricarbonyl derivatives, electronic struct., semiempirical INDO MO calcs. 3—45846
two-level adsorbate chemisorbed on transition metal surface, density of state calcs. 3—13879
two-loop background calcs. for arbitrary background fields 3—16474
two-time thermal Green's functions for commuting dynamical variables 3—5712
uniaxial semiconductors, optical response 3—23970
unsteady subsonic flow, far field conditions 3—37451
vibrations of rectangular drum, effect of enclosed air cavity 3—42175
wavefront reversal efficiency in medium with time depend. fluctuations 3—27170
weakly coupled $P(\phi)_2$ model, second Legendre transform 3—11007
Wigner crystal, two-dimensional, melting templ. and anharmonic effects 3—38327
Al, Auger linewidths for $L_1L_{II,III}V$ processes 3—19231
Al, Fermi surface props. from phase shift parametrisation 3—13703
Al-H, electronic struct. of H impurity, bandstruct. model 3—33673
Be, Breit correction, calcs. using Coulomb Green's function 3—11716
CO_2, valence-electron shake-up satellite bands in ionisation spectra, HAM/3 calcs. 3—50285
CdS, ideal vacancy electronic states and band struct., Green's function calc. 3—43099
Cu, defect states, Green's function Fourier coeff. evaluation 3—23228
Cu, Green's function Fourier component determ. method 3—23229
Cu, impurity states, selfconsistent electronic struct. calcs., application of complex energy integration 3—18595
Cu, point defect form. energy and charge density oscillations around impurities *(German)* 3—27935
Cu, surface phonon focusing 3—51915
Cu-Al, dil., low temp. lattice sp.ht., Green's function theory 3—13480
Cu-Au, dilute, low temp. sp. ht., Green function theory 3—28116
Fe, critical dynamics above Curie point, polarised neutron study 3—52496
Fe, light impurities, hyperfine fields and adiabatic pot. 3—52064
Fe, magnetostatic field calcs., Green's function approach 3—46120
Fe-Co alloys, Fermi surface topology influence on kinetic props. 3—8405
GaAs, (110) bound and resonant surface states 3—28406
GaAs, antisite defect electron energy states, Green's function calc. 3—47306
p-GaAs, heavily doped, impurity band tails based on semiempirical pseudopotentials 3—52075
GaAs, impurity deep levels, electronic props. and stability 3—52072
GaP, impurity deep levels, electronic props. and stability 3—52072
GaP(Sb), (110) bound and resonant surface states 3—28406
Ge, surface phonon focusing 3—51915
H atom, nonrelativistic, AO calcs. Green's function path integral, Kustaanheimo-Stiefel transform. 3—50290
H atom, quantum mechanical Coulomb problem path integrals, Green functions, wave functions 3—10611
H, positron collisions, field-theoretic formalism 3—41680
H, stimulated radiative corrections and shifts, energy level broadening 3—31968
He, Breit correction, calcs. using Coulomb Green's function 3—11716
He-like ion ground-state energy, correl. effect calc. using relativistic Coulomb Green's function 3—11718
K_2MnF_4:Ni antiferromagnets, impurity spin autocorrelations, NMR study 3—57595
K_2NiF_4:Mn antiferromagnets, impurity spin autocorrelations, NMR study 3—57595
K_2NiF_4:Mn antiferromag., local magnetisation on Mn impurities, NMR study 3—57596
Mg, Auger linewidths for $L_1L_{II,III}V$ processes 3—19231
N_2O, valence-electron shake-up satellite bands in ionisation spectra, HAM/3 calcs. 3—50285
Na, Auger linewidths for $L_1L_{II,III}V$ processes 3—19231
NaCl, surface phonon focusing 3—51915
Ne, Breit correction, calcs. using Coulomb Green's function 3—11716
$RbNiF_3$, two-magnon Raman spectra, Green's function calc. *(Chinese)* 3—43519
SOS, cryst. growth, laser beam induced, model calcs. 3—56966
Si, impurity deep levels, electronic props. and stability 3—52072
Si, multivacancies, interstitials and self-interstitial migration 3—47289
Si, self-consistent electronic struct. for Al and Si interstitials, cluster extended Green's function technique 3—47294
Si, substitutional and interstitial 3d impurities, electronic struct. 3—23323
Si:P, impurity states calcs. 3—33669
Si:S(Zn)(H), impurity electronic struct. calcs. 3—23322

Green's function methods continued
Si:transition metals, impurity electronic struct., Green's function calc. 3—43098
V_2O_3, optical absorpt. spectrum, electron interaction effects *(Russian)* 3—28879
W, chemisorbed H, D, Li, NA atom vibrations 3—28209
Zn-blende semiconductor surfaces, angle resolved local density of states Green's function calc. 3—8390
ZnO(S), ideal vacancy electronic struct. 3—47309
ZnS, substitutional transition metal impurities, local force variations, Raman scatt., Green's function calc. 3—47651
$Zr(V_xCo_{1-x})_2$:H, Laves phase, H interstitials study 3—38340

grinding
ceramic pellets prod. with close shape tolerances, hot impact densification 3—969
cylindrical mirror fabrication for synchrotron radiation 3—7239
fibre optic arrays, fused, for image transforms, figuring methods 3—7176
glass, optical, devitrified, type SO-115M, axial compression, bending strength, influence of surface conditions 3—14761
glass surfaces used in precision optics, crack layer study *(French)* 3—4117
jig for mechanical thinning of high-pressure cell gaskets 3—277
lens radius testing with pneumatic device under prod. conditions 3—37253
minerals, mech. prepared pyrite and quartz, surface changes, electron spectroscopy and microscopy obs. 3—13608
optical glass grindability, effect of degree of vac. 3—7255
optical grinding and polishing, state of the art, rel. to UV reflective and refractive scatt. 3—7241
optical manufacturing methods, overview 3—7221
plastic embedded tissues, grinding method for producing large area sections 3—4731
reflector front surface of specific profile fabrication by high-speed diamond grinding 3—27279
semiconductor wafer processing, surface characts. improvement, grinding, indexing and polishing 3—53251
steel, C, plunge grinding process with constant load *(Japanese)* 3—14780
superhard abrasive grains, wear against hard ceramics, SEM obs. *(Japanese)* 3—4151
surface texture assessment from laser Doppler anemometer signal visibility 3—40563
X-ray mirrors, grazing incidence, automated cylindrical polishing 3—17644
Al_2O_3, residual surface stress, caused by grinding, X-ray diffr. determ. 3—51903
$Ba(Pt(CN)_4).4H_2O$, low temp. photoluminescence, grinding effects 3—43583
CdS:Te, low temp. photoluminescence, grinding effects 3—43583
Cr plate on steel, fretting resist.improvement, optimum grinding parameters 3—58307
Fe_2O_3, γ-α transform., effect of dry grinding Fe_3O_4 with added γ-Al_2O_3 3—53003
KCl surface, disturbed layer depth and optical strength, processing and ageing influence 3—56293
$K_2(Pt(CN)_4).3H_2O$, low temp. photoluminescence, grinding effects 3—43583
Ni electroless plated mirror, fabrication on Alnico magnet 3—7229
$Ru(C_{15}H_{11}N_3)_2I_2.H_2O$, low temp. photoluminescence, grinding effects 3—43583
SiC hot pressed, reaction bonded and CVD mirrors, fabrication and use for synchrotron radiation 3—7123
$SmCo_5$ powder and sintered compact, mag. props. rel. to milling medium 3—47526
ZnSe crystals, grinding effect on surface quality 3—37249
ZrO_2-Y_2O_3, sintered disc, grinding and polishing, stress induced rhombohedral phase on surface 3—53046

grinding mills *see grinding*

ground support equipment
see also navigation; telemetering equipment
Landsat-D, upgrading of Earthnet stations for multispectral scanning and thermatic mapping data 3—39989

grounded collector amplifiers *see emitter followers*

groundwater
aquifer structural variability and pollutant distrib. problem *(Hungarian)* 3—39543
borehole temperature profile, fluid filled fracture effects 3—30077
brine-saturated rocks, effective electrical props. anal. using heterogeneous models 3—48474
Crozet, fumarollic fields, thermo-mineral springs *(French)* 3—25054
S Dakota, USA, pre-glacial valley location using Landsat 3—44451
design level prediction from piezometer recordings and rainfall data 3—39860
electric fields in geothermal area due to water flow 3—24974
electric self-potential modeling (elec. pot. due to groundwater flow) 3—53916
fractured rock groundwater flow by percolation theory 3—44482
frozen ground, downward motion of water into underlying frozen ground 3—54059
Fuji volcano groundwater, Rn content and environmental radioactivity *(Japanese)* 3—25139
Galapagos hydrothermal vent water ^{238}U, ^{226}Ra, ^{210}Pb concs. 3—4848
Georgia, USA, community water systems, Ra and U radionuclides conc. meas. 3—58567
geothermal energy field (vapour dominated), reinjection study 3—4363
geothermal groundwater system geochemistry, review 3—44409
geothermal reservoir charged at const. press., fault controlled, heat and mass transfer 3—35121
geothermal reservoir heat and water flow by finite element models 3—44479
geothermal systems, $MgCl_2$ and $CaCl_2$ aq. solns. appl. 3—33474
geothermal wells in presence of non-condensable gas, two phase model 3—29872
geysers, laboratory model rel. to seismic influence on eruption regime 3—20044
geysers, laboratory model rel. to theory and modelling of geyser process and field expts. 3—20042
geysers, metastability of water rel. to theory and modelling of geyser process 3—20043
geysers in Tibet (Xizang), energy estimation *(Chinese)* 3—44467
geysers of Yangbajain Geothermal Field, Tibet-China, caused by drilling *(Chinese)* 3—44468
Gobi desert, geology and hydrology obs. *(Russian)* 3—4816

groundwater continued
heat transfer with phase change, finite element solutions 3—44484
hydrothermal alteration and secondary mineralization in IRDP basalts from E Iceland 3—19990
hydrothermal vents and mineral deposits of E. Pacific Rise 3—25077
Italy, long-period tides seen in groundwater level 3—4888
Kerguelen, fumarollic fields, thermo-mineral springs *(French)* 3—25054
low-level radioactive waste, disposal sites, radionuclide migration 3—49938
magma rapid intrusion into wet rock, groundwater flow due to pore press. increase 3—15493
magnetic field changes assoc. with seismicity, due to groundwater flow 3—48499
Maxey Flats Shallow Land Burial Site, Pu transport through soil mech. 3—24644
mid-ocean ridge hot spring chemistry 3—25076
SW Nigeria, water resource prospecting by seismic refr. method 3—54060
opencast mine groundwater lowering automation *(German)* 3—39859
Pantelleria Island, Italy, groundwater temp. and geochemistry 3—58997
Pilgrim Springs, Alaska, geothermal features, radar/IR remote sensing 3—29962
pollutant migration, numerical dispersion reduction by conformal mapping 3—34745
prospecting method for groundwater resource by seismic refr. method 3—54060
Puga valley, India, geoelectric study of geothermal area 3—53925
radioactive low level waste management, biotic transport models for radionuclide migration 3—21401
radioactive waste disposal sites, surface water hydrology 3—44167
radioactive waste disposal sites in USA, avoidance of geohydrologic problems 3—44160
radioisotope concentrations in spring waters, Sanin district, Japan, ^{234}U, ^{238}U, ^{226}Ra and ^{228}Ra *(Japanese)* 3—48582
radionuclide chain migration in groundwater, solubility limited dissolution 3—24647
remote sensing of shallow groundwater by satellite IR radiometry 3—44588
Rolling Plains of Texas Panhandle, evaporite dissolution and karst features development 3—29954
Saint-Paul Isle, fumarollic fields, thermo-mineral springs *(French)* 3—25054
seismic wave 3—35095
Sherwood Sandstone aquifer, England, hydrochemical evolution 3—25142
Sicily thermal springs, dissolved sulphate and H_2S isotopic comp. 3—29959
steel, stainless, corrosion and pitting in dil. acidic geothermal brines, goethermal power plant appl. *(Japanese)* 3—47987
streamflow, evaluation of chemical mixing model for contrib. of throughflow to storm runoff 3—29955
tectonic deformation due to groundwater changes 3—48503
thawed active layers overlying permafrost, dielectric props. using radar at VHF 3—9946
underground water, sounding by subsurface radar in Latvian SSR *(Russian)* 3—20154
UNSAT1D, unsaturated groundwater flow computer code manual 3—39571
Villa de Reyes geothermal area, Mexico, ground water, D and ^{18}O investig. 3—39862
vitrified radioactive waste, solubility limited fractional dissolution rate in groundwater 3—21409
Xizang geysers, China, dynamic var. characts. *(Chinese)* 3—44466
Yilgarn Block, SW Australia, chem. weathering and groundwater chem. 3—54028
Yongping mine, Jiangxi Province, China, blast effect on groundwater Rn conc. *(Chinese)* 3—48577
Rn content variation and earthquake source region strain adjustment *(Chinese)* 3—48479

group theoretical schemes
E_6 exceptional group, tensor formalism for irreducible representations 3—40812
interacting boson model for rotational states of negative parity *(Chinese)* 3—31275

group theory
see also Clebsch-Gordan coefficients; crystal symmetry; elementary particle theory; group theoretical schemes; Lie groups; renormalisation; SU_n theory
6j tensor, symmetry props. 3—49191
A nucleon system, microscopic collective states, dynamical group, boson representation 3—21239
active representations of space groups based on the simple cubic lattice 3—206
area preserving maps, renormalisation group anal. of bifurcations 3—16112
automorphism groups in canonical commutation relations representations 3—30670
BCC Bravais lattice, full holosymmetric double space groups 3—2453
colour groups and phase transitions 3—207
colour symmetry polemics 3—208
complex cryst., spin wave spectrum, group theoretical anal. *(Russian)* 3—52427
complex rotation group and subgroups, Euler angle parametrisation 3—49141
complex rotation group and subgroups, reality nature of Euler angles 3—49142
computational group theory in crystal physics: a review 3—7946
computing with groups and their character tables, review 3—5588
conference, group theoretical methods in physics, Canterbury, Kent, England (Aug.-Sept., 1981) 3—18
configuration interaction calcs., matrix element factorisation in unitary group approach 3—31899
conservation laws, group structure and derivation 3—54863
contact vector fields in group of contact diffeomorphisms, variational characterization 3—56
Coulomb Sturmian basis for any spin 3—5638
crystallographic colour groups, appl. to Landau theory of phase transitions 3—27884
crystallography and the Penrose pattern 3—211
decimation method of real-space renormalization for electron systems with application to random systems 3—5735
determinantal wavefunctions, group representations for fermion systems 3—21605

group theory continued
differential geometry, role in relativity, quantum mechanics, and group theory 3—35891
double groups, relationships to single or point groups 3—7943
duality between SU(n) and S_L, phase conventions 3—49579
dynamic NMR spectroscopy, topological and group theoretical anal. 3—49415
dynamical group SU(1,1), path integral for coherent states 3—20667
electron diffr. scatt., many-wave theory, group-theoretic anal. 3—33045
electron propagator theory, U(n) 3—35864
Euclidean to Poincare group via Osterwalder-Schrader positivity 3—31069
Flodmark-Blokker scheme for irreducible representations of finite groups 3—7945
Galois theory for PDE systems, physics appl. 3—60
generalised Dirac (Clifford) algebras, irreducible representation 3—16465
grand unification and group theory: the Higgs problem 3—6033
Hermitian operators, characteristic operators and unitarily invariant decomposition 3—35877
Hodge's star, exterior derivative, group in operator algebra 3—5636
homotopy groups and the quantization of localizable systems 3—5639
ideal fluid problem 3—84
imperfect crystal physics, group theoretical methods, struct. phase transitions 3—33171
improper point groups, classification and basis functions 3—51531
induction and subduction of type-adapted representations 3—116
integrity bases for corepresentations of magnetic crystal point groups 3—7948
invariants and covariants of corepresentations of magnetic point groups 3—7950
isoscalar factors for anti-unitary point groups 3—7949
Jahn-Teller effect 3—1266
Landau theory of phase transitions, group theoretical implications 3—5757
lead phthalocyanine, monoclinic modification, quasi-one-dimensional, metal with charact. order of mol. dipoles 3—8028
Leech roots and Vinberg groups 3—26006
light-nuclei reactions anal. with respect to symmetry group U(3) 3—6199
local class field theory generalisation using K-groups 3—20649
magnetic crystals, anti-identity operations and props. tensors 3—16292
magnetic symmetry and the electrical conductivity tensor 3—8467
matrice eigenvectors, appl. of graph theory to group theory 3—117
matrix elements for the deformed shell model using the Sp(6,R) group 3—6170
moelcular spin relaxation, Brownian motion in group manifolds 3—1391
multicomponent spin models with transitive permissible symmetry groups 3—33845
nuclear structure, group theory use 3—707
octupole-phonon-state classification, shift operator props. in groups G2 and R(7) 3—6176
optics, classical, appl. of group theoretical methods 3—1548
orthogonal transitivity, invertibility and null geodesic separability in type D vacuum solutions of Einstein's field equations with cosmological constant 3—20720
Pauli principle effect for nucleons in classical phase space 3—5643
phase transitions, continuous, subgroups of index N, Landau criterion 3—10788
phase transitions, symm. anal., induced representation concept *(Russian)* 3—35949
Pierre Curie symm. principle generalisation 3—33172
point groups, general projective representations, space group appl. 3—51530
point mass motion in classical mechanics, use of relativistic spinor regularisation 3—65
polarization, the Bargmann transform and the harmonic oscillator 3—5644
polycentric tensor algebra, book 3—20585
potential scattering, transfer matrix and group theory 3—54647
quadrupole phonon state labelling and $R(5)\downarrow SU(2)\otimes SU(2)$ 3—6177
quantum mechanics in a finite number of dimensions 3—5641
quasi-one-dimensional systems, polar and axial vector standard components, applications 3—51745
quasiperiodicity in dissipative systems: a renormalization group analysis, chaos 3—16269
Racah algebra, for groups with time reversal symm. 3—49190
real space renormalisation group transforms, a question of exactness 3—16178
Rubik's cube: a toy, a Galois tool, group theory for everybody 3—58
selection rules for symmetry breaking and symmetry restoration in continuous transitions 3—238
semicoherent states and the group ISp(2,R) 3—5642
semidirect product groups, type-adapted representations 3—30592
Shubnikov point groups, general corepresentations 3—51532
SO(2,1) Lorentz group, Clebsch-Gordan coeff. in parabolic basis 3—5645
soft-group-manifold structure of supergravity and the proof of unitary 3—5696
$Sp_c(2,R)$ dynamical group of microscopic collective nuclear states 3—6181
Sp(2,R) model for the breathing mode resonance 3—6207
spin systems and global symmetry groups 3—5733
spinor monopole harmonics and Pauli spin equation 3—45315
structural stability and symmetry breaking 3—236
superspace groups, conceptual ideas 3—2454
symmetry and phase transitions 3—237
symmetry group and canonical transforms for nuclear collective models 3—6182
symmetry groups of the regular tessellations of S^2 and S^3 3—530
symmmetry adaptation of crystal spin-orbitals 3—7944
symplectics unitarisation, appls. for field quantisation 3—25778
tensor fields in crystals and colour groups 3—209
time reversal and magnetic reversal in crystal physics 3—7947
topology of countable subgroups of the Heisenberg-Weyl group 3—5637
two-dimensional lattice, Lagrangian mechanics, group representation 3—210
two-dimensional systems, continuous phase transitions, symm. changes 3—51746
two-dimensional systems, second order phase transitions, classification 3—3023
two-particle fractional-parentage coefficients for $s^{\nu}p^{\mu}$-electronic configurations 3—1202
type-adapted subduction matrices 3—30593
U(3)×U(3), phase space orbits as product of collective and intrinsic groups 3—6179
U(n), reduction of inner-product representation, duality between permutation and U(n) groups 3—40343

group theory continued
  U(n) basis, Sp(n,R) and Sp(n) groups, infinitesimal operator expressions 3—40342
  visualising four-dimensional symmetry 3—57
  Weyl invariants for unitary groups *(French)* 3—551
  Wigner's little groups, Poincare transformations extended by dilatations 3—16562
  Wigner function 3—5640
  np scattering matrix, spinor particles nonlinear relations 3—26021
  H, electron motion, dynamic symmetry in Coulomb field, Fock representation 3—31934
  Nb_3Sn, struct. phase transition, group theory anal. 3—18442
  TiS_3, IR reflectivity, Raman scattering, IR active phonons 3—28851
  V_3Si, struct. phase transition $O_h^3 \rightarrow D_{4h}^9$, group theory anal. 3—18442
Gruneisen coefficient
  alkali aluminosilicate glasses, heat capacity and Gruneisen parameters 3—2840
  alkali halide crystals, Anderson-Gruneisen parameter 3—47074
  alkali metal halides, repulsive energy and Gruneisen coeff., ab initio and Thomas Fermi calc. 3—38018
  alkaline earth oxides, cryst. binding and Gruneisen parameter 3—13157
  alloys, nonmagnetic d-electron amorphous, elect. resistivity, press. and temp. depend. 3—23353
  epoxy SC5, thermal expansion, 0.2 to 10K 3—8232
  fluorite compounds, thermophysical and anharmonic props. calc. 3—51536
  ionic crystals, Anderson-Gruneisen parameter 3—47074
  ionic crystals, diatomic, lattice props. calc. using short-range Rydberg pot. function 3—22819
  liquids, nonlinearity acoustical parameter rel. to Rao acoustical parameter 3—37279
  liquids, pseudo-Gruneisen param., modified expression 3—38015
  metals, thermoelastic instability, review 3—24311
  minerals, small crystal, thermal expansion meas., capacitance micrometer, Gruneisen's ratio obtained 3—30839
  naphthaline d_8, d_0, Raman study of press. induced freq. shifts 3—34094
  PMMA, glassy, thermal expansion, 0.2 to 10K 3—8232
  PMMA, multiply loaded, one-dimensional isentropic compression meas., Gruneisen parameter vol. depend. 3—13338
  polymers, Gruneisen parameter and evaluation of interchain sp. ht. and US absorption 3—28052
  polymers, strength, rel. to elastic props. *(Russian)* 3—9182
  α-quartz, Raman active vibr. modes, temp. and press. depend. 3—8834
  steel, electron pulse beam generated acoustic signal, effect of thermophys. props. 3—28060
  tetrahydrofuran-water mixture, excess internal press. and Gruneisen parameters, 25°C 3—42807
  zincblende-type semiconductors, lattice statics, interionic pot. model 3—22818
  Ag halides, cryst. binding and Gruneisen parameter 3—13157
  Al, lattice vibrs. and thermophysical props. 3—47063
  Al, nuclear Gruneisen parameter for eqn. of state, vol. variation 3—28074
  Ar, solid, thermal expansion, effect of N_2 impurity mol. rot. motion *(Russian)* 3—28124
  As_2S_3, amorphous, thermal expansion, 0.2 to 10K 3—8232
  Be, nuclear Gruneisen parameter for eqn. of state, vol. variation 3—28074
  Be_2SiO_4, thermal expansion, Gruneisen parameter anal. 3—8228
  $CdAl_2O_4$, thermal expansion, Gruneisen parameter anal. 3—8228
  Cs halides, cryst. binding and Gruneisen parameter 3—13157
  CsCl(Br)(I), thermal cond. and heat capacity 3—2902
  $CsNiCl_3$, low temp. magnetostriction studies, partial Gruneisen parameter determ. 3—47538
  GaS(Se), layered cryst., thermal expansion behaviour 3—28127
  Ge, lattice dynamics, ab initio pseudopot. theory 3—2707
  Ge, third order elastic consts. and Gruneisen coeff., US vel. study 3—47018
  InP, lattice dynamics under hydrostatic press. 3—22995
  $LiAlSiO_4$, thermal expansion, Gruneisen parameter anal. 3—8228
  LiH(D), adiabatic elastic consts., 4.2 to 300K 3—18361
  α-N_2, far IR spectrum under press. 3—14281
  Nb_3Sn, supercond. transition temp. and electronic density of states 3—52295
  $(Nb_{1-x}Ta_x)_{55}Rh_{45}(Ir_{45})$, metallic glasses, superconducting T_c press. depend. 3—43313
  Ni-Cr alloys, thermodynamic studies and mag. ordering close to critical composition 3—8671
  PdHMn RKKY spin glass, mag. Gruneisen parameter, thermal expansion study 3—28574
  PdMn giant moment spin glass, mag. Gruneisen parameter, thermal expansion study 3—28574
  $Pd_{0.775}Si_{0.165}Cu_{0.06}$, amorphous, thermal expansion, 1.5 to 350K 3—42818
  Si, lattice dynamics, ab initio pseudopot. theory 3—2707
  Si, third order elastic consts. and Gruneisen coeff., US vel. study 3—47018
  β-Si_3N_4, thermal expansion, Gruneisen parameter anal. 3—8228
  SiO_2, glassy, thermal expansion, 0.2 to 10K 3—8232
  $TlGaS_2$, layered cryst., thermal expansion behaviour 3—28127
  Zn_2GeO_4, thermal expansion, Gruneisen parameter anal. 3—8228
  Zn_2SiO_4, thermal expansion, Gruneisen parameter anal. 3—8228
  Zr-Nb-Mo-Re, electronic Gruneisen const. 3—23253
GTO calculations
  see also GO calculations
  linear combination of Gaussian-type orbitals, ab initio LCAO SCF MO program calcs. *(Chinese)* 3—41490
  molecular one-electron expectation values, GTO expansions of STO functions 3—55821
  molecules, Gaussian pot. var. fitting in $X\alpha$ calcs. 3—55835
  second-row elements, self-consistent MO methods, polarisation-type basis set 3—1216
  Br_2, MINI-1 and MIDI-1 basis sets, GTO calcs. 3—6527
  CO, ESCA peak intensities in DA and GSA calcs., using Fourier transformed GTOs 3—50292
  Ga to Cd, MINI-1 and MIDI-1 basis sets, GTO calcs. 3—6527
GTO devices *see thyristors*
Gudden-Pohl effect *see electroluminescence*
guided electromagnetic wave propagation
  see also guided light propagation; waveguides
  anomalous scattering from slightly random surface, guided complex wave propag. 3—6846
  crystal waveguide, dielectric permittivity spatial dispersion, one dimens. model 3—17419
guided electromagnetic wave propagation continued
  dipole, radiation in presence of grounded gyromagnetic slab 3—26914
  Earth-ionosphere waveguide, effects of lateral ionospheric gradients on ELF propag. 3—10035
  Earth-ionosphere waveguide, obs. of ELF localised nocturnal propagation anomalies 3—10032
  Earth-ionosphere waveguide, struct. of natural ELF EM field in Arctic basin 3—15522
  ionospheric waveguides, radiowave extraction mechanism, resonance buildup of beams 3—20179
  magneto-microwave Kerr effect, effective linewidth, guided wave anal. and surface finish effects 3—34172
  metal spheres and cylinders in dielectric waveguide, surface shape testing rel. to phase change 3—30840
  multi-duct structure effect on whistler-mode propag. in magnetosphere 3—10155
  multiple diffraction on semiplanes 3—46143
  radar scattering by open circular waveguides 3—26917
  scattering of guided modes by boundary deforms. of dielectric slab waveguides, integral eqn. method 3—46137
  short radiowave propagation in magnetospheric channels, SW and VHF signals 3—20187
  troposphere ducting environment, refractivity profiles interference from satellite-to-ground RF meas. 3—10034
  whistler ducting in inner magnetosphere, summer-winter asymmetry effect, ray-tracing 3—10154
  X-ray guide tube for diffr. expts. 3—56774
guided light propagation
  see also optical waveguides
  dielectric hollow circular waveguide, Gaussian beam transmission, optical theory 3—32460
  dielectric waveguides, rectangular-core, anal. using accurate perturbation approach 3—32473
  fibre, distortion-free pulse propag. using polariton-induced picosec. pulse broadening compensation 3—37236
  fibre, propagating laser light spatial coherence 3—12351
  fibre, Selfoc, controlled non-linear evolution of TE and TH ps-pulses 3—12349
  fibre link, two-mode, transmission bandwidth 3—12341
  fibre propagation characteristic improvement with computer-aided anal. using wave eqn. techniques 3—1784
  fibre-optic waveguides, stimulated Raman scatt. Stokes component pulses, temporal and amplitude characts., streak camera technique 3—22250
  fibres, dual-mode propag. characts., analytical approxs. 3—32488
  fibres, graded-index, circularly symm., mode excitation by focused Gaussian beams 3—32486
  fibres, single-mode, pulse propag. expts. 3—32503
  fibres, step-index, mode propag. meas. using synchroscan streak camera 3—37237
  fibres, step-index, weakly guidng, linearly polarised mode propag. consts. 3—46322
  graded W-fibres, equivalent step-index profile, TE_{01} mode cut-off appls. 3—12350
  image transmission through fibres by optical phase conjugation 3—12352
  lens waveguides, periodic, Gaussian beam parameter oscills. 3—1762
  magnetostatic wave delay line, guided optical wave diffr. 3—50762
  metal surface, guided-wave resonance and enhanced nonlinear-optical effects 3—22154
  multilayer optical fibre simultaneous two-way video transmission 3—22239
  planar midIR dielectric coated metallic waveguides, transmission characts. 3—12327
  pulse compression with reduced wings by propag. through single-mode optical fibres 3—37235
  square-wave oscillators, guided-wave all-optical, proposal involving bistable optical systems 3—27133
  surface waves, focused and transversely confined paraxial 3—27235
  waveguide structures, corrugated, propag. and conversion of light waves 3—27236
  waveguides, dielectric, hollow, loss influence on mode shape 3—27232
  waveguides, dielectric, linearly polarised mode propag. consts. 3—46322
  waveguides, planar, graded-index, light wave propag. and conversion 3—1764
  $LiNbO_3$:Ti single-mode strip waveguides, mode size and method for estimating propag. const. 3—12320
  YIG film, optical guided-wave interactions with magnetostatic waves at microwave frequencies 3—8804
Guinier-Preston zones
  HV electron microscopy, alloy microstruct. determ. *(Japanese)* 3—51463
  metals, vacancy form. after irrad. and quenching, positron annihilation study 3—47732
  Al-Cu alloys, phonon dispersion relations, Guinier-Preston zone form., neutron scatt. study 3—23000
  Al-Cu alloys, struct. of Guinier-Preston I zones 3—9071
  Al-Cu alloys, struct. of Guinier-Preston zones 3—9072
  Al-Cu-Mg, Cu/Mg ratio effect on precipitation *(Korean)* 3—4042
  Al-Mg-Si, quenched and aged, electron density of states, soft X-ray emission study 3—3029
  Al-Sn (0.06-0.5 wt.%), Mossbauer and positron annihilation study of ^{119}Sn 3—28745
  Al-Zn, initial precipitation hardening, mechanism *(Japanese)* 3—9080
  Al-Zn (10-15 wt.%), metastable phases, size distrib. 3—14564
  Al-Zn-Mg, Mg effect on formation and reversion of Guinier-Preston zones 3—9064
  Al-Zn-Mg (4.5, 2 at.%), Guinier-Preston zone reversion, pre-ageing conditions depend. 3—9069
  Al-Zn-Mg (4.5, 2 at.%), struct. changes during continuous heating, DSC and small-angle X-ray scatt. study 3—19340
  Al-Zn-Mg (5, 1 wt.%), GP zones, reversion, calorimetry and thermal anal. study 3—29089
  Cu-Be (1.35 at.%), microstruct. evolution under electron irrad. in HVEM 3—27996
  SiC reinforced Al alloy, fibre and particulate, microstruct. 3—47870
Gulyaev-Bleustein waves *see surface acoustic waves*
Gunn devices
  see also Gunn diodes
  No entries
Gunn diodes
  No entries

Gunn effect
see also limited space charge accumulation; negative resistance effects
p-$In_{0.53}Ga_{0.47}As$, absence of Gunn effect, theory 3−47351
$In_{0.53}Ga_{0.47}As$, transferred-electron effect obs. in travelling-domain mode 3−52160
n-nSb, Gunn oscillations obs. 3−13825
Gunn effect devices *see Gunn devices*
Gunn oscillators
InP, MOVPE and VPE grown, fabrication of Gunn oscillators 3−43754
n-nSb, Gunn oscillations obs. 3−13825
guns, plasma *see plasma guns*
gyration *see rotation*
gyromagnetic effect
see also gyromagnetic ratio; magnetic resonance
electron autoresonance in elec. and mag. fields 3−56127
gyromagnetic ratio
see also g-factor; magnetic resonance
deformed axially symmetric nuclei, collective gyromagnetic ratio from density depend. HF calc. 3−45451
higher spin particles, mag. and gravit. moments 3−49616
$(YEuDy)_3(FeGa)_5O_{12}$ bubble film, domain walls, saturation vel. 3−43418
$(YSmCa)_3(FeGe)_5O_{12}$ bubble film, domain walls, saturation vel. 3−43418
$(YSm)_3(FeGa)_5O_{12}$ bubble film, domain walls, saturation vel. 3−43418
gyroscopes
see also navigation
asymptotic stopping in presence of viscous friction 3−40351
balance method of measuring angular rotation rates with a fiber-optic interferometer 3−16339
dry-tuned gyros, wheel-speed induced errors 3−54729
dynamically adjustable, accuracy, nonlinear effects influence 3−7397
dynamics of gyroscope supported by flexible circular plate 3−7402
electrostatic gyroscope with sampled-data control system, dynamics 3−45136
Ferranti oscillogyro, miniature vacuum system, for rotation detection 3−40596
fibre optic, intensity depend. nonreciprocal phase shift for low coherent sources 3−32494
fibre optic, optical Kerr effect, nonmonochromatic source effects 3−41989
fibre optic, using Sagnac interferometer 3−27254
fibre optic directional coupler, single mode, for use in reflectometers or gyroscopes 3−1773
fibre-optic gyroscopes, source statistics and the Kerr effect 3−12353
Hertz concept in mechanics rel. to gyroscopic system props. 3−46438
integrated optics elements for optical gyros 3−17638
laser gyro design progress, lock-in and freq. pulling, mirror settings *(German)* 3−37096
liquid suspension gyroscope, dynamics, quasi-stationary method apl. 3−56424
optical, fundamental precision limit 3−25935
passive ring gyroscopes, pot. appl. of mode locked gas laser using an external acoustooptic modulator 3−17547
phase-nulling fibre optic gyro development review 3−22229
resonant motions of gyroscopic systems, stability 3−56426
ring laser gyro, noise variances estimation by using multiple observers 3−1671
waveguide gyroscope couplers, 3×2 channel, theory 3−12319
gyrotrons *see microwave tubes*
gyrotropy (optical) *see optical rotation*
H-centres
alkali halides, deformable lattice, electron, hole and exciton instabilities 3−57047
alkali halides, $F_2{}^+$-centre spectrum, comparison with $H_2{}^+$ using one-electron model 3−13762
alkali halides, F-centre form. and excitons, time and temp. depend. 3−56893
alkali halides, F-H pair production by UV laser irrad., absorption spectra studies 3−56895
alkali halides, recombination induced F-H pair prod., cascade spectroscopy studies 3−56894
alkali halides, self-trapped excitons and F+H pair form. 3−57291
fluorapatite, fission-damage induced colour centres, absorption spectroscopy study 3−56889
rare gas solids, self-trapped excitons and F+H pair form. 3−57291
$CsCl:Ag^+$, F-H centre production under light irrad. 3−56896
GaAs, electron irrad., optical props. thermal stability 3−43577
KBr:Li, X-ray irrad., V-bands and thermoluminescence, annealing effects 3−18299
KCl, exciton decay into F, H and α-I pairs, luminesc. study 3−23279
KCl:Br(I), exciton decay to Frenkel defects, tunnel recharge *(Russian)* 3−57287
KCl:I, electron irrad., exciton decay, Frenkel defects, optical absorption study 3−8425
KCl:I, electron irrad., impurity exciton prod., optical absorpt. and luminesc. studies 3−43576
KI, laser irrad. defect form., V_k and H-centres 3−56892
LiF:Mg, γ-irrad., OH^- ions effect on thermolum., ESR obs. 3−28905
SiO_2-$Li_2O(Na_2O)(K_2O)$, glass, X-ray induced hole centres, ESR studies, struct. model 3−3530
H I regions
21 observations, implications for relation between mag. field and gas density in interstellar clouds 3−30446
21-cm radiation of local spiral arm, rel. to diffuse galactic gamma radiation *(German)* 3−54523
absorption line survey from Effelsberg-Green Bank, anal. 3−25544
3C 196, quasar, discovery of 21 cm H I absorpt. at z=0.437 against extended radio struct. 3−30523
3C 58, Crab-like supernova remnant, H I absorption profile obs. rel. to distance 3−5400
column density of H I, rel. to reddening estimation at low galactic latits. from Lick galaxy counts 3−48993
NML Cygni, H II region, due to outflow photoionisation by Cygnus OB2 assoc. stars radiation 3−59504
Cygnus X-3, interstellar H I column density from I-band obs. 3−10402
disc galaxies, evolution in colour-gas content plane rel. to S0 galaxies problem 3−10464
distribution beyond solar circle in Galaxy, UHF obs. anal. 3−25593
distribution in line of sight to λ Scorpii, UV line anal. 3−30451
expanding shell around H II regions in Cas OB6 region 3−40230
H I regions continued
extended soft X-ray emission in southern galactic hemisphere from local H I regions 3−10486
G116.9+0.2 (CTB 1), supernova remnant, 21 cm continuum and H I emission obs. 3−10420
in G78.2+2.1, supernova remnant, CO obs. of high-vel H 1 cloudlets 3−48980
galactic H I absorption towards 3C 123, VLA synthesis 3−10412
southern galactic plane, H I survey for $|b|<10°$ 3−15977
in galaxies, 21-cm line obs. of 59 lenticular and spiral galaxies 3−44842
in galaxies, IR absolute magnitude-H I rel. width-surface brightness relation rel. to cosmological expansion *(Russian)* 3−35724
Galaxy central region structure and dynamics from 21 cm line obs. 3−10453
halo gas structure towards globular cluster M13, star Barnard 29, obs. 3−40208
heating of warm neutral clouds, role of acoustic waves in supernova remnants 3−10418
high velocity clouds near South Celestial Pole linking Magellanic Clouds to galactic plane 3−25545
high velocity H I clouds, obs. props. and models anal. 3−54494
high-velocity clouds, transverse vels. determ. from soft X-ray emission 3−59426
HVC 287.5+22.5+240, 271+11+258, 273+9.5+258, positive high velocity clouds, 21 cm obs. 3−40234
IC 5146 H II regions, nearby broad H I zones detect., struct. and morphology 3−25569
in M101, giant spiral galaxy, interstellar matter collapse to H I-H II assoc. and star form. 3−25598
in M31, anal. of warping of H I disc 3−10466
in M31, comparison of H I gas distrib. with optical data and star form. rate 3−10467
in M31, H I kinematic props. and density wave theory 3−16008
M81 dwA, extremely faint dwarf irregular galaxy, H I distrib. obs. 3−49007
Magellanic Stream, new high-sensitivity H I obs. 3−49012
magnetic field strength scaling in interstellar clouds, resolution of 'B versus n dilemma' 3−30447
molecular clouds formation from interstellar H I, implications for propagating star form. 3−54517
NGC 1079, low-visibility H I rich spiral galaxy, H I mass-blue luminosity ratio 3−49014
in NGC 1275 (3C 84), H I absorpt. spectrum time variations 3−15992
in NGC 1313, barred spiral galaxy, accretion of H I clouds rel. to morphology of ionised gas 3−44678
NGC 1961, peculiar supermassive Sb galaxy, stripping from H I survey obs. 3−25596
NGC 281 and 1579 H II regions, nearby broad H I zones detect., struct. and morphology 3−25569
in NGC 315 nucleus, active elliptical galaxy, H I struct. and vel. 3−54530
Orion A, origin of forbidden C I IR emission in H II or H I region 3−10422
in peculiar galaxies in clusters of galaxies, H I content from 21 cm obs. 3−10449
Puppis Window of Milky Way, 21-cm H I obs. 3−35696
in radio galaxies, search for H I emission and absorpt. 3−54521
shell structure at l=130°, b=22.5, possible SNR assoc. with PSR 0809, UHF obs. 3−10426
shells, temp. var. 3−15967
Small Magellanic Cloud, H I regions, line profiles and Gaussian anal. 3−5429
in SMC, $N_H/E(B-V)$ ratio for Sk 143 rel. to galactic type UV extinction curve 3−10423
in southern galaxies, H I survey 3−35719
in spiral galaxies, H I mass, total mass and distances, UHF obs. 3−5415
in spiral galaxies, integrated 21 cm line profiles 3−5419
in spiral galaxies in clusters, relations between morphological types and integrated H I content 3−20501
in spiral galaxies of low surface brightness, H I survey 3−25591
Ursa Major/Canes Venatici region, galaxy groupings, redshift and H I masses 3−20496
UV absorption lines towards HD 93206, IUE obs. rel. to props. of neutral gas 3−59425
Virgo cluster galaxies, 21 cm data and optical emission line fluxes rel. to galaxy-IGM interactions 3−30509
W28 supernova remnant, H I envelope and H II regions 3−20470
warm H I component of interstellar medium, anal. of H I emission profiles at positive galactic latits. 3−44821
Weaver's jet region, high velocity H I cloud, preliminary search for 2.6 mm ^{12}CO emission 3−10433
CO clouds, correl. with H I clouds 3−25586

H II regions
abundances from IR forbidden lines 3−15968
abundances of N, S and He and relative stellar temps. 3−5376
associated molecular clouds, neutral gas velocities 3−25571
bubbles and shocks in molecular clouds 3−25562
4c 21.53W, extended component as head-tail radiogalaxy or H II region 3−30517
η Carinae nebula, He I lines obs. rel. to IR spectrum and variability 3−59368
Case low-dispersion northern sky survey 3−48839
PV Cephei (T Tauri star) nebula IR polarisation props. 3−10421
champagne phase, coronal gas effects 3−20460
compact regions and assoc. OH masers, formaldehyde obs. 3−25581
complexes, unresolved near IR-1 mm emission component nature 3−30475
conference on star form. regions in Penticton, Canada (June 1981) 3−20578
distribution in line of sight to λ Scorpii, UV line anal. 3−30451
30 Doradus Nebula, morphology and dynamics of halo 3−40227
30 Doradus nebula cluster, central object R136a single star nature, lines anal. 3−25437
dust albedo at Hα, effect on ionised nebulae extinction determ. 3−59418
dynamical evolution and star form. 3−25561
dynamical evolution in non-uniform environments 3−25559
dynamics of galactic and extragalactic H II regions, effects of hypersonic stellar winds 3−15917
emission-line spectra, metal abundance dependencies 3−44817
evolution in collapsing massive mol. clouds 3−25560

H II regions continued

- excitation conditions in H II regions, determ. from IR fine struct. line ratios 3−44818
- formaldehyde towards interstellar OH maser sources and assoc. ultracompact H II regions 3−10428
- G333.6−0.2, H_2 emission origin and distrib. 3−30518
- G333.6−0.2, spherical H II region modelling 3−40212
- G45.13+0.14A, 2-4 μm spectral obs. 3−10475
- in galaxies, history and present status of optical surveys 3−10419
- H II/OH maser regions, collisional and thermal overlap pumping mechanism rel. to obs. 3−25633
- HGC 7538 (IRS1), VLBI aperture synthesis obs. of 1720 MHz OH maser 3−5441
- IC 132 in galaxy M33, ionising source WR nature and characts. 3−59439
- IC 1470, image-tube spectrograms, nebular line ratios 3−48973
- in IC 1613, spectra of H II region and assoc. unusual Wolf-Rayet star 3−10364
- IC 5146, nearby broad H I zones detect., struct. and morphology 3−25569
- ionised gas relative velocities 3−25571
- low-density regions, electron temp. galactic gradient, SHF obs. 3−54506
- luminous stars in symmetric nebulae, mass loss, spectra anal. and nebulae characts. UV obs. 3−44735
- in M101, giant spiral galaxy, interstellar matter collapse to H I-H II assoc. and star form. 3−25598
- M16-HH1, H II region Herbig-Haro object, visible and UV continuum 3−20453
- M17, metre wavelength H recombination line obs. 3−20472
- M17 and M42, H II regions interacting with mol. clouds, fine struct. IR lines 3−25563
- M1-67, wind blown bubble around WR star 209 BAC, vel. and nature 3−25548
- in M31, optical data on H II regions and star form. rel. to H I gas distrib. 3−10467
- M42, obs. in forbidden O III 52 and 88 μm lines and forbidden O I 63 μm and N III 57 μm lines 3−48991
- M42 (Orion nebula), obs. of complex ionised struct. in θ^2 Orionis region 3−15978
- in M83, SN 1923a and SN 1957d, assoc. H II regions used for progenitor stars nature 3−30397
- M8 nebula H II regions, emission lines and electron densities, visible obs. 3−25538
- modular Fabry-Perot interferometry system for H II regions imagery and spectrometry 3−25338
- molecular clouds, ionized gas in active cores 3−48971
- molecular clouds associated with H II regions chemistry 3−25578
- MR 2251−1178, QSO in Seyfert galaxy nucleus, surrounding giant H II cloud nature 3−30524
- N 11 in LMC, high-resolution narrow bandwidth photography 3−44815
- in NGC 1313, barred spiral galaxy, H II regions catalogue rel. to ionised gas morphology 3−44678
- in NGC 1566, catalogue 3−10458
- NGC 1977 bright rim, C detect. from 492 GHz obs. 3−25585
- NGC 2024, C II forbidden line emission at 157 μm 3−35683
- NGC 2071 H II region mol. outflow region, disk constrained stellar wind 3−25573
- NGC 2264, brightness distrib. mapping, emission meas. and nonthermal radioemission density, HF obs. 3−44828
- NGC 2359, kinematic anal. WR star, HD 56925 as driving force, visible obs. 3−40223
- NGC 281 and 1579, nearby broad H I zones, detect., struct. and morphology 3−25569
- in NGC 3351, hot-spot nucleus galaxy, obs. of inner ring of H II regions rel. to star form. burst 3−35720
- in NGC 4321, giant Sc galaxy, spatial distrib. 3−40247
- in NGC 4631, distribution rel. to radiocontinuum morphology, UHF/SHF obs. 3−35712
- NGC 5204, extragalactic H II region, X-ray and UV obs. 3−54519
- in NGC 5430 (Markarian 799), barred spiral galaxy, Wolf-Rayet stars and star form. in emission knot 3−20500
- NGC 595 in M33, struct.; Hα and SHF obs. 3−54489
- NGC 6357, 6611 (M16) and 6618 (M17), extinction and dust props. 3−40229
- NGC 7538, H110α aperture synthesis obs. of compact region 3−20457
- NGC 7538 molecular cloud, molecules distrib.+dynamics rel. to H I and H II 3−25570
- NGC 7635 (Bubble Nebula), far IR and radio molecular obs. 3−15976
- nomenclature of diffuse fragmentary objects 3−5402
- O-type stars in cluster NGC 6530, H II regions emission, contrib. to M8 emission 3−25538
- Of stars ring nebulae, statistics, origin and classification 3−25542
- ON 1, compact H II region/maser source, obs. of assoc. mol. cloud complex 3−54473
- optical regions, new catalogue in machine-readable form 3−5162
- Orion A, origin of forbidden C I IR emission in H II or H I region 3−10422
- Orion Nebula, dust distrib. and temp. and ionisation struct. 3−40218
- Orion Nebula, photographic obs. of flare stars 3−25349
- Orion Nebula, star form. characts., IR sources anal., struct., internal motion and comp. 3−15985
- Orion Nebulae, stellar RI photometry rel. to age range of stars and globules 3−10317
- λ Orionis region, Hα objects/OB association members evidence for fossil giant molecular cloud 3−5367
- in PKS 2158-380, extended ionised gas, nucleus UV emitter as ionising source, obs. 3−20520
- S106, bipolar nebula, kinematic struct. from spectroscopic obs. 3−5387
- S235, IR spectroscopy of IR sources and implications for line excess problems 3−54477
- S237, S254-S257, small H II regions, dust distrib. from V-band and Hα maps 3−59429
- S 128, formaldehyde absorpt. obs. rel. to galactic location and star form. 3−5388
- Sagittarius A, metre wavelength H recombination line obs. 3−20472
- Serpens dark cloud, embedded H II regions assoc. with stars with strong winds 3−25546
- Sh 2-269, H II region-molecular cloud complex, optical and millimetre wave study 3−5386
- Sharpless 101, radial vel. survey 3−25540
- Sharpless 106−ON 2 complex, discrete IR sources mapping 3−5382

H II regions continued

- Sharpless 106 IRS 9 discovery, IR spectral obs. 3−25551
- Sharpless 155, X-ray emitting bubble discovery, origin from early type star winds 3−40293
- Sharpless 156, optical polarisation and dust component rel. to blister model 3−30454
- Sharpless 222, assoc. mol. cloud CO obs. 3−25576
- Sharpless 235B, HCN mapping and column density 3−25580
- Sharpless 254-247, surface photometry 3−25541
- Sharpless 54 and 142, vel. struct. from visible obs. 3−20449
- Sharpless 68, CO isotopes abundances, photochemistry anal. and EHF obs. 3−25579
- Simeis 147, supernova remnant, chem. and physical conditions 3−40235
- in SMC, assoc. with stars in catalogue of SMC members 3−35461
- in spiral arms of Galaxy, relation to bisymmetric spiral mag. field 3−48969
- strings in spiral galaxies, clouds and star form. dimensions determ. 3−59471
- ultracompact regions assoc. with OH masers, UHF obs. 3−25582
- ultracompact regions in circumstellar IR sources, form. and interactions 3−25564
- ultracompact regions in star form. regions, mass outflow phenomena 3−25572
- W1, continuum emission mapping and star form. processes, SHF/VHF obs. 3−25641
- W28 supernova remnant, H I envelope and H II regions 3−20470
- W3, 4 and 5 and SNR HB 3, expanding H I shell 3−40230
- W3, H I movements and distrib. UHF obs. 3−40275
- W3, interpretation of OH maser obs. in W3 (OH) 3−16026
- W3, OH masers 6 cm emission, origin and positron, SHF obs. 3−35689
- W3, W4, W5 complex, star form. evidence from 11 and 20 μm obs. 3−5384
- W3, Westerbork obs. of formaldehyde 6 cm absorpt. 3−5398
- W40, H II region and its mol. cloud, struct. and nature 3−25642
- W51, H II region complex, VLA obs. of warm NH_3 assoc. with mass outflows from young stars 3−54474
- W51, metre wavelength H recombination line obs. 3−20472
- CO radial velocities towards galactic H II regions catalogue 3−5148
- OH masers pumping 3−16025
- OH type I masers and OB association form. 3−40273
- S abundances in Galaxy, Magellanic Clouds and POX 4 galaxy 3−48981
- S III abundance from IR fine struct. lines at 18.71 and 33.47 microns 3−15969

Hadfield steel *see alloy steel*

hadron classification schemes

- baryon and meson states, wave eqns. and mass spectra, quark model 3−597
- multiplet construction, comparison between stable-particle and integrally-charged models 3−623
- quark gas, statistical mechanics in 1-D, SU_2 model 3−31183

hadron current

- *see also current algebra*
- electroweak hadronic currents, single-sheet classical surface 3−574

hadron decay

- *see also baryon decay; meson decay*
- lattice QCD with SU(3) gauge, hadronic masses and decay constants 3−31154
- $Z^0 \rightarrow ggg$, differential and total decay rates and e^+e^- annihilation into three-gluons 3−650

hadron-deuteron interactions

- *see also hadron-deuteron scattering; hyperon-deuteron interactions; meson-deuteron interactions; proton-deuteron interactions*
- hd→pX, fast backward N prod., confinement forces, colour flux tub model 3−6120

hadron-deuteron scattering

- *see also hadron-deuteron interactions; hyperon-deuteron scattering; meson-deuteron scattering; proton-deuteron scattering*
- hd, elastic scatt., GeV region, multiple scatt. formalism 3−6219

hadron electroproduction

- gauge theory and particle physics, book 3−5511
- D*(2010) production at CESR 3−36255
- D* production MARK II results at PEP 3−36256
- $e^-e^+ \rightarrow q\bar{q}g$, gluon spin ang. distrib., beam polarisation 3−11196
- e^+e^-, radiative annihilation to hadrons, differential cross section calc. 3−6112
- $e^+e^- \rightarrow$1.4 to 2.2 GeV vector mesons 3−36259
- e^+e^- annihilation, 30 GeV CM, baryon prod. and charmed-quark fragmentation function 3−21145
- e^+e^- annihilation, 3.8-6.7 GeV CM, D-meson prod. cross section 3−16651
- e^+e^- annihilation, baryon-antibaryon prod., fire-string decay at high energies 3−54918
- e^+e^- annihilation, charged hadrons correl. in quark and gluon jets in perturbative QCD *(Russian)* 3−21142
- e^+e^- annihilation, charged-hadronic multiplicity distrib. for high-mass diffractive states 3−21150
- e^+e^- annihilation, charged-particle inclusive cross section anal. including QCD higher-order correction 3−40918
- e^+e^- annihilation, differential three-jet cross section, QCD and abelian vector theory predictions 3−21144
- e^+e^- annihilation, energy-energy correlation; $O(\alpha_s)^2$ calc. in QCD framework 3−26125
- e^+e^- annihilation, evolution of short distance phase space quanta into hadron jets 3−16654
- e^+e^- annihilation, hadron prod., single gluon contrib. 3−646
- e^+e^- annihilation, hadronic final states from MARK II detector at PEP 3−31225
- e^+e^- annihilation, Higgs bosons and heavy flavours prod. at LEP 3−21143
- e^+e^- annihilation, inclusive hadron prod., scale breaking obs. 3−11194
- e^+e^- annihilation, inclusive hadron prod., 2nd order QCD effects obs. in PETRA 3−31224
- e^+e^- annihilation, kaon, baryon and vector meson prod. 3−31223
- e^+e^- annihilation, multihadron prod. 3−647
- e^+e^- annihilation, multihadron prod. cross section, inclusive muon prod. rate 3−31194
- e^+e^- annihilation, neutral current effects in QCD four-jet prod. 3−54919
- e^+e^- annihilation, possibility of finding $b\bar{b}$ state above threshold 3−21126

hadron electroproduction continued
e^+e^- annihilation, strings and energy-energy correlation, QCD test 3−11161
e^+e^- annihilation, three-jet events in hadronic final states 3−36261
$e^+e^- \rightarrow D^{*\pm}X$, TASSO results from PETRA 3−36258
$e^+e^- \rightarrow e^+e^-M\bar{M}$, heavy meson prod. cross section in perturbative QCD 3−36200
$e^+e^- \rightarrow e^+e^-$+hadrons, photon structure function in high Q^2 region 3−40908
$e^+e^- \rightarrow e^+e^-\gamma\gamma \rightarrow e^+e^-f'$, $K\bar{K}$ pair prod. and tensor meson f′(1515) excitation 3−40944
$e^+e^- \rightarrow e^+e^-h$, interference effects of electroweak interaction, photon structure functions 3−26053
$e^+e^- \rightarrow e^+e^-x$, x-hadrons, polarised photon structure functions, QCD leading behaviour 3−16639
$e^+e^- \rightarrow$exclusive channels, 1.4-1.9 GeV, $\rho'\omega'\phi'$ model interpretation 3−26128
$e^+e^- \rightarrow ggg$, differential and total cross-sections and Z^0 decay into three-gluons 3−650
$e^+e^- \rightarrow gg\lambda$, gluon jets prod. via Z^0 reson. 3−16653
$e^+e^- \rightarrow \gamma^* \rightarrow \psi X$, production rate calcs., 3−36262
$e^+e^- \rightarrow h$ describing QCD jets in leading logarithmic approximation for transitions 3−26132
$e^+e^- \rightarrow$hadrons, 9.5 GeV, cross section meas., Υ and Υ' resonance parameters 3−648
$e^+e^- \rightarrow$hadrons, comparison with $\bar{p}p$ annihilations into charged particles 3−16672
$e^+e^- \rightarrow$hadrons, energy-energy correl. function, perturbative QCD correction 3−21081
$e^+e^- \rightarrow$hadrons, perturbative QCD, large corrections from gluon bremsstrahlung 3−598
$e^+e^- \rightarrow$hadrons, $Q^2 \rightarrow A\sqrt{s}$ scaling law at high energies 3−16655
$e^+e^- \rightarrow$hadrons, results from JADE at PETRA 3−36257
$e^+e^- \rightarrow$hadrons, scaling violations, quark fragmentation, perturbative QCD 3−26130
$e^+e^- \rightarrow$hadrons, strong coupling constant, fragmentation/hadronisation models influence 3−54916
$e^+e^- \rightarrow$hadrons, total cross section higher corrections, electro-strong model, scalar quarks 3−6110
$e^+e^- \rightarrow$hadrons ($\mu^+\mu^-$), R value calc. in anisotropic-chromodynamics 3−26079
$e^+e^- \rightarrow$hadrons+γ, direct photon prod. cross section, angle and energy depend. 3−16650
$e^+e^- \rightarrow$jets, Lund Monte Carlo method, computation and comparison with expt. 3−54917
$e^+e^- \rightarrow$jets, pol. beams., ang. distribs., broken colour gauge theory 3−11214
e^+e^- jets, proton and Λ prod. from jet calculus and recombination model 3−16652
$e^+e^- \rightarrow \Psi(4S) \rightarrow B\bar{B}$, inclusive K^0 prod. at upsilon reson. 3−6109
$e^+e^- \rightarrow q\bar{q}\pi^\pm$, three jet processes, P-odd effects for one-photon mechanisms *(Russian)* 3−11197
$e^+e^- \rightarrow \rho^0X$, 14-34 GeV, differential cross section 3−11195
$e^+e^- \rightarrow \Upsilon$ family, CESR results 3−45407
$e^+e^- \rightarrow \Upsilon' \rightarrow \gamma\gamma\Upsilon'(\gamma\gamma\Upsilon)$, evidence for $\chi_b{}'$ prod. 3−21136
$e^+e^- \rightarrow VX$, associated heavy vector meson prod. 3−649
e^+e^-annihilation, strong coupling constant variation from jet energy spread meas. 3−45405
e^+e^-annihilations, multiple prod. phenomena, existence of jets, quark and quark-gluon models 3−40873
ep, π production, P violation, Z boson exchange, neutral weak current 3−21141
Υ spectroscopy at CESR 3−36260

hadron-hadron interactions
see also baryon-baryon interactions; hadron-hadron scattering; meson-baryon interactions; meson-meson interactions
charged particle multiplicity distrib. Koba-Nielsen-Olesen scaling 3−54920
charm hadronic production via flavour excitation 3−26073
dilepton prod., oscillatory scaling violations and QCD Coulomb 3−21080
direct photon production in hard hadron process at ISR 3−21186
Drell-Yan cross section, high energy behaviour 3−49703
Drell-Yan cross-section, cancellation of long distance contributions 3−49638
Drell-Yan model of hadroproduction of dimuons, experimental review 3−6119
Drell-Yan process 3−21160
electroweak hadronic currents, single-sheet classical surface 3−574
general relativistic methods using scaled down Einstein eqns. 3−6055
hadronic charm production 3−21194
hadronic system fragmentation meas. in different flavour and colour states 3−21182
heavy quark production 3−40859
high energy physics conf., Paris, France, (July, 1982) 3−35771
high p_T particle hadroprod. QCD review 3−26061
jet production, study with identified high transverse momentum particle 3−21184
jet production and fragmentation 3−40861
jet production comp. in Kp, pp, e^+e^-, νN, μp interactions 3−21167
KNO distributions using the generalization of Novero-Predazzi's ansatz with three constraints 3−40924
large E_t hadronic processes, very high energies, gluon jets in perturbative QCD, hadron source 3−40936
large transverse momentum hadrons interactions, QCD anal. 3−21079
low $p_\perp$ high energy inclusive reactions, leading particles phenomenology 3−26167
low-p_T particle prod. in nuclei, quark-parton model 3−6085
massive μ pair prod. in association large momentum hadron, recombination model anal. 3−667
meson resonance inclusive prod. and sea-quark distrib. in proton 3−16669
multiparticle correlations 3−21181
multiparticle dynamics, recent developments 3−21087
multiple hadron prod., SPS collider energies, pomerons as quark-gluon strings 3−11126
multiplicity, dispersion, pseudorapidity distribs., from shower particles in 24-400 GeV hadron-nucleus reactions 3−820
multiplicity of gamma families, quasiscaling model 3−48783
partons in soft-hadronic processes, conf., Erice, Italy (March 1981) 3−5499
perturbative QCD and low-p_T physics 3−6070

hadron-hadron interactions continued
qCD expectations for high-energy hadronic collisions 3−11149
small transverse momentum physics 3−21085
soft hadron-hadron and hadron-nucleus interactions, dual fragmentation models 3−6084
soft hadronic interactions, review 3−6123
soft hadronic processes and hadron structure 3−6083
structure function model in QCD frame work 3−16641
two-particle inclusive distrib. in dual parton model 3−21158
valon model charm production and explanation of observed spectra 3−36204
hh, 10^{15}-10^{16} eV, cluster phenomena in emulsion chamber expts. and hadron jets *(Chinese)* 3−44633
hh, large transverse energy events, gluon bremsstrahlung effects in QCD 3−36199
hh, multiplicity distrib., connection between KNO and geometrical scaling 3−36275
$hh \rightarrow \gamma X$, direct photon polarisation jet-γ correlations *(Ukrainian)* 3−45425
$hh \rightarrow hX$, multiplicity distributions, universality ansatz 3−26149
$hh \rightarrow l^+l^-X$, transverse momentum distributions in massive quark model, QCD comparison 3−26163
$h_1h_2 \rightarrow l^+l^-X$, perturbative QCD calc., soft gluon effects, K-factor 3−54883
$h_1h_2 \rightarrow l^+l^-x$, lepton pair prod., role of soft gluons 3−16609
$h_1h_2 \rightarrow \mu^+\mu^-X$, lepton pair prod. at large transverse momentum in second order QCD 3−31152
$hp \rightarrow \Omega(\bar{\Omega})X$, $\bar{\Omega}/\Omega$ ratio in proton fragmentation, quark junction model 3−31251
K^+ and π^+ beam jets, meson and baryon prod. and quark-diquark cascade model 3−40867
$ph \rightarrow X$, planar multiparticle prod. at 147 GeV 3−21166
$qh \rightarrow l\bar{l}X$, Drell-Yan process in QCD, two-loop graphs, spectator partons 3−6121

hadron-hadron scattering
see also baryon-baryon scattering; hadron-hadron interactions; meson-baryon scattering; meson-meson scattering
nonlocal quasipotentials, large angle hadron scattering 3−11152
partial-wave scatt. amplitude, D function in phenomenological N/D model 3−40809
$Q^2\bar{Q}^2$ meson search possibilities 3−21196

hadron interactions *see hadron-deuteron interactions; hadron-hadron interactions; lepton-hadron interactions; photon-hadron interactions*

hadron leptoproduction
see also baryon production; hadron electroproduction; meson production
transverse momentum effects and ang. energy flow 3−11143
lN, deep inelastic scatt., hadron ang. distribs., T odd asymmetry in QCD 3−26105
lN, deep inelastic scatt. structure functions, slow rescaling variable 3−40912
$\mu^+N \rightarrow 2\mu(3\mu)$, 250 GeV, charm production, photon-gluon fusion model calcs. 3−45399

hadron-nucleus reactions
see also hadron-hadron interactions; hyperon-nucleus reactions; meson-nucleus reactions; nucleon-nucleus reactions
charged particle multiplicity distrib. Koba-Nielsen-Olesen scaling 3−54920
forward and central collisions, quark model 3−16613
low-p_T particle prod. in nuclei, quark-parton model 3−6085
multiplicity, dispersion, pseudorapidity distribs., from shower particles in 24-400 GeV hadron-nucleus reactions 3−820
partons in soft-hadronic processes, conf., Erice, Italy (March 1981) 3−5499
QCD confinement, DTU model and hadron-nucleus collisions 3−6066
role in understanding the nucleus 3−11350
soft hadron-hadron and hadron-nucleus interactions, dual fragmentation models 3−6084
(h,X), 100 GeV, multiparticle prod., multiplicity and rapidity distribs. 3−45529

hadron-nucleus scattering
see also hadron-hadron scattering; hyperon-nucleus scattering; meson-nucleus scattering; nucleon-nucleus scattering
^{40}Ca(h,h), elastic scatt., nucl. shape parameters effects 3−738
^{2}H(h,h), elastic scatt., GeV region, multiple scatt. formalism 3−6219
^{24}Mg β-band excitation in collective model, coupled channel effects, form factors, from (h,h′) and (α,α') 3−11297

hadron photoproduction
see also baryon photoproduction; meson photoproduction
collective phenomena, conf., Moscow, USSR (April 1981) 3−5484
QCD tests in large transverse momentum hadron photoproduction 3−6067
$\gamma\gamma \rightarrow p\bar{p}$, distribution amplitudes, angular dependence in QCD 3−31153
$\gamma N \rightarrow \pi N$, nonresonant s- and p-wave amplitudes from multipole anal. 3−6104
π photoproduction amplitudes for resonant P_{33} state, Pade approx. 3−6103

hadron production
see also baryon production; hadron leptoproduction; hadron photoproduction; meson production
hadronic charm production 3−21194
heavy quark production by hadrons 3−21067
high p_T hadron production 3−21185
inclusive multihadron prod., p_T distribs. 3−31167
jet model, quark fragmentation function, hadron probability distribution, quark clusters 3−45364
KNO distributions using the generalization of Novero-Predazzi's ansatz with three constraints 3−40924
large transverse momentum hadrons interactions, QCD anal. 3−21079
QCD jets, hadron multiplicity and distrib., next-to-leading effects 3−45344
quark-gluon plasma, particle radiation in qualitative model 3−36205
$B\bar{B} \rightarrow$hadrons, multiplicity distrib. calc. 3−49701
$D \rightarrow$hadrons, multiplicity distrib. calc. 3−49701
$e^+e^- \rightarrow h$, cross section ratio to $e^+e^- \rightarrow \mu^+\mu^-$ 3−26101
$e^+e^- \rightarrow hX$, 22.4 GeV compared to $\bar{p}p$ 3−26166
$hh \rightarrow hX$, multiplicity distributions, universality ansatz 3−26149
$K^\pm p$, 100, 175 GeV/c, single particle inclusive scatt. and multiplicities 3−671
νd, hadron production at Fermilab energies 3−21118
νd, inclusive ρ°, ω°, η°, $K^{*\pm}$(890) prod. 3−21119

hadron production continued
- $\nu p \to \mu hX$, charged current hadron production in BEBC 3−21116
- pA→hX, analytic approximation, heuristic Glauber model, semi-inclusive interactions 3−26136
- $\bar{p}p$, 100, 175 GeV/c, single particle inclusive scatt. and multiplicities 3−671
- pp→hX, multiplicity distributions, universality ansatz 3−26149
- $\pi^- N \to hX$, mechanism, values of n_s, n_g, n_b, n_h, collective tube model, pomerons 3−26164
- $\pi^{\pm}p$, 100, 175 GeV/c, single particle inclusive scatt. and multiplicities 3−671
- $H(\nu,\mu hX)$, charged current hadron production in BEBC 3−21116

hadron scattering *see hadron-deuteron scattering; hadron-hadron scattering; lepton-hadron scattering; photon-hadron scattering*

hadronic atoms
- *see also mesic atoms*
- Σ hypernuclei, self energy in nuclear matter, Σ^- atom data 3−16726

hadrons
- *see also baryon resonances; baryons; hadron classification schemes; hadron current; hadron decay; meson resonances; mesons*
- coloured scalars and new hadrons 3−11127
- hadron-quark transition, effective dielectric theory 3−606
- lattice QCD, hadron spectroscopy, u, d and s quark masses 3−11119
- relativistic models of extended hadrons with mass-spin trajectory constraint, book 3−10540
- superdense hadronic plasma in degenerate stars, eqn. of state and thermodynamics 3−59195
- supersymmetry in effective Lagrangians, relativistic Bergman-Wigner equations, SU(2K,2K/N), hadronic physics applications 3−6000
- top hadrons, mag. moments in SU(12) framework 3−54910

haemodynamics
- *see also blood*
- angio-haemodynamical unit 3−58793
- angiography, fluoroscein, using image scanner, OSIRIS, still photo sequence functional imaging 3−24872
- aorta, wall shear stress in dogs 3−24783
- aorta aneurysm, mech. instabilities in canine arterial walls *(Japanese)* 3−39679
- aortic arch model, human, physiological pulsatile flow expts. 3−9654
- aortic flow, vel. pulses, laminar-turbulent transition *(German)* 3−9645
- aortic press. transfer, approx. identification 3−29613
- aortic valve behaviour, effect of some haemodynamic factors 3−29603
- arterial blood pressure of rats, spectral anal. 3−58698
- arterial branching, local geometry 3−24747
- arterial system optimal modelling 3−53712
- bi-directional ultrasonic Doppler blood flow measurement with direct single-sideband separation *(Chinese)* 3−39698
- blood pressure transducer system, disposable 3−15251
- bone, blood flow meas. and partition coeff. of ^{133}Xe 3−15212
- bone ^{99}Tc-MDP uptake in man, rel. to local blood flow 3−19795
- brain, visual evoked potentials and PET mapping of regional cerebral blood flow and cerebral metabolism 3−15085
- bronchial arterial blood flow and bronchovascular resist. meas. in dogs 3−24764
- bronchial circulation in anesthetised sheep, origin, distrib. and blood flow 3−19746
- cardiac catheter including manometers and velocity probe, computerised anal. 3−29780
- cardiac output and stroke volume in exercising ducks and pigeons 3−19745
- cardiac output rel. to positive and end-expiratory pressure 3−39676
- cardiac output values, technique for determ. in rapid succession using conductivity cell 3−19855
- cardiac stroke volume radioisotope determ., influence of attenuation 3−4628
- cardiohaemodynamics, interrelationship with myocardium mechanics, in expt. cardiac tamponade 3−34876
- cardiovascular alterations in Macaca monkeys exposed to stationary mag. fields, ECG and blood press. obs. 3−58712
- cardiovascular CT, quantitative, baseline subtraction 3−58801
- cardiovascular diagnostic parameters derived from pressure and flow pulses 3−4609
- cardiovascular dynamics study by continuous recording of blood density 3−9772
- cardiovascular finite-element analyses, recent developments 3−9661
- carotid arterial disease, quantification by Doppler US 3−48349
- carotid baroreceptor control of blood press. in man, math. model and some meas. characts. 3−34872
- carotid wave interpretation using knowledge based system 3−19872
- cathlab of the present and future 3−29779
- cerebral blood flow, and rapidly exchangeable water vol., positron emission tomography *(French)* 3−48393
- cerebral blood flow, regional, calc. from emission CT of inert gas concs. 3−48379
- cerebral blood flow, regional, meas. using continuous inhalation of $C^{15}O_2$ using positron emission tomography *(French)* 3−15205
- cerebral blood flow, regional, noninvasive method for determ. *(French)* 3−15207
- cerebral blood flow, regional, positron emission tomography *(French)* 3−48392
- cerebral blood flow meas., conf., Toulouse, France (Sept. 1981) 3−10504
- cerebral blood flow meas. in man, problems, review *(French)* 3−15204
- cerebral blood flow measurement, restoration of contrast by spatial deconvolution *(French)* 3−15206
- cerebrovascular disorders, sonic diagnosis *(Japanese)* 3−58861
- circulation parameters, visualisation by electronic oscillography *(German)* 3−34997
- circulation research, haemodynamics and fluid mechs. *(German)* 3−44260
- circulatory system, mammalian, comprehensive elementary model 3−44259
- coherent structure, Doppler US obs. 3−48350
- collateral ventilation changes with increased vascular press. and edema form., dog expts. 3−19738
- computer-based flow mapping system, intracardiac appl. 3−15174
- coronary artery models, representation in angiographic films 3−24870
- coronary obstruction severity, computer aided quantitation from single view cineangiograms 3−24869
- cutaneous vasculator responses to initiation of exercise, effect of heat stress 3−24683

haemodynamics continued
- dilute suspension unsteady flow in a semi-infinite contracting or expanding pipe 3−44269
- Doppler US signals real-time spectral anal. 3−48348
- double beam Doppler US method for quantitative blood flow vel. meas. *(Chinese)* 3−9683
- drag-reducing polymer effect on haemodynamic parameters in dogs 3−39681
- dual collimator design for beat-to-beat measurement of cardiac performance with an Anger camera 3−4632
- EM blood flowmeter, noninvasive, theoretical aspects and technical evaluation 3−19794
- EM flowmeter, rapid technique for dynamic calibration 3−19790
- flow, in vivo meas. using radionuclides 3−34972
- flow, instantaneous volumetric, rel. to CW Doppler US recordings, theoretical model 3−29681
- flow, instantaneous volumetric, rel. to CW Doppler US recordings, canine expts. 3−29682
- flow, instantaneous volumetric, rel. to CW Doppler US recordings, power spectra calc. 3−29683
- flow and velocity meas. in vivo by electromagnetic induction 3−34927
- flow imaging techniques using NMR 3−15189
- flow meas., photoplethysmography appl. 3−34945
- flow meas. using Doppler shifted ultrasound 3−34924
- flow relation to US echogenicity, red cell aggregation effect 3−34867
- fluid shear stress effects on living cells obs. using cone-plate viscometer 3−29803
- foetal haemodynamics, Doppler US evaluation 3−29688
- foetal vessels, quantitative assessment of blood flow by pulse Doppler techniques 3−15170
- forbidden indicators in flow measurement using the saline dilution method 3−19837
- heart, left ventricular pumping, compliance descriptor anal. 3−58711
- heart blood vessel system, simulation of blood pressure control operations *(Japanese)* 3−9660
- hot-film anemometer used for human blood vel. determ., patient safety unit 3−4668
- intraaortic balloon pumping, cardiac assistance optimisation, theoretical considerations 3−58865
- Korotkoff sound generation at distole 3−53711
- laser Doppler velocimeter with optical fibre, appl. to blood flow velocity meas. 3−19873
- left ventricle, features of compliance pumping 3−4532
- left ventricle, infarcted, finite element model of pressure-volume relation 3−48308
- left ventricular mechanics, anal. during filling, isovolumic contraction, and ejection 3−39666
- left ventricular overload, simple models, assessment of a parametric identification procedure 3−34871
- left-ventricular contraction mechs., computer graphics anal. 3−4533
- leg of baboon, blood flow LF dynamics 3−9662
- liver, effects of pre- and posthepatic blood flow obstruction on arterial and portal drainage in guinea pigs 3−4518
- lung lobe, dog, vascular resistance and compliance distrib. 3−19743
- myocardial blood flow during acute isovolumic anaemia and threadmill exercise in dogs 3−19744
- NMR 2-coil method for fluid flow meas., blood appl. 3−9695
- NMR flowmeter, in vivo evaluation, human forearm blood flow obs. 3−34942
- NMR imaging of blood flow, approaches 3−53755
- noninvasive blood pressure measurement *(Japanese)* 3−19831
- noninvasive cardiac output meas. using Doppler US computerised blood flowmeter 3−4575
- photostimulated wound healing, haemodynamical stimulation using incoherent and polarised light *(Hungarian)* 3−15187
- poststenotic flow, extraction and characterisation of underlying vel. waveforms 3−29769
- pressure measurement *(Japanese)* 3−19830
- pressure radiotelemeter for small animals 3−15311
- pulmonary artery pressure ambulatory monitoring, solid state recorder 3−15249
- pulmonary blood flow distrib., radioisotope CT obs. 3−58705
- pulmonary blood flow monitor, modelling and design 3−15264
- pulmonary gas exchange, effect of local blood flow control, control theory analysis 3−39669
- pulmonary vascular resistance by arterial and venous occlusion, lung inflation effect 3−39670
- pulsatile blood flow, fluid dynamics and mech. wall stress for aneurysm and renal bifurcation *(German)* 3−58694
- pulsed-Doppler echocardiography, microprocessor sample-vol. tracker and light-pen 3−15175
- radiographic image sequences, processing and anal., cardiac and haemodynamic appl. 3−29724
- regulation of cardiac output and cerebral blood flow 3−34870
- renal artery models, electrochem. surface shear rate evaluation 3−24778
- right ventricular pressure response to $+G_z$ acceleration stress in miniature swine 3−24894
- Roentgen densitometer as a noninvasive means for infant intracardiac shunts detect. 3−53843
- single-coil pulsed-NMR method for fluid flow meas., theoretical and expt. anal. 3−24837
- single-photon emission tomography and cerebral blood flow *(French)* 3−15208
- skin blood flow rate evaluation by heat flow anal. *(Japanese)* 3−39737
- stenoses, axisymmetric, in vitro Doppler detect. from transverse vel. meas. 3−9685
- stenosis angiographic quantitation by digital image processing 3−24871
- transcutaneous O_2 tension in the lower limb, effect of age and sex of normal volunteers 3−44264
- transmural cardiac pressures, estimation during ventilation with PEEP 3−29592
- transposition of great arteries, blood pressure, blood flow and oxygen transport, model studies 3−58710
- tumours, human, regional blood flow changes as a result of radiotherapy 3−29659
- unsteady flow in branched arteries, mathematical simulation 3−15128
- US blood velocity meas., fast dedicated microprocessor for real-time freq. anal. 3−19789
- US echogenicity of blood flow in veins 3−39688
- US scanning, carotid artery stenosis, spectral anal. patterns evaluation 3−29684

haemodynamics continued
ventricular pressure and myocardial contractility, math. interrelationship 3−9664
wave propagation in previously stressed incompressible cylinder containing a viscous compressible liquid 3−32804

haemoglobin *see proteins*

haemorheology *see biorheology; blood*

hafnium
see also nuclei with ......
atoms, radiative lifetimes meas. using time-resolved laser-induced fluoresc. 3−11745
BWR advanced control blade materials, critical expts. 3−16867
PWR control rod materials, development of hafnium 3−41159
thin films, form. in Penning discharge, resistivity and struct. study 3−52275
Hf^{3+}, electron impact excitation-autoionisation, distorted wave approx. with exchange 3−41686
Hf^{3+}, electron impact ionisation, excitation contrib. meas. 3−46078
^{181}Hf in Cr-H as probe causing local condensation of H, PAC study *(French)* 3−28107
^{181}Hf, in Pt, trapping of C impurity, TDPAC study 3−57840
Lu-Hf isotopic system, importance in studies of planetary chronology and chemical evolution 3−48513
YIG:Hf, elec. cond. meas. 3−52147

hafnium alloys
see also hafnium compounds
metallic glasses, superconductivity and eleetronic struct. 3−38524
Be_2HfH formation 3−48179
Cu-Ag(Ti)(Zr)(Hf), thermochem. at 1373K 3−4007
Cu-Hf, amorphous, positive Hall coeffs., 4.2 to 270K 3−28340
Hf-Sc-Ga, isothermal sections of phase diagrams at 800°C 3−4013
Hf-Ti-Ga, isothermal sections of phase diagrams at 750°C 3−4013
$HfCo_2(HfCo_3)(Hf_6Co_{23})(HfCo_7)$ and amorphous $Hf_{1-x}Co_x$, magnetic moments meas. 3−23597
$HfFe_2$, γ-γ perturbed angular correlation study 3−52687
$Hf_{1-x}Fe_x$, amorphous, ^{57}Fe Mossbauer isomer shift 3−52691
$Hf_{0.8}Ta_{0.2}Fe_2$, mag. phase transitions 3−52469
HfV_2, elastic moduli meas., 77 to 1500K 3−13312
HfV_2, Laves phases, elastic moduli anomalies, ultrasonic resonance meas. 3−13310
HfV_2H_x, thermal desorption spectra of H 3−42922
HfV_2H_y system, supercond., T_c study *(Chinese)* 3−13940
$(Hf_{0.5}Zr_{0.5})V_2H_y$ system, supercond., T_c study *(Chinese)* 3−13940
Ni-Al-Hf, strength and flow stress, temp. depend. 3−39163
$Ni_3(Al,Hf)$, Al-rich phases, dislocation struct. study 3−51607
$Sm(Co,Fe,Cu,Hf)_{7.25}$ permanent mag., mag. domains 3−33921
Ta-Hf, thermally activated deform. 3−4084
Ta-Hf-w, thermal cond., phonon and electron components, elec. resist. and Seebeck coeff. 3−3157
Ta-W-Hf, thermally activated deform. 3−4084
α-Ti-Hf, substitutional elements effect on serrated flow 3−14683
Ti-Hf alloys, short-range lamination, lattice instability and size effect *(Russian)* 3−51539
Ti-Hf-O (50, 33 at.%), ternary system, phase diagram construction 3−14568
Ti-Zr-O, Ti-Hf-O and Zr-Hf-O, ternary systems, ω-phase, ordering phenomena 3−14573
V-HfN, long-time hardness 3−24246
$V_2Hf_{1-x}Nb_x(V_2Zr_{1-x}Nb_x)(V_2Hf_{0.5}Zr_{0.5-x}Nb_x)$, G15 cpds., supercond. transition temp. and XPS meas. *(Chinese)* 3−18809
$V_2Zr_{0.5}Hf_{0.3}Ta_{0.2}$, C-15 supercond., sp. ht. meas. at low temps. *(Chinese)* 3−13954
Zr-Hf alloys, short-range lamination, lattice instability and size effect *(Russian)* 3−51539
$Zr_xHF_{1-x}V_2$ superconducting Laves phase, electron spectrum peculiarities 3−3873
$(Zr_{0.5}Hf_{0.5})Fe_2$, hyperfine mag. field, TDPAC study 3−23845
$(Zr_{1-x}Hf_x)Fe_2$, electronic struct., magnetisation and isomer shift 3−3048
$(Zr_{0.5}Hf_{0.5-x}TA_x)V_2$ and $(Zr_{0.5-x}Hf_{0.5}Nb_x)V_2$, C-15 Laves phases, supercond. transition temp., press. dependence meas. *(Chinese)* 3−18808
$Zr_{1-x}Hf_xV_2$, C-15 cpds., struct. transition and supercond. transition, resistivity and X-ray study 3−8183

hafnium compounds
see also hafnium alloys
CeO_2-ZrO_2-Y_2O_3-ThO_2-HfO_2-La_2O_3-Na_2O-B_2O_3, heat resistant nonsilicate porous glasslike material, prep., leaching 3−58110
$CuHf_2S_4$, mag. props. study 3−3425
Er_2O_3-HfO_2 system. phase relations and ordering, X-ray diffr., thermal expansion 3−53036
HfC, lattice dynamics, Debye temp. and phonon dispersion relations 3−8154
HfC, sp. ht., entropy and enthalpy 3−51822
HfC, whisker growth by CVD, 1000-1450°C 3−42985
HfC_xN_{1-x}, heat of mixing, XPS core level binding energy shifts 3−24095
$Hf_4Co_7Ge_6$, crystal struct., lattice parameter *(Ukrainian)* 3−22850
HfF_4 based glasses, IR fibre material research 3−41945
HfF_4 glasses for IR fibres 3−41944
HfF_4-BaF_2-LaF_3 glass, IR edge absorpt. anal. using Fourier spectrophotometer 3−25963
HfF_4-BaF_2-LaF_3-AlF_3 glass laser elements, hot pressing 3−7103
$HfFeSi_2$, cryst. struct., single cryst. X-ray diffr. study *(French)* 3−13188
$HfMnSi_2(Ge_2)$, cryst. struct., single cryst. X-ray diffr. study *(French)* 3−13188
HfN coating, RF sputtered, composition, elec. resist., refractive index 3−13674
HfN coatings on cemented carbide tools, PVD and CVD, interrupted cutting tests 3−14763
HfN film based transparent heat mirror, transmittance and reflectance 3−17599
HfN, lattice consts. temp. depend. and thermal expansion 3−37888
HfN, whisker growth by CVD, 1000-1450°C 3−42985
HfO, Er_2O_3-stabilised, polycryst., self-diffusion of Er and Hf 3−13528
HfO_2 in internally oxidised alloys based on Nb and Mo, crystal structure 3−42588
HfO_2 inhomogeneous thin films, optical consts., automatic determ. 3−19219
HfO_2, monoclinic, hydrothermal reaction-sintering 3−9026
HfO_2 powders, monoclinic, prep. by hydrothermal oxidation of Hf metal chips 3−53006

hafnium compounds continued
HfO_2, Tb_4O_7 or Pr_6O_{11} stabilised, elastic moduli as function of porosity and temp. 3−58151
HfO_2-ZrO_2 solid solutions, vibrational spectra 3−8827
HfS_2, ^{181}Ta nucl.-quadrupole freq. doubling, TDPAC study 3−8746
HfS_2, band struct. and X-ray absorption spectra 3−58002
$HfS_{3-x}Se_x$, Raman scatt. study 3−23950
$HfTe_5$, freq. depend. cond. 3−38375
$HfTe_5$, quasi-one-dimensional, phonon modes, Raman scatt. study 3−43542
Y_2O_3-$(Zr_{1-x}Hf_x)O_2$, Zr-Hf interdiffusion coeffs., lattice and grain boundary 3−18496
ZrF_4-HfF_4 based fluoride glasses for IR optical fibres 3−37225

half-lives (radioactive) *see radioactive decay periods*

half wave rectification *see rectification*

halides
see also compounds of individual elements, e.g. "tungsten compounds" and "organic compounds"
see also alkali metal halides; halogens
alkali halide monatomic ions, charge clouds, density difference functions 3−45812
alkyl halides, mol. Rydberg spectroscopy, mag. field effects 3−26662
fluorides, heat capacity, low temp. 3−57105
group IV halides, tetrahedral, Coriolis coupling consts. and centrifugal distortion consts. 3−36740
ions, adsorbed on colloidal Ag, surface enhanced Raman spectroscopy 3−57932
ions, adsorbed on colloidal Ag, surface enhanced Raman spectra 3−57933
melts, oxide solubilization and Coulomb complexing 3−47117
metal film/halide systems, ambient-induced diffusion 3−18521
X-ray K and L_{III} absorption edge of metal halides, chemical shifts 3−57995
Cu halide solutions, emission spectra, base cations influence *(Russian)* 3−3817
H halides, vibr. energy transfer rate coeffs. 3−26825

Hall constant *see Hall effect*

Hall effect
amorphous superconductors, phonon spectrum parameters and Hall coeffs. *(Chinese)* 3−28465
Anderson localisation, conf., Sanda-shi, Japan (November 1981) 3−40321
closed cycle MHD power generation, fully ionised K seed experiments, aspects 3−29423
coal combustion MHD power generation experiments with shock tube, Hall coefficient meas. 3−29420
conductor, mag. field penetration, nondiffusion mechanism 3−21969
copper phthalocyanine single cryst., low temp. microwave Hall mobility meas. 3−23408
crystal transport props., local-field correction effects 3−33693
EMF meas. in high resistance low charge carrier mobility materials by two-frequency method 3−49398
film on sapphire, elec. props., thermal stress effects 3−38506
generator, secondary flow caused by Hall currents in compressible boundary layers 3−2302
granular materials, Hall effect rel. to carrier density 3−18726
hopping conduction in ordered and disordered systems, review 3−3194
inhomogeneous system, Hall effect, elec. cond. study metal-insulator transition model 3−43030
intrinsic semiconductors, carrier concentration under high mag. fields 3−47362
measurement, selective frequency helicon generator appl. 3−40638
measurement of semiconductor kinetics parameters, contact instrument design 3−45161
metal film, reduced Hall coeff., impurity effects 3−13925
MHD cylindrical Z pinch, Hall effect influence on spectrum 3−46703
MHD flow through porous straight channel, Hall effect 3−46656
MHD free and forced convective flow through porous media, Hall effects 3−12658
MHD generator plasma diagnostics using bulk conductivity and Hall parameter meas. 3−24616
microwave Hall effects in low-mobility materials, biological appl. 3−29794
nontransition metals and alloys, phonon spectrum parameters and Hall coeffs. *(Chinese)* 3−28465
photostimulated Hall effect in longitudinal mag. field for interband transitions 3−23410
polar semiconductors, anisotropic, Hall coeff., anomalous temp. depend. calc. *(Russian)* 3−47370
quantisation of Hall impedance using period integrals 3−52182
quantised Hall effect, gauge transform. study 3−23344
quantised Hall effect at millikelvin temps., single-electron approx. and continuum percolation theory 3−43208
quantised Hall effect in a two-diemensional periodic potential 3−23345
quantized Hall effect and localization in a strong magnetic field 3−43213
quantized Hall effect and other macroscopic quantum phenomena 3−43214
quantized Hall effect current, ideal conductor behaviour 3−3145
quantized Hall effect meas. on 2-D electron gas 3−57366
quantum, atomic standard ohm unit and high precision determ. of fine struct. const. *(Polish)* 3−10793
rare earth antimonides, R_5Sb_3 (R=Nd, Sm, Gd, Tb, Dy, Ho), elec. props. 3−3203
semiconducting materials, numerical data processing method *(Russian)* 3−40635
semiconductor, hot electron EM instability in mag. field 3−18717
semiconductor, inhomogeneous, DC cond. and Hall effect in high elec., fields, effective medium theory 3−13824
semiconductor, neutral impurity scatt., spin depend., Hall effect, electron drag, and light absorption methods 3−28346
semiconductor, polaron vel. distrib. in crossed elec. and mag. fields 3−8426
semiconductor, two-donor (majority) levels determ. from Hall effect meas. 3−8442
semiconductors, carrier conc. and mobility distrib., multiprobe meas. apparatus *(Russian)* 3−3193
semiconductors, Hall factor for isotropic media, mag. field dependence 3−43206
semiconductors, impurity level determ. from cond. or Hall data, error anal. 3−3109
semiconductors, longitudinal Hall effect in high-freq. elec. field 3−47367
semiconductors, randomly inhomogeneous, Hall effect theory 3−38408

Hall effect continued
slagging MHD generators, electrochemical charact. 3–29427
steel, rapidly cooled from liq. state, struct. and electrophys. props. 3–8472
supersonic flow of conducting gas in planar MHD diagonal-type channel 3–2301
tetramethylsilane, liquid, injected electrons Hall mobility, room temp. meas. 3–38404
thin film ternary compounds, critical fields, flux pinning and Fermi surfaces, book contrib. 3–8635
transition metal dichalcogenide intercalation compounds, electronic props. 3–23386
transition metals amorphous and liq., electronic states, hybridisation effects 3–52015
two dimensional, quantum limit theory 3–52126
two-dimensional disordered electron gas, magnetocond. and Hall resist. 3–3144
two-dimensional electrons, Hall cond. in periodic pot. 3–57370
two-dimensional Hall cond. under strong mag. fields, Wigner representation 3–43215
two-dimensional magnetotransport in extreme quantum limit, CDW state form. 3–57369
two-dimensional system, Hall effect and electron localisation in strong mag. fields 3–43212
two-dimensional system, limiting conductivity in mag. field 3–52222
two-dimensional systems, strong elec. and mag. fields effects, review 3–28440
vacuum arc interaction with transverse mag. field, appl. to current limitation 3–27778
weakly localised regime, spin-orbit scatt. effect on Hall effect 3–43138
Ag chalcogenides, Hall effect, thermoelec. power and elec. cond. changes on melting 3–13839
Ag-Mn spin glasses, transverse magnetoresist. and Hall resist. 3–38371
$(Ag_{0.5}Cu_{0.5})_{1-x}Mg_x(Al_x)(Ge_x)$ amorphous films, electron transport props., extended Ziman theory 3–3150
β-Ag_2Te, electronic and electrogalvanic props., Frenkel defect form. energy *(French)* 3–57347
Al, granular, Hall effect meas. near metal-insulator transition 3–3163
Al-Ti dilute alloys, elec. resist., Hall effect and magnetoresistance, clustering effects 3–43155
$Al_xGa_{1-x}As$ epitaxial layer on GaAs:Cr, elec. cond. and transfer doping effect 3–23509
$Al_xGa_{1-x}As$:Si, doped and undoped, MBE grown, elec. and optical props., effect of growth conditions and alloy comp. 3–43596
$Al_xGa_{1-x}As$:Si epitaxial layer on GaAs; Hall effect and photocond., heterojunction phenomena 3–47438
$Al_xGa_{1-x}As/Al_yGa_{1-y}As$ visible lasers, contaminated, MOCVD grown, elec. and optical characts. 3–41871
$Al_xGa_{1-x}N$ MBE films, struct., elec. and optical props 3–8355
Au islet films, Hall EMF meas. by two-frequency methods 3–49398
Au-Fe(Mn) spin glasses, transverse magnetoresist. and Hall resist. 3–38371
B-B, elec. conduction mechanism, elec. and optical props. 3–8495
n-BNi_2Te_3, carrier mobility and effective mass, Hall effect and magnetoresist. study 3–3202
$BaPb_{1-x}Bi_xO_3$, superconducting and normal elec. props. meas. *(Japanese)* 3–38560
Bi thin film, resist., Hall effect and magnetoresistance, anisotropic two carrier model 3–43300
Bi_2Te_3-Sb_2Te_3-Sb_2Se_3 thermoelectric ingot preparation and characterisation 3–14475
$CdCr_2Se_4$ single cryst., elec. cond. and magnetoresist. in alternating elec. fields 3–28361
$CdCr_2Se_4$:In(Ag), impurity effects on carrier density and mobility, elec. cond. and Hall EMF studies 3–33810
$Cd_{1-x}Mn_xS$, spin-flip Raman scatt., magnetisation, and transport meas. 3–47656
n-CdS single cryst., high field DC elec. cond. 3–43189
CdS(Te), hot wall epitaxial growth 3–47782
CdSe films, Hall EMF meas. by two-frquency method 3–49398
$CdSe_xTe_{1-x}$ thin films, struct. and elec. props. 3–57237
$CdSnAs_2$, n- and p-type, carrier lifetime, optical energy gap, photocond. study 3–18743
Cd_2SnO_4 thin films obtained by DC reactive sputtering of Cd-Sn alloys 3–52284
CdTe:Mn, current carrier mobility 3–43182
$Ce_{1-x}La_xSb(Bi)$, anomalous mag. and transport props. 3–52591
Co films on non-magnetic substrates, mag. moment, anomalous Hall effect study *(German)* 3–52565
Co-Sn thin film, cryst. and amorphous, elec. and mag. props. 3–28454
Cu-Mn spin glasses, transverse magnetoresist. and Hall resist. 3–38371
Cu-Zr(Ti)(Hf), amorphous, positive Hall coeffs., 4.2 to 270K 3–28340
$CuInS_2$:Fe, defect electron levels, elec. cond. and Mossbauer studies 3–52062
$CuInSe_2$, single cryst., elec. props. *(Korean)* 3–13838
$CuInSe_2$ single cryst., elec. resist. and Hall effect 3–57351
$CuInTe_2$, polycrystalline thin film, elec. transport props., H_2 effect, grain boundary scatt. 3–52282
Cu_2O, elec. cond., switching phenomena, temp. depend. 3–18709
Cu_2Se-Cu_2Te-Si junctions, photovoltaic props., solar cell appls. 3–53514
$Eu_{1-x}Gd_xO$ (SM_xO), carrier scatt. and transport phenomena 3–28363
$EuMo_6S_8$, low temp. transport props. 3–33727
$EuO_{1-\delta}$, carrier scatt. and transport phenomena 3–28363
Fe-Co alloys, Fermi surface topology influence on kinetic props. 3–8405
FeS, pyrrhotite, ferrimag. semicond., Hall effect studies 3–33743
GaAS:Cr, electrical conductivity and Hall effect meas., using two electrometers 3–45164
GaAlAs:H_2S(Se), doping relationships during MOCVD growth 3–42632
$Ga_{1-x}Al_xAs$:Se(Zn), elec. resist., Hall effect meas., impurity energy levels 3–23510
GaAs, epitaxial and bulk, $S^+(Si^+)(Se^+)$ implanted, chemical and elec. profiles 3–27968
GaAs film, triode sputtering prep., elec. characts. 3–28995
GaAs films, α-irrad., defect migration, hall effect study 3–47167
GaAs, Hall EMF meas. by two-frequency method 3–49398
GaAs, Hall factor for isotropic media, mag. field dependence 3–43206
GaAs, hot wall epitaxial growth 3–47782
GaAs, impurity incorporation during MBE growth, optical and elec. props. 3–8378
GaAs LEC semi-insulating wafers for IC appls., resist. and Hall mobility meas. technique 3–20878

Hall effect continued
n-GaAs, metallic impurity donor band, elec. cond., Hall effect, luminescence 3–23313
GaAs, p-conductivity study, intrinsic double acceptor evidence 3–3178
GaAs, residual double acceptor, IR absorption, photoluminescence and Hall effect meas. 3–38334
GaAs, semiinsulating, electrical characterisation using galvano-magnetic measurements *(Slovak)* 3–47364
GaAs:Be MBE layers, impurity and defect levels 3–3102
GaAs:Cr, 3 inch diameter crystal growth by horizontal Bridgeman technique, characts. 3–24115
p-GaAs:Cr, epitaxial, photo-Hall effect and photocond. 3–18735
GaAs:Cr, positive identification of $Cr^{4+}\rightarrow Cr^{3+}$ thermal transition, Hall effect meas. 3–23409
GaAs:Ge, doped and undoped, MBE grown, elec. and optical props., effect of As vapour species 3–43595
GaAs:H_2S(Se), doping relationships during MOCVD growth 3–42632
GaAs:Mg, carrier profile, correlation with Mg atomic profiles, SIMS and Hall effect study 3–3218
GaAs:S, VPE grown, doping anisotropy, Hall effect and photoluminescence studies 3–42631
GaAs:Si, post-implantation annealing, capless technique, carrier conc. and mobility 3–53096
GaAs:Zn, Te, N, Zn diffusion profiles, Hall effect and elec. cond. study 3–8085
GaAs-$Al_{0.3}Ga_{0.7}As$, quantised Hall resist., fine struct. consts. 3–23411
GaAs-$Al_xGa_{1-x}As$ heterostructure, selectively doped, two-dimens. electron gas mobility and conc. 3–52231
GaAs-$Al_xGa_{1-x}As$ semicond. superlattice with tunable electronic props. 3–38462
GaAs-$Al_xGa_{2-x}As$ heterostructure, magneto-quantum transport at low temp. 3–3306
GaAs-$Ga_{1-x}Al_xAs$ heterostructures, quantum well and modulation doped, MOVPE growth 3–43271
GaP:Mn, impurity centres, internal friction and ESR study 3–18660
n-GaSb:Te, electron mobility, elec. cond. Hall effect 3–8506
GaSb:Te, LEC growth, uniform carrier conc. distrib., Hall meas. 3–14470
GaSb(:Te), shaped melt lowering growth technique, photoluminesc. and Hall meas. 3–34214
Ge, conductivity and Hall coeff. meas., microcomputer-controlled expt. 3–40331
Ge, elec. cond. transition, Hall coeff. meas., neutron irrad. effect, percolation theory 3–38445
p-Ge, galvanomagnetic effects, hole distrib. functions 3–43207
p-Ge inversion layers, elec. subbands, Shubnikov-de Haas study 3–47403
Ge on Si ⟨111⟩, heteroepitaxial growth by vacuum deposition, elec. props. 3–24130
p-Ge:Au, recombination wave instability in injected electron-hole plasma 3–38420
Ge-Si alloy, electron and X-ray irrad.-induced acceptors, elec. cond. study 3–18653
$Ge_{38}As_8I_8$, clathrate semicond., prep., struct. and elec. props. 3–13814
GeSi:Sb solid solns., γ-irrad., carrier mobility and magnetoresist. 3–38410
$Ge_{0.9}Si_{0.1}$, energy band parameter study 3–52030
GeTe melt, Hall effect 3–23412
GeTe:Cu, solubility of Cu and ionised donor states 3–51800
$Hg_{0.8}Cd_{0.2}Te$:I, doping behaviour, single donor sites, Hall effect studies 3–18324
$Hg_{0.8}Cd_{0.2}Te$:P, P incorporation during Hg vapour anneal, elec. characterisation 3–51636
$Hg_{1-x}Cd_xTe$, laser excited, electron mobility meas. 3–52178
$Hg_{1-x}Cd_xTe$, pure and ion implanted, laser annealed, Hall, cond. and C-V meas. 3–28347
HoCo amorphous films, thermal Hall hysteresis loops 3–18797
In-Te, liq., elec., mag., optical, thermodynamic, and struct. props. 3–56805
InAs, elec. transport and band struct. 3–3233
$In_{0.53}Ga_{0.47}As$ high-purity LPE layers, postgrowth heat treatment effects on elec. characts. 3–52278
InGaAsP, growth by MBE, optical and elec. props. 3–24131
InGaAsP, LPE growth and charact., doping conditions 3–42959
InP, carrier mobility, grain size depend., elec. cond. and Hall effect studies 3–47343
n-InP crystals, compensated, illumination influence on inpurity pot. elec. props., study 3–8548
n-InP, electron irrad. defects, positron annihilation and Hall effect study 3–24045
InP epitaxial film, MOCVD grown, elec. props., low temp. photoluminescence study 3–23511
InP epitaxial layer growth by In-PCl_3-H_2 technique, surface quality and mobility characts. 3–43756
InP, epitaxial layers, carrier conc. and Hall data rel. to vapour etching before growth 3–34239
InP epitaxial layers, carrier density and mobility, optical meas. 3–43199
n-InP, epitaxial vapour phase etching, Hall mobility meas., SEM study 3–43976
InP, LPE growth and charact., doping conditions 3–42959
InP, VPE grown, Hall effect, photothermal ionisation, diffusion length, photoluminescence studies 3–19277
InP:Be MBE layers, elec. and optical props. 3–47365
InP:Cd, Zn, diffusion and p-n junction form., Hall effect and EBIC study 3–18512
InP:Si, ion implanted, and semi-insulating transport props. and defects 3–28383
InSb, deep impurity level, Hall coeff. study 3–38346
InSb, magnetoresistance, Hall effect and elec. cond. near high press. phase transition 3–13840
InSb:Bi, doping during LPE, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3–33603
InSb:S, ion implanted, S diffusion, laser annealing and elec. props. 3–38140
InSb:S(Se), highly localised impurity states, press. depend. 3–52068
InSb-GaAs heteroepitaxial structures, galvanomagnetic coeffs. *(Russian)* 3–8565
InSe, elec. props. meas. 3–52155
InSe, photocond., photovoltaic props., carrier mobility and lifetime 3–47384
InSe:Te, diffusion intercalated, elec. and struct. props. 3–3185
In_2Te_3-Sb_2Te_3, elec. and photoelectric props. 3–28358

- **Hall effect** continued
  - InTe(Se) heat treated films, Hall effect, deposition temp. effects 3—57440
  - (La,Ce)B_6, dil., Kondo system, Hall coeff., mag. field depend. 3—57335
  - $Mg_{80.4}Cu_{19.6}$, amorphous, quenched, electron transport props. 3—3153
  - $Mg_xHg_{1-x}Se$, zero gap semiconductor-ordinary semiconductor transition *(Russian)* 3—3204
  - Mn/SiO_2 thin cermet films, conductivity and Hall constant meas. using van der Pauw technique 3—38491
  - MnAs, elec., galvanomag., and mag. props. 3—28360
  - $NbSe_3$, quasi 1-D metallic cond., phonon drag and elec. props. 3—33713
  - Ni films on non-magnetic substrates, mag. moment, anomalous Hall effect study *(German)* 3—52565
  - Pb chalcogenides, hot wall epitaxial growth 3—47782
  - $Pb_{1-x}Ge_xTe$:In, Hall coeff., thermoelec. effect and absorption coeff. 3—38409
  - PbS-PbSe(Te) solid solutions, electronic density of states effective mass 3—57262
  - PbSe:In films, elec. props. dopant effects on scatt. parameters 3—18806
  - PbSe-SnSe solid soln., phase transition, elec. study 3—8195
  - p-$PbSe_{1-x}Te_x$, valence band struct., Shubnikov-de Haas effect study 3—18616
  - $Pb_{1-x}Sn_xSe$, nonstoichiometric defect levels, Hall coeff. study 3—18656
  - n-$Pb_{0.8}Sn_{0.2}Te$ epitaxial films, H_2 effects in stabilising elec. props. 3—47436
  - $Pb_{1-x}Sn_xTe$, anisotropic polar semicond., Hall coeff., anomalous temp. depend. calc. *(Russian)* 3—47370
  - $Pb_{1-x}Sn_xTe$ epitaxial films, elec. transport props., band parameters 3—18801
  - $Pb_{1-x}Sn_xTe$:In, energy spectrum in quantizing mag. field 3—18727
  - PbTe films, cond., photocond., thermoelectric, Hall and photothermoelectric meas. 3—8596
  - PbTe melt, Hall effect 3—23412
  - PbTe:In, quasilocal level position, Hall effect and absorption spectra study 3—18658
  - $(PbTe)_{100-x}(MnTe)_x$, NMR study 3—14152
  - Pd, pure, Hall coefficient calc. 3—38370
  - PdPSe, elec., mag., photoelec., and optical props. 3—18701
  - $(Pd_xPt_{1-x})_3Fe$, Hall effect, 13 to 400K, effect of mixed exchange interaction *(Russian)* 3—28338
  - Pt-Ni, dil., elec. and galvanomag. props., 1.4 to 300K 3—57332
  - $PtSb_2$, narrow gap semicond., elec. cond., Hall and Seebeck coeffs. 3—52144
  - $Sb_{1.5}Bi_{0.5}Te_3$-Bi_2Se_3 solid soln. single cryst., elec. and thermal conductivities 3—57345
  - Sb_2Te_3, Ag doped and undoped, elec. props., reflectivity, nature of Ag impurity 3—23381
  - p-Si, acoustic phonon limited cond. and Hall mobilities, deform. pot. theory calcs. 3—47366
  - Si, CVD grown on amorphous substrate, shaped beam laser recrystallised, structural and elec. characts. 3—57244
  - Si, dislocation core variable reconstruction, photocond. and Hall effect meas. 3—37921
  - Si, dislocation effect on radiation defect annealing process 3—27993
  - Si, films, polycryst., As and P ion implanted, effects of CW and pulsed laser annealing 3—33299
  - Si, Hall coeff. and conductivity mobility, acoustic phonon scatt. 3—8512
  - Si inversion layer, quantised Hall resistance and freq. effect 3—43291
  - Si inversion layers, 2D quantised Hall resistance, electron localisation 3—3302
  - Si, irradiated, defects determining Fermi level stabilisation 3—33674
  - Si MOS inversion layers, effective mobility edge and inelastic scatt. time in strong mag. fields 3—43292
  - Si, partial dislocation glide 3—22893
  - Si, polycrystalline, Hall mobility and resistivity, model 3—18725
  - Si, thermal donor electronic struct., Hall effect and IR study *(Chinese)* 3—43059
  - Si:As(Sb), impurity activation by laser irrad., Hall effect and Rutherford backscatt. study 3—18339
  - Si:Cu, model of Cu impurity levels 3—33679
  - Si:Er, γ-ray irrad., photocond. and elec. props. 3—43235
  - Si:Fe,B,Al,Ga, deep impurity levels, photocapacitance photocond. and Hall effect studies 3—43080
  - Si:Ga, ion implanted, dopant distrib., elec. activity and damage annealing 3—27970
  - Si:H film, polycryst., lightly doped, effects of hydrogenation, Hall effect meas. 3—23513
  - Si:In, Al, photoluminesc., IR absorpt., photocond. and Hall effect meas. 3—34135
  - Si:In, ion implanted, high temp. diffusion and elec. props. 3—57142
  - Si:Mg, diffused, elec. and optical props. 3—18699
  - Si:P, (Sb), deformation pot. of shallow donors, Hall effect meas. 3—8453
  - Si:P, heavily doped, P inactivation mechanism 3—18335
  - Si:P films, elec. cond., Hall mobility and carrier density 3—8602
  - Si:P^+ ion implanted buried amorphous layers, recrystallisation behaviour 3—27845
  - Si:P(B)(As), doping profiles determ. by electrical meas. and anodic stripping, automatic apparatus 3—49403
  - Si:Sb supersaturated laser annealed ion-doped layers, decompostion, elec. cond. study 3—42786
  - Si:Te, I, ion implanted, impurity levels, Hall effect and elec. resist. studies 3—43102
  - Si-MgO.Al_2O_3-Si struct., VPE 3—24153
  - SmB_6, transport and US props., NMR, amorphous Wigner crystn. model 3—52150
  - SmS, semicond.-metal phase transition, critical press., carrier conc. study 3—28271
  - Sn-Au(Ag)(Cu), amorphous, elec. props., effect of average electron conc. 3—43149
  - SnTe melt, Hall effect 3—23412
  - Ta-H, inhomogeneous, Hall voltage, time changes meas. 3—3161
  - Tb-Fe alloy thin films, amorphous, RF-sputtered, thickness depend. of mag. hysteresis props. 3—28661
  - Ti-Al-Zr-Mo(W), rapidly cooled from liq. state, struct. and electrophys. props. 3—8472
  - Ti-transition metal alloys, high-resist., as highly correlated disordered systems 3—3124
  - TiO_2:Nb, H, elec. cond., Hall effect and carrier scatt. 3—47344
  - TlSe, elec. resist. and Hall effect, press. dependence meas. 3—33725
  - YbB_{12}, valence fluctuating system, mag. and elec. meas. 3—52149
  - ZnO film, highly conductive and transparent, prep. by RF magnetron sputtering, elec. props. 3—13651
- **Hall effect** continued
  - Zn_3P_2, elec. cond., Hall effect and acceptor levels 3—18702
  - $ZrSe_3$, vapour grown, elec. resist. Hall coeff., and thermoelec. power, 200 to 400K 3—33728
- **Hall effect devices**
  - magnetometry, low field 3—25899
- **Hall effect transducers**
  - steel, wire rope, magnetic test methods 3—53298
  - strain and pressure sensors using Kanda effect 3—281
- **Hall generators** *see Hall effect devices*
- **halogens**
  - *see also astatine; bromine; chlorine; fluorine; halides; iodine*
  - alkali metal+halogen ions, mutual neutralisation and ter mol. recombination in burnt flame gases 3—41665
  - anions, local density approx., self-interaction correction 3—41479
  - atom+inert gas atoms, channels of atom and excitation transfer, pot. surfaces 3—11929
  - atoms, electron affinities calc. using relativistic HF approach with atomic polarisation 3—6534
  - crystals, interat. pot. model 3—2462
  - elemental distrib. in IRDP basalts from E Iceland 3—19957
  - Si, monocrystalline, donor generation by halogen implantation 3—51642
- **Hamidashi effect** *see ferroelectricity*
- **handling, materials** *see materials handling*
- **handsets (telephone)** *see telephone sets*
- **Hanle effect**
  - pyrazine, $^1B_{3u}$ mol. eigenstates, zero-field level crossing 3—56004
  - semiconductor, conduction electron g-factor sign determ. by Hanle effect 3—3039
  - Sun, photosphere turbulent mag. fields from spectral lines anal. 3—20320
  - three-level systems, Hanle effect, four-wave mixing, pump fluctuations effect 3—45906
  - Kr I lifetimes meas. by Hanle effect method under electron beam excitation 3—1308
  - NO_2, g-factor and fluoresc. depolars., mag. reson. expts. 3—55980
  - NO_2, zero-field Stark level crossing and Stark-Zeeman recrossing expt. 3—1433
  - Ne, metastable states, optical pumping, optogalvanic detection 3—1316
  - ^{85}Rb, in $5^2P_{3/2}$ state *(Russian)* 3—17249
  - $^{129}Xe+Cs$, spin relax. by exchange interaction 3—46089
- **hard soldering** *see brazing*
- **hard-sphere fluids** *see classical theories of fluid structure; liquid theory; quantum theories of fluid structure; statistical mechanics*
- **hardening**
  - *see also dispersion hardening; quench hardening; radiation hardening; solid solution hardening; surface hardening; work hardening*
  - alloys, low stacking fault energy, stacking fault stengthening 3—51632
  - alloys, texture form. in technological treatments, phase transition effects *(Russian)* 3—53079
  - ceramics, two-phase composite, dilatant transformation toughening, continuum theory 3—46491
  - concrete, gypsum, mixed with sand and cement, strength and hardening condition *(Japanese)* 3—58060
  - cracked solid under alternating loads, nonlinear viscoelasticity with hardening *(French)* 3—7489
  - cyclic plasticity with a nonhardening strain region, constitutive model 3—32629
  - discrete elastic-plastic structure yield limit and hardening modulus identification by nonlinear programming 3—50956
  - low-alloy, structs. identification and morphology after hear treatment 3—39176
  - metals, stretching, cogging and drawing with heating, energetic forces estimation *(Russian)* 3—19351
  - metals and alloys, surface anal. *(French)* 3—47201
  - plastics, toughened, heterophase polymers, review 3—43857
  - polymer mixtures, rubber particle dispersion, toughening mechanism 3—43856
  - sheet, isotropic, with unchanging thickness, plastic bending *(Russian)* 3—56448
  - steel, 316 stainless, cyclic hardening under complex loading histories *(French)* 3—47901
  - steel, austenitic, stress relaxation of thermomechanically hardened crystals, expt. study *(Russian)* 3—34381
  - steel, CC Nb-Mo, pressure vessel, creep rupture strength rel. to Mo addition 3—47962
  - steel, Cr-Mo-V, low alloy, cyclic response 3—4108
  - steel, Cr-Ni-Mo-V, structural, crit. brittleness temp., alloying comp. influence 3—34469
  - steel, dual-phase, extrinsic transform. accommodation hardening 3—53075
  - steel, hardenability prediction, continuous cooling transform. data, regression analysis 3—58123
  - steel, hardening investigation, in high-temp. mech. treatment region, plastometer appl. 3—9280
  - steel, history of science and technology 3—40341
  - steel, ion nitrided, struct. characterization 3—4209
  - steel, low C dual-phase, thermomech. treatment, strengthening effects 3—58148
  - steel, low-alloy, containing V and B, struct. and failure resist. 3—4128
  - steel, martensites, tempering, comparative study 3—47867
  - steel, multiphase stainless, athermal, stress and strain induced transform. strengthening 3—43848
  - steel, spring, strength and ductility, heat treatment influence 3—29112
  - steel, stainless, type SUS 304, fatigue strength in long life range and non-propagating fatigue crack 3—53178
  - steel, surface deformed, internal stress relax. during annealing *(Russian)* 3—53088
  - steel, tool, fracture toughness, influence of microstruct. variations 3—4124
  - steel induction hardening of cylindrical samples, numerical solution method 3—34342
  - yield functions, isotropy and anisotropy 3—4090
  - Al alloy D16, clad thin sheet, structural strength, low temp. thermomech. treatment 3—47871
  - Al alloys, low cycle fatigue, back stress variation along the hysteresis loop 3—53225
  - Al, polycryst., thermal softening during hydrostatic extrusion 3—24258
  - Al-Al_3Ni eutectic, strengthening by mech. thermal treatment 3—43854
  - Al-Li, yield charact. after solution treatment and ageing 3—9102
  - Al-Zn-Mg-Cu, pressed semifinished products, softening schedules for ageing 3—34365

hardening continued
Al-Zu, two-phase, strength, preliminary deform. effect 3−9135
AlN-(Al_2O_3)-phosphate binder composites, physicochem. processes on heating 3−39085
β''-Al_2O_3, Li stabilised, transform. strengthening with tetragonal ZrO_2 3−58124
Al_2O_3, strengthening by heat treatment 3−43855
Cu, polycryst., recovery and recrystn. during hydrostatic extrusion 3−24257
Fe, high purity, fatigue limit and strain ageing *(Japanese)* 3−9165
Fe-Al (39.8 at.%), B2 aluminide plastic flow props., elevated temps., influence of thermomech. processing 3−34393
Fe-Mn-si (30, 1 wt.%), single cryst., shape memory effect, $\gamma \rightleftharpoons \epsilon$ transformation, hardening to G-phase 3−43838
GaAs:Si, LEC grown, dislocation distrib., etching study 3−42607
Mg single crystals, basal dislocation density during plastic deform. *(Russian)* 3−51605
Mg, strongly textured, grain boundary strengthening, prod. by hot rolling 3−34353
Mo crystals, compressed, localised macroscopic shear *(Russian)* 3−34382
Si_3N_4-(Al_2O_3)-phosphate binder composites, physicochem. processes on heating 3−39085
$\alpha+\beta$Ti-Al-Mo-Fe-Cr-Mn, hardened, embrittlement and spontaneous cracking during ageing 3−19422
β-Ti-Mo-Zr-Al, recrystn., Al effect 3−24264
W-Ti(Zr)(HF)(V)(Nb)(Ta)(Cr)(Mo), creep, alloying element influence *(Russian)* 3−19373

hardness
see also abrasion; hardness testing
alloy steel, type 8Kh4V2S2MF, active impurity effect on mechanical strength and low-cycle fatigue 3−14720
bone, mineral content, rel. to strength characts., hypodynamic conditions 3−34992
boriding, liq., induction salt baths 3−53284
bronze, pitting limit, influence of lubrication 3−39258
cementite, hot hardness of primary phase found in Fe-C, Fe-C-Cr and Fe-C-B 3−34441
creep, high temp., flow law, role of strain history 3−24303
diamond, CB-type, polycrystalline, physicomech. and physicochem. props. 3−14599
elastomers as thermal solar collectors, mech. props. evaluation 3−53578
hard materials, future potential developments, mech. props. rel. to appl. 3−3981
IR transmitting materials, impact damage and erosion mechanisms, opt. quality 3−9145
metallic glasses, microhardness meas., compared with theoretical predictions 3−29179
metallic materials, electroerosion treatment, effect on surface struct. and props. *(Russian)* 3−4187
metallised layers formation during shock-wave application of powders to monolithic substrates 3−24412
metals, ion implanted, ultra microhardness tests 3−4139
metals, pure, resistance to low stress abrasive wear 3−19430
misch metal prep., lattice consts., melting point and hardness 3−14524
nuclear and space radiation effects, conf., Las Vegas, NV, USA (July 1982) 3−40315
optical glass microhardness, polisher suspension effect 3−1820
optical thin films, stress, adherence, hardness and density 3−13685
PMMA, cone indentation and deep punching 3−43943
polymorphic transformations hysteresis 3−51783
polyurethane based blends, morphology and mech. props. 3−34436
rubber, accelerated ageing tests in hot air, air change rate effect 3−24266
rubber, C block filled, degree of dispersion rel. to elec. resist. and matrix phys. props. 3−14814
silicate glasses, N^+ ion implantation effects, microhardness and refr. index meas. 3−33133
steel, alloy, melt spun ultra high strength, microstruct. study 3−9097
steel, austenitic, dispersion hardening, shock loading effect on struct. and props. 3−53074
steel, austenitic Cr-Ni, hot embrittlement in heat affected zone of welded joints *(German)* 3−53097
steel, austenitic stainless, aluminised coating, struct. and phase comp. 3−53282
steel, austenitic stainless, Cr-Ni-Mo-Ti, shaped castings, intermetallic phases struct. and props. 3−29114
steel, austenitic stainless, fatigue crack propag., elevated temp., deform. 3−24344
steel, bearing, cementite dissolution during austenisation, hydroextrusion effects *(Russian)* 3−24271
steel, C, -Cu multilayer composite, mech. props. 3−39250
steel, C, austenite-pearlite transform. Co addition effect 3−34295
steel, C, ferritic-martensitic, tensile fracture 3−4120
steel, C-Mn weld metal, microstruct. and toughness, effect of reheating 3−47943
steel, carbon type, successive saturation with Al and B, effects on props. 3−24405
steel, carburizing, fracture toughness, temp. depend. 3−53193
steel, cold worked, TiC CVD coated, scratch test adhesion 3−14836
steel, Cr, bearing, high C, mech. props. and substruct. *(Korean)* 3−53090
steel, Cr, microstructure, microhardness, austenite form., laser treatment, SEM and TEM studies 3−24342
steel, Cr, quenched, internal friction meas., hardness and tensile props., effect of tempering at 1100°C 3−43912
steel, Cr, structural, optimisation for improved strength and toughness 3−34462
steel, Cr-Mo, temper embrittlement, compositional effects 3−14728
steel, Cr-Mo-V, creep ductility, effect of P and S 3−34390
steel, dual phase, deform. and fracture, metallographic study 3−14667
steel, eutectoid, fatigue crack behaviour in plain specimens *(Japanese)* 3−9166
steel, hardenability, influence of quenching stresses 3−4048
steel, high strength, prestrain effect at elev. temp. effect on fracture 3−58244
steel, low alloy, hardenability, sulphide stress cracking resist., fracture toughness, suitability for oil pipes 3−53268
steel, low alloy, heat treated, fracture toughness, mech. props. correlations 3−34423
steel, low alloy, powder-forged, fracture, effect of inclusions 3−53207
steel, low alloy and low C, heat treated, quantitative anal. of fatigue fractographs 3−34483

hardness continued
steel, low C, dual-phase, fatigue crack path, high mean stress, ferrite selection ratio *(Japanese)* 3−39241
steel, low-alloy, graphitised, quench hardness and transform. during tempering, alloying effect 3−34364
steel, maraging, 15% Ni, age-hardening, effects of Co, Mo and Ti contents 3−43847
steel, martensites, tempering, comparative study 3−47867
steel, martensitic stainless, carbide phase transform. during tempering 3−24242
steel, martensitic stainless, plasma-spray-quenched coatings, microstruct., adhesion and microhardness 3−3950
steel, martensitic stainless, tempering process, influence of quenching temp. 3−24269
steel, medium and high C martensites, tempering from 100-700°C 3−24273
steel, microcutting, plastic deformation rel. to cutting speed 3−29143
steel, multiphase stainless, athermal, stress and strain-induced transforms. 3−43810
steel, Ni-Cr-Mn, carburised, hardenability, effect of austenitising above and below Ac_3 3−29113
steel, nuclear pressure vessel, tensile props. and fracture mode, combined effects of neutron irrad. and H absorpt. 3−18353
steel, pitting limit, influence of lubrication 3−39258
steel, rel. to friction with polyoxymethylene 3−34494
steel, steel, maraging, age hardening, 773K, microstruct., TEM and electron diffr. obs. *(Japanese)* 3−39165
steel, strength and microstruct. parameters, new statistical relation 3−14662
steel, tempering process, effect of Ni *(Chinese)* 3−53084
steel, tool, AISI M2, inductive RF plasma nitriding 3−58315
steel, tool, impact wear, SEM and X-ray methods 3−4149
steel, tool, tempering resist. and hot hardness, contrib. of Co 3−43963
steel, type 38KhGNM, quenching and tempering effect on mag., elec., and mech. props. 3−58142
steel, ultrasonic strengthening treatment, surface plastic deform. *(Russian)* 3−39292
steel cylinders, gaseous case-hardening, diffusion of C, microhardness *(French)* 3−47931
steel G-V, AISI 6150 alloy, isothermal transformation, austenitizing temp. effect 3−53045
strength and flow stress, temp. depend. 3−39163
superhard abrasive grains, wear against hard ceramics, SEM obs. *(Japanese)* 3−4151
tetramethylammonium: copper tetrachloride, paraelastic-ferroelastic transition, hardness meas. 3−18449
thin films, fibres, ultramicrohardness measuring method *(German)* 3−16353
Waspaloy, Ni-base superalloy, friction-welded, correl. between struct. and thermomech. treatment *(German)* 3−4132
Ag-CdO cermet contact, fabrication using ultrasound, physical and mechanical props. improvement *(Bulgarian)* 3−43843
Ag_3AsS_3-Ag, interstitial solid soln., eutectic type phase diagram 3−9039
Al, creep, constitutive eqn., internal variable, dip test 3−47918
Al, pure, cold rolled, microhardness and yield stress at very high deform. 3−53145
Al, shock deformation, thermal trapping calc. 3−22975
Al-Al_2O_3, powder metallurgy, prep. and props. 3−34260
Al-Al_2O_3(SiC), composites, abrasive wear 3−9195
Al-Cu, precip. hardening, invest. by sound wave vel. and US attenuation 3−43845
Al-Cu alloy D16T sheets, temp. to which heated determ. from struct. and props. 3−24275
Al-Mg-Si alloys, ductile fracture toughness, effect of dispersoids 3−34452
Al-Mg-Si-Mn(Cr), quench sensitivity, effect of Mn or Cr additions 3−39164
Al-Si alloy, chill castings, supersaturation method influence on precip. hardening 3−29093
Al-Si coconut shell char particulate composite, prep. and props. 3−3989
Al-Si-P(Na), hypereutectic alloy, cost struct., strengthening and refinement *(Japanese)* 3−29171
Al-Zn alloys, cold working effect on damping charact. *(Japanese)* 3−9086
Al-Zn-Mg, clustering processes after direct quenching to agency temp. 3−34368
Al-Zn-Mg (4.5, 2.0 wt.%), precipitation size and density, hardness 3−29088
AlN-SiO_2 ceramics, containing long-period polytypes, charact. by fracture toughness 3−39093
Al_2O_3, strengthening by heat treatment 3−43855
Al_2O_3:Cr(Zr), ion implanted, surface struct. and props., annealing effects 3−2948
α-Al_2O_3:Cr(Zr)(Ti), ion implantation and thermal annealing, channelling, EPR and microhardness study 3−46972
Al_2O_3/Cr system, Fe^+ ion irrad. prep. of ceramic alloys, mech. props. 3−4000
Al_2O_3/Zr system, Fe^+ ion irrad. prep. of ceramic alloys, mech. props. 3−4000
As_2S_3, glassy, optical props. and microhardness, electron stimulated reversible changes 3−18352
As_2Te_3-$Tl_5As_2Te_3$-As system, phase diagram anal. 3−58104
BN film, hard, ion beam sputter deposited, prep. and props. 3−13673
BN films, ion-activated formation, microstruct. and hardness props. 3−52978
Bi_2Te_3-Te eutectic system, hardness and elec. cond. interrelations 3−52138
C fibre Al and alloys, chopped fibres, fabrication by graining process 3−52998
C film, hard, ion beam sputter deposited, prep. and props. 3−13673
C films, diamond-like, ionized deposition from methane gas and hardness props. 3−52976
C films, ion-activated formation, microstruct. and hardness props. 3−52978
CaF_2 monocrystals; polished surface shape accuracy rel. to anisotropy and block disorientation, specular reflection coeff. 3−32428
Cd-GaSb solid solutions, retrograde solubility, mechanical and optical study 3−2805
$CdC_2O_4.3H_2O$ single crystals, Vickers microhardness indentation study 3−9153
$CdCr_2Se_4$:Al(In)(Cu)(Ag), dislocation patterns, rel. to elec. cond., hardness and doping 3−27947

hardness continued
- CdSb-GaSb solid solutions, retrograde solubility, mech. and optical props. 3−2805
- Co-Cr-Mo, Vitallium superalloy, precipitation under heat treatment, expt. study 3−9074
- Co-Si-B amorphous alloy, mech. props. and struct. 3−51685
- Cu, fatigue crack growth, near-threshold 3−4125
- Cu layer formation, shock-wave appl. of powder on C steel 3−24412
- Cu, microcutting, plastic deformation rel. to cutting speed 3−29143
- Cu, rolling, stored energy, hardness and texture, influence of feed angle 3−4066
- Cu, wire, second stage drawing texture, mech. props. *(Japanese)* 3−58132
- Cu-Al, two-phase materials, strength/ductility-microstruct. relationship 3−43926
- Cu-Al (10 wt.%), quenched martensitic alloy, internal friction, tensile props., hardness, heat treatment effect 3−43920
- Cu-Al (15 at.%), quenched, prop. changes due to development of short-range order state 3−9104
- Cu-Al(Ga)(Si)(Sn), binary alloys, rapidly quenched, struct. and props. 3−19381
- Cu-Be-Co (2.1, 0.2 wt.%), ageing, influence of rapid solidification 3−29095
- Cu-Ti, amorphous, solubility and diffusion of H_2 3−47114
- Cu_3VS_4 formation by peritectic reaction, microhardness 3−58041
- Dy-Cu system, intermediate phase form., cryst. struct. and phase diagrams 3−22853
- $(Fe,Cr)_2N$, ϵ phase, microhardness *(Italian)* 3−53258
- Fe alloys, sintered, plain-mixed, detrimental effect of Mo on ductility 3−19368
- Fe base materials, bushings, sintered, Brinell hardness 3−47956
- Fe, cast, white, mischmetal effect on microstructure and mech. props. 3−24327
- Fe layer formation, shock-wave appl. of powder on C steel 3−24412
- Fe-Al-P, ternary amorphous alloys, mech. props., thermal stability, Al content depend. 3−47937
- Fe-C magnetic films, RF reactively sputtered, phys. props. and struct. 3−52563
- Fe-C-Ni, surface struct. of boride layers 3−19453
- Fe-Cr (15 to 80 wt.%), quenched, struct. developments *(French)* 3−47868
- Fe-Cr-Ni (15, 15 wt.%), shock wave response, effect of polycrystallinity 3−33362
- Fe-Mo-Cu-P, sintered, case carburising behaviour of P-containing compacts 3−53291
- Fe-Ni (34.5 wt.%), shock wave response, effect of polycrystallinity 3−33362
- Fe-Ni-Cu-P, sintered, case carburising behaviour of P-containing compacts 3−53291
- Fe-Ni-Nb(Ta), amorphous containing fine crystalline particles, mech. props. 3−34339
- Fe-Ni-Si-Co, aging of martensite, Co influence *(Russian)* 3−53087
- Fe-Ni-Ti-Co, martensite morphology, effect of ausaging 3−43867
- Fe-Pd, permanent magnet alloy, isothermal heat treatment, phase transform. mag. props. 3−58119
- Fe-Si(Mn)(Cr)(Ni)(Cu)(C), reaction with molten Al, form. of alloy layers 3−29060
- Fe-Ti, sintering and diffusional impregnation with C 3−24414
- ϵ-Fe_3C, valence electron struct. anal., spatial distrib. of bonds, mech. strength depend. *(Chinese)* 3−33177
- $Fe_xNi_{80-x}B_{10}Si_{10}$, amorphous alloy, microhardness and occurrence of mech. anisotropy *(Polish)* 3−24354
- GaAs, microinclusion-induced mech. prop. degradation 3−57023
- Ga_2Te_3-Fe, solid solubility 3−57091
- In, micropores, deformation healing, hardness rel. to size effects *(Russian)* 3−57184
- KCl, micropores, deformation healing, hardness rel. to size effects *(Russian)* 3−57184
- La-Si-O-N oxynitride glass, microhardness and transparency 3−58209
- La_2O_3, single crysts., microhardness, temp. depend. *(French)* 3−33356
- β-LiAl, mech. behaviour, effect of defect struct., hardness and dislocation damping study 3−33266
- LiF, heavy ion irrad., defect struct. and mech. props. 3−8108
- MgO, deform. study by Vickers, microhardness test. 3−29177
- MgO-Al_2O_3-SiO_2, Z 3−22793
- Mn-Ge system, Invar-type, nonferromag., thermal expansion, mag. and elec. props. 3−42821
- Mn-Ge(-Fe)(Co)(Ni), Vocoloy, antiferromag., influence of Fe, Co and Ni *(Japanese)* 3−9197
- Mo, explosively consolidated, struct. and hardness 3−34454
- Mo layer formation, shock-wave appl. of powder on C steel 3−24412
- Mo-MoS_2, hot pressed powder, self-lubricating, friction and wear characts. 3−47967
- NaCl:Ca(Pb) crystals, microhardness and dislocation mobility, quenching effects 3−13326
- NaCl-KCl, mixed two-phase soln. grown crystals, quench hardening study 3−18381
- NaCl-KCl mixed and two-phase crystals, microhardness studies 3−47041
- Na_2O-SiO_2 glasses, mech. props., effect of dissolved water 3−9159
- Nb-V-Ge system, isothermal cross section of phase diagram at 1123K 3−13407
- NbB_2, *(Japanese)* 3−4130
- NdB_6, single cryst. growth from Al flux, characteris. *(Japanese)* 3−8957
- Ni, bending fatigue, obs. of surface zone hardening rate 3−14718
- Ni layer formation, shock-wave appl. of powder on C steel 3−24412
- Ni P electrolytic composition coatings, coating technique and properties *(Russian)* 3−58056
- Ni-Al-P, ternary amorphous alloys, mech. props., thermal stability, Al content depend. 3−47937
- Ni-based alloys, dispersion strengthening, solid-solution strengthening, TaC and TiC additions 3−29092
- Ni-C, irradiation enhanced decomposition 3−6291
- Ni-Fe-B alloys, chemically deposited, mag., elec., mech. props. 3−52985
- Ni-Fe-Cr alloys, precip. reactions, effect of C and Mo 3−29085
- Ni-P-Cr coatings deposited from soln., heated in vacuum, struct. and props. *(Russian)* 3−13667
- Pb, micropores, deformation healing, hardness rel. to size effects *(Russian)* 3−57184
- Pb-Sn-Te(As), microstruct. and mech. props., effect of small addition of Te and As *(Japanese)* 3−29166
- PbO-B_2O_3 immiscible glasses, mech. props. 3−2661
- PbTe-FeTe system, phase diagram and elec. props. 3−2739

hardness continued
- Pd-Ti (0 to 30 wt.%), lattice spacings, hardness and mag. susceptibilities 3−27897
- PrB_6, single cryst. growth from Al flux, characteris. *(Japanese)* 3−8957
- Sb_2Te_3-Te eutectic system, hardness and elec. cond. interrelations 3−52138
- Si wafers, chemical treatment effect on mechanical props. 3−13333
- SiC:Cr, ion implanted, amorphous struct. and mechanical props. 3−4138
- Si_3N_4 powders, high press. hot pressing, densification, α to β phase transform., hardness, fracture toughness, temp. depend. *(Japanese)* 3−58084
- Si_3N_4 wear resistant coatings RF sputtered on stainless steel 3−14781
- Sn, micropores, deformation healing, hardness rel. to size effects *(Russian)* 3−57184
- TaB_2, *(Japanese)* 3−4130
- Te-As_2Te_3-$Tl_5As_2Te_3$ system, phase diagram anal. 3−58103
- Ti layer formation, shock-wave appl. of powder on C steel 3−24412
- β-Ti-Mo-Zr-(Al), ageing characts. 3−19354
- Ti-Si (1-5 wt.%), oxidation kinetics, study using X-ray diffr. and hardness meas. 3−4199
- TiB_2-CoB, boride additives effect on mech. props. 3−24323
- TiC ion plated coatings, microhardness and adhesion 3−58243
- TiC thick films, vapour deposited, appl. and props. 3−29226
- TiC/TiB_2 microlaminate coating, vacuum evaporated, struct. and mech. props. meas. 3−24202
- TiC-based cemented carbides, binder phase, hot hardness, solid-solution strengthening 3−29042
- TiC_x CVD layer on cemented carbides, microhardness and texture 3−14700
- $TiC_xO_yN_z$ film, reactively sputtered, microhardness, elec. cond. and temp. coeff. of resist. 3−51994
- TiN coating, hard friction-reducing, high rate sputtering on to tools 3−14484
- TiN coatings deposited by ion and plasma assisted techniques on to nodular cast Fe 3−14483
- TiN ion plated coatings, microhardness and adhesion 3−58243
- TiN thick films, vapour deposited, appl. and props. 3−29226
- Tl_3BX_4 (B=V, Nb, Ta; X=S, Se) single crystals, microhardness meas. *(German)* 3−13327
- $VC_{0.88}$-VB_2 system, phase diagram construction 3−14560
- W-C coating, wear resistant, controlled nucleation thermochemically deposited, microstruct. evaluation 3−3014
- W-Cu-Si(Zr) pseudoalloy, fractographic study, Si and Zr effects 3−24358
- WC, cemented, metalloid ion implanted, microhardness meas. 3−47930
- WC hard metals, strength and microstruct. parameters, new statistical relation 3−14662
- WC-Co, sintered, orientation of contiguous WC, determ. from slip line traces 3−24443
- WC-Co cement, fracture toughness, effects of nonstoichiometric C contents 3−4106
- Zn, microcutting, plastic deformation rel. to cutting speed 3−29143
- ZnO, microstructure, plastic deform., microhardness anisotropy, SEM study 3−37992
- ZnO-Al_2O_3-SiO_2 glass-ceramic, particulate, indentation hardness 3−4111
- ZnS, static and impact loading, comparisons 3−14702
- ZnS(Se) IR transmitting materials, CVD, developments and improvements 3−7094
- Zr-Gl, amorphous binary alloys, superconducting props. 3−23523
- Zr-Ni-H metallic glass, Vickers microhardness, H doping effects 3−53191
- $Zr_{50}Cu_{50}$, amorphous, crystn. kinetics using US and microhardness meas. 3−7921
- ZrO_2, modified abradable seal coating for high temp. gas turbine appls. 3−4210

hardness testing
- Brinell hardness automatic meas. system using laser and microcomputer *(Japanese)* 3−58345
- ceramics, Knoop and Vickers indentation, controlled flaws, residual stress field, fracture analysis 3−53312
- cracking onset determ., by monitoring electrical contact resistance 3−53333
- crown silicate glass, hardness response, time depend. 3−4223
- elastic modulus to hardness ratio, method of determ. using Knoop indentation meas. 3−14805
- electronic hardness tester for automatic control on production lines *(German)* 3−53320
- indentor penetration process, local strain hardening eval. method 3−58339
- metals, portable strain-gauge head for depth meas. on indents 3−48004
- microindentation test methods, comparison using Cu, 52100 steel and amorphous Pd-Cu-Si alloy 3−48000
- plastics, microhardness testing 3−4221
- polyethylene filament, thin, with shish-kebab struct., microindentation hardness, draw ratio depend. 3−19468
- quality control *(German)* 3−14811
- rate effects, time-depend. props. of engng. materials 3−4223
- Rockwell tester calibration, effect of geom. arrangement of hardness dents using ref. blocks *(German)* 3−34576
- steel, balls, comparison with ruby and sapphire, flattening, meas. apparatus *(German)* 3−58346
- steel, cold rolled thin strip, continuous NDT *(German)* 3−4252
- steel, low alloy type 25Kh1MF, fastener blanks, magnetic inspection of hardness 3−48019
- steel 30Kh3MF, magnetic method of hardness inspection, heat treatment effects 3−24466
- transparent materials, controlled indentation, microscopic obs., indentation testers design 3−24436
- US, portable, direct-reading instrument for steel work pieces 3−58322
- Vickers indentation anisometry on thin cylindrical materials 3−24438
- Cu, single cryst., hardness response, time depend. 3−4223
- Fe, cast, chilled layer hardness, inspection apparatus using higher harmonics 3−58337
- Fe, cast, grey, hardness testing by upper harmonics method *(German)* 3−9294
- Fe, sintered, bending strength determ. by hardness meas. and mag. inductive meas. *(German)* 3−53307
- W, polycryst., hardness response, time depend. 3−4223
- WC-Co hardmetal, indentation and compressive creep tests equivalence 3−24427

harmonic analysis
  see also waveform analysis
  ellipsoidal harmonics, Lame function method, chemical free energy appl. 3−29329
  ocean tidal loading computations, spherical harmonic expansion for mass conservation 3−39767

harmonic generation
  see also optical harmonic generation
  autoionising state, multiphoton ionisation, reson. harmonic generation, intensity saturation effects 3−55901
  Duffing equation, mech. for chaos 3−49265
  gas bubbles in liqs., nonlinear oscills., harmonic reson. 3−37281
  piezoelectric semiconductor, reverse second harmonic acoustic wave generation 3−3259
  plasma, nonresonance beam-plasma instability development, harmonic generation *(Russian)* 3−2238
  quartz crystal, acoustically active, elastic wave propagation, SHG 3−51720
  SAW, nonlinear SHG and focusing phenomena, optical study *(French)* 3−17678
  transmission lines with periodic nonlinear loads, EM wave propagation 3−46129
  US pulses, harmonic generation 3−50828
  Ge, subharmonic transit resonance, carrier cyclic motion effects on harmonic generation 3−8521
  Ge, third order elastic consts. and Gruneisen coeff., US vel. study 3−47018
  LiNbO$_3$, transversely limited SAW beams, nonlinear propagation, second-harmonic diff. field, theory and expt. 3−37283
  LiNbO$_3$, US harmonic generation 3−50827
  Si, third order elastic consts. and Gruneisen coeff., US vel. study 3−47018

harmonic oscillators
  x^{2N} anharmonic oscillators, Laplace expansions of Wiener integrals for Bender-Wu formula 3−40402
  anharmonic Morse oscillator, quadratic Hamiltonian 3−50472
  anharmonic oscillator, Schrodinger eqn. soln. 3−30662
  anharmonic oscillators, conditional Wiener integrals, Laplace asymptotic expansion, generalised Mehler kernel formulas 3−20671
  anharmonic oscillators, Hill determinant and analytic continued fraction method appl. 3−103
  anharmonic oscillators, scaling-variational treatment 3−45014
  anharmonic oscillators, vibr. distrib. and energy relax., current of quanta effects 3−6771
  anharmonic oscillators Green's function 3−30697
  anharmonic separable oscillators sets, energy level densities calc. 3−20652
  area theorem for a model of classical anharmonic oscillators 3−27141
  associated harmonic oscillator pot. models for Schrodinger eqn. 3−30661
  Borel approximants for anharmonic oscillator and quantum field theory *(French)* 3−30650
  charged, in mag. dipole approx., gauge invariance 3−40398
  coherent states in anharmonic systems, short time dynamics, one dimens. motion 3−49186
  continued fractions and pot. models of confinement 3−30664
  coupled, soln. of inverse problem, of mols. or polymers *(French)* 3−41544
  coupled oscillations, SCF and adiabatic approximations 3−45022
  coupled oscillator system, eigenvalues and wavefunctions calc. using adiabatic approx. theory 3−6514
  damped, quantum friction with a stochastic force 3−5630
  damped, time-dependent quadratic Hamiltonian and the Heisenberg uncertainty principle 3−30685
  degenerate, partition function factorisation, Cauchy algorithm 3−20684
  direct harmonic interaction of two and three relativistic particles 3−40363
  dissipative systems, connection between Schrodinger eqn. and master eqn. 3−20692
  double well anharmonic oscillator, variational method 3−16168
  double-well anharmonic oscillator, eigenvalue perturbation expansion, Borel sum 3−45009
  Duffing oscillator, analog computer simulation and comparison with statistical linearisation 3−12556
  Duffing oscillator, transition to chaos 3−25786
  dynamical group SU(1,1), path integral for coherent states 3−20667
  electro-optic effects, anharmonic oscillator, theoretical models 3−3690
  few-body anharmonic oscillators, matrix continued fractions 3−40400
  forced oscillations of system with nonlinear restoring force 3−54642
  hadronic mechanics, Lie admissible Fock space foundations 3−31075
  harmonic oscillator energy level spacing depend. on nuclei mass number 3−40977
  harmonic oscillators, dissoc. rate consts. and vibr. relax. times meas., nonequilib. transient effects 3−34608
  Hermite-Pade approximants appl. to harmonic oscillator on lattice and water waves 3−20786
  hydrogenlike atoms, connection to harmonic oscillation 3−54650
  Jahn-Teller effect, energy matrix, approx. analytial treatment 3−47319
  Kramers approx., double and associated harmonic oscillator models, $\pi^{1/2}/2$ factor 3−30687
  Langevin equation for harmonic oscillator in a fluid 3−180
  level spectra, fluctuations, role of range 3−20665
  linear plus Coulomb potential, analytic WKB energy expression 3−40395
  Morse oscillator, quantum mechanical dissoc. probabilities calc., Airy basis calcs. 3−17357
  Morse oscillator, Wigner phase space description 3−10613
  nonequilibrium dynamics for infinite harmonic oscillator system 3−16183
  nonlinear semiconductor oscillator, Pomeau-Manneville intermittent route to chaos 3−188
  nonlinear stochastic systems, analysis, continued fractions appls. 3−16118
  nonlinearly weakly damped oscillator, theory 3−10558
  nonMarkovian Brownian harmonic oscillator, long time behaviour, relaxation processes 3−10750
  nuclear binding energies from moment methods using harmonic oscillator Hamiltonian 3−40959
  one-dimensional harmonic oscillator with discrete time, lattice versions 3−45010
  one-dimensional macroscopic harmonic oscillators, quantum mechanical description, quasi-coherent states, quantum limits 3−10643
  oscillator coupled to finite string, quantum field theory 3−5646
  path integration of a quadratic action with a generalized memory 3−30688
  perturbed harmonic oscillator ladder operators, eigenenergies and eigenfunctions 3−40396

harmonic oscillators continued
  phase space cells in nonlinearly coupled oscillators, quantum dynamics of wave packets 3−35873
  polarization, the Bargmann transform and the harmonic oscillator 3−5644
  quantum laser theory, modified perturbation method for damped harmonic oscillator 3−50643
  quantum theory, open laser system simulation damped *(Chinese)* 3−40386
  quartic anharmonic oscillator, bounded matrix elements 3−30693
  quasiclassical Langevin eqn. 3−20679
  radial path integral, semiclassical calc. 3−30678
  randomly driven oscillators stability, stochastic eqns. 3−20769
  Schrodinger equation, anharmonic oscillator soln. from Feynman path integral 3−49203
  Schrodinger equation, exact solns. in harmonic-oscillator elementary form, necessary and sufficient conditions 3−30666
  Schrodinger equations, harmonic oscillator, soln. for wave functions having fixed logarithmic derivative at equilib. position 3−45019
  semisimple 1:1 resonance reduction, harmonic oscillators and hydrogen atom 3−16170
  simple harmonic motion in harmonic plane waves, appl. to light waves 3−49125
  Sp(12,R) symmetry breaking, harmonic oscillator quark model 3−36218
  space-time propagators for special time depend. harmonic oscillator and quadratic Hamiltonian system *(Korean)* 3−10629
  stochastic harmonic oscillator with finite correlation times 3−30658
  symmetric classical nonlinear oscillator eqn. solns. *(Spanish)* 3−35866
  symmetry group of contact transforms. 3−49187
  time depend. system, coherent states 3−10636
  time-dependent dynamical systems, theorems 3−16167
  triple well anharmonic oscillator, perturbation theory, 1-dimens. Schrodinger eqn. 3−5628
  two-state doubling algorithm for $K^2 \times K^2$ matrix approx., critical behaviour 3−30679
  Van der Pol oscillators, strongly coupled, dynamics 3−102
  von Neumann lattices, phase space, determination of zeros in harmonic oscillator 3−40480
  wave functions, overlap integral new expressions 3−30642
  CO laser active medium props., mol. isotopic composition influence, numerical kinetics calcs. in anharmonic oscillator system 3−27022
  H atom, nonrelativistic, AO calcs. Green's function path integral, Kustaanheimo-Stiefel transform. 3−50290

harmonics
  see also harmonic analysis
  current harmonic content meas. for elec. systems supplied by periodic nonsinusoidal signal *(Croatian)* 3−49395
  pulsed load effect on supply networks 3−56704
  Rayleigh waves, periodic, finite amplitude, on isotropic solid 3−17676
  TEXTOR nucl. fusion expt., main power supplies 3−55761
  vectorial spherical harmonics for suppression of stationary EM field associated with EM wave 3−32278
  voltage harmonic content meas. for elec. systems supplied by periodic nonsinusoidal signal *(Croatian)* 3−49395

Hartmann lines *see Luder's bands*

Hartree calculations *see SCF calculations*

Hartree-Fock approximation *see HF calculations*

Hartree-Fock calculations *see HF calculations*

Hasiguti relaxation *see anelastic relaxation; dislocation damping*

Hastelloy *see iron alloys; molybdenum alloys; nickel alloys*

He *see helium*

headphones
  see also earphones
  High Fidelity, subjective tests for distortion evaluation using stereo headphones *(German)* 3−7347
  voice pitch waver perception meas. for headphones and loudspeakers 3−9617

health effects of radiation *see biological effects of radiation*

health hazards
  see also biological effects of radiation
  AD-MARC, atmospheric dispersion module for assessing radiological consequences of accidental releases 3−34754
  alpha energy potential exposure rel. to index of dose 3−48426
  asbestos fibres, mag. props., basis for airborne conc. anal. 3−39759
  biological effects and medical applications of RF electromagnetic fields 3−29633
  computerised tomography and other diagnostic radiology procedures, risk analysis 3−24850
  conference on hazard arising from small radiation doses, London, England (Apr. 1982) 3−5476
  CR-39, plastic film detector, characteristics, using chemical-electrochemical etching 3−50135
  CRT X-ray emission standard for video display terminals, operator organ doses estimation 3−39720
  diathermy equipment, meas. of elec. and mag. stray fields prod. by electrodes 3−24832
  dose equivalent index, meas. and interpretation 3−6457
  electron applicator assembly on a linear accelerator, radiation leakage 3−9725
  ELF magnetic fields in electrosteel and welding industries 3−24786
  environmental monitoring, sampling overview 3−50056
  environmental water-borne contaminants, carcinogenic effects, risk assessment, FORTRAN program 3−34746
  epidemiological and environmental radioactivity studies around the San Onofre nuclear power plant 3−1013
  eye protection against He-Ne lasers, interf. filter based protective glasses *(Czech)* 3−4656
  health and safety impacts of residential wood heat 3−4357
  high-level radioactive wastes geologic disposal, technological implications 3−6339
  high-levels radioactive waste disposal, models and risk 3−6340
  human exposure to microwave radiation, safe limits standard 3−9667
  human susceptibility to radiation, age depend. 3−53874
  implants, surgical and dental, hazards and artifacts from NMR imaging 3−58766
  impulse noise and auditory hazard, workshop results 3−15149
  ionising radiation in small doses, effects *(French)* 3−34915
  IR/UV radiation protection during arc welding, visual training aids *(French)* 3−54603
  laser safe operation rules *(Chinese)* 3−37058

health hazards continued
LIMCAL, food chain model parameter values for uptake from rad. waste 3—1088
low level radiation, hazards to humans, review 3—4568
lung function testing with ^{133}Xe, exhaust instrument for leaking gas *(Japanese)* 3—29711
lungs of miners, magnetopneumography, mag. field study, lung model 3—39665
natural radiation indoors, problem of high exposures 3—17092
near-field EM absorption in man, numerical and expt. results 3—34885
neutron irrad., tumour risks *(Dutch)* 3—58717
noise exposure, daily, personal reaction 3—9522
nuclear science and power systems, conf., Washington DC, USA (Oct., 1982) 3—44890
occupational radiation exposure at the Republic of China's first nuclear power station 3—58822
occupational risk from nuclear power 3—1090
paediatric radiology, characts. and pot. significance of extrafocal radiation 3—58799
population exposure limits to ionising radiation, adverse event probability, nuclear facilities emissions 3—58821
population exposure to VHF and UHF broadcast radiation in the United States 3—24892
radiation sensors, requirements of risk assessments 3—53861
radiation training programmes in electric utilities operating nuclear reactors in USA 3—6433
radiography, fluoroscopes, C-arm, radiation exposure 3—58824
radioisotopes in community water supplies, Georgia, USA, Ra and U concs. meas. 3—58567
rail traffic noise from Shinkansen Super Express railway, human effects,survey 3—19642
reproductive hazards among workers at high voltage substations 3—58714
respirable aerosols, electrostatically enhanced collection, granular bed filters 3—39557
RF hazards in VLF to MF band 3—29635
RF radiation, pot. hazardous sources, review 3—34886
risk of oil shale 3—4356
risk perception role in energy policy 3—4345
spermatogonia effective depth, calcs. for external high-energy β-rays, rel. to genetic risk 3—15238
Tokamak remote inspection and repair, key issues 3—56761
VDU ergo-ophthalmology, visual strain and blue light lesion *(Italian)* 3—4495
^{129}I in high activity nuclear wastes, deep ocean disposal option 3—886
^{129}I, waste management methods 3—34763
^{85}Kr purge at Three Mile Island in 1980, risks of local and global public health effects 3—29646
N_2O, determ. of content in air using IR gas analyser in hospital environ. *(Hungarian)* 3—39432
Pu internal contamination assessment in man 3—48428
^{A}Pu, A=239, 240, accumulation in Japanese tissues, 1962-77 3—9761
^{A}Ra, A=226, 228, in Iowa drinking water 3—29464
Rn increases in well insulated houses, health risks 3—4742
Rn levels in houses, review of sources 3—53604
U assay in milk from north India 3—9760

health physics *see dosimetry; health hazards; radiation monitoring; radiation protection*

hearing
see also bioacoustics; ear; hearing aids; speech
abrupt switching, transient clicks detectability 3—53696
acoustic distortion products in ear canals of chinchillas with normal or damaged ears 3—9612
action potential, auditory nerve, due to elec. stimulation, guinea pig 3—53688
ageing ears, acoustic reflex threshold 3—39653
auditory spectral anal. model, chirp z-transform appl. 3—48297
aural harmonic distortion and the pulsation threshold procedure 3—9603
behavioural awakening from noise in the home 3—15113
bilsometer noise meas., appl. to hearing loss evaluation 3—46401
binaural hearing, lateralisation based on interaural phase differences, expt. study 3—58677
binaural noise stimuli with time-varying interaural correlation, detectability meas. 3—15110
blink responses to combined trigeminal, acoustic and visual repetitive stimulation, habituation in humans 3—34838
brainstem acoustic evoked response, distrib. of surface pot. on cat's head 3—15115
brainstem auditory evoked pots., improved wave V resolution by dual-channel recording 3—58848
brainstem auditory evoked pots., normative values obtained by digital filtering and automatic peak detect. 3—15106
brainstem auditory responses, earphones for arrefact-free recording 3—53739
brainstem potentials, use in abnormal hearing adaptation diagnosis 3—29679
brainstem response, correl. with speech discrimination scores in patients 3—29566
brainstem response, lower audiometric limit 3—29569
brainstem response in 5 vertebrate classes 3—48296
brainstem response in neonates during first 48 hours after birth 3—53699
brainstem response to rarefaction and condensation clicks in normal and abnormal ears 3—29564
brainstem responses in chronic alcoholic patients 3—34858
brainstem responses in the aged 3—29563
brainstem-evoked potentials evoked by peripheral auditory pathway, inverse solns. 3—29553
cat, brainstem response using forward-masking paradigm 3—39654
cats, paired sound sources location with variable arrival times 3—9618
central nervous system, Locusta migratoria, multichannel recordings and real time current source density anal. 3—29789
click-evoked brainstem response, monaural, rel. to contralateral white noise 3—53697
click-evoked human electrocochleogramy noninvasive recording method, origin and physiologic significance 3—34993
cochlea active model, power amplification, short wave case 3—53684
cochlea filtering, detection and compression, computational model 3—15114
cochlear active and passive models 3—53683
cochlear drainage and basilar membrane tuning 3—9615

hearing continued
cochlear frequency map, cat, auditory nerve fibre labelling, characteristic freq. 3—19727
cochlear inner hair cell, neurotransmitter release, multiple reservoir model 3—19726
cochlear mechanics, sharpening mechanism 3—53682
cochlear microphonic responses to acoustic clicks, guinea pig 3—53686
cochlear nonlinear transmission-line model compatible with combination tone psychophysics 3—9606
cochlear outer hair cells, intracellular recordings 3—29560
conference on hearing and hearing prophylaxis, Oslo, Norway (May 82) 3—35772
consonant-vowel syllables, responses of auditory-nerve fibres, cat obs. 3—53687
cortical magnetic fields evoked by freq. glides of continuous tone 3—48301
defects of noise trauma type with lack of noise exposure 3—29568
deterioration with age, freq. selectivity, crit. ratio, audiogram and speech threshold 3—29555
dichotic listening with consonant-vowel nonsense syllables, statistical anal. 3—15111
dipole localisation with a spherical homogeneous model, accuracy, auditory evoked response appl. 3—39649
distance discrimination by the cod 3—48298
dosimeters, impulsive noise and the OSHA Hearing Conservation Amendment 3—56390
eardrum impedance of human ears, meas. method 3—39752
echolocation, use by harbour seals 3—29579
echolocation by bats, resolution enhancement due to tragus 3—19728
echolocation system of the European wide eared bat, bioacoustic characts. 3—29577
EEG, late positive complex, auditory stimulus intensity effects on components 3—15104
effective masking bandwidths at low frequencies 3—53689
environmental stimulus tolerance and sensitivity relationship *(Japanese)* 3—53677
evoked brainstem responses to monaural stimulation, bilateral recordings 3—29562
evoked magnetic fields, response amplitude vs. stimulus intensity 3—15105
evoked potential data management 3—15309
evoked potential testing, introduction and overview 3—15260
evoked potentials, brain function study appl. 3—53876
evoked potentials, engng., considerations 3—15274
evoked potentials, fundamental investigation of composition 3—39650
evoked potentials, simultaneous recording and separation of early and middle latency pots. 3—15245
evoked responses elicitation technique using bone-conducted stimuli for animal research 3—58884
forward masking of auditory nerve (N_1) and brainstem (wave V) responses in humans 3—9614
forward masking of diotic and dichotic clicks by noise, expt. study 3—15109
frequency, time and memory, Gabor's pioneering work 3—5581
frequency differentiation, difference times 3—34860
frequency discrimination and cochlear implants 3—4512
frequency discrimination forced-choice tasks, sinusoidal pitch shifts intensity dependence, signal detection theory 3—29557
frequency selectivity meas. psycho-acoustical tuning curves determ. *(German, English)* 3—58757
fundamental frequency and vowel perception 3—17734
gap detection in hearing-impaired chinchillas 3—19720
gap detection in normal and hearing-impaired listeners 3—9610
goldfish, sound burst repetition rate change detection 3—9609
gunfire exposure effects meas. 3—9619
hair cell, nonlinear elec. circuit model *(Japanese)* 3—4513
head and torso, sound press. distrib. for humans 3—39652
hearing-aid testing and audiological experimentation, microprocessor-controlled system 3—39747
High Fidelity, subjective tests for distortion evaluation using stereo headphones *(German)* 3—7347
impaired hearing, relations between auditory functions 3—53692
impairment for high level impulse noise, theoretical anal. *(French)* 3—9604
impedance meter for stapedius metering and tympanometry 3—58759
impulse noise and auditory hazard, workshop results 3—15149
individual noise protection means *(Hungarian)* 3—58840
individual practical solutions of noise control in tin-making shop of Szeged canning factory *(Hungarian)* 3—58841
inner ear, hair cells, hearing and balance medication 3—44254
intensity determ., successive versus simultaneous comparison 3—53690
intensity perception, presentation probability effect on absolute identification 3—39657
interaural attenuation factors meas., 8 to 20 MHz 3—9616
interaural difference detection in trains of HF clicks 3—53691
interaural time delays, marked discrimination with narrow-band signal 3—29558
intraoperative monitoring, sensory evoked pots., review 3—15279
laryngeal responses to auditory stimulation in humans 3—48299
loss, noise induced, age effects, scalp-recorded response obs. 3—19754
loss prevention methods *(Hungarian)* 3—29559
loudness adaptation induced by an intermittent tone 3—9607
macaque monkeys, enhanced speech discriminability at phonetic boundaries 3—58686
masking, pure-tone forward, masker duration effect 3—19719
masking, signal suppression by off-frequency simultaneous maskers 3—58669
masking, simultaneous masking and unmasking with bandlimited noise 3—58671
masking, suppression at 8 kHz, freq. ratio and sound press. level depend. *(German)* 3—42076
masking of continuous pure tones by rectangularly-global broadband noise *(German)* 3—44253
masking patterns for synthetic vowels in simultaneous and forward masking 3—58672
mechanical to neural transduction, model, interaction phenomena 3—19716
microphonic cochlear potential of guinea pig as function of expt. conditions *(French)* 3—53681
microwave-induced auditory brainstem responses, comparison of meas. and predicted characts. 3—24800
middle latency responses in patients with cortical lesions 3—15103

- **hearing** continued
  - mistuned melodic intervals, perceptibility by school children 3—4511
  - monaural and binaural auditory frequency resolution measured using bandlimited noise and notched-noise masking 3—58670
  - monaural and binaural hearing systems, tonal masking and freq. selectivity 3—39658
  - music perception and elementary auditory sensations *(German, English)* 3—58668
  - musical acoustics, multiple model for describing subjective attributes of sound *(German)* 3—42080
  - nerve fibres, auditory, relation between discharges and whole-nerve response, empirical model 3—53685
  - noise, personal protectors, rating procedures 3—19729
  - noise damage due to impulse noise, spectral analysis 3—27307
  - noise-induced hearing loss, rel. to acoustic reflex threshold 3—53700
  - noise-induced hearing loss in rural schoolchildren 3—29626
  - noise-induced hearing losses in industry, role of audiometric monitoring 3—19645
  - noise-induced temporary threshold shifts due to low freq. noise 3—58673
  - normal threshold of hearing at preferred frequencies 3—29570
  - perceived noisiness of repetitive impulses *(Japanese)* 3—37292
  - pinna impulse responses, 3-D sound source localisation 3—39659
  - pitch anomalies, pure-tone, pitch-intensity effects and diplacusis in normal ears 3—19721
  - pitch matches and tuning curves meas. for listener with unilateral low-freq. hearing loss 3—58678
  - pitch matching of components of complex tones 3—58674
  - pitch of pure and complex tones, noise-induced shifts 3—58680
  - pitch of unresolved, two-component complex tones 3—19722
  - pitch perception of pure tunes for listener with low freq. hearing loss 3—58679
  - pitch shifts contingent on the modulation frequency of an adaptation tone 3—53694
  - primary auditory fibre responses to brief tone bursts 3—9613
  - protector attenuation depend. on noise level, psychophysical evaluation 3—39724
  - protectors attenuation and NRR factor *(Spanish)* 3—46375
  - psychoacoustic and phonetic temporal processing in normal and hearing-impaired listeners 3—9608
  - psychoacoustic function model and possibilities of a technical system optimisation *(German)* 3—37297
  - psychoacoustic measurement, microcomputer controlled system *(Japanese)* 3—19849
  - psychoacoustic parameters of amplitude modulated narrow noise bands, calc. 3—15102
  - psychophysical suppression effects under diotic and dichotic listening conditions 3—19718
  - psychophysical threshold variability detection procedure 3—53693
  - psychophysical timing curves, normal and pathological ears 3—39656
  - psychophysical tuning curve, suppression role 3—19717
  - receptor potential of inner hair cells and Davis theory 3—34861
  - repeated tone burst detection with repeated noise masking 3—58676
  - serious hearing loss identification with acoustic reflex data 3—29567
  - simultaneous masking additivity in pyschoacoustics 3—39655
  - simultaneous masking of acoustic signals, suppression effects meas. *(German)* 3—15101
  - sinusoidal signal masked by interaurally delayed white noise, detection and interaural time discrimination 3—19724
  - sound volume judgements, broadband noise, perceived extensity 3—19723
  - speech, consonant-feature transmission as function of presentation level for hearing-impaired listeners 3—15107
  - speech, continuous, freq. distributed band-limited noise, threshold of degradation 3—17733
  - speech, degraded, quality magnitude estimation by normal and impaired-hearing listeners 3—29575
  - speech, final stop voicing, acoustic cues for hearing-impaired and normal listeners 3—15108
  - speech, perception of short-term spectral cues for stop consonant place by hearing-impaired and normal subjects 3—29574
  - speech discrimination in preschool children, comparison of 2 tasks 3—24738
  - speech perception by children and handicapped individuals, effects of noise 3—44256
  - speech perception of place of articulation of stop consonants, onset spectra and formant transitions 3—58687
  - speech perception of rise time of voiceless affricates and fricatives 3—58684
  - spondaic words, detect. and recognition masking-level differences 3—24739
  - stapedius reflex, human, time course in normal-hearing subjects 3—29565
  - startle reflex habituation and sensitisation 3—29561
  - stereophonic reproduction, sound-image localization control technique 3—15112
  - timbre of complex tone bursts with time varying spectral envelope 3—19730
  - two-tone suppression and distortion products meas. 3—58675
  - tympanometry, the most suitable immittance components and probe tone freq. 3—53738
  - vertex response, EEG and MEG, interstimulus interval depend. 3—34859
  - voice fundamental frequency, effects of freq.-modulated auditory tones 3—58688
  - voice pitch waver perception meas. for headphones and loudspeakers 3—9617
  - voicing onset, investig. of perceptual cues 3—17732
  - vowel perception, temporal processing of spectral data 3—19731
  - weapons impulse hazards, 105 mm howitzer effect on cats' ears 3—50837
  - Weber's law appl., teleological view 3—53674
  - word discrimination in noise, predictive value of directional sensitivity diagrams of hearing aids 3—53701

- **hearing aids**
  - acoustic-magnetic coupler for telephone receiver, aid for hearing impaired users 3—35031
  - acoustical transmission props., opened ear-mold influence *(German)* 3—15281
  - bionic ear electronic implant 3—9783
  - brainstem audiometry, hearing aid selection appl. 3—29788
  - cochlear implants, freq. discrimination implications for single channel auditory prostheses 3—4512
  - cochlear prostheses, design and evaluation of electrode implants for the profoundly deaf, review 3—9779

- **hearing aids** continued
  - design principles for auditory prosthetic device 3—53885
  - electronic ear design, cochlear microphonics changes rel. to white noise and NaCl crystal appl. in guinea pigs' ears *(Korean)* 3—24737
  - electronic hearing aids, environmental aids and computerised systems, review 3—58869
  - EM receiver for hearing aid 3—53889
  - PARCOR characterization of ear for hearing aids 3—29787
  - prosthetic treatment of the ear, influence and importance of time-pattern anal. *(German, English)* 3—29785
  - test system accuracy, revised estimates 3—24817
  - testing of hearing aids, microprocessor-controlled system 3—39747
  - time-pattern analysis for prosthetic treatment of hearing organ, conventional and implantable aids *(German, English)* 3—19846
  - word discrimination in noise, predictive value of directional sensitivity diagrams of hearing aids 3—53701
- **heart** *see cardiology*
- **heart valves** *see cardiology; prosthetics*
- **heat**
  - *see also heat transfer; heating; latent heat; specific heat; temperature; terrestrial heat; thermal variables measurement; thermodynamic properties; thermodynamics*
  - axisymmetric thermal convection in spheres/spherical shells, stability, appl. to planet interiors 3—42223
  - temperature, heat and statistics *(French)* 3—40534
- **heat capacity** *see specific heat*
- **heat conduction**
  - *see also thermal conductivity*
  - ablation layer instability, analytic theory 3—56543
  - air charge factor for room ventilation losses determ. *(German)* 3—7385
  - all-plastic flat-plate solar collector modelling and analysis 3—39524
  - alternating direction implicit methods for 3—1926
  - annular plate, heat conduction and radiation, nonlinear problem solns. 3—7388
  - bidimensional nonstationary conduction in wall under uniform radiative flux 3—2066
  - calculus of variations applied to continuum physics, inverse problem 3—30620
  - complex geometric media, radiative transfer problems, invariance relations 3—22306
  - conductive bar capped with thin poorly-conductive skin, boundary behaviour 3—12488
  - contact interface temperature with internal thermal radiation and cond. effects, numerical soln. 3—7381
  - cooling fin, optimisation, nodal averaging appl. 3—37318
  - cyclic temperature and thermal stress fluctuations in fusion reactors 3—45666
  - cylindrical medium, combined conductive and radiative heat transfer 3—37322
  - cylindrically bounded domains, axisymmetric non-Fourier temps. 3—1929
  - deformable bodies, homogeneous, isotropic, almost-cylindrical, heat-cond. and thermoelasticity boundary-value problems 3—22326
  - dewar, liq. N_2, superinsulated, separation of conduction and radiation components of heat transfer 3—32586
  - drops, evaporation at arbitrary differentials of temp. and densities 3—27372
  - eccentric annuli, heat conduction, temp. distrib. 3—27353
  - elastic material, dynamical problems of nonlinear thermoelasticity 3—37364
  - energy and entropy balances, appl. to flow and temp. meas. across real wall in unsteady state *(French)* 3—50897
  - films supported by Al substrate, emissivity measurement and comparison with theoretical results 3—34719
  - finite element Galerkin operator, L_∞-boundedness for parabolics 3—17770
  - finned surfaces, convecting and radiating, heat conduction anal. 3—46435
  - flow past vertical oscillating plate, conduction-convection transition 3—56530
  - fluid, non-uniformly heated, mech. equilib. condition in variable cond. media *(Russian)* 3—1933
  - fluid saturated porous material, heat conduction, phase progressive waves 3—46638
  - fuse to semiconductor device heat conduction problem soln. *(Slovak)* 3—12489
  - generalised equation, parameter determ. from transient expt. data 3—42105
  - gray medium with diffusely reflecting boundaries, radiation-cond. heat transfer, 2D problem 3—1928
  - ground thermal performance as inexpensive solar collector/storage system 3—34733
  - heat and mass transfer, bibliography, Soviet works, 1980-82 3—44910
  - high-intensity radiation source outer jacket two-dimens. temp. state anal. *(Russian)* 3—56415
  - homogeneous isotropic planar solid, infinite rate of heat diffusion, random functions 3—7372
  - inertially cooled limiters, thermal props., scaling laws 3—17037
  - inhomogeneous medium, periodic heat transfer 3—12496
  - inverse problem, surface temp., Beck's soln. 3—50898
  - inverse problem regularisation by partial matching scheme 3—7375
  - IR detector, cryogenic heat pipe for coupling to cooler 3—40614
  - laminar heat transfer from surface of rot. disk 3—12677
  - laminates, corrugated, temp. field and thermal stress anal. 3—50950
  - linear solar concentrator-receiver system performance anal. under different flow regimes 3—48168
  - liquid, thermal conductivity, thermal radiation heat transfer 3—51873
  - liquid metal heat transfer in turbulent pipe flow with uniform wall flux 3—46547
  - local heating and current drive investigations on TOSCA 3—22669
  - metal flat specimens with circular notches, heated cyclically by elec. current, thermal state 3—13494
  - metal-target vaporisation, reaction to energy-flux modulation 3—50905
  - metals, electron beam kinetic heating, temp. fields 3—51666
  - MHD combustor oxidiser high temperature preheating by direct combustion of fuel 3—44135
  - micropolar rotating fluid layer, thermal instability, numerical soln. 3—56549
  - multicomponent heterogeneous systems, thermal cond. determ. 3—7371
  - multilayer thermal trap collectors, heat withdrawal analysis 3—53587
  - Multiple Layer Solar Collector, characts., comparison with selective flat plate collector 3—53585
  - nonlinear, self-adaptive closed constrained soln. algorithms 3—7377

heat conduction continued
- nonlinear inverse heat cond. problem, sequential soln. 3—7378
- nonlinear steady state heat conduction eqn., similarity solns. 3—50899
- nuclear fuel element, nonlinear two-dimens. heat conduction, Lanczos-Chebyshev method 3—55234
- nuclear fuel rod, cylindrical, with cladding, temp., thermal stress, analytical determ. 3—36466
- nuclear reactor, dryout heat transfer, steam-water two-phase flow during LOCA 3—45620
- one dimensional heat conduction system parameter identification method *(Japanese)* 3—7382
- one-dimensional absorbing, emitting and scattering medium, heat cond. and radiation, polynomial approx. calcs. 3—7380
- packed bed heat exchangers, for thermal energy storage systems, thermal balance eqns., analytical solns. 3—7383
- packed bed thermal storage system, heat transfer, transient anal. 3—27594
- passive space heating concepts thermal performance anal. 3—34724
- periodic array of spheres, heat conduction 3—46432
- plate flat, thermophysical prop. meas. by arbitrary heating 3—12500
- plate with heat generation, transient nonlinear heating and cooling 3—27354
- power deposition on limiters and divertor targets, thermographical meas. 3—18123
- prism, spatial nonstationary heat conduction 3—7376
- relations between nonsteady and steady temperature fields 3—7374
- relativistic heat conduction 3—240
- relativistic hydrodynamics, conservative eqns. for heat conduction and viscosity 3—46663
- rigid conductor, energy eqn., supplementary conservation law 3—46431
- rigid sphere sheared suspension, thermal cond. study 3—22514
- sand thermal trap solar collector/storage system thermal performance anal. 3—34720
- seasonal heat storage in water saturated soils, ground water flow heat losses determ. using mathematical model 3—58561
- shell of revolution, thin, nonsteady state temp. fields in nonaxisymmetric heating 3—17774
- solar absorber convertor with convection suppressing honeycomb, radiative-conductive heat flux loss approximation 3—34729
- solar absorber-convertors, selective material coated, with vacuum thermal insulation, thermotechnical characts. anal. 3—9464
- solar air heater for drying cereal grains, heat transfer characts. 3—48169
- solar collector/water heater, performance eval. considering side losses 3—53580
- solar greenhouse with transparent buffer insulation, thermal processes anal. 3—9394
- solidification inside and outside cylinders, variable time step methods 3—50909
- solids, coupling with moisture diffusion, model *(Chinese)* 3—42106
- solids of revolution, with nonaxisymmetrical heating, nonstationary temp. fields 3—17773
- stationary plane thermal problems, boundary point least squares soln. 3—1927
- thermal cond. coefficient determ. from soln. of nonlinear inverse problem 3—7370
- thermal plasma, shock wave produced, heat transfer, optical and thermodynamic props. 3—37676
- thermocline storage of hot water, stratified, theoretical and experimental studies 3—34734
- thermoelastic heat conducting materials, weak shock wave propag. 3—12558
- thermoelasticity and heat conduction with memory effects 3—7424
- thin films, thermophysical characts., heat conduction eqn. soln. 3—7373
- three dimens. modified strongly implicit procedure 3—56413
- transient heat conduction, boundary integral eqn. calc. method, FORTRAN program 3—37317
- transient heat conduction under plasma conditions 3—51284
- transient nonlinear conduction in materials with linear thermal props. 3—42107
- transient one dimens. inverse heat cond. problem 3—12490
- Trombe-wall passive systems thermal performance under Aegean sea climatic conditions 3—34730
- two dimensional inverse heat conduction problem, external thermal load parameters determ. 3—7369
- undulating heating wire, heat conduction anal. 3—22301
- unsteady, signal and systems anal. 3—46433
- vacuum discharge, cathode processes, numerical simulation 3—18178
- NiS films supported by Al substrate, emissivity measurement and comparison with theoretical results 3—34719
- Si, surface temperature using large diameter scanning CW laser and electron beam sources 3—56978

heat content *see enthalpy*

heat convection *see convection*

heat dissipation *see cooling*

heat engines
- acoustic traveling wave heat engine, gain and efficiency calc. 3—29445
- conditioning system integrated into utility grid 3—29455
- energy conversion systems using geopressured-geothermal fluids 3—24551
- evaporation of water in energy prod. systems 3—49115
- fluctuation heat engine and cold diode rectifier models 3—14984
- fluorinated organic fluid solar engine design and test results for electric energy generation 3—24619
- Nitinol low-grade thermal energy conversion plant cost analysis 3—39508
- organic Rankine cycle working fluid selection for direct-contact heat exchange with solar pond 3—39509
- Otto cycle with saturated steam, theory 3—44136
- parabolic dish solar thermal power plants, heat engine type performance capability comparison 3—24622
- piston engine, CW laser driven, indicator efficiency 3—27127
- rotary piston laser engine 3—27128
- thermoacoustic heat pumping engine, irreversible processes 3—48163
- turboexpander application in energy recovery from low-temperature waste heat 3—14987
- CuZnAl, pseudoelastic alloy, prototype heat engine using martensitic transform. in single cryst. rods 3—44137
- NiTi, displacive martensitic transform; energy conversion system design 3—44138

heat exchange *see heat transfer*

heat exchangers
- *see also cooling towers*
- 40 MVA transformer heat loss utilisation for building water heating *(German)* 3—29377
- air-cooled finned tube heat exchanger surface geometries, performance evaluation 3—12667
- annular channel, heat exchange, porous inner wall effects 3—42234
- boiling liquids, meas. of intensity of heat exchange *(Russian)* 3—54739
- convective heat exchange with the walls of a cyclone dust separator 3—7384
- cross-current heat exchangers, economic performance optimisation *(German)* 3—4400
- dynamic behaviour *(German)* 3—37334
- electric convection of liq. in heat exchanging system, transient behaviour 3—27525
- energy loss minimisation using performance curves *(German)* 3—4401
- energy sources other than oil and electricity for space heating *(German)* 3—39446
- fluorinated organic fluid solar engine design and test results for electric energy generation 3—24619
- gas-solid fluidised bed, heat transfer coeffs. 3—12753
- grooved tubes in heat exchangers, heat transfer improvement by turbulisation 3—22445
- heat pumps, dual source, with roof absorber and heat store for domestic dwelling appls. *(German)* 3—29444
- industrial processes heat recovery using heat pipe heat exchangers, principles, design and advantages 3—4379
- integrated multiple mixing chamber 3—322
- JET gas leaking and cooling plant 3—55616
- Joule-Thomson miniature refrigerator stability and noise, spaceborne instrumentation appl. 3—36003
- laminated, convective heat exchange, bilateral case soln. *(Russian)* 3—17940
- liquid in porous bodies, heat transfer with evaporation and boiling 3—12494
- local heat exchange along the initial segment in a heat exchanger with a helical flow 3—12670
- optical reflectors, cooled, optical surface quality, stress concentrator effects in high-power optics 3—12278
- OTEC noncylindrical heat exchanger tubes, biofouling monitors 3—14992
- packed bed heat exchangers, for thermal energy storage systems, thermal balance eqns., analytical solns. 3—7383
- paraffin wax storage subsystem models using liquid heat transfer media, comparisons 3—24639
- parallel flow multichannel heat exchangers differential eqns., coeff. matrix props. 3—51045
- parallel-flows and counterflow heat exchangers, response to sinusoidal flow rate changes of large amplitude 3—51088
- phase change thermal energy storage in shell and tube heat exchangers, preliminary model 3—9495
- pipe heat exchanger, flow regimes 3—51229
- power installation with liquid insolation medium, heat flow anal. for pipeline constructional parameters determ. *(Slovak)* 3—9478
- radiation heat transfer effect on performance, expt. results of one flow channel 3—27510
- regenerator, for miniature cryorefrigerators, anal. and design 3—30868
- rotating bubble type, thermal processes 3—10838
- secondary energy resources utilisation 3—10841
- shell-side flow and temperature patterns, continuum eqns. 3—46551
- solar absorber-convertors, selective material coated, with vacuum thermal insulation, thermotechnical characts. anal. 3—9464
- solar heat-generating simulation and expt. performance 3—39522
- solar pond power plant with direct contact boiler, thermal anal. 3—15006
- solar thermal receiver high-temp. ceramic-metal heat exchanger element 3—39521
- space heating by isentropic air compression using wind power 3—14919
- spherical annulus heat exchanger, forced convection heat transfer 3—37499
- supercritical HE cooling system superconducting solenoid, muon production appl. 3—36605
- tube-in-tube type exchanger, performance for cryogenic appl. tube-in-tube type exchanger, performance for cryogenic appl. 3—30866
- turboexpander application in energy recovery from low-temperature waste heat 3—14987
- vapor-gas front in the condenser of a two-dimensional gas-controlled heat pipe 3—27606
- various types, industrial energy efficiency 3—37323
- Ag sintered submicron powders, rel. to low temp. heat exchangers 3—56416
- Cu sintered submicron powders, rel. to low temp. heat exchangers 3—56416
- Fe-Ni-Cr, Incoloy 800 heat exchange material, oxide films, SIMS anal. 3—14766
- ^{3}He-^{4}He dilution refrigerator, heat exchanger design 3—49382
- Na liquid, flow over coiled-tube heat exchanger, heat transfer 3—22441

heat flow *see heat transfer*

heat insulation *see thermal insulation*

heat losses
- *see also thermal insulation*
- 40 MVA transformer heat loss utilisation for building water heating *(German)* 3—29377
- air charge factor for room ventilation losses determ. *(German)* 3—7385
- air cooled solar collector using all cylindrical elements in low heat loss body, performance characts. 3—53584
- air solar collector laboratory installation and measurement of power consumption by fan 3—24625
- all-glass vacuum tubular collectors, vacuum production, maintenance and lifetime *(Chinese)* 3—9477
- calorimetric microflowmeter for gas flows 3—46673
- closed loop solar energy system with concentrating collectors, design method 3—14996
- collector/storage type solar water heater, theoretical and experimental studies 3—24627
- concentration collector, evacuated, circular cylindrical, thermal and optical analysis 3—19613
- convective circulation, buoyancy-driven, in free-surface channels 3—2053
- dust clouds of C, coal, Mg, Al, flame propagation in zero gravity, burning velocity, thickness, radiation heat loss 3—24537
- falling solar pond theory and stability requirements 3—24632

heat losses continued
- flat-plate collectors selective coatings selection by comparison of thermal performance 3—24626
- fluorinated organic fluid solar engine design and test results for electric energy generation 3—24619
- forced-flow solar regenerator analysis 3—39517
- greenhouse thermal regime evaluation using correlation-regression anal. 3—9398
- high temperature batteries, heat loss meas. of insulating enclosure 3—39455
- hot water systems performance with tanks in series 3—34735
- integral compact solar water heater thermal performance anal. 3—53586
- metals, thermal conductivity determination, stationary state *(Polish)* 3—3160
- Multiple Layer Solar Collector, characts., comparison with selective flat plate collector 3—53585
- packed bed thermal storage unit of hot air solar heating system, design and sizing 3—15005
- seasonal heat storage in water saturated soils, ground water flow heat losses determ. using mathematical model 3—58561
- shallow solar pond: state-of-the-art 3—9482
- solar absorber convertors convection suppression devices solar transmittance 3—15003
- solar air heater, double-flow, non-porous, theory and anal. 3—19597
- solar collector/water heater, performance eval. considering side losses 3—53580
- solar flat-plate collectors with diathermanous covers, heat loss coefficients and effective $\tau\alpha$ products 3—53583
- solar greenhouse with transparent buffer insulation, thermal processes anal. 3—9394
- solar still with enameled heat receivers, design and test results 3—9465
- Swedish district heating systems' utilisation of heat pumps *(Hungarian)* 3—48160
- thermocline storage of hot water, stratified, theoretical and experimental studies 3—34734
- thermoelectric generator temp. spatial and temporal distrib., transient analysis 3—14973
- water heating system, 'once-through' type comparison with natural circulation type 3—24630

heat measurement *see thermal variables measurement*

heat of adsorption
- chemisorption, perturbation LCAO MO calc. 3—8330
- inert gas adsorption, structures and interactions 3—38233
- limited solubility systems, thermodynamics of adsorption at grain boundaries *(Russian)* 3—33440
- methane, Lennard-Jones 6-12 pots., heat of adsorption calc. 3—22821
- multilayer physisorption, mean field theory, desorption kinetics 3—13630
- surface coverage effect, appl. of exact occupation statistics 3—8337
- transition metal films, heat of chemisorption, LCAO calc. 3—23168
- transition metals, surface core level energy shifts, comparison with heats of segregation 3—47400
- GaP surface single adsorbate, local density of states, local charges and adsorpt. energy calc. 3—3275
- Mo (112), adsorption of La, struct., work function and stability, LEED study 3—33576
- Ni (100), adsorption of Xe, LEED, UPS, thermal desorption, and work function meas. 3—2967
- Pt (111), C_1-C_4 alcohol adsorption and decomposition 3—2981
- Pt (111), heat of D_2 adsorption and absolute coverage, nuclear microanal. study 3—2978
- Pt, chemisorption and growth of Ag and Au monolayers AES, desorption, and LEED study 3—8334
- Si surface, spin centres, interaction with adsorbed mols., EPR study 3—38451
- W (100), adsorption of La-Li, work function and thermal stability 3—28218

heat of combustion
- No entries

heat of crystallisation
- a-Ge, thermodynamics of equilib. and non-equilib. crystn. 3—22775
- K inorganic salts, heats of dissolution and crystallisation in water at 298.15K 3—27879
- $Pd_{40}Ni_{40}P_{20}$, bulk form., heat of crystn., X-ray diffr., TEM and calorimetry studies 3—7911
- a-Si, thermodynamics of equilib. and non-equilib. crystn. 3—22775
- $Ti_{1-x}Ni_x$ amorphous alloy, crystallisation, stability and elec. transport props. 3—43150

heat of dissociation
- chemical species stabilisation energies 3—39403
- conjugated molecules, heats of atomisation, semiempirical calcs. 3—55852
- ethylene oxide hydrates, enthalpies of decomp. and heat capacities 3—29330
- hydrocarbons, conjugated, heats of atomisation, semiempirical calcs. 3—6545
- tetrahydrofuran hydrates, enthalpies of decomp. and heat capacities 3—29330
- $(Ce_{0.55}La_{0.45})Ni_{4.5}Al_{0.5}D_3$, equilibrium and kinetic props. of hydriding and dehydriding 3—48049
- KO, dissociation energy, effusion-mass spectrometric studies 3—34643
- K_2O, enthalpy of formation, atomisation energy, effusion-mass spectrometric studies 3—34643
- KOH, thermodynamic props., effusion-mass spectrometric studies 3—34643
- $LaNi_5D_3$, equilibrium and kinetic props. of hydriding and dehydriding 3—48049
- $LiNa_2AlH_6$, prep., struct. and thermal stability, X-ray diffr. study 3—37880
- PrSe, dissociation and sublimation, at high temps. 3—14884
- $ZrCr_2$-based alloys, hydrides, calorimetric enthalpy of form., decomp., config. entropy 3—53442
- $ZrMn_2Fe_{0.8}(Co_{0.8})(Ni_{0.8})(Cu_{0.8})(Mn_{0.8})$, hydrides, calorimetric enthalpy of form., decomp., config. entropy 3—53442

heat of formation
- alkali cyanides, density functional theory 3—2497
- alkali metal halides, solid, free energy based on $H_2{}^{0}{}_{98}$ 3—38101
- anthracene TCNQ, enthalpy of form. and binding energies 3—58446
- benzylium, cation form. photoelectron-photoion coincidence spectrosc., RRKM anal. 3—45819
- boron compounds, bond order depend. bond enthalpy terms 3—53439
- carbocations, heats of formation, MINDO/3 calcs. 3—1245

heat of formation continued
- chemical species stabilisation energies 3—39403
- ground state S-containing mols., geometries moments, ionisation energies, MNDO calcs. 3—55847
- intermetallic phases, heat of formation, struct. information from Miedema's theory 3—44067
- JANAF thermochemical tables, 1982 supplement 3—25704
- metallic bonds, cohesion and decohesion 3—23304
- methanethiol ion, heats of form. of ions, photoionisation mass spectrometry 3—21832
- naphthalene TCNQ, enthalpy of form. and binding energies 3—58446
- ordered AB alloys, cellular theory, heat and volume of formation 3—18471
- n-paracyclophanes, comparative conformational anal. by mol. mechanics 3—21941
- rare earth alloys, $La_{1-x}R_xNi_5$, (R-Ce,Pr,Nd,Sm), H_2 absorption, press.-composition isotherm study 3—33564
- sodium TCNQ, enthalpy of form. and lattice energy 3—58447
- thermochemical data, ab initio calcs. of total correl. energies, Schrodinger energies and heats of form. 3—1222
- TMPD, enthalpy of form. and binding energies 3—58446
- TMPD TCNQ enthalpy of form. and binding energies 3—58446
- transition metal monoxides, cohesive props., heat of form., ab initio calc. 3—7958
- transition metal-p metal alloys, heat of form., rigid-band model 3—2846
- tropylium cation form. photoelectron-photoion coincidence spectrosc., RRKM anal. 3—45819
- van der Waals complexes formation, entropy effect 3—58444
- β-Al_2O_3-LiO_2, hydration reaction, IR meas. 3—14858
- $AuAl_2$ alloys, struct., correlation with heat of form. *(German)* 3—22825
- $BaCO_3$, free energy of formation and thermal stability 3—9347
- C_3H^+, heat of formation, determ. by reactivity meas. 3—55879
- Ce intermetallic cpds., with nontransition metals, valence states, heat of form. calcs. 3—52082
- $CeNi_{5-x}Cu_x$, H storage and desorption, hydride heat of form. 3—24641
- CeSb, thermodynamic props., invest. by vapour press meas. 3—19321
- Co-Ti, energy of alloy formation calc. using model electron-density functional 3—51810
- CoGa, interaction energies, defect struct., thermodynamic props. 3—23058
- $CsSO_4F$, low. temp. heat capacity, thermodynamic functions 3—33464
- Cu-Ag(Ti)(Zr)(Hf), thermochem. at 1373K 3—4007
- Cu-Zn alloy, FCC and BCC, pair interchange energies, order-disorder transition enthalpy 3—34307
- Cu_2S, free energy of form. meas. using $CuZr_2(PO_4)_3$ 3—42841
- Eu intermetallic cpds., with nontransition metals, valence states, heat of form. calcs. 3—52082
- Fe-Ti, energy of alloy formation calc. using model electron-density functional 3—51810
- Fe-Ti, liq., enthalpies of form. 3—9349
- Fe-V alloy formation and ordering energies calc. using electron density functional method 3—23049
- Fe_3C, self-diffusion coeffs. of C meas. via kinetics of form. 3—13529
- Fe(II) sulphides, solubility consts., free enthalpies of form., reaction equilib. consts. 3—29327
- H_3O^-, gas phase, long-lived form., struct. and reactions 3—58403
- InSb, ion implantation, enthalpy of formation and stability 3—42637
- KBr-KI mixed cryst., ionic cond., melting point and Schottky defects 3—57129
- K_2O, enthalpy of formation, atomisation energy, effusion-mass spectrometric studies 3—34643
- KOH, thermodynamic props., effusion-mass spectrometric studies 3—34643
- LiMg, cellular theory, heat and volume of formation 3—18471
- Lu-H system, phase boundaries and entropy of form., H_2 vapour press. study 3—23029
- Mg_xCa_{1-x} disordered alloy, heat of form., cellular density functional theory 3—33184
- Mn-Si system, thermodynamic props. in ranges of existence of Mn_9Si_2 and Mn_6Si 3—58099
- Mn_2P, solid, congruent vaporization 3—8180
- $NaAl_{11}O_{17}$, Gibbs free energy of form. and thermal stability, galvanic cell study 3—42813
- $NaAl_5O_8$, Gibbs free energy of form. and thermal stability, galvanic cell study 3—42813
- Na_2CdCl_4, Δ_fG° meas. in galvanic cell, 548 to 668K 3—34644
- $NbC{:}^{147}Pm$, self-diffusion study *(Russian)* 3—38119
- Ni-Al system, struct., correlation with heat of form. *(German)* 3—22825
- Ni-Ti, energy of alloy formation calc. using model electron-density functional 3—51810
- $NiCO_3$, solubility consts., free enthalpies of form., reaction equilib. consts. 3—29327
- PrSe, dissociation and sublimation, at high temps. 3—14884
- Pt-Al system, struct., correlation with heat of form. *(German)* 3—22825
- Si, transition metal solid solubility, NAA and antiCompton spectrometry study 3—28109
- Si-containing molecule, MINDO/3 and MNDO calcs. 3—21641
- SmC_x, vaporisation and thermodynamic props. 3—13425
- Ti-Ni-(O), phase equilib. and thermodynamic studies 3—58102
- $(UO_2)_x(AsOy)_z$, standard enthalpies of form. 3—4311
- V-Ti alloy formation and ordering energies calc. using electron density functional method 3—23049
- YF_3, negative ion form. investigated by mass spectroscopy, enthalpies of reaction and form. 3—4330
- Yb intermetallic cpds., with nontransition metals, valence states, heat of form. calcs. 3—52082
- $ZrC{:}^{147}Pm$, self-diffusion study *(Russian)* 3—38119
- $ZrCr_2$-based alloys, hydrides, calorimetric enthalpy of form., decomp., config. entropy 3—53442
- $ZrMn_2Fe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3—48081
- $ZrMn_2Fe_{0.8}(Co_{0.8})(Ni_{0.8})(Cu_{0.8})(Mn_{0.8})$, hydrides, calorimetric enthalpy of form., decomp., config. entropy 3—53442
- $ZrMn_2Mn_yFe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3—48082

heat of fusion
- p-n-hexyloxybenzylidene-p'-toluidene, nematic liq. cryst., sp. ht., thermodynamic props. 3—28113
- p-n-hexyloxybenzylideneaniline and homologous cpds., sp. ht., melting entropy 3—28118

heat of fusion continued
long slender heat pipe performance for latent-heat thermal energy storage 3−39534
low temperature latent heat thermal energy storage: heat storage materials 3−58560
phase change thermal energy storage in shell and tube heat exchangers, preliminary model 3−9495
polyethylene terephthalate, heat of fusion, Clapeyron eqn., melting point, press. depend. 3−51756
trans-1,4-polyisoprene, crystallisation 3−2438
polyoxy-2,2′-dimethylazoxybenzene-4,4′-diyloxydodecanedioyl, phase transitions, DSC, optical microscopy 3−38063
PTFE, amorphous density, heat of fusion and NMR meas. 3−18238
PVC struct., plasticizer conc. and annealing effect 3−2443
sulphate and thiosulphate hydrates, phase transitions and thermodynamic props. 3−13478
transition metals, heat of fusion, enthalpy and specific heat 3−8171
CaO, heat of fusion, calc. 3−18428
Cu-S system, thermodynamic stability of Cu_2S, EMF meas. at 1000-1450K 3−24214
Ga-Se system, phase diagram study 3−4020
$Gd_3Ga_5O_{12}$, thermal and optical props. 3−28117
LiOH, vol. change at melting point 3−8172
Li_2SO_4-NaCl, vol. change at melting point 3−8172
MgO, heat of fusion, calc. 3−18428
Na, melting transition, pseudopot. model, mol. dynamics calc. 3−51757
NaCl-$MgCl_2$, vol. change at melting point 3−8172
$NaNO_2$-$NaNO_3$-KNO_3, vol. change at melting point 3−8172
$NaNO_3$, vol. change at melting point 3−8172
Na_2SO_4-NaCl, vol. change at melting point 3−8172
PbSe-CdS, phase equilibria 3−9040
Ta, liq. and solid, enthalpy meas. by levitation calorimetry 3−4014

heat of mixing
alkali halide electrolytes, aq., enthalpies of mixing, 373.15K 3−33451
alloys, thermodynamic quantities, exptl. methods for determ., review 3−13484
binary fluids, enthalpy of mixing, scaling theory 3−13460
calorimeter, isothermal high-pressure flow, excess enthalpy of cyclohexane+n-hexane 3−30861
cyclohexane+n-hexane, excess enthalpy, meas. using isothermal high-pressure flow calorimeter 3−30861
dense gases, heat of mixing, temp. depend. 3−27640
limited solubility systems, thermodynamics of adsorption at grain boundaries *(Russian)* 3−33440
liquid alloy, binary, free energy of mixing 3−57096
liquid alloys, binary, free enthalpy of mixing, association and vol. contraction 3−51807
methane-CO_2 mixture, contaminated natural gas, thermodynamic props. meas., expt. apparatus 3−38096
methane-CO_2 mixture, contaminated natural gas, thermodynamic props. meas., expt. apparatus 3−38097
methane-CO_2 mixture, enthalpy and heat of mixing, BWR equation of state 3−37598
moderately dense gases, heat of mixing meas. 3−42784
nonelectrolyte binary liq. mixtures, vap. liq. equilib., heat of mixing and vol. change of mixing data 3−25705
PMMA stereoisomers and their blends, isothermal enthalpy studies 3−13459
polymer blends, miscible, charact. techniques, review 3−38089
polymer melts with low-molecular organic compounds, excess entropy of mixing calc. *(Russian)* 3−51811
polystyrene-poly-4-chlorostyrene, mixtures and copolymers, miscibility, heats of mixing, dielec. loss obs. 3−38088
solid solutions, binary, deviations from ideal mixing, thermodynamic models 3−42785
Al-Ca, liq., mixing enthalphy, thermodynamic invest. *(German)* 3−47118
Al-Mg-Pb(Sn), melt, temp. depend. of mixing enthalpy *(German)* 3−58100
Al-Sr, liq., mixing enthalphy, thermodynamic invest. *(German)* 3−47118
Ar-CO liq. mixtures, thermodynamics, direct calorimetry meas. 3−18463
Ar-He, heat of mixing meas. 3−42784
As-S/As-Se glass system, heat of mixing 3−33450
$BaWO_4$-Na_2WO_4, solutions, solute-solvent interactions and solubility-temp. relations 3−42776
CO_2-H_2(He), heat of mixing meas. 3−42784
Ca-Ni, liq., mixing enthalphy, thermodynamic invest. *(German)* 3−47118
$CaWO_4$-Na_2WO_4 solutions, solute-solvent interactions and solubility-temp. relations 3−42776
Co-Mn liquid alloys, Mn activities meas. by isobaric method *(Japanese)* 3−9030
Cu-Ag(Ti)(Zr)(Hf), thermochem. at 1373K 3−4007
Cu-Ni, surface tension isotherm calc. *(Russian)* 3−28210
Cu-Pd-Si, liq. alloy system, mixing enthalpies determ. at 1600K 3−34286
Cu-Si liquid thermodynamic props. 3−13457
Cu-Ti, liq. alloys, thermodynamic mixing functions 3−4015
H_2-CO_2, heat of mixing meas. 3−42784
He-Ar(CO_2)(N_2), heat of mixing meas. 3−42784
HfC_xN_{1-x}, heat of mixing, XPS core level binding energy shifts 3−24095
In-Te, liq., elec., mag., optical, thermodynamic, and struct. props. 3−56805
Mg-Ni, liq., mixing enthalphy, thermodynamic invest. *(German)* 3−47118
Mg-Pb, liquid, enthalpies of mixing at 975K 3−57098
Mg-Pb-Sn, melt, temp. depend. of mixing enthalpy *(German)* 3−58100
$MgI_2.8H_2O$-ethanol, excess enthalpies 3−33457
N_2-He, heat of mixing meas. 3−42784
Na-Cs, liquid, thermodynamic props. meas. 3−22762
Na-Pb liquid alloys, heat of mixing and specific heat, concentration cell meas. 3−42799
Rh-Ni, solid soln., thermodynamic props., miscibility gap 3−38102
Sn-Te liq. alloys, electronic props., compound-forming effect 3−28331
Sn-Te melt, enthalpy of mixing *(German)* 3−58101
$SrWO_4$-Na_2WO_4 solutions, solute-solvent interactions and solubility-temp. relations 3−42776
Ti-H_2(D_2) system, high temp. thermodynamics 3−42809
α-TiO_x-H_2(D_2) system, high temp. thermodynamics 3−42809

heat of reaction
see also heat of combustion; heat of dissociation; heat of formation
binary liquid mixtures with fast chem. reactions, convective instabilities onset 3−53408
chemical species stabilisation energies 3−39403

heat of reaction continued
ethylene+F(H) reactions, ab initio MO calcs., heats of reaction, barrier heights and bond dissoc. energies 3−48060
BaO-Ga_2O_3-SiO_2 glasses, ion exchange, effect of added ions 3−34617
Fe-Ni-H, bonding energy changes and heats of reaction, DSC study 3−42563
Na_2O-SiO_2 and Na_2O-Ga_2O_3-SiO_2 glasses, ion exchange, effect of added ions 3−34617
Ni-H, bonding energy changes and heats of reaction, DSC study 3−42563
Pd-H, bonding energy changes and heats of reaction, DSC study 3−42563
SiH_5^+, struct. and energy, comparisons with CH_5^+ and BH_5 3−55794
YF_3, negative ion form. investigated by mass spectroscopy, enthalpies of reaction and form. 3−4330
$Zr_{0.7}Ti_{0.3}Mn_2Fe_{0.8}$, hydrogenation, H_2 storage appl. 3−24642
$Zr_{1-x}Ti_xMnFe$ alloys, hydrogenation characts., H_2 storage appl. 3−24529

heat of solution
n-butyl alcohol, solution in cyclohexane, activity and heat of soln., US study 3−13341
ethyl cellulose, glassy, organic vapour transport, conc. depend. 3−18469
isobutyl alcohol, solution in cyclohexane, activity and heat of soln., US study 3−13341
metallic surfaces, subsurface bonding of H 3−23169
n-propyl alcohol, solution in cyclohexane, activity and heat of soln., US study 3−13341
salt solns. in liquid alkali metals, elec. resist. and solvation enthalpy 3−2857
silicate glasses, specific heat consumption in melting *(Slovak)* 3−18478
small mols. solubility in liq. Kr 3−33445
sulphate and thiosulphate hydrates, phase transitions and thermodynamic props. 3−13478
transition metals, binding energies, of He and H heats of soln., effective medium theory, covalent effects 3−3112
transition metals, heat of soln. and binding energy of H impurity 3−2806
water, of O, flow-microcalorimetric technique 3−4314
As-S(-Se) glasses, heat of soln. in alkaline solns. 3−33450
As-Se glasses, heat of soln. in alkaline solns. 3−33450
CsF, aq. soln., struct., mol. dynamics simulation 3−46824
Cu-Ag(Ti)(Zr)(Hf), thermochem. at 1373K 3−4007
K inorganic salts, heats of dissolution and crystallisation in water at 298.15K 3−27879
β-$LaNi_5H_x$, struct., entropy and enthalpy calcs., statistical thermodynamical approach 3−2499
NaCl aq. solns., sp. ht. near critical point, corresponding-states theory 3−13473
Nb-Sn system, phase diagram study by vapour press. meas. 3−19320
RbBr, enthalpy of solution in water 3−4312
RbCl, enthalpy of solution in water 3−4312
RbI, enthalpy of solution in water 3−4312
Si:Mg(Ca), solubility of dopant during LPE 3−33444
Si:O, precipitation kinetics, solubility, diffusivity and particle size 3−42787
$(UO_2)_x(AsOy)_z$, standard enthalpies of form. 3−4311

heat of sublimation
mesotartaric acid, and hydrates, vapour press. and lattice energies 3−42763
methanol films, cryst., IR spectra, effect of growth texture 3−43655
myoinositol, and hydrates, vapour press. and lattice energies 3−42763
oxalic acid, and hydrates, vapour press. and lattice energies 3−42763
phloroglucinol, and hydrates, vapour press. and lattice energies 3−42763
Ge liquid, radioactive/non-radioactive, evaporation by effusion method 3−51764
NH_4CNS, vapour phase dissociation, enthalpies of sublimation 3−34615
NH_4HCO_3, vapour phase dissociation, enthalpies of sublimation 3−34615
NH_4NO_3, vapour phase dissociation, enthalpies of sublimation 3−34615
NH_4X (X=F, Cl, Br, I), vapour phase dissociation, enthalpies of sublimation 3−34615
PrSe, dissociation and sublimation, at high temps. 3−14884

heat of transformation
see also heat of crystallisation; heat of fusion; heat of sublimation; heat of vaporisation
alloys, amorphous, magnetic props. and stability, review 3−18862
condensed bodies, surface and cohesive energy 3−38186
4,4′-di-n-heptyl-azobenzene/4-n-pentyl-4′-cyanobiphenyl, nematogen liq. cryst. binary mixtures, induced smectic phases, expt. studies 3−13077
ethylene oxide hydrates, enthalpies of decomp. and heat capacities 3−29330
p-n-hexyloxybenzylidene-p'-toluidene, nematic liq. cryst., sp. ht., thermodynamic props. 3−28113
nematic polymers, Landau-de Gennes theory 3−37777
Potts model, first order transition from finite lattice extrapolation 3−5748
sulphate and thiosulphate hydrates, phase transitions and thermodynamic props. 3−13478
tetrahydrofuran hydrates, enthalpies of decomp. and heat capacities 3−29330
$AgClO_3$, tetragonal to cubic transition, enthalpy change 3−51773
AlSb thin film form. by laser annealing of Al/Sb sandwich structs. 3−56977
$CsLiWO_4$, ferroelec. phase transitions, calorimetric study 3−38773
β-Cu-Zn-Al single crystal, stress dependency of latent heat of transform. 3−58120
Cu_2HgI_4, superionic conducting transition, sp. ht. study 3−2783
Dy, thermomagnetic energy conversion 3−34731
Fe_3O_4, first order transition at 1433K, thermodynamic props. *(French)* 3−47827
Fe_3Pt, near stoichiometric and stoichiometric, martensitic transform. and shape memory effect, calorimetric obs. 3−39141
$LaCo_5H_x$, hydride phase transitions, magnetisation studies 3−28093
Mg_2NiH_4, low temp. cryst. struct. and phase transition 3−33198
$NdCo_5H_x$, hydride phase transitions, magnetisation studies 3−28093
Pd, solubility and sorption of T 3−2815
$PrCo_5H_x$, hydride phase transitions, magnetisation studies 3−28093
Ti, specific heat and heat of phase transition 3−51821
TiO, α- and β-modifications, heat capacity, enthalpy, and enthalpy of transition 3−2834
UI_4, high temp. phase transform., elec. cond. and calorimetric meas. 3−33419

heat of vaporisation
- benzene, heat of vaporisation and thermodynamic props. in liq. and gaseous phase 3—8213
- diphenyl-diphenyl oxide mixture, heat of vaporisation and thermodynamic props. in liq. and gaseous phase 3—8213
- uracil protomers, relative stabilities and relative enthalpies 3—48080
- Cs, vaporisation, thermodynamic characts. 3—8179
- K, vaporisation, thermodynamic characts. 3—8179
- KOH, thermodynamic props., effusion-mass spectrometric studies 3—34643
- Li, vaporisation, thermodynamic characts. 3—8179
- LiF, vaporisation study by mass spectrometry 3—889
- Mn_2P, solid, congruent vaporization 3—8180
- Na, vaporisation, thermodynamic characts. 3—8179

heat of wetting *see wetting*

heat pipes
- cryogenic heat pipe for IR detector coupling to cooler 3—40614
- extreme thermal operating conditions, anal. and expt. investig. 3—12659
- fluid friction and heat transfer at supercritical press. 3—2122
- heat valve using thermocapillary migration 3—37530
- liquid in porous bodies, heat transfer with evaporation and boiling 3—12494
- long slender heat pipe performance for latent-heat thermal energy storage 3—39534
- low temperature, with corrugated mesh wick, heat transfer limit, transfer agent mass effects 3—12660
- metal fiber capillary structs., heat transfer charact. in heating zone 3—51091
- nuclear thermoelectric space power system design and mass sensitivity 3—14970
- solar absorber-convertor, development of long heat-pipe for parabolic trough solar collector *(Japanese)* 3—34718
- solar absorber-convertor, heat collection expt. *(Japanese)* 3—34717
- thermal efficiency of longitudinal ribs, rectangular profile deposits effect 3—37328
- transient shutdown of an axial-groove liquid trap heat pipe thermal diode 3—50902
- transverse streamlining of coaxial circular tubes in staggered bundle by viscous incompressible fluid 3—7616
- vapor-gas front in the condenser of a two-dimensional gas-controlled heat pipe 3—27606
- vapour flux laminar flow in condensation region of heat tubes 3—51226
- wet vapour flow in heat-pipe vaporiser, coolant drop entrainment study 3—7638

heat pumps
- absorption cycle heat pump, solar powered, temporal hierarchical approach to operational and design optimisation problems 3—9462
- absorption heat pump refrigerant mass and energy storage anal. for space heating 3—34715
- acoustic traveling wave heat pump, gain and efficiency calc. 3—29445
- bivalent heat pump heating systems with surface heat exchangers, operational results *(German)* 3—34714
- brewing industry waste heat recovery by heat pump utilisation *(German)* 3—29438
- capacity control methods and problems *(German)* 3—29434
- combined heat-pump/solar collector system, cloudy weather operation improvement *(French)* 3—58558
- commercial buildings, heating and cooling, appl. 3—58542
- domestic space and water heating in New Zealand, heat pumps appls. 3—58546
- domestic/industrial water and space heating by heat pumps 3—29446
- drying/dehumidification system experimental assessment 3—39507
- drying/dehumidification systems, experimental assessment 3—39506
- drying/dehumidification systems, potential 3—39505
- dual source, with roof absorber and heat store for domestic dwelling appls. *(German)* 3—29444
- dwellings, controlled ventilation and space heating using heat pumps *(German)* 3—29442
- earth heat system for heating new school buildings. Automatic controls for refrigeration plant 3—24621
- economic alternative to conventional heating systems *(German)* 3—29441
- economic and effective appl. 3—58543
- electric, economic significance *(German)* 3—29436
- electric dehumidifiers principles for reducing household dampness 3—29447
- electrical energy conservation in the home, colloquium, London, England Nov. 1982 3—25698
- electrically driven, efficiency calc. method *(German)* 3—4397
- electricity supply effects in Austria by 1990 *(German)* 3—29440
- electroplating plant heat pump utilisation for energy savings *(German)* 3—29437
- energy calcs. for heat storage plant using heat pump *(German)* 3—39536
- energy sources other than oil and electricity for space heating *(German)* 3—39446
- gas-type, for building heating 3—14989
- greenhouse heating using heat pump controlled by programmable logic controllers *(Norwegian)* 3—53572
- ground-coupled tank feasibility in solar-assisted heat pump systems 3—39510
- heat pump installations extracting heat from small areas of ground *(German)* 3—58548
- heat recovery and central air conditioning in single family house *(German)* 3—29443
- heating a highly insulated building by heat pump, simulation 3—39504
- heating system effects on heat pump operating coefficients *(German)* 3—58549
- high temperature heat pump applications and their limitations 3—14991
- house heating by heat pump, size selection 3—58547
- industrial plant waste heat recovery by heat pump utilisation *(German)* 3—29433
- low temperature heat pump, exergy anal. 3—49383
- maintenance and servicing *(German)* 3—29435
- Malmo district heating system using 20 MW steam driven heat pump *(Hungarian)* 3—48161
- microcomputer controlled, performance data *(Japanese)* 3—44139
- multivalent heat supply for a shopping centre 3—14988
- office buildings, heat transfer from hot to cold areas, appl. 3—58544
- optimal capacity of heat pump plants, determ. method 3—48165
- plastics processing waste heat recovery by utilisation of electric powered heat pump *(German)* 3—29439

heat pumps continued
- power station waste heat utilisation, pilot plant measurements *(German)* 3—19569
- regional comparison of solar, heat pump, and solar-heat pump systems thermal and economic performances 3—14931
- single-family house heating system employing heat pumps, electricity and solar collectors *(German)* 3—39513
- solar absorption cooling systems parasitic power and operational control criteria 3—34721
- solar domestic heating using heat pump and uncovered solar collectors, mathematical simulation of performance 3—24624
- space heating, residential, net energy analyses of four different technologies 3—53488
- space heating solar installations for the production of low-temperature heat 3—14998
- Stirling cycle heat pump, expt. study *(Japanese)* 3—39503
- storage for solar power systems, refrigerant storage digital simulation study 3—9493
- Swedish district heating systems' utilisation of heat pumps *(Hungarian)* 3—48160
- Swedish district heating using heat pump installations 3—14990
- swimming pools, indoor heated, energy conservation without condensation, appl. 3—58545
- thermal storage by latent heat in the range 100 to 150°C. Experimental study and modelling of the kinetics of storage and removal in a 25 kWh accumulator 3—4412
- thermochemical energy storage system, heat and mass transfer considerations 3—34738
- thermochemical principles of energy storage and generation, economics 3—4399
- thermoelectric conversion, conference, Arlington, TX, USA (March 1982) 3—10513
- thermoelectric generator efficiency-maximising shape calc. 3—14976
- thermoelectric heat pumps for instrument cooling 3—301
- town heating by combination of district heating scheme and heat recovery from river water by heat pumps *(German)* 3—34713
- two-phase flow solar collector thermal performance model 3—39527
- US Chemical Heat Pump Program—an overview 3—24620
- waste heat recovery, appls. 3—48164
- water heating, domestic, experience with heat pumps *(German)* 3—34712
- water heating, domestic, operating experiences with heat pumps *(German)* 3—34711
- water heating appls. *(German)* 3—34709
- water heating by heat pump, operating experiences *(German)* 3—34710

heat radiation
- absorbing, radiation heat transfer, complementary variational principles 3—37337
- annular plate, heat conduction and radiation, nonlinear problem solns. 3—7388
- blackbody radiation, Doppler demon 3—35806
- blackbody radiation sources, overview 3—54732
- building energy consumption, thermal and solar radiation influence 3—14926
- coal suspensions, radiant energy transfer, evaluation, numerical method 3—7389
- combined free convection and radiation heat transfer in parallelogram shaped enclosure 3—17935
- combustion chamber, convectively cooled, thermal state calcs. 3—12498
- contact interface temperature with internal thermal radiation and cond. effects, numerical soln. 3—7381
- cryogenic vacuum-shield thermal insulation with radiant heat sources, heat transfer model 3—7387
- cylindrical medium, combined conductive and radiative heat transfer 3—37322
- dewar, liq. N_2, superinsulated, separation of conduction and radiation components of heat transfer 3—32586
- diffuse illumination systems, finite element anal. 3—27179
- Eddington factor-flux limited diffusion, variable ∇.F description 3—50901
- exergy of incoherent EM radiation 3—10774
- films supported by Al substrate, emissivity measurement and comparison with theoretical results 3—34719
- finned surfaces, convecting and radiating, heat conduction anal. 3—46435
- gas flow in cooled ducts, combined radiative-convective heat transfer 3—51092
- generalised phase change model, melting and solidification internal radiative transfer 3—50912
- gray medium, radiative transfer 3—46436
- gray medium with diffusely reflecting boundaries, radiation-cond. heat transfer, 2D problem 3—1928
- grey fluids in vertical cavities, combined radiation-convection 3—37493
- grey model, radiant energy transfer, evaluation, numerical method 3—7389
- heat and mass transfer, bibliography, Soviet works, 1980-82 3—44910
- homogeneous sphere, radiation transfer, integral form 3—17779
- inhomogeneous atmosphere, point explosion, heat radiation 3—7606
- IR-radiating gases, total band absorptance, analytical expression 3—50914
- jets, thermal radiation emission, Monte Carlo calcs. 3—56596
- laminar flow in open channel, thermal radiation by semitransparent fluid layer 3—56538
- liquid, thermal conductivity, thermal radiation heat transfer 3—51873
- liquids, absorbing-scattering, radiative transfer, scatter phase function distrib. 3—27365
- material partly transparent to radiation, nonstationary heating *(Russian)* 3—42111
- measurement apparatus, high temperature laboratory *(Japanese)* 3—40613
- MHD combustor oxidiser high temperature preheating by direct combustion of fuel 3—44135
- mineral melt, vertically incident jet, cooling, thermal radiation and convection influence 3—7393
- mixed convection over vertical zircaloy plate with oxidation 3—27514
- multilayer thermal trap collectors, heat withdrawal analysis 3—53587
- Multiple Layer Solar Collector, characts., comparison with selective flat plate collector 3—53585
- nonmetallic materials in conditions of radiant heat transfer, contact method for meas. surface temp., error 3—304
- one dimensional phase change with radiation-convection 3—37333
- one-dimensional absorbing, emitting and scattering medium, heat cond. and radiation, polynomial approx. calcs. 3—7380
- packed fluidised bed suspensions, radiative transfer meas. 3—37562
- packed snow, melting by radiative heating 3—44487

heat radiation continued
- parallel Ti plates, heat exchange during nonstationary heating in chemically active gases *(Russian)* 3—1937
- passive space heating concepts thermal performance anal. 3—34724
- Planck's const. determ. 3—35820
- plate, flat, partially absorbing, cyclic thermal radiation heating, convection cooling, thermal stresses 3—37360
- radiative gas dynamics, weakly nonlinear wave interaction 3—42327
- radiative heat transfer between fluidised bed and a surface 3—51099
- radiative transfer in inhomogeneous media, inverse Monte Carlo solns. 3—27366
- semitransparent crystals, growth from melt, radiative instability of plane crystallisation front 3—50916
- semitransparent crystals, growth from melt, radiative supercooling 3—50915
- shield materials reflectance under radiant-convective heating 3—37324
- solar absorber convertor with convection suppressing honeycomb, radiative-conductive heat flux loss approximation 3—34729
- solar energy concentrators, trough-type, optical and thermal anal. 3—53486
- soot radiation, soot shape effect 3—50913
- spherical shock wave propag. in exponential medium with radiation heat flux 3—37515
- thermal plasma, shock wave produced, heat transfer, optical and thermodynamic props. 3—37676
- three dimens. rectangular geometry, radiative transfer eqn. 3—17780
- transition metals, thermal emittance, calc. using optical consts. 3—37336
- transparent crystals grown from melt radiative cooling, Stefan problem soln. 3—18254
- Trombe-wall passive systems thermal performance under Aegean sea climatic conditions 3—34730
- two coaxial cylinders of finite length, radiating system, radiant heat exchange 3—27367
- two dimensional transfer, integral function computation 3—32588
- various types, industrial energy efficiency 3—37323
- viscous shock layer, radiative heat transfer calcs., semimoment method 3—7580
- water, stratified layers, heating cooling, energy transfer 3—51190
- weak magnetic field excitation by shock wave propag. in suddenly heated medium 3—22491
- zero-point term in cavity radiation 3—12499
- Al, oxidised, thermal emission spectra, struct. 3—1936
- C particles in gas suspension, optical props., comp. effects 3—19537
- CO_2 cryodeposits, optical constants and thermal radiative props. 3—36011
- H_2O cryodeposits, optical constants and thermal radiative props. 3—36011
- Ni, oxidised, thermal emission spectra, struct. 3—1936
- NiS films supported by Al substrate, emissivity measurement and comparison with theoretical results 3—34719

heat sinks
- above-ambient temp. regulation, heat sink conductance reduction by thermoelectric cooler 3—12503
- cryostat terminal and heat sink arrangement 3—20859

heat systems
- *see also boilers; heating*
- design, construction and continuous evaluation of a medium scale solar energy system 3—58477
- HTGR module designed for process heat and high temp. steam *(German)* 3—21496
- solar absorption cooling systems parasitic power and operational control criteria 3—34721
- solar heating systems simulation using generalised computer simulation code 3—34727
- solar water heater, 'built-in' storage, booster mirror 3—58551

heat transfer
- *see also condensation; convection; cooling; evaporation; heat conduction; heat radiation; radiative transfer; thermal diffusivity*
- ablation layer instability, analytic theory 3—56543
- ablative radome materials, thermal-ablation and erosion modelling 3—9263
- Adams-Welty model validation for heat transfer in large particle fluidised beds 3—17963
- air flow around three cylinders in row at low pitch-to-diameter ratios 3—32739
- air flow over flat plate, turbulent Prandtl no. in inner boundary layer 3—46536
- air fluidised bed-vertical tube heat transfer 3—12754
- air solar collector laboratory installation and measurement of power consumption by fan 3—24625
- air-water horizontal flow, void distribution, effect of flow obstruction 3—51202
- air/water mist flow in heated cylinders, heat transfer 3—17938
- airfoil-cascade flows, thermal boundary layers devel., heat transfer 3—37476
- annular channel, heat exchange, porous inner wall effects 3—42234
- arbitrary Prandtl number effect on forced convection in laminar separation 3—2065
- atmosphere, parameterisation of turbulent heat and diffusion fluxes from thermodynamic eqns. 3—9988
- axisymmetric jets, submerged, heat and mass transfer 3—7623
- bibliography, Japanese works 3—20598
- bibliography, Soviet works, 1980-82 3—44910
- bibliography of Soviet works of heat and mass transfer 3—25709
- binary gas mixture fluid dynamics and mass transfer in a centrifuge 3—32733
- binary mist flow, heat transfer expt. study, incidence angle on a plate effect 3—27592
- boiling heat transfer and its interference on horizontal tube with circumferential fins *(Japanese)* 3—12497
- boiling heat transfer from plane heater to K layer 3—27362
- boiling liquids, meas. of intensity of heat exchange *(Russian)* 3—54739
- boundary heating of solids, performance index optical control 3—50908
- boundary layer, thermal, on cylindrical gas column with distributed heat sources 3—56542
- boundary layers, buoyancy force effects on heat transfer charact. 3—37467
- building thermal environmental control by evaporative cooling and variable ventilation 3—58481
- buoyancy-driven convection, integral equation formulation 3—27503
- buried pipe, heat losses from flowing fluid 3—12774

heat transfer continued
- BWR system simulator, boil-off tests to evaluate bundle heat transfer and thermohydraulic flow conditions 3—6434
- casting process, simultaneous heat and mass transfer 3—50911
- Cauchy-Stefan problem 3—2746
- cavities in supersonic air flow, heat transfer, relative depth and Re effects 3—27524
- cavity in supersonic flow, heat transfer with barrier cooling 3—27523
- chemically reactive turbulent pipe flow, heat and mass transfer 3—37586
- circular cylinder with wake control, fluid flow and heat transfer 3—56537
- circular tube flow, transitional boundary layers, flow development 3—37569
- circular tube turbulent heat transfer in the downstream of an orifice 3—37474
- closed loop solar energy system with concentrating collectors, design method 3—14996
- coke, combustion temp. in fluidised bed, heat transfer 3—7649
- collector-storage walls designing un-utilizability method 3—19615
- collector/storage solar water heaters transient behaviour for generalised demand patterns 3—19598
- colour Trombe walls filled with $CaCl_2.6H_2O$ phase change material, thermal behaviour 3—4405
- complex temp. fields generation for cryst. growth by high temp. elec. resistance oven 3—50918
- composite plate, multilayer, locally heated, thermoelastic equilib. 3—27385
- compressible gas flow, turbulent separation, friction, heat transfer, boundary layer eqns. 3—37457
- concentration collector, evacuated, circular cylindrical, thermal and optical analysis 3—19613
- continuous stretching sheet, velocity and temp. distribution, Prandtl number dependence 3—12673
- convection boundary layer in air along vertical plate expt. study using laser Doppler velocimeter 3—51086
- convective pattern evolution and secondary instabilities 3—32820
- cooling gas blanket injection into developed turbulent boundary layer 3—37464
- corona wind meas. of heat transfer from horizontal fine wire and cylinders 3—18147
- Couette flow of nonhomogeneous viscous fluid 3—12778
- countercurrent flow thermoelectric generator performance, analytical model 3—14975
- critical heat flux density in open channels cooled by superfluid ^4He 3—12493
- cryobiologic appl., heat transfer from warm plates to liquid N_2 3—35051
- cryogenic fluid heat and mass transfer, laser Doppler anemometry appl. 3—40617
- cryogenic liquids, heat transfer at forced flow boiling in tubes 3—7574
- cryogenic pipe array chilling by uniflow stream 3—35995
- crystal growth, rapid, from undercooled melts, roles of heat transport and interfacial rearrangement 3—13138
- crystallisation nuclei in liq. in a sound field 3—51525
- crystallisation problem, heat eqn. with mixed nonlinear boundary conditions 3—17776
- crystals grown from melt, two dimensional Stefan problem, analytic soln. 3—18253
- cubic heat storage container with helical tube heat exchanger and $CaCl_2.6H_2O$ latent heat storage material *(Japanese)* 3—34736
- curved surfaces, turbulent shear flows, heat transfer modelling 3—51117
- cylinders, circular, fluid flow and heat transfer 3—51087
- cylinders, heat transfer during impact streamlining by air jets 3—37480
- desalination productivity of distillation vs. reverse osmosis using solar pond energy 3—39520
- descending vapour flow, heat transfer on horizontal tubes during condensation 3—27519
- disordered system, thermal EMF flow model calc. 3—17772
- dispersed annular flow of two phase medium, mass transfer between wall adjacent liquid film and flow core 3—46636
- diver heating, predictive engng. formulations 3—24685
- dodecylbenzene, SO_3 absorpt., heat and mass transfer multiplicity 3—4259
- dropwise condensation, heat transfer near initiation 3—56419
- earth heat system for heating new school buildings. Automatic controls for refrigeration plant 3—24621
- eddy diffusivity and viscosity of heat into fluid flow 3—51100
- electrically conducting fluid in rot. system, MHD Couette flow and heat transfer 3—2136
- elliptical cylinder heat exchange with surrounding gas flow 3—32735
- energy and mass diffusion, inertial relax. terms, variational principles 3—27370
- energy conversion theorem *(Rumanian)* 3—17769
- equivalence problem for heat eqn. 3—20802
- ethanol, liquid film flowing down heated surface, breakdown heat fluxes 3—27509
- ether in glycerin emulsion, heat transfer coeff. with high superheating of its disperse phase 3—12749
- evaporating liquid drop, heat and mass transfer on surface 3—1944
- evaporator pipe position influence on heat transmission *(German)* 3—32582
- evaporator tube, heated, heat transfer coeff. in post-dryout region *(German)* 3—7394
- exchange intensity near stagnation point, periodic surface temp. variation effects 3—37481
- Experimental Breeder Reactor II superheater, destructive examination 3—6367
- external walls, regular heat transfer calcs. 3—42235
- fabric-covered cylinder in air cross-flow, heat transfer 3—17933
- falling liq. film flow, interface perturbation, heat and mass transfer 3—37478
- fast particles, chemical reactions and heat exchange in flow 3—42324
- fatigue testing machine at liquid He temp., re-condensing type casting system, heat transfer and operational characts. 3—36012
- filaments in the atmosphere, heat-exchange crisis 3—37331
- film absorption under laminar flow, simultaneous heat and mass transfer 3—46548
- filmwise condensation inside vertical tube, effect of waves on vapour side heat and mass transfer, experimental investig. 3—50922
- finned tube bundles, boiling heat transfer 3—51093
- fins, rectangular and triangular, condensation, heat transfer, temp. distrib. 3—50923
- flat plate, three dimens. film cooling 3—27360
- flat surface in air fluidised bed, heat transfer, orientation effect 3—27595

heat transfer continued
flat-plate collectors selective coatings selection by comparison of thermal performance 3—24626
flat-plate solar water heating system energy flow simulation 3—9483
flow behaviour and heat transfer around a circular cylinder at high blockage ratio's 3—27511
flow on uniformly heated moving continuous flat surface 3—32734
flow through porous medium bounded by infinite vertical plate under magnetic field action 3—7646
fluid dissipation energy, heat transfer promoter evaluation 3—37475
fluidisation column wall, instantaneous heat transfer coeff. 3—51095
fluidised bed, heat exchange with containing walls, intensification 3—42301
fluidised bed, heat exchange with water-cooled coil 3—42300
fluidised bed structure with surface boiling of fluidising medium 3—12764
fluidised beds, heat transfer process and solid particle mixing, mathematical modelling 3—12765
fluidized bed-wall, heat transfer *(French)* 3—42232
fluids for use in medium temp. solar systems, industrial experience 3—58553
fluorinated organic fluid solar engine design and test results for electric energy generation 3—24619
forced convective boiling, thermal hysteresis 3—50903
free convection flow past a vertical flat plate embedded in a saturated porous medium 3—56541
free jet boundary heat transfer, curvature effects 3—12726
free stream turbulence effect on heat and mass transfer in boundary layer 3—37477
freons, non-azeotropic binary mixtures, condensing heat transfer in vertical tube *(Japanese)* 3—37330
frost form., thermal cond., generalised correl. 3—54086
fuel element assembly models, heat and mass exchange processes 3—11410
fully developed flow in heated curved tubes, numerical soln. 3—12623
fully developed turbulent flow, vortex stretching, transport processes 3—37468
fusion reactors, wall erosion and heat transfer 3—28015
gas, dissoc. and vibr. relax., heat transfer in turbulent channel flow with rough walls 3—51090
gas blown spark gap, flow visualisation using Mach-Zehnder interferometer system 3—7850
gas flow in helical coil, turbulent to laminar flow transition, heat transfer 3—27484
gas fluidised bed in freeboard region, heat transfer to horizontal tubes 3—17965
gas suspension, flow in cylindrical channel, unsteady heat transfer 3—42311
gas-cooled rod bundler in axial flow, heat transfer 3—22443
gas-liquid flow, flow pattern transition modeling 3—12758
gas-liquid horizontal flow, pattern transitions, effect of flow obstructions 3—51201
gas-solid fluidised bed, heat transfer coeffs. 3—12753
gaseous-solid suspension, forced convective heat transfer at high temp. 3—51204
generalised angular coeff. determ. by numerical method 3—32583
granular medium, thermal cond., unit cell model 3—27369
greenhouse thermal regime evaluation using correlation-regression anal. 3—9398
grooved tubes in heat exchangers, heat transfer improvement by turbulisation 3—22445
ground temperature remote prediction and distribution mapping in Australia, application to earth covered/undergound housing 3—58480
groundwater heat transfer with phase change, finite element solutions 3—44484
heat eqn. property extension to linear thermoelasticity 3—27357
heat exchange with microparticle, scatt. effects in image-force field 3—22575
heat exchanger, rotating bubble type, thermal processes 3—10838
heat exchangers, radiation heat transfer effect on performance, expt. results of one flow channel 3—27510
heat exchangers, shell-side flow and temperature patterns, continuum eqns. 3—46551
heat pipes, low temp., with corrugated mesh wick, heat transfer limit, transfer agent mass effects 3—12660
heat-shielded materials, monochromatic normally hemispherical reflectivity determ. 3—27363
n-heptane, liquid film flowing down heated surface, breakdown heat fluxes 3—27509
heterogeneous media, heat and mass diffusion, partial differential eqns. 3—37332
horizontal fluid layer, onset of instability rel. to step change in temp. 3—22457
horizontal ribbon crystal growth, morphologically stable, quasi steady-state heat flow anal. 3—34218
hot water systems performance with tanks in series 3—34735
hyperbolic heat transfer with reflection 3—7379
immiscible liquids, heat transfer parametric anal. in spray columns 3—2062
impinging jet arrays, heat transfer coeff. distrib., visualisation technique meas. 3—22459
impulse thermal breakdown eqn.; boundary conditions 3—19057
incompressible flow, turbulent jet incident on heated plate, heat transfer 3 22454
incompressible liquid, heat transfer eqn. 3—12672
incompressible micropolar fluid, flow over stretching sheet, heat transfer 3—12674
incompressible Newtonian fluid, stagnation flow with temperature dependent viscosity 3—46528
incompressible viscous fluid in plane layer, laminar motion, thermal inhomogeneity influence 3—2025
industrial multi-stage evaporation-concentration processes utilising plastic materials as heat-exchange surfaces 3—4378
industrial processes heat recovery using heat pipe heat exchangers, principles, design and advantages 3—4379
interface crack, external, axisymmetric, with heat flow 3—27450
interface role in heat transfer processes 3—51763
inverse problems, appl. in planning and testing of technical objects 3—12501
IR emitters, at high temp., complex heat transfer calc., mathematical model 3—37339
jets entering a crossflow, heat and mass transfer coeff. meas. 3—37536

heat transfer continued
laminar flow, between two circular discs, effect of wall conductance 3—2077
laminar flow in axial sealing gap inlet of radial compressors 3—46519
laminar flow in tube preceded by 180° bend 3—51094
laminar heat transfer at bottom surface of cavity submerged in separated flow region of duct 3—7588
laminar heat transfer from surface of rot. disk 3—12677
laminar pulsatile flow, wall heat/mass transfer meas. 3—46646
linear heat-conduction eqn. coeffs., inverse problem soln. 3—27356
linear jet array, hydraulics of channel 3—56597
liquid, bubble containing, acoustic wave propag., model nonlinear eqns. 3—12403
liquid, bubble-containing, nonlinear acoustic waves 3—12404
liquid distrib. and crit. phenomena in heat transfer in dispersed annular flow with nonlinear heat liberation 3—51225
liquid film, steady flow, heat and mass transfer on fluted surface 3—37482
liquid film boiling with subheating, minimum wall superheat 3—28085
liquid film flow, isothermal multilayer, on inclined planes, model calcs. for flow curves *(German)* 3—27482
liquid film flow over solid surfaces, heat transfer 3—1931
liquid in porous bodies, heat transfer with evaporation and boiling 3—12494
liquid jet, cylindrical free falling, direct contact heating 3—51181
liquid layers, horizontal, interfacial heat transfer enhancement by gas injection 3—41235
liquid metal heat transfer in turbulent pipe flow with uniform wall flux 3—46547
liquid metal vapour condensation, influence of wall-condensate interface resistance 3—50921
liquid solidification in rotating cylinder; heat exchange *(Ukrainian)* 3—23017
liquid supercooling in forced pipe flow, ice crystal growth 3—17976
literature survey 1977-81, numerical methods 3—46562
LMFBR, temp. fluctuations of blocked subassembly from turbulent heat transfer study 3—55274
local heat exchange along the initial segment in a heat exchanger with a helical flow 3—12670
localization of a heat source for a given temperature field 3—5751
LWR rod bundles under accident conditions, BUSH computer code for heat transfer calc. 3—6302
magnetofluid seal, heat transfer effect on limiting characts. 3—7579
marine water reactor, helically coiled once through steam generator, two-phase flow parameters 3—45619
mass transfer in tube banks in fully developed region 3—17977
measurement by linear Fick's law calorimeter 3—5526
meridional heat transports in World Ocean 3—4886
metal hydride hydrogen storage beds space-time dependent temp. and composition props. determ. using RET 1 computer code 3—53595
metal oxides, reduction in metal carbide fusion superheated with plasma *(French)* 3—43978
methanol-water, condensation on flat plate, heat transfer 3—37325
MHD flow through porous straight channel, Hall effect 3—46656
MHD laminar free convection flow with Hall effects past a porous vertical plate 3—42319
MHD oscillatory flow, and heat transfer, between conducting plates 3—32809
micropolar fluid viscosity coeff. calc. formulae deduced from viscometric and thermal meas. 3—42333
mixed boundary value problem, thermal reaction of fluid and unevenly heated solid 3—27502
molecular heat, mass and momentum transfer, universal relations 3—40529
molten core debris, downward heat transfer correlation for penetration into concrete 3—31734
moving bubble, mass transfer during slow chem. reaction 3—37543
moving phase change front, Stefan eqns. 3—27371
multi-layer wall heat transfer anal. by state transition matrices 3—56414
multi-layer wall heat transfer by state transition matrices 3—37326
multicomponent chemically nonequilib. gas mixture in supersonic nozzle with porous walls, friction, injection effect 3—2138
multidimensional eqns., soln. and reduction methods 3—42236
multilayer insulation for cryogenic liquid transfer lines, thermal characts. 3—36005
natural draught cooled container for radioactive materials, calc. model for thermodynamic anal. *(German)* 3—31516
non-evaporating region in a downward flow vertical liquid film type evaporator 3—17939
nondissipative medium, acoustic streaming 3—12405
nonequilibrium hydrodynamic fluctuations and generalised entropy 3—233
nonisotropic turbulent gravity flow, two eqn. model 3—56540
nonlinear heat equations, asymptotic behaviour 3—17781
nonstationary convective heat and mass transfer in fluid at high Peclet numbers 3—2056
nuclear power plants, fluctuations of the mass velocity of the working fluid in separating superheaters 3—55215
nuclear quadrupole thermometer, temp. distrib. in thermometric material, errors 3—49371
nucleate boiling heat transfer, system press. and surface roughness effects 3—1934
Nusselt number oscillation at straight-helical tube junction, heat transfer enhancement 3—37487
Nusselt-type condensation on triangular fluted surface, anal. 3—22302
octadecylene surfactant soln. boiling in steam generators, heat transfer and vaporisation 3—37327
office buildings, heat transfer from hot to cold areas, heat pump appl. 3—58544
organic Rankine cycle working fluid selection for direct-contact heat exchange with solar pond 3—39509
orthogonal anisotropic materials, thermal cond. by a transient hot wire method 3—56420
OTEC noncylindrical heat exchanger tubes, biofouling monitors 3—14992
packed bed heat exchangers, for thermal energy storage systems, thermal balance eqns., analytical solns. 3—7383
packed bed thermal storage system, heat transfer, transient anal. 3—27594
packed bed thermal storage unit of hot air solar heating system, design and sizing 3—15005
packed beds, input-response heat transfer meas., infinite bed assumption validity 3—46545

heat transfer continued
packed-bed storage system thermal behaviour anal. 3—4411
parallel channels, cylinder-type turbulence promoters, flow patterns, heat transfer 3—16944
parallel flow and counterflow heat exchangers, response to sinusoidal flow rate changes of large amplitude 3—51088
parallel flow multichannel heat exchangers differential eqns., coeff. matrix props. 3—51045
particles in stream with low Peclet numbers, mass and heat exchange 3—42297
periodic heat flow into ground under building, Fourier transform 3—27361
photoacoustic effect, thermoacoustic treatment, 3D, 1D and piston models 3—12479
photoacoustic transient heat exchange meas. 3—42104
pipes, thermal efficiency of longitudinal ribs, rectangular profile deposits effect 3—37328
pipes with metal fiber capillary structs., heat transfer charact. in heating zone 3—51091
plasma flow, heat exchange in heating spot *(Russian)* 3—37630
polydisperse system of drops, vaporisation, similarity regime kinetics 3—12750
porous circular cylinder immersed in moving stream, heat transfer 3—22460
pumped-fluid solar collectors, collection of energy at specified output temp. 3—14994
PWR LOCA, decay heat removal experiments in U-tube boiler two-loop test facility 3—50021
PWR rod bundle dispersed flow film boiling heat transfer neat spacer grids 3—41243
PWR steam generators simulation of heat transfer behaviour using RELAP4 and RELAP5 computer codes 3—55249
radiation flux of gasdynamic MHD power station 3—2134
radiative heat transfer, graybody approx. 3—1935
radiative-conductive heat transfer calc. in semitransparent plate by Monte Carlo method 3—27520
rate prediction, interpolation method 3—27506
reacting gas flow, endothermic, heat transfer in heated tube 3—2047
reactor steam generators, heat transfer in primary water distribution *(Czech)* 3—11406
recirculating flow in confined jet, wall heat transfer study 3—37473
rectangular cavities in laminar and turbulent flow, separated zone heat transfer 3—42240
relativistic plasma, balance eqns. 3—51373
resonantly absorbing mol. medium, spectral props., transport phenomena 3—51165
return bend, heated convex wall, turbulent heat transfer charact. 3—51115
return bend of rectangular cross-section, turbulent heat transfer from heated concave wall 3—42241
review, 1981 literature 3—20597
rivers, thermal pollution, time depend., three dimens. model 3—42233
between rotating eccentric cylinders with different radii 3—12664
roughened surfaces, heat transfer and friction factor performance 3—50907
saturated nucleate boiling along heated wire, statistical anal. 3—50910
school with passive solar heating, thermal comfort and user control, effects on design 3—58556
semi-infinite medium thermal stresses, sinusoidal flux effect 3—37319
semiconductor, electrothermal instabilities, nonlinear heat transfer conditions to liq. N_2 3—28344
semilinear heat eqns., channel and cylindrical flow of viscous fluids 3—51113
shallow solar pond: state-of-the-art 3—9482
silkworm cultivator design and temp. regime for year-round operation 3—9399
slit-type quenching apparatus, high temp. heat exchange in gas flow 3—42309
softwood, vacuum contact drying, heat and mass transfer *(French)* 3—22458
solar absorber convertors, flat-plate, conditions for optimal collection of solar energy 3—14995
solar absorber-convertor non-uniform fluid flow distribution effects on thermal performance 3—24628
solar absorber-convertors, evacuated-tube type, transient response model 3—15000
solar air heater, double-flow, non-porous, theory and anal. 3—19597
solar freon generator, hotbox type, temperature distribution 3—9470
solar pond power plant with direct contact boiler, thermal anal. 3—15006
solar-induced turbulent flows in passive air collectors, two-dimens. model 3—44147
solid surface, transient thermal change, moisture and temp. depend., failure site location 3—37424
solidification of curvilinear walls and hollow bodies under transient conditions, approx. soln. 3—37321
spend nuclear fuel storage pool, gravity driven flow and heat transfer 3—41195
spent nuclear fuel storage pools, thermal anal. using GFLOW code 3—11387
spherical packed beds, mean heat transfer and energy efficiency *(Russian)* 3—56610
spheroids, freely rotating, flow pathlines in simple shear flow 3—51126
stagnation point flows, 3D laminar, with mass transfer, compressible 2nd order boundary layers 3—2026
stagnation point of jet flowing over a baffle, heat transfer and microstructure 3—22455
steam generator tubes, post-dryout heat transfer at high press. 3—46554
steam/water central solar receiver development and design for commercial applications 3—15001
Stefan problem, multidimensional two-phase, error estimates 3—22303
Stefan problem with imperfect thermal contact at the interface 3—32740
Stefan problems, weak formulations *(German)* 3—37335
subcooled nucleate pool boiling heat transfer in microgravity, TEXUS IIIb expt. *(German)* 3—7386
submerged bodies in saturated liqs., boiling, crit. heat flux, hydrodynamic model 3—46550
submerged burners, in reactor bubble velocity in gas-liquid bed 3—56624
superconductor, composite, transient heat transfer for normal zone propag., He cooled 3—8618
superconductors, heat transfer model for normal zone propag., insulation and enclosure effects 3—18820

heat transfer continued
superheated and subcooled cryogenic liquids, vapour bubble size and motion, theory 3—32786
superheated liq. spheres with temp. depend. props., solidification *(French)* 3—13411
superheating instability in planar layer, heat exchange effect 3—50919
supersonic air flow, over cavities, heat transfer coeffs. 3—22448
supersonic boundary layer, cooling influence on stability 3—42258
swirled tube flow, turbulent boundary layer, heat and mass transfer 3—22449
temperature and velocity fluctuations in the wall region of turbulent flow 3—22430
temperature distribution in and around a buried heat generating sphere 3—12492
temperature-dependent viscosity effects on slow flow past hot sphere 3—22463
temporal evolution near the Rayleigh-Bernard instability in cylindrical containers 3—32732
thermal conductivity, boundary-value problems, Laplace transforms and memory eqns. 3—27355
thermal conductivity, direct and inverse problem, basis coordinates 3—2048
thermal flux meas. using linear calorimetric probe, automation, turbulence and flow rate effect 3—7659
thermal instability in porous medium in presence of suspended particles, rotation, solute gradients 3—32795
thermally-stratified flow, turbulent momentum, heat transfer 3—22503
thermoacoustic oscillations in liquid at supercritical pressures, amplitude-frequency response 3—56557
thermophysical props., conf., Gaithersburg, MD, USA (June 1981) 3—30556
three dimens. body ablating under influence of heat fluxes 3—7612
three-dimensional jet-obstacle interaction, turbulent boundary layer, heat transfer 3—37472
three-layer system, heat transfer props., computer calc. *(Russian)* 3—17778
transient heat transfer between laminar boundary layer and plate containing internal heat source 3—2049
tube bank, heat transfer improvement by first row cylinder roughening 3—42109
tube bundle in turbulent axial flow, heat transfer enhancement 3—22442
tube-in-tube type exchanger, performance for cryogenic appl. 3—30866
tubes, heated, fluid friction and heat transfer at supercritical press. 3—2122
turboexpander application in energy recovery from low-temperature waste heat 3—14987
turbulent air flow in horizontal pipes in gravity field, friction and heat transfer 3—51227
turbulent atmosphere, random permittivity field, numerical modelling 3—7581
turbulent flow, struct., thermal nonstationarity effect 3—7554
turbulent gas flow in slotted channel, fluctuation effect on heat coeffs. 3—22444
turbulent heat transfer downstream from an abrupt pipe expansion 3—46566
turbulent heat transfer in a pipe, $\overline{v\theta}$ eqn. soln. with local equilib. assumption 3—2060
turbulent intensity and heat transfer rate in mixing vessel 3—46561
turbulent shear stress across boundary layer 3—37462
turbulent viscosity of external flow effect on heat transfer in boundary layer 3—37460
twisted gas-liquid layer, heat and mass transfer 3—2113
two-element flow control orifice, heat transfer downstream 3—2059
two-layer density stratification, stability and vertical mixing on bottom heating 3—42284
two-phase bubble flow in concentric annuli, momentum and heat transfer 3—51196
two-phase choked flows through sequential orifices, with heated spacer-reservoirs 3—37550
two-phase two component annular flow heat transfer and flow charact. 3—51105
universal graph for optimal dimensions of solar collector plate 3—24633
unsteady incompressible boundary layers near asymmetric stagnation point 3—51055
unsteady laminar boundary layer heat transfer, instant nonsimilarity solns. 3—7549
unsteady thermal entrance heat transfer of laminar power law flow in annuli *(Chinese)* 3—2058
vapor-gas front in the condenser of a two-dimensional gas-controlled heat pipe 3—27606
vapour condensation on plate during horizontal motion of coolant 3—37479
vapour flux laminar flow in condensation region of heat tubes 3—51226
vapour-gas mixture, evaporation and condensation, kinetic anal. 3—22304
vapour-liquid bubble medium, heat and mass transfer, shock wave struct. 3—27590
vertical porous heat storage system composed of fluid and spherical solid particle, heat transfer 3—7587
viscoplastic media, MHD couette flow, channel wall influence on hydrodynamics 3—37491
viscous fluid between rot. disks, laminar flow, vorticity flow function 3—2021
viscous sublayer in two-dimens. incompressible turbulent wall boundary layer 3—27496
wall temperature calc., post dryout heat transfer 3—12669
water, boiling in high thermal cond. capillary structs., heat exchange 3—42108
water, liquid film flowing down heated surface, breakdown heat fluxes 3—27509
water, nucleate boiling in vertical upflow and downflow 3—51230
water, subcooled pool boiling, heat transfer in transition boiling 3—2038
water, subcooled pool boiling charact. curves, vapour bubbles and surface temp. var. 3—56418
water, subcooled pool boiling characteristic curves, heat transfer and vapour bubble minimisation, contamination effect 3—56417
water, turbulent tube flow, heat transfer augmentation 3—22446
water bodies, formula for vertical eddy diffusion coeffs. under conditions of nonneutral stability 3—15465
water boiling in a microthermosiphon, heat transfer intensification 3—12495
water inward freezing in circular and square pipes 3—17775

heat transfer continued
water vapour condensation and heat transfer from humid air to horizontal tubes arranged in-line in bank *(Japanese)* 3—32587
wet vapour flow in heat-pipe vaporiser, coolant drop entrainment study 3—7638
Al, electron beam induced heat flow transients, heat diffusion eqn. calc. 3—42670
Al, ion implanted and pure, laser irrad., impurity profiles and heat flow 3—27990
Ar flow boiling, fouling phenomena obs. 3—32590
H_2 storage using FeTi hydride beds, designs modelling and evaluation 3—39538
H_2O dryout heat flux or horizontal nonisothermal tube during heat transfer 3—2061
H_2O pool boiling phenomena, polymer additives effects 3—2762
He I, Kapitza resistance influence on nucleate boiling at solids 3—37486
He, liquid, channel flow in horizontal channel, heat transfer to near-critical state 3—51878
He pool-boiling heat transfer from small monolithic Cu stabilisers 3—30874
^{3}He-^{4}He dilute solns., heat transfer between phonons and quasiparticles 3—57168
^{4}He, non-superfluid, boiling in centrifugal force field, crit. heat transfer charact. 3—13424
^{4}He phase separators flow characts. 3—35998
^{4}He, superfluid, cooling channel flow, heat transport mechanisms obs. 3—38149
^{4}He, superfluid, heat transfer performance, for use in superconducting magnet technology 3—38148
^{4}He, superfluid, subcooled, axial heat transport, channel restrictions 3—42868
Mg_2Ni hydride heat storage system heat transfer characts. 3—9492
N_2 flow boiling in horizontal tube 3—32808
N_2, liquid, rapid cooldown of metals, thin insulating layer effect obs. 3—32591
N_2-Freon-12, liq., heat transfer with bubble boiling on porous Cu/Al coating 3—50904
NH_3, turbulent flow in heated circular tubes in presence of catalytic dissoc. at walls 3—12636
N_2O_4, dissociative turbulent pipe flow, heat transfer 3—37584
Na liquid, flow over coiled-tube heat exchanger, heat transfer 3—22441
NbTi-Cu coated with polyvinyl formvar film, heat transfer to liquid He 3—33825
Ni, electrothermal instabilities, nonlinear heat transfer conditions to liq. N_2 3—28344
Pb crystallites, time-depend. melting and superheating 3—2754
n-Si, electrothermal instabilities, nonlinear heat transfer conditions to liq. N_2 3—28344
ZnSe-electrolyte interface, photocorrosion study to photothermal deflection spectroscopy 3—9335

heat treatment
see also annealing; normalising; quenching (thermal); spheroidizing; tempering; thermomagnetic treatment; thermomechanical treatment
alloys, modulated struct. form., statistical theory *(Russian)* 3—51799
Araldite B, thermal shock effects rel. to laser beam heating *(Polish)* 3—19350
arc plasma filament, heating of ceramic and silicate material surfaces 3—39267
Astroloy, Ni-base superalloy, supersolidus sintered preforms, necklace struct. obtained by forging 3—9017
biotite mica, heat treatment and oxidation, Mossbauer study 3—19020
carbide, low-Z fusion reactor materials, surface comp. changes with ion bombardment and heat treatment 3—21522
ceramics, firing process, use of acoustic emission in NDT *(Czech)* 3—14822
epoxy systems, struct. changes, evaluation by moisture sorption-desorption and dynamic mech. studies 3—24268
ferromagnetic materials, soft, heat treatment 3—39259
fibre reinforced plastic and fibre/matrix interfaces, temp. depend. of strength *(Japanese)* 3—58222
fine magnetic powders with super high coercivity, surface struct. 3—57182
glass, crack healing, using double torsion loading config. 3—39247
glass, heterogeneities, small angle scatt. studies 3—13106
glass, porous, vycor type, rel. between pore struct. and doping 3—33127
glass, thermal shock effects rel. to laser beam heating *(Polish)* 3—19350
glass ceramics, crystn., microstructure, heat treatment effects, elec. resist. and thermal anal., review 3—33116
graphite fibres, derived from benzene, Raman spectra and resist. meas., effect of intercalation 3—23951
Inconel X-750, SCC, effects of heat treatment and comp. 3—34540
Invar, heat treatment influence on C distrib. and microinhomogeneity 3—58141
merocyanine dye Langmuir films, ESR 3—38678
metallic materials, stress relax. minimisation by heat treatment 3—53115
metals, FCC, critical strain hardening, grain growth, dislocation struct. *(French)* 3—58133
mica, industrial, high temp. transform. 3—58137
phosphor, electroluminescent, Destriau-type, long-living, emission intensity-time depend. 3—19203
phosphosilicate glass film, CVD, on Si substrate, thermal stress study 3—47239
photographic layers on AlH_3 substrates, thermostat ageing *(Russian)* 3—20935
polyvinylidene fluoride, isothermal ageing of piezoelectricity based on long-term heat treatment 3—19067
PVC, dielec. permittivity and loss, thermal history influence 3—19048
PVC and blends with rubber modifier, mech. behaviour and deformation *(Russian)* 3—14678
pyrocarbon coating, depthwise structural inhomogeneity 3—8350
quartz containing porcelain subjected to low rate thermal changes, acoustic activity 3—53085
silica glass:Ti(Eu)(Ce), absorption and fluorescence spectra, melting and heat treatment effects 3—34140
solar furnaces, industrial prospects *(French)* 3—49377
steel, alloy, 40KhN2MA type, magnetisation props. in weak and moderate fields, analytical description *(Russian)* 3—28608
steel, alloy, mech. props., effects of thermal cycling *(Korean)* 3—29170
steel, austenitic stainless, Cr-Ni, oxidation of C and alloying elements, thermodynamic anal. 3—34549

heat treatment continued
steel, austenitic stainless, elevated temp. transient isotropic hardening, microstruct. based eqn. 3—47919
steel, austenitic stainless, high N, struct. and mech. props., effect of V 3—53093
steel, austenitic stainless, sintered powder metallurgy, corrosion resistance, methods of improvement 3—9213
steel, austenitic stainless 3—43891
steel, bearing, cementite dissolution during austenisation, hydroextrusion effects *(Russian)* 3—24271
steel, BN precipitation in isothermal treatment process *(Chinese)* 3—53060
steel, C, austenisation, X-ray diffr. study *(Russian)* 3—39111
steel, carburizing process, microprocessor control, math. modelling 3—58271
steel, constructional, resistant to H embrittlement, alloying additions and struct. 3—53200
steel, Cr, structural, optimisation for improved strength and toughness 3—34462
steel, Cr-Al, ferritic, heat resistance, strength and embrittlement increase by thermal stress 3—47861
steel, Cr-Mo, mech. relax. response rel. to heat treatment 3—53114
steel, Cr-Ni-Mo-V medium alloys, hot cracks within welding process affected zones *(Czech)* 3—58140
steel, Cr-Ni-Si, ferritic-austenitic, heat resistance, strength and embrittlement increase by thermal stress 3—47861
steel, diffusion of C during thermocyclic treatment *(Russian)* 3—38128
steel, dual phase, stress-strain behaviour in forward and reverse straining, effect of heat treatment 3—14680
steel, eutectoid, plain C, isothermal form. of austenite 3—53083
steel, G-V, AISI 6150 alloy, isothermal transformation, austenitizing temp. effect 3—53045
steel, hardenability prediction, continuous cooling transform. data, regression analysis 3—58123
steel, high speed, R6M5, strength and phase comp. 3—53029
steel, low alloy, fracture toughness, mech. props. correlations 3—34423
steel, low alloy, sea water corrosion behaviour *(German)* 3—53294
steel, low alloy, ultrahigh strength, grain boundary phase obs. in laser heat treated samples 3—22919
steel, low alloy pressure vessel type A533B, stress relaxation prediction under multiaxial stresses 3—53103
steel, low alloy RPV, radiation embrittlement annealing 3—43862
steel, low C, austenite-ferrite structs., hot torsion deformation 3—43915
steel, low-alloy, dual phase sheet, development 3—39175
steel, maraging, ductility characts., struct. sensitivity in age hardening 3—29139
steel, maraging, Ni, lath martensite formed from deformed austenite, morphology 3—43887
steel, maraging VNS-2, temp. relationship of retarded fracture process, mobile H content 3—58236
steel, medium C, ultrahigh strength, heat treatment, fracture props. rel. to comp. 3—53240
steel, Mn-(Nb), yield and impact strength, plate gauge depend., cooling rate effect 3—43914
steel, Mn-Si, dual phase sheet, development 3—39175
steel, Ni type, thermal hold at nitriding temp. influence on fatigue resist. 3—58238
steel, Ni-Cr, Charpy impact toughness, effect of heat treatment *(Korean)* 3—53192
steel, Ni-Cr, embrittlement, role of N 3—24346
steel, nitrided case, N solubility and thermodynamic activity, alloying elements effect 3—34544
steel, stainless, Ca, ferritic, σ-phase form. 3—34330
steel, stainless, duplex 329, corrosion resistance, effect of heat treatment between 400 to 700°C 3—39276
steel, stainless, SUS-304L, surface struct. variation with heat treatment, SEM and AES study 3—42901
steel, type A302-B 3—43871
steel 25 and 40, austenite transformation in intercrit. temp. range, α-phase form. 3—24207
steel Mn-Si, high strength, retained austenite and mech. props. *(Korean)* 3—39214
steels, martensitic stainless, structural transformations and mechanical props. 3—4058
superalloys, Ni-base and Fe-base, room temp. tensile props., influence of carburisation 3—19388
surface heat treatment, laser and electron beam hardening, review 3—58270
thermoluminescent dosimeter detectors, laboratory technique 3—45707
trifluoroethyl methacrylate copolymer, CR-39, vapour phase transfer process, for GRIN rod 3—37153
vacuum breakdown, thermal instability of anode in prebreakdown stage 3—18155
wire inspection, moving, quality of heat treatment 3—34597
Zircaloy-2 cladding, material condition effect on I_2 SCC susceptibility 3—19454
AgBr photographic emulsions, sensitivity temperature dependence experiment *(French)* 3—45227
Al alloy, stress corrosion reinstant, high strength, type 7075, microstruct. study, TEM obs. 3—9096
Al alloys, high strength, factors influencing fracture toughness 3—53220
Al alloys, oxide film rupture, reanodisation and stress corrosion cracking 3—43985
Al-Cu alloy D16T sheets, temp. to which heated determ. from struct. and props. 3—24275
Al-Mg, struct., plastic deformation and corrosion resistance *(Russian)* 3—24292
Al-Mg (90, 10 wt.%), recovery heat treatment after natural ageing 3—34366
Al-Si interface, chem. interdiffusion, AES study 3—33520
Al-Zn-Mg (4.5, 2 at.%), struct. changes during continuous heating, DSC and small-angle X-ray scatt. study 3—19340
Al_2O_3, strengthening by heat treatment 3—43855
Al_2O_3:MgO fibres, doped and undoped, exaggerated grain growth, microscopy study *(Japanese)* 3—51815
Al_2O_3-SiO_2-Li_2O-ZnO glasses, β-eucryptite solid soln. form. during crystn. 3—2432
Al_2O_3-ZrO_2 composites, critical microstruct. for microcracking 3—39240
AuFe, magnetic behaviour, atomic order, Mossbauer spectra 3—57649
B fibre reinforced Ti-Al-V, hot pressing and struct. 3—29038
B_2O_3-Al_2O_3-SiO_2 system, glass ceramic form. 3—34273
B_2O_3-SiO_2-PbO glass, crystn., TEM study 3—27854

heat treatment continued
$BaPb_{0.75}Bi_{0.25}O_{3-y}$, anomalous magnetoresist. and elec. resist. 3−47368
$BaPbO_3$, electrical conductivity, mixture composition and baking conditions effect 3−52140
Be, microplastic deform. study *(Russian)* 3−33341
C fibre surfaces, industrially treated, effect of heat and exposure to O, XPS studies 3−14442
C fibres, B modified, BN form., X-ray photoelectron spectroscopy study *(Russian)* 3−43786
$CaHPO_4.2H_2O$, powdery, changes in surface props. during thermal treatment *(Japanese)* 3−18536
CaO-FeO-SiO_2, glass, liquid-phase separation processes 3−23050
Cd-Zn, unidirectionally solidified eutectic alloy, compressive deform., metallography 3−53133
$CdGe_{1-x}Si_xAs_2$ glassy alloys, phase stability, microstruct. and glass form. 3−27855
CdS-Cu_xS solar cell, heat treatment effects 3−39475
CdTe:In, solution-grown, cathodoluminesc., effect of Cd-vapour and Te-vapour heat treatments 3−3826
$CeCu_2Si_2$, heavy fermion systems, gapless supercond. and transition temp. variation 3−52294
Co and alloys, cold worked, tensile strength, elongation, allotropic transformation effect 3−43919
Co-base superalloy, 73C, directionally solidified, cyclic response 3−58251
Co-Cr-Mo, Vitallium superalloy, precipitation under heat treatment, expt. study 3−9074
Co-Cr-Mo alloys, phase diagram calc., thermodynamic assessment of heat treatment 3−34279
Co-P films, amorphous, struct. and mag. props., effect of heat treatment and ion irrad. *(Russian)* 3−27843
CoO selective absorber coatings high temp. degradation 3−53588
CoPt, ordering kinetics after heat treatment, Mossbauer study *(Russian)* 3−29073
CrO_2 powders, stabilisation process, mag. tape material appl. 3−3979
Cu, grain growth, irregular, nucleus-free mechanism 3−29102
Cu surface, laser produced plasma, compound formation obs., surface treatment appl. 3−24388
Cu-Ni-Al, shape memory alloy, melt spinning, transform. temp., DSC 3−43834
Cu-Sn films condensing in vac., growing surface struct. 3−38256
α-Cu-Zn, grain growth, irregular, nucleus-free mechanism 3−29102
Cu_xS, evaporated films, effect of thermal treatment on optical and elec. props. 3−38503
Cu_xS thin films, transport props., heat treatments effects 3−38502
Fe, cast, remelted ductile, microstructure transforms., metallographic study 3−39102
Fe, cast, white, cementite transform. into austenite 3−24222
Fe powders, sintered mag. cores, coercive force 3−47527
Fe-C system, carbides and diamond formation under high temp. and press., mag. study 3−18390
Fe-Ni-Al-Ti mag. alloy, semi-hard, struct. and mag. props. 3−58145
Fe-Ni-Ti-Co, martensite morphology, effect of ausaging 3−43867
Fe-Ti absorption of H_2, selective 3−47220
FeCoSiB amorphous alloys, zero-magnetostrictive, disaccommodation elimination 3−28644
Fe_3O_4-Fe_2O_3 film, prep. by reactive condensation, oxidation and coercivity 3−18954
Fe_7Se_8, ferrimagnetism, 3d transition metal solute effects 3−57694
$Fe_{75}Sn_{25}$-$Co_{75}Sn_{25}$ alloys, metastable phases, X-ray and electron diffr. studies 3−37855
GaAs epitaxial film, heat treatment, ellipsometric and AES studies 3−14621
GaAs:Cr, semi-insulating, thermal conversion, cathodoluminesc., photoluminesc. and SIMS study 3−43635
GaAs:Si, MBE growth on heat-treated semi-insulating GaAs:Cr substrate, SIMS study 3−39034
GaAs-Au thin film interface, microstruct. and colour, heating effects 3−51963
Ge, laser-induced defects, H_2 passivation, DLTS study 3−46993
GeO film, heat treatment effect on struct. and props. 3−14612
$Ge_{0.957}Te$, phase transformations and ordering of nonstoichiometric struct. defects 3−56881
In_2O_3-ZrO_2 solid soln., heat treatment, elec. resist. and struct. 3−58136
$In_{20}Te_{80}$, metallic glass, crystn., X-ray diffr. and XPS study 3−33105
$K_2Mg_6Al_2Si_6O_{20}F_4/AlPO_4$-based materials, struct. changes and thermal stability 3−8185
K_2O-Al_2O_3-B_2O_3-Fe_2O_3 glass, Fe aggregation on heat treatment, optical and mag. study 3−13467
$KTaO_3$:Fe^{3+}, H diffusion correl. with relative concs. of cubic and axial sites 3−38132
$LaNi_5$, absorption of H_2, selective 3−47220
LiF(TLD-100) crystals, thermolum., rapid readout rate studies 3−3833
Lu_2O_3-TiO_2 system, phase equilibria 3−58108
Mg-Zn-Y-Zr, new high strength sheet alloy *(Chinese)* 3−4045
MgO-MnO_2 particle surface layers, high valence impurity-vacancy complex form., EPR study 3−57773
$Mn_{1+x}Sb_{1+x}Sn_x$ alloys, mag. props., struct. and Mossbauer spectra, temp. effects 3−18938
MnZn ferrite, CaO segregation 3−42778
Na_2O-B_2O_3-SiO_2 glasses, tie-line direction in liq. phase separation region, temp. effect 3−2820
Na_2O-SiO_2-Fe_2O_3-Y_2O_3 glass, Mossbauer and EPR spectroscopy study 3−3603
Nb-based superconductor, bronze route fabrication and props. 3−29028
Nb_3Sn multifilamentary superconductors, diffusion layer thickness calc., mathematical model *(Chinese)* 3−13982
Nb_3Sn multifilamentary superconductors, solid-liquid diffused, crit. currents and temps. meas. 3−23556
Ni, grain growth, irregular, nucleus-free mechanism 3−29102
Ni, superalloy MAR-M247, Co effect on microstruct. 3−14618
Ni-Al-Mo, γ/γ'-α-Mo, directionally solidified eutectic superalloy, microstruct. and dimens. stability, effect of thermal cycling 3−24272
Ni-B film, electroless plating, amorphous, struct. rel. to B conc. *(Japanese)* 3−58055
Ni-base alloy, heat resistant, fatigue resist., 873-1073K, struct. effect 3−43953
Ni-base superalloys, post-weld heat-treatment cracking, review 3−58202
Ni-Cr-W-Co-Mo-Ti-Al superalloy, investment cost, tensile props., stress-rupture, corrosion resist., rel. to B/C modification 3−58161
ϵ-Pb-Bi films for Josephson junction counterelectrodes, film comp. and thermal stability 3−47237
Se amorphous thick film, optical gap, heat treatment effects 3−52758
Se, vapour deposition, correlation between electrophotographic props. and original material props. 3−16437
Se-Te system, X-ray study 3−42524
Si (100) surface, thermal etching in Ar ambient 3−47971
Si, edge defined film fed growth ribbon, effect of heat treatment on bulk diffusion length 3−52179
Si, heat treatment studies of O defect-impurity interactions 3−2598
Si heavily doped wafers, behaviours of thermally induced microdefects 3−42592
Si, laser induced backside damage, characterization for gettering 3−56973
Si, polycrystalline cast, solar grade, grain boundary props., heat treatment effect, EBIC study 3−51628
Si polycrystalline solar cells, elec. props., effect of thermal treatment *(French)* 3−24586
Si wafers, heavily doped, thermally induced microdefects obs., intrinsic gettering appl. 3−51587
Si:^{31}P epitaxial layers, neutron transmutation doping, heat treatment effects 3−42629
Si:H single cryst., etch pits and dislocation rosettes, H impurity effect 3−56900
Si:O, electron irradiated, divacancy production enhancement 3−42601
Si:O, heat treated, donor states, DLTS studies 3−43078
Si:O, O diffusivity at donor formation temp., stress-induced dichroism study 3−33498
Si:O, thermally activated O donors distribution, expt. study 3−33284
n-Si/PtSi/(Ti-W)/Al Schottky contact, elec. degradation induced by heat treatment 3−18766
SiC coated B fibre reinforced Ti-Al-V, hot pressing and struct. 3−29038
SiC fibre reinforced Ni, phase boundary, effect of thermal cycling *(Japanese)* 3−9101
SiC fibre reinforced Ti-Al-V, hot pressing and struct. 3−29038
SiO_2 film, CVD, on Si substrate, thermal stress study 3−47239
SiO_2, vitreous, DC resist. of Na^+ ions, heat treatment effect 3−51844
SiO_2-Al_2O_3-ZnO-ZrO_2 glass, crystallisation and phase separation, thermal history effects 3−33125
$Sm_2(Co, Cu, Fe, Zr)_{17}$ magnets having high intrinsic coercive force and maximum energy product 3−14088
$Sm(Co,Cu,Fe)_76$, permanent magnets, struct. phase transitions obs. during heat treatment *(Russian)* 3−33417
SnO_2 thin films stability following heat treatment at 200°C in air, application in photovoltaic devices 3−34515
steel, V, dual phase sheet, development 3−39175
Th-Nb small-filament eutectic composite, supercond. props. 3−3358
Ti alloy, $\alpha+\beta$ type, heat treatment schedule w.r.t. phase comp. diagram 3−14630
$\alpha+\beta$-Ti alloy, fracture toughness, strength and microstruct. 3−14734
Ti alloy, high-temp. strength improvement methods 3−24251
Ti alloy rolled stock surface struct. effect on optical props. 3−9198
Ti alloys, antiseizing properties under different chemical and heat treatment 3−19432
Ti alloys, corrosion cracking and retarded fracture in air, heat treatment influence 3−58306
$\alpha+\beta$-Ti alloys, nature of α/β interfacial layer, effect of heat treatment 3−14686
Ti alloys, two-phase martensitic, β-solid soln. isothermal decomp. mechanisms 3−29074
Ti and Ti alloys, chemico-thermal treatment, intensification by rapid plastic deform. 3−19464
Ti sheet and strip, commercially pure, anisotropic props., processing and heat treatment influence 3−24321
Ti surface, laser produced plasma, compound formation obs., surface treatment appl. 3−24388
Ti-Al, alloy VT3-1, heat treatment influence on phase and struct. transform. *(Russian)* 3−34296
Ti-Al, low temp. thermocycling and plastic deformation, defect struct., TEM obs. 3−53086
Ti-Al-Sn-Mo-Si alloy, $\alpha+\beta$ type, heat treatment variations effect on mech. props. 3−24363
$\alpha+\beta$ Ti-Al-V, mech. props., heat treatment influence 3−24279
Ti-Al-V (6, 4 wt.%), quenched, fatigue and microstruct. props. 3−53195
Ti-Al-V (90, 6, 4 wt.%), fatigue strength, heat treatment effect 3−24280
Ti-Al-V alloy, cast, heat treatment processes and microstructures, mech. props. 3−24282
β-Ti-Al-V-Cr-Mo-Zr (75, 3, 8, 6, 4, 4 wt.%), thermomech. props., and stress corrosion 3−24277
Ti-Al-Y (8, 4 at.%), dispersion strengthened, laser surface melting, microstruct. EM obs. 3−43852
β-Ti-Mo-Cr-Fe-Sn-La, behaviour, C effect 3−29091
Ti-Mo-Zr-Sn alloy, VT30, precipitation of second phases *(Russian)* 3−24232
Ti-Mo(Ni) alloys, beta-type, strength and toughness, heat treatment effects 3−24366
Ti-Ni alloy, deform. and transform. temp., effect of heat treatment 3−39220
Ti-Ni-Zr (95.5, 2.5, 2.0 wt.%), for appl. in hot NaCl solns., heat treatment and props. 3−29225
TiO_2 ceramic pellets with asymmetrical elec. cond. unusual microstruct. 3−27972
YIG crystallisation in Na_2O-SiO_2-Y_2O_3-Fe_2O_3 glass system, effect of nucleating agents 3−29196
ZnO-Al_2O_3-SiO_2 glass-ceramic, particulate, indentation hardness 3−4111
Zn_2SiO_4 glass-ceramic, He diffusion, density, refractive index, thermal expansion coeff., thermal history depend. 3−56827
ZrC-C system, chemical gas-phase deposited, specimens high temp. electrical resistivity, temp. dependence 3−52137
ZrO_2, MgO partially stabilised, thermomech. props., effect of heat treatment 3−58210

heated cathodes *see thermionic cathodes*

heating
see also electric heating; induction heating; ovens; plasma heating; refractories; space heating
aerosol particles, combustion processes in EM field 3−53396
arc spots, thermal runaway prevention 3−18177
boundary heating of solids, performance index optical control 3−50908
ceramics, surface heating by arc plasma filament 3−39267
cometary comae, photochemical heating theory for H_2O and CO-rich comets 3−35532

heating continued
  Europa, internal heating rel. to liq. water layer and active resurfacing 3—35518
  fault frictional heating, generation mechanism for earthquake lights 3—53949
  ferromagnetic conductor, penetration and heating with impulse mag. field 3—8710
  heat shield materials reflectance under radiant-convective heating 3—37324
  intergalactic medium in clusters of galaxies effect of heating on gas mixing 3—16018
  interstellar molecular clouds turbulence and heating rel. to protostellar rotation 3—35584
  interstellar neutral clouds heating, role of acoustic waves in supernova remnants 3—10418
  inviscid fluid, local theory of thermo-acoustic phenomena 3—37340
  Io, tidal heating rel. to orbital evolution of Jovian satellites 3—15872
  ionosphere, relations between Birkeland currents, auroral electrojet indices and high latit. Joule heating 3—5030
  ionosphere, simulation of D and E-region high-power microwave heating using HF ionospheric modification expts. 3—10137
  ionosphere RF heating, appl. to artificial modulation 3—15718
  jet, laminar plane wall, temp. distrib. due to viscous heating 3—2100
  laser diode, heating, energy characts. 3—41836
  Mars atmosphere, heating during global dust storms rel. to atmospheric circulation 3—5192
  plane porous radiators with surface combustion 3—32589
  plate, orthotropic, subjected to bilateral heating over a rectangular region, stress anal. 3—50952
  plate with heat generation, transient nonlinear heating and cooling 3—27354
  semiconductor laser element temperature vs. optical freq., transient heating behaviour, cooling method 3—37042
  Seyfert galaxies, Compton heating of accreting gas rel. to broad emission lines 3—54509
  silicates, surface heating by arc plasma filament 3—39267
  solar active corona heating, theory of magnetic neutral sheets in evolving fields 3—35564
  solar corona heating, theory of magnetic neutral sheets in evolving fields 3—35565
  solar energy collector and control systems *(German)* 3—53487
  solar heating system, optimal control system 3—9405
  solar surface layer, magnetic field-related heating instabilities 3—30163
  stellar surface layers, magnetic field-related heating instabilities 3—30163
  water, stratified layers, heating cooling, energy transfer 3—51190
  water drop with insoluble core, heating under 10.6 μm radiation, explosive boiling 3—51659
  He I turbulent tube flow, heating and coding, forced convective heat transfer coeff. 3—22447
  Ti, heating by intense laser beam, oxide optical consts. changes effect 3—19230
  Ti, laser heating, stochastic regime 3—42656
heating, buildings *see space heating*
heating elements
  see also electric heating
  NbC heating elements, furnace, props. and struct. 3—24357
  NbC-Nb$_2$C-Nb heating elements, furnace, props. and struct. 3—24357
heavily doped semiconductor materials *see heavily doped semiconductors*
heavily doped semiconductors
  see also degenerate semiconductors; superconducting semiconductors
  band gap narrowing, extended Thomas-Fermi model 3—23240
  band tail structure, injection level and compensation degree effects, theory *(Chinese)* 3—38339
  compensated completely, semiconductor-metal transition 3—23446
  film on sapphire, elec. props., thermal stress effects 3—38506
  finite surface barriers, modified Thomas-Fermi approx. 3—52218
  impurity band tails based on semiempirical pseudopotentials 3—52075
  laser processing, review 3—8099
  many-valley, phonon attenuation study 3—22993
  metal-nonmetal transition, HF pseudocluster calc. 3—43027
  n$^+$-n-p asymmetric junctions, anal. and meas. of built-in-field in highly doped emitters 3—28420
  n-type, longitudinally magnetized, laser beam parametric decay to US-helicon waves 3—28374
  n-type crystals, energy band parameters, heavy doping effects 3—13701
  optical phonon damping under laser irrad. 3—2716
  superlattices, heavily doped n-type, impurity band tails calc. 3—57310
  In-BaTiO$_3$, donor-doped, resist. profile meas. using liquid-metal-wetted four-point probe 3—23480
  CdCr$_2$Se$_4$ single cryst., elec. cond. and magnetoresist. in alternating elec. fields 3—28361
  Cd$_{1-x}$Mn$_x$Te, excitons, exchange spin splitting effects, magnetoabsorption study 3—33643
  CdSnAs$_2$:Cu, n- and p-type, carrier lifetime, optical energy gap, photocond. study 3—18743
  Eu$_{1-x}$Gd$_x$O (SM$_x$O), carrier scatt. and transport phenomena 3—28363
  EuO$_{1-\delta}$, carrier scatt. and transport phenomena 3—28363
  GaAs, direct band-gap semiconductor, minority carrier transport, radioactive recombination effects 3—52171
  p-GaAs, heavily doped, impurity band tails based on semiempirical pseudopotentials 3—52075
  GaAs, heavily doped, photoluminescence edge calc. 3—38860
  p-GaAs, heavily-doped compensative material, exponential band-tails and lasing characts. *(Chinese)* 3—32355
  GaAs, highly excited, picosec. spectroscopy, free carrier relax. in continuum states 3—38910
  GaAs:Cr, semi-insulating, nonuniformity and dislocations, photoluminesc. intensity study 3—38858
  n$^+$-GaAs:S polycrystalline films, MOCVD growth using S$_2$Cl$_2$ dopant source, solar cell appl. 3—33278
  GaAs:Te, heavily doped crystals influence of polarity on facet effect *(Chinese)* 3—2591
  GaAs:Te, Zn, defect struct. induced by Zn diffusion, TEM study 3—27944
  GaSb laser, heavily doped, high power and optical damage resist. attainment 3—12182
  n-Ge, four electron pockets, magnon-like modes 3—52067
  n-Ge, heavily doped, many-valley, phonon attenuation study 3—22993
  Ge:As heavily doped solid soln., Frenkel pair form. in initial stage of precipitation 3—33247
heavily doped semiconductors continued
  In$_2$O$_3$, highly doped, as transparent heat reflecting coatings 3—17600
  InP, heavily doped, photoluminescence edge calc. 3—38860
  InP:Ge single cryst., high resolution TEM obs. of defect struct., electron beam induced degradation 3—18304
  InSb, nonlinear interactions under picosec. laser irrad., plasma form. and nonlinear melting 3—37961
  Si (111)-1×1 surface, electronic props., many-body effects 3—38449
  p-Si, dislocation sources, starting stresses 3—2570
  Si, electron and hole densities of states, ionized donors effect, Born approx. calc. 3—52003
  n-Si, heavily doped, band-gap shrinkage, luminesc., IR absorpt. and bipolar transistor data 3—38859
  Si, heavily doped, phonon self-energies 3—22989
  Si heavily doped wafers, behaviours of thermally induced microdefects 3—42592
  n-Si, impure, elec. and optical energy gap calcs. 3—43009
  Si on sapphire (vitreous quartz), heavily doped layers, stress relief, Raman study 3—51993
  Si, polycrystalline, transport props., three-dimens. model 3—18700
  Si, pulsed doping in high-current gas discharge 3—33282
  Si, SOS small-size p$^+$nn$^+$ diodes, double injection phenomena, hot carrier effects obs. 3—13888
  Si solar cells with highly-doped substrates, recombination mechanisms 3—39489
  Si wafers, heavily doped, thermally induced microdefects obs., intrinsic gettering appl. 3—51587
  Si:As, heavily doped, low minority carrier mobility and diffusivity meas. 3—38398
  Si:As CVD film, reduced press. deposited, diffusion source for Si-SiO$_2$ interface heavy doping 3—51852
  Si:As(P), heavily doped, grain boundary segregation 3—23047
  Si:B film, highly doped, deposited on Si(100) substrates, solid phase epitaxy 3—23198
  Si:H, amorphous p-i-n$^+$ solar cell, thin n$^+$ window layers, elec. props. meas. 3—14942
  Si:H, B, amorphous, optical absorpt. spectra and struct. props. 3—52803
  Si:H amorphous thin film MIS solar cells, fabrication, elec. and optical behaviour 3—58512
  Si:P, heavily doped, minimum metallic cond. and metal-insulator transition 3—52035
  Si:P, heavily doped, P inactivation mechanism 3—18335
  Si:P, heavily doped polycryst. film, thermal oxidation 3—9351
  Si:P, metal-nonmetal transition, Anderson localisation, sp. ht. and mag. props. 3—43026
  Si:P film, segregation of P at grain boundaries, STEM X-ray microanal. study 3—13456
  SnO$_2$, highly doped, as transparent heat reflecting coatings 3—17600

Heaviside layer *see E-region*

heavy ion excited X-ray emission *see ion microprobe analysis*

heavy ion-nucleus reactions
  for inelastic heavy ion-nucleus scattering, see "heavy ion-nucleus scattering"
  alpha transfer reactions 3—21336
  angular correlations of sequential decay following heavy ion reactions 3—21350
  anomalon problem and metastable phase in low density nucl. matter 3—49796
  anomalons as pineuts bound to nuclear fragments 3—31432
  anomalous, statistical arguments, possible statistical fluctuation 3—55054
  anomalous particle fragments search, proposed electronic counter expts. 3—55063
  C ^{238}U(^{12}C,X), 13-77 MeV/N, indept. cross sections for Na,K,Rb,Cs,Fr prod. 3—26270
  charge equilibration in heavy ion reactions 3—21297
  coherent surface excitations 3—21344
  colour model for anomalous nuclei 3—54885
  cosmic ray nuclei fragmentation parameters in nucl. photoemulsion 3—5063
  coupled channels calcs., nonlocal pot. localisation, Taylor expansion 3—26258
  damped heavy ion reactions, expt. characteristics 3—21345
  deep inelastic collisions, mean charge and mass drift, TDHF 3—26257
  deep inelastic collisions, model for mass and charge transfer 3—16742
  deep inelastic collisions, transition from coherent to statistical phase 3—45503
  deep inelastic scatt., simulation based on single-nucleon transfer mechanism *(Chinese)* 3—49880
  deep inelastic scatt. with nucleon transfer, ang. momentum distrib. calc. *(Chinese)* 3—49879
  deep-inelastic collisions, mass-energy correlations of fragments 3—31427
  deformed nuclei surface, classical treatment 3—11333
  dissipative collisions, time depend. shell model theory 3—26274
  dissipative heavy-ion collisions, step parameter ΔE in random walk model 3—16795
  dissipative phenomena in nuclear collisions 3—21342
  dynamics of collisions with deformed nuclei 3—21339
  dynamics of collisions with near closed shell nuclei 3—21339
  emitted particle spectra from gas dynamic model 3—36431
  energetic reactions, three-component fluid dynamics for description 3—6251
  energy loss, nucleon exchange and neutron-proton correl. 3—6253
  equilibration in dissipative nuclear collisions 3—21298
  fast fission, compound nucleus formation, deeply inelastic collisions 3—21346
  fission, heavy ion induced, and statistical model 3—6269
  fission relativistic hydrodynamics in a mean-field theory of nuclear matter 3—11351
  folding model potential and surface interaction of two nuclei 3—21269
  fragment angular momentum distrib., nonequilibrium-statistical model calc. 3—45548
  fragmentation, exclusive cross sections, variational estimates 3—31441
  fusion, barrier height and radius 3—810
  fusion, connection with elastic scatt. by modified SOD method 3—36433
  fusion, exotic nuclei studies 3—49893
  fusion, pre-equilibrium effect in multi-nucleon emission, exciton model 3—6277
  fusion and capture cross section dynamical calc. 3—49886
  fusion and zero-point motions 3—21349

heavy ion-nucleus reactions continued
fusion mechanism description using parabolic barrier with Coulomb interaction 3−6252
fusion model appl. using collective variables and microscopically related mass parameters 3−26261
fusion reactions, critical distance 3−11354
generalised impulse approximation 3−21326
high energy nucleus-nucleus collisions, chem. reactions in expanding fireball 3−55016
high multipolarity particle-hole isoscalar excitations, independent particle model 3−6190
high spin studies by multiple Coulomb excitation 3−45438
high-energy collisions, effective two-nucleon pot. 3−6255
high-energy collisions, role of product particles mean free paths 3−11336
hot quark matter from ultra-relativistic heavy-ion collisions, dilepton production mass spectrum 3−16798
hydrodynamical description of relativistic heavy-ion reactions 3−21300
hydrodynamical model 3−21333
identical heavy ions, total reaction and fusion cross sections, SOD method 3−801
inner-shell ionisation, compound-nucleus effect 3−41518
interacting fermion gases, mass distrib. from Schrodinger eqn. TDHF anal. 3−36373
interaction pot. calc. at finite temp. 3−11329
light particle emission mech. model for 10 MeV collisions 3−36430
light particles sequential emission, exact kinematical treatment 3−45536
local inter-nucleons pot. study using resonating group method 3−40973
localization effects in heavy ion collisions 3−21340
low-p_T particle prod. in nuclei, quark-parton model 3−6085
mass distribution, two-particle-two-hole excitation effects 3−55059
medium energy reactions, energy dissipation, nucleon exchange, fusion-fission, sequential splitting 3−49881
microscopic transport theory, neutron and proton transfer 3−21335
model for low energy nucleon spectrum 3−816
nonequilibrium emission of neutrons and light charged particles, 7-10 MeV/N 3−819
nonequilibrium light charged particle prod., p, d, t, α 3−31425
nuclear matter momentum distrib. 3−6185
nuclear physics workshop, Trieste, Italy, (Oct. 1981) 3−20576
nuclear response and imaginary pot., Fermi gas model 3−45539
nuclear structure, heavy ion beams, general theory 3−49760
nucleon-quark phase transition 3−36429
nucleons transfer, inertia effects anal. in transport model 3−11332
nucleus-nucleus interactions, very high energy, multiplicity 3−803
optical pot. real and imaginary part computation 3−55003
phenomenological heavy-ion potentials 3−21270
pion distributions, Monte Carlo study using fireball model 3−45549
population of collective states by transfer reactions using very heavy ions 3−21341
positron creation in heavy ion collisions, theory 3−40844
pre-equilibrium description of fast-light particle emission 3−41044
quantum diffraction effects in a statistical theory of heavy ion reactions 3−21296
quark matter formation and ultra-relativistic ion collisions 3−36185
quark-gluon plasma and the little bang 3−21064
quark-gluon plasma formation, quarkochemistry, quark matter 3−45541
relativistic, NN collision model, scale breaking in forward and backward regions 3−45550
relativistic collisions, anomalous fragment mean-free-path, quasimolecular resonances 3−31431
relativistic collisions, excitation of shape-vibrational modes 3−45552
relativistic collisions, heavy fragment prod., mass scaling phenomena 3−21328
relativistic collisions, hydrodynamic model, direct nucleon emission from hot, dense regions 3−809
relativistic heavy ion collision phenomena, finite size effects, nuclear fireball, shock waves 3−6262
relativistic heavy ion collisions, projectile fragment anomalous mean free path, comment and reply 3−21327
relativistic heavy ion experiments 3−21247
relativistic heavy-ion collisions, deuteron number prediction from cascade calcs. 3−6256
relativistic nucl. fragments, strongly interacting, Z depend. 3−26263
residue energy spectra bumps, giant resonances or bumps 3−21348
role in understanding the nucleus 3−11350
rolling friction, fusion cross sections and ang. momentum transfer 3−49892
RPA calcs., time evolution of coherent ground-state correlations, TDHF approach 3−54967
simple structure obs. in deep inelastic collisions 3−21347
spectator fragmentation model for intermediate energy reactions 3−21272
statistical, quasilinear response theory, friction tensor and energy transport anal. 3−49884
statistical and dynamical aspects of heavy-ion collisions 3−31446
stripping reactions as source of fast α-particles 3−36392
surface friction model description of deep inelastic collisions and capture 3−21271
target fragmentation processes, mass yield distrib. 3−31443
time-dependent meanfield studies of strongly damped collisions 3−21295
transfer reactions and inelastic scatt. 3−45554
transfer reactions near Coulomb barrier 3−45555
transfer reactions with heavy ions, anal. and problems 3−21338
ultra-relativistic heavy ion collisions, phys. conditions 3−21334
ultrarelativistic nucleus-nucleus collisions, quarkgluon plasma 3−45502
workshop on nucl. physics, Philadelphia, PA, USA (Sept. 1980) 3−44900
^{40}(^{40}Ca,X), fusion excitation functions, optical model anal. 3−41066
Ag(^{12}C,X), 86 MeV/A, angular distribution and mass of products 3−808
Ag(^{165}Ho,X), 1400 MeV, ang. momentum transfer and alignment, γ-multiplicity, Q-values 3−55056
Al(^{16}O, X), 8.8-19.6 MeV/N, nonequilibrium phenomena in fusionlike processes, momentum transfer 3−36443
^{27}Al(^{16}O,X), friction coeff., energy and target mass depend. 3−11337
^{27}Al(^{20}Ne, X), 32-151 MeV, fusion and deep inelastic scatt., fragment parameters 3−31464
^{27}Al(^{32}S, ^{31}P), mechanism with Skyrme-type potential, spectroscopic factors calc. 3−45501
^{27}Al(^{6,7}Li,X), 36 MeV, projectile breakup, light particle spectra, total reaction strengths 3−26259
(Ar,X), energy equilibration and anomalous mass drift 3−49887
(Ar,α) an emulsion, 2A GeV, ang. distrib. meas., Maxwell-Boltzmann parametrisation 3−45551

heavy ion-nucleus reactions continued
Ar+KCl collisions, cascade model, global variables 3−55058
Ar(Ar, X), 800 meV/A, proton inclusive spectra, fireball model predictions and critical density 3−11334
^{36}Ar(^{20}Ne,X), ^{56}Ni compound nucleus production, TDHF anal. 3−49882
(^{40}Ar,X), 1.85 GeV/u, relativistic collisions, search for fractionally charged projectile fragments 3−45544
(^{40}Ar, π^+), A=27-238, 0.25-1.05 GeV/N, inclusive cross section, charged particle multiplicity 3−31437
(^{40}Ar, X) on KCl, BaI$_2$, relativistic collisions, compression effects 3−11335
Au(^{20}Ne, X), 100, 156 MeV/N, light particle spectra, nuclear matter disassembly, energy depend. 3−711
Au(^{20}Ne,X), 5-42 GeV, spectator residues, statistical breakup model 3−49831
^{197}Au(^{12}C,X), X=α,Li,Be,B, 64, 67, 71.5 MeV, energy spectra, ang. distribs. *(Chinese)* 3−31442
^{197}Au(^{12}C,p), 25, 84, Mev/u, proton emission energy depend., moving source parametrisation 3−31433
^{197}Au(^{14}N,X), 140 MeV, reaction channels selection via particle K X-ray coincidences 3−55062
^{197}Au(^{20}Ne, X), 252 MeV, fragments intrinsic spin average magnitude and alignment study 3−11331
^{197}Au(^{20}Ne, X), exactly central collision by nucl. hydrodynamics 3−6258
^{197}Au(^{20}Ne,X), 290 MeV, quasielastic projectile dissoc. 3−815
^{197}Au(^{20}Ne,f), 5-42 GeV, peripheral collisions, momentum transfer to target, fission fragment correlations 3−26284
^{197}Au(^{36}Ar, X), deep inelastic collisions, fast α-particles emission 3−31444
^{197}Au(^{63}Cu,X), 605 MeV, fragment masses and energies, fission yields following fusion 3−16793
^{11}B(^{16}O, ^{15}N)^{12}C, nucl. compressibility and matching term effects, shell model interaction anal. 3−31429
^{9}Be(^{12}C, ^{8}Be$_{gs}$)^{13}C$_{gs}$ sub-Coulomb energy region, mol. resonances 3−21325
^{209}Bi(^{12}C,X), 61.1-73 MeV, reaction mechanism study 3−45553
^{209}Bi(^{136}Xe,X), 940, 1130, 1422 MeV, anal. of energy loss vs. fragment charge distribs. 3−55064
^{209}Bi(^{54}Cr,X)^{263}107, reaction model, chaotic regime dynamics 3−26260
^{209}Bi(^{59}Fe,X), one correl. α-decay obs. 3−31445
^{209}Br(^{84}Kr,HI), 712 MeV, reaction mechanism, transport model comparison 3−16801
C(C,X), 4.2 GeV/N, peripheral and central collisions, cross sect. 3−49865
^{A}C(^{28}Si,α), 75-102 MeV, selective population of states 3−811
^{A}C(^{6,7}Li,X), A=12, 13, 36 MeV, projectile breakup, light particle spectra, total reaction strengths 3−26259
(^{12}C, X), linear momentum transfer, explanation in terms of solitons 3−41043
(^{12}C,X), 2 GeV/N, 10-20 MeV/N, projectile fragmentation model, isotope yields 3−45545
(^{12}C,X), 4.2 GeV/N, in emulsion, central collisions, multiplicity and ang. distribs. 3−6247
(^{12}C,f) on ^{181}Ta, W, Re, Pt, ^{197}Au, Pb, ^{209}Bi, complete fusion cross section meas. from fission fragment ang. distrib. *(Chinese)* 3−41051
^{12}C(^{12}C, ^{8}Be$_{gs}$)^{16}O$_{gs}$ sub-Coulomb energy region, mol. resonances 3−21325
^{12}C(^{12}C, 6α), nuclear breakup into α-particles, cross section near yrast-region *(Russian)* 3−11339
^{12}C(^{12}C,X), 5-20 MeV, excitation functions from gamma ray studies, statistical anal. 3−16805
^{12}C(^{12}C,X), coexistence of molecular and shape resonances 3−55060
^{12}C(^{12}C,X), cross section direct meas. between 10 and 83 MeV/nucleon 3−26264
^{12}C(^{12}C,X), fusion excitation functions, optical model anal. 3−41066
^{12}C(^{12}C,X) 9.1-11.9 MeV, resonance observations from γ-ray yield and α angular distribution 3−16748
^{12}C(^{12}C,p), 12-37 MeV, prefusion, excitation funct. and ang. distrib. meas. 3−41049
^{12}C(^{13}C,X), 8.8-10.9 MeV, reson. in total fusion cross section 3−36440
^{12}C(^{13}C,$\alpha\gamma$)^{21}Ne, 2795 keV $J^\pi={}^1/_2{}^+$ level lifetime meas. 3−54980
^{12}C(^{14}N,X), fusion excitation functions, optical model anal. 3−41066
^{12}C(^{16}O, X), 20 MeV/A, incomplete momentum transfer components in fusion 3−41045
^{12}C(^{16}O,X), 8.5, 14 MeV (c.m.), dinuclear structure of resonances from optical theorem 3−45546
^{12}C(^{16}O,X), friction coeff., energy and target mass depend. 3−11337
^{12}C(^{16}O,X), rotation-vibration model for nucl. mol. *(Chinese)* 3−41052
^{12}C(^{16}O,α), 40-150 MeV, ^{24}Mg states, Hauser-Feshbach anal., compound nucleus mech. validity 3−21201
^{12}C(^{16}O,γ), ^{28}Si giant dipole resonaces built on excited prolate band, γ-spectra 3−21275
^{12}C(^{18}O,X), binary and fusion-evaporation channels, correl. among intermediate structures 3−16799
^{12}C(^{20}Ne, X), incomplete fusion from shapes of residue energy spectra 3−26268
^{12}C(^{20}Ne,X), 54-81 MeV, $Z\geq5$ reaction products, fusion cross section 3−26287
^{12}C(^{22}Ne,X), 178 MeV, light charged particle inclusive spectra at 0°, effective temp. 3−26262
^{12}C(^{28}Si, X), 50-105 MeV, fusion cross section, stat. yrast line model anal. 3−31462
^{13}C(^{16}O,X), 4.6-9.1 MeV, fusion cross sections, meas. and optical method anal. 3−36441
^{14}C(^{14}C, ^{12}Be)^{16}O, 60 MeV, ^{12}Be levels study 3−805
^{14}C(^{7}Li,tγ)^{18}O, natural parity states study in ^{18}O 3−36307
Ca(^{16}O, X), 8.8-19.6 MeV/N, nonequilibrium phenomena in fusionlike processes, momentum transfer 3−36443
^{A}Ca(^{A}Ca,X), A=40,42,44,46,48, 6.4 MeV/N, pairing correlation effects on mass transfer 3−49883
^{39}Ca(^{17}O, X), ^{56}Ni compound nucleus production, TDHF anal. 3−49882
^{40}Ca(^{A}Ca,X), A=40,42,44,46,48, 6.4 MeV/N, pairing correlation effects on mass transfer 3−49883
^{40}Ca(^{16}O, X), ^{56}Ni compound nucleus production, TDHF anal. 3−49882
^{40}Ca(^{16}O,^{12}C), 143-310 MeV, breakup dominance at higher energies, inclusive spectra 3−21329
^{40}Ca(^{16}O,^{12}C)^{44}Ti, microscopic finite range form factor 3−21337
^{40}Ca(^{16}O,X), 100 MeV, 250 MeV/N, mean field effects, nuclear matter compression, time-dependent Hartree-Fock approx. 3−6260
^{40}Ca(^{20}Ne, ^{16}O), 260 MeV, incomplete deep inelastic collisions, direct and dissipative modes 3−26267

heavy ion-nucleus reactions continued
^{40}Ca(^{40}Ca, X), fusion excitation function study 3−55073
^{40}Ca(^{40}Ca,X), 100 MeV/N, mean field effects, nuclear matter compression, time-dependent Hartree-Fock approx. 3−6260
^{40}Ca(^{40}Ca,X), central reactions, fast nucleons cold prod. 3−49888
^{40}Ca(^{40}Ca,X), high freq. part of giant reson. 3−739
^{40}Ca(^{40}Ca,x), fusion cross section and inertial mass param. calcs. by adiabatic TDHF method 3−36442
^{40}Ca(^{6}Li, d), 76 MeV, EFR-DWBA anal., direct α-cluster transfer, ^{44}Ti α-spectroscopic factors 3−21216
^{48}Ca(^{18}O,^{15}B), ^{15}B mass measurement, new mass formulae 3−54943
^{48}Ca(^{18}O,^{19}N), ^{19}N mass measurement, new mass formulae 3−54943
^{48}Ca(^{208}Pb,X), fusion reactions, dynamical picture 3−21343
^{A}Cd(^{12}C,xn), A=114, 116, 118 MeV, γ-γ energy correlations, collective moment of inertia 3−16684
^{140}Ce(^{14}C, ^{16}O), two-proton pickup, transitions, analogies with (p,t) 3−21290
Cl(^{40}Ar, X), central collisions, charged-particle exclusive anal. 3−55065
^{59}Co(^{32}S,X), 5 MeV/N, angular dep. of fissionlike fragmentation 3−36432
^{52}Cr(^{16}O, X), X=2n or 3n, 35-51 MeV, absolute cross section, gamma de-excitation effect 3−817
^{52}Cr(^{208}Pb,X), fusion reactions, dynamical picture 3−21343
Cs(^{16}O,X), 16.4 Mev/n, in CsI, ejectile parameters, transfer and breakup reactions 3−31434
Cu(^{40}Ca,X), 4 MeV/N, very neutron deficient isotopes below ^{100}Sn, β-decay props. 3−735
Cu(^{20}Ne, spallation), 211, 377 MeV/N, product cross sections, isobaric mass yield curves, abrasion-ablation model calcs. 3−16804
Er(Kr,X), deep inelastic, nucleon exchange effects on ang. momentum and energy transfer 3−26255
^{14}Er(^{16}O,^{16}O$'\gamma$), A=162, 164, 166, 168, 170, 48 MeV, quadrupole moment and decay branching ratio of $2^{+'}$ states 3−45433
^{166}Er(^{16}O, ^{15}O)^{167}Er, high-J orbital states 3−45440
^{166}Er(^{16}O,4n), 85 MeV, ^{180}Os rotational band crossings, $1/2^{-}$ |541| quasiproton alignment 3−16688
^{166}Er(^{84}Kr,X), 12.5 MeV/μ, proximity and nonequilib. effects 3−49891
^{166}Er(^{86}Kr,X), 11.9 MeV/N, deep inelastic, preequilib. neutron emission, neutron spectra 3−26273
^{168}Er(^{18}O,4n)^{182}Os, population of high spin states and side bands 3−21210
F(^{20}Ne, X), 425 MeV/N, total event struct., rigidity flow anal. 3−36436
(Fe,α) on emulsion, 2A, 0.9A GeV, ang. distrib. meas., Maxwell-Boltzmann parametrisation 3−45551
Fe(^{132}Xe,X), fusion yields, evidence for phenomenological capture (extra push) 3−11353
^{54}Fe(^{7}Li,^{6}He), 48 MeV, angular distributions, DWBA calcs. with Woods-Saxon potentials, ^{55}Co spectroscopic factors 3−16754
^{54}Fe(^{7}Li,^{6}Li), 48 MeV, angular distributions, DWBA calcs. with Woods-Saxon potentials, ^{55}Fe spectroscopic factors 3−16754
^{56}Fe(^{7}Li,X) 3−6250
^{58}Fe($^{20\ 8}$Pb,X), fusion reactions, dynamical picture 3−21343
^{154}Gd(^{20}Ne,4n), 105-120 MeV, ^{170}W high spin state transitions, HFBC model anal. 3−49724
^{157}Gd(^{13}C, X), 4-11 MeV/N, nonequilibrium neutron emission, moving hot source model 3−36437
^{158}Gd(^{12}C, X), 4-11 MeV/N, nonequilibrium neutron emission, moving hot source model 3−36437
^{74}Ge(^{208}Pb, f), 1600 MeV, fast fission phenomenon in time depend. HF studies 3−45543
^{76}Ge(^{32}S,X), 3.4-7.0 MeV/N, reaction, evaporation residue, fissionlike and fusion cross sections 3−26283
(HI, xn), residual nuclei decay after fusion reactions, M1 transitions effect 3−718
^{3}He(^{6}Li, p), 21 MeV, polarisation soln. to analysing powers, DWBA anal. 3−36434
^{4}He(^{12}C,γ), 1.34-3.38 MeV, stellar burning rate, ^{16}O ground state γ-transition 3−818
^{165}Ho(^{40}Ar,f), localisation of fast fission in ang. momentum 3−26285
^{165}Ho(^{56}Fe,X), 350-510 MeV, fusion cross section calc. 3−41048
I(^{16}O,X), 16.4 Mev/n, in CsI, ejectile parameters, transfer and breakup reactions 3−31434
K(Ar, X), 800 meV/A, proton inclusive spectra, fireball model predictions and critical density 3−11334
K(^{40}Ar, X), central collisions, charged-particle exclusive anal. 3−55065
K(^{40}Ar, 2π^{-}), 1.5 GeV/N, on KCl, pion source radius and coherence from correlation meas. 3−41050
(Kr,X), energy equilibration and anomalous mass drift 3−49887
(^{6}Li,αX), projectile fragmentation struct. in high energy reactions 3−807
(^{6}Li,d), DWBA analysis of α-transfer reactions with microscopic formfactors 3−21268
(^{6}Li,d), finite-range DWBA calcs. using optical model parameters and ^{6}Li wavefunction 3−55014
(^{6}Li, d), EFR-DWBA descript., shape of α pots., cross section 3−31438
^{6}Li(^{6}Li, 3α), 2 MeV, α-particle coincidence cross section ang. distrib. interpretation 3−814
^{6}Li(^{6}Li,3α), direct single spectator process, quasifree scatt. conditions *(Chinese)* 3−55013
^{7}Li(^{11}B,pn), 7-35 MeV, ^{16}N mean lifetimes for various levels 3−31338
^{7}Li(^{18}O,X), 10-60 MeV, ^{20,21}F, ^{22}Ne mean lifetimes for various levels 3−31338
^{A}Mg(^{14}N, ^{10}B), A=24, 26, comparison of alpha spectroscopic factors 3−21331
^{24}Mg(^{12}C, α)^{32}S, sub-Coulomb energy region, mol. resonances 3−21325
^{24}Mg(^{12}C,^{16}O), 40 MeV, ang. distribs., optical anal., effects on (^{12}C,^{12}C) 3−26271
^{24}Mg(^{16}O, pnγ), 36-44 MeV, ^{38}K high-spin states, spin-parity assignments, shell model calcs. 3−36306
^{24}Mg(^{16}O,^{12}C)^{28}Si, reson. structure study using DWBA calcs. 3−55061
^{24}Mg(^{16}O,X), 40-51 MeV, resonance like structures, cross-correlation anal. 3−16753
^{24}Mg(^{20}Ne, X), 45-105 MeV, total and fusion cross sections, inclusive γ spectra 3−31465
^{25}Mg(^{3}He, X), multistep compound processes, variance of Ericson fluctuations 3−813
^{26}Mg(^{12}C,^{12}B), 102 MeV, charge exchange, shell, microscopic direct and CRC anals. 3−55057
^{26}Mg(^{208}Pb,X), fusion reactions, dynamical picture 3−21343
^{92}Mo(^{12}C,X), 30 MeV/A, on-line γ-emission, charge and ang. momentum transfer 3−6191

heavy ion-nucleus reactions continued
^{92}Mo(^{86}Kr,X), dissipative collisions as semi-quantal process, charge equilibration 3−26266
^{94}Mo(^{12}C, pn), 41-57 MeV, ^{104}Ag, band struct., J$^{\pi}$, transitions, collective model anal. 3−31272
^{14}N (^{10}B, 6α), nuclear breakup into α-particles, cross section near yrast-region *(Russian)* 3−11339
^{14}N(^{12}C,X), ^{26}Al compound nucleus, isobaric mirror channels, decay by ^{3}H and ^{3}He emission, isospin mixing 3−16794
^{14}N(^{13}C, X), 64-110 MeV, ^{27}Al compound nucleus limitations to fusion cross sections, entrance channel and yrast line limitations 3−6276
^{14}N(^{14}N,X), 7-25 MeV, excitation functions for partial yields, total fusion cross section, crit. ang. momentum 3−6275
^{15}N(^{12}C, X), 98, 117 MeV, fusion cross section, critical ang. momentum 3−31463
Na(^{20}Ne, X), 425 MeV/N, total event struct., rigidity flow anal. 3−36436
^{A}Nd(^{20}Ne,X), A=144,146,149 MeV, ^{158}Yb entry states decay, collective and dipole components 3−16731
^{142}Nd(^{14}C, ^{16}O), two-proton pickup, transitions, analogies with (p,t) 3−21290
^{150}Nd(^{20}Ne, X), 4-11 MeV/N, nonequilibrium neutron emission, moving hot source model 3−36437
^{150}nd(^{20}ne,α), α ang. distrib. with respect to spin direction of residual nuclei from fusion 3−26265
(Ne,X), energy equilibration and anomalous mass drift 3−49887
(Ne, X) on emulsion-polystyrene mixture, 2.1 GeV/n, projectile fragments ang. and number distribs. 3−55055
(Ne,X) on NaF and Pb, 2.1 GeV/nucleon, K^{+} meson prod. cross section meas. 3−774
(^{20}Ne,X), 2 GeV/N, 10-20 MeV/N, projectile fragmentation model, isotope yields 3−45545
(^{20}Ne, π^{+}), A=27-238, 0.25-1.05 GeV/N, inclusive cross section, charged particle multiplicity 3−31437
(^{20}Ne, x), 2.1 GeV, abrasion cross-sections 3−45537
^{20}Ne(^{20}Ne,$\pi^{\pm}$), 655 MeV, Monte Carlo study of pion distrib. using fireball model 3−45549
Ni(^{40}Ca,X), 4 MeV/N, very neutron deficient isotopes below ^{100}Sn, β-decay props. 3−735
Ni(^{16}O, X), 8.8-19.6 MeV/N, nonequilibrium phenomena in fusionlike processes, momentum transfer 3−36443
^{58}Ni(^{12}C,p), 25, 84 MeV/u, proton emission energy depend., moving source parametrisation 3−31433
^{58}Ni(^{16}O, HI α), 6, 9 MeV/N, reaction mechanism from energy and ang. correl. meas. 3−45547
^{58}Ni(^{16}O,X), deep inelastic collision, multipolarity of statistical γ-rays from f-p shell nuclei 3−54978
^{58}Ni(^{28}Si, 2p), ^{84}Zr identification and half-life 3−31348
^{58}Ni(^{40}Ar, X), 280 MeV, simulation based on single-nucleon transfer mechanism *(Chinese)* 3−49880
^{58}Ni(^{56}Fe,X), 315, 461 MeV, fragment distribs. transport calc., energy damping with statistical single nucleon exchange 3−16802
^{60}Ni(^{16}O,X), friction coeff., energy and target mass depend. 3−11337
^{64}Ni(^{208}Pb,X), fusion reactions, dynamical picture 3−21343
^{64}Ni(^{56}Fe,X), 464 MeV 3−16802
(^{16}O,X), 2 GeV/N, 10-20 MeV/N, projectile fragmentation model, isotope yields 3−45545
(^{16}O,X), A=12,16,24,27,40, fusion excitation functions, optical model anal. 3−41066
(^{16}O, X), in photoemulsion, 2-1 GeV/N, two particle rapidity and azimuthal correlation 3−31426
(^{16}O, X) on nucl. emulsion, 75, 175, 2000 MeV/A, correl. between projectile and target break-up 3−31430
^{16}O(^{12}C, X), compound nuclear processes, exit doorway states, intermediate resonances 3−31440
^{16}O(^{16}O, X), two-body dissipation, fusion window, time depend. HFB anal. 3−49878
^{16}O(^{16}O,X), TDHF central collision, prompt particle emission, nucleonic jet density 3−41047
^{16}O(^{9}Be, n6α), nuclear breakup into α-particles, cross section near yrast-region *(Russian)* 3−11339
Pb(Ar, X), 800 meV/A, proton inclusive spectra, fireball model predictions and critical density 3−11334
Pb(^{40}Ar, X), central collisions, charged-particle exclusive anal. 3−55065
^{20}Pb(^{12}C,X), 132-230 MeV, α, ^{8}Be and ^{12}C* prod., cross sections and reaction mech. 3−16791
^{206}Pb(^{16}O,4n)^{218}Th low lying Yrast states and α-decay 3−11216
^{208}Pb(^{13}C, X), 75-95 MeV, ^{214,216}Ra high spin states, J$^{\pi}$, $T_{1/2}$, transitions, even-even N=128 systematics 3−31273
^{208}Pb(^{13}C,3n), ^{218}Ra level scheme, γ-ray spectroscopy, E1 interband transitions and probabilities 3−16685
^{208}Pb(^{16}O,^{18}O), one- and two-step contributions, DWBA calcs. 3−6261
^{208}Pb(^{16}O,X), friction coeff., energy and target mass depend. 3−11337
^{208}Pb(^{18}O,4n), 86-93 MeV, ^{222}Th molecular cluster states 3−49734
^{208}Pb(^{32}S,X), 185-225 MeV, fission fragment ang. distrib. sensitivity to nonequilib. processes 3−55072
^{208}Pb(^{86}Kr,X), 695 MeV, high energy-resolution spectra using QQDQ spectrometer *(Chinese)* 3−55053
^{208}Po(^{14}C,^{14}O)^{208}Pb, pair exchange, final state study 3−21267
^{196}Pt(^{16}O,4n), 89 MeV, ^{208}Rn high spin states, J$^{\pi}$, $T_{1/2}$, isomers, transitions 3−45431
^{32}S(^{13}C, ^{14}N), mechanism with Skyrme-type potential, spectroscopic factors calc. 3−45501
^{32}S(^{24}Mg,X), ^{56}Ni compound nucleus production, TDHF anal. 3−49882
^{45}Sc(^{12}C, 2np), 40 MeV, magnetic moment meas. of ^{54}Fe(10^{+}) level 3−45450
^{A}Si(^{16}O, ^{15}N), A=29, 30 mechanism with Skyrme-type potential, spectroscopic factors calc. 3−45501
^{28}Si(^{10}B, ^{9}Be), mechanism with Skyrme-type potential, spectroscopic factors calc. 3−45501
^{28}Si(^{13}C, ^{12}C), mechanism with Skyrme-type potential, spectroscopic factors calc. 3−45501
^{28}Si(^{18}O, ^{17}O), mechanism with Skyrme-type potential, spectroscopic factors calc. 3−45501
^{28}Si(^{28}Si,X), ^{56}Ni compound nucleus production, TDHF anal. 3−49882
^{28}Si(^{28}Si,X), 2.1 GeV/N, subthreshold K^{-} prod. by coherently produced ϕ-mesons 3−45540
^{28}Si(^{28}Si,X), fusion excitation functions, optical model anal. 3−41066
^{29}Si(^{18}O, 2np)^{44}Sc, 30-90 MeV, isomer ratio meas. 3−11330
^{A}Sm(^{16}O,X), A=148, 150, 152, fluctuation and fusion cross sections, average S-matrix model 3−16803

heavy ion-nucleus reactions continued
^Sm(^{16}O,X), A=148, 152, reaction and fusion cross section calcs. from angle-dependent phase shifts 3−36435
^Sm(^{40}Ar, X), A=144, 148, 154, nucl. fusion, threshold behaviour, collective surface motion influence 3−26286
^{144}Sm(^{14}C, ^{16}O), two-proton pickup, transitions, analogies with (p,t) 3−21290
^{148}Sm(^{12}C, ^{11}C), high-J orbital states 3−45440
^{148}Sm(^{13}C, ^{12}C), high-J orbital states 3−45440
^{148}Sm(^{165}Ho,X), 1400 MeV, ang. momentum transfer and alignment, γ-multiplicity, Q-values 3−55056
^{148}Sm(^{16}O, ^{15}O), high-J orbital states 3−45440
^{149}Sm(^{18}O,4n), 84 MeV, ^{163}Yb high spin states, band crossing and signature splitting 3−36305
^{150}Sm (^{12}C,X), 30 MeV/A, on-line γ-emission, charge and ang. momentum transfer 3−6191
^{154}Sm(^{86}Kr,X) 610 MeV, deep inelastic, ang. momentum transfer, energy depend., stat. anal. 3−16792
^Sn(^{32}S, X), A=116, 120, 124, 130-202 MeV, fusion reactions, prompt compound nucl. K X-rays prod. 3−26269
^Sn(^{32}S,xn), A=120, 122, 124, 132-165 MeV, Dy high-spin isomers, continuous gamma radiation feeding 3−49804
^Sn(^{40}Ar, X), A=112, 116, 122, nucl. fusion, threshold behaviour, collective surface motion influence 3−26286
^Sn(^{56}Fe,X), A=120, 122, 330-456 MeV, evaporation residue excitation functions, statistical fission decay 3−6259
^{112}Sn(^{32}S,X), 190 MeV, ^{136}Sm ^{137,138}Eu, very neutron deficient isotopes, half life 3−31340
^{120}Sn(^{28}Si,4n), 145 MeV, CC ^{144}Gd, 10^{+} isomer decay, γ-rays, giant dipole resonance 3−31267
^{122}Sn(^{129}Xe,X), 12.5 MeV/μ, proximity and nonequilib. effects 3−49891
^{122}Sn(^{56}Fe,X), 320, 460 MeV, fragment distribs. transport calc., energy damping with statistical single nucleon exchange 3−16802
^{124}Sn(^{28}Si,Sn), 130-156 MeV, ^{147}Gd high-spin isomers, continuous gamma radiation feeding 3−49804
^{124}Sn(^{32}S, 4n)^{152}Dy, 145 MeV, γ-ray props. from ^{152}Dy 3−40988
Ta(C,X), 4.2 GeV/N, peripheral and central collisions, cross sect. 3−49865
^{181}Ta(^{12}C,X), 13-77 MeV/N, indept. cross sections for Na,K,Rb,Cs,Fr prod. 3−26270
^{181}Ta(^{14}N, α), 115 MeV, breakup-fusion process, DWBA calcs. 3−829
^{181}Ta(^{14}N,5n)^{190}Hg, Hg isomeric state decay, meas. from electron conversion spectra 3−54976
^{181}Ta(^{14}N,α), exact finite range DWBA calcs. in breakup-fusion treatment 3−16797
^{181}Ta(^{22}Ne,X), 178 MeV, light charged particle inclusive spectra at 0°, effective temp. 3−26262
^{159}Tb(^{14}N,αX), 140,168 MeV, energy and angular particle-particle correlations 3−16790
^{122}Te(^{12}C,X), 30 MeV/A, on-line γ-emission, charge and ang. momentum transfer 3−6191
^{128}Te(^{34}S,xn), giant reson., spin depend. and ang. correl. 3−49826
^{232}Th(^{11}B,^{10}He), 89 MeV, cross-section for ^{10}He prod. *(Russian)* 3−6263
^{232}Th(^{16}O, X), transfer reactions, maximum entropy anal. 3−41046
^{232}Th(^{184}W,X), 8.2 MeV/u, dissipative collisions, driving pots., shell effects 3−21330
^{232}Th(^{22}Ne,X), 178 MeV, light charged particle inclusive spectra at 0°, effective temp. 3−26262
Ti(^{20,22}Ne,X), 178, 196 MeV, light charged particle inclusive spectra at 0°, effective temp. 3−26262
^{48}Ti(^{12}C,αn), 39 MeV, ^{55}Fe high-spin states, lifetime meas. 3−724
^{48}Ti(^{16}O,X), deep inelastic collision, multipolarity of statistical γ-rays from f-p shell nuclei 3−54978
^{50}Ti(^{208}Pb,X), fusion reactions, dynamical picture 3−21343
U(^{40}Ar, 2π^{-}), 1.5 GeV/N, on KCl, pion source radius and coherence from correlation meas. 3−41050
U(^{12}C,X), nonrelativistic collisions, linear momentum transfer 3−6254
U(^{20}Ne,X), 400 meV, multiplicity selection, single particle distribs., fireball calc. 3−31439
U(^{20}Ne,X), nonrelativistic collisions, linear momentum transfer 3−6254
U(^{16}O,X), nonrelativistic collisions, linear momentum transfer 3−6254
^{238}U(^{16}O, X), 90-148 MeV, fission fragment ang. distrib. sensitivity to nonequilib. processes 3−55072
^{238}U(^{20}Ne, X), 252 MeV, fragments intrinsic spin average magnitude and alignment study 3−11331
^{238}U(^{56}Fe,X), fusion yields, evidence for phenomenological capture (extra push) 3−11353
^{51}V(^{12}C,X), differential recoil range meas., stat. evaporation, preequilibrium processes 3−6250
^{89}Y(^{16}O, 3n), 60-80 MeV, ^{102}Ag band struct., J$^{\pi}$, transitions, collective model anal. 3−31272
^{174}Yb(^{12}C,X), 30 MeV/A, on-line γ-emission, charge and ang. momentum transfer 3−6191
^{176}Yb(^{165}Ho,X), 1400 MeV, ang. momentum transfer and alignment, γ-multiplicity, Q-values 3−55056
^{64}Zn(^{36}Ar, ZpZn), 127 MeV, ^{96}Pd 8^{+} isomer, lifetime and g-factor 3−31289
^{68}Zn(^{12}C, 2nγ), 36 MeV ^{78}Kr excited state lifetimes and γ-ray energies 3−36350
^Zr(^{90}Zr, f), A=90, 94, complete fusion at subbarrier energies, dynamic processes influence 3−45542
^{94}Zr(^{6}Li, 3n), 18-30 MeV, ^{97}Tc high spin states and band structure 3−6140

heavy ion-nucleus scattering
absorptive potential in heavy-ion scattering 3−21273
backward angle scatt., intermediate structure 3−49889
elastic, connection with fusion process by modified SOD method 3−36433
elastic scatt., pot. vol. integral conservation 3−6257
geometric reaction cross section, optical pot. approx. 3−800
high energy nucleus-nucleus collisions, muon pair prod. 3−673
inelastic excitation of vibr. bands in deformed nuclei, form factors 3−6148
inelastic scatt. and transfer reactions 3−45554
integral kernal systematic anal. in generator coordinate theories 3−26272
range distribution function for energetic ions in matter 3−13299
time-dependent mean-field S-matrix theory in adiabatic limit 3−6248
^{209}Bi(^{12}C,^{12}C), 61.1-73 MeV, reaction mechanism study 3−45553
^{79}Br(^{32}S,^{32}S), differential cross sections *(Korean)* 3−804
^{12}C (^{12}C, ^{12}C), 300 MeV, elastic and inelastic, cross section, rainbow scatt., optical anal. 3−6264

heavy ion-nucleus scattering continued
^{12}C (^{6}Li, ^{6}Li), 36 MeV, elastic scatt., Woods-Saxon and double-folding potentials comparison 3−16788
^{12}C(^{12}C, ^{12}C), 200-290 MeV, WKB solns., optical pot. from density folding 3−26256
^{12}C(^{12}C,^{12}C^{1}), 24, 30, 36 MeV, gross struct., dominant ang. momentum, DWBA anal. 3−31435
^{12}C(^{12}C,^{12}C), 13.5-37.5 MeV, spectral density method anal., preequilibrium emission from quasimolecular states 3−802
^{12}C(^{12}C,^{12}C), 161-1030 MeV, nuclear rainbow scatt., ang. distrib. anal. 3−6249
^{12}C(^{12}C,^{12}C), 508 MeV c.m., elastic scatt. cross section, nucl. rainbow effect 3−812
^{12}C(^{12}C,^{12}C), 6-85 MeV/A, total and reaction cross sections, optical model anal. 3−31428
^{12}C(^{12}C,X) 9.1-11.9 MeV, resonance observations from γ-ray yield and α angular distribution 3−16748
^{12}C(^{12}C,X) excitation functions, phase shift anal. 3−49805
^{12}C(^{16}O,^{16}O), band crossing model justification 3−41042
^{12}C(^{16}O,α)^{24}Mg, 112-191 MeV, excitation energies, alpha particle spectra 3−31436
^{12}C(^{19}F, ^{19}F) reaction mechanism 3−45556
^{13}C(^{12}C,^{12}C), dynamically spin-depend. interaction, (L.S) interaction, polarisation 3−21304
^{21}C(^{14}N,^{14}N), optical model anal. 3−41066
^{40}Ca (^{12}C, ^{12}C), elastic scatt. differential cross section in Watanabe superposition model 3−16789
^{40}Ca(^{16}O,^{16}O), model-independent optical pot. evaluation 3−11338
^{40}Ca(^{16}O,^{16}O), optical model anal. 3−41066
^{248}Cm(^{232}Th,^{232}Th′), ^{248}Cm Coulomb fission, experimental features 3−16809
^{74}Ge(^{32}S,^{32}S), differential cross sections *(Korean)* 3−804
^{4}He(^{12}C,^{12}C), 1.44-3.38 MeV, cross section, resonance parameters 3−818
^{4}He(^{19}F,^{4}He), 46 MeV, ^{19}F, mag. moment and lifetime of $^{5}/_{2}{}^{-}$ state 3−40950
(^{6}Li,^{6}Li), break-up effects, potential model representation through inversion procedure 3−806
^{24}Mg(^{12}C,^{12}C), 40 MeV, ang. distribs., optical anal., effects of α-transfer 3−26271
^{24}Mg(^{13}C,^{13}C′), 35 MeV, 2^{+} level population prob., polarisation, spin slip, CC calcs. 3−31381
^{24}Mg(^{56}Fe, ^{56}Fe^{1}), 125 MeV, search for transient elec. field gradients on fast moving ions 3−21332
^{25}Mg(^{7}Li, ^{7}Li), 27 MeV, elastic scatt., Woods-Saxon and double-folding potentials comparison 3−16788
^{26}Mg(^{6}Li, ^{6}Li), 36 MeV, elastic scatt., Woods-Saxon and double-folding potentials comparison 3−16788
^{15}N(^{16}O,^{16}O), microscopic study using resonating group eqn. 3−41041
^{15}N(^{7}Li, ^{7}Li), 28.8 MeV, elastic scatt., Woods-Saxon and double-folding potentials comparison 3−16788
^{58}Ni(^{7}Li,^{7}Li), 14.2, 20.3 MeV, doubling folding model description 3−49890
^{58}Ni(^{7}Li,^{7}Li), tensor interactions, projectile excitations, anal. powers, folding model anal. 3−16796
^{12}O(^{12}C,^{12}C′), inelastic scatt. to 3^{-} state, spin alignment meas. 3−26608
^{16}O(^{12}C,^{12}C′), 19.7 to 22.6 MeV, reson. scatt., spin alignments 3−31285
^{16}O(^{16}O,^{16}O), 10-26 MeV, spectral density method anal., preequilibrium emission from quasimolecular states 3−802
^{16}O(^{6}Li, ^{6}Li), 36 MeV, elastic scatt., Woods-Saxon and double-folding potentials comparison 3−16788
^{18}O(^{16}O,^{16}O), blocking influence on core-exchange effects 3−49876
^{192}Os(^{32}S, ^{32}S′), 80 MeV, g-factors, transient hyperfine field meas. 3−36323
^{192}Os(^{58}Ni, ^{58}Ni′), 220 MeV, g-factors, transient hyperfine field meas. 3−36323
^{20}Pb(^{12}C,X), 132-230 MeV, α, ^{8}Be and ^{12}C* prod., cross sections and reaction mech. 3−16791
^{208}Pb(^{10}B, ^{10}B), Coulomb excitation giant dipole reson. effect 3−6246
^{208}Pb(^{12}C,^{12}C′), 132-230 MeV, ^{12}C second 0^{+} state excitation, form factor, optical pot., anal. 3−715
^{198}Pt(^{32}Ni, ^{32}Ni′), 80 MeV, g-factors, transient hyperfine field meas. 3−36323
^{198}Pt(^{58}S, ^{58}S′), 220 MeV, g-factors, transient hyperfine field meas. 3−36323
^{28}Si (^{12}C, ^{12}C), elastic scatt. differential cross section in Watanabe superposition model 3−16789
^{28}Si(^{16}O, ^{16}O) reaction mechanism 3−45556
^{28}Si(^{16}O,^{16}O), 21-35 MeV, differential cross sections, optical pot. description 3−45538
^Sm(^{16}O, ^{16}O), A=148, 152, reaction and fusion cross section calcs. from angle-dependent phase shifts 3−36435
^{152}Sm(^{16}O,^{16}O′), proximity potential in coupled-channel anal., collisions with deformed nuclei 3−16800
^{159}Tb (^{40}Ca, ^{40}Ca′), 162 MeV, ground state rot. band, lifetimes, quad. moments 3−54939
^{232}Th(^{184}W,^{184}W′), ^{232}Th Coulomb fission, experimental features 3−16809
^{232}Th(^{32}S, ^{32}S$^{1}\gamma$), 135 MEV, rot.-vibr. interaction strength, excited bands, γ-branching 3−31268
^{48}Ti(^{16}O, ^{16}O′), 100 MeV, continuum spectra and polarisations, direct reaction anal. 3−49885
^{238}U(^{152}Sm,^{152}Sm′), ^{238}U Coulomb fission, experimental features 3−16809
^{238}U(^{184}W,^{184}W′), ^{238}U Coulomb fission, experimental features 3−16809
^{51}V(^{7}Li,^{7}Li), 10-18 MeV; double folding model anal. using effective nucleon-nucleon interaction 3−49890
^{89}Y(^{32}S,^{32}S), differential cross sections *(Korean)* 3−804
^{90}Zr (^{12}C, ^{12}C), elastic scatt. differential cross section in Watanabe superposition model 3−16789

heavy leptons
chronon predictions of mass 3−49550
early Universe, stable massive particles survival density 3−20538
gauge theory and particle physics, book 3−5511
massive neutrinos in large-scale gravit. clustering, rel. to galaxies form. 3−30489
observation in high-energy cosmic rays 3−54935
$e^{+}e^{-}\rightarrow e^{+}e^{-}(\mu^{+}\mu^{-})(\tau^{+}\tau^{-})$, 22, 34 GeV, electroweak mixing angle, weak neutral current coupling strengths 3−45384
$e^{+}e^{-}\rightarrow e+$heavy lepton, one photon exchange, unified field theory 3−16627
τ, decay, current expt. situation 3−11174
τ, decay, MARK II results at PEP 3−36256

heavy leptons continued
- τ, lifetime meas. 3−36247
- τ, weak decay 3−40901
- $\tau\rightarrow3\pi^{\pm}$, measurement of τ lifetime 3−31210
- $\tau\rightarrow(\pi,\rho,A_1)\nu_\tau$, predictions from Bethe-Salpeter $q\bar{q}$ dynamics 3−26094
- τ composite structure from anomalous mag. moment meas. in e^+e^- 3−49657
- τ decay, charged-particle multiplicity distrib. meas. 3−11180
- τ decay in nonstandard electroweak gauge models 3−40903
- τ decay lifetime meas. in MAC detector at PEP 3−31194
- $\tau\rightarrow\nu\pi X$, $X=\rho,\omega,\phi,\eta$, second class currents, weak current form factors 3−31209
- $\tau^+\tau^-$ decay product correl. from e^+e^- annihilation 3−16628
- ^{18}F, beta spectra and heavy neutrinos 3−54985
- ^{19}Ne, beta spectra and heavy neutrinos 3−54985
- ^{35}S, beta spectra and heavy neutrinos 3−54985

heavy water
- adsorbed on oriented cellulose 3−47568
- adsorption and two-dimens. condensation on NaF 3−2964
- adsorption on Re, XPS study 3−51925
- enriched, anomalous H search with time-of-flight spectrometer 3−11996
- laser oscillator emitting at 385 μm 3−37007
- laser system based on H_2O and D_2O vapour, orthogonal polarisations generation 3−46234
- liquid, neutron diffr. obs. of struct. 3−7899
- liquid struct., time-of-flight neutron diffr. study *(Japanese)* 3−42506
- molecule, bending modes, vibr. relax. in gas mixtures 3−11951
- molecule, electron impact, D* prod., mechanism, translational energy distrib. 3−56093
- molecule, vibr. excited states above dissoc. threshold, non-RRKM behaviour 3−1330
- neutron diffr. pattern at press. up to 9.1 kbar 3−7897
- solid oxide electrolysis cell for tritiated water 3−45675
- structure factor, isochoric temp. derivative, neutron diffraction study 3−56804
- tetrahydrofuran-heavy water, phase equilib., miscibility gap with two crit. temps. 3−47099
- vapour, decomposition in plasma centrifuge 3−34621
- X-ray struct. factor, isochoric temp. differential 3−56803
- D_2O ice, 6K, pulse radiolysis 3−58436
- HDO, high resolution rot. vibr. IR spectra of ν, and $2\nu_2$ bands 3−26723
- U resources, enrichment, reprocessing, and heavy water availability in Yugoslavia and adjacent countries *(Croatian)* 3−55206

HEED *see high energy electron diffraction*

height measurement
- depth-measuring microscope for height difference meas. between given surfaces 3−5850
- earthwork calculations accuracy from digital elevation data 3−48545
- sea level measurement, appl. of S-band radio interferometer to meas. of phase shift of coherently refl. radio waves 3−10099

Heisenberg model
- anisotropic chain, eigenstates in case of complex wave numbers not forming strings 3−18843
- anisotropic Heisenberg ferromagnet, low temp. spontaneous magnetism 3−3407
- anisotropic Heisenberg spin chain and nonlinear Schrodinger eqn. 3−30805
- anisotropic Heisenberg spin chain linearisation and Backlund transforms. 3−94
- antiferromagnet, one-dimensional, continuum dynamics, identification with O(3) nonlinear sigma model 3−43347
- antiferromagnet, quasi-1-D Heisenberg-Ising, excitation spectrum and T=0 dynamics 3−38572
- antiferromagnet, semi-infinite, surface nucl. spin waves 3−3429
- antiferromagnet, theory of electron scatt., surface and bulk effects 3−57571
- antiferromagnetic alternating chairs in mag. field, mag. susceptibility and sp. ht. 3−23686
- antiferromagnetic chain, $s={}^1/_2$, proton relax. and spin dynamics 3−14069
- antiferromagnetic Heisenberg spin Peierls system, incommensurate states 3−57690
- antiferromagnetic Heisenberg-Ising chain, spin-1, ground state props. 3−38575
- antiferromagnetic spin 1/2 chain, singlet bound states, excitation spectra 3−33852
- Bethe wave function norms calc. 3−497
- chain, classical, isotropic, equation of motion, linearisation 3−20688
- classical Dzialoshinksy-Moriya chain, exact partition function 3−45085
- classical Heisenberg chain with anisotropies, statistical mechanics 3−43348
- classical Heisenberg model in four dimensions, high temp. susceptibility 3−23688
- classical Heisenberg model in three dimensions, extended high temp. series 3−23687
- classical n-component, block spin renormalisation group in large-n limit 3−38576
- classical planar models, high temp. behaviour of susceptibility and correlation length 3−33849
- continuous Heisenberg ferromagnetic chain, S-matrix for magnons 3−23569
- copper formate tetrahydrate, 2-D Heisenberg antiferromag., zeropoint spin reduction 3−57636
- dilute chain, scaling treatment of critical and 'chaotic' dynamics of the dilute Heisenberg chain 3−33916
- disordered spin systems, free energy, infinite range limit 3−38578
- ferromagnet, amorphous Heisenberg, spin wave dispersion and temp. depend. of magnetisation 3−14028
- ferromagnet, anisotropic, with biquadratic exchange, Green function theory 3−28586
- ferromagnet, continuous one-dimensional, with easy plane, quantum kink, picture of antiferromag. magnon 3−3404
- ferromagnet, local coexistence of different phases 3−38573
- ferromagnet, method for generating discrete soliton eqns. 3−30623
- ferromagnet, three-dimens., spin dynamics, effect of exchange anisotropy in crit. region 3−18927
- ferromagnet, three-dimens., spin dynamics at finite fields and temps. 3−18929
- ferromagnet, uniaxial 1-D, pulse-like soliton soln. 3−52334
- ferromagnet in paramagnetic region, correl. functions 3−47520

Heisenberg model continued
- ferromagnetic chain, classical, with axial anisotropy, solitons and excitation spectrum 3−14034
- ferromagnetic chain, mag. soliton motion about lattice soliton 3−5741
- ferromagnetic chain, spin (1/2), multiple bound states 3−47518
- ferromagnetic chains, anisotropic, double sine Gordon solitons 3−52507
- ferromagnetic film, Heisenberg, magnons, anharmonical effects and magnetisation 3−18872
- ferromagnetic films, light scatt. and spin wave reson. 3−47530
- ferromagnetic films, spin waves and response functions 3−47529
- ferromagnetic Heisenberg chain, interacting spin-wave theory 3−14033
- ferromagnetic Heisenberg chain, quantum continuous, energy spectrum and magnons 3−3405
- ferromagnetic Heisenberg chain, spin dynamics in mag. field, evidence for second magnon mode 3−38641
- ferromagnetic insulators, surface exchange anisotropy effects 3−38574
- ferromagnetic media, spontaneous magnetisation; Landau-Ginsburg eqn. 3−38597
- ferromagnetic model, anisotropic, Green's function method anal. 3−18926
- generalised classical chain dynamics 3−16294
- generalised Heisenberg ferromagnetic spin chain, excitation spectrum 3−23610
- Heisenberg antiferromagnet with nearest-neighbour interactions, dynamics 3−28575
- hydrodynamical spin wave approx., dynamics of longitudinal component 3−43390
- impurity ferromagnet, theory 3−3406
- inhomogeneous Heisenberg chain, spin evolution eqns. 3−23570
- isotropic, dynamical correlated effective field approx., appl. to helical spin struct. 3−57504
- isotropic Heisenberg 1D ferromagnet, solitary waves 3−23689
- isotropic Heisenberg chain with arbitrary spins, thermodynamics 3−43388
- itinerant ferromagnets, effective Heisenberg Hamiltonian, effective exchange integral 3−38577
- lattice system, one and two dimensional, Mermin-Wagner phenomenon and cluster props. 3−25824
- magnetic transitions, crossovers from 2D Ising to 2D Heisenberg and to ID Ising 3−28558
- metamagnet, thermodynamics, transitions and exchange parameter 3−33893
- new field theoretical method for spin 1/2 Heisenberg model 3−212
- O(N) Heisenberg model, susceptibility and mass gap in continuum limit 3−54842
- one-dimensional conductor, mag. susceptibility studies, review 3−8659
- one-dimensional magnets, dil., sp. ht. and inelastic neutron scatt., spin wave theory 3−47490
- one-dimensional quantum Heisenberg ferromagnet near T=0 3−57691
- paramagnet dynamics and relax. in const. external mag. field 3−3470
- paramagnet dynamics and relax. in time depend. mag. field 3−3471
- pseudo-spin system, self-consistency and thermal equilibrium, second order treatment 3−18844
- quadrupole order and anisotropy of spin fluctuations 3−43346
- quantum lattice systems, thermodynamics and ground state props., renormalisation approach 3−38640
- quantum spin systems, Gel'fand Levitan method 3−16299
- random anisotropic planar Heisenberg model, quantum and classical, spin glass state, statistical mechanics 3−3472
- random bond anisotropic classical model, spin glass and mixed phases 3−57682
- random magnetic systems, frustration and spin-glass freezing 3−3474
- random unfrustrated mag. systems, boundary conditions influence 3−3403
- solitary waves along the compressible Heisenberg chain 3−13994
- spin dynamics at high temp., neutron scatt. meas. and theoretical models 3−57564
- spin glasses, dynamical susceptibility and elec. resist., Heisenberg-Mattis model 3−43391
- spin glasses, infinitely long-ranged bond-random anisotropic classical planar model 3−52506
- spin glasses, isotropic, absence of irreversibility, anisotropy effects 3−33915
- spin glasses, XY model, topological phase transition, Villain variant *(Russian)* 3−3475
- spin glasses with short-range interactions, susceptibility and spin correls. 3−57643
- spin Hamiltonian, Heitler-London approach, test on half filled Hubbard model 3−57506
- spin systems, low-dimens., with anisotropic Heisenberg exchange, mag. props. 3−57505
- spin-glass with local uniaxial anisotropy 3−8694
- spin-Peierls systems, high press. and high mag. field effects 3−23635
- spin-wave theory for Heisenberg magnets, Hubbard operators, single-ion anisotropy 3−14037
- surface phase transitions, Heisenberg model with cubic anisotropy 3−51944
- Suzuki-Trotter transfrom. to Ising model, Monte Carlo studies 3−33853
- system in thermal equilibrium, bounds for mag. susceptibility 3−16255
- transition metal magnets, spin density fluctuations, neutron scatt. studies 3−57520
- transition temperature shifts and correction-to-scaling amplitudes in systems exhibiting crossover behaviour 3−2734
- two-dimensional, axially symm. solutions *(Russian)* 3−5739
- two-dimensional nonlinear O(3) σ model, structure of vacuum 3−16486
- Co- B-Si metallic glasses, spin wave stiffness const., magnetisation study 3−28535
- Cu complexes, linear Heisenberg chains with alternating exchange, susceptibility and magnetisation study 3−23600
- $Cu(NO_3)_2.2.5\ H_2O$, atlernating linear-chain antiferromag., specific heat and mag. props. meas. 3−33917
- EuO(S), static and dynamic mag. props., self-consistent correl. theory 3−52335
- Fe, electronic struct. and magnetism above Curie temp. 3−28498
- Fe, magnetism and thermodynamic props. above Curie temp. 3−52356
- Gd, spin dynamics at high temp., neutron scatt. meas. and theoretical models 3−57564
- ^{3}He, solid, spin wave theory, pseudo-six-dimensional spin method 3−8293
- $KCoF_3$ Heisenberg antiferromagnet, 3D, linear birefringence, crit. behaviour 3−8798
- K_2MnF_4, mag. phase diagram 3−28559
- $KNiF_3$ Heisenberg antiferromagnet, 3D, linear birefringence, crit. behaviour 3−8798

Heisenberg model continued
Ni, spin dynamics at high temp., neutron scatt. meas. and theoretical models 3−57564
$Rb_2CuBr_4.2H_2O$, spin dynamics, effect of exchange interactions in crit. region, NMR study 3−18928
$RbMnF_3$ Heisenberg antiferromagnet, 3D, linear birefringence, crit. behaviour 3−8798
UAs(P), two-ion anisotropic interaction from band of electron hybridisation 3−28497

Heising modulation *see amplitude modulation*

helical dislocations *see screw dislocations*

helicity (elementary particles)
$^3S_1(Q\bar{Q})\rightarrow\gamma+{}^3P_1(q\bar{q})$, transition rate and helicity structure 3−31216
fermions, QED formalism for multiple bremsstrahlung in gauge theories 3−6044
fermions scatt. by monopole in presence of CP nonconservation 3−45280
massless vierbein spin-5/2 fields and hypergravity 3−10696
muon helicity from muonic atom polarisation 3−46102
one gluon exchange pot., nonstatic effects, helicity representation 3−45347
scalar and tensor meson decay to two photons, relativistic calcs. 3−31215
unitary transformation to helicity form, transformation of position, spin, parity and time-reversal operators 3−31081
$e^+e^-\rightarrow e^+e^-\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3−6092
$e^+e^-\rightarrow e^+e^-\gamma\gamma\rightarrow e^+e^-f'$, $K\bar{K}$ pair prod. and tensor meson f′(1515) excitation 3−40944
$e^+e^-\rightarrow\gamma\gamma\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3−6092
$e^+e^-\rightarrow\mu^+\mu^-\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3−6092
$eN\rightarrow e\gamma^*(Z^0)X\rightarrow el\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3−40910
$\mu N\rightarrow\mu\gamma^*(Z^0)X\rightarrow\mu l\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3−40910
ν_μ, direct helicity meas. 3−5537
$\bar{p}p$, large p_T strange or charmed baryon prod., higher power QCD mechanisms 3−49713
$\psi\rightarrow\gamma f$, helicity structure, f as (gg) state M=1220 MeV in QCD 3−26077

helicons
see also solid-state plasma
metal plates, NMR line profile and surface impedance with weakly damped EM wave excitation *(Russian)* 3−33988
selective frequency helicon generator 3−40638
semiconductor, heavily doped n-type, longitudinally magnetized, laser beam parametric decay to US-helicon waves 3−28374
semiconductor surfaces and interfaces, surface helicon waves in oblique geometry 3−33753
In, US rotation of polarisation and ellipticity under helicon-phonon reson. conditions 3−3260

helicopters
rotor, model, noise due to ingestion of isotropic turbulence 3−32540
rotor noise, high speed, non-linear effect 3−32539

heliotron *see plasma devices*

heliports *see airports*

helium
see also nuclei with ......
see also helium atoms; helium films; liquid helium; solid helium
abundance in DA white dwarf HZ 43 atm. 3−20354
adsorbed on diamond, ^4He atom beam probe study 3−51936
adsorbed on LiF(001), resonant energy transfer between and adsorbed atom and surface Rayleigh phonons 3−13632
adsorption on Cu surfaces 3−23176
alkali-He self-oscillating magnetometer 3−30908
upper atmosphere, global model in mag. coords. 3−54177
atom, ground state, soln. of few-particle Schrodinger equation 3−5649
atom, muonic, QED electron propagator testing, Higgs boson contrib. and mass 3−36183
atoms, collisional excitation transfer, time resolved laser induced fluorescence spectroscopy *(French)* 3−41658
bubble growth in $Ni:He^+$, growth curves and bubble distrib. 3−56905
bubbles in Al and Ni films, press. and density determ. 3−8381
bubbles in metals, cavity nucleation during post-irradiation creep 3−33305
buildup in iron from neutron irradiation in reactors 3−41189
buildup in Ni-alloys in reactors 3−41190
centrifugal He compressors development 3−30877
concentration in Venus atm., predawn bulge, solar wind effect 3−44682
cryogenic universal plant for liquefaction and extraction 3−30876
DC discharge, optogalvanic effect due to metastable quenching, spatial depend. 3−27767
DC hollow cathode discharges using Al cathode, glow-to-arc transition, report 3−46804
desorption kinetics, macroscopic continuum model 3−51887
determination using low-background mag. reson. mass spectrometer 3−53464
diffraction and adsorption on Cu (110) surface, electronic density profile study 3−38988
diffusion in globular cluster Population II stars, effect on evolution 3−30367
diffusion in oriented polyethylene films *(Russian)* 3−53152
electronic stopping power for 50 to 230 keV ions in C, Al, Au, Cs foils 3−28019
flow meas. in GCFR core flow simulator 3−6395
gas, supercritical, elec. breakdown with partial discharge in short gaps, cable insulation appl. 3−42465
gas filling of optical path in solar telescope, heat effect reduction 3−30173
gas viscosity meas. with Fleisch pneumotachograph 3−19858
glow discharge, cathode region, electron swarm, Monte Carlo anal. 3−18152
glow discharge, metastable atom density, theoretical model 3−33009
glow discharge electron beam, luminosity study 3−42472
interstitial diffusion in Ni monocrystal 3−38134
ion, collision with W surface, neutralisation by tunnelling, nonperturbative results 3−3907
ion beam, collectively accelerated, diagnostics by solid-state nuclear track detector 3−11554

helium continued
ion bombardment of stainless steel fusion reactor first wall, blistering obs. 3−21512
ion implanted Al and Ni, bubble density and press. 3−21510
ion implanted in pyrographite, retention, re-emission and thermal desorption 3−21509
ion implanted metals, investigs. using monoenergetic positrons 3−24046
ion implanted Ni, bubble obs. with small-angle X-ray scatt. 3−21514
ion implanted stainless steel, trapping and surface permeation of D 3−17038
ion irradiated Cu, depth distrib. of bubbles and fracture 3−21511
ion irradiated stainless steel first wall material, surface roughness factor of blistered and exfoliated surfaces 3−21513
Jupiter, cosmological implications of He and D abundances 3−54554
laser-pumped flowing He afterglow, spin-polarised electron source 3−50105
liquefaction, thermodynamic anal. of cryogenic systems 3−30869
Lyman α solar chromosphere line radiation pressure and ^3He accel. 3−54294
mass spectrometry, leak detection for quality control appl. 3−5911
NGC 7099 (M30), globular cluster, He content radial gradient from photometry in central region 3−5371
physisorption on graphite (Constantan) (Ar), mean field theory, desorption kinetics 3−13630
plasma, dense, small model of relaxation kinetics 3−27653
plasma, electron density, laser and collision induced fluoresc. meas. 3−27746
plasma, fluctuating elec. fields meas. by forbidden transitions obs. 3−18113
plasma, linear Z-pinch He plasma, extreme UV emission and ionisation O ions 3−46788
plasma, supersonic expansion in Laval nozzle, kinetic behaviour 3−51299
plasma, theta pinch with initial trapped reverse mag. field, transient loss 3−12932
plasma generation by steady microwave discharge in quasioptical resonator 3−37723
plasma produced by powerful electron beam, n=2 state population mechanism 3−32849
pressurised spark gaps, electric strength recovery after breakdown 3−7849
primordial abundance, hot-big-bang model, neutrino effects 3−16049
primordial nucleosynthesis, ^4He and D yields rel. to neutrino number and baryon density of realistic universe 3−59516
reactor materials, buildup and release, spectrometer anal. 3−41188
refrigerator system, with low-temp. centrifugal compressors 3−30878
resonance dechannelling in Si at axial to planar transition 3−13296
Saturn, cosmological implications of He and D abundances 3−54554
scattering from NaF(001) surface, kinematic focusing evidence 3−52882
self-trapping in metals, kinetic theory 3−51861
solar atmosphere He abundance, determ. from cut-off freq. of solar acoustic modes 3−54323
solar wind, He abundance enhancements and transient coronal mass ejection 3−5083
solar wind ion composition obs. 3−5250
solar wind ion velocity obs., for He^{2+}, H^+ and O^{6+} ions 3−5082
sputtering of carbide fusion reactor materials due to light ion bombardment 3−26441
sputtering yield data for light ion bombarded metals for fusion reactors 3−21515
sputtering yields of Ti due to light ion bombardment, fusion reactor divertor plates 3−26442
squirrel cage motor for operation in high pressure/temp. He atmosphere, prototype development and test 3−26411
Steamboat Springs, Colorado, geothermal power exploration using helium and ground temp. surveys 3−53482
superfluid bose system, path integral for coherent states of dynamical group SU(1,1) 3−20667
thermal condutivity at temps. from 300 to 6000K at atmospheric press. 3−27638
thermonuclear reactor structural materials, helium induced embrittlement from (n,α) reactions 3−45692
$Ag:He^+$ ion-implanted films, Frenkel-type radiation defects form. and annealing 3−13249
Br_2-CO_2-He gas laser, solar energy conversion, lasing power and efficiency 3−26998
CO-He, RF discharge, dissoc. vibr. distrib., IR, UV, visible obs. 3−7815
CO_2-He, 10 μm absorpt., optical broadening coeffs. 3−18000
CO_2-N_2-He laser, operating efficiency, kinetics model 3−26996
CO_2-N_2-He TEA laser, circuit modelling and discharge modelling 3−1609
CsI:He, diffusion during deform. at low temp. 3−28161
D_2-$^3He^{2+}$, Tokamak plasma, numerical simulation of ion-cyclotron heating 3−22666
Fe:He, D, ion implanted, D surface permeation and defect trapping obs. 3−33500
α-Fe:He, spontaneous vacancy-impurity annihilation 3−42644
GaAs:He, ion implanted, depth distrib. and range parameters for He, SIMS study 3−13252
GaP:He, ion implanted, photoelectrochemical meas. 3−42627
H_2-He mixtures with exp-6 interactions, mixing rule 3−33442
He I lines in B-type stars, non-LTE models comparison with obs. 3−20338
He II 468.6 nm line intensity radial distrib. in high voltage hollow cathode discharge tube 3−51425
He removal, falling liquid film condenser, mathematical simulation 3−21557
He-Ar(CO_2)(N_2), heat of mixing meas. 3−42784
He-C arc plasma, lifetimes and Stark widths of C II, plasma diagnostics 3−6572
He-Cd commercial gas lasers, reliability 3−17523
He-Cd II laser, upper level decay rate meas., axial mode competition at 533.7, 537.8 nm 3−37006
He-Cd II rod anode laser tube, characteristics meas. 3−7006
He-Cd laser, effect of weak axial mag. field 3−7047
He-Cd lasers, lifetime and reliability 3−1660
He-Cd lasers, oscill. and striation effects on emission charact. 3−6955
He-Cd lasers in commercial systems 3−1659
He-Cd^+ laser, electron impact excitation of Cd^+, laser transitions 3−32219
He-Cd^+ laser, white light prod. 3−27078
He-Cd^+ positive column laser, 441.6 nm emission, excitation mechanism anal. 3−22042

helium continued
He-Cd^+ positive column laser discharge, Cd II lines radial profiles meas. 3—50648
He-Cs VUV and soft X-ray lasing based on charge-exchange mechanisms 3—12119
He-F_2 mixtures in glow discharge positive column, spectral and elec. pumps. 3—2328
He-graphite, forced convective heat transfer at high temp. 3—51204
He-H, collision integrals, transport coeffs. calcs. 3—32833
He-H_2 discharges, IR optogalvanic meas. 3—42448
He-H_2O positive column plasma, number density and electron temp., numerical model 3—37716
He-I_2 discharge plasma study 3—2310
He-I^+ laser, gain meas. 3—41804
He-Kr high-press. laser excited by U fission fragments 3—50645
He-Kr hollow cathode ion laser investigation *(Chinese)* 3—41862
He-Kr mixture, DC hollow cathode discharges using Al cathode, glow-to-arc transition, report 3—46804
He-like ions, relativistic and correl. effects, Green's function of Dirac's eqn. 3—31897
He-methane, diffusion coeffs. and thermal diffusion factors 3—7682
He-methane mixture, collision induced scatt. spectrum, data acquisition system *(French)* 3—21771
He-Ne 1.15 μm laser, CW oscillation with ultralong optical fibre resonator 3—7025
He-Ne 3.39 μm lasers, heterodyne expts. 3—7048
He-Ne 473-THz (633-nm) laser I_2-stabilised, direct freq. meas. 3—46196
He-Ne commercial gas lasers, reliability 3—17523
He-Ne continuous laser, oscill. period doubling chaos 3—22032
He-Ne discharge, 6328 Å line gain analysis using freq. modulation spectroscopy 3—26989
He-Ne glow discharge, reson. interaction of laser emission 3—27782
He-Ne internal mirror laser, correl. change during warm-up period 3—5538
He-Ne intra-cavity laser beam polarisation effect on refl. beam intensity *(Chinese)* 3—41895
He-Ne laser, $^{127}I_2$ stabilized, I_2 saturation dispersion effects 3—46193
He-Ne laser, 3.39 μm, anomalous dispersion mechanism *(Japanese)* 3—46197
He-Ne laser, 3.39 μm, freq. stability improvement using mag. field 3—17481
He-Ne laser, basic struct., capillary design, elec. components, gas factors and optical elements 3—41867
He-Ne laser, design of I_2 filled absorption cell 3—6996
He-Ne laser, dimensional measurement applications, review 3—27124
He-Ne laser, internal mirror, amplitude and freq. stabilisation by cooling fan method 3—7034
He-Ne laser, mode competition with different Q-factors 3—17484
He-Ne laser, mode effects in SHG, use for laser stabilisation 3—46194
He-Ne laser, reliability factors 3—1657
He-Ne laser, reprographics, optical storage, gauge and medical appls. 3—56271
He-Ne laser, sensitive electro-optical system 3—35968
He-Ne laser acupuncture mechanism, expt. study *(Chinese)* 3—24793
He-Ne laser beam intensity stabiliser 3—46252
He-Ne laser line generation in hollow Cu cathode, 1.15 to 1.20 microns range 3—22031
He-Ne laser tubes, breakdown voltage lowering mechanism *(Chinese)* 3—36993
He-Ne laser with inhomogeneous mirrors, non-Gaussian intensity profile form. 3—37092
He-Ne laser with internal-mirror plasma tube, freq. stabilization system 3—46229
He-Ne lasers, real cost for original equipment manufacturer user 3—1658
He-Ne lasers operating with coupled modes, intensity modulation 3—12194
He-Ne methane stabilised laser with mode spacing/spatial shift independent variation, mode competition 3—27004
He-Ne mixture, Na(K) diffusion coeffs. of normal states and states excited into lower reson. states 3—32836
He-Ne multitransverse mode intermol. mirror laser, polarisation phenomenon *(Chinese)* 3—41803
He-Ne ring laser, emission amplitude characts. 3—12114
He-Ne ring lasers, use of circular dichroism to obtain unidirectional lasing 3—22033
He-Ne stabilised laser, type LG-149-1, active medium perturbation effect on emission-freq. instability 3—32347
He-Ne three-mode laser in self-locking operation, beat-freq., fluctuation suppression 3—22034
He-Ne two-freq. laser in a transverse mag. field 3—27005
He-Ne/methane two-mode lasers, freq. shifts, axial mag. field influence 3—22037
He-O_2^+, population inversion obs. 3—22043
He-O_2(air) mixtures, gas viscosity meas. with Fleisch pneumotachograph 3—19858
He-SF_6 mixture, space discharge forms. by UV radiation *(Russian)* 3—27758
He-Sr plasma laser, convective gas flow, energy rating and kinetics 3—27016
He-Xe, disparate-mass gas mixtures, light scatt. predictions 3—46682
He-Xe, fission pumped IR laser, expt. study 3—1670
He-Xe laser radiation bistability and polarisation due to $5d[3/2]_1^0$-$6p[3/2]_1$ transition in ^{136}Xe in weak mag. field 3—22036
He-Xe pulsed plasma jet recombination laser, stimulated emission at 2.026 μm 3—6949
He-Zn II laser, upper level decay rate meas., axial mode competition at 492.4 nm 3—37006
He-Zn^+ ion laser using hollow-cathode discharge with high-voltage operation 3—32377
He+F, X-ray satellite lines from doubly excited states of F^{6+}, F^{7+} 3—41664
He^{2+}+H, partial cross section for charge transfer, report 3—21894
He_2, Heitler-London intermolecular interaction energy, variational principle 3—11918
^{3}He, ^{4}He ions and high energy protons, detect. using CR-39 track detector 3—26594
^{3}He polarised intense beam source for fusion reactors 3—50076
^{3}He-^{116}Cd, high press. mixture, lasing activity at 441.6 nm 3—17487
^{3}He-^{20}Ne-^{22}Ne ring laser, freq. characts. *(Russian)* 3—12115
$^3He^{2+}$+C, charge transfer reactions at 68, 99 and 130 MeV 3—21908
^{3}He-tetrafluoromethane proportional neutron counter performance 3—1148

helium continued
$^4He^+$, projected range distributions, low-intermediate-high energy, Al target 3—51676
LiF:He, diffusion during deform. at low temp. 3—28161
NH_3 laser output, buffer gas effects 3—12121
N_2O-N_2-He, gas mixture, vibr. relax. behind shock wave 3—27549
NaCl:He, diffusion during deform. at low temp. 3—28161
Ne-He glow discharge, Ne 632.8 nm spectral line, collision broadening and shift obs. 3—55891
SF_6-H_2-He chem. laser, relativistic electron beam excitation using TEREK-1R system 3—6960
Si:He, ion implanted, depth distrib. and range parameters for He, SIMS study 3—13252
Si:He^+, ion implantation, radiation damage accumulation kinetics 3—37945

helium, liquid *see liquid helium*

helium, solid *see solid helium*

helium-3 interactions *see helium 3-nucleus reactions*

helium 3-nucleus reactions
for inelastic helium 3-nucleus scattering, see "helium 3-nucleus scattering"
two-nucleon transfer reactions, ^{3}H, ^{3}He projectiles and products, R-matrix anal., form factor models 3—36393
^{27}Al(^{3}He, π-X), 910 MeV, cross section meas. 3—31422
^{27}Al(^{3}He,d), 40, 60 MeV, ^{28}Si stretched 6^-, 0 and 6^-, 1 resonance meas., 6^-, $1 \to 6^-$, 0 M 1 γ decay strength 3—45499
^{27}Al(^{3}He,p), 13 MeV, statistical multistep compound emission mechanism 3—49833
^{241}Am (^{3}He, 4n), 33 MeV, ^{240}Bk beta-delayed fission study 3—41064
^{197}Au(^{3}He,d), 50 MeV, ^{198}Hg deduced levels, spectroscopic strengths, comparison of supersymmetry and Alaga models 3—16702
^{10}B(^{3}He,p)^{12}C*, reaction Q-value meas. 3—49738
^{9}Be(^{3}He, π^-X), 910 MeV, cross section meas. 3—31422
^{9}Be(^{3}He,p)^{11}B, 38 MeV, CC ^{11}B study at high excitations 3—6239
^{81}Br(^{3}He,t), Gamow-Teller matrix, solar neutrino detection feasibility 3—31350
C^{12}(^{3}He, $\pi^\pm$X), 910 MeV, cross section meas. 3—31422
^{12}C(^{3}He, α)^{11}C, reaction mechanism, finite-range DWBA calcs. 3—11327
^{12}C(^{3}He,d)^{13}N*, theory for stripping to unbound levels 3—16779
^{48}Ca(^{3}He,d), 16 MeV, normalisation constant meas. 3—11325
Cd(^{3}He, π=X), 910 MeV, cross section meas. 3—31422
^{A}Dy(^{3}He,t), A=160, 162, ground-state IAS, deformation effects 3—36389
^{161}Dy(^{3}He, α)^{160}Dy, multiple quasi-particle bands, spectroscopy study 3—45485
^{161}Dy(^{3}He,α), 26 MeV, ^{160}Dy level density above yrast, γ-ray multiplicity variation with nuclear temperature 3—11225
^{A}Er(^{3}He,t), A=162, 164, 166, 168, 170, ground-state IAS, deformation effects 3—36389
^{57}Fe(^{3}He, X), 23, 35 MeV, p, d, ^{3}He and α energy spectra, exciton model anal. 3—41039
^{A}Gd(^{3}He,t), A=152, 154, 156, 158, 160, ground-state IAS, deformation effects 3—36389
^{155}Gd(^{3}He,3nγ), 27 MeV, ^{155}Dy, lifetime meas. of isomeric $9^+/2$ state, particle-rotor anal. 3—31339
^{A}H(^{3}He, $\pi^\pm$X), A=1 or 2, 910 MeV, cross section meas. 3—31422
(^{3}He,d), density depend. effective interactions, DWBA description 3—16784
(^{3}He,γ), on A=14-40, excitation functions, energy levels, J^π 3—45455
(^{3}He,$\vec{p}$), 14 MeV, on ^{7}Li, ^{9}Be, ^{2}H, polarisation and analysing powers meas., time asymmetry *(French)* 3—36400
^{4}He(^{3}He,γ), 897 keV, cross sections and S-factor for stellar evolution 3—31424
^{A}Hf(^{3}He,t), A=176, 178, 180, ground-state IAS, deformation effects 3—36389
^{179}Hf(^{3}He,d), 36 MeV, ^{180}Ta bands, isomers, diff. cross sections, DWBA, Nilsson anal. 3—31271
^{6}Li(^{3}He,pα), 13 MeV, αd momentum distrib., quasifree reactions 3—16781
^{7}Li(^{3}He,αd), 2.5 MeV, ^{6}Li, state width at 4.3 MeV 3—36329
^{25}Mg(^{3}He,p), 13 MeV, statistical multistep compound emission mechanism 3—49833
^{26}Mg(^{3}He,t), 1.06 MeV, $^{26}Al^m$ Fermi beta-decay, Q-value doublet meas. 3—16736
^{92}Mo(^{3}He,d), 16 MeV, normalisation constant meas. 3—11325
^{98}Mo(^{3}He,2nγ)^{99}Ru, particle-core multiplet populating 3—49723
^{14}N(^{3}He,t), 1.06 MeV, ^{14}O Fermi beta-decay, Q-value doublet meas. 3—16736
^{61}Ni(^{3}He, X), 23, 35 MeV, p, d, ^{3}He and α energy spectra, exciton model anal. 3—41039
^{16}O(^{3}He, α)^{15}O, 15 MeV, spin-orbit effects, optical model anal. 3—16778
^{16}O(^{3}He,pγ), 3.8 MeV, ^{18}F 1081 keV γ-transition, parity violation search, polarised γ 3—16698
Pb(^{3}He, π^-X), 910 MeV, cross section meas. 3—31422
^{208}Pb(^{3}He,^{3}He′), 140 MeV, hexadecapole components in GQR 3—55052
^{A}Se(^{3}He, d)Br, A=76, 78, 80, 82, 24 MeV, differential cross sections, ang. distribs., L, J, π, S determ. 3—31421
^{77}Se(^{3}He,3n) 36-22 MeV, high-purity ^{77}Kr production 3—58815
^{28}Si(^{3}He,p4n), 110-130 MeV, $T_z=-2$ isotope ^{26}P, beta-delayed proton decay 3—54996
^{A}Sm(^{3}He,alpha), A=144,148,152, neutron hole strength distributions, DWBA theory 3—55041
^{144}Sm(^{3}He,d), 33 MeV, ^{145}Eu mass excess and Q-value 3—6144
Te(^{3}He, 3n), 20-27 MeV, ^{122,124,126}Xe positive and negative parity states, isomer, J^π, transitions, IBA anal. 3—678
^{126}Te(^{3}He,α)^{125}Te, transfer reactions cross sections for low-lying weakly excited high-spin states 3—45439
^{A}Yb(^{3}He,t), A=170, 172, 174, 176, ground-state IAS, deformation effects 3—36389

helium 3-nucleus scattering
^{A}Fe(^{3}He, ^{3}He), A=54, 56, elastic and inelastic, 33 MeV, anal. powers, optical and deformation parameters 3—45505
(^{3}He,^{3}He), A=16-40, 25 MeV, differential cross sections, optical anal., charge radii 3—16782
^{A}O(^{3}He, ^{3}He), A=16,17,18, 14 MeV, optical model anal. 3—16778
^{A}O(^{3}He, ^{3}He), A=17, 18, elastic and inelastic, 33 MeV, anal. powers, optical and deformation parameters 3—45505

helium-3 scattering *see helium 3-nucleus scattering*

helium atoms
2^1S state, electron impact excitation calcs. 3—32221

helium atoms continued
- $2s2s^1S$ and $2s2s^1P$ reson., saddle point complex rotation method calcs. 3−21635
- ^2S atomic resonance states, propagator version of the direct Siegert method 3−36701
- autoionisation state width computation using model-pot. method 3−1317
- autoionising states widths, var. calc. using complex coords. 3−55902
- backscattering from Al and W, low energy, ang. and energy correls. 3−26452
- Breit correction, calcs. using Coulomb Green's function 3−11716
- charged particle scatt., Glauber amplitude calc. 3−46062
- Compton scatt., impulse approx. 3−32007
- correlation energy, explicitly correl. Gaussian geminals, 2nd order perturbation calcs. 3−41487
- cosmic ray prod. nuclids in Fe meteorites, exposure ages and meteoroid sizes 3−48867
- Coulomb three-body problem, hyperspherical expansions 3−21621
- diffraction and scattering from LiF, semiclassical perturbation approx. calcs. 3−58015
- double electron excitation cross section, Glauber theory calcs. 3−26868
- doubly excited, electron pair correlations, review 3−41507
- doubly excited P-wave resonances 3−6559
- doubly excited states, CI wave functions and adiabatic channel functions 3−31960
- doubly excited states study 3−21874
- dynamic polarisability, time-depend. density functional theory 3−6745
- dynamic polarisability calc., coupled HF and variational perturbation theories 3−1228
- elastic electron scatt., polarisation and exchange effects 3−32200
- elastic electron scatt. cross sections, semiclassical polarisation approx. 3−32207
- electric dipole polarisability, MC-TDHF calcs. 3−50291
- electron correlation angular aspects and the Coulomb hole 3−1256
- electron elastic and inelastic scatt. at high energies 3−46079
- electron impact double ionisation at high velocity 3−6776
- electron impact excitation, alignment and orientation parameters meas. 3−6792
- electron impact excitation, of 2^1P state, electron-photon ang. correl. 3−56086
- electron impact ionisation, laser assisted, cross section calcs. 3−32213
- electron impact ionisation, triple-differential cross section, core-model calcs. 3−21921
- electron impact near-threshold excitation of 2^3S state 3−46072
- electron removal by fast multiply charged ions 3−11958
- electron scatt., total cross sections, time of flight method 3−26851
- electron-photon joint excitation of $1^1S \rightarrow 2^3S$ transition 3−6787
- EM hyperpolarisability tensor from Verdet consts. 3−50448
- energy level excitation cross section meas. following electron impact 3−36863
- excitation and ionisation cross-sections by positron impact 3−26858
- excited, multiphoton ionisation in glow discharge by ruby laser 3−17250
- excited Rydberg states, reorganisation, electron correl., Hartree-Fock calcs. 3−1272
- excited state, at. Fues pot., energies and oscill. strengths 3−55892
- exotic atoms, X-ray yield meas. 3−32246
- ground state, correlated one-parameter momentum space function 3−55812
- ground state, photoionisation cross section 3−1321
- ground state in momentum space 3−6522
- ground state trial functions 3−31962
- ion, ground state energy, correl. effect calc. using relativistic Coulomb Green's function 3−11718
- ionisation energy in a plasma 3−32857
- ionisation in solar prominences and subsequent radiation diffusion 3−40102
- ionisation processes involving synchrotron and laser radiations recent progresss 3−26713
- ions, electron de-excitation collisions, laser-based meas. 3−21924
- ions, isoelectronic series, dielectronic recombination rate coeff. 3−26846
- isoelectronic series, 2^3P fine struct., QED test 3−45872
- isoelectronic series, $2^3S\text{-}2^3P_{0,1,2}$ energies, QED test 3−45873
- isoelectronic series, dielectronic recombination rate 3−26845
- isoelectronic series, third-order correl. energies for closed-shell systems 3−21620
- isoelectronic series, two-electron spectra, correls., MCHF calcs 3−21646
- Lamb shifts, precision wavelength meas. 3−41532
- laser plasma, satellite struct. intensities near $1s3p^1P_1$ to $1s^2\ {}^1S_0$ line of multiply charged He-like ions 3−2291
- locally constrained var. calcs., nonlinear programming approach 3−55818
- magnetic resonance of 2^3S_1 state, appl. in magnetometer 3−30908
- matter, structure and props., book 3−40326
- metastable atom impact on Ni(111) and CO/Ni(111) surface, Penning ionisation study 3−58016
- muonic atoms, ground state hyperfine splitting 3−41708
- photoionisation, using synchrotron radiation 3−32012
- photoionisation with excitation of residual ion 3−32016
- plasma, collisional-radiative mode and laser induced excitation transfer 3−21696
- positron impact excitation, cross sections, modified Born approx. 3−32220
- proton stopping power meas. 3−41455
- refractive index meas., polarisabilities, eigenergies, oscillator strengths, Rayleigh scatt. and force consts. 3−7696
- Rydberg atoms, electric field ionisation 3−6592
- Rydberg atoms, intense microwave interactions 3−26678
- Schrodinger eqn., two dimens. fully numerical solns. 3−36669
- spectral line profiles, ion dynamic effects at low density 3−42456
- supersonic beam time-of-flight analysis, with quadrupole mass spectrometer 3−26884
- vinylidene triplet radical+He, quenching in UV region 3−36771
- H^-, $1s2p2p'4P^e$ reson. in photodetachment 3−45909
- H^-+He, impact param. depend. on detached electron energy spectra 3−46056
- H_2-He mixture, collision induced spectra, intercollisional interf. effect on S_1 rot. line 3−45942
- He (2^1P) electron impact alignment and orientation study 3−41687
- He I, absorpt. spectrum line oscillator strengths in 190-600 Å region 3−1309
- He I 10830 Å line profiles in early-type stars, atlas of Fabry-Perot scans 3−30348
- He I 3965 Å line, Stark broadening calc. 3−45896
- He I 3p ^3P state, beam foil excited, orientation and polarisation 3−21896

helium atoms continued
- He I 5016 Å line, Stark profile and widths in plasma 3−45897
- He I D_3-line obs., vector magnetic fields of solar prominences 3−5254
- He II, photoelectron spectroscopy, capillary discharge tube for the production of intense VUV resonance radiation 3−27180
- He ions+H_2, nondissociative ionisation and dissoc. ionisation 3−6756
- He, multiply excited states, electronic correl., hyperspherical anal. 3−26656
- He^-, $^2P^0$ reson. state calc. 3−26652
- He^-, electron pair correlations, review 3−41507
- He^-, multiply excited states, electronic correl., hyperspherical anal. 3−26656
- He^-, resonances below n=3 threshold 3−36649
- He^+, $^1P^o$ reson. below $n=4$, oscillator strengths, autoionising levels 3−11902
- He^+ beam, collision with solid surface, hydrogenic excited states formation 3−21669
- He^+, electric field induced anticrossing signals, Stark effect mass 3−1303
- He^+, electron impact 2s and 2p level excitation cross sections *(Russian)* 3−21928
- He^+, fine struct. interval anticrossing meas. 3−1315
- ^3He, singlet-triplet mixing in the 13d Rydberg state obs. with laser stepwise excitation 3−21672
- He^{2+}:Li, electron capture processes in energy range 15-150 keV 3−1457
- He-Ag (110) interaction pot. determ. by selective adsorption 3−3902
- He-He_2, elastic and dissociative collisions, multiple scattering description 3−11920
- He-like ion reson. line, dielectronic satellite strengths in optically thick plasma 3−12846
- He-like ions, 2s ^3S-2p ^3P transition study *(French)* 3−21875
- He-like ions, 2s ^3Si-1s2p $^3P_{0,2}$ transition 3−21684
- He-like ions, Bethe-Salpeter eqn. ladder approx. 3−31915
- He-like ions, electron capture by protons, cross sections calc. 3−11942
- He-like ions, P^{13+}, n=2 states lifetimes and fine struct. energies 3−21708
- He-N_2(CO)(NO)(CO_2), intermolecular short-range forces, differential scatt. study 3−11917
- He-Ne laser, Zeeman multiplet, nonlinear laser spectroscopy 3−21701
- ${}_2^4He+{}^{79}Au({}^{82}Pb)({}^{83}Bi)({}^{92}U)$, M-shell X-ray prod. cross sections meas. 3−6759
- He+Ar mixture, collision induced absorpt. spectra 3−26674
- He+Ar^+, rearrangement collisions, VUV emission spectra 3−26832
- He+Ar(N_2), Penning ionisation by He(2^3S), expt. study 3−11956
- He+Au^{2+}, electron capture, target ionisation, coincidence meas. 3−32185
- He+C_3, vibr. relax of $C_3(\tilde{X}^1\Sigma_g^+)$, time-resolved and laser induced fluoresc. spectra 3−17362
- He+$C^{3+}(N^{4+})(O^{5+})$, electron capture reactions, (n,l) distribs. meas. 3−21903
- He+CO, vibr. relax. following shock heating 3−41650
- He+CO_2 (N_2O)(cyanogen), crossed atomic and mol. beams, anisotropic intermolecular pots. 3−41647
- He+CdH ($A^2\Pi$), rot. energy transfer, collision cross sections 3−6767
- He+Eu^+, excitation transfer process study 3−21890
- He+fluoromethane-d_3, IR luminesc. and vibr. relax. at low temps. 3−17367
- He+H, exchange-induced dipole moments 3−11919
- He+H_2, energy surface in repulsive region, single configuration HF calcs. 3−6562
- He+H_2, ortho-H_2 rovib. excitation 3−21864
- He+H_2, pot. energy surfaces relevant to Penning ionisation 3−1466
- He+H_2, rot. inelasticity, initial value representation cross sections 3−17348
- He+H_2, rot. vibr. scatt., off-energy-shell effects in energy sudden factorisation relations 3−36845
- He+H_2 collision, far IR absorpt. spectrum anal. 3−11797
- He+H_2^+, alignment in mol. excitation for 3.22 keV collision 3−56052
- He+H^-, detached electron energy spectra 3−50495
- He+H^-, electron detachment, doubly differential cross-section 3−26819
- He+H^- collisions, electron detachment cross section 3−50504
- He+H^+, double ionisation at high velocity 3−6776
- He+H^+, elastic differential cross sections for small angle scatt., 25-, 50-, and 100 keV protons 3−11926
- He+H^+, ionisation, differential cross section calcs. 3−56069
- He+H^+, orbiting and rainbow structures, low-energy elastic differential cross sections, semiclassical anal. 3−50304
- He+HD, viscosity transport, relaxation cross-sections, close-coupled calcs. 3−50497
- He+HF, IR laser-crossed molecular beam study 3−26811
- He+H(H_2), 0.3-3.5 MeV, total one-electron-loss cross sections 3−26836
- He+H(He)(Li)(B)(C)(O) ions, absolute partial ionisation cross sections determ. for inelastic interactions 3−6765
- He+He, bound state form., repulsive forces effects *(Russian)* 3−1454
- He+He^+, 2-3 keV, photon polarisation meas., impact parameter selection 3−21895
- He+He^+, atomic excitation, level-crossing meas. 3−1468
- He+He^{2+}, electron capture, cross section binary encounter approx. 3−32194
- He+He+Li van der Waals interaction and contrib. to hyperfine shifts, many-body study 3−26820
- He+He(H)(Li)(B)(C)(O) ions, ionisation, deviations from q^2 scaling 3−6764
- He+I_2 collision, excitation and rotational relaxation, quantum mechanical study *(Spanish)* 3−36843
- He+ion, impact ionisation scaling cross sections 3−36851
- He+K(Rb)(Cs), intramultiplet mixing, quantum calcs. 3−21853
- He+Kr^+(Xe^+), integral elastic scatt. cross-sections 3−26852
- He+Li, coherent S→D excitation, polarisation anal. 3−50496
- He+Li, van der Waals interaction and contrib. to hyperfine shifts, many-body study 3−26820
- He+Li^+, total cross section meas., pot. determ. 3−17355
- He+LiH, rot. energy transfer process, individual trajectory study 3−26822
- He+Li+Li(Ne) van der Waals interaction and contrib. to hyperfine shifts, many-body study 3−26820
- He+Li(Li ions), excitation and ionisation cross sections Born approx. 3−11959
- He+N_2, anisotropic van der Waals pot., state-to-state differential scatt. cross-sections 3−50479
- He+N_2, rot. excitation, time of flight spectra 3−26821
- He+N^{7+}(O^{7+}), two electrons capture into autoionising states 3−11966

- **helium atoms** continued
  - He+NH$_3$ collisions, microwave double reson. expt. interpretation using the m-dependent transitions selection rule 3–21855
  - He+NH$_3$ microwave double reson. expts., anal., m-dependence effects 3–55978
  - He+Na, population transfer, time-resolved laser fluoresc. 3–6773
  - He+Ne, elastic and energy transfer scatt., interaction pots. 3–6772
  - He+PN, energy transfer, Penning ionisation, emission spectra 3–41666
  - He+S^{11+}(S^{13+}), resonant transfer and excitation processes 3–56068
  - He+Sr, 5sns^{1}S$_0$, 5snd^{1}D$_2$ and 5snd^{3}D$_2$ levels impact broadening 3–32004
  - He+Te$_2$, relax. cross section, lifetimes and Lande factors for rovibronic Te$_2$ levels 3–17337
  - He$^-$+H(H$_2$), 0.3-3.5 MeV, total one-electron-loss cross sections 3–26836
  - He$^+$+Ar, rearrangement collisions, VUV emission spectra 3–26832
  - He$^+$+Ar collision, electron ang. distrib. in electron spectra 3–56034
  - He$^+$+Ar(Xe) high energy collisions, electrons and X-rays angular distrib. 3–41646
  - He$^+$+H, charge exchange and excitation, OEDM orbital appl. 3–26844
  - He$^+$+H, excitation and charge transfer cross sections, impact parameter formalism 3–32196
  - He$^+$+H$^+$($\bar{p}$), excitation, ionisation and charge transfer 3–41661
  - He$^+$+H(H$_2$), 0.3-2.0 MeV, total electron capture cross sections 3–26837
  - He$^+$+H(H$_2$), 0.3-3.5 MeV, total one-electron-loss cross sections 3–26836
  - He$^+$+He, 2-3 keV, photon polarisation meas., impact parameter selection 3–21895
  - He$^+$+He, ang. distrib. of ejected electrons from 20 keV, autoionisation states 3–11967
  - He$^+$+He, atomic excitation, level-crossing meas. 3–1468
  - He$^+$+He collisions, autoionisation transition interference, electron distrib. 3–26829
  - He$^+$+He(N$_2$)(Ar), electron loss from fast one-electron ions 3–1471
  - He$^+$+Hg, nonreson. charge exchange, quenching and excitation 3–21907
  - He$^+$+N$_2$, reaction rate consts., ion mobilities temp. depend ion drift tubes study 3–39367
  - He$^+$+Ne, autoionisation electrons from Ne(2p^{4}3s^2)^{1}D, ang. distrib. 3–11968
  - He$^+$+Ne, K$_\alpha$ X-ray satellites and hypersatellites 3–50336
  - He^{2+}+H, radiative charge transfer calcs. 3–26848
  - He^{2+}+H(H$_2$), 0.3-2.0 MeV, total electron capture cross sections 3–26837
  - He^{2+}+He(Ar)(Kr), electron capture, cross section binary encounter approx. 3–32194
  - He^{2+}+Li, excitation between 15 and 600 keV, emission cross sections meas. 3–1458
  - He^{2+}+Ne(Ar)(Kr)(Xe)(N$_2$), electron capture from gas target atoms, 0.7-4.5 keV 3–46064
  - He$_2$, bond formation in terms of electron momentum distrib. 3–36654
  - He$_2$$^{2+}$ ground state, density functional calcs. 3–26636
  - He^{2+}Ca(Sc)(Ti)(V)(Cr) collisions, K-shell vacancy production 3–32179
  - He$^+$He$^+$(Li^{2+})(C^{5+})(O^{7+}), electron loss from fast one-electron ions 3–1471
  - HeI+He* collisions, excitation study by visible spectra 3–32183
  - ^{3}He, 2^{3}P state, hyperfine struct. meas. 3–55825
  - ^{3}He enrichment in flare particles, selective accel. by chromosphere He Lyman α radiation press. 3–54294
  - ^{3}He I, nd ^{1}D states HFS study 3–21938
  - ^{3}He, muonic, theoretical hyperfine structure 3–12013
  - ^{3}He, nd Rydberg states, Doppler-free UV-IR double reson. laser spectrosc. 3–50332
  - ^{3}He, singlet-triplet mixing in ns (n=12-14) Rydberg states 3–45990
  - ^{3}He, spin polarised quantum gas, transport props. 3–28191
  - ^{3}He-^{4}He few-atom mols., binding energy calcs. 3–50299
  - (^{3}He)$_4$ fermionic tetramer, binding energy, var. calc. 3–21944
  - ^{4}He I, triplet level energies, saturated absorpt. obs. 3–41517
  - ^{4}He ion+Cu (Ge) (Mo) (Ag), target, K-shell ionisation cross sections 3–6774
  - ^{4}He motional Stark effect induced anticrossings, zero-field level separations 3–50349
  - ^{4}He, muonic, theoretical hyperfine structure 3–12013
  - ^{4}He+H$_2$(D$_2$), vibr. relax., rate consts., semiclassical sudden approx. 3–56043
  - He*-HeI collisions, excitation study by visible spectra 3–32183
  - He*+H$_2$, Penning ionisation, rel. to diatomics-in-mols. calcs. 3–17239
  - He*+H$^+$(H$_2$$^+$)(H$_3$$^+$) excited state impact induced alignment, backcoupling 3–50507
  - He*+He(Ar)(Ne), crossed beam time of flight study, vel., resolved total integral cross sections 3–11936
  - He(2^{1}P), electron impact excitation, orientation, radiative decay polarisation 3–26855
  - He(2^{3}S) optical pumping, by colour-centre laser 3–21731
  - He(2^{3}S)+CO$_2$, CO$_2$$^+$ emissions resulting from Penning ionisation 3–17369
  - He(3^{1}P), electron impact excitation, momentum transfers 3–26854
- **helium compounds**
  - He-I$_2$ van der Waals complexes, vibr. predissoc., perturbation wave packet study 3–11907
  - HeH, pot. energy curves and mixing coeffs., DIM calcs. 3–17239
  - HeH$^-$, pot. energy curves and mixing coeffs., DIM calcs. 3–17239
  - HeH$^+$, beam-foil level excitations, molecular effects study 3–21880
  - HeH$^+$, mol. states, energies and dynamical couplings 3–31932
  - HeH$^+$, pot. energy curves and mixing coeffs., DIM calcs. 3–17239
  - HeH$^+$, Schrodinger eqn., two dimens. fully numerical solns. 3–36669
  - HeH^{2+}, Schrodinger eqn., two dimens. fully numerical numerical soln. 3–36668
  - HeH$_2$, energy surface in repulsive region, single configuration HF calcs. 3–6562
  - He...I$_2$ quasimol., three dimens. vibr. predissoc. 3–36829
- **helium films**
  - adsorbed on solid Ne, surface electrons and bubble electrons, stability 3–47181
  - adsorption, statistical mechanics, conf., Trieste, Italy (July 1982) 3–49083
  - desorption kinetics, continuum model 3–33568
  - desorption kinetics, macroscopic continuum model 3–51887
  - interaction potential between H atom and normal modes 3–57170
  - superfluidity over impure substrate *(Russian)* 3–47177
  - surface polaron in electron-ripplon system 3–57157
  - two dimensional trapped electrons, electron cond. and third sound vel. 3–28185
  - ^{3}He adsorbed film, anomalous nucl. spin relax. 3–28186
- **helium films** continued
  - ^{3}He film adsorbed on rough substrate, spin-rotation effect 3–57163
  - ^{3}He, liq., surface tension meniscus calc. 3–2928
  - ^{3}He-^{4}He films, phase-separated dynamics 3–28184
  - ^{3}He-^{4}He mixture, superfluid, film, sound propag. *(Russian)* 3–2918
  - ^{3}He-^{4}He stratified soln. film, collective excitation spectrum *(Russian)* 3–28182
  - ^{3}He-A superfluid thin film, extended structures 3–42878
  - ^{4}He film, adsorbing, relax. time after flash desorption 3–57171
  - ^{4}He film, on highly oriented pyrolytic graphite, third sound vel. meas. 3–2909
  - ^{4}He film, persistent flow obs. 3–57169
  - ^{4}He film, superfluid, charge complexes *(Russian)* 3–18530
  - ^{4}He films, superfluid effective thermal conductance, Kosterlitz-Thouless transition 3–8286
  - ^{4}He, liq., surface tension meniscus calc. 3–2928
  - ^{4}He, liq. films, third sound damping and crit. vel., nonlinear effects 3–8285
  - ^{4}He, superfluid, roton compaction near substrate *(Russian)* 3–47176
  - ^{4}He, superfluid, surface excitations, inelastic neutron scatt. study 3–51888
  - ^{4}He, superfluid film, US third sound interaction with substrate surface defects 3–33529
  - ^{4}He superfluid films, thermal conductance near superfluid transition 3–8287
  - ^{4}He, superfluidity onset on particular cryst. facets and on disordered substrates 3–23116
  - ^{4}He, thermal cond. and nonlinear behaviour at superfluid transition 3–2911
- **helium I** *see liquid helium-4*
- **helium II** *see superfluid helium-4*
- **helium nuclei** *see nuclei with mass number 1 to 5; nuclei with mass number 6 to 19*
- **Hellman-Feynman theorem** *see quantum theory*
- **Helmholtz free energy** *see free energy*
- **hemoglobin** *see proteins*
- **hemorheology** *see biorheology; blood*
- **Hertzsprung-Russell diagram** *see stellar evolution*
- **heterodyne detection** *see demodulation*
- **heterodyne wavemeters** *see wavemeters*
- **HEXFET** *see insulated gate field effect transistors*
- **h.f. amplifiers** *see high-frequency amplifiers*
- **HF calculations**
  - *see also Xalpha calculations*
  - 1-p shell hypernuclei study, Λ-N effective interaction *(Chinese)* 3–40985
  - A=152-238, NN forces, binding energy, RMS radius, deformation, semi-phenomenological model 3–36333
  - A=48-208, giant electric isovector resonances, microscopic HF-RPA theory 3–45495
  - acetaldehyde, ^{13}C nuclear mag. shielding tensor, ab initio HF calcs. 3–55863
  - acetone, pot. energy surface determ., nonrigidity effects 3–56018
  - acetylene, spin-spin coupling consts., calc. with self-consistent polarisation propagator approx. 3–26767
  - actinide nuclei, backbending effect study 3–11228
  - actinide nuclei, fission barrier microscopic calc. using two-step iterative method 3–45506
  - actinides, 5d^{10}-5d^{9}5f transition, effect of collapse of 5f electron 3–31994
  - adjoint operator pair, Hartree-Fock scheme 3–30681
  - alkali halides, F- and F$_A$-centres, HF cluster calculation 3–3116
  - alkali metal atoms, photoionisation of outermost closed shell 3–21735
  - alkanes, polarisabilities and second hyperpolarisabilities, CNDO calcs. 3–6543
  - approximating polynomial, least-squares method 3–31935
  - approximation, by linear combination of Slater and Gaussian orbitals 3–26638
  - atom, corrections to Thomas-Fermi model 3–26639
  - atom-atom interactions, exchange interaction with excitation transfer, Hartree-Fock calcs. 3–11673
  - atoms, HF orbitals, semiclassical long-range behaviour 3–1193
  - atoms, ionis. pot. and chem. pot., Hartree-Fock theory 3–41485
  - atoms, struct., electron coincidence spectroscopy, HF wavefunctions 3–26857
  - atoms, Thomas-Fermi study of outer region 3–11685
  - average kinetic energy and mean square radius in nuclei 3–16694
  - axially deformed nuclei, Hartree-Fock eqn. solution *(Russian)* 3–16722
  - bicyclic nonalternating hydrocarbons, methylene derivatives, biradical states calcs. 3–36676
  - bimetallocenes, weakly coupled, electron correl., semiempirical INDO calcs. 3–1261
  - bimetallocenylenes, weakly coupled, electron correl., semiempirical INDO calcs. 3–1261
  - n-butane, torsional pot. function, CI calcs. 3–32158
  - carbonyl bases, protonation energies, geom., basis set and correl. energy depend. 3–39355
  - chalcogen hexahalogenides, electronic struct., discrete var. Xα calc. method 3–55834
  - closed-shell atoms, electron density direct calc. in many-electron atoms 3–36678
  - conference, from particles to nuclei, Varenna, Italy (June-July, 1980) 3–10512
  - constrained quantum mechanics and a coordinate independent theory of the collective path 3–26206
  - constrained Roothaan-Hartree-Fock method 3–50283
  - convergent HF orbital optimisation method, relationship to HF and RPA methods 3–26619
  - coupled chains, antiferromag. ordering, Hartree-Fock approx. calc. 3–57503
  - crystal field effects, HF calcs. on periodic systems, low order elec. moments cancellation 3–38356
  - cubene electronic struct., HF wave-functions 3–21615
  - cyclobutadiene, aza-derivatives, struct., Hartree-Fock calcs. 3–36685
  - deformed axially symmetric nuclei, collective gyromagnetic ratio from density depend. HF calc. 3–45451
  - density-gradient expansion for Hartree-fock exchange energy 3–8434
  - diamond, impurities, exchange-correlation and local field effects, RPA calc. 3–57298
  - diamond, muonium location and hyperfine interaction, HF SCF cluster calc. 3–57325

HF calculations continued
diatomic molecule, total energy calc., Gaussian quadrature Xα method for Hartree-Fock-Slater eqn. 3—31923
1,3-dihydro-1,3-diazine, struct., Hartree-Fock calcs. 3—36686
dimethylberyllium, mass spectral fragmentation, struct., MNDO UHF calcs. 3—11691
1,3-dioxin, struct., Hartree-Fock calcs. 3—36686
direct energy minimisation method for constrained HF and HFB solns. 3—36341
direct minimisation procedure, restricted HF approx. 3—55785
disilene-silylsilylene isomerisation, transition state calcs. 3—24496
1,3-dithiin, struct., Hartree-Fock calcs. 3—36686
dithiocarbazic acid, S-methyl ester, conformational behavior, HF-LCAO-MO-SCF calcs. 3—11648
DNA, solvation, quantum chem. calc. and computer simulation 3—39572
easy-plane ferromagnet, semiclassical theory of planar spin states 3—38623
eigenfunctions without spherical symmetry 3—54649
electron spins, unpaired, in mol. phys. and chem. 3—55778
electronic stopping powers, shell corrections, orbital mean excitation energies calcs. 3—26635
EM M1 strength quenching due to mesonic and ground state correl. effects 3—6189
energy minimisation, restricted HF approx. 3—55784
enzymes, hydration, quantum chem. calc. and computer simulation 3—39572
ethane, excited states, pot. energy surface, photochemistry, ab initio HF CI calcs. 3—31957
excited Rydberg states, reorganisation, electron correl., Hartree-Fock calcs. 3—1272
externally perturbed systems, many-body theory of correl. effects 3—5704
field shift crossed-second-order effects in l^{N}s configurations 3—1192
finite-dimensional fermion algebra decomposition into irreducible spaces 3—30764
finite-temperature Hartree-Fock-Bogoliubov cranking theory 3—49776
finite-temperature mean field theory of nuclei 3—21241
first row homonuclear diatomic mols., electron momentum distrib., HF calcs. 3—41489
first-row diatomic hydrides, electron momentum density contour maps 3—21622
1-fluoro-1-chloroethane, ^{13}C nuclear mag. shielding tensor, ab initio HF calcs. 3—55863
Fock matrix elements transferability 3—55830
formaldehyde, equilib. geometry and vibr. freqs., Hartree-Fock calcs. 3—17204
formamide, ^{13}C nuclear mag. shielding tensor, ab initio HF calcs. 3—55863
generator coordinate method mass parameter 3—31312
giant dipole resonance in the high spin region of deformed nuclei 3—49828
giant multipole states, displacement potential, dynamical macroscopic description 3—31373
gluon magnetic mass in Hartree-Fock approximation of QCD 3—587
halogen atoms, electron affinities calc. using relativistic HF approach with atomic polarisation 3—6534
Hartree-Fock equation, numerical soln. method 3—35833
Hartree-Fock mean-field theories in finite nuclei 3—11274
Hartree-Fock-Slater formalism, model potential method 3—17213
heavy ion deep inelastic collisions, mean charge and mass drift, TDHF 3—26257
heavy ion reactions, time evolution of coherent ground-state correlations, TDHF approach 3—54967
heptafulvalene trianion radical, electronic struct., doublet instability of HF soln. and related phenomena 3—11700
hot dense nucl. matter, light metal abundances depletion as consequence of Pauli quenching 3—40983
Hubbard model, antiferromagnetic and incommensurable mag. solns., Hartree-Fock approx. 3—23575
hydrazine, N-N spin-spin coupling consts., ab initio calcs. 3—17309
hydrazines, protonated, N-N spin-spin coupling consts., ab initio calcs. 3—17309
infinite Fermi systems, density fluctuations 3—11271
inorganic and organic radicals, thermodynamical props. and struct. data, MNDO-UHF calcs. 3—31943
interacting fermion gases, mass distrib. from Schrodinger eqn. TDHF anal. 3—36373
ions in insulators, indirect exchange interaction theory 3—3437
itinerant electron magnetism theory 3—52337
kinetic energy functionals for electron number and spin density, non-local approx. 3—43050
large amplitude vibrations, generator coordinate method, path integrals, TDHF eqns. 3—16687
linear approach for second order soln, application to SU(2) and SU(3) 3—26208
linear combination of Gaussian-type orbitals, ab initio LCAO SCF MO program calcs. *(Chinese)* 3—41490
Lipkin model, TDHF trajectories corrections 3—21299
local density approx., self-interaction correction 3—41479
many electron systems, externally perturbed, correlation effects 3—36694
many-body excited states, wave functions and energies, diagonalisation and HF method 3—49178
many-electron systems, dynamic polarisability calc., coupled HF and variational perturbation theories 3—1228
methane, elastic electron scatt., rot. excitation, ab initio interaction pots. 3—41681
methyl radical (-d$_3$), spectrosc. props. UHF self-consistent electron pair wavefunction calcs. 3—45821
model polymer, electron localisation calcs. 3—13713
modified virtual orbitals in orbitally ordered CI expansion 3—11667
molecular electronic struct. theory, rot. invariance in energy derivatives 3—36643
molecular mag. quantities calc. using the I_{rs} and J_{rs} integrals in the computation, McWeeny coupled perturbation method 3—36664
molecular one-electron expectation values, GTO expansions of STO functions 3—55821
molecules, spin-spin coupling consts., calc. with self-consistent polarisation propagator approx. 3—26767
monocyclic nonalternating hydrocarbons, methylene derivatives, biradical states calcs. 3—36676
mononuclear isoelectronic species, total energy, energy components, orbital energy, and MO coeff. 3—11666

HF calculations continued
multiconfiguration time-dependent Hartree-Fock theory, formalism 3—50291
naphthalene(-d$_8$) anions, reson. Raman spectra in tetrahydrofuran 3—45950
narrow gap semiconductors, diamond like, Kane model deviations caused by nonlocal pot. 3—8414
neutral atom energy, approx. rel. with nucl. electronic pot. 3—17188
nickel complex, bis(π-pentadienyl)dinickel, intramol. electron-hole transfer 3—1234
nitroxides spin density, alkyl substitution effect, ab initio UHF calc. 3—55824
nonlinear eigenvalue problem soln. in one dimension 3—45006
nuclear many-body problem, pion propagator in relativistic quantum field theories 3—26223
nuclear matter, quasi-Hartree-Fock theory calcs. 3—45479
nuclear matter, semi-infinite, surface incompressibility study using constrained HF calcs. 3—26210
nuclear rotational motion, flow pattern from Elliott's SU(3) model 3—16717
nucleus-nucleus collision, fusion model appl. using collective variables and microscopically related mass parameters 3—26261
numerical HF functions, orthogonalisation procedure 3—11645
one-body density matrix, nonunitary effects in time evolution 3—40982
one-dimensional chains, Peierls- and Mott-type instabilities 3—13727
one-dimensional many-body system, fermion clustering 3—30766
open-shell Hartree-Fock theory, anal. first and second energy derivatives 3—17204
open-shell systems, correl. energies, CEPA, PNO-CI and perturbation treatments, restricted RHF formalism 3—1263
open-shell systems, struct. predictions from ab initio MO procedures, comparative assessment 3—50301
optimised mean-field description of N-fermion system 3—21606
orbital self-interaction in Hartree-Fock and density functional theories 3—18600
phase transitions in exactly soluble models, Hartree Fock linearised model 3—26207
poly-(p-phenylene) chains, electronic struct., ab initio HF study 3—23239
polyacetylene, semicond., quasiparticle energy band struct., correlation effects on band gap 3—57264
polyacetylene, vibronic states 3—47072
polyenes, π-electron correl. effects in one-particle spin-pairing amplitudes method 3—47255
projected Hartree-Fock solns., stability and instability conditions 3—17208
quantum defect theory in double-valley pot. 3—26809
quasispin dynamics beyond Bloch sphere, exact vs. time depend. HF evolution 3—11268
radicals, spin-density distrib., hyperfine coupling consts., INDO-RHF-CI calcs. 3—11689
relativistic nucleon-nucleus pot., local density approx. 3—11249
resonant freq. depend. polarisabilities and polarisability derivatives, HF theory and MO basis selection scheme 3—1208
restricted HF theory, analytic second derivatives, high-spin open-shell mol. wave functions 3—21618
Schrodinger eqn., numerical solution, appl. to electron-atom scatt. and many electron problems 3—20704
second-row elements, self-consistent MO methods, polarisation-type basis set 3—1216
semi-infinite medium, nucl. surface props., temp. depend. 3—31324
semi-infinite nucl. matter, surface incompressibility, HF scaling calcs. 3—6186
semiclassical limit, large N electrons interacting with static nuclei, exchange energy 3—40392
semiclassical theory of nuclear collective modes 3—21289
semiconductors, heavily doped, metal-nonmetal transition, HF pseudo-cluster calc. 3—43027
shell model potential from a relativistic Hartree-Fock approach 3—11259
2-silaallenes, electeronic states and intrnal rot. barriers, ab initio MO calcs. 3—31931
Skyrme functional for HF calcs. of nucl. masses and density distrib. 3—54944
SO(2N+1) time-dependent Hartree-Bogoliubov eqn. 3—10741
spin extended HF eqns., computational scheme for large π-electron systems 3—11641
superconducting nuclei, density depend. interaction, HF single-particle energy, interaction matrix element 3—40981
supersymmetric gauge fields with heavy gauge superfields, phase structure 3—49590
surface compressibility and the giant monopole resonance 3—21286
ten-electron atomic systems, dipole polarisability, electron correl. contrib., nucl. charge depend. calcs. 3—6553
thermochemical data, ab initio calcs. of SCF energies for augmented basis sets and HF limit energies 3—1221
time-dependent meanfield studies of strongly damped collisions 3—21295
$(TMTSF)_2X$, Mulliken-Wolfsberg-Helmholtz band struct., role of basis set 3—57278
transition metal cpds., binuclear, intramol. electron-hole transfer 3—1234
trimethylaluminium, mass spectral fragmentation, struct., MNDO UHF calcs. 3—11691
trimethylboron, mass spectral fragmentation, struct., MNDO UHF calcs. 3—11691
two config. SCF wave functions, force consts. for post HF calcs. 3—45803
two-dimensional electron system in strong mag. fields, CDW ground state and electron-hole symmetry 3—28287
two-electron problem, unstable solns. 3—45841
urea crystal with H-bonded mol. units, nonlinear optical props. 3—1689
weak interatomic reson. interactions, HF approx. 3—17214
Weizsacker term corr. using Thomas-Fermi term 3—36679
X-ray absorption, near-edge structure, many-body aspects, Hartree-Fock approach 3—58000
X-ray $K\alpha_{1,2}$ lines, expt. and theoretical energies, comparison 3—38961
yrast line region, phase transitions, cranked HFB approx., backbending 3—16680
zero-differential overlap methods, spectral variants 3—17215
(e,e′) in medium and heavy nuclei, high spin mag. observables 3—49839
NN forces and nuclear binding energy, HFB approx., semiphenomenological model 3—36332
Ag IV 4d^{7}5s-4d^{2}5p transitions 3—45887
Al, Compton profile, stopping power, X-ray scatt., HF wavefunctions 3—6581
Al_2O_3 with adsorbed Ar, cluster model 3—13633

HF calculations continued
- Ar isoelectronic sequence calc., extended Thomas-Fermi-Dirac theory 3−50309
- Ar, X-ray emission spectra, multivacancy effect 3−41519
- $Ar+H^+$, angular distribution of ejected L-shell electrons 3−26831
- Au, (e, 2e) reaction, relativistic and nonrelativistic HF calc. 3−1485
- B isoelectronic series, $^2P_{1/2}$-$^2P_{3/2}$ transition, relativistic effects, multiconfiguration HF method 3−31989
- Ba V, $5s^25p^4$-$5s5p^5$ transitions 3−50333
- Be, electron scatt., ab initio adiabatic polarisation pots., matrix HF calc. 3−6789
- Be II, doubly excited quartet states, multiconfiguration HF calcs. 3−11679
- Be II, perturbation of $1s2p4l\,^4L$ states by $1s2snl'4L$ Rydberg series 3−50302
- Be II, quartet states, energy levels and lifetimes, multiconfig. HF calcs. 3−11678
- Be, isoelectronic series, E1, M1, E2, M2 transitions 3−32002
- Be, Knight shift, chem. shift correction 3−38708
- Be slabs, electronic struct., ab initio LCAO HF calc. 3−23259
- BeF_2, crystalline, electronic struct., ab initio cluster calcs. 3−43019
- BeF_2, crystalline and vitreous, electronic struct., optical study 3−52032
- BeOH, spectrosc. consts., quantum chem. calcs. 3−21624
- $BeOH^+$, spectrosc. consts., quantum chem. calcs. 3−21624
- $BiBr_3$, PES and relativistic interpretation 3−26786
- $BiCl_3$, PES and relativistic interpretation 3−26786
- BiI_3, PES and relativistic interpretation 3−26786
- C III, ^5P-^5S transition wavelengths, fine struct., MCDF-EAL calcs. 3−50323
- $C+H_2^+$, internucleon separation calcs. using realistic single scattering cross sections 3−21852
- $C_2H_2N^+$ isomers, struct., relative stabilities and structs., ab initio SCF calcs. 3−31910
- $CH_2NH_3^+$, equilib. struct., ab initio UHF calcs. 3−36660
- Cl isoelectronic sequence, Cl XII to VXVIII, $2s^m2p^n$-$2s^{m-1}2p^{n+1}$ intersystem transitions 3−1300
- CO adsorbed on Cu(111) surface, electronic struct., mol. cluster model anal. 3−13878
- CO_2, symm. breaking of lowest $^3B_2$ and $^3A_2$ states, orthogonal orbital MCSCF and CI calc. 3−55860
- Ca, optically forbidden ionic states, excitation and electronic decay of autoionisation states 3−11755
- ^{A}Ca(e, e), A=40, 48, elastic scatt., radial distrib. of nucleons 3−49841
- ^{40}Ca(^{16}O,X), 100 MeV, 250 MeV/N, mean field effects, nuclear matter compression, time-dependent Hartree-Fock approx. 3−6260
- ^{40}Ca(^{40}Ca,X), high freq. part of giant reson. 3−739
- ^{40}Ca(^{40}Ca,x), fusion cross section and inertial mass param. calcs. by adiabatic TDHF method 3−36442
- ^{40}Ca(n,n), self-consistent density dependent Hartree-Fock field calcs. 3−49793
- ^{40}Ca(p,p), self-consistent density dependent Hartree-Fock field calcs. 3−49793
- CdO, ab initio energy bands 3−43018
- ^{102}Cd, n-deficient, excited states study via ^{102}In decay and nucl. reactions 3−26188
- Co-like ions, Y XIII to Ag XXI, $3d^9$-$3d^84p$ transitions in X-ray spectra 3−1295
- Co_2^+, photoionisation leading to $C^2\Sigma_g^+$ state, cross section, photoelectron asymmetry parameters, vibr. effects 3−1436
- Cr_8^{4-}, Hartree-Fock calcs., rel. to 10Dq 3−41483
- CrF_6^{3-}, Hartree-Fock calcs., rel. to 10Dq 3−41483
- Cs, binding energy, Dirac-Fock calcs., XPS study 3−32017
- Cs, energy levels, fine struct. intervals, relativistic many-body calcs. 3−50324
- Cs IV, $5s^25p^4$-$5s5p^5$ transitions 3−50333
- CsCl, binding energy, Dirac-Fock calcs., XPS study 3−32017
- Cs_3CoCl_5, $CoCl_4^{2-}$ ion spin density and bonding, polarised neutron diffraction data, HF calc. or magnetic structure factors 3−8650
- $CsNiF_3$, semiclassical theory of planar spin states 3−38623
- ^{164}Er rotational bands, neutron rotation alignment from angular momentum projection 3−16689
- F-like ions, 2-2 transition, relativistic calcs. 3−17235
- F-like ions, spin-orbit intervals in ground state, relativistic HF calcs. 3−6557
- F+ethylene reaction, ab initio MO calcs., equilib. geom., transition struct. and vibr. freqs. 3−48059
- F+ethylene reaction, ab initio MO calcs., heats of reaction, barrier heights and bond dissoc. energies 3−48060
- Fe-Cr, ferromagnetism, antiferromagnetism and spin glass states 3−52465
- Ga, configuration interaction effects in $4s^2nd\,^2D_{3/2,\,5/2}$ Rydberg series 3−11748
- ^{69,71}Ga, 6p $^2P_{3/2,1/2}$ levels, hyperfine struct. and lifetime 3−11747
- GeI_2, UV PES 3−46022
- ^{68}Ge, rotational alignment effects of $g_{9/2}$ proton and neutron pairs from HFB cranking model 3−26176
- ^{74}Ge(^{208}Pb, f), 1600 MeV, fast fission phenomenon in time depend. HF studies 3−45543
- H, electron motion, dynamic symmetry in Coulomb field, Fock representation 3−31934
- H+ethylene reaction, ab initio MO calcs., equilib. geom., transition struct. and vibr. freqs. 3−48059
- H+ethylene reaction, ab initio MO calcs., heats of reaction, barrier heights and bond dissoc. energies 3−48060
- H^++atom central and noncentral collisions, 27.5-900 keV, time-depend. Thomas-Fermi approach 3−21860
- H_{12} ring, one-electron electron interaction energies, projected Hartree-Fock approx. 3−50564
- H_2, bond formation in terms of electron momentum distrib. 3−36654
- H_2, Schrodinger eqn., two dimens. fully numerical solns. 3−36669
- HCN, nucl. spin-spin coupling consts., UHF MC SCF calcs. 3−55960
- HF, coupled Hartree-Fock polarisability dipole moments, perturbation correl. corrections 3−50294
- H_2S-HF, equilib. struct., ab initio calcs., role of d functions 3−36671
- He, dynamic polarisability calc., coupled HF and variational perturbation theories 3−1228
- He, electric dipole polarisability, MC-TDHF calcs. 3−50291
- He, electron correlation angular aspects and the Coulomb hole 3−1256
- He, excited Rydberg states, reorganisation, electron correl., Hartree-Fock calcs. 3−1272
- He isoelectronic sequence, two-electron spectra, correls., MCHF calcs. 3−21646

HF calculations continued
- He, locally constrained var. calcs., nonlinear programming approach 3−55818
- He^{2+}+He(Ar)(Kr), electron capture, cross section binary encounter approx. 3−32194
- He_2, bond formation in terms of electron momentum distrib. 3−36654
- He_2^{2+} ground state, density functional calcs. 3−26636
- HeH^+, Schrodinger eqn., two dimens. fully numerical solns. 3−36669
- HeH_2, energy surface in repulsive region, single configuration HF calcs. 3−6562
- ^{4}He(α,X), TDHF central collision, prompt particle emission, nucleonic jet density 3−41047
- ^{A}Hg, A=182-190 even-even isotopes, collective pot. and cranking mass, microscopic calc. 3−6134
- K, specific mass isotope shift calc., pair correlation contribs., field shifts 3−36728
- KCl, X-ray absorpt. near edge struct. 3−28930
- La VI, $5s^25p^4$-$5s5p^5$ transitions 3−50333
- Mg cluster, absorbed H, ab initio HF SCF MO study 3−36900
- Mg, electron scatt., ab initio adiabatic polarisation pots., matrix HF calc. 3−6789
- Mg isoelectronic series, lifetime trends for n=3 singlet states 3−21713
- MgI autoionising states, HF calcs. 3−32145
- MgO, dissoc. energy, ab initio CI calcs., electron affinity and ionisation pot. 3−17229
- MgOH, spectrosc. consts., quantum chem. calcs. 3−21624
- $MgOH^+$, spectrosc. consts., quantum chem. calcs. 3−21624
- Mo isotopes, large deformations onset microscopic description 3−26191
- Mo, surface induced ordered magnetism appearance 3−57742
- N I isoelectronic series, Cl XI to V X VII, $2s^m2p^n$-$2s^{m-1}2p^{n+1}$ intersystem transitions 3−1299
- N IV, ^5P-^5S transition wavelengths, fine struct., MCDF-EAL calcs. 3−50323
- NH_3 adsorbed on Fe and Ni, binding and valence photoemission *(German)* 3−38231
- $NH_3+OH_2(SH_2)$, protonation reactions, basis set depend. 3−31951
- NH_4 radical, Rydberg ground state, dissoc., ab initio MO study 3−36659
- $NH_2CH_3^+$, equilib. struct., ab initio UHF calcs. 3−36660
- N_2XO radical (X=B,C,N), electronic struct., geometry, UHF MNDO PMO calcs. 3−11687
- Na, specific mass isotope shift calc., pair correlation contribs., field shifts 3−36728
- Na-like systems, nd-states, at. fine struct. calcs. 3−21634
- Ne isoelectronic sequence calc., extended Thomas-Fermi-Dirac theory 3−50309
- Ne, strong shock wave generation 3−45884
- Ne, struct. calc., symm. adapted pair function appl., third order correl. energy 3−11683
- ^{20}Ne yrast line configs. ground state to scission, cranked HF eqns. 3−26179
- Ni complex, tetraza porphin nickel(II), band struct., semiempirical HF SCF cryst. orbital calcs. 3−52029
- Ni, Fono line shape in electron-energy-loss spectra 3−38973
- $Ni(NH_3)(NO_2)_2$, spin and charge distribs., polarised neutron, X-ray diffr., ab initio calcs. 3−57320
- ^{58}Ni(e, e'), $2^+_{(1)}$ transition charge density structure, triaxial deformation structure 3−49844
- O V, ^5P-^5S transition wavelengths, fine struct., MCDF-EAL calcs. 3−50323
- O-like ions, 2-2 transition, relativistic calcs. 3−17235
- $OH_2+NH_3(SH_2)$, protonation reactions, basis set depend. 3−31951
- ^{16}O consideration of meson degree of freedom *(Chinese)* 3−49792
- ^{16}O(^{16}O, X), two-body dissipation, fusion window, time depend. HFB anal. 3−49878
- ^{16}O(^{16}O,X), TDHF central collision, prompt particle emission, nucleonic jet density 3−41047
- ^{208}Pb charge and matter distribs., Woods-Saxon and Skyrme-Hartree-Fock anal. 3−49739
- ^{208}Pb(t,α), proton orbit sizes, HF anal. 3−688
- $^{212}Pb\rightarrow{}^{208}Pb+\alpha$, TDHF anal. of zero point oscillations using ^{208}Pb(α,x) 3−49818
- Pm isoelectronic sequence, closed N-shell alkali spectra 3−21613
- RbHF stability, HF study 3−1215
- RbH_2O stability, HF study 3−1215
- SCl, vibr. freq., CEPA calcs. on open-shell mols. 3−45926
- SF, vibr. freq., CEPA calcs. on open-shell mols. 3−45926
- $SH_2+NH_3(OH_2)$, protonation reactions, basis set depend. 3−31951
- $S_4N_4^{2+}$, electronic struct., ab initio HF-Slater MO calcs., UV and visible spectra 3−11654
- S_5N_6, electronic struct. and bonding, ab initio Hartree-Fock-Slater MO calcs. 3−17206
- Sc^{2+}, excitation, oscill. strength, HF and CI calcs. 3−1258
- Se, permittivity, reflectivity, absorption coeff. and electron energy loss spectra 3−8846
- Si, (111) surface, Ag atoms adsorpt., self-consistent HF calc. 3−13621
- Si, impurities, exchange-correlation and local field effects, RPA calc. 3−57298
- SiH_5^+, struct. and energy, comparisons with CH_5^+ and BH_5 3−55794
- ^{28}Si, coexistence of three different shapes 3−26186
- ^{A}Sn(t,α), A=112, 116, 118, 120, 124, 4.75-5.25 MeV, proton orbit radii by DWBA anal., spectroscopic factors, HF calcs. 3−16695
- Te, optical and electron energy loss spectra 3−23972
- Th, (e, 2e) reaction, relativistic and nonrelativistic HF calc. 3−1485
- Ti^{3+}, excitation, oscill. strength, HF and CI calcs. 3−1258
- U, relativistic Hartree-Fock-Dirac calcs. in Roothaan approx., one-electron wave functions and energies *(Russian)* 3−45877
- ^{238}U, high spin states, g-factor and moment of inertia calcs. 3−36325
- V IV, 3d5g config., energy levels, HF, semiempirical calcs. 3−1252
- V^{4+}, excitation, oscill. strength, HF and CI calcs. 3−1258
- W surface, refl. of Na atoms, electron transfer, reson. mechanism for ionisation 3−43697
- W, surface induced ordered magnetism appearance 3−57742
- ^{170}W high spin state transitions, HFBC model anal. 3−49724
- Xe, ionised, laser generated plasma, XUV spectrum, charge-depend. wavefunction collapse, HF calcs. 3−11731
- Xe, slow electron elastic scatt., HF calc. 3−46071
- Zn, approx. of numerical Hartree-Fock functions, by linear combination of Slater and Gaussian orbitals 3−26638
- ZnO, comparative study of HF and HF-Slater method 3−36667
- Zr isotopes, large deformations onset microscopic description 3−26191
- $ZrS_2(Se_2)$, optical and electron energy loss spectra 3−23971

hierarchical systems
brain potential spatio-temporal organisations, Gaussian distribution model *(Russian)* 3−53659
nuclear power plants, hierarchical computer complex concept appl. 3−55566
Higgs particles *see intermediate bosons*
high-energy cosmic ray interactions
EAS, nuclear composition, inverse problem method 3−10166
hadron energy spectra at Mt. Kambala 5500 m above sea level *(Chinese)* 3−44629
heavy lepton, obs. in cosmic rays above 10^{17} eV 3−54935
multiple muon prod. in cosmic ray interactions in Homestake underground detector 3−59177
multiplicity of gamma families, quasiscaling model 3−48783
muon energy spectra, prompt muons effect 3−20194
muons, energy loss calcs. in inelastic scatt. 3−50245
neutrinos from collapsing degenerate stellar cores, interaction with degenerate matter 3−40115
semi-inclusive model 3−35393
superhigh energy physics 3−36286
hh, 10^{15}-10^{16} eV, cluster phenomena in emulsion chamber expts. and hadron jets *(Chinese)* 3−44633
μ interaction obs. using spontaneous scintillation counter 3−15849
NN, 10^{13}-10^{16} eV, scaling violations in Pamir-ANI expts. and in QCD 3−16673
NN, 500 GeV, minimum bias events, P_T distribution, comparison with $p\bar{p}$ interactions 3−31248
NN, inelasticity coeff. distrib., inverse problems solution for Pb 3−6124
NN at $\gtrsim$1000 GeV, heavy clusters prod. 3−25271
NN$\rightarrow$jets, ultrahigh, energies in Pamir-ANI expts., QCD predictions 3−16674
pp, 1-100 TeV, total cross sections 3−49711
pp, cosmic ray and accelerator data comparison 3−36291
^{26}Al/^{10}Be production ratio in atmosphere, determ. from accelerator mass spectrometry meas. 3−48708
high energy electron diffraction
see also reflection high energy electron diffraction
amorphous materials, scanning HEED technique 3−13044
iron garnet films, epitaxial, ion implantation effect on surface struct. 3−8074
practical reflection electron diffraction 3−42496
relativistic theory of electron and positron diffraction at high and low energies 3−13045
Ge, amorphous state, struct., scanning HEED study 3−13044
high-energy nuclear reactions and scattering *see nuclear reactions and scattering*
high fidelity amplifiers *see audio-frequency amplifiers*
high field effects
see also Gunn effect; hot carriers; impact ionisation; limited space charge accumulation; Poole-Frenkel effect; Schottky effect; Zener effect
biotite mica, elec. cond., small polaron hopping 3−47345
electric current caused by phonon induced hopping between Wannier-Stark states, computing method 3−52103
ethylene glycol-water capacitor, high voltage charge injection and transport 3−43483
hopping conduction in ordered and disordered systems, review 3−3194
II-VI semiconductors, second harmonic generation efficiency under high-field conditions 3−3211
Markovian master eqn. for high-field electron transport 3−30816
metal-NH$_3$ solns., liq., strongly decomposed, current instability 3−28395
metal-semiconductor struct., current filamentation due to Joule heating 3−13907
n$^+$-n-n$^+$ structure, voltage-current characteristics in strong electric field 3−33786
NMOS capacitors, high-field stress effects on interface state density 3−52266
p-n-p-n structures, turn-on process in strong elec. fields at high current density 3−3304
photocarrier bipolar drift under spatially periodic excitation *(Russian)* 3−3256
polymers, molecularly doped, elec. field assisted triplet exciton annihilation, photocond. meas. 3−52173
semiconductor, ballistic transport approx. 3−28365
semiconductor, drift wave instability with periodically varying permitt. 3−38421
semiconductor, hopping elec. cond. in strong elec. fields, Monte Carlo study 3−8503
semiconductor, inhomogeneous, DC cond. and Hall effect in high elec., fields, effective medium theory 3−13824
semiconductor, repeated velocity overshoot conditions 3−28421
semiconductor, skewed field domains, Sasaki effect *(Russian)* 3−3216
semiconductor-metal contacts, internal secondary emission of electrons and holes 3−38479
semiconductors, ballistic and overshoot electron transport in bulk and in submicron devices, theory 3−43185
semiconductors, nonlinear quantum transport and scatt., density matrix formalism 3−47355
semiconductors, self-oscillatory medium utilising temperature-electric instability 3−38397
superconductors, phonon and magnon instability in strong elec. field 3−47069
tetramethylsilane/O$_2$ prepared polymer films, glow discharge polymerised, elec. props. 3−8490
Al$_x$Ga$_{1-x}$As-GaAs heterostructures, MBE growth conditions effect on elec. and optical props. 3−42965
CdCr$_2$Se$_4$, active electron-magnon interaction 3−52432
CdCr$_2$Se$_4$, carrier heating, thermal noise temp. meas. 3−28399
n-CdS single cryst., high field DC elec. cond. 3−43189
Cu$_2$O, elec. cond., switching phenomena, temp. depend. 3−18709
EuO, active electron-magnon interaction 3−52432
EuO, carrier heating, thermal noise temp. meas. 3−28399
GaAs, semi-insulating, thermal equilib. current oscills., deep donor EL2 electron emission 3−13759
GaAs, transient electronic transport, investigation using Monte Carlo simulations 3−33731
GaAs velocity overshoot effect anal. *(Chinese)* 3−13822
GaAs, velocity overshoot of electrons with space charge and nonuniform field 3−43188
Ge, electron energy dissipation and carrier intervalley redistrib. under strong high freq. fields 3−57357

high field effects continued
Ge, nonohmic hopping cond. of samples compensated by fast reactor neutron irradiation 3−8504
p-Ge:Au, recombination wave instability in injected electron-hole plasma 3−38420
Hg$_{1-x}$Cd$_x$Te p-n junctions, field ionisation of deep levels, theory 3−38467
In$_x$ Ga$_{1-x}$As$_y$P$_{1-y}$, high-field electron transport 3−23396
n-In$_{0.53}$Ga$_{0.47}$As, temp. depend. electron vel.-field characts. at high elec. fields 3−28366
InSb, hole transport parameters in high elec. field, Monte Carlo calc. 3−43191
n-InSb, noise and diffusion of hot electrons 3−57356
n-InSb, temperature-electric instability in static elec. field 3−18716
K$_{0.3}$MoO$_3$, nonlinear cond. and noise in semicond. CDW state 3−52164
K$_{0.3}$MoO$_3$, quasiperiodic noise voltage and metastability in CDW cond. 3−47358
MgO:Ni, pure and dopes, high field conduction and dielec. breakdown 3−28776
N$_2$, liquid, high field electronic conduction investig. 3−28364
N$_2$, liquid-phase, electron transport mechanisms under high electric fields 3−28349
NbSe$_3$, quasi 1-D metallic cond., phonon drag and elec. props. 3−33713
Si, conductivity, nonequilib. field effect at low temp. *(Russian)* 3−47359
Si, electron energy dissipation and carrier intervalley redistrib. under strong high freq. fields 3−57357
n-Si, negative differential resistance, transverse fields and Sasaki effect 3−33733
Si-SiO$_2$ MOS struct., high-field hole drift vel. in inversion layers 3−13911
Si-SiO$_3$ interface, high field drift velocity, time-of-flight study technique 3−52260
SiO/ZnF$_2$:Mn/SiO electroluminescent display films, separation of hot electron generation and luminescent excitation 3−43634
SiO$_2$ films, off-stoichiometric, high-field conduction 3−47441
TaS$_3$, monoclinic, nonlinear cond. and noise in semicond. CDW state 3−18710
p-Te, high field effects, S-shaped I-V characts., surface pot. meas. 3−8501
V$_2$O$_5$-TeO$_2$ glasses, elec. threshold switching in sandwich geometry 3−52153

high-frequency amplifiers
see also microwave amplifiers
preamplifier for pulsed NQR-spectrometer 3−40656

high-frequency discharges
capacitive HF discharge, current density effect at moderate pressure 3−42482
fluorohydrocarbon-H$_2$ RF discharge, polymerisation during Si etching 3−53382
HF field stabilising effect on positive column of DC discharge *(Russian)* 3−2312
high-frequency electrodeless H discharge, gas heating rel. to contraction *(Russian)* 3−33002
ionisation instability assoc. with surface wave, effect on microwave discharge struct. *(Russian)* 3−32878
laser optogalvanic spectroscopy of molecules, RF discharge use 3−40698
microwave discharge sustained by travelling waves, axial struct. 3−42475
non-self-sustaining high-freq. discharge, in electronegative gases *(Russian)* 3−33005
plasmoids produced in high frequency plasma discharge, equidensitometrical analysis 3−12904
Rf discharge, attachment instability suppression 3−42485
secondary electron emission RF discharge in vacuum, stationary state 3−51428
secondary emission microwave discharges with electron transit angles 3−22737
sonic diagnostic techniques 3−42446
striae in a high-frequency discharge 3−22741
AlO, C$^2\pi_r$-A$^2\pi_i$ electronic transition, high-freq. discharge study 3−45962
CO-He, RF discharge, dissoc. vibr. distrib., IR, UV, visible obs. 3−7815
H, maser oscillation level, function of HF discharge characteristics *(French)* 3−22019
He steady microwave discharge in quasioptical resonator 3−37723
N$_2$, electric breakdown plasma, microwave energy coupling, computer simulation 3−51414
N$_2$, microwave energy coupling during elec. breakdown, expt. and computer simulation 3−42470

high-frequency effects
see also helicons; hot carriers; skin effect; solid-state plasma
borosilicate glass, Li electrolysed, impedance meas. 3−23415
copper phthalocyanine single cryst., low temp. microwave Hall mobility meas. 3−23408
4-dimethylamino-4′-nitrostilbene, flash photolysis, excited states, charge separation, time-resolved microwave cond. 3−39394
ferrites, hexagonal, ferroxplana-type, props., book contrib. 3−57550
glycerol-H$_2$O mixtures, conductivity, relax. time and activation energy at RF 3−38416
kinetics of interacting quasiparticles in strong external fields, review 3−33752
metal, HF cond. of nonideal surface in mag. field *(Russian)* 3−18763
metal microcontacts, thermal relax. in HF EM field 3−33781
metal plates, NMR line profile and surface impedance with weakly damped EM wave excitation *(Russian)* 3−33988
metals, ferromagnetic antiresonance region, expression for microwave surface impedance 3−8725
metals, short-wavelength cyclotron waves in quantising mag. fields 3−43218
percolating clusters, anomalous diffusion, rel. to AC cond. and dielec. const. in high freq. limit 3−30807
photosynthetic reaction centres, triplet yield, microwave effects calcs. 3−34777
polar dielectrics, microwave cond. and dipole moment 3−57373
relativistic high freq. electronics, achievements and problems 3−33024
semiconductor, drift wave instability with periodically varying permitt. 3−38421
semiconductor, nonlinear isotropic conductor, longitudinal magnetoresistance in RF elec. field 3−33746
semiconductor, SHF locally irrad., oscillation processes obs. *(Russian)* 3−18731
semiconductors, longitudinal Hall effect in high-freq. elec. field 3−47367

high-frequency effects continued
semiconductors, nonlinear interaction of electromagnetic waves in superlattices 3—38395
semiconductors, velocity, overshoot, velocity autocorrelation and hot electron noise calc. from small signal microwave mobility 3—52166
spatial dispersion of elec. cond. influence on skin effect *(Russian)* 3—43220
superlattice materials, nonlinear HF response theory, simplified, approach 3—52186
superlattice semiconductor in static elec. field, nonlinear waves 3—8522
$(TMTSF)_2PF_6$, AC-DC coupling expts. in SDW state 3—57340
$(TMTSF)_2X$, itinerant antiferromag. and supercond., mag. reson. study 3—57790
vacuum breakdown criteria due to RF fields 3—18184
β-Al_2O_3 single cryst. and Au blocking electrodes, AC impedance of surface layers, double layer system 3—23457
GaAs, hot electron relax. and saturated current dispersion, DC to 1200 GHz 3—33749
n-GaAs, hot electron transport characts. in crossed elec. and mag. fields 3—38419
$Ga_xIn_{1-x}As_yP_{1-y}$, lattice matched to InP, high freq. elec. transport 3—13850
n-Ge, anisotropic hot-carrier thermo-EMF 3—52184
Ge, electron energy dissipation and carrier intervalley redistrib. under strong high freq. fields 3—57357
Ge, neutron irrad., VHF dislocation cond. *(Russian)* 3—8502
Ge, subharmonic transit resonance, carrier cyclic motion effects on harmonic generation 3—8521
$In_x Ga_{1-x}As_yP_{1-y}$, high-field electron transport 3—23396
Nb-oxide-Pb, planar superconducting struct., high freq. and reson. props. 3—33835
$NbSe_3$, quasi one dimens. cryst., interaction with microwave radiation 3—28376
Se, trigonal single crystal, temp. depend. of AC elec. cond. 3—33729
Si, electron energy dissipation and carrier intervalley redistrib. under strong high freq. fields 3—57357
n-Si, n^+-n-n^+ asymmetrical struct., effect of strong microwave elec. fields 3—33787
n-Si, rectangular waveguide, microwave electric field strength 3—33754
Sm_3Se_4, valence fluctuation cpd., AC resist. meas. 3—52148
V_2O_5-TeO_2 glasses, elec. cond. and dielec. const., 0.1 to 100 kHz, 77 to 400K 3—57346

high-frequency electronic transport *see high-frequency effects*

high-frequency heating *see radiofrequency heating*

high level languages
see also BASIC; FORTRAN; PASCAL; simulation languages
ALADIN problem-oriented input language, EDIP software for electrodynamic problems *(Russian)* 3—17407
CATY, BASIC-like language for expt. control, data collection, display and anal. 3—1184
RETICENT, command language for spectrophotometric data reduction 3—10226

high-pressure effects in solids
see also high-pressure solid-state phase transformations; piezo-optical effects
bis-ethylammonium copper tetrachloride, antiferromag. transitions, press. effects 3—57613
butadiene-methylstyrene elastomer, phys. and chem. relax., gaseous media effects *(Russian)* 3—6818
glass fibre reinforced epoxy, uniaxially aligned, compressive failure and kinking under hydrostatic press. 3—29157
graphite, polycrystalline, pressure-dependent volume strain, under fast neutron irradiation 3—21367
graphite intercalation compounds, KC_8 and $KHgC_4$, supercond. transition temp., anomalous press. depend. 3—23527
hydrogenic like impurity states, chemical shift theory, press. depend. 3—33680
ice VII, eqn. of state and refr. index to 500 kbar 3—28048
II-VI compounds, electronic struct. under press. 3—47260
III-V compounds, electronic struct. under press. 3—47260
misfit dislocation occurrence at grain boundaries under high press. 3 - 2558
naphthalene, X-ray powder diffr. anal. up to 0.5 GPa 3—8025
naphthaline d_8, d_0, Raman study of press. induced freq. shifts 3—34094
neutron scattering studies of materials under pressure, review 3—7866
plastic deform. of thin films or gaskets between anvils 3—12541
PMMA, thermoelastic temp. changes at high hydrostatic press. 3—13308
polyacetylene, high press. optical absorption spectra, expt. and tight binding calc. 3—3763
polyacetylene, I doped conjugation system, electrophys. props., high pressure influence *(Russian)* 3—47587
polybutene-1, isotactic, high press. effect on melting and crystn. behaviour, solid-solid transition 3—51511
polydiphenyl butadiene, I doped conjugation system, electrophys. props., high pressure influence *(Russian)* 3—47587
polymers, I doped conjugation system, electrophys. props., high pressure influence *(Russian)* 3—47587
polyphenyl acetylene, I doped conjugation system, electrophys. props., high pressure influence *(Russian)* 3—47587
polypropylene, isotactic, crystalline, mol. conformation disorder at high press., Raman study 3—51508
polytolane, anionic, I doped conjugation system, electrophys. props., high pressure influence *(Russian)* 3—47587
polyvinylidene fluoride, piezoelectricity under high press. 3—23878
α-quartz, Raman active vibr. modes, temp. and press. depend. 3—8834
rock, sedimentary, US attenuation and phase vel. spectra under high press. 3—54024
ruby, d-orbital theory, appl. to high press. spectra 3—43578
ruby, d-orbital theory and high-press. effects on EPR spectrum 3—38688
ruby, R-line luminescence shift under press. *(Russian)* 3—8873
semiconductors, deep impurity centres, Jahn-Teller effect suppression under uniaxial press. 3—28307
sphalerite, press. and temp. depend. of equilib. comp. rel. to calibration of meteorite cosmobarometer 3—48864
Sr, elastic wave propag. at high press., pulse US method 3—28043
superconducting transition temp., meas. technique, under high press. 3—33820
$(TMTTF)_2SCN$, metal-insulator transitions, press. depend. 3—47395
transition metal alloys, MGa and MGe, phase analysis, high press. and temp. 3—18475

high-pressure effects in solids continued
US meas. under high press., appl. to solids 3—1888
AGBr, thermal cond. and ht. capacity, high press. study 3—2901
Al, steady state creep under press. *(Russian)* 3—33349
$Al_xGa_{1-x}As$ graded-gap cryst., elec. cond., hydrostatic and uniaxial compression effects meas. 3—13817
$Al_xGa_{1-x}As$-GaAs quantum well heterostruct. lasers and superlattices, high press. optical measurements 3—1631
As_2S_3 thin film, press. effect on optical absorpt. edge *(Chinese)* 3—43645
Au-Cu-Zn alloys, anharmonicity and martensitic phase transition, elastic consts. determ. 3—29076
BN, wurtzite form, high press. deformation. expt. study 3—18389
Ba, electronic transitions, s→d and p→d, at high press., systematics 3—13700
CdS, high pressure optical absorpt., resistivity and phase transformation 3—57028
$CeCu_2Si_2$, single cryst., supercond. obs. under high press. 3—38525
Co, electronic band struct., Fermi surface, and optical props. under press. 3—3051
Cr, band struct. in paramag. and antiferromag. phases, press. influence 3—3052
Cr-Al(Si)(Mn)(Fe)(Co), dilute, spin density wave state, press. effects, neutron diffr. study 3—18853
Cr-Ge (0.5 at.%), spin density wave state, press. effects, neutron diffr. study 3—18854
Cs, electronic transitions, s→d and p→d, at high press., systematics 3—13700
CsCl(Br)(I), thermal cond. and heat capacity 3—2902
Cu-Ag (5 wt.%), discontinuous precip., effect. of press. 3—24238
Cu-Al-Zn alloys, anharmonicity and martensitic phase transition, elastic consts. determ. 3—29076
CuSCN, insulator to semicond. transition, press. induced 3—28396
D_2, solid, Raman study of vibron press. depend. 3—13367
n-D_2, solid acoustic velocity angular dependence, Brillouin scatt. study using diamond anvil cell 3—38838
$Eu_{1.2}Mo_6S_8$, supercond. under high press., appearance and disappearance 3—13942
EuO, mixed valence, press.-vol. relationship, quasiparticle density of states and hybridisation gap 3—28269
EuS(Se)(Te), mag. hyperfine fields, high press., high field, ^{151}Eu Mossbauer effect study 3—52683
EuS(Se)(Te), Mossbauer study of mag. hyperfine interaction press. depend. *(German)* 3—52694
$Eu_xSr_{1-x}S$, mag. hyperfine fields, high press., high field, ^{151}Eu Mossbauer effect study 3—52683
Fe-C system, carbides and diamond formation under high temp. and press., mag. study 3—18390
Fe-W (56 wt.%), amorphous, high press., radial distrib. EDAX studies 3—18225
GaAs:Cu, deep impurity centres, Jahn-Teller effect suppression under uniaxial press. 3—28307
$Ga_xIn_{1-x}As_yP_{1-y}$ stripe lasers, influence of press. on temp. sensitivity 3—1628
H_2, solid, Raman study of vibron press. depend. 3—13367
^{4}He, high press. melting curve, 220 to 360K 3—8295
I_2, high pressure phase, hole-metal state, electronic band struct. 3—18615
I_2, solid, electronic transitions, s→d and p→d, at high press., systematics 3—13700
InAs, elec. transport and band struct. 3—3233
InP, lattice dynamics under hydrostatic press. 3—22995
InP under high press., pseudopotential form factors 3—43012
InSb, valence electron density under high press., X-ray diffr. study 3—13160
KRb(Cs)(Na), press. depend. of elec. cond. and thermopower 3—13798
La, electronic transitions, s→d and p→d, at high press., systematics 3—13700
$(La_{0.8}Ca_{0.2})MnO_{3+y}$, ferromag.-antiferromag. transition temp., press effects 3—57605
$LaCrO_3$, Neel point, press. effect 3—14054
$La_{1.2-x}Eu_xMo_6S_8$, supercond. props., hydrostatic press. effects 3—23524
LaF_3, pure and alkaline earth doped, elec. props. 3—23078
MgO, press. depend. to 100 kbar of phonons, vibronic spectra 3—33367
$Mg[Pt(CN)_4].7H_2O$ under press., self-trapped exciton destabilisation 3—3076
$MoS_2(Se_2)(Te_2)$, 2H modification, high-press. Raman spectra 3—34106
NaCl, thermal cond. during uniaxial compression 3—33524
$(Nb_{1-x}Ta_x)_{55}Rh_{45}(Ir_{45})$, metallic glasses, superconducting T_c press. depend. 3—43313
Ni, metal-insulator transition at 34 TPa, APW calc. 3—8420
Ni-Cr, electrical props. under high gaseous H_2 press. 3—38365
Ni-Rh(V), first magnetocrystalline anisotropy const. and press. effects, torque study 3—18881
Ni-V, spontaneous magnetisation, press. effects meas. 3—18863
$Ni(S_{1-x}Se_x)_2$, insulator-metal and mag. transitions under high press. 3—57600
$NpAl_2$, magnetic props. under high press. 3—18850
$NpCo_2Si_2$, magnetic props. under high press. 3—18850
$NpOs_2$, magnetic props. under high press. 3—18850
Pa, bulk modulus, press. studies 3—18364
$Pb_{1-x}Sn_xTe$:In, band edge motion in quantising mag. field and nonequilib. states 3—57275
Pd-Mn(Pb)(B)(Li)(Sn), electrical props. under high gaseous H_2 press. 3—38365
Pr, crystal structure of high press. phase, X-ray diffr. data anal. 3—37845
$PtMn_x$(Sn)(Sb), exchange striction and press. effect on Curie temp. 3—52470
$Rb_4Cu_{16}I_7Cl_{13}$, ionic conduction under press. *(Chinese)* 3—2878
Si, high press. oxidation, optical and elec. props. of oxide layers 3—19436
Si, muonuim hyperfine freq., direct meas. 3—38743
Si, valence electron density under high press., X-ray diffr. study 3—13160
Ta_3Sn, crystallisation at high press., A15 struct., superconducting state 3—14523
Th-Pr, supercond. under press. and low temp. sp. ht. 3—3360
$TlGaS_2(Se_2)$, high-press. Raman spectra 3—3718
$TlInS_2(Se_2)$, high-press. Raman spectra 3—3718
$Tl_2Mo_6Se_6$, pseudo-one-dimensional cpd., press. depend. of supercond. 3—43315
TlSe, elec. resist. and Hall effect, press. dependence meas. 3—33725
Xe, pressure concentrations due to plastic deform. between diamond anvils 3—12541

high-pressure effects in solids continued
  Xe, solid, electronic transitions, $s\to d$ and $p\to d$, at high press., systematics 3—13700
  Xe, solid, pressure present during metallisation 3—33639
  $(Y,Sm,Lu,Ca)_3(Fe,Ge)_5O_{12}$ garnet epitaxial films, uniaxial mag. anisotropy, high press. effects 3—18952
  YAG:Eu^{3+}, high temp. press. sensor using fluorescence spectrum press. dependence 3—20865
  Yb, mean valence in press. range 0 to 340 kbar, X-ray absorpt. study 3—13774
  $Zn_xCd_{1-x}S$, mechanoluminescence and high press. photoluminescence 3—57985
  ZnO, exciton peak energy meas., optical spectra, press. depend. 3—8424
  $(Zr_{0.5}Hf_{0.5-x}TA_x)V_2$ and $(Zr_{0.5-x}Hf_{0.5}Nb_x)V_2$, C-15 Laves phases, supercond. transition temp., press. dependence meas. *(Chinese)* 3—18808
  ZrO_2-Y_2O_3 solid soln., stabilised, hydrostatic press. depend. of elastic behaviour and stability against shear 3—14633

high-pressure phenomena and effects
  see also high-pressure effects in solids
  acrylonitrile, IR vibr. spectra at high press. 3—3704
  tert-butyl alcohol in CCl_4, OH vibr. relax., IR high press. and Monte Carlo studies 3—52784
  conference on geophysics high press. research at Hakone, Japan (January 1981) 3—44888
  cyclohexane+n-hexane, excess enthalpy, meas. using isothermal high-pressure flow calorimeter 3—30861
  4(4-n-decyloxybenzoyloxy)-benzylidene-4′-cyanoaniline, liq. cryst., new multicritical point, high press. study 3—18455
  fertility of male mice after exposure to high environmental press. 3—39674
  liquids, limited miscibility at high press. 3—18462
  liquids, simple, eqn. of state and thermodynamic props. at high press. 3—13393
  minerals thermodynamics and lattice vibration, appl. to phase equilib., isotope fractionations/high press. props. 3—25085
  nematic liq. cryst., pressure effects, isotropic phase free energy 3—13092
  nematic liquid cryst., pressure effects, phenomenological theory 3—13091
  nematic liquid crystals, orientational relax. at high temp. and press. 3—2674
  neutron scattering studies of materials under pressure, review 3—7866
  phospholipid bilayers, high press. meas. using adiabatic compression 3—24690
  poly-γ-ethyl-D-glutamate solution, lyotropic cholesteric liq. cryst., helical pitch, press. effects, laser diffr. study 3—7903
  polyacrylonitrile, IR vibr. spectra at high press. 3—3704
  polyethylacrylate-polyvinylidene fluoride mixtures, phase diagrams, press. effects 3—18465
  polyethylene, annealing under high press., recrystallisation *(Russian)* 3—13149
  polymer solutions, flow, pressure fluctuations, high freq., struct. 3—27501
  polymers, plastic flow, under high press., energies and vols. of activation *(Russian)* 3—8127
  pyridine adsorbed on Ag films, surface enhanced Raman scatt. study 3—23930
  silicates, liquid, pressure enhancement of ion mobilities from computer simulation studies to 800 kbar 3—29915
  silicone oil, polydimethyl siloxane, thermal cond. and sp. ht., temp. and press. dependence meas. 3—33523
  spin-Peierls systems, high press. and high mag. field effects 3—23635
  steam generator tubes, post-dryout heat transfer at high press. 3—46554
  water, flow, pressure fluctuations, high freq., struct. 3—27501
  water droplets, polarisation model for high temps. and density 3—27644
  CO_2-N_2(CF_2Cl_2) and CO_2-N_2-CF_2Cl_2, vapour-liquid equilibria, high press. low temp. data 3—33412
  $CaCO_3$ (aragonite), shock compression expts. and eqn. of state 3—4856
  $CaCl_2$, aq. soln., ionisation consts. assoc. behaviour and elec. cond. 3—33474
  D_2O, liquid, neutron diffr. pattern at press. up to 9.1 kbar 3—7897
  Fe, ferromagnetic, NMR under high press. *(Russian)* 3—52634
  He-p-H_2 mixtures, quantum liquid, US velocity and adiabatic compressibility at high press. *(Russian)* 3—57155
  $Hg_5Ga_2Te_8$, vacancy compound, elastic behaviour under press. 3—22981
  $HgIn_2Te_4$, vacancy compound, elastic behaviour under press. 3—22981
  $Hg_3In_2Te_6$, vacancy compound, elastic behaviour under press. 3—22981
  K^+ ion conductance in cooled and supercooled water, press. depend. 3—13498
  KCl, aq. solns., high press. viscosity, 25 to 200°C 3—2861
  Kr, dense gas, eqns. of state 3—22565
  $MgCl_2$, aq. soln., ionisation consts. assoc. behaviour and elec. cond. 3—33474
  α-N_2, far IR spectrum under press. 3—14281
  N_2, liquid, eqn. of state and thermodynamic props. at high press. 3—13393
  $Pb(Zr,Fi)O_3$ hollow spherical piezoelectric elements operating at large static pressure 3—27339
  Xe, dense gas, eqns. of state 3—22565
  Xe, liquid, high press., fluorescence excitation meas. for electron, α-particle and fission fragment irrad. 3—24023
  Xe, solid, diamond cell, optical obs. 3—34060

high-pressure solid-state phase transformations
  acrylonitrile, IR vibr. spectra at high press. 3—3704
  alkaline earth metals, struct. phase transitions, cryst. struct. sequences 3—28094
  black P to A7 phase transform., press. induced, orbital symm. conservation anal. 3—18439
  calcite:PO_4^{3-}, ionic cond. in high-pressure polymorphs 3—33496
  diamond synthesis, nucleation by puckered dimer coalescence *(Chinese)* 3—28090
  graphite-to-diamond struct. transform., microscopic model *(Chinese)* 3—28089
  methane, solid, high pressure phase transitions, NMR study 3—13436
  polyacrylonitrile, IR vibr. spectra at high press. 3—3704
  polybutene-1, isotactic, high press. effect on melting and crystn. behaviour, solid-solid transition 3—51511
  polymer, amorphous, dielectric studies at high press. 3—14206
  polymorphic transformations hysteresis 3—51783
  quartz-coesite transition in presence of other substances 3—19986
  rare earth vanadates, effect of external stress on structural phase transition *(Russian)* 3—2789

high-pressure solid-state phase transformations continued
  transition metal monogermanides, polymorphism under high press. and temp. 3—13154
  AgI, elec. cond. and activation vol. of solid electrolyte phase and high press. FCC phase 3—23084
  BN, high pressure wurtzite to sphalerite transition, expt. study 3—18389
  $BaGeO_3$, $BaGe_2O_5$, $Ba_2Ge_5O_{12}$, high press. transforms., X-ray powder diffr. data 3—19327
  $BaMo_6S_8$, resist., mag. susceptibility meas., supercond., press. study 3—28470
  BaO, press. induced phase transition, interionic pot. calc. 3—2777
  Bi, BCC struct. stability at high press., X-ray diffr. meas., pseudopot. calc. 3—28092
  C_8KHg, pressure effect on superconductivity 3—3361
  C_8RbHg, pressure effect on superconductivity 3—3361
  $CaCO_3$ (aragonite), shock compression expts. and eqn. of state 3—4856
  CaO, press. induced phase transition, interionic pot. calc. 3—2777
  $CdInGaS_4$, Raman scatt. at high press. 3—43546
  CdS, compression behaviour and high press. polymorphic transformations, X-ray diffr. study 3—46881
  CdS, high pressure optical absorpt., resistivity and phase transformation 3—57028
  Ce, $\alpha\rightleftarrows\alpha'$ polymorphic press.-induced transition, elec. resist. and thermoelec. studies 3—37837
  CeCd, mag. and struct. phase transitions, at high press. 3—51781
  Cr-Ru, T-P-C state diagram, mag. transitions *(Russian)* 3—52488
  $CrAs_{0.47}Sb_{0.53}$, electronic struct. mag. and structural phase transitions, press. study 3—18896
  $CrBe_{12}$, mag. phase transitions under high press. 3—8669
  Cs, electronic s-d transition at high press., interband optical absorpt. study 3—28876
  Cs, electronic transitions under high press., X-ray diffr. study 3—27891
  Cs, isostructural phase transition under high pressure 3—47258
  CsH, struct. transition and phase diagram, vol.-press. depend. study 3—38051
  CuCl, elec. and optical props. at high press. and from 400°C to liq. N_2 temps. 3—13816
  Fe-H system, phase transitions, phase diagrams and mag. props. 3—33425
  Fe_2O_3, high press. phase transition under shock compression 3—13443
  $FeTiO_3$ II, disordered, high temp. synthesis, mag. props. 3—14053
  GaAs, high pressure structural transitions, planar defects, X-ray diffr. study 3—2769
  GaP, high pressure structural transitions, planar defects, X-ray diffr. study 3—2769
  GaS, high press. polymorph, cryst. struct. 3—18277
  Ge, pressure induced phase transition, cryst. stability 3—23035
  Ge_xSi_{1-x}, $\alpha\to\beta$ phase transition at high press., EDAX study 3—2781
  GeTe, high press. phase transitions, elec. cond. 3—28095
  ^3He crystal, HCP→FCC phase transition from triple pt. to 6 kbar 3—38159
  ^3He, HCP-FCC phase transition 3—13586
  $Hg_{3-\delta}AsF_6$, Hg chain freezing transformation, neutron scatt. study 3—57084
  HgSe, transport props. under press. press. induced struct. transition obs. 3—18730
  n-HgTe, phase diagram and phase transitions 3—57060
  InBi-Bi alloys, effects of high press., struct. transitions detected 3—19336
  InS, polymorphic transition at high press., X-ray diffr. study 3—27886
  InSb, magnetoresistance, Hall effect and elec. cond. near high press. phase transition 3—13840
  KC_8, press. induced staging transitions, fractional stage obs. 3—42769
  K_2SnCl_6, phase transition press. depend., NQR study 3—18448
  La, phase transitions and soft phonon mode under high press. 3—23032
  β-$LiIO_3$, $\beta\to\alpha$ transition, effect of H^+ after high press. treatment 3—38058
  MgO, press. induced phase transition, interionic pot. calc. 3—2777
  $Mn(CO)_5Br$, second-order phase transition, Raman spectrosc. 3—13432
  N_2, solid, high press. phase, lattice energy calc. 3—23036
  Na halides, high press. polymorphs and birefringence 3—56844
  $Ni(NO_3)_2.2H_2O$, phase diagram press. depend. 3—28556
  PbI_2, polymorphic phase transition under press., Raman study 3—2788
  Pr, crystal structure of high press. phase, X-ray diffr. data anal. 3—37845
  Pr, phase transitions and soft phonon mode under high press. 3—23032
  Rb, electronic s-d transition at high press., interband optical absorpt. study 3—28876
  $RbCaF_3$, biaxially stressed, cubic-tetragonal transition 3—2778
  Sb, phase transition into BCC struct. at high press., X-ray diffr. study 3—42559
  Sc, high press. structural transform 3—18440
  Si, pressure induced phase transition, cryst. stability 3—23035
  Si_3N_4, direct crystn. from amorphous to β-phase under high press. 3—14531
  SrO, press. induced phase transition, interionic pot. calc. 3—2777
  α-TeO_2, ferroelectric, second order phase transition, Mossbauer study under hydrostatic press. 3—14180
  Ti, phase transition under shock wave loading 3—13428
  Ti, shock wave loading, $\alpha\to\omega$ transform. mechanism and struct. 3—14592
  V_2O_3:Cr, polycryst., phase transform. triggered by external loading 3—38048
  Y, high press. structural transform 3—18440
  Y, phase transitions and soft phonon mode under high press. 3—23032
  ZrO_2-Y_2O_3 solid soln., stabilised, hydrostatic press. depend. of elastic behaviour and stability against shear 3—14633

high-pressure techniques
  calorimeter, isothermal high-pressure flow, excess enthalpy of cyclohexane+n-hexane 3—30861
  container design, for use at low temp. in strong magnetic fields 3—36032
  diamond anvil cell and high-pressure physical investigations, review 3—45151
  diamond anvil pressure cell for high-temp. use 3—20865
  diamond-anvil cell equipped with a worm gear intensifier for pressure generation at low temperature 3—20866
  electric leads, vac.-sealed, in high-press. chamber 3—5815
  fixed-pressure chamber, self-contained, with automatic disc valve 3—5806
  glass-metal junction, using double Teflon-4 cone 3—36033
  hermetic testing, He leak detector and radioisotope methods, graphical soln. 3—45153
  joule heating temp.-jump apparatus, construction and testing 3—339
  magnetic props. of materials meas., with pulsed magnetic field up to 300 kOe 3—45168

high-pressure techniques continued
  Mossbauer effect at high and ultrahigh press., techniques for generating and measuring press. 3—10852
  Mossbauer effect at hydrostatic press. to 17 kbar and 78 to 450K, cylinder-piston type chamber 3—6499
  NMR study of ferroelectric phase transitions 3—16376
  packed-bed balance reactor for gas adsorption and gas-solid reactions under elevated pressures 3—4315
  pneumatic driver for diamond anvil cells 3—20867
  scanning fluorescence spectrophotometer for pressure meas. using ruby R1 lines 3—371
  stimulated Brillouin scattering in polymers 3—22156
  strain gauge for use in pressurised water environment, self-press.-compensating technique and waterproofing 3—20837
  US meas. under high press., appl. to solids 3—1888
  US vibration powder press with vibr. die 3—1893
  X-ray cell for single crystal lattice const. meas. 3—2336
  CO_2 laser radiation absorption meas., high-temp. 10 μm absorption cell 3—32397
  ^{13}C NMR probe for high-temperature and high-pressure experiments 3—45178
  WC-Co, sintered, compressive strength data, for ultra-high-pressure research equipment 3—9267
  YAG:Eu^{3+}, high temp. press. sensor using fluorescence spectrum press. dependence 3—20865
high speed steel *see tool steel*
high spin states (nuclear) *see nuclear collective states and giant resonances*
high-temperature phenomena and effects
  see also refractories
  electrochemistry, conf., Detroit, USA, 1982, Oct. 3—30561
  mica, industrial, high temp. transform. 3—58137
  nondegenerate semiconductor thermoelectric props., incomplete impurity ionisation effects 3—13847
  sphalerite, press. and temp. depend. of equilib. comp. rel. to calibration of meteorite cosmobarometer 3—48864
  transition metal alloys, MGa and MGe, phase analysis, high press. and temp. 3—18475
  water droplets, polarisation model for high temps. and density 3—27644
  $BiVO_4$, Brillouin scatt. at high temps. 3—3749
  $CaWO_4$, melting transition, high temp. Raman spectra study 3—28867
  Er_2S_{3-x} thermoelectric power and resistivity obs. at 500°C 3—14972
  Fe-C system, carbides and diamond formation under high temp. and press., mag. study 3—18390
  Lu_2S_{3-x} thermoelectric power and resistivity obs. at 500°C 3—14972
  Mo-Al system, high temp. thermodynamic study 3—23056
  Mo_2C, reaction with O_2 to form CO, 1300 to 2100K *(German)* 3—29299
  NO_x formation in coal-fired MHD power plant simulation facility 3—53568
  Nb solid and liq., specific heat up to 5000K 3—2830
  Nd:glass laser material, spectral-luminesc. characts., temp. effect 3—8869
  Sc_2S_{3-x} thermoelectric power and resistivity obs. at 500°C 3—14972
  Si_3N_4, hot-pressed, fracture mechanics, up to 1400°C *(German)* 3—29155
  $(SmLuCa)_3(FeVSi)_5O_{12}$ garnet film for ion implanted bubble devices, prep. and high temp. bubble propagation 3—38659
  WC, reaction with O_2 to form CO, 1300 to 2100K *(German)* 3—29299
  WC-CO, reaction with O_2 to form CO, 1300 to 2100K *(German)* 3—29299
  W_2C, reaction with O_2 to form CO, 1300 to 2100K *(German)* 3—29299
  $(ZrO_2\text{-}Y_2O_3)/(Ni\text{-}Cr\text{-}Al\text{-}Zr)$ thermal barrier coating, failure mechanism at high temp. 3—3020
high-temperature techniques
  see also pyrometers; refractories
  attachment for precise meas. of lattice parameters by Bond's method 3—2337
  creep and fatigue test installation for use at high-temp. 3—19491
  diamond anvil pressure cell for high-temp. use 3—20865
  evaporation source, rate-resistance-heated, high-capacity, high evaporation 3—3949
  extensometer extender for conversion of room-temperature extensometers for high-temperature applications 3—40595
  glass manufacture, temp. meas. and control under microgravitation conditions 3—45144
  graphite furnace in electrothermal atomiser for AAS, longit. nonisothermality elimination 3—53468
  graphite rod atomiser for AAS using radioactive isotopes, profile optimisation 3—53467
  indirect method, heating/cooling curve interrogation 3—30863
  ion source, 12 MKh-1303 mass spectrometer for high-temp. expts. 3—49494
  laser absolute dilatometer with digital data processing unit *(German, English)* 3—20820
  optical fiber thermometer for high temp. meas. 3—49362
  photoacoustic cell for the temperature range 300-1050K 3—12458
  randiant heater for zone melting of intermediate melting-point materials 3—52926
  sapphire, crystal growth from melt at high temps., acoustic-emission flaw detection technique 3—28982
  self-cooling materials, based on pseudoalloys, methods of calc. 3—13496
  solar thermal receiver high-temp. ceramic-metal heat exchanger element 3—39521
  steel, maraging stainless, martensitic-austenitic transform., mech. props., TEM and X-ray diffr. studies *(Chinese)* 3—34298
  strain gauge, Pt-W alloy wire, causes of drifting *(German)* 3—30848
  thermal cond. transient hot wire instrument for high temp. liquids 3—46437
  thermal expansion, transient interferometric technique for high temps. 3—45107
  thermocouple, Chromel-Alumel, use under conditions of rapidly changing thermal processes from −196 to 900°C 3—16362
  vacuum atomic and molecular source 3—17384
  vacuum ovens, annealing appl. up to 1600°C 3—45143
  C rod atomiser configuration characteris. for atomic absorpt. spectrometry 3—53460
  ^{13}C NMR probe for high-temperature and high-pressure experiments 3—45178
  Pt, resistance thermometer for high temps: 3—35991
  YAG, crystal growth from melt at high temps., acoustic-emission flaw detection technique 3—28982
  YAG:Eu^{3+}, high temp. press. sensor using fluorescence spectrum press. dependence 3—20865
high vacuum gauges *see vacuum gauges*
high-voltage engineering
  see also high-voltage techniques
  DC line-to-plate gap with DC high voltage, electric field and ion current profile obs. 3—51406
  gas switches, 2.8 MV, UV laser triggering 3—27126
  grid controlled plasma switch with isolated neutral plasma and free electron flow regions 3—27750
  spark gap Blumlein switch, low press., 250 kV, breakdown, recovery 3—27774
  vacuum switch trigger delay characteristics 3—27775
  voltage recovery time of small spark gaps 3—27771
high-voltage techniques
  Antares pulse power system fibre-optic monitoring 3—17534
  DATEP, photomultiplier HV regulator 3—17177
  electron microscope facility at Argonne National Laboratory, operation and applications 3—11561
  gyrotron power supply and protection system for electron cyclotron reson. heating 3—55759
  HV control and protection system for Culham mult-Megawatt beam line 3—55766
  HV divider for TEXTOR neutral injectors 3—55769
  HVDC voltage, absolute determ. by frequency meas., electron-optical system 3—54748
  large sphere-gaps, particulate matter influence on DC breakdown 3—7841
  punch-through voltage meas. device for semicond. 3—5814
  triggered pseudo-spark chamber as fast switch and as high-intensity beam source 3—41373
hip joint replacements *see prosthetics*
history
  American astronomy in the mid-nineteenth-century 3—54607
  aplanatic object glass, $3^1/_4$ inch dia., first by Tulley (c. 1821) 3—25328
  artificial limbs, history and development 3—10549
  binary stars, three and a half centuries of research rel. to laws of physics 3—48956
  Castlehill Observatory, Aberdeen 3—55
  ceramics as biomaterials, review of history 3—49130
  colour wheel invention 3—5582
  condensation nuclei counters, supersaturation and expansion ratios 3—35822
  Corsica, historical seismicity and macroseismic study *(French)* 3—29862
  d'Arsonval's calorimeter: measurement of animal heat, 1877 3—30575
  defibrillator design and development, review 3—44346
  Doppler, Johann Christian (1803-53), and his effect 3—25743
  Fermi surface, history 1933-60 3—35827
  fluctuation theory and Marian Smoluchowski (1872-1917) 3—35824
  fluid dynamics, numerical methods 3—49136
  Gabor, freq., time and memory 3—5581
  gauge theory, historical review 3—20604
  geological studies in Caucasus Mountains, history of testing of geological hypotheses *(Russian)* 3—35823
  Harwell research, 1950's 3—30584
  Irish astronomy to 18th century 3—30583
  Julian period, twelfth century origins 3—35826
  Kepler's cosmological theories, their agreement with observation 3—20602
  Langmuir-Blodgett films, history 3—35828
  Lemaitre cosmology and protogalaxy form. 3—35825
  Louis de Broglie, association with de Beauregard, personal reminiscences 3—30574
  Louis de Broglie, contrib. to quantum theory and physics metatheory 3—30579
  Louis de Broglie, hand-written notes on wave mech., transcript and translation 3—30573
  Louis de Broglie, ideas evolution on wave mech. interpretation 3—30572
  magnetic poles of earth, motions of dip poles and geomag. poles 3—35069
  magnetism, review of Japanese research 3—20600
  magnetism and magnetic materials, history and present role in industry and technology, book contrib. 3—54611
  medical radiology, development in the Ukrainian SSR *(Russian)* 3—30576
  microwave spectroscopy, development, in Europe 3—49132
  microwave spectroscopy, development 3—49131
  motion picture sound, history in years 1927-40 3—56411
  natural units before Planck 3—49134
  neutron beam study of condensed matter, view of the first half-century 3—20603
  neutron beta-decay, expt. studies, historical review 3—54608
  neutrons and nuclear fission *(Dutch)* 3—54609
  new physics, threshold of new age? 3—49128
  Newton and the Principia 3—54605
  optical fabrication traditions, grazing incidence optics 3—5583
  optics of invisible information and the EM wave spectrum 3—54
  pachometry, review of technique over past 250 years 3—19792
  particle accelerators *(Dutch)* 3—54610
  particle physics since 1930: a history of evolving notions of nature's simplicity and uniformity 3—25742
  pauli, the neutrino and the discovery of the neutron fifty years ago *(German)* 3—30582
  photographic daguerreotype, physical model 3—25972
  photographic modern development over the century 3—5584
  Pleistocene ice ages, historical review of astronomical theory 3—4949
  Ptolemy's star data authenticity 3—49135
  Ptolemy and lunar tables in Almagest 3—20601
  pyrolysis and microwave spectroscopy 3—49133
  quantum theory, early interpretations, rationality 3—30580
  quantum theory of measurement, Louis de Broglie's contrib. 3—30581
  radiology, development in Azerbaidzhan *(Russian)* 3—30577
  respiratory assistance: a review of techniques, rationale, and problems with a glimpse at the future 3—9776
  roentgenology and medical radiology, development and scientific strides in Uzbek SSR *(Russian)* 3—30578
  semiconductor laser development, short wavelength, projections 3—17526
  steel hardening, science and technology 3—40341
  Sun, epochs of ancient solar activity maxima of various periods *(Chinese)* 3—40090
  supernova observations in historical records 3—30402
  synchrotron radiation, discovery 3—49129
  theory-experiment confrontation problem 3—10550
  USA particle accelerators, historical perspective 3—40340
  ventricular gradient in medicine and physiology, history and future 3—10551

history continued
visual cortex, primary, exploration 1955-78, historical review 3—4499
William Crookes and the quest for absolute vacuum in the 1870s 3—54606
X-ray astronomy, historical review of first twenty years *(Russian)* 3—10548
H II regions in galaxies, history and present status of optical surveys 3—10419
Pb-acid accumulators, century of development *(Italian)* 3—48129

HIXE *see ion microprobe analysis; X-ray chemical analysis*

HMO calculations
aza-arenes, topological effect on MO energies, ab initio HMO calcs. 3—45862
conjugate molecules with repeat units, spectra 3—45923
copper nitroxyl, paramag., susceptibility, exchange interactions, extended Huckel calcs. 3—57515
cyclic conjugation, Huckel MO model calcs. 3—1204
Huckel N-atom linear chain, noncanonical localised orbitals and chemisorption 3—2980
Huckel parameter, qualitative interpretation using catastrophe theory *(German)* 3—6544
metal $(N+2)$-atomic clusters, cryst. growth, HMO method 3—18248
polyacenes, linear, with many rings, mean π-electron energy, ionisation pot. and Huckel parameters 3—45860
polydecker metallo-organic ring sandwiches, 5 and 6 membered, electronic configuration 3—46106
topological localised mol. orbitals 3—55849
trimethylborazine, electronic struct., mol. props., HMO calcs. 3—50284
$B_3N_3H_6$, electronic struct., mol. props., HMO calcs. 3—50284
$Ba(Pt,Ni)(CN)_4$, delocalised and localised electronic states luminesc. and IR study 3—47694
$Ba(Pt,Pd)(CN)_4$, delocalised and localised electronic states luminesc. and IR study 3—47694
$Ge:^{129}I$ (^{125}Te), nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3—8464
$Si:^{125}Te$ (^{129}I), nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3—8464

H_3O^+ *see hydroxonium ion*

hobby computing *see personal computing*

hodoscopes *see cosmic ray apparatus*

hole mobility *see carrier mobility*

hole theory of liquids *see liquid theory*

hole traps
see also electron traps
adsorbed layers electronic photoexcitation and discharging of deep traps in dielec. substrate 3—3228
diamond, semiconducting, subnanosecond time-resolved photoconductive response 3—47379
impurity polar semiconductor, secondary radiation at deep levels 3—52077
MNOS structures, carrier conduction and trapping, expt. study 3—33796
organic crystals, electronic processes, book 3—5512
organic photoconductors, one- and two-component UV PES 3—13857
polar media, long-range electron hopping, Condon approx. 3—38380
poly(bisphenol-A-carbonate), doped, surface pot. decay, trapping effects influence 3—23419
poly(N-vinylidole) photophysical processes, charge carrier trapping *(Japanese)* 3—23402
polymers, radiation induced cond., kinetics 3—52175
semiconductor, compensated non-polar, IR Faraday rotation due to hot carriers, trapping parameters 3—34078
semiconductors and insulators, generation recombination noise spectra, effect of trap distrib. 3—13872
single injection solid state diodes, I-V characts. in nonconstant mobility regime 3—8590
$Al_{0.3}Ga_{0.7}As$ LPE layer, grown-in deep level defects, thermal annealing effect 3—18799
α-Al_2O_3, traps, thermally stimulated electron emission and annealing curves 3—18649
BaS:Cu, Bi phosphor, radiolum., radiative recomb. phenomena, thermolum. comparison 3—14356
CaS, Ce activated, polycryst., thermolum. due to intrinsic point defects 3—3832
$Cd_{1-x}Zn_xS$/p-GaAs heterojunction, trap states in space-charge region, AC admittance study 3—23470
$EuGa_2S_4$ single cryst., dark current relax., trapping levels 3—8493
GaAs, electron irrad., anisotropic defect production, electron and hole traps 3—42667
p-GaAs, electron irradiated, deep levels, DLTS and deep level optical spectroscopy study 3—33664
GaAs LPE layer, grown-in deep level defects, thermal annealing effect 3—18799
GaAs:Be MBE layers, impurity and defect levels 3—3102
p-GaAs:Cr, epitaxial, photo-Hall effect and photocond. 3—18735
In-GaAs/n-$Al_xGa_{1-x}As$ heterostructures, organometallic VPE grown, interface states study 3—28416
GaP:Zn, as-grown and electron irrad., defect study by DLTS and EPR 3—43087
Ge nuclear radiation detectors, carrier trapping by impurity clusters 3—57362
Ge, phonon anisotropic scatt. by holes 3—52127
Ge:Ga(In)(As)(Sb), electron irrad., hole trapping defects, DLTS study 3—43083
Ge-GeO_2 structure, energy diagram determ. from photocharging spectra 3—52271
InGaAsP LPE layers, electron irrad., defect states, DLTS study 3—57304
InGaAsP/InP p^+n diodes, deep level electron and hole traps, DLTS study 3—47414
p-InP, deep levels study by diode admittance spectroscopy 3—33660
InP, electron irradiated, deep levels study 3—3107
InSe, photoconductivity meas. 3—23434
NiO-Ni_3S_2 two-phase mixtures, elec. conduction meas. 3—43168
PbTe films, cond., photocond., thermoelectric, Hall and photothermoelectric meas. 3—8596
p-Si, divacancies, hole capture cross sections, isothermal capacitance relax. study 3—43107
n-Si, electron-irradiated, heavily compensated, deep levels, photo-DLTS study 3—43063
Si, grain boundary barrier height and interface states, laser beam photocond. study 3—38335

hole traps continued
Si, polycrystalline p-type, density of states and trapping states, DLTS study 3—33661
Si, reactively ion etched, deep levels, DLTS study using p^+-n diode arrays 3—52056
Si ribbon, edge-defined film-fed growth, electron irrad. effects 3—42665
Si, trap centres in wafers containing A-swirl defects, annealing behaviour, DLTS study 3—13760
Si:As, heavily doped, low minority carrier mobility and diffusivity meas. 3—38398
Si:Au(Ag)(Fe)(Cu)(Ni), deep level defects prod. by quenching, DLTS study 3—57309
Si:B, As, ion implanted and CW laser annealed, Fe-related defect centres 3—47304
Si:B,As, CW laser annealing, quenched-in defects 3—57313
Si:H, amorphous, dangling bond defects, trapping parameters, photoconductivity study 3—28367
Si:H, amorphous glow discharge film, optically illuminated, picosecond carrier dynamics obs. 3—33735
a-Si:H film, trapping props., effect of adsorbates, TSC meas. 3—23401
Si:P MOS structs., trap creation in channel oxides due to ion penetration 3—13910
Si/SiO_2 interface, hole capture by deep levels 3—28448
Si-SiO_2 interface, radiation induced defects meas. with XPS 3—43288
Si-SiO_2 interface, VUV irrad., oxide traps and interfacial states obs. *(Chinese)* 3—38482
Si-SiO_2 structure, energy diagram determ. from photocharging spectra 3—52271
Si_3N_4 amorphous films, photoluminesc. study 3—34146
SiO_2:B ion implanted layer, capture cross section of induced traps, elec. field depend. 3—38402
YIG:Ca film, p-type semicond., elec. cond., mag. field gradient dependence meas. 3—33806
ZnO varistors, leakage currents, carrier trapping mechanism obs. 3—33738

hollow cathodes *see cathodes*

holmium
see also nuclei with ......
alkaline earth fluorides:Ho^{3+}, spin transfer, ^{19}F NMR shift 3—33995
Atlantic Ocean, rare earth element distrib. 3—35191
atom hyperfine struct., line classifications, laser fluorescence and RF double resonance spectrosc. 3—36717
bulk, hydride phase development 3—16857
commensurate turn angle effects, Neel temp. 3—18911
helimagnetic phase, commensurate effects 3—52476
point contact spectra of magnons *(Russian)* 3—14027
$Bi_{12}SiO_{20}:Ho^{3+}$, Er^{3+}, impurity IR absorption spectra, Stark levels 3—19165
$CaF_2:Eu^{2+},Ho^{3+}$, fluorite, interaction and luminesc. of activator ions *(Ukrainian)* 3—23995
GdIG:Ho, hyperfine interation, NMR spin echo study 3—19013
YIG:Ho, hyperfine interation, NMR spin echo study 3—19013

holmium alloys
$Gd_{1-x}Ho_xAl_2$, mag. susceptibility and elec. resist., random cryst. elec. field effect 3—38376
HO_5Ir_3, cryst. struct., X-ray diffr. study 3—2470
Ho-C, free diffusion of C, radioactive anal. *(Russian)* 3—51840
Ho-Co sputtered thin films, magnetisation distrib. of submicron bubbles 3—52574
Ho-Co thin films, magnetisation distribs. in bubbles and domains, HVEM study *(Japanese)* 3—18960
Ho-Er, γ-γ perturbed angular correlation study 3—52687
Ho-La(Ce)(Pr), mag. struct. neutron diffr. study 3—52373
$HoAl_2$, ground state spin waves, inelastic neutron scatt. study 3—28538
$HoAl_2$, sp. ht., with external mag. field *(French)* 3—23640
$HoAl_2$, spin dynamics, inelastic neutron scatt. study 3—57528
HoCo amorphous films, thermal Hall hysteresis loops 3—18797
$HoCo_2$, elastic moduli in mag. field, 4 to 200K 3—23777
$HoCo_2$, mag. excitation spectrum 3—3430
$HoCo_2$, magnetic excitation spectra and neutron differential scatt. cross sections 3—52434
$HoCo_3$, mag. anisotropy and magnetisation curves *(Russian)* 3—38610
$HoCo_5$, magnetisation and mag. anisotropy meas. 3—3439
$HoCo_2Ge_2$, magnetic structure, neutron diffr. study 3—14003
$Ho(Co_{1-c}Ni_c)_2$, mag. phase transition, magnetisation and spin echo NMR study 3—28563
$HoCo_2Si_2$, collinear antiferromag. ordering, neutron diffr. study 3—43351
$HoCo_2Si_2$, mag. ordering, neutron diffr. study 3—43353
$HoCu_2$, Neel temp., magnetisation and RKKY model 3—52481
$Ho(Cu_{1-x}Ni_x)_2$, mag. struct., neutron study 3—52388
$(Ho_{0.6}Er_{0.4})Rh_4B_4$, re-entrant superconducting-ferromagnetic transition, specific heat 3—3444
$Ho(Fe, Rh)_2$, hyperfine interactions, Mossbauer study 3—19022
$HoGa_2Ni$ and $HoGa_4Ni$, synthesis and struct. 3—37857
$HoMn_2$, Laves phase, mag. characts. 3—47480
$HoMn_2$, mag. props. and thermal expansion anomaly 3—52588
HoNi, electrical resistivity and magnetic transitions, expt. study 3—18685
HoNi, magnetisation, mag. torque and struct. and metamagnetism 3—52536
HoNi single cryst., magnetisation and elec. resist. 3—28623
$HoPd_2Si_2$, magnetic susceptibility meas. 3—8648
Ho_2Pt, mag. props. study 3—57616
Ho_5Rh_3, cryst. struct., X-ray diffr. study 3—2470
$(Ho_xY_{1-x})Co_2$, spin reorientation temp. 3—18893
$Ho_xY_{1-x}Co_{5+0.5x}$, mag. moments and magnetisation curves *(Russian)* 3—28520
La-Al-Mo, crystal field parameters from neutron spectra 3—13780

holmium compounds
see also holmium alloys
$Cs_2NaHoCl_6$, enhanced nuclear spin system, antiferromag. state 3—52390
$Er_{1-x}Ho_xRh_4B_4$, ferromag. and supercond. crit. behaviour, mean field study 3—18824
$(Er_{1-x}Ho_x)Rh_4B_4$, ferromag. supercond., US attenuation near T_{c2} 3—57477
$HoCl_3$ alcohol solvates, f-f bands intensity 3—11885
$HoCl_3$, polymorphism, phase equilib. and cryst. growth meas. 3—18274
$Ho(ClO_4)_3$, hypersensitive bands, oscillator strengths, solvent effect 3—6723
$HoCrO_3$, field induced spin reorientation, IR absorption study 3—23665

holmium compounds continued
- $(Ho_xEr_{1-x})Rh_4B_4$, mean field behaviour of reentrant superconducting-ferromagnetic transition 3—43365
- $HoFe_2H_x$, cryst. struct. and props. 3—8007
- $Ho_3Fe_5O_{12}$ garnets, temp. evolution of mag. struct. 3—52387
- HoIG, hyperfine interation, NMR spin echo study 3—19013
- HoIG, mag. props. in high mag. field, optical absorpt in IR region 3—28604
- $Ho(Ir_{0.7}Rh_{0.3})_4B_4$, occurrence of supercond. below antiferromag. transition 3—57450
- $(Ho_xLu_{1-x})Rh_4B_4$, mean field behaviour of reentrant superconducting-ferromagnetic transition 3—43365
- $HoMo_6S_8$, domain-like mag. struct. in supercond. phases 3—23592
- $HoMo_6S_8$, ferromag. supercond., mol. field theory for sf exchange model 3—57463
- $HoMo_6S_8$, ferromagnetic superconductor, SF exchange interaction model 3—18817
- $HoMo_6S_8$, ferromagnetic superconductors, mixed states 3—38563
- $HoMo_6S_8$, supercond., modulated mag. phase, small-angle neutron scatt. study 3—38592
- $HoMo_6S_8$, supercond., oscillatory mag. state, field depend., small angle neutron scatt. 3—57524
- $HoMo_6S_8$ type mag. supercond., critical current, mag. field and current effects *(Russian)* 3—3397
- $HoNbO_4$, positional and temp. partameters, interatomic coords., polymorphic transform. 3—22870
- $HoNi_3D_{1.8}$, cryst. struct. determ. 3—18265
- $HoNi_3D_{1.8}$, cryst. struct., neutron diffr. anal. 3—33222
- Ho_2O_3-Er_2O_3 powdered mixtures, photoacoustic spectra, dilution effects 3—18401
- $Ho(OH)_3{:}Gd^{3+}$, host lattice effects, zero field splitting, EPR study 3—18982
- HoP, cubic cpd., mag. props., neutron diffr. results 3—14005
- $Ho(PO_3)_3$, Raman spectra 3—34099
- $Ho(ReO_5)_3.4H_2O$, NQR study 3—23832
- $HoRh_4B_4$, elec. and mag. props. from cryst. field parameters 3—28311
- $HoRh_4B_4$, mag. supercond., muon spin relax. mechs. 3—57844
- HoS, antiferromag., kinetic coeffs. in region of mag. ordering temp. 3—43356
- $(HoS)_2Te_{1.34}$ substructure and order-disorder transformation *(French)* 3—33209
- $(HoS)_2Te_{1.34}$, superstruct., order-disorder transitions and twin domains *(French)* 3—33210
- Ho_5Sb_3, magnetic susceptibility, 77-800K 3—8654
- Ho_2ScNbO_7, crystal structure, X-ray diffr. study 3—27917
- $HoTiO_3$, mag. struct., neutron diffr. study 3—14013
- $HoVO_4$, nucl. antiferromag., many-body nucl. Hamiltonian 3—43344
- $LiHoF_4$, far-IR paramagnetic resonances 3—57920
- $Na_5HoSi_4O_{12}$, cryst. struct. and ionic cond. 3—18279
- $RbHo(PO_3)_4$ structural type IV crysts. 3—56853

holograms *see holography*

holographic gratings
- absorbing gyrotropic medium, travelling intensity waves form., holographic recording 3—17467
- array heterodyne detection using holographic local-oscillator beam multiplexing 3—56158
- avionic displays appl. 3—6937
- beam splitter, complex amplitude addition and subtraction 3—22010
- bleached reflection holograms, internal reflections 3—26972
- chalcogenide glass semiconductor films, amplitude-phase holographic grating form. 3—6935
- coherence time determ. of single picosecond light pulses, dynamic holography method 3—56163
- concave diffraction gratings for monochromators, aberration props. of optical systems 3—27223
- concave holographic diffraction grating in a scheme having Rowland-circle focusing 3—1599
- deflection, opto-optical, by diffr. from transient index modulation grating 3—50716
- diacetylene single cryst. surface, photopolymerisation, holographic grating interference pattern 3—6923
- diffraction efficiencies of evanescent wave holograms 3—36960
- flat aspheric holographic optical elements, optimum phase transfer function 3—36963
- focusing elements, cineform, for CO_2 laser, computer synthesised 3—36969
- groove profile formation of metal coated holographic gratings 3—12302
- gyrotropic media, grating holograms formation, theory 3—12100
- interference field phase distribution investigation using moving holographic diffr. grating 3—1596
- large amplitude, Ag coated, diffr. efficiency and electron microscopy 3—50635
- large-aperture spectrograph employing a concave holographic diffr. grating 3—30936
- laser aided microfabrication *(Japanese)* 3—24380
- laser scanning technology advances, conf., San Diego, CA, USA (Aug. 1981) 3—5481
- lens design, aberration-free, efficient, in presence of construction/reconstruction wavelength shift 3—6926
- lenses, higher order aberrations 3—32326
- light-induced gratings, diffraction efficiency 3—27175
- MBBA, mesophase, dynamic holographic grating, polarization recording 3—22011
- molecular condensed phases, picosecond holographic grating expts. 3—27137
- narrow-band filter consisting of two aplanatic gratings 3—27215
- noise gratings in Ag halide volume holograms 3—56160
- optical element properties and appls. *(Japanese)* 3—12096
- processing, recording and characts. of 3600 mm line freq. gratings 3—36967
- refractive and holographic optical elements, equivalence *(Russian)* 3—41785
- review of holographic optical elements 3—6929
- rhodamine 6G grazing-incidence dye laser with an intracavity lens 3—41822
- sawtooth profile line holographic grating prod., methodological problems 3—26982
- scanner, holographic, design trade-offs of laser diode and photoconductor parameters 3—6928

holographic gratings continued
- spectrograph, miniature, with concave holographic gratings, aberrations and spread function 3—30938
- stereoscopic screens using holographic optical elements 3—12094
- survey of holographic techniques and appl. 3—26977
- toroidal diffr. grating using divergent illum. at grazing incidence for X-ray and XUV spectroscopy 3—54779
- volume holograms, amplitude-phase, out-of-phase, diffr. efficiency 3—26985
- volume multiplexed amplitude holograms, diffraction-efficiency 3—1590
- X-ray holographic grating, quasi-monochromatic imaging with scale alteration 3—25995
- X-ray UV grating reflectivity meas., comparison with EM theory predictions 3—7154
- X-Y grating interferometry for EUROSTEP 2000 wafer steppers 3—36962
- zone plates, high-quality, interferometric recording in spatially incoherent illum. 3—32448
- Ag halide holograms, noise grating form. due to scatter at recording stage 3—1597
- Al-Al_2O_3-Au/MgF_2 tunnel diode on holographic grating, light emission 3—12263
- $Bi_{12}GeO_{20}$ photorefractive crystals, real-time image division in four-wave mixing 3—22168
- $Bi_{12}SiO_{20}$ photorefractive crystals, running holograms 3—22008
- $Bi_{12}SiO_{20}$ photorefractive crystal, light beam steering using reversible photoinduced grating 3—46281
- $BiSiO_{20}(GeO_{20})$, optical information recording inelec. field 3—12093
- $LiNbO_3{:}Fe$ crystals, photorefraction and anisotropic light scatt., holographic recording 3—36959
- $LiTaO_3{:}Fe$ crystals, photorefraction and anisotropic light scatt., holographic recording 3—36959

holographic instruments
- *see also holography*
- bubble chamber for short-lived particle detection 3—1142
- camera, for phase problem soln. in crystallography *(German)* 3—56162
- deflector and optical system for use in IBM supermarket scanner 3—6930
- HOBC, holographic bubble chamber performance 3—17168
- Holofacet scanning adaptation to reprographics and general data handling 3—6932
- laser scanners using generalised zone plates, POS scanner appls. 3—32324
- laser scanning technology advances, conf., San Diego, CA, USA (Aug. 1981) 3—5481
- multi-focal plane holographic disc scanner, optical element chromatic aberration minimisation 3—6934
- optical element properties and appls. *(Japanese)* 3—12096
- scanner, eccentricity compensation 3—41791
- scanner, holographic, design trade-offs of laser diode and photoconductor parameters 3—6928
- scanner, holographic, with aspherical auxiliary reflector 3—6931
- scanners, functions and limitations 3—56161
- scanning disc with auxiliary data track 3—6933
- scanning Fabry-Perot interferometers for recording fast processes 3—32330
- survey of holographic techniques and appl. 3—26977

holographic interferometry
- aspheric optics, diamond turned, testing using computer-generated holographic interferometry 3—7111
- Benard convection onset and breakdown, holographic interferometry meas. 3—46674
- combined acoustic holography and interferometry, expt. results *(Czech)* 3—50851
- composites, deformation and fracture determ. by speckle-holographic interferometry 3—29249
- contour generation by spatial freq. modulation 3—6921
- crystallography, holographic interferometry appls. 3—37832
- deformation, dynamic, analysis apparatus 3—4248
- deformation direction meas. for small displacement 3—36971
- deforming direction meas. 3—36970
- diffuse surface vibr. amplitude meas. using holographic interferometry, amplitude range upper limit 3—7524
- diffusing object in-plane deform. meas. using fringe visibility 3—27458
- displacement and strain field determ., dual-beam holographic moire interferometry 3—5765
- electroacoustic generator active surface vibrs., holographic and speckle interferometric obs. 3—1905
- electron holography and interferrometry, appl. to mag. struct. 3—38593
- electron microscopic hologram, interferometric processing, practical experience with various methods *(German)* 3—45249
- evaluation optimisation *(German)* 3—32327
- flaw visualisation, holographic, using mag. stressing 3—4247
- fringe interactive analysis system, moire contourogram and interferogram appls. 3—10894
- interferograms interpretation, deformational displacements identification 3—50634
- ion beam generator using punch-reflex diode, holographic interferometric study 3—41384
- IR region holographic interferometry 3—50639
- isotropic materials, linear expansion coeff., holographic interferometry study 3—16337
- liquid surface deformation by floating particles, holographic interferometry study 3—57176
- motion parameter measurement, interferometric possibility 3—30843
- nondestructive evaluation, on-line acquisition and analysis 3—29251
- optical surface testing using holographic interferometer 3—1594
- orthogonal in-plane and out-of-plane fringe maps in holographic interferometry 3—46183
- photomicroscopy, holographic methods 3—40683
- planarity monitoring of polished surfaces 3—45106
- plasma electron density profile determ. from refr. meas. obtained using holographic interferometry 3—42451
- plate bending problem, holographic and speckle interferometry comparison 3—51036
- plates and tubes, surface deform. determ. by holographic interferogram meas. 3—32696
- pressure vessel, spherical axisymmetrically flawed, expt. and computer simulated holographic inspection 3—48032
- real-time holographic interferometry for microcomputer based vector displacement meas. 3—56157

- **holographic interferometry** continued
  - reflection hologram using one beam of light, stress and strain anal. appls. 3−41786
  - rotating objects, holographic interferometry with ruby laser 3−26984
  - scanning Fabry-Perot interferometers for recording fast processes 3−32330
  - spurious translation delinking using speckle correl. technique 3−50632
  - strain measurement using laser interferometer, fully automated system *(Russian)* 3−19465
  - strains in diffusely reflecting objects, meas. *(Russian)* 3−56509
  - stress-strain meas. by laser holographic interferometer, data monitoring system *(Russian)* 3−19466
  - survey of holographic techniques and appl. 3−26977
  - transparent materials optical uniformity monitoring 3−16406
  - tyres, multi-bead wire, inspection using holographic interferometer *(Chinese)* 3−41789
  - vibration and deform. meas. using high order diffr. of thermoplastic holograms 3−12609
  - vibration pattern separate freq. contrib. determ. using moire method 3−36957
  - VPE horizontal reactors, carrier gas flows and temp. profiles 3−43769
  - X-Y grating interferometry for EUROSTEP 2000 wafer steppers 3−36962

- **holographic optical elements** *see holographic gratings*

- **holographic storage**
  - data recording for memory with diffuser image in plane of hologram, characteristics *(Russian)* 3−41784
  - optical element aberration requirements and location accuracy *(Russian)* 3−50629
  - photoferroelectrics, electrooptic effect, image storage, vol. phase holograms 3−1591
  - survey of holographic techniques and appl. 3−26977
  - $LiNbO_3$:Fe, optically induced light scatt. and beam distortion, rel. to phase hologram storage 3−50630

- **holography**
  - *see also acoustic holography; computer-generated holography; holographic gratings; holographic instruments; holographic interferometry; holographic storage; microwave holography*
  - aberration compensation with partially coherent light 3−32328
  - absorbing gyrotropic medium, travelling intensity waves form., holographic recording 3−17467
  - Aharonov-Bohm effect obs. by electron holography 3−20680
  - array heterodyne detection using holographic local-oscillator beam multiplexing 3−56158
  - astigmatic one-step rainbow holography, imaging anal. *(Chinese)* 3−41788
  - biaxial crystals, holography appls., phase hologram props. 3−1593
  - biological objects, automated holographic microscopy, computer simulation of 3D imaging 3−24933
  - bleached reflection holograms, internal reflections 3−26972
  - chalcogenide glass semiconductor films, light sensitivity during hologram pulsed recording 3−6936
  - circular plate with partially free, partially clamped edge, natural freqs. 3−12573
  - colour holographic image reconstruction by white-light processing 3−1598
  - colour reflection holograms from bleached PE-2 photographic plates 3−32332
  - combustion processes evaluation using impulse holography *(Hungarian)* 3−53406
  - Denisyuk reflection hologram, diffr. efficiency control by gyrotropy switching during recording 3−41792
  - depolarisation effect elimination 3−32325
  - diffraction efficiency of hologram recorded through turbid medium 3−36965
  - digital data display, three dimensional 3−26979
  - digital holographic filters to optimise methods for coherent-optical pattern recognition 3−36966
  - dispersive concentrating systems based on transmission phase holograms for solar applications 3−6922
  - displaced source method for production of lines of equal level *(Russian)* 3−46180
  - dye laser subpicosecond pulse synthesis and holographic visualisation *(French)* 3−50669
  - electro-optics/laser conf., Brighton, England (March 1982) 3−40320
  - electron Fourier holography reconstruction conditions and resolution 3−25993
  - electron holography, off-axis image, with mixed type interferometer 3−46150
  - electron microscope hologram, interferometrical processing, photographic noise problem *(German)* 3−46182
  - electron microscopical holography, conf., Hamburg, Germany (Aug. 1982) 3−25696
  - electron microscopy, holography employing a coherent quasi-cylindrical illumination wave 3−25992
  - emulsion refractive index characts. due to bleaching effect, phase filter prep. *(Chinese)* 3−41787
  - evanescent wave hologram, diffr. efficiencies 3−36960
  - eye, illumination with laser radiation, immersion method 3−58768
  - forward reconstruction from reflection holograms 3−26978
  - Fraunhofer holography of an object inside a chamber, magnification with divergent beams 3−26980
  - gelatin bichromated layers, holography, guided birefringence *(Russian)* 3−50640
  - generalised holographic imaging and computational solns. to inverse source problems 3−26976
  - hologram recording using electron-beam pumped XeF laser with unstable optics 3−6927
  - hybrid opticodigital stereoholograms synthesis 3−17469
  - image display, 3-D *(Japanese)* 3−50633
  - image generation process for small area image in multi-stratified medium *(Russian)* 3−41783
  - image quality improvement in bleached holograms 3−1589
  - image restoration, of defocused blurred image, using spatial freq. filter *(Korean)* 3−1579
  - inverse scattering for smooth reflecting objects 3−41735
  - laser holographic NDT of tyres using photoplastic holograms *(Chinese)* 3−41790
  - laser science, conf., Ankwei, China (May 1982) *(Chinese)* 3−5
  - laser speckle and holographic measurements 3−46185
  - lenses, higher order aberrations 3−32326

- **holography** continued
  - light-in-flight recording, high-speed holographic motion pictures of ultrafast phenomena 3−36956
  - lines of equal level, production using displaced source method *(Russian)* 3−46180
  - matched spatial filters fabrication, using one-board microcomputer controlled system 3−12095
  - microholography of living organisms 3−19870
  - multiple-aperture three-dimensional image construction utilising fringe-modulated speckle patterns 3−32329
  - multiplex holographic filtering through contact screens 3−17466
  - nuclear particles detector system, optical adjustment using laser beam and hologram 3−11626
  - oceanic particulates, in situ holographic meas. of sizes and settling rates 3−15454
  - optical element chromatic aberration minimisation 3−6934
  - optical element properties and appls. *(Japanese)* 3−12096
  - optical fields in optoacoustic interaction, correl. anal. 3−50628
  - optical information processing developments *(Japanese)* 3−12084
  - passive (self-pumped) phase conjugate mirror, theory and imaging expt. 3−7077
  - phase contrast improvement in interferometric holographic reconstructions under nearly dark field conditions 3−25991
  - photomicroscopy, holographic methods 3−40683
  - radiation field computation, holographic method 3−32266
  - radio-holographic process modelling, boundary-wave method, effective scatt. surfaces 3−17468
  - rainbow holographic aberrations and the bandwidth requirements 3−26973
  - rainbow holographic imaging, Fourier anal. *(Chinese)* 3−26974
  - reflection hypersonic hologram, angular and spectral selectivities 3−26983
  - reflection volume hologram, simultaneous two wave diffr. 3−12097
  - reflection volume hologram writing in a dynamic medium stationary energy transfer between beams 3−12098
  - refractive and holographic optical elements, equivalence *(Russian)* 3−41785
  - registration of holograms with variations of frequency 3−50637
  - remote displacement analysis using multimode fiber-optic bundles 3−5767
  - remote holography, stability achieved using flexible multimode fibre image bundles 3−56159
  - remote measurements in hazardous environments using hologrammetry 3−41793
  - reoxan three-dimensional phase-recording media with phys. development of the latent image 3−22179
  - scattered image plane hologram reconstruction in interferometer *(German)* 3−1595
  - screen beam and chromatic aberration characteristics *(Russian)* 3−1600
  - signal detection measurements by 3-D Fourier transform holograms 3−36964
  - spatial frequency response and resolution 3−36961
  - speckle noise suppression in holographic images 3−22009
  - stereoscopic screens using holographic optical elements 3−12094
  - synthesis methods for optics, quasi-optics, acoustics and electromagnetics, conf., San Diego, CA, USA (Aug. 1981) 3−11
  - synthesised Fourier holograms, optical system for copying *(Russian)* 3−26975
  - transmission hologram reconstruction by reflection *(Chinese)* 3−36958
  - Vander Lugt volume filters, two-dimensional image correlator appl. 3−17453
  - volume holograms, amplitude-phase, out-of-phase, diffr. efficiency 3−26985
  - volume multiplexed amplitude holograms, diffraction-efficiency 3−1590
  - wavefront inversion using 3-dimens. Doppler dynamic hologram 3−50638
  - white-light holography with a slide projector 3−50636
  - Ag halide holograms, noise grating form. due to scatter at recording stage 3−1597
  - Ag halide volume holograms, noise gratings 3−56160
  - $Bi_{12}GeO_{20}$, photorefractive cryst., sign of photoconductivity carriers, holography study 3−13862
  - $Bi_{12}SiO_{20}$ crystal, travelling hologram intensification 3−32331
  - $Bi_{12}SiO_{20}$, photorefractive cryst., sign of photoconductivity carriers, holography study 3−13862
  - $Bi_{12}SiO_{20}$ photorefractive crystals, running holograms 3−22008
  - $Bi_{12}TiO_{20}$, photorefractive cryst., sign of photoconductivity carriers, holography study 3−13862
  - Fe, grey cast, NDT of cracks and welding quality, white light hologram reconstruction *(Chinese)* 3−14792
  - $LiNbO_3$, spatial phase shift during hologram writing 3−50631
  - $LiNbO_3$:Fe crystals, photorefraction and anisotropic light scatt., holographic recording 3−36959
  - $LiTaO_3$:Fe crystals, photorefraction and anisotropic light scatt., holographic recording 3−36959
  - $TlInS_2$ inhomogeneous dynamic gratings, optical self-diffr. 3−36968
  - $TlInS_2$, photoconductivity and holography 3−46184

- **homogenising** *see heat treatment*

- **homopolymers** *see polymers*

- **hopping conduction**
  - activation energy with sequential hop correlation due to Coulomb interactions 3−57326
  - amorphous semiconductors, elec. cond., field depend., rel. to electronic struct. 3−43186
  - Anderson-localised regime, disorder and electron correls. 3−43113
  - biotite mica, elec. cond., small polaron hopping 3−47345
  - bis-(4-dimethylamino-2-methylphenyl)phenylmethane, hopping transport 3−3200
  - chalcogenide glasses, electrical conductivity by small polaron hopping, theory 3−52152
  - crystal transport props., local-field correction effects 3−33693
  - defective semiconductors, hopping conduction and directed percolation in powerful elec. field *(German)* 3−23394
  - dense heavy non-polar fluids, model for excess electron transport 3−18675
  - dielectric ionic space charge polarisation charact. with large AC signal appl., numerical hopping method analysis 3−23871
  - disordered media, hopping cond. props. 3−33695
  - disordered semiconductor, generalised master eqn. for phonon-assisted hopping, DC elec. field effect 3−57343
  - disordered semiconductors, elec. cond. theory 3−52158
  - disordered system, exciton transport and trapping, cluster CPA and random walk calc. 3−57360
  - disordered systems, unified equivalent-circuit approach 3−23374

- **hopping conduction** continued
  - disordered systems with strong electron-phonon interaction, optical intraband absorpt. 3−19101
  - disordered two-dimensional systems, localised electron states 3−47315
  - electric current caused by phonon induced hopping between Wannier-Stark states, computing method 3−52103
  - granular disordered solids, hopping cond. 3−47337
  - granular materials, variable-range hopping cond., metal-insulator transition 3−47346
  - graphites, exfoliated, elec. resist., temp. depend., 1.5 to 300K 3−43148
  - internal field distrib. due to random defects, contrib. of nearest defect 3−37896
  - naphthalene, triplet exciton transport and metal-nonmetal transition 3−47266
  - 1,4,5,8-naphthalenetetracarboxylic dianhydride thin film, cond. changes induced by Ar$^+$ ion beam irrad. 3−8540
  - nickel phthalocyanine thin film, cond. changes induced by Ar$^+$ ion beam irrad. 3−8540
  - off-diagonal disorder and 1D localisation, probability distrib. of resist. 3−3142
  - one-dimensional metals, variable range hopping 3−3169
  - ordered and disordered systems, review 3−3194
  - 3,4,9,10-perylenetetracarboxylic dianhydride thin film, cond. changes induced by Ar$^+$ ion beam irrad. 3−8540
  - phthalocyanine, metal free, carrier generation mechanism 3−43196
  - polar cryst., adiabatic polaron theory of electron hopping, reaction-rate approach 3−28357
  - polar media, long-range electron hopping, Condon approx. 3−38380
  - poly(bisphenol-A-carbonate), doped, surface pot. decay, excitation energy influence 3−23420
  - poly(p-phenylene-1,3,4-oxadiazole) film, electronic and struct. props. 3−57339
  - rare earth iron garnets, elec. cond. and thermoelec. power meas. 3−23377
  - semiconductor, disordered, hopping cond., injection currents 3−23388
  - semiconductor, hopping elec. cond. in strong elec. fields, Monte Carlo study 3−8503
  - semiconductors, amorphous, photoluminescence, trapped exciton model 3−14347
  - semiconductors, two-dimensional disordered, hopping cond., optical transitions, under weak localisation conditions 3−23382
  - spinels, ferrimagnetic, elec. current carrier generation energy, mag. ordering influence 3−13835
  - TCNQ salt, methyl-pyridine homologous group, elec. cond. and thermoelec. power 3−13843
  - tetracene, hopping mobility, temp. depend., photocurrent transient study 3−38388
  - $Al_xGa_{1-x}As$-GaAs heterostructure, hopping cond. in Landau level tails between 10 mK and 1K 3−43274
  - a-As_2Se_3 films, time-of-flight and photocond. studies 3−43230
  - B-B, elec. conduction mechanism, elec. and optical props. 3−8495
  - a-C:H films, elec. cond., optical absorpt., dopant gas effects on props. 3−18705
  - $CdCr_2Se_4$ single cryst., elec. cond. and magnetoresist. in alternating elec. fields 3−28361
  - CdO-ZnO-P_2O_5 glasses, elec. conduction, refr. index, IR transmission spectra, dielec. const. 3−3184
  - n-CdS single cryst., high field DC elec. cond. 3−43189
  - Co-Zn ferrites, elec. cond., Seebeck coeff. meas., mag. props. 3−3190
  - Cu-Ni ferrites, phase transition and cond. mechanisms, DC resist. and thermopower meas. 3−13820
  - $CuIn_{0.3}Ga_{0.7}SeTe$ solid solution, variable range hopping cond. 3−3189
  - $Fe_{2+x}O_3$-Na_2O-P_2O_5 glasses, ionic and electronic cond., temp. depend. 3−33766
  - Fe_2O_3-V_2O_5-P_2O_5 glasses, elec. cond. *(Japanese)* 3−3205
  - FeOCl-ferrocene intercalation cpds., elec. cond. and thermoelec. power elec. cond. and thermoelec. power *(French)* 3−28355
  - GaAs, electron irrad. damage, elec. cond. and defect levels 3−42666
  - GaAs; impurity cond., AC and DC hopping cond., extended pair approx. 3−38386
  - p-GaAs MOS struct., interface states and internal photoemission 3−52257
  - Ge, amorphous, AC and DC hopping cond., extended pair approx. 3−38386
  - Ge, nonohmic hopping cond. of samples compensated by fast reactor neutron irradiation 3−8504
  - Ge, shallow acceptor ground state wavefunctions 3−33668
  - $LuFe_2O_4$, electron exchange between Fe^{2+} and Fe^{3+} 3−14182
  - Mn_3O_4:Ti, doped and undoped, elec. cond. and thermoelec. power meas. 3−47374
  - N_2, liquid, prebreakdown phenomena, optical observation 3−23873
  - PbO-V_2O_5, equimolar system ESR study 3−18979
  - $PbTiO_3$ amorphous sputtered thin films, struct. and elec. cond. 3−33811
  - n-Si, impurity cond., AC and DC hopping cond., extended pair approx. 3−38386
  - Si:H amorphous, localised states, elec. cond. study 3−8457
  - Si:H amorphous, low temp. anomalous magnetoresistance, Fermi level shift contrib. 3−3232
  - Si:N, amorphous CVD film, optical and electrical props. meas. 3−8484
  - Si:P, disorder and Coulomb interactions in Anderson localised states, effect on mag. and elec. props. 3−43128
  - SiC:H, amorphous RF sputtered films, struct. and optical and elec. props. study 3−3711
  - SiO_2 amorphous film, AC hopping conduction model 3−43177
  - SiO_2 MOS structures, thermally grown, DC characteristics and hopping cond. meas. 3−3327
  - SiO_2 RF sputtered films, bipolaron and single polaron contrib. to AC cond. 3−28463
  - SnI_4, DC cond., 30 to 110°C, cond. mechanism 3−28348
  - $TbO_{1.75-x}$ films, elec. cond. and thermoelec. power meas. 3−52288
  - V_2O_5, free and bound polarons, ESR and DC cond. meas. 3−23293
  - V_2O_5-TeO_2 glasses, amorphous semicond., DC cond. under annealing 3−8486
  - $Y_{3-x}Ca_xFe_{5-x}Ti_xO_{12}$ garnet, mag., elec. and thermoelec. props. 3−28352

- **horn antennas** *see waveguide antennas*

- **horology** *see time measurement*

- **hospital administration** *see medical administrative data processing*

- **hospital engineering** *see biomedical engineering*

- **hospital information systems** *see medical administrative data processing*
- **hot carrier conduction** *see hot carriers*
- **hot carriers**
  - amorphous semiconductor, ultrafast relax. of photoinduced carriers 3−38836
  - direct gap polar semiconductor, luminesc. of hot electrons in high excitation density regime 3−47710
  - electroluminescent thin film displays mechanism 3−24020
  - III-V semiconductors, high energy distrib. function and electron impact ionisation coeff. calc. 3−3210
  - Markovian master eqn. for high-field electron transport 3−30816
  - organic crystals, charge carrier photogeneration mechanisms 3−3243
  - p-n junctions, oscillation characteristics 3−28431
  - photocarrier bipolar drift under spatially periodic excitation *(Russian)* 3−3256
  - picosecond relaxation processes, photolum. correl. technique 3−38907
  - semiconductor, compensated non-polar, IR Faraday rotation due to hot carriers, trapping parameters 3−34078
  - semiconductor, conductivity influenced by strong EM radiation 3−38379
  - semiconductor, hot electron EM instability in mag. field 3−18717
  - semiconductor, intervalley scattering, nonequilib. phonon spectroscopy technique 3−45217
  - semiconductor, nondegenerate, hot electrons, absorption coeff. of light 3−3212
  - semiconductor, skewed field domains, Sasaki effect *(Russian)* 3−3216
  - semiconductor plasma and instability in the short-wave part of the UHF range 3−13852
  - semiconductor quantum well structures, quasi-two-dimensional, electron-phonon interaction 3−2715
  - semiconductor-metal contacts, internal secondary emission of electrons and holes 3−38479
  - semiconductors, band theory and transport processes, book 3−39
  - semiconductors, hot electrons, dispersion relations calc. 3−33732
  - semiconductors, velocity, overshoot, velocity autocorrelation and hot electron noise calc. from small signal microwave mobility 3−52166
  - SOS small-size p^+nn^+ diodes, double injection phenomena, hot carrier effects obs. 3−13888
  - Ar, solid and liquid, hot electron relax. calc. 3−13823
  - $CdCr_2Se_4$, active electron-magnon interaction 3−52432
  - $CdCr_2Se_4$, carrier heating, thermal noise temp. meas. 3−28399
  - CdS, photoluminesc., edge emission depolarization under intense laser excitation 3−38887
  - CdS(Se), time resolved spatial expansion of electron-hole plasma 3−38912
  - CdSe, aged electrodeposited photoelectrodes in liq. junction solar cell, hot electron luminesc. obs. 3−29394
  - CdTe, hot electron diffusion, Monte Carlo calc. 3−47354
  - EuO, active electron-magnon interaction 3−52432
  - EuO, carrier heating, thermal noise temp. meas. 3−28399
  - GaAs film, Dember EMF theory 3−28387
  - GaAs heterolayer, hot electrons, phonon scattering 3−8499
  - GaAs, hot electron relax. and saturated current dispersion, DC to 1200 GHz 3−33749
  - n-GaAs, hot electron transport characts. in crossed elec. and mag. fields 3−38419
  - GaAs, hot electrons resonance cooling, effect on EL2 emission band 3−43589
  - GaAs, hot-electron photoluminescence, spectrum and polarisation 3−19191
  - GaAs, microwave noise of hot carriers, temp. depend. 3−13873
  - GaAs, semi-insulating, thermal equilib. current oscills., deep donor EL2 electron emission 3−13759
  - GaAs-$Al_{1-x}Ga_xAs$ modulation doped heterostructure, high-mobility electrons, electric field induced heating obs. 3−28417
  - GaAs-$Al_xGa_{1-x}As$ heterojunction layers, fast electron switching and storage effects 3−8563
  - GaSe, luminescence study of screening of optical phonon-hole interaction 3−14349
  - GaSe, picosec. relax. kinetics of highly photogenerated carriers 3−38913
  - n-Ge, anisotropic hot-carrier thermo-EMF 3−52184
  - Ge, electrical cond. relax. due to warm carriers 3−57355
  - Ge, electron-hole drop luminesc. damping by high power CO_2 laser radiation 3−43601
  - Ge, hot hole noise at liq. He temps., expt. and Monte Carlo calc. 3−13874
  - $In_{0.72}Ga_{0.28}As_{0.6}\ P_{0.4}$, hot carrier multiphonon scatt., 1.3 μm photoluminesc. study 3−38886
  - InGaAsP laser, threshold current, carrier heating effect 3−27041
  - InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3−18721
  - InSb, carrier heating under impact ionisation conditions, Monte Carlo calc. 3−3214
  - n-InSb, noise and diffusion of hot electrons 3−57356
  - InSb, optically induced avalanche, rate eqn. model 3−57872
  - Kr, solid and liquid, hot electron relax. calc. 3−13823
  - Si (111) inversion layer, hot electron effect at low temps. 3−28439
  - Si MOSFET, electron mobility and electron-phonon interaction study by negative magnetoresist. expts. 3−23486
  - Si, oriented superlattices, electronic phenomena 3−13896
  - Si:H, amorphous solar cell, hot carrier diffusion influence on collection efficiency 3−44130
  - Si-SiO_2 interface state generation by alternating voltage stress under visible irrad. due to hot carrier injection 3−43290
  - SiO/ZnF_2:Mn/SiO electroluminescent display films, separation of hot electron generation and luminescent excitation 3−43634
  - SiO_2, grown in presence of trichloroethylene, electron traps, hot electron avalanche injection studies 3−33667
  - Xe, solid and liquid, hot electron relax. calc. 3−13823
  - ZnO metal-semicond. diodes, electroluminescence emission 3−23483
- **hot cathode tubes** *see thermionic tubes*
- **hot cathodes** *see thermionic cathodes*
- **hot electrons** *see hot carriers*
- **hot pressing**
  - ceramics, hot isostatic pressing effect on porosity, sound velocity meas. eval. 3−9293
  - fluoride glass laser elements, hot pressing prep. of optical quality articles 3−7103
  - glass matrix/glass particle composites, hot pressed, Young's modulus rel. to microcracks *(Japanese)* 3−58154
  - graphite discs, hot pressed, crystallite orientation *(Japanese)* 3−39083

hot pressing continued

- graphite fibre reinforced glass, compliant, high failure strain, prep. and characteris. 3—29056
- mechanism maps for hot isostatic pressing, practical appl. 3—52991
- mica ceramics, nonadditive, fabrication by hot isostatic processing 3—9025
- polyethylene, mica filled, hot rolling and forging, effect on mech. props. 3—29057
- refractories, formation by pressing *(Slovak)* 3—19310
- refractory metals, joining by hot isostatic pressing 3—29108
- α-silicon, hot pressed, bending strength and fracture toughness *(Japanese)* 3—9183
- steel, austenitic stainless, powder, hot ductility and recrystn., effect of oxide inclusions 3—58159
- steel, stainless, hot vacuum pressed powder, corrosion reistance, mech. props. 3—47802
- steel, stainless, wire reinforced Cu, cold rolled, deform. 3—34379
- superalloys, hot isostatic pressed plus forged, mech. props. and struct. 3—52997
- Syalon ceramics development, fabrication and engng. applics. 3—29048
- ternary sulphide ceramics, powder prep., sintering, hot pressing 3—43783
- AlN, densification kinetics during hot pressing 3—9024
- AlN, hot-pressed ceramics, high temp. fracture 3—39239
- α-Al_2O_3, corundum ceramic, thermal shock resistance improvement using additives 3—24194
- Al_2O_3, hot isostatic pressing effect on porosity, sound velocity meas. eval. 3—9293
- Al_2O_3, hot isostatically pressed, fabrication and fracture toughness for prosthetic use 3—29049
- β-Al_2O_3, polycrystalline, hot pressed or sintered, fracture toughness, temp. depend. *(Japanese)* 3—58219
- B fibre reinforced Ti-Al-V, hot pressing and struct. 3—29038
- C fibre reinforced Al matrix composite, fabrication by plasma spraying and hot pressing, mech. props. *(Japanese)* 3—58077
- C fibre reinforced Si_3N_4, processing, characteris. and incompatibility problems soln. 3—29051
- $Ca_9H(PO_4)_6.(OH).3.3H_2O$, densification by hot isostatic pressing 3—58089
- $CaLa_2S_4$, opt. window material for 8 to 14 μm region, development 3—7092
- $CaLa_2S_4$ starting powder eval. for 8-14 μm region domes and windows fabrication 3—7090
- CaO-Al_2O_3-P_2O_5 glass composite, prep., struct. props., and prosthetic appls. 3—34274
- Fe-Ni-Cr powder, superalloys, rapidly solidified, characterisation 3—3986
- $(La_{1-x}Ca_x)CrO_3$ ceramics, hot isostatic pressing and props. *(Japanese)* 3—3997
- Lab_6-Ni powder, hot pressing, densification kinetics rel. to Ni additon 3—47812
- $MgAl_2O_4$, layer struct., recrystallisation during pressing 3—8211
- $MgAl_2O_4$ spinel, hot pressed, fabrication and props. for UV, visible and IR requirements 3—7088
- MgO, polycryst., pressing process, EPR study 3—34267
- Mn-Zn ferrite, polycryst. high B, hot isostatic press prep., mag. props. 3—14550
- Mn-Zn ferrites, high permeability, prep., choice of Fe_2O_3 grade and hot pressing conditions 3—14536
- Mo wire reinforced Cu, cold rolled, deform. 3—34379
- Mo-MoS_2, hot pressed powder, self-lubricating, friction and wear characts. 3—47967
- NbC_x, hot isostatic pressing 3—3992
- Ni superalloys, Z 3—39074
- Ni wire reinforced Cu, cold rolled, deform. 3—34379
- Ni-Zn ferrite powders, coprecipitated, sintered by hot pressing, mag. props. and microstruct. 3—52556
- NiTi, controlled transform. temp. and powder metallurgy processing 3—39129
- PLZT ceramics, translucent, prep. *(Japanese)* 3—47808
- $PbMo_6S_8$, sintering and hot pressing prep., high temp. phase 3—14519
- $^{238}PuO_2$ fuel pellet fabrication for space vehicle isotopic heat sources 3—24187
- Si-Ge fine-grained alloy technology development for thermoelectric conversion 3—14981
- Si-O-N-M (M=Mg, Y, Ca, Be or Zr,) reaction bonded and hot pressed ceramics, phase equilib. and mech. props. 3—58112
- $Si_{6-z}Al_zO_zN_{8-z}$, β-sialons, IR absorpt. spectra study 3—8820
- SiC coated B fibre reinforced Ti-Al-V, hot pressing and struct. 3—29038
- SiC fibre reinforced Ti-Al-V, hot pressing and struct. 3—29038
- SiC hot pressed, reaction bonded and CVD mirrors, fabrication and use for synchrotron radiation 3—7123
- SiC-AlN composites, thermal diffusivity and conductivity, effect of hot pressing temp. 3—57151
- Si_3N_4, α- and β-phase, densification under press. 3—14529
- Si_3N_4 ceramics, hot-pressed, high-temp. strength and fatigue, effect of billet differences 3—9157
- Si_3N_4, hot pressed, microstruct. rel. to heat treatment, air and Ar atmospheres 3—53005
- Si_3N_4, hot pressed, strength, effect of high temp. exposure in air 3—58263
- Si_3N_4 hot pressed dielectric material, quality control 3—24195
- Si_3N_4, hot pressed with Y_2O_3+MgO, oxidation kinetics 3—34507
- Si_3N_4, hot-pressed, electron microscopy obs. of microstruct., grain boundary struct. 3—51612
- Si_3N_4, hot-pressed, fracture mechanics, up to 1400°C *(German)* 3—29155
- Si_3N_4, hot-pressed, preoxidised, static fatigue 3—53190
- Si_3N_4 powders, high press. hot pressing, densification, α to β phase transform., hardness, fracture toughness, temp. depend. *(Japanese)* 3—58084
- α-Si_3N_4 powders, hot pressing, strength, oxidation and creep props. 3—34269
- Si_3N_4, solid state reaction with Ni-base alloy 3—38239
- Si_3N_4-Y_2O_3-Al_2O_3, hot pressed, microstruct., grain boundary comp., electron microscopy 3—43782
- Si_3N_4-Y_2O_3-Al_2O_3-Mg-O, sintered compacts, hot isostatic pressing, density, flexural strength *(Japanese)* 3—58083
- Ti-Al-V, cast, weld repaired, high cycle fatigue 3—4123
- TiB_2-Ni ceramic, struct. and comp., analytical electron microscopy obs. 3—14900
- TiB_2-Ni ceramics, hot pressing, fracture, thermal expansion, microstruct., comp. depend. 3—43941
- TiNi shape memory alloys, hot pressed powder metallurgy study 3—39063
- W wire reinforced Cu, cold rolled, deform. 3—34379

hot pressing continued

- W-Cu-Si(Zr) pseudoalloy, fractographic study, Si and Zr effects 3—24358
- Zr-O-F ceramics, for immobilisation of Zircaloy nuclear waste, fabrication and props. 3—6316

hot rolling

- alloys, texture form. in technological treatments, phase transition effects *(Russian)* 3—53079
- metals, porous gauze, geometric struct. parameters distrib. 3—24176
- polyethylene, mica filled, hot rolling and forging, effect on mech. props. 3—29057
- slab, three-dimensional strains, photoplastic simulation 3—32689
- steel, C type, 20k, brittle fracture susceptibility eval., nondestructive magnetomech. method, hot rolling and ageing effects 3—48017
- steel, C-Mn, controlled rolled plates, direct quenching, improved strength and toughness 3—9079
- steel, controlled rolled, strength and toughness, metallurgical studies 3—24359
- steel, hot rolled strip, strain age hardening control by Ti additions 3—43864
- steel, HSLA, ferrite grain refinement 3—43877
- steel, HSLA, hot rolled, ageing, precipitation hardening 3—39183
- steel, low-alloy, texture after controlled rolling 3—39173
- steel, Mn-Si, hot rolling, effect of processing variables on resultant microstruct. and props. 3—53092
- steel, model to calc. struct. development and mech. props. during hot rolling *(Czech)* 3—14614
- steel, Nb, low-pearlite structural, separation behaviour, coiling temp,. infuence 3—47838
- steel, strength and ductility, improvement by controlled rolling 3—58147
- steel, temper rolled strip, discontinuous yielding, Luder's bands nucleation and propagation 3—53164
- steel flange beam, hot rolled, residual stresses, effect on beam stability 3—19353
- thermomechanical response of solids at high strains, natural approach 3—19347
- Al alloy, high-strength V95 sheet, struct., fracture and mech. props. w.r.t. impurity content 3—58233
- Al-Zn-Mg-transition metal alloy billets, granulated, hot rolling 3—14620
- Cu, rolled, spatial arrangements of orientations 3—34351
- Cu-Al-Ni-Ti, shape memory alloy, grain refinement rel. to Ti addition, transform. hysteresis 3—47832
- Cu-Al-Zn-V, shape memory alloys, β-grain size and mech. props. rel. to V addition 3—43888
- Fe-Si-B-C-N alloy, high induction development, C content rel. to hot rolling temp. 3—29197
- Mg, strongly textured, grain boundary strengthening, prod. by hot rolling 3—34353
- Mg-Li (12.5 at.%), hot-rolled, texture and grain boundary strengthening 3—29106
- Mg-Tl (5 at.%), hot rolled sheet, grain boundary strengthening, importance of texture 3—53095
- Ni-Cr-Al-Ti superalloy MA 6000E, oxide dispersion satrengthened, γ' effect on recrystallistion 3—14606
- Ni-Fe alloy sheets, formability, tensile props. rel. to rolling direction 3—47917
- SiC reinforced Al alloy, fibre and particulate, microstruct. 3—47870
- SiC whisker reinforced Al composite, hot rolling effect on microstruct. and tensile props. 3—53181
- Ti alloy, phase and structure transformations on rapid heating 3—14587
- Ti alloy, sheet rolling parameters development 3—14623
- Ti alloy VT6S, hot rolled, texture form. in recrystn. 3—39174
- Ti alloys and Ti with Al, sandwich rolling, layer flow obs. in plastic deform. zone 3—14624
- Ti and Ti alloy composites, multilayered, prod. and strength props. 3—29037
- Ti-Al, recrystn. texture form. 3—24263
- $\alpha+\beta$Ti-Al-V, texture and development 3—24261
- Ti-Al-V alloy, metallurgical structures influence on fatigue props. 3—24362

hot shortness *see brittleness*

hot strength *see tensile strength*

hot working

- *see also hot rolling*
- austenite, dynamic recrystallisation during hot plastic deformation, kinetics 3—24270
- glass fibre reinforced Al, produced by powder metallurgy, mech. props. 3—43925
- steel, austenitic stainless, corrosion resistance, after high temp. thermomech. working 3—29219
- steel, austenitic stainless, cyclic recrystallisation after deformation 3—29101
- steel, ferritic stainless, dynamic recrystn., hot deform. 3—47857
- steel, low-alloy structural, γ-α transform., hot working and austenticity conditions influence 3—9060
- steel, stainless, corrosion resist. and mech. props., effect of Cr substitution 3—24402
- steel, tool, hot worked, fracture toughness, influence of grain size 3—39230
- Al, powder compact, hot extrusion, flow pattern *(Japanese)* 3—58065
- Al-Cu (6%), flow stress, in warm working range 3—53124
- Cu, deformed in torsion, dynamic recrystn. obs. using SEM channelling contrast and TEM 3—47855
- Cu, powder compact, hot extrusion, flow pattern *(Japanese)* 3—58065
- NaCl, deformed under dynamic recrystn. conditions, struct. and props. 3—2657
- Ti-Al-Sn-Zr-Mo-Si, hot forging, nonisothermal, occurrence of shear bands 3—34399
- Ti-Al-V, powder metallurgical, prod. and mech. props. 3—29035

HSLA steel *see alloy steel*

Hubbard model

- alloys, amorphous, Auger spectra, effect of electron correlations in filled narrow bands 3—38969
- Anderson-Hubbard model, renormalisation group study 3—13732
- antiferromagnetic and incommensurable mag. solns., Hartree-Fock approx. 3—23575
- charge density in strong interaction limit, correlation of fluctuations *(Russian)* 3—33614
- electron correlation effects, local approach study 3—18637
- electron excitations in Fermi liquids, paramagnetic-ferromagnetic phase transitions 3—13986

Hubbard model continued
electronic dynamics, Markovian approach 3—3408
extended, electron charge ordering, infrared bound study 3—8440
ferromagnetism at I=∞ for finite lattices 3—52343
finite lattice, I=∞ model, numerical anal. 3—18845
ground state of alloy analogy approx. 3—52336
ground state phase diagram 3—18846
ground state solns., two sublattice formalism 3—52342
ground-state solns., two-lattice formalism 3—38579
Heisenberg spin Hamiltonian, Heitler-London approach, test on half filled Hubbard model 3—57506
hydrocarbons, alternant., conjugated, phys. and chem. props., rel. to quasispin 3—55848
magnetic semiconductors, Hubbard and s-f model, spin Hamiltonian and phase separation instability 3—8643
metal surfaces, H_2 dissociative chemisorption, Hubbard model calc. 3—13623
metal-insulator transition, electron scattering, Hubbard model 3—52210
monolithium cryptate electride, expanded-metal cpds., electron-electron interactions and metal-nonmetal transition 3—33637
Mott state and charge order in random potential 3—47313
narrow-band magnetic semiconds., Hubbard and s-f models, effective spin Hamiltonian and phase separation 3—38580
negative-U extended Hubbard model, Hartree theory, finite temp. 3—8387
negative-U extended Hubbard model in intermediate correlation regime 3—52000
one-dimensional chains, Peierls- and Mott-type instabilities 3—13727
one-dimensional fermion systems, Monte Carlo simulations 3—10743
one-dimensional model, free energy renormalisation transform. 3—5740
pair theory of the Hubbard Hamiltonian for case of half-filled band 3—8386
polaron effect in Hubbard Hamiltonian renormalisation group method 3—13750
polyacetylene, Hubbard versus Peierls and Su-Schrieffer-Heger model 3—8428
quasi 1-D Hubbard model, semimetallic SDW state 3—57635
Roth scheme, antiferromagnetism 3—13996
semiconductor, impurity band density of states, mag. field effects in atomic limit 3—47247
semiconductors, heavily doped, metal-nonmetal transition, HF pseudo-cluster calc. 3—43027
single-band Hubbard model with spin-orbit coupling 3—42988
spin-less fermion Hamiltonian, specific heat and CDW parameters 3—23574
spin-wave theory for Heisenberg magnets, Hubbard operators, single-ion anisotropy 3—14037
superconductivity and itinerant ferromagnetism, coexistence 3—23534
tetrakismethylaminelithium, expanded-metal cpds., electron-electron interactions and metal-nonmetal transition 3—33637
transition metal alloys, spin fluctuation of impurity, Hubbard-type model 3—52458
transition metals, disordered local moments and thermodynamic props. of Hubbard model 3—33854
$Li(NH_3)_4$, expanded-metal cpds., electron-electron interactions and metal-nonmetal transition 3—33637
Ni, itinerant electron ferromagnetism, many-body effect 3—52344
Si (111) surface dangling bonds, many-body effects 3—28405
V_2O_3, optical absorpt. spectrum, electron interaction effects *(Russian)* 3—28879

Hubble model *see cosmology*

Huckel molecular orbital calculations *see HMO calculations*

hue *see colour*

Hugoniot diagrams *see equations of state*

human factors
see also biocybernetics; man-machine systems
biomechanics cinematography laboratory development, human engineering considerations 3—4699
comfort in dwellings with part passive solar heating 3—58555
fission reactor, control room, design and operation, operator viewpoint 3—55352
fission reactors, control room, human factors, conf., Toronto, Canada (June 1982) 3—54588
nuclear engineering, human factors framework 3—55354
nuclear power station control, human factors, general introduction 3—55353
nuclear power stations, risk assessment including human interactions treatment 3—36559
nuclear power stations, safety and reliability 3—36558
nuclear reactor control centre design, human factors role 3—55355
school with passive solar heating, thermal comfort and user control, effects on design 3—58556

human-machine systems *see man-machine systems*

human relations *see social and behavioural sciences*

humidity
see also atmospheric humidity; hygrometers
A-150 plastic tissue-equiv. ionisation chambers, air humidity rel. to γ-ray calibration and neutron dose meas. 3—53870
aminophenyltrimethoxysilane, adsorption on plasma grown Al_2O_3, effects of high humidity 3—38226
electric dehumidifiers principles for reducing household dampness 3—29447
heat pump for drying/dehumidification system experimental assessment 3—39507
heat pumps for drying/dehumidification systems, experimental assessment 3—39506
heat pumps for drying/dehumidification systems, potential 3—39505
influence of humidity on variation of ion mobility with life time in atmospheric air 3—56766
photographic layers on AlH_3 substrates, thermostat ageing *(Russian)* 3—20935
water, evporation into laminar stream of air and superheated steam 3—46629

humidity control
energy conservation in tropical air conditioning: environmental variables 3—34674

humidity measurement
see also hygrometers
absorption dew-point hygrometer using differential pressure gauge *(Japanese)* 3—327

humidity measurement continued
atmospheric humidity, spontaneous Raman scattering 3—39915
graph use in atm. relative humidity determ. 3—40618
IR transmission determ. technique, by polarised radiometry *(French)* 3—25240
microelectronic sensors for humidity and electrical parameters *(German)* 3—10825
psychrometric chart plotting program, eqns. and procedures 3—35272
relative, solid state hygrometer, design 3—36023
relative humidity measurement apparatus *(Italian)* 3—36021
sensor review, wet and dry bulb psychrometer, electric hygrometer 3—25884
starch humidity measurement using microwave humidity meter *(Polish)* 3—36022
$MgCr_2O_4$-TiO_2 humidity sensor, recent trends and applications of ceramic sensors 3—35983
TaN thin film resistive thermoconductive humidity sensor 3—49386
ZnO-Cr_2O_3 humidity sensor, recent trends and applications of ceramic sensors 3—35983

h.v. engineering *see high-voltage engineering*

HVEM *see electron microscopy*

hybrid computer methods *see hybrid simulation*

hybrid integrated circuits
see also flip-chip devices; microwave integrated circuits
analogue and digital ccts. for radiation-tolerant TV camera, design and testing 3—41205
DATEP, photomultiplier HV regulator 3—17177
geothermal well logging, thick-film hybrid IC electronic monitoring ccts. appl. 3—59119
inspection via acoustic microscopy 3—42084
MKE-32 32-channel electronic module for wire chambers 3—50228
pocket neutron REM meter 3—50060
proportional chamber, data registration system based on hybrid IC 3—1161
thick-film hybrid IR focal plane for satellite imaging appls., use at cryogenic temp. 3—40597

hybrid reactors
ambipolar plasma containment hybrid reactor, Project TROL 3—21558
blanket concept performance simulation in existing fission test facilities 3—55706
blanket energy deposition in inertial confinement fusion-fission hybrid reactors 3—21549
breeder alternatives using multicomponent nuclear energy model *(Russian)* 3—31511
breeder reactors, conf., London, England (May 1981) 3—16084
core inventory model for fuel trajectory analysis in fusion-fusion symbiotic systems 3—1071
cyclic temperature and thermal stress fluctuations in fusion reactors 3—45666
energy hybrid Tokamak reactor parameter optimisation 3—31831
energy system parameters between component parts *(Russian)* 3—31514
fission-suppressed direct enrichment fusion breeder concept 3—21546
fuel breeding and fuel management prospects of hybrid and symbiont breeders 3—17069
fusion driven fissile fuel factory, systems aspects 3—21559
fusion-fission hybrid reactor model for stability anal. 3—26489
fusion-fission hybrids, role in nuclear future of USA and West 3—48123
gas-cooled thorium salt beryllium fusion breeder blanket concept 3—21548
hybrid blankets, neutronic performance with conventional and actinide waste fuel 3—21545
mathematical model, natural U blankets for fusion reactor 3—41323
muon catalyzed DT hybrid reactor conceptual design 3—21551
nuclear energetics, best routes for fuel breeding *(Russian)* 3—31512
SOLASE-H design, cross-section uncertainties, effects 3—45695
suppressed-breeding fusion-fission reactor blankets 3—21547
thermionic hybrid blankets, (D,T) driven 3—21550
μ^-- catalysed DT fusion, cross section, barrier penetration factor 3—26468
$^9Be(n,2n)$, cross sections, sensitivity anal. for random mirror hybrid reactor 3—1055
D-^3He burner coupling system to ^3He producing reactor, model 3—21552
^{239}Pu formation in hybrid reactor blanket 3—45696

hybrid simulation
fission reactors, simulation of main control circuit on hybrid computer *(Hungarian)* 3—36500

hydrated electrons *see solvated electrons*

hydration *see solvation*

hydraulic amplifiers
No entries

hydraulic turbines
Earth's hydroelectric potential and methods of utilisation 3—4361

hydroacoustics *see underwater sound*

hydrodynamics
see also jets; liquid waves; viscosity of liquids
thick accretion discs, instability 3—10308
accretion discs, shock propag. and disc transient destruction 3—59209
accretion discs, thin radiative, thermal and hydrostatic equilib. compatibility 3—10196
accretion discs in close binary stars, numerical calcs. 3—40119
accretion discs in close binary systems, hydrodynamics calcs. method 3—15905
accretion discs in close binary systems, models from hydrodynamical calcs. 3—15906
asthenosphere flow, rel. to thermomechanical model of oceanic upper mantle 3—9871
astrophysical hydrodynamics, cascading in nonlinear interaction of random modes 3—59198
axisymmetric thermal convection in spheres/spherical shells, stability, appl. to planet interiors 3—42223
Bardeen discs, short wavelength anal. and classification of normal modes 3—48892
binary alloy melts, hydrodynamic stability during solidification 3—57067
close binary stars, hydrodynamics and Roche dimensions of rotating gaseous discs 3—15959
Black Sea main current, hydrological struct. and stored energy of rings 3—9936
chromosphere-corona transition region, responses of models to mag. field geometry and downflow rels. 3—30311

hydrodynamics continued
  Chudskoe Lake, Estonia, numerical modelling wind-driven currents 3—9947
  classical Cepheids, hydrodynamic models rel. to theoretical and observational light and vel. curves 3—54373
  classical Cepheids, technique for determining limiting amplitude of oscillation for hydrodynamic models 3—44750
  classical chromohydrodynamics, Hamiltonian structure 3—49571
  collapsing rotating stellar cores, gravit. radiation, rot. effects 3—25498
  convection in pulsating stars, nonlinear hydrodynamics 3—10309
  core C flash evolution, axisymmetric hydrodynamical calcs. 3—10313
  crystal growth from melt, solute transport regimes in ideal Czochralski config. 3—42550
  diatomic gas, Boltzmann eqn. asymptotic soln. 3—42349
  differential eqns., soln. asymptotic approach 3—27476
  disc, rotating, hydrodynamic drag versus roughness 3—46511
  Drake Passage, principal tidal currents obs. 3—15458
  early-type rotating stars, boundary layer anal. of mean steady meridional circulation 3—5276
  fission reactors, mixing chambers, models and simulation expts. 3—41251
  flat flame injector torch with vortex injector, hydrodynamic characteristics 3—7598
  fluctuations, nonequilibrium sources, kinetic coeffs. 3—2166
  galactic discs, global shearing modes for gas discs 3—59452
  gas flow out of active galaxy due to radiation press. from nucleus 3—59457
  gaseous halo, dynamical behaviour in disc galaxy 3—35434
  Gippsland lakes, in Australia 3—9940
  gravitational superclustering of collisionless particles, two-dimens. simulation, galaxy form. appl. 3—40269
  gridless smoothed hydrodynamic method for star near massive black hole 3—20415
  hard sphere model, nonlinear hydrodynamic equations by Chapman-Enskog method, divergence of Burnett coefficients 3—17916
  hypersonic stellar winds, dynamical effects of interstellar gas 3—15917
  ideal fluid, jet flow, high vel. hydrodynamics 3—27581
  incompressible fluid laminar flow in plane channel with uniform unidirection injection 3—27486
  interfacial, microscopic theory 3—32704
  interstellar clouds, gravit. collapse and fragmentation of isothermal nonrotating cylindrical clouds 3—54486
  interstellar clouds, preferential mass flow rel. to mag. field strength scaling and 'B versus n dilemma' 3—30447
  interstellar clouds gravitational collapse and star form. 3—44650
  interstellar clouds mass spectrum, models, Monte Carlo simulation 3—5381
  interstellar dense clouds fragmentation due to mol. form. 3—54496
  interstellar medium, dynamics of galactic fountain 3—15986
  interstellar medium, nature of bipolar sources in dense molecular clouds 3—10414
  interstellar medium in barred spiral galaxies, periodic orbits and gas flow theory 3—5424
  interstellar molecular clouds fragmentation, Lagrangian model rel. to stellar initial mass function 3—48994
  interstellar shocked gas cloud, dynamical destruction 3—20465
  ionic solutions, aq., light scatt., linearised hydrodynamic theory 3—52800
  isothermal flows behind variable energy strong spherical shocks, approx. solns., astrophysical appl. 3—59191
  jets in radio galaxies, physical mechanisms 3—25613
  Jupiter atmospheres, convective model 3—20288
  Lagrangian hydrocode technology, large-scale finite element 3—10588
  laminar premixed flames, stability limits, hydrodynamics and diffusion effects 3—22424
  liquid cryst. smectics E, incommensurate phases, hydrodynamics 3—46848
  liquid mixtures, decay of conc. fluctuations 3—33062
  liquid trickle flow through packed beds, axial dispersion processes 3—46641
  liquid-solid fluidised beds, solid packing 3—51172
  long-lived eddies in laboratory, and Jovian/Saturnian atm. 3—48816
  massive object moving through particle background, wake gravit. effect on body 3—40019
  Maxwell-Cattaneo hydrodynamics, Lagrangian formulation 3—40370
  multiple frequency division in quadratically nonlinear systems 3—37439
  Navier-Stokes linearised equations, first boundary-value problem *(Ukrainian)* 3—5610
  nematic liq. cryst., hydrodynamics in presence of conditions density of disclinations 3—13083
  nematic liq. cryst., molecular theory of hydrodynamic eqns. 3—18217
  nondivergent barotropic vorticity equation, general class of exact time-depend. solns. 3—15518
  nonequilibrium hydrodynamic fluctuations and generalised entropy 3—233
  ocean upper layer model, numerical expts. 3—9935
  one-dimensional periodic flows with shock transition, appl. to galaxy density wave theory 3—59190
  optimisation problems, free boundaries *(Russian)* 3—20636
  particle methods 3—25752
  perfect fluid, hydrodynamical eqn. soln. via Lie groups 3—56520
  perturbation potential of three-dimensional body 3—2031
  plane wall effect on sphere moving parallel to it 3—46516
  planet rings, dynamics and physical props. 3—25320
  planetary atmosphere turbulence 3—35486
  plate roughness and hydrodynamic drag 3—46512
  point contact elastohydrodynamic lubrication, surface roughness effects 3—46509
  polystyrene in cyclohexane, temp. depend. of hydrodynamic dimensions, quasielastic light scatt. 3—38105
  presolar nebula formation, existence of unstable co-orbital triple protostellar system 3—35481
  pressureless inhomogeneous spheroids gravit. collapse, cosmological implications 3—59208
  quantum relativistic hydrodynamics of broken symmetry systems, nonequilib. state 3—54857
  quasars, surrounding gas, optically thick radiatively driven shocks, spectra implications 3—59499
  radiative gas dynamics, modified differential approx. method 3—17913
  radiative shock wave oscillatory instability, linear anal. 3—5099
  radiative viscosity, dynamical effects 3—54219
  radio galaxies tails, effect of buoyant forces of cluster gas 3—25609
  radio sources, extragalactic, clamshell mechanism for one-sided Blandford-Rees jets 3—49039
  radio sources, extragalactic, reconfinement of jets 3—54542

hydrodynamics continued
  radiosources, hypersonic beams, struct. and expansion law 3—59493
  relativistic hydrodynamic fluctuations, stochastic Boltzmann eqn. 3—56627
  rolling, hydrodynamic moment theory 3—42692
  rotating planet with topography, thin fluid layer Rossby waves 3—35224
  rotationally distorted convection cell, helicity and α-effect 3—48814
  Sagittarius A precessing jets model and galactic nucleus gas dynamics 3—15994
  self gravitating rotating gaseous discs, gravothermal and gravogyro catastrophes 3—40027
  self-gravitating systems stability within thermodynamic fluctuations theory 3—40025
  self-similar flow of self-gravitating gas behind a shock wave with increasing energy. 3—25313
  self-similar structures of nonradiating blast waves 3—40015
  shearing, viscous media, disk structure growth 3—40013
  shock wave in expanding Universe, struct. and expansion law 3—49061
  simple fluid, nonlocal hydrodynamics and transport coeff. dispersion 3—49166
  simulation in high temp. soln. for crystal growth, free convection 3—47760
  smectic-A liq. cryst., ultrasound attenuation, breakdown of conventional hydrodynamics 3—2677
  soft sphere fluid, Burnett hydrodynamic computer simulation 3—22414
  solar atmosphere, instantaneous downflow motion assoc. with short-period oscills. 3—54320
  solar flare loop radiative hydrodynamics, nonlocal radiative transfer effects 3—40077
  solar flare loop radiative hydrodynamics, thermal stability 3—40076
  solar flare loop radiative hydrodynamics 3—40075
  solar granulation velocities, consistency of mixing length theory for solar convection zone 3—10193
  solar nebula, convective accretion disc models evolution 3—20263
  solar oscillations, cut-off freq. of acoustic modes rel. to atmospheric He abundance determ. 3—54323
  solar photosphere velocity oscillations, study using vel. subtraction technique 3—54327
  solar wind, gas behind shock front, self similar-flow, generalised Roche model 3—39980
  spheres in unbounded fluid, hydrodynamic interaction at small, finite Reynolds number 3—22519
  spiral galaxies, mathematical and physical implications of preferred pitch angle 3—16005
  stability, generalised Lagrangian-mean eqns. 3—32710
  statistical hydromechanics with the Gaussian, nonwhite random force action 3—54625
  steady rotational transonic winds from rot. stars and galaxies, models 3—59189
  stellar core collapses numerical model for collapse calculations 3—44736
  stellar differential rotation, hydrodynamic instabilities 3—10310
  stellar interiors, theory of meridional circulation in rotating star 3—10318
  submerged bodies in saturated liqs., boiling, crit. heat flux, hydrodynamic model 3—46550
  subsonic flow, boundary value problems for hydrodynamic stationary eqns. 3—27544
  Sun, flare impulsive heating of upper chromosphere and hard X-ray emission 3—40099
  superfluid microscopic derivation, dissipative allowances, gauge symmetry breaking 3—13572
  supernova blast wave-interstellar medium interaction, simple model 3—59437
  supernovae, core collapse hydrodynamic anal. with and without neutrino losses, shock wave anal. 3—25495
  sword-fish gill apparatus, hydrodynamic functions *(Russian)* 3—24742
  thermocapillary convection in liquid under high-power laser irrad. 3—7585
  torque on rotating sphere or cylinder, extended Boltzmann equation calc. 3—10591
  transverse perturbations in gas undergoing one dimens. collapse, growth rate, galaxy kinematics appl. 3—35733
  turbulent heat transport in rotating convective zones, appl. to solar and stellar interiors 3—35431
  two-dimensional anticyclonic vortices, collisions *(Russian)* 3—44660
  Type II supernovae, hydrodynamic models 3—59374
  Unimak Pass, Alaska, exchange of water between Gulf of Alaska and Bering Sea 3—15460
  vertical eddy diffusion coeffs. under conditions of nonneutral stability, formula 3—15465
  viscous incompressible fluid squeezed layer, interaction dynamics with elastic walls 3—46586
  viscous thin films, linear hydrodynamics and dispersion relations 3—57178
  vorticity generation by asymm. energy deposition in gaseous medium 3—51137
  water-bubble boundary layer as a hydrodynamic sound source 3—12413
  H II regions dynamical evolution in non-uniform environments 3—25559
  H II regions evolution in collapsing massive mol. clouds 3—25560
  ^{3}He-A, superfluid, hydrodynamic eqns. 3—2912
  KCl, control of crystallisation from soln., mag. field and hydrodynamic conditions influence 3—28976
  Na, steady state model, interface drag, pressure drop, 1-D model 3—36501

hydroelasticity *see elasticity*

hydroelectric power stations
  see also dams; hydraulic turbines; tidal power stations; water supply; wave power generation
  Austrian hydroelectric resources potential and development in 1982 *(German)* 3—34669
  Earth's hydroelectric potential and methods of utilisation 3—4361
  forced shaft shielding anticorrosive measures checking and maintenance *(Rumanian)* 3—9221
  Indian small hydro development—an important source of power to rural and scattered communities 3—53478
  volumetric flow measurements on circular cross-sections, numerical evaluation *(German)* 3—51254
  world survey of major hydro schemes *(Italian)* 3—39443

hydrogen
  see also nuclei with ......
  see also deuterium; hydrogen ions; hydrogen neutral atoms; hydrogen neutral molecules; protons; solid hydrogen; tritium
  absorbed in metals, local meas. using laser technique 3—34571
  absorption and desorption in Mg 3—48087

hydrogen continued
absorption by amorphous and recrystallised $Co_{71}Fe_5Si_{15}B_9$ *(Russian)* 3—23044
absorption by $LaNi_5$ and FeTi 3—47220
absorption by $LaNi_5$ in presence of other gases 3—48086
absorption by transition metal alloys, hydride form. and props. 3—2960
absorption by $ZrMn_2$, photoelectron spectra study of electronic struct. of hydride 3—2940
absorption by $ZrMn_2Fe_x$, hydride form. and H_2 storage implications 3—48081
absorption by $ZrMn_2Mn_yFe_x$, hydride form. and H_2 storage implications 3—48082
absorption in $Ce_{1-x}Y_xCo_5$ in 20-50°C range *(Russian)* 3—47212
absorption in $La_{1-x}R_xNi_5$ (R=Ce,Pr,Nd,Sm) alloys, press.-composition isotherm study 3—33564
absorption in Mg_2Ni modified by organic cpds. 3—48089
absorption in Mg-Sc(Y) dilute alloys, electronic struct. 3—38195
absorption in Pd-Si based metallic glasses, elec. resist. and thermopower 3—47327
absorption in rare earth metals, effect on allotropic transformations 3—42767
absorption isotherms in $LaNi_5$, α-β two-phase region, hysteresis 3—48088
absorption-desorption characts. in Ce-La-Ni-Al(MN) based alloys 3—48090
adorbed on surfaces, detection using refl. EELS, review 3—14905
adsorbed c(2×2) struct. on Pd (100), vibr. excitations, EELS study 3—3886
adsorbed layer on Si (001), monohydride and dihydrde phases, electronic struct., EELS study 3—57405
adsorbed layer on W, surface vibr. excitation cross section EELS study 3—3890
adsorbed on $BaTiO_3$ and SbSI, effect on polarisation processes 3—2983
adsorbed on BCC metal surface (100), pot. surface and diffusion 3—42910
adsorbed on metal surface, electric field sensitive phase separation 3—18557
adsorbed on Pd, electric field sensitive phase separation 3—18557
adsorbed on Rh (111), interaction with coadsorbed species, EHT calc. 3—23179
adsorbed on Si(111)-(2*1) surface, electron energy loss study 3—51935
adsorbed on Si (111), thermal desorption spectra, diffusion effects, theory 3—57227
adsorbed on W, electron stimulated desorption of H^- and H^+ 3—57224
adsorption and coadsorption with CO on Pd(111) 3—38209
adsorption and dissociation on Pd, surface and interface pot. meas. 3—38202
adsorption on activated charcoal, high-pressure isotherms 3—33581
adsorption on Ag covered Re field emitter, work function meas. 3—34201
adsorption on Cu surfaces 3—23176
adsorption on Cu-Ru surface, pairwise-additive model 3—23170
adsorption on Fe (110), lattice gas model 3—2944
adsorption on Li cluster surface (100), adiabatic approx. breakdown 3—2979
adsorption on MBE grown GaAs (100) and (111), photoemission spectroscopy study 3—42925
adsorption on Ni and Pt films, search for supercond. 3—47451
adsorption on Rh-TiO_2, TPD-NMR study 3—8333
adsorption on Si (001)2×1, angle-resolved EELS and elastic LEED study 3—38207
adsorption on Si (111), AES study 3—14401
adsorption on Ta (100), LEED and AES study 3—38177
adsorption on W(100), surface reconstruction, surface lattice dynamics approach 3—57191
angular momentum coherences, group-theoretical classification using SU(2)×SU(2) 3—36720
anomalous H search with time-of-flight spectrometer in enriched heavy water 3—11996
arc emission, 124 to 300 nm, calibration 3—42478
ASDEX plasma boundary, H and D fluxes, time-resolved meas. 3—18120
atom, absorbed in Mg cluster, ab initio HF SCF MO study 3—36900
atomic, stabilization and cooling using large dilution refrigerator 3—36007
BCC metals, H interstitials, quantum mechanical description 3—51633
boiling liq. cylindrical target, density correction 3—36590
buildup in Ni-alloys in reactors 3—41190
chemisorption energy on a magnetic surface 3—57208
chemisorption on Be(0001) surface, cluster model, convergence 3—41715
chemisorption on GaAs (100) and $(\bar{1}\bar{1}\bar{1})$, LEED and photoemission study 3—33574
chemisorption on quartz under mech. activation, IR spectral study 3—14885
chemisorption on Si (111)-(2×1), density of surface states 3—43256
chemisorptive bonds with transition metals, tight-binding parameters 3—52216
clocks metrological characts. 3—10807
coadsorption with CO and NO on Rh 3—8332
coadsorption with O_2 on Ni (111), O_2 condensation 3—42920
coal conversion processes using H_2 from nonfossil energy sources 3—48119
concentration in metal test piece, anelastic deformation determ. *(German)* 3—58356
concentration measurements using nuclear reaction analysis 3—24477
cryogenic universal plant for liquefaction and extraction 3—30876
depth concentration profile in Nb 3—2595
desorbed from Fe, Ni, Pt, acoustic emission 3—22980
desorption from W (111), dynamic measurement of work function with the field emission microscope 3—49508
detection using Pd-gate MOSFET *(French)* 3—45134
determination using low-background mag. reson. mass spectrometer 3—53464
Diffstak diffusion pump, ability to obtain ultra-high vac., energy consumption 3—40629
diffusion in Al, lattice relax. effects calc. 3—2886
diffusion in BCC metal and protonic pot. around interstitial sites 3—42737
diffusion in $Cu_{45}Ti_{55}$ amorphous ribbon 3—47160
diffusion in $CuInTe_2$ film, effect on elec. transport props., grain boundary scatt. 3—52282
diffusion in doped and undoped MgO 3—13547
diffusion in ice, test using muonium 3—23091
diffusion in $LaCo_5$, coeffs. determ. 3—24464
diffusion in $LaNi_5H_6$, quasielastic neutron scatt. study 3—38117
diffusion in metal hydrides, NMR studies 3—38711

hydrogen continued
diffusion in metals, potential config. shape, quantum states, noncoherent transitions 3—13552
diffusion in Mg_2Ni(-Mg), neutron scatt. meas. 3—42851
diffusion in PdH_x, elec. resist. relax. method 3—33493
diffusion in $Ti_{1.2}Mn_{1.8}H_3$, quasielastic neutron scatt. study 3—38116
diffusion in Ti at room temp. 3—47166
diffusion in Zr-Al alloy getter system for Tokamak 3—17048
diffusivity and solubility in Pd-Ag(Au) 3—42850
diffusivity and solubility in Pd-Fe(V) 3—42849
dissociative chemisorption on metal surfaces, Hubbard model calc. 3—13623
dissolved in amorphous Zr-Ni, local environment 3—46858
electrochemical gas sensors, thin solid state devices, exptl. behaviour 3—10822
evolution from Al in reactor containment spray solutions, rel. to corrosion rate 3—34526
evolution reaction of Fe in nonaqueous formic acid 3—19447
flammable limit of H_2-air-steam mixtures, water fog effects 3—45654
frequency standard, magnetic screening methods 3—10806
gas, diffr.-limited Stokes beam amplification by a severely distorted pump 3—46262
gas, ionis. in const. elec. field, electron distrib. function *(Russian)* 3—32839
gas, selective detection using SnO_2 based thick film gas sensor 3—25867
gas, spin-polarised, collision integrals, transport coeffs. calcs. 3—32833
gas, transient stimulated Raman scatt., macroscopic quantum fluctuations obs. 3—56278
gas, tunable narrow-bandwidth VUV radiation generation by anti-Stokes SRS 3—50703
gas, XeF laser radiation stimulated Raman scatt. using collimated beams 3—56287
gas puff, one dimens. MHD calcs. 3—22602
gas sensor based on dual SAW delay-line 3—25863
generation rate in metal powder electrodeposition at gas-evolving electrodes 3—47788
heat of soln. and binding energy in transition metals 3—2806
high-frequency electrodeless H discharge, gas heating rel. to contraction *(Russian)* 3—33002
impurity content in Zr, positron annihilation sensitivity 3—34163
influence on hot deformability of Ti and alloys 3—24318
interaction with Inconel-600 membrane, surface and bulk props. meas. 3—17031
interaction with polycryst. Ni, surface and bulk process parameters 3—33578
ion exchange resin LLW, radiolytic hydrogen gas prod. 3—21404
isotope separation, diffusion filter 3—21936
isotope separation by metal membranes 3—45694
isotope separation using Pd alloy membranes 3—55629
liquefiers for large-scale appl., Japanese (TEISAN) development 3—35997
liquid, convection-boiling boundary, press. and underheating effects 3—7578
liquid, cryogenic target in streamer chamber 3—50138
liquid, eqn. of state from shock-wave expts. at 760 kbar 3—33380
liquid, far-IR absorpt. study 3—3694
liquid, heat transfer at forced flow boiling in tubes 3—7574
liquid metal, ground-state struct. as two-component Fermi fluid at T=0 3—51885
liquid target for work in intense particle fluxes 3—11578
liquid target in streamer chamber, design 3—11576
maser oscillation level, function of HF discharge characteristics *(French)* 3—22019
masers, state-of-art review 3—36980
masers with small resonator 3—22021
metal, electronic struct. of H impurity, jellium model 3—13763
metal hydride surface studies, electrons as H probes, review 3—47199
metallic, absence of crystn., electron screening of proton-proton interaction 3—2922
metals, interstitial H, electronic and elastic struct. 3—38341
middle atmosphere, produced by satellite solar power system launch vehicles 3—48212
molecular gas, electron scatt., Ramsauer-Townsend minima 3—22570
molecule, Raman light and optical parametric light mixing to produce high-power picosecond continuously tunable coherent UV light 3—50702
nonideal plasma, thermodynamic functions 3—32851
peat bog core D/H and O isotope ratios indicating palaeoclimate 3—29986
permeability in Be 3—8263
permeability in metallic films, steady-state eqn. 3—28162
permeability in Ti and TiI_4 at room temp. 3—42854
permeation in $Fe_{40}Ni_{40}P_{14}B_6$ metallic glass 3—8262
permeation through Ni, oscill. method *(Japanese)* 3—57136
phase change behaviour in Nb and Nb-V 3—33385
physisorption on Al and Cu, APFIM study 3—51939
plasma, CO and O_2 impurities control by metal gettering 3—55615
plasma, fluoresc. spectra broadening diagnostics 3—32979
plasma, reverse field pinch, HBTX1A, neutral H density, Balmer α-fluorescence scatt. study 3—51361
plasma, Stark effect, collisions, quasi-classical theory of spectral line wings *(Russian)* 3—1280
plasma density in toroidal devices, recycling, numerical calcs. 3—18005
plasma relativistic electron beam 3—2257
plasmas, density-functional thoery 3—2192
pressurised spark gaps, electric strength recovery after breakdown 3—7849
quantum diffusion in Pd *(Russian)* 3—38130
α-quartz, H and muonium quadrupole constant sign change 3—8749
reaction with Mg-Ni (23.3 wt.%) eutectic alloy, kinetics 3—48050
recycling, thermally activated processes in fusion devices 3—18050
resonance dechannelling in Si at axial to planar transition 3—13296
seawater, relations between dissolved H_2 and CO, nutrients and fluoresc. in surface waters off Baja California 3—20010
sensor, SAW delay line, Pd coated 3—49351
Si:H photovoltaic cells, H passivation 3—24581
solar energy storage as H_2 and Br_2 from HBr, idealised system performance 3—58563
solar wind ion velocity obs., for He^{2+}, H^+ and O^{6+} ions 3—5082
solubility and diffusion in amorphous Cu-Ti 3—47114
solubility in AISI 4340 steel, 298 to 873K 3—18461
solubility in metallic glasses meas. 3—18472
sorption by Nb, surface and bulk conc., photoemission spectra and elec. resist. meas. 3—2958

hydrogen continued
- sorption by Pd thin films on Si and Ti 3−42944
- steel, alloy, oxidised, H penetration, pressure effects of type KhN40B 3−23099
- steel, stainless, oxidised, 2Kh13, 12Kh18N10T, 0Kh16N15M3B, 1Kh13M2FB, 1Kh13F2M2, 0Kh18Yu2, H penetration, pressure effects 3−23099
- stimulated-Raman conversion of continuously tunable light into the near- and mid-IR regions 3−41928
- subsurface bonding to metallic surfaces 3−23169
- surface diffusion on W(110), tunnelling processes 3−38190
- surface tension of H_2 isotopes, and quantum mechanical law of corresponding states *(Russian)* 3−2929
- surface tension of normal and para phases, 15 to 32K *(Russian)* 3−47185
- thermal desorption spectra from HfV_2H_x and ZrV_2H_x 3−42922
- thermoelastodiffusion in steel, time-depend. problem 3−51838
- thyratron, plasma parameters under steady-state conditions 3−27735
- thyratrons, electron excitation processes study 3−7805
- Tokamak plasma, ion thermal conductivity, collision model 3−51286
- transition metal carbides, H doped, resistivity, superconductivity and order-disorder transition meas. 3−33814
- trapping at Cu surfaces via translational-rotational energy conversion EELS meas. 3−38197
- volcanic gas and condensates from NE Japan, isotope ratios 3−35133
- $Ag:H^+$ ion-implanted films, Frenkel-type radiation defects form. and annealing 3−13249
- C:H amorphous film, struct. optical props. and decomposition kinetics 3−18590
- C:H amorphous films, plasma deposition and optical props. 3−38251
- α-C:H sputtered solar selective surfaces, optical props., effect of Ar press. 3−53574
- a-C:H/a-Si:H heterojunction solar cells, plasma deposition 3−38251
- $CO-N_2-H_2$ laser discharge, plasma kinetics, N_2 and H_2 additions effects meas. 3−17483
- $CO_2-N_2-H_2$ gasdynamic laser 3−22028
- $CdS:H-Cu_2S$ solar cell, role of impurities 3−44131
- Cr-Hf-H, local condensation of hydrogen on ^{181}Hf, PAC study *(French)* 3−28107
- Eu:H, excess ferromagnetism study, H conc. estimated *(Russian)* 3−18933
- Fe:H, H interstitials, quantum mechanical description and expt. study 3−51633
- Fe-H, internal friction due to H_2 phase transition, expt. study 3−2669
- GaAs, polycrystalline, grain boundary passivation by H plasma, surface barrier diode appl. 3−43064
- GaAs:H, amorphous, RF sputtered, microstructure, correlation with electronic props. 3−18572
- GaAs:H, passivation of dominant deep level EL2 3−23308
- GaAs:H amorphous, mol. vibr., H bridges, IR spectra study 3−3719
- GaP:H, ion implanted, photoelectrochemical meas. 3−42627
- Gd-Co-H film, amorphous, perpendicular mag. anisotropy, influence of H_2 addition 3−28659
- a-Ge:H, B(P), ESR spectra and transport props. 3−43435
- Ge:H, reduction in γ-ray damage, DLTS study 3−18345
- Ge:H,B(P), amorphous, elec. cond. and thermoelectric power 3−23393
- H isotope separation, falling liquid film condenser, mathematical simulation 3−21557
- H^+ beam heating and corona dynamics 3−22662
- H^+ diffusion in WO_3 thin films 3−8380
- H^+, exchange for K^+ ions in E.coli, systems, independence of functioning 3−24694
- $H-^3He(^4He)$, collision integrals, transport coeffs. calcs. 3−32833
- H-Ar, thermal plasma, potential interactions influence on transport processes *(French)* 3−37623
- H-Cl mixture, detonation initiation 3−7608
- H-like ions, dielectronic recombination rate coeff. in plasma 3−32846
- $H+F^-$, associative detachment reactions, product vibr. state distrib. 3−44051
- H_{12} ring, one-electron electron interaction energies, projected Hartree-Fock approx. 3−50564
- H_2 blue-green second Stokes amplifier design, XeF-pumped 3−27081
- p-H_2, Raman scatt. due to single-mode CO_2 laser 3−41812
- H_2/D_2 separation, thermal diffusion column design and performance 3−55633
- H_2-CO_2, heat of mixing meas. 3−42784
- H_2-F_2 chemical laser parameters, initial electron beam initiation influence 3−1621
- H_2-H_2, thermodynamic props. from ab initio pot. surface calcs. 3−11723
- H_2-HF laser, possibility of obtaining high specific lasing parameters using a chain reaction 3−1620
- H_2-He mixtures with exp-6 interactions, mixing rule 3−33442
- H_2-O_2, implosion, temperature meas. at focus, plasma black body nature 3−7768
- H_2-O_2, thermal electron attachment mechanism, isotope effects 3−41693
- H_2-O_2-Ar flat flames, temp. meas. by two-line laser saturated OH fluoresc. 3−9319
- H_2-Xe, shock-wave struct. 3−12809
- H_2+F_2 explosion initiation due to pulsed laser radiation on reaction vessel surface 3−53405
- $H_2O-H_2-O_2$ mixture, nonequilib. flow in profiled nozzle, inversion in vibr.-rot. transition of H_2O 3−2103
- ^3H, radioactive effluent retention in nuclear facilities, cost-benefit analysis 3−11394
- Hα emission objects within area centered on λ Orionis OB association 3−5367
- He-H_2 discharges, IR optogalvanic meas. 3−42448
- He-p-H_2 mixtures, quantum liquid, US velocity and adiabatic compressibility at high press. *(Russian)* 3−57155
- ^{4}He-p-H solution, dielectric const. and molar volume *(Russian)* 3−14190
- $LaNi_5$-H system, hydriding and dehydriding rates 3−48047
- Mg-SiO-H_2, vapor phase nucleation study 3−47078
- Mg_2Ni-H system, dehydriding reaction kinetics 3−48044
- $MgO:H^-$, thermochemically reduced, electron traps and F-centres 3−57312
- MgO:Li, H, X-ray irrad., Li-H complex, ESR study 3−43432
- Mo-H solid solutions, desorption meas. of diffusion coeffs. *(Russian)* 3−38129
- N_2-H_2 mixture, excitation and quenching rate coeffs. meas. of $C^3\Pi_u$ state in N_2 3−36869
- Nb:H, diffusion model, small polaron models 3−33505
- $NbV_{0.008}H_{0.005}$, local H vibrs. in presence of V impurities 3−42739

hydrogen continued
- Ni:H, electronic struct. of H impurity, LCAO and cluster calc. 3−8446
- Ni:H, ferromagnetic, H props., multiple scatt. cluster-in-condensed-matter calc. 3−33666
- Ni:H, H diffusion, shearing stresses obs. 3−57139
- Ni-H_2 batteries development for space vehicles 3−48137
- Ni-H_2 bipolar battery systems for space vehicles 3−48138
- Ni-H_2 cells, synthetic battery cycling techniques application in space vehicles 3−48140
- Ni-H_2 high energy density battery system for communication satellites 3−48139
- β-PbO_2:H battery plate, H content and Pb vacancies, neutron diffr. studies 3−7973
- Pd-Si:H magnetron sputtered Schottky barrier solar cell 3−8586
- Pd-SiO_2-Si hydrogen sensor, barrier formation and transport, sensitivity 3−10821
- Pt-Si:H magnetron sputtered Schottky barrier solar cell 3−8586
- SF_6-H_2-He chem. laser, relativistic electron beam excitation using TEREK-1R system 3−6960
- a-Si: H, glow discharge deposition from pure Si_2H_6 and pure SiH_4 3−52973
- Si:Au, H, deep level passivation study 3−33676
- Si:Cl,H, amorphous film, preparation, elec. and optical props. 3−28988
- Si:H, amorphous, ^{1}H NMR pulsed studies 3−3579
- Si:H, amorphous, annealed, adsorbed O behaviour during H effusion, XPS study 3−51921
- Si:H, amorphous, Auger line shape anal. of struct. 3−24065
- Si:H, amorphous, band tails, photomodulation spectroscopy studies 3−23248
- Si:H, amorphous, bulk and interface states, elec. props. 3−28256
- Si:H, amorphous, chemical bonding 3−22777
- Si:H, amorphous, crystallisation and nucleation kinetics meas. 3−33094
- Si:H, amorphous, dangling bond defects, trapping parameters, photoconductivity study 3−28367
- Si:H, amorphous, determ. of metallic impurities by SIMS 3−37947
- Si:H, amorphous, dual-beam photocond. modulation spectroscopy study 3−18739
- Si:H, amorphous, electron-hole recombination lifetime distrib., light induced ESR and luminesc. 3−8510
- Si:H, amorphous, electronic struct. model 3−3043
- Si:H, amorphous, electronic struct., self-consistent pseudopot. calc. 3−28253
- Si:H, amorphous, electronic struct. CNDO calcs. 3−52018
- Si:H, amorphous, energy distrib. of traps, photoconductivity study 3−47314
- Si:H, amorphous, film growth, in situ study, rate and refr. index, dielec. const. spectrum *(French)* 3−28224
- Si:H, amorphous, gap state studies 3−23249
- Si:H, amorphous, light soaked state, transient photoconductivity 3−52188
- Si:H, amorphous, nonradiative recombination study 3−38894
- Si:H, amorphous, optical absorption edge and energy-band tails 3−28821
- Si:H, amorphous, p-type, Schottky barriers 3−28437
- Si:H, amorphous, photocond., reversible photoinduced changes at low temps. 3−13854
- Si:H, amorphous, photovoltaic band gap for solar cells 3−13712
- Si:H, amorphous, photovoltaic props., light-induced effects obs. 3−57377
- Si:H, amorphous, plasma deposited, elec. and optical props. 3−28462
- Si:H, amorphous, radiative recomb., ODMR study 3−19016
- Si:H, amorphous, radiative recomb., ODMR waveform meas. 3−19017
- Si:H, amorphous, recombination, spin depend., ODMR study 3−3594
- Si:H, amorphous, solar cells, carrier mobility, photocapacitance study 3−48147
- Si:H, amorphous, symm. relax. of vacancy 3−22888
- Si:H, amorphous, three-centre bond model calcs. 3−37789
- Si:H, amorphous, transient photoconductivity 3−13859
- Si:H, amorphous, transport props., temp. depend. *(Korean)* 3−38412
- Si:H, amorphous, vibr. props. study 3−2724
- Si:H, amorphous CVD film, electronic and optical props. meas. 3−29014
- Si:H, amorphous film, DC and RF glow discharge decomp. prep., elec. cond. meas. 3−43179
- Si:H, amorphous film, interface and surface states, optical absorpt. spectra, photothermal deflection spectroscopy study 3−34125
- Si:H, amorphous film, optical props. 3−24040
- Si:H, amorphous film, Penn model calcs. of electronic struct. 3−52014
- Si:H, amorphous film, permittivity, optical props. 3−23859
- Si:H, amorphous films, efficient visible photoluminesc. obs. 3−47682
- Si:H, amorphous films, role of H, deposition 3−24156
- Si:H, amorphous films, sputtered thin film growth 3−24127
- Si:H, amorphous films, valence electron number and H conc., calc. model 3−3041
- Si:H, amorphous glow discharge film, optically illuminated, picosecond carrier dynamics obs. 3−33735
- Si:H, amorphous hydrogenated, intrinsic surface phonons, theoretical study 3−33556
- Si:H, amorphous p-i-n^+ solar cell, thin n^+ window layers, elec. props. meas. 3−14942
- Si:H, amorphous solar cell, hot carrier diffusion influence on collection efficiency 3−44130
- Si:H, amorphous sputtered films., elec. props., morphological fluctuation 3−3339
- Si:H, amorphous sputtered films, influence of deposition conditions on props. 3−52935
- Si:H, amorphous thin films, prod. by ion beam sputtering, optical props. 3−47727
- Si:H, As amorphous film, RF sputtered, pulsed laser annealing 3−56970
- a-Si:H, As(Cl), ion implanted, IR absorpt. spectra 3−47681
- Si:H, B, amorphous, optical absorpt. spectra and struct. props. 3−52803
- a-Si:H, B, anomalous optical and struct. props. 3−34127
- a-Si:H, Cl, glow discharge prep., optical and elec. props. 3−23978
- Si:H, Cl amorphous film, photocond. meas. 3−43225
- Si:H, crystalline, defect-impurity complexes and IR bands, theory 3−23948
- a-Si:H, DC glow discharge produced, pseudogap state density by field effect meas. *(Korean)* 3−13696
- a-Si:H, doping and Fermi energy, Mott 8-N rule 3−8456
- a-Si:H, elec. and optical props., effect of prolonged illum. 3−23441
- Si:H, F, amorphous, electronic struct. CNDO calcs. 3−52018
- Si:H, form. of H_2, MNDO calc. 3−37946
- a-Si:H, glow discharge deposited, initial growth region 3−42977
- Si:H, impurity electronic struct. calcs. 3−23322

hydrogen continued
Si:H, interstitial muons and H_2, self-consistent total energy surfaces calc. 3−46924
a-Si:H, light-induced metastable effects 3−23392
a-Si:H, low energy excitation of photolum., temp. and intensity effects 3−43622
a-Si:H, luminesc. fatigue and light-induced ESR 3−24011
Si:H, microcrystalline, glow discharge deposition, crystallite size and orientation control 3−52974
Si:H, microcrystalline glow discharge deposited, wide range control of crystallite size 3−42943
Si:H, P amorphous film, transport props. and donor levels 3−23379
a-Si:H, photocond. at 125K, photocarrier generation and recomb. 3−38435
a-Si:H, plasma deposited, SiH_3Cl impurity effect on props. 3−18583
Si:H, polycryst., IR study and MIS solar cell photovoltaic props. 3−4389
Si:H, radiative recombination and spin effects *(French)* 3−23999
Si:H, reduction in γ-ray damage, DLTs obs. 3−18346
a-Si:H, role of dangling bond defects in early recomb., IR absorption 3−47679
a−Si:H, spin-depend. photocond., ESR study, illum. effects 3−3248
Si:H, sputtered solar material, optical prop.-comp. relations 3−17586
Si:H,B thick films, H evolution, film morphology 3−23217
Si:H,B(F), amorphous, optical props. 3−23908
Si:H,F, amorphous, majority carrier drift mobility 3−23407
Si:H,F films, influence of deposition conditions on props. 3−52975
a-Si:H,O, IR absorpt. spectra, structural interpretation 3−23987
Si:H,P, amorphous, gap state profiles, photoacoustic spectroscopy studies 3−23250
Si:H,P, amorphous film, photoconductivity study 3−28385
Si:H,P(B), amorphous film, in situ doping during homogeneous CVD growth, charact. 3−52967
Si:H amorphous, localised states, elec. cond. study 3−8457
Si:H amorphous, low temp. anomalous magnetoresistance, Fermi level shift contrib. 3−3232
Si:H amorphous, low temp. distant-pair photoluminescence 3−28890
Si:H amorphous, non-geminate recombination, EPR and photoluminescence study 3−24008
Si:H amorphous, photocond., I-V and C-V characts., field quenching 3−57387
Si:H amorphous alloys, minority carrier diffusion length, photovoltaic device study 3−3220
Si:H amorphous film, CVD by direct S_2H_6 photolysis and elec. and optical props. 3−52962
Si:H amorphous film, cond. activation energy and downward cond. kink, prep. condition effect 3−18803
Si:H amorphous film, dangling bond correlation energy 3−8437
Si:H amorphous film, elec. and struct. props., capacitor photo-EMF spectra study 3−8535
Si:H amorphous film, elec. cond. in planar and sandwich configurations 3−38393
Si:H amorphous film, elec. props. and solar cell characts. 3−53539
Si:H amorphous film, H anal., mass spectrometry *(Japanese)* 3−23205
Si:H amorphous film, photoconductivity spectrum, temp. depend. 3−3252
Si:H amorphous film, reactively RF sputtered, microcrystalline form., X-ray scatt. study 3−42976
Si:H amorphous films, $0.2<x<0.5$, HOMOCVD prep., broadband visible photoluminesc. 3−8860
Si:H amorphous films, activation energy for conduction, annealing and thickness effects *(Chinese)* 3−43166
Si:H amorphous films, anodic oxidation 3−34504
Si:H amorphous films, ionized cluster beam deposition 3−52977
Si:H amorphous films, reactive sputtering, ion bombardment morphology control 3−28990
Si:H amorphous films, sputtering under reduced pumping speed, cond. and photocond. props. 3−58047
Si:H amorphous films, void supernetworks, TEM and SEM study 3−2995
Si:H amorphous glow-discharge coating on glass, CW laser crystallisation 3−18581
Si:H amorphous MOS struct., interface states 3−23455
Si:H amorphous oxidised film, characterisation using Auger and UPS methods 3−18578
Si:H amorphous pin solar cells, characts. in dark and under illumination 3−53534
Si:H amorphous Schottky solar cells, photogenerated carrier conduction mechanism 3−44132
Si:H amorphous solar cells, open circuit voltage difference between p-i-n and n-i-p cells 3−39467
Si:H amorphous solar cells on polymer film substrate, plasma deposition and photovoltaic props. 3−53533
a-Si:H and a-Si:H, P, gap-state profiles, below-gap optical absorpt. meas. 3−3844
a-Si:H and a-Si:H,F, struct. order parameters, Raman scatt. study 3−56820
a−Si:H and a−Si: H, N, localised state distrib. profiles, SCL current meas. 3−18711
Si:H and Si noncrystalline films, optical parameters and struct. meas. 3−3668
a-Si:H film, H conc. determ. by coincidence meas. of elastically scatt. 100 MeV $^3He^{2+}$ ions and recoil protons 3−2411
a-Si:H film, high rate plasma deposition, for electrophotographic photoreceptor 3−13657
Si:H film, polycryst., lightly doped, effects of hydrogenation, Hall effect meas. 3−23513
a-Si:H film, trapping props., effect of adsorbates, TSC meas. 3−23401
a-Si:H films, deposition by glow discharge and reactive sputtering, H reactions 3−3951
a-Si:H films, disorder characts., optical transmission and photocond. study 3−38932
a-Si:H films, hydrogenated in theta-pinch plasma, photocond. and dark cond. 3−57386
a-Si:H films, optical props., annealing effect *(French)* 3−52862
a-Si:H films, RF sputtering prep., microstruct. and H bonding environment 3−51970
a-Si:H films, thickness depend. of elec. and optical props. and ESR 3−3199
a-Si:H films for photovoltaic appls., optical props. rel. to deposition conditions 3−57990
a-Si:H glow-discharge doped films, laser radiation effects on cond. and Schottky diode operation 3−8579

hydrogen continued
a-Si:H MIS Schottky structures, modelling using C-V and conductance-voltage meas. 3−47427
a-Si:H MOS photodiodes for large-area high spatial resolution photosensor arrays 3−49449
Si:H microcrystalline film, optical props., solar cell appls. 3−4387
a-Si:H n^+-i-n^+ sandwiches, SCL currents under AC conditions 3−47357
a-Si:H n^+nn^+ films, SCL cond. 3−3209
a-Si:H n-i-p solar cells, characterisation and optimisation by variation of device geometry 3−53549
a-Si:H p-i-n diodes, photo-induced effects on elec. props. 3−14953
a-Si:H p-i-n solar cells, effect of SiC layer 3−39484
Si:H photoconductive alloys, reactive sputtering in the He-containing atm. *(Japanese)* 3−19267
a-Si:H Schokky solar cell, plasma deposited, band tail absorption *(Korean)* 3−9433
a-Si:H Schottky barrier structs., gap states, transient current spectroscopy study 3−57316
Si:H single cryst., etch pits and dislocation rosettes, H impurity effect 3−56900
Si:H solar cell efficiency, passivation techniques 3−24583
a-Si:H solar cell on organic polymer substrate 3−53544
Si:H solar cells, H annealing from recombination defects *(French)* 3−24582
a-Si:H solar cells, optical behaviour computer simulation 3−58506
α-Si:H sputtered solar selective surfaces, optical props., effect of Ar press. 3−53574
a-Si:H tandem-type solar cells 3−58534
Si:H thin films on polyethylene, far IR spectra 3−57902
a-Si:H/c-Si heterojunctions, space-charge limited currents 3−18769
Si:H/electrolyte amorphous contacts, band bending, photoresponse and surface reactions 3−8573
a-Si:H-SiO_2 interface, gap state density and interface states 3−52214
Si:H^+ amorphous film, ion implantation doping, ESR and elec. cond. 3−37944
Si:H(H,B)(H,P), amorphous, H diffusion coeff., H_2 effusion expts. 3−33501
Si:H(H,F), amorphous, picosecond photocarrier trapping, photoinduced absorpt. study 3−57376
Si:H(H,P), amorphous, RF glow discharge deposited, photocond. and dark cond. meas. 3−38423
Si+D,H, amorphous, NMR study 3−28728
SiC:H, amorphous RF sputtered films, struct. and optical and elec. props. study 3−3711
SiC:H amorphous film, elec., optical and solar cell window material props. 3−52135
SiC:H amorphous window material for a-Si solar cells, characterisation 3−53538
$Si_{0.15}C_{0.85}$:H amorphous films, photoluminesc. decay curves and time-resolved luminesc. spectra 3−47703
$Si_{1-x}C_x$:H film, glow discharge deposited, photolum. study 3−14333
$Si_{1-x}C_x$:H amorphous film, defects, ESR, optical props. and photocond. 3−23199
Si_xC_{1-x}:H, amorphous, electroluminescence obs. 3−47711
Si_xC_{1-x}:H, amorphous film, optical props. 3−24040
Si_xC_{1-x}:H amorphous coatings, CVD gram, XPS and Raman spectroscopy studies 3−51988
SiGe:H amorphous film, elec. props. and solar cell characts. 3−53539
a-SiGe:H tandem-type solar cells 3−58534
$Si_{1-x}Ge_x$:H, amorphous, optical absorpt., photoconductivity meas., alloying effects 3−43510
Si_xGe_{1-x}:H amorphous film, cond. and photocond. props., solar cell appl. 3−33719
$Si_{1-x}N_x$:H amorphous film, preparation by RF sputtering, defects, EPR 3−24128
Si_xN_{1-x}:H, amorphous films, substitutional doping study 3−51635
SiO_2:H film, SiOH and SiH molecules, Stark effect study 3−38798
Si;H, amorphous, planar RF magnetron sputtering, H effects on deposition rate 3−39031
Ta-H, inhomogeneous, Hall voltage, time changes meas. 3−3161
Ti-H_2 system, high temp. thermodynamics 3−42809
TiO_2:Nb, H, elec. cond., Hall effect and carrier scatt. 3−47344
α-TiO_x-H_2 system, high temp. thermodynamics 3−42809
V:H, H interstitials, quantum mechanical description and expt. study 3−51633
W:H, ^{181}Ta Mossbauer emission spectroscopy 3−19028
WO_3:H, conc. dependent H percolation, optical absorpt. study 3−42846
$Zr(Fe_xMn_{1-x})_2$-H_2 system, thermodynamic props. 3−47123
$Zr(V_xCo_{1-x})_2$:H, Laves phase, H interstitials study 3−38340

hydrogen bonds
ab initio mol. orbital calc. using flexible atomic orbital basis set 3−36646
acetic acid dimens. H bonded, liq., intermol. Raman active vibrs., spectrosc. obs. 3−36761
N-acetyl-(l-alanine) methyl esters, volatilisation kinetics, freq. factors 3−33411
acetylene-hydrogen halide complexes, H-bonded, in solid Ar, Fourier transform IR spectra 3−6639
α-acetylenic tertiary alcohols, acid-catalysed rearrangements, energy hypersurface, STOC calc. 3−39354
alcohols, adsorption and two-dimens. condensation on NaF 3−2964
n-alcohols, H bond energies, US velocity and density study 3−18391
alcohols, internal H-bonding, review of recent results 3−50542
alkylaminomethyl-phenols, geometry and intramol. interactions, CNDO calcs., X-ray diffr. obs. 3−1251
o-amidobenzoic acid, IR absorpt. spectra and H bonding 3−36747
amines, internal H-bonding, review of recent results 3−50542
2+amino-3-methyl-benzoic acid, diamagnetic susceptibility anisotropy, H-bonds effect 3−26879
O+aminobenzoic acid, diamagnetic susceptibility anisotropy, H-bonds effect 3−26879
ammonium acetate, PMR, H-bonds, lineshape anal. 3−6674
ammonium d-tartrate, ^{1}H and ^{13}C NMR studies 3−52642
ammonium picrate, complex with o-phenanthroline, cryst. struct., conformation and bonding 3−56866
bacteriorhodopsin, light induced H^+ activation, H^+ transfer equilib. in phenol-carboxylate H-bonds 3−58585
benzene-HF H-bonded complex, ab initio SCF MO calcs. 3−26624
binary systems with H bonding and electron donor-acceptor interaction 3−27831

hydrogen bonds continued
- bis-(3-nitro-1,2,4-triazoyl-5) dihydrate, mol. and cryst. structures, thermal, deform. and optical props. 3—33233
- n-butane in H_2O, Monte Carlo simulation, conformational evidence for hydrophobic effect 3—21845
- carbazole solutions with hydrogen bonding, electronic spectra, intermol. and intracomplex relax. manifestation 3—36811
- carboxylic group containing cpds., H bonded 3—36775
- β-apo-14′-carotenal, fluoresc. and triplet yield quenching, H bonding effects 3—53428
- catechol(-d_6), H-bond stretching mode detection in LF Raman spectrum 3—32069
- 3-chloro-1-propanol, rot. isomerism from microwave spectrum 3—32044
- 1-chlorobutane-1-alcohols binary mixtures at 303.15K, ultrasonic studies 3—37979
- 2-chloroethanol in Ar matrix, near-IR induced conformational isomerisation 3—4269
- complexes of β-picoline, quinoline, aniline and N,N-dimethylaniline each with o-chlorophenol, microwave spectra 3—6615
- cyanoacetylene in solid soln., far IR matrix isolation studies 3—55929
- cyanogen chloride in solid soln., far IR matrix isolation studies 3—55929
- cytosine and derivatives, difference between luminesc.-excitation and absorpt. spectra 3—41615
- 4,4′-dialkoxy-α-α'-dimethylbenzalazines, mesogenic activity, intramolecular H bonding effect, UV, IR and ^1H NMR spectra 3—46847
- dialkyminothiols, intramol. H bonds with H^+ polarisability, IR NMR 3—1504
- 4-4' diamino diphenyl sulphone, cryst. and mol. struct. 3—56868
- trans-dichlorobis (L-ethylphenyl-alanate) platinum, cryst. struct. anal. *(Chinese)* 3—42589
- dichloroethanol, conformational energies and H bonding 3—50417
- 1,3-diethylbicyclobutane-exo,exo-2,4-dicarboxylic acid, charge density distribs. 3—37889
- 1,4-dihydroxyanthraquinone-$d_0(d_1)(d_2)$, H bonds, electronic-vibr. excitations 3—36802
- diketones, enol forms, solid, ^{13}C NMR shielding, intermol. hydrogen bonding effects 3—23818
- dimethyl formamide, Raman band intensities, solvent effects 3—45947
- dimethyl sulphoxide, Raman band intensities, solvent effects 3—45947
- 2,6-dinitroanisol, intramolecular hydrogen bond, NMR study with particular reference to phenyl protons spectrum *(Japanese)* 3—36780
- 2,6-dinitrophenol, intramolecular hydrogen bond, NMR study with particular reference to phenyl protons spectrum *(Japanese)* 3—36780
- 2,6-dinitrotoluene, intramolecular hydrogen bond, NMR study with particular reference to phenyl protons spectrum *(Japanese)* 3—36780
- ethylene, chemisorption on Pd (111), EELS study 3—3887
- ferroelectric-antiferroelec. H-bonded systems, spin glass phase 3—3452
- five membered ring systems, intramol. H bonding, ab initio calcs. 3—45810
- 2-fluorobenzylalcohol(-d_n), microwave spectra and conformational props. 3—50387
- formaldehyde-HNO H bonded complex struct., prepared by methyl nitrite photolysis 3—1210
- formamide, liq., mol. struct., H-bonds, electron neutron and X-ray diffr. study 3—46831
- formamide(-d_2), liq., hydrogen bonding, LF Raman study 3—14280
- formic acid, dimer, H-bonds, dissoc. and ionisation energy, PES study 3—41617
- formic acid-amine complexes, struct., ^1H NMR obs. 3—36779
- four-membered ring systems, intramol. H bonding, ab initio calcs. 3—45810
- glycerol, liq., vibr. dephasing, H bonding effect, coherent Raman spectra 3—8814
- glycine conformers, relative stability, electron correl. effects 3—31950
- glycine methyl ester, bifurcated H bond and large amplitude vibrs. 3—6616
- guanidinium perchlorate, cryst. struct. and mol. dynamics 3—2544
- guanine-cytosine (-Mg^{2+}) systems, H-bonded, double proton transfer and charge transfer interactions calcs. 3—41495
- hexamethylenetetramine complexes, charge rearrangement due to H bonds, NQR study 3—45975
- HMPT H-bonded complexes, in freon soln., low-temp. PMR 3—26764
- 6-hydroxybenzanthrone-$d_0(d_1)$, matrix isolated, lifetimes, isotope shifts, luminesc. obs. 3—32128
- m-hydroxybenzoic acid, cryst. struct. determ. 3—8035
- p-hydroxybenzoic acid, IR absorpt. spectra and H bonding 3—36747
- 3H-5-hydroxyindole, cryst. struct., X-ray investig. 3—22875
- 2+hydroxyl-3-methylbenzoic acid, diamagnetic susceptibility anisotropy, H-bonds effect 3—26879
- 2-hydroxylbenzotrifluoride, microwave spectra and conformational props. 3—50387
- 1-p-hydroxyphenylthiophanium perchlorate, cryst. struct. determ. 3—8033
- imidazole, trimer, ^{14}N and ^2H quadrupole coupling tensors, ab initio SCF MO calcs. 3—41593
- intermolecular binding 3—50288
- isoquinoline, stepwise solvated complexes, dynamics, spectra, picosecond jet method obs. 3—41641
- lead acetate trihydrate, cryst. struct. and H bonding 3—51586
- malonaldehyde, IR spectrum, tunnelling H-bonded mol. 3—32057
- metallic surfaces, subsurface bonding of H 3—23169
- methanol, dimer, dissoc. and ionisation energies, PES and ab initio SCF MO calcs. 3—41618
- methanol films, cryst., IR spectra, effect of growth texture 3—43655
- methylproline peptides, conformational distribs., effect of steric interactions 3—53630
- mixed dimers, association, H bonds, empirical pot. study 3—6748
- muscovite, lattice and interlayer water vibr. spectral regions, Raman microscopy study 3—14292
- nitrobenzidines, ionics. consts., spectrophotometic determ. 3—32041
- 2-nitroresorcinol, intramolecular hydrogen bond, NMR study with particular reference to phenyl protons spectrum *(Japanese)* 3—36780
- one-dimensional hydrogen-bonded system, proton dynamics calc. 3—13134
- ordered media, IR, Raman, neutron inelastic scatt. band profile calcs. 3—45822
- organic cpds., symmetrical bridging H bonds, ab initio STO-39 and MINDO/3 calcs. 3—55787
- ornithine in gramicidin S in soln., ^1H and ^{14}N NMR study 3—45971
- oxalic acid, α and β phase, IR and Raman vibr. spectra, normal coord. calcs. and intermol. forces 3—34083
- phenol dimer, electronic absorpt. spectra studied by mass-selected MPI-nozzle beam method 3—1435

hydrogen bonds continued
- phenol-pyridine, H-bonded complex in soln., vibr. relax., temp. and conc. depend. 3—41546
- phenols, jet-cooled H-bonded, vibr. energy redistrib. 3—21741
- phosphine-HF (DF), H bonded dimer, mol. props., rot. spectrum 3—41548
- pivalic acid, normal and spectral vibrations *(French)* 3—32072
- poly(γ-methyl-D-glutamate), mol. motion, IR and X-ray diffr. study 3—33149
- poly(propylene oxide) polyurethane, gels, hypersonic props., Brillouin scatt. 3—34120
- polycarbobenzoxyornithine, struct. and side chain interactions 3—56836
- polymer photostabiliser, internally H-bonded, picosecond kinetics of excited state decay processes 3—6700
- polymer-polymer system miscibility, hydrogen bonding, IR spectra, oligomer probe 3—37816
- polymers, strained, intermol. H bond system dynamics *(Russian)* 3—8126
- polyurethane elastomers, thermoelastic props., scanning calorimetry study *(Russian)* 3—51695
- potassium hydrogen furan-3,4-dicarboxylate, H-bonds, ^{17}O quadrupole double reson. study 3—34006
- potassium hydrogen maleate, intramol. H bonded complexes, inelastic neutron scatt., new correl. of γ(OHO) vs. R(OO) 3—56101
- potassium hydrogen oxydiacetate, γ-irrad., ENDOR study of free radicals 3—47572
- propionitrile in solid soln., far IR matrix isolation studies 3—55929
- pyrazine-2-carboxyamide, cryst. and mol. struct., H bonding 3—56867
- pyridine-methanol, vibr. dephasing, freq. shift, H-bonds, Raman study 3—38810
- quasi 1-D H-bonded ferroelec. thermodynamic props., tunnelling model 3—2849
- quinone derivative condensed film cryst: struct. at Hg/n-hexane liq. interface 3—33586
- quinone derivatives, monolayers, H-bonded, at liq. interfaces 3—51929
- riboflavin; fluoresc. polarisation, H bonding effect 3—6701
- salicyclic acid and derivatives, chemical shifts, ^{13}C NMR study 3—8734
- serine depeptide, struct., bonding, ab initio MO theory 3—17197
- six-membered ring systems, intramol. H bonding, ab initio calcs. 3—45810
- substituted alkenes-HF complexes, H-bonds, Fourier transform IR matrix isolation 3—32053
- tetrahydronaphthols, H-bonding, IR and UV spectra 3—11790
- thiamine dichloride monohydrate, cryst. and mol. struct., X-ray diffr. study 3—13208
- thiirane-HCl, H-bonds, ab initio SCF MO calcs., well depths, Mulliken population indices and one-electron props. 3—1207
- thiirane-HF, H-bonds, ab initio SCF MO calcs., well depths, Mulliken population indices and one-electron props. 3—1207
- thiols, internal H-bonding, review of recent results 3—50542
- threonine dipeptide, struct., bonding ab initio MO theory 3—17198
- toluene-cyanobenzene complex, electronic absorpt. spectra studied by mass-selected MPI-nozzle beam method 3—1435
- trimethylphosphine oxide interaction with proton donor, quantum-chem. study of H bond 3—45835
- triphenyl derivatives, group elements, H-bonds vibr., IR obs. 3—6654
- tris (2,2′-bipyridine) metal (II) complexes, optical resolution by d-tartrate 3—3680
- uracil-fluoride complex, multinuclear NMR investig. 3—6679
- van der Waals molecules: quantum chemistry, physical properties, and reactivity 3—39351
- vermiculite, lattice and interlayer water vibr. spectral regions, Raman microscopy study 3—14292
- water, H-bond network, low-density patches, mol. dynamics simulation 3—27824
- water, near solid interfaces, statistical thermodynamic model 3—57175
- water, supercooled, density fluctuations and hydrogen bonding 3—27822
- water liquid, H bond network, gelation and mol. dynamics model simulation 3—42504
- β-$A-_2O_3$-$Li_2O.nH_2O$, cryst. struct., neutron diffr., IR absorpt. and Raman scatt. 3—14282
- $Al_2H_7^-$, hydrogen bond study by SCF calcs. 3—11659
- $Al(IO_3)_3.2HIO_3.6H_2O$, cryst. struct., X-ray and neutron diffr. study 3—2527
- β-Al_2O_3-$Na_2O.nH_2O$, cryst. struct., neutron diffr., IR absorpt. and Raman scatt. 3—14282
- $BaS_2O_3.H_2O(D_2O)$, H bonds, IR and Raman vibr. spectrosc. obs. 3—6648
- $Ca_3(AsO_4)_2.xH_2O$, cryst. struct. and phaunouxite→Rauenthalite topotactic dehydration 3—37860
- $CaK_2[B_4O_5(OH_4)]_2.8H_2O$, cryst. struct., H-bonds 3—2488
- $(ClH)_n$-dimethyl ether complexes, n=1, 2, 3, IR spectral props. 3—32064
- $CoNa(H_2PO_3)_3$, cryst. struct., H bonds 3—2487
- CsH_2PO_4, polycryst., IR spectra of paraelec. and ferroelec. phases 3—3729
- CsH_2PO_4 quasi-1D ferroelec., permittivity and relax., Ising model study 3—23856
- D_2O, adsorption and two-dimens. condensation on NaF 3—2964
- D_2O ice, amorphous, struct. characts., neutron diffr. study 3—42519
- $DuO_2AsO_4.4D_2O$, cryst. struct., powder neutron diffr. study 3—51551
- GaAs:H, passivation of dominant deep level EL2 3—23308
- Ge-Si:H, amorphous RF sputtered vibr. props., IR absorpt. and Raman scatt. meas. 3—18420
- H-bonded cpds. with hydroxyl chains, bond length correl. with IR freqs. 3—36754
- H-bonded dimers, geometries, props., rot. spectrosc. investig. 3—50371
- H-bonded systems, CNDO/2H and MINDO/3H calcs. 3—31941
- $H_2C_2N_2$ isomers, electronic and geometric struct., ab initio SCF calcs. 3—45828
- $H_3Co(CN)_6$, Raman spectra 3—47649
- HF, H bonded to DF, solid state, vibr., IR spectral profile 3—23937
- $(HF)_2$, intermol. pot. energy surface 3—50477
- H_2O, adsorption and two-dimens. condensation on NaF 3—2964
- H_2O, cluster expansion theory of H-bonded fluids 3—51470
- H_2O, thermodynamic props., anomalous 3—51827
- H_2O-HF(DF), H-bonded complex, hyperfine struct., nucl. spin and quadrupole coupling consts. 3—17302
- HOD, stretching-overtone band shape temp. depend., fluctuation model of H bond 3—36742
- $HOHCl^-$, struct., mobility and IR spectra 3—1356
- $HOHF^-$, struct., mobility and IR spectra 3—1356
- $(H_3O)_2Sb_2(SO_4)_4$, cryst. struct. 3—51547
- H_2O...HF dimer. rot. spectrum, Stark effects, elec. dipole moments and H bond modes 3—55927

hydrogen bonds continued
H_2S-HF, equilib. struct., ab initio calcs., role of d functions 3-36671
$H-S^-$ H bonds in organic monosalts, large H^+ polarisability, NMR and IR obs. 3-50397
KD_2PO_4, anisotropic polarisation fluctuations 3-14197
$KHCO_3$, OH(D) stretching bands, proton dynamics, IR and Raman band profile calcs. 3-47630
$K_3Pt(SO_3)_2HBr_2.H_2O$, cryst. struct. determ. 3-27900
$K_3(Pt(SO_3)_2H)Cl_2$, intramol. H bonded complexes, inelastic neutron scatt., new correl. of γ(OHO) vs. R(OO) 3-56101
β-$LiIO_3$, $\beta \rightarrow \alpha$ transition, effect of H^+ after high press. treatment 3-38058
$MnHP_2O_7$, cryst. struct. determ. *(French)* 3-22843
N-H...O=C hydrogen bond, comparison of X-ray and neutron diffr. results 3-37838
$(NH_4)_2Cr_2O_7$, IR spectra, low temp. transitions 3-3695
NH_4HSeO_4, ferroelec. phase transition, high-resolution NMR study 3-28794
$NH_3(ND_2H)$ liquid struct., IR and Raman spectroscopic inference 3-34089
$(NH_4)_2[Er_2UMo_{12}O_{42}].22H_2O$, cryst. struct. determ. 3-8015
$Na_2CO_3.NaHCO_3.2H_2O$, cryst. struct. determ. 3-22839
$Na_3H(SO_4)_2$, cryst. struct. and hydrogen bonds 3-22835
$Na_3PO_4.{}^1/_2H_2O$, cryst. struct. and H-bonding, X-ray diffr. study 3-46910
$Na_2S_2O_3.5H_2O(SD_2O)$, H bonds, IR and Raman vibr. spectrosc. obs. 3-6648
Ni complex, bis(dimethylglyoxyimate)-nickel (II), intramol. H bonded complexes, inelastic neutron scatt., new correl. of γ(OHO) vs. R(OO) 3-56101
Ni-H, interstitial H bonding, CNDO, EHT and SW-Xα calcs. 3-33183
Si:H, amorphous, Auger line shape anal. of struct. 3-24065
Si:H, amorphous films, sputtered thin film growth 3-24127
Si:H,B thick films, H evolution, film morphology 3-23217
a-Si:H films, RF sputtering prep., microstruct. and H bonding environment 3-51970
U complex, $UO_2(1,1,1,5,5,5\text{-hexafluoro-}2,4\text{-pentanedione})_2NH_3$, struct. changes near melting point 3-13155
$VOPO_4.2D_2O$, cryst. struct. determ. 3-22859
$Zn(NO_3)_2$, aq., struct., X-ray diffr. obs. 3-46100

hydrogen compounds
see also deuterium compounds; hydroxonium ion; ice; steam; tritium compounds; water
benzene-HF H-bonded complex, ab initio SCF MO calcs. 3-26624
first-row diatomic hydrides, electron momentum density contour maps 3-21622
furan-HCl, complex, microwave struct. determ. 3-6617
graphite-H_2SO_4, cryst. expansion during galvanostatic intercalation, dilatometer study 3-25875
H_2O maser outburst in Orion A *(Russian)* 3-49046
H_2S solar thermochemical high temp. processing to produce H_2 and S 3-9400
halide molecules, electron dissociative attachment cross section, quantum three-body theory 3-50532
halides, dipole moments, ionisation pot. and electron density asymptotic form 3-12002
halides, vibr. energy transfer rate coeffs. 3-26825
hydracids, near IR spectrum, Q-branch, matrix effects 3-27974
hydride VPE of III-V semiconductors, extraneous wall deposition suppression by HCl injection 3-8997
hydrides, ten-electron, ionisation pots., H^+ affinity, hole states, SCF calcs. 3-6528
hydrides in interstellar space, far-IR and submillimetre astronomy 3-30469
ice:HF, proton ordering, calorimetric study 3-33463
irradiated targets, dynamic nucl. polarisation study 3-1105
peroxy radicals in atmos., measurement technique 3-4987
phosphine-HF (DF), H bonded dimer, mol. props., rot. spectrum 3-41548
vibr. relax. rate consts. 3-4275
$(AsO_4)_2H_2(UO_2)_2.8H_2O$, troegerite, ferroelasticity in phase II 3-8121
Br+HCl reaction, (ν=2, 3, 4), collinear quantum mechanical probabilities using hyperspherical coords. 3-24485
GaAlAs:H_2S(Se), doping relationships during MOCVD growth 3-42632
GaAs:H_2S(Se), doping relationships during MOCVD growth 3-42632
H_2 production from H_2S using selective diffusion membranes 3-34741
H_2-HF laser, possibility of obtaining high specific lasing parameters using a chain reaction 3-1620
H_2BO, electronic struct., geometry, UHF MNDO PMO calcs. 3-11687
H_3BO_3 addition to Sr ferrite, effect on mag. props. 3-14087
HBS, electronic props., struct., ab initio SCF calcs. 3-11650
HBr, coadsorbed on Pt (100) and (111) with other cpds., struct. and comp., LEED and AES study 3-13640
HBr, high density fluid, vibr. energy relax. 3-17363
HBr, μ^+ substituted, isotope effect and solvent chemical shift 3-11886
HBr, photodissoc., hot H atom prod. 3-11949
HBr, reson. state coupling effects on dissociative electron attachment 3-32199
HBr, slow chain reactions, IR chemiluminesc., deactivation rate coeff. 3-19516
HBr+D, exchange reactions, integral and differential cross sections, rate coeff. and rot. distribs. 3-4270
$HBr+H \rightarrow H+HBr$, 3-dimens. rate coeffs., quantum sudden and var. transition state calcs. 3-44042
HBr+HgBr*, quenching consts. of $B^2\Sigma_1/_2{}^+$ state 3-17371
$HBr+O(^3P)$, reaction rate constant, 221 to 455K 3-58413
$HBrO_3$, aq. soln., RuO_2 redox catalysis 3-48085
HCN, adsorption and oxidation on O-covered Cu (111), AES, EELS, and thermal desorption study 3-23172
HCN and $(HCN)_2$, mag. shielding tensors, calc. using GIAO SCF calcs., charge distrib. and intermol. interaction effects 3-6554
HCN, C-state, intramolecular energy transfer and predissociation 3-36827
HCN, core electron binding energies, transition operator calcs. 3-36658
HCN dipole-quadrupole polarisabilities, quantum mech. calc. 3-45844
HCN, electron impact dissoc., $CN(B^2\Sigma^+\text{-}X^2\Sigma^+)$ polarisation emission 3-26881
HCN, highly excited states, applicability of classical dynamics 3-36672
HCN hyperfine anomalies in Lynds 673 and Sharpless 235B 3-48982
HCN, IR intensities, ab initio calcs. 3-1238

hydrogen compounds continued
HCN in dark clouds, continuum survey, EHF obs. 3-44829
HCN in IR source Sharpless 235B, mapping and column density 3-25580
HCN, mag. susceptibilities and NMR chem. shifts theory in terms of localised quantities 3-55969
HCN, nucl. spin-spin coupling consts., UHF MC SCF calcs. 3-55960
HCN, precursors in oligomerisation, $(HCN)_2$ isomers 3-45828
HCN-HF, H-bonded, rot. spectrosc. investig. 3-50371
HCN+methyl bromide, vibr.-vibr. energy transfer in mixtures 3-56040
HCO^+ depletion in interstellar space due to shock wave effects 3-59424
H_2CO^-, electronic struct., geometry, UHF MNDO PMO calcs. 3-11687
H_2CO^+, electronic struct., geometry, UHF MNDO PMO calcs. 3-11687
HCl, addition to C≡N triple bond, ab initio calcs. 3-31908
HCl adsorbed on O covered Fe(100), bonding and reactions, ASED MO study 3-23161
HCl, aq. soln., diffusion, electrical conductance, linear response theory 3-18490
HCl, aq. soln., diffusion, elec. cond., linear response theory 3-18493
HCl, aq. solns., diffusion, elec. conductance, linear response theory 3-18491
HCl, aq. solns., diffusion, elec. cond., linear response theory 3-18492
HCl, Ar matrix isolation, IR absorpt. line shapes, Heisenberg's eqn. of motion appl. 3-56000
HCl atmospheric trace meas. using photoacoustic system 3-48224
HCl, autoionisation, vibr. excitation, UPS study 3-36816
HCl, chemisorption on Pb(110), role of preadsorbed O 3-38215
HCl, cooperative vibr. excitations 3-13366
HCl, EM hyperpolarisability tensor from Verdet consts. 3-50448
HCl, elastic electron scatt., pot. adapted partial wave representation 3-1477
HCl, electron attachment rate const. meas. 3-1455
HCl, electron scatt., rotational transition, close coupling calcs. 3-32227
HCl, Herman-Wallis factor for higher overtone bands 3-41555
HCl in atmos., IR emission spectra calc. 3-4921
HCl, inhibition of carbon fibre growth, from naphthalene at 1100°C 3-24105
HCl, liq., vibr. dephasing, Raman linewidth 3-47648
HCl mols. in nonself sustaining discharge, dissociative electron attachment, rate const. determ. 3-14847
HCl, photodissoc. processes 3-1440
HCl, photoionisation, fluorescence spectra of HCl^+ 3-1406
HCl, slow chain reactions, IR chemiluminesc., deactivation rate coeff. 3-19516
HCl, thermal gasdynamic laser using rot. transitions, energy transfer from H_2 3-27021
HCl^+, electron impact excitation, population inversion in $A^2\Sigma$ vibr. level 3-50533
HCl-Bi^{3+} solution, luminescence study *(Russian)* 3-43630
HCl-DCl, HCl stretching vibr., intermolecular potentials, IR spectra calcs. 3-57039
HCl+HCl(0), deexcitation by vibr.-to-vibr. energy transfer with rot. and translation 3-41654
HCl+OH, vibr. energy transfer, EPR study 3-21863
$H_3Co(CN)_6$, Raman spectra 3-47649
HD, collisional narrowing of Q branch, Raman obs. 3-11809
HD solutions, cryogenic, proton-mag.-reson. lines, self-narrowing effect 3-1390
HD, transition moments, IR obs. 3-26752
$HD+H_3{}^+ \rightleftharpoons H_2D^++H_2$, rate coeffs. and enthalpy change, appl. to interstellar matter 3-25304
HDO, absorpt. spectra at DF laser wavelengths 3-20115
HDO line positions and strengths, 2400-3300 cm^{-1} region 3-1350
HF absorption spectra using fast Fourier transform spectroscopy 3-54775
HF CW chemical laser, specific energy characts., influence of translational and rot. relax. 3-37013
HF CW chemical lasers, choking anal. 3-12132
HF CW R-branch laser demonstration 3-46202
HF chemical laser, supersonic, multikilohertz pulsed operation 3-41816
HF chemical laser utilising a high-press. H_2-SF_6 mixture 3-1619
HF, coupled Hartree-Fock polarisability dipole moments, perturbation correl. corrections 3-50294
HF, cryst., lattice dynamics calcs. 3-13353
HF, diffusion coeff. in air, dosimetry meas. 3-27636
HF, dipole moment function calc. using anharmonic pot. 3-41702
HF, dipole oscillator strengths, mol. and dissociative photoionisation studies 3-46024
HF, dynamic dipole polarisability 3-45818
HF, electronic props. by Green's function calcs. 3-6512
HF, full CI calcs. 3-50316
HF gas interline anomalous dispersion effects 3-42356
HF, H bonded to DF, solid state, vibr., IR spectral profile 3-23937
HF high-power CW and pulsed chem. lasers, dynamic saturation of optical transitions 3-22030
HF, intense field mol. multiphoton excitation, Floquet theory and quasienergy methods 3-32154
HF, $m=0 \rightarrow m=1$ transition, Pade approximants calcs. 3-32122
HF, NMR chemical shift and nucl. screening, electron correl. effects 3-55961
HF, nucl. elec. shielding tensors, freq. depend., eqn. of motion calcs. 3-55869
HF parallel-amplified multiline laser beams, active phase matching by Mach-Zehnder interferometer 3-27113
HF, photon excitation and absorpt. Floquet theory appl. 3-32155
HF, polycryst., IR spectra 3-14267
HF, potential energy curves in bonding region, importance of ionic dissoc. energies 3-1278
HF pulsed chemical laser, laser action during induction period of photoinitiated F_2/H_2 chain reactions *(Chinese)* 3-37011
HF pulsed high-press. chem. laser with elec.-discharge initiation 3-27031
HF, pure source flow chemical laser, gasdynamic and kinetics study 3-56186
HF, refr. index meas. from 2.5 to 2.9 μm 3-22571
HF, semiclassical IR vibr. spectra 3-50364
HF, thermal gasdynamic laser using rot. transitions, energy transfer from H_2 3-27021
HF, thermodynamic props. calc., Bogolyubov inequality appl. 3-20816
HF, time of flight mass spectra invest. of anomalous behaviour in scatt. expts. 3-41704
HF, vibr. energy transfer rates and mechanisms, laser double reson. meas. 3-17365

hydrogen compounds continued
HF/DF laser small signal gain meas. system 3-41854
HF-alkyne complexes, substituted, in solid Ar, Fourier transform IR spectra 3-6640
HF-HCN(N_2), H-bonded, rot. spectrosc. investig. 3-50371
HF+Ar, rot. energy transfer, pot. energy surface, trajectory calcs. 3-41656
$HF+F^-$, pot. energy hypersurface, force consts., SCF theory 3-53367
HF+HF, vibr. energy transfer, quantum dynamics and quasiclassical trajectory cross-correl. moment calcs. 3-56048
HF+He, IR laser-crossed molecular beam study 3-26811
HF+inert gas, vibr.-rot. energy transfer collisions, cross-section calcs. 3-56042
HF+Li, pot. energy surface, quasiclassical trajectory calcs. 3-29305
HF+methyl cation, condensation reaction, ab initio MO calcs. 3-45820
$HF+O^-$, flowing afterglow, prod. state distrib. laser induced fluoresc. study 3-39386
$(HF)_2$, HF stretching bands, rot. struct. and vibr. predissoc. 3-55914
$(HF)_2$, intermol. pot. energy surface 3-50477
$(HF)_n$ clusters, dynamics, vibr. predissoc. spectra 3-50487
H_2F, Rydberg states, electronic struct. 3-6523
$H_2(He)_6$, $B^1\Sigma_u$ Rydberg state, solvent effects, supermol. calcs. 3-36704
HI, dipole moment function calc. using anharmonic pot. 3-41702
HI, mol. Rydberg spectroscopy, mag. field effects 3-26662
$HI+Br_2(Cl_2)$, slow chain reactions, IR chemiluminesc., deactivation rate coeff. 3-19516
HI+D, exchange reactions, integral and differential cross sections, rate coeff. and rot. distribs. 3-4270
HI+I, light atom transfer reactions, classical anal. 3-44050
$H_{0.35}MoO_3$, quasi-one-dimensional behaviour of H, proton NMR 3-52647
$HN_2{}^+$, far IR transitions obs. 3-11792
HN_3+F, N_3 radical form., vacuum UPS obs. 3-21820
HNC, IR intensities, ab initio calcs. 3-1238
HNCO, IR spectrum, fundamental ν_2 band, rot. fine struct. 3-6625
$(H_3NHOH_2)^+$, proton transfer, energetics and electronic rearrangements 3-58400
HNO jet-cooled radical, fluoresc. lifetimes and excitation spectra 3-55984
HNO-formaldehyde, H bonded complex struct., prepared by methyl nitrite photolysis 3-1210
HNO_3 extraction by bidentate organophosphorus extractant from radwaste 3-49956
HNO_3+Cl, rate consts., flash photolysis reson. fluoresc. 3-44036
H_2NO, electronic struct., geometry, UHF MNDO PMO calcs. 3-11687
H_2NO free radical π-complex with benzene, struct., quantum-chem. study 3-45852
H_2Ne, vibr.-rot. spectrum, ab initio calcs., close-coupling approach 3-17260
HO_2 radical dissoc., pot. energy surface study using mol. correl. energies calc. 3-55827
HO_2+HO_2, reaction rate const. determ. using flash photolysis technique, temp. depend. 3-4266
HO_2+HO_2 radicals, disproportionation reaction rate coeff. meas. 3-14844
H_2O cryodeposits, optical constants and thermal radiative props. 3-36011
H_2O in Jupiter's NEB, mole fraction in troposphere from IR spectrum 3-20287
H_2O maser emission in ν_2 excited vibrational state at 12 GHz, unsuccessful search 3-30442
H_2O, μ^+ substituted, isotope effect and solvent chemical shift 3-11886
H_2O^+, unimolecular reactions, electronic state interaction, ab initio SCF CI calcs. 3-41503
H_2O-HF, H-bonded complex, hyperfine struct., nucl. spin and quadrupole coupling consts. 3-17302
H_2O_2, enantiomeric mols., parity-violating energy difference, STO calcs. 3-36653
H_2O_2, in mesosphere, role in mesospheric clouds form. 3-10045
H_2O_2 in rainwater, S Florida and Bahama Is. 3-15560
H_2O_2 pollutant in Bombay region atom., India, concs. and photochemical form. mechanism 3-44171
H_2O_2, submillimeter spectrum and mol. consts. 3-6623
H_3O, Rydberg states, electronic struct. 3-6523
H_3O^-, gas phase, long-lived form., struct. and reactions 3-58403
H_3O^+, inversion pot. and rot. inversion energy levels 3-6603
$H_3O_2{}^- + H_5O_2{}^+$, neutralisation reaction, pot. energy hypersurface, polarisation model 3-9315
$H_3O_2{}^-$, struct., global geometry optimisation calcs. 3-55813
$H_5O_2{}^+ + H_3O_2{}^-$, neutralisation reaction, pot. energy hypersurface, polarisation model 3-9315
H_nO^{x+}, n=1-3, x=1,2, struct., stability, adiabatic ionis. pots., multireference CI calcs. 3-45864
HOCl, Q branches in the rot. IR spectrum 3-26728
$HOHCl^-$, struct., mobility and IR spectra 3-1356
$HOHF^-$, struct., mobility and IR spectra 3-1356
$(HOHOH)^-$, electron correl. effects, Moller-Plesset treatment, pot. energy surface calc. 3-11707
HONO, electronic spectrum and photofragmentation, ab initio and CI calcs. 3-11904
H_3OPO_4, cryst., proton cond., defects and impurities, SCRF-CNDO/2 calcs. 3-13512
$H_3OSbO_5.0.5H_2O$, cryst. acid, adsorption of water vapour *(Russian)* 3-47224
$(H_3O)_2Sb_2(SO_4)_4$, cryst. struct. 3-51547
H_2O...HF dimer. rot. spectrum, Stark effects, elec. dipole moments and H bond modes 3-55927
HPF_2BH_3, Raman and IR spectra and normal coord. anal. 3-32063
H_3PO_4, picosecond continuum temporal characts. as revealed by a two-dimens. anal. of streak images 3-40699
H_3PO_4-H_2O eutectic mixture, liq., separation effect near crystn. point 3-2811
H_3PO_4-methanol fuel cell design for silent power plant 3-39465
H_2S, ground state consts., ν_2 band, IR obs. 3-26749
H_2S, IR spectra, rot. anal. using reduced Hamiltonians 3-45939
H_2S in Sicily thermal springs, isotopic composition 3-29959
H_2S in solid Kr matrix, photodissociation, photoluminescence emission and excitation spectra 3-26774
H_2S, MO interactions, preferred geometry ab initio SCF calcs. 3-11653
H_2S molecules, X-ray spectra of multi-ionised atoms, extraatomic relax. effects 3-45966
H_2S, Mt. St. Helens volcanic plume chem. composition 3-20081

hydrogen compounds continued
H_2S, multiphoton ionisation spectroscopy, reinvestig. of $^1B_1$-$^1A_1$ band at 139.1 nm 3-21829
H_2S, photofragmentation in first continuum, time of flight and ang. distrib. meas. 3-46034
H_2S, volcanic gas emission obs. 3-15402
H_2S^+, orbital angular momentum and Renner-Teller effects 3-55921
H_2S-HF, equilib. struct., ab initio calcs., role of d functions 3-36671
H_2S+CL(H), reaction rate constant determ. using reson. fluoresc. in discharge flow 3-48056
H_2S+methyl cation, condensation reaction, ab initio MO calcs. 3-45820
H_2S_4, rot. isomerism, mol. mechanics and MINDO/3 calcs. 3-55844
H_nS^{x+}, n=1-3, x=1,2, struct., stability, adiabatic ionis. pots., multireference CI calcs. 3-45864
H_2SCl radical, three electron bond ab initio MO calcs. 3-6532
H_2SClH^+, radical, three electron bond ab initio MO calcs. 3-6532
HSO_3, stratospheric conc. due to volcanic emissions 3-35240
H_2SO_4 electrolyte for deposition of Co-W-Mn alloy, behaviour of sulphate and tungstate ions *(Russian)* 3-53415
H_2SO_4 in Venus atm., abundance from radio opacity 3-30272
H_2SO_4, mol. struct., ab initio MO calcs. 3-45805
H_2SO_4, stratospheric conc. due to volcanic emissions 3-35240
H_2SO_4-negative ion reaction rates for stratospheric conditions 3-15549
H_2SSH radical, three electron bond ab initio MO calcs. 3-6532
$H_2Sb_4O_{11}.nH_2O$, fast proton conductor, rigid lattice NMR spectra 3-14149
$H_2Sb_4O_{11}.nH_2O$, proton cond., Grotthus mechanism, NMR study 3-43454
H_2Se, bending modes, vibr. relax. in gas mixtures 3-11951
$H_{0.33}WO_3$, quasi-one-dimensional behaviour of H, proton NMR 3-52647
$NH_2{}^+$, struct., linewidths and shifts, microwave obs. 3-50382
NHO_3 in stratosphere, chem. conversion from N_2O_5 3-54106
$ReCl_5$-H_2SO_4-H_2O, ESR spectrum 3-57746
$Sn(HPO_4)_2.xH_2O$ insoluble acid salt, prep. and characts. *(Russian)* 3-47756

hydrogen distribution *see hydrogen economy*

hydrogen economy
absorption and desorption of H_2 3-48090
Borsod chemical plant's utilisation of waste hydrogen *(Hungarian)* 3-44154
conference, Pasadena, USA, 1982, June 3-25689
electrolyser with solid electrolyte using Nafion membrane, design and construction 3-48184
electron transfer relativity of coordination compounds used for photochemical splitting of water 3-19627
Europe, safety regulations 3-48197
European Community Energy R&D Programme, synopsis of first results 3-48185
Friauf-Laves phase alloy, hydrides struct. and phase relations, neutron diffr. studies 3-33197
H_2 energetics, conditions and material requirements for production *(Hungarian)* 3-44155
H_2-NiOOH rechargeable cell, hydrogen permeable membrane electrode, for H_2 production 3-15008
H_2/H_2-rich fuels production using central receiver solar utilities 3-19625
H_2O electrolysis for H_2 production, gas bubble behaviour and electrolyte resistance 3-15009
H_2S solar thermochemical high temp. processing to produce H_2 and S 3-9400
HTGR, development aims and possibilities *(German)* 3-21494
hydride systems, review 3-48178
hydriding alloys, reversible, hydriding cycling response in H_2-CO atmosphere 3-47219
hydriding and dehydriding kinetics 3-48045
hydriding with activated Ti sponge, He and O effects 3-48198
metal hydride hydrogen storage beds space-time dependent temp. and composition props. determ. using RET 1 computer code 3-53595
metal hydrides, chemical, review 3-48180
metal hydrides, energy storage, thermodynamic and kinetic props. 3-39539
metallurgy of rechargeable hydrides, review 3-9499
nuclear-hydrogen power, radiolysis of steam under flow conditions 3-15010
peak lopping electrical power by H_2 storage during low demand periods *(German)* 3-9498
production by catalysis of SO_2 3-48187
production by hybrid thermoelectrolysis using various catalysts 3-48188
production from sea-water by electro-chemical method 3-19622
production methods for H_2 critical assessment 3-19626
rare earth-based amorphous alloys, struct. characterisation, appl. to H storage 3-33095
solar energy storage as H_2 and Br_2 from HBr, idealised system performance 3-58563
solar generation, biological approach 3-53591
solar-hydrogen energy system-model applied to isolated island 3-53593
Sunshine Project of Japan, current research and development status 3-4369
synthetic diaphragms and membranes for the electrolytic production of H_2 3-48194
thermochemical production, separation process modelling, computer program 3-48186
viologen-Pt systems for H_2 generation 3-24643
water electrolysis, polymer separators for H_2 production 3-48195
water vapour on Ti/TiO_2 surfaces, photolysis, H-prod. 3-4298
Be_2HfH formation 3-48179
Be_2TiH_3 formation 3-48179
$Be_2ZrH_{2.3}$ formation 3-48179
Ce-La-Ni-H-Al(Fe), hydriding and dehydriding kinetics 3-48048
$CeMg_{12}$, hydride form. mechanism and kinetics 3-48051
$CeNi_{5-x}Cu_x$, H storage and desorption, hydride heat of form. 3-24641
Fe-Ti absorption of H_2, selective 3-47220
Fe-Ti-Zr-Nb, hydrogen storage characts. 3-48183
FeTi, activation for H_2 storage 3-48176
FeTi, activation for H_2 absorpt. 3-48177
FeTi, hydriding, activation processes and kinetics 3-48052
FeTi-based alloys containing β-Ti, hydrogenation 3-42569
$FeTiH_x$ (x=1, 2), electronic props. 3-38294
H_2 production, thermochemical, by nickel-iodine-sulphur process 3-34742
H_2 production, thermochemical separation between O_2 and SO_2 3-48190

hydrogen economy continued
H_2 production by decomposition of water in photoelectrochemical cell 3—34743
H_2 production by direct thermal decomposition of water, preliminary investigations 3—19624
H_2 production by thermochemical Mark 11 cycle, pilot plant evaluation and detailed design 3—48189
H_2 production by water electrolysis under pressure and moderate temp. 3—48193
H_2 production by water electrolysis using solar cells, parameters affecting efficiency 3—58564
H_2 production from H_2S using selective diffusion membranes 3—34741
H_2 production from water, R&D present status in Japan 3—53592
H_2 production in large quantities using electrolytic cells 3—48192
H_2 production using alkaline water electrolysis cells and polyantimonic acid based membranes 3—48191
H_2 production using steady-state pH-differential water electrolysis cell 3—19623
H_2 production using U-GAS goal gasification process, pilot plant results, current status and economic projections 3—53594
H_2 production/storage using titanium electrodes and metal hydrides 3—39537
H_2 storage, underground, implications of fingering 3—34744
H_2 storage in the form MgH_x, Mg hydrogenation characts. 3—53596
H_2 storage using FeTi hydride beds, designs modelling and evaluation 3—39538
H_2 storage with cryoadsorpers, comparison with other storage methods 3 48196
H_2O photocatalytic dissoc. for H prod. by p/n Fe_2O_3 polycryst. assembly 3—48175
$LaFe_yNi_{5-y}$, H storing materials, X-diffr. and Mossbauer study *(Chinese)* 3—53026
$LaNi_5$, absorption of H_2, selective 3—47220
$LaNi_5$, hydriding cycling response in H_2-O_2 atmosphere 3—47218
$LaNi_5$, phase separation, particle size distrib. of Ni, magnetisation meas., H storage appl. 3—14593
$LaNi_5$-H system, hydriding and dehydriding rates 3—48047
$LaNi_{5-x}Cu_x$ hydrides, bonding, rel. to H storage materials, photoemission and band struct. calc. studies 3—27889
Mg cluster, absorbed H, ab initio HF SCF MO study 3—36900
Mg-Ni (10 wt.%), hydride form. mechanism and kinetics 3—48051
Mg-Ni (23.3 wt.%) eutectic alloy, reaction with H_2, kinetics 3—48050
MgH_2 formation and decomposition by H_2 absorpt./desorpt. 3—48087
Mg_2Ni hydride heat storage system heat transfer characts. 3—9492
Mg_2Ni, modified by organic cpds., H_2 absorpt. 3—48089
Mg_2Ni-H system, dehydriding reaction kinetics 3—48044
Mg_2Ni(-Mg), diffusion of H, neutron scatt. meas. 3—42851
Ru oxide anodes for oxygen evaluation by water decomposition 3—15007
Si ultra fine particles for high efficiency H storage *(Japanese)* 3—29458
Ti-Zr-Fe-Mn hydrides equilibrium props. 3—47820
$Ti_{1+x}Cr_{2-y}Mn_y$, hydrogen storage props. 3—48181
TiFe and alloys, hydride form. rel. to hydrogen storage *(Korean)* 3—53597
$TiFe_{1-x}Ni_yV_z(Nb_z)$, hydrogen storage props. 3—48182
$Ti_{0.8}Zr_{0.2}CrMnH_3$, diffusion of H, neutron scatt. study 3—28152
Zr and alloys, electrochemical hydriding, H supersaturation effects, H storage appls. 3—58562
$ZrMn_{2+x}$, hydride formation and decomposition, kinetics and thermodynamics 3—42810
$ZrMn_2Fe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3—48081
$ZrMn_2Mn_yFe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3—48082
$Zr_{1-x}Ti_xMn_2$, hydride formation and decomposition, kinetics and thermodynamics 3—42810
$Zr_{0.7}Ti_{0.3}Mn_2Fe_{0.8}$, hydrogenation, H_2 storage appl. 3—24642
$Zr_{1-x}Ti_xMnFe$ alloys, hydrogenation characts., H_2 storage appl. 3—24529
$Zr(V_xCo_{1-x})_2$:H, Laves phase, H interstitials study 3—38340

hydrogen embrittlement
brass, subcritical crack growth due to SCC or H_2 embrittlement, AE obs. 3—14767
Inconel 600 and 625, single-phase, hydrogen-assisted fracture 3—14719
mechanical props. at low temp., H_2 effects *(Japanese)* 3—9160
metal, corrosion fatigue, loss of strength action of aggressive media, physicochem. mechanism 3—58304
metal test piece, anelastic deform. rel. to H conc. *(German)* 3—58356
steel, 4340, hydrogen induced delayed plasticity and cracking, SEM obs. 3—53265
steel, AISI 4340, solubility of H, 298 to 873K 3—18461
steel, alloy, SCC and hydrogen induced blister cracking in H_2S environment, alloy additions effect 3—58273
steel, alloyed, surface crack growth rate calcs. 3—9181
steel, austenitic stainless, fatigue crack propag. influence of gaseous environment 3—14707
steel, austenitic stainless, H-assisted cracking, types 304L and 316L, grain size and heat treatment effects 3—19396
steel, austenitic stainless, internal stresses rel. to hydrogen cathodic charging, X-ray obs. 3—39232
steel, austenitic stainless, Mn, tensile props., effect of H 3—24349
steel, austenitic stainless, slow crack growth, effect of H conc. 3—14714
steel, austenitic stainless, tempering effect, austenite content 3—34449
steel, austenitic stainless, weld fracture, H-assisted, effect of comp. and microstruct. 3—34465
steel, BCC, grain boundary segregation and H embrittlement 3—47839
steel, constructional, resistant to H embrittlement, alloying additions and struct. 3—53200
steel, Cr-Mo, fracture testing in high temp. and press. H_2-H_2S environment, test chamber system 3—29238
steel, ferritic-austenitic stainless, H-charged, tensile props. *(Japanese)* 3—29167
steel, H attack and embrittlement, mechanisms 3—4097
steel, H embrittlement rel. to struct. state 3—53199
steel, high strength, corrosion fatigue crack propag. mechanism 3—34429
steel, high strength, dynamic SCC, threshold crack growth characts. *(Japanese)* 3—4193
steel, high strength, hydrogen embrittlement, role of MnS inclusions 3—29173
steel, high strength low C type X-65, strain rate and cathodic potential effect on tensile ductility 3—39281
steel, HSLA, Cr plated, low cycle fatigue rel. to cooling conditions 3—43952

hydrogen embrittlement continued
steel, maraging, ultrahigh strength, H_2 embrittlement, effect of ion-plated Al coating *(Japanese)* 3—29210
steel, maraging VNS-2, temp. relationship of retarded fracture process, mobile H content 3—58236
steel, mild, subcritical crack growth due to SCC or H_2 embrittlement, AE obs. 3—14767
steel, Mn-Mo-Ni, low alloy, temper and H embrittled, acoustic emission, indentation loading studies 3—24348
steel, nuclear pressure vessel, tensile props. and fracture mode, combined effects of neutron irrad. and H absorpt. 3—18353
steel, spheroidised, notch ductility and fracture, effect of H_2 charging 3—53196
steel, spheroidised medium C; bent bars, fracture and constrained yielding, H charging effect 3—34481
steel, stainless, fatigue damage in hydrogen under low-cycle bending load *(Ukrainian)* 3—9146
steel, stress-rupture strength at high temp. and H_2 press., prediction using chem. comp. 3—58237
steel, texture effect on H embrittlement, impact, SEM study, dislocation model *(Chinese)* 3—34419
steel lower strength, fatigue crack propag., near threshold and higher growth rates, environmentally influenced 3—24350
steel weldments, quenched and tempered, H-induced crack propag. 3—14729
Al alloy 7179 T651, subcritical crack growth due to SCC or H_2 embrittlement, AE obs. 3—14767
Al-Cu, 2021, fatigue crack growth, effect of environment 3—29149
Al-Mg, torsional fatigue, effect of absorbed H_2 3—47954
Al-Zn-Mg, high strength, H-induced cracking and SCC 3—19449
$CaNi_5$, absorption of H_2, disintegration, acoustic emission and exoelectron emission 3—47935
Fe, commercial purity, H attack, effect of stress *(Japanese)* 3—9163
Fe, deform. and fracture, influence of gaseous H_2 3—29185
Fe, H adsorption, work function-chemisorption study 3—51917
Fe, pure, H permeation and diffusion 3—42855
Fe-based alloys, grain boundary segregation and H embrittlement 3—47839
Fe-Cr alloy, hydrogen-induced cold work peak of internal friction 3—14643
Fe-Mn (12 wt.%), hydrogen embrittlement, H_2 conc. effect *(Korean)* 3—4113
Fe-Ni, H permeation and diffusion 3—42855
Fe-Ni-B (40, 20 at.%) glassy alloy, stress corrosion behaviour in aq. acidic media 3—53269
$Fe_{40}Ni_{40}P_{14}B_6$, glassy alloy, SCC, H embrittlement in aq. acidic media 3—58286
$LaNi_4Fe$, absorption of H_2, disintegration, acoustic emission and exoelectron emission 3—47935
Mg-Al (7 wt.%), subcritical crack growth due to SCC or H_2 embrittlement, AE obs. 3—14767
Ni, H embrittlement intergranular, influence of S, P and Sb segregation 3—53194
Ni, pure, H permeation and diffusion 3—42855
Ni wire, tensile stress during H diffusion 3—39246
Ni-based alloys, grain boundary segregation and H embrittlement 3—47839
α-β Ti alloy, microstructural effect on susceptibility to internal H_2 embrittlement 3—14710
Ti alloys, fracture micromechanism, influence of H *(Russian)* 3—24333
Ti and alloys, H embrittlement, susceptibility 3—9191
Ti-Al-V alloy, VT5L, rare earth additions effect on mech. props. and thermal stability 3—24367
Zr-Nb (2.5 at.%), H isotope solubility in stressed hydride forming alloy 3—53211

hydrogen energy *see hydrogen economy*

hydrogen ion activity *see pH*

hydrogen ion concentration *see pH*

hydrogen ions
bombardment of graphite, room temp. to 4000K, erosion yield 3—26449
chemical sputtering yields of TiC on H^+ bombardment, methane prod. 3—26444
complexes with first and second-row bases, ab initio MO calcs. 3—9316
fusion reactor first wall, extended local mixing model for H retention and isotope exchange 3—17041
fusion reactor plasma-wall interaction simulator, factors affecting dynamics 3—17046
H_2^+, dissoc., H^+ velocity distrib. and separation in C foil, computer model 3—50541
H^+, electron stimulated desorption from condensed branched alkanes 3—2971
ionosphere topside, nonstationary polar wind rel. to H^+ and O^+ densities 3—15719
kinetic energy spectra with double focusing mass spectrometer *(French)* 3—46096
proton beams produced of inverse reflex tetrodes, electrode-structural effects 3—6485
S237, S254-S257, small H II regions, ionised gas distrib. from V-band and Hα maps 3—59429
sputtering of carbide fusion reactor materials due to light ion bombardment 3—26441
sputtering yield data for light ion bombarded metals for fusion reactors 3—21515
sputtering yields of Ti due to light ion bombardment, fusion reactor divertor plates 3—26442
stellarator plasma heating, impurity concentration reduction of intense H ion beam 3—32920
surface processes under H isotope bombardment, SIMS obs., Tokamak relevance 3—17039
surface recombination coefficient on Pd, implications for H recycle in Tokamaks 3—21506
trapping in fusion reactor material, transport parameter for max. H inventory and release 3—17045
$\bar{p}+H(He^+)(Li^{2+})$, excitation, ionisation and charge transfer 3—41661
$Ar+H^+$, angular distribution of ejected L-shell electrons 3—26831
H ions formed by field ionisation, mass spectrometry and appearance spectroscopy 3—6591
H ions+He, absolute partial ionisation cross sections determ. for inelastic interactions 3—6765
H ions+He, ionisation, deviations from q^2 scaling 3—6764

hydrogen ions continued
H^-, electron impact, H^+ form. 3−6791
H^-, electron pair correlations, review 3−41507
H^-, high lying doubly excited state, radial and angular correl. 3−11720
H^- intense beam prod. study 3−30963
H^- ion beam for fusion reactor neutral beam injection 3−41305
H^-, multiply excited states, electronic correl., hyperspherical anal. 3−26656
H^-, Schrodinger eqn., two dimens. fully numerical solns. 3−36669
H^- volume-produced ions extraction, from multicusp source 3−32921
H^+, 7 MeV, energy loss in Cu foils, geometrical effect, computer simulation 3−51679
H^+, active electrogenic transport in vesicles of plasma membranes of cow parsnip phloem cells 3−39612
H^+ beam, collision with solid surface, hydrogenic excited states formation 3−21669
H^+, beam-foil level excitations, molecular effects study 3−21880
H^+ concentration in Venus atm., predawn bulge, solar wind effect 3−44682
H^+, dependent efflux of Ca^{2+} from isolated heart mitochondria 3−34809
H^+, exchange for K^+ in E. coli, systems 3−39610
H^+ implantation and blistering, density distrib. profile in Al and W films 3−46983
H^+ in H atom, motion, Dirac field theory 3−31889
H^+, low energy, polarisation meas. method 3−1178
H^+ transfers, electron correl. effects, ab initio MO calcs. 3−58399
H^+ transport, induction in mitochondrial membranes 3−39611
H-like ions in strong mag. fields, photo-ionisation/photo-recombination cross sections 3−40021
$_1{}^1H+{}^{79}Au({}^{82}Pb)({}^{83}Bi)({}^{92}U)$, M-shell X-ray prod. cross sections meas. 3−6759
H^-+Ar, detachment collisions, electrostatic vs. dynamical coupling 3−56033
$H^-+H(H_2)$, 0.3-3.5 MeV, total one-electron-loss cross sections 3−26836
H^-+He, electron detachment, doubly differential cross-section 3−26819
H^-+He, impact param. depend. on detached electron energy spectra 3−46056
H^-+He collisions, electron detachment cross section 3−50504
$H^-+He(H_2)(N_2)$, charge exchange to shape reson., detached electron energy spectra 3−50495
H^-+methane, pot. energy hypersurface, force consts., SCF theory 3−53367
$H^-+N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3−46059
$H^-+\bar{p}$ collisions, H^- stripping with low energy $\bar{p}$ 3−46058
$H^++{}^{12}C$, K-ionisation probability across 460 keV ${}^{12}C(p,p_0)$ reson. 3−26840
$H^++Ar(Xe)$ high energy collisions, electrons and X-rays angular distrib. 3−41646
H^++atom central and noncentral collisions, 27.5-900 keV, time-depend. Thomas-Fermi approach 3−21860
H^++atoms, (Z=1-92), energy loss, time-of-flight, inelastic collision probability data tables 3−10527
$H^++CH_4(SF_6)(CF_4)$, vibr. excitation, semiclassical model 3−17364
H^++Cs, charge transfer excitation, Lyman-alpha emission 3−41674
$H^++Cu(Ge)(Mo)(Ag)(Sn)$, K-shell ionis. cross-section meas. 3−41670
H^++H, charge transfer cross section, high energy behaviour, eikonal approx. 3−6763
H^++H, differential cross sections and charge exchange probabilities 3−56067
H^++H, impact ionisation and charge transfer cross sections, classical-trajectory Monte Carlo method 3−11961
H^++H, partial cross section for charge transfer, report 3−21894
H^++H, reson. charge transfer, total cross sections, impact parameter calcs. 3−50305
$H^++H(D)$, differential cross-sections, intermediate energies, isotope effect 3−26847
$H^++H(H_2)$, 0.25-0.6 MeV, total electron capture cross sections 3−26837
$H^++H(H^+)(Li^{2+})$, excitation, ionisation and charge transfer 3−41661
H^++He, double ionisation at high velocity 3−6776
H^++He, elastic differential cross sections, for small angle scatt., 25-, 50-, and 100 keV protons 3−11926
H^++He, orbiting and rainbow structures, low-energy elastic differential cross sections, semiclassical anal. 3−50304
H^++He^*, excited state impact induced alignment, backcoupling 3−50507
$H^++He(Ne)(Ar)$, ionisation, differential cross section calcs. 3−56069
H^++In, L X-ray prod. cross sections for 120 to 400 keV H^+ bombardment 3−14395
H^++Li, adiabatic switching factors in slow collisions 3−41648
H^++Li, charge exchange, mol. pot. model 3−41677
H^++Li^+, electron capture cross sections calc. 3−11942
$H^++Li(Na)(K)$, excitation-autoionisation 3−1464
H^++methane, electron capture in close collisions 3−21905
$H^++MuH(MuD)$, elastic scatt. cross-sections obs. 3−32163
H^++Na, excitation of 3p level of Na 3−21891
$H^++Na(K)(Rb)(Cs)$, electron capture from ground and excited states, mol. calcs. 3−26816
$H^++Ne(Ar)$, electron capture from the K and L shell, probability depend. on scatt. angle 3−1474
H^++Ni, *K*-vacancy prod. cross sections, struct. effects 3−11943
H^++O^{3+}, fine struct. transitions calc. 3−21859
H^++U, *K*-vacancy prod. cross sections, struct. effects 3−11943
$H_2{}^+$, beam-foil level excitations, molecular effects study 3−21880
$H_2{}^+$, bonding process in ground state, LCAO calc. 3−45836
$H_2{}^+$, chemical bond formation and orbital contraction 3−11677
$H_2{}^+$, double well potential with degenerate minima, perturbation theory *(Russian)* 3−110
$H_2{}^+$, electron elastic scatt. anal. 3−46067
$H_2{}^+$, electron stimulated desorption from condensed branched alkanes 3−2971
$H_2{}^+$, intense field mol. multiphoton dissoc., Floquet theory and quasi-energy methods 3−32154
$H_2{}^+$, pot. energy curves, adiabatic hyperspherical treatment 3−11724
$H_2{}^+$, Schrodinger eqn., two dimens. fully numerical numerical soln. 3−36668
$H_2{}^++Ar$ collision, electron ang. distrib. in electron spectra 3−56034
$H_2{}^++Ar(Xe)$ high energy collisions, electrons and X-rays angular distrib. 3−41646
$H_2{}^++C$, internucleon separation calcs. using realistic single scattering cross sections 3−21852
$H_2{}^++He$, alignment in mol. excitation for 3.22 keV collision 3−56052

hydrogen ions continued
$H_2{}^++He^*$, excited state impact induced alignment, backcoupling 3−50507
$H_2{}^++Na$, excitation of 3p level of Na 3−21891
$H_3{}^+$, beam-foil level excitations, molecular effects study 3−21880
$H_3{}^+$, photodissociation, Stieltjes-imaging calcs. 3−36828
$H_3{}^+$, singlet states, high one-electron excitation, CI calcs. 3−11710
$H_3{}^++CO$ reaction, HCO^+ and HOC^+ formation 3−24501
$H_3{}^++HD \rightleftharpoons H_2D^++H_2$, rate coeffs. and enthalpy change, appl. to interstellar matter 3−25304
$H_3{}^++He^*$, excited state impact induced alignment, backcoupling 3−50507
$H_3{}^++Na$, excitation of 3p level of Na 3−21891
HD^+ electron distrib. asymmetry, adiabatic approx. calcs. 3−11674
HD^+, vibr. rot. spectroscopy near dissoc. limit, meas. of v=17-14 band 3−55922
$HD_2{}^+$, beam-foil level excitations, molecular effects study 3−21880
$H^+(H_2{}^+)(H_3{}^+)$ ions, de-excitation probability on reflection from Be surface 3−50506
${}^1H$-dimens. J spectra, symmetrisation 3−16391
He^+, electron impact excitation, linear algebraic approach 3−32218
$MgO:H^-$, thermochemically reduced, charge and mass transfer, IR absorpt. and luminesc. study 3−43573

hydrogen neutral atoms
21 cm line obs. of cD galaxies centred on extended X-ray sources 3−10459
abundance in high luminosity elliptical galaxies, UHF obs. 3−35709
active galactic nuclei, H I velocities, UHF obs. 3−25590
adsorption on Si (111), surface struct. and cond. studies 3−51938
atomic, mag. resonance review 3−2924
atomic concentration and vel. meas. in tokamak using harmonically generated Lyman-α 1215 Å radiation 3−12968
atomic E1 and E2 radiation interf. detect. 3−21700
atomic fine structure in space of constant curvature 3−1502
avoided crossings and autoionisation widths in mag. fields 3−26702
backscattering from Al and W, low energy, ang. and energy correls. 3−26452
Balmer α lines in expanding chromospheres of late G/K-type supergiants 3−5292
Balmer line equiv. widths and spectral energy distribs. of rotating B and A-stars 3−44743
Balmer series H level population in electron beam, ion+mol. reaction role 3−14865
beam-foil-excited into high Rydberg states, coherent Stark levels 3−56058
bound state spectrum in strong mag. fields 3−6566
3C 58, Crab-like supernova remnant, H I absorption profile obs. rel. to distance 3−5400
Centaurus A, H I absorpt. spatial struct., nucleus nature, UHF obs. 3−35734
charged particle scatt., Glauber amplitude calc. 3−46062
chemical reaction with graphite, methane yield, electron bombardment enhanced, temp. depend. 3−26445
chemical reaction with graphite and TiC-coated graphite, electron impact influence on methane prod. 3−26446
chemical reaction with pyrographite, hydrocarbon form., synergistic effect of Ar ion bombardment 3−26447
chemisorbed on W, atom vibrations 3−28209
chemisorbed on W(110), core level spectroscopy study 3−57207
circumstellar envelopes around evolved late-type stars, H I content from VLA obs. 3−54343
collisions on ${}^4He$ liq. surface, sticking probability 3−57174
Cygnus X-3, interstellar H I column density from I-band obs. 3−10402
deficiency in Abell 262, cluster of galaxies 3−20510
detection and energy analysis using time-of-flight technique 3−22721
Dirac H atom, virial theorem 3−25723
elastic electron scatt., two-pot. method, Coulomb projected Born approx. 3−32208
elastic electron scatt. from excited 2s state, HHOB approx. 3−50306
electron elastic and inelastic scatt., close-coupling eqns. study 3−26850
electron elastic and inelastic scatt. at intermediate energies, coupled channel second order pot. model 3−26859
electron impact, laser-assisted, space-translation method calcs. 3−26806
electron impact, Space Translation Method used in laser assisted collision problems 3−26865
electron impact excitation, Faddeev-Watson approximation 3−56082
electron impact excitation angular distrib. of n=2 levels 3−21922
electron impact ionisation, first-order eikonal exchange amplitudes 3−11987
electron impact ionisation, spin exchange effect meas. 3−26870
electron impact ionisation, triple differential cross sections in Coulomb projected eikonal approx. 3−56081
electron impact-excitation of n=2 level, polarised orbital method study 3−11989
electron momentum distrib., thought expt. 3−44930
electron motion, dynamic symmetry in Coulomb field, Fock represention 3−31934
electron scatt., exchange contrib. to optical-model pots. 3−46075
electron scattering, third-order effects 3−56077
electron scattering theory for intermediate and high energies in 30-400 eV range 3−21913
energy level series for pot. well in strong external field 3−31888
energy levels inside paraboloidal box in elec. field, Stark effect 3−6575
energy values and sum rules for hydrogenic atoms in arbitrary mag. fields, numerical wave functions 3−10194
excitation rate coeffs. from ground state to n=2 and n=3 levels 3−26866
excited states, Rydberg diamagnetism 3−26655
few particle Schrodinger eqn., exact bound state solution from Raleigh-Schrodinger perturbation theory. 3−5648
frequency conversion processes 3−12222
galactic H I absorption towards 3C 123, VLA synthesis 3−10412
in galaxies, 21-cm line obs. of 59 lenticular and spiral galaxies 3−44842
galaxies, H I 21 cm line width as extragalactic distance indicator 3−44835
galaxies, H I 21 cm line widths rel. to Hubble sequence of masses 3−44836
gas chromatographic separation of H isotopes, D_2-HD and H_2-HD-D_2 mixtures 3−1029
GD 40, hot He-rich white dwarf star, H abundance as test of diffusion theory 3−54364
ground state, struct., Wigner's phase space function 3−21631

hydrogen neutral atoms continued
ground state hyperfine transition line shifts, hyperfine-interaction noncontact term contrib. 3−21722
highly excited atom randomisation in low-freq. EM wave field 3−41512
hot atom+CO, rot. excitation 3−11949
interacting adiogalaxies, H I emission survey 3−59449
interaction potential with normal modes in He films 3−57170
interstellar H I, molecular clouds creation rate rel. to propagating star form. 3−54517
interstellar H I survey, brightness temps. and H I column densities in southern galactic plane 3−15977
ionisation by fast highly stripped ions, scaling cross section 3−11965
isotope separation from water, dual-temperature system 3−6392
Jupiter atmosphere, H I column density from Copernicus meas. of Jovian Lyman-alpha emission 3−10252
luminous stars mass loss determ. from IR H lines 3−25417
Lyman α emission from Jupiter, vars. in 1979-82 period 3−35503
Lyman α from Uranus, intense emission, possible aurorae 3−5216
Lyman α high-vel. absorption in NGC 1275, IUE spectrophotometry 3−25603
Lyman α profile obs. during solar eclipse, coronal temp. structure 3−59292
Lyman-alpha emission-line profiles in high-redshift QSOs 3−16029
in M31, anal. of warping of H I disc 3−10466
in M31, comparison of H I gas distrib. with optical data and star form. rate 3−10467
matter, structure and props., book 3−40326
microwave plasma generation of H atoms for rocket propulsion 3−42417
Monoceros SNR region, 130 pc diameter H I shell, struct. and expansion, UHF obs. 3−44827
motion in strong mag. fields, theory 3−26672
NGC 2071, star form. region, H I 21 cm line detect., assoc. with IR star cluster 3−48989
NGC 2712 and 5301, isolated spiral galaxies, H I maps and mass 3−30495
nonrelativistic, AO calcs. Green's function path integral, Kustaanheimo-Stiefel transform. 3−50290
nonrelativistic, at. orbitals in 4-dimens. Riemann space, path integral calcs. 3−41482
path integral for coherent states of dynamical group SU(1,1) 3−20667
in peculiar galaxies in clusters of galaxies, H I content from 21 cm obs. 3−10449
photoelectrochemical cells, based on photoinduced H abstraction reaction in soln. 3−9444
photoionisation cross-section, relativistic effects calcs. 3−55905
positron collisions, field-theoretic formalism 3−41680
positron impact, positronium+H^+ form., ideal space treatment 3−56084
positron ionisational collisions, classical trajectory method 3−32216
positron scatt., hyperspherical coordinate treatment, singly and double excited S-state props. 3−50525
production rates in Comet West (1976 VI) and Periodic Comet d'Arrest (1976 XI) 3−48856
quadratic Zeeman effect, semiclassical quantisation calcs. 3−26690
quadratic Zeeman effect for weak mag. fields 3−50347
quantum mechanical Coulomb problem path integrals, Green functions, wave functions 3−10611
quasi-Landau resonances and at. diamagnetism 3−26617
radial distribution and mass in galactic plane 3−59474
radiogalaxies, H I emission survey 3−59449
recombination and binding on liq. He, mag. reson. study 3−1290
relativistic, momentum representation 3−55868
relativistic atom, energy level calcs., Sommerfeld Puzzle 3−36699
Rydberg atoms, intense microwave interactions 3−26678
Rydberg states, three-photon excitation 3−26700
s-wave electron scatt., variational linear algebraic equations method calcs. 3−21915
semisimple 1:1 resonance reduction, harmonic oscillators and hydrogen atom 3−16170
Seyfert galaxies, H I emission survey 3−59449
in SMC, $N_H/E(B-V)$ ratio for Sk 143 rel. to galactic type UV extinction curve 3−10423
source, high-density effusive target prod. 3−30961
spectrum, blackbody radiation effects 3−35790
spectrum in intense laser fields using Kramers-Henneberger transform. 3−17242
spheroidal analysis, recurrence relations and wavefunctions 3−45826
spin polarised, Bose-Einstein condensation and superfluidity 3−28192
spin polarised, conference on condensed matter techniques and materials, Argonne Nat. Lab., Argonne, IL, USA (Sept. 1981) 3−10514
spin polarised, hyperfine states, ESR study 3−33535
spin polarised, order parameter relax. and quasiparticle scatt. time 3−171
spin polarised quantum gas, transport props. 3−28191
spin-polarised, review 3−13588
spin-polarised, stabilisation and adsorption on ^3He surface 3−13589
in spiral galaxies, integrated 21 cm line profiles 3−5419
in spiral galaxies in binary/multiple groups, distrib., mass and motion 3−30492
in spiral galaxies in clusters, relations between morphological types and integrated H I content 3−20501
Stark broadening, appl. to diagnosis of plasma Langmuir solitons 3−22615
Stark effect near potential barrier peak 3−26689
sticking of spin polarised atoms to ^4He surface 3−38146
sticking probability on liq. He surfaces, mag. reson. lineshape study 3−1291
stimulated radiative corrections, two-photon ionisation, Stark shifts 3−45876
stimulated radiative corrections and shifts, energy level broadening 3−31968
transition probabilities and branching ratios for elec. dipole transitions 3−44904
trapped, in methane and Xe matrices at cryogenic temps. 3−1286
trapped in 8, M H_2SO_4 at 77K, ESE signal decay modulation anal. 3−11838
trapped in gas-discharge ring source plasma for filling open magnetic trap *(Russian)* 3−22659
two-atom bosonic systems, spin-polarised, boson-fermion hybrid representation 3−46043
two-electron atoms, supermultiplet classification and collective spectra 3−45880
two-frequency excitation 3−11751

hydrogen neutral atoms continued
two-photon 0^+-0^- transitions 3−32026
two-photon excitation and ionisation with tunable VUV at Lyman-α 3−11768
two-state reson. persistence under periodic impulsive field influence 3−31973
UGC 6081, peculiar galaxy, H I absorpt. and visible obs. 3−59462
Uranus, detect. of auroral H Lyman-alpha emission by IUE 3−35527
Venus atmosphere, H altitude profile from H I Lyman α obs. 3−44683
Venus thermosphere winds effect on exosphere H distrib. 3−30278
Virgo cluster disc galaxies, H I masses and diameters 3−59446
Virgo cluster galaxies, 21 cm data and optical emission line fluxes rel. to galaxy-IGM interactions 3−30509
W3, H I movements and distrib. UHF obs. 3−40275
Zeeman effect, perturbation theory calcs. 3−6574
C^6+H, large angle scatt., illustration for slow multiply charged ion+atom collisions 3−21902
H atomic densities near wall, laser-induced fluoresc. meas. 3−18038
H I Balmer α and β lines in Orion Nebula, obs. 3−40218
H^+ charged particle, elastic and inelastic collisions, total cross sections 3−11927
H^+ ion motion in atom 3−31889
H-like atom+ion, single ionis. at high and intermediate energies 3−56057
H-like atoms, excited state radiative mean lifetimes, semiclassical calcs. 3−26666
H-like ions, electron impact excitation, linear algebraic approach 3−32218
H-like ions, O^{5+}, Lamb shift meas. 3−21709
H-like ions, quasi-Landau spectrum, two dimens. quantisation 3−1283
H-like ions, relativistic and correl. effects, Green's function of Dirac's eqn. 3−31897
H+alkali metals, reaction rate meas. method 3−48066
H+antiH, interaction potential 3−36886
$H+Be^{4+}$, charge transfer, molecular approach 3−17372
$H+BrH \rightarrow HBr+H$, 3-dimens. rate coeffs., quantum sudden and var. transition state calcs. 3−44042
$H+C^{6+}$, charge-exchange cross sections, semiclassical trajectory effects 3−26849
$H+C^{6+}$, continuum distorted wave capture into nth shell 3−11957
$H+C^{q+}(O^{q+})$, electron capture cross-section meas. in low energy collisions 3−6760
H+CO is interstellar medium, mol. vibr. excitation theory 3−54476
$H+CO_2$, mol. vibr. states, spectral distrib. 3−56046
$H+Cs(N_2)$, electron loss and capture cross section meas. 3−6779
H+D, excitation transfer process, fluoresc., numerical simulation studies 3−50344
H+ethylene reaction, ab initio MO calcs., equilib. geom., transition struct. and vibr. freqs. 3−48059
H+ethylene reaction, ab initio MO calcs., heats of reaction, barrier heights and bond dissoc. energies 3−48060
H+H, exchange-induced dipole moments 3−11919
H+H interaction, dispersion coeffs., sum rule calcs. 3−45817
$H+H_2$, 0.3-3.5 MeV, total one-electron-loss cross sections 3−26836
$H+H_2$, chemical exchanges, BKLT eqns. soln. 3−44037
$H+H_2$, pot. surface, bound trajectories, adiabatic model for reaction dynamics 3−14859
$H+H_2$, rot. energy transfer, pot. energy surface, trajectory calcs. 3−41656
$H+H_2$, rot. excitation effect on chemical reaction 3−48064
$H+H_2$ (MuH), light atom transfer reactions, classical anal. 3−44050
$H+H_2$ collinear reaction, density and flux anal. 3−4268
$H+H_2S$, reaction rate constant determ. using reson. fluoresc. in discharge flow 3−48056
$H+H_2(n \leq 7) \rightarrow H_2(m \leq 7)+H$, collinear quantum reactive scatt. using Delves' coordinates 3−24484
$H+H_2(\nu=1)$, quantum dynamics, coupled state study of cross sections and rate consts. 3−36847
$H+H_2 \rightarrow H_2+H$, integral cross-sections, reduced dimens. quantum calcs. 3−39357
$H+H_2 \rightarrow 3H$, collision-induced dissoc., rate coeffs. and third body efficiencies 3−58411
$H+H^+$, charge transfer cross section, high energy behaviour, eikonal approx. 3−6763
$H+H^+$, differential cross sections and charge exchange probabilities 3−56067
$H+H^+$, impact ionisation and charge transfer cross sections, classical-trajectory Monte Carlo method 3−11961
$H+H^+$, reson. charge transfer, total cross sections, impact parameter calcs. 3−50305
$H+H^+(D^+)$, differential cross-sections, intermediate energies, isotope effect 3−26847
$H+H^+(He^+)(He^{2+})$, 0.25-2.0 MeV, total electron capture cross sections 3−26837
$H+H^+(He^{2+})$ (Li^{3+}) (Be^{4+}) (B^{5+}) (C^{6+}) (O^{8+}) (Ne^{10+}) (Si^{14+}), partial cross section for charge transfer, report 3−21894
$H+H^+(\bar{p})$, excitation, ionisation and charge transfer 3−41661
H+He, exchange-induced dipole moments 3−11919
$H+He^+$, excitation and charge transfer cross sections, impact parameter formalism 3−32196
$H+He^+(H)(He)(H^-)(He^-)$, 0.3-3.5 MeV, total one-electron-loss cross sections 3−26836
$H+He^{2+}$, radiative charge transfer calcs. 3−26848
H+ion collision, electron capture cross-sections by highly charged ions, charge exchange 3−56028
$H+Li^{3+}$, electron capture capture cross section calc. in continuum distorted wave approx. 3−11971
$H+Li^{3+}$, rot. induced transitions studied within one-electron united-atom approx., three state problem 3−11937
$H+Li^{q+}(C^{q+})$, electron capture cross sections, eikonal approx. 3−11972
H+methyl, pot. energy hypersurface, force consts., SCF theory 3−53367
$H+N_2{}^+$, state-selective electron capture, collision spectrosc. obs. 3−56066
$H+Ne(3s^3P_2, {}^3P_0)$, ionisation, electron spectra anal. 3−50509
$H+O^{8+} \rightarrow O^{7+}(n,l)+H^+$, electron capture cross sections, perturbed stationary states calcs. 3−50513
H+positron elastic scatt. using polarised orbital method, positronium form. channel 3−56073
H+propene (butene), absolute rate const. and temp. depend. studied by flash photolysis reson. technique 3−19508
H_2+He, rot. inelasticity, initial value representation cross sections 3−17348

hydrogen neutral atoms continued
$H^{+}O^{3+} \rightarrow O^{2+}+H^{+}$, charge transfer reaction in low energy collision 3–46063
H*, prod. by electron impact dissoc. of H_2O, translational energy distrib. meas. 3–46080
H*, prod. by electron impact from H_2O, mechanism, translational energy distrib 3–56093
H(1s)+H(2s), ion pair production, absolute cross section meas. 3–6755
$H(1s)+Li^{2+}(Li^{3+})$, ionisation and charge transfer, coupled 3–1473
$H\alpha$ emission line stars in galactic dark clouds 3–44675
$He^{+}+H$, charge exchange and excitation, OEDM orbital appl. 3–26844
$K+Kr^{3+}$, charge transfer meas. using effusive H target 3–30961
$MuH+H^{+}(D^{+})$, elastic scatt. cross-sections obs. 3–32163

hydrogen neutral molecules
$^3\Sigma_u^{+}$ state, penetration functions and 2-centre electron repulsion integrals, semiempirical calcs. 3–1201
adsorption and desorption on metal surfaces, differences between d- and s-metals 3–9350
adsorption on W-Sc cathode, electron field emission stability 3–52905
in atmosphere, contrib. of emissions by termites 3–30041
atmospheric trace concentration detect. using coherent active Raman spectroscopy 3–58580
bond formation in terms of electron momentum distrib. 3–36654
Cepheus A, assoc. mol. flows, vibr. excited H_2 2 μm line emission anal. 3–25574
chemical bond formation and orbital contraction 3–11677
circumstellar envelopes around evolved late-type stars, H I and H_2 contents 3–54343
clustered gas jet target for Saturne accelerator 3–26538
compressed, frequency conversion for broad-band radiation by SRS 3–32411
diffraction and scattering from LiF, semiclassical perturbation approx. calcs. 3–58015
dipole polarisability, dynamic 3–45818
dissolved in Ar, rot. line profile of induced spectra, density effects 3–55931
doubly excited autoionising states, ab initio calcs. 3–41629
doubly excited autoionising states, ab initio pot. curve calc. 3–36703
E, $F^1\Sigma_g^{+}$ double minimum state, two-photon excitation 3–36764
electron elastic scatt. over 100 to 1000 eV 3–21914
electron impact dissoc., excited state emission cross section 3–36865
electron impact dissoc. rate calcs. in plasma 3–6799
electron impact dissociation and excitation, distorted wave approx. calcs. 3–26876
electron impact excitation cross sections calc. by combined close coupling–R-matrix method 3–6798
electron scatt., low energy 3–11924
electron thermalisation 3–50528
electronic state, $4s^3\Sigma_g^{+}$, obs. with a blue CW dye laser 3–17237
electronic transition moments between excited singlet states 3–32139
EM hyperpolarisability tensor from Verdet consts. 3–50448
excitation using continuously tunable coherent XUV radiation (97.3-102.3 nm) 3–56005
excited states, MC SCF calcs. method 3–11675
fixed-node quantum Monte Carlo calcs. 3–21657
formation in cosmological epoch $40 \leq z \leq 200$ effect on IR background radiation 3–35745
G333.6–0.2, H II region, H_2 emission origin and distrib. 3–30518
GL 961, assoc. mol. flows, vibr. excited H_2 2 μm line emission anal. 3–25574
o-H_2/p-H_2 disequilibrium and dynamic consequences in Jupiter/Saturn atm. 3–59256
high orbital angular momentum states, ab initio calcs. 3–26629
high-order anti-Stokes stimulated Raman scatt. ang. distrib. 3–32083
interatomic forces and Compton profiles 3–36824
interstellar H_2, properties and UV/IR obs. 3–25555
interstellar H_2, radiative dissociation rel. to accel. of mol. clouds 3–54475
interstellar H_2, role in propagating star form. 3–54517
interstellar H_2 column densities, correl. with diffuse bands towards stars with low colour excess 3–5390
interstellar H_2 densities towards Cassiopeia A, determ. from formaldehyde absorpt. obs. 3–54488
interstellar H_2 in Orion, extinction and excitation temp. determ. from IR obs. 3–30449
interstellar medium, H_2 form. on dust grains surfaces rel. to mol. comp. of grain mantles 3–15973
interstellar medium, H II/OH masers pumping, by collisional excitation by H_2 3–16025
interstellar V=1-0 Q(6) line in Orion 3–48998
linear approximation in self-consistent density functional calculations for atomic clusters 3–50565
NGC 2071, assoc. mol. flows, vibr. excited H_2 2 μm line emission anal. 3–25574
ρ Ophiuchi cloud, H_2 rot. excitation rel. to ionisation equilib. inside cloud 3–54472
Orion Molecular Cloud, excited H_2 line profiles interpretation 3–25568
para, thermophysical props. calc., interactive FORTRAN program, report 3–46679
photodissociation, Stieltjes-imaging calcs. 3–36828
photodissociation rate in interstellar clouds 3–30458
photoelectron asymmetry parameter calc. for $J=0 \rightarrow J'=2$ transition 3–21818
photoionisation, laser induced, rovibr. ground state population meas. technique 3–11897
photoionisation, photoelectron ang. distrib. and intensity 3–56008
photoionisation spectrum, low-resolution, electronic ab initio quantum defect theory 3–31933
polarisability curve, near-degeneracy effects and many-body perturbation theory calc. 3–1211
positron scatt. cross section meas. 3–32202
potential energy curves in bonding region, importance of ionic dissoc. energies 3–1278
production in comets from solar wind interactions 3–48858
quadrupole spectrum, line positions and strengths 3–30166
radial distribution and mass in galactic plane 3–59474
refractive index meas., polarisabilities, eigenergies, oscillator strengths, Rayleigh scatt. and force consts. 3–7696
rotational predissociation resonances, exterior complex scaling appl. 3–1438
rotationally inelastic scatt. and nonspherical interaction 3–50499

hydrogen neutral molecules continued
Schrodinger eqn., two dimens. fully numerical solns. 3–36669
spin-rotation interaction, isotope shift, nucl. mag. shielding function 3–45875
spontaneous E1 transition in lowest Λ doublet of $C^1\Pi_u$ state 3–32096
static dipole polarisability calc. by Kirkwood and finite field methods 3–26882
supersonic beams rot. relax. in free jet expansion, high resolution PES 3–11950
two electron excited states and adiabatic quantum defect, electron elastic scatt. from H_2^{+} anal. 3–46067
two-photon autoionisation, cross section and line shape 3–26793
two-photon excited, high power VUV stimulated emission 3–56006
Uranus atmosphere, effect of H_2 on struct. 3–5221
$CO+H_2$ gaseous mixtures, (V,T) collisional energy exchange 3–56051
$CO^{+}+H_2$, rate constant meas. rel. to loss of CO^{+} in Orion MC-1 by reaction with H_2 3–15974
$CO(\nu=1)+H_2$, vibr. deactivation 3–32170
$F+H_2$, three dimens. reaction, quantum collinear reaction probabilities 3–44040
$H+H_2(n \leq 7) \rightarrow H_2(m \leq 7)+H$, collinear quantum reactive scatt. using Delves' coordinates 3–24484
H_2 in soln., vibr.-rot. spectral line shape props. 3–21770
H_2 in Tokamak plasma, recycling, mol. effects depend. 3–18069
H_2 proton stopping power meas. 3–41455
o-H_2, rotational stimulated Raman scatt. of CO_2 laser beam, intense mid-IR source appl. 3–22165
H_2, stimulated Raman scatt. of XeF* laser radiation 3–12237
H_2 waveguide Raman laser, low threshold operation 3–6954
H_2-H_2(Ne)(Ar)(Kr) dimers, vibr. predissoc., spectrosc. obs. 3–50486
H_2-He mixture, collision induced spectra, intercollisional interf. effect on S_1 rot. line 3–45942
H_2-inert gas van der Waals molecule IR spectra 3–50398
$H_2+{}^4He$, vibr. relax., rate consts., semiclassical sudden approx. 3–56043
H_2+Ar, collision induced emission in fundamental vibr. rot. band 3–26732
$H_2+Ar(H)(D)$, rot. energy transfer, pot. energy surface, trajectory calcs. 3–41656
H_2+C^{4+}, electron capture to Rydberg states 3–21904
$H_2+C^{q+}(O^{q+})$, electron capture cross-section meas. in low energy collisions 3–6760
H_2+CO, vibr. inelastic scatt., pot. energy surface 3–56044
H_2+Cd, Cd ($^1P_1$) excitation transfer and quenching, fluoresc. obs. 3–32182
H_2+D, participation of 2D hindered internal rot. 3–4279
H_2+D, reaction rate const. meas. at 297K, EPR spectra 3–4273
$H_2+D^{+} \rightleftharpoons H^{+}+HD$, rate coeffs. and enthalpy change, appl. to interstellar matter 3–25304
H_2+F, reactive infinite order sudden approximation, adiabatic anal. 3–58393
H_2+F, supersonic chemically reacting jets, laminar mixing 3–37582
$H_2+F \rightarrow H+HF$, quantum dynamical IOS calcs. 3–58418
H_2+H, chemical exchanges, BKLT eqns. soln. 3–44037
H_2+H, light atom transfer reactions, classical anal. 3–44050
H_2+H, pot. surface, bound trajectories, adiabatic model for reaction dynamics 3–14859
H_2+H, quantum dynamics, coupled state study of cross sections and rate consts. 3–36847
H_2+H collinear reaction, density and flux anal. 3–4268
H_2+H_2O vapour, D isotope exchange on Al_2O_3-supported Pt catalyst bed 3–46088
H_2+H^{-}, detached electron energy spectra 3–50495
$H_2+H^{+}(H)(He)(H^{-})(He^{-})$, 0.3-3.5 MeV, total one-electron-loss cross sections 3–26836
$H_2+H^{+}(He^{+})(He^{2+})$, 0.25-2.0 MeV, total electron capture cross sections 3–26837
$H_2+H(Cl)(O)$, rot. excitation effect on chemical reaction 3–48064
$H_2+H \rightarrow 3H$, collision-induced dissoc., rate coeffs. and third body efficiencies 3–58411
H_2+He, energy surface in repulsive region, single configuration HF calcs. 3–6562
H_2+He, ortho-H_2 rovib. excitation 3–21864
H_2+He, pot. energy surfaces relevant to Penning ionisation 3–1466
H_2+He, rot. vibr. scatt., off-energy-shell effects in energy sudden factorisation relations 3–36845
H_2+He collision, far IR absorpt. spectrum anal. 3–11797
H_2+He^{*}, Penning ionisation, rel. to diatomics-in-mols. calcs. 3–17239
$H_2+He(Li)(C)(N)(O)$ ions, nondissociative ionisation and dissoc. ionisation 3–6756
H_2+inert gas atoms, energy loss and scatt. angle calc. for medium energy collisions 3–6761
H_2+ion, impact ionisation scaling cross sections 3–36851
H_2+K, lifetimes and collisions of KH, rot. transfer cross sections, electric dipole moments determ. 3–17356
H_2+K collisions, 4^2P fine struct. mixing 3–26833
$H_2+K(Rb)$, fine-struct. transition, semiclassical model 3–6752
H_2+Li (Li ions), excitation and ionisation cross sections Born approx. 3–11959
$H_2+Mg(^3P_J)$ quenching, temp. depend., endoergic chem. reaction as rate limiting 3–14853
H_2+NH_3, pot. transitions, cross sections, beam maser investig. 3–41653
$H_2+Na(3p^2P) \rightarrow H_2+Na(3s^2S)$, diatomics-in-molecules pot. energy surface, parametrisation 3–56055
H_2+Ne ions, CC X-rays from radiative electron capture 3–11935
$H_2+Ne(3p^3D_3)$, $Ne(3s^3P_{2,0})$, thermal energy ionising collisions, mass and electron spectra studies 3–46055
$H_2+O_2^{+} \rightarrow O_2H^{+}+H$, $H_2^{+}+O_2$, state selected ion-molecule reactions by TESICO technique, vibronic-state depend. of cross sections 3–14849
H_2+O^{6+} charge exchange collisions at 60 keV, captured electron distrib. 3–32195
H_2+OH, state selected reaction rates calc. using vibr.-mode correl. anal. 3–4276
H_2+OH, vibr. energy transfer, EPR study 3–21863
$H_2+O(^1D)$, $OH(X^2\Pi)$ prod., vibr. excitation 3–48057
$H_2+O(^1D) \rightarrow OH+H$, abstraction and insertion reactions 3–29306
H_2+positronium scattering, elastic and vibr. excitation cross sections, perturbative calc. 3–36846
H_2+Zn, excited state quenching; fluoresc. study 3–17359
H_3, hyperspherical diabatic and adiabatic representations for chemical reactions 3–24481
H_3, Rydberg states, electronic struct. 3–6523

hydrogen neutral molecules continued
- H_3 Rydberg states, pot. surfaces calcs. 3—1449
- $HCl+Ne \rightarrow HCl^+ + Ne + e^-$, Penning ionis. optical spectrosc. 3—32177
- HD, nuclear spin-spin coupling, equilib. value and bond length depend. 3—45968
- HD, rotationally inelastic scatt. and nonspherical interaction 3—50499
- HD, supersonic beams rot. relax. in free jet expansion, high resolution PES 3—11950
- HD, vibration-rotation transition probabilities for ground electronic $X^1\Sigma^+$ state 3—35432
- $HD+CH_3^+ \rightleftharpoons$ methyl-d_1 ion $+H_2$ 3—25304
- HD+He, viscosity transport-relaxation cross-sections, close-coupled calcs. 3—50497
- $H\bar{H}$ molecule, instability, and dissociation 3—1510
- $^1H_2$ and $^2H_2$, on graphite (0001) surface, laterally averaged interaction pot. calcs. 3—38987
- H_3* triatomic excimer, photodissociative transition parameters, quantum mechanical calcs. 3—26664
- $Mu+H_2$, rates and temp. depend. activation energies, quasiclassical and var. calcs. 3—58409
- $O+H_2 \rightarrow OH+H$, abstraction and insertion reactions 3—29306

hydrogen power *see hydrogen economy*

hydrogen production *see hydrogen economy*

hydrogen storage *see hydrogen economy*

hydrogen transmission *see hydrogen economy*

hydrological techniques
- current meas. accuracy of EG&G Vector Measuring Current Meter 3—35322
- S Dakota, USA, pre-glacial valley location using Landsat 3—44451
- actual evapotranspiration determ. by IR scanning method *(French)* 3—25239
- flood sediments as palaeostage indicators, Australian appl. 3—39861
- groundwater pollutant migration, numerical dispersion reduction by conformal mapping 3—34745
- shallow groundwater remote sensing by satellite IR radiometry 3—44588
- microwave radiation props. of water areas with different salt. conc., radiometry appl. 3—20158
- radar for peat and underground water sounding in Latvian SSR *(Russian)* 3—20154
- river floodplain, remote sensing of floodways 3—54058
- satellite-borne total-power radiometers, calibration and sensitivity 3—25221
- sedimentation, acoustic measuring system, multichannel 3—54175
- sewage effluent monitoring by uric acid detection method 3—9536
- snow, free water content determ. using dilatometer 3—39919
- snow cover, effective dielectric parameters, radiometer meas. 3—20046
- snow cover satellite microwave remote sensing methods 3—54142
- snow-cover parameter remote sensing by satellite microwave radiometry 3—25231
- soil moisture content, texture and surface roughness, radiometer meas. 3—44480
- soil moisture determin. by radar method, effect of vegetation cover 3—25233
- soil moisture remote sensing by microwave radiometry 3—25232
- streamflow classification, principal components method appl. 3—15498
- streamflow probability determ. method 3—15499
- surface, remote obs. with microwave radiometer, vert. and horiz. polarizations, frequency-division scheme *(Japanese)* 3—19650
- VHF radar sounding of thawed active layers overlying permafrost, appl. to dielectric props. meas. 3—9946
- water quality surveillance system of R. Meuse (Belgium) 3—9504
- water resource prospecting by seismic refr. method 3—54060
- Al content of water, determ. by laser photoionisation spectroscopy method 3—44582

hydrology
- *see also groundwater; lakes; rivers*
- central Australia, desert palaeofloods 3—39861
- brine-saturated rocks, effective electrical props. anal. using heterogeneous models 3—48474
- S Dakota, USA, pre-glacial valley location using Landsat 3—44451
- drought statistics of USSR grain regions *(Russian)* 3—35255
- evaporation theory, book 3—5517
- flood wave propagation, nonlinear theory 3—9939
- Florida, cold-prone areas, soil and water effects 3—30023
- frozen ground, downward motion of water into underlying frozen ground 3—54059
- geothermal wells in presence of non-condensable gas, two phase model 3—29872
- Germany, pot. evapotranspiration at three sites *(German)* 3—20064
- geysers, laboratory model rel. to seismic influence on eruption regime 3—20044
- geysers, laboratory model rel. to theory and modelling of geyser process and field expts. 3—20042
- geysers, metastability of water rel. to theory and modelling of geyser process 3—20043
- geysers in Tibet (Xizang), energy estimation *(Chinese)* 3—44467
- geysers of Yangbajain Geothermal Field, Tibet-China, caused by drilling *(Chinese)* 3—44468
- Gobi desert, geology and hydrology obs. *(Russian)* 3—4816
- Great Plains, United States, droughts and heat waves as result of abnormal circulation 3—9969
- interception loss in tropical and temperate vegetation canopies 3—29960
- Khumbu area, Nepal, flash flood, before and after remotely sensed data 3—39865
- Luni basin, Rajasthan, India, flood in July 1979 3—20045
- mammoth Cave, Kentucky, magnetostratigraphy of clastic sediments 3—4775
- mountain forest cloud droplet deposition (chem. and water) 3—39899
- permafrost in Ungava Peninsula, form. since marine emersion rel. to landscape modification *(French)* 3—29923
- radioactive waste disposal sites in USA, avoidance of geohydrologic problems 3—44160
- regularisation statistics, probabilistic distributions *(Italian)* 3—54057
- Rolling Plains of Texas Panhandle, evaporite dissolution and karst features development 3—29954
- snow, free water content determ. using dilatometer 3—39919
- storm runoff and subcatchment characts. in New Zealand hill country 3—4897
- surface flow on arctic slopes, SW Cornwallis Island, Canada 3—48579
- surface water hydrology 3—44167

hydrology continued
- systems analysis appl., conf., Rome, Italy (Sept. 1981) 3—44898
- thawed active layers overlying permafrost, dielectric props. using radar at VHF 3—9946
- tropical cyclone landfall, decay rel. to surface evaporation 3—48648
- urban runoff pollution loading estimate *(Japanese)* 3—15013
- western USA, rainfall patterns 3—15548

hydromagnetic waves *see magnetohydrodynamic waves*

hydromagnetics *see magnetohydrodynamics*

hydrometers
- *see also density measurement*
- electronic hydrometer for stationary lead-acid battery electrolyte 3—34690

hydrophones
- *see also sonar*
- fibre optic acoustic sensor advances 3—22238
- fibre optic hydrophone, multimode, based on photoelastic effect 3—1776
- fibre-optic, homodyne and heterodyne methods 3—1892
- microbend fiber-optic sensor as extended hydrophone 3—7356
- piezoelectric ceramic hydrophones, amplitude and phase directionality measurements, low MHz range 3—1907
- piezoelectric polymer, fundamental 31-mode and hydrostatic mode designs 3—32570
- piezoelectric polymer miniature US hydrophone probes, voltage sensitivity anal. 3—12486
- piezoelectric pressure gradient transducers, diffr. const. calc. 3—12480
- polymer membrane receiver, pulsed US meas. 3—50871
- polyvinylidene fluoride hydrophone, spot-poled membrane design, sensitivity 3—27346
- pressure laws, expt. study *(French)* 3—7274
- underwater sound, phase and amplitude fluctuations at hydrophones spaced 1/2 to 2 wavelengths apart 3—20024
- US hydrophone calibration method 3—46429
- variable-depth calibration errors 3—50861

hydrophotometers *see photometers*

hydrostatics
- No entries

hydrothermal crystal growth *see crystal growth from solution*

hydroxonium ion
- No entries

hydroxyl group *see oxygen compounds*

hygiene
- *see also medicine*
- radiation hygiene, present-day, main tasks *(Russian)* 3—34986
- review of scientific and hygienic issues in biological research on microwaves 3—24794

hygrometers
- *see also humidity measurement*
- absorption dew-point hygrometer using differential pressure gauge *(Japanese)* 3—327
- Assmann psychrometer for micro-meteorological studies *(German)* 3—20136
- electrical, with Al_2O_3 dielec layer 3—45148
- electronic type, for moisture meas. *(French)* 3—36024
- humidity sensor review, wet and dry bulb psychrometer, electric hygrometer 3—25884
- microwave, microprocesor appl. 3—326
- relative humidity measurement, solid state device, design 3—36023

hyperfine field interactions (condensed matter)
- *see also crystal hyperfine field interactions; nuclear screening*
- amorphous ferromagnet, hyperfine field distrib. from Mossbauer spectrum 3—34015
- free radicals, hyperfine powder spectra, axially symm., abnormal divergence peaks occurrence 3—3538
- neutron-nucleus resonant reactions in solids and mols., light wave effects, theory 3—21281
- poly(p-phenylene), normal and deuterated, second moment of ESR signal 3—47552
- polyacetylene films, π electron character, ESR and ENDOR studies 3—57816
- rare earth iron garnets, amorphous, Mossbauer spectra and magnetisation meas. 3—57832
- $(Co_{0.94}Fe_{0.06})_{74.5}Si_{13.5}B_{12}$, amorphous, hyperfine field of Fe in precipitated Co 3—57834
- CsOH, glass, modulation effects of metal nuclei in spin echo of trapped electrons 3—38694
- Fe-Ni Invar sputtered films, anomalous mag. behaviour, Mossbauer study 3—52559
- $Fe_{1-x}B_x$ amorphous films, magnetisation and comp. 3—57722
- $Fe_{100-x}B_x$ metallic glasses, hyperfine fields, local environment model 3—28316
- $Fe_{100-x}Mn_xPB(C)$ metallic glasses, Mn hyperfine field distrib., NMR study 3—57799
- $Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. props., Mossbauer study 3—19027
- $Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, amorphous, mag. hyperfine field distrib. 3—57835
- $Fe_{40}Ni_{38}Mo_4B_{18}$, amorphous, Mossbauer study and mag. props. *(Korean)* 3—14172
- Fe_2O_3-rare earth oxide systems, amorphous, Mossbauer spectra and magnetisation meas. 3—57832
- Fe_67B_{24}, amorphous, Mossbauer Zeeman spectrum, correl. effects 3—38740
- Gd-Co powders, amorphised by milling, magnetisation props. meas. *(Russian)* 3—33928
- In_5Bi_3:Cd, temp. and press. depend. of electric field gradient, TDPAC study 3—34017
- KOH, modulation effects of metal nuclei in spin echo of trapped electrons 3—38694
- Na_2O-Fe_2O_3-B_2O_3 glass system, Mossbauer spectra study 3—43469
- NaOH, modulation effects of metal nuclei in spin echo of trapped electrons 3—38694

hyperfine field interactions in crystals *see crystal hyperfine field interactions*

hyperfine structure, atomic *see atomic hyperfine structure*

hyperfine structure, molecular *see molecular hyperfine structure*

hyperfragments *see hypernuclei*

hypernuclei
- 1-p shell hypernuclei study, Λ-N effective interaction *(Chinese)* 3—40985
- 1p-shell, Coulomb energies and ΛN forces energy depend. 3—36344
- Λ nonmesonic decay, hybrid quark model 3—31326
- bound A=Z hyperon states in $\Lambda\Lambda$ and ΞN channels, model 3—45482

hypernuclei continued
intermediate energy nuclear physics, Verona, Italy (July 1981) 3–44901
Lambda hypernuclei, production, few body storage systems 3–45483
Sigma hypernuclei, production, few body storage systems 3–45483
supernuclei containing baryons consisting of heavy quarks, possible existence 3–713
(K,X), hypernuclei prod., expt. and theoretical review 3–16807
Σ hypernuclei, self energy in nuclear matter, Σ^- atom data 3–16726
Σ^0-hypernuclei, microscopic approach 3–31325
$^{40}\mathrm{Ar}_{\Lambda\Lambda}$, (K^-,K^+) formation, DWBA calc. of cross sections 3–54974
$^{12}\mathrm{C}_{\Lambda}$, excited analogue state and alpha-particle model 3–11280
$^{16}\mathrm{C}_{\Lambda\Lambda}$, (K^-,K^+) formation, DWBA calc. of cross sections 3–54974
$^{4}\mathrm{H}_{\Lambda}$, ground and excited states binding energy 3–49797
$^{4}\mathrm{H}_{\Lambda\Lambda}$, existence and stability from symmetry theory 3–45481
$^{4}\mathrm{He}_{\Lambda\Lambda}$, existence and stability from symmetry theory 3–45481
$^{5}\mathrm{He}_{\Lambda}$, Λ-α interaction, central part, rel. to ^{4}He density 3–712

hyperon absorption
No entries

hyperon capture
see also hypernuclei
No entries

hyperon decay
hypernuclei, Λ nonmesonic decay, hybrid quark model 3–31326
p-wave nonleptonic hyperon decay amplitude and positive-parity excited baryons 3–16636
polarised hyperon semileptonic decays, theorems on form factors determ. 3–45390
semileptonic, status 3–36244
semileptonic decay, Cabibbo model, spectrum generating SU(3) 3–26112
semileptonic decay, SU_3 symmetry breaking, comparison with Cabibbo model 3–26111
unpolarised hyperon semileptonic decay, form factors determ. 3–31208
$\Lambda\to N\pi$, nonleptonic decay, final-state interaction from current algebra and PCAC 3–40899
$\Lambda_c{}^+$ charmed baryon lifetimes meas. in hybrid emulsion expt. 3–31201
$\Lambda_c{}^+$ inclusive nonleptonic decay in nonrelativistic quark model 3–36245
$\Lambda_c{}^+$ lifetimes, bubble chamber expts. 3–31200
$\Lambda_c{}^+\to\Lambda X$ in νd interactions, branching ratio 3–6094
$\Sigma^-\to\Lambda e\nu$, comparison with Cabibbo theory, symmetry breaking for Γ deviation 3–26082
$\Sigma^-\to\Lambda e\nu$ $(ne\nu)$, Cabibbo model, spectrum generating SU(3), transition rate 3–26112
$\Sigma^-\to ne\nu$ comparison with Cabibbo theory symmetry breaking and higher A_μ representations for α_e discrepancies 3–26082

hyperon detection and measurement
No entries

hyperon-deuteron interactions
see also hyperon-deuteron scattering
No entries

hyperon-deuteron scattering
see also hyperon-deuteron interactions
No entries

hyperon effects
No entries

hyperon interactions *see hyperon-nucleon interactions; hyperon-nucleus reactions; kaon-hyperon interactions; lepton-hadron interactions; photon-hadron interactions; pion-hyperon interactions*

hyperon magnetic moment
bag model description with residual interaction for quarks 3–26081
baryon magnetic moments, dynamical quark-diquark model calcs. 3–49683
baryons, magnetic moment correction from kaon cloud in SU(3)×SU(3) chiral bag model 3–45394
octet baryons, mag. moment recoil corrections in MIT bag model 3–45397
QCD flavour depend., total cross section, additive model 3–49678
Ω^-, lattice QCD calc. in quenched approx. 3–637
Σ^+, mag. moment, quark-diquark model *(Chinese)* 3–31214
Ξ^0, mag. moment, quark-diquark model *(Chinese)* 3–31214

hyperon mass
baryon mass spectra from relativistic composite model 3–36227
heavy quark systems 3–45363
high-spin nucleons, mass calc. from intrinsic mass for M, Λ^0, Σ^-, Ξ^-, Ω^- 3–40891
Λ_c mass in diquark model 3–612

hyperon-nucleon interactions
see also hyperon-nucleon scattering
$\Sigma^-N\to\Lambda K^-\pi^+\pi^+X$, narrow state at 2.46 GeV/c^2 obs., charmed strange baryon A^+ prod. 3–49705

hyperon-nucleon scattering
see also hyperon-nucleon interactions
Λp, elastic scatt. anal. using Regge pole model 3–36271
Λp, low energy, central spin and charge-depend. potentials 3–49797
Λp scattering, quark cluster model, nuclear forces *(Chinese)* 3–54956
Σ^-p, elastic scatt. anal. using Regge pole model 3–36271

hyperon-nucleus reactions
for inelastic hyperon-nucleus scattering, see "hyperon-nucleus scattering"
see also hyperon capture; hyperon-nucleon interactions
No entries

hyperon-nucleus scattering
see also hyperon-nucleon scattering
No entries

hyperon production
jets, baryon prod. from quark fragmentation, multiplicity, scaling 3–6081
proton-nucleus collisions, constituent quark model for forward hyperon prod. 3–54934
e^+e^- jets, proton and Λ prod. from jet calculus and recombination model 3–16652
$hp\to\Omega(\bar{\Omega})X$, $\bar{\Omega}/\Omega$ ratio in proton fragmentation, quark junction model 3–31251
KN, Σ, Λ and η production, N_β role in nucleon-exchange reactions 3–40923
$K^-p\to\Lambda\gamma$, branching ratio for stopped K^- 3–26142
$K^-p\to\phi\phi\Lambda$, 8.25 GeV/c, cross section, $\phi\phi/\phi$ prod. ratio 3–21149
$K^-p\to\phi\phi\Lambda(\Sigma^0)$, 18.5 GeV/c, total cross section, suppression factor 3–40928
$K^+p\to(K^0,\bar{K}^0,\Lambda,\bar{\Lambda},K^*,p^0)X$, 70 GeV, inclusive prod. cross sections 3–21175

hyperon production continued
$K^+p\to(K^{*+}(892), \bar{\Sigma}^{*-}(1385), \Sigma^{*\pm}(1385))X$, 32 GeV, multiparticle fragmentation 3–21176
$K^+p\to\bar{\Lambda}X$, 32, 70 GeV/c inclusive $\bar{\Lambda}$ hyperon polarisation 3–40937
$K^+p\to Y^{*\pm}(1385)X$, 147 GeV, inclusive strange resonance prod. 3–26169
Λ, recent PETRA results 3–21583
$\nu(\bar{\nu})N$ production of strange particles, K^0 and Λ prod. 3–26102
νN, D^0, D^+, F^+ and $\Lambda_c{}^+$ prod. study 3–40895
$\bar{p}d\to\Lambda X$, <1 GeV, possible particle exchange in annihilation, isospin invariance 3–26135
$pp\to hX$, proton as quark and diquark, particle ratio production, in SU(6) 3–40934
$pp\to\Lambda_bX$, negative result at ISR 3–21192
$\bar{p}p\to\bar{\Lambda}\Sigma^0$ differential cross section and polarisation, model fit 3–40919
$pp\to Y^{*\pm}(1385)X$, 147 GeV, inclusive strange resonance prod. 3–26169
πN, Σ, Λ and η production, N_β role in nucleon-exchange reactions 3–40923
π^-p, 16 GeV/c, inclusive Λ prod. and polarisation 3–40935
$\pi^-p\to D^-\Lambda_c{}^+$, 15.4 GeV/c, associated charm production 3–45413
$\pi^+p\to Y^{*\pm}(1385)X$, 147 GeV, inclusive strange resonance prod. 3–26169
$\Sigma^-N\to\Lambda K^-\pi^+\pi^+X$, narrow state at 2.46 GeV/c^2 obs., charmed strange baryon A^+ prod. 3–49705

hyperon resonances
heavy quark systems 3–45363
Λ^*, mass spectra from relativistic composite model 3–36227
$pp\to\Lambda_bX$, negative result at ISR 3–21192
Σ^*, mass spectra from relativistic composite model 3–36227
Ξ^*, mass spectra from relativistic composite model 3–36227
$Y\pi\to K$-N, in high energy heavy ion collisions, subthreshold K^- prod. 3–31235

hyperon scattering *see hyperon-nucleon scattering; hyperon-nucleus scattering; kaon-hyperon scattering; lepton-hadron scattering; photon-hadron scattering; pion-hyperon scattering*

hyperon spin and parity
No entries

hyperons
see also hyperon resonances
magnetic moments, total cross-section, QCD flavour depend., additive model, SU(3) 3–49678
relativistic Bethe-Salpeter equation, unequal quark masses in excited Λ and Σ states, F(M) representation 3–26095
Λ, mass spectra from relativistic composite model 3–36227
Λ^0, mass calc. from intrinsic mass 3–40891
M, mass calc. from intrinsic mass 3–40891
Ω, mass spectra from relativistic composite model 3–36227
Ω^-, mass calc. from intrinsic mass 3–40891
Σ, mass spectra from relativistic composite model 3–36227
Σ^-, mass calc. from intrinsic mass 3–40891
Σ^+-Σ^- isospin breaking mass differences from QCD 3–6059
Ξ, mass spectra from relativistic composite model 3–36227
Ξ^-, mass calc. from intrinsic mass 3–40891
Ξ^0-Ξ^- isospin breaking mass differences from QCD 3–6059

hypersonic flow
axisymm. body with small longitudinal curvature 3–12706
axisymmetric body in hypersonic imperfect gas flow, boundary-layer injection effect on drag 3–37523
blunt bodies in hypersonic stream, flow separation, kinematic feature 3–27546
flow over bodies in neighbourhood of separation point of thin shock layer, asymptotic soln. 3–2086
flow past rectangular profile through which gas is blown strongly 3–2087
free molecular hypersonic flow over rotating bodies, aerodynamic characts. 3–7614
gas, three dimens. flow over a slender wing 3–46593
graphite body in hypersonic gas stream, thermochem. breakdown 3–46660
particle size distrib. meas. in pulsed hypersonic flow, Mie scatt. 3–56566
simulation on high press. aerodynamic installations 3–32757
slender body with minimum drag, three-dimens. shape in hypersonic gas stress 3–7611
stationary shape of bodies ablating in hypersonic flow under the action of radiation heating 3–51158
three dimens. body ablating under influence of heat fluxes 3–7612
uniform gas flow, nonlinear thermal effects in intense light beam, transient behaviour 3–50718
unsteady flow over flat and axisymmetric bodies 3–46594
C particles in gas suspension, optical props., comp. effects 3–19537

hypersorption *see sorption*

hyperthermia *see biothermics*

hypertritons *see hypernuclei; tritons*

hypervirial theorem *see quantum theory*

hypochromism *see light absorption*

hypothetical particles
see also charm particles; heavy leptons; intermediate bosons; magnetic monopoles; quarks; tachyons
axion, enigma *(French)* 3–21060
axion search on pulse reactor IBR-2 *(Russian)* 3–6051
barytinos, astrophysical consequences 3–59200
broken supersymmetric model, gaugino mass 3–21032
broken supersymmetry, cosmological constraints, electroweak theory, Higgs mass, photinos 3–25666
dyons and photons, quantum field theory 3–30985
etherons, appl. to ether theory of gravitation *(Rumanian)* 3–16057
glueball mass spectrum, finite size scaling, finite lattice effects 3–588
glueball mass spectrum, SU(3) lattice Monte Carlo calc. 3–6058
gluino's, effect on structure functions by scaling violation analysis 3–31101
gravitational theories, general relativity for ghosts and tachyons, spin-projection operator formalism 3–5685
gravitino mass, supergravity intermediate supersymmetry breaking 3–40457
gravity-induced supersymmetry breaking and low energy mass spectrum 3–45050
lepton decays involving spin 3/2 and spin 1/2 neutrinos 3–54663
N-extended supersymmetric unification, supersymmetry breaking, gravitino mass, early Universe 3–16577
solitons with fermion number ±1/2, scatt. process 3–16472
spin zero lepton constraints from μ anomalous mag. moment, spontaneous supersymmetry breaking 3–639

- **hypothetical particles** continued
  - squarks, parity violation, occurrence if squarks are not mass degenerate, SUSY bounds 3−49637
  - SU(2)⊗SU(2) chiral model, QCD effective Lagrangian, exotic levels 3−6069
  - superluminal particles, Cooper's evidence re-anal. 3−20621
  - superluminal particles, reply to comments 3−20622
  - supersymmetry, radiative corrections for fermion mass, gravitinos 3−49588
  - y-matter inside Sun, excitation of nonradial oscills. 3−54332
  - $e^+e^- \rightarrow \Delta$+gravitino+antiphotino, cross sections, detection at PETRA, energies 3−11168
  - $e^+e^- \rightarrow \delta$+photino+antiphotino, cross sections, detection at PETRA energies 3−11168
  - $e^+e^- \rightarrow e^{\pm}\tilde{e}^{\pm}\lambda$ single selectron prod. cross section, mass lower limit 3−628
  - $e^+e^- \rightarrow \tilde{\gamma}\tilde{\gamma}(\tilde{\gamma}\tilde{\gamma}\gamma)$, cross sections, finite mass effects, photons search domain 3−49662
  - $e^+e^- \rightarrow \tilde{H}\tilde{H}$, light neutral Higgsino pair prod. at LEP energies 3−31226
- **hysteresis**
  - *see also coercive force; dielectric hysteresis; elastic hysteresis; magnetic hysteresis; remanence*
  - absorption and desorption of H_2 3−48090
  - forced convective boiling, thermal hysteresis 3−50903
  - Lorenz equations, hysteresis associated with multiple stable soln. behaviours 3−16263
  - optical bistability, nascent hysteresis dynamics 3−22150
  - polymorphic transformations hysteresis 3−51783
  - porosimetry, mercury, influence of pore potential on hysteresis and entrapment 3−35962
  - superconducting AC losses, data compilation 3−5507
  - synergetic model for hysteresis and re-entrant phase transitions 3−16321
  - water, natural convection, around density max., hysteresis loop *(French)* 3−22440
  - Al-ZnO-SiO_2-Si struct. for SAW devices, elec. characts. 3−3323
  - $LaNi_5$, α-β two-phase region, H_2 absorpt./desorpt. isotherms, hysteresis 3−48088
  - Rb_2ZnBr_4, X-ray study on successive phase transitions 3−28788
  - Ti-Zr-Fe-Mn hydrides equilibrium props. 3−47820
- **I-centres** *see colour centres*
- **I-II-VI_2 semiconductors** *see ternary semiconductors*
- **I-III-VI_2 semiconductors** *see ternary semiconductors*
- **IC** *see integrated circuits*
- **IC engines** *see internal combustion engines*
- **ice**
  - *see also glaciology; sea ice; snow*
  - Alaska, lower atmosphere, clear sky ice crystals precipitation and form. 3−59055
  - albedo variations, effect on climatic response of Earth to orbital vars. 3−4952
  - Antarctica, ages and comp. of gas trapped in Allen Hills and Byrd core ice and comp. of gas trapped in Allen Hills and Byrd core ice 3−9941
  - BN object, dust grains, 3 micron ice band 3−40224
  - Britain, snow and ice-sheet balance in present and Devensian times 3−20111
  - climatic records from ice core O isotope profiles, effect of wind scouring 3−35196
  - cloud microphysics of ice grain growth 3−54100
  - clouds, riming process leading to ice splinter production 3−44537
  - Colorado hailstorm, dynamics and particle growth mechanisms 3−59053
  - comet ice composition, UV spectra anal. 3−54289
  - crystal, polyhedral, growth from vapour, morphological stability 3−33155
  - crystal growth from vapour, air velocity influence on habit 3−13142
  - crystal growth in H_2O supercooling in forced pipe flow 3−17976
  - crystal size distribution in frozen aq. specimens, theoretical anal. 3−24681
  - crystals, hexagonal, polarised light scatt. model 3−1550
  - crystals in skies at South Pole Station, radiance and polarization meas. 3−30052
  - depolarisation meas. at 28.56 GHz using COMSTAR beacon simultaneously with 16.5 GHz polarisation diversity radar 3−9994
  - EHF waves scattering by ice needles and plates in cirrus clouds 3−25184
  - electron irradiated, visible band electron fast decay at low temp., isotope effects and H^+ mobility 3−13221
  - electron scattering, STEM and CTEM, scattering cross-sections 3−24927
  - Europa, liquid water layer rel. to active resurfacing 3−35518
  - fast ion bombardment of ice, expts. and astrophysical implications 3−30264
  - formation in aqueous systems, nucleation theory 3−13413
  - freezing kinetics, light scatt. study *(German)* 3−7938
  - friction with rubber, effect of salt, expt. study 3−51703
  - frost form., thermal cond., generalised correl. 3−54086
  - Ganymede, ice deposits rel. to evolution of tectonic features 3−59254
  - glaze and rime deposition in Asiatic USSR, orographic effects 3−15606
  - global cover effect on climatic multi-layer energy balance model 3−59100
  - hail detection by radar using two-radar dual wavelength method 3−59124
  - hail suppression by AgI seeding of storm clouds 3−15564
  - hail-producing cumulonimbus, structure and evolution 3−48645
  - hail-stone melting in mesosynoptic model *(French)* 3−54097
  - hailfall measurement, representativeness of point networks 3−15645
  - hailstone growth by droplet accretion, laboratory expts. 3−30011
  - High Plains storms, USA, pot. graupel and hail embryos dev. rates 3−59054
  - high-pressure eqn. of state of ice VII phase 3−28048
  - hot isostatic pressing, deform. maps, practical appl. 3−52991
  - Ic phase, librational region in IR spectra 3−8152
  - ice:HF, proton ordering, calorimetric study 3−33463
  - interstellar 3 microns band, laboratory anal. 3−57901
  - maritime cumulus clouds, combined action of droplet coagulation, ice particle riming and splintering process 3−9989
  - Mars, stratigraphic relationships within polar cap deposits from Viking Orbiter images 3−5187
  - modelling of ice and climate 3−30046
  - Norwegian ice cap, preferential elution of strong acids by melting snows 3−19638
  - nucleation in clouds using AgI 37 model shells *(Chinese)* 3−59095
  - nucleation obs. using AgI catalyst, automatic apparatus appl. 3−26001
  - one-dimensional lattice, solitons and proton motion 3−52047
  - optical constants and sublimation temp., appl. to mol. cloud IR sources 3−40022
  - optical constants and thermal radiative props. 3−8788
- **ice** continued
  - permafrost in Ungava Peninsula, form. since marine emersion rel. to landscape modification *(French)* 3−29923
  - permafrost on SW Cornwallis Island, Canada, rel. to surface water flow on arctic slopes 3−48579
  - permafrost phenomena in N Canada, and implications for human habitation 3−44486
  - polycrystalline, viscoelastic body, fracture kinetics, acoustic emission obs. 3−56507
  - pond in Finland subject to thermal pollution, winter ice cover 3−34748
  - proton injection into ice using photoisomerisation, model for H^+ transport in proteins and membranes 3−34787
  - purification of crystals grown from sucrose and NaCl aq. solns. 3−28975
  - river thermal-ice regimes, collocation finite-element simulation 3−29956
  - structure effects of water mol., Ih ice, liq. water and saturated aq. solns. 3−27826
  - thawed active layers overlying permafrost, dielectric props. using radar at VHF 3−9946
  - thunderclouds, three dimensional cloud model incorporating ice phase rel. to thunderstorm electrification 3−15582
  - torsion, deform. effects, shear 3−18369
  - US attenuation near melting point 3−2683
  - UV and visible emissions from purified ice, pulse radiolytic studies 3−14359
  - vibration of dislocations in ice crystals *(Japanese)* 3−2721
  - VII, eqn. of melting curve 3−42798
  - VII, normal and deuterated, isothermal eqn. of state and lattice const., X-ray study 3−2732
  - vitreous and crystalline, electron microscopy, temp. down to 25K, beam damage 3−20957
  - D_2O, amorphous, struct. characts., neutron diffr. study 3−42519
  - H_2O/CO_2 ice mixture under fast ion irradiation, formaldehyde form. 3−19531
  - KOH-doped, hexagonal, first-order phase transition 3−13434
  - OH 231.8+4.2, dust grain mantles, 3 micron ice band 3−40224
- **iconoscopes** *see television camera tubes*
- **identification**
  - *see also control theory; correlation methods; frequency response; modelling; parameter estimation; simulation; state estimation*
  - aortic press. transfer, approx. identification 3−29613
  - Clare Bishop Area of visual cortex, anal. using stochastic processes and statistic evaluation methods 3−34843
  - EMG signals, system identification and sequential signal estimation algorithm 3−19841
  - measurement errors, adaptive method of real-time identification of covariational matrix *(Russian)* 3−30833
  - mechanical systems, nonlinearly parametric, spectral synthesis 3−35837
  - noisy blurred images, const. accel of object, identification of point spread function, recursive restoration 3−22005
  - Tokamak plasma position control, feedback controller synthesis 3−12923
  - US impediogram accuracy improvement by process identification convolution 3−4593
- **IETS** *see tunnelling spectra; tunnelling spectroscopy*
- **IEXE** *see ion microprobe analysis; X-ray chemical analysis*
- **i.g.f.e.t.** *see insulated gate field effect transistors*
- **ignition**
  - *see also electric ignition*
  - dust clouds, ignition and quenching meas. for C, graphite, coal, Al, Mg, quenching distance formula 3−24536
  - flammable limit of H_2-air-steam mixtures, water fog effects 3−45654
  - fuel/O_2 mixtures, CO_2 laser induced ignition 3−44061
  - gas suspension, lower autoignition conc. limit, approx. calc. method 3−53387
  - heterogeneous deflagration waves, nonlinear dynamics 3−53407
  - long air sparks, leader discharge ignition criterion *(German)* 3−37725
  - metal particle ignition in high-temp. flow behind shock 3−53386
  - metal powder layer, lower autoignition conc. limit, approx. calc. method 3−53387
  - microwave focused Gaussian beam reflected at 45° from conducting plane, field distrib., plasma ignition 3−46133
  - propane-O_2 mixture, detonation wave suppression accompanying spontaneous ignition, expt. study 3−22490
  - radiative ignition, role in large explosion propagation 3−34625
  - supersonic flow, combustion stabilisation, flameout and ignition boundaries in annular groove 3−53392
  - CO_2-N_2 mixture, volume gas discharge with external ionization by electron beam, injection instability 3−42483
  - Na fires, ignition and combustion, consequences 3−11472
  - Ti, heating by intense laser beam, oxide optical consts. changes effect 3−19230
- **II-III_2-VI_4 semiconductors** *see ternary semiconductors*
- **II-IV-V_2 semiconductors** *see ternary semiconductors*
- **II-VI semiconductors**
  - n-CdSe electrodes, electrodeposition and liq. junction solar cell props. 3−9453
  - charge transport by dislocations during plastic deform. 3−46946
  - compound semiconductors, refr. index dispersion near fundamental absorpt. edge, quantum theory 3−56164
  - CVD, organometallic, review 3−8993
  - defect formation kinetics 3−13210
  - defects in semiconductors, conf., Amsterdam, Netherlands (Aug.-Sept. 1982) 3−44894
  - dielectric constant, temp. and press. dependences 3−57854
  - elastic Debye temperature, elastic const. calc. 3−42740
  - electronic struct. under press. 3−47260
  - gap struct. mixed semiconductors *(Chinese)* 3−33631
  - MBE growth *(Japanese)* 3−29004
  - MOCVD method for prod. of semicond. epitaxial films, review 3−24143
  - phonon spectra of pure alloyed and mixed II-VI semiconductors, review *(Russian)* 3−38009
  - quasibounds exciton-LO phonon intermediate state in Raman scatt. 3−3720
  - second harmonic generation efficiency under high-field conditions 3−3211
  - zincblende-type semiconductors, lattice statics, interionic pot. model 3−22818
  - Cd-Hg-Te and related materials, epitaxial layers, SIMS study 3−9377
  - Cd-Te binary system, regular associated soln. model 3−7896
  - CdHgTe, thin-film photoelectromag. detectors for far IR radiation 3−47382

II-VI semiconductors continued
$Cd_{0.2}Hg_{0.8}Te$ crystal, photocond. kinetics under surface excitation *(Russian)* 3–3257
$Cd_{0.2}Hg_{0.8}Te$, density of states distrib. in valence and cond. bands, UPS study 3–14433
$Cd_{0.2}Hg_{0.8}Te$, free-carrier IR absorpt. spectra 3–43526
$Cd_{0.2}Hg_{0.8}Te$, photoconductivity, acceptor impurity band 3–8533
$Cd_{0.2}Hg_{0.8}Te$, photocond. relax., lifetime and generation-recombination noise 3–18759
$Cd_{0.21}Hg_{0.79}Te$ crystals, non-linear refr. index changes at 175K with 10.6 μm radiation 3–1691
$Cd_{1-x}Hg_xTe$, IR study of short-order clustering effect 3–43539
$Cd_xHg_{1-x}Te$ crystal, deform. twinning 3–56910
p-$CCd_xHg_{1-x}Te$ crystals, thermoelectromotive force on nonequilibrium carriers 3–8516
n-$Cd_xHg_{1-x}Te$, discrete exciton absorpt. struct. flare-up in mag. field 3–57930
$Cd_xHg_{1-x}Te$, elec. props., annealing effects 3–38384
$Cd_xHg_{1-x}Te$, energy gap-refractive index interrelation 3–14238
$Cd_xHg_{1-x}Te$, epitaxial layer struct. 3–3007
$Cd_xHg_{1-x}Te$, local degree of imperfection, electroreflection study 3–14256
$Cd_xHg_{1-x}Te$, MBE growth, epitaxy temp. effect on cryst. quality and elec. props. *(French)* 3–42969
$Cd_xHg_{1-x}Te$ photodiodes, zero bias resistance area product calc. for 8-14 μm range, doping effects 3–25947
$Cd_xHg_{1-x}Te$, reflectivity spectra as function of composition and temp. 3–34054
p-$Cd_xHg_{1-x}Te$ solid soln., single cryst., photocond., transverse mag. field influence 3–8537
$Cd_xHg_{1-x}Te$, surface composition fluctuation effects on optical props. 3–28823
$Cd_{0.95}Mn_{0.05}Se$ crystals, Bridgman growth and elec., optical and mag. props. 3–52921
$Cd_{1-x}Mn_xTe$, excitons, exchange spin splitting effects, magnetoabsorption study 3–33643
CdO, ab initio energy bands 3–43018
$CdO-SiO_2-Si$ solar cell characts. 3–39486
CdS, 1.06 μm Nd:YAG laser-induced damage meas. 3–18336
CdS (Se), light diffraction by inhomogeneous transient gratings 3–17585
CdS (Se)(Te), colouring mechanism in glasses, IR, visible and UV transmission spectra 3–34122
CdS, absorpt. and stimulated emission processes, electron-phonon interaction influence 3–8852
CdS, acoustic domain injection into amorphous As_2S_3 3–2682
CdS acousto-optic tunable filter, resolution enhancement using birefr. dispersion 3–12297
CdS, acoustoconcentration effect due to bulk acoustic waves 3–18748
CdS amorphous films, photocond. 3–23428
CdS, anodes for photoelectrochemical cells, electrophoretic deposition 3–48158
CdS, B excitons, two-photon spectroscopy 3–52042
CdS binder layers, photoelectric props. for image recording appl. 3–52197
CdS, Cd interstitial electron states, luminescence study 3–28306
CdS, CdSe, CdSSe, optically pumped semiconductor platelet lasers in external cavities 3–27067
CdS ceramic, X-ray luminesc. *(Russian)* 3–3874
CdS, complex dielec. function in exciton and plasma limit 3–38330
CdS, compression behaviour and high press. polymorphic transformations, X-ray diffr. study 3–46881
CdS crysts., acoustoinjection luminesc. 3–47716
CdS, deformed at low temp., luminescence 3–3812
CdS, dilation and vibr. contrib. to exciton temp. shift at melting point 3–3088
CdS, dispersion in exciton-transition region 3–8791
CdS, donor-acceptor luminescence depend. on elec. field *(Russian)* 3–19195
CdS, donor-acceptor recomb., ODMR study 3–14163
CdS edge photoluminescence band *(Russian)* 3–24013
CdS, electroconversion to Cu_xS for thin film solar cells 3–4294
CdS electrophotographic binder layers, degradation process 3–16435
CdS epitaxial film, lasing obs. at 492, 497 nm 3–8853
CdS, exciton reflection spectra, Brewster effect, theory and expt. *(Russian)* 3–3084
CdS, exciton transitions, two-beam interferometry study 3–43508
CdS, excitonic transmission spectra, memory effect 3–43561
CdS, extended dislocations obs. by high resolution electron microscopy 3–13227
CdS films, chem. bath deposited, elec. resist., Ar^+ laser annealing study 3–38498
CdS, high pressure optical absorpt., resistivity and phase transformation 3–57028
CdS, high temp. sensitisation phenomena 3–43227
CdS, highly excited, picosec. spectroscopy, free carrier-exciton system dynamics 3–38910
CdS, ideal vacancy electronic states and band struct., Green's function calc. 3–43099
CdS, laser irrad., structural defects, recombination radiation spectra 3–52844
CdS, laser irradiated, subthreshold defect formation, photoluminesc. and reflectivity study 3–18341
CdS lattice, characteristic temp. and mean square displacement, X-ray study 3–18421
CdS, luminesc. of high density electron-hole plasma 3–43603
CdS, many-exciton systems, boson description 3–47274
CdS multicomponent laser emitting visible radiation, electron-beam-pumped 3–37050
CdS, optical radiation excitation by acoustic waves *(Russian)* 3–3685
CdS, orange luminescence struct. 3–38897
CdS, photoacoustic effect, influence of appl. DC elec. field 3–18400
CdS, photoacoustic signal induced by pulse ruby laser 3–2685
n-CdS photoanodes in conc. aq. iodide electrolytes 3–9447
CdS, photocond., linearly polarised light depend. 3–18742
CdS, photoconductivity relax. under repeated illumination 3–8534
CdS photoconductor-liq. cryst. system, electro-optical props., surface pot. barriers effect 3–14258
CdS, photocurrent temp. depend. irreproducibility 3–28388
CdS, photoluminesc., edge emission depolarization under intense laser excitation 3–38887
CdS, photosensitive, dielec. dispersion and photoconductivity 3–18747

II-VI semiconductors continued
CdS piezoelectric crystals meas., by resonance-antiresonance method 3–36036
CdS, piezoelectric thin film on amorphous substrate, SAW propagation, expt. study *(French)* 3–18544
CdS, polariton energy transport and green edge luminesc. at low temps. 3–34144
CdS, radiative recomb. anisotropy in cpds. excited with unpolarised light 3–38861
CdS single cryst., high temp. conductivity relax., Cd diffusion 3–3263
n-CdS single cryst., high field DC elec. cond. 3–43189
CdS solar cell, review of progress 3–14949
CdS solar cell structs., dielectric relax. contrib. to freq. dispersion of junction admittance 3–14951
CdS solar cells, airless spray technique 3–53552
CdS, spatially disperse exciton-polariton medium, light propag. 3–47615
CdS, splitting near a surface of the n=2 exciton level, optical reflectance 3–47272
CdS streamer semiconductor laser, spatial, temporal and power characts. 3–37048
CdS, time resolved luminescence at high excitation 3–34138
CdS type photoconductors, electrophotographic versatility 3–20917
CdS, ultrasonic amplification under uniaxial deformation, electron-phonon interaction 3–8538
CdS, ultrasonic Lamb wave irrad., point defect form., exciton luminescence study 3–14363
CdS, vapour-grown, interface morphology and sub-grain struct. obs. 3–7935
CdS, wavevector-reversed phonon echoes due to acoustoelec. interaction 3–13863
CdS:Ag, illumination-induced diffusion, radioactive atom method 3–13550
CdS:Ag(Cu), orange luminescence struct. 3–38897
CdS:Ag(Ni), impurity diffusion, two-sample luminescence study 3–18513
CdS:Al films, transport and optical props., dopant conc. effects 3–18804
CdS:Cl, luminescence, recombination flows *(Russian)* 3–24012
CdS:Cl, press. quenched, elec. behaviour and flux penetration, supercond. at high temps. 3–47453
CdS:Cu, Cl activated phosphors, luminescent centre form., photoluminescence study 3–43606
CdS:Cu, photoacoustic spectra, using piezoelec. transducers 3–2684
CdS:Cu,Cl, quenched phosphor, isochronal annealing, photochem. meas. 3–52846
$CdS:H(Zn)(In)-Cu_2S$ solar cell, role of impurities 3–44131
$CdS:N_2$, acoustic luminescence study *(Russian)* 3–24031
CdS:Na crystal, microscopic Na impurity determ. by laser cascade photoionization of atoms 3–33292
CdS:Te, low temp. photoluminescence, grinding effects 3–43583
CdS/CdTe screen printed solar cells 3–53518
CdS-CdSe heterojunctions, exciton effects in photo-EMF spectra 3–28430
CdS-CdTe, p-n, heterojunction, electron and hole diffusion length determ. using surface photovoltage method 3–28461
CdS-CdTe solar cell, screen-printed, fabricated on glass substrate 3–53498
$CdS-Cu_2S$, solar cell, dry form., X-ray diffr. obs. 3–48155
$CdS-Cu_2S$ solar cells, mechanisms and fabrication research *(Chinese)* 3–14941
$CdS-Cu_2S$ thin film photovoltaic cells 3–14957
$CdS-Cu_xS$ solar cell, heat treatment effects 3–39475
CdS-InP photoelectrochemical solar cells 3–58528
CdS-polyacetylene photovoltaic heterojunction, solar cell appls. 3–52240
$CdS-SiO_2-Si$, photosensitivity of semiconductor-insulator-semiconductor structures 3–33779
n-CdS(Se) photoelectrode, time resolved photolum., surface state influence 3–38911
CdS(Se), photoluminescence and dielec. losses, vacuum annealing effects 3–52825
CdS(Se), picosec. spectroscopy of excitonic mols. and electron-hole plasma 3–38908
CdS(Se), time resolved spatial expansion of electron-hole plasma 3–38912
$CdS_{0.5}Se_{0.5}$ two photon pumped bulk semicond. laser for psec. pulse generation 3–27068
$CdS_{1-x}Se_x$, recombination emission under high excitation levels 3–43580
$CdS_{1-x}Se_x$ solid solns., localised excitons, luminesc. study 3–14345
$CdS_{1-x}Se_x$:Cu, photoconducting props., solid-state image intensifier appl. 3–52196
$CdS_{1-x}Se_x$:Cu in polystyrene binder layers, electrophotographic characts. 3–28379
$CdS_{1-x}Se_x$:Te, exciton binding energy of isolated and paired Te impurities 3–13739
$CdS_{1-y}Se_y$ waveguides, light wave diffr. by dynamic gratings 3–7159
CdS_xSe_{1-x} electrodes, photoluminescence and electroluminescence, appl. to photoelectrochem. cells 3–34153
n-CdS_xSe_{1-x} graded electrodes, electron-hole pair separation efficiency mapping, luminescent props. 3–47686
CdS_xSe_{1-x} multicomponent laser emitting visible radiation, electron-beam-pumped 3–37050
CdS(Te), hot wall epitaxial growth 3–47782
CdSe, aged electrodeposited photoelectrodes in liq. junction solar cell, hot electron luminesc. obs. 3–29394
CdSe, anisotropic semicond., photocond. and pleochroism, polarisation sensitivity calc. for oblique illumination 3–23439
CdSe, anodes for photoelectrochemical cells, electrophoretic deposition 3–48158
CdSe, biexcitons or drop embryos in luminesc. 3–47269
n-CdSe, electro-acoustic effects 3–52204
CdSe film, polymorphism, production by evaporation 3–28235
CdSe film, prep. by laser annealing, elec. and optical characts., photovoltaic appls. 3–52931
CdSe films, Hall EMF meas. by two-frquency method 3–49398
CdSe films, one-barrier residual cond., control by O_2 adsorption induced changes in surface state density 3–38507
CdSe, luminesc. of high density electron-hole plasma 3–43603
n-CdSe, minority carrier diffusion length, photoelectrochem. determ. in aq. solvent 3–33788
CdSe, nonlinear attenuation of excitonic polariton pulses 3–38846
CdSe, photocond., linearly polarised light depend. 3–18742
CdSe piezoelectric crystals meas., by resonance-antiresonance method 3–36036
CdSe, self-diffraction of picosecond light pulses 3–34177

II-VI semiconductors continued
CdSe single cryst., high temp. conductivity relax., Cd diffusion 3—3263
CdSe, surface photovoltage meas., surface electron transitions 3—18740
CdSe thin cryst., polariton time of flight meas. 3—3085
CdSe thin film electrode electrochemical solar cells 3—48150
CdSe thin film solar cells, photovoltaic behaviour 3—53554
CdSe thin film solar cell development *(German)* 3—58514
CdSe thin films, dark current instabilities obs. 3—33808
CdSe thin films electrodeposited on Ni substrate, etched and unetched cross-sections prep. and anal. 3—28987
CdSe three-electrode photoelectrochem. storage cells, transport props. of Nafion membranes 3—24612
CdSe vacuum deposited film, photocond. props. 3—38439
CdSe:Cu, defect structure from conductivity and solubility meas. 3—33280
CdSe:La γ-irrad. films, photoconductivity and dark conductivity 3—38508
$CdSe/LiNbO_3$ acoustoelectronic memory, convolution signal storage 3—18750
CdSe(Te), crystal growth from soln. and photoluminesc. *(Japanese)* 3—39020
$CdSe_{0.65}Te_{0.35}$, chemical shift, XPS study 3—28964
$CdSe_xTe_{1-x}$ film, vacuum deposited, phase diagram, expt. and theory 3—24138
$CdSe_xTe_{1-x}$ thin films, struct. and elec. props. 3—57237
CdTal crystals, verticle unseeded vapour growth, high resistivity 3—34206
CdTe, 1.06 μm Nd:YAG laser-induced damage meas. 3—18336
CdTe, bare and covered, decomposition during annealing in vacuum 3—51768
CdTe, carrier lifetime determ., dynamic phase grating method 3—18720
CdTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3—28248
CdTe crystal, deform. twinning 3—56910
CdTe, cyclotron resonance of electrons and holes, optical detection 3—18603
CdTe, dislocation structs. and motion, TEM study 3—46943
CdTe, edge luminesc. under high-power optical excitation 3—38901
CdTe, exciton diffusion, reson. self-absorpt., luminesc. spectrum profiles 3—19189
CdTe Fabry-Perot type light modulator, 10.6 μm *(Japanese)* 3—50750
CdTe film, CND on foreign substrates and minority carrier diffusion length meas. 3—43746
CdTe film, electron and hole diffusion length determ. using surface photovoltage method 3—28461
CdTe film, prep. by laser annealing, elec. and optical characts., photovoltaic appls. 3—52931
CdTe films, large grain, vacuum evaporation on Sb-Bi alloy coated Ta for solar cell appl. 3—24580
CdTe films, MBE growth on sapphire, X-ray diffr. and VV reflectivity studies 3—43735
CdTe films obliquely deposited in vac., anomalous photovoltaic effect 3—57381
CdTe, fundamental optical functions and relectivity spectra *(Russian)* 3—47618
CdTe heteroepitaxial film, electron beam polishing technique 3—57198
CdTe, hot electron diffusion, Monte Carlo calc. 3—47354
CdTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3—33441
CdTe laser material, laser-induced damage and two-photon absorpt. meas. 3—8091
n-CdTe, minority carrier diffusion length, photoelectrochem. determ. in aq. solvent 3—33788
CdTe p-n homojunction, electron and hole diffusion length determ. using surface photovoltage method 3—28461
CdTe, shallow donor photoionisation cross section, photoconductivity spectra 3—23433
CdTe shallow p^+nn^+ solar cells, fabrication and photovoltaic props. 3—58535
CdTe single cryst., exciton-phonon bound state, detection by photocond. 3—8423
CdTe single crysts., streamer discharges 3—8868
CdTe solar cells, thin film, review 3—44124
p-CdTe solar cells *(German)* 3—58510
CdTe, surface oxidation, XPS study, appl. to Cr-CdTe junction 3—43282
CdTe thin films, hole effective masses ratio determ. from optical transition 3—43651
CdTe thin films, obliquely deposited, anomalous photovoltaic effect *(Japanese)* 3—47386
CdTe:Ag (Cu), excited states, photoluminescence and IR absorption study 3—8450
CdTe:Cl(In), ion implanted, heat treated, defect reactions, cathodolum. and pulse laser annealing studies 3—56932
CdTe:Cu(Li), impurity distrib., spectrally resolved cathodoluminesc. in SEM 3—43636
CdTe:Ge, impurity states and carrier recombination *(Russian)* 3—52078
CdTe:In, diffusion and solubility 3—33502
CdTe:In, solution-grown, cathodoluminesc., effect of Cd-vapour and Te-vapour heat treatments 3—3826
CdTe:Li, localised vibr. modes and defects, IR absorpt. study 3—2720
CdTe:Mn, current carrier mobility 3—43182
CdTe/CuAu low resistance elec. contact, vacuum deposition prep. 3—18783
$CdTe/Hg_{0.8}Cd_{0.2}Te$ (111) system, laser annealing effects, electrolyte electrorefl. study 3—14252
CdTe/HgTe system, interdiffusion meas. 3—2890
$n\text{-}CdTe/In_{2-x}Sn_xO_{3-y}$ thin film solar cell 3—53555
CdTe-CdHgTe heterojunctions with common anion 3—33785
CdTe-HgTe multilayers, MBE growth, surface studies 3—8981
CdTe-InSb heterostruct., MBE growth and InSb surface passivation appl. 3—39037
CdTe(Cl), portable γ-sensitive detector, collimation and spatial props. for biotelemetry 3—58783
$CdTe_xSe_{1-x}$ film, prep. by laser annealing, elec. and optical characts., photovoltaic appls. 3—52931
$Cd_{1-x}Zn_xS$-liq. junction cells, optical props., impurity content, surface states, film composition, photo response curves 3—8787
$Cd_{1-x}Zn_xS$, solid solution alloyed films form. by chemical bath deposition, growth and struct. 3—9000
$Cd_{1-x}Zn_xS/p\text{-}GaAs$ heterojunction, trap states in space-charge region, AC admittance study 3—23470
Cds, dislocation structs. and motion, TEM study 3—46943

II-VI semiconductors continued
CrS-CdS heterojunctions preparation by electrochemical treatment of polycrystalline CdS, for solar cells 3—43270
$CuInSe_2$-CdS thin films solar cell, p-i-n heterojunction model 3—29385
$Cu_2S/(Zn,Cd)S$ heterojunction solar cells, chemiplated, comp. depth profiles meas. 3—53540
$Cu_2S/Cd_{1-x}Zn_xS$ solar cells prepared by solution reaction method, junction geometry 3—58505
Cu_2S/CdS solar cells prepared by solution reaction method, junction geometry 3—58505
$Cu_2S\text{-}Zn_xCd_{1-x}S$ heterojunctions electrical and photoelectric properties, application in solar cells 3—43269
$Cu_{2-x}Te$-CdS heterojunctions preparation by electrochemical treatment of polycrystalline CdS, for solar cells 3—43270
GaAs-ZnO composite struct., guided wave acoustooptic interactions 3—43513
(Hg,Cd)Te MIS devices, impedance characts., effect of crystal defects 3—47431
Hg-Te binary system, regular associated soln. model 3—7896
$Hg_{1-x}Cd_xSe$, g-factor, effect of free electron terms 3—18604
HgCdTe, directionally solidified, one-dimens. analysis of segregation 3—33157
HgCdTe IR detectors, photoconductive and photovoltaic types, 2-14 μm 3—20897
HgCdTe, LPE growth using Hg pressure differential 3—43764
HgCdTe MOS structures, photovoltage 3—23500
HgCdTe photodiode, blackbody heterodyne receiver for noise equiv. power meas. and photodetector characterisation 3—393
HgCdTe photodiodes fibre optic communication appls. 3—32506
$n\text{-}Hg_{0.8}Cd_{0.2}Te$, ion implanted, elec. props., IR reflectivity diagnostic technique 3—3713
$n\text{-}Hg_{0.8}Cd_{0.2}Te$, LPE growth for photoconductivity-type IR detector 3—52979
$n\text{-}Hg_{0.8}Cd_{0.2}Te$ layers, LPE growth, IR detector appls. 3—34245
$n\text{-}Hg_{0.8}Cd_{0.2}Te{:}Al^+(Ga^+)$, ion implanted, IR refl. study 3—18327
$Hg_{0.8}Cd_{0.2}Te{:}I$, doping behaviour, single donor sites, Hall effect studies 3—18324
$n\text{-}Hg_{0.8}Cd_{0.2}Te{:}Mg^+(Zn^+)(Cd^+)$, ion implantation, effect on elec. props., IR refl. 3—8073
$Hg_{0.8}Cd_{0.2}Te{:}P$, P incorporation during Hg vapour anneal, elec. characterisation 3—51636
$Hg_{1-x}Cd_xTe$ biased MIS capacitor, surface pot. relax. 3—38456
$Hg_{1-x}Cd_xTe$, cleaved, stress-mediated Hg migration, photoemission and electrolyte electroreflectance study 3—47195
$Hg_{1-x}Cd_xTe$, density of states, virtual cryst. approx. breakdown, UPS and CPA study 3—8389
$p\text{-}Hg_{1-x}Cd_xTe$, electron irrad., effect on carrier props., isochronal annealing study 3—33303
$Hg_{1-x}Cd_xTe$, energy gap vs. comp. and temp. 3—13719
$Hg_{1-x}Cd_xTe$ film, LPE growth modes 3—29020
$Hg_{1-x}Cd_xTe$, g-factor, effect of free electron terms 3—18604
$Hg_{1-x}Cd_xTe$, IR reflection spectra, coupled subband-phonon resonances 3—28861
$Hg_{1-x}Cd_xTe$, intrinsic carrier conc. calc. 3—52172
$Hg_{1-x}Cd_xTe$, isothermal VPE under controlled Hg vapour press. and elec. props. 3—34242
$Hg_{1-x}Cd_xTe$, LPE growth and elec. props. 3—18577
$Hg_{1-x}Cd_xTe$, laser excited, electron mobility meas. 3—52178
$Hg_{1-x}Cd_xTe$, low temp. metal saturation 3—18467
$Hg_{1-x}Cd_xTe$ MIS structs., capacitance transient anal. 3—47432
$Hg_{1-x}Cd_xTe$ p-n junctions, field ionisation of deep levels, theory 3—38467
$Hg_{1-x}Cd_xTe$, pure and ion implanted, laser annealed, Hall, cond. and C-V meas. 3—28347
$Hg_{1-x}Cd_xTe$, VPE by chem. vapour transport 3—43749
$Hg_{1-x}Cd_xTe{:}B^+$, implantation damage, thermal pulse annealing, expt. study 3—8070
$Hg_{1-x}Cd_xTe$-Al interface formation, local chem. comp. and Schottky barrier height, photoemission study 3—28220
$p\text{-}Hg_{1-x}Cd_xTe\text{-}Al_2O_3\text{-}Pb$, tunnel cond. oscills. in mag. field 3—3330
HgSe, g-factor, effect of free electron terms 3—18604
HgSe, mag. breakdown and spin-split cond. band 3—57260
HgSe, thermoelec. power and elec. cond., high press. study 3—8518
HgSe, transport props. under press. 3—18730
HgTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3—28248
HgTe, g-factor, effect of free electron terms 3—18604
n-HgTe, phase diagram and phase transitions 3—57060
$Hg_{1-x}Te$, electronic struct., CPA and tight-binding calc. 3—43016
$InSe\text{-}Cd_{0.2}Hg_{0.8}Te$ heterojunctions, elec. characts. 3—28429
$Mg_xCd_{1-x}Se$ mixed crysts., reson. Raman scatt. 3—8829
$PbSe_{1-x}Te_x$, electron effective mass, Shubnikov-de Haas effect study 3—13710
PbSnTe, lattice defects X-ray oscillating slit and film techniques 3—42489
Zn-ZnO-Ag sandwich, spontaneous current emission 3—47433
$Zn_{1-x}Cd_xS$, single crystal growth by iodine transport 3—14450
$Zn_xCd_{1-x}S$ epitaxial layer deposition and props. on GaAs 3—43761
$Zn_xCd_{1-x}S$, mechanoluminescence and high press. photoluminescence 3—57985
$Zn_xCd_{1-x}S$ thin film photovoltaic cells 3—14957
$Zn_xCd_{1-x}S{:}Te$, exciton binding energy of isolated and paired Te impurities 3—13739
$n\text{-}Zn_xCd_{1-x}S/p\text{-}Si$ heterojunction solar cells, form. and behaviour optimisation under various heat treatments 3—9440
$Zn_xCd_{1-x}Se$, phonon mode anharmonic coupling, Raman scatt. study 3—14298
ZnO, angle-resolved photoemission from polar and nonpolar surfaces 3—3921
ZnO anodic films on Zn, surface barrier props., annealing behaviour 3—38476
ZnO, binding and decomp. of organic dye mols. 3—23184
ZnO, ceramic semicond., nonlinear cond., potential barriers, voltage contrast imaging in secondary electron microscope 3—52162
ZnO electrode, rose bengal dye-sensitized photocurrent, time resolved meas. with nanosecond pulsed dye laser 3—3238
ZnO, exciton peak energy meas., optical spectra, press. depend. 3—8424
ZnO film, C-axis inclined, sputtered, for shear wave resonator 3—46424
ZnO film, highly conductive and transparent, prep. by RF magnetron sputtering, elec. props. 3—13651
ZnO film, oriented, for microwave shear mode transducer 3—46423
ZnO film, prep. by plasma-enhanced organometallic CVD 3—8991
ZnO film, RF sputtered, elec., optical and structural props. 3—28229

II-VI semiconductors continued
ZnO film, sputtered, SAW propag. loss 3–51912
ZnO film lenses for surface acoustic waves 3–42904
ZnO films prepared by reactive magnetron sputtering, effect of H_2 gas on *c*-axis orientation 3–28240
ZnO gas sensor, for air pollution detection 3–10820
ZnO, ideal vacancy electronic struct. 3–47309
ZnO metal-semicond. diodes, electroluminescence emission 3–23483
ZnO, microstructure, plastic deform., microhardness anisotropy, SEM study 3–37992
ZnO nonpolar, stepped, and polar surfaces, interaction with CO, CO_2, and O_2 3–18561
ZnO particles, O diffusion and defect struct. *(Japanese)* 3–18501
ZnO, photocond. anisotropy in polarised light 3–47389
ZnO piezoelec. films, SAW and optical waveguide appls. 3–14485
ZnO piezoelectric crystals meas., by resonance-antiresonance method 3–36036
ZnO piezoelectric sputtered film, c-axis inclined, ZnO/Si composite shear wave resonator fabrication 3–47605
ZnO piezoelectric thin film accelerometer sensor 3–49338
ZnO, RF magnetron sputtering for SAW, mag. field strength and configuration effects 3–52944
ZnO, radiative recomb. anisotropy in cpds. excited with unpolarised light 3–38861
ZnO, semiconductor-electrolyte boundary, generation-recombination processes 3–28434
ZnO single cryst., solid-state impurity crystn. 3–2817
ZnO thin film resonator on Si, two dimensional theory 3–46425
ZnO thin films, highly c-axis oriented, prep. by CVD 3–2999
ZnO, transparent conducting films, fabrication and props., solar cells 3–3963
ZnO varistor, fabrication, grain growth control using seed grains 3–53010
ZnO varistor, grain boundaries, TEM study 3–51617
ZnO varistors, leakage currents, carrier trapping mechanism obs. 3–33738
ZnO:Co, solid soln., elec. cond., influence of sintering 3–3180
ZnO:Cu, IR luminesc. characts., magnetooptical data 3–43616
ZnO:Ga(Pb), doped and undoped, luminesc. study in UV region 3–38881
ZnO-electrolyte junction, photoresponse meas. 3–33756
ZnO-glass interface, Stoneley wave propagation study 3–38185
ZnO-Si layered medium, SAW resonators 3–46399
ZnO-SiO_2-Si membrane, acoustically thin, plate mode excitation and propagation 3–51911
ZnS, AC powder electroluminescence, brightness and maintenance *(Japanese)* 3–47713
ZnS amorphous film, photoinduced light absorption 3–34160
ZnS, band struct. calcs. 3–3027
ZnS crystal, dislocation exoelectron emission 3–14444
ZnS, current oscillations, excited by rectangular voltage pulses 3–47608
ZnS, doped powder, compaction kinetics 3–9012
ZnS electron release from traps, investig. using optical recharging 3–19161
ZnS film dispersion on slab-type optical waveguide, optical consts. determ. 3–3841
ZnS films, ionised cluster beam deposition growth, crystallinity rel. to accelerating voltage 3–3967
ZnS films, vacuum evaporated, struct. and optical props., ellipsometry study 3–52865
p- ZnS, green photoluminescence band fine struct., wavelength modulation study 3–8882
ZnS, ideal vacancy electronic struct. 3–47309
ZnS, lattice dynamics, deform. dipole model study 3–38017
ZnS, M centres, vacancy local vibrations 3–51597
ZnS phosphors with plate microcrystals, prep. and characts. *(Japanese)* 3–47715
ZnS, piezoelec., bulk magnetophotovoltaic current, influence of Faraday effect 3–8523
ZnS piezoelectric crystals meas., by resonance-antiresonance method 3–36036
ZnS, radiative recomb. anisotropy in cpds. excited with unpolarised light 3–38861
ZnS, self-activated single crysts., IR photoluminesc. 3–8865
ZnS, single crystal growth by iodine transport 3–14450
ZnS, substitutional transition metal impurities, local force variations, Raman scatt., Green's function calc. 3–47651
ZnS:Ag, doped and undoped, luminesc. spectra, effect of intrinsic defect and impurity hole cond. 3–38869
ZnS:Ag, single cryst., photolum. and cathodolum. studies 3–19193
ZnS:Cu, AC electrolum. lines, intermittent arrays and segments 3–19199
ZnS:Cu, electroluminesc. and elec. cond., temp. and field dependence meas. 3–14358
ZnS:Cu,In,Cl phosphors, electroluminesc. 3–47714
ZnS:Cu,Mn^{2+} hexagonal-cubic transition, EPR powder anal. 3–57755
ZnS:Cu(Al), impurity diffusion, two-sample luminescence study 3–18513
ZnS:Eu, Gd, single cryst., struct., impurities effects 3–2512
ZnS:Eu, luminescence polarisation kinetics during afterglow process 3–8880
ZnS:Ga,Al, ODMR of strongly coupled donor-acceptor pairs 3–3593
ZnS:I(O)(Ag), defect creation by impurity doping, luminesc. and ESR study 3–43617
ZnS:In, ion implanted, struct. transitions, luminescence and electroreflection study 3–2780
ZnS:In,Cl phosphors, electroluminesc. 3–47714
ZnS:In^+, ion implanted, photoluminescence and photoconductivity 3–8881
ZnS:Mg, phosphors, electro- and photo-luminesc. study 3–38919
ZnS:Mn, polytype structs. rel to impurity conc., stacking faults energy 3–18319
ZnS:Mn CVD film electroluminescence, AC and DC coupled devices appl. 3–24021
ZnS:Mn sputtered films, Mn conc. effect on photoluminescence 3–43593
ZnS:Mn thin films, AC electrolum. emission decay and saturation 3–19200
ZnS:Mn-Si heterostructure, DC electroluminescence 3–24022
ZnS:Ni, hydrogen-like states in photoionisation band, electroabsorption study 3–8452
ZnS:Ni^+, absorpt. and emission spectra 3–43572
ZnS-PbTe IR multilayer filters, meas. down to 4K 3–12291
ZnS(Se) IR transmitting materials, CVD, developments and improvements 3–7094

II-VI semiconductors continued
ZnS(Se):Mn^{2+} MISIM structures, electron impact excited luminescence 3–43633
$ZnS_{0.3}Se_{0.5}$, neutron irrad., F-centres, optical absorption bands 3–3762
ZnS_xSe_{1-x} films, CVD epitaxy on GaAs by H_2 vapour transport 3–24152
ZnSe, 1.06 μm Nd:YAG laser-induced damage meas. 3–18336
ZnSe, blue emission spectra *(Korean)* 3–14342
ZnSe chemically vapour deposited, bidirectional transmittance distrib. function meas. 3–28811
ZnSe crystals, grinding effect on surface quality 3–37249
ZnSe, deep centres, electrolum., barrier capacitance relax. study 3–18654
ZnSe, dislocation dissociation and stacking fault energies, weak beam study *(French)* 3–18308
ZnSe, dislocation motion during plastic deform., effect on luminesc. spectra 3–43627
ZnSe, electronic charge redistrib. associated with zone-centre phonons, local field effects 3–57044
ZnSe, epitaxial films, use in electron-beam pumped lasers 3–56206
ZnSe exciton photoconductivity 3–23431
ZnSe, exciton system heating under laser excitation 3–18623
ZnSe gamma radiation detectors 3–17175
ZnSe grown by LPE, segregation coeffs. of selected impurities 3–8362
ZnSe, luminescence spectra *(Russian)* 3–24015
ZnSe, MO CVD grown, optoelectronic props. of donors 3–43618
n-ZnSe, minority carrier diffusion length, photoelectrochem. determ. in aq. solvent 3–33788
ZnSe, N^+ implanted, radiation damage wrt dosage and annealing 3–33314
ZnSe, neutron irrad., F-centres, optical absorption bands 3–3762
ZnSe, phase factor in EXAFS 3–43662
ZnSe, plastically deformed, dislocation struct., weak beam electron microscopy study 3–42613
n-ZnSe, single cryst., recomb. radiation with electron excitation 3–3827
ZnSe single crystals, absorpt. edge deform. by laser radiation 3–1724
ZnSe, struct. defects rel. to p-type cond. 3–43175
ZnSe twinned single crysts., anomalous photovoltage, internal elec. field 3–8529
ZnSe, VPE on GaAs, photoluminescence and cond. 3–8863
ZnSe, zero-phonon recombination spectra of donor-acceptor pairs 3–28891
ZnSe: Cu(Ga)(Al), impurity diffusion and luminescence centres 3–23096
ZnSe:Cl, photoluminescence and electron conc., defects effects 3–38885
ZnSe:Cu, nonlinear absorpt. and linear circular dichroism spectra 3–19163
ZnSe:Cu, two-photon absorption coeff., deep level impurity effects 3–3776
ZnSe:Fe, IR absorpt. 3–8854
ZnSe:Ga (Ni), impurity diffusion, two-sample luminescence study 3–18513
ZnSe:In(Ga)(Cu), donor and acceptor levels, photocond. and Schottky diode studies 3–18661
ZnSe:Li, localised vibr. modes and defects, IR absorpt. study 3–2720
ZnSe:Mn, stacking faults and polytype structs. rel. to impurity conc. 3–18320
ZnSe:N, binding energy of shallow acceptor 3–52076
ZnSe-$CuGa_{0.7}In_{0.3}Se_2$ heterojunction, electroluminesc. and I-V characteristics meas. 3–3821
ZnSe-electrolyte interface, photocorrosion study to photothermal deflection spectroscopy 3–9335
ZnSe(S):Ni, bound excitons, electroabsorption spectra study 3–38318
ZnSe(Te), crystal growth from soln. and photoluminesc. *(Japanese)* 3–39020
ZnSe(Te), exciton diffusion, reson. self-absorpt., luminesc. spectrum profiles 3–19189
ZnTe, 1.06 μm Nd:YAG laser-induced damage meas. 3–18336
ZnTe, angle resolved local density of states Green's function calc. 3–8390
ZnTe, Brewster effect on refl. amplitude and phase in exciton spectral region 3–23969
ZnTe, exciton reflection spectra, Brewster effect, theory and expt. *(Russian)* 3–3084
ZnTe, excitonic surface polaritons, ATR, reflection and luminesc. spectra 3–28283
ZnTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3–33441
ZnTe, luminescence on intense lase excitation 3–43628
ZnTe, optical amplification spectra meas. 3–24009
ZnTe, optical inhomogeneity form. by single picosec. pulse 3–57878
ZnTe, surface phonon polaritons, Raman scatt. study 3–38831
ZnTe:Al, cryst., luminesc. under laser illumination 3–3784
ZnTe:Al(Cl)(In), laser-induced donor diffusion, photoluminesc. study 3–47158
ZnTe:Cl, defect centres, EPR and ODMR study 3–43433
ZnTe:Cl(Br)(Cu)(Ag), ion implanted, donor related edge luminescence 3–52856
$ZnTe_{1-2x}S_xSe_x$, energy gap variation with composition, photolum. spectra 3–52845
$ZnTe_xSe_{1-x}$, Raman spectra, vibr. states *(Russian)* 3–43550

III-V semiconductors
antisite and vacancy electron states, local density of states 3–43096
compound semiconductors, refr. index dispersion near fundamental absorpt. edge, quantum theory 3–56164
conference, Perpignon, France (Sept. 1982) 3–20568
Coulomb potential fluctuations due to charged impurities 3–3101
CVD, organometallic, review 3–8993
deep level defects, self-consistent cluster calcs. 3–47300
defects in semiconductors, conf., Amsterdam, Netherlands (Aug.-Sept. 1982) 3–44894
degenerate, p-type, high electron mobility and impurity scatt., theory 3–52133
diamagnetic susceptibility, Green's function calc. 3–28502
dielectric constant, temp. and press. dependences 3–57854
dielectric functions and optical parameters, 1.5-6.0 eV 3–43509
dislocation density, grown-in, effect of impurity at. size 3–27943
elastic Debye temperature, elastic const. calc. 3–42740
electron ionisation coeffs. anisotropy 3–13827
electron probe microanalysis, standardless quantitative technique 3–24547
electronic struct. under press. 3–47260
film growth by MBE 3–19272

III-V semiconductors continued
- $Ga_{1-x}Al_xAs$ superradiance diode, high-power low-divergence operation and coupling efficiency 3–1655
- $Ga_xIn_{1-x}P$, LPE growth on GaAs(100), lattice mismatch and photoluminescence 3–8356
- GaAs:B, elec. cond., impurity effects 3–23398
- GaAs:Cr, semi-insulating, impurity centres study by measurement of photoconductivity spectra *(Czech)* 3–47285
- GaN highly excited semiconductors, relax. processes 3–14351
- gap struct. mixed semiconductors *(Chinese)* 3–33631
- heterostructures, graphite boat design for use in LPE growth 3–39049
- high energy distrib. function and electron impact ionisation coeff. calc. 3–3210
- hydride VPE of III-V semiconductors, extraneous wall deposition suppression by HCl injection 3–8997
- III-V ternary and quaternary epitaxial solid solns., instability criteria 3–42954
- internal electronic config. of Sn donors and acceptors, Mossbauer isomer shift anal. 3–47302
- light sources, carrier lifetime meas., recomb. rate and doping level determ. 3–8505
- LPE grown, surface and interface problems, review 3–24158
- LPE growth, lattice mismatching conditions, expt. study 3–24167
- LPE techniques for cpd. semicond. growth, review 3–24157
- MBE, appl., review 3–8986
- MBE growth, review 3–52957
- MBE growth *(Japanese)* 3–29003
- metal-semiconductor interface thickness, soln. theory 3–51964
- metallisation-compound semicond. interfaces, metallurgical interactions 3–13909
- MOCVD epitaxial growth 3–47777
- MOCVD growth 3–52966
- MOCVD method for prod. of semicond. epitaxial films, review 3–24143
- ohmic contacts to III-V semiconductors, fabrication techniques, review 3–52249
- optoelectronic devices prepared by MBE 3–19271
- photoluminescence spectra and meas. *(French)* 3–28882
- picosecond relaxation processes, photolum. correl. technique 3–38907
- pseudobinary compounds, excess free energy of mixing and phonon spectra anal. 3–13463
- quaternary alloys, miscibility gaps, delta lattice parameter model 3–43791
- quaternary alloys, miscibility gaps, delta lattice parameter model 3–43792
- quaternary solid solns., thermodynamics 3–23057
- quaternary solid solutions, unstable regions, strictly regular solution approx. 3–51798
- sphalerite structure, dynamic atomic displacements, X-ray study 3–27919
- spin density distrib. around mag. centre due to transition metal doping 3–18655
- spinodal decomp. and clustering 3–18466
- staggered-lineup heterojunctions as sources of tunable below-gap radiation 3–38915
- ternary, band struct. tight-binding calcs., virtual cryst. approx. modification 3–47264
- ternary, clustering, bond probability study 3–57094
- ternary and quaternary, equilib. diagrams, influence of chemical disorder and epitaxial substrate, DLP model *(French)* 3–42957
- ternary compound planar doped barrier photodetectors, detectivity calcs. 3–45202
- thin film heterojunction struct., thermal strains anisotropy meas. 3–13645
- thin films, prep., defects, and appls. 3–23210
- VPE, organometallic, thermodynamic aspects 3–42953
- VPE growth, use of low press. 3–42960
- VPE growth by hydride process using multichamber reactors, abrupt heterojunction prod. 3–43771
- zinc-blende semiconductors, orthonormal local orbitals constructions 3–38284
- zincblende-type semiconductors, lattice statics, interionic pot. model 3–22818
- (Al, Ga)As DH lasers, cooling rate effect on short-time LPE growth of active layers 3–9005
- (Al,Ga)As laser, single quantum well, visible CW operation 3–37020
- (Al,Ga)As, luminesc. centre form. during pulsed laser irrad. 3–47699
- (Al,Ga)As, Mg diffusion profiles alteration due to p-n junctions 3–13549
- (Al,Ga)As:Mg, diffusion across p-n junction during LPE growth 3–23098
- (Al,Ga)As/GaAs DH lasers, ageing-induced degradation (or lifetime) vars. statistical anal. 3–56259
- Al/GaAs Schottky barriers, evaluation using Norde's modified current-voltage anal. 3–38455
- Al-GaAs structures, anodic oxidation for prep. of dielectric passivation layers *(Slovak)* 3–47226
- Al-InP interface, cryst. and electronic struct. 3–23189
- AlAs, NMR spin-lattice relax. *(German)* 3–3567
- AlAs-AlGaAs-GaAs quantum well heterostructures, induced disorder effects on luminescence 3–18519
- AlAs-GaAs multilayer struct. for increasing solar cell efficiency 3–19591
- AlAs-GaAs superlattice intermixing by Zn diffusion 3–18518
- AlGaAS/GaAS p-n junction solar cells, conversion efficiency 3–53516
- AlGaAs 0.8 μm lasers, distortion characts. 3–41842
- AlGaAs CW DH lasers, longit. mode partition noise in gain spectrum shift and gain suppression 3–22068
- AlGaAs CW high power single-mode laser diodes, review and comparison 3–22055
- AlGaAs DH injection lasers, nonwaveguide mode operation 3–22116
- AlGaAs DH laser, LPE growth in sapphire boat 3–37066
- AlGaAs DH laser, room temp. CW operation, 680-700 nm 3–6966
- (AlGa)As diode laser with deposited waveguide, monolithic-hybrid integration 3–41861
- AlGaAs Gaussian channel substrate planar laser diodes, high performance, single mode 3–32379
- AlGaAs graded-index waveguide separate-confinement heterostruct., lasers with proton-delineated stripe, LPE and MBE grown 3–56193
- AlGaAs high power multiple-stripe injection lasers with channel guides 3–12149
- AlGaAs injection heterolaser based optoelectronic readout 3–56155
- AlGaAs injection lasers, theory and obs. of optical nonlinearities 3–22062
- AlGaAs LPE heterostructures, luminesc. efficiency improvement by CW laser annealing 3–47700
- AlGaAs laser, freq. stabilisation based on $^{85}Rb\text{-}D_2$ line 3–1676

III-V semiconductors continued
- AlGaAs laser, picosecond single-mode pulse generation by injection locking 3–41890
- AlGaAs laser amplifier, bias current reson., refr. index change 3–6963
- AlGaAs laser amplifiers, Fabry-Perot and travelling-wave type, noise characts. 3–56265
- AlGaAs laser diode coupled to single-mode fibre cavity, optical feedback effects on oscill. field spectrum 3–7046
- AlGaAs laser diodes, high-power CW single-mode operation 3–27080
- AlGaAs laser facets, contamination reduction by reactive outdiffusion 3–41880
- AlGaAs laser preamplifier and linear repeater system, S/N and error rate performance 3–7008
- AlGaAs laser spectrometer, near IR, high-resolution *(Japanese)* 3–10925
- AlGaAs lasers, AM and FM quantum noise, theoretical and expt. result comparison 3–32362
- AlGaAs lasers, coherence props. of picosecond pulses 3–41839
- AlGaAs, metalorganic CVD growth, review *(Japanese)* 3–29015
- AlGaAs multi-purpose low-noise laser, shallow proton implant, appls. 3–7007
- (AlGa)As multimoded laser for digital communication appl., functional life testing 3–1662
- AlGaAs narrow stripe lasers using double current confinement, operation and appl. 3–12142
- AlGaAs optical source masterslice, custom metallizations for lasers and LEDs 3–22112
- AlGaAs semiconductor laser, injection locked, optical phase modulation 3–7038
- AlGaAs single mode lasers for fibre-optic appls. 3–22060
- AlGaAs single mode lasers for fibre-optic communications 3–50672
- AlGaAs TJS single mode diode lasers, anomalous tuning 3–27115
- AlGaAs window V-channelled substrate inner shape laser, high power visible CW operation 3–46207
- AlGaAs:Ge, effect of Ge on liquidus and solidus in LPE domain 3–42956
- (AlGa)As/GaAs DH laser, negative resistance effect at low temp. *(Chinese)* 3–12145
- AlGaAs/GaAs heterointerface, compositional fine line patterning by Zn implantation 3–51637
- AlGaAs/GaAs laser diode based monitoring amplifier, operating condition elec. diagnostics 3–56262
- AlGaAs/GaAs multilayer graded-gap avalanche photodiodes for 0.8-1.8 μm wavelength region 3–49447
- AlGaAs/GaAs multiple segmented stripe contact lasers, longit. vars. in current injection and carrier conc. 3–32361
- AlGaAs/GaAs multiquantum-well lasers with ridge-waveguide, MBE 3–46237
- AlGaAs/GaAs photodiode permanent damage effects due to total dose exposure 3–40688
- AlGaAs/GaAs superlattice, graded band gap, channeling and staircase avalanche photodiodes: towards a solid-state photomultiplier 3–47418
- AlGaAs/GaAs systems for integrated optical circuits 3–32507
- AlGaAs/GaAs twin-channel substrate-mesa-guide injection lasers fabricated by OMVPE 3–46238
- AlGaAs-GaAs, VPE monolithic cascade solar cell 3–4383
- AlGaAs-GaAs cascade solar cell, MBE grown, conversion efficiency 3–19582
- (AlGa)As-GaAs DH, MBE grown, minority carrier props. effect of As species 3–41834
- AlGaAs-GaAs DH planar LED using junction current confinement, coupling to large core dia. fibres using lenses 3–12362
- AlGaAs-GaAs fibre coupler laser using front-mirror leaked light for feedback control *(Chinese)* 3–37061
- AlGaAs-GaAs single mode DH laser with channel-guide struct., theoretical anal. 3–27055
- AlGaAs-GaAs solar cells, high energy proton irrad. damage 3–53504
- $Al_{0.08}Ga_{0.92}As$ MBE-grown proton-bombarded, stripe laser based optical transmitter, 45 Mbit/s, characterisation, functional reliability 3–32363
- $Al_{0.22}Ga_{0.78}As$, laser induced recombination centers, photoluminesc. measurements 3–38857
- $Al_{0.25}Ga_{0.75}As$-GaAs modulation doped structs. grown by MBE, light sensitivity 3–52279
- $Al_{0.28}Ga_{0.72}As$, shallow acceptors, photoluminescence study 3–43590
- $Al_{0.3}Ga_{0.7}As$ LPE layer, grown-in deep level defects, thermal annealing effect 3–18799
- p-$Al_{0.7}Ga_{0.3}As$-p-GaAs-n-GaAs, thick window concentrator solar cell 3–9429
- $Al_{1-x}Ga_xAs$ diode laser, freq. stabilisation using optogalvanic effect in Ar I 3–1675
- $Al_{1-x}Ga_xAs$, organometallic VPE layers, improved photoluminesc. using AsH_3 source gettering technique 3–34235
- $Al_{1-x}Ga_xAs$ solar convertors for solar concentrators, ohmic loss reduction 3–34700
- $Al_xGa_{1-x}As$, core exciton spectra studied with synchrotron radiation 3–18625
- $Al_xGa_{1-x}As$ DH picosec. lasers, optoelectric diode response rate meas. appls. *(Chinese)* 3–41829
- $Al_xGa_{1-x}As$ epitaxial layer on GaAs:Cr, elec. cond. and transfer doping effect 3–23509
- $Al_xGa_{1-x}As$ graded index heteroepitaxial waveguides, refractive index profile 3–12332
- $Al_xGa_{1-x}As$ graded-gap cryst., elec. cond., hydrostatic and uniaxial compression effects meas. 3–13817
- $Al_xGa_{1-x}As$, LPE grown, composition and minority carrier diffusion length meas. *(Chinese)* 3–38242
- $Al_xGa_{1-x}As$ lasers, optically integrated coherently coupled laser pair 3–41860
- $Al_xGa_{1-x}As$ layers, compositionally graded, electron drift vel. meas. by time resolved optical reflectivity 3–52285
- $Al_xGa_{1-x}As$, luminescence and minority carrier transport 3–28889
- $Al_xGa_{1-x}As$ MBE layers, Si doped, elec. props. 3–23512
- $Al_xGa_{1-x}As$, OMVPE growth, effects of trimethylaluminium interaction with graphite 3–42966
- $Al_xGa_{1-x}As$ organometallic VPE layer, electron traps, transient capacitance study 3–3340
- $Al_xGa_{1-x}As$, organometallic VPE growth, review of method, comparison with other growth techniques 3–19280
- $Al_xGa_{1-x}As$ planar stripe lasers with deep Zn diffusion, active layer injection carrier spatial distrib. anal. *(Chinese)* 3–41828
- $Al_xGa_{1-x}As$ variable-gap epitaxial films, exciton reflection and electroreflection spectra 3–14372

III-V semiconductors continued
$Al_xGa_{1-x}As$ variband layer strain gauge resistors, sensitivity and comp. depend. 3—5780
$Al_xGa_{1-x}As$: Si, MBE growth, effect of H_2 on elec. and optical props. 3—51973
$Al_xGa_{1-x}As$:Si, doped and undoped, MBE grown, elec. and optical props., effect of growth conditions and alloy comp. 3—43596
$Al_xGa_{1-x}As$:Si, Si doping during MBE growth 3—24133
$Al_xGa_{1-x}As$:Si epitaxial layer on GaAs; Hall effect and photocond., heterojunction phenomena 3—47438
$Al_xGa_{1-x}As$:Si MBE layers, elec. props. and precipitation 3—38509
$Al_xGa_{1-x}As$:Te, impurity states, electron mobility 3—33681
$Al_xGa_{1-x}As/Al_yGa_{1-y}As$ visible lasers, contaminated, MOCVD grown, elec. and optical characts. 3—41871
$Al_xGa_{1-x}As/Al_yGa_{1-y}As$ multiquantum wells, pulsed MBE grown, photoluminesc. spectra 3—52823
$Al_xGa_{1-x}As$/GaAs, weak luminesc. spectra, meas. by photoemission technique 3—3787
$Al_xGa_{1-x}As$/GaAs heterostruct., MBE grown, mobility enhancement using superlattice struct. 3—57413
$Al_xGa_{1-x}As$/GaAs multiple quantum well junction laser, MBE grown, performance 3—17495
$Al_xGa_{1-x}As$-GaAs heterostruct., MBE growth, minicomputer control system, software *(German)* 3—39053
$Al_xGa_{1-x}As$-GaAs heterostructures, MBE growth conditions effect on elec. and optical props. 3—42965
$Al_xGa_{1-x}As$-GaAs heterostructure, hopping cond. in Landau level tails between 10 mK and 1K 3—43274
$Al_xGa_{1-x}As$-GaAs heterojunctions, plasticity and strength studies *(Russian)* 3—47035
$Al_xGa_{1-x}As$-GaAs modulation doped heterostruct., current transport meas. at moderate fields 3—8562
$Al_xGa_{1-x}As$-GaAs quantum well heterostruct. lasers and superlattices, high press. optical measurements 3—1631
$Al_xGa_{1-x}As$-GaAs superlattice, impurity band tails calc. 3—57310
$Al_yGa_{1-y}As$ solid soln., multistage solar cell with p-n heterojunctions 3—19589
AlGaAsGaAs multiple quantum well stripe lasers, CW longit. mode spectra 3—6972
$Al_xGa_{1-x}As_{1-y}P_y$, LPE growth on $GaAs_{0.61}P_{0.39}$ (100) 3—39050
AlGaAsSb long-wavelength (1.3 to 1.6 μm) photodetectors for fibre optical communications, review 3—12361
AlGaAsSb, on GaSb, low temp. LPE growth conditions and props. 3—42955
AlGaAsSb/GaSb p-n junction solar cells, conversion efficiency 3—53516
$Al_xGa_{1-x}As_ySb_{1-y}$, spinodal decomp. and clustering 3—18466
$(Al_{0.5}Ga_{0.5})_{0.48}In_{0.52}As$, MBE growth on InP substrate, Schottky diode and MESFET fabrication 3—8985
$(Al_xGa_{1-x})_yIn_{1-y}As$, lattice matched to InP, MBE growth and elec. and optical props. 3—24132
AlGaInP, VPE growth, thermodynamic anal. 3—33587
$Al_xGa_yIn_{1-x-y}P(As)$, solid-phase miscibility gap and spinodal decomposition, theory 3—42780
$Al_xGa_{1-x}N$ epitaxial film, photoluminescence and cathodoluminescence 3—28904
$Al_xGa_{1-x}N$ MBE films, struct., elec. and optical props 3—8355
$Al_xGa_{1-x}N$:Zn, photoluminescence and Raman scatt. 3—43625
$Al_xGa_{1-x}P$ epitaxial layers, lattice consts., X-ray diffr. study 3—18588
$Al_{0.3}Ga_{0.7}P_{0.01}As_{0.99}$ laser heterostruct., MBE growth 3—1666
$Al_xGa_{1-x}P_yAs_{1-y}$, organometallic VPE growth, composition control 3—18576
AlGaSb, on GaSb, low temp. LPE growth conditions and props. 3—42955
$Al_xGa_{1-x}Sb$, OMVPE grown using trimethylarsenic and trimethylantimony, review 3—24145
$Al_xGa_{1-x}Sb$ solid solns., production of heterostructures by LPE *(Russian)* 3—13662
$Al_{0.5}In_{0.5}P-Ga_{0.5}In_{0.5}P$ DH lasers optically pumped at 90K, MO-CVD growth 3—46231
$Al_{0.5}In_{0.5}P-Ga_{0.5}In_{0.5}P$ DH visible lasers, MOCVD growth and optical pumping at 90K 3—50657
AlN epitaxial layer on sapphire, orientation relationships, X-ray diffr. study 3—47231
AlSb film, laser irrad., self-epitaxial growth, TEM and electron diffr. study 3—47236
AlSb film on GaAs, MBE growth and elec. and struct. props. 3—58051
AlSb thin film form. by laser annealing of Al/Sb sandwich structs. 3—56977
Au/Langmuir-Blodgett film/n-GaP diode, electrolum. 3—38923
Au-InP Schottky diodes, elec. characts., interfacial layer effects 3—8582
AuGe-GaAs ohmic contact, laser beam annealed, surface and subsurface morphology 3—57196
CdTe:Ge, deep impurity centre ionisation 3—28304
$Cd_{1-x}Zn_xS$/p-GaAs heterojunction, trap states in space-charge region, AC admittance study 3—23470
CraAs:Cr, semi-insulating, Cr lattice location, ion channelling and PIXE studies 3—56916
Ga-Al-P ternary system, low temp. phase diagram rel. to growth 3—14578
Ga-In-As-Ge(Sn), liquid quaternary phases, melting diagram meas. and calc. 3—13410
GaAS CC laser diode, mode shifting, temp. depend. rate 3—1636
GaAS, diffusion of Fe, masking props. of SiO_2 film 3—8257
GaAS solar cell test facility 3—53528
GaAS, tetracene thin film, mol. fluoresc. quenching 3—43587
GaAS:Cr, electrical conductivity and Hall effect meas., using two electrometers 3—45164
(GaAl)As /GaAs DH lasers for optical communication systems *(Czech)* 3—6983
(GaAl)As buried convex waveguide struct. injection lasers 3—7010
GaAlAs buried optical guide laser, linewidth enhancement factor, theory and meas. 3—41825
GaAlAs CW lasers, cavity length effects on 20 μm stripe laser waveguiding 3—22067
GaAlAs CW room temp. laser *(Chinese)* 3—41864
GaAlAs closely coupled twin stripe lasers, bistability obs. 3—22065
GaAlAs composite CW laser module 3—22119
GaAlAs DH injection laser amplifier, parameters determ. from superlum. characts. 3—27057
GaAlAs DH laser, long-lived, Cu identification by SEM, cathodolumineesc., EBIC and electron probe anal. 3—50661
GaAlAs DH laser, subnanosec., pulsed current driven 3—27047

III-V semiconductors continued
GaAlAs diode laser, actively mode-locked, 7 Gbit/s coherent pulse generation 3—1677
GaAlAs diode laser, pulse-current pumped, ps light pulse obs. 3—12192
(GaAl)As dual wavelength lasers *(French)* 3—41876
GaAlAs dual-wavelength laser 3—6970
(GaAl)As GHz bandwidth lasers and optical detectors for signal processing appls. 3—17494
GaAlAs gain-guided-stripe DH laser with high kink power grown by organometallic VPE 3—46239
GaAlAs heterojunction laser diodes, harmonic and intermodulation distortion 3—46214
(GaAl)As heterostructure laser, slider-induced convection simulation in horizontal LPE slider system 3—34249
GaAlAs heterostructure laser, operational life improvement 3—37043
GaAlAs injection lasers, commercial, high-freq. characts. 3—6978
GaAlAs injection locked lasers, locking bandwidth asymmetry 3—17496
p-GaAlAs, LPE growth on GaAs, Be and Zn diffusion obs. 3—52982
GaAlAs, LPE system for semicond. heterostructure laser growth, slider induced convection 3—24160
GaAlAs laser, direct pumping, high-speed source development 3—7004
(GaAl)As laser, gain guided diode, CW high power, Al_2O_3 coated mirror facets, reflectivity 3—37076
GaAlAs laser, phase locked arrays, optical output power 3—27042
GaAlAs laser diode, antireflection-coated, polarisation control by external optical feedback 3—41889
(GaAl)As laser diode phase-locked array emitting 2.6 W CW 3—46212
GaAlAs laser diodes, reliability improvements, review 3—6982
GaAlAs laser electronic difference freq. control 3—41877
GaAlAs laser freq. stabilisation using Doppler-free spectrum of Cs D_2-line 3—37037
GaAlAs laser frequency stability, effect of intensity noise reduction by electronic feedback 3—41892
GaAlAs lasers, correl. of low-freq. intensity and freq. fluctuations 3—12197
GaAlAs lasers, forward bias voltage characts. 3—22069
GaAlAs low-threshold MO-CVD single quantum well lasers with Mg as p-type dopant 3—27048
GaAlAs multiple quantum-well heterostruct. laser development and characterisation for optical communication appls. 3—56239
GaAlAs, organometallic VPE growth on large scale 3—43751
GaAlAs proton stripe geometry laser, MOCVD grown, characts. 3—22110
GaAlAs quantum well heterostructure laser uniformity 3—1625
GaAlAs, recombination enhanced defect processes and device degradation 3—56909
GaAlAs red ultra-high brightness 500 mcd LED, LPE, optical communication appls. 3—22257
GaAlAs, scintillator, with monolithically integrated photodiode, detector 3—50165
GaAlAs single mode injection laser diode performance, under conditions of fluid immersion and hydrostatic press. 3—22099
GaAlAs single mode semicond. laser, relax. resonance effects in field spectrum 3—41823
GaAlAs single-mode lasers, phase noise and spectral line shape 3—56195
GaAlAs TJS laser optical detector for detect. at Gbit/s rates 3—42030
(GaAl)As TS lasers with reduced facet reflectivities, noise and longit. mode characts. 3—56260
GaAlAs:H_2S(Se), doping relationships during MOCVD growth 3—42632
GaAlAs:Mg one-watt CW visible single-quantum-well lasers grown by OM-VPE 3—37026
(GaAl)As/GaAs channelled substrate injection laser prep. and props. 3—46232
GaAlAs/GaAs DH lasers, Sn doped and undoped, MBE grown, p-n junction positioning study 3—41835
GaAlAs/GaAs double heterostructure junction lasers, fine struct. of freq. spectrum *(Japanese)* 3—56253
GaAlAs/GaAs high power phase-locked laser array 3—46240
GaAlAs/GaAs laser, current injection induced acoustic signals 3—1632
GaAlAs-GaAs DH laser diodes for gain-switched picosecond pulse generation 3—22064
GaAlAs-GaAs heteroface solar cell, design optimisation, reflection loss effect 3—29386
GaAlAs-GaAs oxide-stripe lasers, 880 nm, pulse-power perform. and stability 3—22061
GaAlAs-GaAs superlattice, third order nonlinear optical susceptibility 3—27129
GaAlAs-GaAs wavelength division solar cells, MOCVD growth 3—53515
p-$Ga_{0.2}Al_{0.8}As$/p-$Ga_{1-y}Al_yAs$/n-$Ga_{1-y}Al_yAs$ solar cells, conversion efficiency 3—53517
$Ga_{1-x}Al_xAs$, coherent off-axis epitaxial layers, X-ray multiple diffr. patterns 3—13665
$Ga_{1-x}Al_xAs$, electron irrad., electron trap optical ionisation cross-sections, DLTS meas. 3—43092
$Ga_{1-x}Al_xAs$, electron mobility and deformation pots, meas. in X-conduction band minima 3—18703
$Ga_{1-x}Al_xAs$, electron traps due to electron irrad. 3—33675
$Ga_{1-x}Al_xAs$ epitaxial films, band gap energy, photoacoustic method 3—51992
$Ga_{1-x}Al_xAs$ epitaxial layers, Al conc., Auger spectroscopy, ion microprobe anal., photoluminescence meas. 3—23993
$Ga_{1-x}Al_xAs$ epitaxial layer characterization by X-ray double diffr. *(French)* 3—28226
$Ga_{1-x}Al_xAs$ epitaxial multi-layer solar cell fabrication and testing, progress report 3—53545
$Ga_{1-x}Al_xAs$, exciton emission, luminescence study 3—52850
$Ga_{1-x}Al_xAs$ film, capillary liq. epitaxy 3—43776
$Ga_{1-x}Al_xAs$ heterojunction injection laser, monolithic-hybrid joining to As_2S_3 glass waveguide 3—22259
$Ga_{1-x}Al_xAs$ lasers, visible and IR, catastrophic degradation level meas. 3—27114
$Ga_{1-x}Al_xAs$, MBE grown, comp. anal. by atomic absorpt. spectroscopy and X-ray diffr. *(French)* 3—52954
$Ga_{1-x}Al_xAs$ variable gap films, photoelectron spectra, electron diffusion length 3—14440
$Ga_{1-x}Al_xAs$ variable-gap structs., isothermal liq. epitaxy 3—28234
$Ga_{1-x}Al_xAs$ visible laser (740 nm), improved lifetime by reducing bonding stress 3—27076
$Ga_{1-x}Al_xAs$:N, ion-implanted, $x=0.2$-0.8, photoluminescence studies *(Chinese)* 3—34132
n-$Ga_{1-x}Al_xAs$:Se, elec. resist., Hall effect meas., impurity energy levels 3—23510

III-V semiconductors continued
p-$Ga_{1-x}Al_xAs$:Zn, elec. resist., Hall effect meas., impurity energy levels 3−23510
$Ga_{1-x}Al_xAs$:Zn, LPE grown, shallow Zn diffusion obs. at 600°C 3−33499
$Ga_{1-x}Al_xAs$/GaAs heterojunctions, epilayer and interface, Raman scatt. meas. 3−14266
$Ga_{1-x}Al_xAs$-GaAs cascade solar cell using n-p-n struct. 3−19590
$Ga_{1-x}Al_xAs$-GaAs quantum well wires, MBE growth and cathodoluminesc. props. 3−3825
$Ga_{1-x}Al_xAs$-GaAs quantum well heterostructs., MOVPE growth 3−3965
$Ga_{1-x}Al_xAs$-GaAs solar cell, role of photoluminesc. in efficiency 3−58539
$Ga_xAl_{1-x}As$ layered stripline rib waveguide, mode selection 3−32470
$Ga_xAl_{1-x}As_yP_{1-y}$, vacancy and antisite defect deep levels, alloy composition effects 3−43097
$Ga_{0.8}Al_{0.2}As_ySb_{1-y}$:Be implanted avalanche photodetectors, tunnelling in reverse dark current charact. 3−20895
$Ga_xAl_yIn_{1-x-y}As/Al_xIn_{1-x}As$ optically pumped double heterostructure laser, room temp. lasing action 3−41824
$Ga_{1-x}Al_xP$, homogeneous, temp. difference LPE growth and photo- and electro-luminesc. meas. 3−39051
$Ga_{1-x}Al_xP$/GaP p-n structures, cathodoluminescence from p and n regions 3−8890
$Ga_{1-x}Al_xSb$, electron and hole impact-ionisation coeffs. 3−13826
$Ga_{1-x}Al_xSb$, solid soln., LPE, liq. and solid phase comp. 3−39099
$Ga_{1-x}Al_xSb$-GaSb heterostructure, epitaxial layers, growth characts. 3−38244
$Ga_{1-x}Al_xSb_{1-y}As_y$/GaSb, LPE growth and phase diagram 3−3970
$Ga_{1-x}Al_xSb_{1-y}As_y$-GaSb, LPE, liquid phase composition stabilisation obs. 3−33610
GaAs, 0.8 eV luminesc. band, annealing behaviour, As_{Ga} antisite detect. 3−28884
GaAs, 3 in. diam. LEC grown cryst., dislocation density and distrib. 3−42610
GaAs (001) surface, MBE grown, initial Al growth, temp. and reconstruction depend. 3−18585
GaAs (001)-Al, MBE grown, band bending, angle-resolved UPS study 3−52252
GaAs (001)-(2×4) surface electronic struct., XPS study 3−3280
GaAs (001)c(2×8), interdiffusion and nucleation of Al monolayers, AES study 3−13626
GaAs (100), initial growth of Ge epilayers, LEED and AES study 3−42978
GaAs (100), one- and two-photon absorpt. due to surface state excitons 3−43559
GaAs (100) and ($\bar{1}\bar{1}\bar{1}$), chemisorption of H, LEED and photoemission study 3−33574
GaAs (100) and (111), MBE grown, interaction with H and H_2, photoemission spectroscopy study 3−42925
GaAs (100) with adsorbed Bi, surface atomic struct. determ. 3−2946
GaAs, (110) bound and resonant surface states 3−28406
GaAs (1×1) (111), dangling bond surface state dispersion curves 3−3283
GaAs, absolute hydrostatic deform. pot., LMTO-ASA calcs. 3−13717
GaAs acoustic charge transport device, monolithic 3−46381
GaAs, adsorption of O, orientation depend., UPS and XPS study 3−24096
GaAs, amorphous, defects, elec. cond. and optical absorpt. studies 3−22778
GaAs, amorphous, low temp. epitaxial regrowth by ion irradiation 3−38266
GaAs, amorphous, pulsed laser annealing, nonthermal effect, time-resolved refl. study 3−46997
GaAs, angle resolved local density of states Green's function calc. 3−8390
GaAs, anion antisite defects and electron traps 3−42603
GaAs, annealed, 1.35 eV photoluminesc. emission centre, diffusion coeff. meas. 3−23997
GaAs, annealing, material-process interactions, review 3−58146
GaAs, antisite defect electron energy states, Green's function calc. 3−47306
GaAs, antisite defect form. during plastic deform., EPR and photoluminescence study 3−2553
GaAs atomically flat LPE-grown facets seen by scanning tunneling microscopy 3−13666
n-GaAs, AuGe ohmic contact formation, improved method for reducing contact resistivity 3−13906
n-GaAs, band-edge phonons, magnetoresist., magnetophonon reson. study 3−3230
GaAs bicrystal, grain boundaries, elec. characterisation 3−52061
GaAs bistable etalon, external switching on and off, regenerative pulsations, transverse effects and lasing 3−17559
GaAs bulk-crystal growth technology, Bridgman and LEC techniques 3−3940
GaAs, CW laser processing *(French)* 3−13271
GaAs, chemical and electrical characterisation 3−23404
GaAs, chemical vapour deposition modelling 3−33594
GaAs, collisional broadening of exciton luminesc. and spin-relax. time 3−28277
n-GaAs, collisional-narrowing of Raman spectrum for electron spin density fluctuations 3−47652
GaAs, compensation by low energy ion irrad., defect diffusion and carrier mobility 3−57001
GaAs concentrator solar cells using Al-cored printed circuit bases 3−53527
GaAs, coupled LO phonon-plasmon modes, anisotropic Raman excitation 3−43054
GaAs crystal based photoelastic light modulators 3−22197
GaAs, crystal growth from solution under microgravity conditions, defects 3−42594
GaAs DH laser, group velocity refr. index dispersion 3−37036
GaAs, dark line defects from. due to dislocation-point defect interactions 3−42615
GaAs, deep donor band in photoluminesc. spectrum 3−3805
GaAs, deep level point defects, annealing behaviour 3−43085
GaAs, deep levels, EL2 level, impurity superlattice model and DLOS results 3−18645
GaAs, defects study by projection etching 3−33263
GaAs, diffuse X-ray scatt. obs. of optically excited near-zone-edge phonons 3−14385
GaAs diode, radiative recomb. allowing for impurity scatt. 3−19198
GaAs, diodes, n-type negative differential cond. localised development 3−38391
III-V semiconductors continued
GaAs, direct band-gap semiconductor, minority carrier transport, radioactive recombination effects 3−52171
GaAs direct-gap semicond., transient optical spectra of dense exciton gas 3−14317
GaAs, dislocation effect on electron mobility, theory 3−33724
GaAs, dislocation glide, recombination enhanced, cathodoluminesc. microscopy study 3−42609
GaAs, dislocation line, elastic energy, integral formalism 3−46930
GaAs doping superlattices, tunable electrolum. 3−14357
GaAs, drag effect in interband transitions, photocurrent spectra 3−3255
GaAs, EL2 emission band, photoluminescence and photoluminescence excitation spectroscopy 3−43589
GaAs, E3 trap annealing, DDLTS study 3−3117
GaAs electrodes, room temp. chloroaluminate molten salt interfaces, Mott-Schottky analyses 3−52243
GaAs, electroliquid epitaxy, mass transfer effects 3−33604
GaAs, electron bombarded and plastically deformed, intrinsic emission intensity 3−24102
GaAs, electron capture by multiphonon emission at native levels 3−3106
GaAs, electron irrad., anisotropic defect production, electron and hole traps 3−42667
GaAs, electron irrad., optical props. thermal stability 3−43577
GaAs, electron irrad. damage, elec. cond. and defect levels 3−42666
GaAs, electron irrad.-induced defects, electron traps 3−42668
p-GaAs, electron irradiated, deep levels, DLTS and deep level optical spectroscopy study 3−33664
GaAs, energy diffusion eqn. for electron gas interacting with polar optical phonons, non-parabolic case 3−43142
GaAs, epitaxial, photoluminescence study of exciton-ionised donor complexes 3−3806
GaAs, epitaxial and bulk, $S^+(Si^+)(Se^+)$ implanted, chemical and elec. profiles 3−27968
GaAs epitaxial film, heat treatment, ellipsometric and AES studies 3−14621
GaAs epitaxial films, laser irrad., photoluminesc. meas. 3−34147
GaAs epitaxial films, structural imperfections and their effect on Schottky-barrier characts. 3−13671
n-GaAs, epitaxial growth, impurity redistribution, theory 3−18582
n-GaAs epitaxial layer, minority carrier diffusion length meas. with high spatial resolution 3−52180
GaAs epitaxial layer electro-optically controlled directional coupler switch at 1.15 μm 3−12314
GaAs epitaxial layers, dislocation density study *(Russian)* 3−22901
GaAs, epitaxial layers, conditions for MO-CVD growth at low temps. 3−33600
GaAs epitaxial layers, vapour phase growth by hydride technique 3−43757
GaAs, etched (100) surface, Auger anal. 3−34181
GaAs, etching in Cl_2 plasma, temp. depend. 3−24376
n-GaAs, etching under laser illum., cryst. defects study 3−42612
GaAs, evaporated Au-Ge ohmic contacts, role of Ge 3−33793
GaAs, evaporation and ripple formation under laser irrad. 3−38968
GaAs FET characteristics as an optoelectronic switch 3−36085
GaAs film, Dember EMF theory 3−28387
GaAs film, epitaxial, CVD grown, analytical evaluation 3−28231
GaAs film, triode sputtering prep., elec. characts. 3−28995
GaAs film growth by MBE 3−19272
GaAs film-Si substrate graphoepitaxy struct. optical waveguides, fabrication 3−22206
GaAs films, α-irrad., defect migration, hall effect study 3−47167
GaAs films, α-irrad. defect migration, elec. study 3−47168
GaAs, first-order Raman line intensity ratio, rel. to lattice perfection scale 3−43524
GaAs, GaInAs and GaInAsP, low-press. CVD, review 3−8992
GaAs, gas-phase deposition, equilib. distrib. of Te and Zn 3−8082
GaAs, grain boundary energy states 3−23314
GaAs grating structures preparation by photochemical etching *(Slovak)* 3−46357
GaAs, Hall EMF meas. by two-frequency method 3−49398
GaAs, Hall factor for isotropic media, mag. field dependence 3−43206
p-GaAs, heavily doped, impurity band tails based on semiempirical pseudopotentials 3−52075
GaAs, heavily doped, photoluminescence edge calc. 3−38860
p-GaAs, heavily-doped compensative material, exponential band-tails and lasing characts. *(Chinese)* 3−32355
GaAs heterolayer, hot electrons, phonon scattering 3−8499
GaAs heterostructure, electrochemical study 3−47415
GaAs heterostructure, polaron effective mass 3−47278
GaAs, high pressure structural transitions, planar defects, X-ray diffr. study 3−2769
GaAs, high-resolution picosec. modulation spectroscopy of near interband resons. 3−36099
GaAs, highly excited, picosec. spectroscopy, free carrier relax. in continuum states 3−38910
GaAs highly excited semiconductors, relax. processes 3−14351
GaAs homojunctions, plasticity and strength studies *(Russian)* 3−47035
GaAs, hot electron relax. and saturated current dispersion, DC to 1200 GHz 3−33749
n-GaAs, hot electron transport characts. in crossed elec. and mag. fields 3−38419
GaAs, hot wall epitaxial growth 3−47782
GaAs, hot-electron photoluminescence, spectrum and polarisation 3−19191
GaAs IR windows for high-speed airborne applic., development 3−7093
GaAs, impact ionisation including quantum effects, Monte Carlo simulation 3−33730
GaAs, impurity analysis with SIMS *(Japanese)* 3−48106
GaAs impurity and mobility profiling techniques 3−23395
GaAs, impurity cond., AC and DC hopping cond., extended pair approx. 3−38386
GaAs, impurity deep levels, electronic props. and stability 3−52072
GaAs, impurity incorporation during MBE growth, optical and elec. props. 3−8378
GaAs in MIS and electrolyte-insulator-semicond. systems, cond. of anodic oxide films *(Russian)* 3−47429
GaAs integrated multilayer DH lasers separated by tunnel junctions 3−1654
n-GaAs, intervalley picosecond electron relax. times, nonlinear optical susceptibility study 3−37100

III-V semiconductors continued
GaAs, ion beam assisted maskless etching by 50 keV focused ion beam 3—34503
GaAs, ion implantation, void form. and swelling, electron microscopy study 3—22926
GaAs, ion implantation damage annealing with graphite heaters 3—57004
GaAs, ion implanted, annealing characts., Rutherford backscattering-channelling study 3—33315
GaAs, ion implanted, EL2 center, defect formation chem. study 3—33663
GaAs, ion implanted, non-planar solid phase epitaxial growth processes 3—3012
GaAs, ion implanted, point defect segregation, dislocation struct., annealing 3—33317
GaAs, ion implanted, pulsed laser annealed, photolum. 3—57977
GaAs, ion implanted, radiation damage, IR absorption spectra and lattice deformation 3—2619
GaAs, ion implanted, radiation disorder depend. on type of ion 3—28005
GaAs, ion implanted, solid phase epitaxy, interface structures and twins obs. 3—33591
GaAs ion source extraction grid, fabrication and use 3—459
GaAs, ion-implanted and crystalline, laser annealing, surface ripples obs. 3—46990
GaAs, Kramers-Kronig analysis of optical consts., Philipp-Taft method improvement 3—52759
GaAs, Kramers-Kronig analysis of optical consts., calc. accuracy 3—52760
GaAs LEC crystal, undoped, semi-insulation mech., role of dislocations 3—22898
GaAs, LEC crystals, doped and undoped, EL2 deep donor level distribution 3—47282
GaAs, LEC grown, deep levels and dislocations, photoluminescence study 3—43086
GaAs, LEC grown, leakage current variation rel. to dislocation density 3—3181
GaAs, LEC grown, twin form., melt stoichiometry effect 3—8056
GaAs LEC semi-insulating wafers for IC appls., resist. and Hall mobility meas. technique 3—20878
GaAs, LPE growth from solns. with evaporating solvent 3—52981
GaAs LPE layer, grown-in deep level defects, thermal annealing effect 3—18799
GaAs laser coupled to external resonator transient and stationary props. in bistable operation 3—37039
GaAs, laser generated heat pulse propagation 3—23112
GaAs, laser irrad., O incorporation, effect of O_2 pressure 3—22936
p-GaAs lasers, PtTi ohmic contact formation using ion-beam sputtering technology 3—41870
GaAs, lattice thermal cond., 4-700K 3—2897
GaAs layers, anisotropy in growth rate 3—38252
GaAs layers irradiated by H^+ ions, elec. props. study 3—23517
GaAs, light scatt. on free electrons, electron-relax. processes 3—23965
n-GaAs, light-scatt. spectrum for single-particle excitations 3—38841
GaAs, liquid phase electroepitaxial growth, layer thickness monitoring by resistance meas. 3—3972
GaAs, longitudinal photocurrent spectral characts. 3—47387
GaAs, low dislocation density single crysts. substrates, liq. encapsulated Czochralski growth 3—28977
GaAs MBE, selected-area growth on ion implanted GaAs substrates 3—3958
GaAs MBE films, cryst. defects rel. to fabrication process *(French)* 3—42971
GaAs, MBE grown, control of Schottky barriers height 3—38457
GaAs, MBE grown, deep states and surface processes, DLTS study 3—43068
GaAs, MBE grown, exciton-like features in low temp. photoluminescence spectra 3—3804
GaAs, MBE growth of planar doped barrier structures 3—43738
GaAs, MBE growth of undoped semi-insulating layers, elec. and photoluminesc. props. 3—39033
GaAs MBE layer, capless and Si_3N_4 encapsulated annealing, photoluminescence and DLTS study 3—8441
GaAs, MBE layers, defect deep levels, optical excitation study 3—47307
GaAs MBE layers, microtwinning and growth defects 3—8359
GaAs MBE single crystal *(Chinese)* 3—3957
GaAs, MBE substrate prep. method 3—4170
GaAs MBE substrates, oxide removal mechanisms, XPS study 3—39260
n-GaAs, MCD in 10.6 μm range, rel. to free carrier conc., homogeneity determ. of doped semicond. 3—28868
GaAs MESFET A/D converter and memory IC for ultra high speed transient recording 3—50216
GaAs MO-CVD film, residual donor impurities, far IR magneto-optic study 3—2592
GaAs MOCVD grown, atmos. and reduced press. growth and elec. props. 3—23197
GaAs, MOCVD growth 3—52966
p-GaAs MOS struct., interface states and internal photoemission 3—52257
GaAs, magnetoplasma surface polariton excitation, resonant emission of odd harmonics 3—38322
n-GaAs metal-semiconductor-metal stripline photodetectors, first order optoelectronic correlations meas. 3—49445
n-GaAs, metallic impurity donor band, elec. cond., Hall effect, luminescence 3—23313
GaAs, metalorganic CVD growth, review *(Japanese)* 3—29015
GaAs, metalorganic MBE grown, thermal decomp. of reactants, mass spectrometer anal. 3—43739
GaAs, microinclusion-induced mech. prop. degradation 3—57023
GaAs, microwave noise of hot carriers, temp. depend. 3—13873
GaAs n^-/n^+ rib waveguide directional coupler struct., insertion loss analysis 3—42037
GaAs n-type Ge doped, MBE grown, elec. and photolum. props. 3—33807
GaAs native oxide props., use in planar devices and integrated optics *(Chinese)* 3—14752
GaAs, native point defects and dislocations, effect on devices, review 3—13216
GaAs, negative differential cond. and low freq. elec. instabilities 3—8500
GaAs, neutron transmutation doping, ESR study 3—3532
GaAs, nonequilibrium direct-gap polar, ultrafast transient transport 3—57341
n-GaAs, nonradiative recomb., electron probe investigation 3—18773
GaAs, OMCVD grown using trimethyl and triethyl gallium sources 3—24144

III-V semiconductors continued
GaAs, OMVPE grown, using diethylgalliumchloride-triethylarsine 3—43755
n-GaAs ohmic contacts, specific contact resistance, model for N_D^{-1} depend. 3—13902
GaAs, optical consts., subtractive Kramers-Kronig method and Leveque method 3—8793
GaAs, optical waveguide fabrication by drive-in diffusion technique 3—50753
GaAs, organometallic VPE growth on large scale 3—43751
GaAs, oscillatory magnetoabsorption and diamagnetic excitons 3—38806
GaAs, oxidation, anal. of oxide films of XPS *(Japanese)* 3—3915
GaAs, oxyfluoride layer, plasma deposited, props. 3—8604
GaAs p^+-p^0-n^0-n^+ structs., minority carrier diffusion length, electron-probe-induced-current meas. 3—18722
GaAs, p-conductivity study, intrinsic double acceptor evidence 3—3178
GaAs permeable base transistor, GaAs VPE overgrowth over W gratings, TEM study 3—28998
GaAs, phase factor in EXAFS 3—43662
n-GaAs photoanodes, polymer coated, in contact with aqueous electrolytes, regenerative photoelectrochemical cells 3—48157
GaAs photocathodes, electron diffusion, radiative and Auger recombination, luminesc. 3—34199
GaAs photoconducting picosecond switch, appl. to direct gain modulation of semicond. laser 3—27095
GaAs photoconductive detectors, laser stimulated MOCVD fabrication 3—45201
GaAs, photoluminescence spectra and meas. *(French)* 3—28882
GaAs, photoluminescence under intense laser excitation 3—52851
GaAs, picosecond dynamics of optical gain due to electron-hole plasma, under near band gap excitation 3—47688
GaAs, picosecond laser pulse annealing, carrier and lattice temp. calcs. 3—56947
n-GaAs piezoelectric film, total-reflection-mode SAW amplification, theory 3—51907
GaAs, plastically deformed As antisite defects as main electron traps, DLTS meas. 3—52055
GaAs, point charge nonlinear-screening, spatial dielec. function 3—38329
GaAs, polycrystalline, grain boundary passivation by H plasma, surface barrier diode appl. 3—43064
GaAs, proton bombard. and annealed, dislocation and void form. 3—47005
GaAs, proton bombarded, extended cryst. defects, annealing, TEM study 3—57000
GaAs, pulsed laser annealing in high press. Ar gas ambience 3—33296
GaAs, pulsed laser breakdown thresholds using two laser beams 3—37959
GaAs, purification by isovalent doping during liq. phase growth 3—34219
GaAs quantum well lasers, threshold current calc. 3—27053
GaAs, reactive ion beam etching damage, annealing behavior 3—2617
GaAs, residual double acceptor, IR absorption, photoluminescence and Hall effect meas. 3—38334
GaAs Schottky junctions, sputter etching effects 3—43972
GaAs, Schottky-barrier diodes, γ-ray irrad., thermal annealing of E3 centres, elec. field effects 3—18657
GaAs Schottky-barriers, γ-irrad., radiation defect accumulation, DLTS study 3—13278
GaAs, semi-insulating, deep levels and compensation, math. model 3—43062
GaAs, semi-insulating, point defects and impurities assessment 3—22931
GaAs, semi-insulating, thermal equilib. current oscills., deep donor EL2 electron emission 3—13759
GaAs, semi-insulating, undoped, EL2 deep level, direct obs. by IR absorpt. 3—57305
GaAs, semi-insulating substrate, spatially resolved cathodolum. study 3—8888
GaAs semi-insulating substrate, in situ etching using $AsCl_3$ in MOVPE 3—14756
GaAs, semiconducting and other major props., review 3—13690
GaAs, semiinsulating, electrical characterisation using galvano-magnetic measurements *(Slovak)* 3—47364
GaAs, semiinsulating, p-n-i-n^+ struct., IR and visible radiation detector 3—5861
GaAs single cryst., damaged surface layer, laser-annealing restoration, 3-cryst. X-ray diffr. 3—42903
GaAs solar cells, grain boundary effects 3—53562
n-GaAs solar cells, polycryst., charge collection characts., SEM/EBIC study 3—53563
GaAs solar cells, thin film, review 3—44124
GaAs solar cells for concentrator and flat plate arrays, fabrication and characts. 3—58530
GaAs, sphalerite structure crysts., antisite defect formation by gliding dislocation-interstitial interaction 3—22892
GaAs sputtered films, cryst. struct. and comp., effect of laser irrad. *(French)* 3—23211
GaAs, struct., formation and props. of dielec. films, book 3—49101
GaAs substrate, Si_3N_4 film, null ellipsometry study technique 3—49429
GaAs substrate for Ta_2O_5 and ZrO_2 films, thickness determ. using electron probe analysis 3—49326
GaAs, substrate for VPE ZnSe 3—8863
GaAs surface, adsorbed $Fe(CO)_5$, UV photolysis at 77K 3—44068
n-GaAs surface, doped, EELS calc., multiple losses and gains 3—19237
GaAs surface (100), interaction with $N_2(H_2)$ plasma, chem. and electronic props. 3—52212
GaAs, surface and redox reactions in various electrolytes 3—52245
GaAs surface barrier diodes, deep level mobility in elec. field, DLTS study 3—8271
GaAs, surface dissociation by pulsed laser irrad., AES study 3—8095
GaAs, surface transitions, gradual, induced by multiple picosec. laser pulses 3—28936
GaAs surfaces (100), (110) and (111), laser annealed, LEED, AES and RBS studies 3—57197
GaAs, thin film growth by CVD and MBE 3—38269
GaAs thin film Wannier exciton energy levels structure and effective radius *(Chinese)* 3—8422
GaAs thin films, optical props. 3—24038
n-GaAs, thin highly doped layer creation for ohmic contact form. 3—18781
GaAs thin layers metalorganic CVD growth on W substrate 3—14496
GaAs, thin-film solar cells, review of prgress 3—14949
GaAs, time-resolved cathodoluminescence in scanning electron microscopy 3—52857

III-V semiconductors continued
GaAs, transient electronic transport, investigation using Monte Carlo simulations 3—33731
GaAs, transient transport and transferred electron behaviour under high energy electron injection 3—38396
GaAs, two-phonon Raman spectroscopy as probe of nonequilibrium HF acoustic phonons 3—14304
GaAs, two-spin reson. transitions of optically oriented nuclei 3—28739
GaAs undoped epitaxial layers, GaAs substrate in situ etching using $AsCl_3$ in MOVPE 3—14756
GaAs, uniaxially compressed, metastable excitons, photo-EMF spectra study 3—13741
GaAs v-channel substrate inner stripe laser, highly reliable and mode-stabilised operation, visible wavelength emission 3—27056
GaAs, VPE, low press., dopant incorporation study 3—42962
GaAs, VPE, low press., growth rate limiting processes 3—42963
GaAs, VPE and LPE grown, electron traps, DLTS and C-V meas. 3—43069
GaAs, VPE grown, deep-level defects vs. growth param., electron traps meas. 3—33670
GaAs, VPE grown using novel $AsCl_3$ reactor, photoluminescence, elec., DLTS meas. 3—19276
GaAs, VPE growth and characterisation for microwave applications 3—19281
GaAs, VPE growth by halide process, large scale reactor 3—43770
GaAs VPE layer, elec. props. improvement by cooling HCl liq. source 3—23514
GaAs, vacancies and anti-struct. defects, electronic density of states 3—47301
GaAs, vacancy deep levels, pseudo-atomic orbitals cluster model *(Chinese)* 3—38338
GaAs velocity overshoot effect anal. *(Chinese)* 3—13822
GaAs, velocity overshoot of electrons with space charge and nonuniform field 3—43188
GaAs wafers, laser chemical etching of vias 3—47972
n-GaAs with electrons and holes, kinetic control of anodic dark and photodissolution 3—52242
GaAs, X-ray diffraction, external photoeffect 3—3925
GaAs, Z 3—3956
GaAs, z 3—18367
GaAs, Z *(Russian)* 3—38889
GaAs, Zn diffusion via SiO_2 layers *(Rumanian)* 3—8255
GaAs:Al, diffusion through surface layers, X-ray and photoluminescence study 3—8258
GaAs:Al, local lattice dynamical force const. variations caused by isoelectronic impurities 3—47071
GaAs:Al, spatial distrib. profile of Al form $^{27}Al(p,\gamma)^{28}Si$ resonant reaction 3—46975
GaAs:B, ion implanted, compensation mechanisms, study 3—33665
GaAs:Be MBE layers, impurity and defect levels 3—3102
GaAs:C, MOVPE grown, photoluminescence study 3—43752
GaAs:C(Si), host isotope fine struct. of local modes 3—18418
GaAs:C(Zn)(Si)(Ge), shallow acceptors, luminesc. study 3—52828
GaAs:Cr, 3 inch diameter crystal growth by horizontal Bridgeman technique, characts. 3—24115
GaAs:Cr, APR study, dynamic Jahn-Teller effect 3—8721
GaAs:Cr, boat grown bulk, Cr level and EL2 electron traps, DLTS study 3—8443
GaAs:Cr, carrier lifetime determ., dynamic phase grating method 3—18720
GaAs:Cr, Cr-related intracentre photolum. 3—23994
p-GaAs:Cr, epitaxial, photo-Hall effect and photocond. 3—18735
GaAs:Cr, impurity trigonal sites, model for luminescence lines 3—42624
GaAs:Cr, ion implanted, Cr redistribution at surface, elec. fields effects, thermodynamic model 3—46979
GaAs:Cr, LEC grown, radiotracer determ. of Cr distrib. 3—13255
GaAs:Cr, no-phonon photoluminescence spectra, energy level scheme 3—8877
GaAs:Cr, O, steady-state photoconductivity response 3—18738
GaAs:Cr, phonon spectroscopy using supercond. tunnel junctions 3—2695
GaAs:Cr, photoinduced transient optical absorption of Cr^{4+} 3—23982
GaAs:Cr, photolum., models 3—19171
GaAs:Cr, positive identification of $Cr^{4+} \rightarrow Cr^{3+}$ thermal transition, Hall effect meas. 3—23409
GaAs:Cr, Se, ion implanted, damage annealing, Rutherford backscatt. and TEM studies 3—33311
GaAs:Cr, semi-insulating, nonuniformity and dislocations, photoluminesc. intensity study 3—38858
GaAs:Cr, semi-insulating, thermal conversion, cathodoluminesc., photoluminesc. and SIMS study 3—43635
GaAs:Cr, semi-insulating, Cr conc. distribution determination by illumination induced cond. changes 3—51647
GaAs:Cr, thermal cond. stress depend. and tunnelling 3—47175
GaAs:Cr, Zeeman spectroscopy meas. of absorption and luminescence lines 3—8807
GaAs:Cr,Te, photoconductivity, defect struct. 3—28384
GaAs:Cr S-diodes, current-volt. characts. and current instability in mag. field 3—38468
GaAs:Cr substrate for $Al_xGa_{1-x}As$ epitaxial layer, elec. cond. and transfer doping effect 3—23509
GaAs:Cr substrates, Cr conc. distrib., non-destructive determ. 3—33283
GaAs:Cr wafer, Si diffusion from thin film by pulsed laser irrad. 3—57145
GaAs:Cr^{2+}, vibronic coupling in trigonal field, luminesc. spectra 3—33685
GaAs:Cr^{2+} deep levels and Jahn-Teller effect 3—52095
GaAs:Cr(Cu)(Fe), deep levels related to transition metal impurities, ionisation energy meas. 3—3105
GaAs:Cr(S)(Si)(Se), lattice incorporation of n-type dopants 3—22924
GaAs:Cu, deep impurity centres, Jahn-Teller effect suppression under uniaxial press. 3—28307
n-GaAs:Cu, electron irrad., photoluminesc. meas. 3—3798
GaAs:Cu, electron irrad., defect interaction with Cu atoms, photoluminescence study 3—37949
GaAs:Er, ion implanted, luminescence line profile 3—19187
GaAs:Fe p-π-ν-n struct., photoconductivity under forward bias 3—18777
GaAs:Fe VPE layers, deep level activation energy and optical cross section 3—47286
GaAs:Fe^{2+}, photons and phonons stimulated emission study 3—52809
GaAs:Ge, doped and undoped, MBE grown, elec. and optical props., effect of As vapour species 3—43595

III-V semiconductors continued
GaAs:Ge, homojunction interfaces, carrier compensating centres, luminescence and DLTS study 3—3273
GaAs:Ge MBE layer doping, thermodynamic study 3—2580
GaAs:H, passivation of dominant deep level EL2 3—23308
GaAs:H amorphous, mol. vibr., H bridges, IR spectra study 3—3719
GaAs:H_2S(Se), doping relationships during MOCVD growth 3—42632
GaAs:He, ion implanted, depth distrib. and range parameters for He, SIMS study 3—13252
GaAs:In, Sb, isovalent impurity interaction with system of point defects 3—37950
GaAs:In(Sb), Czochralski grown, doping effect on struct. perfection 3—33281
GaAs:Mg, anomalous diffusion behaviour 3—23089
GaAs:Mg, carrier profile, correlation with Mg atomic profiles, SIMS and Hall effect study 3—3218
GaAs:Mn, optical-transition cross sections involving impurities 3—38855
GaAs:Mn; impurity electronic struct., SCF multiple scatt. $X\alpha$ calc. 3—8451
GaAs:N dislocation-free cryst. growth by N doping 3—8964
GaAs:O, DLTS anal. using lock-in amplifier *(French)* 3—20872
GaAs:O, deep level, photoluminec. study 3—14331
GaAs:O S-type diodes, charging kinetics of impurity levels 3—8572
n-GaAs:O-Au Schottky barrier diode, deep level studies 3—18646
GaAs:O(B)(Ne), ion implanted, electron trap EL2, photocapacitance transients study 3—28294
GaAs:O(Fe)(Cr), deep impurity centre ionisation 3—28304
GaAs:S, Te, dislocation-point defect-dopant interaction, effects on recombination processes 3—37951
GaAs:S, VPE grown, doping anisotropy, Hall effect and photoluminescence studies 3—42631
n^+-GaAs:S polycrystalline films, MOCVD growth using S_2Cl_2 dopant source, solar cell appl. 3—33278
GaAs:Sb heterojunction photodiodes used for solar corona Fe XIII 10747 Å line 3—20240
GaAs:Sb(In) epitaxial films, elec. props. and acceptor centres 3—57441
GaAs:Se, defect struct. after Se implantation through Si_3N_4 encapsulant layer 3—18322
GaAs:Se, Sn, semi-insulating, AlN capped annealing 3—37940
GaAs:Si, 1.4 eV Si-related emission, luminesc. characts. 3—43613
GaAs:Si, Cr, multiply scanned electron beam annealing 3—56991
GaAs:Si, ion implanted, IR rapid thermal annealing, MESFET appl. 3—8071
GaAs:Si, LEC grown, dislocation distrib., etching study 3—42607
GaAs:Si, LPE growth, cond. inversion 3—8603
GaAs:Si, liquid doping in CVD, electron mobilities, FET devices 3—18323
GaAs:Si, MBE grown, cryst. orientation depend. of Si autocompensation 3—13650
GaAs:Si, MBE growth on heat-treated semi-insulating GaAs:Cr substrate, SIMS study 3—39034
GaAs:Si, post-implantation annealing, capless technique, carrier conc. and mobility 3—53096
GaAs:Si p-n structures, radiative recomb. characts., effect of In impurities 3—38920
GaAs:Si^+, ion implanted, TEM damage studies and elec. profile meas. 3—47006
GaAs:Sn, dopant electronic config., Mossbauer study 3—43091
GaAs:Sn, epilayers, low pressure metal-organic CVD growth using tetraethyltin Sn source 3—34236
GaAs:Sn, MBE grown, surface segregation model for Sn profile, SIMS study 3—13663
GaAs:Sn, MBE growth, Sn doping using $SnSe_2$, photoluminesc: studies 3—37941
GaAs:Sn FET, MBE growth using high throughput system 3—52951
GaAs:Te, dislocation loops with stripe contrast, high resolution electron microscopy study 3—18310
GaAs:Te, heavily doped crystals influence of polarity on facet effect *(Chinese)* 3—2591
GaAs:Te, microdefects and microprecipitates investig. *(Chinese)* 3—8050
GaAs:Te, Zn, defect struct. induced by Zn diffusion, TEM study 3—27944
GaAs:Te crystals impurity nonuniformity determ., by interference microscopy 3—46981
GaAs:Te epilayers, luminescence study of Te donor 3—43621
GaAs:Ti, ion implanted, photoluminescence spectra 3—43626
GaAs:Zn, LPE grown, shallow Zn diffusion obs. at 600°C 3—33499
GaAs:Zn, sputtering, ionisation of sputtered atoms and substrate surface excitations 3—52877
GaAs:Zn, VPE growth for negative electron affinity photocathodes 3—47779
n-GaAs/(Se^{2-}/$Se_n{}^{2-}$)/Pt liquid solar cell *(French)* 3—29395
GaAs/$Al_xGa_{1-x}As$ LPE grown heterojunctions, two dimens. electron gas 3—43278
GaAs/$Al_xGa_{1-x}As$ multilayer reflector for surface emitting laser diode 3—50679
GaAs/AlGaAs heterostructures, two-dimens. electron gas, magnetophonon reson. 3—23479
GaAs/AlGaAs multi-quantum-well laser diodes, polarisation depend. gain 3—46211
GaAs/AlGaAs/BeO constricted DH large optical cavity laser, LPE grown, multichannel optical recording appl. 3—27074
GaAs/$Ga_{1-x}Al_xAs$ multiple quantum well struct., room temp. optical absorpt. saturation spectra 3—7082
GaAs/GaAlAs DH narrow diffused stripe lasers for high speed integrated optical transmitters 3—22109
GaAs/GaAlAs GRIN-SCH very low threshold laser structs. grown by MOCVD 3—56238
GaAs/GaAlAs graded refractive-index separate confinement heterostructure grown by OM-VPE, low threshold 3—6969
GaAs/GaAlAs multi-quantum well struct., Rayleigh scatt. at exciton resonance 3—8843
GaAs/Ge epitaxial heterostructures prep. by scanned CW laser annealing 3—57248
GaAs/Ge epitaxial system, coherency of interphase boundary and elastic strain 3—51977
In-GaAs/n-$Al_xGa_{1-x}As$ heterostructures, organometallic VPE grown, interface states study 3—28416
GaAs/Si layers, thickness, refr. index, m-lines and refl. spectroscopy techniques, waveguide appl. 3—28916
GaAs-(AlGa)As multilayer structures, automated conductivity profiles 3—346

III-V semiconductors continued
GaAs-Al$_{0.3}$Ga$_{0.7}$As, quantised Hall resist., fine struct. consts. 3—23411
GaAs-Al$_{1-x}$Ga$_x$As modulation doped heterostructure, high-mobility electrons, electric field induced heating obs. 3—28417
GaAs-Al$_x$Ga$_{1-x}$As, electron probe microanalysis, improved spatial resolution 3—9369
GaAs-Al$_x$Ga$_{1-x}$As DH, photolum. spectra, anomalous bands 3—3816
GaAs-Al$_x$Ga$_{1-x}$As heterojunction layers, fast electron switching and storage effects 3—8563
GaAs-Al$_x$Ga$_{1-x}$As heterostructure, photo-EMF, forward current flow mechanism, electrolum. study 3—18774
GaAs-Al$_x$Ga$_{1-x}$As heterojunction, subband struct. and light scatt. spectra 3—28423
GaAs-Al$_x$Ga$_{1-x}$As heterojunction, low temp. mobility 3—28424
GaAs-Al$_x$Ga$_{1-x}$As heterostruct., MBE, minicomputer controlled substrate and effusion cell operation *(German)* 3—34234
GaAs-Al$_x$Ga$_{1-x}$As heterostructures, modulation doped, electron or γ-irrad., transport props. 3—38461
GaAs-Al$_x$Ga$_{1-x}$As heterostructure, selectively doped, two-dimens. electron gas mobility and conc. 3—52231
GaAs-Al$_x$Ga$_{1-x}$As heterostruct., intersubband scatt. study 3—57418
GaAs-Al$_x$Ga$_{1-x}$As n-n heterojunction, photovoltaic response *(Chinese)* 3—33782
GaAs-Al$_x$Ga$_{1-x}$As semicond. superlattice with tunable electronic props. 3—38462
GaAs-Al$_x$Ga$_{2-x}$As heterostructure, magneto-quantum transport at low temp. 3—3306
GaAs-AlAs heterostructures, modulation doped, mobility enhancement 3—3300
GaAs-AlAs superlattices, homopolar interface structural and electronic props. 3—23473
GaAs-AlGaAs, effusion processes, in MBE 3—28242
GaAs-AlGaAs DH laser, transverse mode selection, ambipolar excess carrier diffusion 3—46215
GaAs-AlGaAs heterojunctions and superlattices, electron transport *(Japanese)* 3—28426
GaAs-AlGaAs multi-quantum-well laser diode, dynamic behaviour 3—46213
GaAs-AlN MIS structures, reactive MBE growth 3—24142
n-GaAs-Al(Au)(Sn), MIS-type Schottky barrier, electron traps in oxide layer, detrapping study 3—23499
GaAs-anodic native oxide interface analysis using spectroscopic ellipsometry *(French)* 3—28438
GaAs-anodic oxide interface, struct. and elec. props. 3—33800
GaAs-Au thin film interface, microstruct. and colour, heating effects 3—51963
n-GaAs-Au/Ni/Au-Ge ohmic contacts, characts., Auger and SEM anal., ageing effects 3—52250
n-GaAs-Au-Ge ohmic contacts, characts., Auger and SEM anal., ageing effects 3—52250
GaAs-Ga$_{1-x}$Al$_x$As DH lasers, MBE growth at high substrate temp. 3—43740
GaAs-Ga$_{1-x}$Al$_x$As heterostructures, quantum well and modulation doped, MOVPE growth 3—43271
GaAs-Ga$_{1-x}$Al$_x$As laser, direct gain modulation by GaAs picosecond optoelectronic switch 3—27095
GaAs-Ga$_{1-x}$Al$_x$As quantum well structures, energy spectrum of donors 3—8447
GaAs-Ga$_{1-x}$Al$_x$As quantum wells, elec. field effect on luminescence 3—34143
GaAs-Ga$_{1-x}$Al$_x$As quantum well structs., Wannier exciton binding energies 3—47273
GaAs-Ga$_{1-x}$Al$_x$As quantum well structs., hydrogenic impurity state energy levels 3—47308
GaAs-GaAlAs, OM-VPE growth, effect of graphite baffles. 3—43768
GaAs-GaAlAs DH laser, high rate AM and FM characts. 3—22132
GaAs-GaAlAs graded barrier single quantum well lasers, CVD grown, threshold current densities 3—12143
GaAs-GaAlAs heterostructures, high-mobility selectively doped, grown by LP OM-VPE 3—28418
GaAs-GaAlAs laser, dielectric guiding due to inverted gain profile 3—1630
GaAs-GaAlAs lateral surface superlattice, transport 3—57416
GaAs-GaAlAs p-n-p-n negative resistance laser with low threshold current density 3—22117
GaAs-GaAlAs quantum well laser structs., MOVPE growth 3—43767
GaAs-GaAlAs stripe geometry multiple quantum well lasers, CW high-power single-mode operation 3—37029
GaAs-Ga(As), interphase tension of solutions in metals 3—8300
GaAs-In interface, metallurgical props., effect on elec. prop. of ohmic contacts to GaAs 3—13908
GaAs-In$_x$Ga$_{1-x}$As(GaAs$_{1-x}$P$_x$) strained superlattice lasers, CW operation at 300K 3—50656
pGaAs-nGe anisotype graded p-n heterojunctions, nonequilibrium behaviour 3—33784
n-GaAs-Ni/Au-Ge ohmic contacts, characts., Auger and SEM anal., ageing effects 3—52250
GaAs-O-Cs photocathode, (110) surface electronic struct., photoelectron spectra study 3—52892
GaAs-oxide interface electron state theory 3—43255
n-GaAs-p-GaAs-p-Al$_x$Ga$_{1-x}$As heterocells, design and test results in 200 W photovoltaic unit 3—9423
GaAs-polymer interface, polymer film plasma polymerisation and MIS struct. elec. props. 3—24155
GaAs-Pt interface, interfacial reaction and Schottky barrier 3—51868
GaAs-SiO$_2$-SiC, photosensitivity of semiconductor-insulator-semiconductor structures 3—33779
GaAs-ZnO composite struct., guided wave acoustooptic interactions 3—43513
GaAs$_{1-x}$-GaAs superlattices, strained, absorpt. meas. at high press. 3—47619
GaAs(:Si), MBE growth of high-purity layers and elec. props. meas. 3—34231
(GaAs)$_x$(InAs)$_{1-x}$, specific heat and thermodynamic functions, 5 to 300K 3—23055
GaAsP, electron beam annealing of defects during SEM meas. 3—42669
GaAsP, MOCVD growth 3—52966
GaAsP, NEA, energy- and spin-anal. of polarised photoelectrons 3—47751
GaAsP, quantitative anal., electron backscatt. coeff. meas. 3—19541
GaAsP, time-resolved cathodoluminescence in scanning electron microscopy 3—52857

III-V semiconductors continued
GaAs$_{0.15}$P$_{0.85}$ waveguides, light wave diffr. by dynamic gratings 3—7159
GaAs$_{0.4}$P$_{0.6}$-GaP strained-layer superlattice, photocurrent spectroscopy 3—43273
GaAs$_{0.6}$P$_{0.4}$ epilayer photoelectrochemical cells, stabilisation and luminesc. props. 3—14958
GaAs$_{0.82}$P$_{0.18}$, high efficiency solar cells, MOCVD grown 3—24576
GaAs$_{1-x}$P$_s$ waveguide, light wave diffr. by optically induced dynamic gratings 3—7158
GaAs$_{1-x}$P$_x$ epitaxial films, secondary electron emission 3—19232
GaAs$_{1-x}$P$_x$, negative electron affinity cathodes, spin polarised photoemission obs. 3—24084
GaAs$_{1-x}$P$_x$, organometallic VPE grown, optical and SEM anal. 3—43753
GaAs$_{1-x}$P$_x$, photoluminescence and Raman scatt. 3—43625
n-GaAs$_{1-x}$P$_x$, semicond.-liq. junction solar cell 3—29387
GaAs$_{1-x}$P$_x$, VPE, deep level electron traps, transient capacitance spectroscopy study 3—52054
GaAs$_{1-x}$P$_x$:Cd, acceptor photoionisation, IR absorption spectra study 3—19164
GaAs$_{1-x}$P$_x$:N, luminescence decays of bound excitons 3—52849
GaAs$_{1-x}$P$_x$:N, thermal quenching of no-phonon emission bands and phonon sidebands 3—19192
GaAs$_{1-x}$P$_x$:N, transfer of excitons bound to N traps, time resolved luminesc. study 3—47689
GaAs$_{1-x}$P$_x$:N, Zn epitaxial layers, cathodoluminesc. doping level influence 3—8889
GaAs$_x$P$_{1-x}$, epitaxial, EXAFS study 3—38958
GaAs$_y$P$_{1-y}$ MBE growth on VPE GaAs$_{0.63}$P$_{0.37}$ substrate, struct. and comp. control 3—13664
GaAs$_{0.11}$P$_{0.89}$(GaP):N, Te, Zn LEDs, yellow and green, current dependent electroluminescence decay and degradation behaviour obs. 3—3822
GaAs$_{1-x}$P$_x$—GaAs$_{1-y}$P$_y$ superlattices stimulated emission and photoluminescence 3—43564
GaAs$_{1-x}$Sb$_x$, organometallic VPE growth 3—28230
GaAs$_{1-x}$Sb$_x$ p-n junctions, avalanche breakdown voltage, misfit dislocations 3—8569
GaAs$_{1-y}$Sb$_y$, OMVPE grown using trimethylarsenic and trimethylantimony, review 3—24145
GaAs(110) surface, rotationally relaxed, tight-binding calc., saturating slab model 3—28400
GaAs;Si, implanted, high temp. thermal and laser annealing, luminesc. data *(Russian)* 3—38888
Ga$_{1-x-y}$In$_x$Al$_y$As, LPE growth on GaAs and near IR optical props. 3—3973
GaInAs p-i-n detectors for fibre optic communication appls. 3—32506
GaInAs-AlInAs heterojunctions, quantum transport, intersubband scatt. effect 3—3305
GaInAs-AlInAs heterojunctions, enhanced electron g-factors, tilted field method 3—47416
Ga$_{0.47}$In$_{0.53}$As film, MBE grown, optical quality 3—19273
Ga$_{0.47}$In$_{0.53}$As planar doped barrier photodetectors, detectivity calcs. 3—45202
Ga$_{0.47}$In$_{0.53}$As, single longitudinal-mode optical phonon scatt. obs. 3—47334
n-Ga$_{0.47}$In$_{0.53}$As, VPE growth and characterisation for microwave applications 3—19281
Ga$_{0.47}$In$_{0.53}$As/Al$_{0.48}$In$_{0.52}$As heterojunctions, electron mobility, spacer thickness and electron density effects 3—47412
Ga$_{0.47}$In$_{0.53}$As/InP p-i-n photodiodes, performance characts. and life test data 3—40692
Ga$_{0.80}$In$_{0.20}$As high quantum efficiency junction, OMVPE grown, solar cell appl. 3—14939
Ga$_{1-x}$In$_x$As, atomic-scale struct., EXAFS study 3—14388
Ga$_{1-x}$In$_x$As, OMVPE grown using trimethylarsenic and trimethylantimony, review 3—24145
Ga$_{1-x}$In$_x$As, VPE growth, equilibrium thermodynamics *(Czech)* 3—47235
Ga$_{1-x}$In$_x$As, vibrations and optical props., coherent pot. approx. 3—33370
Ga$_x$In$_{1-x}$As, n- and p-type, on InP substrate, optical, crystallographic, and transport props. 3—43597
GaInAsP 1.3 μm simple stripe geometry and advanced struct. laser comparison monomode fibre optic communication system appl. 3—41878
GaInAsP DH, LPE growth and props., effect of different active layer thickness 3—43774
GaInAsP DH laser material assessment by photoluminesc. 3—22058
GaInAsP laser based optical emitter for 1.3 μm wavelength multimode fibre systems 3—56345
GaInAsP lasers, forward bias voltage characts. 3—22069
GaInAsP long wavelength buried-crescent laser struct. on channelled substrates, formation by LPE 3—22114
GaInAsP, shallow proton stripe laser diodes, life tests rel. to LPE and MOVPE prep. techniques 3—37075
GaInAsP VPE layer, elec. props. improvement by cooling HCl liq. source 3—23514
GaInAsP/InP 1.3 micron buried optical waveguide lasers with low threshold 3—46220
GaInAsP/InP BH lasers, current/freq. modulation characts. when directly modulated 3—6971
GaInAsP/InP DFB 1.3 μm lasers, room-temp. CW operation 3—6967
GaInAsP/InP DH laser, current blocking layer made by Be implantation 3—12147
GaInAsP/InP etched mirror and groove-coupled laser device for integrated optics 3—7009
GaInAsP/InP lens-like strip waveguide lasers, single transverse mode condition 3—6977
GaInAsP/InP V-groove-laser for 1.3 μm wavelength region 3—41838
GaInAsP-InP, lattice-matched, dopant conc., photoluminesc. study 3—52827
GaInAsP-InP 1.3 μm DFB lasers, InP surface corrugations preserved from thermal deformation during LPE 3—50673
GaInAsP-InP 1.5 μm DFB BH laser fabrication, single-longit. mode operation 3—17528
GaInAsP-InP 1.5 μm BH laser with reactive ion etched facet mirrors, CW operation 3—50660
GaInAsP-InP double heterostructure MBE lasers, 1.3 μm wavelength 3—22104
GaInAsP-InP lasers, lens-like strip waveguide, single transverse mode condition, theory 3—32356
GaInAsP-InP lasers, short cavity, multilayer reflector design 3—32387
GaInAsP-InP monolithic two section lasers, single longit. mode light pulse generation by current modulation 3—7037

III-V semiconductors continued
GaInAsP-InP monolithic photovoltaic power converter at 1.06 μm 3−14946
GaInAsP-InP passive optical waveguides, fabrication 3−37178
GaInAsP-InP:Be DH laser diodes, Be implantation fabrication 3−37038
$Ga_{0.55}In_{0.45}As_{0.1}P_{0.9}$ crystal, conduction electron g-factor sign determ. by Hanle effect 3−3039
$Ga_{1-x}In_xAs_{1-y}P_y$ monolithic coupled-cavity laser, single mode operation 3−27043
$Ga_{1-x}In_xAs_{1-y}P_y$-InP mushroom stripe laser, fabrication and low threshold CW operation at 1.27 μm 3−22111
$Ga_xIn_{1-x}As_YP_{1-y}$ high purity layers lattice matched to InP, LPE growth 3−42958
$Ga_xIn_{1-x}As_yP_{1-y}$ LPE layer, electron and hole mobilities and scatt. 3−18798
$Ga_xIn_{1-x}As_yP_{1-y}$, lattice matched to InP, high freq. elec. transport 3−13850
$Ga_xIn_{1-x}As_yP_{1-y}$, lattice-matched to InP and GaAs, thermal resist. 3−18522
$Ga_xIn_{1-x}As_yP_{1-y}$ stripe lasers, influence of press. on temp. sensitivity 3−1628
$Ga_xIn_{1-x}As_yP_{1-y}$, VPE growth and characterisation for microwave applications 3−19281
$Ga_xIn_{1-x}As_yP_{1-y}(Sb_{1-y})$, spinodal decomp. and clustering 3−18466
$Ga_{0.5}In_{0.5}P$, two-spin reson. transitions of optically oriented nuclei 3−28739
$Ga_{1-x}In_xP$, picosecond high-resolution modulation spectroscopy of near interband resons. 3−36099
$Ga_xIn_{1-x}P$, electron-phonon interaction effects, refl. and photoluminesc. spectra 3−3764
GaInPAs/InP CW buried meas-stripe heterostruct. lasers emitting in 1.5-1.6 μm range 3−56198
GaInPAs/InP heterolaser with external dispersive resonator tunable CW emission in 1.3 μ range 3−27058
GaInPAs/InP injection lasers, emission characts., temp. depend. 3−56199
GaInPAs-InP DH injection lasers, nonwaveguide mode operation 3−22116
GaInPAs-InP mesa-stripe heterostruct., injection laser, leaky mode emission 3−12152
GaInPAs-InP quaternary buried heterostruct. injection laser, high-power leaky mode operation 3−7012
$Ga_{1-x}In_xSb$, vibrations and optical props., coherent pot. approx. 3−33370
GaN epitaxial films, low press. MOCVD growth, ion implantation and elec. props. 3−47775
GaN epitaxial films, VPE growth on sapphire, rel. to nonuniformity of cathodoluminesc. emission 3−57981
GaN films, reactive MBE growth on AlN-sapphire substrates and elec. and luminescent props. 3−47771
GaN-GaAs MIS structure, thin film passivation, interface state density study 3−52262
GaP, acoustic phonon modes from specific heat meas. 3−33371
GaP amorphous thin film, crystallisation using laser beam annealing 3−37957
GaP, angle resolved local density of states Green's function calc. 3−8390
GaP, bright dislocation halos, dislocation-point defect interactions 3−42615
GaP, computer controlled LEC growth, struct. and elec. props., LED appls. 3−14464
GaP cryst., external photoeffect and reflection from polar (111) $(\bar{1}\bar{1}\bar{1})$ faces near K-absorpt. edge of Ga 3−34198
GaP crystal based photoelastic light modulators 3−22197
GaP, crystal growth by Czochralski method with reduced dislocation density 3−28983
GaP, defects study by projection etching 3−33263
GaP, dislocation line, elastic energy, integral formalism 3−46930
GaP, dispersion curves of stimulated Raman effect 3−41923
GaP, edge dislocations, stress-induced birefr. images, TEM study 3−3683
GaP, electron or neutron irrad., band edges modification by defects, optical absorpt. and photocond. study 3−23975
GaP epitaxial film on Si 3−57238
GaP, ground state struct. props., local density functional formalism 3−57300
GaP, high pressure structural transitions, planar defects, X-ray diffr. study 3−2769
GaP, impurity deep levels, electronic props. and stability 3−52072
GaP, indirect exciton, lineshape and electron-phonon coupling 3−38313
GaP, ion implanted, diagnosis by Raman scatt. and photoluminescence techniques 3−42628
GaP, ion implanted, highly disordered layers, dangling bonds, ESR study 3−52624
GaP LED's, IR to visible up-conversion 3−38917
GaP, LPE, current controlled, mass-transfer parameters 3−14511
n-GaP, Langmuir-Blodgett multilayers and adsorbed monolayers, surface pot. studies 3−38514
GaP, MOCVD growth 3−52966
GaP MOS photocells, photoelectric charact. study 3−53543
GaP microcrystals, Raman scatt. from surfaced phonon mode 3−34108
n-GaP, minority carrier diffusion length, photoelectrochem. determ. in aq. solvent 3−33788
GaP, NMR spin-lattice relax. *(German)* 3−3567
GaP, native defect conc., vapour press. dependence meas. 3−37903
GaP, nonlinear photoinduced desorption of P 3−38204
GaP, ODMR study of antisite related luminescence 3−19185
GaP, optical detect. of ESR and electron spin-lattice relax. 3−38725
GaP p-n junction solar cells, conversion efficiency 3−53516
p-GaP, photoelectrochem. kinetics meas. 3−9455
p-GaP photoelectrode, interfacial chemistry 3−4292
GaP, photoinduced IR absorpt. obs. 3−43521
n-GaP, poly(octadecene-1-maleic anhydride) Langmuir-Blodgett monolayer deposition, Schottky barrier height 3−38486
GaP polycrystalline thin films, MO-CVD growth using $[Et_2Ga\text{-}PEt_2]_3$, Raman study 3−24150
GaP, recombination enhanced defect processes and device degradation 3−56909
GaP, reson. Raman scatt. from surface phonons 3−47658
GaP semiconductor surface, diffr. grating produced by laser beam annealing 3−12304
GaP, single cryst., cleavage, fracture toughness meas. 3−33351
GaP, slip-induced elec. resist. anisotropy 3−57350
n-GaP solutions, dark and photo-current voltage curves, kinetic anodic processes *(German)* 3−52203

III-V semiconductors continued
GaP surface single adsorbate, local density of states, local charges and adsorpt. energy calc. 3−3275
GaP, synthesis solute diffusion technique, Zn impurity conc. 3−39025
GaP thermally-stable two-color light source 3−37148
GaP thin films, electron beam induced carrier excitation, quantum yield 3−43301
GaP, time-resolved cathodoluminescence in scanning electron microscopy 3−52857
GaP, triplet antisite centre, spin depend. form. and decay, ODMR study 3−43462
GaP, two-photon absorpt. *(Russian)* 3−23909
GaP, wavelength modulated reflectivities of direct exciton edge 3−57951
n-GaP with electrons and holes, kinetic control of anodic dark and photodissolution 3−52242
GaP, zero-phonon recombination spectra of donor-acceptor pairs 3−28891
GaP: Ge, lattice distortions around single donor Ge, self-consistent pseudopot. method 3−28298
GaP:Bi(S), ODMR study 3−47576
GaP:Cr epitaxial layers, MOCVD grown, high temp. resist., capacitance and I-V meas. 3−13930
GaP:Cr(Cu)(Fe), deep levels related to transition metal impurities, ionisation energy meas. 3−3105
GaP:Cu, interband excitation induced absorption by deep impurities 3−57960
GaP:Er, ion implanted, luminescence line profile 3−19187
GaP:Fe, electron irrad., radiation defects, ESR study 3−14123
GaP:Fe, photoluminesc. excitation spectroscopy 3−43614
GaP:Fe epitaxial layer photosensitive valve struct. *(Russian)* 3−3344
GaP:H(He), ion implanted, photoelectrochemical meas. 3−42627
GaP:Mn, impurity centres, internal friction and ESR study 3−18660
GaP:N, deep electron trap 3−43088
GaP:N, Te, Zn, impurity related radiative recombination 3−47701
GaP:N, thermal quenching of no-phonon emission bands and phonon sidebands 3−19192
GaP:N epitaxial film, deep level electron trap, absolute energy, DLTS and I-V charact. study 3−43072
GaP:N VPE layers, (111) oriented, N doping conc., lattice parameter meas. 3−8366
GaP:N^-, binding to pair of marginal pots., N^- stability 3−28297
GaP:Ni, photoconductivity, impurity states 3−23427
GaP:O, electronic states of O, weak bonding example 3−47303
GaP:O, electronic struct., MS-X_α method 3−52063
GaP:O, quasimolecular model of impurity states 3−47310
p-GaP:Ru photoelectrochemical solar cells, chemically-induced interface states 3−57422
n-GaP:S, proton implanted fabrication, visible and IR waveguiding 3−17615
GaP:Si, N, LPE growth with N doping from NH_3, Si incorporation kinetics 3−34250
GaP:Sn, dopant electronic config., Mossbauer study 3−43091
GaP:Te (Zn), inhomogeneous distrib. of doping elements 3−8080
GaP:Te(S), homoepitaxial layers, mechanical stresses *(Russian)* 3−51995
GaP:Ti, ion implanted, photoluminescence spectra 3−43626
GaP:Zn, as-grown and electron irrad., defect study by DLTS and EPR 3−43087
GaP-Au interface, Schottky barriers, γ irrad. effects 3−43283
GaP-Au structure, photocurrent due to electron emission from metal, elec. field effect 3−38434
GaP-$GaAs_{1-x}P_x$ superlattice, strained, Zn impurity induced disordering obs. 3−38236
GaP-$GaAs_{1-x}P_x$ superlattices, stimulated emission and photoluminescence 3−43564
GaP-Si heterojunction, GaP metalorganic CVD epitaxy and elec. and photoelec. props. meas. 3−19285
GaPAsSb quaternary single cryst. growth from binary component alloyed mixture 3−34216
$GaP_xAs_ySb_{1-x-y}$, solid-phase miscibility gap and spinodal decomposition, theory 3−42780
GaP(Sb), (110) bound and resonant surface states 3−28406
GaP(Sb), amorphous, defects, elec. cond. and optical absorpt. studies 3−22778
GaS, ionicity, effective charges, bond angles, optimised bond orbital model 3−13156
GaS:Yb, single cryst., isothermal relax. currents 3−43202
GaSb (110), surface atomic geometry, elastic LEED intensity anal. 3−57187
n-GaSb, elastic consts. meas., electronic effects 3−33335
GaSb, excess Ga and Sb, nature of solid solns., lattice parameters study *(German)* 3−22855
GaSb film on AlSb, MBE growth and elec. and struct. props. 3−58051
n-GaSb, intervalley picosecond electron relax. times, nonlinear optical susceptibility study 3−37100
GaSb laser, heavily doped, high power and optical damage resist. attainment 3−12182
GaSb, lattice thermal cond., 4-700K 3−2897
GaSb, OMVPE grown using trimethylarsenic and trimethylantimony, review 3−24145
GaSb, organometallic VPE growth 3−28230
GaSb, p- and n-type, metallisation techniques for ohmic contact prep. 3−43281
GaSb, photoluminescence lines, stress effects, linear polarisation study 3−28894
GaSb:Sn, dopant electronic config., Mossbauer study 3−43091
n-GaSb:Te, electron mobility, elec. cond. Hall effect 3−8506
GaSb:Te, LEC growth with uniform carrier conc. distrib. 3−14470
GaSb-InAs synthesised superlattices, mag., optical, elec., magneto-optical props. and cyclotron reson. 3−13899
GaSb(:Te), shaped melt lowering growth technique, photoluminesc. and Hall meas. 3−34214
GaSe, ionicity, effective charges, bond angles, optimised bond orbital model 3−13156
Ge-GaAs (110) interface, preparation and electronic props. 3−13889
Ge-GaAs heterojunctions, plasticity and strength studies *(Russian)* 3−47035
Ge-GaAs heterojunctions, gamma ray effects on noise characts. 3−52237
Ge-GaAs superlattice, MBE grown, ion channelling studies 3−47225
In-Ga-As-P batch prep. melts, prep. and props. rel. to LPE 3−9006
In-Ga-As-P system, phase equilibria, thermodynamic analysis 3−34287
$In_x\ Ga_{1-x}As_yP_{1-y}$, high-field electron transport 3−23396

III-V semiconductors continued
InAs, contactless method of measuring free-carrier concentration in narrow-band semiconductors 3−23922
InAs, defects study by projection etching 3−33263
InAs, elec. transport and band struct. 3−3233
n-InAs, impact ionisation, I-V characts. 3−18713
InAs, lattice thermal cond., 4-700K 3−2897
InAs, long-wave thresholds from photoemissive yield spectra and their derivatives 3−24083
InAs MBE layers confined between GaSb, hybrid cyclotron intersubband reson. 3−8724
InAs, thermal oxidation and native oxide-substrate reactions 3−4171
InAs, VPE growth rate anisotropy and impurity trapping 3−43762
InAs:Cr, impact ionisation, I-V characts. 3−18713
$InAs{:}Mn^{3+}$, Jahn-Teller distortions, mag. susceptibility 3−38358
InAs:Sn, dopant electronic config., Mossbauer study 3−43091
$InAs\text{-}Al_xGa_{1-x}Sb$ heterostructure, LPE growth 3−38243
InAs-Bi(Pb)(Sn), vapour press. and melting equilib. *(German)* 3−2752
InAs-GaAs synthesised superlattices, mag., optical, elec., magneto-optical props. and cyclotron reson. 3−13899
InAs-GaSb heterojunctions and superlattices, electron transport *(Japanese)* 3−28426
InAs-GaSb superlattices, electronic props. 3−23262
InAs-In(As), interphase tension of solutions in metals 3−8300
$InAs_{1-x}P_x$, energy spectrum, tunnel spectroscopy study in mag. field 3−13708
$InAs_ySb_{1-y}\text{-}GaSb$, LPE heterostructure, charact. study 3−19293
$InAs_ySb_{1-y}\text{-}InAs$, LPE heterostructure, charact. study 3−19293
InGa AsP systems for integrated optical circuits 3−32507
InGaAlP DH laser diodes grown by MBE, 0.66 μm room-temp. operation 3−46210
InGaAs epitaxially grown layers, Sn-doping effects on some properties 3−51634
InGaAs, hydride VPE growth on (100), (110), (111), (311) and (511) InP 3−8363
InGaAs, LPE on InP, self-supersaturation, simplified LPE technique 3−43766
InGaAs/GaAs strained superlattice structs., MBE growth and characts. 3−42964
InGaAs/InP:Be DH laser diodes room temp. pulsed operation 3−47365
InGaAs-InP, LPE growth rate, substrate orientation dependence 3−23203
InGaAs-InP DH laser, subjected to optical excitation, threshold characts. 3−6984
$p\text{-}In_{0.53}Ga_{0.47}As$, absence of Gunn effect, theory 3−47351
$In_{0.53}Ga_{0.47}As$, electron transport, compositional clustering effects 3−8482
$In_{0.53}Ga_{0.47}As$, high purity LPE growth and characterisation 3−43777
$In_{0.53}Ga_{0.47}As$ high-purity LPE layers, postgrowth heat treatment effects on elec. characts. 3−52278
$In_{0.53}Ga_{0.47}As$, LPE growth effects on structured InP substrates 3−42947
$In_{0.53}Ga_{0.47}As$, photoluminesc. spectra, band assignments 3−34145
$n\text{-}In_{0.53}Ga_{0.47}As$, temp. depend. electron vel.-field characts. at high elec. fields 3−28366
$In_{0.53}Ga_{0.47}As$, transferred-electron effect obs. in travelling-domain mode 3−52160
$p\text{-}In_{0.53}Ga_{0.47}As\text{-}Al$ Schottky barrier, barrier height meas. 3−13883
$p\text{-}In_{0.53}Ga_{0.74}As{:}Zn$ VPE layers, elec. and optical props. 3−18800
$In_{0.72}Ga_{0.28}As_{0.6}\ P_{0.4}$, hot carrier multiphonon scatt., 1.3 μm photoluminesc. study 3−38886
$In_{1-x}Ga_xAs$ epitaxial layers lattice matched to InP substrates, MBE growth 3−42970
$In_{1-x}Ga_xAs$, LPE growth on (100), (111)B faces, impurity and carrier concs. 3−8360
$In_{1-x}Ga_xAs$, liquid-solid equilibrium phase diagram calc. for solid solns. with miscibility gaps 3−43790
$In_xGa_{1-x}As$, current controlled LPE on InP (100) 3−19292
$In_xGa_{1-x}As$ diode simulator of solid-state laser 3−37147
$In_xGa_{1-x}As$ LPE growth on InP near solid instability 3−42951
$In_xGa_{1-x}As$ photocathodes, electron emission probability with negative electron affinity 3−47755
$In_xGa_{1-x}As$, thermal oxidation and native oxide-substrate reactions 3−4171
$In_xGa_{1-x}As\text{-}GaAs$ superlattice, free enthalpy 3−8219
InGaAsP 10 kHz linewidth 1.5 μm external cavity laser with 55 nm tuning range 3−37030
InGaAsP, Auger recombination, phonon-assisted, theory 3−52813
InGaAsP BH 1.3 μm lasers with high T_0 3−6981
InGaAsP DFB lasers, InP surface corrugations fabricated using electron lithography 3−6968
InGaAsP DH laser, LPE growth, enhanced InP substrate protection 3−47784
InGaAsP distributed feedback lasers, hybrid LPE/MOCVD growth 3−32380
InGaAsP double channel BH laser diode with effective current confinement 3−12176
InGaAsP, growth by MBE, optical and elec. props. 3−24131
InGaAsP injection laser, transient spectra and mode partition noise obs. 3−6974
InGaAsP injection lasers, fast excitation, picosecond freq. chirping and dynamic line broadening obs. 3−37022
InGaAsP LPE growth on InP, appl. to DH lasers 3−29021
InGaAsP, LPE growth and charact., doping conditions 3−42959
InGaAsP LPE layers, electron irrad., defect states, DLTS study 3−57304
InGaAsP laser, freq. locking to first overtone vibr.-rot. lines of HF 3−27092
InGaAsP laser, threshold current, carrier heating effect 3−27041
InGaAsP laser spectrometer, near IR, high-resolution *(Japanese)* 3−10925
InGaAsP lasers, high power single mode, single step LPE fabrication 3−37021
InGaAsP lasers, lightly doped, radiative and nonradiative recomb. law 3−46209
InGaAsP lasers with lightly doped active layers, meas. of radiative recombination coeff. and carrier leakage 3−27049
InGaAsP long-wavelength (1.3 to 1.6 μm) photodetectors for fibre optical communications, review 3−12361
InGaAsP low threshold current 1.3 μm CW lasers, nonplanar VPE growth 3−50677
InGaAsP mode stabilised terrace lasers on semi-insulating InP 3−27054
InGaAsP photocathodes with negative electron affinity, surface comp. 3−24094
InGaAsP, photoexcited carrier lifetime and Auger recombination 3−43192

III-V semiconductors continued
InGaAsP quantum well lasers, Auger recombination rates calc. 3−50662
InGaAsP quaternary alloys, analytical model for gain spectra 3−22059
InGaAsP, recombination enhanced defect processes and device degradation 3−56909
InGaAsP short-cavity single-frequency BH lasers 3−37027
InGaAsP single mode lasers for fibre-optic appls. 3−22060
InGaAsP single mode lasers for fibre-optic communications 3−50672
p-InGaAsP solid soln., Auger recombination rate and luminescence 3−19186
InGaAsP superluminescent diode, lateral confinement at 1.3 μm 3−37034
InGaAsP/InP 1.3 μm BH lasers, linearity and noise characts. 3−41842
InGaAsP/InP DH laser diodes, high-speed modulated, mode partition noise characts. 3−27051
InGaAsP/InP DH laser, LPE grown, proton-defined stripe geometry 3−32357
InGaAsP/InP DH LEDs, dark defects, TEM obs. 3−43632
InGaAsP/InP DH lasers, dark defects under accelerated aging 3−50663
InGaAsP/InP distributed feedback lasers, lasing characts. in 1.5 μm range, temp. depend. 3−32358
InGaAsP/InP groove transverse junction laser, mode stabilisation mechanism 3−56257
InGaAsP/InP laser diodes, V-grooved-substrate buried heterostruct., etching, ageing 3−41869
InGaAsP/InP layers, struct. study of alloyed Au metallisation contacts 3−23188
InGaAsP/InP mode-stabilised terrace-large optical cavity laser fabricated on InP substrate 3−1664
InGaAsP/InP optoelectronic devices, monolithic integration 3−6995
InGaAsP/InP p^+n diodes, deep level electron and hole traps, DLTS study 3−47414
InGaAsP/InP p-i-n sensors for laser based optical emitter for 1.3 μm wavelength multimode fibre systems 3−56345
InGaAsP/InP V-grooved substrated buried heterostruct. laser emitting at 1.3 μm 3−7011
InGaAsP/InP:Cd(Zn) lasers, LPE grown, high quantum efficiency 3−27072
InGaAsP-InP 1.3 μm planoconvex waveguide lasers, characts. and optimum designs 3−22115
InGaAsP-InP 1.5 μm V-grooved substrate buried heterostruct. laser 3−50676
InGaAsP-InP buried heterostruct. stripe CW laser, fabrication by hybrid liq./gas phase epitaxy 3−41875
InGaAsP-InP DH laser, optical and current excitation of nonequilib. carriers, lasing thresholds 3−6985
InGaAsP-InP DH buried rib waveguide laser, 1.5 μm operation 3−41832
InGaAsP-InP DH wafer, nonradiative processes, piezoelec. photoacoustic spectroscopy 3−47709
InGaAsP-InP heteroepitaxial rib waveguide directional coupler struct., insertion loss analysis 3−42037
InGaAsP-InP injection laser, low threshold, with microleaved mirrors, for monolithic integration 3−7001
InGaAsP-InP quantum-well heterostruct. lasers, Auger recomb. calc. 3−6980
InGaAsP-InP quaternary 1.5 micron buried crescent lasers with separate optical confinement 3−37031
InGaAsP-InP single freq. injection lasers, index-guided and gain-guided, beam parameters meas. 3−6973
InGaAsP-InP undercut mesa laser, LPE fabrication and planar polyimide passivation 3−46206
InGaAsP-InP:Zn, Mg p^+-n abrupt heterojunction, LPE growth techniques 3−3971
InGaAsP-InP:Zn double heterostructures, luminescence study 3−38922
InGaAsP-oxide interface, comp. profiles, AES ESCA and ion sputtering studies *(Chinese)* 3−38237
$In_{0.7}Ga_{0.3}As_{0.63}P_{0.37}$, photoluminesc. spectra, band assignments 3−34145
$In_{0.75}Ga_{0.25}As_{0.55}P_{0.45}$, LPE growth effects on structured InP substrates 3−42947
$In_{1-x}Ga_xAs_{1-y}P_y$ quantum well lasers, threshold current density, Auger recombination effects 3−27044
$In_{1-x}Ga_xAs_{1-y}P_y$ with narrow photolum. spectrum, LPE growth 3−23196
$In_{1-x}Ga_xAs_{1-y}P_y\text{-}InP$ heterojunction laser, low threshold, for 1.5-1.6 μm interval, LPE growth 3−22121
$In_{1-x}Ga_xAs_{1-y}P_y\text{-}InP$ low threshold terrace mass transport laser, LPE growth 3−27075
$In_{1-x}Ga_xAs_yP_{1-y}$ buried stripe lasers, LPE fabrication *(French)* 3−43773
$In_{1-x}Ga_xAs_yP_{1-y}$ DH lasers, optical gain measurement as function of injected current density 3−22057
$In_{1-x}Ga_xAs_yP_{1-y}$, material parameters derivation from linear interpolation scheme 3−33632
$In_{1-x}Ga_xAs_yP_{1-y}$, near-equilibrium LPE growth on ⟨100⟩ InP 3−34248
$In_{1-x}Ga_xAs_yP_{1-y}$, optical props. from 1.5 to 6.0 eV 3−38844
$In_{1-x}Ga_xAs_yP_{1-y}/InP$ DH lasers with low threshold current density, LPE growth *(French)* 3−43772
$In_xGa_{1-x}As_yP_{1-y}$ $(\lambda=1.5$ μm), LPE growth, luminesc. and photoelec. props. 3−47243
$In_xGa_{1-x}As_yP_{1-y}$ lattice matched to InP, LPE grown, interface spinodal decomposition 3−42952
$In_xGa_{1-x}As_yP_{1-y}$, VPE growth, laser spectroscopy monitoring 3−19279
$In_{0.5}Ga_{0.5}P\text{-}InGaAsP$ double heterostructs., nonequilib. carrier lifetime in active region, effect of emitter recomb. 3−38900
$In_{0.5}Ga_{0.5}P\text{-}InGaAsP$ double heterostructs., photoluminesc. characts., effect of emitter recomb. 3−38902
$In_xGa_{1-x}P$ epitaxial layers, phase diagram meas. 3−39100
$In_xGa_{1-x}P{:}N$ LPE layers $(x<0.01)$, minority carrier diffusion length meas. 3−13933
$In_xGa_{1-x}P/GaAs$, film form., relax. process, liquidus diagram study 3−38245
$In_{1-x}Ga_xP_{1-z}As_z$ solid solution, intrinsic exciton luminescence 3−47720
$In_{0.2}Ga_{0.8}Sb$, MBE growth, cond. props. and donor levels 3−33588
$In_{0.2}Ga_{0.8}Sb$, undoped and S doped, MBE and elec. props. 3−52945
InP 2D inversion layer, spin-orbit coupling and weak localisation 3−13913
InP (100)-Al(Au) interface with etched or cleaned InP surfaces, Fermi level, XPS study 3−47419
InP (110)-Cu interface, AES and photoemission studies of atomic and electronic struct. 3−58032
InP, angle resolved local density of states Green's function calc. 3−8390
InP, anodic oxidation and InP/oxide interface elec. props. 3−33798
p-InP, Au-Be alloyed ohmic contact exam. 3−13904

III-V semiconductors continued
InP avalanche photodiode with VPE grown p^+-n junction, imperfections effect 3—18573
InP, B3 structure, electron irrad., dislocation loops seen edge-on, electron microscopy contrast 3—56907
InP, CVD epitaxial films, elec. props. of doped and undoped material 3—19278
InP, carrier mobility, grain size depend., elec. cond. and Hall effect studies 3—47343
n-InP crystals, compensated, illumination influence on inpurity pot. elec. props., study 3—8548
InP crystals, LEC grown, dislocation generation and propagation, X-ray topography study 3—46936
p-InP, deep levels study by diode admittance spectroscopy 3—33660
InP, defects study by projection etching 3—33263
InP, dislocation line, elastic energy, integral formalism 3—46930
InP, donor discrimination and bound exciton spectra 3—43591
InP, double doped, low dislocation density, TEM obs. 3—2562
n-InP, electron irrad. defects, positron annihilation and Hall effect study 3—24045
InP, electron irradiated, deep levels study 3—3107
p-InP, electron irradiation induced deep levels, DLTS study 3—13758
InP epilayers, process-induced defects, photoluminesc. and DLTS study 3—43089
InP epitaxial film, MOCVD grown, elec. props., low temp. photoluminescence study 3—23511
InP, epitaxial films, MOCVD, growth using Lewis acid-base adducts 3—43758
InP epitaxial layer growth by In-PCl_3-H_2 technique, surface quality and mobility characts. 3—43756
InP epitaxial layers, carrier density and mobility, optical meas. 3—43199
InP, epitaxial layers, growth, carrier conc. and Hall data rel. to vapour etching 3—34239
n-InP, epitaxial vapour phase etching, Hall mobility meas., SEM study 3—43976
InP, etching in Cl_2 plasma, temp. depend. 3—24376
InP, growth by chloride and hydride techniques, thermodynamic considerations 3—19282
InP, heavily doped, photoluminescence edge calc. 3—38860
InP, high purity polycryst., in situ vacuum baking to improve purity 3—14459
InP, hydride VPE growth on (100), (110), (111), (311) and (511) InP 3—8363
InP, in-situ synthesis and growth method in Czochralski puller 3—8963
InP ion implanted amorphised layers, epitaxial regrowth, RHEED, TEM, backscatt. and X-ray studies 3—2994
InP, LPE growth and charact., doping conditions 3—42959
InP, LPE growth effects on structured InP substrates 3—42947
InP, LPE growth on (100), (111)B faces, impurity and carrier concs. 3—8360
InP, lattice dynamics under hydrostatic press. 3—22995
InP low-press. CVD, review 3—8992
InP, MBE growth from cracked PH_3, photoluminesc. and carrier mobility 3—47770
InP, MOVPE and VPE grown, fabrication of Gunn oscillators 3—43754
InP, metalorganic CVD growth *(Japanese)* 3—29016
n-InP, minority carrier diffusion length, photoelectrochem. determ. in aq. solvent 3—33788
InP, n- and p-type, refractive index dispersion meas., 0.95 to 2 eV 3—28812
InP n^+-n^--n^+ layers, VPE growth method 3—14503
InP, near gap energy levels, photolum. and photocond. study 3—3240
InP, oxidation in plasma enhanced CVD reactor 3—9210
n-InP photoanodes in conc. aq. iodide electrolytes 3—9447
InP photoconductors, picosecond correlation measurements 3—43221
n-InP, photoelectrochemical cell using aq. ferrocene/ferricenium 3—9449
InP, photoluminescence from deep levels meas. for bulk and LPE samples 3—23996
InP polycrystalline solar cells minority carrier diffusion length inhomogeneity induced by grain boundaries 3—39483
n-InP, RF sputter-damaged layer, ellipsometric study 3—34501
n-InP, reson. inelastic light scatt. by free electrons 3—57946
InP Schottky barrier formation, influence of water adsorption 3—3316
InP, semi-insulating, relative dielectric constant meas. 3—19032
InP substrate for LPE growth, double meltback procedure 3—34244
InP, substrate for MBE growth of $In_{1-x}Ga_xAs$ 3—42970
InP, surface anal. using Hg-InP Schottky barrier diodes 3—13881
InP ultrashort-cavity single-mode laser, optical pumping by AlGaAs injection laser 3—32359
InP under high press., pseudopotential form factors 3—43012
InP, undoped, prismatic disloation loop anal. by TEM 3—33261
InP, VPE, hydride technique, thermodynamic analysis of growth 3—34241
InP, VPE grown, Hall effect, photothermal ionisation, diffusion length, photoluminescence studies 3—19277
InP:Be MBE layers, elec. and optical props. 3—47365
InP:Cd, Cd diffusion profiles meas. with etching/Schottky contact method 3—23097
InP:Cd, Cd-diffused, Cd phosphide precipitates, TEM obs. 3—42782
InP:Cd, Zn, diffusion and p-n junction form., Hall effect and EBIC study 3—18512
InP:Co^{2+}, EPR study 3—43426
InP:Co^{2+}, g-value of $^4A_2$ ground state, EPR study 3—38684
InP:Cr^{2+}, zero-phonon luminesc. study 3—43615
InP:Cr(Cu)(Fe), deep levels related to transition metal impurities, ionisation energy meas. 3—3105
InP:Fe, APR study, dynamic Jahn-Teller effect 3—8721
InP:Fe, deep impurity centre ionisation 3—28304
InP:Fe, defect state induced by ion irrad. or annealing, optical transient current spectroscopy study 3—43090
InP:Fe, semi-insulating, eutectic precipitates 3—8207
InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3—18721
InP:Fe(Cr), ion implant depth profile after annealing, SIMS study 3—8083
InP:Ge single cryst., high resolution TEM obs. of defect struct., electron beam induced degradation 3—18304
InP:S, ⟨100⟩ substrates, LPE atmos. effect on thermal decomposition 3—9008
InP:Se, ion implanted, laser and furnace annealing effects on elec. props. 3—56975

III-V semiconductors continued
InP:Se^+, ion implanted, multiply scanned electron beam annealing, elec. props., RBS study 3—8102
InP:Si, ion implanted, and semi-insulating transport props. and defects 3—28383
InP:Si, LPE grown, impurity transport processes, thermodynamic calcs. 3—42967
InP:Sn, dopant electronic config., Mossbauer study 3—43091
n-InP:Sn, radiative recomb., absorpt. and reemission processes 3—38899
InP:Te(SN), shallow acceptor centres, luminescence study 3—8861
InP:Zn(Cu), quasipoint acceptor impurity clusters, charge and concentration 3—18333
ρ-InP/Au-Zn, ohmic contacts, alloy deposition by electroplating 3—38478
InP/$Ga_{0.29}In_{0.71}As_{0.61}P_{0.39}$ laser diode, Auger recomb., free-carrier losses 3—12144
p-InP/$In_{2-x}Sn_xO_{3-y}$ solar cells, form. by ion beam deposition, interfacial props. 3—9422
InP/InGaAsP, material-selective etching, device fabrication 3—9204
InP/InGaAsP epitaxial layers, laser diagnostic probes for CVD 3—3966
InP/InGaAsP/InGaAs/InP structure, LPE growth for avalanche photodiodes, circumferential meltback prevention 3—43765
p-InP/Rh-H(Re-H) photocathodes for H_2 evolving photoelectrochem. solar cells 3—34703
n-InP/room temp. molten $AlCl_3$-butyl pyridinium chloride electrolyte interface study 3—9452
InP-Al evaporated systems, plasma anodisation, MISFET appl. 3—29200
InP-Al rectifying contacts, Schottky carriers and MOS structures 3—13920
n-InP-Au Schottky barriers fabrication, by thermal vacuum deposition 3—18764
InP-chemical oxide interface states study in MIS struct. 3—23487
InP-Ge(Sn)(Pb)(Ga)(Tl)(Bi), vapour press. and melting equilib., activity coeffs. *(German)* 3—2753
InP-Hg(Au) Schottky barrier diodes, noninvasive anal. of InP surface 3—13881
InP-InGaAsP heterojunction optoelectronic devices prep. and properties *(Slovak)* 3—47783
InP-InGaAsP LEDs, luminescence study of dark spot defects 3—3824
InP-InGaAsP multilayer struct., damage-free grooving method 3—4159
InP-InGaAsP system, Au based ohmic contacts, metallurgical behaviour 3—23481
InP-InGaAsP-InP DH, misfit dislocations, optically induced glide motion, photoluminesc. study 3—51608
InP-metal system during annealing, mass spectrometric investigation 3—38238
InP(A_3), relaxed (110) surface states and resonances 3—23452
$InP_xAs_ySb_{1-x-y}$, band. struct., pseudopot. calc. and electroreflection meas. 3—8412
$InP_xAs_ySb_{1-x-y}$, solid-phase miscibility gap and spinodal decomposition, theory 3—42780
InS, IR reflectivity and cryst. struct. 3—47634
InSb (100), MBE substrate, chemical cleaning by Cl_2 plasma 3—52949
InSb (110), O_2 adsorption, UPS, EELS and ellipsometry study 3—2959
InSb, AES evaluation of cleaning and etching methods 3—43667
InSb, acoustoelectronic interaction and electron-hole plasma 3—28391
InSb, angle resolved local density of states Green's function calc. 3—8390
n-InSb anodised layers, MIS struct. formation and characts. 3—34518
InSb, α-dislocations, vel. of motion *(Chinese)* 3—2561
n-InSb, band-edge phonons, magnetoresist., magnetophonon reson. study 3—3230
InSb bistable device as optical AND gate and for carrier lifetime meas. 3—37099
InSb, carrier heating under impact ionisation conditions, Monte Carlo calc. 3—3214
InSb, contactless method of measuring free-carrier concentration in narrow-band semiconductors 3—23922
InSb crystal plates, reflection and absorpt. index meas. using far IR spectroscopy *(Japanese)* 3—10926
InSb, deep impurity level, Hall coeff. study 3—38346
n-InSb, deep levels, oscillatory magnetophotoconductivity study 3—23424
InSb, diamagnetic excitons and energy band parameters, magnetoabsorption study 3—33644
InSb, dislocation etch pits obs. for {111} plane using HCl-Fe^{3+} soln. *(Chinese)* 3—18303
InSb, dislocation structs. and in situ obs. of dislocation motion 3—46942
n-InSb, ESR at submillimeter wavelengths 3—28686
InSb, electron energy relaxation by neutral donor impurities in quantising mag. fields 3—57361
InSb, electron gas, electron energy relax. time, photocond. study 3—38328
InSb, electron-irradiated, nature of radiation induced defects 3—13281
n-InSb, far IR radiation from thin-film plasmons, CO_2 laser beam study 3—7068
InSb, far IR radiation modulation, electron-hole plasma refl. control 3—46282
InSb, filamentation and modulational instabilities of laser radiation 3—23416
InSb film MBE on CdTe, double cryst. X-ray diffr. and AES obs. 3—34233
InSb film magnetic sensor, crystalline struct. and sensing characts. obs. 3—43302
n-InSb, free-carrier Faraday effect with pulsed 0.337 mm HCN laser 3—3692
InSb growth by controlled solidification, liq. state diffusion processes influence *(Russian)* 3—19287
n-InSb, Gunn oscillations obs. 3—13825
InSb highly homogeneous single crysts., growth and characterisation for IR imaging devices 3—34215
InSb, hole transport parameters in high elec. field, Monte Carlo calc. 3—43191
p-InSb, IR absorpt., anisotropic, by free holes under strong elec. field 3—23917
InSb, impact ionisation probability 3—38394
n-InSb, impact ionisation at 77K 3—47353
InSb, interference photomagnetoelectric effect, theory 3—23435
InSb, internal quantum efficiency, impact ionisation, L-conduction band effects 3—13858
n-InSb, intra-conduction band magneto-optical studies, cyclotron reson. harmonics, photocond. techniques 3—57899
InSb, ion implantation, void form. and swelling, electron microscopy study 3—22926
InSb, ion implantation, enthalpy of formation and stability 3—42637

III-V semiconductors continued
InSb, ion implanted, point defect segregation, dislocation struct., annealing 3−33317
InSb, laser annealing, MOS elec. props. and compositional anal. 3−56976
InSb, laser-induced melting using picosecond CO_2 laser pulses 3−27985
InSb, lattice thermal cond., 4-700K 3−2897
InSb, localised defect states, electron capture and emission 3−8449
InSb, long-wave thresholds from photoemissive yield spectra and their derivatives 3−24083
n-InSb, longit. cond., effect of nonparabolicity for transverse in strong mag. fields 3−8539
InSb MOS struct., magneto-polarons in two-dimens. electron inversion layer 3−52263
InSb MOS structure using plasma enhanced CVD SiO_2 gate insulator 3−13917
n-InSb, magnetoresist., temp. and mag. field depend., localisation effects 3−43211
InSb, magnetoresistance, Hall effect and elec. cond. near high press. phase transition 3−13840
n-InSb, metallic, magnetoresist. calc. for weakly localised regime 3−13836
n-InSb, multitransit amplification of sound, acoustooptical study 3−18749
InSb, negative differential photocond. induced by a mag. field 3−43232
n-InSb, noise and diffusion of hot electrons 3−57356
InSb, nonlinear acoustoelectronic amplification at high electron drift speeds 3−13864
InSb, nonlinear interactions under picosec. laser irrad., plasma form. and nonlinear melting 3−37961
InSb, optical bistability obs. at room temp. with two-photon excitation 3−41906
InSb, optically induced avalanche, rate eqn. model 3−57872
InSb, photoacoustic signal generation, carrier diffusion and recombination influence 3−47055
InSb photon drag detection at 385 μm 3−45203
p-InSb, plasma pinch effect, I-V characts. 3−18733
InSb, proton damage isolation effect, IR detector responsivity and crosstalk problems *(Chinese)* 3−8107
n-InSb, Raman scatt. by spin transition of free electrons 3−3707
InSb, relaxed (110) surface states and resonances 3−23452
InSb, spin-flip photoconductivity resonance and magnetoresistance *(Russian)* 3−8530
n-InSb, static cond. changes under ESR conditions 3−38697
InSb, suppression of doping striations in zone melting by enhanced convection on a centrifuge 3−8969
n-InSb, temperature-electric instability in static elec. field 3−18716
InSb thin film, size quantised, interband Raman scatt. study 3−47728
InSb type MOS structures, optical transitions in inversion layers 3−34055
In-InSb, ultrathin films, size quantisation, effective electron mass 3−38499
InSb, valence electron density under high press., X-ray diffr. study 3−13160
InSb, X-ray diffr. intensities across In K-absorption edge 3−13025
n-InSb, Zn diffusion, IR photovoltaic detector appl. 3−33503
p-InSb:Au, deep acceptor impurities, magneto-optical detection 3−14260
InSb:Bi, doping during LPE, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3−33603
InSb:Ge(Cd)(Zn), H ion irrad., conduction type inversion by isochronous annealing 3−43180
InSb:S, ion implanted, S diffusion, laser annealing and elec. props. 3−38140
InSb:S(Se), highly localised impurity states, press. depend. 3−52068
InSb:Sn, dopant electronic config., Mossbauer study 3−43091
InSb:Zn, linear photogalvanic effect, laser beam excitation 3−8532
InSb-anodic oxide structures, electrophysical props. 3−33801
InSb-CdTe heterostruct., MBE growth and InSb surface passivation appl. 3−39037
InSb-GaAs heteroepitaxial structures, galvanomagnetic coeffs. *(Russian)* 3−8565
InSb(110) cleaved surface, core-level shifts of 4d states, UPS study 3−39003
InSe, ionicity, effective charges, bond angles, optimised bond orbital model 3−13156
InSe, photoconductivity meas. 3−23434
InSe-$Cd_{0.2}Hg_{0.8}Te$ heterojunctions, elec. characts. 3−28429
InSe-GaSe heterojunctions, noise and current flow mechanism 3−28428
InSe-InSb heterojunctions, elec. characts. 3−28429
InSe-$Pb_{0.82}Sn_{0.18}Te$, heterojunctions, elec. characts. 3−28429
InSe-PbTe heterojunctions, elec. characts. 3−28429
n-$In_{2-x}Sn_xO_{3-y}$/p-InP sputtered solar cells 3−53519
$In_{2-x}Sn_xO_{3-y}$-p-InP solar cell, electron diffusion length 3−19585
p-Si/n-GaAs heterojunctions, MBE growth, elec. and photoelec. props. 3−43277

III-VI semiconductors
Crystal growth and charact. of III-VI layered crystals., review 3−43723
CdS, biexcitons or drop embryos in luminesc. 3−47269
CdS, ion-bombarded layers, reflection spectra *(Russian)* 3−38889
GASe, exciton transition oscill. strength temp. depend. *(Russian)* 3−23287
GaAs, electron-hole pair ODMR signals, donor-acceptor pair separation effect 3−8742
GaAs solar cells, homogeneous temp. characts. 3−44122
GaS, Faraday effect up to 20 T 3−14261
GaS, high press. polymorph, cryst. struct. 3−18277
GaS(Se), layered cryst., thermal expansion behaviour 3−28127
$GaS_{0.6}Se_{0.4}$-InSe heterojunctions, elec. and photoelec. props. 3−18776
GaS_xSe_{1-x} crystals, linear and nonlinear optical props. 3−28827
GaS_xSe_{1-x}, thermoreflectance spectra, 3 to 9 eV 3−38807
GaSe amorphous film, flash evaporated, spherulite growth during crystn. 3−51974
GaSe, bound excitons, light polarisation transformation, mag. field induced, phenomenological theory 3−43518
GaSe, Faraday effect up to 20 T 3−14261
GaSe films, spherulite growth by heating in vac. 3−33589
GaSe, inelastic exciton-exciton collision rate constant, determ. from absorpt. measurements 3−23275
GaSe, luminescence study of screening of optical phonon-hole interaction 3−14349
GaSe, picosec. relax. kinetics of highly photogenerated carriers 3−38913
GaSe thin films, guided wave polaritons, near forward Raman scatt. study 3−43040

III-VI semiconductors continued
GaSe, third order nonlinear susceptibility 3−28819
GaSe:Sn, γ and neutron irrad. effects on photoluminescence 3−19188
GaSe-Al Schottky diode struct., nonequilibrium band flattening 3−47406
GaSe-In_2Te_3 p-n heterojunctions, elec. characts. 3−38475
GaSe-Pb-Li, intercalated semiconductor, optical props. *(Russian)* 3−14247
GaSe(Te), semicond. interband transitions, optical refl. effect, saturation photoacoustic spectra 3−13348
GaSe(s), SCL cond., two-barrier model, I-V characts. 3−18715
GaTe, photoconductivity spectra 3−43234
In-GaSe-Sn, impurity photocond., spectral distrib., I-V, lux-ampere characts., photocurrent kinetics 3−18741
InS, polymorphic transition at high press., X-ray diffr. study 3−27886
InSe crystals, elec. and optical props. *(Korean)* 3−33722
InSe, effective mass and conduction band parameters, cyclotron resonance study 3−8402
InSe, elec. induced impurity photocond. meas. 3−8536
InSe, elec. props. meas. 3−52155
InSe, Faraday effect up to 20 T 3−14261
InSe, magneto-optical props. near band gap, wavelength modulation spectroscopy study 3−28847
InSe, photocond., photovoltaic props., carrier mobility and lifetime 3−47384
InSe, SCL cond., two-barrier model, I-V characts. 3−18715
InSe, semicond. interband transitions, optical refl. effect, saturation photoacoustic spectra 3−13348
InSe:Te, diffusion intercalated, elec. and struct. props. 3−3185
InSe-Aquadag Schottky diode struct., nonequilibrium band flattening 3−47406
InSe-GaSe p-n heterojunction, majority carrier injection under strong illumination 3−57419
InSe-Li-Pb, intercalated semiconductor, optical props. *(Russian)* 3−14247
InSe-naphthalene (anthracene) intercalation cpds., exciton refl. and photoluminesc. spectra, 4.2 to 40K 3−38845
In_2Te_3-Sb_2Te_3, elec. and photoelectric props. 3−28358
InTe(Se) films, optical absorpt. coeff. meas. 3−43652
InTe(Se) heat treated films, Hall effect, deposition temp. effects 3−57440
$TlInS_2$, electroabsorption spectrum 3−3687
TlSe, absorption spectra and fundamental absorption edge under hydrostatic press. 3−14300
TlSe, elec. resist. and Hall effect, press. dependence meas. 3−33725
TlSe, fundamental absorption edge, hydrostatic press. depend. 3−19099

IIR filters *see digital filters*

illumination *see lighting*

image amplifiers *see image intensifiers*

image convertors
see also fluorescent screens; image intensifiers
electronographic image convertor for spectroscopy with 2.6 m reflector 3−30211
liquid crystal light valve for optical-to-optical image conversion 3−17631
photocathode design, for streak camera image converter tube, plasma diagnostics appl. 3−40711
streak camera system, jitter-free 3−25983
vacuum breakdown mechanism, point-to-plane, photographic obs. 3−18171
X-ray image converters, methods of efficiency meas. 3−24472

image iconoscopes *see television camera tubes*

image intensifiers
contrast measurement, rating schemes of tube installations, 1981 3−53809
electron image magnifier, magnetic field paralleliser design and performance 3−50096
electronographic camera at prime focus of CFH 3.6 m telescope 3−30212
electronographic image convertor for spectroscopy with 2.6 m reflector 3−30211
fluoroscopic imaging systems, contrast ratio evaluation 3−53810
microchannel plate, gain characteristics for X-ray photon counting 3−54231
MTF system for testing image intensifier units 3−1800
multi-anode microchannel array detector systems for astronomy 3−30208
optical video-enhanced microscopy with a computer frame memory 3−40682
radiant flux meas. and unit standardisation in night observation field 3−40667
RCA 8857, in Ondrejov Observatory 2 m telescope spectrograph, geom. and photometric distortion investig. 3−44670
RCA C 33063 EP3 and BP2 tests for photographic photometry *(Japanese)* 3−48827
sonoluminescence obs. 3−19216
streak camera system, jitter-free 3−25983
ultrafast picosecond chronography, electron-optical streak camera 3−5897
X-ray image intensifiers, image quality aspects 3−24859
X-ray intensifying phosphor screens, long-term persistency 3−49519
$CdS_{1-x}Se_x$:Cu, photoconducting props., solid-state image intensifier appl. 3−52196

image orthicons *see television camera tubes*

image processing *see picture processing*

image sensors
see also television camera tubes
astronomical spectroscopy appl., development trends 3−15847
C-CD image sensors and microcomputer system for mag. domain obs. 3−25904
C-CD imagers for astronomical obs. 3−5115
CCDs, using 800×800 CCD, Galileo project appl. 3−10209
coherent Doppler tomography for microwave imaging 3−49458
coherent image fringe contrast measurement with sensing arrays 3−5847
electro-optic techniques for 180 mega-pixel per second optical image recording 3−7217
electro-optical imaging system, MTF deterioration by image motion 3−42027
electro-optics/laser conf., Brighton, England (March 1982) 3−40320
horizon sensor performance analysis computing using Earth atmosphere model 3−4959
hybrid focal plane device using CCD multiplexers, noise/performance modelling 3−394
IR focal plane, thick-film hybrid realisation, use at cryogenic temp., satellite imaging appls. 3−40597
laser beams registration, using CCD matrix 3−16414
Micro Focus X-ray magnification equipment 3−16464
photon-counting Reticons for astronomical spectroscopy 3−30237

image sensors continued
- radiological image receptors, performance evaluation by redundancy 3−24849
- satellite monitoring, image anal., sensor technology 3−15663
- schlieren photoelectric instrument based on probing light beam fourfold pass principle 3−27208
- staring sensors, jitter induced clutter arising from background spatial radiance gradients 3−5858
- streak camera system, picosecond diode laser pulse obs. 3−40712
- systems engineering approach to imaging systems assessment 3−1802
- tomography, image reconstruction, limited angle, for missing scans 3−53831
- tomography, positron imaging, reconstruction of 3-D from 3-D, improved performance 3−53832
- virtual phase CCD evaluation as imaging X-ray spectrometer 3−40739
- Nd laser radiation fluctuating subpicosec. struct. recording using image-convertor camera 3−27122
- PtSi thin-film Schottky-barrier IR detector with optical cavity, photoresponse 3−27263
- Si array detectors in RGO coude spectrograph 3−30209
- Si X-ray imaging spectrometer fabricated by Al thermomigration 3−45260

image storage tubes
- digital memory oscilloscopes, characts., market survey *(French)* 3−5779

imagers *see image sensors*

images, optical *see optical images*

imaging, acoustic *see acoustic imaging*

imaging, infrared *see infrared imaging*

imaging, NMR *see magnetic resonance spectroscopy; nuclear magnetic resonance*

IMMA *see ion microprobe analysis*

immiscibility *see solubility*

immittance, electric, measurement *see electric immittance measurement*

impact (mechanical)
- *see also ballistics; impact strength*
- asteroids, complete fragmentation of parent bodies of Themis, Eos and Koronis families 3−59248
- asteroids, M and CMEU types, catastrophic impacts rel. to unusual rot. props. 3−5196
- asteroids, structures as outcomes of catastrophic collisions 3−59247
- brittle materials, rain erosion damage 3−32688
- collision of deformable bodies, high-speed interaction, numerical modelling 3−16132
- crater formation under hypervelocity impact 3−56500
- Cretaceous Tertiary boundary, clay mineralogy of boundary clay rel. to asteroid impact model 3−58971
- cylinder, infinite, with circumferential crack, torsional impact response 3−2007
- cylinder-target impact, post-impact flow, phase transitions 3−27452
- device design, spring with preload force *(Russian)* 3−17782
- flat annular crack in finite elastic cylinder, torsional impact response calc. 3−12599
- flexible coupling impact by rigid body, wave pattern of motion 3−50928
- Giotto spacecraft, dust protection system 3−39994
- graphite-epoxy composite laminate, fatigue and impact damage, US characterization 3−58385
- graphite-epoxy composite laminates, ply orientations, 2D US imaging using polar backscatt. 3−58386
- head, human, composite physical model 3−35047
- human head impact simulator, expt. and modal analysis 3−15129
- humans, impact force attenuation during landing from vertical free fall 3−9649
- indentation of rigid die into ideal rigid-plastic half-space 3−7508
- IR transmitting materials, design data development for rain impact damage 3−9266
- mass attached to elastically restrained beam, transverse impact of body 3−22400
- metals and alloys, strain rate sensitivity determ., use of dynamic impact expts. 3−47884
- multiple-unit impacting mechanisms, stable periodic motion, expt. study 3−50980
- noise due to impact excitation of struct., theory and expt. 3−37290
- oblique, along surface of elastic-plastic half-space 3−7509
- oscillator, stable periodic vibroimpacts 3−51029
- passivation behaviour under mech. working influence by impacting-solid bodies in neutral phosphate electrolyte *(German)* 3−39308
- piezoelectric accelerometer, reference apparatus for checking impact acceleration meas. 3−45120
- planets, impact of comet nuclei and meteorite swarms, crater form. 3−20273
- plastics, US waves, impact generated 3−51725
- plate, infinite, dynamic stress intensity factors around rectangular crack under impact load 3−56482
- PMMA, cone indentation and deep punching 3−43943
- PMMA, erosion by repeated impacts with single particle *(Japanese)* 3−4140
- polyvinylidene fluoride, piezoelectric, potential failure mechanisms 3−9077
- randomly vibrating surface, repeated impact process, expt. study 3−17783
- rod, elastoviscoplastic, impact on rigid wall, temp. field produced *(French)* 3−7438
- shells, thin, elastic, impact-contact problem calcs., geometrical nonlinearities within the contact region 3−22397
- soft spheres, impact, high speed photography obs. 3−56514
- solid, viscoelastic, impact along shallow spherical shell 3−46508
- solid bodies, high velocity collisions, hydrodynamic model 3−16124
- spherical elastic layer collision, contact deform. 3−51030
- stable periodic motion of pair of impacting rigid masses 3−51028
- steel, low C, impact wear *(Japanese)* 3−58254
- steel, tool, impact wear, SEM and X-ray methods 3−4149
- steel, US waves, impact generated 3−51725
- steel target, free surface vel. induced by projectile impact meas. using laser Doppler velocimetry *(Korean)* 3−7521
- stress wave generated by impact, dynamic photoelasticity, fringe vels. 3−51033
- stress wave propagation in an elastic/viscoplastic half-space containing a spherical cavity 3−42170
- two-dimensional impact/sliding response to harmonic excitation, analytical model 3−51027

impact (mechanical) continued
- vibrating plate, repeated impacts, dynamics calc. 3−12506
- CaF$_2$ single crystals, impact erosion by sharp projectiles 3−18384
- CaF$_2$ single crystals, impact erosion by blunt particles, damage struct., microscopy 3−47043
- Cu, impacted by hard spheres, erosion by melting obs. 3−19423
- Fe, cast, impact wear *(Japanese)* 3−58254
- α-Fe, erosion by rough spherical alumina particles, metallographic study 3−19429
- KCl single crystals, impact erosion by blunt particles, damage struct., microscopy 3−47043
- LiF single crystals, impact erosion by sharp projectiles 3−18384
- LiF, single crystals, impact erosion by blunt particles, damage struct., microscopy 3−47043
- MgO:Li; pure and doped, mechanical impact damage, optical absorption study 3−43565
- NaCl single crystals, impact erosion by blunt particles, damage struct., microscopy 3−47043
- ZnS, static and impact loading, comparisons 3−14702

impact ionisation
- III-V semiconductors, electron ionisation coeffs. anisotropy 3−13827
- III-V semiconductors, high energy distrib. function and electron impact ionisation coeff. calc. 3−3210
- nondegenerate semiconductor thermoelectric props., incomplete impurity ionisation effects 3−13847
- p-n junction, electroabsorption produced mixed injection, rel. to impact ionisation coeffs. 3−23477
- p-n junctions, single-diffused Gaussian diffused, avalanche breakdown voltages, analytical soln. 3−52235
- polyethylene, electrical treeing form. 3−19059
- polyparabanic acid film, elec. breakdown under square pulse condtions 3−43487
- semiconductor, point defect modification and recombination, acceleration by ionizing radiation 3−22891
- semiconductor physics, introduction, book 3−40329
- semiconductor-metal contacts, internal secondary emission of electrons and holes 3−38479
- semiconductors, nonlinear quantum transport and scatt., density matrix formalism 3−47355
- AgBr photographic emulsion microcrystals, carrier avalanche multiplication 3−3213
- n-Bi$_{1-x}$Sb$_x$ semicond. alloys, impact ionisation and carrier recombination in mag. field 3−3215
- Cd$_{0.2}$Hg$_{0.8}$Te crystal, photocond. kinetics under surface excitation *(Russian)* 3−3257
- Ga$_{1-x}$Al$_x$Sb, electron and hole impact-ionisation coeffs. 3−13826
- GaAs, impact ionisation including quantum effects, Monte Carlo simulation 3−33730
- n-InAs, impact ionisation, I-V characts. 3−18713
- InAs:Cr, impact ionisation, I-V characts. 3−18713
- InSb, carrier heating under impact ionisation conditions, Monte Carlo calc. 3−3214
- InSb, electron energy relaxation by neutral donor impurities in quantising mag. fields 3−57361
- p-InSb, IR absorpt., anisotropic, by free holes under strong elec. field 3−23917
- InSb, impact ionisation probability 3−38394
- n-InSb, impact ionisation at 77K 3−47353
- InSb, internal quantum efficiency, impact ionisation, L-conduction band effects 3−13858
- InSb, nonlinear interactions under picosec. laser irrad., plasma form. and nonlinear melting 3−37961
- InSb, optically induced avalanche, rate eqn. model 3−57872
- Si, impact ionisation, prob. calc. 3−18714
- Si n-n$^+$ junction with point contact, I-V characts. and current oscill. 3−8568
- Si, photoresponse, near UV quantum yield meas. 3−43226
- Si:P p-n homojunctions, avalanche breakdown voltage, electron irrad. effects 3−8570

impact phenomena *see collision processes*

impact strength
- *see also fracture toughness; notch strength*
- ABS, impact resistance eval. by falling weight method 3−24330
- Charpy impact testing, simplified method, below 5K 3−9262
- dynamic fracture toughness evaluation at impact loading *(Czech)* 3−14808
- epoxy resin laminates, impact fatigue strength under repeated impact loads *(Japanese)* 3−58225
- explosion-type device for creating inertial loads 3−19495
- glass fibre reinforced plastics, flawed, AE under accelerated weathering and falling weight impact tests *(Japanese)* 3−19402
- hard materials, future potential developments, mech. props. rel. to appl. 3−3981
- high-pressure boilers, pulsed destruction 3−14721
- instrumented Charpy impact test at cryogenic temps., new apparatus 3−36013
- IR transmitting materials, design data development for rain impact damage 3−9266
- IR transmitting materials, impact damage and erosion mechanisms, opt. quality 3−9145
- large samples, impact testing machine with oscillogram recording 3−19497
- metals, tube, impact strength testing, stored energy effect 3−9278
- notched bend specimens in impact loading 3−29230
- nuclear reactor pressure vessel materials, neutron embrittlement eval. and prediction 3−55147
- plastic construction materials, thermal and mech. props., ionising radiation effect *(German)* 3−58176
- plastics, toughened, heterophase polymers, review 3−43857
- Plexiglas, spalling failure at normal and elevated temps. 3−19421
- PMMA, cone indentation and deep punching 3−43943
- polyethylene, mica filled, hot rolling and forging, effect on mech. props. 3−29057
- polyethylene, spalling failure at normal and elevated temps. 3−19421
- polystyrene, high impact, rel. between rheological props. and impact strength 3−14639
- PVC, rigid pipes, impact strength and fracture morphology, processing and resin struct. effects 3−24324
- PVC-polyethylene co-vinyl acetate g-vinyl chloride blend, microstructure, impact strength 3−58190

impact strength continued
PVC-post chlorinated PVC blends, compatibility, mech. criteria 3—14641
reactor materials, fracture mechanisms, concept, tensile and notch impact bend test 3—24454
rubber-modified thermoplastics, surface embrittlement, impact and tensile tests 3—34514
steel, alloy, mech. props., effects of thermal cycling *(Korean)* 3—29170
steel, austenitic Cr-Ni, hot embrittlement in heat affected zone of welded joints *(German)* 3—53097
steel, austenitic stainless, 18-8, fatigue crack propag. charact. under repeated impact loading 3—53231
steel, austenitic stainless, Ni-free, low temp. mech. props., effect of N *(Korean)* 3—39242
steel, C, -Cu multilayer composite, mech. props. 3—39250
steel, C, plate, projectile impact, critical fracture energy 3—14691
steel, C type, 20k, brittle fracture susceptibility eval., nondestructive magnetomech. method, hot rolling and ageing effects 3—48017
steel, controlled rolled, fracture features 3—53201
steel, Cr-Mn-Si-Ni, temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
steel, high purity 37KhN3 and 37Kh2N4, influence of high temp. thermomechanical treatment on props. *(Russian)* 3—34361
steel, high strength, ductility and impact energy, effect of vol. fraction and shape of sulphide inclusions 3—34396
steel, high strength, fatigue, impact and nonimpact, comparison of crack growth rates *(Japanese)* 3—9172
steel, HSLA, solidification, thermodynamic model for predicting precip. behaviour 3—43801
steel, HSLA tempered martensitic, adiabatic shear bands, projectile impact loading, electron microscopy 3—34375
steel, impact loading, specimen size factor in surface active media 3—29255
steel, irradiated pressure vessel type, Charpy impact testing, computer appl. 3—9284
steel, low alloy, heat treated, fracture toughness, mech. props. correlations 3—34423
steel, low alloy, type 03G4AF, rupture strength rel. to struct: 3—47957
steel, low-alloy, containing V and B, struct. and failure resist. 3—4128
steel, low-alloy, texture after controlled rolling 3—39173
steel, medium C, impact toughness in different struct. states, complex dynamic loading effect 3—34475
steel, medium C, integral J value, Charpy test, inclusions effect *(French)* 3—58232
steel, medium C, ultrahigh strength, heat treatment, fracture props. rel. to comp. 3—53240
steel, Mn, high strength, development 3—58128
steel, Mn(-Mo), temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
steel, Mn-(Nb), yield and impact strength, plate gauge depend., cooling rate effect 3—43914
steel, Mn-Al, high-alloy, struct. and mech. props:, room and cryogenic temps. 3—39244
steel, Ni-Cr, Charpy impact toughness, effect of heat treatment *(Korean)* 3—53192
steel, Ni-Cr-Mn-Si, temper brittleness, influence of initial microstruct. 3—47945
steel, Ni-Cr-Mo, Ca, rare earth metal treated, impact energy, effect of sulphide inclusion shape control *(Korean)* 3—29169
steel, Ni-Cr-Mo type 4340, thermomech. treatment effect on notch toughness 3—53098
steel, normalised, C-Mn, mech. prop. anisotropy, effect of sulphide inclusion morphology and pearlite bonding 3—53197
steel, pressed notch specimens, fracture resist. in static and impact bend testing 3—19492
steel, stainless, forgings of 03Kh12K12D2-VD, mag. and mech. props. 3—29129
steel, structural, low strength, fracture toughness data, fission reactor appl. 3—53217
steel, texture effect on H embrittlement, impact, SEM study, dislocation model *(Chinese)* 3—34419
steel, tool, high strength structural, mechanical behaviour, effect of substituting W for Mo *(Korean)* 3—29168
steel, ultrahigh strength, medium C, B addition effect on P grain boundary segregation and fracture 3—53070
steel,ultrahigh C/mild and UHC/UHC laminates, impact props. 3—58203
steel plate, mech. props., control of anisotropy 3—47909
Teflon, spalling failure at normal and elevated temps. 3—19421
Al-Cu-Mu-Zr-Fe-Si, struct. and props., Fe and Si additions influence 3—39248
Al-Zn-Mg-Cu, pressed semifinished products, softening schedules for ageing 3—34365
Fe, cast, white, mischmetal effect on microstructure and mech. props. 3—24327
Fe-Ni-Cr-Ti austenitic alloy for cryogenic use, Ti and ageing effects on strength and ductility *(Japanese)* 3—9161
Ir-W:Th, Th segregation to grain boundaries in alloys containing 5-1000 ppm 3—47837
Ni based heat resistant alloy Eh1698VD temp. effect on mech. props. 3—47872
Ni-base superalloy, fracture of single crysts. 3—34453
Ti and alloys, H embrittlement, susceptibility 3—9191
Ti, brittleness, grain size effect 3—29172
Ti, commercial purity, mech. props., effect of α-phase morphology 3—47946
Ti-Al-V alloy, cast, heat treatment processes and microstructures, mech. props. 3—24282
β-Ti-Mo alloy, age hardening, deform. and fracture characts. 3—14684
β-Ti-Mo-Cr-Fe-Sn-La, behaviour, C effect 3—29091
Ti-Mo(Ni) alloys, beta-type, strength and toughness, heat treatment effects 3—24366
Ti-Ni-Zr (95.5, 2.5, 2.0 wt.%), for appl. in hot NaCl solns., heat treatment and props. 3—29225
impedance, acoustic *see acoustic impedance*
impedance, electric *see electric impedance*
impedance, electric, measurement *see electric impedance measurement*
impedance, measurement, electric *see electric impedance measurement*
impedance matching
No entries
imperfections, crystal *see crystal defects*
impermeability *see permeability*
implosions *see explosions*
impulse amplifiers *see pulse amplifiers*
impulse generators *see pulse generators*
impulse testing
air, dry and moist, positive switching impulse breakdown of sphere-plane gap 3—7840
liquid dielectrics electric withstand strength to microsecond voltage pulses *(Russian)* 3—38759
polyparabanic acid film, elec. breakdown under square pulse condtions 3—43487
transformer oil, influence of DC bias superimposed on step voltage 3—43486
impulse voltages *see transients*
impulse welding *see resistance welding*
impurities
for impurity vibrations see "lattice localised modes" or "molecular vibrations in solids"
see also chemical analysis; crystal inclusions; crystal purification; diffusion in solids; impurity-defect interactions; impurity distribution; impurity electron states; interstitials; magnetic impurity interactions; phonon-impurity interactions; segregation; semiconductor doping
AC Kelvin double bridge technique, for impurity (defect) concentration levels monitoring 3—49402
adatom, impact enhanced surface diffusion during impurity induced sputter cone formation 3—38986
agarose, gel, conc., viscoelasticity, alkali metal ion effects 3—7536
alkali chlorides, molten, co-ordination of heterovalent and cation impurities 3—2375
alkali halides, radiation-induced processes, cation impurities role, review 3—2600
alkali halides, $VO_4^{3-}.Sb^{3+}$, $VO_4^{3-}.Al^{3+}$ and $SiO_4.Th^{4+}$ mol. impurity complexes, IR absorpt. study 3—23985
alkali iodides, luminescence from free and self trapped excitons 3—57975
alloys, grain boundary at. struct. and intergranular diffusion 3—46957
alloys with $B8_1$ and B31 structs., interstitial impurity solubility *(Russian)* 3—27929
anharmonic cryst., isotopically disordered, thermal cond. and sound attenuation 3—51874
BCC metals, H interstitials, quantum mechanical description 3—51633
binary FCC solid solns., impurity monomers and dimers, temp. and conc. effects 3—46969
biotite mica, elec. cond., small polaron hopping 3—47345
Bose gas, nonideal, superfluidity over impure substrate *(Russian)* 3—47177
calcium-strontium tartrate tetrahydrate, mixed crystals, gel growth, lattice parameter, density, Fe content 3—39023
kappa-carrageenan, gel, conc., viscoelasticity, alkali metal ion effects 3—7536
Coble creep, effect of impurities 3—28038
crystal growth from soln., impurity effects 3—37831
crystallisation processes, impurity effects 3—27872
diamond, impurities, exchange-correlation and local field effects, RPA calc. 3—57298
diffusion, enhanced in shock waves 3—51862
diffusion couples, thin film and bulk, growth kinetics 3—8268
displacive systems with strong cryst. defects, transition temp. 3—38026
dissolution phenomena, influence of cryst. imperfections 3—38082
drift induced by nonuniform EM field 3—33510
electroluminescence, prebreakdown, occurrence in weak and strong field limits 3—38918
electron autolocalization near a neutral impurity in liquid *(Russian)* 3—3126
exciton scattering by charged impurities, effects on exciton absorption band shift 3—28281
FCC dilute alloys, free enthalpy of binding of impurity-vacancy pairs 3—42562
ferroelectrics with dipole impurities, crit. phonon damping induced phase transition 3—3655
glass, tempered, fracture strength and internal stress distrib. 3—34446
grain boundary chem. bonding, impurity embrittlement study 3—46960
impurity bonds, correlation function at transition point *(Russian)* 3—3469
intermediate valence, single f-state impurity problem, multiple scatt. theory 3—47317
interstitial solid soln., elastic stability, self-consistent harmonic approx. 3—7957
interstitials, electro- and thermotransport *(German)* 3—33522
ionisation chamber, electronegative impurity analyser for liq. Ar, conc. meas. using α-particle pulse amplitude distrib. 3—11607
Ising model with annealed impurity bonds, thermodynamic props. *(Russian)* 3—18920
linear chain cpds., charge density wave transport, temp. and impurity effects 3—38373
materials analysis by ion channelling, book 3—54597
metal oxide, IR transmitting material, water and derived impurities effect 3—7095
metallic host, restricted Friedel sum rules and Korringa relations 3—2577
metals, diffusion coeff. of H, determ. by mechano-electrochem. method 3—33507
metals, grain boundary at. struct. and intergranular diffusion 3—46957
metals, light impurity energy profile codes 3—43093
metals, Soret diffusion vs. impurity diffusion during laser or electron beam induced heat flow transients 3—56961
minerals, natural, with mag. centres, magic-angle sample-spinning lineshapes, NMR study 3—52643
misch metal prep., lattice consts., melting point and hardness 3—14524
molecular impurities in inert gas matrix, interactions, effective pot. calcs. 3—27973
molecular impurities in inert gas matrix, interactions, IR spectrosc. investig. 3—27974
naphthalene, zone refining monitored by triplet lifetime 3—14478
nematic liq. crystals, impurity diffusion time depend. 3—18487
phenanthrene, zone refining monitored by triplet lifetime 3—14478
polyethylene, stretched, solute orientation mechanism, dielec. relax. study 3—22798
quantum diffusion, applicability of tunnelling-jumping approx. *(Russian)* 3—47183
quantum solid solutions, impuritons collision diffusion coeff., temp. depend. 3—38160
quartz, smoky, Al^{3+} impurity related colour centres 3—18298
quartz glasses, neutron activated anal. of impurities 3—9374

impurities continued
- rare earth particles, struct. and mag. props. 3—18260
- semicondcutor, impurity band electron specific heat, Monte Carlo computer simulation *(Russian)* 3—2841
- semiconductors, optical-transition cross sections involving impurities 3—38855
- single crystal plate, cubic lattice, nonuniformly doped, equilib. states *(Russian)* 3—13244
- single crystal plates, nonuniformly doped, equilib. states *(Russian)* 3—13243
- steel, alloy, impurity-induced embrittlement, effects of thermal history and alloying elements 3—4096
- steel, austenitic stainless, internal stresses rel. to hydrogen cathodic charging, X-ray obs. 3—39232
- steel, BCC, grain boundary segregation and H embrittlement 3—47839
- steel, Cr-Mo-V, creep ductility, effect of P and S 3—34390
- steel, grain boundary segregation of P, intergranular embrittlement, alloying element effect 3—58247
- steel, tempered, intergranular brittleness, influence of segregated transition metals 3—47944
- strong-coupling superconductors, cond. in terms of normal state cond. 3—38530
- superconducting transition temp., effect of nonmagnetic impurities, Anderson theorem violation 3—18814
- superconductor, anisotropic, with approx. neutral electron-electron interaction, BCS-type theory 3—3366
- superconductor, impure, with anisotropic electron-electron interaction, generalised BCS theory 3—28476
- superconductor, NMR line shift in presence of paramag. impurities 3—28481
- superconductor, transition temp. rel. due to mixed valence impurities 3—38523
- superconductors, d-band, crit. temp., effects of Anderson impurities 3—23525
- p-terphenyl, zone refining monitored by triplet lifetime 3—14478
- TGS:alanine, impurity unipolarity, critical temp. and pyroelec. props. 3—34044
- TGS:Cr^{3+}(α-alanine), elastic and thermal props., nature of anomalies 3—8148
- trace impurity analysis using tunable diode lasers 3—34658
- transient spectra, meas. scheme influence *(Russian)* 3—13382
- transition metals, binding energies, of He and H heats of soln., effective medium theory, covalent effects 3—3112
- transition metals and alloys, electrodeposited, corrosion-electrochem. behaviour, effect of non-metallic inclusions *(Russian)* 3—4189
- trichlorofluoromethane, influence of impurities on radiolysis *(Japanese)* 3—14881
- two-band metals containing Anderson impurities, proximity effect tunnelling 3—57485
- weak-coupling superconductor with paramag. impurities, functional derivative of transition temp. to electron-phonon spectral function 3—57458
- AR:N_2 alloys, single cryst., elastic const. determ. by Brillouin scatt. 3—13309
- AR:O_2 alloys, single cryst., elastic const. determ. by Brillouin scatt. 3—13309
- Ag, zone refining in presence of AgCl 3—39027
- Ag-In, highly dil. alloy, TDPAC study of internal oxidation of impurities 3—43475
- Al alloy, high-strength V95 sheet, struct., fracture and mech. props. w.r.t. impurity content 3—58233
- Al alloys, lattice distortion at impurity atoms, EXAFS study *(German)* 3—13245
- Al melts, inclusions precip. mechanism on active filter granules 3—7653
- Al-Mg-Si-Cu-Cr-Fe-Mn (0.98, 0.68, 0.26, 0.2, 0.09, 0.05 wt.%), barrier anodized coating characts. 3—3018
- Al-Zn-Mg alloys, struct. of precipitation free zone after heat treatment 3—43872
- $Al_xGa_{1-x}As/Al_yGa_{1-y}As$ visible lasers, contaminated, MOCVD grown, elec. and optical characts. 3—41871
- Al_2O_3:Fe,Ti, Nabarro-Herring diffusional creep, dopant conc. depend. 3—53136
- Ar, solid, thermal expansion, effect of N_2 impurity mol. rot. motion *(Russian)* 3—28124
- BaF_2-GdF_3-ZrF_4, optical fibres, for transmission in mid-IR 3—12356
- Be, alpha irradiated, impurity element behaviour 3—22943
- $Be_3Al_2Si_6O_{18}$, beryl, lattice defects, X-ray topography study 3—37915
- C, trapping at ^{181}Hf probe atoms in Pt, TDPAC study 3—57840
- $CaCO_3$:Mn^{2+}, internal mag. viscosity induced by paramag. centres 3—28501
- $CaCO_3$, precipitation from aqueous soln., induction period rel. to supersaturation and impurities 3—33154
- CdS, possible excitonic supercond. state, theoretical studies 3—38527
- CdS:Na crystal, microscopic Na impurity determ. by laser cascade photoionization of atoms 3—33292
- CdTe, shallow donor photoionisation cross section, photoconductivity spectra 3—23433
- CdTe:In(Cl), ion implanted, heat treated, defect reactions, cathodolum. and pulse laser annealing studies 3—56932
- $Cd_{1-x}Zn_xS$-liq. junction cells, optical props., impurity content, surface states, film composition, photo response curves 3—8787
- CoO:Fe, Mossbauer study of excess charge compensation 3—33246
- CraAs:Cr, semi-insulating, Cr lattice location, ion channelling and PIXE studies 3—56916
- Cu alloys, lattice distortion at impurity atoms, EXAFS study *(German)* 3—13245
- Cu electrode, C surface pollution enhanced by electron bombardment 3—19463
- Cu, point defect form. energy and charge density oscillations around impurities *(German)* 3—27935
- Cu whiskers, stress-strain curve and lattice struct., influence of internal oxidation 3—29144
- $Cu_x(As_{0.4}Se_{0.6})_{100-x}$, amorphous, bonding of Cu impurity, EXAFS study 3—24055
- CuCl, possible excitonic supercond. state, theoretical studies 3—38527
- Eu, quasi-ferromag. behaviour, excess ferromagnetism study *(Russian)* 3—18933
- Fe, high-purity, Si pollution during heat treatment in H_2 atm., resistivity obs. *(French)* 3—29116
- Fe:H, H interstitials, quantum mechanical description and expt. study 3—51633

impurities continued
- Fe-based alloys, grain boundary segregation and H embrittlement 3—47839
- α-Fe_2O_3, Morin transition, sensitivity to imperfections 3—18888
- GaAs film, epitaxial, CVD grown, analytical evaluation 3—28231
- GaAs, impurity analysis with SIMS *(Japanese)* 3—48106
- GaAs LEC crystal, undoped, semi-insulation mech., role of dislocations 3—22898
- GaAs, laser irrad., O incorporation, effect of O_2 pressure 3—22936
- GaAs MOCVD grown, atmos. and reduced press. growth and elec. props. 3—23197
- GaAs:Cr, 3 inch diameter crystal growth by horizontal Bridgeman technique, characts. 3—24115
- GaAs:Cr, impurity trigonal sites, model for luminescence lines 3—42624
- GaAs:In, Sb, isovalent impurity interaction with system of point defects 3—37950
- GaAs:S, Te, dislocation-point defect-dopant interaction, effects on recombination processes 3—37951
- GaAs:Si p-n structures, radiative recomb. characts., effect of In impurities 3—38920
- GaP: Ge, lattice distortions around single donor Ge, self-consistent pseudopot. method 3—28298
- GaP:Bi(S), ODMR study 3—47576
- Ge, amorphised, epitaxial regrowth rate, effects of electrically active impurities 3—3011
- Ge, submm. impurity and exciton photocond. kinetics 3—23432
- Ge:Al, laser multistage ionisation technique for Al impurity conc. determ. 3—58462
- H_3OPO_4, cryst., proton cond., defects and impurities, SCRF-CNDO/2 calcs. 3—13512
- ^{3}He:^{4}He crystals, BCC, dislocation tunnelling, acoustic study 3—57172
- ^{4}He crystals, ^{3}He impurity localisation, NMR study *(Russian)* 3—2921
- InAs, VPE growth rate anisotropy and impurity trapping 3—43762
- InSb, electron energy relaxation by neutral donor impurities in quantising mag. fields 3—57361
- KBr single cryst. growth from aqueous soln. in presence of PbI_2 impurity 3—51526
- KCl, hydrostatically compressed, screw dislocation mobility and jogs 3—13557
- KH_2PO_4:Tl single cryst., oscillator strengths determ., Tl conc. meas. 3—34053
- $LiIO_3$:Fe, γ radiation defects and impurity defects, positron annihilation study 3—33248
- $LiNbO_3$:Fe, γ radiation defects and impurity defects, positron annihilation study 3—33248
- $(Mg, Fe)_{1-x}O$, specific Fe^{3+} cluster geometries, Mossbauer, EXAFS and X-ray diffr. study 3—33285
- MgO:Cr, grain boundary diffusion of ^{51}Cr rel. to dopant conc. and dislocation orientation 3—57135
- MgO:Cr^{3+}, origin of diffuse interstellar spectra features 3—40220
- MgO:Fe, specific Fe^{3+} cluster geometries, Mossbauer, EXAFS and X-ray diffr. study 3—33285
- MgO:Mn^{4+} origin of diffuse interstellar spectra features 3—40220
- MgO-MnO_2 particle surface layers, high valence impurity-vacancy complex form., EPR study 3—57773
- $(Na,Cs)_2O$-SiO_2 glass, impurity alkali diffusion, ^{86}Rb tracer, comp. depend. 3—57134
- Na, impurity analysis, reactions, phase diagrams 3—14913
- NaCl:Ca^{2+}(Sr^{2+})(Cd^{2+})(Eu^{2+}), first stage coloration, X-irrad. dose rate depend. 3—56890
- NaCl:Eu, effects of X-irradiation, colour centre formation 3—18343
- Nb, local H vibrs. in presence of interstitial and substitutional impurities 3—42739
- NbH_x, static Debye-Waller factor, X-ray diffr. study 3—57050
- NbN-H dilute alloy, N-H complex trapping behaviour, X-ray diffr. study 3—33275
- $NbTi_{0.05}$, cryst. supercond., glasslike sp. ht. anomaly due to interstitial H 3—13957
- Ni alloys, lattice distortion at impurity atoms, EXAFS study *(German)* 3—13245
- Ni, single cryst., quadrupole interactions at different ion implanted probe ions, β-γ TDPAC study 3—3599
- PbTe-Bi_2Te_3, kinetic parameter dependence on impurity level, annealing effects 3—8515
- Pd:Fe sputtered film, contamination, SIMS and magnetic susceptibility study 3—52939
- Pt (111), surface oxidation, role of Al, AES study 3—39305
- PuN, lattice parameter, O and C impurities effect 3—33196
- $(Rb_{0.995}K_{0.005})_2ZnCl_4$, normal-incommensurate phase transitions, crit. exponent, X-ray diffr. study 3—57079
- Rb_2ZnBr_4, floating of modulation wave and impurity phase pinning, NMR study 3—33992
- Sb-Sn (Te), dil., Fermi surface characts. rel. to impurity conc. *(Russian)* 3—38286
- SbSI, specific heat and ferroelec. transitions 3—57103
- Se, liq., viscosity meas., impurity depend. 3—2863
- Si, amorphised, epitaxial regrowth rate, effects of electrically active impurities 3—3011
- Si, backsurface gettering of metal impurities 3—8254
- Si, defect struct. transitions induced by Q-switched laser annealing 3—46994
- Si, diffusion of donors, high conc. and nonequilib. defect effects 3—47163
- Si, float zone crystals, swirl defects study 3—46938
- Si, heat treatment studies of O defect-impurity interactions 3—2598
- Si, impurities, exchange-correlation and local field effects, RPA calc. 3—57298
- Si, impurity analysis with SIMS *(Japanese)* 3—48106
- Si, laser irrad., O incorporation, effect of O_2 pressure 3—22936
- Si MOSFET, high density electron-hole plasma form. below 25K 3—47426
- Si, pulsed laser annealed, impurity segregation coeffs. determ. method 3—51651
- Si, single crystal, Czochralski growth, C contamination 3—33153
- Si, solar grade, floating zone growth method 3—52928
- Si, solar grade, prep. in arc furnace from high purity starting materials 3—52987
- Si, solid solubility of III, IV, V group impurities, strain entropy and tetrahedral radius correl. 3—13242
- Si, trace contamination, capacitance transient spectroscopy 3—3103
- Si:B, shallow strain distributions near impurities, X-ray Bragg reflection meas. 3—42622

impurities continued
Si:B(P), impurity content meas. by photoluminesc. technique *(Chinese)* 3−38863
Si:C, crystal growth by Czochralski technique, quantitative model for C incorporation 3−46876
Si:O, O content meas. by 9 μm IR absorpt., calibration curve *(Chinese)* 3−38850
Si:O wafer, Czochralski grown, defect engineering, VLSI substrate development 3−42593
Si-SiO_2-Al MOS capacitor, Na contaminated, scanning internal photoemission study 3−52256
Si-Wsi_2 bilayers, behaviour of B and As impurities 3−23103
SiC, nonstoichiometry and polytypism 3−18476
Si_3N_4, dielec. props., impurities effect 3−23870
Si_3N_4, hot pressed with Y_2O_3+MgO, oxidation kinetics 3−34507
Ti and alloys, surface segregation of impurities or alloying elements, AES 3−14785
Ti-Al-V alloy, impurities effect on working ability 3−24364
TiC_x single crystals, floating zone prep., C content control 3−43724
TiO_2 ceramic, cation contamination effects on elec. resist., microstruct. and discoloration 3−33718
Tl_3VS_4, crystal growth, impurity behaviour 3−52924
V, superconducting props., impurity depend. 3−23538
V:H, H interstitials, quantum mechanical description and expt. study 3−51633
$V_{1-y}M_yH_2$ (M=Fe,Mo), normal and deuterated, phase diagram, impurity effects 3−33391
Y_9Co_7, magnetism and supercond., influence of impurities 3−57696
YH_2:Gd, proton spin-lattice relax. times, effect of impurities 3−3574
$Zn(NH_4)_2(SO_4)_2.6H_2O$, homogeneity study 3−2829
ZnO single cryst., solid-state impurity crystn. 3−2817
ZnS:Eu, Gd, single cryst., struct., impurities effects 3−2512
Zr, positron annihilation, sensitivity to H content and heat treatment 3−34163
β-Zr:Ag, diffusion and isotope effect of Ag *(German)* 3−13544
ZrC_x, elec. and thermal conductivity, struct. variation and impurity effects 3−8276
$(ZrO_2)_{0.83}(YO_{1.5})_{0.17}$, sintering and cond., effect of impurities 3−19307

impurity and defect absorption spectra of inorganic solids
alkali halides, AsO_2^- impurity centres, optical study 3−23981
alkali halides, mixed, F-band position in absorpt. spectrum, Mollwo-Ivey relations 3−43569
alkali halides, $VO_4^{3-}.Sb^{3+}$, $VO_4^{3-}.Al^{3+}$ and $SiO_4.Th^{4+}$ mol. impurity complexes, IR absorpt. study 3−23985
alkali metals, impurity excitation effects 3−3775
alkaline earth oxides, $Li^+(Na^+)$ ion implantation defects, EPR, luminesc. and optical absorpt. study 3−2584
containing Ag granules, microstruct. and optical absorpt. 3−33104
cooperative optical absorption 3−14319
crystals, correlation effect influence on EM wave absorpt. spectra *(Russian)* 3−23988
crysts., optical spectrosc. and EPR obs. 3−57959
diamond:Ni, synthetic, impurity absorpt. spectra meas. 3−23979
diamond, distorted defects, optical meas. 3−47678
far infrared impurity absorption in a quantum well 3−43575
fluorapatite, fission-damage induced colour centres, absorption spectroscopy study 3−56889
glass, oxide, containing Ag granules, microstruct. and optical absorpt. 3−33104
halosodalites, nonstoichiometric, colour centre destruction spectra 3−19160
metal surfaces, adsorbed rare gas atoms, config. description 3−13625
polyacetylene:I_2 highly doped films, IR transmission, rel. to isomerisation 3−19131
quartz:Ge(Li)(Fe), short-lived optical absorption, influence of pulsed electron irradiation 3−14324
ruby, d-orbital theory, appl. to high press. spectra 3−43578
semiconducting, optical absorpt. edge 3−24039
semiconductor films, polycrystalline, electronic and optical props. 3−23515
semiconductors, deep level associated optical cross sections 3−14325
semiconductors, lightly doped, interimpurity absorpt. of IR radiation 3−38856
semiconductors, optical-transition cross sections involving impurities 3−38855
α-Al_2O_3:Mg, point defects, elec. cond., optical absorption and ESR studies 3−56884
As:Ni amorphous sputtered film, chemical modification, elec. props. 3−23518
As_2S_3:Ag amorphous film, Ag photodoping sensitivity, optical and elec. resist. study 3−46851
$BaMnF_4$, pyroelectric antiferromagnet, exciton and magnon-sideband absorption 3−57970
$BaTiO_3$:Co Remeika crysts., excitation energies and optical absorpt. spectra 3−38853
$Be_3Al_2Si_6O_{18}$, beryl, blue and green, optical absorption and EPR studies 3−3518
BeF_2:Gd^{3+} glass, vibronic fluoresc., polarised Raman, and IR spectra 3−38895
BiI_3:$Pb^{2+}(Cd^{2+})(Mn^{2+})$ thin films, exciton absorpt. spectrum 3−19162
$Bi_{10}SiO_{20}$:Nd^{3+}, absorption spectra, vibronic struct. 3−34131
$Bi_{12}SiO_{20}$:Ho^{3+}, Er^{3+}, impurity IR absorption spectra, Stark levels 3−19165
CaF_2:Er, transverse Zeeman effect, optical absorpt. and fluoresc. spectra 3−3691
CaF_2:Li(K), disturbed colour centres after X-ray irrad., optical studies 3−27937
CaF_2:Nd(Ce), Zeeman IR spectra, optical absorption and fluorescence meas. 3−19124
CaF_2:O^{2-}, disturbed colour centres after X-ray irrad., optical studies 3−27937
$CaSO_4$:Dy, thermolum. spectra and optical absorption 3−19209
$CdBr_2$:Eu, optical props. and EPR 3−3526
$CdCl_2$:Ni^{2+}, optical absorpt. and emission spectra 3−23984
CdI_2:Eu, optical props. and EPR 3−3526
$Cd_{1-x}Mn_xSe$, D^- levels, far IR transmission and transport studies 3−47677
$Cd_{1-x}Mn_xTe$, x>0.4, absorpt. edge pinning 3−14329
CdTe:Li, localised vibr. modes and defects, IR absorpt. study 3−2720
$CoCl_2$:Fe, localised mag. modes, far IR absorpt. spectra 3−3770

impurity and defect absorption spectra of inorganic solids continued
Cs colloids in additively coloured CsF, annealing, IR spectra, precip. and ripening obs. 3−28881
CsF, F′-centres, form. and bleaching characts., optical props. 3−2551
$CsMgCl_3$:V^{2+}, single cryst. absorpt. and emission spectra 3−19173
Cs_2SO_4:MoO_4^{2-}, single cryst., low temp. absorpt. spectra 3−14323
CuCl:N crystal, excitons bound to ionised donor-acceptor pairs, optical absorption 3−52810
Cu_2O, excitonic absorpt. lines, isotopic shift 3−14328
$FeCl_2$:Co, localised mag. modes, far IR absorpt. spectra 3−3770
GaAs, amorphous, defects, elec. cond. and optical absorpt. studies 3−22778
GaAs, deep levels, EL2 level, impurity superlattice model and DLOS results 3−18645
GaAs, electron irrad., optical props. thermal stability 3−43577
GaAs MO-CVD film, residual donor impurities, far IR magneto-optic study 3−2592
GaAs, semi-insulating, undoped, EL2 deep level, direct obs. by IR absorpt. 3−57305
GaAs:Cr, photoinduced transient optical absorption of Cr^{4+} 3−23982
GaAs:Mn, optical-transition cross sections involving impurities 3−38855
$GaAs_{1-x}P_x$:Cd, acceptor photoionisation, IR absorption spectra study 3−19164
GaP, electron or neutron irrad., band edges modification by defects, optical absorpt. and photocond. study 3−23975
GaP:Cu, interband excitation induced absorption by deep impurities 3−57960
GaP:Ni, photoconductivity, impurity states 3−23427
GaP(Sb), amorphous, defects, elec. cond. and optical absorpt. studies 3−22778
$GdAlO_3$:Cr^{3+}, magnetic Franck-Condon effect 3−34142
p-Ge, lightly doped, interimpurity absorpt. of IR radiation 3−38856
Ge:Cu, impurity states, piezospectroscopy 3−3118
n-$Hg_{0.8}Cd_{0.2}Te$:$Al^+(Ga^+)$, ion implanted, IR refl. study 3−18327
HoIG, mag. props. in high mag. field, optical absorpt in IR region 3−28604
InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3−18721
$KAl(SO_4)$:$Cr_2O_7^{2-}$, X-ray irrad. damage, optical absorption and ESR study 3−18344
KBr:Eu^{2+} single cryst., precipitated phases, optical absorpt. and fluoresc. 3−3807
KBr:I, F-centre accumulation efficiency, temp. depend. *(Russian)* 3−56888
KBr:Li, X-irradiated, optical absorption and thermolum. studies of F_A-centres 3−34157
KBr:Pb^{2+}, obtical absorpt. and mag. circular dichroism 3−34129
KBr:Pb^{2+}, optical absorpt. and mag. circular dichroism moment anal. 3−34128
KBr(I), lattice defect form. by two-photon excitation 3−12214
KBr(I):Pb^{2+}, absorption and stress-induced dichroism in Pb^{2+} centre A bands 3−52805
KCl, optically induced F-centre aggregation 3−38854
KCl:Br(I), F-centre accumulation efficiency, temp. depend. *(Russian)* 3−56887
KCl:Ca(Sr), gamma irradiated, thermal bleaching of V_2^M centres, oscillator strengths 3−8047
KCl:Eu,F crystals, absorpt. and luminesc. centre form. 3−43599
KCl:I, electron irrad., impurity exciton prod., optical absorpt. and luminesc. studies 3−43576
KCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3−14330
KCl_xBr_{1-x}:Ca^{2+}, X-irrad., Z_1- and F-centres, thermoluminesc. and optical absorpt. studies 3−19212
KF(Cl)(Br)(I):Cd, colloidal colour centre optical props. 3−3771
$KH_3(SeO_3)_2$, ferroelastic and ferroelec. phase transition, radiation damage, absorpt. spectra 3−37963
KI:Se^{2-}, anion vacancy dipoles, UV irrad. effects, optical absorpt. and ionic thermocurrent study 3−43567
KI:TeO_4^{2-}, IR absorpt. spectra *(Russian)* 3−23990
$KMg_3(AlSi_3O_{10})F_2$:V, γ and neutron irrad., absorption spectra study 3−23983
K_2O-BaO-Nd_2O_3-Pr_6O_{11}-SiO_2 glasses, colour and absorpt. spectra, effect of added Mn^{3+}, Co^{2+}, Ni^{2+} 3−34130
LiCl, γ-irrad., vacuum UV absorpt. spectra 3−43571
LiF, Einstein spectral coeffs. for F_2^- colour centres 3−38906
LiF:TiO_2, absorpt., emission, excitation, and polarised luminesc. spectra 3−43602
$LiNH_4SO_4$:Co^{2+}, optical absorpt. spectrum 3−43570
$LiNbO_3$, F^+-centre wave functions, transition energies in absorpt. spectra 3−43071
$LiNbO_3$:$Cr^{3+}(Ni^{2+})$, absorption spectra, crystal field and Racah B parameters 3−14326
Li_2O-B_2O_3 glass, struct., ESR, optical and Mossbauer study 3−22784
Li_2O-K_2O-B_2O_3, glass, spectral absorption of Cu^{2+}, mixed alkali effect 3−47676
Li_2O-Na_2O-Al_2O_3-SiO_2, mixed alkali glasses doped with Cu^{2+} 3−46864
$LiTaO_3$, F^+-centre wave functions, transition energies in absorpt. spectra 3−43071
$Lu_xY_{1-x}SiO_3$:Nd mixed crysts., spectroscopic props. of Nd ions 3−52839
$MgAl_2O_4$:Cr, optical absorpt. spectra and luminescence *(Russian)* 3−23989
$MgCl_2$, γ-irrad., ESR and optical absorpt. spectra study 3−43434
MgO, doped and undoped, diffusion of H^+ and D^+ 3−13547
MgO with chemisorbed O_2, adsorption-luminescence spectrum *(Russian)* 3−19196
MgO:H^-, thermochemically reduced, charge and mass transfer, IR absorpt. and luminesc. study 3−43573
MgO:Li; pure and doped, mechanical impact damage, optical absorption study 3−43565
$MgWO_4$:Co(II), electronic spectrum at 4.2K 3−8855
$NH_4Al(SO_4)_2$:$Cr_2O_7^{2-}$, X-ray irrad. damage, optical absorption and ESR study 3−18344
$(NH_4)_2SnF_6$:Re^{3+}, linear polarised absorpt. spectra 3−57958
NaCl with colloidal centres, optical absorpt. spectra 3−52811
NaCl:Eu^{2+}, hardening, aggregation-precip. state effect 3−4050
NaCl:$Pb^{2+}(Sr^{2+})$, F-colouring efficiency, effect of precipitated phases, optical study 3−47680
NaCl(F)(Br)(I):Cd, colloidal colour centre optical props. 3−3771
NaF:Li, relaxed excited state, F′-centre formation by optical bleaching 3−14327

impurity and defect absorption spectra of inorganic solids continued

- NaF:TiO_2, MgF_2, absorpt., emission, excitation, and polarised luminesc. spectra 3—43602
- Na_2O-B_2O_3 glass, neutron irrad., elec. cond. and light absorpt., fast-neutron dosimeter appl. 3—51667
- Na_2O-B_2O_3-SiO_2:Cu^{2+} glass, optical absorpt. and ESR spectra 3—33119
- Na_2O-K_2O-B_2O_3, glass, spectral absorption of Cu^{2+}, mixed alkali effect 3—47676
- $Na_2Zn(SO_4)_2.4H_2O$:VO^{2+}, optical absorpt. spectrum, cryst. field and mol. orbital coeffs. 3—43574
- Nd^{3+} in disordered matrix, absorpt. and luminesc. band struct. calc. 3—14343
- $Pb_{1-x}Sn_xTe$:In(Ga), obs. of local modes, absorpt. spectra 3—43566
- RbBr, F'-centre absorpt. spectrum 3—43568
- RbBr(I), lattice defect form. by two-photon excitation 3—12214
- RbBr(I):Pb^{2+}, absorption and stress-induced dichroism in Pb^{2+} centre A bands 3—52805
- RbCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3—14330
- RbCl:Pb^{2+}, optical absorpt. and mag. circular dichroism moment anal. 3—34128
- $RbClO_4$:ReO_4^-, single cryst., low temp. absorpt. spectra 3—14323
- RbI:Ag^+, off-centre impurity, UV absorpt. and electro-optical alignment obs. 3—3772
- $RbMgF_3$:Er^{3+}, optical transitions of Er^{3+} ions 3—3773
- $RbMgF_3$:Er^{3+}(Mn^{3+}), optical transitions study 3—3774
- $RbMgF_3$:Eu^{2+}, absorpt., emission, and excitation spectra, rel. to solid laser development 3—19175
- Si amorphous sputtered films, deposition influence on props. 3—52934
- Si, annealed, bulk material dislocation-free, O and C precipitation study *(Chinese)* 3—33439
- Si, distorted defects, optical meas. 3—47678
- Si, donor level, H-defect complex behaviour, elec., optical and DLTS meas. *(Chinese)* 3—33658
- Si, ion implanted, ellipsometric spectrum and optical props. 3—28880
- p-Si, lightly doped, interimpurity absorpt. of IR radiation 3—38856
- Si, neutron transmission doped, radiation damage, IR absorpt. study 3—46974
- Si, thermal donor electronic struct., Hall effect and IR study *(Chinese)* 3—43059
- Si:As, ion implanted, annealing meas. by optical spectrometry *(Chinese)* 3—13247
- Si:B,C, electron irrad., defect accumulation, IR study 3—27998
- Si:Be,k isoelectronic bound excitons, photoluminesc. lifetime, absorpt. and excitation spectra 3—8878
- Si:C, single crystal, errors in measuring C conc. from IR absorption 3—47675
- Si:C, substitutional impurity, local modes and IR absorpt., local effective charge model *(Chinese)* 3—38014
- Si:H, amorphous, bulk and interface states, elec. props. 3—28256
- Si:H, amorphous film, interface and surface states, optical absorpt. spectra, photothermal deflection spectroscopy study 3—34125
- a-Si:H, As(Cl), ion implanted, IR absorpt. spectra 3—47681
- Si:H, B, amorphous, optical absorpt. spectra and struct. props. 3—52803
- a-Si:H, B, anomalous optical and struct. props. 3—34127
- a-Si:H, Cl, glow discharge prep., optical and elec. props. 3—23978
- Si:H, crystalline, defect-impurity complexes and IR bands, theory 3—23948
- a-Si:H, elec. and optical props., effect of prolonged illum. 3—23441
- a-Si:H, role of dangling bond defects in early recomb., IR absorption 3—47679
- a-Si:H,O, IR absorpt. spectra, structural interpretation 3—23987
- Si:H,P, amorphous, gap state profiles, photoacoustic spectroscopy studies 3—23250
- Si:H,P, amorphous film, photoconductivity study 3—28385
- a-Si:H and a-Si:H, P, gap-state profiles, below-gap optical absorpt. meas. 3—3844
- a-Si:H films, disorder characts., optical transmission and photocond. study 3—38932
- a-Si:H films, RF sputtering prep., microstruct. and H bonding environment 3—51970
- a-Si:H films, thickness depend. of elec. and optical props. and ESR 3—3199
- Si:In, Al, photoluminesc., IR absorpt., photocond. and Hall effect meas. 3—34135
- Si:In, In acceptor IR absorpt. spectrum meas. 3—23976
- Si:O, neutron irradiated, defect accumulation and lattice strain, IR study 3—56994
- Si:O, O content meas. by 9 μm IR absorpt., calibration curve *(Chinese)* 3—38850
- Si:O, thermally activated O donors distribution, scanning IR absorpt. study 3—33284
- $Si_{1-x}C_x$:H amorphous film, defects, ESR, optical props. and photocond. 3—23199
- SiO_2, vitreous, absorption band at 300 nm, radiation colour centres 3—23986
- α-SiO_2:V^{4+}, EPR and optical absorpt. spectra 3—52614
- SiO_2-Li_2O(Na_2O)(K_2O), glass, Cu ion, exchange diffusion layers, ESR and optical study 3—52605
- SrF_2:Nd(Ce), Zeeman IR spectra, optical absorption and fluorescence meas. 3—19124
- SrO-B_2O_3 glass, struct., ESR, optical and Mossbauer study 3—22784
- $SrTiO_3$:Mn, vacancy-impurity assoc., EPR and optical absorpt. meas. 3—46985
- $ThBr_4$:Pa^{4+} crysts., optical spectrosc. and EPR obs. 3—57959
- WO_3:H, conc. dependent H percolation, optical absorpt. study 3—42846
- YAG:Fe, coloration on reduction, absorpt. spectra and luminesc. quenching studies 3—47674
- YAG:Nd, absorpt. photolum. and X-ray luminesc. spectra obs., 190 to 900 nm 3—28901
- $YAlO_3$:Fe, coloration on oxidation, absorpt. spectra and luminesc. quenching studies 3—47674
- $YAlO_3$:Nd^{3+}, absorpt. spectrum, Stark effect *(Chinese)* 3—3769
- YIG films, ion irradiated, healing behaviour of nucl. tracks, mag. and optical props. 3—22945
- $ZnCs_2(SO_4)_2.6H_2O$:Co^{2+}, optical absorpt., impurity states 3—34126
- ZnS electron release from traps, investig. using optical recharging 3—19161
- ZnS:Ni^+, absorpt. and emission spectra 3—43572
- ZnSe:Cu, nonlinear absorpt. and linear circular dichroism spectra 3—19163

impurity and defect absorption spectra of inorganic solids continued

- ZnSe:Cu, two-photon absorption coeff., deep level impurity effects 3—3776
- ZnSe:Fe, IR absorpt. 3—8854
- ZnSe:Li, localised vibr. modes and defects, IR absorpt. study 3—2720
- $ZnWO_4$:Co(II), electronic spectrum at 4.2K 3—8855

impurity and defect absorption spectra of solids

- *see also impurity and defect absorption spectra of inorganic solids*
- Anderson-localised many-particle excitations, optical props. 3—43584
- aromatic hydrocarbon crystals, radiation induced colour centres, optical and ESR spectra 3—51596
- bis-methylammonium tin hexahalides:Re^{4+} 3—57958
- impurity centres, absorpt. spectra and luminesc. lines, inhomogeneous broadening 3—38851
- insulator crystals with impurities, optical absorption spectra study 3—23977
- 1,8-octanediol, cryst., γ-irrad., absorpt. spectrum of localised electrons 3—38852
- polyacetylene:I_2, cis-trans isomerisation, IR absorpt. study 3—44054
- polyacetylene, photoexcited gap states, photoinduced optical absorpt. dynamics 3—23980
- tetraethylammonium perchlorate: ReO_4^-, single cryst., low temp. absorpt. spectra 3—14323
- transparent dielectrics, optical breakdown, absorbing impurities effect 3—8856

impurity clustering *see segregation*

impurity-defect interactions

- *see also impurity-dislocation interactions; impurity-vacancy interactions*
- FCC lattice, impurity jump process by means of vacancy mechanism, mol. dynamics calcs. 3—18334
- grain boundary segregation and diffusion, conf., Caen, France (Sept., 1982) 3—44892
- hard-disk arrays, computer-generated, order and deterministic chaos, hexatic configs. 3—23014
- melting mechanisms and surface structures in crystals, impurity depend. 3—33409
- metals, grain boundary struct., hard sphere modelling method 3—46953
- metals, H-defect interactions, binding energies and enthalpies 3—13260
- semiconductors, defect prod., impurity ionisation mechanism 3—46987
- steel, C, cementite-ferrite interface, interaction with H 3—33293
- steel, nuclear pressure vessel, tensile props. and fracture mode, combined effects of neutron irrad. and H absorpt. 3—18353
- steel, ultra-high strength, H induced delayed cracking for type III cracks *(Chinese)* 3—34422
- Fe:He, D, ion implanted, D surface permeation and defect trapping obs. 3—33500
- GaAs solar cells, grain boundary effects 3—53562
- KBr(I), electron irrad., O_2^- ion form., luminesc. study 3—19207
- K_2ZnF_4 and $KZnF_3$, TSC studies 3—3638
- MgO, cation doped, bulk and {001} surface, calc. defect struct. 3—8045
- Nb, local H vibrs. in presence of interstitial and substitutional impurities 3—42739
- Ni, grain boundary chem. bonding, impurity embrittlement study 3—46960
- Se, amorphous, with O impurity, viscosity, elec. field effect, quasimolecular defect theory 3—27846
- p-Si:B, distinction of thermally induced defects, resist. meas. 3—51654
- Si:C, trap centres in wafers containing A-swirl defects, annealing behaviour, DLTS study 3—13760
- Si:H, crystalline, defect-impurity complexes and IR bands, theory 3—23948
- W-Fe-C, grain boundary segregation characts. *(Russian)* 3—39153
- W-Zr-C, grain boundary segregation characts. *(Russian)* 3—39153
- ZnS:Mn, polytype structs. rel to impurity conc., stacking faults energy 3—18319
- ZnSe:Mn, stacking faults and polytype structs. rel. to impurity conc. 3—18320

impurity-dislocation interactions

- *see also dislocation locking; dislocation pinning*
- crystalline film, reentrant melting in presence of quenched random impurities 3—51758
- FCC alloys, dislocation interactions with ordered cylindrical precipitates 3—22932
- ferrous alloys, extrinsic dislocations, intergranular segregation and grain boundaries mobility *(French)* 3—13465
- ice, US attenuation near melting point 3—2683
- III-V semiconductors, grown-in dislocation density, effect of impurity at. size 3—27943
- repeated yielding, dislocation densities, temporal dissipative structure anal. 3—22963
- semiconductors, defects study by projection etching 3—33263
- steel, stainless, Kh20N45M4B, high temperature He embrittlement, bubbles in dislocation network 3—47955
- superplasticity, interpretation of flow in terms of threshold stress 3—39211
- $CaSO_4.2H_2O$, selenite, cleavage faces dehydration, expt. study 3—14843
- Fe, H diffusivity and solubility in pure specimens, effect of vacancies 3—28154
- α-Fe whiskers, stress-strain curves, effect of H charging 3—14651
- Fe-Cr alloy, hydrogen-induced cold work peak of internal friction 3—14643
- n-Ge, elec. props. caused by impurity atmospheres left behind by dislocations 3—18707
- Ge, segregation of O on dislocation core, EELS study 3—28108
- Ge:O_2, combined HREM and STEM microanalysis on decorated dislocation cores 3—8055
- InSb, α-dislocations, vel. of motion *(Chinese)* 3—2561
- NaCl-KCl, mixed two-phase soln. grown crystals, quench hardening study 3—18381
- Nb, H Cottrell cloud form. at dislocations 3—51655
- Pd, H Cottrell cloud form. at dislocations 3—51655
- Si, mass transfer, influence of edge dislocations, numerical study 3—28163
- Si, plastically deformed, dislocation study 3—46939
- Si:O_2, combined HREM and STEM microanalysis on decorated dislocation cores 3—8055

impurity distribution

- *see also doping profiles; segregation*
- binary crystals, non-random distribs., from order to total disorder 3—22929

impurity distribution continued
  chalcogenide glasses, struct., Raman scattering, including impurity atoms Tl, Ge, P, As and Sb 3—46866
  crystalline film, reentrant melting in presence of quenched random impurities 3—51758
  crystallisation and amorphisation from melt at interface rel. approaching 20 m/sec. 3—56943
  crystals grown from melt, impurity striations, boundary layer approx. 3—22809
  diamond, natural, impurity distrib., activation anal. and neutron autoradiography 3—18329
  dibenzyl:tolan, impurity distrib. macroperiodicity during growth from melt 3—33291
  electronic subsystem excitation during polarisation relax. with spatial distrib. of dielect. permeability 3—52711
  epitaxial growth, impurity redistribution, theory 3—18582
  fractional Z elements solid solns. in tetrahedrally bonded crystals 3—46982
  glass fibre, light guide production, with small conc. of OH groups, by gas phase chem. deposition 3—22251
  III-V semiconductors, Coulomb potential fluctuations due to charged impurities 3—3101
  Invar, heat treatment influence on C distrib. and microinhomogeneity 3—58141
  ion implantation range distributions, Pearson distributions applicability 3—37937
  ion implantation surface layer modification and ion distrib. *(Japanese)* 3—37942
  ion implanted, lattice damage and implant distrib., SEM, STEM and AES study 3—2597
  ion implanter design, effect on implant uniformity 3—51641
  ion range statistics by a Fourier series, implanted impurity distribution prediction 3—51650
  ionic solids, grain boundary segregation, space charge, elastic field and dipole contribs. 3—47113
  metals, pulse melted, metallurgy and microstructure 3—58116
  PLZT, effects of impurities on phys. props. *(Korean)* 3—3631
  point defect segregation at grain boundaries, effect of elastic interaction 3—27934
  recoil implanted atoms, low dose depth distribution, theory 3—27956
  semiconductor, impurity and defect clusters, charge and distrib., photoelec. and galvomag. study 3—13258
  semiconductor, ion implanted, laser annealing, computer modelling 3—56946
  semiconductor packaging materials, U analysis using fission track counting 3—29345
  SIMS, raster scanning mode, impurity profiles, influence of crater edges and neutral beam component 3—36121
  SIMS applied to in-depth anal. of impurity profiles, review 3—27971
  single crystal plate, cubic lattice, nonuniformly doped, equilib. states *(Russian)* 3—13244
  steel, stainless, D^+ ion bombard., D_2 mol. reemission and D depth distrib. 3—3894
  steel, tool and stainless, ion irrad.-induced Sn diffusion, Mossbauer study 3—13561
  substitutional impurity distrib. calc. for dissociative mechanism of diffusion 3—8081
  transparent media, impurity distrib. from optical breakdown thresholds 3—2603
  tremolite: Mn^{2+}, Fe^{3+}, S-state ions study, use of ultrasonically modulated electron resonance 3—33973
  YAG:Nd laser rods, spectrophotometric anal. 3—16423
  Al film, H^+ implantation and blistering, density distrib. profile 3—46983
  Al, ion, implanted, heavy ion distrib. 3—42640
  Al, ion implanted and pure, laser irrad., impurity profiles and heat flow 3—27990
  Al-Cu, ion implanted, pulsed electron beam annealing and furnace annealing, RBS and channelling meas. 3—13257
  Al-Sb ion implanted alloy, nonequilibrium segregation during pulsed laser treatment 3—28110
  Al-si interface struct., γ-irradiation effects *(Russian)* 3—47229
  Al-SiO_2-Si, MOS struct., dielectric impurities, elec. durability, SIMS 3—28449
  Al_2O_3:Cr, burn-out of Cr during ruby cryst. growth by Verneuil method 3—39026
  Au, native particles, variation of Ag content, ESCA depth profiling 3—33288
  BaO:M ($M=Mn^{2+}$, Fe^{2+}, Co^{2+}, Ni^{2+}), defect props. 3—56923
  C foils, light element impurity content 3—27965
  CaF_2, solubility and distrib. coeff. of O 3—18460
  CaO:M, ($M=Mn^{2+}$, Fe^{2+}, Co^{2+}, Ni^{2+}), defect props. 3—56923
  CdS:Ag, illumination-induced diffusion, radioactive atom method 3—13550
  CdS:Cu, photoacoustic and photoluminesc. spectra 3—2684
  CdS:Na^+ ion irrad., ^{4}He backscattering orientation dip depend. *(Russian)* 3—14427
  CdSb:In, diffusion and solubility of ^{114}In 3—8256
  CdTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3—33441
  CdTe:Cu(Li), impurity distrib., spectrally resolved cathodoluminesc. in SEM 3—43636
  $CuInS_2$ trace elements determ. 3—29355
  Fe-Cr-Co, at. distrib. in low-conc. solid solns. 3—9035
  Fe-Mn, at. distrib. in low-conc. solid solns. 3—9035
  Fe-Ni-C (25.3, 0.49 wt.%), C distrib., Mossbauer study 3—53055
  n-GaAs, epitaxial growth, impurity redistribution, theory 3—18582
  GaAs, gas-phase deposition, equilib. distrib. of Te and Zn 3—8082
  GaAs impurity and mobility profiling techniques 3—23395
  GaAs, impurity incorporation during MBE growth, optical and elec. props. 3—8378
  GaAs MO-CVD film, residual donor impurities, far IR magneto-optic study 3—2592
  GaAs, pulsed laser annealing in high press. Ar gas ambience, impurity profiles by SIMS meas. 3—33296
  GaAs, semi-insulating, point defects and impurities assessment 3—22931
  GaAs:Al, diffusion through surface layers, X-ray and photoluminescence study 3—8258
  GaAs:C, MOVPE grown, photoluminescence study 3—43752
  GaAs:Cr, ion implanted, Cr redistribution at surface, elec. fields effects, thermodynamic model 3—46979

impurity distribution continued
  GaAs:Cr, semi-insulating, thermal conversion, cathodoluminesc., photoluminesc. and SIMS study 3—43635
  GaAs:Si, MBE growth on heat-treated semi-insulating GaAs:Cr substrate, SIMS study 3—39034
  GaAs:Te crystals impurity nonuniformity determ., by interference microscopy 3—46981
  GaAs:Zn, Te, N, Zn diffusion profiles, Hall effect and elec. cond. study 3—8085
  GaP, synthesis solute diffusion technique, Zn impurity conc. 3—39025
  Ge, interatomic bonds, vacancy formation potential at diffusion temp. 3—8043
  Ge, ion implanted, damage to surface, TEM study 3—8106
  Ge:Al(Na), laser photoionisation impurity detect. 3—14891
  GeSe, U trace distrib., using SSNTDs 3—56924
  $In_{1-x}Ga_xAs$, LPE growth on (100), (111)B faces, impurity and carrier concs. 3—8360
  InP, LPE growth on (100), (111)B faces, impurity and carrier concs. 3—8360
  InP:Fe(Cr), ion implant depth profile after annealing, SIMS study 3—8083
  InP:Si, LPE grown, impurity transport processes, thermodynamic calcs. 3—42967
  $In_{2-x}Sn_xO_{3-y}$/p-InP solar cells, form. by ion beam deposition, interfacial props. 3—9422
  KCl:Br(I), exciton decay to Frenkel defects, tunnel recharge *(Russian)* 3—57287
  KH_2PO_4, lattice parameter determ., birefr., dislocation density and impurity conc., X-ray study 3—46892
  $LiNbO_3$:Fe(Cr)(Ni), mag. susceptibility, 100-400K, effects of annealing *(Korean)* 3—38602
  MgO and MgO:Al single crystal growth method, lowering of OH^- and cation impurities *(Russian)* 3—58040
  MgO:C, subsurface segregation and diffusion, XPS study 3—28104
  MgO:Ca, (100) cleavage surface, Ca segregation, low energy ion scatt., AES 3—51902
  MgO:H^-, thermochemically reduced, charge and mass transfer, IR absorpt. and luminesc. study 3—43573
  Mo-W single crystal, floating zone melted, thermocapillary flow charact. rel. to impurity distrib. pattern 3—8079
  NaCl:Ca,OH, optical strength change, impurity distrib. effects 3—42651
  $20Na_2O.Al_2O_3.(80\text{-}x)SiO_2$, Cu incorporation by Cu-Na ion exchange 3—33117
  $20Na_2O.10CaO.xAl_2O_3.(70\text{-}x)SiO_2$, Cu incorporation by Cu-Na ion exchange 3—33117
  Nb, N impurity, lattice location using reaction $^{15}N(p,\alpha\gamma)^{12}C$ 3—57841
  Nb single crystals, O distribution during electron zone melting and growth 3—34221
  Pb film on Al, pulsed laser treatment, chemical interdiffusion, Rutherford backscatt. study 3—27991
  Pd-T system, solubility, phose diagram, and struct. props. *(German)* 3—18473
  Si amorphous solar cell, electrode element distrib. near contacts and junction layers 3—53536
  Si amorphous thin film technology and characterization *(Japanese)* 3—28233
  Si, amorphous wafers, ion implanted, thermal recrystallisation annealing, transmission electron diffr., microscopy studies 3—56998
  p-Si, anodic oxidation in methanol compared to glycol 3—43970
  Si crystal grown from at. beam in vacuum, doping characts. 3—22928
  Si, diffusion of Au during low energy Ar^+ bombardment 3—2887
  Si, diffusion process, elec. props. and impurity conc. *(Dutch)* 3—57143
  Si epitaxial layers by vacuum sublimation, impurity conc., minority carrier lifetime 3—38255
  Si, excess solubility of O during steam oxidation 3—13455
  Si, float-zone crystal growth, crystal superrefinement by electrolytic segregation *(Japanese)* 3—43725
  Si, grain boundary impurity distrib., SIMS and ion bombard. studies 3—51625
  Si, impurity gettering of damage generated by ion implantation through SiO_2 layers 3—22948
  Si, interatomic bonds, vacancy formation potential at diffusion temp. 3—8043
  Si, ion, implanted, heavy ion distrib. 3—42640
  Si, ion implanted, dopant redistribution by pulsed laser annealing, particle backscatt. and channelling study 3—33289
  Si, melting phenomena and interfacial instability associated with laser irradiation 3—56945
  Si, oxidation, oxygen trapping, induced by laser irradiation 3—56953
  Si, polycryst., impurity distrib. diffusion, and segregation, XPS study *(French)* 3—22930
  Si, pulsed laser annealed, impurity segregation coeffs. determ. method 3—51651
  Si, SIMS depth profiling of light impurities, broadening effects 3—38992
  Si, solar grade, impurity segregation at grain boundaries and other comp. inhomogeneities 3—51812
  Si, U distrib., neutron activation anal. 3—29344
  p-Si, U trace distrib., using SSNTDs 3—56924
  Si, zone refining of nonsubstitutional impurities, during pulsed laser annealing 3—58045
  Si:As(Sb)(Ga) epitaxial layer, impurity distrib. and diffusion 3—51648
  Si:As.Pt struct., As redistrib. during Pd_2Si form., ion channelling and backscatt. study 3—8267
  Si:Au, gamma-ray irrad.-induced Au diffusion, Schottky barrier study 3—33509
  Si:Au, impurity gettering using Ar-, O- and Cl-ion implantation, MOS study 3—2594
  Si:Au, low temp. diffusion, radioactive Au conc. profile study 3—8264
  Si:B, ion implantation through submicron slit at 1 MeV, ion conc. study 3—51639
  Si:B, P, sequential diffusion, impurity profiles, SIMS study 3—42853
  Si:B,P, ion implantation, diffusion, annealing 3—27962
  Si:B(As), ion implantation through mask window, impurity distrib. study 3—51640
  Si:B(P)(As), ion implanted, activation and process characts. of IR rapid isothermal and furnace annealing 3—51652
  Si:C, MBE, interfacial C and line dislocation density, SIMS study 3—42945
  Si:C, O, suppression of O precipitation by C for two-step thermal anneal 3—13454

impurity distribution continued
  Si:Cr(Mn)(Fe)(Co)(Ni)(Cu), diffusion, solubility and elec. activity, review 3−27966
  Si:Cu(Fe), impurity diffusion during activation, neutron activation analysis systematic errors 3−28157
  Si:H, amorphous, determ. of metallic impurities by SIMS 3−37947
  a-Si:H, plasma deposited, SiH_3Cl impurity effect on props. 3−18583
  Si:In, ion implanted, high temp. diffusion and elec. props. 3−57142
  Si:In, ion implanted, thermal annealing, In migration obs. 3−56917
  Si:O, thermally activated O donors distribution, expt. study 3−33284
  Si:P, buried layer profile broadening by ion beam mixing, backscatt. study 3−8084
  Si:P,Sb, O ion bombardment-induced diffusion, conc. profiles 3−13551
  Si:Sb(As) epitaxial layers, autodoping study 3−42638
  Si:Sc, impurity distrib. coeff., temp. depend. 3−51649
  Si-SiO_2 system, $SiCl_4$ annealing, SIMS study 3−47746
  SiC, impurity distrib., solubility, and segregation 3−38079
  SiC:Al(B), sintered, microstruct., inclusions, comp., STEM, AES, X-ray analysis 3−39077
  SiC:Sn, lattice location of Sn impurity, channeling meas. *(Chinese)* 3−51645
  SiH, U trace distrib., using SSNTDs 3−56924
  SiO_2 film, RF sputtered, optical props. 3−14373
  SiO_2:H/D, ion implanted, solubility, exchange and retention 3−2596
  SrO:M, ($M=Mn^{2+}$, Fe^{2+}, Co^{2+}, Ni^{2+}), defect props. 3−56923
  SrO:Pb^{3+}, impurity centres, light or X-ray irradiation, EPR spectra *(Russian)* 3−57771
  TeO_2, paratellurite single crysts. grown by Czochralski technique, impurity microdistrib. 3−13256
  V-I, solubility, phase diagram, struct. props. and diffusion *(German)* 3−18473
  W, carburisation, impurity behaviour, thermochemical study 3−29207
  W film, H^+ implantation and blistering, density distrib. profile 3−46983
  YIG, optically induced spin reorientation transitions 3−43421
  Y_2O_3:Ca, Ca determ. by neutron activation anal. 3−27969
  ZnSe grown by LPE, segregation coeffs. of selected impurities 3−8362
  ZnSe:Fe, IR absorpt. 3−8854
  ZnTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3−33441

impurity electron states
  see also A-centres; Anderson model; charge compensation; deep levels; electron traps; heavily doped semiconductors; impurity scattering; OH^--centres; U-centres; Z-centres
  absorption spectra and luminesc. lines, inhomogeneous broadening 3−38851
  adhesion level calculation, from maxima of TSC and photocond. 3−13829
  alkali halide:$Ga^+(Ge^{2+})(In^+)(Sn^{2+})(Tl^+)(Pb^{2+})$, impurity excited state struct., polarised luminesc. study 3−38871
  alkali halide crystals, photoionisation of like ions, excitation in A and C absorpt. bands 3−47705
  alkali halides, AsO_2^- impurity centres, optical study 3−23981
  alkali metals, impurity excitation effects 3−3775
  anisotropic cpds., two-electron impurity complexes in strong mag. field 3−13769
  anthracene:phenothiazine, TSC transport peak 3−33739
  BCC metals, H interstitials, quantum mechanical description 3−51633
  chalcogenide vitreous semiconductors, Mossbauer and electron spectroscopy studies, review 3−33135
  charged impurity in electron gas, variational binary-mixture theory 3−33677
  computer calc. of impurity levels and carrier conc. *(Russian)* 3−18648
  crystals, correlation effect influence on EM wave absorpt. spectra *(Russian)* 3−23988
  determinantal wavefunctions, group representations for fermion systems 3−21605
  diamond, muonium impurity screening 3−38348
  diamond, semiconducting, photoconductive response, time resolved donor-acceptor and acceptor-valence band recombination 3−43228
  diamond, synthetic, luminescence study, impurity states 3−47719
  dichroism of impurity crystals without inversion centre induced by energy term linear in wavevector 3−43517
  dielectric cryst., nonradiative transition of electron excitation energy between impurity centres *(Russian)* 3−52824
  dilute alloys, nonmagnetic, spin-orbit scatt. of cond. electrons 3−52096
  disordered film, density of electron states and Feynman path integral 3−33617
  disordered systems, probability of electron localization at deep levels 3−18663
  distortive phase transitions, phonon-assisted electronic excitation transfer 3−52066
  electron-phonon states in crystals with Jahn-Teller impurities 3−18659
  electronic subsystem excitation during polarisation relax. with spatial distrib. of dielect. permeability 3−52711
  energy transfer rates between impurity states in solids 3−57308
  excitation transfer theory, inhomogeneous balance eqn. *(Russian)* 3−23324
  excitation trapping in diffusion limit, finite wave vector response 3−3801
  excited impurity electronic state, vibr. relax. and configurational coord. 3−38343
  far infrared impurity absorption in a quantum well 3−43575
  Frenkel exciton trapping in presence of low trap conc. 3−18621
  GaAs:Cr, semi-insulating, impurity centres study by measurement of photoconductivity spectra *(Czech)* 3−47285
  hydrogenic like impurity states, chemical shift theory, press. depend. 3−33680
  III-V semiconductor, transition metal doped, spin density distrib. around mag. centre 3−18655
  III-V semiconductors, Coulomb potential fluctuations due to charged impurities 3−3101
  III-V semiconductors, deep level defects, self-consistent cluster calcs. 3−47300
  III-V semiconductors, internal electronic config. of Sn donors and acceptors, Mossbauer isomer shift anal. 3−47302
  intraatomic interaction of impurity electrons, Anderson model study 3−43109
  Jahn-Teller spectra, semiclassical, optical band shape, method of moments 3−38786
  lattice vibrational relaxation following electronic transition in centres with quadratic vibronic interaction 3−2711
  liquid, electronic states, mean spherical approx. 3−3123

impurity electron states continued
  localised state theory near point-symm. centre *(Ukrainian)* 3−23310
  metal, electronic struct. of H impurity, jellium model 3−13763
  metal, surface dilute impurity elec. struct. calcs. 3−52219
  metal film, reduced Hall coeff., impurity effects 3−13925
  metallic compounds, core-level shifts 3−18641
  metals, interstitial H, electronic and elastic struct. 3−38341
  metals, light impurity energy profile codes 3−43093
  MIS structures, interface states and impurity levels, isothermal capacitance transient spectroscopy technique 3−23485
  molecular crystals, luminesc. spectra in presence of impurities and defects 3−38874
  naphthalene crystals containing tetracene impurity, reson. hot transfer of energy 3−3792
  noble metal β-phase alloys, martensitic transform. onset 3−24228
  polar semiconductor, D^--centre binding energy, effect of free carrier screening 3−43103
  polar semiconductor, secondary radiation at deep levels 3−52077
  trans-polyacetylene, doped, impurity states 3−23326
  polyacetylene, doping study, levels and polarons 3−23290
  polyparaphenylene, doping study, levels and polarons 3−23290
  positron annihilation as a probe for impurities trapped by vacancy clusters 3−14382
  props. in presence of donor impurities 3−18706
  quasi-one-dimensional systems and localized defects: some results of the Green's matrix formalism 3−33672
  semiconductor, bound exciton Auger recomb., selection rules 3−3809
  semiconductor, donor-acceptor pair transitions under reson. capture of highly excited electrons 3−14350
  semiconductor, exciton-neutral donor complex, exchange interaction 3−57323
  semiconductor, impurity and defect clusters, charge and distrib., photoelec. and galvomag. study 3−13258
  semiconductor, impurity band density of states, mag. field effects in atomic limit 3−47247
  semiconductor, lightly doped, multicomponent exciton gas 3−23282
  semiconductor, narrow band-gap, two-band Kane model, large polaron bound states 3−28286
  semiconductor, transient injection with weakly ionised impurities 3−43203
  semiconductor, two-donor (majority) levels determ. from Hall effect meas. 3−8442
  semiconductor electrochem. electrodes with deep impurity level, characterisation method 3−8574
  semiconductor layers of submicron thickness, quasiballistic current flow 3−33809
  semiconductor near interband resons. high-resolution picosec. modulation spectroscopy 3−36099
  semiconductor or semimetal, energy gap between magnetic field-induced impurity band and first Landau band 3−13766
  semiconductor superlattice, impurity ionisation by solitons 3−13891
  semiconductor surfaces, elec. props., review 3−47404
  semiconductor thin threads, charged impurity states, perturbation approx. *(Russian)* 3−52058
  semiconductors, doped, impurity band, self-consistent theory 3−43105
  semiconductors, doped, impurity states calcs. 3−33669
  semiconductors, doped, ore-electronic hydrogenic impurity states 3−23321
  semiconductors, electron-hole recomb., correl. mechanism 3−28369
  semiconductors, energy spectra, dependence of limiting solubilities of impurities 3−8444
  semiconductors, heavily doped, band gap narrowing, extended Thomas-Fermi model 3−23240
  semiconductors, heavily doped, band tail structure, injection level and compensation degree effects, theory *(Chinese)* 3−38339
  semiconductors, heavily doped, impurity band tails based on semiempirical pseudopotentials 3−52075
  semiconductors, heavily doped, metal-nonmetal transition, HF pseudo-cluster calc. 3−43027
  semiconductors, impurity level determ. from cond. or Hall data, error anal. 3−3109
  semiconductors, joint density of states in interband transitions in mag. field 3−38804
  semiconductors, optical-transition cross sections involving impurities 3−38855
  semiconductors, transient screening with weakly ionised impurities 3−43165
  semiconductors and semimetals, mag. field. induced impurity bands and cond. bands 3−52008
  spin-dependent recombination under conditions of optical excitation with polarized radiation 3−47363
  superconductor-normal metal system, elec. field calc., effect of nonmag. transition metal impurities *(Russian)* 3−47456
  superlattices, heavily doped n-type, impurity band tails calc. 3−57310
  1,2,4,5-tetrachlorobenzene, triplet spin dephasing in impurity-induced traps, proximate nuclear spins detuning 3−43461
  transition metals, binding energies, of He and H heats of soln., effective medium theory, covalent effects 3−3112
  transition metals, heat of soln. and binding energy of H impurity 3−2806
  trapping centres, excitation transfer in presence of anisotropic diffusion 3−8445
  two-dimensional disordered system, density of states elec. and mag. field effects 3−33616
  two-electron states of centre surrounded by dielec. continuum, theory 3−3120
  AgBr:Ca^{2+}, Cd^{2+}, resonant exciton trapping at impurity states 3−57290
  AgCl:Pb^{2+}, photochem. modification by dopant, ESR, microwave photocond., and photodielec. effect 3−53433
  AgCl:Pd, EPR study of photocarrier trapping 3−52622
  AgCl:Pd^{2+},Fe^{2+} UV light irrad. prod. Fe^{3+} centres, EPR study 3−47288
  Al:V(Mn)(Fe), impurity density of states, cluster phase shifts and virtual bond states 3−52070
  Al-H, dil., impurity electronic struct., energy and metal-impurity interaction 3−43070
  Al-H, electronic struct. of H impurity, bandstruct. model 3−33673
  $AlCl_3$-$SOCl_2$ soln., CC Nd^{3+} ions, absorpt. spectra, luminesc., lasing props. 3−22054
  $Al_{0.28}Ga_{0.72}As$, shallow acceptors, photoluminescence study 3−43590
  $Al_xGa_{1-x}As$:Si MBE layers, elec. props. and precipitation 3−38509
  $Al_xGa_{1-x}As$:Te, impurity states, electron mobility 3−33681
  AlH_x, bound state induced by interstitial H 3−38342
  α-Al_2O_3, electrical conductivity 3−52141

impurity electron states continued
Al_2O_3:Cr, γ-irrad., Cr^{2+} obs. by linear thermal expansion meas., 3 to 9K 3—42816
As_2Se_3 chalcogenide glass, charged impurity conc., MIS CV charact. study 3—28447
Au, electronic struct. and d^ns^1 impurity states 3—3046
$BaTiO_3$:Co, electronic struct. calcs. 3—43094
$BaTiO_3$:Co Remeika crysts., excitation energies and optical absorpt. spectra 3—38853
BeF_2, crystalline and vitreous, electronic struct., optical study 3—52032
CaF_2:Tm^{2+}, ligand hyperfine interaction, optical detection of ENDOR 3—52670
$Cd_{0.2}Hg_{0.8}Te$, photoconductivity, acceptor impurity band 3—8533
$Cd_{1-x}Mn_xS$, spin-flip Raman scatt., magnetisation, and transport meas. 3—47656
$Cd_{1-x}Mn_xSe$, D^- levels, far IR transmission and transport studies 3—47677
$Cd_{1-x}Mn_xTe$, $x>0.4$, absorpt. edge pinning 3—14329
CdS, donor-acceptor recomb., ODMR study 3—14163
CdTe:Ag (Cu), excited states, photoluminescence and IR absorption study 3—8450
CdTe:Ge, deep impurity centre ionisation 3—28304
CdTe:Ge, impurity states and carrier recombination *(Russian)* 3—52078
Ce impurities in metals, mixed valent, model, Bethe-ansatz soln. of groundstate 3—28295
Cu, selfconsistent electronic struct. calcs., application of complex energy integration 3—18595
Cu-Al(Si)(P)(Zn)(Ge), dil., Dingle temp. and Fermi surface changes, charge transfer effects 3—52009
CuCl:N crystal, excitons bound to ionised donor-acceptor pairs, optical absorption 3—52810
$CuInSe_2$, single cryst., elec. props. *(Korean)* 3—13838
p-$CuInSe_2$ surface, clean and O contaminated, EELS studies 3—38976
Fe, ferromagnetic, electronic struct. of 3d impurities 3—3104
Fe, light impurities, hyperfine fields and adiabatic pot. 3—52064
Fe:H, H interstitials, quantum mechanical description and expt. study 3—51633
$Ga_{1-x}Al_xAs$:Se(Zn), elec. resist., Hall effect meas., impurity energy levels 3—23510
GaAs, deep levels, EL2 level, impurity superlattice model and DLOS results 3—18645
GaAs, electron capture by multiphonon emission at native levels 3—3106
p-GaAs, heavily doped, impurity band tails based on semiempirical pseudopotentials 3—52075
GaAs, impurity deep levels, electronic props. and stability 3—52072
GaAs, impurity incorporation during MBE growth, optical and elec. props. 3—8378
GaAs MBE layer, capless and Si_3N_4 encapsulated annealing, photoluminescence and DLTS study 3—8441
n-GaAs, metallic impurity donor band, elec. cond., Hall effect, luminescence 3—23313
GaAs, residual double acceptor, IR absorption, photoluminescence and Hall effect meas. 3—38334
GaAs, semi-insulating, point defects and impurities assessment 3—22931
GaAs surface barrier diodes, deep level mobility in elec. field, DLTS study 3—8271
GaAs:Be MBE layers, impurity and defect levels 3—3102
GaAs:C(Zn)(Si)(Ge), shallow acceptors, luminesc. study 3—52828
GaAs:Cr, boat grown bulk, Cr level and EL2 electron traps, DLTS study 3—8443
GaAs:Cr, positive identification of $Cr^{4+} \rightarrow Cr^{3+}$ thermal transition, Hall effect meas. 3—23409
GaAs:Fe VPE layers, deep level activation energy and optical cross section 3—47286
GaAs:Fe^{2+}, photons and phonons stimulated emission study 3—52809
GaAs:Mn, optical-transition cross sections involving impurities 3—38855
GaAs:Mn; impurity electronic struct., SCF multiple scatt. Xα calc. 3—8451
GaAs:O S-type diodes, charging kinetics of impurity levels 3—8572
n-GaAs:O-Au Schottky barrier diode, deep level studies 3—18646
GaAs:O(Fe)(Cr), deep impurity centre ionisation 3—28304
GaAs:Sb(In) epitaxial films, elec. props. and acceptor centres 3—57441
GaAs:Si, 1.4 eV Si-related emission, luminesc. characts. 3—43613
GaAs:Te epilayers, luminescence study of Te donor 3—43621
GaAs-$Ga_{1-x}Al_xAs$ quantum well structures, energy spectrum of donors 3—8447
GaAs-$Ga_{1-x}Al_xAs$ quantum well structs., hydrogenic impurity state energy levels 3—47308
$GaAs_{1-x}P_x$:Cd, acceptor photoionisation, IR absorption spectra study 3—19164
$GaAs_{1-x}P_x$:N, luminescence decays of bound excitons 3—52849
$GaAs_{1-x}P_x$:N, transfer of excitons bound to N traps, time resolved luminesc. study 3—47689
$GaAs_{1-x}P_x$:N, Zn epitaxial layers, cathodoluminesc. doping level influence 3—8889
GaAs(P)(Sb):Sn, dopant electronic config., Mossbauer study 3—43091
$GaCl_3$-$SOCl_2$ soln., CC Nd^{3+} ions, absorpt. spectra, luminesc., lasing props. 3—22054
GaP, impurity deep levels, electronic props. and stability 3—52072
GaP: Ge, lattice distortions around single donor Ge, self-consistent pseudopot. method 3—28298
GaP:Cu, interband excitation induced absorption by deep impurities 3—57960
GaP:Fe, photoluminesc. excitation spectroscopy 3—43614
GaP:Mn, impurity centres, internal friction and ESR study 3—18660
GaP:N epitaxial film, deep level electron trap, absolute energy, DLTS and I-V charact. study 3—43072
GaP:N^-, binding to pair of marginal pots., N^- stability 3—28297
GaP:Ni, photoconductivity, impurity states 3—23427
GaP:O, electronic states of O, weak bonding example 3—47303
GaP:O, electronic struct., MS-X_α method 3—52063
GaP:O, quasimolecular model of impurity states 3—47310
GaSe(s), SCL cond., two-barrier model, I-V characts. 3—18715
Ge, acceptor pairs, unlike group III impurities, heteronuclear molecular ion model 3—18644
n-Ge, band gap, narrowing, effects of nonlinear impurity scatt. 3—47263
n-Ge, heavily doped, four electron pockets, magnon-like modes 3—52067
Ge, impurity energy levels of group V and VI elements using unified theoretical model 3—8455
Ge, muonium impurity screening 3—38348

impurity electron states continued
Ge nuclear radiation detectors, carrier trapping by impurity clusters 3—57362
Ge, shallow acceptor ground state wavefunctions 3—33668
Ge, substitutional transition metal impurities, electronic struct. 3—52065
Ge transition metal impurities, electronic struct. calcs. 3—18651
Ge, ultra-pure, shallow acceptor levels, nature and interconversion 3—43084
Ge:As, metal-nonmetal transition under ⟨111⟩ stress, NMR study 3—57283
Ge:Cr(Co)(Cd)(Te)(S)(Se)(Zr)(Ti), deep donor centres, H plasma passivation 3—47287
Ge:Cu, impurity states, piezospectroscopy 3—3118
Ge:Fe, electronic struct. calcs. 3—18651
a-Ge:H, B(P), ESR spectra and transport props. 3—43435
Ge:H, reduction in γ-ray damage, DLTS study 3—18345
Ge:O, γ-irrad. and quenched, deep donor levels 3—43101
Ge:O_2, donor deep level transient spectra 3—18652
Ge:Sb, impurity state ionisation, connection with L- and X-valleys 3—38344
Ge:Sb, P, shallow donors, photoexcitation line quenching by γ-irrad. 3—8454
Ge:Sb(P), impurity photoexcitation spectra, gamma-bombard. fine struct. 3—38436
Ge:Zn, double acceptor bound exciton, photoluminesc. study 3—33645
Ge-GeO_2 structure, energy diagram determ. from photocharging spectra 3—52271
Ge-Si:Mn solid solns., photoconductivity and impurity levels 3—3251
GeTe:Cu, solubility of Cu and ionised donor states 3—51800
n-$Hg_{0.8}Cd_{0.2}Te$, ion implanted, elec. props., IR reflectivity diagnostic technique 3—3713
$Hg_{0.8}Cd_{0.2}Te$:I, doping behaviour, single donor sites, Hall effect studies 3—18324
In-GaSe-Sn, impurity photocond., spectral distrib., I-V, lux-ampere characts., photocurrent kinetics 3—18741
InAs(P)(Sb):Sn, dopant electronic config., Mossbauer study 3—43091
$In_{0.53}Ga_{0.47}As$, photoluminesc. spectra, band assignments 3—34145
$In_{0.7}Ga_{0.3}As_{0.63}P_{0.37}$, photoluminesc. spectra, band assignments 3—34145
$In_{0.2}Ga_{0.8}Sb$, MBE growth, cond. props. and donor levels 3—33588
$In_{0.2}Ga_{0.8}Sb$:S, MBE and elec. props. 3—52945
InP, carrier mobility, grain size depend., elec. cond. and Hall effect studies 3—47343
InP, donor discrimination and bound exciton spectra 3—43591
InP:Be MBE layers, elec. and optical props. 3—47365
InP:Co^{2+}, EPR study 3—43426
InP:Cr^{2+}, zero-phonon luminesc. study 3—43615
InP:Fe, deep impurity centre ionisation 3—28304
InP:Si, ion implanted, and semi-insulating transport props. and defects 3—28383
InP:Te(SN), shallow acceptor centres, luminescence study 3—8861
InP:Zn(Cu), quasipoint acceptor impurity clusters, charge and concentration 3—18333
InSb, deep impurity level, Hall coeff. study 3—38346
n-InSb, static cond. changes under ESR conditions 3—38697
InSb:S(Se), highly localised impurity states, press. depend. 3—52068
InSe crystals, elec. and optical props. *(Korean)* 3—33722
InSe, elec. induced impurity photocond. meas. 3—8536
InSe, SCL cond., two-barrier model, I-V characts. 3—18715
KCl:Eu^{2+}, ODMR study of $4f^65d$ excited state 3—34010
KCl:I, electron irrad., impurity exciton prod., optical absorpt. and luminesc. studies 3—43576
KCl:Na, Pb, γ-irrad., Pb-centres, thermoluminesc. study 3—3830
KCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3—14330
KCl:Tl^+, ESR spectrum anal. 3—38675
KI:In, decay and polarisation of luminescence pulses, impurity centres 3—52829
γ-La_2S_3 single crystals, photoelectric and luminesc. prop. investigation 3—28903
LiF:Li_2O, luminesc. centres, excitation and emission spectra 3—43605
Mg cluster, absorbed H, ab initio HF SCF MO study 3—36900
MgO: Fe^{2+}, excited states, Raman study 3—14309
MgO:H^-, thermochemically reduced, electron traps and F-centres 3—57312
Nb, impurity induced muon localisation and trap identification, μSR study 3—38745
NbN_x $(0 \leq x \leq 0.2)$, density of states calc., recursion method 3—13698
Ni:H, electronic struct. of H impurity, LCAO and cluster calc. 3—8446
Ni:H, ferromagnetic, H props., multiple scatt. cluster-in-condensed-matter calc. 3—33666
Ni-H, interstitial H bonding, CNDO, EHT and SW-Xα calcs. 3—33183
Ni(111), surface dilute impurity elec. struct. calcs. 3—52219
$Pb_{1-x}Ge_xTe$:In, Hall coeff., thermoelec. effect and absorption coeff. 3—38409
PbSe, carrier recomb., photocond. decay curves 3—23406
PbSe(Te)($Se_{1-x}Te_x$), narrow gap semicond., bound defect and impurity states, review 3—23309
$Pb_{1-x}Sn_xS$(Se)(Te), donor props. of Sn, Mossbauer study 3—28746
$Pb_{1-x}Sn_xTe$:In, energy spectrum in quantizing mag. field 3—18727
$Pb_{1-y}Sn_yTe$-In, tunnel self-localisation at negative centres, anomalous elec. and mag. props. 3—3121
PbTe:In, impurity charge state, mag. susceptibility and XPS study 3—28305
PbTe:In, quasilocal level position, Hall effect and absorption spectra study 3—18658
Pb(Zr,Ti)O_3-MnO-$LaO_{1.5}$, oxide additions effect on band struct., diffuse refl. spectra 3—19155
PdH_x, H impurity electronic struct., tight-binding approx. calc. 3—52071
Pt, electronic struct. and d^ns^1 impurity states 3—3046
RbCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3—14330
SRO:Cu^{2+}, impurity states, EPR spectra 3—43428
Si, acceptor pairs, unlike group III impurities, heteronuclear molecular ion model 3—18644
Si, acceptorlike excited states of isoelectronic A,B,C exciton system, luminesc. study 3—3802
n-Si, band gap, narrowing, effects of nonlinear impurity scatt. 3—47263
Si, deep level impurities, finite mol. cluster calcs. 3—47290
Si, diamagnetic susceptibility of donors 3—38582
Si, donor electron localisation in multivalley split 1s states 3—3108

impurity electron states continued
Si, donor level, H-defect complex behaviour, elec., optical and DLTS meas. *(Chinese)* 3—33658
Si, electrical conductivity under large uniaxial deformations 3—52157
Si, electron and hole densities of states, ionized donors effect, Born approx. calc. 3—52003
Si, electronic structure of substitutional 3d impurities 3—43104
Si, high purity, thermal donors, elec. resist. study 3—13767
Si, implanted impurity electron states, hyperfine interaction and channelling studies 3—43076
n-Si, impure, elec. and optical energy gap calcs. 3—43009
Si, impurity deep levels, electronic props. and stability 3—52072
Si, impurity dependent effective mass, transport props. 3—47252
Si, impurity energy levels of group V and VI elements using unified theoretical model 3—8455
Si, lattice vacancy, negative-U props. 3—43077
Si, muonium impurity screening 3—38348
Si p-n junction, ionisation transients of shallow levels in space charge layer 3—43106
Si Schottky contacts on n- and p-type surfaces, props. 3—52251
Si, single cryst., X-acceptors 3—28303
Si, substitutional and interstitial 3d impurities, electronic struct. 3—23323
Si, substitutional chalcogen donors, shallow-deep instabilities 3—3114
Si, thermal donor electronic struct., Hall effect and IR study *(Chinese)* 3—43059
Si:As(P)(Sb), substitutional defect pairs, electronic energy levels 3—3115
Si:As(Sb), impurity activation by laser irrad., Hall effect and Rutherford backscatt. study 3—18339
Si:Au, effective mass states, luminesc., photoconductivity meas. 3—52841
Si:Au, electric field enhanced electron emission from acceptor level and A-centre 3—43073
Si:Au, H, deep level passivation study 3—33676
Si:Au, impurity gettering using Ar-, O- and Cl-ion implantation, MOS study 3—2594
Si:Au, temperature fluctuation method for direct determ. of thermal activation energy of deep levels 3—57307
Si:Au, zero-phonon photoluminescence study 3—43624
Si:Au reverse-biased n^+-p junction diodes, Ag donor level motion, DLTS study 3—28293
Si:B, irradiated, photolum. 1.080 eV (I_2) line origin 3—43610
Si:B,C, electron irrad., defect accumulation, IR study 3—27998
Si:Be,k isoelectronic bound excitons, photoluminesc. lifetime, absorpt. and excitation spectra 3—8878
Si:C, trap centres in wafers containing A-swirl defects, annealing behaviour, DLTS study 3—13760
Si:Co,B, impurity electron states, DLTS and Mossbauer studies 3—43081
Si:Co,B,Al,Ga, pairing reactions of interstitial Co and acceptors, Mossbauer study 3—42623
Si:Cr, deep levels in energy band gap, transient capacitance anal. 3—38349
Si:Cr, ion pairs between Cr and surface acceptors, DLTS study *(German)* 3—43074
Si:Cr,B, charact. by EPR, DLTS, luminesc. and neutron activation anal. 3—47283
Si:Cr,Fe,P, spin depend. carrier-impurity interactions, ESR studies 3—57765
Si:Cr(Mn)(Fe), tight binding study of electronic struct. of transition ions and EPR spectra 3—47299
Si:Cr(Mn)(Fe)(Co)(Ni)(Cu), diffusion, solubility and elec. activity, review 3—27966
Si:Cu(Ni), deep level states, DLTS study 3—52060
Si:Fe,B, interstitial-substitutional pairs, electronically controlled reactions 3—43079
Si:Fe,B,Al,Ga, deep impurity levels, photocapacitance photocond. and Hall effect studies 3—43080
Si:Fe,S, ESR of Fe-S pairs, g-factor and excited states 3—43425
a-Si:H, doping and Fermi energy, Mott 8-N rule 3—8456
a-Si:H, elec. and optical props., effect of prolonged illum. 3—23441
Si:H, P amorphous film, transport props. and donor levels 3—23379
a-Si:H and a-Si:H, P, gap-state profiles, below-gap optical absorpt. meas. 3—3844
Si:In, Al, photoluminesc., IR absorpt., photocond. and Hall effect meas. 3—34135
Si:In, photoelectric spectroscopy 3—38430
Si:In (Tl) thin films, ion implanted, ionisation energy, photocond. study 3—28378
Si:Mg, diffused, elec. and optical props. 3—18699
Si:Mn, impurity electron state, ESR and photoconductivity study 3—13768
Si:O, heat treated, donor states, DLTS studies 3—43078
Si:O, Se, S, impurity binding energies and screening 3—43100
Si:O^-, electronic struct. calc. of O^- impurity 3—47298
Si:P, (Sb), deformation pot. of shallow donors, Hall effect meas. 3—8453
Si:P, excited impurity level widths 3—47284
Si:P, impurity ionisation energy, elastic deformation effects, elec. cond. study 3—3119
Si:P, impurity states calcs. 3—33669
Si:P, sp. ht., electron hopping energy influence 3—42803
Si:P,O, thermal O donors, elec. cond. study 3—3100
Si:Pt, optically pumped photoconductivity and deep traps 3—57380
Si:Pt^-, acceptor struct., ESR and IR spectra studies 3—43082
Si:Pt^-, spectroscopic splitting in strain-modulated ESR study 3—57767
Si:S(Zn)(H), impurity electronic struct. calcs. 3—23322
Si:Te, I, ion implanted, impurity levels, Hall effect and elec. resist. studies 3—43102
Si:Tl, Poole-Frenkel effect influence on acceptor ionisation energy 3—43190
Si:transition metals, impurity electronic struct., Green's function calc. 3—43098
Si-SiO_2 MIS struct., charged impurity effects on inversion layer electrons 3—28443
Si-SiO_2 structure, energy diagram determ. from photocharging spectra 3—52271
Si-SiO_2-Al MOC capacitor, surface space charge layer, electron irrad., compensated donor generation 3—52255
Si+N, laser annealed, deep level study 3—28299
SiC:B, 3C polytype, photoluminescence and radiative recombination centres 3—38898
SiC:Sc, 4H and 6H polytypes, photoluminescence and photoconductivity 3—28893
SiO_2:Al, amorphous, photoluminesc. 3—47707

impurity electron states continued
SiO_2:As, ion implanted, electron traps microscopic location, avalanche injection study 3—43061
Sm_2S_3:Cd(Pb) films, photocond. and photoEMF meas. 3—23521
$SrTiO_3$:Co, electronic struct. calcs. 3—43094
Ti-transition metal alloys, high-resist., as highly correlated disordered systems 3—3124
TiO_2:Nb, electronic deep levels, DLTS study 3—43075
TiO_2:Nb, H, elec. cond., Hall effect and carrier scatt. 3—47344
$Ti_{1-x}V_xS_2$, photoemission study of elec. struct. 3—57273
V:H, H interstitials, quantum mechanical description and expt. study 3—51633
V_2O_5 crystals, impurities and electron localisation, EPR study 3—52599
$(Y, In)_2O_3$:Er^{3+}, luminescence, host sensitization mechanism 3—3781
Y_2O_3, adsorption of O, effect of impurity and irrad. induced donor levels 3—13620
Yb impurities in metals, mixed valent, model, Bethe-ansatz soln. of groundstate 3—28295
$YbGa_2Se_4$ single cryst., injection and thermodepolarisation currents 3—43187
$ZnCs_2(SO_4)_2.6H_2O$:Co^{2+}, optical absorpt., impurity states 3—34126
ZnO:Cu, IR luminesc. characts., magnetooptical data 3—43616
Zn_3P_2, elec. cond., Hall effect and acceptor levels 3—18702
Zn_3P_2:Mg(In)(Sn)(Se), impurity effects on elec. cond. 3—52131
ZnS, substitutional transition metal impurities, local force variations, Raman scatt., Green's function calc. 3—47651
ZnS:Ag, doped and undoped, luminesc. spectra, effect of intrinsic defect and impurity hole cond. 3—38869
ZnS:I(O)(Ag), defect creation by impurity doping, luminesc. and ESR study 3—43617
ZnS:Ni, hydrogen-like states in photoionisation band, electroabsorption study 3—8452
ZnS:Tm^{3+}, energy levels and cryst. field parameters, fluorescence and cathodoluminesc. study 3—43066
ZnSe, MO CVD grown, optoelectronic props. of donors 3—43618
ZnSe:Cu, nonlinear absorpt. and linear circular dichroism spectra 3—19163
ZnSe:In(Ga)(Cu), donor and acceptor levels, photocond. and Schottky diode studies 3—18661
ZnSe:N, binding energy of shallow acceptor 3—52076
ZnTe:Cl(Br)(Cu)(Ag), ion implanted, donor related edge luminescence 3—52856
$Zr(V_xCo_{1-x})_2$:H, Laves phase, H interstitials study 3—38340

impurity scattering
used for carrier scattering by impurities
see also Kondo effect
alloys, metallic, semiconducting and semimetals, band struct. and transport props., average lattice method *(Rumanian)* 3—13702
Anderson localisation, impurity scatt., nonlinear σ-model 3—43121
Anderson localisation, two-dimens., self-consistent treatment in absence of time reversal symm. 3—43123
CDW, one-dimensional, with disorder, low-frequency cond. and density of states, calcs., impurity scatt. study 3—43162
disordered system, one-dimensional CDW, dielec. susceptibility and correl. length, impurity forward scatt. case 3—43048
disordered system, weak, one-dimensional CDW, dielec. susceptibility and correl. length, impurity scatt. 3—43049
III-V degenerate p-type semiconductors, high electron mobility and impurity scatt., theory 3—52133
itinerant ferromagnet, amorphous, anomalous Stoner enhancement 3—23664
metal, magnetoresistivity, linearised Boltzmann eqn. soln. using Fermi surface harmonics 3—33710
metal conductivity, impurity density depend. 3—18695
MOS structure, interaction effects in weakly localised regime 3—43127
noble metals, low temp. elec. resist., effect of electron-dislocation scatt. 3—33703
nondegenerate semiconductor thermoelectric props., incomplete impurity ionisation effects 3—13847
one-dimensional conductor, electron scatt. due to impurities, Green's function study 3—43161
one-dimensional conductor, impurity scatt. and elec. cond. 3—43158
pyroelectric homogeneous semiconductors, thermal excitation anisotropy from impurities and nonequilib. currents 3—47356
semiconductor, neutral impurity scatt., spin depend., Hall effect, electron drag, and light absorption methods 3—28346
semiconductor, nondegenerate, hot electrons, absorption coeff. of light 3—3212
semiconductors, compensated, low temp. mobility due to unscreened charged impurities 3—8483
semiconductors, doped, electron cond. props., Anderson localisation theory 3—43184
semiconductors, joint density of states in interband transitions in mag. field 3—38804
semiconductors, non-polar, hole relax. time and transport coeffs., intervalence band interaction effects 3—43197
semimetals, Shubnikov-de-Haas effect, oscill. amplitudes two-band model 3—38403
simple metals, transport props. 3—18697
single layered structure, ionised impurity scatt., quantum transport 3—47321
superconducting film, on normal substrate, transition temp., impurity scatt. effects 3—28466
surface photogalvanic effect due to free carriers 3—3254
tunnel diodes, radiative recomb. allowing for impurity scatt. 3—19198
two-dimensional system, effect of level broadening on polarisability 3—13755
Al-Ag(Ga)(Ge), dil., magnetoresist., low-field, anisotropic relax. time effect 3—13802
Au foils, elec. resist., temp. depend., size effect theory 3—13800
Bi_2Te_3-Sb_2Te_3-Sb_2Se_3 thermoelectric ingot preparation and characterisation 3—14475
CdTe:Mn, current carrier mobility 3—43182
$Ce_{1-x}La_xB_6$, elec. resist. meas., scatt. mechanisms 3—52122
$Ce_{1-y}Y_yB_6$, elec. resist. meas., scatt. mechanisms 3—52122
Cu, 3d transition metal impurities, magnetoresist. calc. 3—38369
Cu-Al(Si)(P)(Zn)(Ge), dil., Dingle temp. and Fermi surface changes, charge transfer effects 3—52009
$CuInSe_2$, single cryst., elec. props. *(Korean)* 3—13838

impurity scattering continued
- EuO, carrier mobility, mag. spin, acoustic phonon and impurity scattering 3—3195
- GaAs film, triode sputtering prep., elec. characts. 3—28995
- GaAs, impurity cond., AC and DC hopping cond., extended pair approx. 3—38386
- n-Ge, band gap, narrowing, effects of nonlinear impurity scatt. 3—47263
- p-$In_{0.53}Ga_{0.47}As$, absence of Gunn effect, theory 3—47351
- n-InP crystals, compensated, illumination influence on inpurity pot. elec. props., study 3—8548
- InSb, hole transport parameters in high elec. field, Monte Carlo calc. 3—43191
- n-InSb, noise and diffusion of hot electrons 3—57356
- K, impurity scatt., residual resist. and CDW hypothesis 3—3175
- $NbSe_3$, CDW cond. study 3—28342
- PbSe:In films, elec. props. dopant effects on scatt. parameters 3—18806
- Sb film, magnetoresist. corrections due to electron localisation *(Russian)* 3—38500
- n-Si, band gap, narrowing, effects of nonlinear impurity scatt. 3—47263
- n-Si, impurity cond., AC and DC hopping cond., extended pair approx. 3—38386
- Si:In, ion implanted, high temp. diffusion and elec. props. 3—57142
- $SrTiO_3$:La, quenched and reduced ceramic, elec. cond. 3—52145
- TiO_2:Nb, H, elec. cond., Hall effect and carrier scatt. 3—47344
- V, elec. resist. meas., electron-electron scatt. and other mechanisms 3—8477
- Zn_3P_2, elec. cond., Hall effect and acceptor levels 3—18702

impurity-vacancy interactions
- diamond lattice, random walk and vacancy-imperfection interactions as discrete Markov process 3—13261
- dipoles, electronic excited states, photoinduced polarisation and depolarisation 3—23868
- metals, vacancy form. after irrad. and quenching, positron annihilation study 3—47732
- molecular impurities in inert gas matrix, interactions, effective pot. calcs. 3—27973
- molecular impurities in inert gas matrix, interactions, IR spectrosc. investig. 3—27974
- positron annihilation as a probe for impurities trapped by vacancy clusters 3—14382
- semiconductors, radiation defects electronic struct. 3—38350
- Al, electronic struct. of vacancies and H-trapped vacancies rel. to positron lifetime calc. 3—28296
- Au-H solutions, H-vacancy interactions, entropy anomaly 3—28111
- CoO:Sn, Mossbauer study of excess charge compensation 3—33246
- α-Fe, C-vacancy interaction study 3—13259
- Fe, H diffusivity and solubility in pure specimens, effect of vacancies 3—28154
- α-Fe:He, spontaneous vacancy-impurity annihilation 3—42644
- $Fe_{1-x}S_{1-y}Se_y$, real struct. and mag. props. interrelation 3—52487
- KCl:Co crystals, elec. cond. study, impurity-vacancy complex association enthalpy 3—57123
- $LiNH_4SO_4$, ionic thermocurrent studies 3—23869
- MgO:Ca^{2+}, Al^{3+}, Sc^{3+}, migration energy of cation vacancies 3—13523
- MgO:H^-, thermochemically reduced, charge and mass transfer, IR absorpt. and luminesc. study 3—43573
- $Pb_{0.8}Sn_{0.2}Te$:Ag, solid soln., effect of Ag impurity on elec. and struct. props. 3—8498
- PbTe:Ag, effect of impurities on elec. props. 3—8497
- Si, CW laser annealed, quenched-in E-centres, vacancy diffusion model 3—46995
- Si:O, electron irrad., divacancy production enhancement by O, expt. study 3—33301
- Si:O, neutron irradiated, defect accumulation and lattice strain, IR study 3—56994
- Si:O, thermally activated O donors distribution, expt. study 3—33284
- $SrTiO_3$:Mn, vacancy-impurity assoc., EPR and optical absorpt. meas. 3—46985
- TiO_2 ceramic pellets with asymmetrical elec. cond. unusual microstruct. 3—27972

incandescent lamps *see filament lamps*

inclusions in crystalline material *see crystal inclusions*

inclusive reactions, elementary particle *see elementary particle inclusive interactions*

Incoloy *see chromium alloys; iron alloys; nickel alloys*

incommensurate-commensurate transformations *see commensurate-incommensurate transformations*

Inconel *see chromium alloys; nickel alloys*

independent particle model *see nuclear optical model; nuclear shell model*

indeterminancy
- book, Open Universe, an argument for indeterminism 3—20587
- Heisenberg's uncertainty principle test, reply to comment 3—108
- high-energy uncertainty principle 3—20699
- Louis de Broglie, hand-written notes on wave mech., transcript and translation 3—30573
- particles and geometry 3—10644
- quantum gravity unpredictability 3—30742
- space-time quantisation and new approach to quantum field theory, report 3—11040
- spectra interpretation functional, uncertainty relation 3—30702
- teaching of uncertainty principle using oscilloscope 3—49111
- thermal neutron beam longit. coherence length direct meas. 3—45002
- uncertainty in quantum meas. 3—45005
- uncertainty principle for spatially quasi-stationary, partially coherent light 3—6874
- d, exponential pot. well depth evaluation from uncertainty principle *(Russian)* 3—16710

indexing
- *see also information dissemination*
- No entries

indicating devices *see indicators*

indicating instruments *see indicators*

indicators
- *see also alarm systems*
- intensity ratio meter, interaction coeffs. of radiations and optical constants meas. *(Russian)* 3—5781
- multichannel indicator on the control panel of a physics facility 3—45127

indicators continued
- radiographic image quality indicator placement problem w.r.t. pipe weld inspection 3—34565
- readout error obs., vibrating painter effects 3—291

indium
- *see also nuclei with ......*
- μ^+ trapping above room temp., μSR/study 3—28750
- adatom surface diffusion on (110) reflective plane boundaries 3—2977
- adatoms, field induced surface transport on Si (111) surfaces 3—23109
- adsorption, of graphite islands, bond nature 3—33579
- alkali halide: In^+, at. photoionsation cross section determ. from intracentre luminesc. quantum efficiency change 3—26718
- alkali halide:In^+, impurity excited state struct., polarised luminesc. study 3—38871
- atom, Rydberg state spectroscopy, field ionisation technique 3—50359
- atoms, slow-electron excitation, cross section calc. by strong-coupling method 3—11986
- body-centred tetragonal, lattice dynamical study 3—57042
- crystal face-centred tetragonal, lattice dynamics 3—47061
- diffusion along single twist phase boundaries in Sn-Ge bicrystals 3—18515
- electric quadrupole interaction of $^{192}Tl(8^-)$ nuclei in tetragonal In, TDPAD study 3—18674
- film, ageing characts., effect of electrode annealing, elec. resist. meas. 3—18796
- films, vacuum evaporated, crystn., cryst. morphology and orientation, X-ray diffr. study 3—28238
- foil, EM field penetration at low temp. 3—57470
- ion bombard. during O_2 chemisorption, SIMS and multiphoton reson. ionisation study 3—52883
- ion source, multiply charged using heated cathode 3—16441
- ion sputtering of liq. and solid targets 3—3895
- low-lying S and D levels, lifetimes meas. 3—55894
- metallic films, resistivity depend. of 1/f noise 3—43243
- microbridges, coupled supercond. weak links, crit. current pulling and differential resist. 3—23550
- micropores, deformation healing, effect of size *(Russian)* 3—57183
- micropores, deformation healing, hardness rel. to size effects *(Russian)* 3—57184
- particles condensed from vapour, equilibrium shape, TEM study and surface energy calc. 3—22803
- protoporphyrin IX; ^{111}In-apohaemoglobin system, TDPAC obs. 3—41562
- solar cell properties, production, and materials 3—39468
- superconducting, nonlinear interaction with RF field 3—23539
- superconductive film, resistive domains, thermal induction obs. *(Russian)* 3—3373
- surface, elec. quadrupole hyperfine interaction, PAC study 3—23343
- thin film, optical props. and struct. 3—19221
- thin films, struct. and elec. props. 3—3337
- twinning plane superconducting phase diagram *(Russian)* 3—8630
- US rotation of polarisation and ellipticity under helicon-phonon reson. conditions 3—3260
- vac. deposition onto softenable substrates, subsurface struct. formation 3—51984
- whiskers, supercond., electron mean free path influence on phase slip centres 3—8631
- Au/In thin film couples, low temp. interdiffusion, backscatt. spectrometry study 3—57149
- $CdCr_2Se_4$ single cryst., elec. cond. and magnetoresist. in alternating elec. fields 3—28361
- $CdCr_2Se_4$:In, dislocation patterns, rel. to elec. cond., hardness and doping 3—27947
- $CdCr_2Se_4$:In, impurity effects on carrier density and mobility, elec. cond. and Hall EMF studies 3—33810
- $CdCr_2Se_4$:In, mag. semicond., elec. cond., mag. order effects 3—28362
- $CdCr_2Se_4$:In, magnetoconductivity study 3—43210
- CdS:In-Cu_2S solar cell, role of impurities 3—44131
- p-CdSb:In p-n junctions, LPE grown, props. *(Russian)* 3—13898
- CdTe:In, diffusion and solubility 3—33502
- CdTe:In, ion implanted, heat treated, defect reactions, cathodolum. and pulse laser annealing studies 3—56932
- CdTe:In, solution-grown, cathodoluminesc., effect of Cd-vapour and Te-vapour heat treatments 3—3826
- CoO:In, grain boundary segregation 3—24235
- CsI:In, Tl, optical gain meas., amplified spontaneous emission study 3—23974
- GaAs:In, Czochralski grown, doping effect on struct. perfection 3—33281
- GaAs:In, Sb, isovalent impurity interaction with system of point defects 3—37950
- GaAs:In epitaxial films, elec. props. and acceptor centres 3—57441
- Ge:In, electron irrad., hole trapping defects, DLTS study 3—43083
- GeS:In filamentary crysts., prep., morphology, elec. and photoelec. props. 3—57344
- In I, nsnp(n+1)p configurations 3—1292
- In II, $5s^2\ ^1S_0$-$5s5p\ ^{1,3}P_1$ transitions, oscillator strength calcs. 3—21648
- In VI, $4d^75s$-$4d^75p$ transitions, spectrum obs. 270-1550 Å 3—6567
- In:He, diffusion during deform. at low temp. 3—28161
- In-GaAs interface, metallurgical props., effect on elec. props. of ohmic contacts to GaAs 3—13908
- In-GaSe-Sn, impurity photocond., spectral distrib., I-V, lux-ampere characts., photocurrent kinetics 3—18741
- In-In_2O_3 thin film composite, reactively sputtered, struct. phase transition study 3—28989
- In-InI_3, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3—43241
- In-Sn film filters for EUV instrumentation, long term variability of transmission 3—1751
- In-Zn_3P_2 contact, photovoltaic effect anisotropy meas. using GDM-1000 monochromator 3—49468
- In+H^+, L X-ray prod. cross sections for 120 to 400 keV H^+ bombardment 3—14395
- ^{111}In, implanted at low temp. in Fe, nucl. orientation study 3—18326
- In(n,X), 14.6 MeV, activation cross sections for fusion reactor materials 3—21502
- KI:In, decay and polarisation of luminescence pulses, impurity centres 3—52829
- MgO:In^+, ion implanted, precipitation and defects 3—2827
- NaA-In, zeolite-metal ultradisperse system, struct. and optical props. 3—42587
- $Pb_{1-x}Ge_xTe$:In, Hall coeff., thermoelec. effect and absorption coeff. 3—38409

indium continued

PbSe:In films, elec. props. dopant effects on scatt. parameters 3—18806
$Pb_{0.78}Sn_{0.22}Te$:In, photoelectric effect 3—38431
$Pb_{1-x}Sn_xTe$:In; band edge motion in quantising mag. field and nonequilib. states 3—57275
$Pb_{1-x}Sn_xTe$:In, energy spectrum in quantizing mag. field 3—18727
$Pb_{1-x}Sn_xTe$:In, obs. of local modes, absorpt. spectra 3—43566
$Pb_{1-y}Sn_yTe$-In, tunnel self-localisation at negative centres, anomalous elec. and mag. props. 3—3121
PbTe:In, impurity charge state, mag. susceptibility and XPS study 3—28305
PbTe:In, quasilocal level position, Hall effect and absorption spectra study 3—18658
Re:^{184,185}Ir, low temp. elec. quadrupole orientation, elec. field gradient 3—13787
Si:In, Al, photoluminesc., IR absorpt., photocond. and Hall effect meas. 3—34135
Si:In, enhanced backward elastic wave generation 3—22973
Si:In, In acceptor IR absorpt. spectrum meas. 3—23976
Si:In, In diffusion in inert and oxidising ambients 3—38131
Si:In, ion implant damage recovery, recrystallisation and elec. props. 3—56920
Si:In, ion implanted, defects and solid solubility, solid phase epitaxial growth 3—2826
Si:In, ion implanted, high temp. diffusion and elec. props. 3—57142
Si:In, ion implanted, metastable solid soln. form., backscatt. and channelling study 3—2588
Si:In, ion implanted, morphological instability and cell form. during pulsed laser annealing 3—8093
Si:In, ion implanted, thermal annealing, In migration obs. 3—56917
Si:In, isoelectronic bound excitons, photoluminescence obs. 3—19168
Si:In, optical props. and photocond. 3—3701
Si:In, photoelectric spectroscopy 3—38430
Si:In, recoil implanted, electric quadrupole interaction, ^{111}Cd TDPAC study 3—43473
Si:In, X-acceptors 3—28303
Si:In,P LPE layers, donor acceptor pair spectra 3—57971
Si:In implanted, solute segregation and solid phase crystallisation dynamics 3—56950
Si:In thin films, ion implanted, ionisation energy, photocond. study 3—28378
$Zn_{0.37}Mn_{0.58}Fe_2O_4$:In, hyperfine fields, Mossbauer study 3—47580
Zn_3P_2:In, impurity effects on elec. cond. 3—52131
ZnS:Cu,In,Cl phosphors, electroluminesc. 3—47714
ZnS:In, ion implanted, struct. transitions, luminescence and electroreflection study 3—2780
ZnS:In,Cl phosphors, electroluminesc. 3—47714
ZnS:In^+, ion implanted, photoluminescence and photoconductivity 3—8881
ZnSe:In, donor and acceptor levels, photocond. and Schottky diode studies 3—18661
ZnTe:In, laser-induced donor diffusion, photoluminesc. study 3—47158

indium alloys

see also indium compounds
rare earth alloys, R_5In_3 (R=Gd, Tb, Dy, Ho, Er, Tm, Y), mag. susceptibility, Neel temp. and Curie temp. 3—33865
rare earth intermetallics, R_5Ir_3, cryst. struct., X-ray diffr. study 3—2470
rare earth-In, RIn_3, geometric effect in synthesis 3—34256
Ag-In, highly dil. alloy, TDPAC study of internal oxidation of impurities 3—43475
Ag-In, rapidly quenched from melt, metastable ζ-HCP phase in Ag-rich FCC region 3—9095
Ag-In-Cd PWR control rods, stainless steel cladded, predicted service life 3—6360
AgIn, alpha-irrad. radiation damage, oxygen stabilised 3—42681
Al-In alloys, solidification struct., monotectic *(Japanese)* 3—29070
$CeAg_{1-x}In_x$, elec. and mag. props. 3—52419
$CeIn_3$, mag. form factor, neutron studies 3—52380
$CeIn_3$, self-consistent APW band calcs. 3—52022
$Ce(In_{1-y}Sn_y)_3$, behaviour in mixed valence and Kondo regimes 3—23333
$CeIn_{3-x}Sn_x$, mixed valent system, elec. cond., specific heat 3—23332
Co-In, hyperfine fields, nuclear orientation study 3—47318
Cu_2MnIn amorphous films, disorder-induced spin glass state 3—38627
Fe-^{115}In, dil., hyperfine fields of impurity nucl., press. depend., NMR study 3—43445
Ga-In eutectic alloys, solid and liq., sputtering, ion scatt., AES, and Rutherford backscatt. study 3—52885
$GdIn_xAg_{1-x}$, cryst. struct. and mag. props. 3—28530
$GdTl_{0.9}In_{0.1}$, structural transform. and mag. props. 3—51780
Hg-In, liquid, positron annihilation model, interatomic interactions *(Russian)* 3—3862
Hg-In amalgams, Volta effect, contact method meas. 3—8560
In-Cd(Hg)(Tl)(Sn)(Pb) solid solutions, structural phase transformations, Landau theory 3—34312
In-Ga wetted four-point probe for resist. profile meas. of n-type oxide semicond. 3—23480
In-Hg wetted four-point probe for resist. profile meas. of n-type oxide semicond. 3—23480
In-Pb (12 to 14 wt.%), phase diagram, phase changes during ageing *(Japanese)* 3—9029
In-Pb (30 to 40 at.%), phase changes during ageing *(Japanese)* 3—47866
In-Pb alloys, phase transform. and shape memory effects 3—9062
In-Pb(Sn), equilibrium surface composition, AES study 3—57195
In-Te, liq., elec., mag., optical, thermodynamic, and struct. props. 3—56805
In-Te liquid alloys, specific heat 3—2831
In-Tl, martensitic transformation, crystallography 3—7952
In-Tl (19.1 at.%) reed, internal friction, dynamics of rubberlike behaviour 3—29117
In-Tl(Cd)(Pb)(Sn)(Hg), surface morphology rel. to phase transformations 3—29079
InBi-Bi alloys, effects of high press., struct. transitions detected 3—19336
In_5Bi_3:Cd, temp. and press. depend. of electric field gradient, TDPAC study 3—34017
InBi(In_2Bi), intermetallic cpds., Fermi surface, transverse magnetoresist. and Shubnikov-de-Haas effect study 3—18601
InGe films, upper crit. field near percolation threshold 3—33829
InSb-NiSb eutectic, direct solidification in space *(German)* 3—4035
$In_{95}Sn_5$, core level binding energy shifts, XPS study 3—14441
$In_{20}Te_{80}$, metallic glass, crystn., X-ray diffr. and XPS study 3—33105

indium alloys continued

$LaAg_{1-x}In_x$, muon Knight shift study 3—52695
$MnSb_{1-x}In_x$ films, mag. props., ferromag. resonance study 3—23808
Ni-In, molten, positron annihilation *(Japanese)* 3—47734
NiIr, magnetisation and specific heat calcs. 3—52528
Pb-In, dislocation internal friction in mixed state, effect of Abrikosov's vortices *(Russian)* 3—27949
Pb-In alloys, change of flow stress at superconducting transition 3—33818
Pb-In film, O_2 exposed, work function meas., supercond. tunnel junction appl. 3—8620
Pb-In-Au/Pb-Bi thin-film diffusion couples, Kirkendall voids ring form. 3—8266
Pb-In-Au/oxide/Pb-Au Josephson tunnel junction, high precision potentiometer appl. 3—36038
PbIn-NbO_x-Nb Josephson junction interferometers, static characts. 3—57484
$Pb_{60}In_{40}$, double-pinning force maxima for single pinning mechanism, crit. current meas. 3—33838
PbInAu, Josephson tunnel junction, fabrication and basic props. *(Japanese)* 3—38550
$Pd_{1.4}Cu_{0.6}MnIn$, mag. moment meas. in paramagnetic phase 3—52358
$PrIr_2$, cubic cpd., mag. props., neutron diffr. results 3—14005
Sc_3In, sp. ht. in high mag. fields, 1.3 to 20K spin fluctuation quenching 3—52492
Sc_3In, spin fluctuation quenching in high mag. fields 3—57624
Sn-In, dil., US attenuation in normal and supercond. states, amplitude and freq. depend. 3—33826

indium antimonide

acoustoelectronic interaction and electron-hole plasma 3—28391
active-element spectroscopy using Raman scatt. and spin-flip 3—40707
AES evaluation of cleaning and etching methods 3—43667
band-edge phonons, magnetoresist., magnetophonon reson. study 3—3230
carrier concentration under high mag. fields 3—47362
carrier heating under impact ionisation conditions, Monte Carlo calc. 3—3214
contactless method of measuring free-carrier concentration in narrow-band semiconductors 3—23922
crystal plates, reflection and absorpt. index meas. using far IR spectroscopy *(Japanese)* 3—10926
deep impurity level, Hall coeff. study 3—38346
diamagnetic excitons and energy band parameters, magnetoabsorption study 3—33644
dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
dislocation etch pits obs. for {111} plane using HCl-Fe^{3+} soln. *(Chinese)* 3—18303
dislocation structs. and in situ obs. of dislocation motion 3—46942
α-dislocations, vel. of motion *(Chinese)* 3—2561
electron energy relaxation by neutral donor impurities in quantising mag. fields 3—57361
electron-hole plasma refl. control, far IR radiation modulation 3—46282
electron-irradiated, nature of radiation induced defects 3—13281
film, far IR radiation from thin-film plasmons, CO_2 laser beam study 3—7068
film magnetic sensor, crystalline struct. and sensing characts. obs. 3—43302
growth by controlled solidification, liq. state diffusion processes influence *(Russian)* 3—19287
growth of highly homogeneous single crysts., characterisation for IR imaging devices 3—34215
hole transport parameters in high elec. field, Monte Carlo calc. 3—43191
impact ionisation probability 3—38394
internal quantum efficiency, impact ionisation, L-conduction band effects 3—13858
ion implantation, enthalpy of formation and stability 3—42637
ion implantation, void form. and swelling, electron microscopy study 3—22926
ion implanted, point defect segregation, dislocation struct., annealing 3—33317
laser annealing, MOS elec. props. and compositional anal. 3—56976
laser-induced melting using picosecond CO_2 laser pulses 3—27985
lattice thermal cond., 4-700K 3—2897
localised defect states, electron capture and emission 3—8449
long-wave thresholds from photoemissive yield spectra and their derivatives 3—24083
magnetoplasma waves, slow, on surface 3—23418
magnetoresistance, Hall effect and elec. cond. near high press. phase transition 3—13840
MBE of InSb films on CdTe, double cryst. X-ray diffr. and AES obs. 3—34233
MOS struct., magneto-polarons in two-dimens. electron inversion layer 3—52263
MOS structure using plasma enhanced CVD SiO_2 gate insulator 3—13917
MOS structures, optical transitions in inversion layers 3—34055
n-type, deep levels, oscillatory magnetophotoconductivity study 3—23424
n-type, ESR at submillimeter wavelengths 3—28686
n-type, filamentation and modulational instabilities of laser radiation 3—23416
n-type, free-carrier Faraday effect with pulsed 0.337 mm HCN laser 3—3692
n-type, Gunn oscillations obs. 3—13825
n-type, impact ionisation at 77K 3—47353
n-type, intra-conduction band magneto-optical studies, cyclotron reson. harmonics, photocond. techniques 3—57899
n-type, magnetoresist., temp. and mag. field depend., localisation effects 3—43211
n-type, metallic, magnetoresist. calc. for weakly localised regime 3—13836
n-type, multitransit amplification of sound, acoustooptical study 3—18749
n-type, Raman scatt. by spin transition of free electrons 3—3707
n-type, static cond. changes under ESR conditions 3—38697
n-type, temperature-electric instability in static elec. field 3—18716
n-type, Zn diffusion, IR photovoltaic detector appl. 3—33503
n-type anodised layers, MIS struct. formation and characts. 3—34518
narrow gap semicond., Kane model deviations caused by nonlocal pot. 3—8414
negative differential photocond. induced by a mag. field 3—43232
noise and diffusion of hot electrons 3—57356
nonlinear acoustoelectronic amplification at high electron drift speeds 3—13864

indium antimonide continued
nonlinear interactions under picosec. laser irrad., plasma form. and nonlinear melting 3–37961
optical bistability, guided wave approaches 3–7057
optical bistability obs. at room temp. with two-photon excitation 3–41906
optical bistable device as optical AND gate and for carrier lifetime meas. 3–37099
optically induced avalanche, rate eqn. model 3–57872
p-type, IR absorpt., anisotropic, by free holes under strong elec. field 3–23917
phonon dispersion, polarisability effects 3–22996
photoacoustic signal generation, carrier diffusion and recombination influence 3–47055
photon drag detection at 385 μm 3–45203
proton damage isolation effect, IR detector responsivity and crosstalk problems *(Chinese)* 3–8107
relaxed (110) surface states and resonances 3–23452
single-crystal film deposition on unoriented surfaces by vacuum phase laser epitaxy 3–52948
spin-flip photoconductivity resonance and magnetoresistance *(Russian)* 3–8530
submillimeter photoconductivity and elec. cond. 3–3253
surface, (100), MBE substrate, chemical cleaning by $\mathrm{Cl_2}$ plasma 3–52949
surface (110), cleaved, core-level shifts of 4d states, UPS study 3–39003
surface (110), $\mathrm{O_2}$ adsorption, UPS, EELS and ellipsometry study 3–2959
surface plasma wave, propag. const. enhanced nonlinearity, Cu film bounded by InSb 3–7059
thin film, size quantised, interband Raman scatt. study 3–47728
p-type, plasma pinch effect, I-V characts. 3–18733
ultrathin films, size quantisation, effective electron mass 3–38499
US propag. in strong mag. fields, effect of nonparabolicity on longit. cond. 3–8539
valence electron density under high press., X-ray diffr. study 3–13160
X-ray diffr. intensities across In K-absorption edge 3–13025
X-ray-diffraction studies of acoustoelectrically amplified phonons 3–51735
GaInAs-AlInAs heterojunctions, enhanced electron g-factors, tilted field method 3–47416
InAs, elec. transport and band struct. 3–3233
$\mathrm{InAs_ySb_{1-y}}$-GaSb, LPE heterostructure, charact. study 3–19293
$\mathrm{InAs_ySb_{1-y}}$-InAs, LPE heterostructure, charact. study 3–19293
$\mathrm{In_{0.2}Ga_{0.8}Sb}$, MBE growth, cond. props. and donor levels 3–33588
p-InSb:Au, deep acceptor impurities, magneto-optical detection 3–14260
InSb:Bi, doping during LPE, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3–33603
InSb:Ge(Cd)(Zn), H ion irrad., conduction type inversion by isochronous annealing 3–43180
InSb:S, ion implanted, S diffusion, laser annealing and elec. props. 3–38140
InSb:S(Se), highly localised impurity states, press. depend. 3–52068
InSb:Sn, dopant electronic config., Mossbauer study 3–43091
InSb:Zn, linear photogalvanic effect, laser beam excitation 3–8532
InSb-anodic oxide structures, electrophysical props. 3–33801
InSb-CdTe heterostruct., MBE growth and InSb surface passivation appl. 3–39037
InSb-CdTe(PbTe) heteroepitaxial structs. deposition on unoriented surfaces by vacuum phase laser epitaxy 3–52948
InSb-GaAs heteroepitaxial structures, galvanomagnetic coeffs. *(Russian)* 3–8565
InSe-InSb heterojunctions, elec. characts. 3–28429

indium compounds
see also indium alloys; indium antimonide
APR study, dynamic Jahn-Teller effect 3–8721
$\mathrm{Ga_xIn_{1-x}P}$, LPE growth on GaAs(100), lattice mismatch and photoluminescence 3–8356
n-InAs, Auger recombination, role of dielectric screening 3–3225
polyacetylene:$\mathrm{IrCl_6}$, elec. cond. meas. 3–38390
thin films, reactively DC magnetron sputtered, comp. control, sheet resist. determ. 3–8978
$\mathrm{AgInSe_2}$, photoluminescence and photoconductivity *(Russian)* 3–43631
Al-InP interface, cryst. and electronic struct. 3–23189
$\mathrm{Al_{0.5}Ga_{0.5}As}$-$\mathrm{In_xGa_{1-x}As}$ heterostructs: lattice mismatch effects on radiative recombination 3–38926
$\mathrm{(Al_{0.5}Ga_{0.5})_{0.48}In_{0.52}As}$, MBE growth on InP substrate, Schottky diode and MESFET fabrication 3–8985
$\mathrm{(Al_xGa_{1-x})_yIn_{1-y}As}$, lattice matched to InP, MBE growth and elec. and optical props. 3–24132
AlGaInP, VPE growth, thermodynamic anal. 3–33587
$\mathrm{Al_xGa_yIn_{1-x-y}P(As)}$, solid-phase miscibility gap and spinodal decomposition, theory 3–42780
$\mathrm{Al_{0.5}In_{0.5}P}$-$\mathrm{Ga_{0.5}In_{0.5}P}$ DH lasers optically pumped at 90K, MO-CVD growth 3–46231
$\mathrm{Al_{0.5}In_{0.5}P}$-$\mathrm{Ga_{0.5}In_{0.5}P}$ DH visible lasers, MOCVD growth and optical pumping at 90K 3–50657
Au-InP Schottky diodes, elec. characts., interfacial layer effects 3–8582
$\mathrm{Bi_{2-x}In_xTe_3}$, constant energy surface anisotropy 3–3056
Cd-In-Te, liquidus surface building, mathematical experiment planning *(Russian)* 3–57066
$\mathrm{CdCr_{2x}In_{2-2x}S_4}$, spin glass, EPR study 3–28695
$\mathrm{CdInGaS_4}$, Raman scatt. at high press. 3–43546
$\mathrm{CdInGaS_4}$ thin films, electron diffr. study 3–51980
$\mathrm{CdIn_2S_4}$, optical absorpt. spectrum, Raman active $\mathrm{T_{2g}}$ mode obs. 3–34123
$\mathrm{CdIn_2S_4}$, time varying temp. profile CVD growth methods 3–8948
$\mathrm{Cd_2In_6Sn_3Te_5}$, $\mathrm{Cd_6In_2SnTe_7}$, RMS displacement of Sn atoms in anion sublattice, Mossbauer effect 3–34024
CdS-InP photoelectrochemical solar cells 3–58528
n-CdTe/$\mathrm{In_{2-x}Sn_xO_{3-y}}$ thin film solar cell 3–53555
$\mathrm{CuGa_xIn_{1-x}Se_2}$ solid solns., optical absorpt. spectra in fundamental absorpt. band edge region 3–19153
$\mathrm{Cu_{0.5}In_{0.5}Cr_2Se_4}$, semicond., spin glass ordering obs. 3–18914
$\mathrm{CuIn_{0.3}Ga_{0.7}SeTe}$ solid solution, variable range hopping cond. 3–3189
$\mathrm{CuInS_2}$, chem. comp. anal. 3–58465
$\mathrm{CuInS_2}$, time varying temp. profile CVD growth methods 3–8948
$\mathrm{CuInSe_2}$, band struct. calcs. 3–3027
$\mathrm{CuInSe_2}$, oxidation and oxide interface obs. using AES and XPS, comp. 3–14762
$\mathrm{CuInSe_2}$, single cryst., elec. props. *(Korean)* 3–13838
p-$\mathrm{CuInSe_2}$ surface, clean and O contaminated, EELS studies 3–38976
$\mathrm{CuInSe_2}$, thin film photovoltaic technologies, review 3–9441
$\mathrm{CuInSe_2}$-CdS thin films solar cell, p-i-n heterojunction model 3–29385

indium compounds continued
$\mathrm{CuInSe_2}$-ZnSe-$\mathrm{In_2Se_3}$ system, phase diagram and phase structs. *(French)* 3–28079
$\mathrm{CuInTe_2}$, polycrystalline thin film, elec. transport props., $\mathrm{H_2}$ effect, grain boundary scatt. 3–52282
Ga-In-As-Ge(Sn), liquid quaternary phases, melting diagram meas. and calc. 3–13410
$\mathrm{Ga_xAl_yIn_{1-x-y}As/Al_xIn_{1-x}As}$ optically pumped double heterostructure laser, room temp. lasing action 3–41824
GaAs-$\mathrm{In_xGa_{1-x}As(GaAs_{1-x}P_x)}$ strained superlattice lasers, CW operation at 300K 3–50656
$\mathrm{(GaAs)_x(InAs)_{1-x}}$, specific heat and thermodynamic functions, 5 to 300K 3–23055
$\mathrm{Ga_{1-x-y}In_xAl_yAs}$, LPE growth on GaAs and near IR optical props. 3–3973
GaInAs and GaInAsP, low-press. CVD, review 3–8992
GaInAs p-i-n detectors for fibre optic communication appls. 3–32506
GaInAs, VPE growth, use of low press. 3–42960
GaInAs-AlInAs heterojunctions, quantum transport, intersubband scatt. effect 3–3305
$\mathrm{Ga_{0.47}In_{0.53}As}$ film, MBE grown, optical quality 3–19273
$\mathrm{Ga_{0.47}In_{0.53}As}$ planar doped barrier photodetectors, detectivity calcs. 3–45202
$\mathrm{Ga_{0.47}In_{0.53}As}$, single longitudinal-mode optical phonon scatt. obs. 3–47334
$\mathrm{Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As}$ heterojunctions, electron mobility, spacer thickness and electron density effects 3–47412
$\mathrm{Ga_{0.47}In_{0.53}As}$/InP p-i-n photodiodes, performance characts. and life test data 3–40692
$\mathrm{Ga_{0.80}In_{0.20}As}$ high quantum efficiency junction, OMVPE grown, solar cell appl. 3–14939
$\mathrm{Ga_{1-x}In_xAs}$, atomic-scale struct., EXAFS study 3–14388
$\mathrm{Ga_{1-x}In_xAs}$, OMVPE grown using trimethylarsenic and trimethylantimony, review 3–24145
$\mathrm{Ga_{1-x}In_xAs}$, VPE growth, equilibrium thermodynamics *(Czech)* 3–47235
$\mathrm{Ga_{1-x}In_xAs}$, vibrations and optical props., coherent pot. approx. 3–33370
$\mathrm{Ga_xIn_{1-x}As}$, n- and p-type, on InP substrate, optical, crystallographic, and transport props. 3–43597
GaInAsP 1.3 μm simple stripe geometry and advanced struct. laser comparison monomode fibre optic communication system appl. 3–41878
GaInAsP DH, LPE growth and props., effect of different active layer thickness 3–43774
GaInAsP DH laser material assessment by photoluminesc. 3–22058
GaInAsP, equilib. diagrams, influence of chemical disorder and epitaxial substrate *(French)* 3–42957
GaInAsP laser based optical emitter for 1.3 μm wavelength multimode fibre systems 3–56345
GaInAsP lasers, forward bias voltage characts. 3–22069
GaInAsP long wavelength buried-crescent laser struct. on channelled substrates, formation by LPE 3–22114
GaInAsP, shallow proton stripe laser diodes, life tests rel. to LPE and MOVPE prep. techniques 3–37075
GaInAsP, VPE growth, use of low press. 3–42960
GaInAsP VPE layer, elec. props. improvement by cooling HCl liq. source 3–23514
GaInAsP/InP DFB 1.3 μm lasers, room-temp. CW operation 3–6967
GaInAsP/InP DH laser, current blocking layer made by Be implantation 3–12147
GaInAsP/InP etched mirror and groove-coupled laser device for integrated optics 3–7009
GaInAsP/InP lens-like strip waveguide lasers, single transverse mode condition 3–6977
GaInAsP/InP V-groove-laser for 1.3 μm wavelength region 3–41838
GaInAsP-InP, lattice-matched, dopant conc., photoluminesc. study 3–52827
GaInAsP-InP 1.3 μm DFB lasers, InP surface corrugations preserved from thermal deformation during LPE 3–50673
GaInAsP-InP 1.5 μm DFB BH laser fabrication, single-longit. mode operation 3–17528
GaInAsP-InP 1.5 μm BH laser with reactive ion etched facet mirrors, CW operation 3–50660
GaInAsP-InP double heterostructure MBE lasers, 1.3 μm wavelength 3–22104
GaInAsP-InP lasers, lens-like strip waveguide, single transverse mode condition, theory 3–32356
GaInAsP-InP lasers, short cavity, multilayer reflector design 3–32387
GaInAsP-InP monolithic two section lasers, single longit. mode light pulse generation by current modulation 3–7037
GaInAsP-InP monolithic photovoltaic power converter at 1.06 μm 3–14946
GaInAsP-InP passive optical waveguides, fabrication 3–37178
GaInAsP-InP:Be DH laser diodes, Be implantation fabrication 3–37038
$\mathrm{Ga_{0.29}In_{0.71}As_{0.61}P_{0.39}}$/AnP laser diode, Auger recomb., free-carrier losses 3–12144
$\mathrm{Ga_{0.55}In_{0.45}As_{0.1}P_{0.9}}$ crystal, conduction electron g-factor sign determ. by Hanle effect 3–3039
$\mathrm{Ga_{1-x}In_xAs_{1-y}P_y}$ monolithic coupled-cavity laser, single mode operation 3–27043
$\mathrm{Ga_{1-x}In_xAs_{1-y}P_y}$-InP mushroom stripe laser, fabrication and low threshold CW operation at 1.27 μm 3–22111
$\mathrm{Ga_xIn_{1-x}As_YP_{1-y}}$ high purity layers lattice matched to InP, LPE growth 3–42958
$\mathrm{Ga_xIn_{1-x}As_yP_{1-y}}$ LPE layer, electron and hole mobilities and scatt. 3–18798
$\mathrm{Ga_xIn_{1-x}As_yP_{1-y}}$, lattice matched to InP, high freq. elec. transport 3–13850
$\mathrm{Ga_xIn_{1-x}As_yP_{1-y}}$, lattice-matched to InP and GaAs, thermal resist. 3–18522
$\mathrm{Ga_xIn_{1-x}As_yP_{1-y}}$ stripe lasers, influence of press. on temp. sensitivity 3–1628
$\mathrm{Ga_yIn_{1-x}As_xP_{1-x}}$, constituent ternary compounds, band struct., appl. of virtual cryst. approx. modification 3–47264
$\mathrm{Ga_xIn_{1-x}As_yP_{1-y}(Sb_{1-y})}$, spinodal decomp. and clustering 3–18466
GaInP, equilib. diagrams, influence of chemical disorder and epitaxial substrate *(French)* 3–42957
$\mathrm{Ga_{0.5}In_{0.5}P}$, two-spin reson. transitions of optically oriented nuclei 3–28739
$\mathrm{Ga_{1-x}In_xP}$, picosecond high-resolution modulation spectroscopy of near interband resons. 3–36099
$\mathrm{Ga_xIn_{1-x}P}$, electron-phonon interaction effects, refl. and photoluminesc. spectra 3–3764

indium compounds continued
GaInPAs/InP CW buried meas-stripe heterostruct. lasers emitting in 1.5-1.6 μm range 3—56198
GaInPAs/InP heterolaser with external dispersive resonator tunable CW emission in 1.3 μ range 3—27058
GaInPAs/InP injection lasers, emission characts., temp. depend. 3—56199
GaInPAs-InP DH injection lasers, nonwaveguide mode operation 3—22116
GaInPAs-InP mesa-stripe heterostruct., injection laser, leaky mode emission 3—12152
GaInPAs-InP quaternary buried heterostruct. injection laser, high-power leaky mode operation 3—7012
$Ga_{1-x}In_xSb$, vibrations and optical props., coherent pot. approx. 3—33370
$GaS_{0.6}Se_{0.4}$-InSe heterojunctions, elec. and photoelec. props. 3—18776
GaSe-In_2Te_3 p-n heterojunctions, elec. characts. 3—38475
$HgIn_2Te_4$, vacancy compound, elastic behaviour under press. 3—22981
$Hg_3In_2Te_6$, vacancy compound, elastic behaviour under press. 3—22981
In-As-O system, condensed phase diagram 3—4021
In-Ga-As-P batch prep. melts, prep. and props. rel. to LPE 3—9006
In-Ga-As-P system, phase equilibria, thermodynamic analysis 3—34287
In-In_2O_3 thin film composite, reactively sputtered, struct. phase transition study 3—28989
In-InI_3, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3—43241
In-Si-Se system, photo-induced memory effect 3—23429
In-Sn-O thin films, reactively DC magnetron sputtered, comp. control, sheet resist. determ. 3—8978
In-Tl-Te, phase equilib., homogeneity and solid solubility 3—39091
$In_x\ Ga_{1-x}As_yP_{1-y}$, high-field electron transport 3—23396
InAlAs, VPE growth, use of low press. 3—42960
β-$In_{2.47}Al_{22}O_{34}$, cryst. struct. and thermal stability, X-ray study 3—2504
InAs, antisite and vacancy electron states, local density of states 3—43096
InAs, contactless method of measuring free-carrier concentration in narrow-band semiconductors 3—23922
InAs, defects study by projection etching 3—33263
InAs, dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
InAs, dissoc. energy, time of flight mass spectrosc. obs. 3—12010
n-InAs, impact ionisation, I-V characts. 3—18713
InAs, lattice thermal cond., 4-700K 3—2897
InAs, long-wave thresholds from photoemissive yield spectra and their derivatives 3—24083
InAs MBE layers confined between GaSb, hybrid cyclotron intersubband reson. 3—8724
InAs, thermal oxidation and native oxide-substrate reactions 3—4171
InAs, VPE growth rate anisotropy and impurity trapping 3—43762
InAs:Cr, impact ionisation, I-V characts. 3—18713
InAs:Mn^{3+}, Jahn-Teller distortions, mag. susceptibility 3—38358
InAs:Sn, dopant electronic config., Mossbauer study 3—43091
InAs-$Al_xGa_{1-x}Sb$ heterostructure, LPE growth 3—38243
InAs-Bi(Pb)(Sn), vapour press. and melting equilib. *(German)* 3—2752
InAs-GaAs synthesised superlattices, mag., optical, elec., magneto-optical props. and cyclotron reson. 3—13899
InAs-GaSb heterojunctions and superlattices, electron transport *(Japanese)* 3—28426
InAs-GaSb superlattices, electronic props. 3—23262
InAs-In(As), interphase tension of solutions in metals 3—8300
$InAs_{1-x}P_x$, energy spectrum, tunnel spectroscopy study in mag. field 3—13708
$InAs_ySb_{1-y}$-InAs, LPE heterostructure, charact. study 3—19293
InBi-InSb, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3—33603
In_2Bi-InSb, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3—33603
InBr, direct excitonic transition and reflectivity spectra 3—23973
$InCl_3$-graphite intercalation cpd., TDPAC study 3—47579
InGa AsP systems for integrated optical circuits 3—32507
InGaAlP DH laser diodes grown by MBE, 0.66 μm room-temp. operation 3—46210
InGaAs epitaxially grown layers, Sn-doping effects on some properties 3—51634
InGaAs, hydride VPE growth on (100), (110), (111), (311) and (511) InP 3—8363
InGaAs, LPE on InP, self-supersaturation, simplified LPE technique 3—43766
InGaAs/GaAs strained superlattice structs., MBE growth and characts. 3—42964
InGaAs/InP:Be DH laser diodes room temp. pulsed operation 3—47365
InGaAs-InP, LPE growth rate, substrate orientation dependence 3—23203
InGaAs-InP DH laser, subjected to optical excitation, threshold characts. 3—6984
p-$In_{0.53}Ga_{0.47}As$, absence of Gunn effect, theory 3—47351
$In_{0.53}Ga_{0.47}As$, electron transport, compositional clustering effects 3—8482
$In_{0.53}Ga_{0.47}As$, high purity LPE growth and characterisation 3—43777
$In_{0.53}Ga_{0.47}As$ high-purity LPE layers, postgrowth heat treatment effects on elec. characts. 3—52278
$In_{0.53}Ga_{0.47}As$, LPE growth effects on structured InP substrates 3—42947
$In_{0.53}Ga_{0.47}As$, photoluminesc. spectra, band assignments 3—34145
n-$In_{0.53}Ga_{0.47}As$, temp. depend. electron vel.-field characts. at high elec. fields 3—28366
$In_{0.53}Ga_{0.47}As$, transferred-electron effect obs. in travelling-domain mode 3—52160
p-$In_{0.53}Ga_{0.47}As$-Al Schottky barrier, barrier height meas. 3—13883
p-$In_{0.53}Ga_{0.74}As$:Zn VPE layers, elec. and optical props. 3—18800
$In_{0.72}Ga_{0.28}As_{0.6}\ P_{0.4}$, hot carrier multiphonon scatt., 1.3 μm photoluminesc. study 3—38886
$In_{1-x}Ga_xAs$ epitaxial layers lattice matched to InP substrates, MBE growth 3—42970
$In_{1-x}Ga_xAs$, LPE growth on (100), (111)B faces, impurity and carrier concs. 3—8360
$In_{1-x}Ga_xAs$, liquid-solid equilibrium phase diagram calc. for solid solns. with miscibility gaps 3—43790
$In_xGa_{1-x}As$, current controlled LPE on InP (100) 3—19292
$In_xGa_{1-x}As$ diode simulator of solid-state laser 3—37147
$In_xGa_{1-x}As$ LPE growth on InP near solid instability 3—42951
$In_xGa_{1-x}As$ photocathodes, electron emission probability with negative electron affinity 3—47755
$In_xGa_{1-x}As$, thermal oxidation and native oxide-substrate reactions 3—4171
$In_xGa_{1-x}As$-GaAs superlattice, free enthalpy 3—8219
InGaAsP 10 kHz linewidth 1.5 μm external cavity laser with 55 nm tuning range 3—37030

indium compounds continued
InGaAsP, Auger recombination, phonon-assisted, theory 3—52813
InGaAsP BH 1.3 μm lasers with high T_0 3—6981
InGaAsP DH laser, LPE growth, enhanced InP substrate protection 3—47784
InGaAsP distributed feedback lasers, hybrid LPE/MOCVD growth 3—32380
InGaAsP double channel BH laser diode with effective current confinement 3—12176
InGaAsP, growth by MBE, optical and elec. props. 3—24131
InGaAsP injection laser, transient spectra and mode partition noise obs. 3—6974
InGaAsP injection lasers, fast excitation, picosecond freq. chirping and dynamic line broadening obs. 3—37022
InGaAsP LPE growth on InP, appl. to DH lasers 3—29021
InGaAsP, LPE growth and charact., doping conditions 3—42959
InGaAsP LPE layers, electron irrad., defect states, DLTS study 3—57304
InGaAsP laser, freq. locking to first overtone vibr.-rot. lines of HF 3—27092
InGaAsP laser, threshold current, carrier heating effect 3—27041
InGaAsP laser spectrometer, near IR, high-resolution *(Japanese)* 3—10925
InGaAsP lasers, high power single mode, single step LPE fabrication 3—37021
InGaAsP lasers, lightly doped, radiative and nonradiative recomb. law 3—46209
InGaAsP lasers with lightly doped active layers, meas. of radiative recombination coeff. and carrier leakage 3—27049
InGaAsP long-wavelength (1.3 to 1.6 μm) photodetectors for fibre optical communications, review 3—12361
InGaAsP low threshold current 1.3 μm CW lasers, nonplanar VPE growth 3—50677
InGaAsP mode stabilised terrace lasers on semi-insulating InP 3—27054
InGaAsP photocathodes with negative electron affinity, surface comp. 3—24094
InGaAsP, photoexcited carrier lifetime and Auger recombination 3—43192
InGaAsP quantum well lasers, Auger recombination rates calc. 3—50662
InGaAsP quaternary alloys, analytical model for gain spectra 3—22059
InGaAsP, recombination enhanced defect processes and device degradation 3—56909
InGaAsP short-cavity single-frequency BH lasers 3—37027
InGaAsP single mode lasers for fibre-optic appls. 3—22060
InGaAsP single mode lasers for fibre-optic communications 3—50672
p-InGaAsP solid soln., Auger recombination rate and luminescence 3—19186
InGaAsP superluminescent diode, lateral confinement at 1.3 μm 3—37034
InGaAsP/InP 1.3 μm BH lasers, linearity and noise characts. 3—41842
InGaAsP/InP DH laser diodes, high-speed modulated, mode partition noise characts. 3—27051
InGaAsP/InP DH laser, LPE grown, proton-defined stripe geometry 3—32357
InGaAsP/InP DH LEDs, dark defects, TEM obs. 3—43632
InGaAsP/InP DH lasers, dark defects under accelerated aging 3—50663
InGaAsP/InP distributed feedback lasers, lasing characts. in 1.5 μm range, temp. depend. 3—32358
InGaAsP/InP groove transverse junction laser, mode stabilisation mechanism 3—56257
InGaAsP/InP laser diodes, V-grooved-substrate buried heterostruct., etching, ageing 3—41869
InGaAsP/InP layers, struct. study of alloyed Au metallisation contacts 3—23188
InGaAsP/InP mode-stabilised terrace-large optical cavity laser fabricated on InP substrate 3—1664
InGaAsP/InP optoelectronic devices, monolithic integration 3—6995
InGaAsP/InP p^+n diodes, deep level electron and hole traps, DLTS study 3—47414
InGaAsP/InP p-i-n sensors for laser based optical emitter for 1.3 μm wavelength multimode fibre systems 3—56345
InGaAsP/InP V-grooved substrated buried heterostruct. laser emitting at 1.3 μm 3—7011
InGaAsP/InP:Cd(Zn) lasers, LPE grown, high quantum efficiency 3—27072
InGaAsP-InP 1.3 μm planoconvex waveguide lasers, characts. and optimum designs 3—22115
InGaAsP-InP 1.5 μm V-grooved substrate buried heterostruct. laser 3—50676
InGaAsP-InP buried heterostruct. stripe CW laser, fabrication by hybrid liq./gas phase epitaxy 3—41875
InGaAsP-InP DH laser, optical and current excitation of nonequilib. carriers, lasing thresholds 3—6985
InGaAsP-InP DH buried rib waveguide laser, 1.5 μm operation 3—41832
InGaAsP-InP DH wafer, nonradiative processes, piezoelec. photoacoustic spectroscopy 3—47709
InGaAsP-InP heteroepitaxial rib waveguide directional coupler struct., insertion loss analysis 3—42037
InGaAsP-InP injection laser, low threshold, with microleaved mirrors, for monolithic integration 3—7001
InGaAsP-InP quantum-well heterostruct. lasers, Auger recomb. calc. 3—6980
InGaAsP-InP quaternary 1.5 micron buried crescent lasers with separate optical confinement 3—37031
InGaAsP-InP single freq. injection lasers, index-guided and gain-guided, beam parameters meas. 3—6973
InGaAsP-InP undercut mesa laser, LPE fabrication and planar polyimide passivation 3—46206
InGaAsP-InP:Zn, Mg p^+-n abrupt heterojunction, LPE growth techniques 3—3971
InGaAsP-InP:Zn double heterostructures, luminescence study 3—38922
InGaAsP-oxide interface, comp. profiles, AES ESCA and ion sputtering studies *(Chinese)* 3—38237
$In_{0.7}Ga_{0.3}As_{0.63}P_{0.37}$, photoluminesc. spectra, band assignments 3—34145
$In_{0.75}Ga_{0.25}As_{0.55}P_{0.45}$, LPE growth effects on structured InP substrates 3—42947
$In_{1-x}Ga_xAs_{1-y}P_y$ quantum well lasers, threshold current density, Auger recombination effects 3—27044
$In_{1-x}Ga_xAs_{1-y}P_y$ with narrow photolum. spectrum, LPE growth 3—23196
$In_{1-x}Ga_xAs_{1-y}P_y$-InP heterojunction laser, low threshold, for 1.5-1.6 μm interval, LPE growth 3—22121
$In_{1-x}Ga_xAs_{1-y}P_y$-InP low threshold terrace mass transport laser, LPE growth 3—27075
$In_{1-x}Ga_xAs_yP_{1-y}$ buried stripe lasers, LPE fabrication *(French)* 3—43773

indium compounds continued
$In_{1-x}Ga_xAs_yP_{1-y}$ DH lasers, optical gain measurement as function of injected current density 3—22057
$In_{1-x}Ga_xAs_yP_{1-y}$, material parameters derivation from linear interpolation scheme 3—33632
$In_{1-x}Ga_xAs_yP_{1-y}$, near-equilibrium LPE growth on ⟨100⟩ InP 3—34248
$In_{1-x}Ga_xAs_yP_{1-y}$, optical props. from 1.5 to 6.0 eV 3—38844
$In_{1-x}Ga_xAs_yP_{1-y}$/InP DH lasers with low threshold current density, LPE growth *(French)* 3—43772
$In_xGa_{1-x}As_yP_{1-y}$ ($\lambda=1.5$ μm), LPE growth, luminesc. and photoelec. props. 3—47243
$In_xGa_{1-x}As_yP_{1-y}$ lattice matched to InP, LPE grown, interface spinodal decomposition 3—42952
$In_xGa_{1-x}As_yP_{1-y}$, VPE growth, laser spectroscopy monitoring 3—19279
$In_{0.5}Ga_{0.5}P$-InGaAsP double heterostructs., nonequilib. carrier lifetime in active region, effect of emitter recomb. 3—38900
$In_{0.5}Ga_{0.5}P$-InGaAsP double heterostructs., photoluminesc. characts., effect of emitter recomb. 3—38902
$In_xGa_{1-x}P$ epitaxial layers, phase diagram meas. 3—39100
$In_xGa_{1-x}P$:N LPE layers ($x<0.01$), minority carrier diffusion length meas. 3—13933
$In_xGa_{1-x}P$/GaAs, film form., relax. process, liquidus diagram study 3—38245
$In_{1-x}Ga_xP_{1-z}As_z$ solid solution, intrinsic exciton luminescence 3—47720
$In_{0.2}Ga_{0.8}Sb$, undoped and S doped, MBE and elec. props. 3—52945
InI additive in Hg high pressure arcs., axial convection velocity profile determ. 3—51283
InI_3, press. effects on elec. cond. 3—47136
$In_6La_{10}O_6S_{17}$, cryst. struct., X-ray diffr. study, Fourier anal. *(French)* 3—2481
In_2O_3, fast H^+ energy loss and straggling, nuclear resonant reaction study 3—51680
In_2O_3, high quality optical coating prep. by activated reactive evaporation 3—12369
In_2O_3, highly doped, as transparent heat reflecting coatings 3—17600
In_2O_3, In_2O_3-SnO_2, roll coating of optical thin film 3—12371
In_2O_3:Sn, crystal struct., electric props. *(Korean)* 3—38504
In_2O_3:Sn film, deposited by RF sputtering, struct. and props. 3—51983
In_2O_3:Sn films for solar energy utilisation, materials chemistry and optical props. 3—53577
In_2O_3:Sn pyrolytic film optical filters, optical props. 3—56304
In_2O_3:Sn pyrolytic films, optical props. 3—38936
In_2O_3:Sn/n-Si heterojunction solar cells, performance *(Korean)* 3—14947
In_2O_3:SnO_2 conducting optical coating resist. monitoring apparatus for use during vac. deposition 3—35967
In_2O_3-SnO_2 reactively evaporated films as high quality transparent heat reflectors 3—17597
In_2O_3-SnO_2 transparent conductive coating, reactively sputtered optical thin film development 3—12372
In_2O_3-SnO_2 transparent elec. cond. layer, continuous casting onto flexible polymer substrates 3—14480
In_2O_3-ZrO_2 solid soln., heat treatment, elec. resist. and struct. 3—58136
InP 2D inversion layer, spin-orbit coupling and weak localisation 3—13913
InP (100)-Al(Au) interface with etched or cleaned InP surfaces, Fermi level, XPS study 3—47419
InP (110)-Cu interface, AES and photoemission studies of atomic and electronic struct. 3—58032
InP, angle resolved local density of states Green's function calc. 3—8390
InP, anodic oxidation and InP/oxide interface elec. props. 3—33798
InP, antisite and vacancy electron states, local density of states 3—43096
p-InP, Au-Be alloyed ohmic contact exam. 3—13904
InP avalanche photodiode with VPE grown p^+-n junction, imperfections effect 3—18573
InP, B3 structure, electron irrad., dislocation loops seen edge-on, electron microscopy contrast 3—56907
InP, CVD epitaxial films, elec. props. of doped and undoped material 3—19278
InP, carrier mobility, grain size depend., elec. cond. and Hall effect studies 3—47343
n-InP crystals, compensated, illumination influence on inpurity pot. elec. props., study 3—8548
InP crystals, LEC grown, dislocation generation and propagation, X-ray topography study 3—46936
InP, deep level defects, self-consistent cluster calcs. 3—47300
p-InP, deep levels study by diode admittance spectroscopy 3—33660
InP, defects study by projection etching 3—33263
InP, dielectric functions and optical parameters, 1.5-6.0 eV 3—43509
InP, dislocation line, elastic energy, integral formalism 3—46930
InP, donor discrimination and bound exciton spectra 3—43591
InP, double doped, low dislocation density, TEM obs. 3—2562
n-InP, electron irrad. defects, positron annihilation and Hall effect study 3—24045
InP, electron irradiated, deep levels study 3—3107
p-InP, electron irradiation induced deep levels, DLTS study 3—13758
InP epilayers, process-induced defects, photoluminesc. and DLTS study 3—43089
InP epitaxial film, MOCVD grown, elec. props., low temp. photoluminescence study 3—23511
InP epitaxial films, MOCVD, growth using Lewis acid-base adducts 3—43758
InP epitaxial layer growth by In-PCl_3-H_2 technique, surface quality and mobility characts. 3—43756
InP epitaxial layers, carrier density and mobility, optical meas. 3—43199
InP, epitaxial layers, growth, carrier conc. and Hall data rel. to vapour etching 3—34239
n-InP, epitaxial vapour phase etching, Hall mobility meas., SEM study 3—43976
InP, etching in Cl_2 plasma, temp. depend. 3—24376
InP, growth by chloride and hydride techniques, thermodynamic considerations 3—19282
InP, heavily doped, photoluminescence edge calc. 3—38860
InP, high purity polycryst., in situ vacuum baking to improve purity 3—14459
InP, hydride VPE growth on (100), (110), (111), (311) and (511) InP 3—8363
InP, in-situ synthesis and growth method in Czochralski puller 3—8963
InP ion implanted amorphised layers, epitaxial regrowth, RHEED, TEM, backscatt. and X-ray studies 3—2994
InP, LPE growth and charact., doping conditions 3—42959
InP, LPE growth effects on structured InP substrates 3—42947

indium compounds continued
InP, LPE growth on (100), (111)B faces, impurity and carrier concs. 3—8360
InP, lattice dynamics under hydrostatic press. 3—22995
InP low-press. CVD, review 3—8992
InP, MBE growth from cracked PH_3, photoluminesc. and carrier mobility 3—47770
InP, MOVPE and VPE grown, fabrication of Gunn oscillators 3—43754
InP, metalorganic CVD growth *(Japanese)* 3—29016
n-InP, minority carrier diffusion length, photoelectrochem. determ. in aq. solvent 3—33788
InP, n- and p-type, refractive index dispersion meas., 0.95 to 2 eV 3—28812
InP n^+-n^--n^+ layers, VPE growth method 3—14503
InP, near gap energy levels, photolum. and photocond. study 3—3240
InP, oxidation in plasma enhanced CVD reactor 3—9210
n-InP photoanodes in conc. aq. iodide electrolytes 3—9447
InP photoconductors, picosecond correlation measurements 3—43221
n-InP, photoelectrochemical cell using aq. ferrocene/ferricenium 3—9449
InP, photoluminescence from deep levels meas. for bulk and LPE samples 3—23996
InP polycrystalline solar cells minority carrier diffusion length inhomogeneity induced by grain boundaries 3—39483
n-InP, RF sputter-damaged layer, ellipsometric study 3—34501
n-InP, reson. inelastic light scatt. by free electrons 3—57946
InP Schottky barrier formation, influence of water adsorption 3—3316
InP, semi-insulating, relative dielectric constant meas. 3—19032
InP substrate for LPE growth, double meltback procedure 3—34244
InP, substrate for MBE growth of $In_{1-x}Ga_xAs$ 3—42970
InP, surface anal. using Hg-InP Schottky barrier diodes 3—13881
InP ultrashort-cavity single-mode laser, optical pumping by AlGaAs injection laser 3—32359
InP under high press., pseudopotential form factors 3—43012
InP, undoped, prismatic disloation loop anal. by TEM 3—33261
InP, VPE, hydride technique, thermodynamic analysis of growth 3—34241
InP, VPE grown, Hall effect, photothermal ionisation, diffusion length, photoluminescence studies 3—19277
InP, VPE growth, use of low press. 3—42960
InP:Be MBE layers, elec. and optical props. 3—47365
InP:Cd, Cd diffusion profiles meas. with etching/Schottky contact method 3—23097
InP:Cd, Cd-diffused, Cd phosphide precipitates, TEM obs. 3—42782
InP:Cd, Zn, diffusion and p-n junction form., Hall effect and EBIC study 3—18512
InP:Co^{2+}, EPR study 3—43426
InP:Co^{2+}, g-value of $^4A_2$ ground state, EPR study 3—38684
InP:Cr^{2+}, zero-phonon luminesc. study 3—43615
InP:Cr(Cu)(Fe), deep levels related to transition metal impurities, ionisation energy meas. 3—3105
InP:Fe, APR study, dynamic Jahn-Teller effect 3—8721
InP:Fe, deep impurity centre ionisation 3—28304
InP:Fe, defect state induced by ion irrad. or annealing, optical transient current spectroscopy study 3—43090
InP:Fe, semi-insulating, eutectic precipitates 3—8207
InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3—18721
InP:Fe(Cr), ion implant depth profile after annealing, SIMS study 3—8083
InP:Ge single cryst., high resolution TEM obs. of defect struct., electron beam induced degradation 3—18304
InP:S, ⟨100⟩ substrates, LPE atmos. effect on thermal decomposition 3—9008
InP:Se, ion implanted, laser and furnace annealing effects on elec. props. 3—56975
InP:Se^+, ion implanted, multiply scanned electron beam annealing, elec. props., RBS study 3—8102
InP:Si, ion implanted, and semi-insulating transport props. and defects 3—28383
InP:Si, LPE grown, impurity transport processes, thermodynamic calcs. 3—42967
InP:Sn, dopant electronic config., Mossbauer study 3—43091
n-InP:Sn, radiative recomb., absorpt. and reemission processes 3—38899
InP:Te(SN), shallow acceptor centres, luminescence study 3—8861
InP:Zn(Cu), quasipoint acceptor impurity clusters, charge and concentration 3—18333
ρ-InP/Au-Zn, ohmic contacts, alloy deposition by electroplating 3—38478
InP/GaInAsP 1.3 micron buried optical waveguide lasers with low threshold 3—46220
InP/InGaAsP, material-selective etching, device fabrication 3—9204
InP/InGaAsP epitaxial layers, laser diagnostic probes for CVD 3—3966
InP/InGaAsP/InGaAs/InP structure, LPE growth for avalanche photodiodes, circumferential meltback prevention 3—43765
p-InP/Rh-H(Re-H) photocathodes for H_2 evolving photoelectrochem. solar cells 3—34703
n-InP/room temp. molten $AlCl_3$-butyl pyridinium chloride electrolyte interface study 3—9452
InP-Al evaporated systems, plasma anodisation, MISFET appl. 3—29200
InP-Al rectifying contacts, Schottky carriers and MOS structures 3—13920
n-InP-Au Schottky barriers fabrication, by thermal vacuum deposition 3—18764
InP-chemical oxide interface states study in MIS struct. 3—23487
InP-Ge(Sn)(Pb)(Ga)(Tl)(Bi), vapour press. and melting equilib., activity coeffs. *(German)* 3—2753
InP-Hg(Au) Schottky barrier diodes, noninvasive anal. of InP surface 3—13881
InP-InGaAsP heterojunction optoelectronic devices prep. and properties *(Slovak)* 3—47783
InP-InGaAsP LEDs, luminescence study of dark spot defects 3—3824
InP-InGaAsP multilayer struct., damage-free grooving method 3—4159
InP-InGaAsP system, Au based ohmic contacts, metallurgical behaviour 3—23481
InP-InGaAsP-InP DH, misfit dislocations, optically induced glide motion, photoluminesc. study 3—51608
InP-metal system during annealing, mass spectrometric investigation 3—38238
InP_3, synthesis, cryst. struct. and metallic conduction 3—46913
InP(A_3), relaxed (110) surface states and resonances 3—23452
$InP_xAs_ySb_{1-x-y}$, band. struct., pseudopot. calc. and electroreflection meas. 3—8412

indium compounds continued
$InP_xAs_ySb_{1-x-y}$, solid-phase miscibility gap and spinodal decomposition, theory 3—42780
$InPO_4$, band gap, UPS and EELS studies 3—57271
$InPS_4$, elastic, optical and nonlinear optical props. 3—37114
$InPS_4$, Raman light scatt. by polar oscills., anisotropy 3—28865
InS, IR reflectivity and cryst. struct. 3—47634
InS, polymorphic transition at high press., X-ray diffr. study 3—27886
In_2S_3-Cr_2S_3-CdS(CoS)(HgS), phase relationships, X-ray diffr., thermal anal., and IR spectra 3—43795
$In_{2.01}S_3$, cryst. struct., X-ray diffr. anal. 3—42579
InSb, angle resolved local density of states Green's function calc. 3—8390
InSb, electron gas, electron energy relax. time, photocond. study 3—38328
InSb, interference photomagnetoelectric effect, theory 3—23435
InSb, suppression of doping striations in zone melting by enhanced convection on a centrifuge 3—8969
$In_3Sb_5O_{12}$, single cryst., exhibiting electroacoustic echo, growth, phys. and chemical props. 3—14228
InSe crystals, elec. and optical props. *(Korean)* 3—33722
InSe, effective mass and conduction band parameters, cyclotron resonance study 3—8402
InSe, elec. induced impurity photocond. meas. 3—8536
InSe, elec. props. meas. 3—52155
InSe, Faraday effect up to 20 T 3—14261
InSe films, optical absorpt. coeff. meas. 3—43652
InSe, ionicity, effective charges, bond angles, optimised bond orbital model 3—13156
InSe, magneto-optical props. near band gap, wavelength modulation spectroscopy study 3—28847
InSe, photocond., photovoltaic props., carrier mobility and lifetime 3—47384
InSe, photoconductivity meas. 3—23434
InSe, SCL cond., two-barrier model, I-V characts. 3—18715
InSe, semicond. interband transitions, optical refl. effect, saturation photoacoustic spectra 3—13348
InSe:Te, diffusion intercalated, elec. and struct. props. 3—3185
InSe/Bi p-n junctions, elec. and photovoltaic props. 3—47384
InSe/$Ga_{0.98}Bi_{0.02}$Te p-n heterojunctions, I-V characts. 3—43275
InSe/$In_{2-x}Sn_xO_3$ p-n junctions, elec. and photovoltaic props. 3—47384
InSe/Pt p-n junctions, elec. and photovoltaic props. 3—47384
InSe-Aquadag Schottky diode struct., nonequilibrium band flattening 3—47406
InSe-$Cd_{0.2}Hg_{0.8}$Te heterojunctions, elec. characts. 3—28429
InSe-$CuInSe_2$ isotypic n-n heterojunctions, elec. and photoelec. props. 3—3309
InSe-GaSe heterojunctions, noise and current flow mechanism 3—28428
InSe-GaSe p-n heterojunction, majority carrier injection under strong illumination 3—57419
InSe-InSb heterojunctions, elec. characts. 3—28429
InSe-Li-Pb, intercalated semiconductor, optical props. *(Russian)* 3—14247
InSe-naphthalene (anthracene) intercalation cpds., exciton refl. and photoluminesc. spectra, 4.2 to 40K 3—38845
InSe-$Pb_{0.82}Sn_{0.18}$Te, heterojunctions, elec. characts. 3—28429
InSe-PbTe heterojunctions, elec. characts. 3—28429
α'-In_2Se_3, prep., optical spectra and elec. cond. 3—38822
$In_{2.01}Se_3$, cryst. struct., X-ray diffr. anal. 3—42579
$In_x(Si_{01}Se_{0.9})_{1-x}$-$In_{2-x}Sn_xO_{3-y}$ photo-induced microcryst. solar cell 3—24585
$In_x(Si_{0.1}Se_{0.9})_{1-x}$-$In_{2-x}Sn_xO_{3-y}$ solar cells, effects of photo-induced microcrystn. 3—53511
$In_{2-x}Sn_xO_{3-y}$ coatings to prevent spacecraft charging 3—39999
$In_{2-x}Sn_xO_{3-y}$ electrodes, sheet resistance 3—28356
$In_{2-x}Sn_xO_{3-y}$ sprayed coatings, optical props. and antireflection coating appl. 3—38946
$In_{2-x}Sn_xO_{3-y}$ transparent and heat-reflecting films, MgF_2 coated, colour props. 3—49425
$In_{2-x}Sn_xO_{3-y}$/lead phthalocyanine/Al MIS struct., rectifying and photovoltaic props. 3—52254
$In_{2-x}Sn_xO_{3-y}$/p-InP solar cells, form. by ion beam deposition, interfacial props. 3—9422
n-$In_{2-x}Sn_xO_{3-y}$/p-InP sputtered solar cells 3—53519
$In_{2-x}Sn_xO_{3-y}$-InP sprayed solar cells, optical and elec. characts. 3—58538
$In_{2-x}Sn_xO_{3-y}$-p-InP solar cell, electron diffusion length 3—19585
$In_{2-x}Sn_xO_{3-y}$-Se high efficiency photovoltaic solar cells 3—53512
$In_{2-x}Sn_xO_{3-y}$-Si(CdTe)(InP) sprayed solar cells, optical and elec. characts. 3—58538
$In_{2-x}Sn_xO_{3-y}$-Zn_3P_2 heterojunction solar cells 3—53510
$In_{2-x}Sn_xO_{3-y}$In-Si catalytically modifed anodes for photoelectrochem. solar cell 3—9445
InTe films, optical absorpt. coeff. meas. 3—43652
In_2Te_3, effect of hard γ-irrad. on positron annihilation *(Russian)* 3—8901
In_2Te_3, resist. studies under high press. 3—3179
In_2Te_3:PbTe thin film, recrystallisation and phase transitions, electron microscopy study 3—2768
In_2Te_3-sapphire-Ag structure, gate field effects on carrier density and mobility 3—33799
In_2Te_3-Sb_2Te_3, elec. and photoelectric props. 3—28358
$In_{2.01}Te_3$, cryst. struct., X-ray diffr. anal. 3—42579
$(In_2Te_3)_{0.95}Cu_{0.05}$, effect of hard γ-irrad. on positron annihilation *(Russian)* 3—8901
InTe(Se) heat treated films, Hall effect, deposition temp. effects 3—57440
PbF_2-InF_3 system, ionic cond. props. *(French)* 3—13539
$Pb_{1-x}In_xF_{2+x}$, solid soln., prep. and cryst. struct., X-ray diffr. study *(French)* 3—13196
n-Si/$In_{2-x}Sn_xO_{3-y}$ solar cell, comparison with n-Si/SnO_2 solar cells 3—53521
Si-In_2O_3 solar cells, behaviour and conversion efficiencies 3—4392
$TlInS_2$, electroabsorption spectrum 3—3687
$TlInS_2$ inhomogeneous dynamic gratings, optical self-diffr. 3—36968
$TlInS_2$, photoconductivity and holography 3—46184
$TlInS_2(Se_2)$, high-press. Raman spectra 3—3718
$(Y, In)_2O_3:Er^{3+}$, luminescence, host sensitization mechanism 3—3781
$Y_{2.78}Ca_{0.25}In_{0.6}Ge_{0.25}Fe_{4.11}O_{12}$, magnetic properties study and Mossbauer spectrum *(Chinese)* 3—52413
$ZnIn_2S_4$, anisotropic cond., effects of comp. faults 3—8489

INDO calculations
acetylene, spin-spin coupling consts., calc. with self-consistent polarisation propagator approx. 3—26767
acrylic acid, and derivatives, conform. INDO and spectrosc. investig. 3—1376
alkane radical cations, in low-temp. solids, struct. and reactions, ESR spectrosc. obs. 3—26770
alkoxyaluminium catalysts, struct. and activity in alkylation of phenols 3—48067
bimetallocenes, weakly coupled, electron correl., semiempirical INDO calcs. 3—1261
bimetallocenylenes, weakly coupled, electron correl., semiempirical INDO calcs. 3—1261
chalcogen heterocyclopentadienes, nucl. spin-spin interactions, SCF-INDO-perturbation theory calcs. 3—11686
ethyl radical-$d_0(d_2)(d_3)(d_5)$, matrix isolated IR spectra by normal coordinate calcs. 3—45937
ethylene, spin-spin coupling consts., calc. with self-consistent polarisation propagator approx. 3—26767
2-fluorotoluene derivatives, NMR spectrum, conformational depend. 3—50424
fluorovinyl radical, form., identification and electronic struct., EPR investig. 3—26771
formaldehyde, adiabatic proton affinities of excited states, INDO/2-AHP calcs. 3—31938
free radicals, non-rigid, torsional potential and hyperfine couplings, conform. dependences 3—55843
guanine-cytosine (-Mg^{2+}) systems, H-bonded, double proton transfer and charge transfer interactions calcs. 3—41495
isopropanol, $^1J_{CH}$ coupling, solvent and internal rot. effect 3—36773
isopropylamine, $^1J_{CH}$ coupling, solvent and internal rot. effect 3—36773
lanthanide compound electronic structure calc. using INDO method, computer programming formulae *(Chinese)* 3—41492
lanthanide compound electronic structure calc. using INDO method, parameter selection and computer program *(Chinese)* 3—41493
metal group VIII carbonyls, Koopmans' defects, many-body INDO calcs. 3—1244
metallocenes, closed shell, ground and hole states, struct., INDO calcs. 3—11698
molecules, spin-spin coupling consts., calc. with self-consistent polarisation propagator approx. 3—26767
monofluorobenzaldehydes internal rot., SCF MO studies 3—31942
5-nitrofuran derivatives, radical anions, electronic struct., solvation effects 3—36681
13-nor-E, E-isogermacrone, intramolecular cyclisation, INDO-CI calcs. 3—17226
organoboranes, ^{13}C-^{11}B spin-spin couplings, interpretation using finite perturbation methods 3—1381
PMDR spectra, quantum chem. calcs. 3—17317
polyferrocenylene, band struct., INDO calcs. 3—33633
purine, ^{13}C and ^1H spin-spin coupling, solvent effects 3—1382
pyrazine, enhancement of through-bond coupling by bond angle distortion 3—17378
quixotic molecules geometry-crit. examination by CNDO/2-INDO MO methods 3—6538
radicals, spin-density distrib., hyperfine coupling consts., INDO-RHF-CI calcs. 3—11689
resorcinol radicals, mol. geometry, INDO calcs. 3—55845
resorcinol radicals, substituted, mol. geometry, INDO calcs. 3—55845
spin-spin coupling consts., transmission mechanisms, partially restricted MO calcs. investig. 3—17223
thiepins, absorpt. and MCD spectra, INDO calcs. 3—11849
transition metal compounds, Koopman's theorem nonvalidity, semiempirical MO calc. 3—11701
transition metal cpds., photoelectron spectra, reorganisation effects, Green's function INDO calcs. 3—17335
transition metal tricarbonyl derivatives, electronic struct., semiempirical INDO MO calcs. 3—45846
$AlCl_3$, catalyst, struct. and activity in alkylation of phenols 3—48067
Al_2Cl_6, catalyst, struct. and activity in alkylation of phenols 3—48067
$AlCl(OH)_2$, catalyst, struct. and activity in alkylation of phenols 3—48067
CO(II) dopamine complex, ^1H and ^{13}C paramag. shifts and ^{13}C mag. relax. rates 3—26765
$Cr_2(CH_3)_8{}^{4-}$, Cr-Cr multiple bonding, INDO calcs. 3—50313
$Cr_2Cl_8{}^{4-}$, Cr-Cr multiple bonding, INDO calcs. 3—50313
H_2NO free radical π-complex with benzene, struct., quantum-chem. study 3—45852
LiF, band struct., parametrisation of semi-empirical methods 3—23260
Ni (II) complex, dopamine, paramagnetic shift, relax. times, ^{13}C and ^1H NMR 3—6672
Ni complex, bis-(1,2-benzoquinonedioximato)-nickel (II), band struct., cryst., orbital approach based on INDO approx. 3—57274
Ni complex, porphyrinatonickel(II), band struct., INDO cryst. orbital approach 3—33618
Pd planar complexes, mol. orbitals relax. 3—11695

INDOR
see also nuclear Overhauser effect
No entries

induced anisotropy (magnetic)
energy, invariant expansion 3—3438
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloy, induced anisotropy reorientation kinetics 3—28547
Fe-Zr, amorphous, field-cooling anisotropy energy 3—57594
FeCoSiB amorphous alloys, zero-magnetostrictive, disaccommodation elimination 3—28644
$Fe_{70.3}Co_{4.7}Si_{15}B_{10}$, metallic glass, induced anisotropy reorientation kinetics, isotropic behaviour 3—28546
γ-Fe_2O_3-Fe_3O_4 solid solutions, coercivity, effect of vacancies 3—38646
Mn-Zn ferrite film, on $MnGa_2O_4$ substrate, LPE growth and props. lattice match influence 3—14517
Ni-Fe crystalline alloy, induced anisotropy reorientation kinetics 3—28547
$NiFe_2O_4$, precipitation in NiO:Fe, induced uniaxial anisotropy, FMR study 3—14139

inductance
ferromagnetic conductor, mag. field distrib. 3—43354
numerical method for problem of induction hardening of cylindrical samples 3—34342
superconductor, inductance, kinetic and internal field, nonlocal relationship between mag. field and current 3—52301

inductance measurement
small variations of inductance by means of negative inductance simulation *(Polish)* 3—5807

induction, electromagnetic *see electromagnetic induction*

induction heating
- *see also electric furnaces; ovens*
- boriding, oxidation activation, rapid high-freq. induction heating 3−53283
- metal strip, cold rolled, flatness, work rolls shape thermal modification 3−47848
- numerical solution of PDEs describing temperature and electromagnetic fields arising due to induction heating 3−34342
- Fe, grey cast, surface hardening by induction fusion 3−53285
- MgO, periclase, electroengineering, prod. by melting in induction furnace with cold crucible 3−29046

induction machines *see asynchronous machines*

induction motors
- *see also squirrel cage motors*
- acoustic noise production from no-load to full-load, practical and theoretical considerations 3−27308
- magnetic noise, criterion for quiet machines 3−1846
- module system induction motors designed for low level aerodynamic noise 3−27309
- transient operation, acoustic noise production and its sources 3−32544

inductor microphones *see microphones*

inductors
- *see also coils; power inductors; transformers*
- negative inductance simulation, meas. of small variations of inductance *(Polish)* 3−5807

industrial atmospheres *see air pollution*

industrial economics *see economics*

industrial plants
- effluent neutralisation, reagents, residence times and electrode design 3−48202
- fabric dust collectors, surface electrostatic fields, reduction of flow resistance and penetration 3−39559
- heat recovery using heat pipe heat exchangers, principles, design and advantages 3−4379
- HTGR, development aims and possibilities *(German)* 3−21494
- industrial multi-stage evaporation-concentration processes utilising plastic materials as heat-exchange surfaces 3−4378
- noise from open-air plants, CONCAWE model and expt. study 3−15021
- noise niusance anal. of national standards 3−15023
- optical fibre transducers, low sensitivity industrial appls. *(Swedish)* 3−30845
- Tehran municipal solid waste incineration for energy recovery, air pollution effects 3−34664
- turboexpander application in energy recovery from low-temperature waste heat 3−14987
- waste heat for district heating 3−48125
- waste heat recovery by heat pump utilisation *(German)* 3−29433

industrial research management *see research and development management*

industrial robots
- electromechanical manipulator for Hot Cell Verification Facility 3−31571
- multirigid-body system, dynamic analysis from Gauss principle 3−10564
- nuclear power plants, robot techniques, appls., survey 3−31642

industrial standards *see standards*

inelastic electron tunnelling spectra *see tunnelling spectra*

inelastic electron tunnelling spectroscopy *see tunnelling spectroscopy*

inert anodes *see anodes*

inert gas compounds
- *see also argon compounds; helium compounds; krypton compounds; neon compounds; radon compounds; xenon compounds*
- halide discharge lasers, analysis, design and construction 3−41858
- halide UV excimer lasers for at., mol., and condensed matter studies 3−12206

inert gases
- *see also argon; helium; krypton; neon; radon; xenon*
- adsorbed layers on graphite, melting of two-dimensional solids 3−2736
- adsorbed on metal surfaces, config. description 3−13625
- adsorption, structures and interactions 3−38233
- atom, g-factor meas., using colour centre laser 3−55899
- atom, positron annihilation in presence of elec. field 3−46068
- atom+Cs^+, pot. determ. using total cross-section meas. 3−56032
- atom+halogen atoms, channels of atom and excitation transfer, pot. surfaces 3−11929
- atom+HF, vibr.-rot. energy transfer collisions, cross-section calcs. 3−56042
- atom+Li, Li at. reson. lines impact shift 3−21717
- atom+methane, ν_3 deactivation, photoacoustic method obs. 3−37301
- atom+methane, vibr.-translation/rot. and vibr.-vibr. processes, optoacoustic phase meas. 3−41651
- atom+TlCl(Tl1), dissoc. excitation in flowing afterglow 3−58416
- atoms, dynamic dipole polarisabilities, density-functional calc. 3−55828
- atoms, excited *p* states, photoionisation cross section 3−11760
- atoms, local density approx., self-interaction correction 3−41479
- atoms, pots. meas. by excited state degenerate four wave mixing 3−11915
- atoms+H_2, energy loss and scatt. angle calc. for medium energy collisions 3−6761
- atoms+K, resonant fine struct. mixing, fluoresc. obs. 3−17358
- condensed liquids, mass and size effect 3−27812
- crystals, exciton spectrum, effect of nucl. motion *(Russian)* 3−38312
- crystals, FCC struct. and pair interaction pot. 3−46886
- dense van der Waals fluid, transport props., temp. and vol. depend. 3−13503
- dimers, self-trapped excitons 3−23283
- Earth mantle and inert gases in crustal rocks 3−15384
- electric strength, breakdown voltages at high temp. 3−33015
- gamma-ray exposure rate due to inert gases released during a reactor accident, spectral composition 3−6411
- glory region total cross sections from noble gas potentials 3−11939
- hollow cathode light source, active filter for inert gas lines 3−50725
- inert gas+O_2 interaction dynamics 3−50482
- inert gas-ethylene mixtures, collision-induced far-IR spectra 3−1353
- inert gases-Ba system, empirical interatomic pots. deduced from absorpt. meas. 3−11916
- interaction with graphite basal plane surface 3−58020
- ions, $sp^6\ ^2S$ term, correl. effects 3−11705
- ions, low energy trapping on Ti and TiO_2 film surfaces 3−8338
- ions formed by field ionisation, mass spectrometry and appearance spectroscopy 3−6591

inert gases continued
- Lesser Antilles island arc, inert gas geochem. and tectonic history 3−39836
- magnetic susceptibility, separation into diamagnetic and paramagnetic components 3−8645
- metal vapour-noble gas discharges in transition region, modelling 3−37722
- meteorite, chem. composition of Abee E4 chondrite 3−35551
- meteorite inert gas isotope anomalies due to cosmic rays 3−20307
- meteorites (Allende), inert gas isotope study 3−15882
- meteorites (E-chondrites) inert gas sites 3−25393
- Mid-Atlantic Ridge basalt, discovery of two noble gas components 3−53958
- mixtures, collision-induced absorpt., higher-order spectral moments 3−50493
- moisture content meas. using high temp. solid electrolyte galvanic cells 3−4329
- monolayers on graphite, static props. in solid phases 3−51941
- nonequilib. plasma, supersonic MHD channel 3−32874
- physisorption, nature of adatom-substrate bond 3−38232
- plasma, dense, small model of relaxation kinetics 3−27653
- plasma, gas puff, extreme UV emission, XUV source appl. 3−51294
- rare gas-Hg mixtures, multichannel discharges, static and dynamic characts. 3−13005
- rare-gas solids, electronic relaxation, atoms ejection by fast ions 3−47744
- solar flare noble gases, isotopic comp. 3−54210
- solid, electronic structure and cohesion of condensed matter, review 3−37844
- solids, relaxed excitons, time resolved absorption spectra study 3−57292
- solids, self-trapped excitons 3−23283
- solids, self-trapped excitons and F+H pair form. 3−57291
- solids 3−8250
- target+$Ne^{9+}(Ne^{10+})$, electron capture, selective final state population, energy gain spectroscopy 3−11970
- terrestrial planets atmospheres origin and evolution, implications of noble gas contents 3−30246
- trimethylamine-inert gas mols., excited states, fluoresc. decays, vibr. predissoc. 3−6698
- volcanic glasses from Pacific seafloor, inert gas geochem. 3−35106
- VUV tunable coherent radiation generation by freq. tripling and mixing *(German)* 3−1704
- atom+F^- charge neutralisation in thin target 3−26835
- NO+inert gas collisions, rot. transfer rates and propensity rules 3−32169
- ^{87}Rb vapour-inert gas mixture, resonant light absorpt. 3−12816
- SF_6-inert gas mixtures, electric charge stability *(Russian)* 3−22743
- Sr-inert gas systems, fluoresc. polarisation, collisional redistrib. 3−55887

inertial navigation
- fibre optic gyroscope, using Sagnac interferometer 3−27254
- systems for geodesy using land vehicles *(French)* 3−20155
- three-axes electromagnetic accelerometer, low-cost high accuracy design 3−30850
- vibrating beam accelerometer, strapdown inertial systems applications 3−30849

inertial systems
- Earth-pointing structures with hybrid control system, dynamics 3−48796
- systems for geodesy using land vehicles *(French)* 3−20155

infinite impulse response filters *see digital filters*

infinite series *see series (mathematics)*

inflammability *see combustion*

information analysis
- *see also cataloguing; classification; indexing*
- outstanding American astronomers, ages at publication of most-cited papers 3−59236
- particle physics, citation analysis 3−44886

information analysis centres *see information centres*

information centres
- Astronomical Data Center at NASA/GSFC, operations 3−5140
- Clusters of Galaxies Data Centre (CEDAG) *(French)* 3−5435
- data in astronomy 3−5168
- extragalactic data centralization 3−5470
- Kanazawa Data Center, astronomical data management 3−5126
- Potsdam Data Centre 3−5127
- Soviet Center of Astronomical Data 3−5164
- stellar data centres, problems 3−5361
- X-ray data, NSSDC and WDC-A-R&S activities 3−5129

information dissemination
- International Ultraviolet Explorer mission data storage, retrieval and dissemination 3−5137
- Kanazawa Data Center, astronomical data management 3−5126
- seismological bulletin, computer treatment and appl. of stored data for seismological investigations 3−15345

information retrieval
- *see also information storage*
- ASTRONET for astronomical data analysis and retrieval in Italy 3−5131
- astronomical data, retrieval and evaluation aids 3−5142
- astronomical data base and retrieval system at NASA 3−5125
- astronomical data retrieval for digital image processing 3−5135
- astronomical information from Padova-Asiago Observatory plate archives 3−5143
- astronomy, automated data retrieval, IAU colloquium (Strasbourg, July 1981) 3−30
- Astronomy and Astrophysics Abstracts: a status report 3−48
- Bibliographical Star Index 3−49
- Geneva photometric boxes, direct access using square files 3−5146
- INSPEC activities in astronomy and astrophysics 3−5165
- International Ultraviolet Explorer mission data 3−5137
- IUE data distribution 3−5128
- Metacatalogue of galaxies, data retrieval 3−5156
- space astronomy, data retrieval 3−5145
- star catalogue data for satellite attitude determ. 3−5138
- star catalogue file, optimized access 3−5134

information retrieval languages *see high level languages*

information retrieval systems
- Dearborn Observatory stellar data file 3−5362
- information management system for charged particle nuclear reaction data 3−16760
- IR data base and catalogue of IR obs. 3−5149
- medical cathlab of the present and future 3−29779
- micrographic storage, compact of digital optical storage 3−433

information retrieval systems continued
MOGADOC interactive computerised search/retrieval system 3−50540
Northern Hemisphere snow cover (November 1966 to December 1980), digital archive 3−20039
nuclear reactor Equipment Qualification Data Bank 3−1008
nuclear safety information system, natural language retrieval 3−55371
nuclear transient fuel behaviour, ERUDITE database use 3−55392
stellar bibliography retrieving system in Japan 3−5363
time and polar motion data, immediate access to data files 3−4756

information services
astronomical bibliographical card-catalogue of the IAP library 3−5150
astronomical data base and retrieval system at NASA 3−5125
astronomical plate vault information centralization 3−5169
Astronomy and Astrophysics Abstracts: a status report 3−48
automated data retrieval, IAU colloquium (Strasbourg, July 1981) 3−30
EPRI Sulphate Regional Experiment (SURE), database format and composition 3−29478
ESA data analysis facility for Faint Object Camera 3−5139
INSPEC activities in astronomy and astrophysics 3−5165
International Ursigram and World Days Service 3−4964
Nuclear Energy Agency Data Bank, function and compilation 3−6294

information storage
see also information retrieval
astronomical data storage, new developments 3−5132
International Ultraviolet Explorer mission data 3−5137
seismology, computer treatment of kinematic information and appl. of stored data for seismological investigations 3−15345

information storage systems *see information retrieval systems*

information theory
see also codes; correlation theory; decision theory and analysis; estimation theory; filtering and prediction theory; modulation; signal detection; signal processing; speech intelligibility; switching theory
astroarchaeology, stone circle geometries, information theory appl. 3−35477
astronomical telescopes and instrumentation, information efficiencies 3−30189
chemical information theory, struct. aspects 3−36641
digital EM thickness gauge, calibration with account of correction function 3−25906
multichannel acoustooptical modulators, anal. 3−50749
musical composition, Fourier anal. and information theory 3−56388
one-dimensional logarithmic criterion for assessing multiparametric systems *(Russian)* 3−30832
radiation, partially coherent, entropy, generalised canonical statistical operator construction 3−30771
sampling errors in information-measuring systems *(Russian)* 3−54707
time delay estimator, EEG analysis application 3−15259
visual structure, human global analysis, theory and model 3−39638

infrared astronomical observations
0016+16, rich distant cluster of galaxies, discovery of assoc. QSO 3−35740
A0535+26, X-ray binary star, variability of IR radiation *(Russian)* 3−35674
2A 0311−227 (EF Eridani), AM Herculis star, simultaneous IR and optical light curves rel. to accretion model 3−35672
2A 1822−371, X-ray binary, IR photometry and model for UV, optical and IR light curve 3−10384
R Aquarii, symbiotic star, JHKL photometry rel. to IR variability and nature of components 3−59365
asteroid radiometric scale calibration, use of occultation diameters and IR photometry 3−35452
asteroids and related bodies, VJHK colorimetry and implications for surface materials 3−59266
asymptotic giant branch stars in Magellanic Cloud red globulars, IR survey 3−30362
3C 345, highly polarised QSO, wavelength depend. of optical and near IR polarisation 3−59477
η Carinae, 4.6 μm speckle data, image reconstruction 3−40136
η Carinae, obs. of IR spectrum and variability 3−59368
PV Cephei (T Tauri star) nebula IR polarisation props. 3−10421
Cepheus A, assoc. mol. flows, vibr. excited H_2 2 μm line emission anal. 3−25574
Chamaeleon dark cloud complex, 2 μm survey 3−20466
CoD−61°3326, yellow supergiant, dust shell discovery from near IR photometry and spectrum 3−10329
FK Comae Berenicis, obs. of rapid changes in light curves from H and continuum photometry 3−54382
Comet Bowell (1980 b), H_2O ice identified by far IR spectra obs. 3−44711
Comet Bowell (1981b) grain nature from visible/IR obs. 3−35534
P/ Comet Chernykh (1978 IV) 3−35540
P/ Comet Encke (1980 XI), 10 μm feature and dust albedo, IR obs. 3−35540
P/ Comet Kearns-Kwee (1981 h) 3−35540
Comet Panther (1981 II), grain nature from visible/IR obs. 3−35534
P/ Comet Stephan-Oterma (1980 X), 10 μm feature and dust albedo 3−35540
P/Comet Stephan-Oterma (1980 X), grain nature from visible/IR obs. 3−35534
P/ Comet Tuttle (1980 XIII), 10 μm feature and dust albedo 3−35540
remote comets and related bodies, VJHK colorimetry and implications for surface materials 3−59266
cool giant and supergiant stars, obs. at 20, 25 and 33 μm 3−20369
cool giant stars and Mira-type variables, IR props. determ. from JHKL photometry 3−15929
3 CR radio galaxies, optical and IR props. 3−25618
Crab Nebula, mapping in JK range and size 3−48999
59 Cygni, early-type Be star, obs. of transient emission events 3−48916
Cygnus X-3, obs. in I-band 3−10402
diffuse galactic 2.4 μm enhancement region (l=355°, b=−1°), interstellar extinction var. effect 3−16033
DR 21 region, extended emission complex, model, map and nature 3−5382
E2003+225, new AM Herculis star, spectroscopic, photometric and polarimetric obs. 3−25414
1E 2259+586, pulsating X-ray source, IR pulsations obs. in optical counterpart 3−5340
1E 2259+586, pulsating X-ray source, near-IR pulsations obs. rel. to orbital period 3−20432

infrared astronomical observations continued
faint stars towards SGP, VI photometry rel. to galactic struct. and galactic thick disc 3−49026
G333.6−0.2, H II region, H_2 emission origin and distrib. 3−30518
G45.13+0.14A, H II region, 2-4 μm spectral obs. 3−10475
galactic centre, extinction to ionized gas, IR obs. 3−49009
galactic centre, polarimetry of compact near-IR sources 3−30525
galactic centre IR sources, positions 3−59506
galactic plane IR diffuse emission from late-type stars, near IR multicolour obs. 3−16032
galactic plane IR source counts, distrib. and galactic centre stars space densities, K-obs. 3−40290
nearby galaxies, catalogue of IR magnitudes and H I vel. widths 3−44846
galaxies, early type with dusty lanes, JHK obs. 3−5422
galaxies, multiaperture near IR photometry of isolated objects 3−10452
gamma-ray burst, 1978 November 19, RI photometry of optical candidates 3−10484
GL 961, assoc. mol. flows, vibr. excited H_2 2 μm line emission anal. 3−25574
GL 961, molecular outflow nature from IR/EHF obs. 3−5374
H0323+022, galactic X-ray/radio source, nature speculation 3−35741
HD 36705, post T Tauri star, spectroscopic and photometric obs. 3−5294
HD 97048, premain sequence star circumstellar formaldehyde 3−40121
Heiles 2 dark cloud, search for far-IR emission 3−49040
Herbig Ae-Be stars, near IR spectrum, JHKLM photometry 3−35601
Herbig-Haro 57, discovery of new starlike object (March 1983) 3−59332
Herbig-Haro objects, exciting stars, IR photometry 3−48899
Herbig-Haro objects, H_2 emission in IR 3−48979
Herbig-Haro objects in southern hemisphere, two-micron survey and IR photometry 3−54484
HH 100 IRS, southern Herbig-Haro object, IR brightness decrease rel. to FU Orionis phenomenon 3−54484
IC 2165, planetary nebula, obs. of 8 to 13 μm spectrum 3−59444
interstellar H_2 V=1-0 Q(6) line in Orion 3−48998
interstellar K I, abundances and physical conditions in clouds from K I reson. doublet absorpt. obs. 3−44820
IR Mira variables, JHKLM photometry of OH/IR stars rel. to discovery of large-amplitude periodic light vars. 3−59358
IRC+10216, CO movements and outflow 3−25550
IRC+10216, methane ν_3 band and HCl fundamental vibr.-rot. lines at 3 microns 3−5315
Jupiter, ethane in S Polar Region, ν_9 band IR heterodyne spectroscopy 3−40067
Jupiter, H_2O abundance from Voyager IRIS data at 5 μm 3−59251
Jupiter, high-resolution 1100 to 1200 cm^{-1} spectra rel. to tropospheric abundances of CH_4, CH_3D, NH_3 and PH_3 3−10253
Jupiter, NH_3 gas and ice haze global props. 3−35512
Jupiter, North Equatorial Belt, tropospheric gas comp. and D/H ratio 3−20287
Kleinmann-Low Nebula, CO J=16 to 15 transition detect. and OH obs. 3−40239
L1529, L183, interstellar dark clouds, searches for far-IR emission 3−49040
L1551 IRS5, detect. of large IR polarisation 3−54483
BL Lacertae objects, wavelength depend. of optical and near IR polarisation 3−59477
BL Lacertae objects and associated galaxies, CCD photometry 3−25617
late type giants/supergiants, first overtone SiO band obs. 3−15918
LDN 1551 and central object IRS 5, CO movements and outflow 3−25550
lunar surface thermoluminescence, obs. using line-depth method 3−35485
M17 and M42, H II regions interacting with mol. clouds, fine struct. IR lines 3−25563
M2-9, protoplanetary nebula IR polarisation props. 3−10421
M33 nucleus, struct. and stellar population 3−25592
M42, obs. in forbidden O III 52 and 88 μm lines and forbidden O I 63 μm and N III 57 μm lines 3−48991
M51 and NGC 5195 system, starlight reradiation by dust and star form. props. 3−5406
M87, halo population and nature 3−49016
M87, IR obs. of jet 3−54505
M-type dwarf stars, obs. in VRI colours 3−20368
M-type giant stars toward galactic centre, near-IR obs. rel. to interstellar extinction 3−10432
M-type supergiants at galactic centre, IR spectra obs. and implications for star form. 3−30363
Markarian 1040 and 1044, Seyfert 1 galaxies, dust content 3−40255
Markarian 3 and 6, Seyfert galaxies, intrinsic reddening and nonstellar continuum 3−40245
microwave background radiation, anisotropy meas. and cosmological implications 3−20533
Mira-type variables and other cool stars, IR props. determ. from JHKL photometry 3−15929
molecular cloud IR sources, obs. of IR line and radio continuum emission of circumstellar ionised regions 3−54478
molecular clouds, H_2 emission in IR 3−48979
Neptune, imaging in 8900 Å methane band with charge-coupled device 3−5222
NGC 1052, IR emission from elliptical galaxy, multi-aperture photometry 3−30486
NGC 1566, spiral galaxy, IR mapping and UBVRi photometry 3−49003
NGC 2024, C II forbidden line emission at 157 μm from H II region 3−35683
NGC 2071, assoc. mol. flows, vibr. excited H_2 2 μm line emission anal. 3−25574
NGC 4594, 3031, 5194 and 4258 spiral galaxy nuclei, population anal. 3−5423
NGC 5128 (Centaurus A), emission characts. and dust lane, 2.2 μm obs. 3−30502
NGC 5253, SO galaxy, centre star form. history 3−20482
NGC 6357, 6611 (M16) and 6618 (M17), extinction and dust props. 3−40229
NGC 7027, 10 μm spectral features, spatial studies of planetary nebula 3−48997
NGC 7027, compact planetary nebula, high-resolution near-IR and millimetre-wave spectroscopy 3−35686
NGC 7027, planetary nebula dust emission, spatial distrib., IR obs. 3−35690
NGC 7331, Sb galaxy, evidence for massive mol. ring around nucl. bulge, JK obs. 3−25602

infrared astronomical observations continued
NGC 7635 (Bubble Nebula), far IR and radio molecular obs. 3—15976
Nova Muscae 1983, JHKL photometry (1983 January 21 to 23) 3—35633
Nova Muscae 1983, optical and IR photometry and IR spectrum, (1983 January 25 to February 3) 3—44757
Nova Serpentis 1983, visual magnitude estimates and JHK photometry (1983 February 27 to March 3) 3—54386
OJ 287, BL Lacertae object, obs. of rapid variability at 1.25 μm 3—16000
OJ 287, BL Lacertae object emission models and IR/visible/UV and EHF obs. 3—5403
ρ Ophiuchi dark cloud, detect. of far-IR emission 3—49040
Orion, 3.8 μm polarization, spatial distrib. in IR cluster 3—35695
Orion molecular cloud, extinction and excitation temp. of H_2 emission from IR obs. 3—30449
Orion Molecular Cloud infrared cluster, new members 3—35691
Orion Nebula, 145.5 μm O I forbidden emission line obs. from aircraft 3—35694
Orion Nebula stars, RI photometry rel. to age range of stars and globules 3—10317
PKS 2158-380, extended ionised gas, nucleus UV emitter as ionising source 3—20520
planetary satellites and related bodies, VJHK colorimetry and implications for surface materials 3—59266
Pluto, diameter and albedo from IR obs. 3—25379
Praesepe, BVRI photometry of low-mass stars 3—10411
VV Puppis, AM Herculis star, ellipsoidal light curve obs. at 1.2 μm 3—15954
RX Puppis, symbiotic star, JHKL photometry rel. to IR variability and nature of components 3—59366
QSO 0015+162, quasar in rich distant cluster of galaxies, spectrum and redshift 3—35740
QSOs, simultaneous visual-IR polarimetry 3—49048
QSOs of high redshift, IR/visible energy distrib. 3—40272
quasar X-ray sources, IR props., JHK obs. 3—35738
R136, in 30 Doradus nebula, near IR spectrum rel. to WN or O-type spectral characts. 3—10320
radio galaxies, review of IR obs. 3—25614
radiosources, nonthermal, sources with faint red optical identifications, visible/IR photometric obs. 3—25630
very red objects towards galactic centre, near-IR spectroscopic obs. 3—49013
S235, H II region, IR spectroscopy, of IR sources and implications for line excess problems 3—54477
satellites of Uranus, albedo and diameter by photometric/radiometric obs. 3—25378
Saturn, spectrophotometric obs. rel. to cloud height differences between equator and South Equatorial Belt 3—59258
Saturn disc and rings, brightness temp. 3—35523
Serpens dark cloud, star form. region struct. and nature 3—25546
Sharpless 106—ON 2 complex, discrete IR sources mapping 3—5382
Sharpless 106 IRS 9 discovery, IR spectral obs. 3—25551
star clusters in Magellanic Clouds, IR photometric study 3—54453
stellar contributions to galactic near-IR radiation, results from near-IR photometry 3—10316
Sun, limb extensions in far IR during 1981 July 31 eclipse 3—30318
Sun, obs. of global 160-minute IR differential intensity var. 3—54310
Sun, submillimetre radiation meas. at Shorbulak, Eastern Pamirs, rel. to atmospheric transmission 3—44538
sunspots, broad-band circular polarisation 3—48877
symbiotic stars, anal. of IR variability and spectra rel. to nature of components 3—59367
symbiotic stars, brightness fluctuations of AX Per, AG Dra, BF Cyg, V443 Her, and YY Her 3—20401
symbiotic stars, IR photometry and spectroscopy 3—25459
symbiotic stars, near IR spectra 3—25460
RR Telescopii, obs. of IR variability rel. to nature of symbiotic stars 3—48931
Titan, atmospheric methane-d_1 abundance determ. from 8 to 14 μm thermal emission 3—59257
Triton, diameter and albedo from IR obs. 3—25379
Uranus, imaging in 8900 Å methane band with charge-coupled device 3—5222
Uranus ring system, 2.2 μm maps, brightness var. and optical depth 3—35530
Uranus satellites, visual and near IR photometry and spectra 3—5224
Uranus stellar occultation, 1980 August 15, 2.2 μm obs. rel. to ring system struct. and upper atmosphere temp. 3—59263
Venus atmosphere, props. of aerosols below clouds from Venera landers obs. 3—15864
Venus atmosphere, temp. and cloud struct. obs. 3—44694
visual double stars with early type primaries, photometric results 3—40184
PU Vulpeculae, photometry and polarimetry of nova-like binary 3—20398
W3, W4, W5 complex, star form. evidence from 11 and 20 μm obs. 3—5384
W51 IRS-2, star form. region, 2.95-10 μm obs. anal. 3—30453
WC9 star assoc. with C 1309—624 and C 1310—624, dust shell+extinction 3—48922
Wolf-Rayet stars mass loss determination from IR spectra 3—25478
extreme C star near open cluster NGC 1960, photometric, spectroscopic and polarimetric obs. 3—59359
C stars in Local Group galaxies, near-IR transmission grating prism survey and spectrophotometry 3—30376
H II regions, abundances from IR forbidden lines 3—15968
H II regions, S III abundance from IR fine struct. lines 3—15969
He I 10830 Å line profiles in early-type stars, atlas of Fabry-Perot scans 3—30348
OH/IR stars, 1-20 μm obs. along galactic equator 3—20383
OH/IR stars as IR Mira variables, discovery of large amplitude light vars. from JHKLM photometry 3—59358
S III 18.71 microns forbidden line towards Sagittarius A West 3—59432

infrared astronomy
see also infrared sources (astronomical)
balloon borne equipment for submillimetre brightness temp. of Sun 3—30196
balloon-borne telescope, orientation platform design 3—54238
data base and catalogue of IR obs. 3—5149
DAX on IRAS 3—35408

infrared astronomy continued
Fabry-Perot interferometer and grating spectrometer for balloon-borne far IR studies 3—48819
Fabry-Perot spectrometer *(Japanese)* 3—30197
Fourier transform IR spectroscopy on planetary missions including Voyager, results 3—10182
galaxies, IR absolute magnitude-H I rel. width-surface brightness relation rel. to cosmological expansion *(Russian)* 3—35724
giant planets and comets 3—30295
heterodyne spectrometer for 10 microns working in the Cassegrain focus of astronomical telescopes 3—30214
hydrides in interstellar space, far-IR and submillimetre astronomy 3—30469
Infrared Space Observatory, cooled telescope with photometric and spectroscopic instruments 3—40033
Infrared Space Observatory, cryogenically cooled telescope and instrumentation 3—30148
Infrared Telescope in Space, superfluid experiment in zero gravity aboard a rocket 3—35441
interstellar dust clouds, radiative transport code DUSTCD 3—54491
interstellar extinction in LMC and Galaxy, analytical expression 3—59441
interstellar H_2, properties and UV/IR obs. 3—25555
IRAS, description and prospects 3—54215
IRAS data analysis at OCC 3—35453
IRAS data processing at JPL/SDAS 3—35454
IRAS extrinsic IR detectors, radiation effects 3—44672
IRAS telescope 3—35438
IRAS telescope focal-plane array test facility, at NASA Ames Research Centre 3—30180
Mars, spectral reevaluation in mid-IR region 3—30248
Moon, spectral reevaluatioin in mid-IR region 3—30248
Orion Molecular Cloud CO movements from EHF, THF and IR obs. anal. 3—30470
SIRE (Space Infrared Experiment) contamination potential, preliminary assessment 3—10183
sky noise processing by chopping, nodding and filtering 3—40039
solar IR intensity variations, differential technique rel. to obs. of global 160-minute var. 3—54310
southern bright stars, JHKLM photometry homogenization 3—59319
space telescope, extended lifetime, hybrid cryogenic cooling system 3—40005
Spacelab 2 IR telescope, He II Dewar subsystem performance obs. 3—35442
spectrometer and far-infrared photometer calibration 3—30198
submillimetre astronomy from space platforms 3—30194
submillimetre wave transmission of atmosphere at Shorbulak, E Pamirs, meas. 3—44538
telescope, electromechanical device for support of oscillating secondary mirror 3—54243
telescope point source location, coherent and incoherent imaging comparison 3—10211
telescopes, orbiting, He purge flow prevention of atm. contamination of cryogenically cooled optics 3—44638
water vapour predictions for obs. from European mountain sites 3—48624
H II regions, Ar II/Ar III and S III/S IV IR line ratios rel. to excitation conditions 3—44818
H_2 formation in cosmological epoch $40 \leq z \leq 200$, effect on IR background radiation 3—35745
Si:Ga photodetectors, performance under reduced background 3—59220

infrared communication *see optical communication*

infrared detectors
see also bolometers; photodetectors
automatic photographic trigger for fast exposure times, using IR transmitter/receiver, multivibration *(Spanish)* 3—10936
blackbody heterodyne receiver for noise equiv. power meas. and photodetector characterisation 3—393
calibration and standards, conf., San Diego, CA, USA (Aug. 1981) 3—12
calibration errors in IR seekers at low energy levels 3—54770
calibration using laser testing, coherence effects and their avoidance 3—399
cryogenic heat pipe for coupling to cooler 3—40614
cryogenically cooled detector array, narcissus effect 3—392
distributed-line pyroelectric detector 3—49453
Earth-looking sensor radiometric test chamber 3—54771
electro-optics/laser conf., Brighton, England (March 1982) 3—40320
far-IR detector cooling for fusion research 3—36019
fibre optic communication trends, conf., Arlington, VA, USA (May 1982) 3—49070
handheld thermal imagers for 3-5 μm band using signal processing in the element (SPRITE) detectors 3—54773
high speed optical detectors and (GaAl)As lasers for signal processing appls. 3—17494
III-V ternary compound planar doped barrier photodetectors, detectivity calcs. 3—45202
IRAS extrinsic IR detectors, radiation effects 3—44672
IRAS telescope focal-plane array test facility, at NASA Ames Research Centre 3—30180
laser spectroscopy of molecular beams, using room-temp. pyroelectric detector 3—17278
long wavelength photodetectors for fibre optic communications 3—49448
multiband modular radiometer calibration, for remote sensing field research 3—4866
$NiSi_2$-Si infrared Schottky photodetectors grown by molecular beam epitaxy 3—5853
photochemistry, IR laser, possible source of anomalous results 3—58434
photothermal imaging and thermal surface waves as a NDT tool for coatings 3—48042
pyroelectric detector analysis, expt. device, amplifier cct. *(Spanish)* 3—36090
pyroelectric linear array detectors, high performance 3—10901
pyroelectric thin film IR detector, optimum operating conditions 3—49452
semiconductor thin-film photoelectromag. detectors for far IR radiation 3—47382
sensitivity anal. using acoustooptical interaction with grating in a light pipe 3—40691
sensor technology, conf., Arlington, VA, USA (May 1982) 3—54566
Space Shuttle IR radiance instrumentation, contamination effects obs. 3—10085
spaceborne thermal detectors calibration, earth radiation budget expt. appl. 3—400

infrared detectors continued
- temperature-jump apparatus with infrared detection for relaxation studies in thin samples 3—403
- TGS, γ-irrad., detector specific material parameter, rel. to pyroelec. IR detectors 3—49451
- thermal wave imaging for nondestructive evaluation 3—48041
- wide-band fast-acting receiver of EM radiation, welded-contact design 3—5855
- $AgGaS_2$ up-convertor based sensitive IR detect. technique 3—54774
- Al-Al_2O_3-Al thin-film diode array appl. 3—16415
- AlGaAs/GaAs multilayer graded-gap avalanche photodiodes for 0.8-1.8 μm wavelength region 3—49447
- CO_2, high power, beam profile meas. system *(Japanese)* 3—54763
- CdHgTe, thin-film photoelectromag. detectors for far IR radiation 3—47382
- $Cd_xHg_{1-x}Te$ photodiodes, zero bias resistance area product calc. for 8-14 μm range, doping effects 3—25947
- CdTe-HgCdTe photodiodes, In diffused, I-V and C-V characts., minority carrier diffusion length 3—25946
- GaAs:Sb heterojunction photodiode for solar corona Fe XIII 10747 Å line 3—20240
- $Ga_{0.47}In_{0.53}As$ planar doped barrier photodetectors, detectivity calcs. 3—45202
- $Ga_{0.47}In_{0.53}As$/InP p-i-n photodiodes, performance characts. and life test data 3—40692
- p-Ge photon drag IR detector, p-Ge element optimal parameters calc. *(Chinese)* 3—40685
- HgCdTe IR detectors, photoconductive and photovoltaic types, 2-14 μm 3—20897
- n-$Hg_{0.8}Cd_{0.2}Te$, LPE growth for photoconductivity-type IR detector 3—52979
- n-$Hg_{0.8}Cd_{0.2}Te$ layers, LPE growth, IR detector appls. 3—34245
- InGaAsP/InP p-i-n sensors for laser based optical emitter for 1.3 μm wavelength multimode fibre systems 3—56345
- InSb, n-type, Zn diffusion, IR photovoltaic detector appl. 3—33503
- InSb photon drag detection at 385 μm 3—45203
- InSb, proton damage isolation effect, IR detector responsivity and cross-talk problems *(Chinese)* 3—8107
- $In_{2-x}Sn_xO_{3-y}$ transparent antireflection and conduction coating for IR photodetection 3—38946
- $LaBr_3$:Sm quantum counter for 10.6 μm radiation 3—49454
- $LiTaO_3$ pyroelectric IR detector 3—49450
- PbS IR detector nonlinearity meas. method *(Chinese)* 3—36083
- $PbS_{1-x}Se_x$ photovoltaic detectors, carrier lifetimes and resist.-area product 3—47381
- Pd_2Si thin-film IR Schottky-barrier detectors with optical cavity, photoresponse, theory and meas. 3—45208
- PtSi Schottky-barrier IR 64×128 element CCD focal plane array, design and performance 3—54772
- PtSi thin-film IR Schottky-barrier detectors with optical cavity, photoresponse, theory and meas. 3—45208
- PtSi thin-film Schottky-barrier IR detector with optical cavity, photoresponse 3—27263
- Si photodiode, weak opt. signal detecting device 3—5856
- Si photodiode self-calibration for IR radiometry 3—395
- Si reach-through avalanche photodetector 3—40693
- Si:Ga photodetectors, performance under reduced background 3—59220

infrared imaging
- aerial thermography, quantitative methods 3—5857
- beam profile monitor based on IR thermography 3—26522
- breast cancer detection by thermography, performance goal and diagnostic feature identification 3—48369
- calibration and standards, conf., San Diego, CA, USA (Aug. 1981) 3—12
- cholesteric liquid crystal cell, IR radiation excited, used in visualiser, relax. processes 3—37781
- clinical thermographic diagnosis for mass screening, computer implementation 3—15188
- compact refractor telescopes for the thermal IR 3—10875
- cryogenic enclosures, heat inleak detect., IR thermography technique 3—16363
- false-colour thermography picture prod., appls. *(German)* 3—20852
- fluorescent thermal imaging for temp. profiling with 0.7 μm spatial resolution 3—30853
- focal plane, thick-film hybrid realisation, satellite imaging, use at cryogenic temp. 3—40597
- glass fibre reinforced plastic, structural integrity assessment using liquid crystal kit 3—58348
- handheld thermal imagers for 3-5 μm band using signal processing in the element (SPRITE) detectors 3—54773
- horizon sensor errors calculated by computer models, comparison with measured orbit performance 3—5089
- horizon sensor performance analysis computing using Earth atmosphere model 3—4959
- inhomogeneity exam. of materials 3—48003
- lens press forging for IR optical systems 3—7226
- lens system, air-spaced doublet achromat design, aberration theory 3—41954
- liquid crystal thermography quantitative geometric charact. of two-dimensional flaws 3—58347
- medical thermography in Japan *(Japanese)* 3—44310
- mid-IR fibre fabrication for medical appls. 3—50767
- multiband modular radiometer calibration, for remote sensing field research 3—4866
- narcissus effect, refls. and retrorefls. in cryogenically cooled detector array 3—392
- OTF concept applied to thermal imaging systems 3—1801
- photoacoustic microscopy, thermo- and photo-displacement detection 3—45224
- photothermographic dry Ag technology at 3M 3—435
- piezoelectric ceramic acoustic radiators flaw detection using thermovisor 3—48022
- power deposition on limiters and divertor targets, thermographical meas. 3—18123
- precision in measurements made by infrared thermography *(French)* 3—49356
- rapid heating thermal balance, using IR image furnace 3—30851
- recognition of thermal images of military vehicles, scan-line density and S/N ratio effects 3—4506
- remote sensing, satellite visible and IR appl. to oceanic processes 3—15653

infrared imaging continued
- scan pattern distortion, 2-D, generated by combining plane mirror and regular polygon scanner 3—50784
- sensor technology, conf., Arlington, VA, USA (May 1982) 3—54566
- simulation of IR images of natural backgrounds 3—26954
- skin differential temp. correlation for ovulation detect. using IR thermography 3—24845
- Space Shuttle IR radiance instrumentation, contamination effects obs. 3—10085
- storm life cycle, IR sensing 3—15623
- temperature difference, minimum resolvable, for thermal imaging system evaluation 3—1803
- test facility for thermal imaging system assessment 3—1804
- test facility for thermal imaging systems 3—1805
- thermographic temp. meas. systems, atmospheric attenuation effects 3—54730
- wide dynamic range forward looking IR set 3—56342
- Cu_2S-CdS system, phase diagram 3—58107
- HgCdTe IR detectors, photoconductive and photovoltaic types, 2-14 μm 3—20897
- InSb highly homogeneous single crysts., growth and characterisation for IR imaging devices 3—34215
- $LiVO_3$-$NaVO_3$ system, isomorphic miscibility, thermoradiographic investig. 3—51801
- PtSi Schottky-barrier IR 64×128 element CCD focal plane array, design and performance 3—54772
- PtSi thin-film Schottky-barrier IR detector with optical cavity, photoresponse 3—27263
- Zn_3As_2, polymorphic transitions, thermographic study 3—57076

infrared-infrared double resonance *see optical double resonance*

infrared radiometers *see radiometers*

infrared sources
- A source radiation spectral composition calc. *(Czech)* 3—25916
- automatic photographic trigger for fast exposure times, using IR transmitter/receiver, multivibration *(Spanish)* 3—10936
- bromotrichloromethane liquid filled SiO_2 fibres, broadband IR generation by stimulated Raman scatt. 3—41915
- coherent sources of IR and mm waves, appls. book 3—40
- coherent sources of IR and mm waves, scientific appls., book contrib. 3—1651
- high temperature emitters, complex heat transfer calc., mathematical model 3—37339
- signal generators, Model 7700 and 7750, for calibrating and testing fibre optic components 3—37198
- spectroscopic, IR tunable lasers assessment 3—10928
- standard, blackbody model with high effective emissivity 3—46268
- CO_2 laser as IR spectroscopic light source *(French)* 3—9373
- GaAlAs laser, direct pumping, high-speed source development 3—7004
- Pb salt tunable diode lasers and laser systems for 3 to 30 μm IR spectral system 3—46208

infrared sources (astronomical)
- 060+67, 5 GHz radio source, optical-IR spectral index of optical counterpart 3—40277
- A0535+26, X-ray binary star, variability of IR radiation *(Russian)* 3—35674
- R Aquarii, symbiotic star, evidence for dust IR emission from JHKL photometry 3—59365
- ϵ Aurigae, IUE and IR photometry during eclipse ingress (April 1982 to January 1983) 3—35667
- BN object, dust grains, 3 micron ice band 3—40224
- η Carinae, obs. of IR spectrum and variability 3—59368
- Cepheus MC-1 molecular cloud core, IR objects model from HCO^+ line profiles 3—25575
- Chamaeleon dark cloud complex, 2 μm survey, obs. 3—20466
- circumstellar dust shells, radiative transfer rel. to spectral energy distrib. and radial intensity profile 3—15907
- circumstellar ionised regions, IR line and radio continuum emission 3—54478
- circumstellar shells, ultracompact H II regions form. and interactions 3—25564
- CoD−61°3326, yellow supergiant, dust shell discovery from near IR photometry and spectrum 3—10329
- compact near-IR sources in galactic centre polarimetry 3—30525
- cool giant and supergiant stars, obs. at 20, 25 and 33 μm 3—20369
- cool giant stars and Mira-type variables, IR props. determ. from JHKL photometry 3—15929
- 3 CR radio galaxies, optical and IR props. 3—25618
- R Crateris, semi-regular variable, rapid optical var., visible obs. 3—35606
- N1016 Cygni, bipolar nebula detect., mass flows and visible obs. 3—54380
- NML Cygni, evolutionary state, mass loss, mass and luminosity and H II region anal. 3—59504
- V1016 Cygni, UV shell formation obs. from IUE spectra 3—35613
- diffuse galactic 2.4 μm radiation enhancement region (l=355°, b=−1°) from M-type stars anal. 3—16033
- DR 21 region, extended emission complex, model, map and nature 3—5382
- G333.6−0.2, H II region, H_2 emission origin and distrib. 3—30518
- galactic center souces, positrons 3—59506
- galactic centre direction, near-IR spectroscopic obs. of two very red objects 3—49013
- galactic plane IR diffuse emission from late-type stars, near IR multicolour obs. 3—16032
- galactic plane source counts, distrib. and galactic centre stars space densities, K-obs. 3—40290
- nearby galaxies, catalogue of IR magnitudes and H I vel. widths 3—44846
- Galaxy, struct. and props. of nucleus from IR, radio and X-ray data 3—49032
- Galaxy near-IR radiation, anal. of contributing stellar populations 3—10316
- GC-IRS 7, interstellar grains IR spectrum anal. 3—20450
- GL 961, molecular outflow nature from IR/EHF obs. 3—5374
- Heiles 2 dark cloud, search for far-IR emission 3—49040
- Herbig-Haro objects in southern hemisphere, two-micron survey and IR photometry 3—54484
- AC Herculis, RV Tauri star, kinematic and shock phenomena in stellar atmosphere 3—20397
- HGC 7538 (IRS1), VLBI aperture synthesis obs. of 1720 MHz OH maser 3—5441

infrared sources (astronomical) continued
HH 100 IRS, southern Herbig-Haro object, IR brightness decrease rel. to FU Orionis phenomenon 3−54484
IC 2165, planetary nebula, obs. of 8 to 13 μm spectrum 3−59444
intermediate-mass star formation regions with IR excess, dynamical struct. 3−30473
interstellar clouds, hot-centred, dirty silicate grains models rel. to IR spectra 3−5397
IR Mira variables, discovery of large-amplitude periodic vars. in OH/IR stars from JHKLM photometry 3−59358
IRc2 in Orion, SiO isotope emission and model 3−40231
IRC+10216, CO movements and outflow 3−25550
IRC+10216, methane ν_3 band and HCl fundamental vibr.-rot. lines at 3 microns 3−5315
IRC+10420, OH maser main line emission, Stokes polarimetry 3−25412
IRC 10216, shell SiS maser emission, SHF obs. 3−59505
IRc 2 in Orion Nebula, nearby SiO high vel. flow, EHF obs. 3−59433
IRS 16 in galactic central region, two-colour CCD obs. of two optical objects 3−20478
IRS 5 in LDN 1551 CO movements and outflow 3−25550
IRS 8, in Herbig-Haro 57, discovery of nearby optical starlike object (March 1983) 3−59332
Kleinmann-Low nebula, 70-90 GHz obs. of SO_2 3−30450
Kleinmann-Low Nebula, CO J=16 to 15 transition detect. and OH obs. 3−40239
L1529, L183, interstellar dark clouds, searches for far-IR emission 3−49040
L1551 IRS5, detect. of large IR polarisation 3−54483
LDN 1551 and central object IRS 5, CO movements and outflow 3−25550
long-period variable stars, optical polarisation rel. to IR excess, circumstellar dust shells anal. 3−59343
M42, obs. in forbidden O III 52 and 88 μm lines and forbidden O I 63 μm and N III 57 μm lines 3−48991
M87, IR obs. of jet 3−54505
M-type giants and supergiants, circumstellar dust shell, IR emission and raditive transfer 3−40128
M-type supergiants at galactic centre, IR spectra obs. and implications for star form. 3−30363
Mira-type variables and other cool stars, IR props. determ. from JHKL photometry 3−15929
molecular cloud IR sources, appl. of ice optical consts. and sublimation temp. 3−40022
molecular cloud IR sources, obs. of IR line and radio continuum emission of circumstellar ionised regions 3−54478
molecular clouds, ionized gas in active cores, 5 GHz obs. 3−48971
NGC 1052, IR emission from elliptical galaxy, multi-aperture photometry 3−30486
NGC 1566, spiral galaxy, IR mapping and UBVRi photometry 3−49003
NGC 2071, reflection nebula, CO outflow and CS motion assoc. with IR sources 3−5383
NGC 2071, star form. region, H I 21 cm line detect., assoc. with IR star cluster 3−48989
NGC 2071 molecular cloud core, IR objects model from HCO$^+$ line profiles 3−25575
NGC 2346, bipolar nebula, nature and form. from hot subdwarf binary mass loss 3−30457
NGC 7027, compact planetary nebula, high-resolution near-IR and millimetre-wave spectroscopy 3−35686
NGC 7635 (Bubble Nebula), far IR and radio molecular obs. 3−15976
novae, time-dependence of IR spectra 3−59364
OH 26.5+0.6, radiative transfer model rel. to IR spectrum and interstellar grain comp. 3−49053
ρ Ophiuchi dark cloud, detect. of far-IR emission 3−49040
Orion, 3.8 μm polarization, spatial distrib. in IR cluster 3−35695
Orion A, origin of forbidden C I IR emission in H II or H I region 3−10422
Orion molecular cloud, extinction and excitation temp. of H_2 emission from IR obs. 3−30449
Orion Molecular Cloud infrared cluster, new members, IR obs. 3−35691
Orion Nebula, star form. characts., IR sources anal., struct., internal motion and comp. 3−15985
Orion-KL region, obs. of extended anisotropic high-vel. gas flows 3−10424
protostars, IR source searches in star form. regions, surrounding interstellar matter nature 3−25434
RX Puppis, symbiotic star, JHKL photometry rel. to IR variability and nature of components 3−59366
radio galaxies, review of IR obs. 3−25614
S235, H II region, IR spectroscopy, of IR sources and implications for line excess problems 3−54477
HM Sagittae, symbiotic star, spectrum and continuous emission and binary star model 3−25470
semi-regular stars, optical polarisation rel. to IR excess, circumstellar dust shell anal. 3−59343
Sh 2-269, H II region-molecular cloud complex, optical and millimetre wave study 3−5386
Sharpless 106−ON 2 complex, discrete IR sources mapping 3−5382
Sharpless 106 IRS 9 discovery, IR spectral obs. 3−25551
Sharpless 235B, HCN mapping and column density 3−25580
star formation regions maser and IR sources, mass loss phenomena 3−25572
stars, anal. of stellar populations contributions, to Galaxy near-IR radiation 3−10316
stellar gaseous extended ionised envelopes, radio/IR emission and spectral models *(Italian)* 3−15912
symbiotic stars, anal. of IR variability and spectra rel. to nature of components 3−59367
symbiotic stars, IR photometry and spectroscopy 3−25459
RR Telescopii, obs. of IR variability rel. to nature of symbiotic stars 3−48931
W3, W4, W5 complex, star form. evidence from 11 and 20 μm obs. 3−5384
W3(OH), far IR radiation field rel. to interpretation of OH maser obs. 3−16026
W3 molecular cloud core, model involving IR objects from HCO$^+$ line profiles 3−25575
W51 IRS-2, star form. region, 2.95-10 μm obs. anal. 3−30453
WC9 star assoc. with C 1309−624 and C 1310−624, IR obs. 3−48922
C stars in Magellanic Clouds star clusters, effects on clusters integrated IR photometry 3−54453

infrared sources (astronomical) continued
H II regions, Ar II/Ar III and S III/S IV IR line ratios rel. to excitation conditions 3−44818
H II/OH maser regions, pumping by IR line overlaps and collisional excitation by H_2 3−16025
OH 0739−14, bipolar nebula, 2.2 μm polarisation maps, dust grains anal. 3−40236
OH 231.8+4.2, dust grain mantles, 3 micron ice band 3−40224
OH type I masers and OB association form. 3−40273
OH/IR stars, 1-20 μm obs. along galactic equator 3−20383
OH/IR stars as IR Mira variables, discovery of large amplitude light vars. from JHKLM photometry 3−59358
OH-IR stars, high optical depth, double-shell circumstellar dust shells models 3−5280

infrared spectra *see infrared spectra of diatomic inorganic molecules; infrared spectra of inorganic solids; infrared spectra of organic molecules and substances; infrared spectra of polyatomic inorganic molecules; spectra of inorganic liquids and solutions*

infrared spectra of diatomic inorganic molecules
atmospheric hot gas, quantitative emission and absorpt. spectrometry from moderate resolution spectra 3−9526
CO, press. shift expt. on vibr.-rot. band, differential Fourier spectroscopy 3−5884
hydracids, near IR spectrum, Q-branch, matrix effects 3−27974
matrix-isolated impurities IR absorpt. line shapes, Heisenberg's eqn. of motion appl. 3−56000
^{12}C ^{13}C, Fourier spectroscopy of Phillips system 3−44648
^{13} C_2, Fourier spectroscopy of Phillips system 3−44648
AlF, $\Delta\nu=1$ band, IR diode laser spectra 3−6643
BF, ground state, IR transition rates, ab initio SCF calcs. 3−11656
BF$^+$, ground state, IR transition rates, ab initio SCF calcs. 3−11656
CO, adsorption on Cu (110) surface, dipole coupling and chem. shifts, IR refl. absorpt. spectra 3−38833
CO aggregates in Ar and O_2 matrices, IR absorpt. freq. investig. 3−32052
CO, chemisorbed on supported metals, errors and artifacts in IR bands 3−8838
CO, IR emission and absorpt. spectra intensity calc. under vibr. nonequilib. conditions 3−36756
CO, IR intensities, ab initio calcs. 3−1238
CO, in RF discharge, vibr. distrib., IR, UV visible obs. 3−7815
CO, nonequilib. vibr. excitation, Fourier transform IR emission spectra obs. 3−6628
CO, semiclassical IR vibr. spectra 3−50364
CO, spectral line intensities and half-widths, collisional broadening 3−17274
CO, vibr. energy exchange pumping, isotope enrichment, fluoresc. and IR obs. 3−41613
CO, vibrationally excited by hot Pt surface, internal energy distrib. 3−56050
CO$^+$, far IR transitions obs. 3−11792
^{12}C^{13}C, Fourier spectroscopy of Ballik-Ramsay system 3−30165
$^{13}C_2$, Fourier spectroscopy of Ballik-Ramsay system 3−30165
D_2, dissolved in Ar, rot. line profile of induced spectra, density effects 3−55931
D_2, high orbital angular momentum states, ab initio calcs. 3−26629
DBr, dipole moment, laser Stark and Fourier transform spectroscopy 3−26750
H_2, compressed, frequency conversion for broad-band radiation by SRS 3−32411
H_2, dissolved in Ar, rot. line profile of induced spectra, density effects 3−55931
H_2, high orbital angular momentum states, ab initio calcs. 3−26629
H_2, quadrupole spectrum, line positions and strengths 3−30166
H_2-He mixture, collision induced spectra, intercollisional interf. effect on S_1 rot. line 3−45942
H_2-inert gas van der Waals molecule IR spectra 3−50398
H_2+Ar, collision induced emission in fundamental vibr. rot. band 3−26732
H_2+He collision, far IR absorpt. spectrum anal. 3−11797
HD, transition moments, IR obs. 3−26752
HD$^+$, vibr. rot. spectroscopy near dissoc. limit, meas. of v=17-14 band 3−55922
HF, semiclassical IR vibr. spectra 3−50364
HF+He, IR laser-crossed molecular beam study 3−26811
I_2, ground state molecular constants, Fourier absorption spectroscopy 3−41573
KF, $\Delta\nu=2$ band, IR diode laser spectra 3−6643
LiCl+propan-1-ol, mol. interaction, IR and NMR investig. 3−1450
NH radical, rot. hyperfine spectrum around 1 TH_3 3−11791
NH, vibr.-rot band, rot. consts., IR obs. 3−26748
NO, coadsorption with O on Ru (001), temp. programmed desorpt. and IR study 3−57222
NO, $D^2\Sigma^+\rightarrow A^2\Sigma^+$, $E^2\Sigma^+\rightarrow D^2\Sigma^+$ and $E^2\Sigma^+\rightarrow A^2\Sigma^+$ systems study by IR Fourier tranform spectrometry 3−32039
NO, IR band strength and collision halfwidths, tunable diode laser meas. 3−50401
NO IR radiation, kinetic model for upper atmosphere 3−10108
NO, semiclassical IR vibr. spectra 3−50364
O_2, light absorpt. mechanism during $^3\Sigma_g{}^-$ to $^1\Delta_g$ and $^3\Sigma_g{}^-$ to $^1\Sigma_g{}^+$ transitions 3−32074
OH groups on silica surfaces, IR spectra obs. 3−28854
OH, interstellar, IR line overlaps and collisional excitation by H_2 rel. to OH masers pumping 3−16025
OH night airglow, vibr. population distrib. 3−59142
OH radical, IR emission spectrum 3−52
SbBr, $b0^+\rightarrow X_10^+, X_21$ IR emissions and vibr. freq. 3−26740
TeSe, $b^1\Sigma^+$ and $a^1\Delta$ emissions, near-IR obs. 3−41566
TiO, partial vibr. anal. of $f^1\Delta$-$a^1\Delta$ transition 3−17259

infrared spectra of inorganic solids
alkali halides, small crystals, IR absorption of surface phonon modes *(Japanese)* 3−3736
alkali halides, $VO_4{}^{3-}.Sb^{3+}$, $VO_4{}^{3-}.Al^{3+}$ and $SiO_4.Th^{4+}$ mol. impurity complexes, IR absorpt. study 3−23985
alkali oxide-WO_3 systems, rapidly quenched glasses prep. and characteris. 3−29054
alkaline earth oxides, lattice dynamics 3−22992
aluminofluorophosphate glasses, struct. with additions of groups I-III fluorides 3−22792

infrared spectra of inorganic solids continued
- amorphous semiconductors, localised states, two freq. light induced absorpt. and energy density 3—38832
- antiferromagnetic semiconductor, optical absorpt. edge shift, s-f model 3—8844
- carbonaceous systems, 1600 cm^{-1} band, beam deflection IR obs. 3—28863
- chlorite, mid and far IR extinction coeffs., interstellar appl. 3—35422
- coordination complexes, structure, mag. moments visible and visible spectra 3—52786
- crysts., optical spectrosc. and EPR obs. 3—57959
- diamond:Ni, synthetic, impurity absorpt. spectra meas. 3—23979
- diaplectic labradorite glass, from Manicouagan impact order, phys. props. 3—35168
- garnet bubble films, refractive index meas. 3—34050
- glass, strength, effect of metal-oxide coatings 3—24384
- graphite:F^+, ion implanted, metallic IR reflectivity and elec. cond. 3—2444
- graphite intercalation compound with BrF_3, composition and struct. 3—13183
- halosodalites, nonstoichiometric, colour centre destruction spectra 3—19160
- ice, optical constants and thermal radiative props. 3—8788
- ice Ic, librational region in IR spectra 3—8152
- ice mixtures, 3 microns band anal., interstellar appl. 3—57901
- inert gas solids, relaxed excitons, time resolved absorption spectra study 3—57292
- magneto-optical props., appl. to magneto-optical unidirectional TE-TM mode convertor 3—23926
- metal (II) halide aniline complexes, IR and Raman vibr. spectroscopy 3—34091
- metal (II) hexafluorosilicate salts, hexa-aquo, IR absorption studies 3—19123
- metal oxide film optical filters, pyrolysis prep. and optical props. 3—56304
- metal particle composite, far IR absorpt. mechanisms 3—3724
- metal particles, ultrafine, far-IR absorption by eddy currents 3—23939
- metal small particles, far IR absorpt., non-local theory 3—23958
- metals, IR absorptivity using dual non-resonant cavity meas. 3—25965
- metals, optical properties in IR and far IR 3—57868
- micas, tetrasilicon synthetic, IR spectra absorpt. bands *(Ukrainian)* 3—14277
- montmorillonite, mid and far IR extinction coeffs., interstellar appl. 3—35422
- multicomponent inorganic glass, vibr. IR and Raman spectra and nonlinear susceptibility 3—34086
- nitrates, cryst. and molten, anharmonicity of nitrate ion vibrs., effect of temp. and phase state 3—52789
- perovskite phases, vibrational spectroscopy, evidence of ferro and antiferroelectric directions *(French)* 3—8776
- phosphate coatings, nondestructive thickness meas. by IR absorption 3—54715
- physical props., theory, book 3—54596
- plancheite, absorption spectra of Cu^{2+} and EPR meas. 3—28875
- polyacetylene:I,NH_3, cis to trans conversion during doping, IR spectra study 3—42541
- polyacetylene, high press. optical absorption spectra, expt. and tight binding calc. 3—3763
- quartz, chemisorption of H_2 under mech. activation, IR spectral study 3—14885
- quartz resonator crystals grown with $LiNO_2$ and $LiNO_3$ dopants, mech. Q, IR absorpt. obs. 3—52912
- sealing glass with high absorption in the near infrared region 3—34088
- semiconductor, amorphous, ultrafast relax. of photoinduced carriers 3—38836
- semiconductor size-quantised film, inter-subband IR absorption 3—3847
- semiconductor small crystals, IR absorption of surface phonon modes *(Japanese)* 3—3736
- semiconductors, lightly doped, interimpurity absorpt. of IR radiation 3—38856
- serpentine, mid and far IR extinction coeffs., interstellar appl. 3—35422
- shattuckite, absorption spectra of Cu^{2+} and EPR meas. 3—28875
- SOSMOS accumulation layers, intersubband resonances, Fourier transform spectroscopy study 3—43293
- steel, stainless, surface topography, monochromatic directional emittance *(French)* 3—8309
- steel, weathering, passive film characts. by Raman and IR spectra 3—43981
- tellurites, Te-O stretching vibr., IR spectral study 3—3705
- tetracyanoethylene, phonon dispersion of external and low freq. internal vibrs. 3—42724
- transition metal dithiocarbamates, chem. shifts from IR and XPS spectroscopies 3—23931
- transition metal hexacyano compounds, solid and solns., vibr., IR and Raman anal. 3—19116
- β-$A\text{-}_2O_3$-$Li_2O.nH_2O$, cryst. struct., neutron diffr., IR absorpt. and Raman scatt. 3—14282
- Ag-Ge amorphous film, struct., elec. and optical props., free electron model 3—37787
- $AgAsS_2$ vibrational spectra features ex 3—3734
- AgBr(Cl), vibr., optical and thermodynamic props., three body force shell model 3—38007
- $(Ag_{x/2}Ge_{1-x}Sb_{x/2})Te$, ferroelec. phase transition, elec. cond. and optical absorption studies 3—43496
- $AgI(Br)$-Ag_2O-B_2O_3 superionic conducting glasses, IR spectra, glass transition temp. and cond. studies 3—33495
- Ag_3PS_4, vibrational spectra and DTA study *(German)* 3—43551
- AgTlSe, optical elastic and acousto-optical props. 3—52767
- $(Al_xGa_{1-x})_yIn_{1-y}As$, lattice matched to InP, MBE growth and elec. and optical props. 3—24132
- AlN piezoelectric. film, low temp. growth and optical and acoustical props. 3—3000
- γ-Al_2O_3, hydrargillite, IR spectra, OH stretching bands investig. 3—19126
- Al_2O_3, hydrated, exoelectron emission studied by IR spectroscopy 3—8944
- Al_2O_3-based solid electrolytes, β- and β''-phase, IR, Raman and neutron scatt. studies, static and dynamic struct. anal. 3—43547
- β-Al_2O_3-LiO_2, hydration reaction, IR meas. 3—14858
- β-Al_2O_3-Na_2O, far IR absorption, rel. to struct. and ionic cond. 3—19121
- β-Al_2O_3-$Na_2O.nH_2O$, cryst. struct., neutron diffr., IR absorpt. and Raman scatt. 3—14282
- γ-AlO(OH), boehmite, H position in cryst. lattice, IR investig. 3—18276

infrared spectra of inorganic solids continued
- $Al(PO_3)_3$-AlF_3-based glasses, form. and struct., X-ray, DTA and IR spectra studies 3—33124
- As-based chalcogenide glasses, photoinduced struct. changes, IR absorpt., Urbach tail features 3—52804
- As-Se, amorphous, second-order vibration spectrum, IR absorpt. study 3—23934
- As-Te film, amorphous, fabrication, comp. and physicochem. props. 3—8995
- As_2S_3, glass, vibr. props., IR and Raman spectra and struct. model 3—23942
- As_2S_3:Au glass, structural, optical and electrical props. *(Japanese)* 3—56822
- Au-Ge amorphous film, struct., elec. and optical props., free electron model 3—37787
- B-B, elec. conduction mechanism, elec. and optical props. 3—8495
- BN, Geksanit-R polycrysts., reflection spectra of various phase comps. 3—14817
- B_2O_3-P_2O_5-$SiO_2(Al_2O_3)$, glass, struct., IR spectra and X-ray diffr. study 3—13113
- $B_{12}X_{12}{}^{2-}$ icosahedral anions, (X=H,D,Cl,Br,I) vibr. spectra in solids and solns. 3—8832
- $BaF_{2-x}H_x$, mixed cryst., lattice vibr., IR spectra study 3—2705
- Ba_2FeMoO_6, anomalous magneto-optic Kerr effect, influence of oxidation 3—34075
- $BaFe_{12}O_{19}$, magneto-optical and optical props. meas. 3—8805
- $BaFe_{1-x}Ru_xO_{3-y}$, cryst. struct. of polytypes, cond. props. *(German)* 3—18272
- BaO-B_2O_3-Fe_2O_3 glass, IR spectra 3—14295
- $Ba(Pt,Ni)(CN)_4$, delocalised and localised electronic states luminesc. and IR study 3—47694
- $Ba(Pt,Pd)(CN)_4$, delocalised and localised electronic states luminesc. and IR study 3—47694
- $BaX_2.H_2O$, (X=Cl,Br,I), Raman and IR spectra, freq. shifts 3—23944
- Be surface obs., multiple-reflection attachment for the IKS-22 spectrophotometer 3—45186
- $Be_3Al_2Si_6O_{18}$, beryl, blue and green, optical absorption and EPR studies 3—3518
- $Be_3Al_2Si_6O_{18}$, beryl, high pressure hydrothermal synthesis, IR spectra 3—14461
- BeF_2, vitreous, IR, Raman and neutron vibr. spectra, comparisons 3—43531
- BeF_2:Gd^{3+} glass, vibronic fluoresc., polarised Raman, and IR spectra 3—38895
- $BeSO_4$, Raman and IR spectral studies *(French)* 3—34097
- $BeSO_4.4H_2O(4D_2O)$, Raman and IR spectral studies *(French)* 3—34097
- $Bi_{12}SiO_{20}$, single crystals, IR absorpt. spectra, 500-2500 cm^{-1}, at 90 and 300K 3—34117
- $Bi_{12}SiO_{20}$:Ho^{3+}, Er^{3+}, impurity IR absorption spectra, Stark levels 3—19165
- $Bio_{12}GeO_{20}$, single crystals, IR absorpt. spectra, 500-2500 cm^{-1}, at 90 and 300K 3—34117
- C, amorphous diamond-like film, glow discharge bias sputtering, props. and appls. 3—47769
- C film deposition with diamondlike props. from acetylene-Kr plasma 3—33609
- C:H amorphous films, plasma deposition and optical props. 3—38251
- $C_{8.4}AsF_6$, intercalate, composition, IR spectra 3—23954
- $C_{7.3}SbF_6$, intercalate, composition, IR spectra 3—23954
- CaF_2, surface oxidation 3—14757
- CaF_2:Nd(Ce), Zeeman IR spectra, optical absorption and fluorescence meas. 3—19124
- $CaF_{2-x}H_x$, Z 3—2705
- Ca_2FeMoO_6, anomalous magneto-optic Kerr effect, influence of oxidation 3—34075
- $CaMnO_x$, O deficient cpd., reduction prep., cryst. struct. and characterisation 3—7994
- CaO-Al_2O_3-P_2O_5 glass composite, prep., struct. props., and prosthetic appls. 3—34274
- CaO-B_2O_3-Al_2O_3-Fe_2O_3 glass, IR spectra, annealing effects 3—43529
- CaO-MgO-Al_2O_3-SiO_2 glasses, cation distrib. 3—2433
- $Ca_{10-x}Sr_x(PO_4)_6(OH)_2$, mol. vibr. and lattice consts., IR and X-ray study 3—3702
- Cd_3As_2, mono- and polycryst., fundamental reflectivity spectra 3—8848
- $CdCl_2(Br_2)(I_2)$, thin films, IR spectra 3—47723
- CdF_2-BaF_2-ZnF_2 system glasses, prep. and optical props. *(French)* 3—18228
- p-$CdGeAs_2$, energy spectrum and optical absorpt. 3—23246
- $Cd_{0.2}Hg_{0.8}Te$, free-carrier IR absorpt. spectra 3—43526
- $Cd_{1-x}Hg_xTe$, IR study of short-order clustering effect 3—43539
- n-$Cd_xHg_{1-x}Te$, discrete exciton absorpt. struct. flare-up in mag. field 3—57930
- $Cd_{0.95}Mn_{0.05}Se$ crystals, Bridgman growth and elec., optical and mag. props. 3—52921
- $Cd_{1-x}Mn_xSe$, D^- levels, far IR transmission and transport studies 3—47677
- $Cd(NH_3)_6Cl_2$, phase transition, IR absorpt. study 3—14284
- CdO-ZnO-P_2O_5 glasses, elec. conduction, refr. index, IR transmission spectra, dielec. const. 3—3184
- $Cd_3(P_3O_9)_2.14H_2O$, decondensation of $P_3O_9{}^{3-}$ cycles, IR vibr. spectroscopy study *(French)* 3—43525
- CdS (Se)(Te), colouring mechanism in glasses, IR, visible and UV transmission spectra 3—34122
- CdTe thin films, hole effective masses ratio determ. from optical transition 3—43651
- CdTe:Ag (Cu), excited states, photoluminescence and IR absorption study 3—8450
- CdTe:Li, localised vibr. modes and defects, IR absorpt. study 3—2720
- $CdTe/Hg_{0.8}Cd_{0.2}Te$ (111) system, laser annealing effects, electrolyte electrorefl. study 3—14252
- CeO_2, IR optical props., refl. and transmission spectra 3—23947
- $CePd_3$, optical cond., refl. spectra 3—3672
- Co, electronic band struct., Fermi surface, and optical props. under press. 3—3051
- $CoCl_2$:Fe, localised mag. modes, far IR absorpt. spectra 3—3770
- $CoCl_2(Br_2)$, thin films, IR spectra 3—47723
- CoS_2, magneto-optical spectrum and electronic struct. 3—57889
- $CoSiF_6.6H_2O$, IR spectra changes during struct. phase transition 3—38808
- $CoTiF_6.6H_2O$, IR spectra changes during struct. phase transition 3—38808

infrared spectra of inorganic solids continued
$CrCl_3$, IR and Raman vibr. absorpt. spectra 3—14276
$CrOHCr_2O_7.2H_2O$, dehydration and thermal decomposition, X-ray and IR spectra study 3—9314
Cr_2S_3, photoconductivity and optical absorption spectra 3—38427
Cr_2S_3-In_2S_3-CdS(COS)(HgS), phase relationships, X-ray diffr., thermal anal., and IR spectra 3—43795
Cs colloids in additively coloured CsF, annealing, IR spectra, precip. and ripening obs. 3—28881
$CsClO_4$, high and low temp. phases, IR and Raman study *(German)* 3—34110
CsD_2PO_4 single cryst., vibr. IR and Raman spectra 3—57907
CsF, F′-centres, form. and bleaching characts., optical props. 3—2551
CsH_2PO_4, polycryst., IR spectra of paraelec. and ferroelec. phases 3—3729
CsH_2PO_4 single cryst., vibr. IR and Raman spectra 3—57907
$CsMgCl_3$:V^{2+}, single cryst. absorpt. and emission spectra 3—19173
$CsMnCl_3.2D_2O$, isotope effects in multiphonon relax., optical spectra study 3—38826
$CsNO_3$, low temp. form, circular dichroism spectrum, forbidden n-π^* transition 3—52791
$CsNb_2O_5F$, IR absorpt. and Raman scatt. spectra *(French)* 3—28858
$CsNiF_3$, scaling laws, magnetization and optical linewidth 3—57700
$CsVCl_3$, single cryst. absorpt. and emission spectra 3—19173
$Cs_2(VOF_4(H_2O))$, green and blue phases, cryst. struct. and optical spectra 3—33211
Cu I complexes, acetonitrile adducts, vibr., IR and Raman study 3—34112
Cu I complexes, methacrylonitrile adducts, vibr., IR and Raman study 3—34113
CuCl, picosec. dynamics of excitonic polariton 3—38835
$CuInS_{2x}Se_{2(1-x)}$, solid solns. phonon energies, IR study 3—19127
CuO anodised films, IR spectral absorptance and emittance, solar absorber appl. 3—53581
CuO-CaO-P_2O_5 glasses, annealing, effect on properties 3—39178
Cu_2O type crystalline systems, multiphonon selection rules 3—23001
Cu_3PS_4, vibrational spectra and DTA study *(German)* 3—43551
DF, polycryst., IR spectra 3—14267
$Dy_2(SeO_4)_3$, selenite vibr. and cryst. field effects Raman and IR study 3—3703
EuTe, antiferromagnetic semiconductor, optical absorpt. edge shift, s-f model 3—8844
Fe complexes, sodium pentacyano substituted ferrate(II) complexes, Mossbauer and IR studies 3—57843
$FeBO_3$, magneto-optical props., appl. to magneto-optical unidirectional TE-TM mode convertor 3—23926
$FeBr_2$, lattice dynamics, shell model calc. and IR absorpt. meas. 3—2708
$FeCl_2$, thin films, IR spectra 3—47723
$FeCl_2$:Co, localised mag. modes, far IR absorpt. spectra 3—3770
γ-Fe_2O_3, behaviour of surface OH group, Fourier transform IR spectroscopy study 3—23738
Fe_3O_4, behaviour of surface OH group, Fourier transform IR spectroscopy study 3—23738
Fe_3O_4, magnetite, mag. props. and Mossbauer spectra, effect of surfactant 3—57829
GaAs, electron irrad., optical props. thermal stability 3—43577
GaAs, ion implanted, radiation damage, IR absorption spectra and lattice deformation 3—2619
n-GaAs, MCD in 10.6 μm range, rel. to free carrier conc., homogeneity determ. of doped semicond. 3—28868
GaAs MO-CVD film, residual donor impurities, far IR magneto-optic study 3—2592
GaAs native oxide props., use in planar devices and integrated optics *(Chinese)* 3—14752
GaAs, residual double acceptor, IR absorption, photoluminescence and Hall effect meas. 3—38334
GaAs, semi-insulating, undoped, EL2 deep level, direct obs. by IR absorpt. 3—57305
GaAs thin films, optical props. 3—24038
GaAs:Cr, photoinduced transient optical absorption of Cr^{4+} 3—23982
GaAs:H amorphous, mol. vibr., H bridges, IR spectra study 3—3719
$GaAs_{1-x}P_x$:Cd, acceptor photoionisation, IR absorption spectra study 3—19164
$Ga_{1-x-y}In_xAl_yAs$, LPE growth on GaAs and near IR optical props. 3—3973
GaP, electron or neutron irrad., band edges modification by defects, optical absorpt. and photocond. study 3—23975
GaP, photoinduced IR absorpt. obs. 3—43521
$Gd_3Ga_5O_{12}$, gyromag. Faraday effect 3—19112
$Gd_3Ga_5O_{12}$, thermal and optical props. 3—28117
$Gd_2(MoO_4)_3$, refr. indices, temp. depend., IR spectrosc. obs. 3—3665
$Gd_2(SmO_4)_3$, selenite vibr. and cryst. field effects Raman and IR study 3—3703
Ge, [111] stressed, far IR absorpt. spectrum of excitons in high stress limit 3—57927
p-Ge, lightly doped, interimpurity absorpt. of IR radiation 3—38856
Ge, non-equilib. carrier conc. depend. on laser excitation intensity *(Russian)* 3—38426
Ge, picosecond laser excited, transmission at various wavelengths, carrier diffusion role 3—38837
a-Ge, vibr. states, effective local environment model 3—8162
Ge-based chalcogenide glasses, photoinduced struct. changes, IR absorpt., Urbach tail features 3—52804
Ge-Si:H, amorphous RF sputtered vibr. props., IR absorpt. and Raman scatt. meas. 3—18420
GeO_2, vitreous, IR, Raman and neutron vibr. spectra, comparisons 3—43531
GeS_2, vitreous, optical props. rel. to prep. conditions 3—23901
GeS_2, vitreous, short-range struct., IR and Raman spectra study 3—37782
GeSe amorphous film, far IR absorption, composition depend. 3—8835
$GeSe_{3.5}$:Bi chalcogenide glasses, doping-induced struct. changes 3—51502
H_2, far-IR absorpt. study 3—3694
p-H_2, HCP solid, vibrational overtone transitions ($\Delta\nu=4$) 3—38824
H_2, solid, hexagonal-phase, IR spectroscopy of phonons 3—14297
HCl-DCl, HCl stretching vibr., intermolecular potentials, IR spectra calcs. 3—57039
HF, H bonded to DF, solid state, vibr., IR spectral profile 3—23937
HF, polycryst., IR spectra 3—14267
H_2O, solid, amorphous, librational region in IR spectra 3—8152
HPF_2BH_3, Raman and IR spectra and normal coord. anal. 3—32063

infrared spectra of inorganic solids continued
n-$Hg_{0.8}Cd_{0.2}Te$, ion implanted, elec. props., IR reflectivity diagnostic technique 3—3713
n-$Hg_{0.8}Cd_{0.2}Te$:$Al^+(Ga^+)$, ion implanted, IR refl. study 3—18327
$Hg_{1-x}Cd_xTe$, IR reflection spectra, coupled subband-phonon resonances 3—28861
$HgCr_2Se_4$, spin disorder effects on plasma edge, IR reflectivity study 3—38825
$HoCrO_3$, field induced spin reorientation, IR absorption study 3—23665
HoIG, mag. props. in high mag. field, optical absorpt in IR region 3—28604
InAs, contactless method of measuring free-carrier concentration in narrow-band semiconductors 3—23922
InAs MBE layers confined between GaSb, hybrid cyclotron intersubband reson. 3—8724
InGaAsP, growth by MBE, optical and elec. props. 3—24131
InP epitaxial layers, carrier density and mobility, optical meas. 3—43199
InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3—18721
InS, IR reflectivity and cryst. struct. 3—47634
InSb, contactless method of measuring free-carrier concentration in narrow-band semiconductors 3—23922
InSb crystal plates, reflection and absorpt. index meas. using far IR spectroscopy *(Japanese)* 3—10926
InSb, nonlinear interactions under picosec. laser irrad., plasma form. and nonlinear melting 3—37961
InSb, optically induced avalanche, rate eqn. model 3—57872
α'-In_2Se_3, prep., optical spectra and elec. cond. 3—38822
$In_{2-x}Sn_xO_{3-y}$ sprayed coatings, optical props. and antireflection coating appl. 3—38946
$KBa(NH_2)_3$, cryst. struct. and IR spectra, X-ray diffr. study *(German)* 3—22851
KBr: Li, paraelectric pair tunnelling, far IR spectra study 3—19135
$KClO_3$ cryst., charge transfer complexes, reson. Raman and IR spectrosc. obs. 3—57908
$KClO_4$, high and low temp. phases, IR and Raman study *(German)* 3—34110
$KFe_3(SO_4)_2(OH)_6$, jarosite structure, thermal disintegration, IR spectra and X-ray diffraction 3—13182
$KHCO_3$, OH(D) stretching bands, proton dynamics, IR and Raman band profile calcs. 3—47630
$KHSO_4$, IR and Raman spectra 3—34092
$KHgC_x$ (x=4, 8) intercalation compound, optical reflectivity 3—8847
KI:TeO_4^{2-}, IR absorpt. spectra *(Russian)* 3—23990
$K_2Mn_2(SO_4)_3$, vibr. spectra and phase transitions 3—23940
$KNbO_3$, single-domain, IR refl. spectra in tetragonal phase 3—38812
K_2O-Al_2O_3-B_2O_3-Fe_2O_3 glass, Fe aggregation on heat treatment, optical and mag. study 3—13467
K_2O-Nd_2O_3-P_2O_5-H_2O system, phase formation and crystallisation 3—8165
K_2O-ZnO-Na_2O-Ga_2O_3, vibr. modes, ionic cond., IR and Raman study 3—3721
$K_3ReO_2(CN)_4$ and isotopic species, IR and Raman vibr. spectra and force const. anal. 3—23956
$KSbF_2(HPO_4)$, prep., struct. and vibr. spectrum *(German)* 3—46911
K_2TaT_7, IR, Raman, NMR and X-ray study 3—47635
$KTl(CrO_4)_2$. $2H_2O$, synthesis, crystallography and IR studies *(French)* 3—7975
LaH_2, electronic energy bands and optical props., APW calc. 3—43011
$La_3WO_6Cl_3$, cryst. struct. and optical props., X-ray powder diffr. study 3—7995
$La_3WO_6Cl_3$:U, photoluminescence and vibr. spectra 3—8864
$Li_2Cr_{3-x}M_xSbO_8$, (M=Al, Fe, Ga), hexagonal to spinel transition and cryst. struct., X-ray and IR spectra study 3—8187
$LiHoF_4$, far-IR paramagnetic resonances 3—57920
$LiIO_3$, Raman and IR spectra, Darling-Dennisson resonance *(Russian)* 3—3738
$LiNH_4SO_4$:Co^{2+}, optical absorpt. spectrum 3—43570
Li_2O-MO-Nb_2O_5 system (M=Ba, Ca, Mg), twin-roller quenching, glass formation, IR spectra 3—53012
Li_2O-MgO-Al_2O_3-SiO_2, Fe_2O_3 doped, transparent glass ceramic, microstruct. and crystallisation 3—2423
$Li_2Ti_3O_7$, fast-ion conductor, IR study 3—34105
$LiTmF_4$, lattice dynamics and electron-phonon interactions 3—42722
$MgCl_2$, thin films, IR spectra 3—47723
MgF_2:Ni^{2+}, absorption, emission and excitation spectra, electron beam radiation defects 3—43592
MgO:H^-, thermochemically reduced, charge and mass transfer, IR absorpt. and luminesc. study 3—43573
Mn-ferrites, bulk and thin film, phys. props. 3—14094
$MnCl_2$, thin films, IR spectra 3—47723
MnF_2:Ni^{2+}, absorption, emission and excitation spectra, electron beam radiation defects 3—43592
$MnTiF_6.6H_2O$, phase transitions, IR spectra study 3—57080
MoO_3 electrochromic thin films, IR and Raman spectroscopy studies *(French)* 3—47724
α-N_2, far IR spectrum under press. 3—14281
$(NH_4)_2Cd_2(SO_4)_3$, vibr. spectra and phase transitions 3—23940
NH_4ClO_4-$NaNO_3$ mixture, thermal decomposition and transformation to $NaClO_3$-NH_4NO_3 3—48061
$(NH_4)_2Cr_2O_7$, IR spectra, low temp. transitions 3—3695
$NH_4Tl(CrO_4)_2O$, synthesis, crystallography and IR studies *(French)* 3—7975
Na_2-SiO_2 glass prep. by gel-glass transformation, IR reflection spectra study 3—34271
$NaCa(NH_2)_3$, cryst. struct. and IR spectra, X-ray diffr. study *(German)* 3—22851
NaCl-KCl-$ThCl_4$ system, glass forming region, DTA and IR spectra study 3—22786
$NaClO_3$, cryst., charge transfer complexes, reson. Raman and IR spectrosc. obs. 3—57908
Na_2O-Al_2O_3-SiO_2-H_2O, VSZ-3 zeolite crystal, hydrothermal synthesis and charact. 3—8951
Na_2O-B_2O_3-Fe_2O_3 glass, IR spectra 3—14295
Na_2O-Fe_2O_3-NiO-B_2O_3-P_2O_5 glass ceramics, crystallised, mag. and elec. props. *(Japanese)* 3—58144
Na_2O-GeO_2 glass, vibr., struct., Raman and IR study 3—18227
Na_2O-SiO_2 glasses, high water content, effect of γ radiation 3—8101
Na_2O-SiO_2-Fe_2O_3 glass, optical absorption, luminescence and Raman spectra 3—3710

infrared spectra of inorganic solids continued
Na_2O-SiO_2-UO_3 glass, IR spectra, heat capacity and electron microscopy studies 3−14306
Na_2O-ZnO-B_2O_3-SiO_2 glass, surface layer form. during aq. attack 3−43975
$NaRBi_2O_6$, (R=La, Nd, Gd, Y), prep. and cryst. struct., X-ray, IR and mag. susceptibility study 3−13197
$Nd_xCd_{1-x}P_5O_{14}$, oscillator strengths of stark level transitions 3−8831
NdH_2, electronic energy bands and optical props., APW calc. 3−43011
$NiCl_2(Br_2)$, thin films, IR spectra 3−47723
$Ni_{1-x}Cu_xFe_2O_4$, lattice vibr. freq., Jahn-Teller distortion, IR spectra study 3−28066
Ni(II) cpds., tetrahedral, spectrum, spin allowed ligand field bands, distortion effects 3−8833
$NiMoO_4$, cryst., IR and Raman vibr. spectra 3−8817
$Np(OH)_2SO_4$, synthesis, struct. and optical spectra 3−27910
P_4S_{10}, solid and molten state, vibr., IR and Raman study *(German)* 3−47661
$PbBPO_5$, $PbBAsO_5$, synthesis and characterisation *(French)* 3−22845
$PbFe_{12}O_{19}$, magneto-optical and optical props. meas. 3−8805
$PbLaTh(VO_4)_3$, dimorphism, X-ray diffr. and IR spectra study 3−33208
$Pb_{1.5}M_2O_{6.5}$ (M=Nb, Ta), vibr. anal. and chem. bonds, IR and Raman spectra *(French)* 3−19129
PbO, α and β phases, thermal expansion, Raman and IR vibr. spectra studies *(French)* 3−38817
PbS (Se)(Te), colouring mechanism in glasses, IR, visible and UV transmission spectra 3−34122
$Pb_{1-x}Sn_xTe$:In(Ga), obs. of local modes, absorpt. spectra 3−43566
$Pb_{1-x}Sr_xGe_4O_9$, struct., dielec. optical props. and phase transition 3−8824
PbTe, intervalley optical transitions, transmission and magneto-photo response spectra 3−14263
PbTe:In, quasilocal level position, Hall effect and absorption spectra study 3−18658
$Pb(Zr,Ti)O_3$-MnO-$LaO_{1.5}$, oxide additions effect on band struct., diffuse refl. spectra 3−19155
$PrPd_3$, optical cond., refl. spectra 3−3672
Pt (111), adsorption of DMSO, UPS, XPS, EELS, and IR spectra study 3−42928
Pt complex, $((NH_3)_2Pt(OH)_2Pt(NH_3)_2)$, IR and Raman spectra, mol. vibrs. *(French)* 3−14271
Pt complex, $((NH_3)_2Pt(OH)_2Pt(NH_3)_2)(NO_3)_2$, mol. vibrs., normal coordinate anal. *(French)* 3−14272
Rb, high press. equation of state, X-ray diffr. and IR reflectivity study 3−18423
$RbBa(NH_2)_3$, cryst. struct. and IR spectra, X-ray diffr. study *(German)* 3−22851
RbBr, F′-centre absorpt. spectrum 3−43568
$RbClO_4$, high and low temp. phases, IR and Raman study *(German)* 3−34110
$RbEu(NH_2)_3$, cryst. struct. and IR spectra, X-ray diffr. study *(German)* 3−22851
$RbNb_2O_5F$, IR absorpt. and Raman scatt. spectra *(French)* 3−28858
$RbSr(NH_2)_3$, cryst. struct. and IR spectra, X-ray diffr. study *(German)* 3−22851
$RbTa_2O_5F$, IR absorpt. and Raman scatt. spectra *(French)* 3−28858
$RbTl(CrO_4)_2$, synthesis, crystallography and IR studies *(French)* 3−7975
$(SN)_x$, pure and brominated, polarised reflectivity spectra, 1-25 eV region 3−14315
SbSi ferroelec. thin films, laser pulse prep., struct. and composition 3−3968
Sb_2Te_3, Ag doped and undoped, elec. props., reflectivity, nature of Ag impurity 3−23381
Sb_2Te_3, coupled plasmon-LO-phonon modes, anisotropy and dispersion 3−28065
a-Se, optical absorpt. in low freq. range 3−3714
p-Si (100) electron inversion layers, two dimens. plasmon dispersion and intersubband reson. 3−13915
Si amorphous sputtered films, deposition influence on props. 3−52934
Si, amorphous thin films, prod. by ion beam sputtering, optical props. 3−47727
Si, annealed, bulk material dislocation-free, O and C precipitation study *(Chinese)* 3−33439
Si, donor level, H-defect complex behaviour, elec., optical and DLTS meas. *(Chinese)* 3−33658
a-Si films, electrical and optical props., influence of H_2 gas during RF sputtering 3−14371
n-Si, heavily doped, band-gap shrinkage, luminesc., IR absorpt. and bipolar transistor data 3−38859
Si, laser and electron beam annealed, doping profile, characterisation by IR spectrophotometry 3−57939
Si, laser heated, picosec. time-resolved detection of plasma form. and phase transition 3−38834
p-Si, lightly doped, interimpurity absorpt. of IR radiation 3−38856
Si, neutron transmission doped, radiation damage, IR absorpt. study 3−46974
Si, oxidation, oxygen trapping, induced by laser irradiation 3−56953
Si, polycryst., grain boundary passivation and analysis for solar cell applications 3−51629
Si single crystal, errors in measuring C conc. from IR absorption 3−47675
Si solar cell, low-cost material, optical absorpt. coeff. and minority carrier diffusion length meas. 3−23900
Si solar cell struct., ion beam hydrogenation effects 3−8112
Si, transient IR refl. and transmission during pulsed laser annealing 3−57938
a-Si, vibr. states, effective local environment model 3−8162
Si, vibronic bands, IR spectra 3−42720
Si wafer, Czochralski grown, multistep repeated annealing, O and induced defect behaviour 3−4060
Si:B,C, electron irrad., defect accumulation, IR study 3−27998
Si:Be,k isoelectronic bound excitons, photoluminesc. lifetime, absorpt. and excitation spectra 3−8878
Si:C, substitutional impurity, local modes and IR absorpt., local effective charge model *(Chinese)* 3−38014
Si:Cl,H, amorphous film, preparation, elec. and optical props. 3−28988
Si:F amorphous film, annealing behaviour of Si-F bonding struct., optical props. meas. 3−57988
a-Si:F films, RF glow discharge prep., struct. props. 3−34243
Si:H, amorphous CVD film, electronic and optical props. meas. 3−29014
Si:H, amorphous film, interface and surface states, optical absorpt. spectra, photothermal deflection spectroscopy study 3−34125

infrared spectra of inorganic solids continued
Si:H, amorphous hydrogenated, intrinsic surface phonons, theoretical study 3−33556
Si:H, amorphous thin films, prod. by ion beam sputtering, optical props. 3−47727
a-Si:H, As(Cl), ion implanted, IR absorpt. spectra 3−47681
a-Si:H, B, anomalous optical and struct. props. 3−34127
a-Si:H, Cl, glow discharge prep., optical and elec. props. 3−23978
Si:H, crystalline, defect-impurity complexes and IR bands, theory 3−23948
Si:H, polycryst., IR study and MIS solar cell photovoltaic props. 3−4389
a-Si:H,O, IR absorpt. spectra, structural interpretation 3−23987
a-Si:H and a-Si:H, P, gap-state profiles, below-gap optical absorpt. meas. 3−3844
a-Si:H films, disorder characts., optical transmission and photocond. study 3−38932
a-Si:H films, RF sputtering prep., microstruct. and H bonding environment 3−51970
a-Si:H films, thickness depend. of elec. and optical props. and ESR 3−3199
Si:H thin films on polyethylene, far IR spectra 3−57902
Si:In, Al, photoluminesc., IR absorpt., photocond. and Hall effect meas. 3−34135
Si:In, In acceptor IR absorpt. spectrum meas. 3−23976
Si:In, optical props. and photocond. 3−3701
Si:N, amorphous CVD film, optical and electrical props. meas. 3−8484
Si:O, dislocation-free, diffusion limited O precipitation, IR and neutron scatt. and etching studies 3−51796
Si:O, neutron irradiated, defect accumulation and lattice strain, IR study 3−56994
Si:O, O content meas. by 9 μm IR absorpt., calibration curve *(Chinese)* 3−38850
Si:O, precipitation kinetics, solubility, diffusivity and particle size 3−42787
Si:O, thermally activated O donors distribution, scanning IR absorpt. study 3−33284
Si:Pt^-, acceptor struct., ESR and IR spectra studies 3−43082
p-Si:Sn, electron irrad., A-centre and divacancy form. 3−13250
$Si_{6-z}Al_zO_zN_{8-z}$, β-sialons, IR absorpt. spectra study 3−8820
β-SiC synthesis characts. by C ion implantation into Si 3−3993
SiC:H, amorphous RF sputtered films, struct. and optical and elec. props. study 3−3711
SiC:H amorphous window material for a-Si solar cells, characterisation 3−53538
$Si_{1-x}C_x$:H amorphous film, defects, ESR, optical props. and photocond. 3−23199
Si_xGe_{1-x}:H amorphous film, cond. and photocond. props., solar cell appl. 3−33719
a-SiH:$Cl^-(As^{n+})$, bond stability, IR absorpt. spectrosc. obs. 3−38809
SiN_x films, low press. CVD growth, comp. and struct. control, EPR, optical and He backscatt. studies 3−52970
α-Si_3N_4, EM window material, CVD, opt. props. 3−8789
Si_3N_4 plasma CVD films, comp. and chem. bonds, optical props. 3−51971
Si_3N_4-SiO_2-AlN β-sialons, mol. and cryst. struct., IR absorpt. spectra obs. 3−23929
SiO_2, electron traps, annealing in NH_3 effects 3−3221
SiO_2 film, thermal nitridation 3−19435
SiO_2 films, thermally nitrided, N distribution, AES, IR and etching studies 3−51976
SiO_2 fused silica glass chip, IR optical consts. meas. by frustrated total internal refl. 3−28825
SiO_2, gel, platinised, exoelectron emission studied by IR spectroscopy 3−8944
SiO_2, hydroxyl coated, struct. study by IR and mass spectroscopy 3−48092
SiO_2, plasma enhanced CVD, gate insulator for InSb MOS struct. 3−13917
SiO_2, vitreous, absorption band at 300 nm, radiation colour centres 3−23986
SiO_2, vitreous, IR, Raman and neutron vibr. spectra, comparisons 3−43531
SiO_2, vitreous glass, dislocation by Na 3−4333
SiO_2:H film, SiOH and SiH molecules, Stark effect study 3−38798
SiO_2:P^+, laser irrad. effect on film struct., IR transmission spectroscopy 3−18575
SiO_2-Ce_2O_3-$Al_2O_3(Na_2O)$ glass, luminescence and IR absorption spectra 3−14353
SiO_2-K_2O $(Na_2O)(Li_2O)$ glass, IR transmission and absorption spectra 3−34087
SiO_2-Na_2O-CaO-MgO-Fe_2O_3 glass, ferric Fe reduction, EPR and optical spectra studies 3−34616
$Si_6(OH)_3H_3$ disordered layer cpd., struct., optical and electronic props. *(Japanese)* 3−47657
$Sm_2(SeO_4)_3$, selenite vibr. and cryst. field effects Raman and IR study 3−3703
$Sn(MPO_4)_2.xH_2O$ (M=alkali metal or H), double phosphate prep. and characts., phase transforms. *(Russian)* 3−47104
$Sn_2P_2S_6$ ferroelec. thin films, laser pulse prep., struct. and composition 3−3968
$Sr_2Dy_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
$Sr_2Eu_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
SrF_2:Nd(Ce), Zeeman IR spectra, optical absorption and fluorescence meas. 3−19124
$SrF_{2-x}H_x$, mixed cryst., lattice vibr., IR spectra study 3−2705
$SrFe_{12-x}Al_xO_{19}$, magneto-optical and optical props. meas. 3−8805
Sr_2FeMoO_6, anomalous magneto-optic Kerr effect, influence of oxidation 3−34075
$Sr_2Gd_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
$Sr_2La_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
$SrLaTh(VO_4)_3$, dimorphism, X-ray diffr. and IR spectra study 3−33208
$Sr_2Nd_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
$Sr_{10}(PO_4)_3(VO_4)_3OHCl$ cryst., ion migration IR spectra 3−23955
$Sr_2Sm_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
$SrX_2.H_2O$, (X=Cl,Br,I), Raman and IR spectra, freq. shifts 3−23944
Ta_2O_5 films, reactively sputtered, optical props. meas. 3−24037
TaS_3, bolometric IR spectrum, enhanced response in nonohmic region 3−57929
α-TeO_2, Te-O stretching vibr., IR spectral study 3−3705
$ThBr_4$:Pa^{4+} crysts., optical spectrosc. and EPR obs. 3−57959

infrared spectra of inorganic solids continued
α-TiA_2Cl_8 cryst. struct., determ. by vibr. correl. and powder diffraction 3−8818
TiNi, martensitic transform., optical consts. determ., IR spectra 3−3676
TiS_3, IR reflectivity, Raman scattering, IR active phonons 3−28851
$Ti_{1-x}V_xS_2$, far-IR studies of electronic and vibr. props. 3−57911
$Tl_2Cd_2(SO_4)_3$, vibr. spectra and phase transitions 3−23940
$TlGa_xIn_{1-x}Se_{2x}S_{2(1-x)}$ solid soln., optical phonons, IR spectra study 3−47066
$TlInSe_2$, fundamental absorption edge and spectra 3−3667
$TlNb_2O_5F$, IR absorpt. and Raman scatt. spectra *(French)* 3−28858
TlSe, absorption spectra and fundamental absorption edge under hydrostatic press. 3−14300
U, nuclear waste immobilisation in borosilicate glasses, redox chemistry 3−899
$UO_2(NO_3)_4{}^{2-}$ ion, in crysts., vibr. and electronic spectra 3−45965
WO_2 electrochromic thin film, amorphous, oscillator strength of colour centres 3−24035
WO_3, amorphous film, structure, IR and Raman study *(Russian)* 3−19128
WO_3 electrochromic thin film, amorphous, oscillator strength of colour centres 3−24035
WO_3 electrochromic thin films, IR and Raman spectroscopy studies *(French)* 3−47724
WO_3-CaO-TeO_2 glasses, density, optical absorption edges, IR spectra 3−57952
YIG, ATR mode of surface magnon polaritons 3−43536
YIG crystals, floating zone growth and IR transparency meas., magneto-optical device appl. 3−24120
YIG:Sb, near IR magnetooptical effects 3−57896
YPO_4, IR and Raman vibr. spectra and dynamic parameters 3−19141
YPd_3, optical cond., refl. spectra 3−3672
$Y_2(SeO_4)_3$, selenite vibr. and cryst. field effects Raman and IR study 3−3703
YVO_4, IR and Raman vibr. spectra and dynamic parameters 3−19141
Yb_2S_3 thin film, visible, UV and IR spectra, fundamental absorption edge 3−28919
Zn, corrosion inhibition, immersion and potentiostatic tests *(Japanese)* 3−58292
Zn_3As_2, film and crystal, band struct., optical absorpt. and reflectivity study 3−8812
Zn_3As_2, intraband and interband optical transitions 3−23941
ZnP_2 crystal, monoclinic, IR absorption lines, fine struct. 3−23961
ZnP_2, monoclinic, IR lattice vibr. spectra 3−43528
$ZnPS_3$ layer intercalation cpd. with $Co(\eta^5\text{-}C_5H_5)_2{}^+$ and $Cr(\eta^6\text{-}C_6H_6)_2{}^+$, vibr. spectra 3−57914
ZnSe:Fe, IR absorpt., Beer law 3−8854
ZnSe:Li, localised vibr. modes and defects, IR absorpt. study 3−2720
$ZnTiF_6.6H_2O$, phase transitions, IR spectra study 3−57080
ZrF_4-BaF_2-AlF_3-LaF_3-LiF optical glass, aqueous corrosion, IR and SEM study 3−1731
ZrF_4-BaF_2-$BaCl_2$ glass, IR and Raman vibr. spectra and struct. 3−22785

infrared spectra of organic molecules and substances
see also molecular rotation
acetic acid, gaseous at 21°C, Raman spectrum 3−17291
acetone, liq., spectral props., computer simulation and IR meas. 3−46827
acetonitrile, collisional narrowing in IR laser Stark spectrum 3−26743
acetonitrile, liq. and soln., mol. motion and interactions, microwave and far-IR spectra 3−47647
acetophenone derivatives, ring-substituted, halogen mesomeric effect, spectroscopic inversion 3−6650
acetylene-d_2, rare gas mixtures, mean square torque IR vibr.-rot. bands 3−45925
acetylene-hydrogen halide complexes, H-bonded, in solid Ar, Fourier transform IR spectra 3−6639
acrylonitrile, IR vibr. spectra at high press. 3−3704
acrylyl chloride, internal rot., Raman spectra 3−36767
acyclic sulphoxides, vibr. spectra and conformations 3−21758
alcohols, adsorption and two-dimens. condensation on NaF 3−2964
n-alkanes, nonplanar conformers, solid state phase transform., IR study 3−33418
alkoxy(alkylthio)methanes, vibr. spectra and mol. conformations 3−36753
alkyl alcohols, submillimetre laser and interferometric spectroscopy 3−11793
4-alkyl-4′-cyanobiphenyls, orientational order and phase transitions 3−2399
alkyne-HF complexes, substituted, in solid Ar, Fourier transform IR spectra 3−6640
allenylphosphine oxides, IR spectra, rot. isomerism, absorpt. band crossover, substituents effect *(French)* 3−50408
allyl chloride, vibr. spectrum and conformations 3−17288
amides and derivatives, interactions with ions, solution, Raman and IR obs. 3−50402
o-amidobenzoic acid, IR absorpt. spectra and H bonding 3−36747
amidophosphite, bicyclic, constrained, hydrolysis and acidolysis, IR and NMR studies *(French)* 3−44053
amines, chemisorpt. on Cr_2O_3, thermal desorpt. and IR absorpt. obs. 3−8320
aminophosphanes, N atom basicity, IR spectrosc. obs. *(French)* 3−17283
arachidate monolayers, on Al, IR refl.-absorpt. spectra 3−50399
aromatic donor-acceptor complexes, phase transitions, IR study 3−34111
atomic charges from IR intensities, comparison with ab initio values 3−55795
8- azasteroid enaminodicarbonyl cpds., IR spectrosc. 3−17276
bacteriorhodopsin and its photoproducts, Fourier transform IR difference spectroscopy 3−4466
barium cadmium formate single cryst., struct., X-ray and IR spectra studies 3−46916
benzaldehydes, p-substituted, correlation anal. in IR spectra 3−6645
benzene, ν_{13} fundamental band, IR spectrosc. obs., rot. anal. 3−55932
benzene, vibr. excitation, anomalous IR absorpt. 3−41545
benzene and 1,3,5-benzene-d_3 3−1331
benzene metal tricarbonyls, metal=Cr,Mo,W, IR and Raman studies 3−34093
benzenes, mono- and di-substituted, polarised IR vibr. spectra, stretched polymer method 3−32068
benzo-1,4-dioxane, mol. IR absorpt. spectra, vibr. anal. 3−11784
benzoindinospiropyran Langmuir-Blodgett film, positive and negative photochromism 3−38942
benzoyl chloride, phosphoresc. process from vibr. anal. of IR and Raman spectrum and normal coord. anal. 3−36808
benzoylanthanyl acid, IR spectroscopy *(Russian)* 3−14268
bicyclo*/2.2.1/*hept-2-ene, anharmonic skeletal deform., IR spectrosc. obs. 3−36755
biliverdin dimethyl ester dimers, cryst., diastereoisomerism, IR and Raman study 3−37836
binary systems with H bonding and electron donor-acceptor interaction 3−27831
2,2′-bipyridine, normal mode anal., cryst. vibrs. 3−43534
2,2′-bipyridine, normal mode anal., internal modes 3−43533
4,4′-bipyridine molybdenum trioxide, cryst. struct. determ. 3−22883
1,10-bis(4-carboxyphenoxy) decane, synthesis, phase transition, IR spectra, NMR studies 3−2793
1,10-bis(4-p-substituted phenoxycarbonyl)phenoxy-decane, synthesis, phase transition, IR spectra, NMR studies 3−2793
bis(benzene)chromium cation, intercalated in $MnPS_3$, libration IR, Raman and neutron scatt. study 3−8150
bis(benzoimidazole-2-thiol) methane, C-S bond IR vibrs., assignments by selenation 3−41575
bis(benzothiazole-2-thiol) methane, C-S bond IR vibrs., assignments by selenation 3−41575
bis(benzoxazole-2-thiol) methane, C-S bond IR vibrs., assignments by selenation 3−41575
1,3-bis (trifluoromethyl)benzene, Raman and IR spectra, vibr. assignment 3−6661
2-bromo-2-methylpentane, IR vibr. anal. 3−32070
2-bromo-3-chloro-1-propene, vibr. spectra and conformations 3−21759
3-bromo-3-methylpentane, IR vibr. anal. 3−32070
p-bromoaniline cryst., IR and Raman spectra at low temps. 3−52798
4-bromobutyric acid solns., pre-micellar association, IR and Raman spectra 3−1352
2-bromoethanol, matrix isolated, vibr., normal coordinate anal., IR obs. 3−32077
bromoform, liquid to rotator phase transition, far IR spectra and computer simulation anal. 3−46874
tert-butyl alcohol in CCl_4, OH vibr. relax., IR high press. and Monte Carlo studies 3−52784
tert-butyl hydroperoxide, solvent prop. effects on OH band shift in IR spectrum 3−52788
N-carboxy-amino acid anhydride polymers prepared by polymerisation in solid state, mol. arrangements 3−14868
cellulose triacetate films, crystallisation, IR study 3−8828
p-chloracetanilide, IR spectra, vibr. assignment 3−6637
1-chloro-2-methylpropene, barriers to internal rot. determ. by Fourier transform IR spectra 3−6630
p-chloroacetoacetanilide, IR spectra, vibr. assignment 3−6637
chlorodimethylalkanes, IR and Raman spectra, conform. anal. 3−17279
2-chloroethanol in Ar matrix, near-IR induced conformational isomerisation 3−4269
chlorophyll based monolayer and multilayer arrays, optical props. 3−39591
1-chloropropene, cis- and trans- forms., vibr. assignments and barriers to internal rot., Raman and IR spectra 3−11807
cholesteric liq. cryst., selective IR transmission, direct determ. 3−8840
cobalt monochloroacetates, IR spectra, correlation with cryst. struct. 3−14307
copper-phthalocyanine oligomer, elec. resist., temp. depend., solvent washing effect, IR charact. 3−38382
cyanamide, spectroscopic param., ab initio MO study 3−26626
cyanoacetylene in solid soln., far IR matrix isolation studies 3−55929
cyanogen chloride in solid soln., far IR matrix isolation studies 3−55929
cyclohexenones, far IR spectra and inversion barriers 3−41568
cyclopentanone, carbonyl resonance, forbidden level assignment 3−41558
cyclopentanone, liq., pseudorotational motion, far-IR and Raman study 3−23945
cyclopropane, liq., mol. rot., extended diffusion model 3−18486
cyclopropylcarbonyl fluoride, solid, liq. and gas, conformational barriers to internal rot. and vibr. assignment 3−11795
β-cyclopropylidenic alcohols, IR and Raman spectra *(French)* 3−32073
1,2-di-β-naphthylethylene, in naphthalene cryst., absorpt. and fluoresc. intensity at 4.2K 3−1358
diacylmethylenediaminic cpds., IR spectral characts. 3−1351
4,4′-dialkoxy-α-α′-dimethylbenzalazines, mesogenic activity, intramolecular H bonding effect, UV, IR and ^1H NMR spectra 3−46847
dialkyl sulphides, substituted, conformational props., IR study 3−34115
dialkyminothiols, intramol. H bonds with H^+ polarisability, IR NMR 3−1504
3,5-diamino-1,2,4 dithiazolium halides, complexes with Cu(I), Ag(I) and HgII halides, coordination 3−6649
2,5-dibromohexane, liq. and solid state, conformational anal., IR and Raman study 3−57915
2,4-dibromopentane, liq. and solid state, conformational anal., IR and Raman study 3−57915
1,3-dichloro-2,2-dimethylpropane, liq. and solid, vibr. and conformation, IR and Raman study 3−52785
2,3dichloroanisole, solvent effects, IR obs. 3−6646
2,6-dichlorobenzylchloride, IR and laser Raman vibr. spectra 3−8822
dichlorodifluoromethane, diode laser absorpt. around 921 cm^{-1} in supersonic jet 3−26739
dichloromethane, liq., mol. dynamic props., computer simulation 3−18201
trans-1,4-dicyanocyclohexane, conformation and vibr. spectra 3−34090
dicyclopentadienyl-metal complexes, charge separation, IR intensities 3−11788
1,2-difluoroethane aggregates, IR spectra by matrix trapping of effusive and supersonic mol. beams 3−6642
diglycine sulphate, dielec. meas. and vibr. spectra, 5 to 400K 3−52704
dimethyl ether, barriers to internal rot., Fourier transform spectra, far IR region 3−6632
dimethyl ether-H_2O complex, IR vibr. spectrum 3−45936
dimethylamine, barriers to internal rot., Fourier transform spectra, far IR region 3−6632
dimethylethylamine, conformational anal., internal rot. barriers and vibr. assignment 3−32066
dimethylhalosilanes, vibrational spectra, IR and Raman obs. 3−41574
dimethylmethylphosphonate, gas phase conform., IR spectrosc. obs. 3−36751
dimethyloxirane, cis- and trans-, barriers to internal rot. determ. by Fourier transform IR spectra 3−6630

infrared spectra of organic molecules and substances continued
trans-2,3-dimethyloxirane, IR and Raman vibr. spectra and torsional anal. 3—32065
2,6-dimethylphenyl azide, vibrational spectra, IR and Raman obs. 3—41585
dimethylselenide and dimethylsulphide, barriers to internal rot. determ. by Fourier transform IR spectra 3—6630
N,N-dimethylsulfamide and its C'C'and N-N-deuterated cpds., vibr. spectra 3—43535
diphenyl ether, reorientational motion, far IR absorpt. spectrosc. obs. 3—6644
4,4-diphenylmethane diisocyanate elastomer films, segmental orientation during deform. *(Russian)* 3—51515
2,5-diphenyloxazole in n-paraffins, vibr. anal., IR, Raman and Shpolskii spectra 3—32048
1,2-diphenylpropanes, substituted, conform. energy anal. 3—32101
dipropyl(γ-amino propyl)borane, conformation of the five-membered ring 3—32071
docosanoic acid-tricosenoic acid, Langmuir-Blodgett multilayers, orientation, IR linear dichroism 3—38931
electrolyte aqueous solutions, dispersive Fourier transform obs. of opt. consts. 3—8819
epoxy resin, hardened in mag. field, struct. ordering, strengthening *(Russian)* 3—56830
epoxy resin matrix-silane coupling agent interface in fibre-reinforced composites, spectroscopic characterisation 3—19313
ethane in Jupiter's S Polar Region, ν_9 band IR heterodyne spectroscopy 3—40067
ethane-1,1,1-d_3, IR spectrum, rovibrational anal. 3—32060
ethene-d_1, ν_4 vibr. level rot. energies, IR obs. *(French)* 3—50393
ethyl radical-$d_0(d_2)(d_3)(d_5)$, matrix isolated IR spectra by normal coordinate calcs. 3—45937
ethylammonium halides, torsional and lattice modes, IR and Raman spectra 3—14291
ethyldimethylsilane, liq. and solid state, vibr., rot. isomerism, IR and Raman spectra 3—55941
ethylene, IR intensities of the pentad ν_{11}, $\nu_2+\nu_{12}$, $2\nu_{10}+\nu_{12}$, ν_9 and $\nu_3+\nu_8+\nu_{10}$ *(French)* 3—55930
ethylene oxide, vibr. freqs. and intensities, IR and Raman spectra 3—21747
ethylene oxide cryst., phonon spectra and struct. at 77K 3—28850
ethylene sulphide, vibr. freqs. and intensities, IR and Raman spectra 3—21747
ethylene sulphide cryst., phonon spectra and struct. at 77K 3—28850
ethylene-d_2, Fermi reson., IR obs. 3—26751
ethylene-inert gas mixtures, collision-induced far-IR spectra 3—1353
ethylene-methacrylic acid copolymer, Ca salt, annealing, ionic struct., DSC, Fourier transform IR spectra 3—51506
ethylene-propylene copolymers, mol. wt. distrib., gel permeation chromatography study 3—17391
ethylenediamine(-d_4)(-d_8), IR and Raman spectra in liq. and solid states 3—47642
ethylphosphine-borane, IR and Raman spectra, vibr. assignment and conform. anal. 3—36752
ethylstannane-$d_0(d_3)$, struct., microwave, Raman and IR obs. 3—45938
α-ethynyl alcohols, tertiary, struct. information from OH stretching freq., IR absorpt. band 3—50543
fluoroethanes, LF Fourier transform IR spectra, torsional pot. functions, gaseous, liq. and solid states 3—6633
fluoromethane-d_3 in cryogenic solns., vibr. energy relax. and transient absorpt. spectra 3—1360
3-fluorotrifluoromethyl benzene, Raman and IR spectra, vibr. assignment 3—6638
formaldehyde, ν_2 fundamental band study 3—41599
formaldehyde, A^1A_2 state, singlet-triplet perturbations, mag. rot. spectrum 3—45997
formaldehyde, monomer and dimer, without and in prescence of Ar, 3.508μ-HeXe-laser line absorpt. 3—26753
formate ion, vibration freqs., inelastic electron tunnelling spectrum 3—41560
formyl ion, far IR transitions obs. 3—11792
formyl ions, vibr.-rot. transitions, vel. modulated IR spectra 3—50407
formyl ions (HCO^+), IR intensities, ab initio calcs. 3—1238
formyl radical in solid O_2, photochemical oxidation at 13K, Fourier transform IR spectroscopy 3—4299
freon-12, molecular beams, IR spectra at high press., rot. energy distrib. 3—11789
furan adsorbed on alkali halides, IR spectra adsorpt. pots. calc. 3—9354
α-glycine-d_0(-d_5), intermol. pots., Raman and IR scatt. obs. 3—50471
glycino-Zn complex, force constants calc. using IR spectra anal. *(Chinese)* 3—6636
glycolic acid, transferable valence force field 3—50368
graphite trifluoromethylsulphate intercalation cpd., formation and charact. 3—8816
halogenomethyldimethylsilanes, liq. and solid state, vibr., rot. isomerism, IR and Raman spectra 3—55941
hexafluorobenzene, cryst., IR spectrum 3—19132
hexafluorocyclobutene, stimulated emission relax. after IR multiphoton excitation and photochem. isomerisation 3—41626
1,6-hexamethylene diamine elastomer films, segmental orientation during deform. *(Russian)* 3—51515
hexatrienes-$d_0(d_4)$, cis and trans, IR spectra inverse problem soln. valence-optical theory 3—17271
hydrazine, antisymmetric amino wagging band, IR-microwave double reson. 3—45994
p-hydroxybenzoic acid, IR absorpt. spectra and H bonding 3—36747
8-hydroxyquinoline derivatives, IR bonds rel. to C—OH, C=N—C group vibrs. *(Spanish)* 3—17277
8-hydroxyquinoline derivatives, IR spectra *(Spanish)* 3—1359
iminophosphanes, N atom basicity, IR spectrosc. obs. *(French)* 3—17283
indole and its derivatives, complexes, modelling of intermol. interactions, IR spectroscopy, protein appl. 3—24659
2-iodoethanol, matrix isolated, vibr., normal coordinate anal., IR obs. 3—32077
isocyanamide, spectroscopic param., ab initio MO study 3—26626
isopropanol-d_6 adsorpt. on Al_2O_3 surface, IR spectra study *(French)* 3—19115
isopropanol-d_6-Lewis acids coordination, IR spectra study *(French)* 3—19510
Langmuir-Blodgett films, polymerization reactions, mol. arrangement effect 3—39381

infrared spectra of organic molecules and substances continued
Langmuir-Blodgett molecular monolayers anisotropic orientation, FT IR spectroscopy 3—38193
Langmuir-Blodgett monolayers, growth by stepwise adsorption 3—42933
laser dyes, intercombinational transitions, spectrosc. consts. 3—1357
lead phthalocyanine films, optical and photoelec. props., appl. to photocells 3—38428
magnesium acetate tetrahydrate, phase transition, temp.-depend vibr.spectra 3—23932
magnesium monochloroacetates, IR spectra, correlation with cryst. struct. 3—14307
malonaldehyde, IR spectrum, tunnelling H-bonded mol. 3—32057
manganese monochloroacetates, IR spectra, correlation with cryst. struct. 3—14307
mesidine, IR and Raman vibr. spectra 3—17281
mesitol, IR and Raman vibr. spectra 3—17281
methane, line strength of $\nu_1+\nu_4$ IR band 3—32055
methane, vibr. transition moment, IR spectral intensity meas. 3—17256
methane-d_3, IR absorpt. spectrum between 8 and 11.5 μm, ν_3 and ν_6 band anal. 3—32058
methane-d_3, vibronic ground state of C_{3v} 3—32059
methane-d_4 in cryogenic solns., vibr. energy relax. and transient absorpt. spectra 3—1360
methanes, halogen substituted, fundamental vibrs., polarized IR transmission obs. 3—50404
methanol, matrix isolated in N_2 and CO, specific interactions, IR study 3—41577
methanol, opto-acoustic spectra, optical pumping of far IR methanol laser *(Chinese)* 3—22040
methanol, oxidation on Cu(100), IR spectroscopy study 3—24530
methanol dimer, matrix isolated, IR spectrum, temp. and IR irrad. effects 3—11796
methanol films, cryst., IR spectra, effect of growth texture 3—43655
methinophosphide, vibr. rot. spectrum of overtone bands, summation bands and difference bands 3—41554
4-methoxypyridine N-oxide, IR and Raman spectra, thermodynamic functions 3—3725
3-methyl 2-butanethiol, conform. behaviour and vibr. spectra 3—32088
methyl anisoles, IR and Raman spectra 3—32049
methyl chloride, Coriolis reson. combination bands, IR obs. 3—17272
methyl cyanide, $V_2-V_3+V_4$ Fermi doublet as a probe of mol. interactions 3—32035
methyl fluoride, optical mixed-state transient effects by Stark switching, coherent beat effects 3—11851
methyl glycolate, transferable valence force field 3—50368
N-methyl morpholine N-oxide, anhydrous and monohydrate, vibr., IR and Raman obs. *(French)* 3—32050
methyl radical, difference freq. laser spectroscopy of the ν_3 band 3—17273
methyl vinyl ketone, conformational barriers to internal rot., Fourier transform spectra in far IR region 3—6631
methyl vinylether, gas-phase mol. struct., electron diffr. IR Raman and microwave obs. 3—50520
N-methylaniline-$d_0(d_1)$, vibr., pot. energy barriers, vapour phase IR obs. 3—50406
methylene radical, $^3B_1$ state, ν_2 band, laser mag. reson. obs. 3—21791
methylene radical, rot., hyperfine struct., far-IR laser mag. reson. study 3—21790
methylgermane-$d_0(-d_3)$, IR and Raman vibr. spectra 3—6652
2-methylpyrazine, liq. state IR absorpt. and vapour phase UV absorpt. spectra 3—55954
4-methylpyridine molybdenum trioxide, cryst. struct. determ. 3—22883
5-methylresorcinol-hexamethylenetetramine molecular complexes, struct. conversions on heating, chem. interactions 3—53371
methylviologen, vibr. anal. 3—45919
molecular mixed crystal, picosec. photon echo and CARS obs. of dephasing 3—34119
naphthalenes, 1- and 2-hydroxy and 1- and 2-amino-, laser Raman and IR spectra, vibr. assignments 3—6659
o-naphthoquinonediazides, electron struct. and spectral props. 3—17225
2(1-naphthyl)-5-phenyloxazole in n-paraffins, vibr. anal., IR, Raman and Shpolskii spectra 3—32048
nickel acetate(-d_{14}), Fermi reson. in Raman and IR spectra 3—47640
nickel formate dihydrate, librational modes of water 3—21763
nickel monochloroacetates, IR spectra, correlation with cryst. struct. 3—14307
p-nitrobenzoate adsorbed on Ag island films, enhanced IR absorpt. ATR study 3—14269
nitromethane, cryst., CHD_2 internal rot. effect on CH stretching mode, IR and Raman studies 3—27860
norbornane, gas phase mol. struct., electron diffr., microwave, Raman and IR study 3—56074
norbornane, gas-phase mol. struct., electron diffr. IR Raman and microwave obs. 3—50520
octamethylenetetrathiafulvalene, charge transfer complexes and ion-radical salts, electron and cryst. struct. and elec. cond. 3—52121
oligotetramethylene glycol elastomer films, segmental orientation during deform. *(Russian)* 3—51515
organic semicond. thin films, dark DC cond., visible, UV and IR spectra studies 3—52143
organo-siliceous biomolecules IR props. rel. to Trapezium Nebula dust IR spectra 3—5385
orthoaminoazobenzenes, hydroxyhydrazone tautomerism, IR spectra 3—26737
orthohydroxyazobenzenes, hydroxyhydrazone tautomerism, IR spectra 3—26737
7-oxabicyclo[2.2.1]heptane, anharmonic skeletal deform., IR spectrosc. obs. 3—36755
oxalic acid, α and β phase, IR and Raman vibr. spectra, normal coord. calcs. and intermol. forces 3—34083
oxalyl bromide, internal rot., Raman spectra 3—36767
oxalyl chloride, internal rot., Raman spectra 3—36767
PET-polybutylene terephthalate copolymer, photoacoustic study 3—47054
phenol, internal rot. spectrum, CNDO calc. 3—11693
phenol-phenolate anion-phenoxy radical series, electronic struct. study by IR and Raman spectra 3—45944
phenol-pyridine, H-bonded complex in soln., vibr. relax., temp. and conc. depend. 3—41546
phenyl azide-d_5, vibrational spectra, IR and Raman obs. 3—41585
(Z)-α-phenyl-β-(2-thienyl) acrylonitriles, IR and UV absorpt. spectra 3—6651
4-phenylpyridine molybdenum trioxide, cryst. struct. determ. 3—22883

infrared spectra of organic molecules and substances continued
phthalanyl acid, IR spectroscopy *(Russian)* 3—14268
phthalocyanines, protonated, struct., IR spectroscopy study 3—48068
pivalic acid, normal and spectral vibrations *(French)* 3—32072
PMMA, optical absorpt. in low freq. range 3—3714
poly(γ-methyl-D-glutamate), mol. motion, IR and X-ray diffr. study 3—33149
poly(tetramethylene terephthalate) model cpds., IR spectra 3—19130
polyacetylene:F^+, ion implanted, metallic IR reflectivity and elec. cond. 3—2444
polyacetylene, doping by reaction with HF, elec. cond. and IR spectra study 3—18325
polyacetylene, light scatt. and absorption 3—19143
polyacetylene, photogenerated gap states, transient optical absorpt. 3—3760
polyacetylene films, highly doped, IR transmission meas. *(French)* 3—34080
polyacrylonitrile, IR vibr. spectra at high press. 3—3704
polyamido acids, differing struct., IR spectroscopy *(Russian)* 3—14268
polycarbobenzoxyornithine, struct. and side chain interactions 3—56836
polyethylene, melt crystallised, chain folding and CD_2 bend modes, IR studies 3—56837
polyethylene, methyl content determ., attenuated total reflectance Fourier-transform. IR spectroscopy 3—38819
polyethylene films, light ageing, IR spectra study *(Bulgarian)* 3—9075
polyethylene terephthalate, spectroscopic charact. of rotational conformations in disordered phase 3—37811
polyethylene-vinyl acetate copolymers, vinyl acetate content determ., attenuated total reflectance Fourier-transform. IR spectroscopy 3—38819
polyethyleneterephthalate, coextrusion drawn, Fourier-transform IR obs. 3—57917
polymer blends, miscible, charact. techniques, review 3—38089
polymer-polymer system miscibility, hydrogen bonding, IR spectra, oligomer probe 3—37816
polymers, overstressed at. bonds, vibr. spectra study 3—27858
polymethine cyanine IR dyes for picosecond lasers, absorpt. and fluoresc. props. 3—27037
polymethylene systems, annealing, diffusion, calorimetric and IR study 3—34103
polyoxymethylene, structural inhomogeneities 3—33139
polyphenylene sulphide, highly cond. meta derivatives synthesis and characteris., AsF_5 doping 3—13806
polysiloxane thin films, prep. in glow discharge, struct., IR spectrosc. obs. *(Russian)* 3—47660
polyurethanes, electrooptic parameters and band intensities in IR spectra 3—6686
polyurethanes, vibr., inversion of IR dichroism 3—34102
polyurethaneurea elastomer films, segmental orientation during deform. *(Russian)* 3—51515
polyvinylacetate, emission spectra intensity by Fourier transform IR spectrometry *(Japanese)* 3—50558
polyvinylidene fluoride form I, phase transition below melting pt., ferroelec. Curie pt. proposition 3—52746
polyvinylidene fluoride-PTFE copolymer, photoacoustic study 3—47054
porphin, free-base, in 2-methyltetrahydrofuran, photochem. hole-burning study 3—47741
porphyrin Langmuir-Blodgett films 3—38271
promazine bromide salts, electronic props., EPR, mag. susceptibility and IR spectra studies 3—47551
promazine perchlorate salts, electronic props., EPR, mag. susceptibility and IR spectra studies 3—47551
propan-1-ol+LiCl, mol. interaction, IR and NMR investig. 3—1450
2-propene-1-imine, thermally generated, photoelectron and IR spectra 3—6722
propionitrile in solid soln., far IR matrix isolation studies 3—55929
propylene, IR intensity param. transferability 3—32062
PTFE, crystallinity characts. rel. to wear, X-ray diffr., IR spectra, DSC and viscoelastic spectra obs. 3—33145
purple bacterium chromotophores, excited states energy transfer and degradation of light-harvesting antenna, selective picosec. spectra 3—34796
pyridine molybdenum trioxide (tungsten trioxide), cryst. struct. determ. 3—22883
pyridine N-oxide, matrix isolated in Ar, pair association 3—41576
pyridine-N-oxide, IR spectra and electro-optical parameters *(Russian)* 3—43549
all-trans-retinal, Raman and IR vibr. anal. 3—19667
rhodamine 6G, triplet-triplet transitions in IR range 3—32075
Schiff base, nonionised, complexes Zn^{2+}, Cd^{2+} and Hg^{2+} cpds., synthesis, osc. obs. 3—6647
selenophene chromium tricarbonyl, low freq. vibr. spectra, dynamic disorder *(French)* 3—17282
1-silacyclobutane-1-d, ring puckering pot. function, IR obs. 3—32054
silane compounds, high resolution Fourier transform IR spectra, internal rot. barriers, vibr. assignments 3—6634
silanes, Si-H bond charact. rel. to IR stretching freq. 3—11780
sodium acetate, solid, vibr., isotope shifts, IR study 3—34085
substituted alkenes-HF complexes, H-bonds, Fourier transform IR matrix isolation 3—32053
1,3-sultones, long chain, IR absorpt. bands and struct. correl. 3—17275
supersonic jets, conformational interconversions, matrix IR spectroscopy and model calcs. 3—1355
TCNQ salt, $MEM(TCNQ)_2$, phase transition effect on IR reflectivity spectrum 3—28860
TCNQ salt, trimethylamine tetracyano-p-quinodimethane iodide, phase transition, IR study 3—18445
TCNQ salts, TCNQ-promazine, electronic props., EPR, mag. susceptibility and IR spectra studies 3—47551
TCNQ salts, temp. depend. near IR absorpt. theory 3—57903
tertiary alkyl bromides, IR vibr. anal. 3—32070
tetrachloroethylene, fundamental vibrs., polarized IR transmission obs. 3—50404
1,2,2,3-tetrachloropropane, liq. and solid, vibr. and conformation, IR and Raman study 3—52785
tetrafluoromethane, Q branch of $2\nu_1+\nu_4$ band 3—41569
tetrahydronaphthols, H-bonding, IR and UV spectra 3—11790
tetrakis(trimethylsilyl)-diarsane, liq. and solid states, colinear arrangement, thermochromic effect, IR and Raman study 3—57916
tetrakis(trimethylsilyl)-distibane, liq. and solid states, colinear arrangement, thermochromic effect, IR and Raman study 3—57916

infrared spectra of organic molecules and substances continued
tetramethyldistibane, liq. and solid states, colinear arrangement, thermochromic effect, IR and Raman study 3—57916
tetraphenyldistibane, liq. and solid states, colinear arrangement, thermochromic effect, IR and Raman study 3—57916
tetraphenyltetrathiafulvalene, charge transfer complexes and ion-radical salts, electron and cryst. struct. and elec. cond. 3—52121
tetrapropylammonium tribromomercurate(II), vibr., far-IR and Raman obs. 3—28862
thiophene adsorbed on H-montmorillonite, IR spectral study 3—26738
thiophene chromium tricarbonyl, low freq. vibr. spectra, dynamic disorder *(French)* 3—17282
thiophosgene, multiphoton excitation, IR-visible double reson. 3—32120
toluenesulphonyl halides, IR spectra calc. and interpretation 3—45941
2,3,6-trichlorophenol, laser Raman and IR spectra 3—45948
4,4,4-trifluoro-3,3-bis(trifluoromethyl)butyne, IR band struct. and dynamics, temp. depend. 3—55933
trifluoroacetic acid-hydrogen halides complexes, IR matrix isolation and CNDO/2 studies 3—21765
trifluoroiodomethane mol., highly excited, IR transition spectra, vibr. anal. *(Russian)* 3—1341
trifluoromethane-d_1 two-freq. multiphoton dissoc. and excited state absorpt. dynamics 3—50464
trimethyl germanium halides-d_0(-d_q), vibr. spectra, normal coord. calcs. 3—6627
trimethyl tin halides-d_0(-d_q), vibr. spectra, normal coord. calcs. 3—6627
trimethyl-4,5,6 pyrimidone, crysts. and solns., IR and Raman spectra, k halides complexation study *(French)* 3—52796
trimethyl-4,5,6 pyrimidone chlorohydrate, crysts. and solns., IR and Raman spectra, k halides complexation study *(French)* 3—52796
trimethylamine, barriers to internal rot., Fourier transform spectra, far IR region 3—6632
trimethylaminegallium trichloride, IR and Raman spectra, vibr. assignment and normal coord. calcs. 3—32067
trimethylenesulphite, conformational anal., gas phase IR obs. 3—55939
trimethylphosphine-d_3(-d_6), methyl rocking modes assignment 3—50409
trimethylstannylacetylene-d_0(d_9)(d_{10}), liq. vibr., force consts., IR and Raman obs. 3—50405
triphenyl derivatives, group elements, H-bonds vibr., IR obs. 3—6654
tris-sarcosine calcium chloride, ^1H to ^2H substitution, effects on ferroelectric props. 3—28787
TTF-chloranil, neutral-ionic phase transition, charge transfer absorpt., reflectance meas. 3—34084
TTF-chloranil single cryst., reflectance spectrum, temp. depend. 3—3730
γ-valerolactone, liq., far IR and low freq. Raman and microwave spectra 3—6626
vinylidene chloride and dichloroethylene, CH-stretching modes, population lifetimes, IR and Raman spectra 3—1331
vinylidene fluoride-chlorotrifluorethylene copolymer, struct. and piezoelec. props. 3—27856
zinc monochloroacetates, IR spectra, correlation with cryst. struct. 3—14307
ethylene force field calculations, inplane vibrations, CNDO/force method 3—41557
θAl_2O_3, chemisorbed pyridine, IR spectral study 3—8321
Bi(III) complexes, Bi-halodithiocarbamate derivatives, porep., mol. wt. determ., IR spectra 3—55940
$(ClH)_n$-dimethyl ether complexes, n=1, 2, 3, IR spectral props. 3—32064
$CsVO_2$, matrix isolation IR and Raman spectra, oxyanion coord. 3—36749
$CsVO_3$, matrix isolation IR and Raman spectra, oxyanion coord. 3—36749
fluoromethane, simultaneous anal. of ν_1, ν_4, $2\nu_2$, $\nu_2+\nu_5$, and $2\nu_5$ IR bands 3—41571
H-bonded bound systems, gas-phase laser spectroscopy 3—1354
H-bonded cpds. with hydroxyl chains, bond length correl. with IR freqs. 3—36754
HOC^+, IR intensities, ab initio calcs. 3—1238
$H-S^-$ H bonds in organic monosalts, large H^+ polarisability, NMR and IR obs. 3—50397
SF radial, vibration-rotation spectra, IR diode laser spectrosc. study 3—45940
Sb(III)complexes, Sb-halodithiocarbamate derivatives, porep., mol. wt. determ., IR spectra 3—55940
a-Si:H, role of dangling bond defects in early recomb., IR absorption 3—47679
Sn IV complexes, substituted 1,3,4-thiadiazoles, IR and Raman study 3—34114
1,4-sultones, long chain, IR absorpt. bands and struct. correl. 3—17275
tetramethylammonium tetrachlorocuprate, long-wavelength phonons 3—47057
TiO_2 substrate reaction with methylsilanes and hexamethyldisilazane, IR absorpt. spectra 3—9355

infrared spectra of polyatomic inorganic molecules
absolute IR intensities 3—36750
Alkali metal compounds, (MPO_3, MPO_2, MNO_3), matrix isolated IR spectra 3—55938
aquo-lanthanide acetylacetonato complexes, low frequency IR obs. 3—45943
fundamental vibrs., polarized IR transmission obs. 3—50404
phthalocyaninato transition metal(II) complexes, monomeric and polymeric base adducts, IR and FIR study 3—21766
temperature meas. of combustion gases *(Chinese)* 3—10843
transition metal complexes, bis (ketone thiosemicarbazonato) chelates, mag. and spectrosc. obs. 3—50396
Ag_2CO_3, intermolecular vibr. coupling, IR spectra 3—50502
Ag(I) 2-aminobenzothihazole complexes, conductometric and IR investig. 3—17284
$AlCl_3(I_3)$, vapour phase Fourier transform far IR spectra obs., 100 to 500°C 3—6635
$BH(NH_2)_2$, IR and Raman spectra, normal coord. anal. 3—50400
$B_{12}X_{12}^{2-}$ icosahedral anions, (X=H,D,Cl,Br,I) vibr. spectra in solids and solns. 3—8832
$BaS_2O_3.H_2O(D_2O)$, H bonds, IR and Raman vibr. spectrosc. obs. 3—6648
CO_2, 1.4 and 4.3 μm bands, absorption coeff. 3—50410
CO_2, absorption coeff. in wings in 790-910 cm^{-1} spectrum range 3—50411
CO_2, absorption of 9.6 μm CO_2 laser radiation at high temps. 3—50394
CO_2, band parameters determ. by whole band analysis, collision broadening 3—6724

infrared spectra of polyatomic inorganic molecules continued
CO_2 band parameters near 3.6 μm 3-41564
CO_2, distrib. function in combined mode from IR emission in 2.7 and 15 μm bands 3-50412
CO_2, Fourier transform IR spectral meas. of high temp. $^{13}C^{16}O_2$ and $^{13}C^{16}O^{18}O$ 3-6629
CO_2, IR emission and absorpt. spectra intensity calc. under vibr. nonequilib. conditions 3-36756
CO_2, IR spectra, intensity of $(11^10, 03^10)_I$-00^00 band 3-41567
CO_2, IR spectra, vibr.-rot. bands *(Chinese)* 3-41565
CO_2 isotopic laser wavelengths, atmos. water vapour absorption 3-54113
CO_2, rare gas mixtures, mean square torque IR vibr.-rot. bands 3-45925
CO_2 spectrum absorption coeff. calc., transmission microwindows and periphery 4.3 μm band with broadening by Ar and He 3-1361
CO_2, vibrationally excited by hot Pt surface, internal energy distrib. 3-56050
CO_2+H, mol. vibr. states, spectral distrib. 3-56046
CO_2+N_2, cc CO_2 collisionally excited high-resolution emission spectroscopy, rot. distrib. 3-21884
$ClONO_2$, stratospheric mol., far-IR torsional obs. 3-26745
Cr(III) comlex, di-p-hydroxo-bis(tetramine Cr III) bromide, metal pair spectra and exchange coupling 3-17287
Cu (I) 2-aminobenzothihazole complexes, conductometric and IR investig. 3-17284
D_2O, adsorption and two-dimens. condensation on NaF 3-2964
Fe complexes, xanthato-Fe (III), mag. and spectroscopic props. 3-52795
$GaCl_3$, vapour phase Fourier transform far IR spectra obs., 100 to 500°C 3-6635
HCN, IR intensities, ab initio calcs. 3-1238
HCN isoelectronic series 3-1238
HDO, (001), (110) and (030) bands, line positions and strengths 3-55997
HDO, high resolution rot. vibr. IR spectra of ν, and $2\nu_2$ bands 3-26723
HDO line positions and strengths, 2400-3300 cm^{-1} region 3-1350
HF absorption spectra using fast Fourier transform spectroscopy 3-54775
$(HF)_n$ clusters, dynamics, vibr. predissoc. spectra 3-50487
HN_2^+, far IR transitions obs. 3-11792
HNC, IR intensities, ab initio calcs. 3-1238
HNCO, IR spectrum, fundamental ν_2 band, rot. fine struct. 3-6625
H_2O, adsorption and two-dimens. condensation on NaF 3-2964
H_2O molecule, dimer and liq., IR absorpt. spectra calcs. 3-26736
H_2O, OH bond and stretching region in IR vibr. spectrum 3-36738
H_2O vapour, total emissivity, dimerisation effect on IR absorpt. 3-55934
$H_2{}^{16}O$, $H_2{}^{17}O$, $H_2{}^{18}O$, HDO, secondary wave-number standards, 1066 to 2296 cm^{-1}, Fourier-transform spectrosc., ν_2 bands 3-36748
$(H_2O)_n$ clusters, dynamics, vibr. predissoc. spectra 3-50487
HOCl, Q branches in the rot. IR spectrum 3-26728
$HOHCl^-$, struct., mobility and IR spectra 3-1356
$HOHF^-$, struct., mobility and IR spectra 3-1356
HPF_2BH_3, Raman and IR spectra and normal coord. anal. 3-32063
H_2S, ground state consts., ν_2 band, IR obs. 3-26749
H_2S, IR spectra, rot. anal. using reduced Hamiltonians 3-45939
$K_2Nb(O_2)F_5.H_2O$, IR and Raman vibr. spectra 3-6653
$K_2Ta(O_2)F_5.H_2O$, IR and Raman vibr. spectra 3-6653
$LiClO_4$, interactions in amide solns., IR and Raman obs. 3-50402
Mn II complex, $MnX_4(C_5H_5NH)_2$ (X=Cl, Br) *(French)* 3-32076
Mn(II) complexes, acetophenone oxime derivatives, mag. and spectrosc. obs. 3-50395
NH_3, absolute IR intensities 3-36750
NH_3, ground state for IR spectrum, pure rotational transitions 3-41572
NH_3, IR laser optogalvanic spectrosc. 3-55936
NH_3, matrix isolated in CO at 10K, IR spectrum 3-17285
NH_3, molecular beams, IR spectra at high press., rot. energy distrib. 3-11789
$^{14,15}NH_3$, high-resolution of IR and microwave FT spectra of ν_4 and $2\nu_2$ bands 3-32056
NO_2, 800 cm^{-1} region balloon-borne IR atmospheric spectra rel. to calcs. 3-48666
NO_2, monomer and dimer, without and in prescence of Ar, 3.508μ-HeXe-laser line absorpt. 3-26753
N_2O, 00^01-10^00 band vibr.-rot. line parameter determ. 3-36877
N_2O, band parameters determ. by whole band analysis, collision broadening 3-6724
N_2O, determ. of content in air using IR gas analyser in hospital environ. *(Hungarian)* 3-39432
N_2O, laboratory spectra near 1880 cm^{-1} rel. to stratospheric mixing ratio profile 3-25147
N_2O, rare gas mixtures, mean square torque IR vibr.-rot. bands 3-45925
N_2O, vibr. bands, IR absorpt. intensities 3-26744
N_2O_3, in liq. Xe, isomerisation, IR absorpt. spectra obs. 3-55937
$^{14}N^{16}O_2$, line positions and intensities calc. for bands absorbing in 3.4 μm region 3-26741
NaCl, molten, IR spectrum, mol. dynamics simulation, cond. meas. 3-14273
$NaClO_4$, interactions in amide solns., IR and Raman obs. 3-50402
$Na_2S_2O_3.5H_2O(SD_2O)$, H bonds, IR and Raman vibr. spectrosc. obs. 3-6648
Ni(II) polymeric complexes with planar dithiooxamides, IR and UV spectra, thermal anal. 3-17286
O_3, broadening and intensity coeffs., IR obs. 3-26742
O_3 complexes in solid N_2, IR spectrosc. obs. 3-21762
O_3, IR atmos. spectra of ν_2 and $2\nu_2$-ν_2 bands 3-44551
OCS, rovibration, IR laser diode spectra 3-45945
OCS, vibr., pressure broadening in IR spectra 3-32061
Pt complexes, Pt-pyrazine derivatives, UV, IR and PMR study 3-55964
Pt complexes, Zeise's salt derivatives, isotope labelling, IR and Raman obs. 3-50403
Pt complexes, Zeise's salt substituted aniline derivatives, UV, IR and PMR study 3-55963
$Re_2O_3(CN)_8{}^{4-}$, IR and Raman vibr. spectra and force const. anal. 3-23956
SF_6, mol. beam, IR multiphoton excitation study 3-6739
SO_2 complexes, in solid N_2, IR spectrosc. investig. 3-21761
$(SO_2)_2$, matrix isolated, in solid N_2, IR spectrosc. obs. 3-21760
$S_2O_4{}^{2-}$ in aq. soln., struct., Raman and IR obs. 3-17280
SOF_2 isolated in inert gas matrices, temp.-reversible equilibria and exchange among trapping sites 3-6641
SiF_4, IR Doppler-limited spectrum and anal. of $3\nu_3$ manifold 3-41570
$^{28}SiF_4$, pot. consts. and IR spectrum 3-11794
SiH_3F, ν_3 and ν_4 bands, isotope effects, IR obs. 3-26747
TiO_2, partial vibr. anal. of A-X transition 3-17259

infrared spectra of polyatomic inorganic molecules continued
$TiTa_2O_7$, IR and Raman vibr. absorpt. spectra 3-52797
$UO_2(NO_3)_4{}^{2-}$ ion, in crysts., vibr. and electronic spectra 3-45965

infrared telescopes *see telescopes*

infrared transmitters *see infrared sources*

infrasonic waves *see acoustic waves*

initial value problems
Benjamin-Ono eqn., inverse scatt. transform, multidimens. problems 3-49214
degenerate nonlinear diffusion problem, stabilisation of solns. 3-30815
flow of gas in a pipe, real-time simulation *(Italian)* 3-27599
gas dynamics, stable boundary approxs. for implicit time discretisation 3-27543
general relativity, geometric constraints on nonsingular, momentarily static, axisymmetric systems 3-45030
heat equation, finite element Galerkin operator, L_∞-boundedness for parabolics 3-17770
interstitial solid solutions, thermoelastodiffusion process numerical modelling 3-51838
lagrangians for spherically symmetric potentials 3-20673
linear thermoelastic media, one-dimensional shock and higher order wave propagation 3-37407
liquid film, rupture, nonlinear theory 3-38170
Maxwell model, finite element code for initial value problems 3-27568
nonlinear diffusion equation, boundary-initial value problem 3-45098
nonlinear evolution equations, with strong dissipation, soln. existence theories 3-20641
nonlinear thermoelasticity, dynamical problems 3-37364
numerical relativity, initial value problem, formalism for Einstein eqns. soln. 3-25793
one-dimensional inhomogeneous cosmologies, wave propag. 3-16045
oscillators, linear and coupled, reliability anal. 3-69
plane waves, nonlinear steepening 3-49170
plates, Z 3-37373
reactor physics, firt order Boltzmann eqn. and initial value problem, least squares derivation 3-41094
semilinear heat eqns., channel and cylindrical flow of viscous fluids 3-51113
shells of revolution, elastic-plastic anal., initial value method appl. 3-37373
space-time, orthogonal 2+2 decomposition 3-49225
stars gravitational collapse, rot. and mag effects with general relativistic phenomena 3-20350
stellar interiors, theory of meridional circulation in rotating star 3-10318
thermoelasticity with one relax. time, generalised soln. existence 3-7426
thermomechanics, classical and generalised, thermal stress eqns., boundary-initial value problem soln. 3-79
wave evolution near direct reson. conditions 3-5614

injection lasers *see semiconductor junction lasers*

injury by radiation *see biological effects of radiation*

inorganic insulators *see insulating materials*

inorganic molecule configurations
see also isomerism
alkali metal clusters, struct., binding energy, diatomics in molecules approx. 3-17398
alkali metal trimers, force consts., semi-empirical valence bond pot. energy surface 3-21645
bridged dialuminium compounds, electronic struct., ab initio calcs. 3-6520
cyclohexasilane, mol. struct., electron diffr. obs. 3-1475
dimer cation, electronic and mol. struct., ab initio CI calcs. 3-55856
divalent metal ions; 1,8-dihydroxyanthraquinone chelates, struct. and bonding 3-12000
equilib. struct., force field refinement, rot. spectra 3-45930
group 1B metal clusters, binding energies, configs., diatomics in mols. approx. 3-17397
internal top mols., with sixfold barrier, internal rot. and mol. struct., microwave obs. 3-50376
lanthanide complexes, mol. struct. from NMR chemical shifts 3-32108
mixed alkali metal trimers, struct., diatomics-in-molecules approx. 3-17377
phosphate groups, molecular symm., factor anal. 3-21940
silyl amines, struct. and acid-base props., ab initio SCF study 3-31936
silyl phosphines, struct. and acid-base props., ab initio SCF study 3-31936
sulphide borons, electronic props., struct., ab initio SCF calcs. 3-11650
Al^{3+}/CO system, equilib. geometry, ab initio calcs., NMR chem. shielding tensors 3-17205
AlX_3, (X=F, Cl, Br, I), geometry optimisation EHT method, electrostatic correls. 3-45857
Al_2X_6, (X=F, Cl, Br, I), geometry optimisation EHT method, electrostatic correls. 3-45857
$AsF_6{}^-$ octahedral anion, charge distrib., ab initio SCF calc. 3-6535
BCl_2 radical, form. by X-irrad., struct. investig. 3-36781
$BH(NH_2)_2$, IR and Raman spectra, normal coord. anal. 3-50400
BH_3NH_3, microwave spectrum, torsional barrier and struct. 3-36744
$BeAl_2F_8$ complex, ab initio MO studies of struct. and stability 3-36647
BeOH, spectrosc. consts., quantum chem. calcs. 3-21624
$BeOH^+$, spectrosc. consts., quantum chem. calcs. 3-21624
Bi_2, electronic states studied by laser-excited fluoresc. 3-11870
CI_4, cryst. and mol. struct. determ. *(German)* 3-2524
CIBS, isomers, geometries and stabilities, STO calcs. 3-11649
$(CO)_2$, chemically bound triplet electronic ground states, SCF calcs. 3-55871
$CO_2{}^+$, $C^2\Sigma_g{}^+$ state, geometrical struct., ab initio calcs., vibr. struct., photoelectron spectrum, predissoc. reaction paths 3-14839
CO_2-HCl, mol. struct., RF and microwave mol. beam elec. reson. 3-11830
$CO_3{}^-$ co-clustered with water, energetics and struct. studied by mass spectrometer and photodissoc. techniques 3-6732
C_3O_2, geometry, force consts., CNDO calcs. 3-17219
$(CS)_2$, chemically bound triplet electronic ground states, SCF calcs. 3-55871
$Co(NH_3)\ {}_6CuCl_5$, cryst. and mol. struct., single cryst. X-ray and neutron diffr. data 3-7977
$Cr_2(CH_3)_8{}^{4-}$, Cr-Cr multiple bonding, INDO calcs. 3-50313
$Cr_2Cl_8{}^{4-}$, Cr-Cr multiple bonding, INDO calcs. 3-50313
$CsBO_2$, mol. struct., electron diffr. obs. 3-21911
CsHe, pseudopot. mol. struct. calcs. 3-21637

- **inorganic molecule configurations** continued
  - Cs_2SO_4, mol. struct., electron diffr. obs. 3-21912
  - Cu complex, bis(acetylacetonato)Cu(II), gas phase mol. struct., electron diffr. obs. 3-36859
  - Cu_3, matrix isolated, ESR spectrum 3-55974
  - CuF, excited states, spin-orbit interaction 3-11669
  - Cu(II) complexes with hexamethylenetetramine, ESR and photoacoust. spectrosc. obs. 3-21787
  - FBS, isomers, geometries and stabilities, STO calcs. 3-11649
  - Fe complex, cyclobutadieneiron tricarbonyl, struct., ^{1}H and ^{2}H NMR study 3-55962
  - H-bonded dimers, geometries, props.; rot. spectrosc. investig. 3-50371
  - H_2O, HCl dimer, mol. geometry and identification by rot. spectrosc. 3-50372
  - H_2O, MO interactions, preferred geometry ab initio SCF calcs. 3-11653
  - H_2O, semirigid bender model 3-6525
  - H_3O^-, gas phase, long-lived form., struct. and reactions 3-58403
  - $H_3O_2^-$, struct., global geometry optimisation calcs. 3-55813
  - $HOHCl^-$, struct., mobility and IR spectra 3-1356
  - $HOHF^-$, struct., mobility and IR spectra 3-1356
  - H_2S, MO interactions, preferred geometry ab initio SCF calcs. 3-11653
  - H_2S-HF, equilib. struct., ab initio calcs., role of d functions 3-36671
  - H_2SO_4, mol. struct., ab initio MO calcs. 3-45805
  - $K_3(Pt(SO_3)_2H)Cl_2$, intramol. H bonded complexes, inelastic neutron scatt., new correl. of γ(OHO) vs. R(OO) 3-56101
  - $La_2(SO_4)_3.9H_2O$, spatial config. of water of hydration, Raman spectroscopy 3-1371
  - $LiBH(NH_2)_2^+$, bonds, struct., ab initio investig. 3-45809
  - MX_4^{n-}, equilibrium configuration, d-d transition bands 3-45827
  - MgOH, spectrosc. consts., quantum chem. calcs. 3-21624
  - $MgOH^+$, spectrosc. consts., quantum chem. calcs. 3-21624
  - Mn(II) complexes, acetophenone oxime derivatives, mag. and spectrosc. obs. 3-50395
  - Mn(II) complexes with hexamethylenetetramine, ESR and photoacoust. spectrosc. obs. 3-21787
  - NH_3, MO interactions, preferred geometry ab initio SCF calcs. 3-11653
  - NH_2OH, first two bands in PES, ab initio MO study 3-1428
  - N_2XO radical (X=B,C,N), electronic struct., geometry, UHF MNDO PMO calcs. 3-11687
  - NaCN, struct., mol. beam electric reson. and microwave study 3-11832
  - NaHe, pseudopot. mol. struct. calcs. 3-21637
  - Na_2SO_4, struct. by atom superposition and electron delocalisation MO theory 3-31916
  - Ni complex, bis(dimethylglyoxyimate)-nickel (II), intramol. H bonded complexes, inelastic neutron scatt., new correl. of γ(OHO) vs. R(OO) 3-56101
  - Ni(II) polymeric complexes with planar dithiooxamides, IR and UV spectra, thermal anal. 3-17286
  - Os carbonyl clusters, struct., bonding, chem. props. 3-12029
  - PF_6^- octahedral anion, charge distrib., ab initio SCF calc. 3-6535
  - PH_3, MO interactions, preferred geometry ab initio SCF calcs. 3-11653
  - Ru carbonyl clusters, struct., bonding, chem. props. 3-12029
  - Ru complexes, bridged binucl. complexes, charge transfer bands, reson. Raman excitation profiles 3-45949
  - S-Se bonds in cpds., ab initio theoretical study 3-31912
  - S_4N_2, mol. and electronic struct., ab initio MO calcs., photoelectron spectra 3-1236
  - SO_4, struct. by atom superposition and electron delocalisation MO theory 3-31916
  - $S_2O_4^{2-}$ in aq. soln., struct., Raman and IR obs. 3-17280
  - $SbCl_5$, vapour, mol. struct. and pseudorot., electron diffr. obs. 3-36857
  - SbF_6^- octahedral anion, charge distrib., ab initio SCF calc. 3-6535
  - Si-containing molecule, MINDO/3 and MNDO calcs. 3-21641
  - SiC_2, theoretical study of ground state and excited electronic states 3-54221
  - SiH_5^+, struct. and energy, comparisons with CH_5^+ and BH_5 3-55794
  - Si_2H_2, equilib. geom. and pot. surfaces 3-11999
  - SiH_2N_2, and isomers, relative stabilities, ab initio SCF calcs. 3-55861
  - TiF_4, equilib. geometry and vibr. freqs., gaseous electron diffr. obs. 3-11976
  - VO_2^{2+}-imidazole complexes, frozen aq. soln.; ENDOR investig. 3-21795
  - XeHBr, Br quadrupole coupling consts., mol. struct., microwave rot. spectra 3-32042
  - $Zn(NO_3)_2$, aq., struct., X-ray diffr. obs. 3-46100
- **inorganic molecule electronic structure** *see molecular electronic states*
- **input-output media (computers)** *see computer peripheral equipment*
- **insolubility** *see solubility*
- **inspection**
  - *see also quality control; reliability; testing*
  - acoustic flaw detector, low frequency AD-60S 3-22296
  - AE inspection of equipment of gas processing plant, possible variants 3-24469
  - automatic X-ray testing of castings based on local feature operator and flexible image matching 3-24479
  - bimetallic components electrodynamic inspection using proximity effect 3-58369
  - bimetallic structures, surface crack detection, US techniques, reliability eval. 3-44031
  - bimetals, explosively clad, ultrasonic inspection 3-9272
  - BWR control blades inspection, neutron absorber standards method evaluation 3-55239
  - cold rolling rolls hardened by commercial frequency currents and multiple preheatings, magnetic inspection 3-29264
  - component identification using ultrasonic signature analysis 3-58352
  - computer-controlled ultrasonic testing of aircraft structures 3-14791
  - crack tip with elec. current flowing around, magnetic field strength rel. to electromagnetic inspection 3-29265
  - defect detection, surface and below rough surface by US head waves 3-29262
  - deformation, using Moire fringes *(French)* 3-39315
  - DUET US system for thick rolled sheet inspection 3-22295
  - eddy current flaw detection, theoretical considerations using superposed transducers, rigorous mathematical soln. of two dimensional problems 3-24465
  - eddy current flaw detection by superposed transducers, two-dimens. fields analysis 3-29268
  - eddy current inspection with superposed transducers, theory, approx. calc. of two dimensional models 3-53345
  - eddy current probe, multisegment, for flaw detection of bolted structures 3-39341
- **inspection** continued
  - eddy current transducer interaction with multilayered spherical product, electrodynamic problem soln. 3-29267
  - elastic wave scattering from flaws near surfaces, Fourier elastodynamics appl. 3-56468
  - electrothermal inspection of conducting materials 3-24474
  - EM acoustic transducer for steam generator tubing inspection 3-50012
  - fastener hole, crack detection using elec. current perturbation method 3-39342
  - ferromagnetic object with finite dimens., inspection in mag. fields and under elastic stresses, demagnetisation effects 3-29269
  - fibre suspensions, US inspection 3-19472
  - fission reactor underwater viewing improvements demonstration 3-31767
  - hollow imperfections in solid medium, elastic wave scattering, US 3-48011
  - in-service inspection ensures nuclear component integrity 3-31697
  - inclined probe with spherical interface, acoustic field 3-24471
  - integrated circuit inspection via acoustic microscopy 3-42084
  - leak testing methods, standardisation requirements 3-34560
  - LWR steam generator tubes, in-service inspection by multiple-frequency eddy current methods 3-6398
  - magnetic component during demagnetizing with attached square shape electromagnet along hysteresis loop 3-54752
  - magnetic components, using attached electromagnet with square shaped core, mag. field calc. 3-54753
  - magnetic inspection of components at high inductions using coercimeter and attached electromagnet with ferrosensor 3-29270
  - magnetic particle and liquid penetrant methods 3-34556
  - magnetographic inspection, result documentation 3-48018
  - magnetomodulation transducer with excitation field former, optimum excitation conditions determ. 3-29272
  - metallised glass fibre, automated flaw inspection 3-53343
  - near surface cavity and inclusion interaction with Rayleigh waves 3-44015
  - optical fibre appl. to wide band differential interferometry 3-46308
  - photovoltaics industry measurement equipment, manufacturer's perspective 3-24592
  - pipe weld, radiographic image quality indicator placement problem 3-34565
  - polymeric large multilayer parts, unit for combined inspection 3-58365
  - pressure vessel, spherical axisymmetrically flawed, expt. and computer simulated holographic inspection 3-48032
  - pressure vessel integrity inspection, Marshall report (1976) assessment 3-21370
  - prototype fusion reactors, inspection and maintenance 3-11480
  - PWR reactor vessel in-service inspection, quality and efficiency improvements 3-17018
  - quality control, standardised inspection *(German)* 3-19479
  - radioactive materials containers, γ scintillation testing of shielding integrity 3-31833
  - radiographic inspection, reliability and operative characts. calc. 3-29277
  - radiographic inspection using photographic paper 3-29278
  - radiography technique and appl., standardisation requirements 3-34555
  - reactor pressure vessels reliability, pre/in-service inspection and tests influence 3-16825
  - scanning optical microscopy, operation and testing appl. 3-45197
  - scatter imaging using X-ray fan beam and pinhole camera 3-9289
  - shadow inspection method, misaligned US transducer effect 3-53339
  - shadow method with immersion, object surface roughness effect on recorded signals amplitude fluctuation 3-29273
  - solder bonds in superconducting cable, microcomputer based US inspection 3-47999
  - spent fuel canisters, US immersion inspection technique development, report 3-26384
  - steam generator, service degraded, examination prior to tubing strength research 3-6364
  - steel, C, decarburising activity of salt baths, thermoelectric method for inspection 3-29266
  - steel, C, St.5, magnetoelastic charact. under quasistatic effects, NDT appl. 3-47539
  - steel, low alloy type 25Kh1MF, fastener blanks, magnetic inspection of hardness 3-48019
  - steel, mag. spectrometric inspection, treatment of multiple signal 3-29271
  - steel, pearlitic, defect detection, surface and below rough surface by US head waves 3-29262
  - steel, surface stresses inspection using magnetisation jump parameters 3-58336
  - steel 30Kh3MF, magnetic method of hardness inspection, heat treatment effects 3-24466
  - subsurface hole location and sizing, quantitative use of Rayleigh waves 3-44021
  - TFTR in-vessel manipulator system, dynamic and geometric simulations 3-11481
  - three dimensional flaws, US inspection, dimension measuring method 3-48010
  - Tokamak remote inspection and repair, key issues 3-56761
  - turbine blade, in situ crack inspection with endoscope and eddy current probe *(German)* 3-34577
  - underwater photographic techniques for irradiated nucl. fuel inspection, report 3-31690
  - US, velocity signal recording on mag. tape 3-48012
  - US inspection using acoustic fields of elastic wave scattering by defects, liquid model 3-24470
  - US inspection with head waves 3-53340
  - US penetrant inspection, liq. filling of microcapillaries under US action, filling parameters calc. 3-29280
  - US testing, recent trends 3-4227
  - US testing principles and applications, standardisation need 3-34559
  - vibroacoustic pulse random processes, amplitude meas., sample-and-hold peak detector, noise immunity 3-42087
  - weld, US inspection using single crystal elastic const. 3-44034
  - weld inspection, US, using rectangular calibration screen overlays 3-9291
  - welded joint, magnetographic inspection, optimisation of charact. 3-48015
  - welded joints in structures, sensitivity of leak tests 3-25887
  - Fe, cast, chilled layer hardness, inspection apparatus using higher harmonics 3-58337
  - SiN_4 bearing surfaces, fluorescent dye penetrant inspection 3-39324
  - Si_3N_4, acoustic method of crack detection 3-44032

instability *see stability*
installation
see also commissioning; computer installation
solar power plant installation, commissioning and operational results in Almeria, southern Spain 3—14997
installation, computer *see computer installation*
instrumentation
see also aerospace instrumentation; computerised instrumentation; digital instrumentation; digital readout; display instrumentation; nuclear instrumentation; physical instrumentation control; signal generators; signal sources
diagnostic instrumentation for testing and evaluation of MHD heat recovery/seed recovery DOE in USA programme 3—29407
radioactive waste repository, instrumentation reliability 3—49936
steel industry, conf., Bethlehem, PA, USA (Oct. 1981) 3—2
instruments
see also individual types of instruments, e.g. astronomical instruments, bridge instruments, optical instruments
calibration, dynamic procedures survey *(Hungarian)* 3—16330
thermoelectric heat pumps for instrument cooling 3—301
insulated gate field effect transistors
frequency detector, AM, for mag. meas. of ferromag. semicond. and dielec. 3—10867
ISFET pH sensor, electrolyte-insulator interface fringe field effect study 3—54721
MOS dosimeters using MOST and MOS capacitors, positive charge buildup in silica film 3—36574
MOSFET, CO sensitive Pd gate, design and IC sensor appl. 3—54727
MOSFET, localisation and electron-electron interaction effects 3—23492
MOSFET, Pd-gate, H_2 detection *(French)* 3—45134
MOSFET structs., one-dimens. effects, nonmetal-metal transition 3—3328
MOST dosimeter using PMOS device in space radiation environment, error estimation and reduction 3—36577
SOS-ISFETs with inorganic gate oxides for pH sensing 3—34662
two-dimensional electron systems, correl. induced phase transitions 3—33769
Cl^- ISFET microelectrodes, prep. and elec. characts. 3—54726
GaAs-$Al_{\alpha}Ga_{1-x}As$ heterojunction, 2D electron gas struct., FET and logic IC appl. 3—57420
InP MOSFET, 2D inversion layer, spin-orbit coupling and weak localisation 3—13913
InP-Al, evaporated systems, plasma anodisation, MISFET appl. 3—29200
K^+ ISFET microelectrodes, prep. and elec. characts. 3—54726
Si MOS devices, interface states, dynamic conductance and noise meas., bias-temp. stresses 3—8591
Si MOSFET, electron mobility and electron-phonon interaction study by negative magnetoresist. expts. 3—23486
Si MOSFET, high density electron-hole plasma form. below 25K 3—47426
Si MOSFET using laser recrystallised polycryst. Si islands 3—33295
Si, polycrystalline, MOSFETs and thin films, elec. characterisation 3—8597
Si, thin film, recrystallisation on glass substrate, correlated elec. and microstructural studies, TEM 3—57241
Si-Ge alloys, epitaxial, device fabrication 3—28425
SiO_2 MOSFET using plasma anodised SiO_2 film, IC fabrication appl. 3—38337
TiN gate MOSFETs and MOS capacitors 3—52258
insulated wires
HV heavy current leads for liq. He cryostat 3—5793
vacuum-sealed electric leads in high-press. chamber 3—5815
insulating coatings
see also varnish; waxes
Al_2O_3 plasma-deposited, high temp. elec. insulating characts. 3—14479
insulating materials
see also asbestos; ceramics; composite insulating materials; dielectric materials; gaseous insulation; glass; insulating thin films; mica; organic insulating materials; thermal insulating materials
ceramic, surface flashover in vacuum at room and liq. N_2 temps. 3—18180
charging phenomena in air under nonuniform fields with DC voltages 3—19055
electric breakdown, numerical anal. of two-dimensional Poisson field by hopping method 3—28765
generation recombination noise spectra, effect of trap distrib. 3—13872
glass in N_2, insulator surface flashover, predischarge current and surface field meas. 3—7842
Al_2O_3 in N_2, insulator surface flashover, predischarge current and surface field meas. 3—7842
insulating materials, acoustic *see noise abatement*
insulating materials, thermal *see thermal insulating materials*
insulating oils
breakdown across dielectric spacer in insulating oil 3—28769
power transformer gas-in-oil analysis as a guide to operational conditions 3—9386
silicone oil, polydimethyl siloxane, thermal cond. and sp. ht., temp. and press. dependence meas. 3—33523
transformer oil, influence of DC bias superimposed on step voltage 3—43486
insulating thin films
see also dielectric thin films; electronic conduction in insulating thin films
anthracene films, morphological changes via vapour phase transport 3—42980
breakdown, extreme-value properties of the explosion-time distribution in a pure birth process 3—23872
electric breakdown mechanisms, review 3—52730
ethylene, plasma-polymerized, dielec. props. and ESR/ESCA studies 3—13938
flat plate, three dimens. film cooling 3—27360
metal/oxide/electrolyte systems oxide film AC impedance determ. 3—8606
phthalocyanine films, Frenkel-Poole effect 3—38511
polyimide films, fabrication by spinning on soln. and curing up to 210°C, semiconductor technology appl. 3—24161
Si_3N_4 films, low pressure CVD composition and oxidation resistance determ. *(Chinese)* 3—14498
SiO_2 film, laser deposited, conformal step coverage 3—2998
Teflon-coated Cu plate, rapid cooldown in liquid N_2 obs. 3—32591
insulating thin films continued
thermophysical characts., heat conduction eqn. soln. 3—7373
thickness determ., using electron probe analysis and Monte Carlo simulation 3—49326
thickness meas. by meas. tip, local deformation effect 3—264
thymine condensed films formation at H_2O-Hg interface, stochastic effects 3—47187
AlN insulating films for CraAs-AlN MIS structures, reactive MBE growth 3—24142
Al_2O_3 films, bulk polarization and surface charging distinctions, expt. method 3—13939
Al_2O_3, porous anodic thin film incorporating Ag ions within pores, elec. props. 3—38510
C, amorphous diamond-like film, glow discharge bias sputtering, props. and appls. 3—47769
C film deposition with diamondlike props. from acetylene-Kr plasma 3—33609
$CdCl_2(Br_2)(I_2)$, thin films, IR spectra 3—47723
$CoCl_2(Br_2)$, thin films, IR spectra 3—47723
$FeCl_2$, thin films, IR spectra 3—47723
GaN-GaAs MIS structure, thin film passivation, interface state density study 3—52262
Ge_3N_4 films grown by thermal nitridation, comp., struct. and refractive index meas. 3—33592
$MgCl_2$, thin films, IR spectra 3—47723
$MnCl_2$, thin films, IR spectra 3—47723
$NiCl_2(Br_2)$, thin films, IR spectra 3—47723
Sb_2O_3 film in MOM struct., current-voltage characts. 3—3332 .
SiN_x films, low press. CVD growth, comp. and struct. control, EPR, optical and He backscatt. studies 3—52970
Si_3N_4 (SiO_xN_y) films, deposition on Si by electron beam activated reaction of SiO_2 film with NH_3 vapour 3—52965
Si_3N_4 dielec. layers, influence on CW-laser annealing of poly Si 3—33298
Si_3N_4 film, electrolyte-insulator-semicond. struct., trapped charge distrib. study 3—57431
Si_3N_4 film, thermal oxidation, traps obs., MONOS memory diodes appl. 3—57442
Si_3N_4 film on GaAs, ellipsometry study 3—8896
Si_3N_4 film on GaAs substrate, null ellipsometry study technique 3—49429
Si_3N_4 film patterns, fabricated on Si wafer, defect eliminating method 3—22885
Si_3N_4 films, low pressure CVD using $SiCl_4/SiH_4$-NH_3 system *(Chinese)* 3—8987
Si_3N_4 films, reactively ion beam sputtered, passivation appl. 3—19268
Si_3N_4 low press. CVD films, Rutherford backscatt. spectrometry anal. 3—13648
Si_3N_4 thermal films, LPCVD, characterization by optical methods 3—28914
SiO amorphous films, quasicontinuous defect energy distrib. determ. by TSC 3—8759
SiO_2 dielec. layers, influence on CW-laser annealing of poly Si 3—33298
SiO_2 film, Brillouin scatt. from surface acoustic phonons 3—57945
SiO_2 film, CVD, on Si substrate, thermal stress study 3—47239
SiO_2 film, Na^+ ions I-V characteristics, triangular voltage sweep, numerical anal. 3—8245
SiO_2 film, thermal nitridation 3—19435
SiO_2 film, thermally nitrided, characterization 3—8347
SiO_2 film in MIS struct., TSC due to ionic space charge polarisation, numerical anal. 3—52170
SiO_2 film on Si, thickness meas. by ellipsometric technique *(Chinese)* 3—20821
SiO_2 films, neutral traps induced by He^+ beam lithography *(Japanese)* 3—38336
SiO_2 films, plasma anodised, interface and neutral traps, ESR study, IC fabrication appl. 3—38337
SiO_2 films, thermally nitrided, N distribution, AES, IR and etching studies 3—51976
SiO_2 films on Si, viscoelasticity, X-ray topography study 3—22967
SiO_2 glass films, undoped and P doped, step coverage during CVD 3—52963
SiO_2, MOS heterostruct. memory element, current transport and switching effect study 3—57432
SiO_2, RF-diode sputtered films, pinholes detection 3—23218
SiO_2, thermally grown films, topography induced preferential crystallisation 3—33599
SiO_2 thin films, selective deposition in acid baths 3—3978
SiO_2, ultrathin layer on Si, AES and ellipsometry study *(Chinese)* 3—38241
SiO_2, VHSIC, double level metal interconnect technology using photo-CVD oxide process 3—39040
$SiO_2:P^+$, laser irrad. effect on film struct., IR transmission spectroscopy 3—18575
SiO_x (SiN_y) ultrathin layers, stoichiometric comp. determ. by optical reflectivity 3—34661
SiO_x amorphous thin films, phonon struct. 3—28067
SiO_xN_y films, low press. CVD growth, Rutherford backscatt., AES and optical study 3—52964
Sm_2S_3:Cd(Pb) films, photocond. and photoEMF meas. 3—23521
SnO_2, MOS heterostruct. memory element, current transport and switching effect study 3—57432
Ta_2O_5, on GaAs, thickness determ. using electron probe analysis 3—49326
TiN_xO_y, film on Si, composition and thickness determ. by X-ray and nuclear microanal. 3—42982
$TiSi_2$ films, formation and elec. cond. 3—42979
Xe film, elastic and inelastic mean free paths 3—28464
ZrO_2, on Si and GaAs, thickness determ. using electron probe analysis 3—49326

insulation
see also cable insulation; electric breakdown; insulating coatings; insulating materials; insulators; machine insulation; transformer insulation
conference, Amherst, MA, USA (Oct. 1982) 3—10510
vacuum discharge and elec. insulation, conf., Columbia, SC, USA (Oct. 1982) 3—16087

insulation, thermal *see thermal insulation*

insulation testing
cracking onset determ., by monitoring electrical contact resistance 3—53333
power transmission line HV insulations measurement and testing *(French, German)* 3—27754
void discharges meas. techniques comparison 3—10856

insulator-metal boundaries *see metal-insulator boundaries*

insulator-semiconductor boundaries *see semiconductor-insulator boundaries*

insulators
i.e. insulating devices. For materials see insulating materials
see also bushings; insulation
HV, pollution rate estimation from weather data 3—29988
laser and electron beam interactions with solids, conf., Boston, MA, USA (Nov. 1981) 3—54582
magnetic flashover inhibited insulator for EAGLE facility 3—17125
surface flashover, predischarge current and surface field meas. 3—7842
surface spot of charge, electric field study by optical method 3—52770

integer programming
radiation therapy, planning, integer programming, branch-and-bound model 3—19804

integral equations
see also integro-differential equations
Abel's integral equation, numerical inversion using piece-wise least-squares cubic splines 3—42443
acoustic scattering, time-domain problems, least-square iterative technique 3—32521
acoustic wave scattering, impulse response of reflecting target, numerical data *(French)* 3—17664
anoxia development following arteriolar occlusion 3—44226
atmospheric movements, variational theorem for circulation integrals appl. to inviscid symmetric flows 3—15584
atomic radial distrib. function calc. methods comparison 3—42508
Bargmann potentials, multichannel and multidimens. 3—30640
beams with thin walled cross sections, finite element formulation 3—1964
boundary integral equation, crack problems in anisotropic elasticity 3—51003
capacitive transducer on cylindrical dielectric, mathematical model *(Russian)* 3—16348
composite media, boundary value problems 3—17798
concentric rings, electrostatic problem 3—26902
conducting bodies internal resonances, E-field solution 3—26910
contact problems with friction in general purpose finite element computer programs 3—17898
crack, near-surface, diffr. of plane SH waves soln. 3—37429
cylinder, elastic, of finite height, mixed problem of compression by dies on the ends 3—7429
die on prestressed half-space surface, vibr., elastic wave propag. 3—50985
diffraction by circular apertures, method of linear phase and amplitude approx. 3—6868
diffraction integral evaluation using local phase and amplitude approxs. 3—46160
Dirac equation, path integral in two space-time dimens. 3—40790
disordered materials, transport props., integral representation of incoherent field, multiple scatt. theory, pair correlations 3—23347
eddy current distribution and losses in multiple solid plates due to parallel current filament 3—21979
eddy current flaw detection by superposed transducers, two-dimens. fields analysis 3—29268
eddy current problems, 3-D, using T-Ω method and Fredholm integral eqns. 3—41723
eigenvalue problems, numerical method 3—42384
elastic solid, infinite, two-dimens., two collinear pressurised line crack problem 3—12598
elastic space with hyperboloidal sections, soln. of first fundamental axially symm. problem *(Ukrainian)* 3—5607
elastic wave scattering theory, Born series and matrix variational Pade approximant method 3—25764
elastic wave scattering theory, Eikonal approx. weak scatt. approx. 3—25765
elastic wave scattering theory, inverse scatt. in long wavelength limit 3—25789
elastic wave scattering theory, method of equiv. inclusion extension to dynamic case 3—25767
elastic wave scattering theory, multiple scatt. formalism and appl. to scatt. by two spheres 3—25769
elastic wave scattering theory, unimoment method appl. 3—25766
elasticity, mixed boundary-value problem for half-space on an elastic foundation 3—7428
elasticity, three-dimensional problems, numerical integration method appl. 3—37353
elasticity theory, contact problems for media inhomogeneous in depth, asymptotic solns. 3—46503
elastostatic problems, 2D stress intensity factor computation by boundary element method 3—5608
electrostatics, integral equation methods 3—44936
EM mode eqns., integral eqn. formulation 3—42395
EM plane-wave excitation of truncated metal cone *(Russian)* 3—41726
EM scattering of guided mode by boundary deforms. of dielectric slab waveguides, integral eqn. method 3—46137
F_N method for finite slab, singular integral equation 3—30819
final-state interactions in eigenchannel formalism 3—40810
fluid mechanics, integral method, transformation of system of partial differential equations *(French)* 3—22411
focal region field computation 3—41761
fracture dynamics, nonlinear, path independent integrals 3—46489
half-plane, contact problem, photoelastic and integral eqn. solns. 3—37430
half-space with thin inclusion, axisymm. elastic problem 3—46451
Hall impedance, quantisation using period integrals 3—52182
Hamiltonian formulation for synchrotron oscillations and Sacherers integral equation 3—50103
hamiltonian nonlinear coupled degenerate eqns., new hierarchy 3—49148
Heisenberg spin chain, anisotropic, and nonlinear Schrodinger eqn. 3—30805
Helmholtz equation, exterior problems 3—101
impulse response computation of acoustically reflecting targets *(French)* 3—17675
infinitely long elastic strip, shear wave interaction with Griffith crack 3—42187
inhomogeneous media, crack in interface between dissimilar half planes, path-independ. integrals 3—32677
integrals involving associated Legendre polynomials 3—49144
inverse source and inverse scatt. theory, rigorous solns., review 3—25770
isolated crack, new integral eqn. model of US scattering rel. to US testing 3—42091
laser grating resonator, Kirchhoff-Fresnel integral eqn. *(Chinese)* 3—12186
Lennard-Jones (12,6) fluid, triplet correl. functions, simulations 3—33056

integral equations continued
magnetic field analysis by first order integral equations when a marked skin effect is present *(Russian)* 3—17403
magnetic field calculation for two domains with different mag. permeab. *(German)* 3—46122
magnetostatic field problem, nonlinear three-dimensional, matrix anal. *(Russian)* 3—56115
magnetostatic surface waves, integral eqns., numerical soln. 3—33871
Marchenko's integral eqn. for one-dimens. inverse scatt. problem, regularisation by total least squares 3—10645
massless Feynman integrals, logarithmic singularity in dimensional regularisation 3—45274
MHD, method of integral equations appls. 3—22536
molecular fluids, linear, integral eqns., general formulation 3—2356
molecular fluids, linear, integral eqns., hard dumbbell solns. 3—2357
molecular fluids, linear, integral eqns., orientational ordering 3—2358
nonlinear Schrodinger eqn. linearisation and isotropic Heisenberg spin chain 3—20688
oblique wave diffraction by infinite cylinder, hybrid integral eqn. method. 3—12686
one dimensional heat conduction system parameter identification method *(Japanese)* 3—7382
optical band plane and circular dielec. waveguides, theory of synthesis *(Russian)* 3—37184
orthotropic viscoelastic half-plane, rigid stamp motion along boundary 3—46501
oscillating disc flow, multigrid methods for integral eqns., Navier-Stokes eqn. 3—27528
Percus-Yevick equation and structure functions of liquids, review 3—42498
phase conjugate resonator, axially symm., Huygens integral 3—7078
phase-conjugate mirror, scattered field integral eqn. 3—50711
physical optics inverse scattering identity, survey 3—12042
planar elastoplastic problems, soln. technique for indirect boundary integral eqn. 3—37375
plane cracks in elastic medium, singular integral eqns., finite-part integrals appls. 3—1998
plate, elastic, anisotropic, weakened by curvilinear cracks and strengthened by ribs., numerical calcs. 3—46498
plates, elastic, finite deflections, integral eqn. approach 3—1965
potential distrib. theorem, mech. stability and Kirkwood's integral eqn. 3—56796
potential flow around bodies, multigrid methods for integral eqns. 3—27528
quantum fluids, integral equations for pair distrib. function, interpolation method 3—18524
random value density distrib. eval. in presence of noise *(Russian)* 3—40347
Riemann-Hilbert solutions in two-group neutron transport theory 3—11356
rupture, mixed mode uncoupling, path independent integrals *(French)* 3—22389
sheet plasmas, drift waves 3—46710
shell, shallow spherical, crack interaction, singular integral eqn. 3—46499
slender body contact with an elastic half space 3—27454
solid, elastic, containing annular crack, axisymm. thermal stress distrib., triple integral eqns. 3—2003
solid, infinite isotropic elastic, problem of two coplanar cracks 3—37423
sound radiation model for finite length duct of arbitrary shape 3—32518
space with plane slits, stress-strain state determ. 3—50953
Stokes flow, integral eqn. 3—32706
Stokes flow, integral eqn. 3—32707
symplectic struct., Lagrangian, first integral involutiveness of principal chiral field eqn. 3—31070
thin wire integral equations for EM field computation, numerical aspects 3—46126
transient heat conduction, boundary integral eqn. calc. method, FORTRAN program 3—37317
transonic integral equation for lifting flows 3—32756
transonic integral equation solution using polar coordinate formulation 3—12702
two-dimensional eddy current and mag. field problems, interactive graphic soln. 3—36908
vibrations of composite circular membranes, natural freqs., integral equation anal. 3—50981
Voigt functions, Exton's integral expressions, corrections 3—41071
water waves, regular, radiation and diffr. about a body, pot. theory, integral indentities 3—56559
Yvon-Born-Green and similar integral eqns., criticality 3—56795
$^2H(N,Np)$, three nucleon problem, integral eqn. soln. 3—36413

integral transforms *see transforms*

integrated circuit manufacture
Used for commercial manufacture only
see also masks; photolithography
LSI, ion beam technology, for deposition and epitaxy *(Japanese)* 3—39046
photolithography, variable magnification in a 1:1 projection lithography system 3—37157
photolithography 3—37157
vacuum, electron and ion technologies, conf., Varna, Bulgaria (Sept. 1981) 3—25688

integrated circuit technology
See also under specific integrated circuit headings
see also semiconductor technology
CMOS LSI, halogen lamp annealing of ion implanted Si *(Japanese)* 3—46986
conference, integrated optics and MM/microwave ICs, Huntsville, AL, USA (Nov. 1981) 3—16071
electroplating, laser enhanced, mechanisms and appls., review 3—3975
ion beam technology, areas of research *(Japanese)* 3—36127
laser selective annealing technique, overview 3—22940
LSI, ion beam deposition, epitaxy *(Japanese)* 3—39046
photolithographic projection system construction, degree of coherence evaluation *(Russian)* 3—20931
polyimide film, reactive ion etching, study, electroplating appl. *(Japanese)* 3—39268
solar cell, planar multijunction high voltage chip, fabrication and props. 3—24578
submicron IC, Pd_2Si formation, As redistribution, elec. study 3—47169
vacuum, electron and ion technologies, conf., Varna, Bulgaria (Sept. 1981) 3—25688

integrated circuit technology continued
- VHSIC, double level metal interconnect technology using photo-CVD oxide process 3—39040
- VLSI, EHD ion source, data obtained with Au *(Japanese)* 3—39430
- VLSI circuits, hot electron effect suppression by $SiCl_4$ annealing 3—47746
- VLSI MOS IC, gettering effects on leakage currents in shallow junctions 3—52230
- VUV-CVD, low temp. deposition method 3—24151
- X-ray lithography, micro Z-pinch exploding wire as X-ray source 3—20965
- X-ray lithography, Si_3N_4 mask, low press. CVD deposition 3—24149
- Al-Cu (0.5%) fine-line thin film conductors, electromigration induced failure by edge displacement 3—42858
- GaAs MESFET A/D converter and memory IC for ultra high speed transient recording 3—50216
- GaAs:Cr substrates, Cr conc. distrib., non-destructive determ. 3—33283
- Mo silicide formation, self-aligned 3—42625
- Pd_2Si-AlCuSi system, contact resist. behaviour rel. to VLSI technology 3—18784
- PtSi-Si ohmic contacts for Si shallow junctions, VLSI appl. 3—33790
- Si films, plasma etching, polymerisation effects, spectrosc. investig. 3—2306
- Si MOSFET ring oscillator using laser recrystallised polycryst. Si islands 3—33295
- Si:B, ion implantation damage annealing, etching and ellipsometry study, I^2L gate appl. 3—22927
- p-Si-Al thermocouples, thermopile fabrication using semicond. planar technology 3—54731
- Si-poly Si interconnections, contact resistance 3—28419
- Si_3N_4 (SiO_xN_y) films, deposition on Si by electron beam activated reaction of SiO_2 film with NH_3 vapour 3—52965
- SiO_2 MOSFET using plasma anodised SiO_2 film, IC fabrication appl. 3—38337
- SiO_2, reactive sputter etching, in doped and undoped fluorocarbon plasmas 3—39271

integrated circuit testing
- dynamic memory materials, U impurities microanal., fission chamber appl. 3—53463
- nuclear and space radiation effects, conf., Las Vegas, NV, USA (July 1982) 3—40315
- scanning optical microscopy, operation and testing appl. 3—45197

integrated circuits
- *see also digital integrated circuits; hybrid integrated circuits; large scale integration; linear integrated circuits; masks; microwave integrated circuits; monolithic integrated circuits; substrates; thick film circuits; thin film circuits*
- nuclear and space radiation effects, conf., Las Vegas, NV, USA (July 1982) 3—40315

integrated logic circuits
- fast four-input coincidence unit using MECL ICs for scintillation counters 3—50231

integrated memory circuits
- CMOS ROM fabrication, halogen lamp annealing of ion implanted Si *(Japanese)* 3—46986
- dynamic memory materials, U impurities microanal., fission chamber appl. 3—53463
- radiation soft dynamic RAM, appl. as particle detector 3—50171
- GaAs MESFET A/D converter and memory IC for ultra high speed transient recording 3—50216

integrated optics
- *see also fibre optics; optical films; optical modulation; optical waveguides; semiconductor junction lasers*
- A/D converter prototype, four-digit, using interferometric $LiNbO_3$ modulators 3—27267
- acoustooptic convolver using integrated optics elements 3—1812
- adaptive filter in residue no. system, optical waveguide circuit design 3—1810
- automatic alignment of fiber optical components using Elektronika-60 microcomputer 3—37211
- blazed gratings and Fresnel lenses fabricated by electron-beam lithography 3—32513
- Bragg electrooptic rectangular waveguide coupler 3—56316
- cadmium arachidate Langmuir-Blodgett film with selectively laser excited perylene 3—38945
- chalcogenide glass films for optical waveguides, RF sputtering prep. 3—8979
- channel injection laser-intraresonator photoreceiver integrated pair 3—50796
- circuit development using III-V compound semiconds. 3—32507
- circuit fabrication with laser-written masks 3—17646
- composite matched filters, space-invariant, for space-variant processors 3—17607
- conference, integrated optics and MM/microwave ICs, Huntsville, AL, USA (Nov. 1981) 3—16071
- conference, Los Angeles, CA, USA (Jan. 1982) 3—16072
- Corning 7059 glass optical thin film waveguides, low loss by laser annealing 3—17643
- coupler, near 3 dB, and Mach-Zehnder interferometric modulator anal. using four-port scatt. matrix 3—12323
- couplers, multilayered, tunable filtering using SAW 3—22190
- curved channel dielectric waveguide bend, radiation loss 3—17640
- curved structures fabrication by electron lithography 3—7218
- deposit/spin waveguide interconnection (DSWI) for semicond. integrated optics 3—12318
- device fabrication in glasses using electric field enhanced ion diffusion 3—1818
- diacetylene Langmuir-Blodgett layers for integrated optics 3—37145
- dielectric waveguides, rectangular-core, anal. using accurate perturbation approach 3—32473
- diffraction lenses in $LiNbO_3$ waveguides, fabrication and performance 3—17592
- diffused channel-waveguide directional couple, coupling characts. 3—12326
- directional coupler switch, 200 psec. stepped-$\Delta\beta$-operation 3—42038
- distributed index planar microlens applied to 2D lightwave components 3—37244
- distributed-index planar micro-lens, ray tracing 3—1811
- double-tuned circuit prism-thin beam coupler and polarisation conversion mechanism 3—56315

integrated optics continued
- dynamic gratings, optically induced, light wave diffr. in waveguide plane 3—7158
- electro-optic components for wideband optical telecommunications *(German)* 3—56349
- electro-optic Mach-Zehnder interferometer for A/D conversion 3—27266
- electro-optic modulator/switch with induced dielec. channel 3—32459
- electro-optical spectrum analyser, dynamic range calcs. by beam propag. method 3—50798
- electro-optical waveguide modulator, modulation efficiency calc. 3—41970
- electrooptic grating array uses, integrated optical light modulator 3—17639
- electrooptic guided-wave A/D convertor, 2-bit 1 Gsample/s 3—7219
- ferrite thin film magnetooptical waveguides 3—22213
- fibre optic communication trends, conf., Arlington, VA, USA (May 1982) 3—49070
- fusion splicing between optical circuits and optical fibres 3—37179
- geodesic lenses, design modification and aberration error analysis 3—56352
- gradient light guides, refraction index distrib. 3—17617
- gyros using integrated optics elements 3—17638
- gyroscope couplers, 3×2 channel waveguide, theory 3—12319
- heterodyne receiver on Si, exercise in integration 3—17642
- inhomogeneous planar waveguide, propagation characteristics 3—22210
- integrated acousto-optics: the technology and the competition 3—27270
- intrinsic bistable guided-wave devices, theory and appls. 3—17557
- isolators, single-mode, design feasibility 3—12283
- laser diodes, applications, review *(Polish)* 3—1686
- lasers, integrated, Gbit optical pulse generation 3—7032
- logic comparison circuit based on an integrated optical interferometer 3—32508
- logic devices 3—17636
- metal strips on semiconductor, surface EM wave propag. 3—47726
- multielement photoreceivers for optical fibre lines, component interactions 3—37247
- multilayer directional coupler using acousto-optic effects by SAWs, optical switching characts. 3—50797
- multilayer thin film optical tunable separators/couplers, switching using SAWs 3—42040
- multilayer thin-film waveguides, method of poles 3—37177
- multimode geodesic branching components 3—37246
- multiwavelength monolithic integrated fibre optics terminal development 3—17632
- nonlinear ring resonators using GaAs with photon energy below band gap, transient response 3—17558
- optical bistability, guided wave approaches 3—7057
- optical computing *(Japanese)* 3—12086
- optical device structures *(French)* 3—50794
- optical wavelength filters 3—46353
- optical-waveguide micro-displacement sensor 3—5777
- phased array semiconductor laser, high power 7700Å operation, focusing method 3—27093
- photoacoustic spectroscopy of integrated optics elements 3—37206
- picosecond signal processing with planar nonlinear integrated optics 3—27265
- pipelined optical signal processor, design, logic and algebraic appl. 3—56353
- planar dielectric heterostructures, waveguide characts. 3—22073
- planar diffusion glass waveguides obtained by immersing in molten KNO_3 3—50758
- planar microlens, distributed-index ray traces 3—1808
- planar optical devices, phase compensation film 3—27268
- planar waveguide, development possibilities, limitations and problems 3—50795
- planar waveguide refractive-index profiling using modal intensity distributions 3—22202
- planar waveguides, acousto-optic meas. of effective refractive indices of guided modes 3—56348
- planar waveguides, highly multimode, refr.-index profile meas. by guided-beam tracking 3—12330
- planar waveguides, Kerr modulation 3—41978
- PMMA-GMA copolymer thin film optical waveguide 3—37186
- polarisation-independent switches with multiple $\Delta\beta$ reversal sections and Gaussian taper function 3—12367
- prism film coupler induced guided wave perturbations in a thin quartz slab 3—41974
- quartz glasses, neutron activated anal. of impurities 3—9374
- recent progress 3—42036
- ring resonators made by Ag ion exchange in glass 3—56347
- semiconductor directional couplers, insertion loss analysis 3—42037
- semiconductor integrated etalon interference laser with curved resonator 3—56245
- semiconductor laser array, phase-locked, diffraction coupled 3—56233
- semiconductor laser array, phase-locked, near-field and far-field patterns obs. 3—50671
- semiconductor laser structures for integrated optics 3—17493
- semiconductor lasers, LPE grown, integration with other optical devices 3—24159
- semiconductor layers, thickness, refr. index, m-lines and refl. spectroscopy techniques, waveguide appl. 3—28916
- semiconductor material waveguides, light wave diffr. by dynamic gratings 3—7159
- sharp bends with low losses in dielectric optical waveguides 3—56310
- spatial light modulator, integrated total internal refl., for laser printing 3—7162
- spectrum analyser using SAW diffr. grating 3—27269
- stacked planar optics, distrib. index planar microlens development 3—1809
- strip waveguides, multimode, ion-exchanged, field-induced index profiles 3—12324
- switch matrix for single-mode fibre networks 3—12316
- thin films fabrications, spectral analyser realisation 3—46352
- thin-film waveguides, laser annealing for low loss in Corning 7059 glass, ZnO, Si_3N_4, Nb_2O_5, Ta_2O_5 3—50757
- three-layer dielectric rib waveguide, mode selection 3—17614
- waveguide, arbitrarily curved, radiation loss calc., and design 3—37245
- waveguide, inhomogenous, with adjacent rhodamine 6G active medium, mode amplification 3—27036
- waveguide hybrid coupler 3—12329
- waveguide structures, corrugated, propag. and conversion of light waves 3—27236
- waveguide technology, review *(Japanese)* 3—22208

- **integrated optics** continued
  - waveguides, planar, graded-index, light wave propag. and conversion 3—1764
  - (AlGa)As diode laser with deposited waveguide, monolithic-hybrid integration 3—41861
  - AlGaAs/GaAs systems for integrated optical circuits 3—32507
  - $Al_xGa_{1-x}As$ lasers, optically integrated coherently coupled laser pair 3—41860
  - $CdS_{1-y}Se_y$ waveguides, light wave diffr. by dynamic gratings 3—7159
  - (GaAl)As buried convex waveguide struct. injection lasers 3—7010
  - (GaAl)As dual wavelength lasers *(French)* 3—41876
  - GaAlAs laser, phase locked arrays, optical output power 3—27042
  - GaAlAs TJS laser optical detector for detect. at Gbit/s rates 3—42030
  - $Ga_{1-x}Al_xAs$ heterojunction injection laser, monolithic-hybrid joining to As_2S_3 glass waveguide 3—22259
  - $Ga_xAl_{1-x}As$ layered stripline rib waveguide, mode selection 3—32470
  - GaAs bistable etalon, external switching on and off, regenerative pulsations, transverse effects and lasing 3—17559
  - GaAs epitaxial layer electro-optically controlled directional coupler switch at 1.15 μm 3—12314
  - GaAs film-Si substrate graphoepitaxy struct. optical waveguides, fabrication 3—22206
  - GaAs integrated multilayer DH lasers separated by tunnel junctions 3—1654
  - GaAs native oxide props., use in planar devices and integrated optics *(Chinese)* 3—14752
  - GaAs, optical bistability, guided wave approaches 3—7057
  - GaAs, optical waveguide fabrication by drive-in diffusion technique 3—50753
  - GaAs/AlGaAs/BeO constricted DH large optical cavity laser, LPE grown, multichannel optical recording appl. 3—27074
  - GaAs/GaAlAs DH narrow diffused stripe lasers for high speed integrated optical transmitters 3—22109
  - $GaAs_{0.15}P_{0.85}$ waveguides, light wave diffr. by dynamic gratings 3—7159
  - $GaAs_{1-x}P_s$ waveguide, light wave diffr. by optically induced dynamic gratings 3—7158
  - GaInAsP/InP etched mirror and groove-coupled laser device for integrated optics 3—7009
  - GaInAsP/InP lens-like strip waveguide lasers, single transverse mode condition 3—6977
  - GaInAsP-InP passive optical waveguides, fabrication 3—37178
  - $Ga_{1-x}In_xAs_{1-y}P_y$ monolithic coupled-cavity laser, single mode operation 3—27043
  - n-GaP:S, proton implanted fabrication, visible and IR waveguiding 3—17615
  - GeO_2 low-loss optical waveguide fabrication using low deposition rate RF sputtering 3—22260
  - GeO_2 thin film waveguide, high-efficiency prism coupler configs. 3—56311
  - InGa AsP systems for integrated optical circuits 3—32507
  - InGaAsP superluminescent diode, lateral confinement at 1.3 μm 3—37034
  - InGaAsP/InP optoelectronic devices, monolithic integration 3—6995
  - InGaAsP-InP injection laser, low threshold, with microleaved mirrors, for monolithic integration 3—7001
  - InSb, optical bistability, guided wave approaches 3—7057
  - $LiNbO_3$ coupled channel diffused waveguide based electrooptic modulator, coupling coeff. determ. by SHF meas. 3—56308
  - $LiNbO_3$ diffused optical waveguide, corrugated grating for exciting surface waves 3—1765
  - $LiNbO_3$ diffused waveguides, optical damage resistance 3—17613
  - $LiNbO_3$ electro-optic-waveguide freq. translator fabricated by proton exchange 3—12309
  - $LiNbO_3$, integrated optics channel switch formed from elec. field induced waveguides 3—56350
  - $LiNbO_3$ optical waveguide, crossed channel, acoustooptic diffr., integrated optic module 3—41981
  - $LiNbO_3$ planar Bragg-grating lenses, CHF_3 reactive-ion etching fabrication 3—56351
  - $LiNbO_3$ strip waveguide phase modulators, electrical and acoustical cross-talk obs. 3—12366
  - $LiNbO_3$ thin film Fresnel light modulators 3—22200
  - $LiNbO_3$ Ti diffused optical rectangular waveguide with optical axis in transverse plane 3—12325
  - $LiNbO_3$ waveguide modulators, bandwidth, field distrib., and optimal electrode design 3—12308
  - $LiNbO_3$:Ti diffused channel waveguides, coupling of single mode fibres 3—17619
  - $LiNbO_3$:Ti diffused channel waveguides with bends, losses, integrated optical device design 3—17637
  - $LiNbO_3$:Ti electrooptic grating deflector/modulator investigation 3—22196
  - $LiNbO_3$:Ti long wavelength waveguide electro-optic TE$\rightleftharpoons$TM convertor 3—32462
  - $LiNbO_3$:Ti low-loss waveguide bends at $\lambda=1.3$ μm 3—12321
  - $LiNbO_3$:Ti optical waveguide fabrication using $(Ti_{0.65}Nb_{0.35})O_2$ as Ti diffusion source 3—41973
  - $LiNbO_3$:Ti single-mode channel waveguide bends with coherent coupling, low-loss 3—41975
  - $LiNbO_3$:Ti waveguide, Ti-diffused, two-coord. acousto-optic integrated optics deflector 3—12300
  - $LiNbO_3$:Ti waveguide electro-optic polarisation modulator, high-speed 3—1760
  - Nb_2O_5 optical thin film waveguides, low loss by laser annealing 3—17643
  - Si_3N_4 optical thin film waveguides, low loss by laser annealing 3—17643
  - Ta_2O_5 Luneberg lens development 3—17641
  - Ta_2O_5 optical thin film waveguides, low loss by laser annealing 3—17643
  - YIG film, optical guided-wave interactions with magnetostatic waves at microwave frequencies 3—8804
  - YbIG broadband Faraday magneto-optic isolator 3—42039
  - ZnO optical thin film waveguides, low loss by laser annealing 3—17643
- **integrated services digital network** *see communication networks; digital communication systems*
- **integrating circuits**
  - current-voltage characteristics meas. cct. for supercond. tunnel junctions 3—5813
  - digital double boxcar integrator for pulsed NMR expts. 3—5823
  - transducers for induction meas. of constant magnetic fields 3—45170
- **integrating spheres** *see photometry*
- **integration**
  - adaptive quadrature, two-dimens., calc. program for rectangular regions 3—63
- **integration** continued
  - analytic continuation of integrals for Wilson renormalisation group, Fourier transformation operator 3—11037
  - atmospheric movements, variational theorem for circulation integrals appl. to inviscid symmetric flows 3—15584
  - Boltzmann equation in relaxation time approx. 3—40528
  - Cantor sets integrability for Hamiltonian systems 3—25289
  - complex integration as a technique for evaluating sums 3—25718
  - diatomic molecules, Franck-Condon type integration, FORTRAN program 3—21742
  - elasticity, approx. of general arch problems by straight beam elements 3—27378
  - elasticity, three-dimensional problems, numerical integration method appl. 3—37353
  - elasto-viscoplastic solids subject to the Mohr-Coulomb yield criterion, implicit time integration 3—32618
  - error tables for numerical integration, book 3—20590
  - evolution equations, nonlinear, integrability criterion 3—49140
  - Hamiltonian canonical equations, generalized method of averaging *(French)* 3—44957
  - Henon-Heiles Hamiltonian near exceptional integrable case, non-integrability proof 3—16113
  - laminated structures, dynamic finite element model 3—17814
  - nonlinear vibration equations, partial integration technique 3—17860
  - OTF, numerical calc. using least squares curve fitting and Gaussian integration *(Chinese)* 3—41772
  - Painleve conjecture generalisation, 2-dimens. integrable Hamiltonian systems 3—20617
  - postbuckling collapse of general structure 3—17834
  - product of three associated Legendre functions *(Hungarian)* 3—35850
  - quadrilateral finite difference plate element for nonlinear transient analysis of panels 3—22329
  - spreading resistance calculations, accurate integration algorithm 3—49411
  - two-step integration procedures for hyperbolic eqns., flow processes appl. 3—54626
- **integro-differential equations**
  - *see also Boltzmann equation; Fokker-Planck equation; Liouville equation; master equation; Vlasov equation*
  - atomic mixing of implant atoms, in depth-depend. diffusion approx. 3—18332
  - BBGKY equation, spatially nonuniform solns. 3—22747
  - beam and plate, thermorheologically simple viscoelastic, mech. vibrations 3—7444
  - Benjamin-Ono eqn., direct linearising transform 3—40421
  - Benjamin-Ono eqn., soliton and algebraic eqns. 3—10594
  - Benjamin-Ono equation, exact soln. 3—16150
  - combustion chamber, convectively cooled, thermal state calcs. 3—12498
  - dye laser, flash lamp pumped, energy transfer characts. in PTM operation *(Chinese)* 3—37015
  - Hartree-Fock equation, numerical soln. method 3—35833
  - ion implantation in solids 3—56997
  - jets, 2-dimens. rising and falling under gravity 3—22501
  - one-dimensional absorbing, emitting and scattering medium, heat cond. and radiation, polynomial approx. calcs. 3—7380
  - photographic material noise anal. using radiative mass transfer stochastic integro-differential eqn. *(Russian)* 3—54791
  - quasistatic approx. in reactor physics, mathematical foundations 3—31469
  - rarefied flow through circular tube of finite length, BGK eqn. iterative soln. 3—17952
  - resilient body with cylindrical crack, axially symm. problem soln. *(Ukrainian)* 3—7491
  - shell of revolution immersed in fluid, low-freq. vibrs. 3—46476
  - transient electromagnetic processes in interaction of an impulsive magnetic field with a cylindrical conductor *(Russian)* 3—21959
  - tubes, elliptic, nonlinear bending under normal pressure, local buckling *(German)* 3—7461
  - Volterra eqn., stretching of polymeric liquids 3—51040
- **intelligence, artificial** *see artificial intelligence*
- **intelligibility, speech** *see speech intelligibility*
- **intensification** *see amplification*
- **intensity measurement**
  - *see also acoustic intensity measurement*
  - intensity ratio meter, interaction coeffs. of radiations and optical constants meas. *(Russian)* 3—5781
  - interferometers, multidetector 3—45194
  - pulse electrophotometry methods, improvements in measurement accuracy *(Russian)* 3—40664
- **interacting binary stars** *see binary stars; cataclysmic binary stars; eclipsing binary stars; X-ray binary stars*
- **interacting boson model** *see nuclear collective model*
- **interacting control systems** *see multivariable control systems*
- **interactive programming**
  - *see also interactive systems*
  - two-dimensional eddy current and mag. field problems, interactive graphic soln. 3—36908
- **interactive systems**
  - *see also interactive programming; online operation*
  - automated laboratory general physics expt., interactive mode of operation *(Russian)* 3—16341
  - biomedical images, software for interactive processing 3—29672
  - interactive system for scanning tracks in nuclear research emulsions 3—41448
  - irradiation planning using dialogue system *(German)* 3—39723
  - man-prostheses interactive system, myoelec. controlled hand 3—9787
  - PANDA—interactive program for minimum weight design of stiffened cylindrical panels and shells 3—17833
  - QSOs, quantitative measures of slitless spectra 3—10477
  - three-dimensional heart wall motion tracking, graphics method for cineangiography 3—15196
- **interatomic potentials** *see potential energy functions*
- **intercalation compounds**
  - alkali graphite intercalation cpds., electronic interlayer states, linearised APW calc. 3—52006
  - alkali metal-graphite intercalation compounds, phase diagrams 3—23015
  - alkali-graphite intercalation cpd., double-axis and triple-axis X-ray spectrometer results comparison 3—42491
  - chemical reactions; dipolar nucl. spin relax. 3—45981
  - conference on condensed matter techniques and materials, Argonne Nat. Lab., Argonne, IL, USA (Sept. 1981) 3—10514

intercalation compounds continued

- Daumas-Herold domain walls, interf. phenomena 3—28112
- disorder-incommensurate transition systems, phase diagrams, appl. to intercalate systems 3—47080
- DNA, intercalation of acridines, thermodynamics and optical absorption spectroscopy 3—19657
- graphite, KC_8 and $KHgC_4$, supercond. transition temp., anomalous press. depend. 3—23527
- graphite, light scattering, Brillouin and Raman spectra, book 3—46
- graphite, stage 2, orientational in-plane ordering and phonon dispersion 3—56862
- graphite, staging transition mechanism, role of domain walls 3—38061
- graphite, thermal cond., electronic and lattice contribs. 3—42866
- graphite 3—18278
- graphite (0001), layer-by-layer intercalation of K, LEED study 3—57190
- graphite based, charge transfer and maximum cond. 3—18691
- graphite fibres, derived from benzene, Raman spectra and resist. meas., effect of intercalation 3—23951
- graphite fibres, effects of intercalation on microstructure 3—33459
- graphite fibres, intercalated, high field magnetoresist., X-ray diffr., and Raman spectra 3—57333
- graphite intercalated with C, electronic struct. 3—13723
- graphite intercalates, conduction mechanism anisotropy *(French)* 3—23371
- graphite intercalation compound, $C_{9.3}AlCl_{3.3}$, electrical cond., counter-EMF obs. during phase transition 3—23349
- graphite intercalation compound with Li, structural and elastic props., in-plane density 3—33213
- graphite intercalation compounds, 2D band struct., optical props. *(French)* 3—23266
- graphite intercalation compounds, charge transfer, bond lengths 3—21909
- graphite intercalation compounds with K and $FeCl_3$, c-axis elec. resist. and thermopower, temp. depend. 3—8475
- graphite intercalation cpd., $C_{24}SbCl_5$, magnetostriction detection in static fields by capacitance technique *(Japanese)* 3—28678
- graphite intercalation cpd., Raman scatt., lattice dynamics and internal modes, book contrib. 3—3742
- graphite intercalation cpd., thermal cond., lattice and electronic contrib. 3—2905
- graphite intercalation cpd., third and fourth stage, band struct., LCAO calc. 3—23267
- graphite intercalation cpd. with $CuCl_2$, pitch-based fibre, elec. and mechanical props. 3—52106
- graphite intercalation cpd. with $FeCl_3$, air stability, Mossbauer study 3—52693
- graphite intercalation cpd. with K, c-axis resist. and metal-insulator transition 3—28321
- graphite intercalation cpd. with O, elec. cond. reduction, tight-binding and cluster calcs. 3—28320
- graphite intercalation cpd. with Rb, lattice dynamics, Raman scatt. from low freq. phonons 3—28859
- graphite intercalation cpd. with $SbCl_5$, thermal transport props., commensurate-incommensurate transition 3—2904
- graphite intercalation cpds., higher stage, band struct. and c-axis charge distribs. 3—38282
- graphite intercalation cpds., structural phase transitions, X-ray diffr. studies, review 3—13201
- graphite intercalation cpds. with Li, K, Rb, Cs, cond. bands, low energy photoelectron spectroscopy study 3—28968
- graphite trifluoromethylsulphate intercalation cpd., formation and charact. 3—8816
- graphite-$AlCl_3(FeCl_3)$, effects on lattice constants 3—22849
- graphite-alkali metal, higher stage, relaxed incommensurate struct. of intercalant layer 3—22858
- graphite-alkali metal, layer-bending modes, neutron scatt. study 3—22999
- graphite-alkali metal intercalation cpds., chemisorpt. of H_2, ESR and elec. resist. investig. 3—51927
- graphite-AsF_5, charge transfer, optical refl. study, 10 to 300K 3—57956
- graphite-Br, $C_{28}Br_2$, commensurate-incommensurate transition, X-ray scatt. study 3—13435
- graphite-Br, dil., commensurate-incommensurate transition and disordering 3—8193
- graphite-$FeCl_3$, mag. props., AC susceptibility meas. 3—3426
- graphite-$FeCl_3$, stage depend. intercalant in-plane density, Mossbauer study 3—23844
- graphite-$FeCl_3$ intercalation cpd., interplanar distance, low temp. X-ray diffr. study 3—33193
- graphite-H_2SO_4, cryst. expansion during galvanostatic intercalation, dilatometer study 3—25875
- graphite-$InCl_3$, TDPAC study 3—47579
- graphite-K, KC_8, electronic struct., XPS and EELS studies 3—19250
- graphite-K-Amalgam intercalates, Raman modes 3—19134
- graphite-Rb, STEM of multiphases 3—22848
- graphite-$SbCl_4$, commensurate-incommensurate transition, TEM and elec. resist. meas. 3—13437
- intercalated with 3d transition metals, optical refl. spectra, cond. band broadening 3—19154
- K-graphite intercalate, lattice dynamical model 3—13379
- layer lattice and intercalation compounds, neutron scatt. 3—53410
- neutron scattering studies 3—13037
- tantalum dichalcogenides intercalated with 3d transition metals, optical refl. spectra, cond. band broadening 3—19154
- transition metal dichalcogenide intercalation compounds, electronic props. 3—23386
- transition metal dichalcogenides, layered, intercalation positive electrodes for rechargeable Na cells 3—19578
- Ag_xTiS_2, stage-2, intercalate order-disorder transition, Raman scatt. study 3—57075
- $C_{8.4}AsF_6$, intercalate, composition, IR spectra 3—23954
- $C_{8n}AsF_5$ stage 2 intercalation cpd., charge transfer and band struct. 3—23268
- C_6Eu intercalate, high-field magnetisation, spin fluctuations 3—52533
- $C_{8.4}HOTeF_5$ intercalate, cryst. struct. *(German)* 3—22864
- C_8KHg, pressure effect on superconductivity 3—3361
- $C_{24}Rb$ intercalation cpd., phonon dispersion relations, neutron scatt. study 3—33374
- C_8Rb, lattice dynamics, neutron scatt. study 3—2712
- C_8RbHg, pressure effect on superconductivity 3—3361
- $C_{7.3}SbF_6$, intercalate, composition, IR spectra 3—23954
- $CdPS_3$, intercalated with amines, cryst. struct. and semiconducting props. 3—51573

intercalation compounds continued

- $CoCl_2$ intercalated graphite, thermal cond. and thermopower at mag. transition 3—47324
- $CoCl_2$-graphite, mag. transitions, susceptibility and spontaneous magnetisation studies 3—57611
- $Cr_{1/3}NbS_2$, intercalation cpd., magnetisation and neutron diffr. studies 3—18871
- Cs intercalated graphite, nonhexagonal superlattice observation, STEM study 3—42586
- Cs-graphite intercalate, lattice dynamical model 3—13379
- $Cs_xK_{1-x}C_8$ intercalation cpd., electronic struct., configuration propagator theory 3—38300
- $CuCl_2$ intercalated C fibres, metallic cond., air stability and mech. props. meas. 3—38363
- $CxF(MgF_2)_y$, intercalation compound, prep. at 20-350°C, ESCA and ^{19}F NMR 3—24168
- EuC_6, intercalation cpd., electronic and mag. props. 3—33690
- $FeCl_3$ intercalated graphite, Mossbauer study of mag. props. 3—3616
- $FeCl_3$ intercalated graphite, spin glass state, mag. susceptibility and Mossbauer studies 3—43375
- Fe_xNbS_2 ($x=1/4$, $1/3$, $1/2$), intercalation cpds., Mossbauer spectra 3—34021
- FeOCl-ferricinium intercalation cpds., oxidation and irreversible phase transitions, Mossbauer study *(German)* 3—29307
- FeOCl-ferrocene, elec. cond. and thermoelec. power *(French)* 3—28355
- FeOCl-Li intercalate, struct., NMR and Mossbauer study 3—22860
- $Fe_{1/6}Sn_{1/6}NbS_2$, intercalation cpds., Mossbauer spectra 3—34021
- GaSe-Pb-Li, intercalated semiconductor, optical props. *(Russian)* 3—14247
- InSe-Li-Pb, intercalated semiconductor, optical props. *(Russian)* 3—14247
- InSe-naphthalene (anthracene), exciton refl. and photoluminesc. spectra, 4.2 to 40K 3—38845
- K-graphite intercalation cpd., stage transformations, X-ray diffr. study 3—42772
- KC_{24}-tetrafuran, cryst. struct. stoichiometry *(French)* 3—23051
- KC_{24}-tetrahydrofuran, cryst. struct. stoichiometry *(French)* 3—23051
- KC_{24s}-tetrahydrofuran intercalate, molecular motion, ^1H NMR study *(French)* 3—22991
- KC_8, press. induced staging transitions, fractional stage obs. 3—42769
- KC_x, graphite intercalation cpds., neutron diffr. study rel. to appls. as monochromators 3—7876
- $KHgC_8$ intercolation cpd., stage 2, supercond. transition temp., press. depend. 3—18813
- $KHgC_x$ ($x=4$, 8) intercalation compound, optical reflectivity 3—8847
- $K_xRb_{1-x}C_8$ intercalation cpd., electronic struct., configuration propagator theory 3—38300
- LiC_6, first-order phase transition, elastic neutron scatt. and DSC study 3—23037
- LiC_6 intercalation cpd., phonon modes, inelastic neutron scatt. study 3—57043
- Li_nCrO_x cathodes in Li^+/organic electrolyte batteries, transport props. 3—44116
- Li_nMoO_3 cathodes in Li^+/organic electrolyte batteries, transport props. 3—44116
- Li_xNbS_2, cryst. chemistry and superconductivity 3—23528
- Li_xNbSe_2, intercalated, struct., phase diagram 3—2519
- $Li_xTa_yTi_{1-y}S_2$, intercalation props., order-disorder phase diagram 3—33384
- $LiTi_2O_4$, structure, mag. props., superconductivity 3—22863
- $LiTiS_2$, intercalate, band struct., interlayer interactions 3—13725
- Li_xZrS_2 intercalation cpd., structural and semicond.-metal transition obs. 3—52036
- $MnPS_3$ intercalate, weak ferromagnetism 3—23605
- $MnPS_3$, intercalated with $Co(C_5H_5)_2{}^+$ and $Co(C_6H_6)_2{}^+$ cations, low-freq. motions, neutron scatt. study 3—8150
- MoS_2, alkali metal intercalates, ESR spectra and NMR Knight shift 3—14130
- 2H-MoS_2, Li intercalation, struct. destabilisation 3—46880
- $Na_xTiS_2(Se_2)$ intercalate, struct. and phase relations 3—22861
- NbS_2-2H intercalation cpd. with ethylenediamine and trimethylenediamine, cryst. struct. and thermogravimetric study 3—33206
- NbS_2-methylamines(-NH_3), intercalation cpds., NMR studies 3—47570
- NiCl in graphite, mag. transitions, susceptibility, magnetisation and sp. ht. studies 3—57612
- $NiPS_3$, intercalated with amines, cryst. struct. and semiconducting props. 3—51573
- PbI intercalated with organic molecules, heat capacity *(Russian)* 3—13474
- Rb-graphite intercalate, lattice dynamical model 3—13379
- Rb-graphite intercalation cpd. 3—42585
- $Rb_xCs_{1-x}C_8$ intercalation cpd., electronic struct., configuration propagator theory 3—38300
- $SbCl_5$-graphite intercalate, c axis elec. resistivity 3—52156
- SbF_5-graphite intercalate, ^{19}F NMR study 3—23817
- SbF_5-graphite stage one intercalation cpd., order-disorder transform. study 3—8182
- TaS_2 (2H), supercond. intercalated layer cpd., dimensional crossover, crit. field meas. 3—38562
- TaS_2 (2H)-K^+/H_2O, cryst. expansion during galvanostatic intercalation, dilatometer study 3—25875
- TaS_2-1H intercalation cpd. with ethylenediamine and trimethylenediamine, cryst. struct. and thermogravimetric study 3—33206
- TaS_2-NaOH intercalated layered cpd., plasmon struct. of XPS spectra 3—39011
- TaS_2(1T), hydrazine intercalation complexes, mag. props. 3—23578
- TiS_2 intercalation cpd. with ethylenediamine and trimethylenediamine, cryst. struct. and thermogravimetric study 3—33206
- TiS_2-Ag intercalated layered cpd., plasmon struct. of XPS spectra 3—39011
- $Ti_{1+x}S_2.NH_3$, diffusion of NH_3, pulsed PMR study 3—18503
- $TiSe_2$, hydrazine intercalated, mag. susceptibility meas. 3—23579
- $VOPO_4.2D_2O$, cryst. struct. determ. 3—22859
- $ZnPS_3$ layer intercalation cpd. with $Co(\eta^5\text{-}C_5H_5)_2{}^+$ and $Cr(\eta^6\text{-}C_6H_6)_2{}^+$, vibr. spectra 3—57914
- ZrS_2 (Se_2), alkali metal intercalates, ESR spectra and NMR Knight shift 3—14130

interconnected systems *see large-scale systems*

interdiffusion *see diffusion*

interface electron states

- AES for surface struct. and surface electronic struct. anal., review *(Chinese)* 3—43666
- Au film, superimposed on metallic base, elec. cond. 3—38494

interface electron states continued
- electrolyte-SiO_2-Si structures, interface state props., pH response 3−13900
- electronic structure of surfaces, interfaces and organic solids, muffin-tin orbitals calcs. 3−42994
- heterometal systems and superposed films, band struct. and superconductivity, orbital calcs. 3−3295
- injection laser threshold temp. sensitivity reduction, interface states introduction at heteroboundaries 3−17533
- interfaces, LEED, AES, and angle-resolved photoemission meas. 3−43711
- Langmuir-Blodgett film MIS structures on narrow band-gap semiconductors 3−38487
- Lindner high-freq. MOS capacitance approx. 3−57427
- metal-metal junctions, interface plasmons 3−3297
- metal-oxide boundaries, resonant tunnelling via localised interface states 3−18786
- metal-sapphire interfacial strength, SCF Xalpha scattered wave cluster MO calc. 3−13903
- metal-semiconductor interface, localised states, capacitance spectroscopy 3−3314
- metal-semiconductor layered ultrathin coherent struct., electronic struct., rel. to excitonic supercond. *(Chinese)* 3−28435
- metal-semiconductor Schottky barrier contacts, interface Fermi level 3−18765
- MIS structures, interface states and impurity levels, isothermal capacitance transient spectroscopy technique 3−23485
- MOS struct., electron trapping and turn-around effect for different gate metals 3−13912
- MOS structure, interface trap density determ. at midgap 3−18791
- narrow band-gap semiconductors, optical transitions in inversion layers 3−34055
- NMOS capacitors, high-field stress effects on interface state density 3−52266
- nondegenerate semicond.-dielectric interface, surface magnetoplasmon spectrum calc.. 3−13916
- p-n heterojunctions, with interface energy band discontinuities, photo-EMF, lux-ampere characts. 3−18775
- p-n junctions, I-V characts., depletion layer surface recombination-generation effects 3−18770
- reduced Hamiltonian method for solving tight-binding model 3−52220
- semiconductor heterojunction, abrupt, effective mass wave functions, interface correction rules 3−57417
- semiconductor junctions, grain boundary barrier height, interface states *(French)* 3−23472
- semiconductor-metal interface electronic struct. study using synchrotron radiation *(Japanese)* 3−3318
- semiconductor-metal interfaces, structure, geometrical and electronic, props. 3−18780
- semiconductors with doping superlattices, electron-hole excitation energies in subband struct. 3−57402
- semiconductors with doping superlattices, electronic subband struct. and effective energy gap 3−57401
- thin films and interfaces, symposium, Boston, MA, USA (Nov. 1981) 3−23
- transparent conductor-oxide-Si struct., interface characts. 3−18790
- Ag film, superimposed on metallic base, elec. cond. 3−38494
- Ag-Ge coated, IR surface plasmon attenuation coeffs. 3−34059
- Al-InP evaporated systems, plasma anodisation, MISFET appl. 3−29200
- Al-InP interface, cryst. and electronic struct. 3−23189
- Al-SiO_2-Si(n), semiconductor-insulator interface, electronic processes, deep-level transient current spectroscopy 3−3321
- Al-SiO_2-n-Si system, 1.3 MeV electron radiation effects obs. *(Chinese)* 3−38481
- Al-ZnO-SiO_2-Si struct. for SAW devices, elec. characts. 3−3323
- Au-InP Schottky diodes, elec. characts., interfacial layer effects 3−8582
- Au-Si(111) 7×7 interface growth, cryst. and electronic struct. 3−23190
- CdHgTe-CdTe common anion heterojunctions 3−33785
- Cu-InP (110) interface, AES and photoemission studies of atomic and electronic struct. 3−58032
- p-GaAs MOS struct., interface states and internal photoemission 3−52257
- GaAs, oxyfluoride layer, plasma deposited, props. 3−8604
- GaAs:Ge, homojunction interfaces, carrier compensating centres, luminescence and DLTS study 3−3273
- GaAs/$Al_xGa_{1-x}As$ LPE grown heterojunctions, two dimens. electron gas 3−43278
- In-GaAs/n-$Al_xGa_{1-x}As$ heterostructures, organometallic VPE grown, interface states study 3−28416
- GaAs-$Al_xGa_{1-x}As$ heterojunction, subband struct. and light scatt. spectra 3−28423
- GaAs-$Al_xGa_{1-x}As$ n-n heterojunction, photovoltaic response *(Chinese)* 3−33782
- GaAs-AlAs interface, antisite and vacancy defects, electron states 3−43096
- GaAs-AlAs superlattices, homopolar interface structural and electronic props. 3−23473
- GaAs-anodic native oxide interface analysis using spectroscopic ellipsometry *(French)* 3−28438
- GaAs-anodic oxide interface, struct. and elec. props. 3−33800
- GaAs-oxide interface electron state theory 3−43255
- GaInAs-AlInAs heterojunctions, quantum transport, intersubband scatt. effect 3−3305
- GaN-GaAs MIS structure, thin film passivation, interface state density study 3−52262
- p-GaP:Ru photoelectrochemical solar cells, chemically-induced interface states 3−57422
- Ge/Au interface form., photoemission at Cooper minimum 3−52897
- Ge-GaAs (110) interface, preparation and electronic props. 3−13889
- Ge-MBBA interface, photoelec. effects 3−52190
- InGaAsP/InP p^+n diodes, deep level electron and hole traps, DLTS study 3−47414
- InP (100)-Al(Au) interface with etched or cleaned InP surfaces, Fermi level, XPS study 3−47419
- InP, anodic oxidation and InP/oxide interface elec. props. 3−33798
- InP-chemical oxide interface states study in MIS struct. 3−23487
- InSb-anodic oxide structures, electrophysical props. 3−33801
- InSb-CdTe heterostruct., MBE growth and InSb surface passivation appl. 3−39037
- Pd_2Si, form. at Si-Pd interface, chem. bonding, photoemission study 3−58034

interface electron states continued
- Si (111)-Ag(Au)(Ni) interfaces, localised states, capacitance spectroscopy 3−3315
- Si, grain boundary barrier height and interface states, laser beam photocond. study 3−38335
- Si MOS devices, interface states, dynamic conductance and noise meas., bias-temp. stresses 3−8591
- Si, polycryst., grain boundary passivation and analysis for solar cell applications 3−51629
- Si solar cells, induced junction, open circuit voltage limitations due to surface recomb. 3−58537
- Si:H, amorphous, bulk and interface states, elec. props. 3−28256
- Si:H, amorphous film, interface and surface states, optical absorpt. spectra, photothermal deflection spectroscopy study 3−34125
- Si:H amorphous MOS struct., interface states 3−23455
- a-Si:H-SiO_2 interface, gap state density and interface states 3−52214
- n-Si/$In_{2-x}Sn_xO_{3-y}$ solar cell, comparison with n-Si/SnO_2 solar cells 3−53521
- n-Si/n-Fe_2O_3, double layer solar cell electrode, interface states effects obs. *(Chinese)* 3−19581
- Si/SiO_2 CCDs optical carrier generation beyond fundamental absorption edge 3−28445
- Si/SiO_2 interface, Au doped, interface states, chem. bond model 3−38484
- n-Si/SnO_2 solar cell, comparison with spray deposited $In_{2-x}Sn_xO_{3-y}$/n-Si solar cell 3−53521
- Si-Au interface, solid-state reaction, initial stage *(Japanese)* 3−28166
- Si-MBBA interface, photoelec. effects 3−52190
- Si-SiO_2, electron irrad., interface defects, XPS study 3−51962
- Si-SiO_2, gamma irrad., effect of bias on paramagnetic defects 3−3319
- Si-SiO_2, interface electronic struct. calcs. 3−38293
- Si-SiO_2, interface states, generation annealing kinetics activated by photohole injection 3−33797
- Si-SiO_2, interface state spectroscopy, energy resolution increase with Tikhonov weak regularisation method 3−57407
- Si-SiO_2, interface state generation after high-field stress 3−57425
- Si-SiO_2, ion implanted, defect study 3−28444
- Si-SiO_2 interface, electron beam enhanced surface photovoltage 3−3239
- Si-SiO_2 interface, γ-irrad., induced paramag. centers, ESR study 3−52261
- Si-SiO_2 interface, radiation induced defects meas. with XPS 3−43288
- Si-SiO_2 interface, surface inversion current 3−43285
- Si-SiO_2 interface, VUV irrad., oxide traps and interfacial states obs. *(Chinese)* 3−38482
- Si-SiO_2 interface analysis using spectroscopic ellipsometry *(French)* 3−28438
- Si-SiO_2 interface densities and capture cross-section meas. by conductance technique *(Chinese)* 3−3272
- Si-SiO_2 interface state generation by alternating voltage stress under visible irrad. 3−43290
- Si-SiO_2 interfaces in MNOS structs., electronic props., effect of Si_3N_4 films 3−33794
- Si-SiO_2 MOS capacitors, interface states and X-ray produced holes 3−52259
- Si-SiO_2 MOS struct. with SiO_2 ultrathin plasma, surface electronic props. 3−47428
- Si-SiO_2 MOS structure, overlapping polycryst. Si gates, interface state density, constant capacitance DLTS study 3−38483
- Si-SiO_2 MOS structures with thick SiO_2 layers, interface state generation 3−43286
- Si-SiO_2 p-MOS tunnelable structures, tunnelling currents induced by interface states 3−3325
- Si-$TiSi_2$ interface, electronic struct., low temp. annealing effects *(Russian)* 3−47425
- SiO_2 films, plasma anodised, interface and neutral traps, ESR study, IC fabrication appl. 3−38337
- SiO_2 MOS structs., field-sensitive interface states, intimate-valence alternation pairs 3−8549
- SiO_2 RF reactively sputtered coatings on Si, MOS capacitor struct. dielec., props. 3−51978
- SiO_2/Si system, elec. cond. and elec. breakdown of SiO_2 3−3345
- T 3−52268
- ZnO anodic films on Zn, surface barrier props., annealing behaviour 3−38476

interface phenomena
- *see also adsorption; crystal surface and interface vibrations; interface structure; Kapitza resistance; semiconductor-electrolyte boundaries; surface phenomena*
- abrupt l-h junctions and epitaxial layer structures interface, charge carrier conc. 3−3301
- air-water interface, reaeration coeff., turbulence effect in surface region *(German)* 3−51068
- alloy, binary, dil., solid-melt interface stability, thermodynamic criterion *(French)* 3−52920
- Berthelot tube, temp. lag and thermal resist. and steel/liq. interface 3−1932
- charged interfaces, scaling length *(French)* 3−38459
- coarsening models, incorporating diffusion geometry and vol. fraction of particles 3−53056
- constraint vectors, in P_1 and P_2 approx. *(French)* 3−42123
- crack propag. at interface, expt. on mode interaction 3−7519
- critical heat flux density in open channels cooled by superfluid ^4He 3−12493
- crystal growth, rapid, from undercooled melts, roles of heat transport and interfacial rearrangement 3−13138
- Darken experiment, approx. analytical demonstration 3−2893
- development of surface science and technological appl. 3−42892
- diffuse interfaces, optical properties determ., photometry and ellipsometry, surface plasmon excitation *(French)* 3−24033
- diffusion-controlled phase transformations in finite region 3−2892
- electrode-electrolyte interfaces, GMSA for mixture of hard ions and hard dipoles against charged hard wall 3−22749
- fibres, coated, deform. behaviour and tensile strength, rel. to fibre reinforced composites 3−4078
- fluid-fluid interface, bounded acoustic beam refraction, ang. deviation calc. *(French)* 3−17669
- fluid-fluid interface, elec. and mag. susceptibilities 3−34046
- fluid-fluid interface, refraction of narrow acoustic beam in two-dimens., analytic and numerical calc. *(French)* 3−17668
- glass fibre reinforced epoxy resin, interfacial strength studies 3−4002

interface phenomena continued
glass fibre reinforced polypropylene, fiber-polymer interface strength 3—19473
glass fibre reinforced vinyl ester resin, high strength sheet moulding cpd., fatigue damage 3—24328
grain boundary sliding, particle blocking and assoc. internal friction 3—37931
hydrodynamics, microscopic theory 3—32704
image potential modification for interfacial zone with varying dielec. const. 3—57444
insulator-electrolyte interface, double layer, step voltage transients 3—23458
inviscid stability, effect of finite conductivity for interface submitted to high frequency magnetic field 3—51245
ionic fuid, interfacial electric double layer, long-range correlations 3—43263
laminated composites, free-edge stress under uniform extension, logarithmic singularity 3—7406
liquid film thinning as small drop or bubble approaches a fluid-fluid interface 3—18533
liquid films, cratering due to surface defects, Gaussian model 3—38169
liquid interface viscoelastic props., surface fluctuation scatt. using grating heterodyne spectroscopy 3—3747
liquid-gas interface of stirred liquid-gas solution closed to mass transport, bubble evolution kinetics 3—42883
liquid-solid interface, US Rayleigh leaky waves excitation obs. 3—33549
liquid-vapour, capillary waves, percolation props. 3—33537
liquid-vapour interface, ripples, evaporation effects 3—28194
liquid-vapour interfacial thickness, estimation from surface energies 3—38167
magnetic surface and interface studies using polarized neutrons 3—52401
magnetism at surfaces and interfaces 3—52324
metallic systems, massive transform., nucleation, correl. between transform. temp. and cooling rate 3—39110
metals, solidification and melting, US meas. of solid-liq. interface 3—4217
organic semiconductor interface photovoltage studies, optically modulated electron beam method 3—23465
phase transformations, interfacial aspects, NATO Advanced Study Institute, Erice, Sicily (Aug.-Sept. 1981) 3—35777
photoacoustic study of gaseous heat transfer through interface 3—32580
piezoelectric three-layer struct., pure transverse acoustic wave propagation 3—51910
polyethylene, $CaCO_3$ filled, dynamic mech. behaviour 3—53109
polyethylene/ethylene-vinylacetate copolymer laminated films, interfacial phenomena, TSC study 3—47593
polymer solutions, interfacial depletion layers, direct optical obs. 3—24002
polystyrene, soln., interfacial depletion layers, direct optical obs. 3—24002
polystyrene melt, sheared, spatial variation in viscosity 3—34371
polystyrene-polybutadiene-styrene system, polymeric two-phase system in presence of block copolymers 3—43797
proteins, compact macromolecules at interfaces, soft particle model 3—36892
quantum fluids, interface profiles and surface tension, generalised van der Waals theory 3—2923
quinone derivatives, monolayers, H-bonded, at liq. interfaces 3—51929
random interface motion, universal scaling 3—13596
refractory metal silicide form. by metal+Si reaction, SiO_2 diffusion barrier 3—8270
rotating disc in Newtonian liq., film thickness meas. 3—27618
semiconductor, electrothermal instabilities, nonlinear heat transfer conditions to liq. N_2 3—28344
sodium dodecylsulphate emulsion, birefr., interface defects and curvature, spin-labelling technique 3—58450
solid elastic media, interface SAW 3—13614
solid-fluid interface, struct. and thermodynamics 3—57205
solid-fluid interface, transmitted acoustic source radiation, numerical Fourier-Bessel transformation *(French)* 3—17672
solidification, math. modelling 3—2747
statistical surface physics, microclusters, interfaces and simple films, computer simulation 3—13617
steel, 10B20, coarsening of cementite particles in ferrite matrix 3—24236
steel, dual phase, deform. and fracture, metallographic study 3—14667
steel, eutectoid, plain C, isothermal form. of austenite 3—53083
steel, H trapping, permeation meas. effect of microstruct. 3—33504
steel-steel interface elastic waves, attenuation and velocity meas. 3—42174
steels, conf., Bethlehem, PA, USA (Oct. 1981) 3—2
steep standing waves at a fluid interface 3—22479
submerged bodies in saturated liqs., boiling, crit. heat flux, hydrodynamic model 3—46550
thymine condensed films formation at H_2O-Hg interface, stochastic effects 3—47187
transparent conductor-oxide-Si struct., interface characts. 3—18790
US interfacial wave attenuation, at various bonding conditions 3—57199
vacuum-solid insulator interface, elec. field modification by surface charges 3—51416
viscoelastic solid interface, Mode III steady crack propag. 3—51008
water, near solid interfaces, statistical thermodynamic model 3—57175
water surface monolayers, cooperative phenomena, monomer-dimer lattice gas model 3—2934
Al, unidirectionally solidified, H distrib. and diffusivity 3—53044
Au, ion plated film on Ni and Fe substrates tribological props. and XPS studies 3—14746
C fibre reinforced epoxy resin, role of fibre surface-matrix combination 3—9156
C, glassy electrodes in H_2O-KCl solns., interface impedance, mechanical surface treatment effect 3—47410
CO, mol. fluid interphases, electric field effects, perturbation-variational theory 3—23137
CaF_2 solid electrolyte/O_2 interface, dopant redoxing and diffusion, electrochem. study 3—51843
Co-base alloys, low temp. hot corrosion, reaction mechanism 3—14774
Cu-Ni, surface and interface segregation, core-level binding energy shift study 3—47211
Fe-Al system, antiphase boundary wetted by second phase, migration kinetics 3—47815
Fe-C powders, atomised, annealing, reduction and decarburisation 3—14526
Fe-Cr-Ti, high temp. oxidation, influence of small amounts of Ti *(Japanese)* 3—9236
KCl monocrystals, knife edge/plane contact, high temp. deformation, dislocation mechanism, optical microscopy 3—47034
Sn-Pb (2, 38.1 wt.%), superplastic, role of Coble creep and interface control 3—39210
UO_2/Zircaloy-4, chem. interaction under severe fuel damage conditions 3—11374

interface structure
conference, Castle Hot Springs, Arizona, USA (Jan. 1982) 3—5492
crystal-liquid interfacial roughening rel. to structure difference 3—33156
epoxy, rubber modified, amine-cured, phase struct. characterisation 3—43798
epoxy resin matrix-silane coupling agent interface in fibre-reinforced composites, spectroscopic characterisation 3—19313
FCC-HCP, coherent interphase boundaries, interatomic pots. 3—33432
fibre reinforced polymer, fibre-matrix interactions, mech. props. 3—28221
heterojunction interface imaging by high resolution TEM 3—7886
III-V semiconductors, ohmic contacts, fabrication techniques, review 3—52249
III-V semiconductors 3—24158
interfaces, LEED, AES, and angle-resolved photoemission meas. 3—43711
interphase boundaries, dislocation geometry and lattice misfit 3—28223
layered solids, ion beam induced mixing, mechanism 3—28006
Lennard-Jones fluid, binary, liq.-vapour interface, three-phase region and Cahn wetting transition 3—42889
Lennard-Jones fluid, binary, liq.-vapour interface, two-phase region, struct. and surface tension 3—42888
liquid-gas interface, intrinsic density profile near crit. point 3—13426
materials analysis by ion channelling, book 3—54597
metal-semiconductor interface thickness, soln. theory 3—51964
microparacrystals, solid state physics 3—18358
molecular fluids liq. vap. interface, surface anisotropy, optical determ. 3—2933
multilayer structures, electron probe microanalysis, improved spatial resolution 3—9369
polar materials, surface and interface asymmetry 3—23142
polymer blends, compatibility 3—35781
polymer blends, interface struct., free energy density 3—38168
polypropylene, mica filled, interface charact. 3—28222
rough solid-liquid interface, true area of contact 3—42890
Rutherford backscattering and channelling analysis of interfaces and epitaxial systems, review 3—8929
semiconductor multilayer structs., thermal strains, curvature radius and layer stresses calc. 3—42934
semiconductor-metal interfaces, structure, geometrical and electronic, props. 3—18780
short fibre or flake filled plastics, conf., Montreal, Canada, (Dec 1981) 3—25677
solid-fluid interface, struct. and thermodynamics 3—57205
steel, austenitic stainless, aluminised coating, struct. and phase comp. 3—53282
steel, C, cementite-ferrite interface, interaction with H 3—33293
steel, low alloy, low C, lath martensite, morphology and crystallography, TEM study 3—42796
steel, mild, nitrided, oxidation and corrosion resist. 3—4184
steel, mild, oxidation of ferritic alloys, effect of dispersed nitrides at surface 3—4185
steel low C-enamel coating interface props. *(Slovak)* 3—19458
steel-enamel interface in one-coat porcelain enamelling, presence of FeO 3—39296
thin films and interfaces, symposium, Boston, MA, USA (Nov. 1981) 3—23
Ag-NaCl interphase boundaries, structure rel. to atomic matching 3—33585
Al film on Ti substrate, reactions and diffusion 3—33584
Al/AlO_x/Pb junctions, inelastic electron tunneling, barrier prep. effects 3—23502
Al-Al_2O_3-Au electroformed struct., SEM and XPS studies 3—2991
Al-Al_2O_3-benzoic acid-P6 junctions, IETS study, effect of junction roughness 3—38488
Al-InP interface, cryst. and electronic struct. 3—23189
Al-si interface struct., γ-irradiation effects *(Russian)* 3—47229
Al-Si polycrystalline film, solid phase reaction with overlapping Al film obs. 3—33515
Al-SiC interface, AES and EELS study 3—33582
AlGaAs/GaAs heterointerface, compositional fine line patterning by Zn implantation 3—51637
AlSb film on GaAs, MBE growth and elec. and struct. props. 3—58051
Au-Cd (47.5 at.%), martensitic interfaces, TEM 3—34319
Au-Ge (111) interface form., AES, LEED, and electron microscopy study 3—38240
Au-Si(111) 7×7 interface growth, cryst. and electronic struct. 3—23190
B fibre reinforced Al, tensile strength, room-temp., function of annealing temp. and time 3—34484
CdTe/$Hg_{0.8}Cd_{0.2}Te$ (111) system, laser annealing effects, electrolyte electrorefl. study 3—14252
$CoSi_2Si$(111) interface struct., determ. by ultrahigh resolution electron microscopy 3—8343
$CrSi_2$-Cr_2O_3 interface, chem. reactions, XPS and Rutherford backscatt. study 3—42856
β-Cu-Al-Ni, martensitic interface mobility kinetics 180-410K 3—34317
Cu-Al-Ni, shape memory alloy, matrix-martensite interface, TEM 3—34320
Cu-Ga (23.7 at.%), $\beta \rightarrow \zeta_m$ massive transform., crystallography 3—39109
Cu-InP (110) interface, AES and photoemission studies of atomic and electronic struct. 3—58032
Cu-Sn binary diffusion couple, anal. of inert marker motion for Cu_6Sn_5 growth 3—33517
Cu-Zn, martensitic transform. BCC/HCP and BCC/9R interfaces, computer simulation 3—34318
Cu_2S/$Cd_{1-x}Zn_xS$ solar cells prepared by solution reaction method, junction geometry 3—58505
Cu_2S/CdS solar cells prepared by solution reaction method, junction geometry 3—58505
Fe-Al system, interdiffusion, aluminising 3—33519
Fe-Cr(Mo), nitrided,oxidation and corrosion resist. 3—4184
Fe-metal contacts, interfacial adhesion energy, segregation effects, rel. to thin film lubrication expts. 3—53355
Fe-Si(Mn)(Cr)(Ni)(Cu)(C), reaction with molten Al, form. of alloy layers 3—29060
$Ga_{1-x}Al_xAs$-GaAs quantum well heterostructs., MOVPE growth 3—3965

interface structure continued
GaAs, ion implanted, solid phase epitaxy, interface structures and twins obs. 3—33591
GaAs-Al$_x$Ga$_{1-x}$As, electron probe microanalysis, improved spatial resolution 3—9369
GaAs-anodic oxide interface, struct. and elec. props. 3—33800
GaAs-Au thin film interface, microstruct. and colour, heating effects 3—51963
GaAs-Pt interface, interfacial reaction and Schottky barrier 3—51868
GaSb film on AlSb, MBE growth and elec. and struct. props. 3—58051
Ge/GaAs epitaxial system, coherency of interphase boundary and elastic strain 3—51977
Ge/Si interfaces, depth profile and depth resolution evaluation, by KARMA technique 3—51965
^{4}He solid-superfluid interface, charge-induced instability, light interf. obs. 3—28188
Hg$_{1-x}$Cd$_x$Te-Al interface formation, local chem. comp. and Schottky barrier height, photoemission study 3—28220
InGaAsP-oxide interface, comp. profiles, AES ESCA and ion sputtering studies *(Chinese)* 3—38237
InP-metal system during annealing, mass spectrometric investigation 3—38238
InSb-CdTe heterostruct., MBE growth and InSb surface passivation appl. 3—39037
MgO-ZrO$_2$, partially stabilised zirconium ceramics, enhanced thermal up-shock resist. 3—4041
MoSi$_2$-Si interface, self-aligned silicide formation by ion implanation through metal film technique 3—51864
Na-Cs, liquid-vapour interface struct., Monte Carlo simulation 3—23024
Nb-Nb$_2$O$_5$ layered system, interface transitions and struct. *(Russian)* 3—23192
Ni/Au films, vacuum deposited on Si (111) substrate, interfacial phenomena, SEM study 3—33516
Ni-Al (0.55 to 4.10 wt.%), intergranular oxide development at high temp., high stress effect 3—53286
Ni-Au(111) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3—23219
Ni-Au(111) epitaxial couples, interfacial dislocations obs. *(French)* 3—23220
Ni-base superalloys, growth of γ' precip., electron diffr. study 3—47836
Ni-Ti, martensitic interfaces, TEM 3—34319
NiAl/Ni diffusion couples, Ni$_3$Al layer growth, early stages 3—23106
Pd-Au(111) and Au-Pd(001) epitaxial couples, interfacial dislocations, electron diffr. and microscopy study *(French)* 3—23219
Pd-Au(111) and Au-Pd(001) epitaxial couples, interfacial dislocations obs. *(French)* 3—23220
Pd-Si (100) and (111), surface reaction, ion beam anal. and AES study 3—42857
Pd-Si (111) system, low energy EELS and AES study 3—3885
Pd-Si interfaces, struct. props. investig. by RHEED 3—18568
Pd-Si:As interface, Pd$_2$Si formation, As redistribution, elec. study 3—47169
PtSi-Si Schottky barrier contact, elec. characts., interface struct., effects 3—8558
Si (111)-CaF$_2$(BaF$_2$)(SrF$_2$) heterostructures, epitaxial relations, ion channeling anal. 3—51967
Si, ion implanted, solid phase epitaxy, interface structures and twins obs. 3—33591
Si/Au/Ni, vacuum deposited metal films, interface phenomena 3—51961
Si/NiSi$_2$ interface, at. struct., TEM study 3—13644
Si-Al$_2$O$_3$ interface, depth profiles, AES electron beam excited plasmon-loss features 3—8345
Si-Au interface, solid-state reaction, initial stage *(Japanese)* 3—28166
Si-Au interface, struct. and behaviour under O$_2$ exposure, UPS and XPS study 3—52898
Si-Mo interface, MoSi$_2$ formation by ion implantation 3—33583
Si-Nb interface, NbSi$_2$ formation by ion implantation 3—33583
Si-Ni binary diffusion couple, anal. of inert marker motion for Ni$_2$Si growth 3—33517
Si-Ni ohmic contacts, interface struct., CVD doping *(Rumanian)* 3—47420
Si-Pd interface, EELS and AES study 3—23191
Si-Pd$_2$Si, amorphous Si solid phase epitaxy, anal. of inert marker motion 3—33517
Si-planar metal reaction couples, first phase mucleation, theory 3—57146
Si-Rh amorphous alloy formation by interfacial reaction between amorphous Si and cryst. RH 3—57147
Si-SiO$_2$, electron irrad., interface defects, XPS study 3—51962
Si-SiO$_2$ interface, comparative study of optical nature of interface layers 3—5835
SiC fibre reinforced Ni, phase boundary, effect of thermal cycling *(Japanese)* 3—9101
SiC p-n junction, high struct. quality 3—13897
Si$_3$N$_4$, solid state reaction with Ni-base alloy 3—38239
SiO$_2$-Si interface, thermally nitrided, characterization 3—8347
Si(100) with adsorbed Ni, diffusion layer microstructure 3—13634
Sn/electrode film system, Sn elec. cond., electrode effects 3—38497
Ti alloys, martensites, lattice correspondence and crystallography 3—37854
$\alpha+\beta$-Ti alloys, nature of α/β interfacial layer, effect of heat treatment 3—14686
Ti-Mn (5 wt.%), martensitic interfaces, TEM 3—34319
TiC sputter deposited film, adhesion to steel substrate, interfacial chem. effects 3—13646
ZrO$_2$ on α-Zr[11$\bar{2}$0], electron diffr. anal. 3—28201
interface tension *see surface tension*
interface vibrations *see crystal surface and interface vibrations*
interfaces, computer *see computer interfaces*
interfaces, mechanical *see mechanical contact*
interfacial energy *see surface energy*
interfacial tension *see surface tension*
interfacial waves *see surface waves (fluid)*
interference (signal)
see also crosstalk; electromagnetic interference
acoustic beamformer, digital, intrinsic noise 3—17712
acoustic signal to interference ratio expressions for doubly spread target 3—7303
common mode attenuator for interference reduction in seismic data 3—39925
interference (signal) continued
laser backscatter Doppler velocimeter, high energy oceanographic boundary layers obs. 3—4988
noise suppression using data-adaptive polarization filters, infrasonic array data appl. 3—17711
sea flow, US obs. system over long distance, signal processing system 3—1864
interference spectrometers
cryogenically cooled IR Fourier transform spectrometers 3—5881
Fabry-Perot interferometer and grating spectrometer for balloon-borne far IR astronomy 3—48819
Fabry-Perot spectrometer for IR astronomy *(Japanese)* 3—30197
fast-scanning Fourier spectrometer, S/N ratios in control channels 3—25960
Fourier spectrometer, fast scanning, mirror-movement velocity error analysis 3—30940
Fourier transform, field-widened, remote sensing of auroral spectral emissions 3—10084
Fourier transform IR hardware developments 3—5880
Fourier transform spectrometer for high resolution meas. of semiconductor laser static, dynamic spectra 3—20907
high-speed spectrometer for studying radiation sources in chosen spectral regions 3—36097
polarisation Fourier spectrometer, spectrogram correction 3—40700
submillimetre high-resolution Fabry-Perot spectrometer, use of metallic mesh interference filters 3—37171
interference spectroscopy
see also Fourier transform spectroscopy
speckle interferometer, channelled spectrum 3—45215
submillimetre laser and interferometric spectroscopy of alkyl alcohols 3—11793
interference suppression
auroral radar sound, reduction of inherent noise in double-pulse Doppler technique 3—48761
bioinstrumentation FET cascode preamplifier design criterion for interference minimisation 3—24930
common mode attenuator for interference reduction in seismic data 3—39925
EPR, dispersion, saturation transfer, balanced cavity scheme 3—16393
noise suppression using data-adaptive polarization filters, infrasonic array data appl. 3—17711
TV picture perception, staircase patterns emphasized with edge transitions, Mach phenomenon suppression 3—44248
upper atmosphere IR radiation meas., baffle design for Earth radiation rejection in limb-scanning interferometer-radiometer 3—54218
interferometers
see also acoustic wave interferometers; electromagnetic wave interferometers; interferometry
electron mixed type interferometer for off-axis image electron holography 3—46150
neutron diffr. grating interferometer for very cold neutrons 3—41368
neutron interferometer for meas. small angular deflections of neutron beams 3—17166
interferometry
see also acoustic wave interferometry; electromagnetic wave interferometry; holographic interferometry; interferometers
longitudinal coherence in neutron interferometry 3—45003
neutron interferometry, state of art 3—50595
thermal neutron beam longit. coherence length direct meas. 3—45002
intergalactic matter
see also clusters of galaxies; galaxies
Centaurus cluster, intracluster gas cooling flow rel. to optical filaments around (NGC 4696) 3—5427
Coma cluster, mass-to-light ratio and density of dark matter 3—5434
Coma cluster of galaxies (Abell 1656), relativistic particles intergalactic reacceleration 3—59484
Coma galaxy cluster, appl. of diffuse X-rays to survey cluster gravit. mass distrib. 3—10470
Coma-type radio halo clusters, X-ray morphology and intracluster gas heating by cosmic rays 3—5430
continuous extinction determ. methods *(Polish)* 3—49034
density of intergalactic medium, rel. to extended radio sources and diffuse X-ray background 3—25620
dynamics of fully-ionized plasma 3—25594
galactic wind effect on cosmic ray age distrib. and lifetimes 3—25269
galaxy clusters with radio haloes, halo form. models and intracluster gas 3—25626
gaseous halo, dynamical behaviour in disc galaxy 3—35434
hot diffuse intergalactic gas, possibility of detection through X-ray absorpt. line studies 3—30445
intracluster gas, effect on tailed radio galaxies 3—25609
intracluster gas accretion flow onto central galaxies, eventual star form. 3—20512
intracluster gas mixing, effect of turbulent mixing of galactic wakes 3—16018
intracluster gas nature from X-ray imaging 3—25628
intracluster mag. fields survival and mag. monopole flux 3—44859
M87 (NGC 4486), heavy element abundances, temp. anal. and mass infall, X-ray obs. 3—15989
Magellanic Stream, new high-sensitivity H I obs. 3—49012
Magellanic Stream, search for faint blue stars, UGR obs. 3—40265
Magellanic Stream and high velocity H I clouds 3—54494
magnetic fields, rel. to intergalactic Faraday rotation of QSOs 3—5440
magnetic fields, upper limit from rotation measures of radio sources 3—59451
neutrino sea, interaction with EM radiation 3—20488
NGC 4319, spiral galaxy, luminous connection with Markarian 205, anal. 3—49015
PHL 957, quasar, line of sight absorpt. features intergalactic clouds, temp. and nature 3—59496
pressureless inhomogeneous spheroids gravit. collapse, cosmological implications 3—59208
QSO absorption-line clouds, Faraday rotation and magnetic fields 3—30522
radio sources, extended, instabilities in unsteady-beam models rel. to mixing of beam material with intergalactic gas 3—49043
rich galaxies cluster, effect of relaxation and tidal stripping in mass distrib. of intergalactic matter 3—30510
stellar spectral types in direction of Magellanic Stream, search for A-type stars 3—15909

intergalactic matter continued
- structure of intergalactic medium, implications of shock wave struct. and expansion law in expanding Universe 3−49061
- supernovae cumulative effects in young galaxy leading to new generation of galaxies form. 3−30404
- suprathermal dust grains accelerated to $>10^{18}$ eV 3−20189
- Virgo cluster, observational constraints on galaxy-intergalactic medium interactions 3−30509
- Virgo galaxy cluster, line-of-sight mag. fields of intracluster hot gas and M87 radio halo 3−10465
- void regions, rel. to cosmic plasma physics and hierarchical cosmology 3−59512
- voids in galaxy distribution, anal. of space distrib. of Markarian galaxies 3−54507
- X-ray emitting gas in rich galaxy cluster, X-ray temps. rel. to cluster collapse and radio sources morphology 3−59489
- X-ray galaxy clusters, Fe line emission obs. via X-ray telescope with multilayer coatings 3−54240

intermediate bosons
- asymptotic freedom sum rules and $\sin^2\theta_W$ in nearby composite models 3−31180
- axion, enigma *(French)* 3−21060
- axion, very weakly interacting, cosmological aspects, domain walls, decay constant 3−35757
- axion$\rightarrow\gamma\gamma$, search in nuclear reactor 3−643
- axion mass raising in hypercolour sideways interaction model 3−16610
- axion search on pulse reactor IBR-2 *(Russian)* 3−6051
- axion signal from positronium decay, branching ratio, mass 3−6809
- axions and family symmetry breaking, flavour symmetries, Nambu-Goldstone bosons 3−21025
- axions and Universe struct. evolution 3−59518
- axions from nuclear reactions in Sun 3−30134
- axions in galactic halos 3−59482
- Bethe-Heitler process, lepton pair prod. of light pseudoscalar particle 3−45332
- broken Abelian gauge theories, mass hierarchies and scalar field self-couplings 3−54827
- broken supersymmetry, cosmological constraints, electroweak theory, Higgs mass, photinos 3−25666
- charged leptonic current, V, A structure study 3−16569
- charm semileptonic decay, intermediate Higgs bosons, ν_e/ν_μ universality breakdown 3−633
- composite models, W dominance and weak boson mass bounds 3−40877
- cosmology with very large gauge models 3−31117
- CP violation, soft or hard breaking, axions, composite models 3−11076
- decoupling in theories with spontaneous symmetry breakdown 3−11025
- domain walls, axion models 3−31118
- E_6 grand unified model with invisible axions, cosmic domain walls 3−21034
- electric dipole moment, single quark in Kobayashi-Maskawa model of CP violation 3−36178
- electroweak interactions, conf., Schladming, Austria (February-March 1982) 3−25675
- electroweak interactions, gauge theories 3−26026
- electroweak interactions left-right symmetric model, K^0-$\bar{K}^0$ mixing 3−49605
- electroweak mixing schemes, weak boson scenarios and prod. cross section 3−21045
- electroweak model, topological bootstrap theory predictions of boson couplings and spectra 3−54868
- electroweak theories based on $SU(2)_L\times U(1)\times U(1)\times U(1)$ gauge group, neutral currents 3−16583
- families, the invisible axion, and domain walls, instantons in hypercolor 3−591
- flavour changing decays, GIM at one loop level 3−36175
- flavour changing processes, effective weak nonleptonic Hamiltonians 3−6022
- flavour grand unification, natural embedding of Peccei-Quinn symmetry 3−21050
- flavour violation, scalar particles and leptoquarks 3−11081
- gauge theory and particle physics, book 3−5511
- Glashow-Weinherg electroweak theory tests, W and Z searches, $Fe+\mu$ *(French)* 3−21052
- Goldstone-fermion pair exchange in spontaneously broken supersymm., van der Waals type forces 3−49595
- grand unification, fermion mass matrix, axions, Higgs couplings 3−11103
- grand unification, week interaction phenomenology and low-mass parity restoration 3−16581
- ground unified theories, strong CP problem and axion invisibility 3−26041
- GUT with SU(9) gauge symmetry, automatic invisible axion without domain walls 3−11089
- GUTs with invisible axion for strong CP puzzle 3−561
- Higgs boson, compositeness resolution in $e^+e^-\rightarrow Z\rightarrow H\mu^+\mu^-$ 3−49601
- Higgs boson coupling constants, SU(5) Coleman-Weinberg theory 3−563
- Higgs boson mass and coupling constant, upper limits in Weinberg-Salam-Glashow model 3−54871
- inflationary universe, superheavy bosons and baryon asymmetry 3−5465
- intermediate energy nuclear physics, Verona, Italy (July 1981) 3−44901
- invisible axions, prod. in early Universe, $U(1)_{PQ}$ symmetry breaking 3−35756
- invisible axions in strong CP puzzle, cosmology, Universe dark matter 3 35755
- light axion, astrophysical mass constraints in the Sun, red giants, white dwarfs 3−10204
- light axion constraints from nuclear decay and red giant star stability 3−582
- Majoron, massless boson, universe missing mass, left handed γ mass 3−26035
- matter-antimatter oscillations, B-L symmetry breaking in GUT 3−26050
- matter-antimatter oscillations, Higgs bosons in SU(5) and SO(10) GUTs. 3−26036
- monopole solutions in SU(3), spherically symmetric, in limit of cylindrical symmetry 3−40746
- muon anomalous magnetic moment in broken supersymmetric theories 3−11181
- N=1 supersymmetric theories, Lagrangian approach, mass splitting, gluino and photino masses 3−26022
- neutral boson masses in left-right $SU(2)_L\times SU(2)_R\times U(1)_{B-L}$ symmetric model 3−16582

intermediate bosons continued
- neutral Higgs boson mass and weak decays $K^\pm\rightarrow\pi^\pm l^+l^-$ 3−21121
- neutral Higgs bosons from decay of heavy-flavoured mesons 3−26107
- nonlinear R_ξ gauge condition, general treatment 3−5963
- nonstandard weak bosons and standard electroweak gauge model 3−26031
- particle physics conf., Nashville, TN, USA (May 1982) 3−30539
- Peccei-Quinn axion props., strong CP problem 3−31134
- photons within family of gauge vector bosons 3−45327
- QCD_2, zero-mass boson in 1/N expansion 3−11148
- QCD, hadron coupling to Goldstone bosons 3−45345
- QED electron propagator testing, Higgs boson contrib. and mass 3−36183
- right-handed gauge-boson mass lower bound in left-right symmetric model 3−16737
- second class currents and supersymmetric U-boson, common footing 3−36171
- SO(10) model, superlight axion and neutrino masses 3−49614
- SO(14) grand unification model with confining model of weak interactions 3−569
- $SU_2\otimes U_1$, electroweak interaction; renormalisation with S-changing charged current 3−40789
- $SU(2)\times U(1)\times U(1)$ supersymmetric models, neutral currents, neutral boson mass bounds 3−11116
- $SU(2)\times U(1)$ gauge theory, CP nonconservation superweak model 3−21046
- $SU(4)_{colour}$ gauge boson mass limit from $K_L\rightarrow\mu e$ exptal. bound 3−49610
- $SU(4)\times SU(4)$ chiral symmetry for mesons and Weinberg-Salam model 3−54875
- SU(5) axion model and dark matter of Universe 3−49069
- SU(5) effective potential, Higgs and radiative contributions, mass spectrum 3−40815
- SU(5) model, spontaneous CP violation and invisible axion 3−26040
- SU(5) supersymmetric grand unified theory, additional Higgs bosons, proton decay 3−564
- SU(7) GUT with low mass monopoles and invisible axion 3−11090
- SU(N) antisymmetric-tensor Higgs fields, spontaneous symmetry breaking, SU(7) example 3−5975
- supergravity grand unified theories, quarks, leptons, gauge mesons superpartners masses 3−36174
- supersymmetric grand unified models, monopole suppression and baryon production 3−6024
- supersymmetric-particle masses from $(g-2)\mu$, lower bounds 3−572
- symmetry breaking in (2+1) dimensional gauge theories, connection with instantons 3−11054
- topological compositeness of quarks leptons and electroweak bosons 3−621
- triplet scalar bosons and double-β decay 3−16738
- two-Z-boson electroweak model 3−567
- vacuum alignment by broken gauge interactions 3−16601
- vector gauge boson covariant generation, nonlinear background field generation 3−5949
- weak vector boson masses in supergrand unified theory 3−10689
- $e^-e^-\rightarrow W^-W^-$, inverse neutrinoless double beta decay 3−627
- e^+e^- annihilation, Higgs bosons and heavy flavours prod. at LEP 3−21143
- $e^+e^-\rightarrow e^+e^-\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3−6092
- $e^+e^-\rightarrow gg\lambda$, gluon jets prod. via Z^0 reson. 3−16653
- $e^+e^-\rightarrow\gamma\gamma\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3−6092
- $e^+e^-\rightarrow\tilde{H}\tilde{H}$, light neutral Higgsino pair prod. at LEP energies 3−31226
- $e^+e^-\rightarrow\mu^+\mu^-\gamma$, helicity amplitude with photon polarisation, Z^0 exchange, single bremsstrahlung processes 3−6092
- $e^+e^-\rightarrow H^+H^-$, search for charged Higgs and technipions at PETRA 3−45383
- $eN\rightarrow e\gamma^*(Z^0)X\rightarrow el\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3−40910
- $e\nu$ collisions, Higgs boson creation 3−6093
- ep, π production, P violation, Z boson exchange, neutral weak current 3−21141
- $e^-p\rightarrow e^-Z^0X$, total cross-section calculation, Z^0 mass 3−26122
- $\gamma e^\pm\rightarrow\Delta^{\pm\pm}e^\mp$, Δ=double charged Higgs boson, B-L violation 3−36294
- γp, π production, P violation, Z boson exchange, neutral weak current 3−21141
- K weak decay, Nambu-Goldstone nature, quark-tadpole transitions, $\Delta I={}^1/_2$ rule 3−26110
- μ^- conversion via doubly charged Higgs scalar 3−54983
- $\mu N\rightarrow\mu\gamma^*(Z^0)X\rightarrow\mu l\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3−40910
- $np\rightarrow da$, search for axions at power reactor 3−40921
- $\nu_\mu e^-\rightarrow\mu^-\nu_e$, cross section meas. in CHARM neutrino detector 3−49665
- $\bar{\nu}_\mu N$, charged weak currents of quarks, V, A structure study 3−26106
- p and n decay rates in GUTs and SUSY GUTs 3−31098
- p decay in SUSY GUTs due to d=5 operators, lifetime, W-ino mass 3−31106
- $\bar{p}p\rightarrow(\gamma^*,2^0)X\rightarrow l^+l^-X$, soft gluon emission effects from QCD quark form factor 3−26074
- $pp\rightarrow hX$, proton as quark and diquark, particle ratio production, in SU(6) 3−40934
- $\bar{p}p\rightarrow W^-\gamma X$, amplitude zeros, quark magnetic moment effect 3−16671
- $\bar{p}p\rightarrow W^\pm X\rightarrow e^\pm\nu X$, 540 GeV, large transverse energy electron obs. 3−45419
- $\bar{p}p\rightarrow W^\pm X\rightarrow e^\pm\nu(\bar{\nu})X$, single isolated electrons obs. at high transverse momentum at CERN collider 3−49706
- $\bar{p}p\rightarrow Z^0X$, transverse hadronic energy accompanying weak bosons 3−672
- U boson, supersymmetric, coupling to quarks, parameter X constraints 3−11066
- $\Upsilon'\rightarrow\gamma a$, axion search in CUSB detector 3−31204
- W particle, creation and detect. expts at CERN, overview 3−45340
- W-boson properties in electroweak subconstituent models, quantum haplodynamics 3−45377
- $W^\pm$, how discovery of Z would predict its mass 3−45341
- $W^\pm$ dynamical mass generation 3−45342
- W_R mass constraints and $\bar{K}^0$-K^0 matrix elements 3−54909
- $W^\pm$ boson mass determ. in $\bar{p}p$ collisions 3−45418
- Z, how discovery would predict the $W^\pm$ mass 3−45341
- $Z\rightarrow q\bar{q}$, $\beta'\bar{\beta}$ fourth generation possibilities and ultraheavy quark spectrum 3−36176
- Z-U mixing, influence of light supersymmetric U-boson in $SU(3)\otimes SU(2)\otimes U(1)\otimes U'(1)$ 3−45339
- Z^0, dynamical mass generation 3−45342

intermediate bosons continued
$Z^0 \to 4$ jets, gluon self coupling test 3—26078
Z^0 boson mass, leading corrections using chiral dynamics techniques 3—31217
Z^0 flavour changing decay into top quark in $SU(2)_2 \times U(1)$ theory 3—31097
$Z^0 \to ggg$, differential and total decay rates and e^+e^- annihilation into three-gluons 3—650
$Z^0 \to gg\gamma(ggg)$, massive quarks, top quark mass, branching ratios, electroweak test 3—26049
Z^0 heavy boson decay, leptonic branching ratio 3—570
Z^0 multiphoton and multigluon decay modes, composite model test 3—619
$Z^0 \to W^{\pm}X^{\mp}$, hadronic final state and weak boson self-coupling 3—16568
$^{48}Ca \to ^{48}Ti$, neutrinoless double-β decay, Higgs boson exchange contrib. 3—734

intermediate state
intermediate coupling superconductors with variable electronic density of states, crit. temp. 3—57493
In whiskers, supercond., electron mean free path influence on phase slip centres 3—8631

intermediate valence compounds *see mixed valence compounds*

intermetallic compounds *see alloys*

intermodulation
GaAlAs heterojunction laser diodes, harmonic and intermodulation distortion 3—46214

intermodulation measurement
No entries

intermolecular forces
see also Van der Waals forces
acetonitrile, liq. and soln., mol. motion and interactions, microwave and far-IR spectra 3—47647
alkyl chain stretching by nematics 3—56023
n-butane in H_2O, Monte Carlo simulation, conformational evidence for hydrophobic effect 3—21845
chlorofluoroacetonitrile, liq., chiral discrimination, hard-core model for repulsive forces 3—33064
chloroform, inhomogeneous vibr. linewidth broadening, attractive force depend. 3—11888
cholesteric mesophase, helical twisting without mol. rotational vibr. anharmonicity *(Russian)* 3—2406
1,3-cyclobutanedione, and tetramethyl derivative, nonbonding orbital interactions, ab initio study 3—17212
EM resonant field effect on intermol. interaction potential 3—32144
α-glycine-d_0($-d_5$), intermol. pots., Raman and IR scatt. obs. 3—50471
oxalic acid, α and β phase, IR and Raman vibr. spectra, normal coord. calcs. and intermol. forces 3—34083
pyrazine crystal, electrostatic mol. interactions and mol. quadrupole moments calc. from X-ray diffr. data 3—32156
TBBA, chain ordering in smectic and nematic phases, intermol. pots. and mol. free vol., rel. to ^2H NMR data 3—56813
Ar-BCl_3, van der Waals complex, vibr. predissociation, Monte Carlo RRKM study 3—41634
Ar-$N_2(CO)(NO)(CO_2)$, intermolecular short-range forces, differential scatt. study 3—11917
CO, adsorbed on Rh (111), interaction with coadsorbed species, EHT calc. 3—23179
CO+CO, short range intermolecular forces 3—17353
Cl_2 crystal struct., Cl_2-Cl_2 pair pot. anisotropy, intermol. bonding and lone pair effects 3—27915
Cl_2 crystal struct. and lattice dynamics, electrostatic and anisotropic atom-atom pots. 3—27914
D_2 liquid, eqn. of state from shock-wave expts. at 760 kbar 3—33380
H_2 liquid, eqn. of state from shock-wave expts. at 760 kbar 3—33380
H_2O, cluster expansion theory of H-bonded fluids 3—51470
H_2O, thermodynamic props., anomalous 3—51827
He-$N_2(CO)(NO)(CO_2)$, intermolecular short-range forces, differential scatt. study 3—11917
N_2+H_2O, intermol. pot. function from ab. initio MO calcs. 3—1226
N_2+N_2, short range intermolecular forces 3—17353

intermolecular mechanics
see also association; intermolecular forces; kinetic theory of gases; liquid structure; liquid theory; Morse potential; potential energy functions
azabenzene, point charge model for electrostatic interaction, site-site pots., spherical expansion formalism 3—6749
benzene complexes, mol. interactions, semiempirical calcs. 3—21847
p-benzoquinone interaction with complementary base pairs, quantum chem. calcs. 3—58588
butadiene-methylstyrene elastomer, phys. and chem. relax., gaseous media effects *(Russian)* 3—6818
chain mols. in soln. isomerisation rates, hydrodynamic interaction effects 3—14856
chlorophyll, associated, linear and circular dichroism in soln. 3—1401
complex mols., decomp. of overlapping electronic spectra into individual bands 3—17268
cycloaduct solns., intermol. interactions, spectral band shift, solvent effects 3—1448
cyclobutane and derivatives, 1,3 interactions, ab initio MO study 3—17352
cyclohexane, ring inversion, torsion angle driving method for mol. mech. calcs. 3—6747
deterministic computer-oriented approach 3—26620
diatomic four-electron systems, interaction energies, Pade approximants calcs. 3—1451
dichloromethane, liq., equilib. thermodynamic props., mol. dynamics computer simulation 3—18479
dimethyl ether-HF complex, ionisation energy shifts, electrostatic and relax. effects, MO calcs. 3—26807
dimethyl sulphate-18-crown-6 adduct, struct., weak forces 3—56025
dispersive diffusion-controlled monomolecular and bimolecular processes *(Chinese)* 3—2160
floppy mols., phase influence on apparent geometry 3—50489
fluorene derivatives-nucleic acid, interaction, pot. energy function calcs. 3—17350
glycine-water system, intermol. interactions in aq. soln., calcs. 3—1452
Heitler-London intermolecular interaction energy, variational principle 3—11918
hexafluorobenzene+benzene (p-xylene) specific interaction, CNDO/2 calcs. 3—31947
inert gas+O_2 interaction dynamics 3—50482

intermolecular mechanics continued
interstellar molecular clouds fragmentation, nonlinear intermolecular potential rel. to stellar initial mass function 3—48994
liquids, vibr. correlation function, continued-fraction representation 3—50470
methanol, matrix isolated in N_2 and CO, specific interactions, IR study 3—41577
methanol H-bonded clusters, assoc., intermol. pair pots. calcs. 3—1516
methyl-(2,4-dinitrophenyl)-aminopropanoate crytals, nonlinear-optical props., struct. depend. 3—1694
microwave linewidths in a Stark field, anisotropic intermol. pair pots. 3—6624
mitomycin C interaction with complementary base pairs, quantum chem. calcs. 3—58588
molecular interaction energies, Pade approximants calcs. 3—1451
phenoxazone 9 dye solns., ultrafast rot. motion, electronic excitation effects obs. 3—11777
pheophytin, associated, linear and circular dichroism in soln. 3—1401
polyatomic gases, anisotropic intermol. pots. and transport props. 3—51266
polyatomic gases, nonequilibrium states, kinetic eqns. 3—27631
polyene 1,3,5,7-octatetraene, radiationless decay, intermol. interactions 3—17326
polymers, helical, cryst. struct., intermol. interactions effects 3—51584
polypeptide chains, interacting with weak long-range forces, statistics and dimensions, calcs. 3—50553
quaternary ammonium iodide-$POCl_3$, charge transfer complexes, visible, UV obs. 3—32093
quinone derivatives, monolayers, H-bonded, at liq. interfaces 3—51929
semiempirical calcs. 3—21847
small polar molecules, electrostatic energy calcs. method 3—21846
van der Waals molecules, intermol. perturbation theory 3—50475
van der Waals mols., gas phase props. and forces 3—50480
Ar-Xe interactions, intermol. pots. 3—56021
Ar+Kr interactions, intermol. pots., HFD-C type 3—56022
CF_2-$CO(NF)(SO)(CF_2)$, combination products, ab initio SCF calcs. 3—17199
CO-$CO(NF)(SO)(CF_2)$, combination products, ab initio SCF calcs. 3—17199
Ca^{2+}-formate ion, chelation complex binding, ab initio STO-3G calcs. 3—17195
HCN and $(HCN)_2$, mag. shielding tensors, calc. using GIAO SCF calcs., charge distrib. and intermol. interaction effects 3—6554
H_2O-HF(DF), H-bonded complex, hyperfine struct., nucl. spin and quadrupole coupling consts. 3—17302
$(H_2O)_n$, H-bonded clusters, assoc., intermol. pair pots. calcs. 3—1516
$^1H_2$ and $^2H_2$, on graphite (0001) surface, laterally averaged interaction pot. calcs. 3—38987
Kr+Xe interactions, intermol. pots. 3—56021
LiCl+propan-1-ol, mol. interaction, IR and NMR investig. 3—1450
NF-$CO(NF)(SO)(CF_2)$, combination products, ab initio SCF calcs. 3—17199
$(NH_3)_n$ H-bonded clusters, assoc., intermol. pair pots. calcs. 3—1516
O_2, rot. Raman linewidths, temp. depend. 3—36763
SO-$CO(NF)(SO)(CF_2)$, combination products, ab initio SCF calcs. 3—17199

intermolecular vibrations *see molecular rotational-vibrational energy transfer*

intermolecular vibrations (molecular crystals) *see lattice dynamics of molecular crystals*

internal combustion engines
diesel, noise source identification, acoustic intensity method 3—1855
diesel engine exhaust, C soot, electrostatic precipitation 3—39562
diesel engine noise reduction 3—46374
emission checking, using inertia collection system 3—29486
fibre optics use in engine pyrometry 3—42012
noise, two-microphone acoustic intensity measurements 3—12468
Otto cycle with saturated steam, theory 3—44136
sewage gas utilisation by electric power generation using gas engines *(German)* 3—58469

internal conversion
see also conversion electron spectra
E0 conversion, intermediate electron-nuclear states 3—36355
inner shells as a link between atomic and nuclear physics 3—40969
l-forbidden M1 transitions, penetration effects 3—49800
review *(Czech)* 3—45486
transition toroid moments, anomalous IC coeffs. 3—36354
^{228}Ac decay, internal conversion coeff. meas. 3—36356
^{A}Ag, A=102,104, band struct., J^π, transitions, collective model anal. of (^{12}C, pn), (^{16}O, 3n) 3—31272
^{166}Er, $2^+ \to 0^+$ transition, internal conversion line intensity ratio 3—40990
^{55}Fe activity measurement method using 4π proportional counter, efficiency calibration 3—6501
^{145}Gd excited states study from (^3He,2n) 3—49807
^{147}Gd, particle octupole multiplet study by in-beam γ-ray and conversion-electron spectroscopy 3—31276
^{156}Gd, $2^+ \to 0^+$ transition, internal conversion line intensity ratio 3—40990
In, γ-ray internal conversion coeffs. 3—36353
^{208}Po, low energy transition depopulating isomeric 8^+ level, conversion meas. from $^{208}At \to ^{208}Po$ 3—16728
^{102}Rh 27 ns isomer, lifetime, decay, K-conversion coeff. from $^{102}Ru(p,n\gamma)$ 3—695
Sn, Z 3—36353
^{181}Ta, γ-482 keV transition, M1 component, penetration effect *(Russian)* 3—45487
Te, γ-ray internal conversion coeffs. 3—36353
^{205}Tl, 204 keV transition, penetration effects in internal conversion process 3—11289
^{234}U, 43.48 keV transition internal conversion, L shell double vacancy formation 3—21255
^{182}W, levels and transitions following ^{182}Ta decay 3—31332
^{163}Yb high spin states, band crossing and signature splitting from $^{149}Sm(^{18}O, 4n)$ 3—36305

internal conversion in atoms *see Auger effect*

internal conversion in molecules *see nonradiative transitions*

internal fields, crystal *see crystal field interactions*

internal friction
see also Bordoni effect; damping; Snoek effect; Zener relaxation
amplitude depend., in crystals, associated modulus change 3—37919
automatic measurement unit, kHz range 3—58333

internal friction continued

- coal, internal friction spectrum, polymeric character 3—13335
- Debye curves for sample with const. temp. gradient 3—13336
- dislocation hysteresis responsible for internal friction 3—18388
- dislocation internal friction and defect of Young modulus at low deform. amplitudes *(Russian)* 3—22902
- ferromagnet, internal friction in second-order spin-reorientation transitions *(Russian)* 3—23629
- ferromagnet, magnetoelastic damping, statistical theory *(Russian)* 3—33961
- forced pipe diffusion of mobile pinning points 3—33253
- grain boundary sliding, particle blocking and assoc. internal friction 3—37931
- high temperature background, damping/temp. curves, strain distrib., influence 3—37996
- internal friction background, high temp., damping/temp. curves, strain distrib. influence 3—37996
- LF internal friction, due to dislocations oscillating in lattice 3—37920
- martensitic transformation and twinning, stress reduced, lattice relax., nucleation 3—34313
- metallic glasses, internal friction, thermally-activated 3—33361
- metals, discrete microstructural changes investigation using resonance method 3—24285
- PAA, low-freq. internal friction 3—2640
- polymers, relaxation time spectra resolution above glass transition point *(Russian)* 3—9107
- powder, solid mixers, internal friction coeff. effect on performance *(Japanese)* 3—18387
- power-law behaviour in spectral response, comparison with dielec. relax. 3—28044
- PTFE, crystallinity characts. rel. to wear, X-ray diffr., IR spectra, DSC and viscoelastic spectra obs. 3—33145
- quartz resonator crystals grown with $LiNO_2$ and $LiNO_3$ dopants, mech. Q, IR absorpt. obs. 3—52912
- rubberlike mechanical behaviour, interface controlled deformation, nonlinear resonances and automodulations 3—29117
- smectic A liq. cryst., rheological behaviour under layer compression 3—33081
- steel, alloyed with graphitising elements, damping and mech. props. 3—4072
- steel, austenitic stainless, diffusion coeff. of C, determ. by internal friction method *(Korean)* 3—2873
- steel, austenitic stainless, internal friction peak, H-induced, effect of plastic deform. 3—9112
- steel, austenitic stainless, internal friction peak due to α' martensite, low temp. deform. 3—9110
- steel, austenitic stainless, internal friction peak due to stress-induced α' martensite 3—43878
- steel, Cr, quenched, internal friction meas., hardness and tensile props., effect of tempering at 1100°C 3—43912
- steel, Cr-Mn-Si-Ni, temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
- steel, Mn, low C, quenched and tempered, strength and toughness 3—43962
- steel, Mn(-Mo), temper brittleness, internal friction and impact toughness meas. *(Chinese)* 3—34421
- steel, Ni-Cr-Mn-Si, temper brittleness, influence of initial microstruct. 3—47945
- vibrating-reed internal friction meas., apparatus with extended capabilities 3—40741
- Zircaloy-4, high temp. internal friction, grain boundary relaxation 3—39188
- Al-Ge alloy, internal friction by second phase particles 3—57027
- Al-Li (2.5 at.%), phys. props., effect of Li loss 3—53108
- Al-Mg, solute segregation to dislocations, internal friction study 3—39152
- AuCd, martensitic transform., internal friction *(Chinese)* 3—43803
- $BaO-FeO-P_2O_5$ glasses, internal friction, torsion pendulum technique 3—51708
- $BaTiO_3$, semicond., initernal friction and elec. resist. meas. 3—8136
- Bi, elastic and relaxation properties during melting and solidification 3—39191
- Bi, high temp. internal friction and elastic moduli 3—28046
- Bi, Young's modulus and internal friction during heating, free carrier effects 3—13311
- Bi-Sb, high temp. internal friction and elastic moduli 3—28046
- Cd, elastic and relaxation properties during melting and solidification 3—39191
- Co and alloys, cold worked of recrystallisation 3—43919
- Cu wire, grain boundary anelasticity, triple contacts and internal friction *(Russian)* 3—51709
- Cu-Al, solute segregation to dislocations, internal friction study 3—39152
- Cu-Al (10 wt.%), quenched martensitic alloy, internal friction, tensile props., hardness, heat treatment effect 3—43920
- Cu-Al-Be, ternary system, shape memory effect, elec. resist., internal friction, Young's Modulus, temp. depend. 3—43835
- Cu-Al-Ni-Ti, shape memory alloy, grain refinement rel. to Ti addition, transform. hysteresis 3—47832
- Cu-Au (14-25 at.%), Zener relax. 3—53101
- Cu-Fe, internal friction caused by diffusion around second phase particle 3—53100
- Cu-Zn-Al, faulted martensite, stacking fault form. 3—42620
- Cu-Zn-Al, internal friction of single and polyvariant martensites 3—43829
- Cu-Zn-Al, martensitic transform., internal friction meas. and thermodynamical anal. 3—43828
- Cu-Zn-Al martensitic alloys, damping charact. evolution with time and temp., peaking effect 3—43879
- $Cu_{60}Zr_{40}$, supercond. disordered metal, low temp. elastic props., acoustic meas. 3—47052
- Fe-Cr alloy, hydrogen-induced cold work peak of internal friction 3—14643
- Fe-H, internal friction due to H_2 phase transition, expt. study 3—2669
- Fe-Ni-C alloys, martensitic transform., low temp. internal friction and dilatometric results 3—43804
- $Fe_{40}Ni_{40}B_{20}$, amorphous metallic glass, internal friction and oscillation decay *(Spanish)* 3—42713
- GaP:Mn, impurity centres, internal friction and ESR study 3—18660
- Ge single cryst., internal friction, amplitude depend., in brittle fracture temp. range *(Russian)* 3—2670
- In-Tl (19.1 at.%) reed, dynamics of rubberlike behaviour 3—29117
- KCl crystals, X-irradiated, sonolum. and internal friction meas. 3—28912

internal friction continued

- β-LiAl, mech. behaviour, effect of defect struct., hardness and dislocation damping study 3—33266
- Mg, internal friction associated with dislocations and electron irrad. induced point defects 3—28045
- Mo, heat treated, internal friction curves, effect of sample surface state 3—37994
- Mo-Zr-Cr-B, microplastic deform., grain boundary segregation *(Russian)* 3—39206
- Nb, elastic relax., internal friction, bias stress depend. 3—58156
- Nb-O(N)(Ti)-H, anelastic thermally activated H behaviour, nonclassical, 1.3 to 40K 3—37995
- Nb_3Sn, polycryst., anomalous elastic softening below martensitic transform. temp. 3—39138
- Ni-Mn-Co-Cu ferrites, piezomag., mag. hysteresis of elastic moduli and internal friction 3—14106
- $Ni_{0.98-x-y}Mn_{0.02}Co_xCu_yFe_2O_4$ ferrites, piezomag., magnetomech. effects, amplitude depend. 3—14105
- Pb, elastic and relaxation properties during melting and solidification 3—39191
- Pb-In, dislocation internal friction in mixed state, effect of Abrikosov's vortices *(Russian)* 3—27949
- $Pd_{80}Si_{20}$, amorphous, H isotope doped, internal friction 3—53110
- Si whiskers, internal friction and microplasticity, free torsion vibr. study 3—13337
- Sn, elastic and relaxation properties during melting and solidification 3—39191
- Ti, hydrogenated, internal friction and Snoek effect *(Chinese)* 3—2666
- α-Ti, oscillatory internal friction assoc. with hydride precip, 3—34374
- Ti-Al-Sn (5,2.5 wt.%), hydrogenated, internal friction and Snoek effect *(Chinese)* 3—2666
- Ti-Al-V (6,4 wt.%), hydrogenated, internal friction and Snoek effect *(Chinese)* 3—2666
- Ti-Cr(Mo)(Nb) alloys, alloying and annealing temp. effect on struct. state, internal friction obs. 3—14647
- β-Ti-Mo and Ti-V, stable and metastable, internal friction studies 3—19367
- βIII-Ti-Mo-Zr-Sn, decomp. 3—19338
- β-Ti-Mo(V) alloys, amplitude depend. internal friction, O-dislocation binding 3—14646
- Ti-Nb (50 wt.%), hydrogenated, internal friction and Snoek effect *(Chinese)* 3—2666
- Ti-Ni, martensitic transform., internal friction meas. and thermodynamical anal. 3—43828
- Ti-O solid soln., ultrahigh purity, oxygen relax. obs. 3—14648
- Zn, dislocation damping peak with automodulation 3—34373
- Zn, elastic and relaxation properties during melting and solidification 3—39191
- Zn, internal friction in brittle-plastic transform. temp. range *(Russian)* 3—47044
- Zr, polycrystals, high temp. internal friction, grain boundary relaxation 3—39188

internal friction of liquids *see viscosity of liquids*

internal mechanics, molecular *see molecular vibration*

internal mechanics of atoms *see atomic structure*

internal modes *see molecular vibration in solids*

internal stresses

- alloy, dislocation behaviour near free surface, solid soln. hardening changes, Schmid's law violation 3—37908
- amorphous metal, inhomogeneities, spatial correl. of at. level parameters 3—22790
- anomalous mechanical aftereffect, dislocation model *(Russian)* 3—37907
- Bauschinger effect, computation simulation model rel. to near surface dislocation sources 3—51699
- beam and plate, thermorheologically simple viscoelastic, mech. vibrations 3—7444
- biaxial dip tests, high temp. plastic flow, internal stresses 3—48040
- bone, tubular, internal stresses rel. to elec. fields 3—53716
- boronised steel, X-ray residual stress meas. of surface layer *(Japanese)* 3—58153
- capillary stress relaxation by twinning 3—46967
- ceramic discs, crack branching, biaxial flexure 3—43942
- ceramics, Knoop and Vickers indentation, controlled flaws, residual stress field, fracture analysis 3—53312
- ceramics, residual stress development 3—53170
- coatings, residual stress state, nondestructive mechanical obs. 3—44017
- composite cylindrical shell, reinforced plastic, load-carrying capacity under combined thermal and mech. loading 3—17793
- composite laminates, fatigue fracture damage 3—4107
- composite material with initial stresses, reduced dynamic characts. 3—50987
- conference, residual stress and stress relax., Lake Placid, NY, USA (July 1981) 3—49089
- creep, constitutive laws, study using biaxial relax. tests 3—47896
- creep, high temp., flow law, role of strain history 3—24303
- cylinder, hollow, residual stress meas., by X-rays 3—53301
- cylinder, spray quenching temp. and stress fields 3—39186
- disc, heterogeneous, residual stresses determ. 3—17805
- elastic-plastic material, stress singularity at ribbon-like rigid inclusion end 3—2650
- entropy variations in stressed systems 3—35954
- environmental cracking, residual stresses role and meas., review 3—58269
- evaluation using US vel. meas. with EM acoustic transducers 3—58379
- external fracture fixation devices, rigidity and stress anal. 3—29786
- fatigue crack growth, description in terms of plastic work 3—13329
- fatigue crack growth, linear elastic fracture mechanics and residual stress 3—51024
- fatigue life, residual stress effect, fracture mechanics analysis 3—51017
- film interdiffusion, phenomenological description, diffusion-induced high stresses 3—18517
- films, stress measurement by light interferometric technique 3—22405
- glass, tempered, fracture strength and internal stress distrib. 3—34446
- glass ceramic, commercial, flexural strength and fracture toughness, surface finish effects 3—34418
- glass fibre reinforced plastic laminates, method for stress-strain state determ. during prod. process 3—14820
- graphite fibre reinforced Al, residual stress meas. 3—53352
- graphite fibre reinforced epoxy unidirectional laminate with Al filler particles, residual stresses 3—53169
- Griffith crack, nonlocal stress field in plate 3—56470

internal stresses continued
irreversible systems, entropy, partial integrability basis 3−54706
laminate, four layer unsymmetric crossply, room temp. shapes 3−12542
laminated anisotropic plate, residual stress meas. by strain gauge method 3−17903
machine parts, metal coated, endurance limit eval. 3−58285
martensite, tempering under load, nature of resist. to small plastic deforms. *(Russian)* 3−34360
metal coatings, residual stress diagram plotting during anodic dissolution using length change method 3−47791
metal disks, surface treated, continuous anal. of residual stresses 3−51037
metal matrix composites, residual stress meas. 3−53352
metallic glasses, rapidly cooled, magnetic anisotropy and mag. domain struct., theory *(Russian)* 3−33920
metallic materials, temp. effect on stress relax. 3−53115
metals, elasto-plastic thermal stress, FORTRAN prog. for finite element calc. *(Japanese)* 3−58178
metals, internal stresses measurement, X-ray diffr. techniques 3−39310
metals, laminated inhomogeneous, bending stress-strain relations, effect of initial residual stress *(Japanese)* 3−58167
metals, laminated inhomogeneous, method to estimate bending fatigue life *(Japanese)* 3−9177
metals, post-yield creep at room temp. 3−9116
neutron diffraction for residual stress distrib. determ. in interior of technical parts 3−53353
neutron method for stress meas. in interior of solids 3−53351
optical fibre and preform, stress meas. method, stresses rel. to drawing process 3−27245
optical thin films, stress, adherence, hardness and density 3−13685
Permalloy film, sputtering, two-facing-targets type, high rate deposition 3−34229
phosphosilicate glass film, CVD, on Si substrate, thermal stress study 3−47239
pipe, stress corrosion crack growth in presence of residual stresses 3−53296
plastic, amorphous, thermal stresses w.r.t. opt. performance, thermoelastic effect 3−8797
plastic pipes, residual stress meas. 3−58320
plate, large, crack perpendicular to welding bead, stress intensity factor due to residual stress 3−51009
plate, X-ray meas. of residual stresses using surface removal 3−17904
poly(ether sulfone), birefringence changes during stress relaxation, ageing 3−47895
polycrystal, strength fundamentals, temp./strain rate combinations 3−37988
polymers, oriented, fracture criterion based on electron spin resonance spectroscopy 3−47934
quenching and welding stresses calc., finite element method 3−53099
residual stress, X-ray diffraction meas. 3−27459
residual stress meas., US, analytical approach to reference samples 3−9288
residual stress meas. obtained using centre hole method, correction 3−7522
residual stress measurement, X-ray method, effect of gradients in multiaxial stress states 3−53325
residual stress nature and changes during fatigue, destructive, nondestructive meas. methods 3−53349
resin matrix composites, residual stresses 3−53169
shot peening and residual stresses 3−53295
steel, alloy, structural fatigue crack propag., overload effect 3−53228
steel, alloy type, fracture kinetics at final deform. stage 3−19412
steel, austenitic stainless, internal stresses rel. to hydrogen cathodic charging, X-ray obs. 3−39232
steel, austenitic stainless, transient creep, 873 to 1023K *(Czech)* 3−14656
steel, austenitic stainless 3−34417
steel, burnished, residual stress measurement method, X-ray diffr. 3−27459
steel, C, medium and low, cracked plate, fatique crack growth, effect of residual stress field *(Japanese)* 3−19399
steel, carburised, local induced residual stress changes 3−53241
steel, carburised, retained austenite effect on fatigue strength *(Japanese)* 3−19400
steel, case-hardened, fracture in bending 3−58195
steel, cold-drawn wire, X-ray residual stress meas. 3−14605
steel, diffusion of C during thermocyclic treatment *(Russian)* 3−38128
steel, dual phase, stress-strain behaviour in forward and reverse straining, effect of heat treatment 3−14680
steel, fatigue crack propagation rel. to overload ratio, plastic zone obs. 3−53235
steel, low alloy, high strength, plastic zone and residual stress near notch and fatigue crack 3−24307
steel, low alloy, welded joints, fatigue crack propag. and stress intensity factors 3−4110
steel, low alloy pressure vessel type A533B, stress relaxation prediction under multiaxial stresses 3−53103
steel, low C, structural, stress relax. in cyclic straining *(Czech)* 3−14635
steel, mag. struct., effect of defects and internal stresses 3−3483
steel, mild, annealed disc compressed, mech. stress meas. 67 mg. field strength rotation 3−58358
steel, nitrided, fatigue behaviour 3−53227
steel, quenched and tempererd, plate, X-ray meas. of residual stresses using surface removal 3−17904
steel, residual stresses after pulsed laser annealing *(Russian)* 3−39209
steel, SAE 1040, normalised and peened, tension fatigue, residual stress changes 3−24341
steel, stainless AISI 4140, fatigue life estimation, X-ray diffr. obs. *(Korean)* 3−4112
steel, surface deformed, internal stress relax. during annealing *(Russian)* 3−53088
steel, tufftrided, fatigue strength, effect of compressive residual stresses *(Japanese)* 3−9164
steel, ultrasonic strengthening treatment, surface plastic deform. *(Russian)* 3−39292
steel bars, cold twisted, tensile props. 3−47915
steel flange beam, hot rolled, residual stresses, effect on beam stability 3−19353
steel parts, residual quenching and welding stresses calc., finite element method 3−53099
steel rectangular plate, welding stress analysis, computational aspects 3−12538
stress relaxation characteristics and data utilisation 3−53116

internal stresses continued
textured materials, residual stress, US meas. 3−9286
thermal and transformation stresses 3−53167
thin film formation and behaviour, atomic level, technology appls. 3−47234
US mapping 3−58381
viscoplastic flow during rolling, elastic strain rate, inclusion in anal. 3−13315
weld-induced residual stress fields, numerical simulation of crack growth 3−51023
wire, drawn, residual stresses determ. in etching off layers by chem. and electrolytic methods 3−24434
X-ray integral method for deform. meas., local geom. influence *(German)* 3−34575
X-ray methods for measuring residual stress 3−53350
X-ray rotating anodes, 3-D anal. of temp., displacements and stresses 3−490
Zircaloy-2 cladding, material condition effect on I_2 SCC susceptibility 3−19454
Ag-Cu(Al) film, vacuum deposited, elec. and mechanical props. 3−14495
Al alloys, residual stress relaxation during fatigue, microplastic deform. process 3−53242
Al alloys, stress meas. calc., X-ray oscill. method *(Chinese)* 3−34561
Al, creep, constitutive eqn., internal variable, dip test 3−47918
Al dilute binary alloys, defect induced distortion fields, neutron scatt. study and ab initio calc. 3−13215
Al film, stress distrib. in dynamic mixed state *(Russian)* 3−47460
Al, internal stress distrib., acoustic interferometry method 3−4232
Al, polycryst., internal and effective stress meas., dislocations study 3−24288
Al, residual stress meas. using US vel. temp. depend. 3−58378
$Al_xGa_{1-x}P$ epitaxial layers, lattice consts., X-ray diffr. study 3−18588
$Al_{0.3}Ga_{0.7}P_{0.01}As_{0.99}$ laser heterostruct., MBE growth 3−1666
Al_2O_3 film, sputter deposited, internal stress 3−18592
Al_2O_3-ZrO_2 composites, critical microstruct. for microcracking 3−39240
B fibre, residual stress. determ. using length change on electropolishing, instrument design 3−9268
B fibres, bare and SiC coated, mech. props. temp. depend. 3−34408
$BaTiO_3$, thin ferroelectric film, internal mech. stresses 3−33611
Cd-Zn single cryst., solid soln. hardening and CRSS 3−58125
coating, residual stress diagrams during electrodeposition and anodic dissolution 3−47792
Cu, annealed, cyclic deform., dislocation dynamics anal. 3−4079
Cu/Al system, B ion implantation, mechanical props. 3−2647
Cu-Al film, vacuum deposited, elec. and mechanical props. 3−14495
Cu-Sn (3.1 at.%), substitutional alloy, model for flow stress and strain rate sensitivity 3−47883
Cu(-Al), Bauschinger effect, internal stress meas. 3−43932
Fe-Co, fracture and stress relax., effect of at. ordering *(Russian)* 3−24332
Fe-Cr-Ni (21,32 wt.%), cold prestrained, internal stress and struct. in creep at 975K 3−9088
GaAs, microinclusion-induced mech. prop. degradation 3−57023
GaAs, z 3−18367
GaP, edge dislocations, stress-induced birefr. images, TEM study 3−3683
GaP:Te(S), homoepitaxial layers, mechanical stresses *(Russian)* 3−51995
KH_2PO_4 crystals, mosaic struct. and stresses 3−57100
LiF, fracture rel. to slip geometry 3−42708
MgF_2 thin porous films, origin of adsorption stress 3−3003
MgF_2, vacuum-deposited thin films, internal stress, Young's modulus, strain energy and adhesion 3−8382
Mo film, DC magnetron sputtering, internal stresses and reactive ion etching 3−34226
Mo, yield and flow stresses, grain size depend., 300-500K 3−29142
$(Mo_{0.6}Ru_{0.4})_{1-x}B_x$, planar magnetron sputtered films, internal stress and mech. props. 3−8383
NaCl, single crysts., stress relax., strain rate depend. and repeated test effect *(Japanese)* 3−2667
NaCl, slip struct. and cross-slip of screw dislocations, deform. study 3−22903
Nb single cryst., cyclic flow stress, temp. and strain-rate depend. 3−28033
Ni alloys, stress meas. calc., X-ray oscill. method *(Chinese)* 3−34561
Ni coating, residual stress diagrams during electrodeposition and anodic dissolution 3−47792
Ni electrodeposit, [100] texture, internal stresses, Mossbauer line intensities study 3−23847
Ni electrolytically deposited bright coatings, internal stresses and hydrogenation rel. to cracking 3−47789
Ni film, surface layers formed by Dy^+ ion implantation, mag. props. 3−57717
Ni P electrolytic composition coatings, coating technique and properties *(Russian)* 3−58056
Ni, plastic flow, activation vol. determ. by micro and macro tests 3−53142
Ni wire, tensile stress during H diffusion 3−39246
Ni:H, H diffusion, shearing stresses obs. 3−57139
Ni-Al (0.55 to 4.10 wt.%), intergranular oxide development at high temp., high stress effect 3−53286
Ni-Al (1 to 4 wt.%) alloys, internal oxides formation and development at high temp. 3−51858
$Pb_5Ge_3O_{11}$, serpentine shaped ferroelec. domains due to internal stresses 3−3657
Si, average stress tensor, ab initio pseudopot. calc. 3−47020
Si, dislocation sources, starting stresses 3−2570
Si, internal strain parameter and elastic consts., self consistent electronic calc. 3−18367
Si on sapphire (vitreous quartz), heavily doped layers, stress relief, Raman study 3−51993
Si wafer, plastically bent, residual stress meas. by photoluminesc. 3−33339
Si:As, ion implanted, flash-lamp annealing, TEM, elec. resist. and Rutherford backscatt. study 3−27979
Si:B, shallow strain distributions near impurities, X-ray Bragg reflection meas. 3−42622
Si:O, neutron irradiated, defect accumulation and lattice strain, IR study 3−56994
$Si-SiO_2$, stress relaxation in oxide film, theory 3−23155
$Si-SiO_2$ system, internal stresses, temp. depend. 3−23151
SiC fibre reinforced Ti-Al-V 3−24345
Si_3N_4 X-ray mask, low press. CVD deposition 3−24149

internal stresses continued
  SiO_2 film, CVD, on Si substrate, thermal stress study 3–47239
  SiO_2 films on Si, viscoelasticity, X-ray topography study 3–22967
  Sn film, stress distrib. in dynamic mixed state *(Russian)* 3–47460
  Ta-based alloys, thermally activated deform. 3–4084
  Th, theoretical stability under multidirectional stress 3–2655
  Ti alloys, welded structures, nonoxidative zonal induction heat treatment 3–14627
  Ti-Al, low temp. thermocycling and plastic deformation, defect struct., TEM obs. 3–53086
  Ti-Al-Mo-V, shot blast treated, residual stresses in surface layers 3–43995
  Ti-Al-Nb-Zr alloys, defect struct. evolution rel. to deform. parameters at 4.2K 3–24302
  Ti-Al-V (6, 4 wt.%), textured, residual stress, US meas. 3–9286
  Ti-Al-V alloy, residual stress following thermodiffusion saturation with Cr-Si mixtures 3–24419
  Ti_xC_{1-x} magnetron sputtered films on Mo, ductility, internal stresses and diffusion 3–58179
  U alloys, residual stresses and thermal stress relieving 3–53168
  V_2O_3:Cr, polycryst., phase transform. triggered by external loading 3–38048
  $(Y_{1-x}Lu_x)_3Al_5O_{12}$ solid soln., annealing effects on acoustic wave absorption 3–13349
internuclear double resonance *see INDOR*
interplanetary magnetic fields
  see also interplanetary matter
  cometary plasma tails, mag. field strength at ionopause rel. to tail flaring 3–10261
  cosmic ray 13 day oscillation at boundary crossing of interplanetary magnetic field sectors 3–20192
  cosmic ray anisotropy at boundary of high speed solar wind stream 3–15784
  cosmic ray drift vel., mag. field effect 3–15782
  flare particles parallel diffusion in interplanetary mag. field from 1-5 AU 3–5066
  heliosphere large scale magnetic field, rel. to heliospheric origin for gamma-ray bursts 3–16035
  heliosphere magnetic field, anal. of similarities galactic mag. field 3–5391
  heliospheric current sheet quadrupole distortions 3–35397
  magnetic cloud caused by coronal mass ejection event 3–48785
  magnetosphere high latitude boundary layer, plasma struct. rel. to interplanetary mag. field direction 3–35363
  model and cosmic ray propag. 3–5076
  nonisotropic turbulence, effect on cosmic ray propag. 3–15783
  northward component, correlation with high latitude magnetosphere convection 3–15798
  polarity during 1975-1981, latitudinal depend. 3–54213
  recurrent sectors effect on charged dust particles Lorentz force 3–20293
  Saturn, magnetosphere, dawn-dusk asymmetry of tail rel. to IMF 3–10260
  shock waves, accel. of energetic particles in upstream and downstream mag. irregularities 3–10178
  shock waves, flare-generated, Helios-2 obs. near Sun 3–10175
  shock waves, interaction of oblique interplanetary mag. field with Earth magnetosphere 3–15779
  shock waves, mag. field obs. rel. to flare-generated collisionless shock waves propag.. 3–10176
  shock waves, turbulent dissipation in collisionless shock waves rel. to turbulent mag. field profile 3–7740
  solar flare particles propagation in September to November 1973, effects of struct. of interplanetary medium 3–15785
  solar particle events, meas. of low energy electron populations assoc. with mag. field filaments 3–10163
  solar wind, field fluctuations, radial evolution correl. with models 3–39983
  solar wind, interaction with comets *(Swedish)* 3–44703
  solar wind B_y component and generation of magnetic tail-ionosphere mag. field 3–10142
  solar wind ellipsoidal modulation region, effect on cosmic ray intensity and diffusion 3–15780
  solar wind field, sectoral struct. effect on Earth diurnal rot. speed 3–35396
  solar wind field correlation with flare associated bipolar sunspots mag. field 3–15748
  solar wind interaction with Venus ionosphere, mag. barrier problem 3–15863
  solar wind magnetic field reconnection at magnetopause dayside boundary 3–10156
interplanetary matter
  see also comets; cosmic dust; interplanetary magnetic fields
  charged dust grains, Lorentz scatt. due to solar wind and interplanetary mag. field 3–20293
  collisionless shock waves, physical mechanisms for turbulent dissipation 3–7740
  dust, spatial distribution maintenance and sources 3–48855
  dust grains, role of electrostatic charging 3–15838
  dust grains in tail of Comet Arend-Roland (1957 III), characts. from tail brightness profiles *(Chinese)* 3–40071
  Earth bow shock, shock-wave struct. in collisionless plasmas from laboratory expts. 3–7739
  electron beam excitation of weak turbulence in plasma 3–30141
  flare-generated collisionless shock waves propag., experimental study 3–10176
  galactic cosmic rays anisotropy in heliomagnetosphere, modulation, average sidereal daily motion 3–5065
  gamma-ray bursts, experimental data in favour of heliospheric origin 3–16035
  gas molecules in Kepler orbits, effect of solar wind 3–48788
  grains in Jupiter 2/1 resonance, Poynting-Robertson drag and gravit. interaction 3–35531
  heliosphere, electrodynamics and plasma flow 3–25267
  magnetic cloud caused by coronal mass ejection event 3–48785
  magnetic clouds, Voyager obs. of 2-4 AU solar wind 3–30142
  pyroxene whiskers and platelets in interplanetary dust: evidence of vapour phase growth 3–40072
  scintillation of Markarian radiogalaxies, VHF obs. 3–59455
  shock acceleration of energetic particles in heliosphere, theory 3–10178
  shock wave, 1979 November 30, assoc. with solar coronal transient directed at Earth 3–35573
interplanetary matter continued
  shock waves, charged particle accel. 3–10177
  shock waves, flare-generated, in interplanetary space, struct. and evolution 3–10174
  shock waves from isolated solar flares and flare series, configuration and struct. 3–10173
  shock waves from proton flares in McMath plage 15266, obs. 3–10300
  shock waves in solar corona and interplanetary space, conference, Smolenice, Czechoslovakia (1980 June 15 to 19) 3–5489
  solar flare particles, meas. of low energy electrons and ions during long-lived particle events 3–10163
  solar flare particles propagation in September to November 1973, effects of struct. of interplanetary medium 3–15785
  solar wind, interaction of non-perpendicular/parallel shock waves with Earth magnetosphere 3–15779
  solar wind velocity distribution effect on scintillations temporal spectra 3–15797
  velocity distribution of solar wind, effect on temporal spectra of interplanetary scintillation 3–15799
  zodiacal light dust particles, light scatt. model 3–25380
interplanetary medium *see interplanetary matter*
interpolation
  see also function approximation
  atoms and ions, electron-nucleus interaction energy, refined interpolation calc. method 3–1264
  B-spline interpolation program for computerised tomography 3–4676
  dynamometer characteristic, interpolability deviation *(Rumanian)* 3–35987
  Fourier transform NMR spectra, exact interpolation and integration 3–49420
  fracture mechanics, semi-radial singularity mapping theory for line singularities 3–46485
  geochemistry, regional interpreting, using optimal interpolation, FORTRAN program 3–4977
  hydrodynamics, particle methods 3–25752
  Lagrange interpolation of function and derivatives, n-order matrices 3–10553
  metals interpolation equations of state 3–51741
  Navier-Stokes equations, numerical solution using non-uniform grids *(Russian)* 3–46518
  NMR tomography, 3-D interpolation technique, total volume imaging 3–53760
  optimality criterion approach, tapered finite elements, nodal averaging technique 3–37318
  plane-and axisymmetric eddy current distributions calc. using finite element method 3–21971
  plate bending analysis element 3–27394
  quantum fluids, integral equations for pair distrib. function, interpolation method 3–18524
  roughness parameters, effect of approximations on error of digital meas. 3–40551
  Schrodinger eqns., nonlinear, and sharp interpolation estimates 3–30646
  tank calibration by volumetric method, interpolation formula *(Rumanian)* 3–40558
  γ-ray attenuation coeffs. from 40 keV to 15 MeV, interpolation technique 3–41454
  NaI scintillation detector, estimation method for response curve generation for γ-ray anal. 3–41431
interstellar dust *see cosmic dust*
interstellar magnetic fields
  see also interstellar matter
  1665 MHz and 1667 MHz OH masers, relative positions and mag. fields, UHF obs. 3–25631
  astropause caused by compressible stellar wind, press. distrib. at inner boundry 3–44732
  3C 166, extended radiogalaxy, lobe struct. and mag. field strength 3–5409
  cloud magnetic fields, rot. and giant collapse to star form., review 3–20346
  clouds, mag. field strength scaling and resolution of 'B versus n dilemma' 3–30447
  clouds, quasistatic contraction due to plasma drift, grain friction effect 3–40241
  clouds, relation between mag. field and gas density from 21 cm and continuum obs. 3–30446
  diffuse clouds, collision cross section for interactions 3–40237
  direction and RF lines polarisation in collapsing/expanding sources 3–59420
  distribution in galaxies, MHD theorem 3–5100
  ellipsoidal circumstellar plasma cavity at wind-ISM interaction medium, mag./fluid environment 3–40111
  galactic mag. field generation and decay by mag. monopoles 3–49000
  galactic magnetic field, anal. of similarities heliospheric mag. field 3–5391
  galactic magnetic field, model of systematic component rel. to galactic and intergalactic Faraday rotation 3–5440
  galactic magnetic field constraints on cosmic magnetic monopoles 3–5109
  galactic magnetic fields, origin of mag. field distrib. in spiral galaxies 3–59451
  Galaxy, bisymmetric spiral mag. field rel. to galactic spiral arms 3–48969
  Galaxy large-scale mag. field from radiosources polarisation plane rot. measure anal. 3–59459
  gas cloud collapse, ambipolar diffusion effects 3–30441
  heliosphere screening from interstellar mag. elec. fields by solar wind plasma 3–5077
  high density gas cloud hit by strong shock wave, evolution, effect of mag. fields 3–25567
  intracluster mag. fields survival and mag. monopole flux 3–44859
  M87, mean line-of-sight mag. fields of radio halo gas and intracluster gas 3–10465
  neutral sheets in evolving mag. fields, rel. to form. of galactic corona 3–35565
  NGC 6334N, 1665 MHz and 1667 MHz OH masers, relative positions and mag. fields, UHF obs. 3–25631
  origin from viscous resist. to differential rot. 3–25315
  Perseus arm window, rotation measures determ. for extragalactic radio sources 3–40279
  protostellar OH masers, astrometry and spectral feature positions and mag. fields 3–5279

interstellar magnetic fields continued
self-gravitating rotating magnetic interstellar clouds, 3D models 3−10429
Serpens Nebula, reflection nebula, local galactic mag. field rel. to optical polarisation 3−48995
solar neighbourhood field struct. from radiosource and star polarisation anal. 3−15984
star formation, magnetogravitational instability of finitely-conducting medium with variable streaming motion 3−59196
star formation, shock induced, interstellar turbulence and mag. field effects 3−10425
supernova remnants, fluctuating magnetoacoustic field prod. by acoustic waves 3−10418
W3(OH), maser region dynamics rel. to temporal variability, line width and mag. field 3−16026

interstellar matter
see also cosmic dust; H I regions; H II regions; interstellar magnetic fields; nebulae
4430 Å line, determination of early type stars contamination, use of computer controlled intensity determ. method 3−5121
Abell 1367, galaxy cluster, galaxy coronas nature, X-ray obs. 3−40267
absorption in HD 14633 direction 3−48976
absorption law in 0.95 μ^{-1} to 3.03 μ^{-1} wave number interval 3−25547
acoustic waves in supernova remnants, rel. to interstellar neutral clouds heating 3−10418
active galaxies, broad emission-line regions, dust heating sources 3−25588
active galaxies, radiation press. from nucleus sweeping gas/dust out of galaxy 3−59457
active galaxies narrow-line regions, reddening from intrinsic Balmer decrement 3−54252
astronomical masers, physical characteristics, review 3−10434
astropause caused by compressible stellar wind, press. distrib. at inner boundry 3−44732
axions as dark matter, role in Universe struct. evolution 3−59518
B5 dark cloud, physical conditions and CO abundance, EHF obs. 3−5380
Barnard 361, dark cloud, vel. gradient and spectral obs. of formaldehyde and OH, radio obs. 3−25539
in barred spiral galaxies, periodic orbits and gas flow theory 3−5424
BD+39°4926, A- or F-type supergiant, interstellar reddening determ. from IUE spectrum 3−20365
bipolar sources in dense molecular clouds, unified interpretation 3−10414
BN object, dust grains, 3 micron ice band 3−40224
carbonaceous composite, responsibility for 220 nm hump 3−40240
V Centauri, Cepheid, possible member of open cluster NGC 5662, reddening evidence 3−54400
in Centaurus A (NGC 5128), X-ray evidence for hot interstellar medium 3−25610
Cepheus MC-1 molecular cloud core, IR objects model from HCO^{+} line profiles 3−25575
CG 1, age and struct., star evolution and form. 3−59440
Chamaeleon dark cloud complex, 2 μm survey, obs. 3−20466
champagne phase, coronal gas effects 3−20460
charged dust particle, electron bound states calc. 3−25554
Circinus galaxy, obs. of intense nuclear H_2O maser emission 3−5426
cloud fragmentation, rel. to Monte Carlo simulations of initial stellar mass function 3−59320
cloud magnetic fields, rot. and giant collapse to star form., review 3−20346
cloud-supernova remnant blast wave interaction, simple model 3−59437
clouds, dimensions in spiral galaxies from H II regions strings anal. 3−59471
clouds, hydrodynamic collapse and star form. 3−44650
clouds, relation between mag. field and gas density from 21 cm and continuum obs. 3−30446
clouds mass spectrum, models, Monte Carlo simulation 3−5381
clouds shocked gas, dynamical effects of pre-main sequence stars winds 3−25565
cluster containing classical Cepheid CV Monocerotis, intermediate-band photometry rel. to distance modulus and colour excess 3−48964
Coalsack Nebula, UBVR surface photometry *(German)* 3−10427
collapse and protostars form. *(Polish)* 3−40114
comets origin in globules through dust grain sedimentation 3−59265
conference on star form. regions in Penticton, Canada (June 1981) 3−20578
cosmic ray electron energy spectra, propag. and interactions, bremsstrahlung γ-ray luminosity 3−20188
cosmic ray interactions, gamma-ray colour of Milky Way rel. to cosmic ray electron density 3−49027
cyanopolyyne interstellar chem. in Taurus molecular cloud 3−44822
Cygnus X-3, interstellar H I column density from I-band obs. 3−10402
dark clouds, catalogue of Hα emission line stars 3−44675
dark clouds, formaldehyde 6 cm line obs. 3−48983
dark clouds, HCN and CO densities, dust density and brightness temp., EHF obs. 3−44829
dark clouds dense cores, star form. and gravit. collapse evidence, NH_3 SHF 3−54469
dark clouds in NGC 224, NGC 2841 and NGC 7331, apparent size distribs. rel. to galaxies distances 3−35716
dark matter in galaxy clusters, equipartition with galaxies, effect on virial M/L determ. 3−59485
dark nebulae extinction correl. with methylidyne abundance 3−25587
dense clouds, detailed chem. network and parameter var. effects 3−25316
dense clouds, EHF emission lines polarisation 3−59419
dense clouds fragmentation due to mol. form. 3−54496
deuterated molecules, surface chemistry on dust grains 3−54224
diffuse 443 nm feature and far-UV extinction 3−59434
diffuse clouds, electron and gas densities from Ca I absorption 3−48975
diffuse far-UV emission lines and plasma components 3−54490
diffuse galactic 2.4 μm enhancement region (l=355°, b=−1°), interstellar extinction var. effect 3−16033
diffuse galactic γ-ray line emission due to radionuclides decay nucleosynthetic 3−20403
diffuse interstellar bands towards stars with low colour excess, correl. with H_2 column density 3−5390
diffuse interstellar cloud, effects of shock on molecular comp. 3−54479
diffuse interstellar features in stellar spectra, obs. of anomalous diffuse features in dust-embedded stars 3−59443
diffuse spectral features due to MgO:Cr^{3+} and MgO:Mn^{4+} 3−40220
diffuse visible lines towards stars with low column densities of H_2 3−48987

interstellar matter continued
disc galaxies, evolution in colour-gas content plane rel. to S0 galaxies problem 3−10464
distribution in galaxies, MHD theorem 3−5100
DR 21 region, extended emission complex, model, map and nature 3−5382
dust clouds, radiative transport code DUSTCD 3−54491
dust distribution structure from analysis of luminous stars, UBV Hβ photometry obs. 3−15999
dust grains, rot. spin-up by inverse Cerenkov effect 3−54487
dust grains, X-ray scattering and halo around bright source 3−54492
dust grains composition, implications of IR spectrum of OH-IR star (OH 26.5+0.6) 3−49053
dust in elliptical like galaxies with dust lanes, stellar and gaseous rot. axes 3−30499
dust map out to 300 pc, A/F-type stars anal. 3−44819
dust scale height determ. from UV objects catalogue anal. 3−30242
dust thermal emission and submillimetre surveys 3−30475
E 1405-451, AM Her star, continuum flux, interstellar extinction and wind existence, UV obs. 3−48954
1E 2259+586, X-ray pulsar, accretion from interstellar mol. cloud rel. to optical counterpart obs. 3−5340
element depletion depend. on H column density 3−59422
ellipsoidal circumstellar plasma cavity at wind-ISM interaction medium, mag./fluid environment 3−40111
elliptical galaxies, gas/dust orbital configs. and galaxy axes 3−59463
emission line regions in disc galaxy nuclei, spectral anal. 3−15991
ethanol, mol. consts., microwave space, data tables 3−16092
ethynyl radical (CCH), laboratory and astronomical meas. of millimetre wave spectrum 3−35421
extended sources scanning, use of multi-purpose scanning Fabry-Perot interferometer system 3−25336
extinction due to three grain types, model 3−20448
extinction of open clusters and galactic struct. 3−35723
Feige 24, white dwarf, discovery of highly ionised interstellar species in UV spectrum 3−35597
formaldehyde absorption in S 128, rel. to galactic location and star form. 3−5388
formaldehyde in W3, Westerbork obs. of 6 cm absorpt. 3−5398
formaldehyde towards Cassiopeia A, absorpt. lines obs. rel. to cloud sizes and H_2 densities 3−54488
formyl ion-^{17}O (HC^{17}O^{+}) detect. (Sagittarius B2) 3−35693
G333.6−0.2, H II region, H_2 emission origin and distrib. 3−30518
G35.2−0.74 molecular cloud rel. struct. from NH_3 SHF obs. 3−5438
G35.2-0.74, interstellar molecular cloud, J=2-1 CO obs. and H_2O maser obs. 3−59442
galactic absorption, correction of intermediate band filter spectrophotometry of bright galaxies 3−35718
galactic centre, extinction to ionized gas, IR obs. 3−49009
in galactic centre, origin of ionised interstellar gas clouds 3−49032
galactic centre content and mass *(French)* 3−30498
galactic centre direction, interstellar extinction meas. 3−10432
galactic centre region, compact ionised gas clouds, generation, ionisation mechanism and disruption 3−15995
galactic corona heating by MHD waves 3−59438
galactic coronae around spirals, mass considerations 3−15996
galactic discs, global shearing modes for gas discs 3−59452
galactic fountain, dynamics 3−15986
galactic halo gas existence, review 3−25556
galactic haloes, N V and O VI prod. by photons emitted by massive photinos 3−44825
galactic halos composition of axions 3−59482
galactic nuclei accretion discs, shock propag. and disc transient destruction 3−59209
galactic star formation regions and SNRs, ^{14}CO J=1$\rightarrow$0 line obs. 3−30519
galactic wind, steady rotational transonic winds, models 3−59189
galactic/extragalactic nebulae, Fabry-Perot interferometric obs. *(Spanish)* 3−40052
in galaxies, interstellar gas stripping rel. to mixing of intracluster gas 3−16018
in galaxies, tidal stripping in rich clusters rel. to evolution of galaxy mass distrib. 3−30510
galaxies CO along line of sight to high Z QSOs, absorpt. line anal. 3−44868
in Galaxy, analytical expressions for interstellar extinction 3−59441
galaxy dust lane widths correl. with galaxy luminosity and cluster membership 3−5418
gamma ray discrete sources, molecular cloud nature and irradiation by cosmic ray electrons/nuclei 3−25655
gas column density rel. to cosmic gamma-rays 3−15781
gas distrib. in galactic halo, H I 21 cm obs. towards OB stars 3−30440
gas heating in galactic corona and disc 3−20190
gas large-scale flow in galactic spiral waves, thermal balance/self-gravit. effects 3−59427
gas motion near and beyond galactic corotation resonance 3−44854
gas phases and density in Galaxy from radio obs. 3−35722
gas-grain interaction, thermal accommodation and trapping 3−40210
gaseous halo, dynamical behaviour in disc galaxy 3−35434
GC-IRS 7, IR source, interstellar grains IR spectrum anal. 3−20450
GD 40, hot He-rich white dwarf star, accretion from interstellar medium rel. to Fe and Mg abundances 3−54364
giant cloud complexes in nucleus of spiral galaxy IC 342, temps. and sizescales 3−5416
giant molecular cloud-H II regions complexes unresolved near IR-1 mm emission component nature 3−30475
giant molecular clouds dynamical evolution in Galaxy, nonsteady disc accretion model 3−44852
giant molecular clouds effect on Oort cloud 3−25553
GL 961, assoc. mol. flows, vibr. excited H_2 2 μm line emission anal. 3−25574
GL 961 molecular outflow effect on surrounding mol. cloud 3−5374
globules in Orion Nebula, ages from stellar RI photometry 3−10317
Gould's Belt, related H I, profiles anal. 3−54495
grain growth through accretion, effect on normalised linear polarisation curve 3−25543
grain mantles molecular composition, model calcs. 3−15973
graphite grains, Planck mean absorpt. efficiency and extinction curve 3−59193
H II/OH maser regions, collisional and thermal overlap pumping mechanism rel. to obs. 3−25633

- **interstellar matter** continued
  - HD 5980 in SMC, line of sight vel. struct. and absorpt., UV obs. 3–59417
  - Heiles 2 dark cloud, search for far-IR emission 3–49040
  - high density gas cloud hit by strong shock wave, evolution, effect of mag. fields 3–25567
  - high velocity clouds near South Celestial Pole linking Magellanic Clouds to galactic plane 3–25545
  - high velocity H I clouds, obs. props. and models anal. 3–54494
  - high-velocity clouds, transverse vels. determ. from soft X-ray emission 3–59426
  - hot component from SNRs as origin for galactic UV background 3–30530
  - hot diffuse interstellar gas, possibility of detection through X-ray absorpt. line studies 3–30445
  - hot galactic gas and narrow line quasar absorption systems 3–15983
  - hot gas of supernova remnants, rel. to UV sky background radiation observed with space expt. 'Galaktika' 3–59509
  - hot interstellar medium, spatial distrib. and spectral characts. of diffuse soft X-ray background 3–40295
  - hot-centred interstellar clouds, dirty silicate grains models rel. to IR spectra 3–5397
  - HR 9049, eclipsing binary, interstellar reddening, orbit parameters, components masses/radii, UBV obs. 3–15956
  - HVC 287.5+22.5+240, 271+11+258, 273+9.5+258, positive high velocity clouds, 21 cm obs. 3–40234
  - hydrides in interstellar space, far-IR and submillimetre astronomy 3–30469
  - hydrous silicate minerals mid and far IR extinction coeffs. 3–35422
  - hypersonic stellar winds, dynamical effects of interstellar gas 3–15917
  - IC 1805, young open cluster, interstellar reddening meas. from photoelectric UBV photometry 3–59414
  - IC 1805 molecular cloud, shock wave interaction and B0.5 star form. 3–25577
  - IC 2581, open cluster, distance and reddening from visible obs. 3–54460
  - ice mixtures, 3 microns band laboratory anal. 3–57901
  - intermediate-mass star formation regions with IR excess, dynamical struct. 3–30473
  - interstellar shocks in dense mol. regions and HCO$^+$ depletion 3–59424
  - IRc 2 in Orion Nebula, nearby SiO high vel. flow, EHF obs. 3–59433
  - irregularities analysis from pulsar scintillation spectra 3–20410
  - irregularities causing variability in extragalactic UHF variable radiosources 3–44864
  - isothermal nonrotating cylindrical clouds, gravit. collapse and fragmentation 3–54486
  - Kepler's SNR, X-ray surface brightness anal. and interstellar medium nature 3–30452
  - L1529, L183, interstellar dark clouds, searches for far-IR emission 3–49040
  - L1551 interstellar dark cloud, detect. of large IR polarisation from IR source (L1551 IRS5) 3–54483
  - Large Magellanic Cloud giant mol. cloud complex detect. from CO survey 3–25623
  - Large Magellanic Cloud interstellar polarisation,. wavelength depend. 3–40252
  - LDN 1551 and central object IRS 5, CO movements and outflow 3–25550
  - in LMC, analytical expressions for interstellar extinction 3–59441
  - in LMC, young phenomena assoc. with giant and supergiant interstellar shells 3–16013
  - LMC supergiant OBA stars, interstellar reddening 3–40126
  - local extinction curve from early types stars anal. 3–20349
  - local interstellar gas traced by gamma-ray obs. 3–20461
  - local interstellar medium struct. from galaxy counts and γ-ray emission 3–54466
  - local spiral arm, gas density and 21 cm radiation rel. to diffuse gamma radiation *(German)* 3–54523
  - Lynds 673, dark cloud, HCN J=1-0 hyperfine anomalies 3–48982
  - Lynga 6, cluster containing classical Cepheid TW Normae, intermediate-band photometry rel. to distance modulus and colour excess 3–48964
  - M101, giant spiral galaxy, interstellar matter collapse to H I-H II assoc. and star form. 3–25598
  - M17 and M42, H II regions interacting with mol. clouds, fine struct. IR lines 3–25563
  - M1 (Crab Nebula), synchrotron emission and extinction from VBLUW obs. 3–20456
  - in M31, interstellar absorption in Baade fields I, II and III *(Russian)* 3–16011
  - M51, optical spectrophotometry of galactic nucleus rel. to high-velocity gas outflow 3–54515
  - M51 and NGC 5195 system, starlight reradiation by dust and star form. props. 3–5406
  - M51 spiral galaxy, molecular gas distrib. from CO mapping, EHF obs. 3–40249
  - M87, diffuse X-ray emission obs. from hot gas 3–10440
  - M87, double source model of radio hole 3–10465
  - M87, elliptical galaxy, hot plasma halo radiative accretion 3–16021
  - M87, giant elliptical galaxy, halo dark matter nature 3–49016
  - M 101, Sc I galaxy, CO emission distrib. and star form., EHF obs. 3–54531
  - Magellanic Clouds, CO emission survey 3–25623
  - Magellanic Clouds H I halo, evidence for connection with Magellanic stream from 21 cm obs. 3–49012
  - magnetic bubbles, heliospheric model for mag. fields 3–5391
  - magnetic clouds, quasistatic contraction due to plasma drift, grain friction effect 3–40241
  - magnetic diffuse clouds, collision cross section for interactions 3–40237
  - magnetic field strength scaling in interstellar clouds, resolution of 'B versus n dilemma' 3–30447
  - magnetic monopole flux 3–30412
  - magnetogasdynamic plane shock wave propagation in exponential medium 3–59192
  - Markarian 1050 and 1044, Seyfert 1 galaxies, dust content visible/IR obs. 3–40255
  - Markarian 297, struct. and interstellar matter anal. from visible spectral obs. 3–16007
  - Markarian 3 and 6, Seyfert galaxies, intrinsic reddening and nonstellar continuum 3–40245
  - masers, mechanism involving OH Λ doublets population inversions 3–46035

- **interstellar matter** continued
  - masers, radiation field stability, variational technique 3–20451
  - methanol in Orion A, rotational transitions in ground and torsionally excited state 3–35684
  - methanol interstellar masers, lines radiative transfer and statistical equilib. eqns. *(Russian)* 3–44826
  - millisecond pulsar in 4C 21.53, discovery, precise position, period and period derivative, and dispersion measure 3–15936
  - millisecond pulsar in 4C 21.53, interstellar dispersion measure determ. 3–25504
  - molecular cloud contraction leading to open cluster form. 3–30435
  - molecular cloud dynamics, effect of T Tauri star winds 3–5282
  - molecular cloud form., turbulent and fragmentation models 3–5401
  - molecular cloud IR sources, appl. of ice optical consts. and sublimation temp. 3–40022
  - molecular cloud structure, standard anal. accuracy 3–40222
  - molecular cloud/Elias 12 fuor interaction 3–48898
  - molecular clouds, C depletion in turbulent cloud cores 3–10413
  - molecular clouds, creation rate rel. to propagating star formation 3–54517
  - molecular clouds, embedded H II region bubbles and shocks 3–25562
  - molecular clouds, ionized gas in active cores, 5 GHz obs. 3–48971
  - molecular clouds assoc. with supernova remnants W44 and W28, search for evidence of shocks 3–30448
  - molecular clouds associated with H II regions, neutral gas velocities 3–25571
  - molecular clouds associated with H II regions chemistry 3–25578
  - molecular clouds chem. comp. and reactions, time depend. model 3–30474
  - molecular clouds distrib., review 3–25607
  - molecular clouds fragmentation, Lagrangian model rel. to stellar initial mass function 3–48994
  - molecular clouds physical props., implications of EHF/THF line obs. for techniques 3–30472
  - molecular clouds with high vel. gas, clumpy outflow evidence CO EHF obs. 3–54470
  - molecular high-vel. flows near young stellar objects 3–48977
  - molecular UV emission bands in HD 44179 direction 3–48978
  - molecule abundances behind slow shock waves 3–25566
  - molecules, collisional vibr. excitation theory 3–54476
  - molecules, vertical valence ionis. energies, Green's function calcs. 3–5502
  - Monoceros-R2 reflection nebulae, radiosources detect., SHF obs. *(Russian)* 3–20468
  - neutral gas towards HD 93206, column densities from UV interstellar absorpt. lines obs. 3–59425
  - NGC 1052, giant elliptical galaxy nucleus emission line region ionisation and physical state 3–54528
  - NGC 2071, assoc. mol. flows, vibr. excited H_2 2 μm line emission anal. 3–25574
  - NGC 2071, reflection nebula, CO outflow and CS motion assoc. with IR sources 3–5383
  - NGC 2071, star form. region, H I 21 cm line detect., assoc. with IR star cluster 3–48989
  - NGC 2071 H II region mol. outflow region, disk constrained stellar wind 3–25573
  - NGC 2071 molecular cloud core, IR objects model from HCO$^+$ line profiles 3–25575
  - NGC 2244, young open cluster, membership from proper motion anal. and differential extinction 3–30436
  - NGC 2346, planetary nebula, central star, dust cloud model for unprecedented light vars. 3–48947
  - NGC 2371-2, planetary nebula, evidence for deceleration by interstellar medium 3–35697
  - NGC 2447, open cluster, red giants luminosity/interstellar absorpt. 3–59407
  - NGC 3998, active lenticular galaxy, vel. field of stars and ionized gas 3–49025
  - NGC 4151, broad line region clouds and absorbing material in Seyfert 1.5 galaxy 3–20477
  - NGC 457, open cluster, distance and reddening from visible obs. 3–54460
  - NGC 4696, Centaurus cluster galaxy, optical filaments discovery 3–5427
  - NGC 5128 (Centaurus A), emission characts. and dust lane, 2.2 μm obs. 3–30502
  - NGC 595, H II region in M33, dust content and extinction 3–54489
  - NGC 6334N, 1665 MHz and 1667 MHz OH masers, relative positions and mag. fields, UHF obs. 3–25631
  - NGC 654, young open cluster, interstellar reddening from UBV photometry 3–48968
  - NGC 7023, reflection nebula of HD 20075, dust grain scatt. props. 3–5378
  - NGC 7331, Sb galaxy, evidence for massive mol. ring around nucl. bulge, JK obs. 3–25602
  - NGC 7538, H II region molecular cloud, molecules distrib.+dynamics rel. to H I and H II 3–25570
  - NGC 7789, open cluster, blue stragglers membership from interstellar polarisation survey 3–25531
  - NGC 891, edge-on Sb galaxy, unseen halo mass/luminous disc mass ratio 3–59447
  - Norma early type stars, linear polarisation and interstellar matter 3–35687
  - Nova Sagittarii 1982, interstellar reddening from IUE obs. of 220 nm feature 3–5314
  - OB associations, Auriga OB-2 and Scorpius OB-1 UV extinction, obs. 3–25533
  - OMC-1, C abundance upper limit from 492 GHz obs. 3–25584
  - OMC-1, CO, ^{13}CO and HCN mol. emission maps 3–25583
  - ON 1, compact H II region/maser source, obs. of assoc. mol. cloud complex 3–54473
  - open clusters, gas and high vel. star loss 3–44812
  - μ Ophiuchi, UV interstellar absorpt.-line spectrum 3–10415
  - ρ Ophiuchi cloud, Ca abundance, visible obs. 3–48985
  - ρ Ophiuchi cloud, ionisation equilib. in cloud interior 3–54472
  - ρ Ophiuchi cloud, search for diffuse band profile vars. 3–20446
  - ρ Ophiuchi dark cloud, detect. of far-IR emission 3–49040
  - ρ Ophiuchi molecular cloud, formaldehyde mapping at 14 GHz 3–40225
  - Orion, 3.8 μm polarization, spatial distrib. in IR cluster 3–35695
  - Orion A, H62δ detect. 3–5392
  - Orion MC-1, rate constant for loss of CO$^+$ by reaction with H_2 3–15974
  - Orion Molecular Cloud, bipolar CO outflow detect., obs. 3–10431
  - Orion Molecular Cloud, excited H_2 line profiles interpretation 3–25568

interstellar matter continued
Orion Molecular Cloud 1, small rot. clouds of stellar mass, NH_3 spectral obs. 3—48984
Orion Molecular Cloud CO movements from EHF, THF and IR obs. anal. 3—30470
Orion Molecular Cloud infrared cluster, new members, IR obs. 3—35691
Orion Nebula, star form. characts., IR sources anal., struct., internal motion and comp. 3—15985
Orion Nebula SiO maser model 3—15971
Orion-KL region, obs. of extended anisotropic high-vel. gas flows 3—10424
λ Orionis region, Hα objects/OB association members evidence for fossil giant molecular cloud 3—5367
in peculiar galaxies in clusters of galaxies, H I obs. rel. to interstellar gas stripping 3—10449
peculiar UV interstellar extinction, characts. from low-resolution IUE data 3—54480
Perseus arm absorption, H I 21 cm Zeeman effect, WSRT obs. of CAS A 3—44816
Perseus arm window, rotation measures determ. for extragalactic radio sources 3—40279
phase structure from pulsar scatt. index parameter anal. 3—40219
physics of stellar evolution and cosmology, book 3—10545
polarisation law, noise effects 3—30455
polarisation of Seyfert galaxies by foreground dust, results from optical linear polarisation meas. 3—54510
polarisation of supernova light, rel. to meas. of deviation from spherical symmetry 3—30396
propionitrile, mol. consts., microwave space, data tables 3—16092
protoplanetary cloud, dense solid particles form. and dust grain effects 3—20473
protostars, energetic particles fluxes and propag., and ionisation rate 3—15913
protostars, IR source searches in star form. regions, surrounding interstellar matter nature 3—25434
protostellar OH masers, astrometry and spectral feature positions and mag. fields 3—5279
Q 0028+003, QSO, halo rel. to absorpt. line system in QSO (Q 0029+003) 3—5444
QSO asymmetric emission line region with out-flowing mass and $Z_{ab} \gtrsim Z_{em}$ systems 3—25649
QSOs with broad absorption lines, spherically symm. wind models and spectra anal. 3—5447
quasar broad emission-line regions, dust heating sources 3—25588
quasar emission-line regions, radial motion evidence from varying redshifts of emission line regions 3—25647
quasars, kinematics of broad-line emission gas 3—10437
in quasars, struct. and mass loss of stars immersed in supermassive star 3—10481
radiative shock wave oscillatory instability 3—5099
radiowave propagation and pulsar long term intensity var. 3—10378
reddening, appl. of principal components anal. 3—59227
reddening at low galactic latits., estimation from Lick galaxy counts 3—48993
reddening within 100 pc from late F-type stars uvbyβ obs. 3—35688
RF lines polarisation/mag. field direction in collapsing/expanding sources 3—59420
rotating isothermal clouds collapse, equilib. analytical solns. 3—44824
Ruprecht 79, cluster containing classical Cepheid CS Velorum, intermediate-band photometry rel. to distance modulus and colour excess 3—48964
SA 158, southern starfield near galactic centre, interstellar reddening from RGU photometry 3—44734
Sagittarius A precessing jets model and galactic nucleus gas dynamics 3—15994
Sagittarius A West, formaldehyde distrib. and vel., SHF obs. 3—30459
Sagittarius B2, formyl ion at 89.5 GHz and laboratory transition meas. 3—35426
Sagittarius B2, methyl cyanide $J=1 \rightarrow 0$ transition detect., SHF obs. 3—59435
Sagittarius B2, temp. and density determ. from methyl cyanide lines anal. 3—25644
Sagittarius B2(OH) line of sight NaOH detect. 3—5392
Sagittarius B2 molecular cloud, kinetic temp. + density from methyl cyanide EHF obs. 3—54471
self-gravitating rotating magnetic clouds, 3D models 3—10429
Serpens dark cloud, star form. region struct. and nature, IR obs. 3—25546
Seyfert galaxies, emission line regions, profiles, curve of growth effects 3—40282
Seyfert galaxies, radio jets interaction with interstellar medium rel. to linear radio struct. 3—25612
Seyfert galaxy nuclei, kinematics of broad-line emission gas 3—10437
Sh 2-269, H II region-molecular cloud complex, optical and millimetre wave study 3—5386
Shapley-Ames galaxies nuclear regions Na-rich interstellar matter, obs. 3—5414
Sharpless 106—ON 2 complex, discrete IR sources mapping 3—5382
Sharpless 106 IRS 9 discovery, IR spectral obs. 3—25551
Sharpless 156, W II region, optical polarisation and dust component rel. to blister model 3—30454
Sharpless 222, H II region, assoc. mol. cloud CO obs. 3—25576
Sharpless 235B molecular cloud, HCN J=1-0 hyperfine anomalies 3—48982
shock front produced by stellar wind-interstellar gas interaction, geometrical props. determ. method 3—30221
shock waves in interstellar medium, review of optical obs. 3—15987
shocked gas cloud, dynamical destruction 3—20465
in SMC, IUE obs. of Sk 143, SMC star with galactic type UV interstellar extinction 3—10423
in SMC, UV extinction curve from IUE obs. 3—5425
SNR evolution and structure of interstellar medium 3—30461
solar neighbourhood, analysis and diagnostic methods *(Italian)* 3—15982
southern galactic plane star form. regions with H_2O masers, CO $J=2 \rightarrow 1$ line obs. 3—30456
spin-orbit coupling constants, ab initio calcs. for potential exotic molecules 3—48974
spiral arm struct., one-dimens. periodic flows with shock transition 3—59190
star field near globular cluster NGC 6171, interstellar reddening from RGU three-colour photometry *(German)* 3—5275

interstellar matter continued
star formation, magnetogravitational instability of finitely-conducting medium with variable streaming motion 3—59196
star formation, shock induced, interstellar turbulence and mag. field effects 3—10425
star formation regions maser and IR sources, mass loss phenomena 3—25572
star formation regions molecule anal. through submillimetre obs., atm. effects 3—30467
star forming molecular cloud cores, high vel. CO line wings and dynamics 3—25573
stellar wind return of mass and energy 3—30444
T Tauri stars wind outflow determ. from surrounding high vel. CO emission 3—25436
Taurus dark cloud complex, CN abundance and N=1-0 emission 3—40209
Taurus molecular cloud 1, cyanopolyyne formation chemistry 3—44822
Taurus Molecular Cloud 1, dense mol. gas struct. from cyanopropyne transitions obs. 3—59423
thioformyl ion/CS ratio in interstellar clouds 3—40238
TMC-1, methyl cyanide $J=1 \rightarrow 0$ transition detect., SHF obs. 3—59435
Tombaugh 2, distant open cluster, reddening, distance and CM diagram, BV obs. 3—54459
Trapezium Nebula dust IR spectra rel. to organo-siliceous biomolecules IR props. 3—5385
in triaxial S0 galaxies, theory of stable polar gas discs 3—35715
turbulent medium, shock wave fronts random deflection causing electron density fluctuations *(Russian)* 3—20469
turbulent molecular clouds, theory of star form. and initial mass function 3—15910
UGC 6081, peculiar galaxy, H I absorpt. and visible obs. 3—59462
SU Ursae Majoris, dwarf nova, X-ray scatt. from interstellar grains rel. to soft X-ray halo 3—40152
UV extinction curves towards HH 1 and HH 2, effect on UV continuous and emission-line spectra 3—10416
variable interstellar obscuration, effects on observed clustering of galaxies 3—30508
velocity fluctuations in interstellar medium, due to gravit. interaction with system of stars 3—54485
Virgo cluster disc galaxies, H I masses and diameters 3—59446
in Virgo cluster galaxies, interstellar gas stripping by galaxy-IGM interactions 3—30509
PU Vulpeculae, interstellar reddening from UBV and spectroscopic obs. 3—44754
W30H, protostellar maser source nature and spectral line obs. 3—5396
W33 region, molecular gas, ^{13}CO and ^{12}CO line maps 3—48972
W3, OH masers 6 cm emission, origin and positron, SHF obs. 3—35689
W3, W4, W5 complex, star form. evidence from 11 and 20 μm obs. 3—5384
W3 (OH), interpretation of OH maser obs. 3—16026
W3 molecular cloud core, model involving IR objects from HCO^+ line profiles 3—25575
W40, H II region and its mol. cloud, struct. and nature 3—25642
W49N, 1665 MHz and 1667 MHz OH masers, relative positions and mag. fields, UHF obs. 3—25631
W51, H II region complex, VLA obs. of warm NH_3 assoc. with mass outflows from young stars 3—54474
W51 IRS-2, star form. region, 2.95-10 μm obs. anal. 3—30453
warm H I component of interstellar medium, anal. of H I emission profiles at positive galactic latits. 3—44821
WC9 star assoc. with C 1309—624 and C 1310—624, dust shell+extinction 3—48922
wind velocities near solar system 3—20190
X-ray active galactic nuclei, wind and shock model 3—54527
AlH^+, spin splitting, core polarisation and interstellar chem. 3—41484
C, amorphous grains, Planck mean absorpt. efficiency and extinction curve 3—59193
C I, origin of forbidden IR emission in H II or H I regions 3—10422
C I in interstellar sources, 610 μm fine struct. transition anal. 3—30471
C II regions, implications of low-freq. excited C lines in direction of Cassiopeia *(Russian)* 3—35701
$C^+ + Cn \rightarrow C_{n+1}{}^+$, n-depend. of reaction rate in interstellar space 3—30443
C_2 in molecular clouds, excitation and abundances from radioastronomy 3—30468
C_2 radiative processes, photodissociation, pot. energy curves, CI and SCF calcs. 3—41635
C_3 in diffuse interstellar clouds, column density limits 3—15980
CH radical, interstellar gas clouds, rot. transitions, microwave obs. 3—45995
$CH_n{}^+$, (n=0 to 3), interstellar mols., mobility in Ar and He meas. 3—12811
C_2H in molecular clouds, excitation and abundances from radioastronomy 3—30468
CO abundance rel. to visual extinction in ρ Oph and Taurus molecular cloud complexes 3—20444
CO, catalogue of radial velocities towards galactic H II regions 3—5148
CO clouds, correl. with H I clouds 3—25586
CO clouds, distribution at galactic centre, EHF obs. 3—59445
CO emission search in Magellanic Clouds, EHF obs. 3—15993
CO in dark clouds, 2.7 mm obs. and column densities 3—35682
CO in NGC 7635 (Bubble Nebula), 115 GHz emission obs. 3—15976
CO in outer Galaxy (longitudes 50° to 72°), UHF obs. 3—59431
CO isotopic forms relative abundances, effects of isotope selective photodissociation 3—59421
CO, search for high vel. features in supernova remnant (G78.2+2.1) 3—48980
CO, two lowest rot. transitions, anal. curves, large vel. gradient radiative transfer model 3—59204
^{12}CO, search for 2.6 mm emission from Weaver's jet region 3—10433
Co integrated 2.6 mm intensity conversion to H column density 3—15972
D abundance variation during galactic evolution and cosmological models test 3—44813
H I absorption towards 3C 123, VLA synthesis 3—10412
H I in radio galaxies, search for emission and absorption features 3—54521
H I in spiral galaxies in binary/multiple groups, distrib., mass and motion 3—30492
H I observations towards Puppis Window of Milky Way, rel. to turbulent interstellar medium 3—35696
H II regions evolution in collapsing massive mol. clouds 3—25560

interstellar matter continued
H II/OH masers pumping, IR line overlaps and collisional excitation by H_2 3—16025
H radial distribution and mass in galactic plane 3—59474
H/D exchange reactions involved in molecules deuteration 3—25304
H_2 clouds, acceleration through radiative dissociation of H_2 3—54475
H_2 column densities, correl. with diffuse interstellar bands towards stars with low colour excess 3—5390
H_2 in Orion molecular cloud, IR obs. rel. to interstellar extinction and excitation temp. 3—30449
H_2 in spherically symm. inhomogeneous clouds, photodissociation rate and radiation field 3—30458
H_2, properties and UV/IR obs. 3—25555
H_2 radial distribution and mass in galactic plane 3—59474
H_2 V=1-0 Q(6) line in Orion 3—48998
HCl, photodissoc. processes 3—1440
HD, vibration-rotation transition probabilities for ground electronic $X^1\Sigma^+$ state 3—35432
HDO, 2(1,1)-2(1,2) rot. emission line detect. in Orion Molecular Cloud 3—5399
H_2O maser emission in ν_2 excited vibrational state at 12 GHz, unsuccessful search 3—30442
H_2O masers in galactic centre region, new discoveries 3—40110
H_2O masers near Herbig-Haro objects 3—40216
H_2O variable maser sources in star form. regions, line profiles and struct., SHF obs. 3—44830
K I, abundances and physical conditions in clouds towards 188 early-type stars 3—44820
Li abundance rel. to old halo dwarf stars 3—25426
N abundance, implications for grain models 3—48988
N contribution to interstellar medium from novae and planetary nebulae in M31 Magellanic Clouds 3—10462
NH^+, candidate molecule for comets and interstellar space, anal. of optical and near IR spectra 3—10195
NH_3 in giant cloud complexes in spiral galaxy IC 342, inversion lines obs. rel. to cloud temps. and sizes 3—5416
NH_3 in hot molecular cloud toward Sgr B2, SHF obs. 3—20459
NaH in dense molecular clouds, unsuccessful search at 290 GHz 3—20445
NaOH detection towards galactic centre source Sagittarius B2(OH) 3—5392
O abundance, implications for grain models 3—48988
OH 1720 MHz maser in NGC 7538 (IRS1), VLBI aperture synthesis obs. 3—5441
OH masers and assoc. H II regions, formaldehyde obs. 3—25581
OH masers and assoc. ultracompact continuum sources, UHF obs. 3—25582
OH type I masers and OB association form. 3—40273
S III 18.71 microns forbidden line towards Sagittarius A West 3—59432
SO_2, obs. in Kleinmann-Low nebula 3—30450
SiO as possible origin for interstellar 9.7 μm feature 3—20452

interstitials
see also Cottrell atmospheres; crowdions; Snoek effect
alloy hydrides, AB_5-type, cryst. struct., rel to press.-composition isotherm plateau length 3—33199
alloys, ternary ordering, interstitial at. diffusion, method of average energies *(Russian)* 3—28144
alloys with B19 structure, solubility of interstitial impurities and correl. parameters 3—23048
alloys with $B8_1$ and B31 structs., interstitial impurity solubility *(Russian)* 3—27929
BCC and FCC crysts., interstitial type self diffusion, correlation effects 3—47149
BCC lattice, ordered structures of interstitial solutes 3—56849
BCC metals, H interstitials, quantum mechanical description 3—51633
cubic ionic crystals, point defect form. energy calc., FORTRAN program 3—22887
diamond, electron irradiated, A-2 and A-3 ESR centres form., self di-interstitial complexes 3—43436
diamond, interstitial host atoms near divacancies, diffusion and annealing 3—37905
diamond, ion-implanted, point defect production and interaction 3—42635
diamond, muonium location and hyperfine interaction, HF SCF cluster calc. 3—57325
diamond type lattices, native defects 3—51595
differential climb of inhomogeneously distributed dislocations during irradiation 3—18302
diffuse X-ray scattering from selfinterstitials, lattice statics technique 3—13020
diffusion of dissolved interstitial ats., effect of long-range interaction *(Russian)* 3—28143
edge dislocation-vacancy and self interstitial interaction, atomistic and Monte Carlo calc. 3—42643
graphite intercalated with C, electronic struct. 3—13723
Huang diffuse scattering from self-interstitials in a trigonal lattice 3—42599
III-V semiconductors, antisite and vacancy electron states, local density of states 3—43096
impurities, electro- and thermotransport *(German)* 3—33522
intermetallic compounds, A_6B_{23}-type, occupied interstices in hydrides and deuterides 3—8046
isothermal matter transport, phenomenological coeffs., Einstein and linear response formulae 3—2869
loop size distribs., analytical formulation 3—6290
low energy individual cascades, spatial distrib. depend. on displacement model 3—2635
metal, HCP, self-interstitial symm. configs. 3—13219
metal hydrides, props. and appls., conf., Toba, Japan (May 1982) 3—30547
metal-H interstitials solutions, solvus thermodynamics 3—47819
metallic surfaces, subsurface bonding of H 3—23169
metallic thin foil, irradiated, interstitial loop growth 3—18294
metals, BCC, configurational entropy of H 3—33469
metals, BCC, H diffusion and protonic pot. around interstitital sites 3—42737
metals, grain boundary diffusion mechanisms 3—33484
metals, grain boundary vacancies and interstitials, self-diffusion, mol. dynamics study 3—46923
metals, H-defect interactions, binding energies and enthalpies 3—13260
metals, He self-trapping in metals, kinetic theory 3—51861

interstitials continued
metals, interstitial H, electronic and elastic struct. 3—38341
metals, irradiated, point defect clusters nucleation, cascade effects, theory 3—13267
metals, light impurity energy profile codes 3—43093
muon spin relax. due to dipolar interactions 3—38744
quartz, electron irrad., ESR of E_1' centres 3—52626
radiation damage model, two-interstitial model 3—46988
segregation at grain boundaries, effect of elastic interaction 3—27934
semiconductors, radiation defects electronic struct. 3—38350
shear structures, nonstoichiometry, role of point defects and shear planes 3—51631
simultaneous formation of both vacancy and interstitial loops under irradiation 3—6289
solid soln., elastic stability, self-consistent harmonic approx. 3—7957
solid solution, BCC, solute clusters effect on screw dislocations, strengthening and weakening model 3—37923
solid solutions, binary and ternary, volume effects, review 3—19315
solid solutions, thermoelastodiffusion process numerical modelling 3—51838
sphalerite structure crysts., antisite defect formation by gliding dislocation-interstitial interaction 3—22892
steel, alloy, irrad. damage, electron, heavy-ion and fast-neutron, correl. 3—27976
steel, austenitic, Mn-Cr-N, interstitial solid soln. hardening, yield stress *(German)* 3—29096
steel, austenitic 3—29097
steel, austenitic stainless, Mn, tensile props., effect of H 3—24349
steel, Cr low alloy, hardened, tempered, radiation embrittlement rel. to struct. 3—43951
steel, dynamic strain ageing characts. 3—14619
steel, stainless, void density effect on dislocation bias during electron irrad. of type FV548 3—18348
steel, ultra-high strength, H induced delayed cracking for type III cracks *(Chinese)* 3—34422
structural alloys, radiation effects 3—13289
transition between coherent and stochastic motion 3—33514
tunnelling recomb. kinetics stimulated by defect motion 3—23083
void nucleation in interstitial, vacancy and divacancy supersaturated materials 3—13213
Ag_3AsS_3-Ag, interstitial solid soln., eutectic type phase diagram 3—9039
AgBr, defect energy calc., dielec. and elastic props. 3—51593
AgCl:Cd, elec. cond. mechanism 3—3176
AgCl:Pd^{2+},Fe^{2+} UV light irrad. prod. Fe^{3+} centres, EPR study 3—47288
$AgInTe_2$, nonstiochiometry and elec. props. 3—47341
AgZn, neutron irrad., self interstitials and vacancies, strain relax. study 3—2615
Al, fast neutron irrad., interstitial clustering, diffuse X-ray scatt. study 3—33307
Al foil, point defect nature determ. from dislocation loops *(Russian)* 3—37902
Al, self-interstitials, energy 3—51737
Al-Ge, Ge precipitate amorphisation by electron bombardment, TEM study 3—56981
Al-H, vibr. spectrum of H, recursion method 3—42738
AlCr, dilute, self-interstitial trapping at Cr atoms 3—13218
AlH_x, bound state induced by interstitial H 3—38342
α-Al_2O_3:Mg, point defects, elec. cond., optical absorption and ESR studies 3—56884
β-Al_2O_3-Na_2O, non-stoichiometric, struct. and transport 3—18498
$Ba_{1-x}La_xF_{2+x}$ crystals, low temp. ionic cond. and dielec. relax. 3—18506
BaO-B_2O_3-Al_2O_3 glass, EPR and kinetic study of H centres 3—14129
C in martensitic steel, MO calc., Mossbauer obs. 3—33245
CaF_2, proton irrad., lattice defects 3—47003
$Ca(NO_3)_2$, γ-ray irrad., chem. radiation damage, annealing kinetics 3—2606
CdS, Cd interstitial electron states, luminescence study 3—28306
$Co_{1-x}O$, transitory creep, rel. to point defect diffusion 3—28037
$Cr_3(^{11}B_{0.44}C_{0.56})C_{0.85}$, cryst. struct., neutron powder diffr. study 3—51578
$Cr_3C(C_{0.52}N_{0.48})$, cryst. struct., neutron powder diffr. study 3—51578
Cu foils, electron irrad., growth of dislocation loops 3—18349
Cu irradiated thin foils, interstitial loop growth 3—18294
Cu, self-interstitials, energy 3—51737
Cu_3Au, ordered and disordered, electron irrad. damage 3—13283
$CuGaSe_2$, nonstiochiometry and elec. props. 3—47341
$CuInS_2$:Fe, defect electron levels, elec. cond. and Mossbauer studies 3—52062
Fe, amorphous, vacancies and interstitials, density fluctuation stability 3—37904
Fe, N-charged, mag. after-effects due to precip. 3—29090
α-Fe, N-charged, precip.-induced mag. after-effects 3—39150
γ-Fe, point defect capture by vacancy pores, machine modelling method *(Russian)* 3—37948
α-Fe, Xe^{2+} ion irrad., dislocation loop damage struct., TEM study 3—42682
Fe:H, H interstitials, quantum mechanical description and expt. study 3—51633
α-Fe:He, spontaneous vacancy-impurity annihilation 3—42644
α-Fe-Al, dil., interaction energy of Al and C atoms 3—13262
Fe-C-X ternary systems, X=substitutional element, uphill diffusion of interstitial atoms modified quasistationary model 3—47148
Fe-Ni-C (25.3, 0.49 wt.%), C distrib., Mossbauer study 3—53055
Fe-Ni-C alloys, martensitic transform., low temp. internal friction and dilatometric results 3—43804
Fe-Ni-Cr, austenitic, dislocation loops at twin boundaries, ion-irrad. effects 3—2565
FeAl, electron irrad. amorphisation, high volt. electron microscopy study 3—47001
FeCo, partly ordered, electron energy spectra and subbands *(Russian)* 3—52019
FeCu dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
FeMn dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
Fe_3O_4-Fe_2O_3 colloids, defect spinel struct. 3—27930
FeTi dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
$Ga_xAl_{1-x}As_yP_{1-y}$, vacancy and antisite defect deep levels, alloy composition effects 3—43097
GaAs, anion antisite defects and electron traps 3—42603

- **interstitials** continued
  - GaAs, antisite defect electron energy states, Green's function calc. 3−47306
  - GaAs, dark line defects from. due to dislocation-point defect interactions 3−42615
  - GaAs, native point defects and dislocations, effect on devices, review 3−13216
  - GaAs, sphalerite structure crysts., antisite defect formation by gliding dislocation-interstitial interaction 3−22892
  - GaAs:Cu, electron irrad., defect interaction with Cu atoms, photoluminescence study 3−37949
  - GaP, bright dislocation halos, dislocation-point defect interactions 3−42615
  - $GdAlO_3:Cr^{3+}$, magnetic Franck-Condon effect 3−34142
  - Ge, electron irrad., vacancy and interstitial clustered defect form. 3−47000
  - Ge, interstitial ion migration energy, pseudopot. calc. 3−28160
  - $Ge:O_2$, donor deep level transient spectra 3−18652
  - He liberation from irradiated ceramic materials, control purposes 3−28002
  - Ho-C, free diffusion of C, radioactive anal. *(Russian)* 3−51840
  - KBr:Li, X-ray irrad., V-bands and thermoluminescence, annealing effects 3−18299
  - $LaNi_5H_6$, H diffusion, quasielastic neutron scatt. study 3−38117
  - β-$LaNi_5H_x$, Haucke cpd., struct., statistical thermodynamics approach 3−42568
  - β-$LaNi_5H_x$, struct., entropy and enthalpy calcs., statistical thermodynamical approach 3−2499
  - LiF, F_2-centre form. mechanism, synchrotron radiation luminescence method 3−27938
  - LiF, gamma-ray sensitised, thermoluminesc. glow curves and supralinearity 3−3831
  - $LiNH_4SO_4:Co^{2+}$, optical absorpt. spectrum 3−43570
  - $MgF_2:Li^+$, Mn^{2+}, enhancement of Mn^{2+} diffusion, ESR study 3−2885
  - MgO, cation doped, bulk and {001} surface, calc. defect struct. 3−8045
  - MgO:Li, H, X-ray irrad., Li-H complex, ESR study 3−43432
  - $MnFe_{0.09}Sb$, spin density distrib. 3−52398
  - MnO, Mn self diffusion, oxidation and evaporation method 3−57130
  - $Mn_{1.09}Sb$, interstitial site occupancy and electronic struct., neutron diffr. study 3−51590
  - Mo, heat treated, internal friction curves, effect of sample surface state 3−37994
  - Nb, local H vibrs. in presence of interstitial and substitutional impurities 3−42739
  - Nb, N impurity, lattice location using reaction $^{15}N(p,\alpha\gamma)^{12}C$ 3−57841
  - Nb:H, diffusion model, small polaron models 3−33505
  - NbH_x, static and thermal displacements around H, X-ray diffr. study 3−57051
  - Nb_3Sn, point defect configuration mol. dynamics method and pseudopot. calc. 3−18296
  - Ni, monocryst., interstitial diffusion of implanted He 3−38134
  - Ni:H, ferromagnetic, H props., multiple scatt. cluster-in-condensed-matter calc. 3−33666
  - Ni-H, interstitial H bonding, CNDO, EHT and SW-Xα calcs. 3−33183
  - NiTi, partly ordered, electron energy spectra and subbands *(Russian)* 3−52019
  - Pb, ^{203}Hg electromigration and thermomigration *(German)* 3−51872
  - Pb-Ni solid solution, Ni precip. kinetics 3−43842
  - p-$Pb_{1-x}Sn_xTe$, ferroelec. phase transition under electron irrad. 3−3651
  - Pd-Cu-H, solid soln., thermodynamics 3−47817
  - α-Pd-H, elastic binding energy 3−37842
  - Pt, neutron irradiated, activation energy, correlated recovery with three dimens. diffusion 3−42677
  - $RbMgF_3:Mn^{2+}$, electron beam irrad. damage, annealing and luminescence studies 3−56984
  - Sb_2Te_3, Ag doped and undoped, elec. props., reflectivity, nature of Ag impurity 3−23381
  - Si, Czochralski grain, bulk defects, impact of high temp. processing 3−46925
  - Si, dislocation effect on radiation defect annealing process 3−27993
  - Si, electron irrad. in HVEM, point defect interaction with surface 3−27999
  - Si, entropy barrier against vacancy-interstitial recombination 3−27975
  - Si, float zone crystals, swirl defects study 3−46938
  - Si, interstitial host atoms near divacancies, diffusion and annealing 3−37905
  - Si, interstitial ion migration energy, pseudopot. calc. 3−28160
  - Si, interstitial muons and H_2, self-consistent total energy surfaces calc. 3−46924
  - Si, multivacancies, interstitials and self-interstitial migration 3−47289
  - Si, neutron displacement cascades structure 3−42673
  - Si, oxidation-enhanced B and P diffusion, quantitative model 3−23101
  - Si, self-consistent electronic struct. for Al and Si interstitials, cluster extended Green's function technique 3−47294
  - Si, stacking faults, oxidation induced, shrinkage, doping depend. 3−8065
  - Si, substitutional and interstitial 3d impurities, electronic struct. 3−23323
  - Si, swirl defects form. mechanism, growth rate and temp. gradient influence 3−8044
  - Si, trap centres in wafers containing A-swirl defects, annealing behaviour, DLTS study 3−13760
  - Si:Al, enhanced interstitial migration, electronic struct. calc. 3−51859
  - Si:Al(B), point defect recombination-induced migration 3−57141
  - $Si:As^+(As^+)$, ion implanted, self-interstitial atom interactions 3−2586
  - Si:As.Pt struct., As redistrib. during Pd_2Si form., ion channelling and backscatt. study 3−8267
  - p-Si:B, distinction of thermally induced defects, resist. meas. 3−51654
  - Si:B,As, CW laser annealing, quenched-in defects 3−57313
  - Si:B,C, electron irrad., defect accumulation, IR study 3−27998
  - Si:Co,B,Al,Ga, pairing reactions of interstitial Co and acceptors, Mossbauer study 3−42623
  - Si:Cr,Fe,P, spin depend. carrier-impurity interactions, ESR studies 3−57765
  - Si:Cr(Mn)(Fe), tight binding study of electronic struct. of transition ions and EPR spectra 3−47299
  - Si:Cr(Mn)(Fe)(Co)(Ni)(Cu), diffusion, solubility and elec. activity, review 3−27966
  - Si:Fe,B, interstitial-substitutional pairs, electronically controlled reactions 3−43079
  - Si:Mg, diffused, elec. and optical props. 3−18699
  - Si:Ni, point defects, Ni diffusion and annealing studies 3−42602
  - Si:O, electron irradiated, divacancy production enhancement 3−42601

- **interstitials** continued
  - Si:O, neutron irradiated, defect accumulation and lattice strain, IR study 3−56994
  - Si:O, O content meas. by 9 μm IR absorpt., calibration curve *(Chinese)* 3−38850
  - Si:P(As)(B)(Sb), oxidation effects on diffusion, dual vacancy-interstitial mechanism 3−8259
  - $Si:Pt^-$, spectroscopic splitting in strain-modulated ESR study 3−57767
  - Si/GaAs heterojunction form., surface antisite acceptor level effects 3−18771
  - Si/GaP heterojunction form., surface antisite acceptor level effects 3−18771
  - SiO_2, vitreous, diffusion of Cs^+, Rb^+ and K^+ 3−28156
  - Si(100) with adsorbed Ni, diffusion layer microstructure 3−13634
  - SrF_2, proton irrad., lattice defects 3−47003
  - Ta, plastically deformed, migration of interstitials to immobile vacancies and dislocations 3−56878
  - Ta-H(D) system, solvus behavior 3−53022
  - $Th_6Mn_{23}D_x$, interstitial site occupation by H atoms, neutron diffr. study 3−33243
  - Ti alloy, interstitial, mobile dislocation density during plastic flow at low temp. 3−14681
  - Ti, fracture behaviour, effect of temp., interstitial content and grain size 3−9186
  - α-Ti, plastic deform. below 700K, prismatic slip 3−14660
  - Ti-Al(Sn) alloys, dil., deform. kinetics at low temp., strengthening mechanism 3−14682
  - Ti-Cr(Mo)(Nb) alloys, alloying and annealing temp. effect on struct. state, internal friction obs. 3−14647
  - β-Ti-Mo(V) alloys, amplitude depend. internal friction, O-dislocation binding 3−14646
  - Ti-O solid soln., ultrahigh purity, oxygen relax. obs. 3−14648
  - β-Ti-V, plastic deform. mode 3−9138
  - $Ti_{1.2}Mn_{1.8}H_3$, H mobility, quasielastic neutron scatt. study 3−38116
  - TiN films, neg. temp. coeff. of resist., struct. anal. 3−47442
  - TiNi thin foil, intermetallic cpd., martensitic transform. 3−39126
  - TiO_2, rutile, point defect form. energy, correl. with permitt. 3−33244
  - TiO_2, rutile, radiation damage, mol. dynamics simulation 3−27933
  - TiO_{2-x}, cation interstitial defect struct., diffusion 3−46922
  - $Ti_{1+x}S_2.NH_3$, diffusion of NH_3, pulsed PMR study 3−18503
  - $(U, Pu)O_{2+x}$, nonstoichiometric nuclear fuel, diffusion processes and surface effects 3−55137
  - UO_{2+x}, mechanism for the ease of slip 3−16856
  - UO_{2+x}, nonstoichiometric nuclear fuel, diffusion processes and surface effects 3−55137
  - V:H, H interstitials, quantum mechanical description and expt. study 3−51633
  - $V_2H(D)$, stoichiometric and hyperstoichiometric, occupied interstices 3−33241
  - V_2O_3 nonstoichiometry, cryst. struct. and defects, TEM study 3−8058
  - VSe_2, electron irrad. induced defects, elec., mag., and lattice parameter meas. 3−18347
  - W, point-defect calcs. 3−51594
  - $YAG:Co^{2+}$, ESR study of interstitial Co^{2+} 3−57760
  - $Y_6Mn_{23}D_x$, interstitial site occupation by H atoms, neutron diffr. study 3−33243
  - ZrNiH, interstitial site occupation, X-ray and neutron diffr. studies 3−33242
  - $ZrNiH_x$, interstitial site occupation by H atoms, neutron diffr. study 3−33243
  - $Zr_{0.67}Ni_{0.33}H_x$ amorphous, soft X-ray emission spectra and electronic struct. 3−38964
  - $Zr_{0.65}Pd_{0.35}H_x$, amorphous, soft X-ray emission spectra and electronic struct. 3−38964
  - $Zr(V_xCo_{1-x})_2:H$, Laves phase, H interstitials study 3−38340

intersystem crossing *see nonradiative transitions*

intramolecular forces *see atomic forces*

intramolecular mechanics *see atomic forces*

intramolecular potentials *see potential energy functions*

intramolecular vibrations *see molecular vibration; molecular vibration in solids*

intrinsic magnetisation *see spontaneous magnetisation*

- **Invar**
  - er↾ar *(Russian)* 3−23716
  - ferrimagnetism of Fe-Ni Invar alloys at low temperatures 3−57555
  - heat treatment influence on C distrib. and microhomogeneity 3−58141
  - local environment effect, ferromagnetic instability 3−52529
  - magnetic props., spin-polarised energy band calc. 3−52341
  - phase diagram and mag. phases from studies on Santa Catharina meteorite 3−24212
  - saturation induction, thermomagnetic anal., electron diffr. meas. *(German)* 3−47477
  - Fe-based amorphous alloys, Invar effect, magnetostriction meas. 3−57738
  - Fe-Cr, Invar anomalies, magnetisation and thermal expansion meas. 3−57727
  - Fe-Ni Invar alloys, mag. props., neutron irrad. effects 3−52471
  - Fe-Ni Invar sputtered films, anomalous mag. behaviour, Mossbauer study 3−52559
  - Fe-P amorphous Invar alloys, magnetoelastic props. and linear magnetostriction 3−3500
  - Fe-Pd alloy, struct. changes before FCC→BCT martensitic transform., Invar effect role 3−39143
  - Fe-Pd alloy, successive martensitic transforms., stress and alloying effects 3−39142
  - Fe-Pd Invar alloys, magnetostriction and field-induced transform. meas. 3−52586
  - Fe-Pd Invar alloys, thermal expansion and magnetisation anomalies 3−52587
  - Fe-Pd(Pt)(Ni) Invar alloys, susceptibility and magnetisation meas. 3−52417
  - Fe-Pt, mag. and magnetovol. props. around γ-α phase boundary 3−52585
  - Fe-Pt Invar alloys, disordered, lattice parameter meas., rel. to magnetovol. effect 3−51540
  - FeNi alloys, theory of Invar effect, forced vol. magnetostriction and bulk modulus 3−14102
  - $Fe_{65}Ni_{35}$, mag. interactions, small angle neutron scatt. 3−3417
  - Fe_3Pt, Invar behaviour and thermoelastic martensitic transform. 3−39140
  - Fe_3Pt, mag. interactions, small angle neutron scatt. 3−3417

Invar continued
  Fe_3Pt, near stoichiometric and stoichiometric, martensitic transform. and shape memory effect, calorimetric obs. 3−39141
  Mn-Ge system, Invar-type, nonferromag., thermal expansion, mag. and elec. props. 3−42821
invariance
  see also conservation laws
  period two-points in two-dimensional maps, construction of invariant curves 3−49266
  renormalisation group, invariance principle, functional self-similarity in quantum field theory 3−21015
  (n, f), parity breaking effects study 3−11321
inverse Nyquist diagrams *see Nyquist diagrams*
inversion layers
  electron layer, polarizability function with collisional broadening effects 3−33651
  equilibrium distributions of the potential and of the carrier in the inversion layer, anal. *(Chinese)* 3−3320
  Langmuir-Blodgett film MIS structures on narrow band-gap semiconductors 3−38487
  MIS structure, surface capacitance under depletion-type static bias 3−18794
  MIS structures, high-frequency capacitance, degeneration and nonparabolicity effects, theory 3−23495
  MOS electron inversion layer, electromagnetic radiation transmission and surface cond. 3−28442
  narrow band-gap semiconductors, optical transitions in inversion layers 3−34055
  quantised Hall effect at millikelvin temps., single-electron approx. and continuum percolation theory 3−43208
  semiconductor-insulator interface, inversion layers, electron density, modified local density approx. 3−3326
  semiconductors, band theory and transport processes, book 3−39
  thermopower in high mag. field 3−13842
  two-dimensional electron lattice with phonon interactions, drag calcs. for MIS struct. 3−2717
  two-dimensional electron systems, correl. induced phase transitions 3−33769
  p-Ge inversion layers, elec. subbands, Shubnikov-de Haas study 3−47403
  InP 2D inversion layer, spin-orbit coupling and weak localisation 3−13913
  InSb MOS struct., magneto-polarons in two-dimens. electron inversion layer 3−52263
  p-Si (100) electron inversion layers, two dimens. plasmon dispersion and intersubband reson. 3−13915
  Si (111) and (110) surfaces, optical absorpt. of surface space-charge layers 3−52763
  Si (111) inversion layer, valley phase transition in high mag. fields 3−23451
  Si (111) inversion layer, hot electron effect at low temps. 3−28439
  Si, g-factor and mag. susceptibility, influence of effective pot. 3−57429
  Si inversion layer, cyclotron effective mass, plasmon and impurity effects 3−3329
  Si inversion layers, 2D quantised Hall resistance, electron localisation 3−3302
  Si MOS inversion layers, effective mobility edge and inelastic scatt. time in strong mag. fields 3−43292
  Si MOS structures, inversion layer formation, illumination effects 3−43289
  Si MOSFET, localisation and electron-electron interaction effects 3−23492
  Si MOSFET structs., one-dimens. effects, nonmetal-metal transition 3−3328
  Si, magnetic properties of surface electrons 3−52596
  Si narrow inversion layer, 1-D localisation and interaction effects 3−8589
  Si, oriented superlattices, electronic phenomena 3−13896
  Si, quantised Hall resistance and freq. effect 3−43291
  Si solar cells, induced junction, open circuit voltage limitations due to surface recomb. 3−58537
  Si/SiO_2 interface, 2-D electron gas, cyclotron resonance, memory function and random pot. 3−23497
  $Si/SiO_2/Mg$ inversion layer solar cells, elec. characts. 3−53520
  $Si-SiO_2$ interface, surface inversion current 3−43285
  $Si-SiO_2$ MIS struct., charged impurity effects on inversion layer electrons 3−28443
  $Si-SiO_2$ MOS struct., high-field hole drift vel. in inversion layers 3−13911
invertors
  power conditioning system integrated into utility grid 3−29455
iodine
  see also nuclei with .....
  absorption cell design for He-Ne laser 3−6996
  adsorbed $\sqrt{3}\times\sqrt{3}$-30° overlayer on Ag {111}, LEED struct. anal. 3−38213
  adsorbed layer on Ag(111), photoelectron diffr. calc. 3−3926
  adsorption on Ag (111) and Cu (111) adatom-adatom interactions, XPS and LEED study 3−14439
  atom, $5p^4ns$ and $5p^4np$ (n=6,7) configs., wave functions of intermediate coupling, energy levels, Lande factors 3−31949
  atom, $M_{4,5}N_{4,5}N_{4,5}$ Auger energy shift study in free CsI mol. 3−45911
  atom recombination in liq. state, diffusion theory 3−44049
  CANDU fuel, I, Cs, Te conc. in postulated LOCA 3−45602
  coadsorbed on Pt (100) and (111) with other cpds., struct. and comp., LEED and AES study 3−13640
  concentration determination in blood serum by epithermal neutron activation analysis 3−4336
  crystals, interat. pot. model 3−2462
  electronic transitions, s→d and p→d, at high press., systematics 3−13700
  high pressure phase, hole-metal state, electronic band struct. 3−18615
  inhibition of carbon fibre growth, from naphthalene at 1100°C 3−24105
  interaction with Fe-Cr-Ni surface, superlattice form. 3−2942
  ion, specific adsorption on Ag electrochemical electrode 3−57223
  laser, Iskra IY, 2 Tw, fusion ignition appls. 3−31827
  laser, nanosecond pulse amplifier with 2 kJ single beam output energy 3−12180
  laser, photodissoc., Faraday cell 3−56251
  laser, photodissociation, high efficiency, operating in free-lasing regime 3−27029
  laser, photodissociation, short pulse amplification 3−41817
  laser, photodissociative, single-pulse, two-freq. lasing 3−1617
iodine continued
  laser, photolytically pumped, optical distortion due to gas-dynamic motion 3−56256
  laser, pumping in power stage, radial distribution of excitation 3−12133
  laser gain profile width determ. using stimulated Brillouin scatt. 3−27030
  lasers, optical pumping efficiency improvement 3−56188
  molecular, intracavity gain detect. 3−41805
  molecular laser with broad-band optical pumping by multichannel cumulative discharge of magnetoplasma compressor 3−22120
  molecule, B and X states, pot. curves, Franck-Condon factors and intensity distrib. 3−1429
  molecule, B state, vibr., semiclassical approx. 3−6594
  molecule, B-state, hyperfine predissociation, lifetime meas. of hyperfine sublevels 3−50466
  molecule, centrifugal distortion consts. (D_V, H_V, L_V, and M_V) in anal. of B←X system 3−41551
  molecule, collisionally induced optical double reson., rotational and of D′(2g)-A′(2u) laser transitions 3−11844
  molecule, E-B band, vibr. and rot. const., UV obs. 3−26760
  molecule, ground state molecular constants, Fourier absorption spectroscopy 3−41573
  molecule, long-range pot. energy curves for the 23 states 3−21844
  molecule, photodissoc. and recomb., picosec. dynamics 3−36830
  molecule, pseudopotential SCF MO and ab initio effective pot. calcs. 3−31911
  molecule, resonant three-stage ionisation using dye and N_2 lasers 3−6731
  molecule, vibr. energies, near dissoc. expansions using spectrosc. data 3−55915
  molecules, 17-1 P(62) transition at 520 THz (576 nm), o hyperfine component meas. 3−46195
  molecules, vibr.-vibr. energy exchange, time depend. Schrodinger eqn. calcs. 3−41655
  muonic atom, 2p and 1s state polarisation, muon helicity 3−46102
  nuclear power stations, charcoal adsorbers for radioiodine capture 3−19640
  photodissociation laser amplifier system, characts. *(Korean)* 3−12135
  photolytic cage effect in gases and liquids 3−58435
  polyacetylene:I_2, cis-trans isomerisation, IR absorpt. study 3−44054
  polyacetylene:I_2, elec. cond., electron irrad. effects 3−3183
  polyacetylene:I_2 highly doped films, IR transmission, rel. to isomerisation 3−19131
  polyacetylene:I, elec. cond. meas. 3−38390
  polyacetylene:I, magnetoresist. and Corbino resist. 3−57371
  polyacetylene:I,NH_3, cis to trans conversion during doping, IR spectra study 3−42541
  polyacetylene film, native and I doped, struct., PMR investig. 3−3555
  polyphenylacetylene, undoped and I_2 doped, photoconductivity, carrier generation, transport and trapping 3−28377
  polystyrene, iodine thin films, photoconductivity study 3−43236
  polyvinylfluoride films, I_2 doped, elec. cond. meas. 3−23520
  PWR fuel performance, I escape rates through cladding, steady state consequences *(Japanese)* 3−49939
  radioiodine, various isotopes, foetal thyroid dose from intake by mother 3−29747
  tetraphenyltetrathiafulvalene-I charge transfer complexes and ion-radical salts, electron and cryst. struct. and elec. cond. 3−52121
  TMI-2, radioiodine mass balance study 3−21488
  Zircaloy-2 tubing, I stress corrosion cracking susceptibility, neutron irradiation effects 3−16847
  Ge:^{129}I, nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3−8464
  He-I_2 discharge plasma study 3−2310
  He-I^+ laser, gain meas. 3−41804
  I, energy transfer from O_2, lasing due to spin-orbit transition 3−9344
  I VI, $5s^2\ {}^1S_0$-$5s5p\ {}^{1,3}P_1$ transitions, oscillator strength calcs. 3−21648
  I^-, electron photodetachment thresholds, laser optogalvanic spectrosc. obs. 3−36733
  I-O_2, chemical laser, gain, output energy, numerical modelling 3−56190
  I-O_2 chemical laser, transverse-flow, performance in low gas-flow velocity regime 3−50653
  I+Ar, γγ ang. correl. on-line acquisition, charge exchange cross section 3−50511
  I+HI (MuI), light atom transfer reactions, classical anal. 3−44050
  I+I(Ag) slow collisions, K-shell ionis., impact parameter depend 3−56035
  I+Na, charge transfer collision, electronic degrees of freedom, classical model 3−21900
  I+O_2, rate const., equilib., time depend. I_2 conc. 3−56031
  I+O_2, rate consts. at 298K, flow-tube investig. 3−11933
  I+O_2 chemical laser excitation mechanism, temp. depend. 3−22046
  I_2 dissociation kinetics meas. in presence of $O_2(^1\Delta)$, I chem. laser appl. 3−29310
  I_2 excimer laser, high-energy, optically pumped, 342 nm 3−56243
  I_2 solvent complexes, predissociation and picosecond absorpt. spectroscopy of transient species 3−6733
  I_2+1,2-bis-pyridyl acetylenes, intermol. interactions, visible spectra study 3−24504
  I_2+1,2-bis-pyridyl ethylenes, intermol. interactions, visible spectra study 3−24504
  I_2+Ar^+ collisions, double scatt. simulation 3−11944
  I_2+He collision, excitation and rotational relaxation, quantum mechanical study *(Spanish)* 3−36843
  I_2+methyl chloride, reactive and inelastic processes, fluoresc. 3−11857
  I_2+O_2, I_2 A-X system anal. from IR emission spectrum 3−21757
  $(I_3^-)_\infty$ periodic one-dimens. chain, electronic struct. 3−23366
  $(I_5^-)_\infty$ periodic one-dimens. chain, electronic struct. 3−23366
  $I_2(D^4\Sigma_u^+)$ state, 350-400 nm continuum anal. 3−11860
  I_2(D′-A′) UV laser pumped by wide-band radiation 3−1616
  ^AI, (A=127, 129), Mossbauer isomer shift calibration const. determ. 3−3606
  ^AI, A=123, 125, 131, effect on thyroid function after injection in mice 3−19773
  ^{123}I prod. by photonuclear reactions 3−26232
  ^{123}I, pure isotope preparation 3−34975
  ^{125}I effluent from protein iodinations, activated charcoal filter counting 3−44188
  ^{125}I, encapsulated sources, apparatus and dosimetry for determ. of mammalian cell RBE 3−9801
  ^{125}I interstitial implants in the RIF-1 murine flank tumour, animal model for brachytherapy 3−4567

iodine continued
^{125}I labelled estradiol uptake in tumors having estrogen receptors 3—29369
^{125}I measurement in radioimmunoassay using liq. scintillation counter *(Chinese)* 3—44344
^{125}I photons and other soft X-rays, non-metallic wall-less proportional counter for meas. 3—41330
^{125}I, thyroidal, coincidence counting assay, calibration by Monte Carlo simulation 3—58795
^{127}I, lasing in Zeeman inhomogeneous gain profile, spectral selection in $^2P_{1/2}$-$^2P_{3/2}$ transition region 3—27027
^{127}I Mossbauer spectroscopy, reference standard 3—3600
$^{127}I_2$ HFS signal symmetry investigation method using laser freq. locking techniques 3—21822
$^{127}I_2$ stabilized He-Ne laser, I_2 saturation dispersion effects 3—46193
^{129}I, anal. in environmental materials, milk activity concs. 3—58566
^{129}I, contamination of biosphere, environmental effects 3—29768
^{129}I, gamma ray source vibration, Mossbauer spectrum, quantum beats and sidebands 3—3608
^{129}I in high activity nuclear wastes, deep ocean disposal option 3—886
^{129}I in rabbit thyroids near a nuclear fuel reprocessing plant in Idaho 3—4657
^{129}I in soln., liquid scintillation and NaI(Tl) counting 3—21597
^{129}I, radioactive effluent retention in nuclear facilities, cost-benefit analysis 3—11394
^{129}I, waste management methods 3—34763
^{131}I administration to rats, resulting thyroid tumours 3—29662
^{131}I, effect of small radiation doses during embryogenesis on thyroid gland cells *(Russian)* 3—58742
^{131}I in meadow vole thyroids near Three Mile Island 3—58844
^{131}I in thyroids in meadow voles near Three Mile Island Nuclear Generating Plant 3—58843
^{131}I, thyroid dose factors rel. to thyroid mass values 3—15239
I* anti-Stokes Raman laser, UV and VUV laser emission 3—12116
I^*+O_2, rate consts. at 298K, flow-tube investig. 3—11933
KBr:I, F-centre accumulation efficiency, temp. depend. *(Russian)* 3—56888
KCl:I, electron irrad., exciton decay, Frenkel defects, optical absorption study 3—8425
KCl:I, electron irrad., impurity exciton prod., optical absorpt. and luminesc. studies 3—43576
KCl:I, exciton decay to Frenkel defects, tunnel recharge *(Russian)* 3—57287
KCl:I, F-centre accumulation efficiency, temp. depend. *(Russian)* 3—56887
O_2-I active medium, kinetics of physical processes 3—6959
O_2-I CW chemical laser emitting at 1.315 μm, energetics analysis 3—27028
Si:^{129}I, nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3—8464
Si:Te, I, ion implanted, impurity levels, Hall effect and elec. resist. studies 3—43102
ZnS:I, defect creation by impurity doping, luminesc. and ESR study 3—43617

iodine compounds
rechargeable solid electrolyte cells with Cu ion conductor, $Rb_4Cu_{16}I_{7-\delta}Cl_{13+\delta}$ and TiS_2 cathode 3—34684
ICN, direct I doublet transitions using Stark modulation spectroscopy 3—6688
ICl, $B^3\Pi_0{}^+$ excited state, rot. and hyperfine struct. 3—1333
IF, $B^3\Pi(0^+)\rightarrow X^1\Sigma^+$ lasing from collisionally pumped states 3—37010
IF electron beam pumped laser characts. 3—37005
IF, fluoresc. and lasing in blue-green region, optical pumping 3—22045
IF produced in situ in mol. beam expt., laser spectroscopy, vibr.-rot. anal., hyperfine struct. 3—6595
IF, pseudopotential SCF MO and ab initio effective pot. calcs. 3—31911
IF_3, pseudopotential SCF MO and ab initio effective pot. calcs. 3—31911
IF_5, pseudopotential SCF MO and ab initio effective pot. calcs. 3—31911
IHI, 3-dimens., bound state on purely repulsive pot. energy surface, var. calcs. 3—31917
IHI, vibr. stabilisation, new possibility of chemical bonding 3—24483
IHI, vibrationally adiabatic mols., 3-dimens., bound state 3—31918
Ta_2ISe_8, cryst. struct. determ. 3—22840

ion-atom collisions *see atom-ion collisions*

ion beam effects
see also ion-surface impact; ionoluminescence; plasma-beam interactions
alloys, ion irrad., subsurface composition changes at high temp. 3—2621
alloys, ion irrad.-induced segregation, surface modification 3—2825
alloys, supercond., quenching by ion bombard., laser and electron irrad. 3—57459
amorphous binary alloys formation by ion mixing, struct. difference rule 3—28004
amorphous target, ion irradiated, energetic ion scattering, Monte Carlo simulation 3—51671
atomic redistribution during ion irrad., atomic mixing 3—2620
bombardment-diffused coatings and ion beam mixing, review 3—28167
chalcogen and related alloy films, photocontraction effect 3—7919
composition depth profile due to multidirectional ion bombardment 3—21533
cytogenetic effects in Chinese hamster cells RBE coeffs. of accelerating He, C and Ne ions *(Russian)* 3—34897
divinyl-benzene polymer, thin film deposition by electron and ion beam induced polymerisation 3—39042
fast ions traversing foils, K-shell charge exchange, equilibration lengths 3—42660
film growing by electron-beam-deposition, ion bombard. effect on props. 3—28997
forebrain, damage after heavy ion irrad., comparison with γ-irrad., rabbit expts. 3—9672
fusion reactor first wall, extended local mixing model for H retention and isotope exchange 3—17041
fusion reactor first wall, in-pile T permeation expt. 3—21507
fusion reactor first wall, T permeation calcs. 3—21508
fusion reactor first wall candidates, surface deformations energy depend. of He bombard 3—41318
fusion reactor material, dimensionless transport parameter for max. H inventory and release 3—17045
fusion reactor plasma-wall interaction simulator, factors affecting dynamics 3—17046

ion beam effects continued
fusion reactor wall coating, low-Z, D trapping and re-emission during ion bombardment 3—17040
graphite, erosion due to energetic ion bombardment, room temp. to 4000K 3—26449
graphite, implanted with D, trapped states, chem. sputtering, thermal desorption 3—26448
graphite, pyrolytic, implanted He retention, re-emission and thermal desorption 3—21509
graphite, pyrolytic, reaction of atomic H, hydrocarbon form., synergistic effect of Ar ion bombardment 3—26447
ion beam technology, usable limit of new materials *(Japanese)* 3—39047
ion implantation damage not removable by annealing, identification method 3—33276
ion scattering, study of radiation damage in metals and semiconductors 3—28958
layered solids, ion beam induced mixing, mechanism 3—28006
LiF cryst., colour centres prod. by H^+ bombardment, lasing action 3—32368
light ion irradiation, radiation damage and imbedded atom profiles, computer simulation 3—51672
low Z wall coatings for JET, deuteron trapping meas., report 3—11487
material modification, by ion beam techniques 3—43700
metal, He implantation investigs. using monoenergetic positrons 3—24046
metal, slow ion stopping power, exchange-correlation approx. 3—51678
metal ion source for metallic surface metallurgy 3—16444
metallic glasses, ion irradiated, surface structure 3—37972
metallic thin film, ion-bombarded, formation of texture 3—28016
metals, void lattice form., neutron and ion irrad. effects 3—37971
metastable material form. by ion implantation, conf., Boston, USA (Nov. 1981) 3—31
methane, stopping power and average energy to form an ion pair for 42 MeV O^{6+} ions 3—22568
1,4,5,8-naphthalenetetracarboxylic dianhydride thin film, cond. changes induced by Ar^+ ion beam irrad. 3—8540
negative ion neutraliser, plasma targets generation 3—51330
nickel phthalocyanine thin film, cond. changes induced by Ar^+ ion beam irrad. 3—8540
oxidation processes using ion beams, review 3—8111
3,4,9,10-perylenetetracarboxylic dianhydride thin film, cond. changes induced by Ar^+ ion beam irrad. 3—8540
plasma and ion beam processing, conf., Yorktown Heights, NY, USA (June 1972) 3—17
PMMA surface, modified by ion bombardment, charact. using noncontact dielec. technique 3—52725
polyethyleneterephthalate film, heavy ion irrad., etching, pore dias. 3—26593
polyimide: Cu complex films, etching and elec. props. 3—57443
propane, stopping power and average energy to form an ion pair for 42 MeV O^{6+} ions 3—22568
pyro-graphite, high energy ion irradiation, ESR study 3—28701
quartz, ion and laser beam effects, SAW study 3—51674
radiobiological properties compared of protons, neutrons, heavy ions and pions 3—44292
radiobiology, in vivo, of heavy ions 3—44289
radiobiology, molecular and cellular, of heavy ions 3—44288
rare earth intermetallic compounds, surface strain removal by ion beam planing 3—34508
retina, struct. damage by heavy ion irrad. 3—15167
retinal photoreceptor cells, effects of heavy ions, anal. of DNA damage, rabbit obs. 3—53724
rhabdomyosarcoma tumours, rat, irrad. in vivo with extended-peak Si ions, cell survival obs. 3—19782
semiconductor, radiation defect formation mech. during ion bombardment 3—8109
semiconductors, nature of pulsed beam annealing, review 3—56937
semiconductors and semicond. devices, charge collection on junction nodes from ion tracks 3—38464
skin cells, mouse foot, C ion beam irrad., response across Bragg peak 3—58745
steel, alloy, irrad. damage, electron, heavy-ion and fast-neutron, correl. 3—27976
steel, austenitic stainless, Cr-Ni (15, 15 wt.%) ion irradiated, void-assisted grain boundary migration 3—33313
steel, austenitic stainless, He embrittled, modelling high temp. mech props. 3—19398
steel, austenitic stainless, Ti modified, void swelling due to C^+ ion bombardment 3—22947
steel, austenitic stainless AISI 314, ion bombardment pretreatment, oxidations obs. by AES and ellipsometry 3—43979
steel, stainless, austenitic, He implanted, trapping and surface permeation of D 3—17038
steel, stainless, He ion bombardment, blistering obs. 3—21512
steel, stainless, implanted D retention and release, dynamic meas. 3—21505
steel, stainless, membrane, re-emission of implanted D^+ from back surface 3—17047
steel, stainless, type 304, ferromagnetic-paramagnetic transform., irrad. induced 3—23628
steel, stainless, type 304, implemented D movement, simulated fusion reactor conditions 3—17049
steel, stainless, type 304 and 316, He^+ irrad., surface roughness factor of blistered and exfoliated surfaces 3—21513
steel, stainless, type 304LN, D trapping and re-emission, fusion reactor wall relevance 3—17044
steel, stainless, type 304LN, He damaged, D retention and detrapping energy 3—17050
steel, stainless, type 316, fatigue failure, effects of multienergy ion bombardment, neutron irrad. and stress/temp. cycling 3—24336
steel, tool and stainless, ion irrad.-induced Sn diffusion, Mossbauer study 3—13561
surface topography, ion beam induced, surface diffusion 3—2618
SYNROC, leaching, $^4He^+$ and $^{84}Kr^+$ beam effects 3—41167
tissue-equivalent gases, methane-based, stopping power and average energy to form an ion pair for 42 MeV O^{6+} ions 3—22568
transition metal alloys, ion irrad. induced amorphisation or dislocation network form. 3—2631
trimethylaluminium thin film, decomposition induced by electron, ion and photon beams 3—4285
vacuum, electron and ion technologies, conf., Varna, Bulgaria (Sept. 1981) 3—25688

ion beam effects continued
- Vacuum Group, Institute of Physics, conf., Chester, England (March 1982) 3-40318
- yeast, heavy-ion effects, survival and recovery in vegetative cells of different sensitivity 3-19777
- yeast cells, heavy ion effects, induction of canavanine-resistant mutants 3-29647
- AG, heavy ion bombarded, thermal spike effect in sputtering 3-33316
- Ag, defect production, binary-collision simulations 3-33312
- Ag film on Cu, Ar^+ and N^+ implanted, temp. evolution, model calcs., energy loss 3-57010
- Al alloys, radiation blistering from He^+ and D^+ simultaneous irradiation 3-45691
- Al film, H^+ implantation and blistering, density distrib. profile 3-46983
- Al film, He ion irrad., He bubble form. 3-22949
- Al film, ion-beam corrosion and acoustic emission 3-51673
- Al film, ion-irradiated, defect production, residual resist. 3-33312
- Al, implanted with He, bubble density and press. 3-21510
- Al/Ag multilayer films, ion beam mixing, conc. depth profiles, He backscatt. study 3-2625
- Al/Sb layers, ion beam mixing, backscattering spectra study 3-2626
- Al/Sb multilayer films, ion beam mixing, conc. depth profiles, He backscatt. study 3-2625
- Al_2O_3/Cr system, Fe^+ ion irrad. prep. of ceramic alloys, mech. props. 3-4000
- Al_2O_3/Zr system, Fe^+ ion irrad. prep. of ceramic alloys, mech. props. 3-4000
- Au foil+Si(Cl), equilibrium charge state distribs. of fast ions 3-32190
- Au/Ag epitaxial struct., metastable phase form. by pulsed beams and ion beam mixing 3-2627
- Au/Co multilayer system, metastable phase form. by ion beam mixing 3-57002
- Au/Si multilayer film, metastable phase form. on ion irrad., Si diffusion 3-2624
- Au/Si multilayer struct., metastable phase form. by ion mixing 3-2628
- Au-Si detectors, degradation characteristics from high doses 3-50155
- C foil+Si(Cl), equilibrium charge state distribs. of fast ions 3-32190
- C foils, light element impurity content 3-27965
- C, implanted D retention and release, dynamic meas. 3-21505
- C, ion-induced release of D, plasma-wall interactions 3-17043
- C, radiation damage effect on D trapping and re-emission 3-17042
- CO_2, stopping power and average energy to form an ion pair for 42 MeV O^{6+} ions 3-22568
- $CaUO_4$, fission fragment irradiation 3-18354
- CdS, ion-bombarded layers, reflection spectra *(Russian)* 3-38889
- CdS:Na^+ ion irrad., ^{4}He backscattering orientation dip depend. *(Russian)* 3-14427
- Co-Mo, metastable electron cpd. form. by ion irrad. 3-42684
- Co-P films, amorphous, struct. and mag. props., effect of heat treatment and ion irrad. *(Russian)* 3-27843
- Cr thin film, sputter deposited on Cu, laser and ion beam mixing 3-57242
- Cr/Cu layer system, Ar ion implantation-induced intermixing, Cr precipitation 3-2622
- $Cr(CO)_6$ thin film, decomposition induced by electron, ion and photon beams 3-4285
- Cu, cascade region evolution during thermal spike 3-33306
- Cu, defect production, binary-collision simulations 3-33312
- Cu, ion bombarded by Ar^+, cone formation, SEM study 3-42679
- Cu, ion bombardment induced preferential orientation, influence of ion species 3-33319
- Cu, irrad. with He^+ and D^+, depth distrib. of bubbles and fracture 3-21511
- Cu, irradiated by 200 keV D^+, ring of blisters, stress distrib. 3-37967
- Cu/Al film system, short- and long-range ion-beam mixing, influence of interfacial oxide 3-37966
- Cu/Au thin layer system, ion irrad.-induced atomic mixing 3-2623
- Cu/W thin layer system, ion irrad.-induced atomic mixing 3-2623
- Cu-Cr, metastable alloys, RF sputtering deposition ion-beam mixing effects 3-3955
- Cu-Fe, coherent Fe particles, ion irrad., martensitic transformation and mech. wave formation obs. 3-53049
- Fe (110), oxidation by O_2 and H_2O vapour, ion irrad. effects 3-29216
- Fe, corrosion resistance, ion beam mixing and bombardment diffused coatings 3-28167
- α-Fe, Xe^{2+} ion irrad., dislocation loop damage struct., TEM study 3-42682
- Fe/W multilayer films, metastable state form. by Xe irrad. 3-2630
- Fe-Al, self ion implanted, amorphisation and recrystallisation 3-2420
- Fe-Cr-Mo (9.5, 0.78 wt.%), cavity form., Ni^+ and He^+ irrad., TEM 3-37968
- Fe-Ni-Cr, austenitic, dislocation loops at twin boundaries, ion-irrad. effects 3-2565
- $Fe_{75}B_{25}$ ribbons and sputtered films, ion bombardment amorphisation and props. 3-2416
- GaAs, amorphous, low temp. epitaxial regrowth by ion irradiation 3-38266
- GaAs, compensation by low energy ion irrad., defect diffusion and carrier mobility 3-57001
- GaAs, ion implanted, radiation damage, IR absorption spectra and lattice deformation 3-2619
- GaAs, ion implanted, radiation disorder depend. on type of ion 3-28005
- GaAs layers irradiated by H^+ ions, elec. props. study 3-23517
- GaAs, reactive ion beam etching damage, annealing behavior 3-2617
- GaAs, Z *(Russian)* 3-38889
- GaAs:Se, defect struct. after Se implantation through Si_3N_4 encapsulant layer 3-18322
- $(GaSb)_{1-x}Ge_x$, metastable, RF sputtering deposition ion-beam mixing effects 3-3955
- $(Gd,Bi)_3(Fe,Ga)_5O_{12}$ epitaxial film, nuclear tracks from Xe and U ion irrad. 3-3493
- $GdAl_2$, intermetallic compounds, surface strain removal by ion beam planing 3-34508
- GdIG epitaxial film, nuclear tracks from Xe and U ion irrad. 3-3493
- Ge, ion irrad., defect accumulation, magnetoconcentration effect study 3-13291
- Ge:Te^+, ion implanted, damage, cryst. orientation depend., TEM, RHEED and channelling studies 3-56999
- GeSe films, ion beam induced densification, species and deposition angle depend. 3-13647
- He distribution, high Ni-alloy using TEM for radiation effects 3-41310

ion beam effects continued
- He irradiation of H_2O/CO_2 ice mixture, formaldehyde prod. rate 3-19531
- InP epilayers, process-induced defects, photoluminesc. and DLTS study 3-43089
- InP ion implanted amorphised layers, epitaxial regrowth, RHEED, TEM, backscatt. and X-ray studies 3-2994
- InP:Fe, defect state induced by ion irrad. or annealing, optical transient current spectroscopy study 3-43090
- InSb, ion implantation, enthalpy of formation and stability 3-42637
- InSb:Ge(Cd)(Zn), H ion irrad., conduction type inversion by isochronous annealing 3-43180
- LiF, heavy ion irrad., defect struct. and mech. props. 3-8108
- LiF, thermolum. response to ions, gamma-rays and X-rays 3-38927
- $LiNbO_3$, ion and laser beam effects, SAW study 3-51674
- $MgUO_4$, fission fragment irradiation 3-18354
- Mo, chemically deposited, He ion irrad. 3-28013
- Mo, H and He ion bombardment, effect on He accumulation 3-8110
- Mo, He ion irrad., small angle X-ray scatt. 3-28012
- Mo, high energy He^{2+} irrad., lattice parameter change 3-33320
- Mo surface, N_2^+ bombardment, N diffusion in MoNx film, Auger effect study 3-28014
- Mo-Ru amorphous superconducting films formed by ion mixing 3-57446
- $(Mo_{0.6}Ru_{0.4})_{1-x}B_x$ amorphous sputtered film, superconductivity and elec. resist., ion irrad. effects 3-47446
- N_2, stopping power and average energy to form an ion pair for 42 MeV O^{6+} ions 3-22568
- NaCl crystals, ion excited, electron emission and point defects 3-8048
- $Na_2U_2O_7$, fission fragment irradiation 3-18354
- Ni, corrosion resistance, ion beam mixing and bombardment diffused coatings 3-28167
- Ni, H and He ion bombardment, effect on He accumulation 3-8110
- Ni, implanted with He, bubble density and press. 3-21510
- Ni, implanted with He, bubble obs. using small-angle X-ray scatt. 3-21514
- Ni, iron irrad., uniaxial tensile stress effect on swelling *(Russian)* 3-22944
- Ni/Si layers, pulsed ion beam annealing, silicide phase form. 3-2632
- Ni/Si struct., metastable phase form. by pulsed beams and ion beam mixing 3-2627
- Ni-Cr thin film, sputter deposited on Cu, laser and ion beam mixing 3-57242
- Ni-Mo, metastable electron cpd. form. by ion irrad. 3-42684
- Ni-Nb, metastable electron cpd. form. by ion irrad. 3-42684
- $NiSi_2$ film, non-irradiated, recrystn. 3-18580
- NiTi, self ion implanted, amorphisation and recrystallisation 3-2420
- $Ni_{33}Zr_{67}$ glass, He^+ irradiation effects on surface topography and microstructure 3-57181
- $PbMo_6S_8$ thin films, supercond., prep. and irradiation induced disorder effects 3-38564
- PbTe thin film, elec. props., ion bombardment effects 3-52277
- Pd, surface recomb. coeff. of H, implications for H recycle in Tokamaks 3-21506
- Re films, ion-irrad., residual resist., supercond., transition temp. and struct. disorder 3-8610
- Si, amorphized by ion implantation, fast scanned electron and laser beam induced explosive crystn. 3-56821
- Si amorphous sputtered films, deposition influence on props. 3-52934
- Si devices, appl. of ion beam mixing to electrical contacts 3-28167
- Si, diffusion of Au during low energy Ar^+ bombardment 3-2887
- Si for VLSI, implant gettering and ion beam detect. of generation impurities 3-42633
- Si, grain boundary impurity distrib., SIMS and ion bombard. studies 3-51625
- Si, ion bombardment, low energy, long range effect 3-33321
- Si, ion implanted, short time annealing methods, review 3-51638
- Si, ion irrad., melting and dislocation trapping 3-2568
- Si MOS structure and diffused junctions charge collection meas. for energetic ions 3-38465
- Si, SIMS depth profiling of light impurities, broadening effects 3-38992
- Si solar cell struct., ion beam hydrogenation effects 3-8112
- Si solar cells, polycryst., chem. and ion beam etch studies rel. to elec. characts. 3-53561
- Si, surface reactions with XeF_2, gaseous reaction products, ion bombardment effects 3-53444
- Si wafer, ion beam irrad., melting, resolidification, dislocations, TEM obs. 3-57003
- Si:H, amorphous films, sputtered thin film growth 3-24127
- Si:H amorphous films, reactive sputtering, ion bombardment morphology control 3-28990
- Si:In, recoil implanted, electric quadrupole interaction, ^{111}Cd TDPAC study 3-43473
- Si:P, buried layer profile broadening by ion beam mixing, backscatt. study 3-8084
- Si:P, implant profile computation with depth-dependence diffusion 3-18331
- Si:P, planar dechannelling of energetic ions at edge dislocations 3-47007
- Si:P,Sb, O ion bombardment-induced diffusion, conc. profiles 3-13551
- Si/Cr struct., silicide form. by ion irrad. backscatt. and X-ray study 3-2629
- Si/metal interface, H^+ and He^+ irrad. damage 3-42685
- Si/Ni struct. silicide form. by ion irrad. backscatt. and X-ray study 3-2629
- Si/Pt struct., silicide form. by ion irrad. backscatt. and X-ray study 3-2629
- Si-SiO_2 interface, ion beam induced atomic mixing, Monte Carlo calc. 3-2990
- SiC, He^+ ion irrad., surface structure meas., fusion reactor wall appl. 3-33543
- Si_3N_4 thin films, He^+ ion irrad., elec. cond. 3-43307
- SiO_2 film, Ar ion sputtering and Si 2p core level shift 3-43682
- SiO_2 films, neutral traps induced by He^+ beam lithography *(Japanese)* 3-38336
- SiO_2, vitreous, stress relax. on irradiation 3-22946
- $Sr_2U_3O_{11}$, fission fragment irradiation 3-18354
- $TbAl_2$, intermetallic compounds, surface strain removal by ion beam planing 3-34508
- Te, ion implantation amorphisation, Mossbauer study 3-2418
- Ti alloys, bombardment-diffused wear resistant coatings 3-28167
- α-Ti:N, ion implanted, N diffusion, ion and proton bombardment effects 3-51848

ion beam effects continued
  Ti-Al-V (6, 4 wt.%), single- and dual-ion irrad., radiation-induced precip. 3−28007
  Ti-Au metallic glasses formed by ion mixing 3−7920
  Ti-Au metastable electron cpd. form. by ion irrad. 3−42684
  TiC, chem. sputtering yields on H^+ bombardment, methane prod. 3−26444
  TiC low-Z coatings for fusion reactor, surface erosion and re-emission behaviour under H and He ion bombardment 3−21524
  TiC(N) low-Z coatings for JT-60, thermal shock testing 3−21525
  UO_2, surface damage due to mech. polishing and ion bombardment, channelling meas. of thermal recovery 3−34510
  U_3O_8, fission fragment irradiation 3−18354
  V-Ti (20 wt.%), fate of implanted He 3−28008
  W film, H^+ implantation and blistering, density distrib. profile 3−46983
  WO_3 amorphous film electrochromic cell under heavy Li ion injection, optical characts. 3−24036
  YIG epitaxial film, nuclear tracks from Xe and U ion irrad. 3−3493
  YIG films, ion irradiated, healing behaviour of nucl. tracks, mag. and optical props. 3−22945
  P-$ZnGeAs_2$, H^+ irrad., elec. resist. and Fermi level 3−43173
  $ZnIn_2S_4$:Ne, ion irrad., photoluminescence, relationship to intrinsic defects 3−3811
  ZnSe, N^+ implanted, radiation damage wrt dosage and annealing 3−33314
  Zr, irradiation by 100 keV Ne ions, simulation of neutron irradiation growth and creep 3−37970
  Zr-Nb (2.5 wt.%), irradiation by 100 keV Ne ions, simulation of neutron irradiation growth and creep 3−37970

ion beam lithography
  line fabrication, ion beam technology, areas of research *(Japanese)* 3−36127
  SiO_2 films, neutral traps induced by He^+ beam lithography *(Japanese)* 3−38336

ion beams
  see also beam-foil spectra; beam-foil spectroscopy; energy loss of particles; ion beam effects; ion optics; ion-surface impact; mass spectrometers; particle accelerators; sputtering
  acceleration-deceleration systems, transport characts. of intense ion beams *(Chinese)* 3−55733
  charge neutralised ion beam propag. in transverse mag. field 3−37662
  charged particle beams transported through dense plasma, current instability 3−7757
  collectively accelerated hevy ions, charge state meas. by Thomson spectrometer 3−45740
  current-carrying plasma channels for intense ion beam transport, theory 3−6487
  edge field influence of quadrupole mass spectrometer on ion beam 3−30960
  fast ion beam spectroscopy, current trends 3−49505
  filamentation instability in heavy ion beams 3−6448
  focusing, edge of field effects and aberrations *(Japanese)* 3−36931
  fusion targets, ion-driver, beam production acceleration, transport and focussing 3−1069
  heavy ion beam+atomic gas, collisionally excited few-electron ions prod. 3−41662
  heavy ion beam slowing down in ionized metal target, inertial fusion appl. 3−11493
  heavy-ion acceleration optimal regimes in a linear accelerator with asymmetric variable phase focusing 3−26505
  HIBALL, heavy ion beams for ICF 3−55597
  high-current electron beam shape control and heavy-ion beam generation in dielectric channels 3−17121
  high-current ion beams in Novosibirsk Institute of Nucl. Phys. 3−6466
  high-power electron and ion beam, conf., Palaiseau, France (June-July 1981) 3−5501
  hollow ion beam, high-intensity beam prod. and focusing 3−11585
  ICF anal. using light ion beam 3−6446
  ICF of ablative pellets using voltage shaped ion beam, numerical study 3−50047
  ICF research by light ion beams 3−6444
  inductive storage for particle beam prod. and plasma implosions 3−17067
  injector unit for JT-60, extraction of 70 A ion beam 3−55601
  intense charged particle beams, book 3−10541
  intense ion beam diodes for inertial fusion 3−6479
  intense ion beam handling in magnetised plasma 3−6447
  intense ion beam source development expts. 3−6484
  intense ion beams, propag. in straight and tapered z-discharge 3−42413
  intense pulsed light-ion beam, generation, focusing, propag. and target irradiation 3−6480
  ion-optical system, double-focusing, linear approx. 3−41752
  JT-60 Tokamak, neutral ion beam injector 3−17063
  large current ion beams, elec. meas. of current, error estimation 3−5818
  light ion beam fusion, beam transport by z-discharged plasma channel, computer simulation 3−50039
  light ion beam fusion, beam transport by z-discharged plasma channel, sausage instabilities 3−50040
  light ion beams, intense, energy determination by BN nuclear activation 3−50090
  light ion prod. and focusing with pinch-reflex diodes 3−6481
  light-ion beam prod. with low impedance generators 3−6482
  light-ion ICF, system requirements 3−6445
  linear ion accelerator, HF beaming matching at input with spatially uniform focusing 3−41350
  low energy intense ion beams, transport in acceleration-deceleration system 3−45742
  low-emittance neutralised light ion beams for ICF 3−6450
  m=0 unstable Z pinch, ion beam formation 3−56724
  magnetically insulated diode with cryogenically refrigerated anode for ion beam prod. 3−6486
  magnetically insulated ion diode, applied-B_θ, parameter studies 3−10940
  measurement and microfabrication, focusing and polarising electric field lens *(Japanese)* 3−39430
  microbeams, ion beam technology, areas of research *(Japanese)* 3−36127
  MINIMAFIOS pulsed ion source for completely stripped ion beam prod. *(French)* 3−17146
  multiple scatt. with absorpt. 3−45735
  multiply charged ions, generation and annihilation 3−26545
  neutralised ICF light ion beams, electron temp. requirements 3−6449

ion beams continued
  neutralised ion beam emission using Penning cell with ring-shaped cavity 3−50108
  nondischarge magnetoplasma ion source 3−54815
  parameters meas. at neutron generator target 3−11579
  pinch reflex diodes for proton and deuteron accel. 3−6483
  plasma, surface ionisation, production of ion beams, analysis charge exchange *(Dutch)* 3−51398
  plasma gun, ion extraction conditions influence on ion beam parameters 3−49500
  positive low-energy ions detection, using microchannel plate in reflection mode 3−31862
  proton beam, intense, pulsed, geometric focusing 3−10941
  proton beam, intense pulsed, in Nagaoka ETIGO-I, dynamics 3−11569
  proton current meas. using prompt gamma ray diagnostics 3−17154
  pulse-powered plasma focus ion beams meas. by Thomson spectrometer 3−18130
  pulsed, from reflex triode, focal spot size, anode plasma uniformity effects 3−41379
  pulsed ion beams produced by inverse reflex tetrodes, electrode-structural effects 3−6485
  reflected beam sputter source, optics, emittance and brightness 3−45730
  simulation code, ion and electron space charge concurrent correction 3−56132
  subDoppler spectroscopy in ionic beams *(Spanish)* 3−17245
  surface and thin film technology appls. *(German)* 3−45245
  time resolved beam profile monitor for intense ion beams 3−17162
  transport system, fundamental laws *(Japanese)* 3−36932
  trapping of ions from high energy sources into RF ion trap 3−12008
  Ar^+, metastable ion beam fractions measured for different ion sources 3−40717
  $^{12}C^+$, projected range distributions low-intermediate-high energies, Al target 3−51676
  Cs^+, amplification factors of a particle multiplier for singly charged alkali ions 3−40727
  Cs^{+1} beam diagnostics, electron beam probe for charge neutralisation studies 3−31861
  Ga, photoionic beam production by stepwise ionisation of atoms by laser radiation 3−26706
  H^- intense beam prod. study 3−30963
  H^- ion beam for fusion reactor neutral beam injection 3−41305
  He ion beam, collectively accelerated, diagnostics by solid-state nuclear track detector 3−11554
  $^4He^+$, projected range distributions, low-intermediate-high energy, Al target 3−51676
  K^+, amplification factors of a particle multiplier for singly charged alkali ions 3−40727
  Kr^+ beams stopping power meas., time of flight method, in Al, Ti, Ni, Zr, Ag 3−51677
  Kr^+, metastable ion beam fractions measured for different ion sources 3−40717
  Li^0, multi-MeV beam for confined α particle diagnostics 3−46782
  Li^+, amplification factors of a particle multiplier for singly charged alkali ions 3−40727
  N^+ ion beam, C-foil excited, K-shell vacancy fraction, target thickness dependence 3−21892
  Na^+, amplification factors of a particle multiplier for singly charged alkali ions 3−40727
  $^{16}O^+$, projected range distributions low-intermediate-high energies, Al target 3−51676
  Rb^+, amplification factors of a particle multiplier for singly charged alkali ions 3−40727
  Xe neutral beam, appl. to plasma diagnostics 3−46781

ion chambers *see ionisation chambers*

ion counters *see counters*

ion cyclotron resonance heating *see plasma heating*

ion cyclotron resonance spectra *see mass spectra*

ion cyclotron resonance spectroscopy *see mass spectroscopy*

ion density
  see also plasma density
  effect of recombination on ion density in alternating current corona discharge 3−7817
  electron bombardment ion thruster charge-exchange plasma flow 3−42375
  ionosphere topside, nonstationary polar wind rel. to H^+ and O^+ densities 3−15719
  CO^+ column density in Orion MC-1 effect of ions loss by reaction with H_2 3−15974
  Cs^{+1} beam diagnostics, electron beam probe for charge neutralisation studies 3−31861

ion emission
  see also field ion emission; secondary ion emission; thermionic ion emission
  cyclotetramethylene tetranitramine, mol. cryst., explosive, fracto-emission obs. 3−14446
  glass fibres, positive ion emission accompanying fracture, time-of-flight meas. of mass-to-charge ratio 3−19397
  pentaerythritol tetranitrate, mol. cryst., explosive, fracto-emission obs. 3−14446
  polybutadiene, glass-beam filled, positive ion emission in fracture, mass/charge ratio and kinetic energy 3−8947
  polymer fibres, positive ion emission accompanying fracture, time-of-flight meas. of mass-to-charge ratio 3−19397
  Al_2O_3 coatings, positive ion emission accompanying fracture, time-of-flight meas. of mass-to-charge ratio 3−19397
  Si surface, laser pulse irrad., electron and ion emission mechanisms 3−38967

ion engines
  see also aerospace propulsion; rockets
  plasma propagation simulation near an electrically propelled spacecraft 3−12965

ion etching *see sputter etching*

ion exchange
  anion exchange resin type AV-17 radiation-thermal degradation primary products formation kinetics 3−6402
  bacteriorhodopsin, light induced H^+ activation, H^+ transfer equilib. in phenol-carboxylate H-bonds 3−58585
  benzoic acid dimer, H^+ transfer, ab initio calc. 3−11661
  electroplating production, effluent purification and recycling by combined electrocoagulation and ion exchange *(Russian)* 3−53416

- **ion exchange** continued
  - fibres, low-OH, MCVD, without barrier layer using $OH \rightarrow OD$-exchange substrate tubes 3–37195
  - glass, ion exchange treated, props. meas. using stratorefractometer *(Czech)* 3–53311
  - glass fibre, electrocond., with metallic grain dispersion, prep. by ion exchange and reduction method 3–14551
  - gradient index rod lens with high numerical aperture, ion exchange fabrication 3–37150
  - gradient optical wave guides, form. in glass substrates 3–32476
  - integrated optical ring resonators made by Ag ion exchange in glass 3–56347
  - Langmuir-Blodgett film, purple-membrane containing, deposition on lipid and paraffin impregnated filters 3–38262
  - optical glass, K8, hardening by low-temp. ion-exchange method 3–27178
  - proton injection into ice using photoisomerisation, model for H^+ transport in proteins and membranes 3–34787
  - radioactive resins, incineration in fluidised bed 3–41136
  - strip waveguides, multimode, ion-exchanged, field-induced index profiles 3–12324
  - surface stress meters utilising the optical waveguide effect of chemically tempered glasses 3–42200
  - $BaO-Ga_2O_3-SiO_2$ glasses, ion exchange, effect of added ions 3–34617
  - CdS, electroconversion to Cu_xS for thin film solar cells 3–4294
  - $Cu\ (CN_6)Fe_2O_4$, appl. to Cs removal from liquid waste 3–41135
  - $LiNbO_3$ waveguide fabrication by immersion in $AgNO_3$ and $TlNO_3$ 3–1816
  - Na_2O-SiO_2 and $Na_2O-Ga_2O_3-SiO_2$ glasses, ion exchange, effect of added ions 3–34617
  - Na_2O-SiO_2 glass, Na^+/Ag^+ interdiffusion from melt 3–33518
  - $20Na_2O.Al_2O_3.(80\text{-}x)SiO_2$, Cu incorporation by Cu-Na ion exchange 3–33117
  - $20Na_2O.10CaO.xAl_2O_3.(70\text{-}x)SiO_2$, Cu incorporation by Cu-Na ion exchange 3–33117
  - SiO_2, ion-exchanged Na-free gel, growth of $KClO_4$ and $RbClO_4$ single crystals 3–3938
  - $SiO_2-B_2O_3-Al_2O_3-ZrO_2-Li_2O-Na_2O$ glasses, uniform refractive index model, obtained by Li^+ for Na^+ ion exchange 3–23905
  - $SiO_2-Li_2O(Na_2O)-Al_2O_3-P_2O_5-Sb_2O_3$ glass, for ion-exchange strengthening 3–29053
  - $SiO_2-Li_2O(Na_2O)(K_2O)$, glass, Cu ion, exchange diffusion layers, ESR and optical study 3–52605
  - WO_2, thermally evaporated layer, xerogel struct. 3–18579
- **ion exchanging** *see ion exchange*
- **ion excited X-ray emission** *see ion microprobe analysis*
- **ion implantation**
  - *see also semiconductor doping*
  - alkaline earth oxides, $Li^+(Na^+)$ ion implantation defects, EPR, luminesc. and optical absorpt. study 3–2584
  - amorphous target, ion irradiated, energetic ion scattering, Monte Carlo simulation 3–51671
  - atomic mixing in the depth-dependent diffusion approximation 3–18332
  - blistering behaviour during ion beam heating of solids 3–28015
  - bronze, phosphor, friction and wear behaviour, effect of ion implantation 3–34491
  - bubble lattice form. 3–37971
  - ceramic compacts, ion implanted, anomalous cantilever deflection due to blistering 3–47891
  - crystallisation and amorphisation from melt at interface rel. approaching 20 m/sec. 3–56943
  - cutting tool hardening by ion implantation 3–19346
  - damage not removable by annealing, identification method 3–33276
  - diamond: N(B)(C), ion implanted, mechanical props. enhancement 3–4154
  - diamond, ion implanted, X-ray diffr. contrast, wavelength depend. 3–37736
  - diamond, ion-implanted, point defect production and interaction 3–42635
  - diamond, synthesis, internal growth by C^+ implantation 3–47766
  - elastic and inelastic energy deposition distribs. during ion implantation 3–56997
  - electrodes, ion implantation, high voltage vacuum gap breakdown characts. increase 3–18173
  - ferrite-garnet film, ion implanted region, cylindrical mag. domains on boundary, static characteristics 3–14098
  - fusion reactor first wall, extended local mixing model for H retention and isotope exchange 3–17041
  - fusion reactor first wall, in-pile T permeation expt. 3–21507
  - fusion reactor first wall, T permeation calcs. 3–21508
  - fusion reactor material, dimensionless transport parameter for max. H inventory and release 3–17045
  - fusion reactor plasma-wall interaction simulator, factors affecting dynamics 3–17046
  - fusion reactor wall coating, low-Z, D trapping and re-emission during ion bombardment 3–17040
  - garnet bubble films, ion implanted, strain distrib. using X-ray dynamical theory 3–47532
  - garnet bubble layers, Fe, Ga, As implanted, annealing mechanism, FMR study 3–33982
  - garnet film, ion implanted, charged walls and coupled bubbles motions 3–28667
  - garnets, implanted, bubble motion control by charged walls 3–52571
  - glass, sputtering process during ion implantation 3–33279
  - graphite: B(p)(As), ion implanted, lattice damage and implant distrib., SEM, STEM and AES study 3–2597
  - graphite:F^+, ion implanted, metallic IR reflectivity and elec. cond. 3–2444
  - graphite, implanted with D, trapped states, chem. sputtering, thermal desorption 3–26448
  - graphite, ion implanted lattice damage and annealing, Raman spectra study 3–3746
  - graphite, pyrolytic, implanted He retention, re-emission and thermal desorption 3–21509
  - implant uniformity study, ion implanter design considerations 3–51641
  - impurity distribution prediction, ion range statistics by a Fourier series 3–51650
  - iron garnet films, epitaxial, ion implantation effect on surface struct. 3–8074
  - magnetic stripe domain stretching in ion implanted channels, bubble memory appls. 3–28666
  - material modification, by ion beam techniques 3–43700
- **ion implantation** continued
  - metal, He implantation investigs. using monoenergetic positrons 3–24046
  - metal-amorphous semicond. contact, diffusion theory 3–33792
  - metal-metalloid amorphous cpd. formation by ion implantation, expt. study *(German)* 3–2585
  - metal-SiO_2:Ar^+-semiconductor structure, charge trapping and storage 3–28450
  - metallic films, ion bombardment rel. to chem. activity, basic rules and mechanisms 3–58313
  - metals, He self-trapping in metals, kinetic theory 3–51861
  - metals, ion implantation by O or N cpd., phase form. 3–2581
  - metals, ion implantation effects on mechanical props., review 3–27957
  - metals, ion implantation-modified, mech. props., Dept. of Defence appl. 3–2589
  - metals, ion implanted, ultra microhardness tests 3–4139
  - metals, ion implanted or laser irrad., corrosion and electrochemical behaviour 3–29215
  - metals, metalloid ion implantation, amorphisation, irrad. dose effect, crit. energy density model, TEM and electron diffr. studies 3–47002
  - metals, pulse melted, metallurgy and microstructure 3–58116
  - metastable material form. by ion implantation, conf., Boston, USA (Nov. 1981) 3–31
  - metastable surface alloys produced by ion implantation, laser and electron beam treatment, review 3–27961
  - MOS structures, ion implantation induced electron traps, photoinjection studies 3–23484
  - optical grating couplers, ion implanted, for optical waveguides, fabrication 3–37175
  - Pearson IV distrib. study for profile reconstruction 3–33290
  - Permalloy films, vacuum evaporated, ${}^+H_2$ ion implantation effects on coercive force and magnetoresist. 3–38492
  - photovoltaic science, conf., Kyoto, Japan (May 1982) 3–49073
  - poly(p-phenylene sulphide), ion implanted, elec. cond. enhancement 3–3207
  - polyacetylene:F^+, ion implanted, metallic IR reflectivity and elec. cond. 3–2444
  - practical applications, improvement in wear and corrosion resistance 3–9233
  - radioactive alkaline isotope deposition on single crystal surface 3–47745
  - range distributions, Pearson distributions applicability 3–37937
  - recoil implanted atoms, low dose depth distribution, theory 3–27956
  - semiconductor, laser processing, review 3–8099
  - semiconductor processing, ion implantation appls. 3–27958
  - semiconductors, CW CO_2 laser annealing and alloying *(Chinese)* 3–27986
  - semiconductors, ion implanted, laser annealing *(Rumanian)* 3–8097
  - semiconductors, laser beam irradiation 3–22937
  - semiconductors and metals, ion implantation and laser treatment, conf., Bombay, India (Feb. 1981) 3–25686
  - silicate glasses, N^+ ion implantation effects, microhardness and refr. index meas. 3–33133
  - silicide contacts, marker motion studies 3–8585
  - SOS film, implanted, furnace annealed, defect struct. 3–8376
  - steel, austenitic stainless, martensitic transform., heavy ion implantation induced 3–42680
  - steel, austenitic stainless, N implantation effects on martensitic transformation 3–4039
  - steel, N-ion implanted, wear rel. to surface hardening 3–53245
  - steel, stainless, austenitic, He implanted, trapping and surface permeation of D 3–17038
  - steel, stainless, D^+ ion bombard., D_2 mol. reemission and D depth distrib. 3–3894
  - steel, stainless, He ion bombardment, blistering obs. 3–21512
  - steel, stainless, implanted D retention and release, dynamic meas. 3–21505
  - steel, stainless, membrane, re-emission of implanted D^+ from back surface 3–17047
  - steel, stainless, Ti and C implanted, friction and wear 3–4153
  - steel, stainless, type 304, implemented D movement, simulated fusion reactor conditions 3–17049
  - steel, stainless, type 304LN, D trapping and re-emission, fusion reactor wall relevance 3–17044
  - steel, stainless, type 304LN, He damaged, D retention and detrapping energy 3–17050
  - steel, stainless 316L, Al, Ti and Sc ion implantation effect on resist. to crevice corrosion 3–58312
  - surface layer modification and ion distrib. *(Japanese)* 3–37942
  - Ag film on Cu, Ar^+ and N^+ implanted, temp. evolution, model calcs., energy loss 3–57010
  - Ag:$He^+(H^+)$ ion-implanted films, Frenkel-type radiation defects form. and annealing 3–13249
  - Al film, H^+ implantation and blistering, density distrib. profile 3–46983
  - Al film, implantation induced He bubble press. and density determ. 3–8381
  - Al, implanted with He, bubble density and press. 3–21510
  - Al, ion, implanted, heavy ion distrib. 3–42640
  - Al, ion implantation by MeV He^+ ions, uniform depth distrib. using absorber tilting 3–46978
  - Al, ion implanted and pure, laser irrad., impurity profiles and heat flow 3–27990
  - Al, Sb ion implanted, precip. after nucleation laser irrad. 3–56960
  - Al thin film, N_2^+ and Ar^+ ion bombarded, elec. cond. 3–28457
  - Al:N, 700-800 keV ${}^{15}N_2^+$ implantation, AlN layers formed, charact. 3–2582
  - Al-Cr-Mo, ion implanted metastable phase form by pulsed laser treatment 3–2604
  - Al-Cu, ion implanted, pulsed electron beam annealing and furnace annealing, RBS and channelling meas. 3–13257
  - Al-Sb ion implanted alloy, nonequilibrium segregation during pulsed laser treatment 3–28110
  - Al-Si:As Schottky barrier diode, barrier height enhancement by ion implantation 3–52223
  - Al-Zr, ion implanted, struct. and mech. props. 3–4051
  - AlGaAs/GaAs heterointerface, compositional fine line patterning by Zn implantation 3–51637
  - Al_2O_3:Cr(Zr), ion implanted, surface struct. and props., annealing effects 3–2948
  - α-Al_2O_3:Cr(Zr)(Ti), ion implantation and thermal annealing, channelling, EPR and microhardness study 3–46972
  - B:C ion implantation form. of B_4C, TEM and electron diffr. study 3–27959
  - Be-B, ion implantation prep., wear resistance and microstructure 3–4152

ion implantation continued
- Bi thin film, N_2^+ and Ar^+ ion bombarded, elec. cond. 3–28457
- Bi_2O_3 thin film, N_2^+ ion implanted, photoconductivity 3–28457
- C, implanted D retention and release, dynamic meas. 3–21505
- C, ion-induced release of D, plasma-wall interactions 3–17043
- C, radiation damage effect on D trapping and re-emission 3–17042
- C:B, ion implantation form. of B_4C, TEM and electron diffr. study 3–27959
- CdTe:Cl(In), ion implanted, heat treated, defect reactions, cathodolum. and pulse laser annealing studies 3–56932
- Ce ions recoil implanted into metallic elements, local mag. moment form. 3–47476
- Cs radioactive ions, implantation into solid materials 3–46976
- Cu, improvement of surface friction and wear 3–43700
- Cu, ion bombardment induced preferential orientation, influence of ion species 3–33319
- Cu, irrad. with He^+ and D^+, depth distrib. of bubbles and fracture 3–21511
- Cu thin film, N_2^+ and Ar^+ ion bombarded, elec. cond. 3–28457
- Cu/Al system, B ion implantation, mechanical props. 3–2647
- Cu-Al-O, ion implanted, mechanical and struct. props. 3–4051
- Cu-Ni, binary alloy form by ion implantation, surface composition and sputtering 3–2587
- $(EuTmCa)_3(FeGe)_5O_{12}$ film, ion-implanted layers, defects study 3–18328
- Fe film, Dy ion implantation at 400 kV, struct. and props. 3–57716
- Fe, implantation behaviour of ^{111}In and ^{103}Ag at low temp., nucl. orientation study 3–18326
- Fe, ion implanted, struct. changes, TEM study 3–33318
- Fe, ion implanted, surface layer characts. 3–56919
- Fe, Sn ion implanted electron beam melting, slip, dislocations, SEM, TEM, RBS and channelling studies 3–56987
- Fe:C, ion implanted form. of Fe_3C, TEM and electron diffr. study 3–27959
- Fe:He, D, ion implanted, D surface permeation and defect trapping obs. 3–33500
- Fe-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3–14038
- Fe-Ti-C, ion implanted friction and wear 3–4153
- $Ga_{1-x}Al_xAs$:N, ion-implanted, $x=0.2$-0.8, photoluminescence studies *(Chinese)* 3–34132
- GaAs (001) and (111), He^+ and Si^+ ion implantation, deform. anisotropy, X-ray diffr. study 3–27963
- GaAs, epitaxial and bulk, $S^+(Si^+)(Se^+)$ implanted, chemical and elec. profiles 3–27968
- GaAs, ion implantation, void form. and swelling, electron microscopy study 3–22926
- GaAs, ion implantation damage annealing with graphite heaters 3–57004
- GaAs, ion implanted, annealing characts., Rutherford backscattering-channelling study 3–33315
- GaAs, ion implanted, EL2 center, defect formation chem. study 3–33663
- GaAs, ion implanted, non-planar solid phase epitaxial growth processes 3–3012
- GaAs, ion implanted, point defect segregation, dislocation struct., annealing 3–33317
- GaAs, ion implanted, pulsed laser annealed, photolum. 3–57977
- GaAs, ion implanted, radiation disorder depend. on type of ion 3–28005
- GaAs, ion implanted, solid phase epitaxy, interface structures and twins obs. 3–33591
- GaAs, ion-implanted and crystalline, laser annealing, surface ripples obs. 3–46990
- GaAs LEC semi-insulating wafers for IC appls., resist. and Hall mobility meas. technique 3–20878
- GaAs MBE, selected-area growth on ion implanted GaAs substrates 3–3958
- GaAs single cryst., damaged surface layer, laser-annealing restoration, 3-cryst. X-ray diffr. 3–42903
- GaAs:Al, spatial distrib. profile of Al form $^{27}Al(p,\gamma)^{28}Si$ resonant reaction 3–46975
- GaAs:B, ion implanted, compensation mechanisms, study 3–33665
- GaAs:Cr, ion implanted, Cr redistribution at surface, elec. fields effects, thermodynamic model 3–46979
- GaAs:Cr, Se, ion implanted, damage annealing, Rutherford backscatt. and TEM studies 3–33311
- GaAs:Cr substrates, Cr conc. distrib., non-destructive determ. 3–33283
- GaAs:Cr(S)(Si)(Se), lattice incorporation of n-type dopants 3–22924
- GaAs:Er, ion implanted, luminescence line profile 3–19187
- GaAs:He, ion implanted, depth distrib. and range parameters for He, SIMS study 3–13252
- GaAs:O(B)(Ne), ion implanted, electron trap EL2, photocapacitance transients study 3–28294
- GaAs:Se, defect struct. after Se implantation through Si_3N_4 encapsulant layer 3–18322
- GaAs:Se, Sn, semi-insulating, AlN capped annealing 3–37940
- GaAs:Si, ion implanted, IR rapid thermal annealing, MESFET appl. 3–8071
- GaAs:Si^+, ion implanted, TEM damage studies and elec. profile meas. 3–47006
- GaAs:Ti, ion implanted, photoluminescence spectra 3–43626
- GaAs;Si, implanted, high temp. thermal and laser annealing, luminesc. data *(Russian)* 3–38888
- GaInAsP/InP DH laser, current blocking layer made by Be implantation 3–12147
- GaInAsP-InP:Be DH laser diodes, Be implantation fabrication 3–37038
- GaN epitaxial films, low press. MOCVD growth, ion implantation and elec. props. 3–47775
- GaP, ion implanted, diagnosis by Raman scatt. and photoluminescence techniques 3–42628
- GaP, ion implanted, highly disordered layers, dangling bonds, ESR study 3–52624
- GaP:Er, ion implanted, luminescence line profile 3–19187
- GaP:H(He), ion implanted, photoelectrochemical meas. 3–42627
- n-GaP:S, proton implanted fabrication, visible and IR waveguiding 3–17615
- GaP:Ti, ion implanted, photoluminescence spectra 3–43626
- Ge, ion implanted, annealing behaviour 3–37939
- Ge, ion implanted, damage to surface, TEM study 3–8106
- Ge:^{129}I (^{125}Te), nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3–8464
- Ge:Te^+, ion implanted, damage, cryst. orientation depend., TEM, RHEED and channelling studies 3–56999
- He deposition profiles from self-shielded alpha sources 3–37943

ion implantation continued
- n-$Hg_{0.8}Cd_{0.2}Te$, ion implanted, elec. props., IR reflectivity diagnostic technique 3–3713
- n-$Hg_{0.8}Cd_{0.2}Te$:$Al^+(Ga^+)$, ion implanted, IR refl. study 3–18327
- n-$Hg_{0.8}Cd_{0.2}Te$:$Mg^+(Zn^+)(Cd^+)$, ion implantation, effect on elec. props., IR refl. 3–8073
- $Hg_{1-x}Cd_xTe$, pure and ion implanted, laser annealed, Hall, cond. and C-V meas. 3–28347
- $Hg_{1-x}Cd_xTe$:B^+, implantation damage, thermal pulse annealing, expt. study 3–8070
- InP:Fe(Cr), ion implant depth profile after annealing, SIMS study 3–8083
- InP:Se, ion implanted, laser and furnace annealing effects on elec. props. 3–56975
- InP:Se^+, ion implanted, multiply scanned electron beam annealing, elec. props., RBS study 3–8102
- InP:Si, ion implanted, and semi-insulating transport props. and defects 3–28383
- InSb, ion implantation, void form. and swelling, electron microscopy study 3–22926
- InSb, ion implantation, enthalpy of formation and stability 3–42637
- InSb, ion implanted, point defect segregation, dislocation struct., annealing 3–33317
- InSb:S, ion implanted, S diffusion, laser annealing and elec. props. 3–38140
- LiF:K, ion implanted, metastable percolation phase form., metal-insulator transition 3–3071
- MgO:$Li^+(Na^+)(K^+)(Rb^+)(Fe^+)(In^+)(Au^+)$, ion implanted, precipitation and defects 3–2827
- MnF_2, dynamic recovery of magnetism in collision cascades after ion implantation, PAD study 3–57667
- Mo films, bias sputtered in Ar/N_2 or N^+ ion implanted, supercond. and elec. props. 3–39032
- Mo silicide formation, self-aligned 3–42625
- $MoSi_2$-Si interface, self-aligned silicide formation by ion implanation through metal film technique 3–51864
- Na_2O-SiO_2:Ar glass, ion implanted, XPS, charge correction method 3–43707
- $Nb_3Al_{1-x}B_x$, struct. and supercond. props. 3–2472
- Ni film, implantation induced He bubble press. and density determ. 3–8381
- Ni film, surface layers formed by Dy ion implantation, mag. props. 3–57717
- Ni, implanted with He, bubble density and press. 3–21510
- Ni, implanted with He, bubble obs. using small-angle X-ray scatt. 3–21514
- Ni, martensitic transform., heavy ion implantation induced 3–42680
- Ni, self ion implanted, pulsed laser irrad., defect-impurity interactions 3–2599
- Ni:He^+, He bubble growth in Ni:He^+, growth curves and bubble distrib. 3–56905
- Ni-Eu, ion implanted, pulsed laser irrad., defect-impurity interactions 3–2599
- Ni-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3–14038
- PLZT ceramic ferroelec., ion implanted, optical imaging and information storage 3–1588
- Pd, surface recomb. coeff. of H, implications for H recycle in Tokamaks 3–21506
- $Pd_{1-x}B_x$, ion implantation prep., amorphisation, elec. props., and supercond. 3–3154
- $Pd_{1-x}Si_x$ ion implantation prep., amorphisation, elec. cond. and TEM study 3–2419
- PtSi formation at Si/Pt interface, substrate damage and impurity effects 3–2988
- PtSi-p-Si Schottky diode barrier height reduction by B^+ ion implantation 3–8559
- Re amorphous film, ion implantation prep., supercond. and elec. props. 3–28467
- ReN film, ion implantation prep., struct., supercond. and elec. props. 3–28467
- Si, amorphised ion implanted single cryst., laser annealing, explosive crystn. obs. 3–42655
- Si, amorphized by ion implantation, fast scanned electron and laser beam induced explosive crystn. 3–56821
- Si amorphized surface, struct. modifications following picosecond laser irradiation 3–56949
- Si, amorphous, laser annealing, explosive crystn., implantation effects 3–42654
- Si, amorphous wafers, ion implanted, thermal recrystallisation annealing, transmission electron diffr., microscopy studies 3–56998
- Si, characterisation of XeCl excimer laser annealing 3–8092
- Si, electron beam annealed, minority carrier diffusion length, solar cell appls. 3–57365
- Si epitaxial layer on O_2^+ implanted substrate, carrier lifetime meas., IC appl. 3–47360
- Si film, on CaF_2/Si structs., cryst. quality improvement by ion implantation and solid phase recrystn. 3–51972
- Si film, polycryst., amorphisation by Si ion implantation, annealing behaviour 3–51982
- Si, films, polycryst., As and P ion implanted, effects of CW and pulsed laser annealing 3–33299
- Si for VLSI, implant gettering and ion beam detect. of generation impurities 3–42633
- Si, high dose N ion implantation, formation of Si_3N_4 buried layers 3–51643
- Si, hollow p-n junction and silicide ohmic contact form. by ion implantation technique 3–13246
- Si IC, bipolar, $FeSi_2$ precip. contamination effect on circuit yield 3–23045
- Si, implanted impurity electron states, hyperfine interaction and channelling studies 3–43076
- Si, implanted or Czochralski grown, rod-like defects, faults and loops, independent form. 3–46968
- Si, impurity gettering of damage generated by ion implantation through SiO_2 layers 3–22948
- Si, ion, implanted, heavy ion distrib. 3–42640
- Si, ion implant damage, rapid annealing using thermal radiation 3–2590
- Si, ion implantation, high energy damage mechanism, theory 3–42626
- Si, ion implantation and pulsed annealing, appl. to solar cell fabrication 3–27960

ion implantation continued

- Si, ion implantation by 11 MeV As ions 3—8076
- Si, ion implantation damage annealing with graphite heaters 3—57004
- Si, ion implantation of C, β-SiC synthesis 3—3993
- a-Si, ion implantation of glow discharge, appl. to solar cell devices 3—58515
- Si, ion implanted, annealing behaviour 3—37939
- Si, ion implanted, annealing using incoherent light 3—56928
- Si, ion implanted, CW CO$_2$-laser annealing, solid-phase epitaxy model *(Chinese)* 3—37955
- Si, ion implanted, dopant redistribution by pulsed laser annealing, particle backscatt. and channelling study 3—33289
- Si, ion implanted, dynamic behaviour of nanosecond pulsed laser annealing, optical studies 3—56939
- Si, ion implanted, ellipsometric spectrum and optical props. 3—28880
- Si, ion implanted, explosive liq. phase crystallisation 3—18222
- Si, ion implanted, form. energy of amorphous layer, calorimetric study 3—42683
- Si, ion implanted, halogen lamp annealing *(Japanese)* 3—46986
- Si, ion implanted, laser annealed, defect struct., electron microscopy anomalies 3—22939
- Si, ion implanted, picosecond laser annealed, recrystn., microprobe Raman anal. 3—51656
- Si, ion implanted, Raman scatt. calcs. during laser annealing 3—57937
- Si, ion implanted, short time annealing methods, review 3—51638
- Si, ion implanted, solid epitaxy, impurity and conc. depend. of growth rate 3—37938
- Si, ion implanted, solid phase epitaxial growth 3—8367
- Si, ion implanted, solid phase epitaxy, interface structures and twins obs. 3—33591
- Si, ion implanted, solid state annealing by incoherent light pulses and multiscan electron beam 3—27997
- Si, ion implanted laser annealing, charact. and solar cell fabrication 3—13269
- Si, light absorpt. effects on Nd laser annealing 3—56951
- Si MIS structs., ion implantation radiation damage, density of surface states study 3—28446
- Si modulation doped structs. using multi-step MBE and ion implantation 3—42630
- Si, monocrystalline, donor generation by halogen implantation 3—51642
- Si, nonequilibrium crystal growth during pulsed laser annealing 3—56942
- Si, p^+ implanted, defect annealing, DLTS *(Chinese)* 3—43060
- Si p-n shallow junctions, ion implanted, gettering effects on leakage currents, MOS VLSI appl. 3—52230
- Si polycrystalline, ion implanted, laser annealed film, characterisation by Raman microprobe 3—3842
- Si, polycrystalline film, ion implanted laser annealing, struct., resist., carrier mobility *(Chinese)* 3—43299
- Si polycrystalline solar cells, elec. props., effect of thermal treatment *(French)* 3—24586
- Si position sensitive detector response to heavy ions 3—41420
- Si, SIMS depth profiling of light impurities, broadening effects 3—38992
- Si solar cell, CW laser annealing and ion implantation 3—19586
- Si solar cells, EFG polycryst., ion implantation and laser annealing prep., SEM characts. 3—24584
- Si solar cells, ion implantation techniques in manufacture 3—51644
- Si solar cells, self-annealed ion implanted, fabrication and props. 3—14938
- Si solar cells fabricated by non-mass-analysed ion implantation 3—53500
- Si solar cells fabricated by ion implantation and short time furnace processing 3—53501
- Si wafers, virgin and implanted, laser beam annealed, point defects, EPR, cyclotron reson., DLTS meas. 3—56957
- Si: As(Sb)(Bi), ion implanted, doping profiles meas. by 200 keV α-particle backscattering 3—24077
- Si:^{11}B, divacancy annealing, electron beam and pulsed ruby laser excitation 3—56986
- Si:^{125}Te (^{129}I), nuclear quadrupole hyperfine parameters, self-consistent-charge extended Huckel calc. 3—8464
- Si:^{75}As, implanted, isothermal annealing study 3—13253
- Si:^{75}As(^{31}P), thin film, thermal stability, effects of ion implantation and laser annealing 3—57249
- Si:Ar, ion implanted, surface states, positron annihilation study 3—19225
- Si:Ar, ion implanted, XPS, charge correction method 3—43707
- Si:As, annealing meas. by optical spectrometry *(Chinese)* 3—13247
- Si:As, B, ion implanted and incoherent light annealed, characterisation 3—56922
- Si:As, electron beam annealing of ion implantation damage 3—42664
- Si:As, ion implantation damage, electron-induced conductivity study 3—8075
- Si:As, ion implanted, damage study 3—2616
- Si:As, ion implanted, flash-lamp annealing, TEM, elec. resist. and Rutherford backscatt. study 3—27979
- Si:As, ion implanted and laser annealed, defect struct., X-ray and TEM studies 3—42650
- Si:As, ion implanted polycryst. low press. CVD film, As lateral diffusivity meas. 3—38125
- Si:As, pulsed X-ray annealing 3—56979
- Si:As polycrystalline films, ion implanted, regrowth due to oxidation drive-in 3—23207
- Si:As$^+$ wafers, rapid annealing with scanning Hg arc lamp 3—13264
- Si:As$^+$(As$^+$), ion implanted, self-interstitial atom interactions 3—2586
- Si:As(B), ion implantation damage, flame annealing, TEM and Van der Pauw studies 3—46970
- Si:As(B), laser annealed, surface electron props. 3—57408
- Si:As(Bi), influence of laser beam homogeneity on regrowth 3—56954
- Si:As(Sb), ion implanted, comparison of solubility limits and elec. activities 3—2583
- Si:As(Sb)(In)(Pb)(Tl)(Bi), ion implanted, metastable solid soln. form., backscatt. and channelling study 3—2588
- Si:Au, impurity gettering using Ar-, O- and Cl-ion implantation, MOS study 3—2594
- Si:B, As, ion implanted and CW laser annealed, Fe-related defect centres 3—47304
- Si:B, ion implant damage and annealing, EPR studies 3—14132
- Si:B, ion implantation damage annealing, etching and ellipsometry study, I^{2}L gate appl. 3—22927
- Si:B, ion implantation through submicron slit at 1 MeV, ion conc. study 3—51639
- Si:B, ion implanted, elec. activation of B ions during solid phase epitaxy 3—2579
- Si:B,As, CW laser annealing, quenched-in defects 3—57313

ion implantation continued

- Si:B,P, ion implantation, diffusion, annealing 3—27962
- Si:B(As), ion implantation through mask window, impurity distrib. study 3—51640
- Si:B(P)(Ar)(Ge)(As)(Bi), ion implanted, characterisation by ellipsometry and channelling 3—46977
- Si:B(P)(As), ion implanted, activation and process characts. of IR rapid isothermal and furnace annealing 3—51652
- Si:Ga, ion implanted, dopant distrib., elec. activity and damage annealing 3—27970
- Si:Ge, ion implanted, Ge ion distrib., X-ray microanalysis 3—8087
- Si:Ge, ion implanted X-ray microanalysis determ. of integrated dose 3—8086
- a-Si:H, As(Cl), ion implanted, IR absorpt. spectra 3—47681
- Si:H$^+$(P$^+$)(Mn$^+$)(Ar$^+$) amorphous film, ion implantation doping, ESR and elec. cond. 3—37944
- Si:He, ion implanted, depth distrib. and range parameters for He, SIMS study 3—13252
- Si:He$^+$(C$^+$)(N$^+$)(Ne$^+$)(Ar$^+$)(Kr$^+$), ion implantation, radiation damage accumulation kinetics 3—37945
- Si:In, ion implant damage recovery, recrystallisation and elec. props. 3—56920
- Si:In, ion implanted, high temp. diffusion and elec. props. 3—57142
- Si:In, ion implanted, thermal annealing, In migration obs. 3—56917
- Si:In, recoil implanted, electric quadrupole interaction, ^{111}Cd TDPAC study 3—43473
- Si:In (Tl) thin films, ion implanted, ionisation energy, photocond. study 3—28378
- Si:In(Sb), ion implanted, defects and solid solubility, solid phase epitaxial growth 3—2826
- Si:In(Sb), ion implanted, solute segregation and solid phase crystallisation dynamics 3—56950
- Si:In(Sb)(Ga)(Bi), ion implanted, morphological instability and cell form. during pulsed laser annealing 3—8093
- Si:Li, diffusion of implanted Li ions, proton and deuteron bombardment effects 3—8265
- Si:O, ion implanted, buried oxide layer, thermal annealing, ion channeling and Rutherford backscatt. study 3—27955
- Si:P, implant profile computation with depth-dependence diffusion 3—18331
- p-Si:P, implanted profile, nondestructive transverse acoustoelec. voltage vs. voltage technique 3—42642
- Si:P, ion implanted, enhanced dopant diffusion 3—13548
- Si:P, ion implanted, impurity redistrib. by annealing under hydrostatic press. 3—38139
- Si:P, ion implanted, laser annealing dynamics, reflectivity and transmission coeff. study 3—37958
- Si:P, ion implanted, light scanning annealing, elec. and defect props. 3—27980
- Si:P, ion implanted, misfit strain overcompensation by dislocation networks 3—47004
- Si:P, ion implanted, pulsed electron beam annealing, SEM and TEM studies and computer simulation 3—51665
- Si:P, ion implanted, solid soln. form. after solid phase epitaxial regrowth 3—57099
- Si:P ion implanted damaged layers, ellipsometric study *(Chinese)* 3—2578
- Si:P MOS structs., trap creation in channel oxides due to ion penetration 3—13910
- Si:P$^+$, ion implanted, refl. dynamic interf. effect by CW CO$_2$ laser annealing *(Chinese)* 3—38789
- Si:P$^+$ ion implanted buried amorphous layers, recrystallisation behaviour 3—27845
- Si:P(As), polycrystalline film, ion implanted, pulsed incoherent light annealing 3—22933
- Si:Sb, ion implanted, annealing with incoherent halogen lamp irrad. 3—2601
- Si:Sb, ion implanted, rapid annealing using radiant light source 3—56929
- Si:Sb (100), ion implanted, metastable Sb doping, channelling study 3—33277
- Si:Sb supersaturated laser annealed ion-doped layers, decompostion, elec. cond. study 3—42786
- Si:Te, I, ion implanted, impurity levels, Hall effect and elec. resist. studies 3—43102
- Si:Te, impurity redistribution after pulsed laser annealing, Rutherford backscatt. study 3—42641
- Si/SiO$_2$ struct., ion implantation form., microstructure, TEM and SEM study 3—2992
- Si/SiO$_2$ substrate, B implantation, ion range profiles, computer calc. 3—28020
- Si-Mo interface, MoSi$_2$ formation by ion implantation 3—33583
- Si-Nb interface, NbSi$_2$ formation by ion implantation 3—33583
- Si-SiC structure formed by C ion implantation into n-Si, elec. characterisation *(French)* 3—13919
- Si-SiO$_2$, ion implanted, defect study 3—28444
- Si-SiO$_2$ MIS struct., Si$^+$ ion implantation defect energy levels meas. 3—3322
- Si-SiO$_2$ MOS structure, B implanted, incoherent light pulse annealing 3—23496
- Si+N, laser annealed, deep level study 3—28299
- α-SiC:Al$^+$, LED, ion implanted, radiative recomb., electrolum. study 3—57978
- SiC:Cr, ion implanted, amorphous struct. and mechanical props. 3—4138
- SiO$_2$ films, form. by O ion implantation, stoichiometry elec. props. 3—27964
- SiO$_2$, reflectivity, ion implantation effect 3—19091
- SiO$_2$:Ar, ion implanted, XPS, charge correction method 3—43707
- SiO$_2$:As, ion implanted, electron traps microscopic location, avalanche injection study 3—43061
- SiO$_2$:B, vitreous, ion implanted, optical props. study 3—3677
- SiO$_2$:B films, dopant conc.-depth SIMS study 3—27967
- SiO$_2$:B ion implanted layer, capture cross section of induced traps, elec. field depend. 3—38402
- SiO$_2$:H/D, ion implanted, solubility, exchange and retention 3—2596
- SiO$_2$:P$^+$, laser irrad. effect on film struct., IR transmission spectroscopy 3—18575
- (SmLuCa)$_3$(FeVSi)$_5$O$_{12}$ garnet film for ion implanted bubble devices, prep. and high temp. bubble propagation 3—38659
- Ti, B implanted, cavitation erosion behaviour 3—58257
- α-Ti:N, ion implanted, N diffusion, ion and proton bombardment effects 3—51848
- Ti-Al-V B implanted, cavitation erosion behaviour 3—58257

ion implantation continued
- Ti-V-Al, implanted He behaviour mech props., temp. depend. 3—26463
- TiC low-Z coatings for fusion reactor, surface erosion and re-emission behaviour under H and He ion bombardment 3—21524
- V metastable surface alloys by Ga, Se, Bi and In ion implantation 3—42636
- V-Si-C ion implanted sputtered films, supercond. transition temp. 3—3362
- W film, H^+ implantation and blistering, density distrib. profile 3—46983
- W, He implantation effects 3—41309
- W:H, ^{181}Ta Mossbauer emission spectroscopy 3—19028
- WC, cemented, metalloid ion implanted, microhardness meas. 3—47930
- WC, Co-cemented, ion implantation effects on mechanical props., review 3—27957
- $(YBiCa)_3(FeSi)_5O_{12}$ epitaxial garnet films, mag. props. 3—33945
- YIG epitaxial film, Mossbauer studies 3—28747
- YIG film, magnetostatic volume wave propag., ion implantation effect 3—43412
- YIG film, Ne implanted, variation of saturation magnetisation 3—38653
- YIG thin films, ion implanted, saturation magnetisation, temp. dependence meas. 3—14090
- $(YSmCaTm)_3(FeGe)_5O_{12}$ films, H_2^+ ion implanted, conversion electron Mossbauer spectroscopy study 3—57831
- $(YSmLuCa)_3(FeGe)_5O_{12}$ ion implanted films, Kerr rotation study 3—34076
- (YSmTmGd)(FeGaAl) epitaxial garnets, mag. props. 3—33944
- ZnS:I(O)(Ag), defect creation by impurity doping, luminesc. and ESR study 3—43617
- ZnS:In, ion implanted, struct. transitions, luminescence and electroreflection study 3—2780
- ZnS:In^+, ion implanted, photoluminescence and photoconductivity 3—8881
- ZnS:Mn sputtered films, Mn conc. effect on photoluminescence 3—43593
- ZnSe, N^+ implanted, radiation damage wrt dosage and annealing 3—33314
- ZnTe:Cl(Br)(Cu)(Ag), ion implanted, donor related edge luminescence 3—52856

ion lasers
- CW, electron beam pumping, 1 to 6 keV 3—7002
- electron beam pumped CW ion lasers, glow discharge electron beams appl. 3—42472
- generation of extreme UV and soft X-ray 3—36992
- hollow cathode ionic metal vapour laser *(Rumanian)* 3—17482
- metal vapour lasers, HV hollow cathode discharge tube for excitation source 3—1665
- plasma-recombination short-wavelength lasers, gain scaling 3—46201
- radially inhomogeneous discharge, ion lasing 3—17488
- safe operation rules of lasers *(Chinese)* 3—37058
- shortwave, plasma production in solid target, energy requirements 3—27015
- soft X-ray gain in plasma, meas. and anal. 3—37000
- VUV plasma lasers, calibration and diagnostic techniques 3—12196
- Al II, III segmented plasma recomb. lasers employing foil electrodes 3—12125
- Ar detachable pulsed laser *(Chinese)* 3—41866
- Ar ion ILA-120 laser for high-sensitivity polarimeter 3—40668
- Ar ion laser, liq. surface acoustic holography appl. *(Chinese)* 3—22106
- Ar ion laser, operation at 3181 Å in UV region *(Chinese)* 3—22039
- Ar ion laser, SHG of 257 nm radiation in external ring cavity 3—22157
- Ar ion laser and ring dye laser, intracavity sum freq. mixing as tunable CW UV source 3—1698
- Ar ion laser pumped dye laser emission to 9500 Å 3—22052
- Ar ion laser with narrow emission line 3—7019
- Ar^+ CW laser amplifying medium, phase-conjugate refl. by four-wave mixing 3—41933
- Ar^+ laser, loss, gain and saturation parameters meas. at 4880, 5145 Å *(Chinese)* 3—36994
- Ar^+ laser, passive mode locked, to pump double mode locked rhodamine 6G laser 3—22136
- Ar^+ laser light effects on optical props. of As_2S_3 film *(Chinese)* 3—24034
- Ar^+ tunable frequency stabilised laser 3—12175
- Ba^+ laser, photo-autoionisation pumped 3—12118
- Ba^+, optical inverted, 4-wave parmetric mixing, coherent radiation generation 3—12131
- Bi hollow cathode ion laser, 680.9, 660.0, 571.9 nm Bi II lines, 1.1711 μm Bi I line 3—27008
- C IV 116.8 nm recombination laser 3—12117
- Ca II segmented plasma recomb. lasers employing foil electrodes 3—12125
- Cd vapour arc, CW recombination laser action 3—41807
- Cu II CW IR laser, using water-cooled helical hollow cathode device 3—32382
- Cu II segmented plasma recomb. lasers employing foil electrodes 3—12125
- Ga II hollow cathode discharge, CW laser action obs. at 6335, 7199 Å 3—27007
- He-Cd II laser, upper level decay rate meas., axial mode competition at 533.7, 537.8 nm 3—37006
- He-Cd II rod anode laser tube, characteristics meas. 3—7006
- He-Cd lasers, lifetime and reliability 3—1660
- He-Cd lasers in commercial systems 3—1659
- He-Cd^+ laser, white light prod. 3—27078
- He-Cd^+ positive column laser, 441.6 nm emission, excitation mechanism anal. 3—22042
- He-Cd^+ positive column laser discharge, Cd II lines radial profiles meas. 3—50648
- He-I^+ laser, gain meas. 3—41804
- He-Kr hollow cathode laser investigation *(Chinese)* 3—41862
- He-O_2^+, population inversion obs. 3—22043
- He-Sr plasma, convective gas flow, energy rating and kinetics 3—27016
- He-Zn II laser, upper level decay rate meas., axial mode competition at 492.4 nm 3—37006
- He-Zn^+ ion laser using hollow-cathode discharge with high-voltage operation 3—32377
- Kr II ion laser, lifetimes for radiative transitions 3—50644
- $NH_4H_2PO_4$, intracavity sum freq. mixing as tunable CW UV source 3—1698
- O II 397.3 nm and 398.3 nm UV laser transition 3—50650
- S III 363.2 nm UV laser transition 3—50650
- Sr^+ recombination laser, transversely excited 3—36998
- Xe detachable pulsed laser *(Chinese)* 3—41866

ion lasers continued
- Xe II ion laser, lifetimes for radiative transitions 3—50644
- Xe-ion, injection source of injection-locked rhodamine 6G dye laser with four-mirror ring config. 3—32376
- Zn II CW laser oscillation of 758.8 nm line in HF discharge *(Russian)* 3—46198

ion lenses *see lenses*

ion lithography *see ion beam lithography*

ion microanalysis
- *see also ion microprobe analysis*
- depth profiling, of light isotopes *(Japanese)* 3—38981
- NiO films grown by sputter oxidation *(Japanese)* 3—19455
- Si:K, doped in low energy at beams, K conc. depth profiles *(Japanese)* 3—18330

ion microprobe analysers *see ion microprobe analysis*

ion microprobe analysis
- *see also ion microanalysis*
- aerosol composition in remote atmospheres of the northern and southern hemispheres 3—9518
- coal, coal conversion products and petroleum, metal specification, nucl. techniques appl. 3—9381
- energetic ion beam techniques in near-surface materials analysis 3—29356
- ion beam measurement and microfabrication *(Japanese)* 3—39430
- microprobe ISFET sensors for extracellular ion-activity meas., Na and K sensitivity 3—10943
- neutral particle beam effects, expt. study *(Chinese)* 3—44081
- PIXE anal., charge build-up elimination on insulating samples 3—44077
- PIXE anal. conditions for sweat anal. 3—44356
- PIXE analytical technique using target intermediate air press., plant material obs. 3—53472
- pottery shards, PIXE anal. 3—16454
- proton induced γ-ray emission method for heavy element determ. 3—44078
- sample preparation in PIXE analysis of biological materials 3—9739
- silicates, quantitative anal. by ion microprobe, calibration of standards 3—19542
- thick targets containing light elements ($Z \leq 12$), quantitative anal. by PIXE 3—44080
- Ag-Cu-Ag targets, Cu foreign atoms depth profile parameters determ. 3—29339
- CdTe-HgTe multilayers, MBE growth, surface studies 3—8981
- CraAs:Cr, semi-insulating, Cr lattice location, ion channelling and PIXE studies 3—56916
- Fe, anodic oxide film form. in neutral $Na_2B_4O_7$-H_3BO_3 soln., effect of Cl^- ion 3—34532
- $Ga_{1-x}Al_xAs$ epitaxial layers, Al conc., Auger spectroscopy, ion microprobe anal., photoluminescence meas. 3—23993
- In, L X-ray prod. cross sections for 120 to 400 keV H^+ bombardment 3—14395
- $In_{2-x}Sn_xO_{3-y}$/p-InP solar cells, form. by ion beam deposition, interfacial props. 3—9422
- Si for VLSI, implant gettering and ion beam detect. of generation impurities 3—42633

ion microscopes
- *see also field emission ion microscopes; ion microscopy*
- scanning, ion channelling effects and ion beam writing with 60 keV Ga^+ probe 3—5912
- scanning ion microscope, heavy ion probes appl., review 3—20953

ion microscopy
- *see also field emission ion microscopy; ion microscopes*
- bibliography of microscopic equipment, methods, appls. and related topics 3—5521
- freeze substitution sample preparation for ion microscopy of plant tissue 3—53898
- scanning ion microscopy with 60 keV Ga^+ probe, ion channelling effects 3—40723

ion mobility
- *see also electrolytic ion mobility; ionic conduction in solids*
- hexafluoropropene gas, ion mobility and recombination and effective ionisation coeff. 3—7688
- influence of humidity on variation of ion mobility with life time in atmospheric air 3—56766
- interaction potential including core sizes, numerical calc. *(Japanese)* 3—12813
- liquid crystals, dielec. friction and ionic mobility 3—52715
- mobility near conducting boundary 3—12055
- PET, new measurement of ionic mobility in insulators by thermally stimulated currents 3—13833
- plasma diagnostics by laser beam, using single frequency scanning laser 3—51383
- polar liquids, dielec. friction and ionic mobility 3—52715
- polysulfone, heat resistant, action of mobile ion in high temp. region *(Korean)* 3—57122
- quadrupolar traps, 3-dimens., ion motion characts., Hill eqn. appl. *(French)* 3—54812
- silicates, liquid, pressure enhancement of ion mobilities from computer simulation studies to 800 kbar 3—29915
- synthetic aromatic insulating liquid, elec. conduction and dielectric loss obs. 3—28762
- wake, periodic flow instabilities 3—37449
- AgCl-NaCl(KCl)(CsCl)(RbCl), fused salt conc. cells, transference transport numbers 3—47137
- ArO^+, test of ground state pots. by ion mobility data 3—6563
- CH_n^+, (n=0 to 3), interstellar mols., mobility in Ar and He meas. 3—12811
- CaF_2-LaF_3, defect phases, anion mobility, NMR study 3—13525
- Cl^- in N_2, ion mobility rel, to inelastic energy loss 3—32840
- Cl^- ion mobility in N_2, mass spectrosc. meas. 3—56642
- $CsNO_3$-KNO_3, internal mobility ratio, Klemm method meas. 3—47138
- $He^+ + N_2$, reaction rate consts., ion mobilities temp. depend ion drift tubes study 3—39367
- ^{3}He, liquid, ion mobility and interaction with quasiparticles 3—28179
- Li^+, ion mobility in Kr, Xe, mass spectrosc. meas. 3—56642
- $N_2^+ + 2N_2$, reaction rate consts., ion mobilities temp. depend ion drift tubes study 3—39367
- NH_2^+, drift vel. in He meas. 3—39366
- NO^+ in N_2, ion mobility rel, to inelastic energy loss 3—32840
- NO_2^- in N_2, ion mobility rel, to inelastic energy loss 3—32840
- NO_3^- in N_2, ion mobility rel, to inelastic energy loss 3—32840

ion mobility continued
$NaNO_3$-KNO_3, internal mobility ratio, Klemm method meas. 3—47138
$O_2^+ + 2O_2$, reaction rate consts., ion mobilities temp. depend ion drift tubes study 3—39367
SF_6 ions in SF_6 parent gas, interaction pots. from mobility data 3—51271
Tl^+, ion mobility in Kr, Xe, mass spectrosc. meas. 3—56642
$(U, Pu)O_{2+x}$, nonstoichiometric nuclear fuel, diffusion processes and surface effects 3—55137
UO_{2+x}, nonstoichiometric nuclear fuel, diffusion processes and surface effects 3—55137

ion-molecule collisions
see also charge exchange; ion-molecule reactions
aldehydic C-H force constant, ion-mol. collision, trans lone-pair effect, CNDO calcs. 3—55842
alkali metal fluorides+C ions, multiple ionisation, electron transfer, K X-ray emission spectra 3—32186
alkaline earth fluorides+C ions, multiple ionisation, electron transfer, K X-ray emission spectra 3—32186
Balmer series H level population in electron beam, ion+mol. reaction role 3—14865
dissociationless scattering for diatomic molecule, theory 3—32165
few-electron recoil ions, X-ray and Auger electron emission 3—41663
gaseous targets+Ne ions, CC X-rays from radiative electron capture 3—11935
ion+polar molecule, collision rate coeff., pot. energy function 3—26815
linear dipolar molecule+ion, CT rate const., rot. Stark effect and asymptotic value effect 3—9313
nonpolar molecule-ion low velocity collision with quadrupole interaction, perturbed rot. states expansion 3—11953
Sigmund scaling test for low collision energies 3—21865
spherical-top molecules+ions, vibr. excitation, semiclassical model 3—17364
tetrafluoromethane+Na^+, vibr. excitation, time of flight spectra 3—26821
$Ar^+ + I_2$, double scatt. simulation 3—11944
Ba ion+H_2, Ba II metastable state quenching, laser spectroscopy 3—36716
Cl^-+trichlorobromomethane, electron attachment cross sections in energy range 0-100 meV, pot. energy curves 3—6751
$D^- + N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3—46059
$H^- + H_2(N_2)$, detached electron energy spectra 3—50495
$H^- + N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3—46059
H^++methane, electron capture in close collisions 3—21905
$H_2 + C^{q+}(O^{q+})$, electron capture cross-section meas. in low energy collisions 3—6760
$H_2 + H^+(He^+)(He^{2+})$, 0.25-2.0 MeV, total electron capture cross sections 3—26837
$H_2 + He^+(H^-)(He^-)$, 0.3-3.5 MeV, total one-electron-loss cross sections 3—26836
H_2+He(Li)(C)(N)(O) ions, nondissociative ionisation and dissoc. ionisation 3—6756
H_2+ion, impact ionisation scaling cross sections 3—36851
$He^{2+} + N_2$, electron capture from gas target atoms, 0.7-4.5 keV 3—46064
$K^+ + CsCl$ collisions, rot. energy transfer distrib. and classical differential cross sections in CPST limit 3—32171
Li ions+H_2, excitation and ionisation cross sections Born approx. 3—11959
$Li^+ + CO$ collisions, rot. energy transfer distrib. and classical differential cross sections in CPST limit 3—32171
$Li^+ + N_2$, rot.-vibr. excitation, IOS approx. appl. 3—56047
$N_2 + He^+(Li^{2+})(C^{5+})(O^{7+})$, electron loss from fast one-electron ions 3—1471
Na^++tetrafluoromethane, impulsive energy transfer in electronically adiabatic low energy collisions 3—56053
$O^{6+} + H_2$, charge exchange collisions at 60 keV, captured electron distrib. 3—32195
$O_2^+ + O_2$, low energy electron transfer reactions, semiclassical energy conserving trajectory 3—41672
$OH^-.H_2O + NO_2$, reaction cross sections, charge transfer and collisional dissoc. 3—19515
$SF_6^- + SF_6$, electron attachment cross sections in energy range 0-100 meV, pot. energy curves 3—6751

ion-molecule reactions
C $O_2^+ + 2O_2$, three-body assoc. reaction, temp. depend. study 3—24498
first and second-row bases, complexes with H^+, Li^+ and Na^+, ab initio MO calcs. 3—9316
flow reactors, venturi inlets diagnostics studies 3—9321
methane+H^-, pot. energy hypersurface, force consts., SCF theory 3—53367
methylamine+NH_2^+, charge and H^+ exchange, rate consts., branching ratio 3—39366
nonactin+$Na^+(K^+)(NH_4^+)$ interaction, energy balance 3—14848
olefins, electrophilic addition, substituent effects, ab initio MO calcs. 3—55803
pentene, ion-molecule reaction, photoionisation mass spectrometry 3—19513
pyrene, quenching by metal ions, intersystem-crossing rate const. 3—6704
stilbazolium betaine, protolytic reaction and photochem. isomerisation, ps laser photolysis study 3—44060
$C^+ + Cn \rightarrow C_{n+1}^+$, n-depend. of reaction rate in interstellar space 3—30443
C^++hydrocarbons reactions at 296K, C-C bond formation 3—34609
CN^++neutral molecule, reaction channels and rate coeffs., ICR meas. 3—58405
C_2N^++neutral molecule, reaction channels and rate coeffs., ICR meas. 3—58405
$CO^+ + H_2$, rate constant meas. rel. to loss of CO^+ in Orion MC-1 by reaction with H_2 3—15974
$COH^+ + CO \rightarrow (CO)_2H^+$, 3-body ion assoc. reactions, chaperone participation 3—44043
$Cl^- + Cl_2 \rightleftarrows Cl_3^{-*}$, dynamics, quasiclassical trajectories calcs. 3—58412
$Co(CO)_3NO$ fragment ions, gas phase chem., appl. as chem. ionis. reagents 3—58402
$D^+ + H_2 \rightleftharpoons H^+ + HD$, rate coeffs. and enthalpy change, appl. to interstellar matter 3—25304
$F^- + HF$, pot. energy hypersurface, force consts., SCF theory 3—53367
$H_3^+ + CO$ reaction, HCO^+ and HOC^+ formation 3—24501
$H_3^+ + HD \rightleftharpoons H_2D^+ + H_2$, rate coeffs. and enthalpy change, appl. to interstellar matter 3—25304

ion-molecule reactions continued
$H_5O_2^+ + H_3O_2^-$, neutralisation reaction; pot. energy hypersurface, polarisation model 3—9315
$He^+ + N_2$, reaction rate consts., ion mobilities temp. depend ion drift tubes study 3—39367
methaniminyl ion+N_2 clustering, appl. to Titan atm. 3—24503
methyl ion+$HD \rightleftharpoons$methyl-d_1 ion+H_2, rate coeffs. and enthalpy change, appl. to interstellar matter 3—25304
Mo fluorides, electron affinities determ. by meas. equilib. const. of ion-mol. reactions involving negative ions 3—1509
$N^+ + CO$, flowing afterglow, prod. state distrib. laser induced fluoresc. study 3—39386
$N^+ + O_2$, product branching, IR chemiluminesc. of vibr. excited NO^+ 3—39358
$N_2 + N_2H^+ \rightarrow (N_2)_2H^+$, 3-body ion assoc. reactions, chaperone participation 3—44043
$N_2 + O^+$ resonant charge exchange reactions in upper atmosphere 3—10106
$N_2^+ + 2N_2$, reaction rate consts., ion mobilities temp. depend ion drift tubes study 3—39367
$N_2^+ + 2N_2$, three-body assoc. reaction, temp. depend. study 3—24498
$O^- + HF$, flowing afterglow, prod. state distrib. laser induced fluoresc. study 3—39386
O_2-$SO_2(N_2)$, O^- ion conversion and detachment reactions, study technique 3—24502
$O_2^+ + 2O_2$, reaction rate consts., ion mobilities temp. depend ion drift tubes study 3—39367
$O_2^+ + H_2 \rightarrow O_2H^+ + H$, $H_2^+ + O_2$, state selected ion-molecule reactions by TESICO technique, vibronic-state depend. of cross sections 3—14849
$O_2^+ + O_2$, low energy electron transfer reactions, semiclassical energy conserving trajectory 3—41672
$OH^-.H_2O + NO_2$, reaction cross sections, charge transfer and collisional dissoc. 3—19515

ion optics
see also ion beams; ion microscopes; mass spectrometers
beam transport system, fundamental laws *(Japanese)* 3—36932
charged particles passing through the edge fields of sector magnets 3—32301
cylindrical electrostatic analyser for mass spectrometry with accelerator 3—447
deuteron beam, pulsed, collected from grid-fixed plasma boundary, density distrib. 3—11573
electric field lens, for focusing and polarising, ion beam measurement and microfabrication *(Japanese)* 3—39430
electron beam guiding ion source, ion optical props. 3—26539
electrostatic analyser for wide beams and its ion-optical props. 3—6866
focusing, edge of field effects and aberrations *(Japanese)* 3—36931
four-electrode multiple-slit system for ion beam form., ion opt. props. 3—1109
ion cyclotron frequency, elec. field inhomogeneity depend. 3—32300
magnetic coaxial lens system for hollow ion beams 3—41369
magnetic spectrometer, optics investigation using α-particle source 3—1122
proton beam of micron size, system for shaping 3—11577
reflected beam sputter source, optics, emittance and brightness 3—45730
relativistic, in crossed toroidal elec. and inhomogeneous mag. fields 3—56131
simulation code, ion and electron space charge concurrent correction 3—56132
sources, broad-beam, used in sputtering, technology 3—456
third order trajectory for crossed toroidal elec. and inhomogeneous mag. fields *(Chinese)* 3—1545
third order trajectory in crossed toroidal elec. and inhomogeneous mag. fields *(Chinese)* 3—1546
third-order trajectory calc. in crossed toroidal elec. and inhomogeneous mag. field 3—5910
third-order trajectory in crossed electric and mag. fields, ion-optical theory 3—16438

ion plating
electron microscope specimen coating techniques, review 3—10957
high-vacuum ioniser for thermal-ionic precip. of films 3—8996
ion beam technology, usable limit of new materials *(Japanese)* 3—39047
LSI, ion beam technology, for deposition and epitaxy *(Japanese)* 3—39046
material modification, by ion beam techniques 3—43700
metal, high melting point, ion plating *(German)* 3—29018
optical coating, ion beam appls. 3—14505
plasma nitriding, low press. method 3—14764
protective coatings, heat and corrosion resistant, material modification techniques 3—43700
protective coatings for silvered glass mirrors 3—17602
sheet plasma, high efficiency, for ion plating of large area *(Japanese)* 3—47781
step coverage in evaporated films, ion bombardment appl. 3—8994
Au, ion plated film on Ni and Fe substrates tribological props. and XPS studies 3—14746
BN films, ion-activated formation, microstruct. and hardness props. 3—52978
C amorphous films, ion beam deposition and struct. 3—3969
C films, ion-activated formation, microstruct. and hardness props. 3—52978
TiN coatings deposited by ion and plasma assisted techniques on to nodular cast Fe 3—14483
TiN ion plated coating on plasma nitrided tool steel, abrasive wear 3—14747

ion probe analysers *see ion microprobe analysis*

ion probe microanalysis *see ion microprobe analysis*

ion pumps
LEP electron-positron collider, pumping approach 3—41358
orbitron device, optimum ionising characts. 3—5802
vacuum technology, book 3—35765

ion recombination
alkali metal+halogen ions, mutual neutralisation and ter mol. recombination in burnt flame gases 3—41665
atom+ion collisions, resonant transfer and excitation processes 3—56068
bacteria, photosynthetic, radical ion recomb., microwave and mag. field effects 3—34780
Cassiopeia A direction, search for low-freq. excited C radio lines *(Russian)* 3—35701
conference, Arezzo, Italy (Sept. 1980) 3—30563

ion recombination continued
  N,N-dimethylaniline cation, recomb. with anthracene anion, electron hopping, spin dynamics, mag. field depend. 3—45952
  excited states nonstationary kinetic ionisation, recombination and population 3—51274
  hexafluoropropene gas, ion mobility and recombination and effective ionisation coeff. 3—7688
  hydrogen halide molecules, electron dissociative attachment cross section, quantum three-body theory 3—50532
  ice, electron irradiated, visible band electron fast decay at low temp., isotope effects and H^+ mobility 3—13221
  ion-ion recombination in an ambient ion gas 3—11934
  ionisation chambers irrad. by proton beams, ion recombination loss 3—1125
  lipid bylayers vesicles, exciplex systems, photoinduced charge separation and recombination 3—6702
  organic radical ion pairs, soln., recombination, spin motion dephasing anal. 3—26766
  recombination processes in atomic and molecular physics 3—32166
  small ion recombination in lower stratosphere/troposphere 3—35247
  TMPD, photoionis., geminate charge recomb., solvent effects 3—26794
  Ar II, Ar III, photoionisation cross sections and recomb. coeffs. rel. to IR line ratios in H II regions 3—44818
  Ar plasma, organic compounds attachment coeff meas 3—37612
  Ar^{14+} dielectronic recomb. rate coeff. calcs. 3—56072
  Ar_2^+, dissociation recombination in electron beam excitation at high press. 3—50527
  Ar_2^+, electron impact three-body dissociative recombination *(Chinese)* 3—41684
  C I, interstellar, electron recomb. model for origin of forbidden IR emission in H I regions 3—10422
  C^+, dielectronic recomb. cross-section 3—46065
  C^+, dielectronic recombination cross section meas. 3—41689
  C^{3+}, dielectronic recomb. cross-section 3—56038
  CO_2 lasers, ion aging effects on the dissociative-attachment instability 3—12111
  Cd vapour arc, CW recombination laser action 3—41807
  Cs plasma, recombination, excited state population 3—27647
  Fe XIX-XXII, X-ray lines inner shell transition origin, solar flare+Tokamak appl. 3—48812
  H generation in microwave plasma, for rocket propulsion 3—42417
  H I, two-photon recomb. in supernova remnant 30 Doradus B rel. to optical continuum 3—48992
  H plasma, recombining, population inversion, laser-induced fluoresc. meas. 3—32902
  H-like ions, dielectronic recombination rate coeff. in plasma 3—32846
  H-like ions in strong mag. fields, photo-ionisation/photo-recombination cross sections 3—40021
  He-H_2O positive column plasma, number density and electron temp., numerical model 3—37716
  He-ions isoelectronic series, dielectronic recombination rate coeff. 3—26846
  He-like ions, isoelectronic series, dielectronic recombination rate 3—26845
  Mg+ dielectronic recombination cross sections, crossed beam meas. 3—41690
  NO^+, electron impact, dissociative recombination cross sections *(Russian)* 3—1492
  N_2O-$O_2(N_2)$-^3He nuclear reactor pumped laser excited by ion-ion neutralisation, theory 3—41810
  Ne_2^+, dissoc. recomb. rel. to $2p^54p$ at config. level population 3—50331
  Ne_2^+ dissociative recombination in Ne afterglow plasma, spectral line analysis 3—11884
  S III/S IV, photoionisation cross sections and recomb. coeffs. rel. to IR line ratios in H II regions 3—44818
ion scattering *see collision processes; ion mobility; ion-surface impact*
ion solvation *see solvation*
ion sources
  see also ion emission
  75 keV, 70 A, 10 s ion beams production, Tokamak-60 appl. 3—26542
  accelerator, development of suitable ion sources *(Japanese)* 3—36599
  alkali metal, based on surface ionisation, for ion-photon emission 3—49499
  alkali-ion gun for atom-ion collision expts. 3—454
  alpha sources, self-shielded, He deposition profiles 3—37943
  AMPFION class ion diode theory 3—7813
  anode tufting, arc faulting and plasma nonuniformity 3—50098
  ASDEX ion sources, long pulse operation with edge cooled extraction grids 3—55679
  atmospheric pressure ionisation source for tandem mass spectrometer 3—54808
  beam extraction at prototype injector unit for JT-60 3—55601
  beam matching in 150 keV linear accelerator and ion source 3—36582
  beam source with UHF power supply 3—45247
  broad beam, technology and appls., developments 3—458
  broad-beam, used in sputtering, applications 3—457
  broad-beam, used in sputtering, technology 3—456
  channel charge exchanger and beam, shaper, geometric effect on beam composition 3—6475
  conical pinched electron beam diode for intense ion beam sources 3—11570
  cryo-diode, magnetically insulated; intense pulsed ion beam extraction 3—16445
  double-cell effusion chamber, in mass spectrometer for high-temp. expts. 3—49494
  duoplasmatron, construction and characts., for SNU 1.5 MV tandem Van de Graaff accelerator *(Korean)* 3—37708
  electrohydrodynamic ion source with reservoir and emitter tip heated by electron bombardment 3—460
  electron beam guiding, ion optical props. 3—26539
  extraction system, water cooled 3—55745
  fast-atom bombardment mass spectrometer conversion 3—36117
  four-electrode multiple-slit system for ion beam form., ion opt. props. 3—1109
  heavy ion beam+atomic gas, collisionally excited few-electron ions prod. 3—41662
  Heliotron E fusion machine, circular magnetic-multipole bucket ion source performance 3—32919
  HF vacuum spark in a mass-spectrometer ion source, elect. and optical param. 3—33013
  high current, mag. confinement fusion *(Japanese)* 3—36600
ion sources continued
  high power long duration neutral beam injector ion source for JT-60 3—6477
  high-power electron and ion beam, conf., Palaiseau, France (June-July 1981) 3—5501
  hydrocarbon mixtures, field ion mass spectrometry, ion formation mechanism *(German)* 3—39431
  hydrodynamic, ion beam measurement and microfabrication, VLSI *(Japanese)* 3—39430
  ICF research by light ion beams 3—6444
  inductive storage for particle beam prod. and plasma implosions 3—17067
  intense ion beam diodes for inertial fusion 3—6479
  intense ion beam source development expts. 3—6484
  intense pulsed light-ion beam, generation, focusing, propag. and target irradiation 3—6480
  ion microbeam source 3—36594
  ion-driven fusion targets, beam production acceleration, transport and focussing 3—1069
  JET, large area ion source for neutral beam injection 3—55680
  laser focus accelerator 3—17142
  laser-generated plasma transported through axial. mag. field, heavy ion source 3—12984
  light ion beams, pulsed intense beams production from multiterawatt generator 3—41384
  light ion prod. and focusing with pinch-reflex diodes 3—6481
  light-ion beam prod. with low impedance generators 3—6482
  light-ion ICF, system requirements 3—6445
  liquid metal field ion emission source, emitter shape effects, theory 3—16443
  liquid metal ion source optics, computer simulation 3—36593
  liquid metal ion sources, field emission *(Japanese)* 3—20951
  liquid metal ion sources, space charge effects, theory 3—20950
  liquid metallic ion emitters, space charge effect on pot. distrib. 3—45744
  low energy very highly ionised atom sources, review 3—36122
  magnetically insulated diode with cryogenically refrigerated anode for ion beam prod. 3—6486
  magnetically insulated ion diode, applied-B_θ, parameter studies 3—10940
  magnetron modification to ion-beam source 3—58048
  mass spectrometer ion source, effects of dielectric film formed on exit diaphragm 3—45243
  mass spectrometer with spark source, liquid analysis by frozen-drop method 3—36120
  metal ion source for metallic surface metallurgy 3—16444
  metastable ion beam fractions measured for different ion sources 3—40717
  MINIMAFIOS pulsed ion source for completely stripped ion beam prod. *(French)* 3—17146
  multiply charged, using heated cathode 3—16441
  multiply charged ions, generation and annihilation 3—26545
  multipole ion sources, operation limits 3—6473
  negative ion source for reactive plasma etching 3—36123
  neutral beam injector, ion source species yield determ. 3—17150
  neutralised ion beam emission using Penning cell with ring-shaped cavity 3—50108
  neutron spectrometry, mean ion production energy 3—45711
  nondischarge magnetoplasma ion source 3—54815
  nuclear fusion technology, symp., Julich, Germany (Sept. 1982) 3—54577
  Penning ion source, energy anal. using mass spectrometer 3—31857
  pinch reflex diodes for proton and deuteron accel. 3—6483
  pinched-beam ion-diode scaling on the Aurora pulser 3—31859
  pinched-plasma ion beam source, appl. of sheath formed by relativistic electron beam, report 3—46735
  plasma, surface ionisation, production of ion beams, analysis charge exchange *(Dutch)* 3—51398
  plasma focus with fast valve gas injection, ion beam prod. 3—12911
  plasma gun, ion extraction conditions influence on ion beam parameters 3—49500
  plasma source, anode plasma uniformity effect on focal spot size of pulsed ion beam from reflex triode 3—41379
  plasma-beam ion source, plasma electron energy distribution meas. 3—50088
  power supply for gas-discharge ion source 3—45246
  protection of neutral injectors against damage from HV sparking 3—55768
  proton beam, intense pulsed, in Nagaoka ETIGO-I, dynamics 3—11569
  pulsed ion beams produced by inverse reflex tetrodes, electrode-structural effects 3—6485
  quasi-point, liquid metal, for microfabrication *(Japanese)* 3—36125
  reflected beam sputter source, optics, emittance and brightness 3—45730
  RF ion source for 600 kV Cockcroft-Walton accelerator *(Chinese)* 3—41378
  RF-ion source RIG for neutral injection 3—55746
  scaling laws for ion source discharges 3—26541
  single-ring magnetic cusp ion source 3—16447
  structure determination of organic compounds, ionisation methods *(Japanese)* 3—36126
  surface and thin film technology appls. *(German)* 3—45245
  TFTR 120 keV ion source power supply 3—55772
  triggered pseudo-spark chamber as fast switch and as high-intensity beam source 3—41373
  vacuum, electron and ion technologies, conf., Varna, Bulgaria (Sept. 1981) 3—25688
  Ar/metal ion sources on the basis of a discharge contracted in crossed E×H fields 3—16446
  Cs^+, inverted spherical ioniser sputter ion source 3—45731
  D^-, ion beam prod. by negative surface ionisation 3—20952
  D^- ion source for energetic neutral beam prod. 3—55742
  D^- ion source using Si semiconductor, neutral beam injection appl. 3—41383
  Ga, photoionic beam production by stepwise ionisation of atoms by laser radiation 3—26706
  Ga, quasi-point liq. metal, for microfabrication *(Japanese)* 3—36125
  GaAs ion source extraction grid, fabrication and use 3—459
  H^- intense beam prod. study 3—30963
  H^- volume-produced ions extraction, from multicusp source 3—32921
  ^3He polarised intense beam source for fusion reactors 3—50076
  LaB_6 emitter coatings prep., improved cataphoretic deposition methods 3—40718
  β-$LiAlO_2$ solid-state ion sources, pulsed operation 3—10942
  β-$LiAlSiO_4$ solid-state ion sources, pulsed operation 3—10942

ion sources continued
N^{5+} ion current from cold-cathode ion sources, depend. on pulse width 3−26517
Si ion source extraction grid, fabrication and use 3−459

ion-surface impact
see also particle backscattering; sputtering
adatom, impact enhanced surface diffusion during impurity induced sputter cone formation 3−38986
Al target, H^+ collision, secondary electron emission, Compton profile 3−34187
alkali halide crysts., ion-electron emission theory 3−52889
alkali iodides, ion form. from solid by fast dust particle impact 3−34191
amorphous target, ion irradiated, energetic ion scattering, Monte Carlo simulation 3−51671
carbide, low-Z fusion reactor materials, surface comp. changes with ion bombardment and heat treatment 3−21522
clean surfaces, struct., review 3−38180
depth profiling, of light isotopes *(Japanese)* 3−38981
desorption, charge transfer, electronic struct. model 3−51940
deuteron-induced K X-ray emission cross-sections 3−21689
effective interaction between swift ions at solid surfaces 3−58019
elastic collision cascade, spatial distrib. of momentum spectrum of recoiling atoms 3−14420
electron capture in ion-surface collisions, capture amplitude calc. Stark states, post-collision interaction 3−21899
electron emission, enhanced, reduction by electron and ion impact 3−19233
electron emission, slow ion collisions and super-Rydberg cascades 3−21851
fast ion collision with foil target, highly excited states prod. 3−32184
ferromagnetic metal surfaces, electron spin polarisation techniques, review 3−28516
ferromagnetic surface, ion beam impact forming Li beams, X-ray laser implementation 3−32340
field electron emission current instabilities, ion bombardment effects meas. 3−14443
fusion reactor material, ion impact desorption cross sections, data compilation and eval. 3−21518
heavy charged particle-target backscattering coeff., meas. geometry influence 3−19242
hydrogenic excited states, formation mechanism for H and He^+ beam collisions with solid surface, elliptic polarisation meas. 3−21669
ices, fast ion bombardment expts. and astrophysical implications 3−30264
impact cascade, anal. based on shock wave model 3−43687
impact-collision ion scatt. spectroscopy *(Japanese)* 3−28949
interfaces and epitaxial systems, Rutherford backscatt. and channelling analysis, review 3−8929
ion Auger spectra, orientational effects due to recoil atoms 3−43699
ion beam quality, gas phase collisions 3−28957
ion neutralisation, two dimens. tight binding models 3−28948
ion scattering, low energy, elastic and inelastic processes 3−28956
ion scattering, study of radiation damage in metals and semiconductors 3−28958
ion-atom potentials, determ. using semichannel focusing 3−28955
ion-photon emission phenomenon, expt. and theory, appls., review 3−14421
kinetics of elementary processes at surfaces, review 3−38996
L-shell X-ray prod. cross section for low-energy protons 3−43685
light ion irradiation, radiation damage and imbedded atom profiles, computer simulation 3−51672
material modification, by ion beam techniques 3−43700
metal sputtering products, photon emission with continuous spectrum 3−50346
metal-adsorbate systems, ion impact desorption mechanisms and energy distribs., fusion plasma relevance 3−26454
metallic films, ion bombardment rel. to chem. activity, basic rules and mechanisms 3−58313
metallic superlattices, prep. by sputtering, struct., and phys. props. 3−14491
metallic thin film, ion-bombarded, formation of texture 3−28016
metals, excited atom emission under ion bombard. 3−38993
neutralisation by tunnelling, nonperturbative results 3−3907
organic surface characterisation techniques, review 3−13607
plasma and ion beam processing, conf., Yorktown Heights, NY, USA (June 1972) 3−17
positive ion neutralisation by collisions with electronically excited semiconductor surface 3−24069
radioactive alkaline isotope deposition on single crystal surface 3−47745
rare-gas solids, electronic relaxation, atoms ejection by fast ions 3−47744
semichannel focusing energy determ. from surface scatt. 3−28954
single cryst., glancing ion scatt. by surface semichannels, ion charge form. 3−3899
spherical target, H^+ bombardment, plasma corona prod. and heating 3−2249
sputtered excited atoms, energy distribution, linear cascade theory derivation 3−21889
steel, stainless, D^+ ion bombard., D_2 mol. reemission and D depth distrib. 3−3894
steel, stainless, type 316, H ion impact desorption of adsorbed D, SIMS obs. 3−21516
surface anal., conf., Teddington, England (Nov. 1981) 3−5490
surface roughening under ion bombardment 3−14426
vacuum, electron and ion technologies, conf., Varna, Bulgaria (Sept. 1981) 3−25688
Vacuum Group, Institute of Physics, conf., Chester, England (March 1982) 3−40318
XPS review, UPS, AES and ion scatt. spectroscopy 3−8940
Ag, neutralisation of scattered He^+ and Ne^+ ions 3−52886
Ag, scatt. of He^+ and Ne^+ ions, inelastic energy loss and departures from binary scatt. model 3−52887
Al, charge state distrib. of scattered fast ions, contaminating layers influence 3−19239
Al, energy loss meas., low-velocity ion effective charge 3−14418
Al, excited atom emission, ion bombard. 3−38993
Al, heavy ion and electron collisions, Auger line shape 3−43689
Al, ion induced electron emission, effect of oxidation 3−3905
Al, reactive sputtering, angular distrib., sputtering yield, 40 keV Ar ion bombardment 3−38994
Al, secondary electron emission after ion bombardment *(German)* 3−38995

ion-surface impact continued
Al, secondary electron emission under ion bombardment, 100-800 keV *(German)* 3−58024
Al surface, K^+ bombardment, secondary emission particle excitation 3−28953
Al_2O_3, reactive sputtering, angular distrib., sputtering yield, 40 keV Ar ion bombardment 3−38994
Ar ion-Cu atom interaction potential, semichannel focusing energy calc. 3−3901
Au, energy loss meas., low-velocity ion effective charge 3−14418
Au epitaxial growth on Pd (111), transition from pseudomorphic to nonregistered state 3−47242
Au, H and He reflections in single-collision model 3−52890
Au, He and D ion bombardment, energy reflection coeffs. 3−43688
C adsorpt. on Ir(111) surface, submonolayer phase composition investig. 3−33577
C, energy loss meas., low-velocity ion effective charge 3−14418
C, heavy-ion-induced wake pot. interf. effects 3−24076
C impact, H^+ collision, secondary electron emission, Compton profile 3−34187
C ions, stopping power of Ni, Ag, Au and Pb 3−57006
CO, vibrationally excited by hot Pt surface, internal energy distrib. 3−56050
Cl ions, highly stripped, moving in solids, K-shell binding energies, radiative electron capture 3−56070
Cu, backscattering of low energy $^{20}Ne^+$ ions, shade effects *(French)* 3−34189
Cu, charge state distrib. of scattered fast ions, contaminating layers influence 3−19239
Cu, excited atom emission, ion bombard. 3−38993
Cu, He and D ion bombardment, energy reflection coeffs. 3−43688
Cu, ion bombard. induced surface topography, depth resolution, electron microscopy study 3−8924
Cu, ion bombardment induced preferential orientation, influence of ion species 3−33319
Cu single cryst., Ar ion scatt., semichannel focusing energy 3−28954
Cu, surface scatt., ion focusing and blocking effects for grazing angle 3−47749
Cu surface structure anal. by low energy ions multiple scatt. 3−28199
Cu target, Ar^+ sputtering, excited atom form., kinetic energy distrib. 3−8922
Cu/Al film system, short- and long-range ion-beam mixing, influence of interfacial oxide 3−37966
Fe (110), oxidation by O_2 and H_2O vapour, ion irrad. effects 3−29216
Ga-In eutectic alloys, solid and liq., sputtering, ion scatt., AES, and Rutherford backscatt. study 3−52885
$Gd_2(MoO_4)_3$, ion beam irrad. area meas. using surface etching technique 3−20829
H^+, 7 MeV, energy loss in Cu foils, geometrical effect, computer simulation 3−51679
HD and H_2-D_2 mixture, solid, electron and ion bombarded, secondary electron emission 3−58009
^4He ion+Cu (Ge) (Mo) (Ag), target, K-shell ionisation cross sections 3−6774
In, ion bombard. during O_2 chemisorption, SIMS and multiphoton reson. ionisation study 3−52883
$LiGaO_2$, dielec. props., relation to crystallographic polarity, ion surface scatt. and chem. etching studies 3−38766
$LiGeO_3$, dielec. props., relation to crystallographic polarity, ion surface scatt. and chem. etching studies 3−38766
Mg, heavy ion and electron collisions, Auger line shape 3−43689
MgO:Ca, (100) cleavage surface, Ca segregation, low energy ion scatt., AES 3−51902
Mo (001), low energy Li^+ focused scattering, expt. and computer simulation 3−58023
Mo, ion induced electron emission, effect of oxidation 3−3905
MoS_2 basal plane surfaces, low energy He ion scatt., preferential neutralisation from second layer 3−43691
Na, bombarded by D, energy distribs. and charge-state fractions of reflected D 3−26453
NbN/Pb Josephson tunnel junctions with plasma oxidised barriers, fabrication 3−23544
Ni (110), ion bombardment induced surface damage, prod. and annealing 3−24078
Ni (110) and (111), ion induced secondary electron emission 3−3904
Ni, charge state distrib. of scattered fast ions, contaminating layers influence 3−19239
NiO, reduction during ion beam milling Ni island form. 3−14760
$Ni_{33}Zr_{67}$ glass, He^+ irradiation effects on surface topography and microstructure 3−57181
Pd, adsorbed on Si (111), surface struct., ion scatt. spectroscopy and LEED-AES study 3−33562
Pd-Si (100) and (111), surface reaction, ion beam anal. and AES study 3−42857
Pt (111), CO migration, He-scatt. study 3−23165
Pt (111) and vicinal surfaces, adsorption of CO, He scatt. and work function meas. 3−38214
Si (111) surface, Ne^+ bombarded, secondary ion emission 3−14417
Si, heavy ion and electron collisions, Auger line shape 3−43689
Si, ion bombard. induced surface topography, depth resolution, electron microscopy study 3−8924
Si, ion-induced Auger electron emission 3−3893
Si, laser annealing/cleaning, pulsed, ion scattering study of O_2 indiffusion 3−57144
Si surface, (111), adsorbed Pd, surface superstruct., LEED-AES and ion scatt. spectra 3−51922
Si surface, adsorption of F, removal by ion bombard., SIMS study 3−38990
Si surface, ion and electron excitation, Auger effect 3−8923
Si(111), ion oxidation, photoemission study 3−24375
Ti, He and D ion bombardment, energy reflection coeffs. 3−43688
Ti, He^+ ion scatt. spectroscopy, interaction pot. study 3−24071
TiC low-Z coatings for fusion reactor, surface erosion and re-emission behaviour under H and He ion bombardment 3−21524
U surface, high-energy ion bombarded, secondary electron emission meas. 3−34186
^{238}U ions+C(Al)(Ti)(Ni)(Nb)(Pb)(Sn) foils, thermal neutron activation anal., stopping power values 3−8920
$V_6O_{13}(001)$ surface, K segregation, low energy in ion scatt. study 3−8927
W surface, He ion collisions, neutralisation by tunnelling, nonperturbative results 3−3907

ion thrustors *see ion engines*

ionic conduction in liquids *see electrical conductivity of electrolytic liquids; electrical conductivity of liquids*

ionic conduction in solids
- *see also superionic conducting materials*
- alkali sulphate -$ZnSO_4$ glasses, elec. cond., mixed alkali effect 3—13533
- alkaline earth metaphosphate glasses, $MO\text{-}P_2O_5$, containing water, protonic cond., DC elec. cond. meas. 3—23082
- calcite, high-pressure polymorphs, influence of PO_4^{3-} content 3—33496
- glasses, protonated, surface profiling, invest. by spectrochem. anal. of sputter-induced radiation 3—28203
- impulse thermal breakdown eqn., boundary conditions 3—19057
- ionic conductors, noise in one-dimensional diffusion model 3—38124
- metal, plasma oxidation 3—9247
- metallic glasses, ionic dynamics, elec. transport, electronic struct. and appls., review 3—18678
- Ohmic friction on an ion in a conducting pore 3—51839
- poly(p-phenylene benzobisthiazole) extended chain aromatic hetero-cyclic polymer, ionic transients 3—13541
- polyethylene terephthalate, steady state DC conduction 3—23074
- polymer, $PEO_8\text{-}LiClO_4$, ionic conductivity, press. effects, battery solid-state electrolyte appls. 3—13542
- polysulfone, heat resistant, action of mobile ion in high temp. region *(Korean)* 3—57122
- sulphate glass, AC cond. and dielectric props. 3—2880
- transient displacement currents accompanying charged Frenkel defect annihilation in noncentrosymmetricsystems, theory 3—22889
- Ag halide emulsion grains, pAg adjusted, ionic cond., dielectric loss and photocharge decay kinetics meas. 3—53452
- AgBr, defect energy calc., dielec. and elastic props. 3—51593
- AgBr, non-stoichiometry, DC polarisation cell transient current study 3—42797
- $AgF\text{-}BiF_3$ system, ionic cond. and struct. props. of phases 3—42844
- $AgI\text{-}Ag_2O\text{-}B_2O_3$ glassy electrolytes, struct. and glass transition 3—22783
- $AgI\text{-}ZnI_2$ system, equil. diagram and elec. cond. 3—13405
- $Ag_7I_4AsO_4$ glass, ionic cond., nonArrhenius behaviour and temp. depend. 3—33494
- $AgPO_3\text{-}Ag_2SO_4$ glasses, ionic cond., Raman study 3—38123
- Ag_3PO_4, relation between struct. and low temp. ionic cond. *(French)* 3—13540
- $\alpha\text{-}Ag_2Se$, diffusion and ionic cond. of Ag 3—57133
- $Ag_2Se\text{-}Se$-metal thin film sandwiches, polarized memory switching effects 3—13869
- $\alpha\text{-}Al_2O_3$, struct. characts. and ionic mobility, neutron diffr. study 3—7985
- $B_2O_3\text{-}SiO_2\text{-}Na_2O$ glasses, Na^+ ion transport 3—23081
- $Ba_{1-x}La_xF_{2+x}$ crystals, low temp. ionic cond. and dielec. relax. 3—18506
- $BaMoO_4$ crystals, elec. cond. meas. 3—13522
- $(Bi_2O_3)_{0.8}(Er_2O_3)_{0.2}$, struct. and ionic cond., neutron diffr. study 3—33201
- $Ce_{1-x}Ca_xO_{2-x}$, solid soln., ionic cond. study *(French)* 3—28150
- CeO_2 ceramics, doped, grain boundary type Maxwell-Wagner peak in thermally stimulated depolarisation 3—8756
- $CeO_2\text{-}CaO(YO_{1.5})$ solid solns., ionic cond. study *(French)* 3—28149
- $CeO_2\text{-}YO_{1.5}$, solid soln., dipolar dielec. relax., vacancy redistribution 3—52720
- Cu chalcogenides, diffusion phenomena, mixed cation-electronic cond. 3—8242
- $CuO\text{-}P_2O_5$ glasses, addition of $CuCl_2$ during prep. to control electrical conductivity 3—38120
- CuTeBr, ionic conductivity, rel. to cryst. struct. 3—2877
- $Fe_{2+x}O_3\text{-}Na_2O\text{-}P_2O_5$ glasses, ionic and electronic cond., temp. depend. 3—33766
- H_3OPO_4, cryst., proton cond., defects and impurities, SCRF-CNDO/2 calcs. 3—13512
- $Hg_{1-x}Bi_xF_{2+x}$ solid soln., ionic cond. props. *(French)* 3—18502
- $(K_{1.3},Li_{0.1})Mg_{0.7}Ti_{7.3}O_{16}$, high freq. ionic AC cond., freq. and temp. depend. 3—42839
- KAg_4I_5 fast ionic conductor, prep. and characterisation 3—24190
- $K_{1.6}Al_{1.6}Ti_{6.4}O_{16}$, high freq. ionic AC cond., freq. and temp. depend. 3—42839
- KBr-KI mixed cryst., ionic cond., melting point and Schottky defects 3—57129
- KCl:Co crystals, elec. cond. study 3—57123
- KDP cryst., grown from gel, elec. cond. study 3—8247
- $(K_{1.3}Li_{0.2})Al_{1.5}Ti_{6.5}O_{16}$, high freq. ionic AC cond., freq. and temp. depend. 3—42839
- $KLiSO_4$, ionic cond. and dielec. props. *(Chinese)* 3—28146
- $K_{1.6}Mg_{0.8}Ti_{7.2}O_{16}$, high freq. ionic AC cond., freq. and temp. depend. 3—42839
- $K_2O\text{-}ZnO\text{-}Na_2O\text{-}Ga_2O_3$, vibr. modes, ionic cond., IR and Raman study 3—3721
- $LiMgCl_3$, Li^+ ion mobility, NMR study 3—3543
- Li_2MgCl_4, Li^+ ion mobility, NMR study 3—3543
- $Li(Nb_{0.8}P_{0.2})O_3$ glass, roller quenched, struct. and ionic cond. 3—33126
- Li_2SO_4, monoclinic, ionic cond., prep. condition effects 3—42836
- $Li_2Si_2O_5.xLi_2SO_4$, vitreous, ^7Li nuclear mag. spin-lattice relax. times *(French)* 3—28727
- $Li_{3.75}Si_{0.75}P_{0.25}O_4$, cryst. struct. and ionic cond., X-ray diffr. study 3—7990
- $MgAl_2O_4$ spinel, elec. cond., ionic transference numbers, O_2 partial press. depend. 3—42829
- MgS, elec. cond., 973-1223K, S partial press. depend., ionic and hole cond. *(Japanese)* 3—38443
- $ND_4UO_2PO_4.3D_2O$, cryst. struct. rel. to proton cond. 3—51552
- $(NH_4)HSO_4$, proton conduction, coulometric meas. 3—8251
- $(NH_4)_3H(SO_4)_2$, proton cond., DC cond. and DTA study 3—2881
- $Na_2Al_6Si_6$, $O_{24}Cl_2$, sodalites, non-stoichiometric, ionic cond. and dielectric losses 250-450K, 0.7-10 kHz *(Russian)* 3—57124
- $NaCl{:}Ca^{2+}$, OH^-, relax. phenomena 3—34031
- NaI, ionic cond., bulk modulus and specific heat of vacancies 3—13531
- $NaNbO_3\text{-}WO_3\text{-}Nb_2O_5$ system, ionic cond. of W-bronze type phases 3—13534
- $Na_2O\text{-}CaO\text{-}SiO_2$ glasses, N-containing, struct., mech., optical, and elec. props. 3—33129
- $Na_2O\text{-}SiO_2$ silicate glass, Na^+ and nonbridging O^{2-} conduction, TSC study 3—51842
- $Na_5YSi_4O_{12}$, cryst. struct. determ., ionic cond. 3—8012
- $Na_4ZrSi_3O_{10}$, ionic cond. and cryst. struct. 3—42840
- $Na_3Zr_2Si_2PO_{12}$, Na ion cond., effect of homovalent framework cation substitutions 3—8249
- $PbF_2\text{-}CdF_2$, solid solutions, superionic, elec. props. 3—13526

ionic conduction in solids continued
- $PbF_2\text{-}InF_3$ system, ionic cond. props. *(French)* 3—13539
- $Rb_2O.SiO_2$, glass, conc. fluctuations, DC cond. meas. 3—37796
- $Rb_2Zr_3OF_{12}$, ionic motions, NMR spin-lattice relax. and ionic cond. study 3—3575
- SiO_2 film, Na^+ ions I-V characteristics, triangular voltage sweep, numerical anal. 3—8245
- SiO_2, vitreous, DC resist. of Na^+ ions, heat treatment effect 3—51844
- SrS, elec. cond., 973-1223K, S partial press. depend., ionic and hole cond. *(Japanese)* 3—38443
- Ta_2O_5 anodic films, high field ionic cond., open-circuit transient method 3—23076
- Ta_2O_5 anodic films, high field ionic cond., stepped current method 3—23077
- $\gamma\text{-}(Ti(PO_4)_2)X_2$, X=H,Li,Na,K, ionic cond., impedance meas. 3—18507
- $Tl_2Zr_3OF_{12}$, ionic motions, NMR spin-lattice relax. and ionic cond. study 3—3575
- WO_3 thin films, diffusion of H^+ 3—8380
- $\alpha\text{-}Zr\ (HPO_4)_2.H_2O$, prep., chem. props. and AC ionic conductivity 3—42837
- Zr, anodic oxide film growth, ^{18}O nucl. microanal. and ionic cond. study 3—9227
- ZrO_2, CaO stabilised, electronic cond. and O_2 semipermeabiity 3—23079
- $ZrO_2\text{-}CeO_2\text{-}Y_2O_3(CaO)$, ionic conductivity, lattice parameter effects 3—8246

ionic conductivity in solids *see ionic conduction in solids*

ionic thermocurrents *see thermally stimulated currents*

ionisation
- *see also associative ionisation; autoionisation; charge exchange; electron attachment; electron capture; field ionisation; ion recombination; ionisation of atoms; ionisation of gases; ionisation of liquids; ionisation of molecules; ionisation of solids; ionisation potential; Penning ionisation; photoionisation; surface ionisation*
- flame ionisation detector with two ionic components, current-voltage curve shape 3—44056
- interstellar neutral gas towards HD 93206, ionisation state from obs. of UV absorpt. lines 3—59425
- M42 (Orion nebula), obs. of complex ionised struct. in θ^2 Orionis region 3—15978
- ρ Ophiuchi cloud, ionisation equilib. in cloud interior 3—54472
- planetary nebulae of medium and high excitation, anal. of O III/O II problem 3—44814
- stellar winds from OB and Wolf-Rayet stars, ionisation struct. and mass loss rates 3—25418
- young supernova remnants, non-ionisation-equilib. models abundances and X-ray emissivities 3—10417
- H II regions, excitation conditions determ. from IR fine struct. line ratios 3—44818

ionisation chambers
- 4π gamma ionisation chamber as part of the secondary standardisation system *(Czech)* 3—26597
- A-150 plastic tissue-equiv. ionisation chambers, air humidity rel. to γ-ray calibration and neutron dose meas. 3—53870
- absolute fission chambers for high-energy neutron fields meas. in TFTR and JET 3—31786
- absorbed dose rate standards for beta radiation at protection level, report 3—21580
- avalanche chamber, optical readout for UV photons accurate positioning 3—45762
- avalanche position-sensitive detector with resistive cathode 3—41436
- average quality factor evaluation in mixed radiation field with ionisation chambers 3—17072
- Bragg curve detector, heavy ion identification using ionisation chamber 3—26589
- charged particle $\Delta E\text{-}E$ telescope with large solid angle 3—26570
- cosmic ray telescopes, rigidity responses 3—54248
- CRISIS detector, recirculating gas system design 3—41447
- cylindrical, filled with compressed Xe, for low-energy γ-ray spectrometry 3—1157
- cylindrical gas-filled ionisation chambers, electron fluence perturbation 3—41408
- dosimetric methods comparison TE-phantom irradiated by fast neutrons 3—45700
- electronegative impurity analyser for liq. Ar, conc. meas. using α-particle pulse amplitude distrib. 3—11607
- fission fragment nucl. charges identification method using axial ionisation chamber 3—41428
- focusing two-channel spectrometer, multichannel detectors in monitoring system 3—11601
- gas sampling calorimeter studies, in proportional, saturated avalanche, and streamer modes 3—50237
- gas sampling saturated avalanche EM calorimeter testing in positron beam 3—41412
- glass ionisation chamber, radioactivity meas. of T, atm. moisture effect reduction *(Japanese)* 3—45783
- heavy ion detector for NSF QMG/2 spectrometer, electrostatic calc. 3—26552
- HIDAC, electron avalanche chamber with wire chamber for positron emission tomography 3—53825
- high resolution axial ionisation chamber for fission products 3—41429
- ion recombination characts. of MDH 10X5-6 under continuous exposure 3—31876
- ion recombination loss in ionisation chambers irrad. by proton beams 3—1125
- methane, liquid chamber, incidence directivity meas., low energy fluxes 3—50235
- multiparameter gas scintillation-ionisation counter, detection of heavy ions from nuclear fission 3—1145
- multistep avalanche chamber, multiplication factor and detect. efficiency *(Chinese)* 3—31878
- multiwire X-ray counter with high resolution 3—16461
- Munich RF recoil spectrometer for heavy-ion reaction products obs. 3—36612
- natural background neutron meas. using BF_3 counter *(Chinese)* 3—41337
- neutron spectrometry, mean ion production energy determ. 3—45711
- parallax-free gaseous detectors for X-ray and VUV localisation 3—1136
- parallel plate avalanche counters, detector system for ang. correl. meas. 3—36620
- parallel plate ionisation chamber, primary standards of exposure for 50 kV X-rays, report 3—21599

ionisation chambers continued
- particle identification with a fine sampling ionization loss detector 3−50198
- picoammeter for ion chambers without range switching 3−50055
- portable pulse counter for gas-discharge ionising radiation detectors 3−50230
- primary standard free air chamber, errors in air attenuation correction, report 3−21598
- response and wall correction factors for ^{60}Co γ-rays 3−29759
- response and wall correction factors for ^{60}Co γ-rays 3−29760
- spectrometer for recoil nuclei in elastic small-angle hadron scatt. research 3−1154
- thermal neutron flux absolute meas. based on $4\pi(\alpha$-^{7}Li)-γ coincidence technique 3−45795
- thin detector with ionisation tubes for high energy electrons and photons 3−26566
- time expansion chamber, principle, characts., construction and expt. results *(Chinese)* 3−31877
- time projection chamber, liquid argon, operation 3−45777
- Westinghouse postaccident type, sensitivity, γ-ray energy effect 3−41443
- X-ray dosimetry, fraction of ionisation arising in wall of ionisation chamber 3−50182
- X-ray spectrometer with position sensitive wire detector 3−41404
- xerography method appl., for imaging of particle trajectories *(Polish)* 3−55752
- Ar, liquid chamber, incidence directivity meas., low energy fluxes 3−50235
- ^{60}Co half-life determ. using $4\pi\gamma$ ionisation chamber and $4\pi\beta$-γ coincidence techniques 3−45791
- $FeSO_4$ dosimeter for ionisation chamber dosimetry control of electron, ^{60}Co γ-beams 3−24886
- ^{203}Hg calibration for type 1383A ionisation chamber *(Spanish)* 3−41405
- ^{236}U fission fragment charge-mass-energy correl. using ionisation chamber-scintillation detector telescope 3−41459
- Xe, liq., position sensitive detector for γ-rays 3−50179

ionisation gauges
- axial emission gauges for UHV *(Chinese)* 3−40632
- extractor gauge, modified, for UHV press. meas. 3−49393
- ionisation manometer, class 2 standard, for pressures in 10^{-4} to 10^{-1} Pa range 3−40633
- pressure gauge *(Spanish)* 3−25890
- pumping speed and gas release meas. in ionisation gauge heads, review 3−5805
- vacuum technology, book 3−35765
- T activated ionisation gauge, limiting current meas. 3−336

ionisation of atoms
- *see also atomic electron impact ionisation*
- 3d elements, K_β/K_α intensity ratio for X-ray prod. by photoionisation and electron capture 3−26709
- alignment in ionization by ion, electron and photon impact 3−41659
- alignment studies in inner-shell processes by heavy projectiles 3−41660
- alkali halide: $In^+(Tl^+)(Sn^{2+})$, at. photoionisation cross section, determ. from intracentre luminesc. quantum efficiency change 3−26718
- alkali metal atoms, highly excited states, radiative and spectrosc. props. *(French)* 3−31969
- alkali metal atoms, inner shell electron photoionisation, outer shell environment effects 3−41540
- alkali metal atoms, photoionisation of outermost closed shell 3−21735
- atom+atom (ion) collisions, charge exchange and ionisation, impact parameter approx. 3−32197
- atom-atom collisions, Rydberg state excitation and ionisation 3−32176
- atomic ionisation processes involving synchrotron and laser radiations, recent progress 3−26713
- atoms and ions, electron and photon collisions 3−32212
- Auger electrons angular distrib. and spin polarisation following photoionisation and photoexcitation 3−1327
- Auger threshold effects, comparison of process induced by electron and photon impact ionisation 3−45912
- autoionising state, multiphoton ionisation, reson. harmonic generation, intensity saturation effects 3−55901
- autoionsing-like states, spin polarization by selective laser-induced interference 3−55903
- binary encounter with massive projectile and isotropic target vel., doubly diff. cross section 3−21893
- channelled fast particles, ionisation prob. calc. *(Russian)* 3−2636
- concurrent events in photoelectron spectroscopy, theoretical studies 3−55995
- conference, Arezzo, Italy (Sept. 1980) 3−30563
- core spectra, dynamic effects 3−36730
- dressed-atom continuum resonances 3−31975
- element traces, laser at. photoionisation spectral anal. 3−58456
- exchange-correlation energy for many electron system, one-particle approach 3−8431
- excited states, photoionisation, review 3−41539
- few electron slow recoil ion from heavy-ion collisions with gaseous targets, spectroscopic investigation 3−21877
- fluctuation studies with one-atom detection techniques 3−26799
- heavy and highly ionised atoms, spectra and transition probabilities, semi-empirical regularities 3−21714
- heavy atoms in superstrong magnetic fields 3−55786
- heavy ion collisions, ionisation, ang. distrib. of emitted electrons 3−11962
- heavy-ion impact, L_3 sub-shell ionisation, atomic alignment 3−46061
- high Rydberg atoms, elec. and mag. fields effects 3−26654
- inner shell ionisation, screened Coulomb trajectory effects 3−32189
- inner-shell ionisation, compound-nucleus effect 3−41518
- inner-shell ionisation, post-collisional interaction 3−36734
- inner-shell ionization during nuclear β decay 3−50534
- inner-shell photoionisation by elliptically polarised light, fluoresc. radiation polarisation 3−26711
- inner-shell vacancies, prod. and decay 3−36708
- interaction with EM fields, multiphoton ionisation 3−26714
- interstellar medium, ionisation equilibria and electron density from UV absorpt.-line spectrum of μ Ophiuchi 3−10415
- isolated atom, collective effects in electron shells 3−32013
- K- and L-shell ionisation cross sections in plane-wave Born approx., computer codes 3−21866
- K-shell ionisation, relativistic and atomic effects during beta decay 3−50356
- L-shell ionisation by charged particle impact, relativistic correction factors 3−1470

ionisation of atoms continued
- laser-induced autoionisation, photon spectrum 3−41537
- multiphoton ionisation, nonperturbative methods 3−26715
- multiphoton ionisation 3−11765
- multiphoton ionisation and autoionisation, laser intensity effect on config. interaction 3−21734
- multiphoton ionisation spectroscopy, laser-induced continuum struct. 3−11766
- near-symmetric relativistic atoms, slow collisions, K-shell ionis., impact parameter depend 3−56035
- negative ions photodetachment in mag. fields 3−26712
- one electron atoms in intense mag. fields, review 3−26695
- one-electron atoms, Stark effect and photoionisation spectra 3−26691
- optogalvanic response to light, photon energy vs. photon number 3−18143
- optogalvanic response to light, photon energy vs. photon number, authors comments 3−18144
- $p+Li^+(Li^{2+})$, ionisation and charge transfer, coupled 3−1473
- path integration method applied to (N-1)-reson. N-photon ionisation 3−45908
- photodisintegration and photoionisation in homogeneous elec. field, theory *(Russian)* 3−1323
- photoeffect, inner shell features 3−36698
- radiatively excited atoms, polaris.-depend. assoc. ionis. 3−26818
- radioactive atoms, hyperfine and isotope struct. study using laser photoionisation detect. 3−14891
- radioactive isotopes, rare, highly selective laser detect. method through multistep photoionisation of accelerated atoms 3−21934
- rare earth atoms partial photoionis. cross-sections in 4d reson. region 3−41534
- resonant multiphoton ionis., photoelectron ang. distrib., theory 3−50357
- resonant multiphoton ionis. rel. to third-harmonic generation, mean-field model 3−50358
- resonant multiphoton ionisation in multimode laser fields, Stark shifts 3−1322
- Rydberg atoms, intense microwave interactions 3−26678
- Rydberg states, multiphoton ionis. and induced X-ray emission 3−32014
- secondary electron emission from thin C foil bombardment with fast ions, ion beam current and incidence angle dependence 3−21878
- single-photon ionisation as Hilbert boundary value problem 3−32018
- small aggregates, magnetism and electronic struct., effect of electronic correls. 3−23732
- spectra, satellite struct., electron correls. 3−36709
- strong-field photodetachment, threshold effects 3−1319
- structure functions and ionisation of isolated atoms by charged projectiles 3−11977
- tunnelling ionisation in multifrequency laser field 3−32015
- two photon ionisation effective order of non-linearity, time depend. contribs. 3−26716
- two-electron escape at threshold in excited states, Wannier theory 3−26653
- wavefunction, asymptotic form, for ionisation problem 3−11979
- X-ray and atomic inner-shell physics, conf., Eugene, OR, USA (Aug. 1982) 3−40308
- β^+-decay of nucleus, atomic K-shell excitation 3−36357
- $\bar{p}+H(He^+)(Li^{2+})$, excitation, ionisation and charge transfer 3−41661
- $Ag+H^+$, K-shell ionis. cross-section meas. 3−41670
- Al ions, ionisation rate coeff. in theta-pinch discharge 3−32918
- Al laser multistage ionisation for impurity conc. determ. in Ge 3−58462
- Ar, energy and ang. distribs. of ejected electrons from Penning ionisation *(French)* 3−11955
- Ar, inner-shell threshold excitation with synchrotron radiation 3−41510
- Ar, Penning ionisation by He(2^3S) and excitation transfer from Ar(^{1,3}P) to N_2 meas. 3−11956
- $Ar+H^+$, angular distribution of ejected L-shell electrons 3−26831
- $Ar+H^+$, ionisation, differential cross section calcs. 3−56069
- $Au^{2+}+He(Ne)$, electron capture, target ionisation, coincidence meas. 3−32185
- B^-, bound state, electron correl. calcs., radiative autoionis. 3−45832
- Ba, 5d7d state, forced autoionis. 3−26703
- Ba $(6p_jns_{1/2})$ states, electron ejection, energy and ang. distribs. 3−55904
- Ba^+, optical inverted, 4-wave parmetric mixing, coherent radiation generation 3−12131
- Ba^{2+}, Rydberg spectra, correl., term depend. and autoionis. 3−21733
- Be III, decay channels of $(2,3c)^3P^0$ and $(2,4c)^3P^0$ levels 3−26667
- $^{12}C+H^+$, K-ionisation probability across 460 keV $^{12}C(p,p_0)$ reson. 3−26840
- Ca, photoionisation, relativistic RPA calcs. 3−32021
- Cl, photoionis., ion yield curve 3−45910
- Co, gas-phase high temp. PES 3−26710
- ^{58}Co, K-shell ionisation from β^+ decay 3−40994
- ^{60}Co, β^- decay, K-shell ionisation prob. form Ni X-ray spectra 3−40997
- Cs, multiphoton ionisation 3−11765
- Cs, oscillator strengths, atomic cone polarisation influence on multiphoton processes 3−41541
- Cs^+, Rydberg spectra, correl., term depend. and autoionis. 3−21733
- $Cu+H^+$, K-shell ionis. cross-section meas. 3−41670
- Fe, atomic, three-photon ionisation, photoelectron spectra and angular distrib. 3−26708
- Fe, gas-phase high temp. PES 3−26710
- Fe XXV (XXVI), autoionising states, resonant dielectronic satellite lines anal. *(French)* 3−41526
- Ga, stepwise ionisation by laser, photoionic beam prod. 3−26706
- $Ge+H^+$, K-shell ionis. cross-section meas. 3−41670
- H, avoided crossings and autoionisation widths in mag. fields 3−26702
- H, ionisation by fast highly stripped ions, scaling cross section 3−11965
- H photoionisation cross-section, relativistic effects calcs. 3−55905
- H, Rydberg atoms, intense microwave interactions 3−26678
- H Rydberg states, three-photon excitation 3−26700
- H, stimulated radiative corrections, two-photon ionisation, Stark shifts 3−45876
- H, two-photon excitation and ionisation with tunable VUV at Lyman-α 3−11768
- H^-, high lying doubly excited state, radial and angular correl. 3−11720
- H-like atom+ion, single ionis. at high and intermediate energies 3−56057
- H-like ions in strong mag. fields, photo-ionisation/photo-recombination cross sections 3−40021
- $H+H^+$, impact ionisation and charge transfer cross sections, classical-trajectory Monte Carlo method 3−11961
- $H+\mu^-$, stopping powers, ionisation and capture cross sections, Monte Carlo calcs. 3−32187
- $H^++H(H^+)(Li^{2+})$, excitation, ionisation and charge transfer 3−41661

ionisation of atoms continued
$H(1s)+Li^{2+}(Li^{3+})$, ionisation and charge transfer, coupled 3–1473
He, at. ionisation energy in a plasma 3–32857
He atoms, excited, multiphoton ionisation in glow discharge by ruby laser 3–17250
He autoionising states widths, var. calc. using complex coords. 3–55902
He, electron removal by fast multiply charged ions 3–11958
He, ground state, photoionisation cross section 3–1321
He in solar prominences and subsequent radiation diffusion 3–40102
He, photoionis. using synchrotron radiation 3–32012
He, photoionisation with excitation of residual ion 3–32016
He Rydberg atoms, intense microwave interactions 3–26678
$He+H^+$, double ionisation at high velocity 3–6776
$He+H^+$, ionisation, differential cross section calcs. 3–56069
He+H(He)(Li)(B)(C)(O) ions, absolute partial ionisation cross sections determ. for inelastic interactions 3–6765
He+He(H)(Li)(B)(C)(O) ions, ionisation, deviations from q^2 scaling 3–6764
He+ion, impact ionisation scaling cross sections 3–36851
^{4}He ion+Cu (Ge) (Mo) (Ag), target, K-shell ionisation cross sections 3–6774
Hg, 5d, 5p, 4f subshell photoionisation calcs. 3–6590
Hg atoms, excited, multiphoton ionisation in glow discharge by ruby laser 3–17250
Hg atoms, isotopically selective resonance photoionisation, fluorescence study 3–41538
I+I(Ag) slow collisions, K-shell ionis., impact parameter depend 3–56035
In, Rydberg state spectroscopy, field ionisation technique 3–50359
$K+H^+$, excitation-autoionisation 3–1464
$K+SnCl_4$ (carbon tetrachloride), ion pair form., total and double differential cross-sections 3–56029
Kr, energy and ang. distribs. of ejected electrons from Penning ionisation *(French)* 3–11955
Li, avoided crossings and autoionisation widths in mag. fields 3–26702
Li I, core-excited doublets, autoionisation rate determ. 3–21732
Li vapour, inner shell photoemission obs. 3–21737
Li^+ metastable levels, soft X-ray pumping from laser plasma source 3–26705
$Li+H^+$, excitation-autoionisation 3–1464
Li^++Li^+, ionisation and charge exchange cross sections 3–1467
Lu, autoionising and high-lying Rydberg states 3–11757
$Mo+H^+$, K-shell ionis. cross-section meas. 3–41670
N_2+H, electron loss and capture cross section meas. 3–6779
Na, 2p subshell photoionisation, outer-shell environment effects 3–21736
Na, continuum Stark spectroscopy and photoionisation 3–26692
Na, laser excited, ionisation by synchrotron radiation 3–11758
Na vapour, inner shell photoemission obs. 3–21737
Na vapour, laser induced ionisation 3–11756
$Na+H^+$ excitation-autoionisation 3–1464
NaI, photoabsorpt. spectrum below 1s ionis. threshold 3–50330
$Ne+H^+$, ionisation, differential cross section calcs. 3–56069
Ne+H(D), using state selected Ne(3s$^3P_2$, $^3P_0$) metastable atoms, ionisation, electron spectra anal. 3–50509
$Ne^{2+}+Xe$, charge exchange, transfer ionisation, translational spectroscopy 3–41676
Ni, gas-phase high temp. PES 3–26710
$_{28}^{63}Ni$, K-shell electron ionisatin probability during β decay calcs. 3–11291
O III/O II problem in medium and high excitation planetary nebulae, theoretical anal. 3–44814
O resonant multiphoton optogalvanic detection in flames 3–45914
Pb, laser photoionisation mass spectroscopy 3–11759
Pb^{82+} photoionisation cross-section, relativistic effects calcs. 3–55905
Pd, 4d subshell, photoabsorption relativistic RPA approx. 3–32019
$_{46}^{107}Pd$, K-shell electron ionisatin probability during β decay calcs. 3–11291
Rb, Stark effect and photoionisation spectra 3–26691
Se, relative photoionisation cross-section meas., 800 to 1400 Å 3–6587
Si ions, ionisation rate coeff. in theta-pinch discharge 3–32918
$_{62}^{151}Sm$, K-shell electron ionisatin probability during β decay calcs. 3–11291
$Sn+H^+$, K-shell ionis. cross-section meas. 3–41670
Sr, three-photon ionisation and autoionisation, laser intensity effect on config. interaction 3–21734
Ti atoms, release, transport and ionis. at ASDEX divertor plates, fluoresc. obs. 3–18037
Xe, above threshold ionis. contrib. to total ion yield 3–55908
Xe, energy and ang. distribs. of ejected electrons from Penning ionisation *(French)* 3–11955
Xe, inner-shell threshold excitation with synchrotron radiation 3–41510
Xe isoelectronic sequence, core charge effect on Rydberg spectra 3–26658
Xe isoelectronic series, Rydberg spectra, correl., term depend. and autoionis. 3–21733
Xe, multiphoton ionisation, AC Stark shift as a probe to meas. laser power density distrib. 3–32020
Xe, multiphoton ionisation studies using 2π electron spectrometer 3–10938
Xe, PES meas. after resonantly enhanced multiphoton ionisation 3–26707
Xe, reson. multiphoton ionis., AC Stark shift as intensity probe 3–55907
Xe, resonantly enhanced three-photon ionisation 3–1324
Xe, two and three photon ionisation 3–56009
Xe, two-photon ionis. at 193 nm 3–21738
Xe+Pb, high energy collisions, Pb K-shell ionisation probability 3–11963
Yb I, photoionisation spectroscopy from $6s7s'S_0$ state in presence of static mag. field 3–32023

ionisation of gases
see also atmospheric ionisation; electron avalanches; Townsend discharge
air, continuous columnar ionisation, modified ion balance eqn. 3–17993
boosted glow discharge emission lamp, temps., electron densities and degrees of ionis. 3–410
breakdown voltage between closely spaced electrodes on insulating surfaces, probability distribs. 3–13006
dense gases, bremsstrahlung and photocond. 3–2178
discharge, externally supported, ionisation losses, electron density 2 dimens. distrib. 3–33016
discharge, externally sustained, conducting channel propag. 3–33023
discharge, self-sustained longitudinal, stabilized by oppositely directed gas flow, steady-state current filament 3–42484

ionisation of gases continued
electron beam self-focusing in gases and their ionisation 3–26546
gas discharge, ionisation stability, sudden constriction 3–32844
gas-discharge-plasma streams motion in electromagnetic shock tube, effects of xenon preionisation 3–51322
hexafluoropropene gas, ion mobility and recombination and effective ionisation coeff. 3–7688
methane, stopping power and average energy to form an ion pair for 42 MeV O^{6+} ions 3–22568
molecular ionisation by electrons under electric field, rate constant determ. 3–51275
plasma theta pinch, ionising plasma, spectral line decay, plasma expansion effects 3–42423
propane, stopping power and average energy to form an ion pair for 42 MeV O^{6+} ions 3–22568
space-charge-limited bipolar current flow between coaxial cylindrical electrodes 3–33007
tissue-equivalent gas and its constituents, $\bar{W}$ values determ. using 1.1-3.9 MeV α-particles 3–58833
tissue-equivalent gases, methane-based, stopping power and average energy to form an ion pair for 42 MeV O^{6+} ions 3–22568
water droplets, polarisation model for high temps. and density 3–27644
water in liquid and vapour phases, electron energy deposition and yields 3–18351
Ar inductively coupled plasma, temp., electron density and ionisation 3–18006
Ar-ethane gas mixture, laser induced ionisation meas. 3–2170
CO_2, high repetition rate mini TEA CO_2 laser using a semiconductor preionizer 3–17480
CO_2, stopping power and average energy to form an ion pair for 42 MeV O^{6+} ions 3–22568
CO_2-N_2 mixture, volume gas discharge with external ionization by electron beam, injection instability 3–42483
H_2 gas, ionis. in const. elec. field, electron distrib. function *(Russian)* 3–32839
K molecular ions production in Cs discharge plasma, gas temperature effect on production rate 3–51335
N, transient voltage meas. by primary ionisation 3–2176
N_2, stopping power and average energy to form an ion pair for 42 MeV O^{6+} ions 3–22568
N_2-air mixture ionisation in contracted glow discharge, energy balance 3–51336
N_2-O_2 mixtures photoionisation by radiation from electric gas discharge 3–50462
Ne gas discharge plasma, ionisation kinetics, electron distrib. function 3–32842
Ne gas discharge plasma, ionisation waves kinetics 3–32843
SF_6-air mixture, ionisation and attachment coeffs. meas. 3–22732
SF_6-inert gas mixtures, electric charge stability *(Russian)* 3–22743

ionisation of liquids
acetonitrile-d_3, doped, photodetachment threshold of solvated electrons, luminesc. study 3–23998
anthracene in dielectric liqs., DC cond. signals obs. following pulsed photoionisation 3–9332
aromatic hydrocarbon in alkane solvents, laser photoionisation mechanism, solvent radical cation form. 3–9333
halides, molten, press. effects on elec. cond. 3–47136
organic solutes, photoionisation by far UV light, elect. field quenching of fluoresc. and photocurrent 3–8875
Ga, quasi-point ion source, for microfabrication *(Japanese)* 3–36125

ionisation of molecules
see also molecular electron impact ionisation
acetaldehyde ions, photoelectron-photoion coincidence spectra 3–1427
acetone, unimol. fragmentation, PES-photoion coincidence study 3–29296
acetylene, auto- and photo-ionisation, const., PES study 3–32137
alkali metal fluorides+C ions, multiple ionisation, electron transfer, K X-ray emission spectra 3–32186
alkaline earth fluorides+C ions, multiple ionisation, electron transfer, K X-ray emission spectra 3–32186
alkylbenzenes, chem. ions. mass spectra *(Japanese)* 3–48065
ammonium salts, quaternary, thermal ionis. 3–55873
anthracene molecule, mass-optical spectrum 3–11901
atomic charges from IR intensities, comparison with ab initio values 3–55795
chlorobenzene, multiphoton ionisation PES, vibr. struct. determ. 3–21840
concurrent events in photoelectron spectroscopy, theoretical studies 3–55995
conference, Arezzo, Italy (Sept. 1980) 3–30563
core spectra, dynamic effects 3–36730
1,4-cyclohexadiene, Rydberg transition symm., multiphoton ionisation study 3–36825
desorption ionisation used for fragile involatile molecules mass spectroscopy 3–19544
dihaloacetylene cations, $\tilde{A}$ and $\tilde{B}$ states relax., photoelectron-photoion coincidence spectroscopy 3–1426
dimer, electronic struct., oscillator strengths, photoionisation cross sections 3–46031
N,N-dimethyl-amides, radical cation form., ESR spectroscopy 3–29316
N,N-dimethyl-thioformamide, radical cation form., ESR spectroscopy 3–29316
DMSO, radical cation form., ESR spectroscopy 3–29316
electron and photon collisions, ang. distrib. 3–32229
1,2-epoxypropane, unimol. fragmentation, PES-photoion coincidence study 3–29296
ethylene, ionisation energies of bent and twisted double bonds 3–11670
ethylene oxide ions, photoelectron-photoion coincidence spectra 3–1427
field desorption time-of-flight mass spectrometry, ion form. mechanism investig. 3–54810
fluoroanthene, multiphoton ionis., FT mass spectrometric obs. 3–21830
glow discharge, mol. gas, photoionisation effects 3–33018
ground state S-containing mols., geometries moments, ionisation energies, MNDO calcs. 3–55847
halobenzene cations, photoelectron-photon coincidence studies of excited electronic states 3–11878
HgI_2, mol. beam photoionisation, UPS study 3–32135
hydrocarbons, alternant and nonalternant, p-band transition freq. rel. to bonding energy and ionic. pot. 3–50360
indole, soln., photoionisation threshold, N_2O quenching, fluoresc. study 3–32129
inner-shell ionisation, post-collisional interaction 3–36734

ionisation of molecules continued

- intermolecular complexes, ionisation, electrostatic and relax. effects 3–55805
- interstellar molecules, vertical valence ionis. energies, Green's function calcs. 3–5502
- iodobenzene, ^{125}I labeled, electron capture, Auger ionisation after-effects 3–36852
- iodobenzene, ion fragmentation rates, photoelectron-photoion coincidence meas. 3–50463
- ionisation pot. and appearance pot. meas., 1971-81 3–49100
- ions, multiphoton ionisation PES, vibr. struct. determ. 3–21840
- malachite green leucocyanide, photoionis., malachite green form., conformation changes 3–32146
- metal group VIII carbonyls, Koopmans' defects, many-body INDO calcs. 3–1244
- methanethiol ion, heats of form. of ions, photoionisation mass spectrometry 3–21832
- methanol, condensed, CO_2 laser induced ionisation, mass spectrometric detect. of mol. ions 3–21827
- methyl bromide, partial photoionisation cross sections using spin polarisation PES 3–26795
- methyl iodide, ^{125}I labeled, electron capture, Auger ionisation after-effects 3–36852
- methyl iodide ion, photodissoc. spectrum, multiphoton ionis. 3–46033
- molecular dimers, ionisation, electrostatic and relax. effects 3–55805
- multiphoton ionisation, surface-enhanced signal 3–56007
- multiphoton ionisation 3–11765
- multiphoton mass spectrometry of metastables, direct obs. of decay in high resolution time-of-flight spectrometer 3–46097
- naphthalene, multiphoton ionis., FT mass spectrometric obs. 3–21830
- naphthalene, one-colour reson.-enhanced two-photon ionis. spectra 3–46032
- negative ions photodetachment in mag. fields 3–26712
- nitrobenzidines, ionics. consts., spectrophotometic determ. 3–32041
- nitromethane, mol. beam, photofragment detection by multiphoton ionisation 3–6734
- pentene, ion-molecule reaction, photoionisation mass spectrometry 3–19513
- $(phenol)_n$ mol. clusters, electronic absorpt. spectra, mass-selected multiphoton ionis. obs. 3–32259
- phenol dimer, electronic absorpt. spectra studied by mass-selected MPI-nozzle beam method 3–1435
- phenol-$(H_2O)_n$ mol. clusters, electronic absorpt. spectra, mass-selected multiphoton ionis. obs. 3–32259
- 2-propene-1-imine, thermally generated, photoelectron and IR spectra 3–6722
- pyrazine, supersonic beam, triplet state lifetimes, photoionisation meas. 3–17339
- pyrimidine, supersonic beam, triplet state lifetimes, photoionisation meas. 3–17339
- tetrafluoroethene, valence-electron shake-up satellite bands in ionisation spectra, HAM/3 calcs. 3–50285
- toluene-cyanobenzene complex, electronic absorpt. spectra studied by mass-selected MPI-nozzle beam method 3–1435
- triethylamine, multiphoton ionisation, IR multiple photon dissoc. of mol. ions 3–21834
- trifluoromethyl radical, reson. enhanced multiphoton ionis. 3–26801
- trifluoromethyl radical, reson. enhanced multiphoton ionisation 3–11896
- triphenylene, multiphoton ionis., FT mass spectrometric obs. 3–21830
- vinylene carbonate, gas-phase negative ion form. by collision and electron impact 3–56054
- ArXe, photoionisation and bond dissoc. energies 3–11899
- CO, ($A\ ^1\Pi$) state, reson. multiphoton ionisation, photoelectron spectra 3–32136
- CO, ESCA peak intensities in DA and GSA calcs., using Fourier transformed GTOs 3–50292
- CO, jet cooled, $A^1\Sigma \leftarrow X^1\Sigma^+$ reson. enhanced multiphoton ionisation 3–1434
- CO, multiphoton ionisation and resonantly enhanced VUV generation 3–12231
- CO_2 TEA laser, photoionization sources 3–6945
- CO_2 TEA pulsed laser with preliminary photoionisation and high specific energy input 3–32384
- CO_2, valence-electron shake-up satellite bands in ionisation spectra, HAM/3 calcs. 3–50285
- $Co(CO)_3NO$ fragment ions, gas phase chem., appl. as chem. ionis. reagents 3–58402
- Cr_2, cluster, rot. consts., two-photon ionisation 3–17396
- $D^- + N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3–46059
- D_2^+ ($X^2\Sigma_g^+$) vibr.-rot. states, threshold electron photoionis. obs. 3–50461
- DCl, autoionisation, vibr. excitation, UPS study 3–36816
- DCl, vibronic transition ionisation energies, photoelectron spectroscopy study 3–41621
- $H^- + N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3–46059
- H_2, doubly excited autoionising states, ab initio calcs. 3–41629
- H_2 in Tokamak plasma, recycling, mol. effects depend. 3–18069
- H_2, laser-induced photoionisation, rovibr. ground state population meas. technique 3–11897
- H_2, photoionisation, photoelectron ang. distrib. and intensity 3–56008
- H_2 photoionisation spectrum, low-resolution, electronic ab initio quantum defect theory 3–31933
- H_2, two-photon autoionisation, cross section and line shape 3–26793
- $H_2 + He^*$, Penning ionisation, rel. to diatomics-in-mols. calcs. 3–17239
- $H_2 + He(Li)(C)(N)(O)$ ions, nondissociative ionisation and dissoc. ionisation 3–6756
- H_2+ion, impact ionisation scaling cross sections 3–36851
- $H_2 + Ne(3p^3D_3)$, $Ne(3s^3P_{2,0})$, thermal energy ionising collisions, mass and electron spectra studies 3–46055
- HCl, autoionisation, vibr. excitation, UPS study 3–36816
- HCl, photoionisation, fluorescence spectra of HCl^+ 3–1406
- HF, dipole oscillator strengths, mol. and dissociative photoionisation studies 3–46024
- H_nO^{x+}, $n=1\text{-}3$, $x=1,2$, struct., stability, adiabatic ionis. pots., multireference CI calcs. 3–45864
- H_2S, multiphoton ionisation spectroscopy, reinvestig. of $^1B_1\text{-}^1A_1$ band at 139.1 nm 3–21829
- H_nS^{x+}, $n=1\text{-}3$, $x=1,2$, struct., stability, adiabatic ionis. pots., multireference CI calcs. 3–45864
- $HgBr_2$, mol. beam photoionisation, UPS study 3–32135

ionisation of molecules continued

- $HgCl_2$, mol. beam photoionisation, UPS study 3–32133
- I_2, resonant three-stage ionisation using dye and N_2 lasers 3–6731
- $K + SnCl_4$ (carbon tetrachloride), ion pair form., total and double differential cross-sections 3–56029
- K_2, electronic struct., oscillator strengths, photoionisation cross sections 3–46031
- KrXe, photoionisation and bond dissoc. energies 3–11899
- LiI, fluctuation studies with one-atom detection techniques 3–26799
- N_2, high-power nonself-sustained vol. discharge initiation by UV radiation from plasma cathode 3–37724
- N_2 Penning ionisation by $He(2^3S)$ and excitation transfer from $Ar(^{1,3}P)$ to N_2 meas. 3–11956
- N_2-air mixture ionisation in contracted glow discharge, energy balance 3–51336
- N_2-O_2 mixtures photoionisation by radiation from electric gas discharge 3–50462
- NH_3-H_2O, binary clusters, mol. beam two-photon ionisation mass spectra 3–50562
- NH_n^{x+}, $n=1\text{-}4$, $x=1,2$, struct., stability, adiabatic ionis. pots., multireference CI calcs. 3–45864
- NO, electron spectra for reson. four-photon ionisation 3–11895
- NO, excited states, four-photon ionisation and fluoresc. dip spectra 3–46038
- NO, optical-optical double reson. multiphoton ionisation spectroscopy 3–11840
- NO, PES meas. after resonantly enhanced multiphoton ionisation 3–26707
- NO photofragment internal energy distribs., mol. beam multiphoton ionis. obs. 3–26800
- NO, scatt. from Cu surface, mutliphoton ionic. detect. 3–14429
- NO, vibrationally excited, scatt. off LiF and CaF_2 surfaces 3–28950
- NO_2, 2-photon photodissoc. dynamics, NO photofragment internal energy distribs. 3–26800
- N_2O, valence-electron shake-up satellite bands in ionisation spectra, HAM/3 calcs. 3–50285
- Na_2, electronic struct., oscillator strengths, photoionisation cross sections 3–46031
- $Ne + HCl \rightarrow Ne + HCl^+ + e^-$, Penning ionis. optical spectrosc. 3–32177
- O_2, shape reson. and electronic autoionisation in vibr. resolved partial photoionisation cross sections 3–21828
- O_2, vibronic partial photoionisation cross sections 3–6729
- PH_n^{x+}, ~~$n=1\text{-}4$, $x=1,2$,~~ struct., stability, adiabatic ionis. pots., multireference CI calcs. 3–45864
- PO^+, ground state, vac. UV photoelectron spectrosc. obs. 3–46028
- PbSe, laser photoionisation mass spectroscopy 3–11759
- PbTe, laser photoionisation mass spectroscopy 3–11759
- Pd planar complexes, mol. orbitals relax. 3–11695
- SiF_4, continuous-absorpt. cross section discontinuities near inner-electron-shell ionisation threshold 3–1378
- SiF_6^{2-}, continuous-absorpt. cross section discontinuities near inner-electron-shell ionisation threshold 3–1378
- SiH_4, continuous-absorpt. cross section discontinuities near inner-electron-shell ionisation threshold 3–1378
- UO_2 (hexafluoroacetyl acetate)$_2$ TMP spectral narrowing and IR laser fragmentation of jet cooled mols. 3–14877
- UO_2(hexafluoroacetylacetate)$_2$ THF spectral narrowing and IR laser fragmentation of jet cooled mols. 3–14877

ionisation of solids

- halides, insulator, cryst. cohesion, effects of electron retention and spin pair bonding 3–27888
- oxides, insulator, cryst. cohesion, effects of electron retention and spin pair bonding 3–27888
- Ce, electron excited Auger and autoionisation spectra, comparison with resonant photoemission 3–3875
- Ge:Al(Na), laser photoionisation impurity detect. 3–14891

ionisation potential

- *see also work function*
- acetaldehyde ions, photoelectron-photoion coincidence spectra 3–1427
- acetone, unimol. fragmentation, PES-photoion coincidence study 3–29296
- adenine tautomers, props., MNDO calcs 3–55841
- n-alcohols, H bond energies, US velocity and density study 3–18391
- alkali atoms and diatoms, core-valence correl. effects inclusion in pseudopot. calcs. 3–1255
- alkali dimer ions, pot. curves calc. using semi-empirical pseudopot. method 3–31948
- atom, many electron system, exchange-correlation energy, one-particle approach 3–8431
- atoms, heavy and highly ionised, spectra and transition probabilities, semi-empirical regularities 3–21714
- atoms, ionis. pot. and chem. pot., Hartree-Fock theory 3–41485
- atoms and diatomic mols. props., differential coeff. 3–31892
- benzene, resonant two color photoionization in a hypersonic jet 3–6727
- benzene-inert gas van der Waals complex, pot. surfaces 3–36836
- cytosine tautomers, props., MNDO calcs. 3–55840
- diatomic mols., heteronuclear, dipole moments, ionisation pot. and electron density asymptotic form 3–12002
- diimines, ionisation pots., photoelectron spectra, comparison of semiempirical methods 3–17221
- dimethyl ether-HF complex, ionisation energy shifts, electrostatic and relax. effects, MO calcs. 3–26807
- electron energy-loss study in 14.8 to 20.3 eV region using a multidetector electron spectrometer 3–26873
- 1,2-epoxypropane, unimol. fragmentation, PES-photoion coincidence study 3–29296
- formic acid, dimer, H-bonds, dissoc. and ionisation energy, PES study 3–41617
- ground state S-containing mols., geometries moments, ionisation energies, MNDO calcs. 3–55847
- hydrides, ten-electron, ionisation pots., H^+ affinity, hole states, SCF calcs. 3–6528
- hydrocarbons, alternant and nonalternant, p-band transition freq. rel. to bonding energy and ionic. pot. 3–50360
- hydroxybenzoic acids, electronic spectra, struct., reactivity, CI-CNDO-PPP calcs. 3–11697
- II-VI compounds, defect formation kinetics 3–13210
- imines, ionisation pots., photoelectron spectra, comparison of semiempirical methods 3–17221
- inert gas ions formed by field ionisation, mass spectrometry and appearance spectroscopy 3–6591

ionisation potential continued
- insulating gases, dielectric strength, boiling point and toxicity 3—2173
- ionisation pot. and appearance pot. meas., 1971-81 3—49100
- ions, photoelectron-photoion coincidence spectra 3—1427
- metal clusters, trimeric homonuclear and double charged, stability study 3—21954
- metal group VIII carbonyls, Koopmans' defects, many-body INDO calcs. 3—1244
- metallocenes, closed shell, ground and hole states, struct., INDO calcs. 3—11698
- methanol, dimer, dissoc. and ionisation energies, PES and ab initio SCF MO calcs. 3—41618
- methyl compounds, Koopman's theorem ionisation pot., ab initio SCF calcs. 3—55819
- methyl cyanide, electron impact study of appearance energies of positive ions 3—6796
- nonbonding valence orbital ionis. pot., shifts, rel. to core binding energy shifts 3—50300
- polyacenes, linear, with many rings, mean π-electron energy, ionisation pot. and Huckel parameters 3—45860
- polydiacetylene cryst., energy levels of ionised states, photoemission study 3—24086
- pyridine, mass spectral fragmentation, MNDO calcs. 3—31940
- quanine tautomers, props., MNDO calcs 3—55841
- silyl compounds, Koopman's theorem ionisation pot., ab initio SCF calcs. 3—55819
- Stark effect near potential barrier peak 3—26689
- thymine tautomers, props., MNDO calcs. 3—55840
- transition metal compounds, Koopman's theorem nonvalidity, semiempirical MO calc. 3—11701
- transition metals, multiple metal-metal bonding, charge overlap and mol. orbital energies 3—37841
- triphenyl derivatives, group elements, H-bonds vibr., IR obs. 3—6654
- uracil tautomers, props., MNDO calcs. 3—55840
- valence-electron shake-up satellite bands in ionisation spectra, HAM/3 calcs. 3—50285
- AlH, excited states, ab initio propagator calcs. 3—45840
- Ar, electronic props. by Green's function calcs. 3—6512
- ArKr, photoionisation and bond dissoc. energies 3—11899
- ArXe, photoionisation and bond dissoc. energies 3—11899
- Be^+, doubly excited states 3—31977
- $Bi_{1-x}Sb$, electron probe microanalysis, extrapolation method 3—9368
- CO_2, ionisation pots. in 20 to 30 eV, CI calcs. 3—31954
- CO_2, valence-electron shake-up satellite bands in ionisation spectra, HAM/3 calcs. 3—50285
- $Cs_2{}^+$, pot. curves calc. using semi-empirical pseudopot. method 3—31948
- CsH^+, pot. curves calc. using semi-empirical pseudopot. method 3—31948
- Cu_2, dissoc. energy, ionisation pot. ab initio MRD CI calcs. 3—11712
- $D_2{}^+$ ($X^2\Sigma_g{}^+$) vibr.-rot. states, threshold electron photoionis. obs. 3—50461
- GeI_2, UV PES 3—46022
- H, freq. conversion processes 3—12222
- H halides, dipole moments, ionisation pot. and electron density asymptotic form 3—12002
- H^++atoms, (Z=1-92), energy loss, time-of-flight, inelastic collision probability data tables 3—10527
- HF, electronic props. by Green's function calcs. 3—6512
- H_2O, electronic props. by Green's function calcs. 3—6512
- KrXe, photoionisation and bond dissoc. energies 3—11899
- Li_2, Rydberg states, ionisation pot. optical double reson. 3—6683
- Li_3 cluster, binding energies, ionisation pot., ab initio SCF and MRD CI calcs. 3—26890
- Lu^{2+} polarisability, transition and probabilities, ionisation energies, one-electron spectrum 3—6565
- MgO, dissoc. energy, ab initio CI calcs., electron affinity and ionisation pot. 3—17229
- $Mn(CO)_5X$, (X=halide), core binding energies use in UV photoelectron spectra assignment 3—50460
- NH_3, electronic props. by Green's function calcs. 3—6512
- N_2O, valence-electron shake-up satellite bands in ionisation spectra, HAM/3 calcs. 3—50285
- $N_3(X^2\Pi)$ radical, transient species, vacuum UPS 3—21820
- Ne, electronic props. by Green's function calcs. 3—6512
- NiO, UHV surface annealed, electronic props., photoemission yield spectra study 3—24092
- PO^+, ground state, vac. UV photoelectron spectrosc. obs. 3—46028
- Pm isoelectronic sequence, closed N-shell alkali spectra 3—21613
- $Rb_2{}^+$, pot. curves calc. using semi-empirical pseudopot. method 3—31948
- RbH^+, pot. curves calc. using semi-empirical pseudopot. method 3—31948
- SI, VUV spectrum and ionisation energy 3—31993
- Si:Tl, Poole-Frenkel effect influence on acceptor ionisation energy 3—43190
- Si-containing molecule, MINDO/3 and MNDO calcs. 3—21641
- $(Y, In)_2O_3:Er^{3+}$, luminescence, host sensitization mechanism 3—3781

ionisation time *see ionisation*

ionogen *see electrolytes*

ionoluminescence
- Ar_2, excited states vibr., VUV luminesc. obs. 3—1377
- Co, ion-photon emission at polymorphic transform. 3—43637
- Xe, liquid, high press., fluorescence excitation meas. for electron, α-particle and fission fragment irrad. 3—24023

ionosondes *see ionospheric measuring apparatus*

ionosphere
- *see also D-region; E-region; F-region; ionospheric electromagnetic wave propagation; ionospheric techniques; sporadic-E layer*
- Alfven resonator, parametric excitation 3—5017
- Alfven wave energy accumulation and geometric optics approx. breakdown 3—35341
- Alfven wave reflection by nonuniform ionosphere 3—48759
- annual variations of equatorial electrojet field 3—35067
- artificial magnetic field pulsations generated by amplitude modulated radio wave, amplitude 3—15754
- auroral break-up event, rocket and ground-based obs. 3—54181
- auroral currents, artificial LF radiation generation 3—39945
- auroral hiss, Z mode radiation and AKR of polar magnetosphere 3—44620
- auroral ionosphere, elec. field and electron accel. above discrete auroras 3—15717
- auroral ionosphere, equilib. motion of quiet auroral areas 3—15678
- auroral ionosphere, relations between Birkeland currents, auroral electrojet indices and high latit. Joule heating 3—5030

ionosphere continued
- auroral kilometric radiations correl. with field-aligned currents 3—35373
- auroral lines of force, anomalous resist. and longitudinal elec. fields 3—15689
- auroral radar experiments, interpretation using kinetic theory of two-stream instability 3—48763
- auroral zone proximity to magnetic and geographic equators, index 3—10116
- bay disturbance at low-latitude 21 March 1981 obs. 3—48736
- conductivity tensor, altitude depend. inhomogeneity effect on longitudinal currents 3—35345
- convective elec. fields and currents driven by field-aligned currents 3—39952
- current as origin of superposed northward field on $S_q(H)$ var. 3—44389
- currents associated with Pi 2 anal. and characts. 3—35381
- cyclotron resonance effects in light ion stochastic accel. 3—20167
- D-region, EM wave scatt. mechanism involving electron detachment 3—48753
- daily variations of ionospheric characts., effect on Doppler freq. shift on Boulder-Havana path 3—15714
- dayside polar region, field-aligned currents and magnetic disturbances 3—10160
- decametre radiowave nonlinear interaction at close freq. in oblique propagation 3—48749
- density drift instabilities, nonlocal theory 3—54189
- density irregularity (small-scale) behaviour in auroral zone 3—44616
- detrapping of whistler wave trapped electrons by additional wave 3—10150
- disturbances caused by 1980 May 18 Mount St. Helens eruption 3—10131
- disturbed ionosphere as source of hot ions for magnetosphere 3—54202
- 3-D double layer formation in electron beam-magnetoplasma interaction 3—18086
- double layers driven by elec. current, in auroral plasma 3—48731
- E_{sq}-type irregularities in polar and equatorial zones, comparison with H_E-type irregularities at middle latits. 3—15711
- Earth-ionosphere waveguide excitation by ELF source in ionosphere 3—15741
- electric current systems, rel. to diurnal motions of Earth's magnetic poles 3—35069
- electric currents, contrib. to low-latitude geomag. var. 3—59126
- electric currents and rel. to electrojets, global dynamo model 3—39951
- electric currents generation in polar ionosphere, role of viscous interaction 3—15713
- electric field generation by solar wind mag. field B_y component 3—10142
- electric field model (F-region) from radar obs. 3—54191
- electric field variability at high-latitudes 3—15721
- electric fields and currents estimated from ground mag. data 3—15734
- electric fields during mag. storm disturbances 3—39948
- electric fields measurement in ionosphere and magnetosphere, via Intercosmos-Bulgaria 1300 satellite 3—20197
- electrodynamics of diffuse aurora region 3—5019
- westward electrojet rel. to FAC and diffused auroral precipitation 3—35348
- electron beam injection from spacecraft, calc. of RF emission 3—10152
- electron beam-plasma-discharge producing suprathermal electrons 3—7754
- electron content depletions assoc. with VHF scintillations 3—48751
- electron density irregularities produced in radiowave heating expt. 3—48746
- electron density valley problem, inverse scattering solns. 3—48756
- electron density variation, effect on VHF auroral backscatter amplitude 3—59153
- electron precipitation, global distrib. of energy flux 3—15727
- electron precipitation (quiet-time) in S Atlantic anomaly region 3—39947
- electron transport in ionosphere, photoelectron fluxes, energy spectra 3—15744
- electrons (field-aligned) streaming out from ionosphere at auroral latitudes 3—10144
- electrostatic field obs. of auroral zone 3—5020
- electrostatic plasma wave growth in radiowave heating expt. 3—15740
- elevated ion temps. at high latitudes due to plasma convection 3—20166
- ELF (Schumann resonance) propagation and elec. conductivity perturbations 3—48754
- equatorial counter-electrojet effect on Indian region geomag. solar/lunar daily var. 3—44390
- equatorial electrojet, characts. at Huancayo and Eusebio (Fortaleza), in S American region 3—5028
- equatorial electrojet, parameters regional var. 3—44604
- equatorial electrojet characts. from Brazil geomag. field var. anal. 3—44605
- equatorial electrojet characts. rel. to E Senegal geomag. var. *(French)* 3—44394
- equatorial electrojet effect on S_q var. 3—44393
- equatorial plasma depletions of nighttime F-region 3—35351
- equatorial region EM reson., review 3—30118
- equatorial spread-F obs. indicating drift wave instabilities 3—15724
- equivalent currents representing solar daily variations 3—15729
- EXB instability in presence of inhomogeneous elec. field 3—44615
- field aligned current region, elec. and mag. field obs. 3—15722
- field aligned currents and electrojets of post-noon quadrant 3—30111
- field-aligned current distrib. during substorms 3—15728
- field-aligned currents associated with auroral arcs 3—30121
- field-aligned plasma flow in quiet, mid-latitude ionosphere 3—48700
- flat disc in magnetically active plasma layer, low freq. impedance, radiosonde appl. 3—15630
- H_E-layer irregularities at middle latitudes, comparison with E_{sq}-type irregularities in polar and equatorial zones 3—15711
- Harang discontinuity variability, radar and magnetometer chain meas. 3—59151
- heating by radiowaves 3—54192
- high-energy electron fluxes during mag. storm disturbances 3—44618
- high-latitude trough location and production 3—48758
- auroral hiss and effect of ion conic damping 3—35349
- hot spots at high latitudes due to plasma convection 3—20166
- inhomogeneities formation on density gradients moving rel. to plasma 3—15700
- inhomogeneities layer height from coherent freq. reception 3—15701
- inhomogeneous structure model simulation, use in forecasting radiowave scintillations 3—15687
- internal geomag. field and variations determined from very quiet nighttime currents 3—4772

ionosphere continued

- inverted-V electron precipitation, elec. fields and plasma characts. 3—30119
- ion beam injection expt., obs. of anomalous electron distribs. 3—10123
- ion conic formation along auroral field lines 3—54187
- ion source for magnetosphere plasma mantle 3—48768
- ion velocity distrib. function for auroral zone 3—15730
- ion velocity distrib. function model for auroral zone 3—20177
- ions contribution to radiation belt energetic ion fluxes 3—35362
- IRI and MSIS models of neutral atmos. and ionosphere composition, comparison study 3—48730
- irregularities generated by parametric decay instabilities 3—44614
- isolated irregularities, investigation via wave field reconstruction of VHF radio waves 3—10136
- Langmuir soliton formation during radiowave heating expt. 3—48741
- lateral ionospheric gradients, effects on ELF propag. 3—10035
- loss-cone instability, effect of finite extent of plasma cloud 3—54188
- magnetic fields measurement in ionosphere and magnetosphere, via Intercosmos-Bulgaria 1300 satellite 3—20197
- magnetic storm effects during 17-18 Dec. 1971 storm 3—5009
- magnetosphere plasma of polar ionosphere origin 3—15764
- magnetosphere-ionosphere coupling, MHD model including turbulence 3—44611
- main ionisation trough effect on high latitude HF wave propagation 3—15705
- meteor trail deionization 3—5018
- mid-latitude electron conc. distrib., mag. field effects 3—35344
- mid-latitude trough movement obs. 3—20176
- modification experiments performed using Scandinavian radiowave heating facility 3—48740
- modification expts., conf., Aug. 1981, Washington, DC, USA 3—44891
- modification of ionosphere using power HF radiowaves, review 3—48738
- Mt. St. Helens 1980 volcanic eruption causing travelling wave disturbance 3—10119
- Mt. St. Helens volcanic eruption (May 1980) causing global wave disturbance 3—10011
- myriametric wave generation at equatorial plasmapause 3—5050
- narrowband radioemission from near plasmapause 3—48772
- negative ion chemistry of upper ionosphere 3—15732
- negative ions identification and abundance 3—35358
- nonstationary polar wind, causes and effects 3—15719
- particle precipitation, possibility of artificial modulation of particle streams 3—15718
- Pc 5 ULF pulsation and ionosphere elec. fields during substorms 3—30128
- photoelectron flux measurement by satellite method 3—54169
- planetary waves generation, Rossby soliton excitation 3—39956
- plasma, interaction with moving bodies, induction 3—15810
- plasma characteristics from Doppler method 3—15686
- plasma convection at high-latitudes, model 3—10121
- plasma electron component anisotropic hydrodynamics 3—48757
- plasma flux, parallel to mag. field, moment eqns. *(French)* 3—2204
- plasma instabilities due to upgoing ion beams 3—35350
- plasma instabilities of ionospheric holes 3—5021
- plasma noise at high frequency induced in in-situ elec. dipole antenna 3—15690
- plasma sheet instability initiation, role of ionospheric O^+ ions 3—48771
- plasmapause, magnetometer ground array use 3—35377
- plasmapause location rel. to plasma sheet inner boundary 3—30110
- plasmasphere disturbance convection pattern 3—39950
- plasmasphere field line resonance and micropulsations, magnetometer ground array use 3—35377
- plasmasphere temp. deduced from VLF obs. 3—48752
- polar and auroral oval daytime sector, electrons/protons penetration 3—35337
- polar cap elec. field consistent with photoelectron obs. 3—15720
- polar cusp region, role of plasma instabilities in topside heating and density fluctuations 3—15725
- polar ionosphere, investigation of irregular struct. using oblique incidence soundings 3—5026
- polar region, convection vel. and longitudinal currents mag. effects 3—35338
- polar region periodic structures and micropulsations amplitude estimation 3—15750
- polar wind expansion, calc. of plasma flow 3—30112
- positive ions identification, and origin abundance 3—35357
- Ps 6 disturbance spatial and temporal structs. 3—15770
- pulsating aurora correl. with Pi 1 and riometer obs. 3—35371
- pulsation resonance regions, ionosphere role magnetometer ground array use 3—35377
- pulsing hiss, pulsating aurora and micropulsations correlations 3—20164
- radionoise from dynamo current system modulated by HF heater signal 3—48747
- radiowave emission following heating by HF signal 3—48748
- radiowave heating, feedback-diffraction theory 3—48743
- radiowave heating expt. exciting thermal modulational instability 3—48742
- radiowave heating expts. and nonlinear phenomena research in USSR 3—48739
- radiowave heating generated irregularities due to parametric decay instability 3—44614
- RCAD-1 and -2 Franco-Soviet project results 3—5033
- resonant energy absorpt. in plasma 3—32905
- rocket exhaust causing F-layer ionisation depletion 3—48750
- rocket-borne electron beam expt., obs. of floating pot. and return current 3—20169
- S_q current representation of East Asia quiet day mag. field var., validity 3—44387
- S_q current systems for N America during quiet-Sun year 3—53920
- S_q/L currents estimation and var. 3—44603
- SAR arc associated heated electron population obs. 3—15680
- Schumann resonance, effects of ions conc. 3—15706
- solar eclipse caused electron content decrease 3—59158
- solar eclipse caused ionospheric disturbance, magnetometer study 3—59168
- solar eclipse caused magnetic field variations and ionospheric currents 3—59166
- solar eclipse causing gravity wave disturbances 3—59157
- solar eclipse disturbance of ionosphere, multifreq. radiowave absorpt. obs. 3—59154
- solar eclipse effect on ionosphere total electron content 3—59159

ionosphere continued

- solar eclipse effects on 1980 February 16, symposium (New Delhi, Jan. 1981) 3—54572
- solar eclipse effects on 2.2 MHz radio absorpt. and phase height 3—59155
- solar eclipse generated gravity waves, 16 Feb. 1980 obs. 3—20174
- solar eclipse induced total electron content changes 3—59161
- solar eclipse influence on TEC at low latitudes 3—59160
- solar eclipse of 26 February 1979, total electron content obs. 3—59163
- solar eclipse rocket sounding programme, 16 Feb. 1980 over India 3—59169
- solar eclipse time electron content fluctuations 3—59162
- solar eclipse time geomagnetic variation obs. 3—59167
- solar eclipse time horizontal drift obs. 3—59164
- solar eclipse time negative ion, electron density and electron loss coeffs. 3—59171
- solar eclipse time photoelectron flux obs. 3—59172
- solar eclipses causing geomagnetic variations 3—59165
- solar power satellite microwave beam impact on ionosphere 3—39946
- sounding rocket generated elec. fields in wake region 3—54190
- source for magnetosphere ions 3—25262
- spectrum of small-scale artificial ionospheric turbulence 3—5016
- stationary large-scale irregularities 3—20171
- storm-time disturbance, magnetospheric convection effects 3—39949
- prompt striations growth, role of Rayleigh-Taylor instability 3—35352
- substorm assoc. VLF phase anomalies and energetic electron precipitation 3—54186
- substorm onset, effect of initial ionosphere cond. 3—35383
- sudden disturbance effect at high solar zenith distances 3—48729
- suprathermal electrons accelerated in HF radiowave heating expt. 3—48745
- TEC changes at mid-latitude stations located several 100 km apart 3—5010
- thermal oscillating two-stream instability, Ohmic heating 3—42397
- topside electron densities and critical freq. determ. 3—15685
- topside equatorial electron density irregularities, and radio scintillation 3—44613
- topside ionosphere above Arecibo, interhemispheric thermal proton flow 3—10122
- total electron content structure over Israel 3—30116
- transversely accelerated ion events at low-altitude during substorm 3—44609
- travelling ionospheric disturbance due to 1980 Mt. St. Helens volcanic eruption 3—10120
- travelling ionospheric disturbances 3—15671
- ULF pulsation generation in ionosphere radiowave heating experiment 3—48744
- upper atmosphere dynamics, Dynamics Explorer satellite mission 3—15737
- vertical ionisation profiles of terrestrial and planetary ionospheres, rel. to possible global EM resonances 3—15862
- VHF radar auroral backscatt. due to conductivity of ionosphere 3—10126
- VLF hiss, struct. of quasi-periodic fluctuations 3—15755
- VLF hiss at low-latitudes, narrow band characts. 3—35346
- winter anomaly explained by thermosphere NO photochem. model 3—15726
- Zarnitsa-2 experiment, injected electron beam-plasma interaction, glow dynamics 3—15707
- Ba ion cloud, sunlight reson. fluoresc. scatt., radiative transfer and lines anal. 3—5031
- H ion accel. and conic formation along auroral field lines 3—54187
- NO seasonal variations of D-region from electron density obs. 3—20159
- O^{2+} photochem. and photoionisation processes 3—10107
- O(S) deactivation coeff. meas. during Stereotop expt. 3—5006

ionospheric electromagnetic wave propagation

see also atmospherics

- adaptive antenna systems, HF skywave channel, time-variant properties design and performance implications 3—48767
- amplitude modulation by modulated mag. fields in inhomogeneous plasma 3—37656
- artificial magnetic field pulsations generated by amplitude modulated radio wave, amplitude 3—15754
- atmospherics, propagation in Earth-ionosphere guide 3—54101
- aurora borealis, radiowave transmission effect *(Norwegian)* 3—35360
- auroral radar echoes, reduction of inherent noise in double-pulse Doppler technique 3—48761
- auroral radar experiments, interpretation using kinetic theory of two-stream instability 3—48763
- auroral zone scintillation studies 3—10132
- bi-static incoherent scatter radar and meas. of autocorrel. functions 3—48755
- chorus, latitudinal variation of freq. in topside ionosphere 3—35355
- coherent frequencies reception used to determine ionosphere inhomogeneities layer height 3—15701
- conference, Aug. 1981, Washington D.C., USA 3—10505
- D-region, identification of ionisation ledges by LF/VLF obs. during meteor shower 3—5027
- D-region MF partial reflection profiles rel. to electron density meas. 3—10129
- D-region radio wave absorption, dominant role of solar Lyman-α radiation 3—5029
- D-region VLF transmission, mode conversion and winter anomaly effects 3—44607
- decametre radiowave nonlinear interaction at close freq. in oblique propagation 3—48749
- disturbance period radioabsorpt. 3—44618
- Doppler freq. shifts of HF waves due to acoustic-gravity waves *(Chinese)* 3—54182
- Doppler frequency shift on Boulder-Havana path, effect of daily vars. of ionospheric characts. 3—15714
- doppler frequency variations in the field-aligned scattering of VHF waves by artificial irregularities of the ionosphere 3—39954
- E-region sudden disturbance due to solar UV/X-ray emission, aeronomic characts. 3—15693
- Earth-ionosphere waveguide excitation by ELF source in ionosphere 3—15741
- Earth-ionosphere waveguide model, computation of complex roots of modal eqns. 3—30109
- EHF satellite-to-satellite Doppler tracking accuracy limited by turbulence 3—25260

ionospheric electromagnetic wave propagation continued
  electron density irregularities produced in radiowave heating expt. 3−48746
  electron detachment from molecule as scatt. mechanism 3−48753
  electrostatic plasma wave growth in radiowave heating expt. 3−15740
  ELF (Schumann resonance) propagation and elec. conductivity perturbations 3−48754
  ELF localised nocturnal propagation anomalies, obs. in Connecticut and N Atlantic Ocean 3−10032
  ELF propagation, effects of lateral ionospheric gradients 3−10035
  ELF signal generation due to LF/MF transmissions, Finnish expt. 3−10127
  ELF signal generation due to LF/MF transmissions, interpretation 3−10128
  equatorial anomaly, E Asian sector, nighttime VHF and SHF scintillations 3−59150
  equatorial region EM reson. 3−30118
  extraordinary wave absorpt. in mid-latitude region 3−15742
  f_0F_2, appl. of theoretically derived values to improvement of ionospheric maps 3−48762
  F_2-layer, reflected partly scattered vector field, ang. spectra 3−15695
  F_2-layer critical penetration freq., sunrise effects 3−5013
  F-region, density/temp. disturbances from heating by HF waves 3−15697
  F-region, perturbation with high-power radiowaves 3−20178
  frequency management of HF sky-wave circuits in Europe 3−10117
  geodetic gravity surveying by inter satellite tracking, EHF propag. problems 3−25260
  HF emission, spectrum of small-scale artificial ionospheric turbulence 3−5016
  HF field structure in parabolic ionospheric layer, numerical simulation 3−15703
  HF ionosphere radiowave heating expt. producing ELF and VLF waves 3−48748
  HF propagation factors affecting the design and operation of real time, channel evaluation, adaptive systems 3−48766
  HF propagation geometry effect on sky wave radar sea-state sensing 3−35275
  HF radar ionospheric clutter, characteristics 3−48765
  HF radio signal time delay variations of ionospherically refl. signals 3−15739
  HF radio waves, high-power, parametric disintegration in ionospheric plasma 3−15708
  HF radiowave propagation effects on striction parametric instability 3−39957
  HF signals, multimode broadening on long paths 3−15715
  HF waves, very long distance propag. characts. in high solar activity period 3−15688
  HF waves propagation at high latitude, effect of main ionisation trough 3−15705
  high-freq. radio wave, stimulated scatt. 3−25261
  high-power RF radiation, modulation frequency wave generation by nonlinear wave-wave interaction 3−10138
  hydromagnetic wave (Pc 5) propagation 3−30127
  incoherent scatter radar obs. of plasma line, appl. of chirped pulse system 3−10139
  inverse scattering, exact solns. to valley problem, ionospheric electron density determ. 3−48756
  ionosphere, modification expts., conf., Aug. 1981, Washington, DC, USA 3−44891
  Langmuir soliton formation during radiowave heating expt. 3−48741
  long-distance television reception in Band I due to F2 propagation 3−54183
  meteor scatter mode VHF communication, amateur expts. *(German)* 3−54184
  MF high power incident waves, non-linear interference effects at electron gyrofrequency 3−15684
  microwave heating of D and E-regions, simulation using HF ionospheric modification expts. 3−10137
  microwave scintillation and refr. due to equatorial plasma bubbles 3−20168
  mixed-path whistler echoing near dawn plasmapause 3−20185
  modification experiments performed using Scandinavian radiowave heating facility 3−48740
  modification of ionosphere using power HF radiowaves, review 3−48738
  multidimensional identification of ionospheric parameters using incoherent scatt. method, errors 3−15743
  mutual coherence function for transionospheric radiowaves, meas. 3−10135
  myriametric wave generation at equatorial plasmapause 3−5050
  night-time ionospheric absorption during and after magnetospheric storms, from auroral to middle latits. 3−5024
  parametric excitation of plasma modes at upper hybrid reson. 3−2227
  polar ionosphere, transitional HF and VHF emission from plasma inhomogeneities 3−15694
  radio phase path contrib. from F_2-layer characts. 3−5015
  radiowave absorption of middle/high latitudes, difference var. through solar cycle, background corpuscular radiation effect 3−15702
  radiowave heating, feedback-diffraction theory 3−48743
  radiowave heating expt. exciting thermal modulational instability 3−48742
  radiowave heating expt. modulating dynamo current system 3−48747
  radiowave heating expts. and nonlinear phenomena research in USSR 3−48739
  radiowave heating generated irregularities due to parametric decay instability 3−44614
  radiowave modification used in ionosonde method for horizontal stratification determ. 3−44576
  radiowave propagation, numerical method for extending ray trace calcs. into strong focusing regions 3−6842
  radiowave propagation effects used to determine solar flare EUV radiation 3−15852
  radiowave propagation in ionospheric plasma 3−35359
  radiowave scintillation forecasting, use of ionosphere inhomogeneous struct. model 3−15687
  radiowaves, caustic cusp diffr. region in ionospheric plasma layer, field struct. 3−5032
  random nonuniformities, EM wave refl., radiowave propag. effects *(Russian)* 3−54194
  reflected radio wave frequency shift in ionospheric initial stage perturbation by strong radiowave 3−35339
  regional structure of ionospheric radiowave absorpt. 3−20171

ionospheric electromagnetic wave propagation continued
  RF heating, turbulence, Luxembourg effect 3−54192
  RF heating wave, Alfven wave generation 3−15718
  riometer obs. during Pi 1 and pulsating aurora 3−35371
  riometery method sensitive to E-region irregularities 3−10118
  scintillation of daytime transionospheric equatorial radiosignals 3−5011
  scintillation of VHF and UHF transionospheric equatorial signals 3−35347
  self-focusing characts., anal. 3−39953
  short radiowave propagation on long meridional paths, azimuthal deviation 3−39959
  solar eclipse disturbance of ionosphere, multifreq. radiowave absorpt. obs. 3−59154
  solar eclipse effects on 2.2 MHz radio absorpt. and phase height 3−59155
  solar eclipse effects on ionospheric phase paths and group path variations 3−59156
  solar power satellite microwave beam impact on ionosphere 3−39946
  spacecraft borne transmitters emission, effect on plasma characts. and disturbance 3−15698
  sporadic E-layers, partial transparency at high latits. due to radio waves mode coupling 3−5023
  spread-F occurrence at high latits., study of irregular struct. of polar ionosphere using oblique incidence sounding 3−5026
  suprathermal electrons accelerated in HF radiowave heating expt. 3−48745
  SW radiocommunication links, calc. of max. usable frequencies taking Earth's magnetic field into account 3−39960
  thermal self-focusing instability prod. by radio wave interaction 3−35340
  topside electron densities and critical freq. determ. 3−15685
  topside equatorial electron density irregularities, and radio scintillation 3−44613
  transionospheric radiowave beam propagation, theory for turbulent layer 3−15738
  UHF signals, foreshortened scatter characts. of H_E-type and E_{sq}-type irregularities 3−15711
  ULF fields first mode propag. characts. 3−15704
  ULF guided waves correl. with auroral electron precipitation 3−15736
  ULF pulsation generation in ionosphere radiowave heating experiment 3−48744
  VHF amplitude scintillations and assoc. electron conc. depletions 3−48751
  VHF auroral backscatter amplitude, depend. on cond. in eastward polar electrojet region 3−59152
  VHF auroral backscatter amplitude, depend. on ionosphere electron density 3−59153
  VHF radar auroral backscatt. due to conductivity of ionosphere 3−10126
  VHF radio waves, appl. of wave field reconstruction method to single isolated ionospheric irregularities 3−10136
  VLF atmospherics fadings associated with Calcutta monsoon depression rainfal 3−10018
  VLF atmospherics propagation and absort. by lower D-region 3−48734
  VLF Fresnel-type fadings observed at Delhi 3−48732
  VLF mid-latitude transmission, mode conversion effects 3−10130
  VLF phase anomalies associated with substorm disturbance 3−54186
  VLF propagation, effects of charged particles conc. 3−15706
  VLF propagation in Earth-ionosphere waveguide model, propag. and inverse problem characts. 3−15696
  VLF radio noise obs. made in Europe 3−20165
  VLF reflection coefficients, appl. to estimation of D-region electron density profile 3−48764
  VLF standing waves in Earth-ionosphere waveguide 3−20175
  VLF wave-particle interactions and VLF propagation 3−44619
  VLF whistler mode waves transmitted from ground and obs. by GEOS-1 3−10148
  waveguides, radiowave extraction mechanism, resonance buildup of beams 3−20179
  whistler waves beat excitation 3−12863
  whistlers, VLF receiver design 3−44589
  whistlers cut-off latitude and duct propag., Zhanjiang region obs., China *(Chinese)* 3−10140
  whistlers in topside ionosphere, amplitude spectra at freq. below 1 kHz 3−15745
  whistlers/VLF emissions, intensity spectrum characts; SH-1 equipment *(Chinese)* 3−10074
  E-region, VHF scatt. irregularity obs. 3−15735

ionospheric measuring apparatus
  optical photometer (rocket-borne) to study night-time emissions 3−48791
  sensor electric reference pot. establishment by nearly passive technique 3−15812
  VLF receiver for whistler signal investig. 3−44589

ionospheric measuring instruments *see ionospheric measuring apparatus*

ionospheric propagation *see ionospheric electromagnetic wave propagation*

ionospheric techniques
  see also electron density; ion density
  artificial modulation of precipitating particle streams, appl. of modulated RF heating 3−15718
  auroral radar sound, reduction of inherent noise in double-pulse Doppler technique 3−48761
  bi-static incoherent scatter radar and meas. of autocorrel. functions 3−48755
  D-region electron density profile, estimation from knowledge of VLF refl. coeffs. 3−48764
  EISCAT ionospheric radar research facility 3−30067
  electrostatic field in auroral zone by radar method 3−5020
  f_0F_2, theoretical derivation and appl. to improvement of ionospheric maps 3−48762
  F-region plasma diagnostics from radioemission of injected electron beams 3−48684
  geomagnetic daily variation at equatorial latits., internal component separation rel. to ionospheric current determ. 3−35354
  HF digital Doppler ionosonde compared to incoherent scatt. method 3−15658
  horizontal density stratification monitoring by radio wave modification method 3−44576
  incoherent scatter radar obs. of plasma line, appl. of chirped pulse system 3−10139
  ion temp. in space plasma determ., retarding potential analyser graphical results computing 3−20157
  ionosonde method for monitoring motion of mid-latitude trough 3−20176

ionospheric techniques continued

- modification experiments performed using Scandinavian radiowave heating facility 3—48740
- multidimensional identification of ionospheric parameters using incoherent scatt. method, errors 3—15743
- photoelectron flux measurement by satellite method 3—54169
- plasma flow (field-aligned) determ. by topside sounding method 3—48700
- pulsed plasma probe technique for multi-ion plasmas and assoc. effects on instabilities 3—20123
- radiowave heating expts. and nonlinear phenomena research in USSR 3—48739
- radiowave propagation, numerical method for extending ray trace calcs. into strong focusing regions 3—6842
- riometery method sensitive to E-region irregularities 3—10118
- satellite electric reference pot. establishment by nearly passive technique 3—15812
- solar eclipse rocket sounding programme, 16 Feb. 1980 over India 3—59169
- sounding rocket generated elec. fields in wake region 3—54190
- wave field reconstruction of VHF radio waves, appl. to single isolated ionospheric irregularities 3—10136
- Ba-cloud release, spectroscopic line-of-sight vel. meas. method 3—4968

ionotophoresis *see electrophoresis*

ions

- *see also atoms; electrolytic ions; hydrogen ions; negative ions*
- No entries

i.r. astronomy *see infrared astronomy*

i.r. detectors *see infrared detectors*

IR drop *see electric potential*

IR focal plane arrays *see image sensors; infrared imaging*

i.r. imaging *see infrared imaging*

i.r. sources *see infrared sources*

i.r. spectra *see infrared spectra of diatomic inorganic molecules; infrared spectra of inorganic solids; infrared spectra of organic molecules and substances; infrared spectra of polyatomic inorganic molecules; spectra of inorganic liquids and solutions*

irasers *see lasers*

iridium

- *see also nuclei with ......*
- adsorbed graphite monolayer, AES study 3—2984
- adsorption of C, on (111) surface, submonolayer phase composition investig. 3—33577
- desorption and oxidation of CO on (110) surface, lattice-gas model 3—38211
- field emitter, adsorption of O_2 studies using FEM 3—34202
- field evaporated ions, charge state distrib., post-ionisation 3—3928
- surface, (100), structure determ. by quasidynamical LEED intensity evaluation 3—57194
- surface, Ar^+ impact, SIMS study 3—38979
- surface (110), NO chemisorption, σ and π orbitals, UPS study 3—2973
- surface (110), NO chemisorption and decomposition, UPS study 3—2972
- surface (110), reconstructed, cross-channel adatom diffusion, computer calc. and FIM study 3—2974
- Ir I atoms, radiative lifetimes, oscillator strengths, fluoresc. spectra 3—50343
- ^{192}Ir template procedures, ideal vs. actual dosimetry 3—58836
- ^{193}Ir neutron activated, Frenkel pair creation and annihilation, elec. resist. meas. 3—56882

iridium alloys

- *see also iridium compounds*
- Ir-V thin films and bilayers, silicide form. resulting from interfacial reaction with Si substrate 3—18520
- Ir-W:Th, Th segregation to grain boundaries in alloys containing 5-1000 ppm 3—47837
- Mo-W-Ir, struct. form., electron conc. role 3—37858
- Nb_3Ir, electronic struct., superconductivity and spin fluctuations 3—38299
- Nb_3Ir, NQR studies of relax. process 3—23829
- $(Nb_{1-x}Ta_x)_{55}Ir_{45}$, metallic glasses, superconducting T_c press. depend. 3—43313
- Pd-Ir-P amorphous alloys, anodic characts. in hot NaCl soln. 3—53277
- $PrIr_2$, mag. props. at low temps., neutron diffr. study 3—14023
- UIr_3 (100), f-band dispersion angle resolved and resonant photoemission study 3—57269
- $^{235}UIr_2$ thin-film target, for g-factor meas. in fission isomers 3—50081
- V_3Ir, electronic struct., superconductivity and spin fluctuations 3—38299
- Zr_8Ir_2, crystallisation, DSC, X-ray diffr. and Mossbauer studies 3—51494

iridium compounds

- *see also iridium alloys*
- $Ho(Ir_{0.7}Rh_{0.3})_4B_4$, occurrence of supercond. below antiferromag. transition 3—57450
- $IrCl_3$, electronic props. relativistic correction, multiple scatt. $X\alpha$ calc. 3—3061
- $IrCl_6{}^{2-}$, ${}^{3-}$, electronic props., relativistic corrections, MS-X_α calcs. 3—50322
- $IrCl_6{}^{2-}$, anti-Stokes mag. Raman optical activity and time reversal 3—11890
- $IrCl_6{}^{2-}$, sign of g-value determ. using MCD data 3—6690
- $IrCl_6{}^{2-}$, vibr., vibr.-electronic reson. Raman scatt. 3—32082
- Ir(II) paramagnetic cpds., ESR 3—17314
- IrO_2 sputtered films, pH sensitivity 3—10823
- Ir_2O_3 film, optical information storage process 3—32319

iron

- *see also nuclei with ......*
- (110), oxidation by O_2 and H_2O vapour, ion irrad. effects 3—29216
- abundance in globular clusters NGC 7006 and Palomar 13 giant stars 3—54457
- abundance in K-type giants, method using very strong lines 3—30226
- abundance in terrestrial planets cores 3—10243
- abundances in K-type giants from visible obs. 3—20363
- acicular particles, remanent coercive force meas. 3—18943
- adsorbed N on (100) surface, struct. arrangement, LEED study 3—38212
- adsorption of acetylene and ethylene on (110) surface, EELS study 3—3889
- aluminised, interdiffusion in Fe-Al system 3—33519
- amorphous, atomic mag. moment study 3—47483
- amorphous, hyperfine field and atomic mag. moment 3—43132
- amorphous, local electron densities, Green's function formalism 3—8459
- amorphous, local electronic densities, multiple scatt. Green's function theory 3—8458

iron continued

- amorphous, local electronic density of states, direct space expansion 3—28252
- amorphous, vacancies and interstitials, density fluctuation stability 3—37904
- anisotropy const., band model calcs. 3—52452
- anodic oxide film form. in neutral $Na_2B_4O_7$-H_3BO_3 soln., effect of Cl^- ion 3—34532
- anodic oxide film form. in neutral phosphate soln., comp. and struct. 3—34531
- Armco, electromagnetic-acoustic technique for Rayleigh wave reception 3—57740
- Armco, nitriding, phase comp. investigation in X-ray apparatus 3—34548
- Armco, shock wave structure recording using commercial manganin gauges 3—42204
- atom, matrix isolated, a^5P and a^3P states 3—50340
- atom, multielectron, one-photon transition, line splitting and intensity 3—11744
- atoms, gas-phase high temp. PES 3—26710
- atoms, K_β/K_α X-ray intensity ratio, chem. sensitivity effect 3—26684
- austenite, P segregation 3—53066
- BCC, atomic and electronic structs. of tilt grain boundaries 3—33269
- bushings, sintered, Brinell hardness 3—47956
- cast, structural barriers for high-level nuclear waste containment 3—6355
- cast Fe, nodular, TiN coatings deposited by ion and plasma assisted techniques 3—14483
- chemisorptive bonds with H, O, N, and S, tight-binding parameters 3—52216
- cleavage crack growth, cyclic, quantitative fractography 3—39228
- commercial purity, H attack, effect of stress *(Japanese)* 3—9163
- corrosion behaviour, H evolution reaction in nonaqueous formic acid 3—19447
- corrosion resistance, ion beam mixing and bombardment diffused coatings 3—28167
- crack simulation, using new boundary scheme 3—14716
- creep rate, high temp., unified anal. from point of view of recovery 3—58160
- critical dynamics above Curie point, polarised neutron study 3—52496
- critical dynamics at Curie point, role of spin-nonconserving forces 3—3456
- critical scattering of polarised neutrons above T_c 3—52394
- deformation and fracture, influence of gaseous H_2 3—29185
- deformation of single crystals, low temp. *(French)* 3—53149
- desorbing H, acoustic emission 3—22980
- diffusion, in GaAs, masking props. of SiO_2 film 3—8257
- elastic consts., determ. from elastic moduli of polycryst. samples *(Russian)* 3—51686
- electrode surface, potentiostatically polarised, SEM study 3—34527
- electrodeposited, corrosion-electrochem. behaviour, effect of non-metallic inclusions *(Russian)* 3—4189
- electron backscatt. and sticking coeff. anisotropy of gases on single cryst. surfaces 3—8915
- electron beam melted, pure and Sn implanted, slip, dislocations, SEM, TEM, RBS and channelling studies 3—56987
- electron irrad., muon trapping at monovacancies 3—52701
- electronic struct. and magnetism above Curie temp. 3—28498
- epitaxial (110) film on W (110) ribbon, spin polarised electron scatt. 3—23751
- epitaxial film, FMR study, surface anisotropy effects 3—23807
- epitaxial films on GaAs substrates, growth and mag. props. 3—18950
- epitaxial growth on GaAs by MOCVD in vacuum, LEED, Auger and FMR studies 3—13652
- epitaxial metal film sandwich, mag. moment var. 3—13683
- erosion of α-Fe by rough spherical alumina particles, metallographic study 3—19429
- EXAFS, fluorescence and transmission, meas. 3—24050
- fatigue crack propag., near threshold, effect of grain size and cold work 3—29181
- ferromagnetic, electronic struct. of 3d impurities 3—3104
- ferromagnetic, muon spin relax. due to hopping motion of positive muons, theory 3—3624
- ferromagnetic, NMR under high press. *(Russian)* 3—52634
- ferromagnetic, pseudopotential calcs. of ground state props. 3—57510
- ferromagnetic antiresonance transmission meas. of critical exponent β 3—28704
- ferromagnetic correls. in paramag. α and γ-phases, neutron scatt. study 3—52355
- ferromagnetic domain struct., neutron polarisation anal. 3—52519
- ferromagnetic films and heterogeneous double layers, mag. props., Brillouin scatt. from spin waves *(German)* 3—14314
- ferromagnetic thin films, Brillouin light scatt. by spin waves, magnetostatic theory 3—57943
- ferromagnetism, reversible ideal, dipole eqns. *(German)* 3—18838
- film, γ magnetic resonance, polarisation detection method 3—8731
- film, (001), surface magnetism, self-consistent FLAPW determ. 3—57712
- film, correspondence of optical anisotropy to mag. anisotropy 3—28816
- film, Dy ion implantation at 400 kV, struct. and props. 3—57716
- film, mag. parameters determ. from spin wave Brillouin scatt. 3—19150
- film, magnetic phase transition verification 3—28560
- film, thermal spin waves and FMR modes, role of surface anisotropy 3—23748
- films, 7.3 keV electrons energy distribs. with depth selective Mossbauer spectrometer 3—40720
- films, selected area deposition by laser CVD 3—52969
- fine particles, mag. domain structs. and domain walls 3—3479
- fission reactors, He buildup from neutron irradiation meas. 3—41189
- foil, oxidation to Fe_3O_4, electron transfer, XPS study 3—19248
- forged sintered, fatigue, fractographic anal. 3—24355
- fracture studies using AES, review 3—14827
- glass:Fe^{3+}, site symmetry and g-factor, EPR study 3—43429
- grain boundary segregation and H embrittlement 3—47839
- grain boundary vacancies and interstitials, self-diffusion, mol. dynamics study 3—46923
- hard saturated, surface eqns. 3—52597
- high purity, fatigue limit and strain ageing *(Japanese)* 3—9165
- high-purity, fund. plastic behaviour 3—39226
- high-purity, Si pollution during heat treatment in H_2 atm., resistivity obs. *(French)* 3—29116
- implanted bubble garnet layers, annealing mechanism, FMR study 3—33982
- interface, magnetism studied by neutron diffr. 3—57532
- interfaces, magnetism studied by Mossbauer spectroscopy 3—57828

iron continued
ion implantation behaviour of ^{111}In and ^{103}Ag at low temp. 3−18326
ion implanted, struct. changes, TEM study 3−33318
ion implanted, surface layer characts. 3−56919
ion implanted corrosion and electrochemical behaviour 3−29215
island layers on Bi films, elec. resistance 3−43304
isotropic ferromagnets, dynamical crit. behaviour 3−14061
itinerant magnetism in paramag. phase, theory 3−57509
kinetics of $\alpha \rightleftharpoons \gamma$ transition, adiabatic scanning calorimetry study *(French)* 3−8184
laser bombardment, dynamic response, surface roughness effect 3−13272
lattice self-diffusion, critical review *(Japanese)* 3−13518
layer formation, shock-wave appl. of powder on C steel 3−24412
left-right asymmetry of polarised neutron scatt. above T_c 3−52395
light impurities, hyperfine fields and adiabatic pot. 3−52064
line emission in GX 1+4, pulse period meas. and phase-var. 3−15955
liquid, surface bismuth after vibration *(French)* 3−42882
liquid, thermodynamic props., Percus-Yevick phonon description 3−51474
magnetic domain interactions with dislocations and grain boundaries, HVEM study 3−23699
magnetic domain walls at high temp. 3−28595
magnetic moment structure of α-Fe from neuton diffr. expt., electron theory 3−14009
magnetic tape, Fe-particle, Mossbauer study 3−19029
magnetic thermogravimetry of Ni, De and Co using modified magnetic thermo-balance *(Japanese)* 3−54750
magnetisation spatial correl. in paramag. phase, neutron scatt. study 3−57517
magnetism and thermodynamic props. above Curie temp. 3−52356
magnetostatic field calcs., Green's function approach 3−46120
magnetostriction 3−57731
mechanical properties of high purity single cryst., effect of H charging during deform. 3−2651
microcrystals, Barkhausen jump parameters 3−23715
mixed valence trinucl. clusters, Mossbauer spectra 3−28748
molten, surface tension meas. 3−28196
Mossbauer oxidation study in phosphate glasses 3−43470
muon precession freq., dipole symmetry disruption by dislocations 3−52697
neutron powder diffr. by white source transmission meas. 3−7959
nitride hardening and carbonitriding *(Italian)* 3−53258
nitrided α-phase, surface Fe_xN form. under unfavourable thermochem. conditions, causes 3−14886
optical properties in IR and far IR 3−57868
oxidation, Mossbauer depth profiling technique 3−53272
oxidised, sulfur diffusion in oxide grain boundaries 3−43983
NE Pacific Ocean, meas. of dissolved Fe concs. 3−4896
paramagnetic, ferromag. correls., polarised neutron scatt. study 3−28507
particles, prep. for mag. recording tapes, coercive force, saturation magnetisation, grain props. 3−23739
particles in Hg, aggregation study using small angle neutron scatt. 3−52508
particles in Hg suspension, struct. determ. 3−13071
particles in Mg, melting study 3−13412
passivated surface, thin film roughness characterization by X-ray reflectometry *(French)* 3−28225
passivation behaviour under mech. working influence by impacting-solid bodies in neutral phosphate electrolyte *(German)* 3−39308
passive film, EXAFS study 3−43988
passive film, optical spectra, mol. orbital study 3−9231
passive film, TEM study 3−9230
passive layers containing water, SIMS meas. 3−4332
photoelectron spectra, two-electron resonances 3−52896
photons multiple backscattering, saturation depth Z-dependence 3−47577
plastic stress-strain relationships, tested in biaxial tension 3−47913
point defect capture by vacancy pores, machine modelling method *(Russian)* 3−37948
point defect drift-diffusion in dislocation strain fields, saddle point anisotropy effects 3−51847
pollution of soils by ore smelter, Sudbury, Ontario, Canada 3−39542
polycrystalline, α-phase, fatigue crack initiation mechanism 3−58200
polycrystalline, cyclic deform., dislocation substructure rel. to saturation stress 3−53162
porous sheet material, mag. props. 3−14749
powder, electrodeposited, oxidation processes during prep., washing and drying 3−47991
powder, fine electrolytic, with organic coatings, reduction annealing, micropowder magnet prep. 3−58066
powder, reduced from α-FeOOH, coercive force 3−18944
powders, disaggregation at low temps. 3−39071
powders, mag. props., vol. concentration dependence meas. *(German)* 3−28642
powders, pyrophonic, stabilising oxide layers effect on mag. props. 3−23731
powders, rel. between particle morphology and prod. process 3−52992
powders, sintered magnetic cores, coercive force 3−47527
pure, cold rolling and annealing textures, effect of grain boundaries 3−29103
PWR boilers, corrosion removal from boiler secondary, electrochemical meas., Fe ions behaviour 3−50006
quartz:Fe, short-lived optical absorption, influence of pulsed electron irradiation 3−14324
rare gas:^{57}Fe solids, impurity-host to host-host coupling force const. ratio 3−22988
reaction of H_2S with (001) surface, AES and LEED study 3−2955
rolled crystals, [100](001) oriented, orientation changes, deformation banding and dislocation structs., theory 3−43858
salt film form. during passivation in acid solns. 3−24389
secondary electron high spin polarisation, photoemission study 3−8936
self-diffusion in α-Fe, mag. order influence *(Czech)* 3−57666
short range mag. order above Curie temp., local band theory 3−57629
single cryst., ferromag., spontaneous magnetisation determ. *(French)* 3−23596
sintered, bending strength determ., NDT using hardness and mag. inductive meas. *(German)* 3−53307
sintered compacts, electroplating with Cu, Ni and Zn 3−19461
soft ferromagnetic materials and heat treatment 3−39259
soft mag. props., ideal reciprocal ferromagnetism *(Polish)* 3−47524
solid solubility in high-purity Si, NAA and antiCompton spectrometry study 3−28109
spin fluctuations rel. to photoemission line shape, cluster theory 3−57627

iron continued
spin wave theory, mag. moment and magnetisation study 3−33873
spontaneous magnetisation and spin wave theory *(French)* 3−52412
sputtered excited atoms, vel. distrib., laser induced fluoresc. study 3−14416
steel, atm. corrosion, Mossbauer study 3−19444
STEM spatial resolution for compositional anal. 3−7889
stopping ratios for 30-330 keV ions with $1 \leq Z_1 \leq 5$ 3−22950
strain hardening law, latent hardening and multislip tests 3−37926
strained crystal, vacancy formation and migration energies, computer simulation 3−38118
surface, (100), O covered, Cl and HCl bonding and reactions, ASED MO study 3−23161
surface, (110), adsorption and decomposition of CO, vibrating capacitor study 3−42913
surface, (110), ferromag., exchange scatt. of spin polarised electrons 3−57711
surface, adsorbed NH_3, adsorbate, binding and valence photoemission *(German)* 3−38231
surface, Ar^+ impact, SIMS study 3−38979
surface (100), diffusion of C following halocarbon adsorption, AES and XPS study 3−42924
surface (110), H adsorption, lattice gas model 3−2944
surface (110), oxide film composition and structure 3−3002
surface (110) magnetism from polarized electron scatt. 3−18969
surface oxide layer, elastic and inelastic electron scatt. anal. 3−13677
surface sensitive $M_{2,3}$ absorpt. edge shifts by refl. EELS 3−19236
surfaces, corrosion processes, Mossbauer spectroscopy study 3−4177
temperature-pressure phase diagram 3−34284
TGS:Fe^{3+} crystals, luminesc. and absorpt. investigation 3−8870
TGS, pure and Fe^{3+} doped, current-voltage characteristics *(Russian)* 3−47352
thermal desorption, laser induced, of CO from (110) surfaces 3−13642
thermal diffusivity over temp. range 300-1250K 3−1938
thermal transport props. near Curie point 3−8275
thermodynamics of interactive co-segregation of P and alloying additions 3−14596
thick film, ultrasonic generation and propagation 3−22979
thin films mag. anisotropy where deposited by facing targets sputtering 3−38658
tremolite: Mn^{2+}, Fe^{3+}, S-state ions study, use of ultrasonically modulated electron resonance 3−33973
tribological props. and XPS studies 3−14746
vacancy form. after irrad. and quenching, positron annihilation study 3−47732
whiskers, low field FMR near T_c 3−57783
wire coils, dislocation elasticity *(Russian)* 3−33340
X-ray emission spectra, systematic struct. in K emission bands 3−38966
X-ray galaxy clusters, Fe line emission obs. via X-ray telescope with multilayer coatings 3−54240
X-ray K emission spectra, intensity distrib. meas. 3−3872
X-ray $L_{\alpha 1,2}$ emission lines, chemical shifts meas., electron microprobe anal. appl. 3−8906
AgCl:Pd^{2+},Fe^{2+} UV light irrad. prod. Fe^{3+} centres, EPR study 3−47288
Al:Fe, impurity density of states, cluster phase shifts and virtual bond states 3−52070
β-Al_2O_3:Fe, electronic cond. meas. 3−8541
Al_2O_3:Fe,Ti, Nabarro-Herring diffusional creep, dopant conc. depend. 3−53136
$Bi_{0.88}Sb_{0.12}$:Fe, elec. cond. and thermo-EMF, Fe effect 3−38413
$Bi_{12}SiO_{20}$:Fe^{3+}, paramag. impurity, EPR study 3−28693
$CdGa_2S_4$:Fe(III), EPR spectra, crystal field interactions, twinning characteristics *(German)* 3−3520
$CoCl_2$:Fe, localised mag. modes, far IR absorpt. spectra 3−3770
CoO:Fe, Mossbauer study of excess charge compensation 3−33246
Cr_7C_3-Fe composite, phase constitution and chem. comp. of phases formed during sintering 3−58092
CrO_2:^{57}Fe particles, mag. struct., Mossbauer spectra 3−18860
$CuInS_2$:Fe, defect electron levels, elec. cond. and Mossbauer studies 3−52062
Fe (IX) to (XV), electron impact ionisation rate coeff. 3−26864
α-Fe, activation energy for self diffusion, ferromag. ordering effects 3−57121
Fe, atomic, three-photon ionisation, photoelectron spectra and angular distrib. 3−26708
α-Fe, C-vacancy interaction study 3−13259
γ-Fe, carburisation in CO-N_2 atmos., surface reaction kinetics *(French)* 3−4206
Fe I, Kurucz-Peytremann gf values, errors 3−36722
Fe I, moderately accurate oscillator strengths determ. 3−36725
Fe I, relative oscillator strengths meas., multipass optical system appl. 3−11742
Fe I, solar photospheric absorption line asymmetry in quiet and active regions 3−40085
Fe I curve of growth for solar photosphere and comp. 3−40082
Fe I lines in photosphere, departure from LTE, comparison with NLTE calcs. 3−20228
Fe II, electron impact excitation cross-section meas. 3−44665
Fe II, radiative lifetimes, selective laser excitation 3−41529
ϵ-Fe, internal mag. fields, enhanced paramagnetism, Mossbauer study 3−28741
Fe VII forbidden lines excitation under gaseous nebula conditions, transition probabilities and collision strengths 3−1279
α-Fe whiskers, stress-strain curves, effect of H charging 3−14651
Fe XII-XVIII, Kα and Kβ lines from M-shell ionised ions produced in vac. spark 3−51380
Fe XIII 10747 Å solar corona line meas. with GaAs:Sb heterojunction photodiode 3−20240
Fe XIV, interferometric eclipse obs. of inner solar corona 3−59305
Fe XIV 530.3 nm coronal emission line polarisation, abundances and mag. field direction determ. 3−30315
Fe XIV and XVII line identifications in EUV solar spectrum 3−30330
Fe XIX-XXII, X-ray lines inner shell transition origin, solar flare+Tokamak appl. 3−48812
Fe XV-Fe XIX in Tokamaks, ionisation and recombination coeffs., confinement times 3−2276
Fe XXI, energy levels, L-shell correl. corrections 3−21661
Fe XXIII, Be-like ions, relativistic intermediate coupling calcs. 3−41527
Fe XXV, 2s ^3S-2p ^3P transitions of heavy He-like ions *(French)* 3−21875
Fe XXV (XXVI), autoionising states, resonant dielectronic satellite lines anal. *(French)* 3−41526

iron continued
- Fe XXV dielectronic recombination rate coeff. meas. in PLT Tokamak plasma 3−32944
- Fe XXVI, in strong mag. fields, photo-ionisation/photo-recombination cross sections 3−40021
- α-Fe, Xe^{2+} ion irrad., dislocation loop damage struct., TEM study 3−42682
- Fe^{2+}, in CaO, SrO and BaO, defect props. study 3−56923
- Fe^{26+}, Lyman-α lines and 1s Lamb shift 3−55866
- Fe^{7+}, photoabsorpt. oscillator strengths of $3p^63d^2D \rightarrow 3p^53d^2\ {}^2p^0, {}^2D^0, {}^2F^0$ transitions 3−21716
- Fe^{n+} (n=13-15), ion radiation in L-2 stellarator plasma *(Russian)* 3−32901
- Fe:^{152}Sm, hyperfine mag. fields 3−3138
- Fe:C, ion implanted form. of Fe_3C, TEM and electron diffr. study 3−27959
- α-Fe:Co, neutron irrad., Mossbauer study of point defects 3−57821
- Fe:H, H interstitials, quantum mechanical description and expt. study 3−51633
- Fe:He, D, ion implanted, D surface permeation and defect trapping obs. 3−33500
- α-Fe:He, spontaneous vacancy-impurity annihilation 3−42644
- Fe/W multilayer films, metastable state form. by Xe irrad. 3−2630
- Fe/Zn system, diffusion driven grain boundary migration during zincification of Fe 3−2573
- Fe-graphite compact undergoing sintering, diffusion obs., thermal microscopy 3−58068
- Fe-metal contacts, interfacial adhesion energy, segregation effects, rel. to thin film lubrication expts. 3−53355
- Fe-sapphire interfacial strength, SCF Xalpha scattered wave cluster MO calc. 3−13903
- Fe-Sn clusters in Ar matrix, Mossbauer effect 3−3614
- Fe-Ti stationary redox battery, operating performance in presence of Pb 3−24565
- Fe-V film, multilayered, ^{51}V NMR obs. 3−28735
- Fe+C, heavy ion excitation, visible radiation study 3−50503
- ^{55}Fe, K-L double ionis., X-ray emission 3−26869
- ^{57}Fe nucleus, γ-magnetic resonance in presence of electronic spin relax. 3−52688
- ^{57}Fe resonance electron Mossbauer spectra using proportional counter technique 3−41409
- ^{57}Fe, scattered and transmission electron Mossbauer spectra 3−30969
- ^{60}Fe, nucleosynthetic, yield constraints from diffuse galactic γ-ray line emission 3−20403
- Fe(n,X), 14.6 MeV, activation cross sections leading to long lived reaction products 3−21501
- GaAs:Fe, deep impurity centre ionisation 3−28304
- GaAs:Fe p-π-ν-n struct., photoconductivity under forward bias 3−18777
- GaAs:Fe VPE layers, deep level activation energy and optical cross section 3−47286
- GaAs:Fe^{2+}, photons and phonons stimulated emission study 3−52809
- GaP:Fe, electron irrad., radiation defects, ESR study 3−14123
- GaP:Fe, photoluminesc. excitation spectroscopy 3−43614
- GaP:Fe epitaxial layer photosensitive valve struct. *(Russian)* 3−3344
- Ga_2Te_3-Fe, solid solubility 3−57091
- Ge:Fe, electronic struct. calcs. 3−18651
- H adsorption, work function-chemisorption study 3−51917
- H diffusivity and solubility in pure specimens, effect of vacancies 3−28154
- H permeation and diffusion 3−42855
- InP:Fe, APR study, dynamic Jahn-Teller effect 3−8721
- InP:Fe, deep impurity centre ionisation 3−28304
- InP:Fe, defect state induced by ion irrad. or annealing, optical transient current spectroscopy study 3−43090
- InP:Fe, ion implant depth profile after annealing, SIMS study 3−8083
- InP:Fe, semi-insulating, eutectic precipitates 3−8207
- InP:Fe, semiinsulating, recomb. processes, photocond., TSC, electroabsorption studies 3−18721
- K_2MnF_4:Fe, antiferromag., EPR linewidth and spin-lattice relax. 3−57762
- $KTaO_3$:Fe^{3+}, H diffusion correl. with relative concs. of cubic and axial sites 3−38132
- $LiIO_3$:Fe, γ radiation defects and impurity defects, positron annihilation study 3−33248
- $LiNbO_3$:Fe, electrooptic crysts., photogalvanic and photorefractive effects 3−33762
- $LiNbO_3$:Fe, exoelectron emission and radiation strength, impurity and temp. depend. 3−39019
- $LiNbO_3$:Fe, γ radiation defects and impurity defects, positron annihilation study 3−33248
- $LiNbO_3$:Fe, optically induced light scatt. and beam distortion, rel. to phase hologram storage 3−50630
- $LiNbO_3$:Fe, photorefractive effect and surface elec. breakdown, space charges obs. 3−23898
- $LiNbO_3$:Fe, photovoltaic tensor meas. 3−3242
- $LiNbO_3$:Fe, Raman scatt., effect of induced photorefr. 3−14294
- $LiNbO_3$:Fe crystals, photorefraction and anisotropic light scatt., holographic recording 3−36959
- $LiNbO_3$:Fe growth by Czochralski method, phys. props. *(Korean)* 3−3943
- $LiNbO_3$:Fe photorefractive grating, electroacoustic and acoustooptic interactions 3−38797
- $LiTaO_3$:Fe crystals, photorefraction and anisotropic light scatt., holographic recording 3−36959
- $MgCO_3$:Fe^{2+}, slow spin relax, Mossbauer study 3−38730
- MgO: Fe^{2+}, excited states, Raman study 3−14309
- MgO:Fe, grain boundary chem., analytical electron microscope study 3−46959
- MgO:Fe, magnesioferrite form., mag. resonance and electron diffr. 3−8726
- MgO:Fe, specific Fe^{3+} cluster geometries, Mossbauer, EXAFS and X-ray diffr. study 3−33285
- MgO:Fe^{+}, ion implanted, precipitation and defects 3−2827
- MgO:Fe^{2+}, twist boundaries, binding energy calcs. 3−46932
- MnF_2:Fe^{2+}, local magnon modes, Green's function theory 3−52442
- α-MnS:^{57}Fe, Mossbauer study 3−57822
- N-charged, mag. after-effects due to precip. 3−29090
- N-charged, precip.-induced mag. after-effects 3−39150
- $Na_3Sc_2V_3O_{12}$:Fe, spin Hamiltonian ESR spectra, numerical parametrisation 3−38681
- Nb:Fe, effective valence for electromigration 3−42860
- $NbSe_2$:Fe (2H), zero-field NMR study of spin-glass transition 3−34007

iron continued
- Ni-based alloys, grain boundary segregation and H embrittlement 3−47839
- $NiBr_2(Cl_2)(I_2)$:Fe^{2+}, single crystal growth by Bridgman-Stockbarger technique 3−14471
- NiO:Fe, precipitation of $NiFe_2O_4$, induced uniaxial anisotropy, FMR study 3−14139
- $PbTiO_3$:Fe^{3+} single cryst., paramag. defects, EPR study 3−52601
- Pd:Fe sputtered film, contamination, SIMS and magnetic susceptibility study 3−52939
- Si:Cr,Fe,P, spin depend. carrier-impurity interactions, ESR studies 3−57765
- Si:Fe, deep level defects prod. by quenching, DLTS study 3−57309
- Si:Fe, diffusion, solubility and elec. activity, review 3−27966
- Si:Fe, impurity diffusion during activation, neutron activation analysis systematic errors 3−28157
- Si:Fe, tight binding study of electronic struct. of transition ions and EPR spectra 3−47299
- Si:Fe,B, EPR spectra 3−52615
- Si:Fe,B, interstitial-substitutional pairs, electronically controlled reactions 3−43079
- Si:Fe,B,Al,Ga, deep impurity levels, photocapacitance photocond. and Hall effect studies 3−43080
- Si:Fe,S, ESR of Fe-S pairs, g-factor and excited states 3−43425
- SiC:Fe, positron annihilation study 3−38951
- $Sr_2Nb_2O_7$:Fe, ESR study of orthorhombic Fe^{3+} centres 3−28692
- $Sr_2Ta_2O_7$:Fe, ESR study of orthorhombic Fe^{3+} centres 3−28692
- $SrTiO_3$:Fe(Al)(Cr), acceptor-doped, high temp. defect struct. 3−8072
- TeO_2:Fe^{3+}, elec. cond. study 3−28397
- Ti-Fe powder mixtures, sintering of compacts, diatometric investig., intermetallic form. 3−58069
- TiB_2-Fe composite, sintered, transverse rupture strength, temp. depend. 3−58242
- TiC-Fe, Ni cermet with different binder concs. in alternating layers, prod. and struct. form. 3−58091
- V_2O_5:Fe^{3+}, doping effects on texture change, N_2 adsorpt. meas. 3−56918
- YAG:Fe, coloration on reduction, absorpt. spectra and luminesc. quenching studies 3−47674
- $YAlO_3$:Fe, coloration on oxidation, absorpt. spectra and luminesc. quenching studies 3−47674
- YIG:Fe^{4+} film, conductive, microwave spectra and mag. relaxation 3−33951
- $ZnAl_2O_4$:Fe,Mn, cryst. struct. determ. by channelling effect in electron induced X-ray emission 3−8019
- ZnSe:Fe, IR absorpt. 3−8854
- ZnTe:Fe, impurity effect on excitonic and mag. props. *(Russian)* 3−23580
- ZrO_2:Fe, Mossbauer study 3−3621

iron alloys
- *see also Elinvar; Invar; iron compounds; Permalloy; steel*
- austenite, P segregation 3−53066
- C $Fe_{80}B_{20}$, amorphous and cryst., electronic props., EELS, AES, and X-ray absorpt. study 3−52876
- cast, grey, hardness testing by upper harmonics method *(German)* 3−9294
- cast, nodular, fatigue crack initiation and propag. mechanism invest. *(Chinese)* 3−4102
- cast, white, mischmetal effect on microstructure and mech. props. 3−24327
- cast Fe, chilled layer hardness, inspection apparatus using higher harmonics 3−58337
- cast Fe, dynamic strain ageing 3−43875
- cast Fe, ferritic spheroidal graphite, fracture mechanics, heat treatment effects *(French)* 3−43937
- cast Fe, flake graphite, fractography study *(Japanese)* 3−19401
- cast Fe, grey, NDT of cracks and welding quality, white light hologram reconstruction *(Chinese)* 3−14792
- cast Fe, grey, surface hardening by induction fusion 3−53285
- cast Fe, grey, US attenuation by graphite, flaw detection 3−34563
- cast Fe, impact wear *(Japanese)* 3−58254
- cast Fe, Mg impurity, nondestructive 14 MeV neutron activation anal. 3−29342
- cast Fe, nodular, alloyed with Cu, Ni, and Mo, investment cast method *(French)* 3−43800
- cast Fe, nodular graphite, image analysis of particle perimeters, SEM study 3−48002
- cast Fe, nodular graphite and inverse chill form., melted and cast under vacuum 3−53043
- cast Fe, pearlitic grey, fracture behaviour, microstruct. and macrostruct. modelling 3−14731
- cast Fe, remelted ductile, microstructure transforms., metallographic study 3−39102
- cast Fe, solidification kinetics, mech. vibration effect *(French)* 3−58114
- cast Fe, spheroidal graphite, identification of inclusions *(French)* 3−24423
- cast Fe, tensile strength, effects of Al and Cu additions *(Korean)* 3−39161
- cast Fe, vermicular graphite, morphology and graphite formation *(Chinese)* 3−19332
- cast Fe, white, cementite transform. into austenite 3−24222
- cast Fe, white, graphitising kinetics of cementite *(Japanese)* 3−9099
- cast Fe, white, powder, rapidly solidified, microstruct. 3−39062
- cast Fe, white, rapidly solidified, superplasticity 3−14665
- cast Te, white, deformed, struct. and phase features, influence of V, Nb and Ti alloying additions 3−53030
- $Fe_{81}B_{19}$ metallic glasses, struct. factor, neutron diffr. study 3−7922
- Fe-Ni(25wt.%), supercooled, nucleation and grain refinement, relationship in absence of gravitational field *(Croatian)* 3−51761
- Fe-Si (3 wt.%), grain-oriented, with very high permeability, 180° domain wall spacing 3−52512
- Fe-Sn melts, density and surface tension 3−8305
- ferrous alloys, extrinsic dislocations, intergranular segregation and grain boundaries mobility *(French)* 3−13465
- glassy and crystalline, mag. moment variation, chem. bonding and local symm. model 3−23598
- grain boundary segregation and diffusion, AES and scanning radioactive anal. 3−47115
- grain boundary segregation and H embrittlement 3−47839
- Hastelloy X, carburization protection by Si enriched layers in HTGR 3−4208
- Incoloy 800, intergranular corrosion, Strauss test, electrochemical potentiokinetic reactivation and magnetic permeability meas. 3−39275

iron alloys continued

- Inconel 600, intergranular attack in lab. and in steam generators 3−53262
- Inconel 600, mill-annealed, intergranular corrosion in PWR steam generator tubing 3−6365
- Inconel 600 and 625, single-phase, hydrogen-assisted fracture 3−14719
- Inconel 625, thermal fatigue testing of low-Z coatings for Tokamak reactor 3−21526
- Inconel 625 fusion reactor material, thermal shock testing of low-Z coatings 3−21525
- Inconel 718, fatigue, low cycle, crack propag. and substructs. 3−4118
- Inconel 718, fatigue crack propag. process, phys. modelling 3−4119
- Inconel 718, Ni-base superalloy, coarsening of γ'- and γ''-precipitates 3−29084
- Inconel 718, Ni-base superalloy, crack growth under fatigue, creep and combined loading, effect of microstruct. and environment 3−24339
- Kovar alloy, Fe-Ni-Co, SXAPS materials testing *(Chinese)* 3−20960
- liquid, diffusion of N, alloying elements influence 3−8238
- maraging steel based on Fe-Ni, influence of alloying elements on recrystallisation *(Russian)* 3−34343
- martensitic transformation *(German)* 3−58122
- martensitic transformations, theory and mechanisms 3−4036
- metallic glasses, soft X-ray emission study of chemical bonding 3−28933
- metallography, interference layer technique, determ. of optical consts. for appl. to refractory alloys *(German)* 3−24478
- muon precession freq., dipole symmetry disruption by dislocations 3−52697
- Nimonic PE 16, Ni-base superalloy, microstruct. and mech. props., effect of long-term exposure at elevated temps. 3−47840
- polycryst. magnetostriction and thermal expansion 3−57735
- rare earth-Fe alloys, cryst. struct. and mag. props., review *(Polish)* 3−13167
- rare earth-Fe alloys, rapidly quenched, permanent mag. props. 3−33935
- sintered, plain-mixed, detrimental effect of Mo on ductility 3−19368
- sintered, soft magnetic, props. and appl. 3−39065
- solidification of Fe-base alloys, review 3−29071
- structural memory of ferrite *(French)* 3−29077
- unidirectionally solidified Fe-base alloys, dendrite morphology 3−34292
- Young's modulus temp. behaviour of Fe-based alloys 3−19359
- Ag-Fe, dil., localised mag. moments, finite cluster approach 3−23582
- Al alloy AK4-1, fatigue crack propag. kinetics, Al_9FeNi insoluble phase particles effect 3−34472
- Al-Co-Fe, heat treatment effect on piezomagnetic props. 3−23773
- Al-Cr(Cu)(Mg)(Fe)(Mn)(Zn), thermoelec. power at high temps., temp. and conc. depend. 3−3165
- Al-Cu-Mu-Zr-Fe-Si, struct. and props., Fe and Si additions influence 3−39248
- Al-Fe, dil., solute segregation and boundary struct. changes during grain growth 3−53057
- Al-Fe, solid soln. extended by rapid quenching from melt, lattice parameter vs. conc. prediction 3−53094
- Al-Fe directional eutectic alloy, strength, deform. and fracture, uniaxial tensile testing, SEM and TEM studies 3−24424
- Al-Fe-Cr, rapidly solidified, struct., TEM and X-ray diffr. study 3−24219
- Al-Fe-Mn (2.0, 0.8 wt.%), fine-grained, tensile deform. 3−47911
- Al-Fe-Sc (0.25, 0.2 wt.%), creep, high temp., flow law, role of strain history 3−24303
- Al-Fe-Si, amorphous alloy, rapid solidification, glass form., crystn. 3−56826
- Al-Mg-Si-Cu-Cr-Fe-Mn (0.98, 0.68, 0.26, 0.2, 0.09, 0.05 wt.%), barrier anodized coating characts. 3−3018
- Al-Ni-Fe-Ti, oxide phase hardened, heat and corrosion resist. 3−34543
- Al_6Fe eutectic alloy fibres, elec. resist. 3−43154
- Au-Fe, dil., absolute thermoelec. power at low temps., spin glass-Kondo effects 3−8474
- Au-Fe, longit. magnetoresist near percolation limit, spin glass and ferromag. props. 3−38372
- Au-Fe, spin glass crit. relax. time, SQUID meas. 3−8677
- Au-Fe, spin glasses, resist. 3−13799
- Au-Fe (15 at.%), AC susceptibility near percolation limit 3−14021
- Au-Fe (19 at.%), spin canting and ferromag., Mossbauer and susceptibility meas. 3−14012
- Au-Fe alloys, magnetoresist., theory and expt. 3−38368
- Au-Fe spin glass, low-field AC susceptibility and DC magnetisation, SQUID meas. 3−14059
- Au-Fe spin glasses, transverse magnetoresist. and Hall resist. 3−38371
- Au-Pt-Pd-Ag-Fe-Sn, dental alloy, internal oxidation, O ion diffusion, Fe_2O_3 and SnO_2 distrib. 3−51854
- AuFe, magnetic behaviour, atomic order, Mossbauer spectra 3−57649
- AuFe, magnetic double transition, Mossbauer investig. 3−57652
- AuFe spin glass, dilute, random static polarization, μSR study 3−57659
- AuFe spin glass, nonlinear mag. susceptibility 3−57657
- AuFe, spin glass transition, Mossbauer investig. 3−57651
- $B_{1-x}Fe_x$, amorphous, ^{57}Fe Mossbauer isomer shift 3−52691
- Be-Fe-C, heterophasal, atomic ordering *(Ukrainian)* 3−13165
- Ca-Fe, dilute, positive mag. hyperfine field for impurities, perturbed angular distrib. obs. 3−57836
- cast Fe, spheroidal graphite, Si effect on low-cycle fatigue life *(Japanese)* 3−29178
- Ce-La-Ni-Fe-H, hydriding and dehydriding kinetics 3−48048
- $Ce(Fe_{0.8}Al_{0.2})_2$, elec. resist., 1.5 to 300K, spin glass phase 3−23357
- $Ce(Fe_{0.8}Al_{0.2})_2$, magnetisation meas., spin glass behaviour 3−33905
- Co-Fe (1.2 at.%), field induced DHCP→HCP transform. and anisotropy change 3−57588
- Co-Fe-B, solid soln. equilibrium distrib. *(Italian)* 3−53020
- Co-Fe-B, ternary system behaviour at 1273K *(Italian)* 3−53019
- Co-Fe-Nb, amorphous, saturation magnetisation and magnetostriction, comp. depend. 3−33962
- Co-Fe-Ni-Mn-B-Si metallic glasses, near zero magnetostrictive, with very high saturation induction 3−28672
- Co-Fe-Ni-Mo-B-Si glassy alloys, nonmagnetostrictive, mag. props. 3−28619
- Co-Fe-Si-B, amorphous, short-range order, stability, and mag. props. *(Russian)* 3−37792
- Co(-Fe)-O, liq., surface tension, effect of O, wettability of Al_2O_3 *(Japanese)* 3−8303
- $Co_{58}Fe_5Ni_{10}Si_{11}B_{16}$, amorphous ribbon, power loss, annealing conditions effect 3−28649
- $(Co_{0.94}Fe_{0.06})_{74.5}Si_{13.5}B_{12}$, amorphous, hyperfine field of Fe in precipitated Co 3−57834

iron alloys continued

- $Co_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloy, induced anisotropy reorientation kinetics 3−28547
- $Co_{70.3}Fe_{4.7}Si_{15}B_{10}$, metallic glass, properties and appl. test *(Polish)* 3−52543
- $Co_{71}Fe_5Si_{15}B_9$, amorphous and recrystallised, absorpt of H_2 *(Russian)* 3−23044
- $Co_2Ga_{2-x}Fe_x$, mag. order, Mossbauer effect and magnetisation study 3−52525
- $Co_{5.8}Ni_{10}Fe_5B_{16}Si_{11}$ amorphous alloy struct. changes during heating 3−51778
- $Co_{42.9}Ni_{29.3}Fe_{7.8}Si_8B_{14}(Co_{50.2}Ni_{19.5}Fe_{7.8}Si_6B_{16})$, metallic glass, structure, X-ray diffr. study *(Chinese)* 3−18224
- $Co_{3n+5}Sm_{n+1}B_{2n}$, permanent magnets, substitution of Fe for Co, effect on mag. props. 3−47500
- Cr-Fe, dil., relax. Mossbauer spectra and phase transitions *(Russian)* 3−38728
- Cr-Fe, dilute, spin density wave state, press. effects, neutron diffr. study 3−18853
- Cr-Fe, ferromagnet, crit. correlations, small angle neutron scatt. study 3−23644
- Cr-Fe, high field magnetisation curves 3−52539
- Cr-Fe, paramag. diffuse neutron scatt. 3−7875
- Cr-Fe alloys, antiferromag., close to crit. conc. evolution of mag. order 3−38589
- Cr-Fe alloys, evolution of mag. order, onset of ferromagnetism 3−38590
- Cr-Fe alloys, evolution of mag. order, ferromagnetism close to crit. conc. 3−38591
- Cr-Fe alloys, high field mag. susceptibility meas. 3−14017
- Cr-Fe-Co-based permanent magnets, production methods and mag. props. *(German)* 3−43405
- Cr-W(Mo)(Fe), amorphous electrodeposited, corrosion resist. *(Japanese)* 3−24399
- Cu-Al-Ni-Fe (10, 5, 5wt.%), crystallography of martensite 3−43826
- Cu-Fe, coherent Fe particles, ion irrad., martensitic transformation and mech. wave formation obs. 3−53049
- Cu-Fe, dil., solute segregation and boundary struct. changes during grain growth 3−53057
- Cu-Fe, grain boundary enrichment, thermoelec. study 3−39185
- Cu-Fe, internal friction caused by diffusion around second phase particle 3−53100
- Cu-Fe, Kondo and spin glass states, elec. and mag. studies *(Russian)* 3−28512
- Cu-Fe multifilamentary composites, in situ formed, permanent mag. props. meas. 3−28629
- Cu-Fe-Ni system, phase equilibria calc. 3−14565
- Cu-Fe-Sn(Si)(Be), precip. processes, influence of addition of third element 3−47845
- Cu-Ni-Fe, corrosion product film form., temp. effects, corrosion in well aerated seawater 3−39273
- Cu-Ni-Fe, ferromagnetic inclusions, phase transitions, AC susceptibility studies 3−33941
- Cu-Ni-Fe, influence of mag. field on transition temp. to superferromagnetic state *(Russian)* 3−33890
- Dy-Fe amorphous film, magnetostriction meas. by cantilever capacitance method 3−14101
- $Dy(Fe, Rh)_2$, hyperfine interactions, Mossbauer study 3−19022
- Dy_2Fe_{17}, mag. props., ^{161}Dy and ^{57}Fe Mossbauer spectroscopy 3−14171
- $Dy_{57}Fe_{43}$, amorphous, mag. props. 3−57701
- $Dy(Fe_{1-x}Al_x)_2$ Laves phases, mag. struct. and moments, neutron diffr. study 3−52375
- $DyFe_5Al_7$, unusual ferrimagnetism, magnetisation and mag. hysteresis meas. 3−14073
- $DyFe_2Si_2$, hyperfine interactions of ^{161}Dy and ^{57}Fe 3−13778
- $Dy_{0.73}Tb_{0.27}Fe_{1.95}$, mag. domain struct. and defects, X-ray topography obs. 3−18931
- $Er_6(Fe, Mn)_{23}$, mag. props. under high press. and in high mag. fields 3−28674
- $ErFe_2$ hydride forming alloy, surface segregation, XPS and mag. susceptibility study 3−2816
- $Er_{57}Fe_{43}$, amorphous, mag. props. 3−57701
- $F_5Co_{75}Si_{13}C_7$, amorphous, deform. and fracture, mech. props. and struct. regularities 3−53202
- $(Fe,Cr)_2N$, ϵ phase, microhardness *(Italian)* 3−53258
- Fe-^{115}In, dil., hyperfine fields of impurity nucl., press. depend., NMR study 3−43445
- Fe-^{75}As, dil., hyperfine fields of impurity nucl., press. depend., NMR study 3−43445
- α-Fe-Al, dil., interaction energy of Al and C atoms 3−13262
- Fe-Al, elastic consts., determ. from elastic moduli of polycryst. samples *(Russian)* 3−51686
- Fe-Al, electron and neutron irrad., defect production and recovery 3−42671
- Fe-Al, ordered alloy, in situ plastic deformation in 200 kV electron microscope 3−53163
- Fe-Al, self ion implanted, amorphisation and recrystallisation 3−2420
- Fe-Al (39.8 at.%), B2 aluminide plastic flow props., elevated temps., influence of thermomech. processing 3−34393
- Fe-Al (6.3-28.3 at.%), recovery of quenched-in vacancies, positron annihilation 3−9094
- Fe-Al alloys, small magnetostriction coeff., anisotropy const. calc. 3−57732
- Fe-Al system, antiphase boundary wetted by second phase, migration kinetics 3−47815
- Fe-Al-O system, thermodynamics, 1073 to 1573K 3−58113
- Fe-Al-P, ternary amorphous alloys, mech. props., thermal stability, Al content depend. 3−47937
- α-Fe-Al-Si-Sn-V, dilute spin and charge density changes on substitution 3−52382
- Fe-Al-Ti coating on stainless steel, high temp. corrosion under S_2/SO_2 atm. *(French)* 3−58299
- Fe-Al-(Cr), aqu. corrosion props. 3−39303
- Fe-Al(Cr)(Ni), laser induced surface melting, mass transfer 3−22938
- Fe-Au-B sputtered amorphous alloys, high mag. moment 3−28521
- Fe-B, molten, structural transition, phase diagram 3−18435
- Fe-B amorphous RF sputtered film, magnetoelastic wave excitation 3−38664
- Fe-B glasses formed by picosecond pulsed laser quenching 3−9027
- Fe-B melts, structure close to eutectic comp., X-ray study *(Russian)* 3−46834

iron alloys continued
Fe-B-Si, amorphous, casting, max. melt spun thickness, composition effect 3—29027
Fe-B-Si amorphous ribbon, mag. props., Al and S additions effect 3—28648
Fe-B-Si(-C) amorphous ribbons, mag. props. limited by surface crystn. 3—28200
Fe-B(-Mo)(Ni-P)(-Cr) 3—28326
Fe-B(c)(Si) film, amorphous ferromag. mag. props. 3—18955
Fe-base amorphous alloys, stress relax., effect of mag. field 3—29120
Fe-based metal pigments for mag. recording tapes, coercivity, porosity and particle size depend. 3—23740
Fe-C, (hhl) habit planes in martensite growth wave models 3—47835
Fe-C, ferrite 3—8202
Fe-C, US attenuation, microstruct. and ductile to brittle transition temp. 3—58228
Fe-C (0.44-2.03 wt.%), high purity, austenite solidus determ. using DTA 3—53028
Fe-C alloy, coarsening of carbide precipitates 3—53071
Fe-C alloys, atomised, decarburisation on annealing, alloying elements effect, thermodynamic anal. 3—39070
Fe-C alloys, etching of spheroidal graphite *(Chinese)* 3—4222
Fe-C martensites, tempering, DTA study 3—29115
Fe-C melts in solid and liq. states, density isotherms 3—37980
Fe-C powders, atomised, annealing, reduction and decarburisation 3—14526
Fe-C system, carbides and diamond formation under high temp. and press., mag. study 3—18390
Fe-C system, martensite growth, habit planes description in two-wave scheme 3—42774
Fe-C-Cr steel, microstructure, microhardness, austenite form., laser treatment, SEM and TEM studies 3—24342
Fe-C-Cr-Mn, Mn addition and solidification rate effects during directional solidification, on eutectic interphase distance and tensile strength *(Polish)* 3—47828
Fe-C-Cr-Ti, eutectics, struct. and mech. props., effect of Ti addition and solidification *(Polish)* 3—4023
Fe-C-Ni, surface struct. of boride layers 3—19453
Fe-C-Si alloy, isothermal austenitising, dissolution of graphite *(Polish)* 3—47860
Fe-C-X ternary systems, X=substitutional element, uphill diffusion of interstitial atoms modified quasistationary model 3—47148
Fe-Co, electrodeposition from acid tartrate bath, effect of superimposed AC 3—47785
Fe-Co, FCC to HCP transformation, electron microscopy study 3—8190
Fe-Co, fracture and stress relax., effect of at. ordering *(Russian)* 3—24332
Fe-Co alloys, electronic and mag. struct. from SCF XαSW calcs. 3—38278
Fe-Co alloys, Fermi surface topology influence on kinetic props. 3—8405
Fe-Co base alloys, γ-α transition, texture formation *(Russian)* 3—39167
Fe-Co powders, mag. props., vol. concentration dependence meas. *(German)* 3—28642
Fe-Co-B-Si, amorphous, high-field magnetisation and spin wave const. meas. 3—23717
Fe-Co-Cr(V), magnetisation props. and fine cryst. struct., TEM, Mossbauer and X-ray diffuse scatt. studies *(Russian)* 3—33927
Fe-Co-Si ribbon, rapidly quenched, grain struct. and mag. props. 3—29110
Fe-Co-V, creep, constitutive laws, study using biaxial relax. tests 3—47896
Fe-Co-V, cubic centred high conc. solid solns., creep and stacking fault energy 3—58177
Fe-Co-V, mag. props. stability, thermomag. treatment effects 3—43411
Fe-Cr, dil., hyperfine field and mag. moment, NMR study 3—19000
Fe-Cr, ferromagnetic, mag. correlations near crit. conc., neutron small-angle scatt. study 3—14055
Fe-Cr, ferromagnetism, antiferromagnetism and spin glass states 3—52465
Fe-Cr, hydrogen-induced cold work peak of internal friction 3—14643
Fe-Cr, Invar anomalies, magnetisation and thermal expansion meas. 3—57727
α-Fe-Cr, mag. order influence on Fe self-diffusion *(Czech)* 3—57666
Fe-Cr, oxidation at 600°C, influence of prior oxide film 3—19448
Fe-Cr, surface oxidation at elevated temps., laser Raman study 3—53278
Fe-Cr, surface oxide layer, elastic and inelastic electron scatt. anal. 3—13677
Fe-Cr, tempered, mag. trans. rel. to heat treatment *(French)* 3—52486
Fe-Cr, thermal expansion in range 4.2-300K 3—23063
Fe-Cr (15 to 80 wt.%), quenched, struct. developments *(French)* 3—47868
Fe-Cr (19 wt.%), precip. hardening, tensile testing and TEM study 3—24244
Fe-Cr (25 wt.%), high temp. oxidation of Cr_2O_3 forming alloys, influence of superficially applied oxide powders 3—14777
Fe-Cr (3 wt.%), high temp. oxidation 3—53292
Fe-Cr (3wt.%), oxidation, microstruct. invest. 3—34537
Fe-Cr (7-24 wt.%), electrochem. behaviour rel. to pitting corrosion 3—24397
Fe-Cr (8 wt.%), ferrite to austenite, isothermal transform. *(Japanese)* 3—9058
Fe-Cr alloys, sulphidation in H_2S-H_2 atmos. at 1073K 3—4195
Fe-Cr-Al, sulphidation in H_2S, morphology of corrosion scales, rel. to non-equilibrium phenomena *(French)* 3—4181
Fe-Cr-Al alloys, corrosion protection in sulphidising environments by means of α-Al_2 3—4196
Fe-Cr-Al alloys, H permeation characts. 3—28155
Fe-Cr-Al-Ti-Y_2O_3, oxide dispersion strengthened, texture and microstruct. 3—34352
Fe-Cr-Al-Y (Y_2O_3), oxidation characts., 1073-1373K 3—34553
Fe-Cr-B amorphous systems, mag. permeability after-effect 3—28643
Fe-Cr-Co, at. distrib. in low-conc. solid solns. 3—9035
Fe-Cr-Co permanent mag. alloy, high temp. X-ray diffr. study, effect of ageing *(Chinese)* 3—27892
Fe-Cr-Co permanent magnet alloy, atom probe FIM, microstruct. and comp., coercivity mechanism 3—14559
Fe-Cr-Co-Si, cryst. struct., precipitation *(Russian)* 3—37851
Fe-Cr-Co-Si-V, cryst. struct., precipitation *(Russian)* 3—37851
Fe-Cr-Mo (9.5, 0.78 wt.%), cavity form., Ni^+ and He^+ irrad., TEM 3—37968
Fe-Cr-Mo magnet alloys, semi-hard, glass sealable, for remanent reed contacts 3—33936
α-Fe-Cr-N, activity coeffs. of N 3—58094
Fe-Cr-N, constitutional diagram *(Italian)* 3—53021

iron alloys continued
Fe-Cr-Ni, high temp. oxidation under tensile stress *(Japanese)* 3—58291
Fe-Cr-Ni, ternary system, correlation of thermodynamic and phase data; review 3—34280
Fe-Cr-Ni (15, 15 wt.%), shock wave response, effect of polycrystallinity 3—33362
Fe-Cr-Ni (18, 10 to 25 wt.%), paramagnetic, elec. resist. and thermal expansion meas. 3—23358
Fe-Cr-Ni (21,32 wt.%), cold prestrained, internal stress and struct. in creep at 975K 3—9088
Fe-Cr-Ni surface, superlattice form. by interaction with H_2O, I_2 ans O_2 3—2942
Fe-Cr-Ni-Mn, mass transfer of N from N_2 H_2 atmos. during nitriding 3—33455
Fe-Cr-Ni-Mo, corrosion resist. in marine environments, review 3—39293
Fe-Cr-Ni-Mo-Mn sigma phase alloys average site occupation parameters, X-ray diffr. study 3—37848
Fe-Cr-Ti, high temp. oxidation, influence of small amounts of Ti *(Japanese)* 3—9236
Fe-Cr-(Al), high temp. oxidation under tensile stress *(Japanese)* 3—58291
Fe-Cr(Mo), nitrided,oxidation and corrosion resist. 3—4184
Fe-Cu bearing material containing $MnO.xP_2O_3$, sintered material prep., antifriction props. 3—58256
Fe-Cu-B amorphous systems, mag. permeability after-effect 3—28643
Fe-Cu-C-S, bushings, sintered, Brinell hardness 3—47956
Fe-Fe_3Si system, electronic struct., charge density study 3—23254
Fe-Gd amorphous film, mag. anisotropy, electron microscopy study 3—57578
Fe-Gd(Si) amorphous film, long range order in struct. 3—2415
Fe-Ge, molten, positron annihilation *(Japanese)* 3—47734
Fe-H, internal friction due to H_2 phase transition, expt. study 3—2669
Fe-H system, phase transitions, phase diagrams and mag. props. 3—33425
Fe-metalloid alloys, chemical bonding, mag. moments and local symm. 3—42564
Fe-Mn, amorphous, spin freezing below ferromag. transition, AC mag. susceptibility study 3—23647
Fe-Mn, amorphous ferromagnetic, mag. correlations near crit. conc., neutron small-angle scatt. study 3—14055
Fe-Mn, at. distrib. in low-conc. solid solns. 3—9035
Fe-Mn (12 wt.%), hydrogen embrittlement, H_2 conc. effect *(Korean)* 3—4113
Fe-Mn alloys, α-γ phase boundaries and T_0 line 3—34283
γ-Fe-Mn-C, FCC to BCC transition in paramagnetic phase *(Russian)* 3—51776
Fe-Mn-C, forged sintered, fatigue, fractographic anal. 3—24355
Fe-Mn-N alloys, tempered, existence of orthorhombic DO_{11} phase 3—27894
Fe-Mn-Ni base maraging alloys, struct. and mech. props. of martensite, effect of thermomech. treatment 3—9093
Fe-Mn-X, X=Ti, Cr, Co, Ni or Cu, phase equilibria in ternary Fe systems, review 3—58095
Fe-Mn-si (30, 1 wt.%), single cryst., shape memory effect, $\gamma\rightleftarrows\epsilon$ transformation, hardening to G-phase 3—43838
Fe-Mo, anodic behaviour inorganic solvents, water effects 3—9214
Fe-Mo, high temp. creep rate, unified anal. from point of view of recovery 3—58160
α-Fe-Mo, mag. order influence on Fe self-diffusion *(Czech)* 3—57666
Fe-Mo alloys, microstruct. changes near coherent spinodal line *(Japanese)* 3—9100
Fe-Mo-C, M_6C carbide crysts. morphology 3—39158
Fe-Mo-Cu-P, sintered, case carburising behaviour of P-containing compacts 3—53291
Fe-N-P, amorphous, Ni diffusion, radioisotope absorption-kinetic study *(Russian)* 3—47152
Fe-Nd, ion implanted dilute alloy, mag. hyperfine interactions, γ-ray spectra study 3—14038
Fe-Ni, (hhl) habit planes in martensite growth wave models 3—47835
Fe-Ni, amorphous, spin freezing below ferromag. transition, AC mag. susceptibility study 3—23647
Fe-Ni, austenitic alloys, rapid solidification microstruct. 3—53038
Fe-Ni, electronic and mag. structure evolution during ferromagnetic ordering *(Russian)* 3—28263
Fe-Ni, FCC, local mag. moments, magnetisation meas.; magnetovol. effect 3—52531
Fe-Ni, H permeation and diffusion 3—42855
Fe-Ni, magnetovolume effect, magnetostriction and thermal expansion anomalies 3—52584
Fe-Ni, martensitic transform. under elastic loading, effect of stress relax. *(Russian)* 3—24225
Fe-Ni, rapidly quenched, mag. props. rel. to at. short-range order 3—52526
Fe-Ni, soft mag. alloys, phys. props. 3—3482
Fe-Ni (15 wt.%), $\gamma\rightarrow\alpha$ transform 3—24223
Fe-Ni (25, 50 and 75 wt.%), diffusion coeff. of S *(French)* 3—42845
Fe-Ni (25 at.%), long-range ordering, TEM study 3—19344
Fe-Ni (29.6 wt.%), martensitic transform., Mossbauer study 3—24227
Fe-Ni (30 wt.%), single crysts., paired martensite 3—43807
Fe-Ni (30 wt.%), stress induced martensitic transformation, in situ microscopy *(Japanese)* 3—58121
Fe-Ni (32 wt.%), elec. emission assoc. with martensitic burst, optical reflectivity and voltage obs. 3—39149
Fe-Ni (32.8 wt.%), thin foils, martensitic transforms. 3—9063
Fe-Ni (34.5 wt.%), shock wave response, effect of polycrystallinity 3—33362
Fe-Ni (5 wt.%), laser processed, martensitic transform. 3—29078
Fe-Ni (50 wt.%), cubic texture formation mechanism *(Russian)* 3—39168
Fe-Ni alloys, corrosion behaviour in HCl and HCl-O_2 gas mixtures 3—29220
Fe-Ni alloys, long- and short-range atomic order, neutron diffr. study *(Russian)* 3—51538
Fe-Ni alloys, mag. soft powder cpds., sintered, mag. props. study *(Polish)* 3—3476
Fe-Ni alloys, martensite plates, semithickness-to-radius ratio 3—43809
Fe-Ni alloys, martensitic plates, semithickness-to-radius ratio 3—4038
Fe-Ni base alloys, martensitic transform., effect of C and H 3—43805
Fe-Ni crystalline films, mag. anisotropy calc. 3—57718
Fe-Ni film, electroplating, comp. rel. to AC to DC ratio 3—34251
Fe-Ni meteoritic metal, discontinuous precip. reactions in α and γ phases 3—19341
Fe-Ni system, martensite growth, habit planes description in two-wave scheme 3—42774

iron alloys continued
  Fe-Ni type G20 alloy, warm deform., twinning *(Russian)* 3−34380
  Fe-Ni-Al-Co high coercivity alloys, magnetisation curves and interaction domains *(Russian)* 3−28607
  Fe-Ni-Al-Ti mag. alloy, semi-hard, struct. and mag. props. 3−58145
  Fe-Ni-B (40, 20 at.%) glassy alloy, stress corrosion behaviour in aq. acidic media 3−53269
  Fe-Ni-C, one and two phase, mass transport of C in temp. gradient 3−13516
  Fe-Ni-C (25.3, 0.49 wt.%), C distrib., Mossbauer study 3−53055
  Fe-Ni-C alloys, martensitic transform., low temp. internal friction and dilatometric results 3−43804
  Fe-Ni-C austenite, interatomic binding and Debye temp., Mossbauer study *(Russian)* 3−34012
  Fe-Ni-Co for cantilever-type displacement sensor using diffused silicon strain gauges 3−282
  Fe-Ni-Cr, Alloy 600, crevice corrosion at 288°C, pot./pH meas. 3−24391
  Fe-Ni-Cr, austenitic, dislocation loops at twin boundaries, ion-irrad. effects 3−2565
  Fe-Ni-Cr, Incoloy 800 heat exchange material, oxide films, SIMS anal. 3−14766
  Fe-Ni-Cr, passive film form. in borate buffer soln., ellipsometric study 3−24390
  Fe-Ni-Cr, superalloy, additive strengthening 3−9081
  Fe-Ni-Cr base superalloy, precip. strengthening mechanism 3−14601
  Fe-Ni-Cr powder, superalloys, rapidly solidified, characterisation 3−3986
  Fe-Ni-Cr-B-Si amorphous ribbons, Cr conc. effects, magnetisation study 3−28616
  Fe-Ni-Cr-C, butterfly martensite, morphology and substruct. 3−42794
  Fe-Ni-Cr-Si-B metallic glass, resistivity and galvanomag. coeffs. 3−28325
  Fe-Ni-Cr-Ti austenitic alloy for cryogenic use, Ti and ageing effects on strength and ductility *(Japanese)* 3−9161
  Fe-Ni-Cu-P, sintered, case carburising behaviour of P-containing compacts 3−53291
  Fe-Ni-H, bonding energy changes and heats of reaction, DSC study 3−42563
  Fe-Ni-Mn, lath martensite, TEM study 3−42795
  Fe-Ni-Mn-Cr, α-γ phase equilib. 3−9033
  Fe-Ni-Mn(-C) alloy, isothermal martensitic transform. nucleation rate, stress effect 3−34305
  Fe-Ni-Mo sintered alloy impregnated with Nylon 11, sliding wear charact. *(Japanese)* 3−9196
  Fe-Ni-Mo-B metallic glass, struct. relax., elec. resist. study 3−33101
  Fe-Ni-P-B amorphous ribbons, electron and proton irrad. effects on mag. props. 3−28554
  Fe-Ni-Si (15, 12 wt.%), splat cooling to improve mech. workability and constancy of permeability 3−29111
  Fe-Ni-Si-Co, aging of martensite, Co influence *(Russian)* 3−53087
  Fe-Ni-Ti (-Co) austenitic alloys, martensitic transformation and strength, mag. ordering effects *(Russian)* 3−53048
  Fe-Ni-Ti-Co, martensite morphology, effect of ausaging 3−43867
  Fe-Ni-Zr, ductile and amorphous containing fine crystalline particles, mech. props. 3−34339
  Fe-Ni-based superalloys, γ'-phase precip., yield strength improvement, heat treatment study *(Chinese)* 3−34335
  Fe-Ni(-Ru), hysteresis loops and thermal expansion coeff., 4.2 to 300K 3−52530
  Fe-Ni(Co), liq., surface tension, wettability of Al_2O_3 *(Japanese)* 3−23136
  Fe-P, amorphous, elec. resist. and magnetoresist., conc. depend. 3−28329
  δ-Fe-P, limited solubility system, adsorption thermodynamics at grain boundaries *(Russian)* 3−33440
  Fe-P alloys, mag. soft powder cpds., sintered, mag. props. study *(Polish)* 3−3476
  Fe-P amorphous alloys, crystallisation, energy dispersive X-ray diffr. study 3−13103
  Fe-P dilute alloys, diffusivity, surface segregation technique, Auger study 3−2876
  Fe-P-Mo powder premix, sintering temp. effect on mech. props. 3−39068
  Fe-Pd, permanent magnet alloy, isothermal heat treatment, phase transform. mag. props. 3−58119
  Fe-Pd, struct. changes before FCC→BCT martensitic transform., Invar effect role 3−39143
  Fe-Pd, successive martensitic transforms., stress and alloying effects 3−39142
  Fe-Pd permanent magnet alloys, isothermal heat treatment and phase diagram *(Japanese)* 3−9032
  Fe-Pd-Ag, coercive force, residual flux density, Ag conc. depend. 3−57706
  Fe-Pd-H system, mag. props., Mossbauer emission spectra study 3−28742
  Fe-Pt, mag. and magnetovol. props. around γ-α phase boundary 3−52585
  Fe-Pt (25.2 and 27.0 at.%), ordering, X-ray determ. *(Serbian)* 3−34294
  Fe-Se, kinetics of $\alpha\rightleftharpoons\gamma$ transition, adiabatic scanning calorimetry study *(French)* 3−8184
  Fe-Se (3 wt.%) statically bent vibrating ferromagnetic plate, magnetoelastic effect 3−28680
  Fe-Si, cyclic voltammetric studies 3−39277
  Fe-Si, fatigue crack threshold at low homologous temp., controlling parameters 3−53212
  Fe-Si, fatigue limit, effect of low-intensity ultrasound 3−14725
  Fe-Si, ferromag. domain wall motion rel. to energy losses 3−3477
  Fe-Si, ferromagnetic antiresonance transmission meas. of critical exponent β 3−28704
  Fe-Si, ferromagnetic resonance and antiresonance linewidths 3−38700
  α-Fe-Si, mag. order influence on Fe self-diffusion *(Czech)* 3−57666
  Fe-Si, polycryst., with stress coating, demagnetization effects 3−33923
  Fe-Si, single crysts., deformed and annealed, dislocations 3−22897
  Fe-Si, spin and charge density changes, effect of Si, Mossbauer study 3−19021
  Fe-Si (0.9 wt.%), dislocation arrangement after tensile deform., TEM study 3−37916
  Fe-Si (1 to 4 wt.%), oxidation characts. rel. to creep, 973-1073K 3−53287
  Fe-Si (1 wt.%), (110)[001] oriented, secondary recrystn. textures 3−34347
  Fe-Si (10.9 wt.%), clustering and ordering in ordered phase, conc. waves, kinetic theory 3−51804
  Fe-Si (3 at.%), inhibitor phase parameters, grain boundary migration effects *(Russian)* 3−24253
  Fe-Si (3 wt.%), domain refinement due to scatching 3−3478
  Fe-Si (3 wt.%), electric sheets, magnetic props., meas. with induction anisometer *(German)* 3−49413

iron alloys continued
  Fe-Si (3 wt.%), grain oriented, power loss 3−28600
  Fe-Si (3 wt.%), grain oriented mag. props. and domain struct., Mg_2SiO_4 coating effect 3−28601
  Fe-Si (3 wt.%), grain oriented, power loss, tensile stress effect 3−33963
  Fe-Si (3 wt.%), grain oriented, mag. flux distrib., waveforms, stress and temp. effects 3−57741
  Fe-Si (3 wt.%), high permeability grain oriented, texture changes during secondary recrystn. 3−29099
  Fe-Si (3 wt.%), loss separation meas. 3−28626
  Fe-Si (3 wt.%), magnetic props. for transformer core appls. 3−28588
  Fe-Si (3 wt.%), nonoriented, loss calc. from classical viewpoint 3−28590
  Fe-Si (3 wt.%), plane-matching grain boundaries, recrystallisation struct., electron channelling patterns 3−37933
  Fe-Si (3 wt.%), primary recrystallised textures, vol. fractions 3−58131
  Fe-Si (3 wt.%), reversible magnetisation change due to repeatedly applied tensile stress 3−52578
  Fe-Si (3 wt.%), rotational power loss and mag. field vector meas. method 3−30904
  Fe-Si (3 wt.%), saturation magnetisation, 3.5 to 300K, FMR and ferromag. antireson. study 3−33987
  Fe-Si (3 wt.%), secondary recrystn., effect of C content *(Korean)* 3−29100
  Fe-Si (3 wt.%), sheet, primary recrystallised, surface texture, crystallite orientation distrib. 3−58130
  Fe-Si (3 wt.%) grain oriented laminations, Bloch wall dynamics during magnetization 3−33922
  Fe-Si (3 wt.%) grain oriented laminations, Bloch walls motion homogenisation effects due to mech. tension 3−52510
  Fe-Si (3 wt.%) single crystal, electromagnetic acoustic conversion, magnetic charact. effect 3−23780
  Fe-Si (3.2 wt.%), linear stage in strain hardening *(Ukrainian)* 3−24252
  Fe-Si (3.25 wt.%), phase-shifted flux harmonics and magnetostriction 3−33965
  Fe-Si (3wt.%), computerized magnetic testing equipment 3−30903
  Fe-Si (4 wt.%), dynamic domain wall motion, 30 Hz to 5 kHz 3−52511
  Fe-Si (6.5 wt.%) ribbon, rapidly quenched, mag. props., thickness depend. 3−28656
  Fe-Si (<4 wt.%) ribbons, high flux density 3−28612
  Fe-Si alloys, mag. soft powder cpds., sintered, mag. props. study *(Polish)* 3−3476
  Fe-Si coated sheets, domain struct., obs. by new mag. colloid technique *(Chinese)* 3−4219
  Fe-Si coated sheets, magnetised, domain detection by computer-controlled field scanning 3−52509
  Fe-Si cryst. ribbons, rapidly quenched, coercive force and mag. losses 3−52542
  Fe-Si grain oriented sheet, bending effect on domain configurations and losses 3−33964
  Fe-Si single cryst., AC magnetostriction and magnetisation close to (110)[001] 3−38666
  Fe-Si-Al, nonoriented sheet, mag. relax. process in commercially produced alloys 3−47528
  Fe-Si-Al, soft mag. props., heat treatment effect 3−28613
  Fe-Si-Al ordering alloys, phase separation *(Japanese)* 3−29061
  Fe-Si-Al-Ni, super Sendust films, mag. props., recording appls. 3−33943
  Fe-Si-B, high C, texture, effect of cold work *(Korean)* 3−53081
  Fe-Si-B, Metglas 2605S2 and S3, magnetomechanical coupling, ΔE and permeability 3−23768
  Fe-Si-B amorphous alloys, Mossbauer spectra, hyperfine fields and mag. props. 3−28740
  Fe-Si-B-C-Mn-S-N, secondary recrystn., cold work and C role 3−34348
  Fe-Si-B-C-N alloy, high induction development, C content rel. to hot rolling temp. 3−29197
  Fe-Si-C, carbide precip., TEM study *(Chinese)* 3−34323
  Fe-Si-P, P solubility, AES study 3−42788
  Fe-Si-V ternary system, phase equilib., critical evaluation 3−19323
  Fe-Si(Mn)(Cr)(Ni)(Cu)(C), reaction with molten Al, form. of alloy layers 3−29060
  Fe-Si(Ni), cleavage crack growth, cyclic, quantitative fractography 3−39228
  Fe-Si(Ni)(Cu)(Mn)(C), dissolution in molten Al 3−29222
  Fe-Si(3wt.%) alloys, asymmetric cold rolling, texture formation characts. *(Russian)* 3−34346
  α-Fe-Sn, intergranular creep fracture, high temp., enhanced by grain boundary migration 3−53219
  δ-Fe-Sn, limited solubility system, adsorption thermodynamics at grain boundaries *(Russian)* 3−33440
  Fe-Sn clusters in Ar matrix, Mossbauer studies 3−26891
  Fe-Tb-Gd magnetisation and perpendicular anisotropy, effect of columnar microstruct. 3−23747
  Fe-Ti, energy of alloy formation calc. using model electron-density functional 3−51810
  Fe-Ti, liq., enthalpies of form. 3−9349
  Fe-Ti, sintering and diffusional impregnation with C 3−24414
  Fe-Ti absorption of H_2, selective 3−47220
  Fe-Ti solid soln., lattice parameters 3−7962
  Fe-Ti sputtered alloys, magnetovolume effects 3−23770
  Fe-Ti sputtered films, metastable BCC and amorphous, mag. props. 3−57719
  Fe-Ti-C, ion implanted friction and wear 3−4153
  Fe-Ti-S melts, rhythmic growth of dendritic branches 3−39105
  Fe-Ti-Zr-Nb, hydrogen storage characts. 3−48183
  Fe-TiC magnetoabrasive powder, struct. effect on service life in metal polishing 3−24370
  Fe-Ti(V)(Cr)(Mn)(Co)(Ni)(Cu), dil. alloys, electronic struct. 3−3104
  Fe-V, dil., hyperfine field and mag. moment, NMR study 3−19000
  α-Fe-V, mag. order influence on Fe self-diffusion *(Czech)* 3−57666
  Fe-V alloy formation and ordering energies calc. using electron density functional method 3−23049
  Fe-V-Si-C, phase equilibria and solubility product of VC in austenite, effect of Si 3−53027
  α-Fe-W, mag. order influence on Fe self-diffusion *(Czech)* 3−57666
  Fe-W (56 wt.%), amorphous, high press., radial distrib. EDAX studies 3−18225
  Fe-W-Cr-V-C, mag. field induced first order phase transition 3−53051
  Fe-Zr, amorphous, field-cooling anisotropy energy 3−57594
  Fe-Zr amorphous alloy, hydrogenation effects on mag. and thermal expansion props. 3−28125
  Fe-Zr amorphous thin films, crystallisation, TEM and electron diffr. studies 3−27849

iron alloys continued
Fe-Zr metallic glasses, superconductivity and spin fluctuations 3—57456
$Fe_{0.815}B_{0.145}Si_{0.04}$, amorphous, mag. props. *(Croatian)* 3—52544
β-$Fe_{1.67}$ Ge, spin struct., Mossbauer study 3—19018
FeAl, electron irrad. amorphisation, high volt. electron microscopy study 3—47001
FeAl, local partial Al density of states, linear KKR study 3—38279
$Fe_{1-x}Al_x$, disordered, Mossbauer meas. of critical behaviour 3—14177
Fe_3Al alloy, neutron irradiated, struct. changes during subsequent phase transitions *(Russian)* 3—33304
Fe_3Al, neutron irrad., anomalous behaviour at order-disorder transformation, X-ray study 3—33309
Fe_3Al, neutron irrad., order-disorder transitions, X-ray diffr. study 3—2459
Fe_3Al order-disorder system, mag. props., magnetisation and susceptibility study 3—28561
FeB metallic glass, struct. determ. by polarised neutron diffr. 3—52392
$Fe_{1-x}B_x$ amorphous films, magnetisation and comp. 3—57722
$Fe_{100-x}B_x$, amorphous, effective mag. moment *(Korean)* 3—3423
$Fe_{100-x}B_x$, amorphous, Invar effect, magnetostriction meas. 3—57738
$Fe_{100-x}B_x$, metallic glass, positron annihilation study 3—19226
$Fe_{100-x}B_x$ metallic glasses, hyperfine fields, local environment model 3—28316
Fe_3B, electron irrad. amorphisation, TEM study 3—2417
Fe_3B, phase equilib. 3—14563
$Fe_{40}B_{60}$ amorphous sputtered film, magnetism, Mossbauer study 3—28657
$Fe_{75}B_{25}$ amorphous and cryst. electron irrad., Frenkel-type defects, elec. cond. study 3—2611
$Fe_{75}B_{25}$ ribbons and sputtered films, ion bombardment amorphisation and props. 3—2416
$Fe_{80}B_{20}$ amorphous alloys, electron diffr. 3—22795
$Fe_{80}B_{20}$ amorphous ferromagnet, instantaneous reversible permeability 3—28610
$Fe_{80}B_{20}$, metallic glass, crystn. kinetics 3—2425
$Fe_{80}B_{20}$, metallic glass, electron irrad., point defects, positron lifetime and mag. aftereffect study 3—3860
$Fe_{81}B_{19}$ metallic glass, struct., high resolution neutron diffr. study 3—18231
$Fe_{82}B_{18}$-Al_2O_3 amorphous granular film, Mossbauer study 3—43466
$Fe_{83}B_{17}$, amorphous, mag. excitations, neutron scatt. study 3—14030
$Fe_{83}B_{17}$ glass, spin polarised Auger spectroscopy probe of mag. props. 3—28938
$Fe_{90}B_{10}$, $Fe_{83}B_{17}$ molten alloys, interatomic distances and coord. nos., X-ray diffr. obs. *(German)* 3—56808
$Fe_{87}B_{11}Au_2$ amorphous ribbons, high mag.moments and magnetisation 3—28522
$(Fe_yB_{1-y})_{1-2x}R_xLa_x$ alloys, amorphous, low field mag. props. 3—28545
$Fe_{80}B_{20}Sb_x$ amorphous alloy, Sb impurity hyperfine field, Mossbauer study 3—14168
FeBSi amorphous alloys, microstructurally depend. mag. props. 3—28620
$Fe_{75.4}B_{14.2}Si_{10.4}$, amorphous ferromagnet, hyperfine field distrib. *(Korean)* 3—38735
$Fe_{78}B_{13}Si_9$ amorphous ribbon, mag. props., toroid radius influence 3—28611
$Fe_{78}B_{13}Si_9$ metallic glass, accelerated ageing, 60 Hz appl. 3—29109
$Fe_{78}B_{13}Si_9$, Metglas 2605 S2, magnetomechanical props. 3—23767
$Fe_{79}B_{16}Si_5$, Metglas 2605S3, magnetomechanical props. 3—23767
$Fe_{81.5}B_{14.5}Si_4$ amorphous particles, Curie temp. and ferromag. resonance 3—43441
$Fe_{79}B_{15.5}Si_{3.5}C_2$, amorphous, composite mag. annealing effect 3—28650
$Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous ribbon, power loss, annealing conditions effect 3—28649
$Fe_{81}B_{13.5}Si_{3.5}C_2$, metallic glass, theory and application 3—23766
$Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glass, resistivity and galvanomag. coeffs. 3—28325
$Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glass, crystallisation, Mossbauer spectra study 3—56829
$Fe_{81}B_{13.5}Si_{3.5}C_2$ ribbons, Metglas 2605SC, Mossbauer study 3—34020
$Fe_{81}B_{13.5}Si_{3.5}C_2$ toroidal amorphous ribbon and polycryst. cores, step magnetization losses 3—43398
$Fe_{70.5}B_{15.5}Tb_7La_7$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3—33932
$(Fe_xB_{1-x})_{0.9}Tb_{0.05}La_{0.05}$, crystallized, coercive force and microstruct., composition depend. 3—33931
FeCo, partly ordered, electron energy spectra and subbands *(Russian)* 3—52019
$Fe_xCo_{80-x}B_{20}$, amorphous, elec. resistivity and thermopower 3—28327
$Fe_{67}Co_{18}B_{14}Si_1$, amorphous ribbons, with transverse or oblique mag. anisotropy, domain studies 3—28594
$(Fe_6Co_{88}Ni_3V_3)_{75}Si_{10}B_{15}$, amorphous soft mag. material with extra low core loss at HF, mag. props. 3—28589
$Fe_{1-x}Co_xSi$, ESR spectra 3—52607
FeCoSiB amorphous alloys, zero-magnetostrictive, disaccommodation elimination 3—28644
FeCoSiB amorphous alloy, zero-magnetostrictive, initial permeability produced by mag. annealing 3—28651
$(Fe_{0.05}Co_{0.95})_{78}Si_8B_{14}$, amorphous accommodation and disaccommodation effects 3—18946
$Fe_5Co_{75}Si_{15}B_5$ metallic glass, resistivity and galvanomag. coeffs. 3—28325
$Fe_5Co_{75}Si_4B_{16}$, amorphous metallic glass, mag. annealing kinetics 3—28652
$Fe_{70.3}Co_{4.7}Si_{15}B_{10}$, metallic glass, induced anisotropy reorientation kinetics, isotropic behaviour 3—28546
$Fe_5Co_{70}Si_{15}Bi_{10}$, amorphous ferromagnet, mag. noise, Barkhausen effect 3—23697
$Fe_4Co_{66}V_2Si_8B_{20}$, amorphous, mag. props., mag. head appls. 3—33930
$(Fe_{1-x}Co_x)_{90}Zr_{10}$, amorphous, giant forced vol. magnetostriction 3—3503
FeCr, dilute, hyperfine field distribs., host and impurity, NMR spectra 3—52639
FeCr, mag. hyperfine fields, Curie temp. and mag. moments, Mossbauer study 3—52673
$Fe_{52}Cr_{48}$ sigma phase, atom distribs., X-ray diffr. study 3—37847
FeCrAlY, increased plasticity of alumina scale and formation mechanism of keying or pegging Y_2O_3 3—14775
$Fe_{80-x}Cr_xB_{20}$, metallic glass, crit. indices for ferromag. ordering and spin glass state 3—23650
$Fe_{34}(Cr_XCo_{1-x})_{66}$ alloys, mag. behaviour 3—8699
$Fe_{5.53}Cr_{93.93}Mn_{0.54}$, thermal expansion in range 4.2-300K 3—23063
$Fe_{80-x}Cr_xP_{13}C_7$, amorphous, Invar effect, thermal expansion and mag. props. study 3—52582

iron alloys continued
FeCu dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
FeGe, elec. field gradient sign in paramag. state, Mossbauer study 3—23848
$FeGe_2$, magnetic transition, magnetisation *(Russian)* 3—38612
$(Fe_{1-x}M_x)_2A$, A=Y, Zr, U, onset of magnetism, magnetisation 3—23720
$(Fe_{1-x}M_x)_3Ga$, M=Cr, Mn, Co, Ni, mag. moments, Mossbauer spectra 3—52418
$(Fe_{1-x}M_x)_{77}Si_{10}B_{13}$ (M=Ni, Co, Mn, Cr), amorphous, Invar effect, magnetostriction meas. 3—57738
FeMn dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
$Fe_{1-x}Mn_x$ sputtered films, metastable BCC phase 3—13681
$Fe_{77.6}Mn_{22.4}$-H, spontaneous magnetisation, ferromag. ordering 3—18870
$Fe_{1-x}Mn_xBe_2$, inhomogeneous magnetism, hyperfine interaction meas. 3—33892
$(Fe_{1-x}Mn_x)_{75}P_{16}B_6Al_3$ ribbon, spin glass, ESR absorpt. 3—3451
$(Fe_{1-x}Mn_x)_{75}P_{16}B_6Al_3$ amorphous ribbon, ferromagnet-spin glass transition, magnetisation study 3—28551
$Fe_{100-x}Mn_xPB(C)$ metallic glasses, Mn hyperfine field distrib., NMR study 3—57799
$(Fe_cMn_{1-c})_{80}P_{16}C_4$, metallic glass, ferromagnet, crit. correlations, small angle neutron scatt. study 3—23644
$(Fe_{1-x}Mn_x)_2Y(B)$, mag. moments, magnetisation, neutron scatt., Mossbauer, and NMR meas. 3—3420
$Fe_{72.5}Mo_{7.5}B_{20}$, amorphous ferromagnets, relax. above Curie point 3—33986
Fe_xNb_{100-x} sputtered amorphous alloy, mag. props., resistivity and Mossbauer spectra 3—28658
FeNi alloys, theory of Invar effect, forced vol. magnetostriction and bulk modulus 3—14102
FeNi dilute alloys, mag. aftereffect 3—28645
$Fe_{0.68}{}^{60}Ni_{0.32}$, mag. moment distrib. study 3—23586
$Fe_{40}Ni_{38}$, mag. hyperfine field, effects of B and Mo additions *(Korean)* 3—38734
$Fe_{65}Ni_{35}$, sound velocity dispersion and volume magnetostriction *(Russian)* 3—51716
$Fe_{65}Ni_{35}$, thermal expansion in range 4.2-300K 3—23063
$(Fe_{1-x}Ni_x)_{80}B_{20}$ amorphous alloy, crystallisation, elec. resist. and X-ray diffr. studies 3—27848
$Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. props., Mossbauer study 3—19027
$Fe_{40}Ni_{40}B_{20}$, amorphous, struct. anal. by X-ray diffraction *(Korean)* 3—37784
$Fe_{40}Ni_{40}B_{20}$, amorphous, ferromag. phases study by EPR 3—43430
$Fe_{40}Ni_{40}B_{20}$, amorphous, ductility, neutron-induced changes 3—51668
$Fe_{40}Ni_{40}B_{20}$ amorphous alloy, stress relax., effect of mag. field 3—29120
$Fe_{40}Ni_{40}B_{20}$, amorphous metallic glass, internal friction and oscillation decay *(Spanish)* 3—42713
$Fe_{40}Ni_{40}B_{20}$ powder, production by rotating water atomisation process *(Japanese)* 3—24179
$Fe_{60}Ni_{20}B_{20}$ alloys, amorphous, magnetisation, mech. tensile stress effects 3—47537
$Fe_{40}Ni_{38}B_{18}Mo_4$, magnetomechanical coupling, ΔE and permeability 3—23768
$Fe_xNi_{80-x}B_{10}Si_{10}$, amorphous alloy, microhardness and occurrence of mech. anisotropy *(Polish)* 3—24354
$Fe_{0.56}Ni_{0.23}Cr_{0.21}$, stainless steel, short range order, neutron diffuse scatt. study 3—13162
$FeNi_{45}Cr_{20}Al_5Y_{0.02}$, austenitic alloy, oxidation kinetics, influence of struct. parameters 3—34534
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, struct. relax. by modulus meas. 3—9111
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, crystn., effects of pre-annealing, TEM study 3—42529
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, amorphous, pre-yield microstrain, precision meas. 3—43913
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, amorphous, mag. hyperfine field distrib. 3—57835
$Fe_{65}(Ni_{0.84}Mn_{0.16})_{35}$ alloy, press. effect on elec. resist., mag. phase transition obs. 3—28336
$(Fe_xNi_{1-x})_{1-y}Mn_y$, mag. moment of Mn, neutron diffuse scatt. 3—52457
$Fe_{40}Ni_{38}Mo_4B_{18}$, amorphous, Mossbauer study and mag. props. *(Korean)* 3—14172
$Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous alloy, hydrogenation effects on mag. props. 3—28555
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, crystn. kinetics 3—2425
$Fe_{40}Ni_{38}Mo_4B_{18}$ metallic glass, crystallisation, size effect, high voltage electron microscopy obs. 3—3236
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, X-ray photoelectron spectra obs. of surface oxidation 3—34533
$Fe_{40}Ni_{38}Mo_4B_{18}$, Metglas 2826 MB, domain dragging by elec. current 3—28598
$Fe_{40}Ni_{38}Mo_4B_{18}$, Metglas 2826MB, elec. resist., rel. to deform. in tension *(French)* 3—53135
$Fe_{40}Ni_{38}Mo_4B_{18}$, Metglas 2826MB, anomalous elec. resist. 3—57329
$Fe_{10}Ni_{70}P_{20}$, amorphous spin glass, magnetic relaxation disappearance obs. 3—23646
$Fe_{10}Ni_{70}P_{20}$ amorphous spin glass, mag. relaxation disappearance, crit. field 3—57665
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous, H permeability, diffusivity and solubility, electrochem. technique 3—8262
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, crystn. by eutectic reaction, kinetics and mechanism *(French)* 3—13104
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, homogeneous flow, threshold stresses 3—14631
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloy, struct. relax., threshold stresses 3—14632
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloys, stress relax. kinetics, effect of pre-annealing 3—24287
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous ferromagnet, instantaneous reversible permeability 3—28610
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, stress relax., effect of mag. field 3—29120
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous film, volume change on order-disorder transition *(Russian)* 3—38045
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous, deform. and fracture, mech. props. and struct. regularities 3—53202
$Fe_{40}Ni_{40}P_{14}B_6$, crystn., stability, effect of electron irrad. *(French)* 3—51662
$Fe_{40}Ni_{40}P_{14}B_6$, domain struct. and behaviour 3—28593
$Fe_{40}Ni_{40}P_{14}B_6$, glassy alloy, SCC, H embrittlement in aq. acidic media 3—58286

iron alloys continued
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, electron irrad., point defects, positron lifetime and mag. aftereffect study 3—3860
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, CW laser annealing, effects on magnetostriction and Young's modulus 3—37956
$Fe_{40}Ni_{40}P_{16}B_4$, metallic glass, crystn., effects of pre-annealing, TEM study 3—42529
$Fe_{45}Ni_{45}P_{8.5}B_{1.5}$, struct. changes during crystallisation, interatomic binding *(Russian)* 3—51493
$Fe_{15}Ni_{60}P_{16}B_6Al_3$ amorphous alloy, para, ferro and spin glass regions, high field magnetisation study 3—28614
$(Fe_xNi_{1-x})_{75}P_{16}B_6Al_{13}$, spin glass, deviations from Curie-Weiss behaviour 3—57521
$Fe_{29}Ni_{49}P_{14}B_6Si_2$, amorphous ferromagnets, relax. above Curie point 3—33986
$Fe_{40}Ni_{40}Si_{14}B_6$, metallic glass, positron annihilation study 3—19226
$Fe_{100-x}P_x$, amorphous, effective mag. moment *(Korean)* 3—3423
FePd, local magnetic moments, all-electron local density theory 3—52366
$FePd_3$, electronic struct. and magnetism, LCAO calc. 3—28258
$Fe_{1-x}Pd_x$, FCC, lattice dynamics, mag. ordering effect 3—2701
Fe_3Pt, Invar behaviour and thermoelastic martensitic transform. 3—39140
Fe_3Pt, near stoichiometric and stoichiometric, martensitic transform. and shape memory effect, calorimetric obs. 3—39141
FeRh, magnetic phase diagram 3—52466
$Fe_{75}Si_{15}B_{10}$ amorphous spark eroded particles, atomic struct. 3—33099
$Fe_{78}Si_{10}B_{12}$ amorphous alloy, struct. relax., elec. and mag. study 3—27847
FeSn, elec. field gradient sign in paramag. state, Mossbauer study 3—23848
$Fe_{75}Sn_{25}$-$Co_{75}Sn_{25}$ alloys, metastable phases, X-ray and electron diffr. studies 3—37855
FeTi (100) and (111) surfaces, LEED and AES studies 3—18541
FeTi, activation for H_2 storage 3—48176
FeTi, activation for H_2 absorpt. 3—48177
FeTi dilute alloys, electron irrad., annealing behaviour, mag. after-effect study 3—43873
FeTi, hydriding, activation processes and kinetics 3—48052
FeTi-based alloys containing β-Ti, hydrogenation 3—42569
$Fe_{0.5}Ti_{0.5}$, lattice dynamics study 3—42727
$Fe_{1-x}Ti$, sputtered alloys, metastable BCC and amorphous phases, Mossbauer effect 3—51991
$Fe_{1-x}Ti_x$, sputtered alloys, metastable BCC and amorphous phases, X-ray diffr. and magnetisation 3—51990
$FeTiH_x$ ($x=1$, 2), electronic props. 3—38294
FeV, dilute, hyperfine field distribs., host and impurity, NMR spectra 3—52639
$Fe_{83-x}V_xB_{14}Si_3$ amorphous N_2 containing alloy, thermal and mag. props. 3—28552
FeV(Mn), NMR freq. temp. depend. on local environments 3—52637
$Fe_{24}Zr_{76}$, amorphous, Pauli spin paramagnetism 3—28510
$Fe_{90}Zr_{10}$, amorphous alloy, stability and crystn. behaviour 3—22797
$Fe_{90}Zr_{10}$, amorphous and microcrystalline, domain structure, Lorentz TEM 3—38643
Fe_xZr_{100-x}, metallic glasses, electronic struct. 3—52017
Fe_67B_{24}, amorphous, Mossbauer Zeeman spectrum, correl. effects 3—38740
Gd-Fe amorphous films, FMR linewidth contrib. 3—57786
Gd-Fe-Co amorphous films, magneto-optic Kerr effect and Curie temp. 3—28841
Gd-Tb-Fe amorphous films, magnetic and magneto-optic props., magneto-optical disc memory appl. 3—23927
$Gd(Fe, Rh)_2$, hyperfine interactions, Mossbauer study 3—19022
GdFe amorphous films, calibration for quantitative Auger analysis 3—28241
GdFe film, amorphous, sputtered, compositional variation, mag. props. 3—18956
$GdFe_2$-Tb(Nd), hyperfine struct. anisotropy, ^{57}Fe Mossbauer meas. 3—52684
$Gd(Fe_xAl_{1-x})_3$, reciprocal susceptibility and g-values 3—52421
$Gd(Fe_yAl_{1-y})_3$, reciprocal susceptibility, saturation moment determ., EPR study 3—14019
$Gd(Fe_{1-x}Co_x)_3H_y$, NMW spin-echo study 3—52666
$Gd(Rh_{1-c}Fe_c)_2$, mag. props., magnetisation meas. 3—18936
$(Gd_xY_{1-x})Fe_3$, reciprocal susceptibility, saturation moment determ., EPR study 3—14019
$Gd_xY_{2-x}Fe_{17}$, mag. props. and exchange interactions 3—38608
$Gd_{1-x}Y_x(Fe_{1-z}Co_z)_2$, CC ^{59}Co NMR study 3—28711
H_2 production/storage using titanium electrodes and metal hydrides 3—39537
H_2 storage using FeTi hydride beds, designs modelling and evaluation 3—39538
$HfFe_2$, γ-γ perturbed angular correlation study 3—52687
$Hf_{1-x}Fe_x$, amorphous, ^{57}Fe Mossbauer isomer shift 3—52691
$Hf_{0.8}Ta_{0.2}Fe_2$, mag. phase transitions 3—52469
$Ho(Fe, Rh)_2$, hyperfine interactions, Mossbauer study 3—19022
$LaFe_yNi_{5-y}$, H storing materials, X-diffr. and Mossbauer study *(Chinese)* 3—53026
$LaNi_4Fe$, absorption of H_2, disintegration, acoustic emission and exoelectron emission 3—47935
$LaNi_{5-x}Fe_x$, Mossbauer study 3—52680
$LuFe_2$-Tb, hyperfine struct. anisotropy, ^{57}Fe Mossbauer meas. 3—52684
γ-Mn-Fe, antiferromagnetic, single-domain FCT, magnetic struct. and spin waves, neutron diffr. study 3—14002
Mn-Ge(-Fe)(Co)(Ni), Vocoloy, antiferromag., influence of Fe, Co and Ni *(Japanese)* 3—9197
$Mn_{1-x}Fe_xSb$ thin films, mag. props., ferromag. and spin wave resonance studies 3—43440
$Mn_{1-x}Fe_xSi$, spin fluctuation effects, resist., magnetoresist., and magnetisation meas. 3—57623
MnPdFe, resistivity anomaly at spin-glass temp. 3—47509
$Nb_{1-x}Fe_x$, amorphous, ^{57}Fe Mossbauer isomer shift 3—52691
$NdCo_2$-Fe, hyperfine struct. anisotropy, ^{57}Fe Mossbauer meas. 3—52684
Ni-Co-Fe (21, 15 wt.%) film with low-coercivity channels, mag. struct. study *(Russian)* 3—38586
Ni-Cr-Fe, Alloy 600, electrochem. impedance diagrams at active-passive transition pot. *(Japanese)* 3—29209
Ni-Cr-Fe superalloy, Alloy 600, SCC in oxygenated high temp. water, environmental factors effect 3—58316
Ni-Cr-Fe-Si-B self-fluxing coatings for stationary gas turbines, modification by Al_2O_3 protective scales 3—4211
Ni-Fe, anomalously prolonged Barkhausen jumps, resonance study 3—23711

iron alloys continued
Ni-Fe, electrodeposited, corrosion-electrochem. behaviour, effect of nonmetallic inclusions *(Russian)* 3—4189
Ni-Fe, mag. thin film, vacuum deposition, microcomputer control system 3—43742
Ni-Fe (0.5 at.%), Mossbauer spectra, room temp. to Curie point 3—52678
Ni-Fe alloy, magneto-optic effect meas. using Lissberger's method *(Japanese)* 3—14241
Ni-Fe alloy sheets, formability, tensile props. rel. to rolling direction 3—47917
Ni-Fe crystalline alloy, induced anisotropy reorientation kinetics 3—28547
Ni-Fe thin film magnetoresistive vector magnetometer, factors affecting performance 3—25901
Ni-Fe thin films, spin wave resonance obs. 3—57782
Ni-Fe-B alloys, chemically deposited, mag., elec., mech. props. 3—52985
Ni-Fe-Co-Ti foils, containing nonmag. precipitates, magnetisation processes, TEM study 3—52572
Ni-Fe-Co-Ti thick foils, mag. domain struct., TEM study 3—52573
Ni-Fe-Cr alloys, precip. reactions, effect of C and Mo 3—29085
$Ni_{77}Cr_{16}Fe_7$, S atomic behaviour in grain boundaries, embrittlement *(French)* 3—29175
γ-$(Ni_{80-x}Cr_{20})Fe_x$, spin glass state and mag. transitions, neutron diffr. study *(Russian)* 3—23641
Ni_3Fe, configurationally disordered, mag. heat capacity 3—8673
Ni_3Fe, critical behaviour of elec. cond. temp. derivative 3—28335
Ni_3Fe, electron irrad. and cold worked, mag. disaccommodation 3—23743
Ni_3Fe, magnetocrystalline anisotropy const. meas. 3—57590
Ni_3Fe, slip-induced mag. anisotropy annealing effects near T_c 3—57586
Ni_3Fe, surface composition of (100) and (110) faces, influence of S *(French)* 3—28198
$Ni_{80}Fe_{20}$ etched films, micromagnetic struct. and struct. const. 3—14096
Ni_xFe_{1-x}, unoccupied electron states 3—13694
Ni_xFe_{1-x}, X-ray $M_{2,3}$ emission spectra 3—14394
$(Ni_{65}Fe_{35})_{77}B_{23}$ metallic glass, short range order, neutron diffr. study 3—18233
Nicrosil-Nisil thermocouple, K-type replacement 3—5786
P-containing, microstruct., effect of C additions 3—29033
Pd-Fe, diffusivity and solubility of H 3—42849
Pd-Fe, dil., Curie temp., vol. depend., tight-binding calc. 3—52472
Pd-Fe, dil., localised giant magnetisation, hyperfine mag. field *(German)* 3—18851
Pd-Fe, dil., localised mag. moments, finite cluster approach 3—23582
Pd-Fe, elec. and mag. props., order-disorder transition temp. effects *(Russian)* 3—23354
Pd-Fe, longit. magnetoresist near percolation limit, spin glass and ferromag. props. 3—38372
Pd-Fe solid solutions, proton irradiation damage, dislocation loops, voids, TEM 3—37969
Pd-Fe-Au, elec. and mag. props., order-disorder transition temp. effects *(Russian)* 3—23354
Pd-Si-Fe, amorphous, magnetisation, AC susceptibility, and Mossbauer meas. 3—57560
$(PdCuSi)_{90}Fe_{10}$, amorphous spin glass, evidence for existence of mag. two level system 3—47510
$Pd_{77.5-x}Cu_6Si_{16.5}Fe_x$ amorphous alloy, hyperfine field distrib., Mossbauer spectra 3—43471
PdFe alloys, dil., model of localised moments 3—14000
PdFe, mag. struct., neutron depolarisation studies 3—51453
$(Pd_xPt_{1-x})_3Fe$, Hall effect, 13 to 400K, effect of mixed exchange interaction *(Russian)* 3—28338
$(Pd_xPt_{1-x})_3Fe$, specific heat meas. across ferromag.-antiferromag. conc. phase transition *(Russian)* 3—3462
$Pr_2(Co_{1-x}Fe_x)_{17}$, magnetostriction and magnetisation 3—23771
$PrFe_2Ge_2$, mag. props., magnetisation and neutron diffr. meas. 3—43352
$(Pr_{80}Ga_{20})_{100-x}Fe_x$ metallic glass, mag. props. and crystallisation 3—28618
$Pr_xSm_{1-x}Fe_2$ Laves phases, mag. props., Mossbauer and magnetisation studies 3—52454
PtFeSb, Heusler alloy, struct., mag. and magneto-optical props. and ^{57}Fe Mossbauer spectra 3—57898
Rh-Fe, resistance thermometer stability characts. 3—305
Si-Al-Fe, soft mag. alloys, phys. props. 3—3482
Si-Fe ribbon, mag. props., toroid radius influence 3—28611
SiFe, hysteresis loss, freq. depend. 3—28625
Sm-Co-Cu-Fe-Zr magnets, sintered, phase comp. and struct. 3—4043
Sm-Fe films, ferromagnetic, direct synthesis by selectively thermalised sputtering 3—28663
Sm-Zr-Co-Cu-Fe-epoxy resin metalloplastic permanent magnets 3—3487
$Sm_6 (Mn_{1-x}Fe_x)_{23}$, mag. clustering and props., mictomagnetism 3—23657
$Sm(Co, Cu, Fe, Ti)_7$ magnets, cryst. struct., polymorphism and hard mag. props. 3—51542
$Sm_2(Co, Cu, Fe, Zr)_{17}$ magnets having high intrinsic coercive force and maximum energy product 3—14088
$Sm(Co,Cu,Fe)_76$, permanent magnets, struct. phase transitions obs. during heat treatment *(Russian)* 3—33417
$Sm(Co,Fe,Cu,Hf)_{7.25}$ permanent mag., mag. domains 3—33921
$Sm_2(Co,Fe,Cu,Zr,Cr)_{14.8}$ permanent mag., ferromag. coercivity 3—33937
$Sm(Co,Fe,Cu,Zr)_{7.22}$ permanent mag., mag. domains 3—33921
Sm(Co, Fe, Ni) system, mag. props. 3—14024
$Sm(Co\text{-}Cu\text{-}Fe\text{-}Ti)_{6.8}$ sintered magnet, magnetisation reversal at very low temp. 3—52540
$Sm_2(Co_{1-x}Fe_x)_{17}$, exchange and hyperfine fields on dil. ^{153}Eu 3—52676
$Sm_2Co_xFe_y$, exchange and hyperfine fields on dil. ^{153}Eu 3—52676
$SmFe_2$, remanent strain, effect of shock loading and initial mag. texture 3—39224
$Sm_6(Mn_{1-x}Fe_x)_{23}$, paramag. phase, mag. and ESR studies 3—52359
Tb-Fe, sputtered, props. for tunable SAW device appls. 3—51997
Tb-Fe alloy thin films, amorphous, RF-sputtered, thickness depend. of mag. hysteresis props. 3—28661
Tb-Fe film, magnetisation and perpendicular anisotropy, effect of columnar microstruct. 3—23747
$Tb_{0.27}Dy_{0.73}Fe_2$, magnetisation process and domain struct., X-ray topography study 3—3480
$TbFe_2$, amorphous, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3—43399
$TbFe_2$ based alloys, magnetostriction under compressive stress 3—57733
$TbFe_2$, remanent strain, effect of shock loading and initial mag. texture 3—39224
Tb_xFe_{1-x} sputtered amorphous alloy, magneto-optical props. 3—28838
$TbFe_5Al_7$, unusual ferrimagnetism, magnetisation and mag. hysteresis meas. 3—14073

iron alloys continued
  $Tb_{0.23}(Fe_{1-y}M_y)_{0.77}$ (M=V, Mn, Co, Cu), amorphous, mag. and magneto-optical props. 3—57897
  Ti-Al-Mo-Cr-Fe, damping props. with layered metal coatings 3—14778
  $\alpha+\beta$Ti-Al-Mo-Fe-Cr-Mn, hardened, embrittlement and spontaneous cracking during ageing 3—19422
  Ti-Al-Mo-V-Cr-Fe, internal struct. of α-phase crysts. 3—14598
  Ti-Al-Mo-V-Cr-Fe alloy, VT23, supercooled β-phase, precipitation *(Russian)* 3—34325
  Ti-Fe, corrosion and electrochem. props., alloying effects 3—9257
  Ti-Fe compacts, sintering from powders, vol. changes 3—39072
  Ti-Fe powder mixtures, sintering of compacts, diatometric investig., intermetallic form. 3—58069
  β-Ti-Mo-Cr-Fe-Sn-La, behaviour, C effect 3—29091
  β-Ti-Mo-V-Fe-Al, metastable, direct ageing for optimum mech. props. 3—19355
  Ti-V-Fe-Al (9.3, 1.8, 3.2 wt.%), stress-induced martensite, form. and reversion 3—14588
  Ti-V-Zr-Fe Transage Ti 129, transform characts., structures produced on ageing 3—14589
  Ti-Zr-Fe-Mn hydrides equilibrium props. 3—47820
  TiB_2-Fe-Mo cermet, sintering, effect of TiB_2 fine struct. 3—24201
  TiFe and alloys, hydride form. rel. to hydrogen storage *(Korean)* 3—53597
  TiFe, electronic struct. and density of states, cluster Xα calc. *(Russian)* 3—23252
  $Ti_{1-x}Fe_x$, amorphous, ^{57}Fe Mossbauer isomer shift 3—52691
  $Ti_{74.6}Fe_{0.4}Al_{25}$, Mossbauer study *(Russian)* 3—38729
  $TiFeH_x$, substoichiometric, electronic struct. 3—38296
  $TiFe_{1-x}Ni_yV_z(Nb_z)$, hydrogen storage props. 3—48182
  $Ti_{50}Ni_{47}F_3$, martensitic transform., electron microscopy study 3—39125
  $Ti_{50}Ni_{47}Fe_3$, martensitic transformation, electron microscopy study 3—47834
  $Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, elec. resist. meas., TEM and electron diffr. studies 3—38053
  $Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, microstructural changes, CDW, electron diffr. study 3—38054
  $Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, incommensurate and commensurate phases 3—39124
  $Ti_{50}Ni_{50-x}Fe_x$, phase transform., TEM and electron diffr. study 3—39123
  Tm_2Fe_{17}, polycryst. magnetostriction and thermal expansion 3—57735
  UFe_2, electronic struct. calcs. 3—18608
  $U(Fe_{1-x}Co_x)_2$, electronic struct. calcs. 3—18608
  $U(Fe_xCo_{1-x})_2$, magnetisation and susceptibility meas. 3—57554
  $U(Fe_xCo_{1-x})_2$, paramag. and ferromag. props., magnetisation and susceptibility meas. 3—33866
  $U(Fe_{1-x}Mn_x)_2$, electronic struct. calcs. 3—18608
  $U(Fe_{1-x}Mn_x)_2$, Mossbauer study of onset of magnetism, elec. cond. 3—19024
  $V_{1-x}Fe_xH_y$, soft X-ray emission spectra, metal-H bonding states 3—38962
  $V_{1-y}Fe_yH_x$, normal and deuterated, phase diagram, impurity effects 3—33391
  W-Fe-C, grain boundary segregation characts. *(Russian)* 3—39153
  Y-Fe, rapid solidification, BCC phase of Y prep. 3—2468
  $Y_2(Co, Fe)_{17}$, $Y_2(Co, Fe, Cu)_{17}$, $Y_2(Co, Fe)_{23}$, cryst. growth by Bridgman method 3—19263
  $Y_{6-x}Er_xFe_{23}$, hydrides, mag. props., structural props., X-ray diffr. anal. 3—52524
  $Y(Fe, Rh)_2$, hyperfine interactions, Mossbauer study 3—19022
  $Y_{1-x}Fe_x$ amorphous alloy, hydrogenation effects on mag. props. 3—28555
  $Y_{1-x}Fe_x$ amorphous melt-spun alloy, magnetic props. and crystn. kinetics 3—18934
  $Y(Fe_{1-x}Co_x)_2$, H_2 absorption effects on mag. props. 3—52423
  $Y(Fe_xCo_{1-x})_2$, mag. clustering, aftereffect, neutron depolarisation study 3—52558
  $Y(Fe_xCo_{1-x})_2$, thermal expansion and forced vol. magnetostriction 3—52589
  $Y(Fe_{1-x}Co_x)_3H_y$, NMW spin-echo study 3—52666
  $Y(Fe_{1-x}Mn_x)_2$ mag. props. and Mossbauer spectra, absorbed H effects 3—28631
  $Y_6(Fe_{0.4}Mn_{0.6})_{23}$, magnetic short range order, neutron scatt. study 3—52374
  Zr-Fe (0.025-1.0 wt.%), nuclear quality, nature of precipitation *(French)* 3—19343
  $Zr(Fe,Mn(Al))_2$, mag. ordering, H_2 absorption effects 3—28632
  $Zr_{1-x}Fe_x$, amorphous superconductor, upper critical fields 3—3393
  Zr_8Fe_2, crystallisation, DSC, X-ray diffr. and Mossbauer studies 3—51494
  $Zr(Fe_{1-x}Al_x)_2$, Mossbauer and proton NMR studies 3—57824
  $Zr(Fe_xMn_{1-x})_2$-H_2 system, thermodynamic props. 3—47123
  $(Zr_{0.5}Hf_{0.5})Fe_2$, hyperfine mag. field, TDPAC study 3—23845
  $(Zr_{1-x}Hf_x)Fe_2$, electronic struct., magnetisation and isomer shift 3—3048
  $ZrMn_2Fe_{0.8}$, hydride, calorimetric enthalpy of form., decomp., config. entropy 3—53442
  $ZrMn_2Fe_{0.8}$, Mossbauer and proton NMR studies 3—57824
  $ZrMn_2Fe_{0.8}$, nonstoichiometric, unit cell dimensions and hydriding characts. 3—37859
  $ZrMn_2Fe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3—48081
  $ZrMn_2Mn_yFe_x$, H_2 absorpt. and desorpt. characts., hydride form. and H_2 storage implications 3—48082
  $Zr_{0.7}Ti_{0.3}Mn_2Fe_{0.8}$, hydrogenation, H_2 storage appl. 3—24642
  $Zr_{1-x}Ti_xMnFe$ alloys, hydrogenation characts., H_2 storage appl. 3—24529

iron compounds
  see also ferrites; iron alloys
  cementite, hot hardness of primary phase found in Fe-C, Fe-C-Cr and Fe-C-B 3—34441
  cluster complexes, core binding energies, gas-phase XPS study 3—41622
  coal gasification, Fe-bearing phases, magnetisation and Mossbauer study 3—29301
  $CoFe_xAl_{2-x}O_4$, solid solution, Mossbauer and high field magnetisation studies 3—34019
  diiron metallacarborane, mixed spin, 'wedged', mol. and electronic struct. 3—21797
  epitaxial garnet films, anisotropy and exchange parameter ferromag. resonance study 3—14093
  $Fe_{1-x}Co_xCl_2$, site-random solid soln. mag. props. from DC mag. susceptibility and elastic neutron diffraction 3—33888
  garnet epitaxial films, stratification, refractive index study by guided light propag. 3—18587
  garnets, substitutional dilution, mag. transitions and mag. struct. 3—28569

iron compounds continued
  graphite-$FeCl_3$, intercalation compound, effects on lattice constants 3—22849
  graphite-$FeCl_3$, stage depend. intercalant in-plane density, Mossbauer study 3—23844
  iron trinuclear trifluoroacetate complex, cryst. struct. 3—18288
  oxide layer on Fe surface, EXAFS study, total photoelectron yield method 3—28932
  oxides, plasma-H reduction kinetics *(Russian)* 3—39364
  polyacetylene:$FeCl_3$, elec. cond. meas. 3—38390
  polyacetylene:$FeCl_4$ films, chemically and electrochemically doped Mossbauer study 3—38732
  pressure-induced high spin-low spin transition, mag. props. 3—52532
  pyrite, mech. prepared, surface changes, electron spectroscopy and microscopy obs. 3—13608
  silicate minerals, magnetic ordering props. meas. 3—28527
  solar energy conversion to chemical energy by photoassisted processes, NH_3 production over TiO_2 catalysts, influence of iron content 3—14960
  $[FeCl_4]^-$, reson. Raman spectra 3—1367
  $Al_2(SO_4)_3$-$FeSO_4$-H_2O, mean ionic activity coeffs., double salt form. *(German)* 3—53381
  $(As_{13}Te_{24}Si_{27}Sb_{18})_{1-x}Fe_x$ RF sputtered films, struct., elec., and optical props. 3—13649
  B_2O_3-Na_2O-MgO-Fe_2O_3-SnO_2, vitreous, coordination of Fe^{3+} and Sn^{4+} 3—37794
  $BaFeSi_4O_{10}$, gillespite, Fe^{2+} Mossbauer spectrum, mag. relax. effects obs. 3—3609
  BaO-B_2O_3-Fe_2O_3 glass, IR spectra 3—14295
  BaO-Fe_2O_3, melt, density and surface tension *(Japanese)* 3—47192
  BaO-FeO-P_2O_5 glasses, internal friction, torsion pendulum technique 3—51708
  BaO-transition metal oxide-Fe_2O_3 ferrite, microsyntactic intergrowth and composition fluctuation 3—13472
  $BaO.6Fe_2O_3$ permanent magnet, oriented, fracture toughness and anisotropy 3—14741
  $Ca_{3.18}M_{2.20}(Ti_{0.43}Fe_{0.37}Al_{0.31})B_{4.04}(Si,Al)_4O_{22}$, M=transition metal, cryst. struct. determ. 3—33216
  CaO-B_2O_3-Al_2O_3-Fe_2O_3 glass, IR spectra, annealing effects 3—43529
  CaO-Fe_2O_3, melt, density and surface tension *(Japanese)* 3—47192
  CaO-FeO-SiO_2, glass, liquid-phase separation processes 3—23050
  $8CaO.8SiO_2.3Fe_2O_3.2FeO$, amorphous slag, EPR study 3—18977
  $Co_xFe_{3-x}O_4$, particle growth by air oxidation of aqueous suspensions and mag. props. 3—52986
  $Co_{1-x}Fe_xTiO_3$ single crystals, floating zone growth method, controlled atm. 3—52925
  $Co_yFe_{1-y}5$, metastable coexistence of high and low-temp. states, Mossbauer study 3—3611
  $Cr(CO)_6$:$Fe(CO)_5^-$, single cryst., γ-irrad., EPR spectrum 3—28690
  $Cr_xFe_{1-x}S$, Mossbauer study, crystallographic α transition 3—14179
  $CsFeCl_3$:$2H_2O$, nuclear spin-lattice relax. study 3—52658
  $Cs_2FeCl_5.H_2O$, Mossbauer study of hyperfine field variation 3—57826
  $CsMnFeF_6$, frustration effects, neutron study 3—28518
  $Cu_{0.5}Fe_{2.5}O_4$-$ZnFe_2O_4$, initial permeability increase 3—14079
  $ErFe_2H_x$, cryst. struct. and props. 3—8007
  $EuFe_2P_2$, Mossbauer studies 3—57823
  Fe (III) complex, tetraphenylporphyrin iron (III) halides, high spin, ^{13}C NMR 3—1392
  Fe CO_3, asymmetric quadrupole double in Mossbauer spectrum 3—45996
  Fe complex, $(Fe(2\text{-pic})_3)Cl_2.EtOH$, spin transition in crossover region, Mossbauer spectroscopy and mag. susceptibility meas. 3—3409
  Fe complex, bromobis(N,N-diethyldithiocarbamato)iron(III), heat capacity, λ-type ferromag. phase transition 3—52463
  Fe complex, cyclobutadieneiron tricarbonyl, struct., ^1H and ^2H NMR study 3—55962
  Fe complex, Fe(1,10-phenanthroline)$_2$(NCS)$_2$, spin transitions, hysteresis and cryst. quality effect 3—33925
  Fe complex, Fe(2,2′-bipyridene)$(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3—8656
  Fe complex, Fe(2,2′-bipyridine)$_2$(NCS)$_2$, spin transitions, hysteresis and cryst. quality effect 3—33925
  Fe complex, Fe(4,7-$(CH_3)_2$-1,10-phenanthroline) (NCS)$_2$, high spin-low spin transitions, thermal hysteresis effects 3—57619
  Fe complex, ferric dithiocarbonates, spin-crossover phenomenon 3—3129
  Fe complex, high spin-low spin transition, low press. effect, Mossbauer effect 3—52459
  Fe complex, trichlorotripyridene Fe (III) monopyridene, elec. cond. 3—18704
  Fe complexes, multiple scatt. and disorder in EXAFS anal. 3—58001
  Fe complexes, sodium pentacyano substituted ferrate(II) complexes, Mossbauer and IR studies 3—57843
  Fe complexes, xanthato-Fe (III), mag. and spectroscopic props. 3—52795
  Fe II complexes, mixed, with phenanthroline, XPS, spin states effects 3—11881
  Fe III-hexafluoride complex, ESCA studies using an internal standard of calibration 3—6720
  γ-Fe O powders, mag. props., vol. concentration dependence meas. *(German)* 3—28642
  Fe-Al-O system, thermodynamics, 1073 to 1573K 3—58113
  Fe-C magnetic films, RF reactively sputtered, phys. props. and struct. 3—52563
  Fe-Co-B-O particles, with super high coercivity, surface struct. 3—57182
  $Fe_{0.297}$-$Mn_{0.097}$-$Ti_{0.606}$-O system, phase equilibria 3—2743
  $(Fe_{0.35}$-$Ca_{0.65})_2SiO_4$, X-ray Fe $L_{\alpha1,2}$ emission lines, chemical shifts meas., electron microprobe anal. appl. 3—8906
  $FeAl_2O_4$, oxidation, elec. cond. meas., Fe^{2+} ion availability in defect phase γ, DTG anal. 3—39373
  $\alpha(Fe_{1-c}Al_c)_2O_3$, Morin transition, Mossbauer study 3—52677
  α-$Fe_{1-x}Al_xOOH$, aluminous goethite, Mossbauer study and X-ray data 3—3613
  $Fe(BF_4)_2.6H_2O(D_2O)$, mag. susceptibility and anisotropy, dielec. const., struct. transitions, ligand field parameters, bond ordering 3—57558
  $FeBO_3$, antiferromagnet, Mandelstam-Brillouin scatt. from magnons and phonons 3—28870
  $FeBO_3$ film, domain wall motion at high freqs., induced oscill. method 3—43417
  $FeBO_3$, high freq. spin wave branch and uniform precession mode, Brillouin scatt. study 3—28536
  $FeBO_3$, magneto-optical props., appl. to magneto-optical unidirectional TE-TM mode convertor 3—23926
  $FeBO_3$, pulsed magnetisation reversal obs. 3—3485

iron compounds continued
$FeBO_3$, weak ferromag., parametric and subharmonic magnetoelastic excitations of NMR 3–3558
$Fe_3B_7O_{13}I$, low freq. dielec. relax. in paraelec. and ferroelec. phases 3–52716
$FeBr_2$, lattice dynamics, shell model calc. and IR absorpt. meas. 3–2708
$FeBr_4^-$, reson. Raman spectra 3–1367
Fe_3C, self-diffusion coeffs. of C meas. via kinetics of form. 3–13529
Fe_3C, single crysts., low temp. deform. *(French)* 3–53149
ϵ-Fe_3C, valence electron struct. anal., spatial distrib. of bonds, mech. strength depend. *(Chinese)* 3–33177
$Fe(CN)_6^{4-}$ complexes, solid and solns., vibr., IR and Raman anal. 3–19116
$(Fe(CN)_6)^{4-}$, electronic struct. calc. by SCF $X\alpha$-scatt. wave generalised partitioning method 3–23238
$Fe(CO)_5$ adsorbed on GaAs, UV photolysis at 77K 3–44068
$Fe(CO)_5$, Auger line shape investig. 3–21831
$Fe(CO)_5$, Koopmans' defects, many-body INDO calcs. 3–1244
$Fe(CO)_3B_4H_8$, Frenske-Hall LCAO-MO-SCF calcs., isolobal principle validity 3–26640
$[Fe(CO)_3]_2B_3H_7$, Frenske-Hall LCAO-MO-SCF calcs., isolobal principle validity 3–26640
FeCl, sextet state interactions 3–21685
$FeCl_2$ amorphous thin films, X-ray and MCD studies 3–57891
$FeCl_2$, specific heat and random-field effects 3–28581
$FeCl_2$, thin films, IR spectra 3–47723
$FeCl_2$, X-ray absorpt., near edge, multielectron contrib. 3–14387
$FeCl_2$:Co, localised mag. modes, far IR absorpt. spectra 3–3770
$FeCl_3$ intercalated graphite, Mossbauer study of mag. props. 3–3616
$FeCl_3$ intercalated graphite, ferric and ferrous ion arrangement, Mossbauer study 3–18278
$FeCl_3$ intercalated graphite, spin glass state, mag. susceptibility and Mossbauer studies 3–43375
$FeCl_3$ intercalated with graphite, interplanar dist., X-ray diffr. study 3–33193
$FeCl_3$ intercalation compound with graphite, c-axis elec. resist. and thermopower, temp. depend. 3–8475
$FeCl_3$ intercalation cpd. with graphite, air stability, Mossbauer study 3–52693
$FeCl_3$-graphite intercalation cpd., thermal cond., electronic and lattice contribs. 3–42866
$FeCl_3$-graphite low stage intercalation cpd., mag. props., AC susceptibility meas. 3–3426
$FeCl_3.6H_2O$, paramagnet, invest. by nonlinear effects 3–8646
$Fe_{1-x}Co_xCl_2$, random mixture with competing spin anisotropy, phase diagram 3–28567
$Fe_{1-x}Co_xCl_2.2H_2O$, random mixture with orthogonal spin anisotropies, Mossbauer study 3–43468
$FeCo_{1.5}Ti_{0.5}O_4$, mag. struct., neutron study 3–52389
$Fe_xCo_{1-x}TiO_3$, random mixture, competing spin anisotropies, Mossbauer and neutron scatt. studies 3–14170
$FeCr_{2-x}In_xS_4$, ferrimagnetic, spontaneous magnetisation 3–18869
$FeCr_2O_4$, oxidation, elec. cond. meas., Fe^{2+} ion availability in defect phase γ, DTG anal. 3–39373
$FeCr_2S_2$ film, ferrimag. semicond., prep. and props. 3–58049
$FeCr_2S_4$, vapour pressure, temp. depend., tensimetric investig. 3–57101
$(Fe_{1-x}Cr_x)_{0.98}Si_{1.02}$, paramagnetic susceptibility meas. 3–52349
$Fe_{0.3}Cu_{0.7}Cr_2S_4$, mag. semicond., mag. props. and cryst. struct. 3–14018
$Fe_xCu_{1-x}Rh_2Se_+$, crystallographic transition from spinel to monoclinic struct. *(Korean)* 3–38050
FeF_2, AFMR, determ. of mag. polaritons group velocity 3–57788
FeF_2, antiferromagnet, anisotropic, critical behaviour 3–57671
FeF_2, Raman scatt. from magnon pair excitations 3–57913
FeF_2, resonant magnon-phonon interaction in strong mag. field, neutron and Raman spectra interpretation 3–52438
FeF_2, spin flop field, temp. depend. 3–57608
FeF_2:Mn, giant Raman scatt. by local magnon modes 3–3715
FeF_2:Mn, local magnon mode dynamics, effect of S_zx-nonconserving interactions 3–52440
$FeF_2:Mn^{2+}$, local magnon modes, Green's function theory 3–52442
$FeF_2:Mn^{2+}$, spin-lattice relax. determ. 3–57809
$FeGaO_3$, noncryst. ferromag., cond. and mag. props. 3–28660
$Fe_{15}Ge_8O_{36}$, cryst. struct. *(German)* 3–51549
$Fe_{3-x}Ge_xO_4$, hyperfine fields and electron diffusion, Mossbauer study 3–14181
$Fe_{3.2}Ge_{1.8}O_8$, cryst. struct. *(German)* 3–51548
$Fe_2Ge_xSi_{1-x}O_4$, mag. props., struct. depend. 3–52414
FeI_2 photodissociation laser 3–12134
Fe(II) phthalocyanine, crysts., dark and photo-cond., adsorbed gases effects 3–8528
Fe(II) sulphides, solubility consts., free enthalpies of form., reaction equilib. consts. 3–29327
Fe(III) complexes, high-spin porphyrins, mag. props. and electronic struct. 3–41488
$Fe_{1-x}M_xSO_4.7H_2O$ (M=Mg, Ni, Zn, Co), cooperative Jahn-Teller effect, ^{57}Fe Mossbauer effect 3–52692
$Fe_{1-x}Mg_xCl_2$, specific heat and random-field effects 3–28581
$Fe_{1-x}Mg_xCl_2$, spin-glass-like behaviour 3–3450
$Fe_{1-x-y}Mn_yO$, Mossbauer study 3–34016
$Fe_2Mo_3O_8$, spontaneous magnetisation meas., mag. anisotropy 3–52367
$Fe_{16}N_2$, metastable, reactively sputtered, high saturation magnetisation meas. 3–28628
Fe_4N power, synthesis and mag. props., mag. tape appl. 3–23729
$Fe(ND_4)_2(SO_4)_2.6D_2O$, single crysts., PMR and D NMR 3–47558
$Fe(NH_4)_2(SO_4)_2.6H_2O$, single crysts., PMR and D NMR 3–47558
$FeNbO_4$, cryst. struct. and elec. cond., relationship to $FeWO_4$ 3–7996
Fe_xNbS_2 (x=1/4, 1/3, 1/2), intercalation cpds., Mossbauer spectra 3–34021
$FeNb_3Se_{10}$, X-ray diffuse scatt. study 3–33212
FeO, clean and K-promoted, CO adsorption, UPS, AES and thermal desorption study 3–2976
FeO, decomp. on heating, nonstoichiometry defects, Mossbauer study 3–34023
FeO, defect props. 3–56875
FeO, Fe_2O_3 containing ceramic systems, temp. limit evaluation for subsolidus state *(Ukrainian)* 3–24215
FeO molecule, total energy calc., Gaussian quadrature $X\alpha$ method for Hartree-Fock-Slater eqn. 3–31923
FeO, non-stoichiometric wustite, comp. under H_2O-H_2 equilib. atmosphere *(French)* 3–47826
FeO, reduction, external mag. field effects 3–53369

iron compounds continued
FeO, spectroscopic props. of $^5\Delta_i$ ground state 3–6711
FeO, wustite, ionic defects, effect of thermal gradients 3–28371
FeO, wustite phase, defect struct. and elec. props. 3–52185
$Fe_{1-\delta}O$, elec. cond. mechanism 3–23378
$Fe_{1-x}O$, Mossbauer study 3–34016
$Fe_{2+x}O_3$-Na_2O-P_2O_5 glasses, ionic and electronic cond., temp. depend. 3–33766
γ-Fe_2O_3, acicular particles, remanent coercive force meas. 3–18943
Fe_2O_3, acicular powder, sintering, pore struct., densification 3–58079
Fe_2O_3 additive in reaction bonded Si_3N_4 prep., influence on vitrification of grain boundary phases 3–29040
α-Fe_2O_3, antiferromagnetic vector rotation in transition 3–43373
γ-Fe_2O_3, behaviour of surface OH group, Fourier transform IR spectroscopy study 3–23738
γ-Fe_2O_3 ceramics, elec. resist. meas., gas sensitivity 3–52132
α-Fe_2O_3 ceramics, gas sensing props., effect of SO_4^{2-} ion 3–34659
γ-Fe_2O_3, Co adsorbed, mag. and Mossbauer studies 3–57830
α-Fe_2O_3, dehydration prep., X-ray peak broadening due to twin form. 3–8059
γ-Fe_2O_3 dispersion, mag. characts. for discs and tapes 3–28639
Fe_2O_3 electrodes for photoassisted electrolysis of water 3–14962
Fe_2O_3 films, semiconducting, spray pyrolysis deposition and elec. and optical props. 3–52930
Fe_2O_3, γ-α transform., effect of dry grinding Fe_3O_4 with added γ-Al_2O_3 3–53003
α-Fe_2O_3, haematite, single cryst., magnetoresist. near Morin transition 3–18728
Fe_2O_3, haematite, transverse quadratic galvanomag. effect near Morin temp. *(Russian)* 3–52181
α-Fe_2O_3, hematite, effective third-order elastic moduli 3–28027
Fe_2O_3, high press. phase transition under shock compression 3–13443
α-Fe_2O_3, highly dispersed, in SiO_2 gel pores, interaction obs. using Mossbauer effect *(Russian)* 3–48093
α-Fe_2O_3, Morin transition, sensitivity to imperfections 3–18888
Fe_2O_3 needles prep. by decomp. of iron salt 3–39054
γ-Fe_2O_3, partial reduction to produce high coercivity particulate mag. media 3–28635
γ-Fe_2O_3 particles, adsorbed Co, ^{57}Co Mossbauer emission spectra 3–19030
γ-Fe_2O_3 particles, SiO_x adsorbed, high coercive force, ESCA study 3–23737
Fe_2O_3 powder specimens, charact. and sintering 3–14545
γ-Fe_2O_3, prep. from Fe_3O_4, coercivity, particle size depend., chem. struct. 3–23736
α-Fe_2O_3 pyrolytic film optical filters, optical props. 3–56304
γ-Fe_2O_3 semiconducting ceramic gas sensor, life testing, appls. 3–30847
$\alpha-Fe_2O_3$ spherical particles, Morin temp. affected by mag. fields and strain 3–43363
α-Fe_2O_3, superparamagnetic particles, effect on spin-lattice relaxation of protons in water *(Korean)* 3–38652
Fe_2O_3 ultrafine particles in Teflon, anomalous recoilless fraction, Mossbauer meas. 3–47578
α-Fe_2O_3:$^{119}Sb^{5+}$, adsorbed ions, emission Mossbauer obs. 3–52674
α-$Fe_2O_3:Al^{3+}$, aluminous hematite, Mossbauer study 3–34018
γ-Fe_2O_3:Co, coercivity, rot. hysteresis, mag. recording appls. 3–23734
γ-Fe_2O_3:Co, epitaxial, orientation and dispersion, mag. recording appl. 3–23741
γ-Fe_2O_3:Co, prep., coercivity, mag. recording appl. 3–23735
γ-Fe_2O_3:Co ferrite, epitaxial, coercivity, saturation magnetisation 3–23733
α-$Fe_2O_3:SO_4^{2-}$ ceramics, gas sensitivity, elec. resist. study 3–52134
n-Fe_2O_3/n-Si, double layer solar cell electrode, interface states effects obs. *(Chinese)* 3–19581
Fe_2O_3/Si photoanode with negative flatband potential, XPS and AES studies 3–52244
α-Fe_2O_3-Al_2O_3, solid soln. form., Mossbauer and DTA study 3–8745
Fe_2O_3-B_2O_3-PbO based glasses, susceptibility and Mossbauer effect meas. 3–57514
Fe_2O_3-BaO-B_2O_3 glass, mag. and struct. props., ^{57}Fe Mossbauer spectra 3–3601
γ-Fe_2O_3-Fe_3O_4 solid solutions, coercivity, effect of vacancies 3–38646
Fe_2O_3-PbO-B_2O_3 glasses, ^{11}B and ^{207}Pb NMR lineshape studies 3–52636
Fe_2O_3-PbO-SiO_2, Fe_2O_3-$NaPO_3(P_2O_5)$, amorphous layers, vitrification range, light transmittance *(Japanese)* 3–57989
Fe_2O_3-rare earth oxide systems, amorphous, Mossbauer spectra and magnetisation meas. 3–57832
Fe_2O_3-TiO_2 system in flux environment, cryst. growth 3–28972
Fe_2O_3-V_2O_5-P_2O_5 glasses, elec. cond. *(Japanese)* 3–3205
Fe_2O_4, magnetite, surfactant effect on mag. props. and Mossbauer spectra *(Chinese)* 3–43407
$Fe_{3-x}O_4$, natural magnetite, low temp. oxidation, Mossbauer study 3–47979
Fe_3O_4, aqueous suspensions of magnetite, behaviour of Co 3–18553
Fe_3O_4, behaviour of surface OH group, Fourier transform IR spectroscopy study 3–23738
Fe_3O_4, dissolving and crevice studies with chelant solns., rel. to reactor cooling loop 3–41132
Fe_3O_4, electrical and magnetic transitions 3–33636
Fe_3O_4, electron transfer during oxidation of Fe foil, XPS study 3–19248
Fe_3O_4, electronic superstruct., Verwey transition, review 3–13734
Fe_3O_4 epitaxial layer on Fe(110), composition and structure 3–3002
Fe_3O_4, ferrimag. ferroelectricity, hysteresis and piezoelec. consts. 3–57865
Fe_3O_4, ferrofluid, form birefr., dichroism meas. 3–28829
Fe_3O_4 ferromag. fine particle systems, Neel relax. study 3–52554
Fe_3O_4 film, reactive sputtering from two facing targets, high rate deposition 3–19269
Fe_3O_4, first order transition at 1433K, thermodynamic props. *(French)* 3–47827
Fe_3O_4, ionic configurations and electron ordering 3–56860
Fe_3O_4, low temp. phase, Fe^{3+} and Fe^{2+} hyperfine fields, NMR study 3–14150
Fe_3O_4, low-temp. phase, anti-phase struct. 3–56911
Fe_3O_4, mag. and dielec. relax., permeability and permittivity meas. 3–14214
Fe_3O_4, magnetite, anomaly in magnetoelectric effect at low temps. 3–57736
Fe_3O_4, magnetite, biogenic in bacteria, animals and man 3–15124
Fe_3O_4 magnetite, dielec. const., mag. field depend. 3–57851
Fe_3O_4, magnetite, elec. resist., temp. depend. below Verwey transition 3–38385

iron compounds continued

- Fe_3O_4, magnetite, low temp. cryst. struct. deduced from diffuse electron scatt. 3—13202
- Fe_3O_4, magnetite, mag. props. and Mossbauer spectra, effect of surfactant 3—57829
- Fe_3O_4, magnetite, magnetocryst. anisotropy and magnetoelec. effect 3—57584
- Fe_3O_4, magnetite, spin-reorientation transition *(Russian)* 3—8667
- Fe_3O_4, magnetite, weakly elec. cond. ferromagnet, antireson. theory 3—23806
- Fe_3O_4, μSR study 3—52698
- Fe_3O_4, reduction, external mag. field effects 3—53369
- Fe_3O_4, Verwey transition, band effects on charge ordering 3—13731
- Fe_3O_4:Co, coercivity, rot. hysteresis, mag. recording appls. 3—23734
- Fe_3O_4-Fe_2O_3 colloids, defect spinel struct. 3—27930
- Fe_3O_4-Fe_2O_3 film, prep. by reactive condensation, oxidation and coercivity 3—18954
- Fe_xO_y as electrode in n-Si-1M $NaNO_3$ junction, photovoltaic *(Korean)* 3—8576
- γ-Fe_2O_3(:Co) fine particles, mag. anisotropy, ^{57}Fe Mossbauer study *(Chinese)* 3—18942
- FeOCl-ferricinium intercalation cpds., oxidation and irreversible phase transitions, Mossbauer study *(German)* 3—29307
- FeOCl-ferrocene intercalation cpds., elec. cond. and thermoelec. power *(French)* 3—28355
- FeOCl-Li intercalate, struct., NMR and Mossbauer study 3—22860
- $FeO(Fe_3O_4)(Fe_2O_3)$, X-ray Fe $L_{\alpha1,2}$ emission lines, chemical shifts meas., electron microprobe anal. appl. 3—8906
- $Fe(OH)_3$, Mossbauer effect study of Fe ions *(Korean)* 3—14174
- $FeOHSO_4$ fine particles, magnetisation and Mossbauer studies 3—43410
- α-FeOOH, goethite, Mossbauer spectra, hyperfine field interactions 3—3595
- FeOOH polymetallic nodules, chemical composition and Fe oxidation state, Mossbauer study 3—15428
- β-FeOOH sol for light scatt. meas. of viscosity and vortices 3—2074
- β-FeO(OH), thermal decomp. intermediate product, mag. props. 3—14089
- FeP, mag. struct., Mossbauer study 3—28517
- Fe_2P, neutron scatt. study of mag. excitations 3—52383
- $Fe_2P_2O_7$, cryst. struct. study 3—2528
- $Fe_x(PO_4)_yO_z$, phase relations and structs. *(French)* 3—47088
- $FePS_3$, X-ray photoemission and optical spectra 3—19243
- $(Fe_{1-x}Pd_x)_{0.98}Si_{1.02}$, paramagnetic susceptibility meas. 3—52349
- $FeRh_2Se_4$, cryst. struct., mag. susceptibility and Mossbauer spectra 3—8008
- $FeRh_2Se_4$, energy level splittings of Fe ions, Mossbauer spectra study *(Korean)* 3—14173
- FeS, cryst. struct. and ferrimag.-antiferromag. transition 3—51559
- FeS, electronic struct., Xα discrete variational calc. 3—52027
- FeS, pyrrhotite, ferrimag. semicond., Hall effect studies 3—33743
- FeS/Li-Al compact cell, reference electrodes for long-term testing 3—44114
- FeS_2 crystal, electrochemically reacting, thin secondary product films, electron diffr. studies 3—4295
- FeS_2, electronic structure of 3d pyrite- and marcasite-type sulphides 3—18611
- $Fe_{1-\delta}S$, hexagonal phase, cation vacancy mobility 3—51846
- $Fe_{13}S_{16}$, synthetic smythite, formation and struct. 3—33214
- Fe_3S_4, monoclinic, formation and struct. 3—33214
- Fe_xS, integral area AES meas., quantitative comparison with XPS studies 3—14403
- $FeSO_4$ dosimeter for ionisation chamber dosimetry control of electron, ^{60}Co γ-beams 3—24886
- $FeSO_4$ solution, total absorpt. of electrons for determ. of absorbed dose to water 3—21564
- $Fe_{1-x}S_{1-y}Se_y$, real struct. and mag. props. interrelation 3—52487
- Fe_7Se_8, ferrimagnetism, 3d transition metal solute effects 3—57694
- $Fe_{1-x}Si_{1+x}$, paramagnetic susceptibility meas. 3—52349
- $FeSiO_3$, high-temp. polymorph, cryst. struct. study 3—46894
- α-Fe_2SiO_4, mag. props., neutron diffr. study 3—57540
- $Fe_7Si_8O_{22}(OH)_2$, grunerite, mag. behaviour from Mossbauer spectroscopy 3—52686
- $Fe_{1/6}Sn_{1/6}NbS_2$, intercalation cpds., Mossbauer spectra 3—34021
- $FeTiO_3$, coexistence of Ising- and XY-like magnons 3—52437
- $FeTiO_3$, collinear antiferromag., obliqueness of easy axis, neutron diffr. study 3—47478
- $FeTiO_3$ II, disordered, high temp. synthesis, mag. props. 3—14053
- Fe_2TiO_5, spin glass, Mossbauer study 3—28744
- Fe_xVS_2, cryst. struct., mag. and elec. props. 3—7997
- $Fe_xV_{3-x}S_4$, Mossbauer study of Fe, V site distrib. 3—3617
- $FeWO_4$, cryst. struct. and elec. cond., relationship to $FeNbO_4$ 3—7996
- $Fe_2(WO_4)_3$, semicond.-metal transition 3—8419
- $(FeZn)F_2$, Raman scattering by magnons and phonons 3—52792
- $Fe_xZn_{1-x}F_2$, randomly diluted, H-T phase diagram 3—57609
- $GdFe_2H_x$, prep. and decomp., Debye-Scherrer X-ray study 3—2807
- $Ge_{0.03}Fe_{2.97}O_4$, doped magnetite, mag. and elec. props. *(Korean)* 3—38733
- GeO_2-ZnO-Fe_2O_3 system, phase diagram at 1000°C 3—19328
- $HoFe_2H_x$, cryst. struct. and props. 3—8007
- $K_3Co_{1-x}Fe_x(CN)_6$, phase transition and soft mode 3—43493
- $KFeBr_3$, cryst. and mag. struct. 3—22829
- $K_xFe(CN)_6$, $x=3$, 4, XANES spectra, multiple scatt. resonances 3—34170
- K_2FeF_5, soliton broadening in Mossbauer spectra 3—57825
- $K_3Fe_2(PO_4)_3$, cryst. struct. study *(French)* 3—46897
- $KFe_3(SO_4)_2(OH)_6$, jarosite structure, thermal disintegration, IR spectra and X-ray diffraction 3—13182
- $K_2Mn_{1-x}Fe_xF_4$, random mixture with competing spin anisotropy, phase diagram 3—28567
- K_2O-Al_2O_3-B_2O_3-Fe_2O_3 glass, Fe aggregation on heat treatment, optical and mag. study 3—13467
- $LaAlO_3$-$LaFe_3O_3$, solid solutions, crystal prep. by zone refining 3—14476
- $La_xBa_{1-x}Fe_{12-x}Zn_xO_{19}$ ferrites, mag. props. and high temp. composition 3—57698
- $La_2Fe_xMn_{2-x}S_5$, mag. props. meas. 3—28543
- La_2LiFeO_6, Fe oxidation states and electronic configurations, oxide stabilisation 3—33179
- Li-Al/FeS battery cell, simulated negative electrodes, thermomech. behaviour meas. 3—9420
- Li-Al/FeS cell, effective conductivities of positive electrode at different states of charge 3—48131
- Li-Al/FeS cells, engineering-scale, self-discharge behaviour 3—48132
- Li-Al/FeS_x battery, ceramic separators 3—9418
- LiAl/FeS cells, performance reproducibility, capacity retention and cycle life 3—44112
- LiAl-FeS cells, pelletised, operating characteristics 3—19571
- $LiNbO_3$:Fe, mag. susceptibility, 100-400K, effects of annealing *(Korean)* 3—38602
- Li_2O-B_2O_3-Fe_2O_3 glasses. mag. props. from ^{57}Fe Mossbauer spectroscopy 3—14169
- Li_2O-MgO-Al_2O_3-SiO_2, Fe_2O_3 doped, transparent glass ceramic, microstruct. and crystallisation 3—2423
- $(Mg, Fe)_{1-x}O$, specific Fe^{3+} cluster geometries, Mossbauer, EXAFS and X-ray diffr. study 3—33285
- Mg-Fe olivine, crystal size location of Fe and trace elements via new crystallographic technique 3—10100
- Mg-Fe-Ni olivines, synthetic, cation distrib. study 3—13176
- MgO-FeO-Al_2O_3-SiO_2 glass-ceramics with coal stone as main raw material 3—34275
- MgO-M_2O_3-silicate system (M=Al,Cr,Fe in binary mixture), solid solubility in periclase phase 3—34290
- MgO-ZrO_2-Fe_2O_3 system, phase equilib., X-ray and electron microprobe obs. 3—34289
- MnFe-ferrite, monocrystalline epilayer, bubble domains 3—23763
- $Mn_{1-x}Fe_xAs$, single cryst., mag. interactions and phase transitions *(Russian)* 3—3440
- $(MnFe)F_2$, Raman scattering by magnons and phonons 3—52792
- $Mn_{1-x}Fe_xO$, mag. susceptibility meas., 77-300K 3—14022
- $Mn_xFe_{3-x}O_4$, magneto-optical spectra meas. 3—14265
- $MnFe_{0.09}Sb$, spin density distrib. 3—52398
- $Mr_{1.9}Fe_{0.1}Sb$, spin wave dispersion relations 3—57566
- $NaFeNp_3F_{15}$, cryst. struct., X-ray diffr. study *(French)* 3—7970
- Na_2O-B_2O_3-Fe_2O_3 glass, IR spectra 3—14295
- Na_2O-Fe_2O_3, melt, density and surface tension *(Japanese)* 3—47192
- Na_2O-Fe_2O_3-B_2O_3 glass system, Mossbauer spectra study 3—43469
- Na_2O-Fe_2O_3-NiO-B_2O_3-P_2O_5 glass ceramics, crystallised, mag. and elec. props. *(Japanese)* 3—58144
- Na_2O-FeO_n-B_2O_3-SiO_2 glass system, elec. resist., semicond. props. 3—33721
- Na_2O-SiO_2-Fe_2O_3 glass, optical absorption, luminescence and Raman spectra 3—3710
- Na_2O-SiO_2-Fe_2O_3-Y_2O_3 glass, Mossbauer and EPR spectroscopy study 3—3603
- Ni-Fe olivines, cation ordering, Mossbauer spectroscopy study 3—13177
- $Ni_xFe_{3-x}O_4$, magneto-optical spectra meas. 3—14265
- PbFCl, NQR study of electric field gradient 3—23830
- $Pb(Fe_{1/2}Nb_{1/2})O_3$, ferroelec. perovskites form. mechanism and ceramic process 3—14577
- PbO-B_2O_3-Al_2O_3-Fe_2O_3-Y_2O_3 glass-ceramics, mag. props. 3—57833
- PbTe-FeTe system, phase diagram and elec. props. 3—2739
- $RbFeCl_3$:$2H_2O$, nuclear spin-lattice relax. study 3—52658
- SiO_2-Na_2O-CaO-MgO-Fe_2O_3 glass, ferric Fe reduction, EPR and optical spectra studies 3—34616
- SiO_2-Na_2O-Fe_2O_3-B_2O_3-TiO_2-CaO-MnO_2-Li_2O-Al_2O_3 glass surfaces, ion depletion during Auger anal. 3—14398
- SiO_2-Na_2O-NiO-Fe_2O_3 glasses, precipitation of $NiFe_2O_4$, ESR and Mossbauer studies 3—13468
- $Sr_{0.5}La_{1.5}Li_{0.5}Fe_{0.5}O_4$, Fe oxidation states and electronic configurations, oxide stabilisation 3—33179
- SrOI-Fe_2O_3, melt, density and surface tension *(Japanese)* 3—47192
- $TlFeBr_3$, cryst. struct., distortion of 2L hexagonal perovskite type *(French)* 3—27913
- YFe_2H_x, prep. and decomp., Debye-Scherrer X-ray study 3—2807
- ZnFe-ferrite, monocrystalline epilayer, bubble domains 3—23763
- $Zn_{1+x}Fe_{2-2x}Ge_xO_4$ spinel solid solns., lattice consts. 3—19328
- $Zn_5Fe_{10}Ge_8O_{36}$, cryst. struct. 3—19328
- $Zn_xFe_{3-x}O_4$, magneto-optical spectra meas. 3—14265
- $ZrMoFeD_{2.6}$, cryst. struct. determ. 3—18265

iron phosphate semiconductor glasses *see amorphous semiconductors*

irradiation effects *see radiation effects*

irradiation induced creep

- fast reactor design, appls. of swelling and irradiation creep 3—31508
- graphite, polycrystalline, pressure-dependent volume strain, under fast neutron irradiation 3—21367
- metallic materials qualification for appl. in advanced HTGR 3—898
- metals, cavity nucleation during post-irradiation creep, bubble sweeping model, appl. to stainless steel 3—33305
- metals, radiation creep, temp. and dose depends. *(Russian)* 3—37952
- Neitron-11, apparatus for studying reactor radiation effect on creep and strength of structural materials 3—45600
- radiation effects on materials, conf., Philadelphia, USA (June 1982) 3—5494
- reactor fuel element bulging, creep in fast neutron flux *(Russian)* 3—49947
- reactor materials, radiation damage, sink strengths calc. method 3—55156
- steel, austenitic stainless, cold worked, irrad. creep, effect of flux and temp. gradients 3—28011
- steel, austenitic stainless, cold worked, irrad. creep, stress and stress transient effects 3—28009
- steel, austenitic stainless, JRC fusion materials programme in-pile creep and fatigue facilities 3—55691
- thermocycling influence on radiation deform. rate of crystals 3—27981
- Zircaloy 2, uniaxial in-reactor creep, stress, flux and temp. depend. 3—43894
- zircaloy-2, annealed, fast neutron irradiated, growth strain breakaway, temp. depend. 3—34385
- Zr-Nb (2.5 wt.%), irradiation by 100 keV Ne ions, simulation of neutron irradiation growth and creep 3—37970
- Ni-W (1.2 at.%), cold worked, irrad. creep, stress and stress transient effects 3—28009
- Zr, irradiation by 100 keV Ne ions, simulation of neutron irradiation growth and creep 3—37970

ISDN *see communication networks; digital communication systems*

Ising lattices

- *see also Ising model*
- adsorbed multilayer films, phase transitions, lattice gas models 3—51951
- alloys, amorphous covalent, random and nonrandom bonding, Ising lattice study 3—37786
- antiferromagnet, many neighboured, ground state degeneracy in max. critical field 3—8684
- classical lattice systems, equilib. states, energy-entropy inequalities 3—40516

Ising lattices continued
- cluster method, incl. 1st and 2nd nearest neighbour interactions 3—3468
- Edwards-Anderson Ising spin glass, residual mag. entropy and metastable states 3—49276
- finite lattices, systematic approx. schemes 3—45080
- Ising model, random bond, on square lattice, ferromag. phase existence 3—8683
- linear defects, depinning transition and nonuniversal behaviour, unified renormalisation group study 3—49277
- Migdal-Kadanoff approx., Ising model in external fields 3—49280
- random Ising chain, low temp. behaviour 3—35930
- simple cubic, free energy and entropy estimation by computer simulation 3—45081
- square lattice Ising model with first and second neighbour interactions, phase diagram 3—43382

Ising model
- *see also Ising lattices*
- amorphous ferromagnet, Ising model 3—23677
- amorphously packed, frustrated hierarchical models, chaotic rescaling and spin glass behaviour 3—23671
- anisotropic double Ising chain, indirect polarisation of spins 3—13989
- anisotropic three-dimens., dynamics in transverse field 3—38778
- ANNI model, in mag. field, low temp. anal. 3—18840
- ANNNI model, renormalisation group anal. in mag. field 3—57677
- antiferromagnet, amorphous, phase transitions, statistical model 3—57688
- antiferromagnet, layered, phase transitions *(Russian)* 3—47517
- antiferromagnet, many neighboured, ground state degeneracy in max. critical field 3—8684
- antiferromagnet, phase diagram 3—28582
- antiferromagnet, quasi-1-D Heisenberg-Ising, excitation spectrum and T=0 dynamics 3—38572
- antiferromagnet, three-dimens. tricrit. behaviour, Monte Carlo simulation 3—23673
- antiferromagnetic, A-B site-bond correlated percolation, Bethe cluster approx. 3—28490
- antiferromagnetic Heisenberg-Ising chain, spin-1, ground state props. 3—38575
- antiferromagnetism, type I, statistical theory on FCC lattice, AB alloy superlattice theory 3—28489
- axial next nearest neighbour, 2-dimens., phenomenological renormalisation of Monte Carlo data 3—5728
- axial next nearest neighbour model, analytical soln. 3—10768
- axial next-nearest-neighbour Ising model, perturbation expansions, phase transitions 3—43384
- Banach algebras and Kadanoff transformation 3—16329
- BCC lattice, fluctuation-induced first order transition 3—33912
- Bohm-Aharonov strings, functional integrals for order-disorder variables 3—508
- centred hypercubic lattices, frustration in Ising systems with multi-spin interactions 3—5734
- chains, short-range random systems, thermodynamic limit and replica method 3—23675
- classical Heisenberg chain with anisotropies, statistical mechanics 3—43348
- cluster free energy in Ising model, Monte Carlo calc., comparison with capillarity approx. 3—33908
- cluster method, incl. 1st and 2nd nearest neighbour interactions 3—3468
- compressible dilute, crit. behaviour, Monte Carlo study 3—18924
- correction-to-scaling critical exponent for fluids to order ε^3 3—234
- correlated site percolation, test of universality 3—20781
- correlated site-bond percolation in two-dimensions, droplets study 3—20780
- critical behaviour, block spin techniques 3—45091
- critical indices calc. by rational approx. method 3—201
- critical indices of 2-D Ising type model, symmetry and size effects 3—14066
- critical temp. upper bounds from correlation identities 3—52502
- cubic lattices with four-spin interactions, mag. ground states 3—52333
- d-dimensional, partition function 3—16293
- dilute, on triangular lattice, spin glass transition, Monte Carlo simulation 3—23672
- dilute Ising models, approx. method. 3—52329
- dilute model on triangular lattice, spin-glass transition 3—8687
- disordered mag. Ising systems, static and dynamic props. 3—33850
- disordered systems, mean field like renormalisation group 3—28495
- fermionisation of 2-dimens. model 3—20977
- fermionisation of 3-dimens. model, grassmannian integral derivation 3—20978
- ferro- and antiferromagnetic Ising-type chains, mag. field effects in spin dynamics 3—8689
- ferromag., in noninteger spatial dimension 3—38569
- ferromagnet, amorphous, Curie temp., Bethe-Peierls-Weiss approximation 3—38614
- ferromagnet, bond-diluted, on triangular and honeycomb lattices, crit. frontiers 3—18925
- ferromagnet, correl. inequalities for truncated two-point function 3—28492
- ferromagnet, d-dimens., domain wall pinning transitions 3—14067
- ferromagnet, dilute, correlated effective field approx. 3—23563
- ferromagnet, Griffiths-Hurst-Sherman inequality improvement 3—33848
- ferromagnet, hypercubic d-dimens., crit. temp. and crit. energy 3—23670
- ferromagnet, planar, uniaxial, two-point functions and bubbles 3—43385
- ferromagnet, surface anisotropy effects 3—18882
- ferromagnet, surface tension, real-space renormalisation group calc. 3—13992
- ferromagnet, two-dimens., percolation of unfrustrated plaquettes 3—18922
- ferromagnet, Z-D, computation of structure factors by finite-size scaling and transfer matrix methods 3—47515
- ferromagnetic abelian lattice systems, translation invariant equilibrium states 3—3463
- ferromagnetic Ising model, anisotropic, crit. temps., extended linear chain approx. 3—23680
- ferromagnets, amorphous A_cB_{1-c} alloys, Curie temp., short range at. order study 3—23681
- ferromagnets, surface tension, percolation and roughening 3—28493
- finite amorphous, with frustration, ground state mag. field depend. 3—57687
- finite-size scaling and phenomenological renormalization 3—25822
- free energy for Ising model on closed Cayley tree 3—49303
- frustration effects on freezing transition 3—57673

Ising model continued
- frustration in Ising systems with multi-spin interactions of different sign 3—23669
- frustration models in two dimensions 3—54684
- fully frustrated substrates, phase transitions 3—54683
- $g|\phi|^4$ theory in four dimensions and polymers 3—36143
- gauge-invariant correl. functions for Ising-gauge Ising-Higgs system in two-dimensions 3—36146
- Gibbs states, non-translation invariant, absence in two-dimens. Ising model 3—16303
- Glauber's stochastic spin model with broken bond disorder 3—52327
- hierarchical model, collective variables method for scalar ferromagnet 3—30813
- hypercubic lattices with noninteger dimensionality, using low lacunarity fractal lattices 3—30808
- impurity bonds, correlation function at transition point *(Russian)* 3—3469
- infinite-range Ising spin glass, internal field distrib. 3—47514
- infinite-range random Ising model, limit distrib. 3—202
- inhomogeneous, correlations, diagonally layered models on square lattice 3—52501
- inhomogeneous, correlations, horizontally layered models on square lattice 3—28580
- interacting hard squares on lattice, tricritical points 3—5737
- internal energy and short-range order 3—23566
- Ising frustration potentials for zero point entropy models, phase transformations 3—16309
- Ising spion glasses, critical region size 3—23679
- kinetic Ising model, finite-size scaling approach 3—16297
- lattice systems, general theory 3—192
- layered Ising models on triangular and honeycomb lattices 3—28579
- linear chain approx. to Ising model with competing interactions 3—23567
- linear Ising magnet, in strong constant field, exchange anisotropy, nonequilibrium behaviour 3—23564
- linear Ising magnet in strong time depend. field 3—52328
- long-range potential models, transition matrix, perturbation theory 3—14068
- low temp., probability distribution of random paths 3—40505
- magnetic susceptibility and correl. length, confluent correction amplitudes 3—8692
- magnetic systems, Monte Carlo simulation 3—23559
- magnetic transitions, crossovers from 2D Ising to 2D Heisenberg and to ID Ising 3—28558
- mean field critical point, perturbation 3—193
- mean field Ising model, transition probability and stochastic eqns. 3—25826
- medium range 3-D, percolation and droplets, Monte Carlo calc. 3—35940
- metamagnet, three-dimens. tricrit. behaviour, Monte Carlo simulation 3—23673
- metamagnet tricritical point meas., random field effects 3—8668
- molecular phases in a lattice-gas model 3—5738
- nonlinear relaxation exponent determ. 3—28585
- odd-spin-cluster interactions 3—52332
- one-dimensional Ising chain with competing interactions, residual entropy 3—23562
- one-dimensional spin-$^1/_2$ Ising antiferromagnet, spin-wave dispersion 3—47489
- one-dimensional spin-glass model with long range random interaction 3—38638
- one-dimensional transverse model, continued-fraction representation 3—30803
- one-dimensional X-Y spin system, relax. behaviour in transverse variable mag. fields *(Russian)* 3—38633
- order and disorder lines in systems with competing interactions 3—28494
- partition function on periodic 4×4×4 lattice 3—20799
- phase transition and index of states on Clifford algebra 3—16304
- phase transitions in systems with multispin interactions 3—20814
- phase transitions with random fields at low temp. 3—54703
- polymer soln., dil., chain energetics, freq. depend., Ising model analogue 3—36889
- Potts antiferromagnet in mag. field, Ising transition into order with extensive entropy at T=0 3—52505
- Potts models an hierarchical lattices, defect free energies calc. 3—40509
- pseudo-spin system, second order treatment, transverse-field Ising model 3—18841
- quantum Heisenberg and XY models, Suzuki-Trotter transform. to Ising model, Monte Carlo studies 3—33853
- quantum model for commensurate-incommensurate transitions 3—35948
- quantum spin systems, Gel'fand Levitan method 3—16299
- quantum spins at T=0 order and disorder lines in systems with competing interactions 3—28587
- quasi 1-D H-bonded ferroelec. thermodynamic props., tunnelling model 3—2849
- quasi-two-dimensional Ising models, crossover scaling function for lattice anisotropy, susceptibility 3—38635
- quasione-dimensional interacting Ising and Mitsui type systems, thermodynamics 3—3654
- quenched bond-mixed Tsing model, ferromagnetic phase breakdown 3—23568
- quenched disorder, long-range correlated, in second order phase transition, percolation of triangular Ising model 3—33388
- random, systematic expansion 3—18919
- random bond, on square lattice, ferromag. phase existence 3—8683
- random bond model, ±J, spin glass props. 3—57684
- random bond-diluted Ising ferromagnet, symm. breaking 3—8690
- random field spherical model, thermodynamic props., Ising model comparison 3—8691
- random Ising ferromagnets, weak singularity and absence of metastability 3—23674
- random magnetic systems, frustration and spin-glass freezing 3—3474
- random spin systems, mag. props., high temp. series expansion 3—38637
- random spin systems and frustration, thermal theory 3—57683
- random triangular cactus, frustration and percolation 3—38634
- random unfrustrated mag. systems, boundary conditions influence 3—3403
- random-bond chains, ground state props. 3—3402
- random-bond Ising model, boundary between ferromagnetic and nonferromagnetic phases 3—33909
- randomly dilute, convergence of cluster expansion 3—52330
- real space renormalisation group methods for critical and chaotic phenomena 3—30789
- recursive method as alternative method of soln. 3—13993
- renormalisation group eqns., analytical soln. *(Russian)* 3—224

Ising model continued
  roughening transition at wall in narrow two-dimensional strips 3-8688
  S=3/2 system, phase diagram and tetracritical point 3-23682
  semi-infinite magnets, critical behaviour 3-28491
  spatially modulated phases in model with long-range interactions 3-33910
  spin 1/2, thermodynamic props., approximation method 3-38570
  spin glass, 2D, ±J, Monte Carlo study of dynamical behaviour 3-14063
  spin glass, ±J Ising model, anal. by real replica method 3-57686
  spin glass, bond disorder effects 3-57685
  spin glass, free energy surface and hysteresis effects calc. 3-23667
  spin glass, infinite range, ground state 3-14064
  spin glass, infinite-range Sherrington-Kirkpatrick model, condensation of infinite number of eigenmodes 3-57680
  spin glass, long-range, convergence of sub-extensive terms 3-18921
  spin glass, mean field models, ergodicity of coupling consts. and symm. n-replicas trick 3-47516
  spin glass, two-dimens., dynamics of spin clusters, Monte Carlo study 3-57681
  spin glass, two-dimens., dynamics of spins and spin clusters, Monte Carlo simulation 3-23684
  spin glass, two-dimens., statics and dynamics, Monte Carlo simulation 3-57689
  spin glass models, generalised, stability conditions 3-18923
  spin glass models, mag. partition function and ground state study 3-3466
  spin glasses, 3-dimens., exact ground states, ±J and Gaussian model 3-8680
  spin glasses, average metastable states and internal fields 3-23676
  spin glasses, diagram method of high temp. expansions, free energy 3-8693
  spin glasses, dynamical props. of cluster model 3-23683
  spin glasses, freezing temp., two-dimens. ±J model 3-23668
  spin glasses, scaling props. of equilib. sensitivity to boundary condition changes 3-33911
  spin glasses, static susceptibility and sp. ht. of Ising FCC antiferromagnet 3-18901
  spin glasses, susceptibility and sp. ht. in mag. field, Ising model 3-43386
  spin glasses with short-range interactions, susceptibility and spin correls. 3-57643
  spin systems, disordered, crit. behaviour in two and three dimens. 3-38639
  spin systems, renormalisation group and free energy calcs. 3-3465
  spin-glass and spin-crystal phase transition of a regular Ising model on the Cayley tree 3-52503
  spin-S, phase diagram in random mag. field 3-33913
  spinodals in a long-range interaction system, Monte Carlo study 3-13401
  spontaneous magnetisation calc. by finite-size scaling method 3-23561
  square lattice, random-bond Ising model, spin-glass-ferromag. boundary 3-23678
  square lattice Ising model with first and second neighbour interactions, phase diagram 3-43382
  superionic conductors, occupation number depend. of ionic cond., one-dimensional Ising model 3-23069
  surface excitations for the Ising model in a transverse field 3-43345
  temperature quenches in the disordered phase of a spin system 3-13991
  thermodynamic critical fluctuation theory 3-40495
  thermodynamic properties of the Ising model with annealed impurities bonds *(Russian)* 3-18920
  three dimensional, hyperscaling, susceptibility and correlation length 3-52331
  three-dimensional, confluent singularities, temp. plane unbiased map 3-5744
  three-dimensional, with long-range exchange forces, pair correl. function calc. 3-23565
  three-dimensional Ising model, hyperscaling violation 3-20783
  three-dimensional Ising model, Monte Carlo expt. for nucleation rate 3-10763
  three-dimensional spin glasses, real space renormalisation group study 3-38636
  transition temperature, effective field calc. 3-3467
  transverse susceptibility in spin S Ising chains 3-47467
  triangular lattice, mag. phase diagram, cluster variation method 3-28583
  trimethyl ammonium cobalt chloride:Mn, impure Ising linear chain, Mn^{2+} ESR 3-14118
  trimethylammonium cobalt(II)chloride, quasi 1-D Ising ferromag., mag. props. 3-28531
  trimethylammonium cobalt chloride.$2H_2O$, one-dimensional magnet, mag. excitations, ESR study 3-57752
  two dimensional kinetic Ising model, droplet dynamics 3-33846
  two dimensional to one dimensional crossover 3-57672
  two-dimensional axial next-nearest neighbour Ising model, Hamiltonian studies 3-200
  two-dimensional crystal lattice, long-range at. order and criticality 3-23666
  two-dimensional frustrated network 3-13990
  two-dimensional Ising model, analytic continuation at first-order phase transitions 3-28584
  two-state spin system, Ising model, kinetic eqn. 3-28496
  weakly bound chains, soliton statistics, mapping to Ising model 3-45082
  Z_p model on Union Jack lattice, massless phases 3-20787
  zero temperature triangular antiferromagnet, roughening transitions 3-8682
  zeros of the partition function for some generalized Ising models 3-16301
  $Cd_{1-x}Mn_xTe$, semimag. semicond., two-magnon Raman scatt. 3-28852
  $CoCl_2$.2 pyridine, one-dimensional magnet, mag. excitations, ESR study 3-57752
  $CsCOBr_3(Cl_3)$ quasi-1-D Ising antiferromag., spin wave response, neutron scatt. study 3-38606
  $CsCoCl_3$, one-dimensional magnet, mag. excitations, ESR study 3-57752
  $CsCo_{1-x}Mg_xCl_3$, quasi-one-dimens. Ising diluted antiferromag., short- and long-range order 3-43383
  $CsFeCl_3.2D_2O$, Ising chain systems, mag. struct. and relax. phenomena, neutron diffr. studies 3-57537
  CsH_2PO_4 quasi-1D ferroelec., permittivity and relax., Ising model study 3-23856
  Cu_3Au Ising spin system, ordered cluster evolution from disordered state 3-57082
  $Dy_2O_2SO_4$, mag. phase diagram, mag. susceptibility study 3-14051
  $Eu_xSr_{1-x}S$, site-diluted Ising ferromagnet, spin glass, octahedron approx. on FCC lattice 3-3464
  Fe-Ni, magnetovolume effect, magnetostriction and thermal expansion anomalies 3-52584

Ising model continued
  $FeCl_2$, specific heat and random-field effects 3-28581
  FeF_2, antiferromagnet, anisotropic, critical behaviour 3-57671
  $Fe_{1-x}Mg_xCl_2$, specific heat and random-field effects 3-28581
  KD_2PO_4, anisotropic polarisation fluctuations 3-14197
  $LiT6F_4$, Ising ferromagnet, ordered and disordered phases, magnetostriction meas. 3-3505
  $MnCl_2.4H_2O$ Ising antiferromag., critical behaviour crossover in transverse field 3-57670
  MnF_2, antiferromagnet, anisotropic, critical behaviour 3-57671
  $RbCrCl_4$, magnetization, critical behaviour, magneto-optical study 3-52775
  $RbFeCl_3.2D_2O$, Ising chain systems, mag. struct. and relax. phenomena, neutron diffr. studies 3-57537
  Si-Ge alloy thermocouple degradation by dopant precipitation, kinetics 3-14980
island-like metallic thin films *see discontinuous metallic thin films*
islet-like metallic thin films *see discontinuous metallic thin films*
isobaric analogue resonances
  see also nuclear collective states and giant resonances
  level-level correlations in continuum shell model 3-16701
  Wigner SU(4)-symmetry restoration in heavy nuclei, many-body forces problem 3-16750
  $^{A}Dy(^{3}He,t)$, A=160, 162, ground-state IAS, deformation effects 3-36389
  $^{A}Er(^{3}He,t)$, A=162, 164, 166, 168, 170, ground-state IAS, deformation effects 3-36389
  $^{A}Gd(^{3}He,t)$, A=152, 154, 156, 158, 160, ground-state IAS, deformation effects 3-36389
  $^{A}Hf(^{3}He,t)$, A=176, 178, 180, ground-state IAS, deformation effects 3-36389
  ^{51}Mn, IAR, high-resolution meas. 3-55009
  ^{A}Mo,(p,n), A=94, 96, 98, 100, isospin and proton-absorptive-potential anomaly 3-11317
  ^{30}P, proton resonances, from $^{29}Si(p,p)$, 1.3-3.3 MeV 3-49747
  $^{86}Sr(p,p')$, K-shell ionization across isobaric analog resonances 3-21276
  $^{50}Ti(p, n)$, intermediate width structure 3-31416
  $^{A}Yb(^{3}He,t)$, A=170, 172, 174, 176, ground-state IAS, deformation effects 3-36389
  $^{A}Zr(p,n)$, A=92,94,96, isospin and proton-absorptive-potential anomaly 3-11317
isobaric analogue states
  see also isobaric analogue resonances
  medium heavy nuclei, quenching of single particle spin-isospin operators with $\Delta l=1$ 3-49802
  virtual Δ-isobar admixture in nuclei 3-54962
  (γ,p), Δ-isobar excitation influence at medium energies *(Chinese)* 3-41020
  ^{12}B discrete isobaric analogue states, π ang. distrib. cross sections from $^{12}C(e,\pi^{\pm})$ 3-45456
  $^{9}Be(^{3}He,p)^{11}B$, 38 MeV, CC ^{11}B study at high excitations 3-6239
  $^{9}Be(\alpha,d)^{11}B$, CC ^{11}B study at high excitations 3-6239
  $^{12}C_{\Lambda}$, excited analogue state and alpha-particle model 3-11280
  $^{13}C(\pi^{+},\pi^{0})^{13}N$, 165 MeV, single pion exchange reactions to isobaric analogue states, ang. distribs. 3-6266
  $^{40}Ca(\pi^{\pm},\pi^{0})$, 164 MeV, pion single charge exchange, analogue of giant dipole reson. 3-11342
  ^{12}N discrete isobaric analogue states, π ang. distrib. cross sections from $^{12}C(e,\pi^{\pm})$ 3-45456
  $^{15}N(\pi^{+},\pi^{0})^{15}O$, 165 MeV, single pion exchange reactions to isobaric analogue states, ang. distribs. 3-6266
  ^{28}Si, lowest T=1 states, Coulomb displacement energy calcs. 3-11247
isobars *see atmospheric pressure and density*
isoelectronic series
  atoms, heavy and highly ionised, spectra and transition probabilities, semi-empirical regularities 3-21714
  covalent and ionic crysts., electronic response to valence modifications 3-56848
  diatomic molecules, 13-, 14-, and 22-electron sequences 3-36874
  isoelectronic series, Li I to C IV, doubly excited $^{2}P^{e}$ states, SCC calc. 3-55870
  mononuclear isoelectronic species, total energy, energy components, orbital energy, and MO coeff. 3-11666
  one-electron atoms, Stark effect and photoionisation spectra 3-26691
  positive ions, isoelectronic series, chem. pot. rel. to total energy 3-55880
  positive isoelectronic ions, Darboux approx. calcs. 3-21630
  Ar isoelectronic sequence calc., extended Thomas-Fermi-Dirac theory 3-50309
  Ar isoelectronic series, electron impact ionis. cross-section, distorted wave calcs. 3-26867
  B, $^{2}P_{1/2}$-$^{2}P_{3/2}$ transition, relativistic effects, multiconfiguration HF method 3--31989
  B I isoelectronic series, intersystem lines, atomic spectra 3-11725
  B isoelectronic sequence, ground state fine struct. using extended regular doublet law 3-21636
  B, isoelectronic series, elec. dipole oscill. strengths, length and vel. forms 3-55893
  Be, ^{5}P-^{5}S transition wavelengths, fine struct., MCDF-EAL calcs. 3-50323
  Be isoelectronic sequence, relativistic intermediate coupling calcs. 3-41527
  Be isoelectronic series, E1, M1, E2, M2 and E3 transitions 3-31985
  Be, isoelectronic series, E1, M1, E2, M2 transitions 3-32002
  Be, mag. quadrupole transitions, relativistic intermediate-coupled wavefunctions 3-21676
  Be-like four electron systems, third-order correl. energies for closed-shell systems 3-21620
  Cl isoelectronic sequence, Cl XII to VXVIII, $2s^{m}2p^{n}$-$2s^{m-1}2p^{n+1}$ intersystem transitions 3-1300
  Co-like ions, Ba^{29+} to Yb^{43+}, $3p^{6}3d^{9}$-$3p^{5}3d^{10}$ transitions diagnostics in laser-prod. plasmas 3-32231
  Co-like ions, Y XIII to Ag XXI, $3d^{9}$-$3d^{8}4p$ transitions in X-ray spectra 3-1295
  Cs IV, $5s^{2}5p^{4}$-$5s5p^{5}$ transitions 3-50333
  Cu I isoelectronic sequences, beam-foil spectroscopy 3-21873
  Cu isoelectronic sequences, oscillator strengths and wavelengths 3-44906
  F isoelectronic sequence, ground state fine struct. using extended regular doublet law 3-21636
  F-like ions, spin-orbit intervals in ground state, relativistic HF calcs. 3-6557
  H-like atom+ion, single ionis. at high and intermediate energies 3-56057

isoelectronic series continued
H-like atoms, excited state radiative mean lifetimes, semiclassical calcs. 3−26666
H-like atoms, in superstrong mag. fields, props. 3−41481
H-like atoms, transition probabilities and branching ratios for elec. dipole transitions 3−44904
H-like ions, quasi-energy levels intersections, relativistic theory 3−45829
HCN isoelectronic series 3−1238
He, Breit correction, calcs. using Coulomb Green's function 3−11716
He I sequence, line ratio systematics 3−20221
He, isoelectronic series, 2^3P fine struct., QED test 3−45872
He, isoelectronic series, 2^3S-$2^3P_{0,1,2}$ energies, QED test 3−45873
He-ions isoelectronic series, dielectronic recombination rate coeff. 3−26846
He-like atom with Z=2-100, relativistic calc. 3−21702
He-like atoms, in superstrong mag. fields, props. 3−41481
He-like ion reson. line, dielectronic satellite strengths in optically thick plasma 3−12846
He-like ions, electron capture by protons, cross sections calc. 3−11942
He-like two-electron systems, third-order correl. energies for closed-shell systems 3−21620
Li I isoelectronic sequence, var. wavefunctions 3−50317
Li isoelectronic sequence ions, elec. polarisabilities, bounds obs. 3−31919
Li isoelectronic series, 1s2s2p $^4P^0$ and $1s2p^2$ ^4P terms, fine struct., transition wavelengths 3−55881
Li isoelectronic series, deexcitation in 1s2s2p state 3−32024
Li-like ions, ^4S-$^4P^0$ spectrum calc. by Hylleraas method 3−11664
Li-like ions, electron impact excitation, reson. effect, collision strengths calc. 3−6793
Mg isoelectronic series, E1, M1, E2, M2 and E3 transitions 3−31985
Mg isoelectronic series, lifetime trends for n=3 singlet states 3−21713
N I isoelectronic series, Cl XI to V X VII, $2s^m2p^n$-$2s^{m-1}2p^{n+1}$ intersystem transitions 3−1299
Na-like ions, electron impact inner-shell ionisation cross sections 3−11988
Na-like systems, nd-states, at. fine struct. calcs. 3−21634
Ne isoelectronic sequence calc., extended Thomas-Fermi-Dirac theory 3−50309
Pd I isoelectronic series, I VIII to Ho XXII, reson. lines identification 3−32003
Pm isoelectronic sequence, closed N-shell alkali spectra 3−21613
ScX to MoXXXI, $3s^2$ $^1S_0$-3s3p $^3P_1$ Mg sequence intercombination lines obs. in PLT tokamak 3−2292
Xe isoelectronic sequence, core charge effect on Rydberg spectra 3−26658
Xe, Rydberg spectra, correl., term depend. and autoionis. 3−21733
Zn I isoelectronic sequences, beam-foil spectroscopy 3−21873
Zn isoelectronic sequences, oscillator strengths and wavelengths 3−44906
Zn isoelectronic series, E1, M1, E2, M2 and E3 transitions 3−31985

isolators, microwave *see microwave isolators*

isomer shift
III-V semiconductors, internal electronic config. of Sn donors and acceptors, Mossbauer isomer shift anal. 3−47302
Mossbauer, line shift magnetostrictive anomaly 3−3620
Mossbauer spectrometer, isomer shift compensation with reson. detectors. 3−1123
rare earth alloys, charge and spin density, electronic struct., Mossbauer study 3−28749
Schiff base ^{151}Eu complexes, Mossbauer study 3−43467
steel, Fe-Cr-Mn-C, electron interactions, Mossbauer sub-spectra interpretation 3−8743
steel, Fe-Cr-Mn-N, electron interactions, Mossbauer sub-spectra interpretation 3−8743
steel, Fe-Cr-Ni-C, electron interactions, Mossbauer sub-spectra interpretation 3−8743
steel, mild, corrosion in acid medium, Mossbauer study 3−24408
$B_{1-x}Fe_x$, amorphous, ^{57}Fe Mossbauer isomer shift 3−52691
B_2O_3-Na_2O-MgO-Fe_2O_3-SnO_2, vitreous, coordination of Fe^{3+} and Sn^{4+} 3−37794
CoI_2, electronic and mag. props. of ^{57}Fe, Mossbauer spectroscopy study 3−19019
$Cs_2NpO_2Cl_4$, Mossbauer study, spin fluctuations 3−19026
Cu complex, Cu(2,2′-bipyridene)$(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3−8656
Dy(Fe, Rh)$_2$, hyperfine interactions, Mossbauer study 3−19022
Fe complex, Fe(2,2′-bipyridene)$(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3−8656
Fe complexes, sodium pentacyano substituted ferrate(II) complexes, Mossbauer and IR studies 3−57843
α-Fe-Al-Si-Sn-V, dilute spin and charge density changes on substitution 3−52382
Fe-Si, spin and charge density changes, effect of Si, Mossbauer study 3−19021
Fe-Sn clusters in Ar matrix, Mossbauer effect 3−3614
Fe-Sn clusters in Ar matrix, Mossbauer studies 3−26891
$Fe_{75.4}B_{14.2}Si_{10.4}$, amorphous ferromagnet, hyperfine field distrib. *(Korean)* 3−38735
$Fe_{0.3}Cu_{0.7}Cr_2S_4$, mag. semicond., mag. props. and cryst. struct. 3−14018
$Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous alloy, hydrogenation effects on mag. props. 3−28555
$Fe(OH)_3$, Mossbauer effect study of Fe ions *(Korean)* 3−14174
$FeRh_2Se_4$, cryst. struct., mag. susceptibility and Mossbauer spectra 3−8008
$FeTiH_x$ (x=1, 2), electronic props. 3−38294
Fe_67B_{24}, amorphous, Mossbauer Zeeman spectrum, correl. effects 3−38740
GaAs(P)(Sb):Sn, dopant electronic config., Mossbauer study 3−43091
Gd(Fe, Rh)$_2$, hyperfine interactions, Mossbauer study 3−19022
Ge:As; laser processed, ^{73}Ge Mossbauer effect 3−57839
$Hf_{1-x}Fe_x$, amorphous, ^{57}Fe Mossbauer isomer shift 3−52691
^{A}Hg, A=199, 200, muonic X-ray study, charge radii, quadrupole moments, isotope shifts 3−40964
Ho(Fe, Rh)$_2$, hyperfine interactions, Mossbauer study 3−19022
^{A}I, (A=127, 129), Mossbauer isomer shift calibration const. determ. 3−3606
InAs(P)(Sb):Sn, dopant electronic config., Mossbauer study 3−43091
$Li_2M^{4+}Fe_6O_{12}$ (M=Ti, Sn, Ge, Si) spinel ferrites, cryst. chem. 3−13204
$LuFe_2O_4$, electron exchange between Fe^{2+} and Fe^{3+} 3−14182
Na_2O-Fe_2O_3-B_2O_3 glass system, Mossbauer spectra study 3−43469
$Nb_{1-x}Fe_x$, amorphous, ^{57}Fe Mossbauer isomer shift 3−52691

isomer shift continued
Ni complex, Ni(2,2′-bipyridene)$(H_2O)_2SO_4$, mag. susceptibility and Mossbauer spectra 3−8656
$NiCl_2(Br_2)(I_2)$, electronic and mag. props. of ^{57}Fe, Mossbauer spectroscopy study 3−19019
$NpAs_2$, magnetic behaviour, Mossbauer study 3−23843
$NpO_3.2H_2O$, Mossbauer study, spin fluctuations 3−19026
PbI_2, ^{127}I and ^{129}I Mossbauer spectra 3−43472
$Pb^{II}{}_{4-x}Pb^{IV}{}_xO_4I_{2x}$, ^{127}I and ^{129}I Mossbauer spectra 3−43472
$Pb_xSn_{1-x}Te$, ^{125}Te Mossbauer parameters and phonon spectrum 3−38737
^{206}Pb, 803 and 2648 keV states, muonic isomer shifts 3−21218
$Pd_{77.5-x}Cu_6Si_{16.5}Fe_x$ amorphous alloy, hyperfine field distrib., Mossbauer spectra 3−43471
Si, implanted impurity electron states, hyperfine interaction and channelling studies 3−43076
Si:As, Ge, laser processed, ^{73}Ge Mossbauer effect 3−57839
Si:Sn amorphous, dopant effects on elec., optical and Mossbauer spectra props. 3−18708
Si-^{57}Co, supersaturated soln., annealing and precipitation, Mossbauer study 3−43474
SiO_2-Na_2O-NiO-Fe_2O_3 glasses, precipitation of $NiFe_2O_4$, ESR and Mossbauer studies 3−13468
$SnCl_4$, electronic struct., ^{119}Sn isomer shifts, CNDO calcs. 3−11711
$SnCl_4$-organic ligand complexes, electronic struct., ^{119}Sn isomer shifts, CNDO calcs. 3−11711
SnU, tetragonal, lattice dynamics and Mossbauer lattice temp. 3−57838
$(Sr_{1-x}Sm_x)FeO_3$, synthesized under high O_2 pressure, Mossbauer studies 3−23846
$Ti_{1-x}Fe_x$, amorphous, ^{57}Fe Mossbauer isomer shift 3−52691
Y(Fe, Rh)$_2$, hyperfine interactions, Mossbauer study 3−19022
$Y_{1-x}Fe_x$ amorphous alloy, hydrogenation effects on mag. props. 3−28555
$Y(Fe_{1-x}Co_x)_2$, H_2 absorption effects on mag. props. 3−52423
$YbMo_6S_8$, Mossbauer study of Yb valence and delocalisation 3−38739
$Zn_{0.37}Mn_{0.58}Fe_2O_4$:Cr(In), hyperfine fields, Mossbauer study 3−47580
$Zr(Fe_{1-x}Al_x)_2$, Mossbauer and proton NMR studies 3−57824
$(Zr_{1-x}Hf_x)Fe_2$, electronic struct., magnetisation and isomer shift 3−3048
$ZrMn_2Fe_{0.8}$, Mossbauer and proton NMR studies 3−57824

isomerisation
acetaldehyde ions, photoelectron-photoion coincidence spectra 3−1427
2-aminoethanol, IR induced photorotamerisation in low temp. matrices, ab initio optimised geometries calcs. 3−24518
azobenzene, pot. energy curves along isomerisation paths, ab initio and CI calcs., photochemical props. 3−1277
azobenzenes photochemical storage potential 3−53571
benzocyclobutenes, substituted, thermal ring opening, orbital mapping anal. 3−21640
chain mols. in soln. isomerisation rates, hydrodynamic interaction effects 3−14856
2-chloroethanol, IR photorotamerisation, ab initio calcs. 3−45808
2-chloroethanol in Ar matrix, near-IR induced conformational isomerisation 3−4269
cyclobutenes, substituted, thermal ring opening, orbital mapping anal. 3−21640
cyclobutenes-butadienes, substituted, laser-induced IR multiphoton isomerisation, dynamics 3−4274
3,3′-diethyloxadicarbocynanine iodide, photochem. isomerisation with freq. dependent friction Kramers theory 3−39369
diphenyl butadiene, photoisomerisation and photophysics, solvent effects 3−24495
disilene-silylsilylene isomerisation, transition state calcs. 3−24496
enol ions, metastable, dissoc. bimodal kinetic energy release distrib. 3−53363
2-fluoroethanol, IR photorotamerisation, ab initio calcs. 3−45808
formaldoxime, isomeric forms studied by He I photoelectron and quadruple mass spectroscopy, ionisation pots. 3−9317
hexafluorocyclobutene, stimulated emission relax. after IR multiphoton excitation and photochem. isomerisation 3−41626
ions, photoelectron-photoion coincidence spectra 3−1427
isolated molecules in supersonic jets, picosec. laser spectroscopy, vibr. energy redistrib. and quantum beats 3−32175
methanol dimer, matrix isolated, IR spectrum, temp. and IR irrad. effects 3−11796
methoxy radical, weakly exothermic rearrangement, pot. surface calcs. 3−44045
methylnitrite ion, isomerisation, fragmentation, photoelectron-photoion coincident mass spectra 3−44048
4-nitro-4′-dimethylaminostilbene in toluene solns., trans-cis photoisomerisation 3−4281
nitromethane ion, isomerisation, fragmentation, photoelectron-photoion coincident mass spectra 3−44048
nitrosomethanes, isomeric forms studied by He I photoelectron and quadruple mass spectroscopy, ionisation pots. 3−9317
non-aqueous media, thermodynamics, kinetics and mechanisms of solvation, solvolysis and substitution 3−53360
nonequilibrium solvation dynamics in solution reactions 3−58421
13-nor-E, E-isogermacrone, intramolecular cyclisation, INDO-CI calcs. 3−17226
photoisomerisation dynamics in soln., freq. depend. friction effects 3−58414
polyacetylene:I_2, cis-trans isomerisation, IR absorpt. study 3−44054
polyacetylene:I_2 highly doped films, IR transmission, rel. to isomerisation 3−19131
polyacetylene, chemical and electrochemical isomerisation, in situ optical studies 3−19517
polyacetylene, cis-trans thermal isomerization, structural study 3−58423
cis-polyacetylene, solitons and isomerisation by doping 3−38351
polyacetylene film, thermal isomerisation, Raman study 3−38934
polymers, heterogeneous, conformational transition mechanism and rates 3−24500
rate consts. for BGK model, pot. shape effect 3−44041
rhodopsin, visual pigment, photoisomerisation, numerical calc. 3−15093
rhodopsin, visual pigment, photoisomerisation, theoretical study 3−15092
rhodopsin chromophore, deformed excited state, cis-trans isomerisation, adiabatic pot. 3−19658
solutions, energy diffusion-controlled-reactions 3−4263
stilbazolium betaine, protolytic reaction and photochem. isomerisation, ps laser photolysis study 3−44060
stilbene, trans-cis isomerisation dynamics, in supersonic jets 3−58396
tautomeric reaction, water chain intervention 3−58397

isomerisation continued
- uracil protomers, relative stabilities and relative enthalpies 3—48080
- N_2O_3, in liq. Xe, isomerisation, IR absorpt. spectra obs. 3—55937

isomerism
- *see also isomerisation; nuclear isomerism; rotational isomerism*
- active O complex model of catalase, struct., ab initio SCF calcs. 3—1233
- adenine tautomers, props., MNDO calcs 3—55841
- L-alanine, enantiomeric mols., parity-violating energy difference, STO calcs. 3—36653
- aliphatic thiocarbonyls, thioketone-enethiol tautomerism, ab initio SCF-MO calcs. 3—55823
- alkoxy(alkylthio)methanes, vibr. spectra and mol. conformations 3—36753
- allyl chloride, vibr. spectrum and conformations 3—17288
- aza-arenes, topological effect on MO energies, ab initio HMO calcs. 3—45862
- benzene hexachloride, struct., dipole moments, isomers, mol. mechanics force field 3—55780
- benzene tetrachloride, struct., dipole moments, isomers, mol. mechanics force field 3—55780
- biliverdin dimethyl ester dimers, cryst., diastereoisomerism, IR and Raman study 3—37836
- 1,1′-binaphthyl, in Shpolskii matrix, low-temp. vibronic spectra 3—17298
- 2-bromo-3-chloro-1-propene, vibr. spectra and conformations 3—21759
- n-butyl alcohol, solution in cyclohexane, activity and heat of soln., US study, isomerism effects 3—13341
- closo-carboranes, polyhederal mols., overlap control and stability 3—45825
- cyclophosphazenes, spiro-ansa isomerism investig. 3—21942
- cytosine tautomers, ab initio and semiempirical calcs. 3—55790
- cytosine tautomers, props., MNDO calcs. 3—55840
- diazomethane, and isomers, relative stabilities, ab initio SCF calcs. 3—55861
- dicyanocobalamin, isomers, struct., ^{1}H NMR 3—6673
- dicyanocobinamide, isomers, struct., ^{1}H NMR 3—6673
- 1,1′-dimethyl-4,4′-cyanine iodide photoisomers, transient absorpt. spectra with sync-pumped ps dye laser and tunable probe light 3—48076
- 1,1′-dimethylbifluorenylidene, conformation investig., inversion and E-Z isomer interconversion 3—1223
- dimethylmethylphosphonate, gas phase conform., IR spectrosc. obs. 3—36751
- EBBA-butanol, mesomorphic props., alcohol isomerism effects 3—37776
- fluoromethane radical cation, structs. and relative energies 3—21650
- fluoromethane radical cation isomers, structs. and relative energies 3—21650
- formamide, isomers, protonated, neutral and deprotonated mols., SCF calcs. 3—31926
- formylcyclohexane, axial conformers, γ-gauche deshielding effect, ^{13}C NMR obs. 3—32104
- glycine conformers, relative stability, electron correl. effects 3—31950
- Hector's base series, model cpds., adduct form., isomerism, MNDO calcs. 3—17220
- 4-hydroxy-2-pyridinone, tautomerism, ab initio MO calcs. 3—17209
- hydroxypyridines, tautomers, interaction of H_2O, SCF-MO-LCAO-ab initio calcs. 3—31937
- isobutyl alcohol, solution in cyclohexane, activity and heat of soln., US study, isomerism effects 3—13341
- MBBA-butanol, mesomorphic props., alcohol isomerism effects 3—37776
- N-methyl acrylamide, cis- and trans-, CNDO calcs. 3—11713
- N-methylacetamide, isomerism, semi-empirical SCF NDO calcs. 3—41494
- 2′-methylacetophenone, enol-ketone and rot. transforms., H shift kinetics, tunnel effect 3—48077
- methylenefluoronium radical cation, structs. and relative energies 3—21650
- naphthalene tetrachloride, struct., dipole moments, isomers, mol. mechanics force field 3—55780
- orthoaminoazobenzenes, hydroxyhydrazone tautomerism, IR spectra 3—26737
- orthohydroxyazobenzenes, hydroxyhydrazone tautomerism, IR spectra 3—26737
- pinacyanol iodide, photoisomers, transient absorpt. spectra with sync-pumped ps dye laser and tunable probe light 3—48076
- PMMA stereoisomers and their blends, isothermal enthalpy studies 3—13459
- polyacetylene structures, paramag. solitons *(German)* 3—38674
- polymers, ground state props., ab initio calcs. 3—17389
- polyphenylacetylenes, dielec. relax., thermally stimulated depolarisation current obs. 3—14208
- n-propyl alcohol, solution in cyclohexane, activity and heat of soln., US study, isomerism effects 3—13341
- purine mononucleotides, conform. in aq. soln., spin-lattice relax. obs. 3—32105
- pyridine, mass spectral fragmentation, MNDO calcs. 3—31940
- pyridones, tautomers 3—31937
- quanine tautomers, props., MNDO calcs 3—55841
- 2-quinolones tautomerism, semiempirical MND and UV absorpt. studies 3—21643
- silaethylene isomers, F and Li substitution effects, ab initio calcs. 3—1213
- styryl-merocyanines, solvatochromism and tautomeric equilibria, electronic struct. 3—31963
- tetraphenyl-1, 2-cyclohexylenediphosphine dioxide, conformational anal. 3—17217
- thioacetylacetone, enol-enethiol tautomerism, XPS obs. 3—21819
- B-thioxoketones, enol-enethiol tautomerism, XPS obs. 3—21819
- thymine tautomers, props., MNDO calcs. 3—55840
- (+)-(1S,5R)-1,8,8-trimethylbicyclo[3.2.1] octan-3-one, chair-boat conform. equilib. investig. 3—21800
- uracil tautomers, props., MNDO calcs. 3—55840
- vinylcyclohexane, axial conformers, γ-gauche deshielding effect, ^{13}C NMR obs. 3—32104
- $(B_5O_{12})^{9-}$, stereoisomerism, polymorphism and piezoelectricity in polar borate zeolites, hilgardite groups of minerals 3—13179
- CH_2LiF, geometric and electronic struct., pot. energy surface, SCF calcs. 3—31921
- $C_2H_2N^+$ isomers, struct., relative stabilities and structs., ab initio SCF calcs. 3—31910
- C_2H_2S isomers, lowest singlet and triplet surfaces, SCF and CI calcs. 3—41486
- ClBS, isomers, geometries and stabilities, STO calcs. 3—11649
- FBS, isomers, geometries and stabilities, STO calcs. 3—11649
- $H_2C_2N_2$ isomers, electronic and geometric struct., ab initio SCF calcs. 3—45828

isomerism continued
- H_2O_2, enantiomeric mols., parity-violating energy difference, STO calcs. 3—36653
- N(4)-hydroxycytosine tautomers, ab initio and semiempirical calcs. 3—55790
- $LiBH(NH_2)_2{}^+$, bonds, struct., ab initio investig. 3—45809
- SiH_2N_2, and isomers, relative stabilities, ab initio SCF calcs. 3—55861

isomorphism
- hydrate salt crystals, inclusion of isomorphous admixtures 3—27885
- nonlinear sigma model in symmetric spaces, isomorphism, renormalisation group β-function 3—49538
- $Bi_4(GeO_4)_3$, refinement of crystal struct. *(French)* 3—22846

isothermal transformations
- cholesteryl capronate, isothermal crystallization parameters 3—2800
- cholesteryl nonanoate, isothermal crystallization parameters 3—2800
- diphenyl, negative crystals, spontaneous transformation, surface roughness and kinetics meas. 3—13427
- solidification problems, Galerkin finite-element methods 3—39103
- steel, alloy type, IT and CCT curves, additivity rule inversion 3—14553
- steel, BN precipitation in isothermal treatment process *(Chinese)* 3—53060
- steel, boride precipitation during cooling *(Chinese)* 3—53059
- steel, eutectoid, plain C, isothermal form. of austenite 3—53083
- steel, Ti, microalloyed, yield points 3—43930
- steel, TRIP, isothermal martensitic transform., stress-assisted 3—24229
- steel G-V, AISI 6150 alloy, isothermal transformation, austenitizing temp. effect 3—53045
- Cu-Be-Co (2.1, 0.2 wt.%), ageing, influence of rapid solidification 3—29095
- Fe-Cr (8 wt.%), ferrite to austenite, isothermal transform. *(Japanese)* 3—9058
- Fe-Cr-Ni, ternary system, correlation of thermodynamic and phase data; review 3—34280
- Fe-Ni-Mn(-C) alloy, isothermal martensitic transform. nucleation rate, stress effect 3—34305
- ZrO_2, solid soln., cubic, precipitation kinetics 3—53054

isotope detection
- *see also mass spectra*
- alpha-active products from U(^{208}Pb, X), on-line mass determ. 3—46085
- anomalous H search with time-of-flight spectrometer in enriched heavy water 3—11996
- depth profiling, of light isotopes using ion beams *(Japanese)* 3—38981
- on-line automated gamma spectrometer for coolant at LOFT facility 3—55224
- operating nucl. power plants, coolant and effluent parameters remote meas. 3—55218
- radioactive isotopes, rare, highly selective laser detect. method through multistep photoionisation of accelerated atoms 3—21934
- ^{10}Be conc. meas. with FN tandem accelerator 3—41697
- ^{10}Be specific content mass spectroscopic meas. using tandem van de Graaff accelerator 3—30222
- ^{41}Ca detection by laser-selective enrichment of Ca II ion 3d-states 3—26877
- ^{183}Lu, neutron-rich isotope identification by mass separation and decay spectroscopy 3—31628
- Pu in-situ meas. in transuranic waste with photoneutron-based U exploration system 3—6801
- ^{226}Ra identification and assay using modulo-2 filter 3—41453
- ^{165}Tb isotope identification and half-life 3—54991

isotope effects
- *see also isotope shifts*
- acetic acid dimens. H bonded, liq., intermol. Raman active vibrs., spectrosc. obs. 3—36761
- acetylene-d_0(-d_2), direct and inverse anharmonic mech. spectral problems 3—17262
- alkyl benzene-tetracyanobenzene EDA complexes, radiation-less transitions and isotope effects on internal conversion 3—11863
- benzene-d_0(-d_6) mol. dielectrics, sputter-ion form. mechanism 3—58014
- binary systems with H bonding and electron donor-acceptor interaction 3—27831
- p-bis(pentamethylbenzoyl)benzene radical anion, ESR spectra 3—6677
- bis-methyl ammonium cadmium tetrachloride, and deuterated homologues, lattice dynamics and struct. transitions, Raman spectra study 3—47639
- 1,3-butadiene ion, electron impact ionisation, dissoc., isotope effects, mass spectra, RRKM calcs. 3—19514
- Chevrel-phase cpds., electron-phonon interactions, isotope effect and tunnelling spectra, book contrib. 3—8160
- m-chloroaniline-d_0(-d_1)(-d_2), rot. isomerism, microwave spectrosc. obs. 3—50378
- chloroform-d_0(d_1), vapour press. isotope effects, anharmonicity const. 3—45928
- cyano complexes, dimag., ^{13}C/^{12}C isotope effects on ^{15}N chemical shielding 3—11825
- N,N-dimethylaniline cation, recomb. with anthracene anion, electron hopping, spin dynamics, mag. field depend., deuteration and protonation effects 3—45952
- electron capture differential cross-sections, intermediate energies, isotope effect 3—26847
- ethyl radical-d_0(d_2)(d_3)(d_5), matrix isolated IR spectra by normal coordinate calcs. 3—45937
- ethylphosphine-borane, IR and Raman spectra, vibr. assignment and conform. anal. 3—36752
- fluorovinyl radical, form., identification and electronic struct., EPR investig. 3—26771
- formaldehyde, D separation by UV laser dissoc. 3—11997
- formaldehyde-d_0(d_2), excited vibr. state, electric dipole moment, rot. Zeeman effect 3—50449
- formaldehyde-d_0 (-d_1)(-d_2), direct and inverse anharmonic mech. spectral problems 3—17262
- glycine methyl ester, bifurcated H bond and large amplitude vibrs. 3—6616
- hexatrienes-d_0(d_4), cis and trans, IR spectra inverse problem soln. valence-optical theory 3—17271
- hydracids, near IR spectrum, Q-branch, matrix effects 3—27974
- ice, electron irradiated, visible band electron fast decay at low temp., isotope effects and H^+ mobility 3—13221
- linear dipolar molecule+ion, CT rate const., rot. Stark effect and asymptotic value effect 3—9313
- lithium formate monohydrate single cryst., optical transmission spectra, deuteration effect 3—3741

isotope effects continued
magnesium acetate tetrahydrate, phase transition, temp.-depend vibr.spectra 3-23932
methane, $^{13}CD_4$, second order Stark effect, rot. transitions and centrifugal distortion moment 3-50451
methanethiol ion, heats of form. of ions, photoionisation mass spectrometry 3-21832
2′-methylacetophenone, enol-ketone and rot. transforms., H shift kinetics, tunnel effect 3-48077
naphthalene, internal vibr., reson. energy transfer, motional narrowing and vibr. dephasing 3-38814
naphthylalkylamines, solvent isotope effect on exciplex fluorescence yield and lifetime 3-26777
oxo-anion salt vapours, matrix isolation studies, isotope patterns 3-6611
phosphine-HF (DF), H bonded dimer, mol. props., rot. spectrum 3-41548
polyacetylene, molecular wt. and kinetic isotope effects 3-56110
propylene oxide, microwave spectrum and struct. 3-21756
propynal-d_0(d), supersonic jet, rovibronic level decay, fluoresc. study 3-26776
proteins, solid, H^+ relax., dynamics, $H_2O(D_2O)$ effects 3-53638
superconductor, anisotropic, with approx. neutral electron-electron interaction, BCS-type theory 3-3366
tetrahedral XY_4 mols., isotopic invariants, mol. const. determ. 3-6803
tetramethylammonium ions, deuterated, Fermi reson. in methyl stretching region, Raman spectra 3-17296
tetramethylammonium ions, deuterated, methyl deform. vibrs., Raman spectra 3-17295
triatomics, ABA type, energy transfer between bonds, classical dynamics 3-1461
trifluoromethyl radical, ν_3 band, IR diode laser spectrosc. 3-55935
trimethyl germanium halides-d_0(-d_q), vibr. spectra, normal coord. calcs. 3-6627
trimethyl tin halides-d_0(-d_q), vibr. spectra, normal coord. calcs. 3-6627
tris-sarcosine calcium chloride, ^1H to ^2H substitution, effects on ferroelectric props. 3-28787
$BH(NH_2)_2$, IR and Raman spectra, normal coord. anal. 3-50400
CO, catalytic oxidation over ZnO, ^{13}C and ^{14}C kinetic isotope effect 3-58448
CO, vibr. energy exchange pumping, isotope enrichment, fluoresc. and IR obs. 3-41613
CaBr, $X^2\Sigma$ spin rot. and HFS param., vibr., rot. and isotopic depend. 3-6556
Ce, coherent neutron scatt. lengths *(German)* 3-11945
$CsH_{2(1-x)}D_{2x}PO_4$, quasi-one-dimens. ferroelectric, static dielec. props., deuteration effects obs. 3-19075
$CsH_{2(1-x)}D_{2x}PO_4$, ferroelectric, dynamic dielec. props., deuteration effects obs. 3-19076
$CsMnCl_3.ZH_2O$ and deuterated cpd., isotope effects in multiphonon relax. 3-38826
$D^- + N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3-46059
$D^+ + H(D)$, differential cross-sections, intermediate energies, isotope effect 3-26847
DF, solid, with H-bonded HF impurities, IR vibr. spectra 3-23937
Fe complex, cyclobutadieneiron tricarbonyl, struct., ^1H and ^2H NMR study 3-55962
$Fe_{0.56}Ni_{0.23}Cr_{0.21}$, stainless steel, short range order, neutron diffuse scatt. study 3-13162
GaAs:C(Si), host isotope fine struct. of local modes 3-18418
$H^- + N_2(CO)(O_2)(CO_2)(CH_4)$, electron detachment and charge transfer cross sections 3-46059
$H^+ + H(D)$, differential cross-sections, intermediate energies, isotope effect 3-26847
H_2, electron impact dissoc., excited state emission cross section 3-36865
HBr, μ^+ substituted, isotope effect and solvent chemical shift 3-11886
H_2O, energy transfer between bonds, classical dynamics 3-1461
H_2O, HCl dimer, mol. geometry and identification by rot. spectrosc. 3-50372
H_2O, in hydrated cpds., nucl. quadrupole double reson. 3-36783
H_2O, isotope enrichment during cluster formation in supersonic free jet expansions 3-56112
H_2O, μ^+ substituted, isotope effect and solvent chemical shift 3-11886
H_2O, nucl. motion, coordinate system selection 3-6597
H_2S, ground state consts., ν_2 band, IR obs. 3-26749
Hg atoms, isotopically selective resonance photoionisation, fluorescence study 3-41538
Hg, electron-laser excitation study 3-26856
HgCl, D-X system, vibr. and rot. struct., Franck-Condon factors 3-1373
$KHCO_3$, OH(D) stretching bands, proton dynamics, IR and Raman band profile calcs. 3-47630
KN_3, internal mode region of Raman spectrum 3-47645
$K_3ReO_2(CN)_4$ and isotopic species, IR and Raman vibr. spectra and force const. anal. 3-23956
LaH_3, normal and deuterated, phase transitions and polymorphism, sp. ht. study 3-51533
LiH, thermal expansion and zero-point displacement, effect of isotopic substitution 3-42820
LiH, thermophysical props., anharmonic lattice calc., H isotope effects 3-8227
NH_4NO_3, heteroionic vibr. coupling, Raman spectra 3-19120
O_2, non-exponential fluoresc. decay from $^1\Delta_g$ state, isotope effects 3-26779
O_3 production from O_2, non-mass-dependent isotope effect 3-39391
OCS, rovibration, IR laser diode spectra 3-45945
OH^-, isotope effects, nucl. quadrupole double reson. study 3-36782
$^{18}O_2$, thermal electron attachment mechanism, isotope effects 3-41693
Pd-Si based metallic glasses, elec. resist. and thermopower, H_2 absorpt. influence 3-47327
Pd-Si-H(D), amorphous, supercond. transition temp., effect of noble metal addition 3-43308
$Pd_{1-y}Ag_yH_x(D_x)$, supercond., isotope effect 3-57452
PdH_x, normal and deuterated, electronic, struct., de Haas-van Alphen study 3-23244
Si, distorted defects, optical meas. 3-47678
Si:B, irradiated, photolum. 1.080 eV (I_2) line origin 3-43610
SiH_3F, ν_3 and ν_4 bands, isotope effects, IR obs. 3-26747
V complex, vanadyl β-diketonate, IR multiphoton dissoc. 3-26798
V_2O_3:Cr, metal-insulator transition, ^{18}O substitution effects, expt. study 3-3065
$VOCl_3$, IR multiphoton dissoc. 3-26798

isotope exchanges
fusion reactor first wall, extended local mixing model for H retention and isotope exchange 3-17041
oxides, self-diffusion coeff. determ. from ^{18}O exchange reactions 3-38122
plasma-wall interaction simulator dynamics, H recycle and wall inventory 3-17046
H isotope separation from water, dual-temperature system 3-6392
H_2/H_2O exchange, multistage column, numerical simulation 3-45670
H_2O+H_2, D isotope exchange on Al_2O_3-supported Pt catalyst bed 3-46088
ZrO_2 film covered Si, plasma anodization, low temp., short range O migration and O exchange 3-9209

isotope relative abundance
see also element relative abundance
$^{87}Sr/^{86}Sr$ in interstial waters from Deep Sea Drilling Project cores marine sediments 3-25081
Allende meteorite, Ca and Ti isotope anomalies prod. by sp-process 3-35416
Antarctic ice core D isotopes and humidity of palaeoclimate 3-10048
atmosphere ^{34}S and ^{18}O isotope ratios in rainwater from Israel 3-29985
atmosphere C isotopes, study of tree rings 3-4936
coal D/H isotope ratios rel. to palaeolatitude of deposition 3-58915
lower continental crust xenoliths in kimberlite, $^{87}Sr/^{86}Sr$ and $^{143}Nd/^{144}Nd$ ratios 3-19968
Earth mantle and inert gases in crustal rocks 3-15384
evaporation from non-vegetated surface, use of D 3-35299
galactic cosmic rays nuclei, comp. from satellite obs. 3-20191
geophysics, comparison of stable isotope reference samples 3-53957
Golda Zuelva anorogenic complex (N Cameroons), isotope geochemistry 3-19950
interstellar HDO/H_2O ratio in Orion Molecular Cloud, results from HDO 2(1,1)-2(1,2) rot. emission line obs. 3-5399
Koloula Igneous Complex, Guadalcanal, Pliocene-Pleistocene oceanic-arc plutonic complex, O and Sr isotopic comps. 3-19967
lavas of Vulsinian District, Central Italy, O and Sr isotope study rel. to mantle metasomatism 3-9867
Mboutou anorogenic complex (N Cameroons), isotope geochemistry 3-19950
meteorite (Abee), nitrogen content and isotopes 3-35553
meteorite inert gas isotope anomalies due to cosmic rays 3-20307
meteorite isotopic anomalies due to supernova in solar nebula vicinity 3-30247
meteorites, isotope distrib. rel. to molecular excitation in early solar nebula 3-25351
meteorites (Allende), inert gas isotope study 3-15882
NGC 7027, compact planetary nebula, $^{12}C/^{13}C$ ratio from millimetre-wave spectroscopy 3-35686
noble gases in Mid-Atlantic Ridge basalt, isotopic ratios rel. to two-component model 3-53958
Nyiragongo Nephelinites, isotopic ratios and mantle metasomatism 3-35125
ocean ^{10}Be vertical profiles in Drake Passage and E.Pacific 3-9937
ocean island basalts, Sr and Nd isotopic comps. rel. to mantle reservoirs 3-35149
peat bog core D/H and O isotope ratios indicating palaeoclimate 3-29986
rainwater of Israel, ^{18}O and H isotope composition 3-48619
solar flare noble gases, isotopic comp. 3-54210
solar nebula Pu, Nd and $^{244}Pu/^{238}U$ ratio from meteorite evidence 3-15858
Stockdale Rhyolite, England, ^{87}Sr chronology and geochem. evolution 3-29869
tektites (Australasian), ^{10}Be content indicating terrestrial origin 3-29926
Terceira, Azores Islands, Sr and Pb isotopic vars. within single oceanic island 3-4829
transuranium radionuclide α spectra anal. 3-11599
volcanic gas and condensates from NE Japan, isotope ratios 3-35133
volcanic glasses from Pacific seafloor, inert gas geochem. 3-35106
volcanoes of Japan Island arcs, B isotopes of fumarole condensates 3-25056
Ag in Fe meteorites, isotopic comp. and conc., and origin of exotic Ag 3-48863
$^{40}Ar/^{39}Ar$ dating of pyrite from Geco ore body, Ontario, Canada 3-9875
$^{10}Be/^9Be$ ratio mass spectroscopic meas. using tandem van de Graaff accelerator 3-30222
$^{10}Be/^9Be$ ratio meas. with FN tandem accelerator 3-41697
C isotope changes in S Atlantic benthic foraminifera, Late Quaternary abyssal circulation 3-25210
C isotopic composition in Earth's mantle, anal. of C geodynamic cycle 3-19969
CO isotope abundances in H II region Sharpless 68, photochemistry anal. and EHF obs. 3-25579
CO isotopic forms relative abundances, effects of isotope selective photodissociation 3-59421
^{13}C in marine sediments in Mediterranean region, evidence for latest Miocene sea-level fall 3-20034
^{13}C in mid-oceanic ridge basalts 3-44413
$^{13}C/^{12}C$ in atmospheric methane 3-20088
^{14}C atmospheric production rate rel. to O isotope records in ice cores 3-29984
^{14}C changes in atmosphere and ocean during Little Ice Age, evidence from banded corals 3-9938
^{53}Cr, prediction of isotopic anomaly in Allende meteorite resulting from sp-process 3-35416
Cu-Ni ore fields of northern area of central Siberia Cu/Ni ratio and ^{34}S abundance rel. to geological and tectonic factors 3-4864
D abundance variation during galactic evolution and cosmological models test 3-44813
D abundances on Jupiter and Saturn, cosmological implications 3-54554
D, yield from primordial nucleosynthesis rel. to neutrino number and baryon density of realistic universe 3-59516
D/H in Jupiter's NEB rel. to protosolar nebula 3-20287
D/H ratio in atmosphere of Titan, determ. from methane-d_1 abundance 3-59257
D/H ratio in cyclonic precipitation 3-30016
D/H ratio in Jupiter and Saturn atm. 3-35510
D/H ratio in Jupiter troposphere, determ. from high-resolution 1100 to 1200 cm^{-1} spectra 3-10253
F isotopes, warm CNO nucleosynthesis as possible enrichment mechanism 3-30161

isotope relative abundance continued
$H_2{}^{18}O/H_2{}^{16}O$ ratio in New York Bight and Gulf of Maine, rel. to origin of continental shelf and slope water 3—20026
^{4}He, yield from primordial nucleosynthesis rel. to neutrino number and baryon density of realistic universe 3—59516
^{176}Hf/^{177}Hf, importance in studies of planetary chronology and evolution 3—48513
^{41}K 3—48867
^{138}La-^{138}Ce geochronometer, new dating method 3—25244
Li isotopic composition and at. wt. of natural sample 3—56096
^{15}N/^{14}N, ratio in trapped gas in Allen Hills and Byrd core ice 3—9941
Nd isotopes in kimberlites and lamproites from W Australia 3—58916
^{143}Nd/^{144}Nd, for Los Humeros caldera, Mexico, magma genesis 3—53970
^{20}Ne/^{22}Ne ratio in solar flare particles, determ. from spacecraft meas. meteorites and lunar samples 3—54210
O in Greenland ice core, climatic variables analysis 3—30047
O isotope ratios in eucrites, shergottites, nakhlites and chassignites 3—35548
O isotopes, warm CNO nucleosynthesis as possible enrichment mechanism 3—30161
^{18}O depletion in Adirondack anorthosite, shallow emplacement evidence 3—25089
^{18}O variations in Syoura Station snow, Antarctica, correl. with preceding month temp. 3—35195
^{18}O/^{16}O, ratio in trapped gas in Allen Hills and Byrd core ice 3—9941
^{18}O/^{16}O from deep holes in basalts of Icelandic crust 3—19959
^{18}O/^{16}O in deep-sea sediments, diagenetic recrystallization effects 3—44440
^{18}O/^{16}O isotope profiles in ice cores, effect of wind scouring on climatic records 3—35196
^{18}O/^{16}O ratio in oceans during Little Ice Age, evidence from banded corals 3—9938
^{18}O/^{17}O abundance ratio in Sagittarius B2, determ. from detect. of formyl ion-^{17}O ($HC^{17}O^+$) 3—35693
Pb isotope ratios in Ni sulphides of Thompson Belt, Manitoba, geochronologic interpretations 3—48510
^{208}Pb/^{207}Pb/^{206}Pb/^{204}Pb in Ascension Is. rocks 3—44415
^{34}S/^{32}S in Kleinmann-Low nebula, evidence from obs. of SO_2 3—30450
Sm-Nd studies of Archean of W Greenland 3—44414
Sn, natural, isotope abundances, absolute, mass spectrometric meas. 3—56097
Sr isotope content of sea water during Proterozoic indicating mantle event 3—53956
Sr isotopes in kimberlites and lamproites from W Australia 3—58916
^{87}Sr/^{86}Sr for Los Humeros caldera, Mexico, magma genesis 3—53970
U and Th decay series application to geologic and geochronologic problems 3—10087
Xe in meteoritic troilite 3—15888
Xe, terrestrial, isotopic comp. vars. rel. to appl. as geodynamic tracer 3—9868
Zr isotopic abundance ratios and at. wt., surface ionis. and at. wt. 3—56098

isotope separation
see also isotope exchanges; laser isotope separation; radiochemistry
distillation method, mass exchange 3—41698
gas mixtures, centrifugal and charge effects of mass separation in plasma centrifuge 3—41699
Gronau U enrichment plant in Germany, construction start *(German)* 3—16885
multiparametric optimisation of the process 3—32230
multipass batch-step advanced isotope separation campaign models 3—6386
plasma centrifuge, isotope separation, radial conc. gradient form. 3—18142
plasma laser induced, extraction of selectively ionised atomic isotopes 3—2288
suparsonic mol. beam isotope separation using RF spectroscopy 3—41194
SuperHILAC heavy-ion accelerator, online isotope separator, OASIS 3—50078
vibrational-kinetics methods, appls. to mol. lasers and laser chemistry 3—6769
^{10}Be conc. meas. with FN tandem accelerator 3—41697
C isotope separation in expanding supersonic flow 3—36870
CO_2, ^{13}C and ^{10}O isotopically enriched samples, rovibrationally resolved Raman spectra 3—6655
H isotope separation, diffusion filter 3—21936
H isotope separation, falling liquid film condenser, mathematical simulation 3—21557
H isotope separation by gas chromatography, D_2-HD and H_2-HD-D_2 mixtures 3—1029
H isotope separation by metal membranes 3—45694
H isotope separation using Pd alloy membranes 3—55629
H_2/D_2 separation, thermal diffusion column design and performance 3—55633
H_2O, isotope enrichment during cluster formation in supersonic free jet expansions 3—56112
^{3}H recovery system using cryogenic distillation column 3—21413
LiCl-KCl, isotope distrib., countercurrent electromigration 3—47135
$LiNO_3$-KNO_3, isotope distrib., countercurrent electromigration 3—47135
^{183}Lu, neutron-rich isotope identification by mass separation and decay spectroscopy 3—31628
SF_6, thermodiffusion, isotope separation of ^{52}S and ^{34}S 3—7684
Sr isotopes selective on-line separation 3—26394
T separation and recovery from spent fuel of fusion expts. 3—55631
T-D isotope separation using resonant optical radiation absorption 3—41293
Ta isotopes selective on-line separation 3—26394
U(VI) complex, bis(hexafluoropentane-2,4-dionato) dioxo U(VI), reversible and permanent multiphoton 3—17345
Zn, radiochemical separation for NAA to observe stable isotope in-vivo tracers 3—29367
Zr isotopes selective on-line separation 3—26394

isotope shifts
see also atomic spectra
acetylene-d_0(-d_1)(-d_2), overtone and combination bands, Raman intensities meas. 3—11802
anisole-d_0(-d_3)(-d_5)(-d_8), vapour, near UV absorpt. spectra, vibr. anal. 3—11818
asymmetric rotor, isotopic substitution effects on mol. props. 3—26791
atomic laser spectroscopy with the thermionic diode 3—5864

isotope shifts continued
azobenzene, ^{15}N/^{14}N isotope effects on ^{13}C NMR chem. shifts 3—45974
benzo[c]cinnoline, ^{15}N/^{14}N isotope effects on ^{13}C NMR chem. shifts 3—45974
camphor, site-specific D isotope effects, D NMR investig. 3—1385
chalcogen compounds, isotope effects on nucl. shielding and correl. with bond lengths, NMR study 3—50426
delta-log interaction study 3—45462
diatomic mols., microwave and laser high resolution spectroscopy, hyperfine interaction, isotope shifts and predissoc. 3—50391
1,4-dihydroxyanthraquinone-d_0(d_1)(d_2), H bonds, electronic-vibr. excitations 3—36802
ethylenediamine(-d_4)(-d_8), IR and Raman spectra in liq. and solid states 3—47642
ethylstannane-d_0(d_3), struct., microwave, Raman and IR obs. 3—45938
field shift crossed-second-order effects in l^Ns configurations 3—1192
glycolic acid, transferable valence force field 3—50368
6-hydroxybenzanthrone-d_0(d_1), matrix isolated, lifetimes, isotope shifts, luminesc. obs. 3—32128
liquids, pure, dielectric shifts in IR spectra; vapour press. isotope effects 3—47662
methyl glycolate, transferable valence force field 3—50368
methylene, LMR determ. of ^{13}C hyperfine interactions and v_2 isotope shift 3—55971
methylgermane-d_0($-d_3$), IR and Raman vibr. spectra 3—6652
molecular ions, struct., linewidths and shifts, microwave obs. 3—50382
sodium acetate, solid, vibr., isotope shifts, IR study 3—34085
1,1,3-trimethylcyclohexane, site-specific D isotope effects, D NMR investig. 3—1385
Au, isotope shift determ. in D_1 line between ^{197}Au and ^{195}Au 3—32005
BCl_3 condensed gas, selective evaporation by laser radiation 3—1430
Ba, 5d7d $^1D_2$ perturbing state, hyperfine struct. and config. interaction 3—21660
Ba, Rydberg states 6sns, high resolution spectroscopy 3—50327
$BaS_2O_3.H_2O(D_2O)$, H bonds, IR and Raman vibr. spectrosc. obs. 3—6648
$^{13}CH^+$, $A^1\Pi$-$X^1\Sigma$ emission bands 3—50419
^{A}Ca, A=40-48, $4s^2$ $^1S_0$-4s4p $^1P_1$ transition, isotope shifts and HFS 3—21726
Cl, inverse Lamb saturation dip obs. in laser mag. reson. spectrum, isotopic shift meas. 3—21680
Cu_2O, excitonic absorpt. lines, isotopic shift 3—14328
Dy isotopes, changes of charge radii and hyperfine interactions 3—11746
Eu I, isotope shift, crossed second-order effects 3—6568
Ga, $4s^26p$ $^2P_{3/2,1/2}$ levels, natural radiative lifetimes and hyperfine struct. 3—26697
H_2 spin-rotation interaction, isotope shift, nucl. mag. shielding function 3—45875
^{3}He, nd Rydberg states, Doppler-free UV-IR double reson. laser spectrosc. 3—50332
Hg II, $6s^2S_{1/2}$-$6p^2P_{1/2}$ first reson. line Doppler-limited absorpt. spectrum 3—37120
In, Rydberg state spectroscopy, field ionisation technique 3—50359
K, HFS and isotope shifts meas. by RF modulated laser light 3—21715
K, specific mass isotope shift calc., pair correlation contribs., field shifts 3—36728
$KBr:Li^+$, paraelectric resonance absorption, tunnelling models and isotope shifts 3—3659
Li at. beams, fine and hyperfine struct., isotope shift, laser induced fluoresc. study *(Chinese)* 3—21692
Na, specific mass isotope shift calc., pair correlation contribs., field shifts 3—36728
$Na_2S_2O_3.5H_2O(SD_2O)$, H bonds, IR and Raman vibr. spectrosc. obs. 3—6648
Ni(II) complex, nickel(II) protoporphyrin IX, reson. Raman spectra, vinyl effects 3—1368
OT, rot. anal. of $A^2\Sigma^+ \rightarrow X^2\Pi$ system, merged mol. consts. for $A^2\Sigma^+$, $\nu \leq 4$ and $X^2\Pi$, $\nu \leq 3$ 3—6600
Pb, isotope shifts and hyperfine structure, high-resolution meas. 3—50329
Pb, mean square charge radii differences of isotopes, from electronic K X-ray shifts 3—40963
Pb-compounds, electronic and rot. energy, finite nuclear size influence 3—6664
^{202}Pb, radioactive, isotope shift in $6p^2$ $^3P_0$-6p7s $^3P_1{}^0$ 283.3-nm line 3—36724
Pt complexes, Zeise's salt derivatives, isotope labelling, IR and Raman obs. 3—50403
$SO^+(A^2\Pi$-$X^2\Pi_r)$ emission system, vibr. quantum number determ. by meas. isotope shifts, mol. consts. 3—6665
$^{28}SiF_4$, pot. consts. and IR spectrum 3—11794
SiTe, rotational anal. of $A^1\Pi$-$X^1\Sigma^+$ transition for ^{130}Te and ^{128}Te 3—26724
^{87}Sr, Rydberg states, energy-level shift, two-photon obs. 3—11773
Tl-compounds, electronic and rot. energy, finite nuclear size influence 3—6664
Xe II, hyperfine structure and isotope shift meas. by collinear fast-beam laser spectroscopy 3—21667
Yb isotopes, stable and neutron deficient, fast-beam laser spectroscopy for isotope shifts and hyperfine structure meas. 3—22145
^{A}Zn, A=64, 66, 67, 68, 70, isotope effects on nuclear charge distribution from optical isotope shift data, nuclear deformation 3—6578

isotopes
see also radioisotopes
Tb isotopes, hyperfine interactions, nuclear orientation study *(French)* 3—33691

isotopic generators *see radioactive sources*

isotopic spin (elementary particles)
see also baryon spin and parity; lepton spin and parity
geometric quantisation of particles with isotopic spin 3—36151
$K^0 \rightarrow \pi^+\pi^-$ long-distance effects and $\Delta I = {}^1/_2$ rule 3—36241
NN short range interaction, isospin depend., quark gluon model, meson exchange 3—21220
np, large angle scatt., quark interchange, spin observables, spin core proton model 3—21151
$\bar{p}d \rightarrow \Lambda X$, <1 GeV, possible particle exchange in annihilation, isospin invariance 3—26135
pp, large angle scatt., quark interchange, spin observables, spin core proton model 3—21151
$\bar{p}p$ annihilation, isospin conservation, π multiplicity and primary temp., internal symmetry 3—668
$\theta \rightarrow E\pi^0$, isospin violation possibility, branching ratio calcs. 3—36242

iteration methods *see iterative methods*

iterative methods
see also predictor-corrector methods
acceleration of transport eigenvalue problems 3—867
acoustic probing of impedance profiles in inhomogeneous slab in time domain, optimisation technique 3—7266
acoustic scattering, time-domain problems, least-square iterative technique 3—32521
actinide nuclei, fission barrier microscopic calc. using two-step iterative method 3—45506
aerofoils, steady transonic pot. flows, multigrid algorithm using Newton iteration 3—27545
asymmetric top molecules, rot. and centrifugal const. determ. using an iteration procedure 3—32034
atomic clusters, linear approx. in self-consistent density functional calcs. 3—50565
autonomous system, carleman embedding and Lyapunov exponents 3—30605
averaged Lagrangian-finite element technique for the solution of nonlinear vibration problems 3—17845
axially symmetric plasmas, free boundary equilibria computation, nonconvex methods 3—7769
beam vibrations, non-linear, Lagrange-type formulation for finite element anal. 3—32649
calibration improvement of hot-wire anemometers 3—49310
charge distribution in structurally disordered systems 3—37791
charged impurity in electron gas, variational binary-mixture theory 3—33677
contact problems with friction in general purpose finite element computer programs 3—17898
contractive mapping fixed point-computation using overrelaxation method 3—41719
cylinders, arbitrarily oriented finite size, light scatt., iterative approach 3—50600
dielectrics, nonhomogeneous, potential energy, iterative calc. 3—52752
diffusion problems soln. in r-θ geometry, alternating direction implicit methods 3—1926
direct and inverse scatt. by sphere of variable index of refr. 3—20678
elastoplastic torsion problem, mixed method 3—37369
electrolyte solns., symmetric, statistical mechanical theory using BBGKY hierarchy 3—16224
electron emission from surfaces, elliptic functions computation 3—3927
electron-phonon systems, locally coupled, numerical renormalisation group approach 3—23002
elliptic membrane vibrs., iterative method for charact. value problem *(Japanese)* 3—12581
EM wave scattering and absorption by lossy dielectric objects 3—17413
ferrite, polycrystalline, mag. cryst. anisotropy const. and effective porosity meas. 3—18885
ferromagnetic material, coercivity, domain level modelling using numerical mode pushing 3—28602
finite element anal., static, elastoplastic and eigenvalue problems, iterative method, cost reduction 3—17816
geophysical data processing complex based on Elektronika-60 microcomputer *(Russian)* 3—59130
graphite fibre reinforced epoxy 3—19372
Helmholtz eqn., finite-difference solns. to boundary-value problems 3—53912
image iterative restoration methods 3—17457
interstitial atoms, microscopic diffusion, effect of long-range interaction *(Russian)* 3—28143
ion beam simulation code, ion and electron space charge concurrent correction 3—56132
laser interferometry, iteration parameters for data anal. *(Chinese)* 3—40672
lattice gas model, critical phenomena, iterative perturbative approach 3—20795
lattice gauge theory, iterative methods convergence to compute quark propagator 3—40871
magnetic field synthesis along cylindrical solenoid axis *(Polish)* 3—6826
magnetic fields, local, finite element analysis on microcomputer using iterative division procedure 3—26896
magnetic material, soft, hysteresis and **B-H** modelling for finite element calcs. 3—52547
many-body reson. states theory based on orthogonal projection technique 3—16747
mechanics and waves, perturbation and asymptotic methods 3—46480
monoenergetic diffusion problem with many unknowns, iterative method 3—41082
Navier-Stokes equation, conditions of unique solvability *(Russian)* 3—12622
non-linear dielectrics, pot. distribs., numerical calc. 3—8786
nonelectrical quantities measuring systems, methods for increasing accuracy *(German)* 3—54709
nonlinear eddy current problems, approx. treatment 3—36911
nuclear matter, π and Δ propagation, self-consistency and quasi-particle approx. 3—31320
object restoration, iterative methods in information processing 3—17451
object restoration, regularized iterative and non-iterative procedures 3—26968
optical matrix processors, freq. multiplexed and pipelined iterative systolic array 3—26950
particle transport theory, iterated solns. to nonlinear integral evolution 3—10772
period n-tuplings in complex mappings, universality 3—49152
pipe networks, nonlinear flow analysis 3—56616
plate structure, finite strip method for geometrically nonlinear analysis 3—56429
plates and shells, varying-rigidity, flexion *(Russian)* 3—17800
postbuckling collapse of general structure 3—17834
rarefied flow through circular tube of finite length, BGK eqn. iterative soln. 3—17952
reactor characteristics and critical parameters, perturbation theory inhomogeneous eqns. 3—11357
semiconductor injection lasers, anal. *(Czech)* 3—1633
shells of revolution, multilayer, nonlinearly-elastic, canonical eqns. derivation *(Russian)* 3—17801
singular value decomposition using iterative optical processors 3—56146
spin-lattice relax. times, iterative linear method calcs. 3—11833

iterative methods continued
swirl flow studies in diffuser pipes using flux anal. method with orthogonal curvilinear coords. 3—2123
system accuracy increase, by components accuracy improvement and corrective method *(German)* 3—54709
transducer, analogue, iterational error correction 3—40585
vibrating bodies, substructure representation in dynamic synthesis 3—12570
Al, low-energy electron energy loss and range distribs. 3—41457

itinerant model of magnetism *see band model of magnetism*

IV-VI semiconductors
CVD, organometallic, review 3—8993
energy band struct. and Fermi surface, tight-binding calc. 3—57281
ferroelectric, band gap and energy spectra, temp. depend. 3—18617
MOCVD method for prod. of semicond. epitaxial films, review 3—24143
permittivity behaviour at displacive phase transitions 3—3633
CdS-trivalent metal phthalocyanine heterojunction photovoltaic cells 3—39466
CdSe films, chem. bath deposition for photoelectrochem. solar cells 3—52983
GeS, cryst. and sputtered thin film, U trace distrib., using SSNTDs 3—56924
GeS, layer crystal, phase transition, Raman study 3—18452
GeS:In filamentary crysts., prep., morphology, elec. and photoelec. props. 3—57344
$Ge_{1-x}S_x$ noncrystalline system, average energy gap, compositional depend. 3—52753
GeS(Se)(Te), vapour phase crystal growth under microgravity environment 3—3933
GeSe amorphous film, far IR absorption, composition depend. 3—8835
GeSe films, ion beam induced densification, species and deposition angle depend. 3—13647
GeTe, amorphous film, local struct., crystn. and thermal annealing effects, UPS and XPS study 3—14438
GeTe, bonding in cubic and rhombohedral crystals, valence bands 3—47261
GeTe, cryst. and glassy, imperfections, positron annihilation study 3—18229
GeTe, high press. phase transitions, elec. cond. 3—28095
GeTe, low temp. thermoelectric power 3—28372
GeTe melt, Hall effect 3—23412
GeTe:Cu, solubility of Cu and ionised donor states 3—51800
GeTe-Cu(Cu_2Te), solid soln. form., X-ray diffr. and XPS investig. 3—57092
GeTe-GeSe, solid solutions, mag. susceptibility 3—14016
GeTe-SnTe:Bi, rhombohedral distortion, phase transition point 3—13430
$Ge_{0.957}Te$, phase transformations and ordering of nonstoichiometric struct. defects 3—56881
InSe-$Pb_{0.82}Sn_{0.18}Te$, heterojunctions, elec. characts. 3—28429
InSe-PbTe heterojunctions, elec. characts. 3—28429
Pb chalcogenides, hot wall epitaxial growth 3—47782
Pb salt tunable diode lasers, linewidth meas. using heterodyne and etalon techniques 3—12141
Pb salt tunable diode lasers and laser systems for 3 to 30 μm IR spectral system 3—46208
Pb-Sn-Te(Se), extruded alloys, carrier conc. and mobility 3—8507
$Pb_{1-x}Cd_x(Sn_x)Se(Te)$ and $PbS_{1-x}Se_x$ diode lasers, p-n junctions, EBIC mode SEM study 3—17529
$Pb_{1-x}Ge_xTe$ narrow band-gap ferroelec. semicond., absorption edge near phase transition 3—34061
$Pb_{1-x}Ge_xTe$, quantum ferroelec. semicond., low temp. resist. enhancement 3—38406
$Pb_{1-x}Ge_xTe$:In, Hall coeff., thermoelec. effect and absorption coeff. 3—38409
$Pb_{1-x}Ge_xTe$:Sb injection lasers, stimulated emission delays, temp. depend. 3—37040
PbO electrophotographic X-ray detector, Monte Carlo modelling 3—488
PbS (Se)(Te), colouring mechanism in glasses, IR, visible and UV transmission spectra 3—34122
PbS, anal. of effective compressibilities 3—42700
PbS IR detector nonlinearity meas. method *(Chinese)* 3—36083
PbS-PbSe(Te) solid solutions, electronic density of states effective mass 3—57262
$PbS_{0.1}Se_{0.9}$, intrinsic, recombination, depend. on doping conc. and excitation level 3—52174
$PbS_{1-x}Se_x$ photovoltaic detectors, carrier lifetimes and resist.-area product 3—47381
PbSe, anal. of effective compressibilities 3—42700
PbSe, carrier recomb., photocond. decay curves 3—23406
PbSe:In films, elec. props. dopant effects on scatt. parameters 3—18806
PbSe-like semiconductors, second-order Auger recomb. processes 3—43201
PbSe-SnSe solid soln., phase transition, elec. study 3—8195
p-$PbSe_{1-x}Te_x$, valence band struct., Shubnikov-de Haas effect study 3—18616
PbSe(Te)($Se_{1-x}Te_x$), narrow gap semicond., bound defect and impurity states, review 3—23309
$Pb_{1-x}Sn_x$ Te/$PbTe_{1-y}Se_y$ multilayer struct. thermal expansion and lattice matching 3—2989
$Pb_{1-x}Sn_xS(Se)(Te)$, donor props. of Sn, Mossbauer study 3—28746
$Pb_{1-x}Sn_xSe$, electrolytic polish 3—4161
$Pb_{1-x}Sn_xSe$ epitaxial films, refr. index meas. rel. to injection laser appls. 3—47617
$Pb_{1-x}Sn_xSe$, nonstoichiometric defect levels, Hall coeff. study 3—18656
$Pb_{1-x}Sn_xSe_{1-y}Te_y$ DH laser with two-sided confinement, LPE growth and props. 3—12181
$Pb_{1-y}Sn_ySe(Te)$, layer thickness rel. to liquid-phase epitaxy conditions 3—9002
$Pb_xSn_{1-x}Se(Te)$, energy gap-refractive index interrelation 3—14238
PbSnTe, homostructure diode lasers, dielectric constant and optical confinement, refractive index rel. to carrier conc. 3—27050
PbSnTe, phonon dispersion and elastic consts. rigid ion model 3—57041
PbSnTe-PbTeSe long wavelength lattice matched single heterostruct. lasers grown by LPE 3—22113
$Pb_{0.76}Sn_{0.24}Te$:Cd, elec. cond. and cond. relax. to equilib. value 3—3201
$Pb_{0.78}Sn_{0.22}Te$, intrinsic, recombination, depend. on doping conc. and excitation level 3—52174
$Pb_{0.78}Sn_{0.22}Te$:In, photoelectric effect 3—38431
$Pb_{0.8}Sn_{0.2}Te$, adsorbed surface states, form. and charging kinetics 3—3274
n-$Pb_{0.8}Sn_{0.2}Te$ epitaxial films, H_2 effects in stabilising elec. props. 3—47436

IV-VI semiconductors continued
$Pb_{0.8}Sn_{0.2}Te$:Ag, solid soln., effect of Ag impurity on elec. and struct. props. 3−8498
$Pb_{1-x}Sn_xTe$, anisotropic polar semicond., Hall coeff., anomalous temp. depend. calc. *(Russian)* 3−47370
$Pb_{1-x}Sn_xTe$ DH injection lasers, optimal design 3−37033
$Pb_{1-x}Sn_xTe$ doped crystals, low temp. cond., thermal radiation influence 3−8496
$Pb_{1-x}Sn_xTe$ epitaxial films, elec. transport props., band parameters 3−18801
$Pb_{1-x}Sn_xTe$ expitaxial films with growth plane comp. gradient, cathodolumínesc. 3−28913
p-$Pb_{1-x}Sn_xTe$, ferroelec. phase transition under electron irrad. 3−3651
$Pb_{1-x}Sn_xTe$ homostruct. diode lasers with Ga-doped cladding layer, LPE growth and long wavelength operation 3−41826
$Pb_{1-x}Sn_xTe$, intrinsic absorpt. edge investig. 3−19094
$Pb_{1-x}Sn_xTe$ large crystal vapour phase growth in sealed tube 3−14451
$Pb_{1-x}Sn_xTe$ laser diodes, prod., appls. 3−32365
$Pb_{1-x}Sn_xTe$ photosensitive films, phase composition, struct. and O_2 adsorption effects 3−52193
$Pb_{1-x}Sn_xTe$ photosensitive p-n structures, LPE growth 3−52232
$Pb_{1-x}Sn_xTe$ solid soln., electron spin polarisation in field of strong optical waves 3−18940
$Pb_{1-x}Sn_xTe$ solid solns., elec. active point defects formation 3−46929
$Pb_{1-x}Sn_xTe$:Cd single cryst., photosensitivity in far IR 3−18745
$Pb_{1-x}Sn_xTe$:Cd single cryst., band gap, rel. to electrophysical props. 3−28267
$Pb_{1-x}Sn_xTe$:In, band edge motion in quantising mag. field and nonequilib. states 3−57275
$Pb_{1-x}Sn_xTe$:In, energy spectrum in quantizing mag. field 3−18727
$Pb_{1-x}Sn_xTe$:In(Ga), obs. of local modes, absorpt. spectra 3−43566
$Pb_{1-x}Sn_xTe$:Sb, diffused surface morphology in vapour phase growth *(Chinese)* 3−42940
$Pb_{1-x}Sn_xTe$:Sb p-n homojunction lasers, stimulated emission time delay 3−1634
$Pb_{1-y}Sn_yTe$-In, tunnel self-localisation at negative centres, anomalous elec. and mag. props. 3−3121
$Pb_xSn_{1-x}Te$, ^{125}Te Mossbauer parameters and phonon spectrum 3−38737
n-PbT, fundamental absorption coeff. at high temp. 3−19098
PbTe, adsorbed C, Raman scatt., roughness induced 3−57928
PbTe, anal. of effective compressibilities 3−42700
PbTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3−28248
PbTe diode laser fabrication using proton bombardment 3−37070
PbTe, energy band struct. and Fermi surface, tight-binding calc. 3−57281
n-PbTe epitaxial film, (111)-oriented, four coeff. weak-field magnetoresist. at 4.2K 3−13929
PbTe epitaxial films, carrier density and mobility 3−47439
PbTe films, cond., photocond., thermoelectric, Hall and photothermoelectric meas. 3−8596
PbTe heteroepitaxial films, band. struct., magnetoresistance oscill. study 3−28266
PbTe, intervalley optical transitions, transmission and magneto-photo response spectra 3−14263
PbTe large crystal vapour phase growth in sealed tube 3−14451
PbTe laser, two-photon pumping, stimulated recomb. radiation 3−32366
PbTe melt, Hall effect 3−23412
PbTe thin film, elec. props., ion bombardment effects 3−52277
PbTe thin film, size quantised, interband Raman scatt. study 3−47728
PbTe, VPE, effect of illumination 3−8372
PbTe:Ag, effect of impurities on elec. props. 3−8497
PbTe:Ag_xTe dopant effects on thermoelectric props. 3−14983
PbTe:Bi, thermoelec. props., elec. cond. and thermal cond. 3−47371
n-PbTe:Cr, thermoelec. props., current carrier conc. 3−47372
PbTe:In, impurity charge state, mag. susceptibility and XPS study 3−28305
PbTe:In, quasilocal level position, Hall effect and absorption spectra study 3−18658
PbTe:Tl, superconducting crit. temp. and sp. ht., dependence on hole density meas. 3−23530
PbTe-PbSnTe, effusion processes, in MBE 3−28242
PbTe-SnTe, liq., solutal diffusion coeff. 3−47132
PbTe-ZnS IR multilayer filters, meas. down to 4K 3−12291
Si-PbS n-p heterojunction, photoresponse kinetics 3−38472
SnS, electroreflectance and thermoreflectance spectra 3−38799
SnTe, anal. of effective compressibilities 3−42700
SnTe film, noncryst., struct. analysis, disordered microcrystallites 3−13655
SnTe films, vacuum deposited, substrate temp. effects on microstruct. and elec. props. 3−24137
SnTe melt, Hall effect 3−23412
SnTe-CdTe p-n junctions, photovoltaic effect, solar cell appls. 3−57391
p-$(SnTe)_{0.2}(PbSe)_{0.8}$, epitaxial layer, transfer phenomena 3−8408

izod testing *see dynamic testing*

J particles *see psi mesons*

Jahn-Teller effect
A15 superconducting cpds., band Jahn-Teller effect 3−57319
alkyl halides, mol. Rydberg spectroscopy, mag. field effects 3−26662
conjugated hydrocarbons, excited states, geometrical struct., pseudo Jahn-Teller theory 3−26651
copper manganese oxides, $ACu_3Mn_4O_{12}$, ferromag., synthesis and mag. characterization 3−14462
cyclopentadienyl radical, fluoresc. excitation, emission spectra, Jahn-Teller effect 3−46005
diamond, distorted defects, optical meas. 3−47678
displacive type ferroelectrics, electron-ionic vibr. coupling const. in vibronic model 3−52744
electron-phonon states in crystals with Jahn-Teller impurities 3−18659
energy level struct., impurity Raman scatt. 3−33684
energy matrix, approx. analytial treatment 3−47319
exciton self-trapping, Jahn-Teller effect in adiabatic approx. 3−23281
ferrohaemoglobin, pseudo Jahn-Teller effect 3−44197
first order coupling, reduced matrix element 3−26647
group theory for the Jahn-Teller effect 3−1266
history and applicability 3−1265
molecular ions laser spectroscopy, at reduced temp. 3−11873
orbital doublet, Jahn-Teller effect, one-mode intermediate coupling calc. 3−52092
orthorhombic Jahn-Teller distortions, vibronic model 3−33686

Jahn-Teller effect continued
paramagnet, tetragonal J=1, transverse sound velocity and magnetoelastic interactions *(German)* 3−38668
polycrystal, EPR line shape in presence of dynamic Jahn-Teller effect 3−52598
polycrystalline aggregate, EPR line shape in presence of Jahn-Teller effect 3−28687
randomly doped crysts., Jahn-Teller glass form. 3−52093
semiconductors, deep impurity centres, Jahn-Teller effect suppression under uniaxial press. 3−28307
simple mathematical approach 3−25740
spectral band shape for transitions to degenerate impurity levels, method of moments 3−38786
spectroscopic perturbations due to linearly active and inactive mode dynamics 3−13776
spinel ferrites, disordered, with Jahn-Teller centres, mag. anisotropy, random field effects 3−18884
transition metal compounds, Jahn-Teller effect and magnetism 3−33687
vibronic systems eigenstates, effect of quadratic Jahn-Teller coupling 3−18668
AgCl:Pd^+, Jahn-Teller effect, EPR study 3−3523
$AgCl_{1-x}Br_x$, ODMR study of trapped exciton dynamics 3−23277
Al_2O_3, Jahn-Teller effect under uniaxial stress, Raman spectra 3−52095
Au in Ar, Kr and Xe matrix, absorpt. spectra, line shape anal., Jahn-Teller effect 3−1345
BF_3^+ mutlimode Jahn-Teller and pseudo-Jahn-Teller effects 3−41549
$CaCl_2$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3−43629
CaO:Cr, APR study, dynamic Jahn-Teller effect 3−8721
Cr_2, reson. and prereson. Raman spectra 3−17290
Cr_3, reson. and prereson. Raman spectra 3−17290
$CrZrF_6$, phase transitions, Mossbauer and EPR study of Jahn-Teller distortions 3−47101
$CsCaCl_3$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3−43629
$CsCaCl_3$:Sn^{2+} crystals, luminesc. props. 3−19183
$CsCuCl_3$, EPR line broadening, cooperative Jahn-Teller effect 3−52610
Cu, Ar matrix isolation, spin-orbit and Jahn-Teller interactions, MCD and absorpt. spectra 3−55890
Cu complex, hexakis pyridine-N-opxide copper(II), Jahn-Teller distorted, EPR studies 3−28694
$CuFe_2O_4$, ~~Jahn-Teller~~ struct. phase transition, ferromag. resonance and mag. study 3−18446
$CuZrF_6$, phase transitions, Mossbauer and EPR study of Jahn-Teller distortions 3−47101
$DyFe_{1-x}Mn_xO_3$, x=0.05-0.335, mag. props. and spin reorientation transitions, Mn^{3+} Jahn-Teller ion effect 3−43371
$DyVO_4$, antiferromagnetic phases, NMR study 3−3442
$ErFe_{1-x}Mn_xO_3$, x=0.07-0.33, mag. props. and spin reorientation transitions, Mn^{3+} Jahn-Teller ion effect 3−43371
$Fe_{1-x}M_xSO_4.7H_2O$ (M=Mg, Ni, Zn, Co), cooperative Jahn-Teller effect, ^{57}Fe Mossbauer effect 3−52692
GaAs:Cr, APR study, dynamic Jahn-Teller effect 3−8721
GaAs:Cr, thermal cond. stress depend. and tunnelling 3−47175
GaAs:Cr^{2+}, vibronic coupling in trigonal field, luminesc. spectra 3−33685
GaAs:Cr^{2+} deep levels and Jahn-Teller effect 3−52095
GaAs:Cu, deep impurity centres, Jahn-Teller effect suppression under uniaxial press. 3−28307
$GdVO_4$, antiferromagnetic phases, NMR study 3−3442
H_3 Rydberg states, pot. surfaces calcs. 3−1449
InAs:Mn^{3+}, Jahn-Teller distortions, mag. susceptibility 3−38358
InP:Fe, APR study, dynamic Jahn-Teller effect 3−8721
$KCaCl_3$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3−43629
$KCaCl_3$:Sn^{2+} crystals, luminesc. props. 3−19183
KCl:Sn, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3−13743
K_2CuF_4:Zn^{2+}, hyperfine interactions 3−19015
$KDy(WO_4)_2$, phase transition study by Raman scatt. method *(Russian)* 3−19118
$La_3S_4(Se_4)$, cubic to tetragonal phase transition temp., mag. field depend. 3−42773
LaSb:Dy, ESR and magnetisation, ion-lattice interaction contrib. 3−3524
LaSb:Dy single cryst., Jahn-Teller stress effects on magnetization and ESR props. 3−3134
MgO:Mn^{3+}, APR study, dynamic Jahn-Teller effect 3−8721
Na in Xe matrix, Jahn-Teller splitting, absorpt. and MCD spectra 3−45888
$NaCa_2Cu_xZn_{2-x}V_3O_{12}$, garnet, Jahn-Teller effect, X-ray diffr. and Young's moduli meas. 3−18672
$NaPdF_4$, characterisation of +III oxidation state of Pd *(French)* 3−23795
$Nb_3Sn_{1-x}SB_x$, A-15 pseudobinary alloy, tetragonal-tetragonal transition theory 3−18443
$Nb_3Sn_{1-x}Sb_x$ A15 pseudobinary alloy, tetragonal-to-tetragonal phase transition 3−38055
Ni-Zn ferrite, fast neutron irradiation, changes in mag. props. 3−14072
$Ni_{1-x}Cu_xFe_2O_4$, lattice vibr. freq., Jahn-Teller distortion, IR spectra study 3−28066
Ni(II) cpds., tetrahedral, spectrum, spin allowed ligand field bands, distortion effects 3−8833
$PbCl_2$, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3−13743
$Pr_{1-x}Ca_xMnO_3$, struct. and mag. props. 3−33202
$RbCaCl_3$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3−43629
Rb_2CrCl_4, mag. moment distrib., neutron diffr. study 3−57539
SRO:Cu^{2+}, impurity states, EPR spectra 3−43428
Si, complex defects, divacancy and E-centre, mol. cluster study 3−47297
Si, implanted impurity electron states, hyperfine interaction and channelling studies 3−43076
Si:O^-, electronic struct. calc. of O^- impurity 3−47298
$SnCl_2$, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3−13743
$Sr_xLa_{2-x}Li_{0.5}Ni_{0.5-x}Fe_xO_4$, coexistence of 6-coordinated high-spin Fe^{IV} and low-spin Nc^{III} *(French)* 3−23336
$TbVO_4$, cooperative Jahn-Teller phase transition, fluctuation dynamics, Brillouin scatt. study 3−47665
TiH_x $(0 \leq x \leq 2)$, nonstoichiometric, electronic struct. 3−38295
$TmPO_4$:Gd^{3+}, slowly fluctuating random strains, EPR fine struct. spectrum 3−38692

Jahn-Teller effect continued
TmPO$_4$-type Jahn-Teller virtual elastics, mag. and magnetoelastic props. 3−43420
TmVO$_4$, microwave US attenuation above Jahn-Teller phase transition 3−37999
V-H clusters, electronic struct. 3−38297
Y$_{1-x}$Ca$_x$MnO$_3$, struct. and mag. props. 3−33202
Zn complex, Zn(pyO)$_6$(ClO$_4$)$_2$:Cu, exchange interactions, EPR study 3−23793
jellies *see gels*
jellium
bounded electron gas, electrodynamic response in hydrodynamic formalism 3−33652
Coulomb systems, charge fluctuations, statistical mechs. 3−54666
Debye screening for jellium and other Coulomb systems 3−30763
Kohn-Hohenberg-Sham eqn., nonlinear matrix soln. 3−43254
metal, electronic struct. of H impurity, jellium model 3−13763
metal surface, bounded electron gas, electrodynamic response in hydrodynamic formalism 3−33652
metal surface correlated wave function *(Chinese)* 3−43248
metal surface correlated wave function theory *(Chinese)* 3−43247
metal surface impurities, reflectivity modulation, Raman scatt. calcs. 3−3717
metal surfaces, jellium theory 3−18761
metallic mixture, non-uniform, electronic contrib. to gradient energy 3−52049
metals, light impurity energy profile codes 3−43093
metals, surface props. using inhomogeneous linear electronic response 3−23450
model, theory, var. calcs. 3−35913
one-dimensional ionic mixtures, functional integration treatment 3−30761
superconducting critical temp., phonon freq. dispersion influence 3−3352
surface, inhomogeneous, collective mode dispersion, specular refl. model 3−18549
surface, inhomogeneous, image pot. and induced dipole 3−18760
two-dimensional classical jellium, critical points 3−25802
virial theorem generalisation, application to special geometries 3−47246
jet stream *see atmospheric movements*
jets
see also plasma jets; sprays
acoustic resonance, flow-excited, in covered cavities 3−37469
acoustic wave-jet flow-pipe interaction, small Strouhal number anal. 3−50831
acoustically excited, flow visualisation, appl. of improved schlieren system 3−32777
aerodynamic levitation of laser-heated solids in gas jets 3−2101
aerodynamic sound radiation from a double layer jet 3−37284
aerosol microjets, high speed, optical investig. 3−39414
annular jet injection into body, supersonic flow, turbulent near wakes 3−46573
V1343 Aquilae (SS 433), mass transfer binary star, relativistic jets model and circumstellar ring model 3−40149
V1343 Aquilae (SS 433), obs. of evolution in relativistic precessing jet 3−25456
aromatic cpd. clusters, spectrosc. and photophys. 3−50563
astrophysical jets from geometrically thick accretion disc, theory 3−10203
axisymmetric jets, submerged, heat and mass transfer 3−7623
axisymmetric turbulent jet struct., large vortices effects 3−42281
benzene cluster formation in supersonic jets, electron diffr. studies 3−36899
benzyl radicals, free jet cooled, laser-induced fluoresc. spectra 3−55983
bubble splitting in shear flow 3−12756
n-butane, supersonic jets, conformational cooling, electron diffr. study 3−41714
n-butane clusters, supersonic jets, electron diffr. study 3−41713
3C 9, 3C 280.1, high-redshift quasars, intensity and polarisation obs. of extended radio jets 3−5449
capillary, instability development, control by ultrasonic beams 3−46670
cavitation bubble collapse, shock generation study 3−51175
circular turbulent jet in crossflow, integral calcs. 3−37533
coaxial jet noise, excitation effect 3−56590
computer-enhanced anal. of jet in a cross stream, turbulent mixing region wave 3−56587
concentric jet entrainment with particles in the primary stream 3−2099
confined jets in two-dimensional laminar flow, boundary layer eqns. 3−17955
creeping flow from an orifice in a spherical wall 3−51183
curved wall jet, turbulent diffusion modelling 3−32775
cyclopentadienyl radicals, free jet cooled, laser-induced fluoresc. spectra 3−55983
dichlorodifluoromethane, diode laser absorpt. around 921 cm^{-1} in supersonic jet 3−26739
diffusion flame turbulent jet, fluctuating temp. meas. 3−2097
dye laser nozzle design yielding interferometrically flat fluid jets 3−27082
entrainment by a concentric jet with particles in the secondary stream 3−42279
excited jet with 45° sharp edge, flow structures, Schlieren photographic study 3−12732
excited jets, sound generation, length and time scales. 3−46609
fine-particle conveying flows, inserts effect on two-phase jet 3−46628
flames, convection jets, the slot fire, and fire safety 3−5563
flowfield and far field acoustic amplification props. of heated and unheated jets 3−12727
formation during vaporisation in vacuum 3−32781
free expanding with obstacles, 3 D interaction in subsonic and transonic regions 3−2084
free jet boundary heat transfer, curvature effects 3−12726
gas conc. field in turbulent jets, Rayleigh scatt. meas. 3−46525
gas jet exhausting from infinite vessel, numerical soln. 3−27583
gas mixture in jet cooling of plate, equilib. temp. 3−12502
gas-liquid spray systems, similarity anal. 3−32793
gasdynamic variables of jet undergoing physical and chemical transformation, model for calc. probabilistic behav. 3−56594
granular material dispersal by supersonic gas jet, resultant flow study 3−46626
heat and mass transfer coeffs. in jets entering a crossflow 3−37536
heated asymmetric jet, shear layer, interaction with acoustic pulse, numerical simulation 3−37532
HF sound radiation out of jet pipe 3−7571
hyperbolic jets at free surface 3−51212
jets continued
ideal fluid, jet flow, high vel. hydrodynamics 3−27581
ideal gas, supersonic jets from inclined exit nozzle exhausting into vacuum 3−37531
impact streamlining of cylinders by air jets, heat transfer 3−37480
impingement on planar baffle, diffracted shock waves 3−46612
impinging jet arrays, heat transfer coeff. distrib., visualisation technique meas. 3−22459
impinging liq. jet atomisation in supersonic crossflow 3−56589
incompressible flow, turbulent jet incident on heated plate, heat transfer 3−22454
incompressible liquid, self-similar translational jet flows 3−17956
interstellar medium, nature of bipolar sources in dense molecular clouds 3−10414
isolated molecules in supersonic jets, picosec. laser spectroscopy, vibr. energy redistrib. and quantum beats 3−32175
isoquinoline, excited state interactions, jet, cooled spectra 3−41606
isoquinoline, stepwise solvated complexes, dynamics, spectra, picosecond jet method obs. 3−41641
isoquinoline-methanol complex, excited state interactions, jet, cooled spectra 3−41606
jet-pipe flow issuing into cross stream vel. fluctuation meas. 3−51188
N Kenya, low-level jet in Turkana Channel 3−48606
laminar liquid jets in immiscible liquid systems 3−12736
laminar plane wall jet, temp. distrib. due to viscous heating 3−2100
laser cytophotometer of the through-flow type *(Russian)* 3−44348
laser phase correction using supersonic gas jets 3−12195
laser velocimeter particle motion prediction, fluid mechanics turbulence model 3−2146
LF sound radiation out of jet pipe 3−7572
linear jet array, hydraulics of channel 3−56597
liquid jet, cylindrical free falling, direct contact heating 3−51181
liquid storage tank, buoyant jet for stratification enhancement 3−51185
liquid-liquid systems, stability of jets 3−51058
LMFBR, temp. fluctuations of blocked subassembly from turbulent heat transfer study 3−55274
low Reynolds number jets shape study 3−42280
M87, high-resolution X-ray obs. of radio-optical jet 3−10440
M87, IR obs. of jet 3−54505
metal jets disruption by electric current, powder prod. 3−24177
methane-d$_4$, ν_1 fundamental, stimulated Raman spectrum 3−55944
mineral melt, vertically incident jet, cooling, thermal radiation and convection influence 3−7393
multiple jets in crossflow anal. 3−51187
naphthalene-Ar supersonic jet, naphthalene rot. and vibr. temps. 3−11778
Newtonian liq. jets, inertia and surface tension effects 3−12731
noise, source coherence effects 3−51182
nonlinear viscous liq. jets in air, bending disturbances dynamics 3−32778
oblique impingement of round jet on plane surface 3−32776
one-dimensional liquid fibers 3−2098
oscillatory jet in a cavity, flow visualisation study 3−12728
phenol dimer, electronic absorpt. spectra studied by mass-selected MPI-nozzle beam method 3−1435
pipeline mixing of a T-junction, optimum dimensions 3−51220
PKS 0548−322, BL Lacertae object, UV and X-ray obs. rel. to relativistic jet model 3−10436
polymer solution, wall ejection, effect on performance of conical diffuser *(French)* 3−42278
power law non-Newtonian-Newtonian liquid systems, breakup of jets 3−51059
pulsed molecular beam (free jet) diagnostics with pyroelec. detectors and CO$_2$ lasers 3−26885
radial turbulent jet, similarity relations 3−27492
radial turbulent jet with swirl 3−27580
radiant heat flow from jets, Monte Carlo calcs. 3−56596
radio galaxies, physical mechanisms for jets 3−25613
radio galaxies, systematics of large-scale radio jets rel. to radio cores luminosity 3−25611
radio jets in quasars and active galactic nuclei, consequence of asymmetry of plasmoids ejection 3−25622
radio sources, extragalactic, clamshell mechanism for one-sided Blandford-Rees jets 3−49039
radio sources, extragalactic, influence of buoyancy on stability of jets 3−16024
radio sources, extragalactic, reconfinement of jets 3−54542
reattached water jets sensitive to sound, behaviour in the case of using a short flat wall *(Japanese)* 3−7625
recirculating flow in confined jet, wall heat transfer study 3−37473
rectangular turbulent jet cross-section, deformation 3−22499
resonant entrainment of confined pulsed jet, flow visualisation study 3−51186
round jet, turbulent, particle dispersion, stochastic model evaluation 3−51179
screech suppression in underexpanded supersonic jets 3−56591
selectively excited particles, separation in intersecting streams 3−2102
Seyfert galaxies, radio jets interaction with interstellar medium rel. to linear radio struct. 3−25612
shock-free flow near convex corner 3−2088
short-duration jet with density different from surrounding medium 3−7620
slit non-stationary flow of perfect fluid, jet form. 3−22498
stagnation point of jet flowing over a baffle, heat transfer and microstructure 3−22455
starting turbulent jet, hot-film anemometer meas. 3−56593
stilbene, trans-cis isomerisation dynamics, in supersonic jets 3−58396
streamlining of unknown bodies above a curvilinear smooth floor or in a jet 3−2035
submerged vapour jets in subcooled liqs. condensation 3−37537
subsonic rectangular jet development, Mach number effect 3−56588
subsonic turbulent jet mixing flowfield, reactive recirculating in a combustor 3−56592
supersonic airflow, parallel H$_2$ injection into const. area, high enthalpy jets 3−12709
supersonic free jet anal. using a new shadowgraph device 3−22556
supersonic jet discharge from nozzle into axisymmetric channel 3−56568
supersonic jets, electron diffr. studies, apparatus and method 3−36130
supersonic underexpanded jet impingement on baffle, compression shock standoff distance 3−46610
supersonic underexpanded jet in translational flow, expt. study 3−12735
supersonic underexpanded jet interaction with obstacle, flow field invest. 3−37521

- **jets** continued
  - supersonic underexpanded jet interaction with obstacle, semiempirical theory 3—7622
  - supersonic water-jet, exhausting from cylindrical nozzle, underexpansion regime 3—27582
  - supply of reagent into mixer, mixing process optimisation *(Ukrainian)* 3—12729
  - three dimensional jets expanding in confined convecting flow, integral characts. 3—42282
  - three-dimensional jet-obstacle interaction, turbulent boundary layer, heat transfer 3—37472
  - toluene-cyanobenzene complex, electronic absorpt. spectra studied by mass-selected MPI-nozzle beam method 3—1435
  - tone-excited jet, noise and flow struct. 3—32774
  - turbine blade networks boundary layer separation, coefficient of profile losses determ. 3—42227
  - turbulent gas jets with variable density 3—27585
  - turbulent jet, oscillations through axisymmetric cavity, organised shear layer obs. 3—22500
  - turbulent jet propagation, compressibility effects, connection factor 3—27587
  - turbulent jets, breakdown coefficients used to determine universal exponent μ, appl. to atm. 3—20072
  - turbulent mixing in supersonic nozzle, vibr. relax. effects calcs. 3—37534
  - turbulent mixing layer, temp. pulsation intensity, negative generation effects 3—17932
  - turbulent plane jet, temp. fluctuation budget 3—27584
  - turbulent plane jets, vel. distrib., flow reversal study 3—51184
  - turbulent wall-jet flows, numerical calcs. 3—12730
  - two-dimensional, rising and falling under gravity 3—22501
  - two-dimensional free turbulent jet flow, vortex street model 3—12733
  - two-dimensional liquid jet, numerical anal. using streamline coords. 3—51044
  - two-phase turbulent jet, mathematical model 3—7621
  - two-phase-flow in underexpanded jet exhausting from conical nozzle 3—7633
  - underexpanded jet action on adjacent surface 3—32780
  - underexpanded jet impingement onto planar baffle, supersonic flow study 3—46611
  - underexpanded jet produced by two nozzles, flow investig. 3—56595
  - underexpanded low-density, strong action on plane obstacle, side effect 3—56598
  - unsteady flow past a wing with jets simulation 3—37505
  - vinoxy radicals, free jet cooled, laser-induced fluoresc. spectra 3—55983
  - viscoelastic fluid, free jet breakup study 3—32779
  - viscoplastic liq. planar enclosed jet behaviour 3—27586
  - viscous fluid, internal and jet flows, asymptotic study 3—37535
  - viscous fluid falling against flat plate, fluid buckling, energy loss coeff. 3—22502
  - viscous wall jet, stability 3—46613
  - viscous-gravity jet in stagnation flow 3—12737
  - wall jet flow of cond. gas over permeable surface in transverse mag. field 3—12734
  - water, wall ejection, effect on performance of conical diffuser *(French)* 3—42278
  - water jet characts., high-speed macrophotography study 3—46614
  - water jet pumps, flow cavitation number limitation 3—51180
  - water-glycerol mixtures, atomisation regime of round liquid jet at nozzle exit 3—7624
  - 3 C 433, pecular radio galaxy, morphology of radio jets 3—49011
  - $F+H_2$, supersonic chemically reacting jets, laminar mixing 3—37582
  - $H_2(HD)(D_2)$, supersonic beams rot. relax. in free jet expansion, high resolution PES 3—11950
  - HNO jet-cooled radical, fluoresc. lifetimes and excitation spectra 3—55984
  - H_2O, isotope enrichment during cluster formation in supersonic free jet expansions 3—56112
  - SF_6, CO_2-laser excited, stimulated Raman investig. of excitation dynamics 3—32080
  - Xe jet, pulsed, supersonic, third-harmonic generation 3—27154
- **j.f.e.t.** *see junction gate field effect transistors*
- **Johnsen-Rahbek effect** *see adhesion; electrostatics*
- **Johnson noise** *see thermal noise*
- **joining processes**
  - *see also brazing; cable jointing; soldering; welding*
  - optical fibre coupling technique, suitable for non-concentric core and sheath *(French)* 3—32517
  - Rubber to brass bonding mechanism studied by electron microanalysis techniques 3—53356
  - Cu-Mo bond, low thermal barrier, effective joining technique 3—29022
  - Cu-W bond, low thermal barrier, effective joining technique 3—29022
  - ZnS(Se) IR transmitting materials, CVD, developments and improvements 3—7094
- **jointing, cable** *see cable jointing*
- **jointing (electric connectors)** *see electric connectors*
- **Jordan-Thiry field** *see cosmology; general relativity*
- **Josephson effect**
  - analog simulator of a Josephson junction *(Chinese)* 3—52308
  - background radiation effect on characts. of Josephson detector 3—15843
  - bridge-type Josephson junctions, damping factor of Riedel peak 3—47457
  - coupled Josephson junctions near phase locking, low-freq. behaviour 3—3375
  - current biased resistively shunted Josephson junction, quantum noise effects 3—3383
  - current-density distrib. in supercond. tunnel junctions, two-dimensional imaging 3—18828
  - current-fed junction appl. of driven damped pendulum study 3—38554
  - DC Josephson effect, static tunnelling characts. in ultrasmall junctions 3—3388
  - electronic simulation, incl. effects of freq., temp. and supercond. energy gap 3—23545
  - Fiske steps in zero-field in small Josephson junctions, theory and expt. 3—23548
  - frequency downconvertor appl. for 2 mm wave band modulation superheterodyne radiometer 3—10216
  - Ginzburg Landau free energy for Josephson array 3—57483
  - Josephson junction, fluxon oscillators linewidth 3—3387
  - Josephson SNS structure, proximity effect *(Russian)* 3—13964
  - junction, intermittency and quantum phase difference 3—38540
- **Josephson effect** continued
  - junction annealing and tunnelling current density modification using electron irrad. 3—18827
  - junction arrays, appl. of frustrated X-Y models 3—35938
  - junction barrier quality improvement process 3—8623
  - junction fabrication, HF RF oxidation techniques to fabricate thermally stable junctions 3—18826
  - junction transmission lines coupled by resistive networks, fluxon propag. 3—18834
  - junctions, coherence in linear arrays with inclusive coupling *(German)* 3—33831
  - junctions, intermittent chaos 3—23553
  - long Josephson junction, flux flow branch modulation 3—3381
  - long Josephson junction, fluxon-antifluxon system 3—18829
  - long Josephson tunnel junction, vortex train amplitude dependent velocity meas. 3—3382
  - magnetic flux quantum absolute determ., using superconducting levitating system 3—36046
  - magnetically ordered superconductors, theories 3—57468
  - materials requirements, review 3—52317
  - microbridge, nonideal behaviour, analogue simulation 3—28483
  - microstrip input-output cable for Josephson appl., electrical props. obs. 3—16344
  - MM wave radiation detector, Josephson junction, review *(Japanese)* 3—45207
  - monochromatic phonon generation by the Josephson effect 3—13359
  - neutron induced permanent changes in critical current density 3—38543
  - noise rounded current-voltage curves of Josephson tunnel junction, capacitance effects 3—23547
  - nonautonomous Josephson junction, response to weak quasi-harmonic perturbation 3—38556
  - nuclear particle detector using supercond. structure 3—17173
  - oscillatory steady states, lifetime, problems of pendulum, shunted Josephson junction and charge-density 3—10773
  - overlap and long inline Josephson junctions, fluxon dynamics, mag. field dependence, perturbation calc. 3—52311
  - point contacts fabrication, for submillimetre-wavelength mixers 3—49399
  - polyvinyl stearate Langmuir-Blodgett films as barrier layers in Josephson tunnel junctions 3—38557
  - quantum noise and quantum tunnelling and macroscopic systems 3—23554
  - quasi-equilibrium states of open systems via quantum dynamical master equations, Josephson junc. appl. 3—13965
  - resonant tunnel junction, mag. coupling between junction and applied microwave *(Chinese)* 3—43327
  - resonant tunnel junction, mag. coupling between junction and applied microwave *(Chinese)* 3—43328
  - sine-Gordon soliton dynamics, perturbation theories 3—38558
  - SINS junction, DC Josephson effect *(Chinese)* 3—13963
  - small-capacitance junctions, impedance calc., tunnel theory of Josephson effect 3—13971
  - static interferometer characteristics with many equal Josephson junctions 3—38545
  - superconductor-ferromagnetic metal-superconductor junction, crit. current oscills., exchange field depend. 3—8627
  - superconductor-semimetal-superconductor junctions, stationary Josephson current, effect of exciton coupling *(Russian)* 3—38542
  - thin film devices, 1/f noise model, appl. to bolometers, Josephson junctions, SQUIDS 3—52314
  - transmission line, thermal fluctuations in fluxon reson. motion 3—3380
  - tunnel junction, resistively shunted self-reson., chaotic noise obs. 3—57489
  - tunnel junction, supercurrent oscills. within one flux quantum period *(Chinese)* 3—3376
  - tunnel junctions, current distrib. and inhomogeneity, laser scanning method 3—33833
  - tunnel junctions, retarded current response to phase transitions 3—52313
  - tunnel junctions, small-area, AC Josephson effect of 604 GHz 3—13960
  - tunnelling barrier fabrication by sputtering and oxidation 3—43331
  - tunnelling Hamiltonian approx., Kramers-Kronig relations, sign of $\cos \phi$ term 3—47458
  - tunnelling theory, QED formulation 3—33832
  - universal scaling and chaotic behavior of a Josephson-junction analog 3—25817
  - voltage reference standard appl. high precision potentiometer 3—36043
  - voltage steps, microwave phase noise effect 3—3379
  - vortex mode multiconfiguration obs. in long Josephson tunnel junctions 3—28482
  - weak link, model, periodic pair-current modulation in Josephson junctions *(Chinese)* 3—13961
  - $BaPb_{1-x}Bi_xO_3$ ceramic, Josephson tunnelling 3—23552
  - Nb Josephson junction technology, state of the art 3—52317
  - Nb oxide tunnel barrier in Josephson junction, struct. 3—23546
  - Nb ultrashort variable-thickness bridge fabrication 3—18830
  - Nb/Al-Al_xO_y-Nb(Al/Nb) refractory Josephson tunnel junctions, fabrication 3—47455
  - Nb/Nb oxide/Pb Josephson tunnel junctions fabricated using tetrafluoromethane plasma cleaning 3—52310
  - Nb-Nb Josephson junction, sputtered amorphous Si tunnelling barrier 3—43330
  - Nb-Nb_2O_5-Nb Josephson tunnel junction, fabrication, barrier comp. and elec. props., XPS study 3—43332
  - Nb-Nb_xO_y-Pb Josephson junctions, mag. field penetration, temp. depend. 3—38548
  - Nb-NbO_x-Pb Josephson tunnel junctions, current density distrib., ageing dependence 3—33834
  - Nb-NbO_x-PbIn Josephson junction interferometers, static characts. 3—57484
  - Nb-oxide-Pb, planar superconducting struct., high freq. and reson. props. 3—33835
  - Nb-Si-Nb Josephson junctions, alpha induced upset rate, bias current depend. 3—38544
  - Nb-Sn blob-type Josephson junctions, anomalous I-V characts. 3—38547
  - $Nb_3Ge(Nb_3Sn)(Nb)$ superconductor-normal-superconductor microbridges, fabrication and Josephson behaviour 3—52306
  - NbN variable-thickness microbridges, I-V characts. under microwave irrad. 3—38549
  - NbN/Pb Josephson tunnel junctions with plasma oxidised barriers, fabrication 3—23544
  - NbN-Nb Josephson tunnel junction fabrication 3—23542
  - $NbSe_2$, Josephson junction, new materials in ion beam technology *(Japanese)* 3—39047

Josephson effect continued
Pb alloy Josephson electrodes, grain-size reduction of vapour-deposited thin films 3—57234
Pb alloy Josephson junctions, high J_c, fabrication and props. 3—43329
Pb alloys Josephson junction technology, state of the art 3—52317
Pb-Bi-Au Josephson junction counterelectrodes, film microstructure and thermal stability 3—47238
Pb-In-Au/oxide/Pb-Au Josephson tunnel junction, high precision potentiometer appl. 3—36038
PbInAu, Josephson tunnel junction, fabrication and basic props. *(Japanese)* 3—38550
Sn-SnO_x-Sn supercond. tunnel junction 3—49446
Tc multiconnected Josephson network, AC fundamental susceptibility in mixing mag. field 3—8624
V-V_xOy-Pb Josephson junctions, mag. field penetration, temp. depend. 3—38548
Joshi effect *see glow discharges*
Joule-Thomson effect
real gas, Joule-Thomson effect calc. using Bettie-Bridgeman eqn. 3—2169
refrigeration system for spaceborne appl., stability and noise obs. 3—36003
water, sp. ht., speed of sound, Joule-Thomson and fugacity coeff., and melting curves 3—42798
junction gate field effect transistors
dislocations appls. in solid state technology 3—51603
junction lasers *see semiconductor junction lasers*
junctions, waveguide *see waveguide couplers*
Jupiter
astrometric positions (April 1979) from ESO, La Silla, Chile 3—25370
atmosphere, C/H and D/H ratio determ. from spectra anal. 3—35510
atmosphere, latitudinal wind stability 3—35520
atmosphere, long-lived eddies 3—48816
atmosphere, NH_3 gas and ice haze global props., IR obs. 3—35512
atmosphere, o-H_2/p-H_2 disequilibrium, dynamic consequences 3—59256
atmosphere and interior, motion scale anal., anelastic eqns. and barotropic stability criterion 3—35511
atmosphere Great Red Spot, appl. of Rossby solitons collision *(Russian)* 3—44660
atmosphere NH_3 ice particle clouds effect on outgoing thermal radiance 3—35513
atmosphere thermal and nonthermal radiation at 6, 11 and 21 cm 3—5204
atmospheric circulation, interior struct., mag. field origin 3—5208
Callisto, geological activity compared to Ganymede 3—59250
close encounter with minor bodies 3—25374
convective model of Jupiter, appl. to atmospheric band struct. 3—20288
decametric emission relative to solar wind conditions 3—5203
decametric radioemission assoc. with Io plasma torus 3—35517
distant magnetotail and wake region obs. 3—35401
dust grain with elec. charge, motion in rot. magnetosphere 3—40056
electron fluxes in interplanetary space and solar wind plasma interactions 3—48781
emerging thermal radiation spectra 3—48847
encounter (in 1779) with ejected particles from Periodic Comet Lexell 1770 perihelion passage 3—30305
ethane in S Polar Region, ν_9 band IR heterodyne spectroscopy 3—40067
Europa, liquid water layer rel. to active resurfacing 3—35518
Europa plasma torus, Pioneer 10 evidence 3—15868
Galilean satellite positions, computer program *(French)* 3—35504
Galilean satellites, astrometric positions (April 1979) from ESO, La Silla, Chile 3—25370
Galilean satellites form. in gaseous nebula, model appl. to Callisto/Ganymede 3—35508
Galilean satellites Ganymede and Callisto, surface features, colour photometry 3—35514
Galileo project, image sensor with 800×800 CCDs appl. 3—10209
Galileo space probe *(German)* 3—59181
Ganymede, evolution of tectonic features 3—59254
Ganymede, geological activity compared to Callisto 3—59250
Ganymede, pedestal craters, form. and statistics 3—35506
global EM resonances in atmosphere of Jupiter, possible existence 3—15862
gravitational figures of Jupiter and Saturn, effects of differential rot. 3—59253
hot plasma torus, S II emission, Voyager obs. 3—20286
icy moon tectonics and rheology of ice 3—10257
icy satellites, thermal and plasma induced mol. redistribution 3—35505
icy satellites interiors, self-compression effects from mass-radius relations 3—35509
interplanetary grains in Jupiter 2/1 resonance, Poynting-Robertson drag and gravit. interaction 3—35531
Io, hot spot emission spectrum, volcanic flow model and thermostatic mechanism 3—35507
Io, SO_2 eroded from surface by charge particle impact 3—54273
Io, SO_2 ice sputtering by ions 3—25371
Io, SO_2 near-UV absorpt. spectrum implications 3—35491
Io, thermal radio emission anal., SHF, UHF obs. 3—5202
Io, tidal heating rel. to orbital evolution of Jovian satellites 3—15872
Io exosphere, charge exchange and knock-on processes 3—20285
Io flux tube radiowave emissions 3—44700
Io Na cloud, solar radiation press. explanation of east-west asymmetries 3—35502
Io plasma torus, interpretation of dawn-dusk asymmetry of UV emission 3—54274
Io plasma torus, O III deficiency, obs. 3—30294
Io plasma torus, structure and model 3—5207
Io plasma torus and exosphere charge exchange collisions 3—35515
Io plasma torus corotation lag 3—48848
Io plasma torus region proton conc. 3—35516
Io torus, S electron impact ionisation 3—32217
lightning activity on Jupiter, optical and RF obs. by Voyager 1 spacecraft 3—59252
Lyman-alpha emission intensity, Copernicus meas. and aeronomical significance 3—10252
magneto-ionosphere corotation enforcement current 3—15870
magnetosphere, MHD equilib. of rot. plasma disk 3—40057
magnetosphere, narrowband EM emissions, Voyager 1 and 2 obs. 3—59255
magnetosphere, solns. to eqns. for corotating magnetospheric convection 3—10251
Jupiter continued
magnetosphere and ionosphere, solar wind interaction 3—15800
magnetosphere charged particle motion 3—5206
magnetosphere corotating plasma convection 3—15871
inner magnetosphere ion injection and loss mechanisms 3—15869
magnetosphere particle absorpt. by rings and satellites 3—40069
magnetosphere trapped particle absorpt. by Amalthea 3—40068
magnetospheres of Jupiter and Saturn, Voyager 1 and 2 results 3—25373
magnetotail at large distance from planet (~9000 R_J) 3—10255
North Equatorial Belt, tropospheric gas comp. and D/H ratio 3—20287
organic compounds mixing ratios from UV refl. spectrum anal. 3—54271
photochemistry of NH_3, methane and PH_3, atmospheric colours 3—35519
plasmas torus, UV emission of SO_2 dissoc. products 3—50531
radiation effects and erosion of spacecraft dielec. materials 3—15819
radio brightness temp. meas. based on absolute calibration of radiotelescopes with periscopic reflector 3—40035
radio bursts (decametric) and IMF sector structure 3—48849
radio emission at 0.87 mm, brightness temp. 3—40061
radio emission semirelativistic maser cyclotron instability, azimuthal bunching 3—51314
radiowave emission from magnetosphere, theory 3—54272
ring system, limit on possible narrow rings from stellar occultation obs. 3—10254
ring system, motion of charged dust grains 3—40056
rings, dynamics and physical props. 3—25320
satellites, review 3—25372
satellites (book) 3—16102
satellites and rings dynamics 3—20212
short-period comets pre-discovery encounters, Keplerian approx. estimation 3—25381
stochastic generation of continuous wave spectra 3—44625
third order theory, missing terms determ. method *(French)* 3—10221
troposphere, abundances of CH_4, CH_3D, NH_3 and PH_3 from high-resolution 1100 to 1200 cm^{-1} spectra 3—10253
Voyager 1 mission 3—54276
whistler emission (hiss and chorus) from magnetosphere 3—10256
H I Lyman α emission, vars. in 1979-82 period 3—35503
H_2O abundance of Jupiter, determ. from Voyager IRIS data at 5 μm 3—59251
He and D abundances on Jupiter and Saturn, cosmological implications 3—54554
K-capture *see nuclear electron capture*
K mesons *see kaons*
K-N interactions *see kaon-nucleon interactions*
Kalman filters
circular pipe flow, velocity profile estimation, appl. *(Japanese)* 3—7662
EMG signals, system identification and sequential signal estimation algorithm 3—19841
fuel-clad thermal gap conductance determ. by Kalman filter methods 3—891
hydrology cycle of Lake Biwa basin, state estimation appl. 3—25145
LWR, operation and data anal. with Kalman filters *(German)* 3—49912
noisy blurred images, const. accel of object, identification of point spread function, recursive restoration 3—22005
kaon-baryon interactions
see also kaon-baryon scattering; kaon-hyperon interactions; kaon-nucleon interactions
No entries
kaon-baryon scattering
see also kaon-baryon interactions; kaon-hyperon scattering; kaon-nucleon scattering
No entries
kaon decay
see also kaon hadronic decay; kaon leptonic decay
$K \rightarrow \gamma\gamma$, effects of ρ, ω, ϕ, ψ exchanges, decay rates 3—26117
$K^+ \rightarrow \pi^0 \mu^+ \nu_\mu$, muon transverse polarisation, T-invariance violation 3—49666
$K^\pm \rightarrow \pi^\pm l^+ l^-$, weak decays and limits on neutral Higgs boson mass 3—21121
$K_L{}^0 \rightarrow \gamma\gamma$ in relativistic quark model 3—21133
K_{l3} decay, form factors, Bethe-Salpeter $q\bar{q}$ dynamics 3—26094
K_{l3} form factor renormalisation, role of π' and K′ 3—21130
kaon hadronic decay
see also kaon regeneration
weak decay, Nambu-Goldstone nature, quark-tadpole transitions, $\Delta = {}^1/_2$ rule 3—26110
$K \rightarrow \pi\pi$, decays in relativistic harmonic-oscillator quark model 3—16633
$K^0 \rightarrow \pi^+ \pi^-$ long-distance effects and $\Delta I = {}^1/_2$ rule 3—36241
K^0-$\bar{K}^0$ system interaction with external fields 3—636
$K^+ \rightarrow \pi^+ \pi^0 \rightarrow \pi^+ \tilde{\nu}\tilde{\nu}$ in spontaneously broken supersymmetric models 3—54907
$K_L{}^0$ decay, CP violation origin 3—40804
$K^{*+}(1430) \rightarrow K^+ \gamma$, radiative decay width using Primakoff formalism 3—11187
kaon-hyperon interactions
see also kaon-hyperon scattering
No entries
kaon-hyperon scattering
see also kaon-hyperon interactions
No entries
kaon interactions *see kaon-baryon interactions; kaon-nucleus reactions; lepton-hadron interactions; meson-meson interactions; photon-hadron interactions*
kaon leptonic decay
$SU(4)_{colour}$ gauge boson mass limit from $K_L \rightarrow \mu e$ exptal. bound 3—49610
$K^+ \rightarrow \gamma e \nu$, radiative decay and effective $q\bar{q}$ pot. near origin 3—21137
$K_L \rightarrow \mu^+ \mu^-$, longit. muon polarisation 3—54905
$K_L \rightarrow \mu\bar{\mu}$, strangeness changing neutral current, loop contrib. of quarkinos 3—16571
$K_L \rightarrow \mu\bar{\mu}(e\bar{e})$, flavour violation, scalar particles and leptoquarks 3—11081
$K_{\mu 2} \rightarrow \mu^+ \nu \gamma$, heavy-neutrino search 3—11170
Kl3 decay, leptoquarks and supersymmetric particle constraints 3—583
kaon-nucleon interactions
see also kaon-nucleon scattering; kaon-proton interactions
K±N, 150, 200 GeV, dimuon transverse momentum meas., differential cross sections, QCD anal. 3—11213
$K^- d \rightarrow K^+$ + miss,ing mass 1.4 GeV/c, search for dibaryons with S = −2, Q = −1 3—26141
KN, Σ, Λ and η production, N_β role in nucleon-exchange reactions 3—40923

kaon-nucleon interactions continued
  K^-N, low mass dimuons prod. at high transverse momentum, ρ, ω, ϕ reson. study 3−49704
  $K^\pm N$ interactions, expt. and theoretical review 3−16807
  π^0 production in π, K, p interactions with nuclear targets 3−21187

kaon-nucleon scattering
  see also kaon-nucleon interactions; kaon-proton scattering
  optical potential, computer model, linear equations 3−36224
  $\bar{K}N$ scatt., $gq\bar{q}$ annihilation, lower limit of effective gluon mass in baryons 3−609
  KN sigma terms from kaon-nucleus scatt. lengths 3−660

kaon-nucleus reactions
  for inelastic kaon-nucleus scattering, see "kaon-nucleus scattering"
  see also kaon-nucleon interactions
  role in understanding the nucleus 3−11350
  (K^-,K^+), $^{16}C_{\Lambda\Lambda}$ and $^{40}Ar_{\Lambda\Lambda}$ formation, DWBA calc. of cross sections 3−54974
  (K,X), hypernuclei prod., expt. and theoretical review 3−16807
  $^3He(K^-, K^+n)H$, dibaryon H prod. cross section calc. 3−26277

kaon-nucleus scattering
  see also kaon-nucleon scattering
  optical potential, computer model, linear equations 3−36224
  K^--nucleus scatt. lengths anal., KN sigma terms 3−660
  $^1H(K^+,K^+)$, low-energy scattering, energy-depend. separable pots. 3−653
  $^2H(K^+, K^+)$, Faddeev eqn. anal., isosinglet K^+N S-wave scatt. length 3−26279

kaon production
  virtual-photon exchange, production rates, numerical correspondence with QCD 3−26093
  $B \to K_nX$, K multiplicities, hadronic and semileptonic decays, branching ratio 3−26109
  (d,X) on NaF and Pb, 2.1 GeV/nucleon, K^+ meson prod. cross section meas. 3−774
  $e^+e^- \to$exclusive channels, 1.4-1.9 GeV, $\rho'\omega'\phi'$ model interpretation 3−26128
  $e^+e^- \to$hadrons, 14-34 GeV, $\pi^\pm$,$K^\pm$,$\bar{p}$ and p inclusive prod., yields and composition 3−49693
  $e^+e^- \to \Psi(4S) \to B\bar{B}$, inclusive K^0 prod. at upsilon reson. 3−6109
  $e^+e^- K_SK_L$, 1.06-1.40 GeV, neutral kaon formfactor meas. *(Russian)* 3−6111
  $\gamma\gamma \to \pi^+\pi^-(\pi^0\pi^0)(K\bar{K})$, scalar meson production and mass 3−31257
  $K^-p \to \bar{K}^0\pi^-p$, 8.25 GeV/c, K* resonance obs., cross sections 3−21148
  $K^+p \to (K^0,\bar{K}^0,\Lambda,\bar{\Lambda},K^*,p^0)X$, 70 GeV, inclusive prod. cross sections 3−21175
  $K^+p \to (K^{*+}(892), \bar{\Sigma}^{*-}(1385), \Sigma^{*\pm}(1385))X$, 32 GeV, multiparticle fragmentation 3−21176
  $K^+p \to K^{*\pm}(890)X$, 147 GeV, inclusive strange resonance prod. 3−26169
  $K^\pm p \to K_s{}^0\pi^\pm p$, 30, 50 GeV/c, amplitude anal. using Geneva-Lausanne spectrometer, Regge pole description, K* resonances 3−21153
  $\nu(\bar{\nu})N$ production of strange particles, K^0 and Λ prod. 3−26102
  (p,X) on NaF and Pb, 2.1 GeV/nucleon, K^+ meson prod. cross section meas. 3−774
  $pN \to \pi K+X$, identification test, large aperture ring imaging Cherenkov counter 3−45766
  $\bar{p}p$, 374-680 MeV/c, annihilation cross sections for 2-, 4- and 6-prong events, S meson 3−49695
  $pp \to K_s{}^0X$, $\sqrt{s}=63$ GeV, neutral strange particle prod. cross sections 3−21169
  $pp \to KX$, large P_T, qualitative comparison with QCD 3−36203
  $pp \to K^{*\pm}(890)X$, 147 GeV, inclusive strange resonance prod. 3−26169
  π^-p, 200, 300 GeV, inclusive high P_T prod. cross sections for $\pi^\pm$, $K^\pm$, p and $\bar{p}$, A depend. 3−49707
  $\pi^-p \to K^0K^-p$, 50-175 GeV, A_2 prod., Regge descript., Pomeron exchange 3−26147
  $\pi^-p \to K^+\pi^-\pi^0\Lambda$, 3.95 VeV/c partial wave anal. of $K\pi\pi$ system 3−26140
  $\pi^-p \to KX$, large P_T, qualitative comparison with QCD 3−36203
  $\pi^+p \to k^+\Sigma^+$, differential cross sections and polarisations 3−45411
  $\pi^+p \to K^{*\pm}(890)X$, 147 GeV, inclusive strange resonance prod. 3−26169
  $\pi^\pm p \to K_s{}^0K^\pm p$, 30, 50 GeV/c, mass and momentum transfer spectra, resonance production, Regge pole description 3−21154
  $Y\pi \to K$-N, in high energy heavy ion collisions, subthreshold K^- prod. 3−31235
  (Ne,X) on NaF and Pb, 2.1 GeV/nucleon, K^+ meson prod. cross section meas. 3−774
  $^{28}Si(^{28}Si,X)$, 2.1 GeV/N, subthreshold K^- prod. by coherently produced ϕ-mesons 3−45540

kaon-proton interactions
  see also kaon-proton scattering
  multiparticle dynamics, conf., Notre Dame, IN, USA (June, 1981) 3−20581
  Kp, multijet prod. in QCD framework 3−16641
  K^-p, 16 GeV, pion pair second order interference 3−666
  K^-p, 32 GeV/c, fragmentation processes, π longitudinal correlations, quark processes 3−49710
  K^-p, 4.5, 5.6, 14.3 GeV, planar features of hadronic final states, e^+e^- and μp comparison 3−11210
  K^-p, u, d, ud quark fragmentation obs. by fast $\bar{K}^0$ (Λ) selection 3−21171
  $K^-p \to K_s{}^0K^\pm\pi^\mp\Lambda(K_s{}^0K^\pm\pi^\mp\Sigma^0)$, 4.2 GeV/c, evidence for $K^*\bar{K}$ state at 1.530 MeV 3−26144
  $K^-p \to K^-\phi p$, 8.25 GeV/c, dissoc. of K^- into $K^-\phi$ system 3−659
  $K^-p \to \bar{K}^0X$, SU(3) based comparison with pion charge exchange scatt. in triple Regge region 3−11208
  $K^-p \to \bar{K}^0\pi^-p$, 8.25 GeV/c, K* resonance obs., cross sections 3−21148
  $K^-p \to \Lambda\gamma$, branching ratio for stopped K^- 3−26142
  $K^-p \to \Lambda\bar{p}p$ $(pK^-\bar{p}p)$, 18.5 GeV/c, narrow baryonium prod. study 3−11207
  $K^-p \to \phi\phi\Lambda$, 8.25 GeV/c, cross section, $\phi\phi/\phi$ prod. ratio 3−21149
  $K^-p \to \phi\phi\Lambda(\Sigma^0)$, 18.5 GeV/c, total cross section, suppression factor 3−40928
  $K^-p \to \pi X$, quark and diquark jet fragmentation at 70 GeV 3−21172
  K^+p, 147 GeV/c, jet-like multiparticle systems, coplanarity 3−6122
  K^+p, 32, 70 GeV/c, energy, charge and quantum number flow, inclusive and exclusive jets 3−45422
  K^+p, 70 GeV/c, inclusive ϕ prod., s-quark fragmentation and recombination 3−11212
  $K^+p \to$ charged particles, forward distrib. anal., net charge and strangeness distribs. 3−21168
  $K^+p \to (K^0,\bar{K}^0,\Lambda,\bar{\Lambda},K^*,p^0)X$, 70 GeV, inclusive prod. cross sections 3−21175

kaon-proton interactions continued
  $K^+p \to (K^{*+}(892), \bar{\Sigma}^{*-}(1385), \Sigma^{*\pm}(1385))X$, 32 GeV, multiparticle fragmentation 3−21176
  $K^+p \to K^+p\pi^+\pi^-$, 70 GeV/c, total cross-section, domination by diffractive dissoc. 3−26150
  $k^+p \to K^+p\pi^+\pi^-(K^0p\pi^+\pi^0)(K^0\pi^+\pi^+n)$, 3 GeV, full and differential cross section meas. 3−26143
  $K^+p \to K^{*\pm}(890)X$, 147 GeV, inclusive strange resonance prod. 3−26169
  $K^+p \to \bar{\Lambda}X$, 32, 70 GeV/c inclusive $\bar{\Lambda}$ hyperon polarisation 3−40937
  $K^+p \to \pi^-X$, 70 GeV/c, proton fragmentation, internal structure of valons 3−31176
  $K^+p \to X$, 70 GeV, jetlike props. of multiparticle systems 3−21164
  $K^+p \to Y^{*\pm}(1385)X$, 147 GeV, inclusive strange resonance prod. 3−26169
  $K^\pm p$, 100, 175 GeV/c, single particle inclusive scatt. and multiplicities 3−671
  $K^\pm p$, charged particle multiplicity distrib. 3−661
  $K^\pm p \to K_s{}^0\pi^\pm p$, 30, 50 GeV/c, amplitude anal. using Geneva-Lausanne spectrometer, Regge pole description, K* resonances 3−21153

kaon-proton scattering
  see also kaon-proton interactions
  $K^+(K^-)p$, 20, 50 GeV/c, elastic scatt. differential cross section at large momentum transfers 3−54927
  K^-p forward scatt. amplitude, zero position constraint from positivity 3−11202
  K^+p, 70 GeV/c, elastic scatt. total and differential cross-sections meas. 3−26150
  K^+p, low-energy scattering, energy-depend., separable pots. 3−653
  $K^\pm p$, high energy, elastic differential cross section, scaling 3−26145
  $K^\pm p$, high energy forward elastic scatt. cross section 3−26146

kaon regeneration
  No entries

kaon resonances *see meson resonances*

kaon scattering *see kaon-baryon scattering; kaon-nucleus scattering; lepton hadron scattering; meson-meson scattering; photon-hadron scattering*

kaons
  see also kaon regeneration
  meson wave functions and SU(3) symmetry breaking, QCD sum rules, two particle decay 3−586
  structure function model in QCD framework 3−16641
  $SU(2)_L \times 5U(2)_R \times U(1)_{B-L}$ left-right symmetry, K_L-K_S mass difference, ν mass formula 3−40835
  SU(7) GUT, heavyphoton interactions and mirror fermions, K_L-K_S mass diff. constraints 3−11094
  valence structure function, thermodynamic anal. 3−21132
  $K \to \gamma\gamma$, effects of ρ, ω, ϕ, ψ exchanges, decay rates 3−26117
  $K \to \pi\pi$, decays in relativistic harmonic-oscillator quark model 3−16633
  K^0, charge radius in anisotropic chromodynamics 3−40909
  K^0-$\bar{K}^0$, CP violating mass difference, leptoquarks and supersymmetric particle constraints 3−583
  K^0-$\bar{K}^0$, spontaneous CP violation, right-handed current anal. 3−54861
  K^0-$\bar{K}^0$ mixing, $\Delta S=2$ matrix element 3−36248
  K^0-$\bar{K}^0$ mixing, electroweak interactions left-right symmetric model 3−49605
  K^0-$\bar{K}^0$ mixing in six quark model, QCD leading log approx. 3−49630
  K^0-$\bar{K}^0$ system interaction with external fields 3−636
  k^0-$\bar{k}^0$ transition amplitude in potential model for quark confinement, mass differences for unification 3−601
  K^+, EM form factors in anisotropic chromodynamics 3−40909
  K_L-K_S mass difference and constraints on W_R mass 3−54909
  K_L-K_S mass differences, strangeness changing neutral current, loop contrib. of quarkinos 3−16571
  K_{l3} form factor renormalisation, role of π' and K′ 3−21130
  $K^{*+}(1430) \to K^+\gamma$, radiative decay width using Primakoff formalism 3−11187

Kapitza-Dirac effect
  see also Schwarz-Hora effect
  No entries

Kapitza resistance
  Ag sintered submicron powders, rel. to low temp. heat exchangers 3−56416
  Cu sintered submicron powders, rel. to low temp. heat exchangers 3−56416
  Cu-liq. ^4He interface, enhanced thermal conductance in presence of acoustic streaming 3−28178
  $CuK_2(SO_4)_2$ $6H_2O$/liq. ^3He-^4He interface, mag. coupling at very low temps., thermal boundary resist. 3−57161
  He, desorption kinetics, macroscopic continuum model 3−51887
  He I, Kapitza resistance influence on nucleate boiling at solids 3−37486
  He, liquid, interface with real solid, Kapitza cond. enhancement at 0.32 meV phonon energy 3−28175
  ^3He, liquid/sintered powder boundary, thermal resist., Landau Fermi liq., theory 3−47210
  ^4He film. superfluid, surface excitations, inelastic neutron scatt. study 3−51888
  ^4He liquid-solid interface, Kapitza resist. 3−2910
  ^4He, solid-liquid interface, Kapitza resistance 3−18528
  ^4He, superfluid, heat transfer performance, for use in superconducting magnet technology 3−38148
  NaF/liquid ^3He, phonon transmission into ^3He, freq. depend. 3−42909
  Si surfaces, high freq. acoustic phonon scatt. study 3−18546

KDP *see potassium compounds*

Kelvin-Helmholtz instability *see flow instability*

Kennelly-Heaviside layer *see E-region; ionosphere*

keratin *see proteins*

kerma *see dosimetry*

Kerr effect (optical) *see optical Kerr effect*

Kerr electro-optical effect
  see also optical Kerr effect
  cholesteryl 2 (ethoxy-ethoxy) carbamate, electric field induced birefringence meas., Kerr effect *(Rumanian)* 3−19108
  cryogenic set-up, Kerr effect obs. in variable electric field 3−16371
  dipolar hard ellipsoids fluid, second virial coeffs. 3−13394
  ethylene glycol-water capacitor, Kerr electro-optical mapping 3−43483
  nematogens above nematic-isotropic transition, optical Kerr const. anomalous behaviour 3−23040
  nitroanisole-benzene, dilution effects on opt. props. 3−8799
  nitrobenzene-benzene, dilution effects on opt. props. 3−8799
  o,m-nitrotoluene-benzene, dilution effects on opt. props. 3−8799
  PMMA, solid, Kerr effect meas. 3−47621

Kerr electro-optical effect continued
- poly-p-methacryloyloxybenzoate-p-nonyloxyphenol solution in tetrachloromethane, electrooptical props. *(Russian)* 3−47624
- polyethylene, solid, Kerr effect meas. 3−47621
- polymers, comb-like with mesogenic fragments, electrooptical props. *(Russian)* 3−47624
- relaxation time of Kerr effect buildup, anal. expressions 3−52769
- voltage measurement, liquid-core optical fibre sensor based on Kerr effect 3−45157

Kerr magneto-optical effect
- amorphous materials, mag. domain obs. using CCD image sensor and microcomputer 3−25904
- ferrites, losses and phases study by magnetomicrowave Kerr effect 3−38802
- hysteresimeter for thin films, adapted for electron diffractometer *(French)* 3−20880
- magneto-microwave Kerr effect, effective linewidth, guided wave anal. and surface finish effects 3−34172
- magnetopolarimeters, Kerr and Faraday, for local mag. parameter meas. of film, coatings, wafers 3−40648
- nematogens above nematic-isotropic transition, optical Kerr const. anomalous behaviour 3−23040
- transition metal-Sn Heusler alloys, $M_2M'Sn$, mag. and magneto-optical props. 3−52527
- $BaFe_{12-2x}Co_xTi_xO_{19}$ ceramic, magneto-optic Kerr effect 3−28840
- Ba_2FeMoO_6, anomalous magneto-optic Kerr effect, influence of oxidation 3−34075
- $BaFe_{12}O_{19}$, magneto-optical and optical props. meas. 3−8805
- Ca_2FeMoO_6, anomalous magneto-optic Kerr effect, influence of oxidation 3−34075
- $CdCr_2Se_4$ mag. semicond. film, domain boundary stabilisation, Kerr effect study 3−28669
- $CoFe_{2-x}Al_xO_4$ ferrite, polar Kerr rotation and Faraday effect 3−28842
- $CoFe_{2-x}M_xO_4$ (M=Mn, Cr, Al) ceramic, magneto-optic Kerr effect 3−28840
- $CoFe_2O_4$, LPE grown, mag. and magneto-optical props. 3−14095
- $Co_xFe_{3-x}O_4$ ferrite, polar Kerr rotation and Faraday effect 3−28842
- $Fe_{40}Ni_{40}P_{14}B_6$, domain struct. and behaviour 3−28593
- Gd-Fe-Co amorphous films, magneto-optic Kerr effect and Curie temp. 3−28841
- Gd-Tb-Co film, amorphous, mag. props., magneto-optical recording appls. 3−57720
- $Mn_xFe_{3-x}O_4$, magneto-optical spectra meas. 3−14265
- $Ni_{80}Fe_{20}$ etched films, micromagnetic struct. and struct. const. 3−14096
- $Ni_xFe_{3-x}O_4$, magneto-optical spectra meas. 3−14265
- $PbFe_{12}O_{19}$, magneto-optical and optical props. meas. 3−8805
- PtFeSb, Heusler alloy, struct., mag. and magneto-optical props. and ^{57}Fe Mossbauer spectra 3−57898
- PtMnSb, high magneto-optical Kerr effect obs. 3−38801
- $SrFe_{12-x}Al_xO_{19}$, magneto-optical and optical props. meas. 3−8805
- Sr_2FeMoO_6, anomalous magneto-optic Kerr effect, influence of oxidation 3−34075
- Tb-Fe alloy thin films, amorphous, RF-sputtered, thickness depend. of mag. hysteresis props. 3−28661
- Tb_xFe_{1-x} sputtered amorphous alloy, magneto-optical props. 3−28838
- $Tb_{0.23}(Fe_{1-y}M_y)_{0.77}$ (M=V, Mn, Co, Cu), amorphous, mag. and magneto-optical props. 3−57897
- $(YSmLuCa)_3(FeGe)_5O_{12}$ ion implanted films, Kerr rotation study 3−34076
- $Zn_xFe_{3-x}O_4$, magneto-optical spectra meas. 3−14265

keyboards
- touch-sensitive keyboard, electronic music application 3−12452

kicksorters *see counting circuits*

kidney
- absorbed doses at CT and urography 3−9741
- angiographic evaluation of renal artery stenosis, compound angulation 3−58805
- artery models, electrochem. surface shear rate evaluation 3−24778
- artificial kidney, laboratory exercise for medical students 3−5551
- current pathways in high-voltage injuries 3−48281
- digital subtraction angiography in the diagnosis of kidney disorders 3−19806
- double isotope renal clearance assays anal., computer appl. 3−34959
- ionising radiation combined with US induced hyperthermia, effects in mice 3−29671
- iso-effect tables for tolerance of irradiated normal human tissues 3−58751
- neutron normal tissue tolerance in animals, comparison with patient clinical obs. 3−44273
- neutron RBE for early and late normal tissue injury in pig 3−44272
- pulsatile blood flow, fluid dynamics and mech. wall stress for aneurysm and renal bifurcation *(German)* 3−58694
- RF dielectric properties of animal tissues, in vivo and in vitro obs. 3−39686
- sector scanning in renal US 3−19788
- ultrafiltration monitor for haemodialysis research 3−48448
- ^{131}I renal images, artifacts due to coincidence summing of ^{99m}Tc photons 3−48402

Kikuchi lines *see electron diffraction crystallography*

killed steel *see alloy steel*

kinematic viscosity *see viscosity*

kinematics
- *see also acceleration; ballistics*
- V1343 Aquilae (SS 433), obs. of secular changes in kinematic model 3−40150
- biomechanics, kinematic variables derived from accelerometer and photographic meas., combination 3−4709
- biomechanics cinematography, algorithm for minimising effect of LF errors in derived kinematic variables 3−4707
- biomechanics cinematography, calc. of derivatives from digital information 3−4708
- biomechanics cinematography, determ. of sensitivity to error sources and target configuration of kinematic variables 3−4713
- Charnley 'load angle inlay' knee prosthesis, kinesiologic and biomech. assessment 3−4680
- Coma galaxy cluster, galaxy vel. dispersion profiles rel. to mass-light ratio and dark matter density 3−5434
- cometary comae, photochemical heating of H_2O and CO-rich comets rel. to neutral gas kinematics 3−35532

kinematics continued
- Compton collisions, ejected-electron trajectories *(French)* 3−21929
- disc galaxies, luminosity-vel. dispersion ($L \propto \sigma^n$) for bulge components from vel. dispersion meas. 3−49002
- 30 Doradus B (N175B), supernova remnant, velocity and optical spectrum 3−48992
- faint elliptical galaxies, kinematic props. 3−54503
- elliptical galaxies, mass-central velocity dispersion relation from hierarchical merging model 3−49001
- elliptical galaxies, rel. dispersion profiles and rot. curves rel. to dynamics 3−54514
- error equations to kinematic eqns. soln., derivation using quaternions 3−35413
- fluid-structure transient dynamic interactions, Lagrangian-Eulerian finite element method 3−10587
- galactic halos, vel. dispersion assoc. with massive neutrinos in large-scale gravit. clustering 3−30489
- galaxies, IR absolute magnitude-H I rel. width-surface brightness relation rel. to cosmological expansion *(Russian)* 3−35724
- spherical galaxies, rel. dispersion profiles for models with 3−54504
- galaxies, spherical, projected vel. dispersion calc. from simple model for three-dimensional light distrib. 3−49024
- Herbig-Haro objects 46 and 47, radial vel. meas. and spectrophotometry rel. to bipolar ejection from young star 3−35692
- Hu 1-2, plantary nebula, internal motions and geometry from O III, H I and N II radial vel. fields 3−40233
- HVC 287.5+22.5+240, 271+11+258, 273+9.5+258, positive high velocity clouds, obs. of fine struct. in ang. distrib. and vel. profiles 3−40234
- I 289, planetary nebula, internal motions and geometry from O III, H I and N II radial vel. fields 3−40233
- impact testing of humans, targets for 3D tracking 3−4705
- interstellar CO radial velocities towards galactic H II regions, catalogue 3−5148
- interstellar medium, internal motions of warm H I clouds component rel. to H I emission profiles 3−44821
- interstellar medium, vel. fluctuations due to gravit. interaction with system of stars 3−54485
- M42 (Orion nebula), radial vels. rel. to complex ionised struct. in θ^2 Orionis region 3−15978
- M51, optical spectrophotometry of galactic nucleus rel. to high-velocity gas outflow 3−54515
- matrices, space and time reversal *(French)* 3−20651
- NGC 1313, barred spiral galaxy, asymmetric rotation rel. to ionised gas morphology 3−44678
- NGC 1501, NGC 6905, planetary nebulae, expansion velocity fields meas. 3−5393
- NGC 2371-2, planetary nebula, three-dimensional spatial-kinematic model from echelle spectrograms 3−35697
- NGC 3998, active lenticular galaxy, vel. field and physical conditions 3−49025
- NGC 584, 50 galaxy, rel. dispersion profile and rot. curve rel. to dynamics of galactic bulge 3−54514
- NGC 7354, planetary nebula, internal motions and geometry from O III, H I and N II radial vel. fields 3−40233
- peculiar galaxies in clusters of galaxies, H I spectra and kinematics 3−10449
- quasars, kinematics of broad-line emission gas 3−10437
- reflection nebula surrounding Be star HD 87643, equivalent widths and line shifts rel. to internal motions 3−40232
- rigid body, time-optimal kinematic control of helical displacement 3−54617
- S0 galaxies, rot. vels. and central vel. dispersions meas. 3−49004
- S106, bipolar nebula, kinematic struct. from spectroscopic obs. 3−5387
- Seyfert galaxy nuclei, kinematics of broad-line emission gas 3−10437
- solar granulation velocities, consistency of mixing length theory for solar convection zone 3−10193
- solar photosphere, obs. of global-scale Fraunhofer line shifts 3−35570
- space-time manifolds, kinematic groups and Lie algebras 3−129
- H I radial velocities towards supernova remnant G116.9+0.2 (CTB 1), rel. to remnant distance and diameter 3−10420

kinematography *see cinematography*

kinerecording *see video recording*

kinetic theory
- *see also Boltzmann equation; collision processes; intermolecular mechanics; kinetic theory of gases*
- Bose gas, dil., order parameter relax. and quasiparticle scatt. time 3−171
- evaporation front, gas-dynamic discontinuity, kinetic model 3−46635
- glass, transport processes, kinetic-particle method 3−23071
- hard-sphere Lorentz gas, drift vel. 3−163
- hydrodynamic fluctuations, nonequilibrium sources, kinetic coeffs. 3−2166
- kinetic equations for many-particle correlation functions 3−5711
- kinetic equations for stochastic processes with beginning and ending paths *(German)* 3−181
- nonspherical particles motion in turbulent flow 3−22438
- particle stopping in medium with internal motion, kinetic theory 3−13298
- polymer, rodlike, in semidil. solns., rot. Brownian motion, tube model, kinetic eqn. 3−13072
- polymer solutions, diffusion mass flux, phenomenological approach 3−51835
- Prigogine-Misra-Courbage theory of irreversibility, rates of convergence to equilibrium 3−10735
- relativistic kinetic theory and conformal transformation 3−40441
- stars distribution around black hole, numerical soln. of kinetic eqn. with collisions 3−10380
- torque on rotating sphere or cylinder, extended Boltzmann equation calc. 3−10591
- CO_2-N_2-He laser, operating efficiency, kinetics model 3−26996

kinetic theory of gases
- *see also Brownian motion; collision processes; equations of state; intermolecular mechanics; Joule-Thomson effect*
- binary gas mixture, diffusion slipping at moderate density along flat surface 3−51166
- binary hard sphere mixture with one trace component of disparate mass, transport theory 3−12801
- charge particle drift in strong elec. field, distrib. function moments 3−27632
- cylindrical condensed phase, kinetic theory of evaporation and condensation 3−57073
- dense gases, dynamical struct. factor calcs. 3−56638

kinetic theory of gases continued
diatomic gas, Boltzmann eqn. asymptotic soln. 3—42349
diffusion in gases, elementary kinetic theory 3—12802
dissociating gas, transport processes, nonequilib. effects, theory 3—2165
energy and momentum exchange, gases at different temps. 3—27634
expansion into vacuum of gaseous ellipsoid with repulsion between particles 3—22562
extended irreversible thermodynamics, kinetic derivation 3—25838
highly excited molecules, relaxation study 3—32837
intercollisional interference effects, model with shallow interference dip 3—56637
light particle states in dense gases and mixtures 3—22563
logarithmic, phase transitions, isotropic case 3—37604
Lorentz gas, diffusion, percolation and trapping, variational, kinetic theory appl. 3—164
Maxwell transport eqn., soln. from bimodal two-stream relaxing distrib. 3—32835
moderately dense gas, kinetic eqn. nonequilibrium flow 3—37599
molecular gas, mean-free-path in long pipe of circular cross section *(Chinese)* 3—12800
multiatomic gas, moderately dense, nonequilibrium processes, kinetic equations 3—12804
multiatomic gases, moderately dense, kinetic equation in dissipative approx. coefficients of shear and bulk viscosity and thermal conductivity 3—17989
nonequilibrium gas, vibr. dynamics in case of anharmonic mol. vibrs. *(Russian)* 3—17990
nonlinear Boltzmann equation, soln. for nonisotropic initial conditions 3—42347
polarization creep in a polyatomic gas 3—2163
polyatomic gases, nonequilibrium states, kinetic eqns. 3—27631
rarefied gas, Boltzman limit 3—37600
rarefied gas, spectra density of velocity autocorrelation function *(Russian)* 3—42357
Rayleigh gas, velocity relaxation 3—2164
Rayleigh problem in BGK model, density perturbation at wall 3—27635
real gases, nonstationary and isothermal diffusion 3—51267
selectively excited particles, separation in intersecting streams 3—2102
state functions of gas, one-particle distrib. function, derivative alternation 3—30827
statistical kinematic processes, free path relation 3—30776
thermophoresis, low-density behaviour, kinetic theory 3—54698
two-particle regime, equilib. soln. bimodal Maxwellian distrib. 3—22566
vapour-gas mixture, evaporation and condensation, kinetic anal. 3—22304
N_2, rarefied gas flow past sphere, kinetic eqns. 3—27552
O_3, vibr. excited zone, gas temp. problem, analytic soln. 3—6770
kinetic theory of liquids *see kinetic theory; liquid theory*
kinetics of chemical reactions *see reaction kinetics*
kink bands
double sine-Gordon chain, thermodynamic props., effect of kinks 3—30811
solid solution, BCC, solute clusters effect on screw dislocations, strengthening and weakening model 3—37923
Cu, dislocation etch pits on (111) surface, morphology 3—42616
Mo, high-purity single crystal, low-temp. plasticity, CASS and activation volume 3—39227
kinoforms *see computer-generated holography*
Kirkendall effect *see diffusion in solids*
KKR calculations
substitutionally disordered systems, self consistent pot. calc., KKR-CPR method 3—42995
Ag_cPd_{1-c}, band struct. effects on Auger spectra 3—34178
Al 3—38279
Al, Fermi surface props. from phase shift parametrisation 3—13703
Au, electronic struct. and d^ns^1 impurity states 3—3046
Au_xNi_{1-x}, electronic struct. and density of states, KKR CPA calc. 3—43004
Au_cPt_{1-c}, electronic struct., relativistic theory 3—3049
Au_cPt_{1-c}, $N_{6,7}$ soft X-ray emission spectra, electronic struct. 3—3870
Co, electronic band struct., Fermi surface, and optical props. under press. 3—3051
Cr, band struct. in paramag. and antiferromag. phases, press. influence 3—3052
Cu, impurity states, selfconsistent electronic struct. calcs., application of complex energy integration 3—18595
Cu, point defect form. energy and charge density oscillations around impurities *(German)* 3—27935
Cu-Ni, band struct., angle-resolved photoemission study 3—28962
Cu_cPd_{1-c}, band struct. effects on Auger spectra 3—34178
Fe, magnetism and thermodynamic props. above Curie temp. 3—52356
FeAl, local partial Al density of states, linear KKR study 3—38279
K, Fermi surface press. depend., KKR calc. 3—57257
LaH_x, self-consistent electronic struct. calcs. 3—23264
Nb-Mo, Fermi surface and electron-phonon mass enhancement 3—3037
Ni_cPt_{1-c}, paramag., electronic struct., relativistic KKR CPA calc. 3—52021
NiTi, electronic struct. and optical cond., KKR calc. 3—3053
Pd, electronic energy bands and optical absorpt. spectra 3—13716
Pt, electronic struct. and d^ns^1 impurity states 3—3046
SmS, electronic struct., relativistic KKR calcs. 3—47262
$Ta_{0.5}W_{0.5}$ alloy, electronic density of states and Fermi surface calc. 3—23232
UTe(Bi), electronic struct., relativistic calcs. 3—18609
Zr-Nb, Fermi surface and electron-phonon mass enhancement 3—3037
klystrons
see also reflex klystrons
free electron laser resonator modes, electron dynamics 3—12158
linear electron accelerators application 3—21587
optical klystron spontaneous emission and gain 3—17513
stimulated Cherenkov optical klystron, gain and efficiency 3—56219
Thomson CSF extremely high power klystrons for particle accelerators 3—45724
transverse optical klystron, gain curve in small signal regime, report 3—21588
transverse optical klystron (TOK) and convertor physics and figures 3—32285
transverse optical klystron amplifier, small signal gain 3—22077
transverse optical klystron harmonic generator, generalised description 3—56211
ultra-low phase noise superconducting-cavity stabilised microwave oscillator with application to gravitational radiation detection 3—40468
Knight shift
see also nuclear magnetic resonance
liquid binary alloys of simple metals, Knight shifts calc., charge transfer effects 3—38706
metals, simple, positive muon Knight shift, self consistent calc. 3—38742
rare earth compounds, RRh_3B_2, R=La to Gd, NMR, mag. and superconducting studies 3—23819
superconductor, homogeneous NMR line shift induced by mag. doping 3—13959
Be, Knight shift, chem. shift correction 3—38708
$Ca_{100-x}Al_x$ metallic glass, atomic and electronic struct., MNR and mag. susceptibility studies 3—27850
CeB_6, spin dynamics, NMR study 3—52657
$CePt_{2-x}Rh_x$, lattice parameter, X-ray diffr., ^{195}Pt NMR Knight shift studies 3—51543
Cs, expanded liquid, enhanced paramag. and spin fluctuations, ^{133}Cs NMR meas. 3—47472
Cs-Sb liq. alloys, metal-nonmetal transition and bonding changes, NMR study 3—28723
Cu, conduction spin density, Knight shift and Fermi surface, MAPW formalism 3—38707
$Cu_{0.4}V_2O_5$, quasi 1-D conductor, bipolaronic state of V^{4+} ion pair, NMR study 3—57294
Cu_xZr_{100-x} amorphous alloys, ^{91}Zr and ^{63}Cu-NMR meas., short range order 3—3566
$GdAl_2$, band struct. changes on mag. ordering, NMR anal. 3—28722
Ge:As, metal-nonmetal transition under ⟨111⟩ stress, NMR study 3—57283
Hg, fluid, Knight shift and dielec. anomaly 3—23820
$LaAg_{1-x}In_x$, muon Knight shift study 3—52695
$Li_xV_2O_5$, quasi 1-D conductor, bipolaronic state of V^{4+} ion pair, NMR study 3—57294
MoS_2, alkali metal intercalates, ESR spectra and NMR Knight shift 3—14130
$Na_{0.33}V_2O_5$, quasi 1-D conductor, bipolaronic state of V^{4+} ion pair, NMR study 3—57294
β-$Na_{0.33}V_2O_5$, quasi-one-dimensional cond., bipolarons, NMR and EPR study 3—28720
$NbSe_3$, ^{93}Nb NMR study 3—3563
$Nb_{1-y}Ti_yH_x$ thin films, ^1H NMR Knight shift and mag. susceptibility 3—28721
Ni, ferromagnetic ground state, spin susceptibility, high field ^{61}Ni Knight shift 3—19003
$(PbTe)_{100-x}(MnTe)_x$, NMR study 3—14152
$Pd_{1-x}Ag_x$, mag. susceptibility rel. to ^{109}Ag Knight shift 3—52360
Pt catalyst, NMR, Knight shift inhomogeneity 3—3565
Pt(001) film, spin-polarisation and Knight shift, all electron self-consistent determ. 3—57803
Rb, liq., isolated ^{88}Y ions, anomalously small Knight shift and nucl. relax. rate 3—14175
Re, nucl. quadrupole interaction and Knight shift, nucl. acoustic reson. study 3—28709
Rh-Cr dilute alloys, hyperfine interactions, Knight shift, nuclear orientation study *(French)* 3—33691
SmB_6:La(Yb), spin dynamics, NMR study 3—52657
$(SnTe)_{100-x}$ $(MnTe)_x$ mag. semicond., NMR shift and line width 3—47564
Ti-Cu hydrides, amorphous, proton NMR study of H diffusion and electronic struct. 3—34003
Ti-Cu hydrides, proton NMR study of H diffusion and electronic struct. 3—34003
$TiBe_2$, nearly ferromag., spin fluctuations, NMR study 3—57802
$TiCr_{1.8}H_x$, proton NMR and mag. susceptibility 3—33993
VH_2, ^{51}V and ^1H NMR 3—3564
VS_2 (1T), phase transition, ^{51}V spin echo NMR spectrum 3—57814
Zr-Pd metallic glass and cryst. hydrides, NMR spectra and props. 3—33999
ZrH_x, proton NMR study of electronic struct. 3—38307
Zr_2PdH_x, cryst. and amorphous, electronic struct., NMR studies 3—52644
ZrS_2 (Se_2), alkali metal intercalates, ESR spectra and NMR Knight shift 3—14130
Knudsen flow
arc discharge, cathode region erosion processes 3—22738
gas mixture nonisothermic flow in channel at intermediate Knudsen nos. 3—22527
radiant transport through adiabatic packed bed or porous solid, Monte Carlo simulation 3—17967
Na_2, vel. distrib. anisotropy induced by a temp. gradient across Knudsen cell 3—1417
Knudsen number *see Knudsen flow*
Kohn effect *see lattice dynamics*
Kondo effect
alloys, dil., low temp. thermoelec. power in asymm. Anderson model 3—33711
Anderson lattice, one-dimensional, density of states, single-particle dispersions, perturbation expansions with Coulomb screening 3—52053
Anderson localisation, conf., Sanda-shi, Japan (November 1981) 3—40321
Anderson model, temp. depend. susceptibility and universality 3—38584
dense Kondo system resistivity and periodic Anderson model 3—52123
dilute alloys, spin-lattice relax. time meas. by CW NMR, quadrupolar splitting effect 3—3573
exact solution for Kondo Hamiltonian, magnetisation wave, Wilson's number 3—18852
Green's function theory of Kondo effect and mag. ordering 3—3412
Kondo model, specific heat and mag. susceptibility 3—28513
localization and Kondo effect 3—52124
magnetic alloys, dil., min. resist. mech. *(Chinese)* 3—13808
matter, structure and props., book 3—40326
proximity-effect sandwich systems with Kondo impurities, transition temp. 3—8625
rare earth compounds, valence instabilities and mag. ordering 3—18664
rare earths and actinides, mag. and supercond. props., review 3—18861
specific heat of the Kondo model 3—3455
SU(4) and SU(6) Kondo models, mag. field depend. of magnetisation 3—38583
superconductors, two-band, containing Kondo impurities, crit. temp. 3—3351
two-band metals containing Anderson impurities, proximity effect tunnelling 3—57485
two-dimensional systems, Kondo effects and localisation 3—43146

Kondo effect continued
- valence fluctuations, mag. susceptibility and mag. relax., perturbation formalism 3—52084
- Wilson-Andrei number for SU(3) Kondo model 3—8649
- Au-Fe, dil., absolute thermoelec. power at low temps., spin glass-Kondo effects 3—8474
- CdMn, low temp. resist anisotropy of single cryst. spin glass systems 3—28343
- Ce, Kondo vol. collapse and γ to α transition 3—3413
- Ce, Kondo volume collapse in dilute and concentrated cases, γ-α transition 3—52364
- $CeAl_2$, Kondo alloy, elastic props., ultrasonic vel. study 3—18366
- $CeAl_2$, mag. ordering, electronic struct., LMTO calcs. 3—57508
- $Ce_{89}Al_{11}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
- $Ce_{80}Au_{20}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
- CeB_6, ^{11}B spin echo NMR, mag. field depend. 3—28737
- CeB_6 and alloys, dense Kondo behaviour 3—52361
- CeB_6, spin dynamics, NMR study 3—52657
- CeB_6, spin struct., NMR study 3—57793
- $Ce_{72}Cu_{28}$ amorphous alloys, elec. cond. and thermoelec. power, cryst. field induced anomalies 3—57336
- $Ce(In_{1-y}Sn_y)_3$, behaviour in mixed valence and Kondo regimes 3—23333
- $Ce_{1-x}La_xB_6$, elec. resist. meas., scatt. mechanisms 3—52122
- $Ce_{1-x}La_xCu_2Si_2$, elec. cond., transition from Kondo lattice to Kondo impurity 3—43163
- $Ce_{1-x}La_xSb(Bi)$, anomalous mag. and transport props. 3—52591
- CeMg(Zn), Neel temp., press. depend. 3—57617
- $Ce(Pd_{1-y}Ag_y)_3$, behaviour in mixed valence and Kondo regimes 3—23333
- CePt, resist. and magnetisation meas. 3—47482
- $CeSi_x$, mag. and nonmagnetic behaviour 3—52482
- $CeSn_3$, Fermi surface props., dense Kondo and mixed valence models 3—52010
- $Ce(Sn_xPb_{1-x})_3$, elec. cond., mixed valence behaviour 3—28334
- $Ce_{1-y}Y_yB_6$, elec. resist. meas., scatt. mechanisms 3—52122
- Cu-Fe, Kondo and spin glass states, elec. and mag. studies *(Russian)* 3—28512
- Fe_xNb_{100-x} sputtered amorphous alloy, mag. props., resistivity and Mossbauer spectra 3—28658
- $(La,Ce)B_6$, dil., Kondo system, Hall coeff., mag. field depend. 3—57335
- $(La_{1-x}Ce_x)Sn_3(Th)(Be_{13})$, behaviour in mixed valence and Kondo regimes 3—23333
- MgMn, low temp. resist anisotropy of single cryst. spin glass systems 3—28343
- $Ni_{80-x}M_xB_{16}Si_4$ (M=3d transition metal), amorphous, elec. resist. 3—28328
- TiN films, neg. temp. coeff. of resist., struct. anal. 3—47442
- $(U_xTh_{1-x})S(Se)$, dilute alloys, specific heat and Kondo effect 3—57522
- $Y_{0.9}Tm_{0.1}S$, Kondo effect, mag. susceptibility, elec. resist. meas. 3—52363
- ZnMn, low temp. resist anisotropy of single cryst. spin glass systems 3—28343

Korringa-Kohn-Rostoker calculations *see KKR calculations*

Koster effect *see dislocation damping*

k.p calculations
- No entries

Kramers-Kronig relations
- air, specific heat, nonadiabatic relax., freq. depend. 3—56640
- composite materials, Kramers-Kronig relations and wave propagation 3—46363
- graphite:B, dielectric function and critical-point transitions 3—14244
- Josephson effect, tunnelling Hamiltonian approx., Kramers-Kronig relations, sign of cos ϕ term 3—47458
- steel, stainless, and oxides, optical consts. and spectral selectivity 3—3663
- $(Ag_{x/2}Ge_{1-x}Sb_{x/2})Te$, ferroelec. phase transition, elec. cond. and optical absorption studies 3—43496
- CdS, complex dielec. function in exciton and plasma limit 3—38330
- CdTe, fundamental optical functions and relectivity spectra *(Russian)* 3—47618
- GaAs, Kramers-Kronig analysis of optical consts., Philipp-Taft method improvement 3—52759
- GaAs, Kramers-Kronig analysis of optical consts., calc. accuracy 3—52760
- GaAs, optical consts., subtractive Kramers-Kronig method and Leveque method 3—8793
- Ge monochalcogenides, amorphous, optical consts., reflectivity meas. 3—38791
- InS, IR reflectivity and cryst. struct. 3—47634
- α'-In_2Se_3, prep., optical spectra and elec. cond. 3—38822
- $KHgC_x$ (x=4, 8) intercalation compound, optical reflectivity 3—8847
- $LiTmF_4$, lattice dynamics and electron-phonon interactions 3—42722
- $NiBr_2(Cl_2)$, fundamental refl. and electronic struct. 3—43562
- $(SN)_x$, pure and brominated, polarised reflectivity spectra, 1-25 eV region 3—14315
- ScS(Se)(Te), optical props. and electron struct. 3—19157
- $TlGa_xIn_{1-x}Se_{2x}S_{2(1-x)}$ solid soln., optical phonons, IR spectra study 3—47066
- Zn_3As_2, Kramers-Kronig analysis of optical consts., Philipp-Taft method improvement 3—52759
- Zn_3As_2, Kramers-Kronig analysis of optical consts., calc. accuracy 3—52760
- Zn_3As_2, Kramers-Kronig analysis of optical consts. 3—52761
- Zn_3As_2, optical consts., Kramers-Kronig anal., calc. method review 3—8792
- Zn_3As_2, optical consts., subtractive Kramers-Kronig method and Leveque method 3—8793
- ZnP_2, monoclinic, IR lattice vibr. spectra 3—43528
- Zn_3P_2, Kramers-Kronig analysis of optical consts., Philipp-Taft method improvement 3—52759
- Zn_3P_2, Kramers-Kronig analysis of optical consts., calc. accuracy 3—52760
- Zn_3P_2, Kramers-Kronig analysis of optical consts. 3—52761
- Zn_3P_2, optical consts., Kramers-Kronig anal., calc. method review 3—8792
- Zn_3P_2, optical consts., subtractive Kramers-Kronig method and Leveque method 3—8793

Kramers systems *see determinants*

Kromayer lamps *see mercury vapour lamps*

Kronig-Penney model
- disordered Kronig-Penny I-D model, statistical props. in elec. field 3—42989

Kronig-Penney model continued
- one-dimensional disordered systems, localisation in presence of elec. field 3—52079
- reciprocal lattice space formalism 3—44939
- Wannier reson. oscills., elec. field depend. 3—33688

krypton
- *see also nuclei with ......*
- adsorbed on graphite, electrodynamic screening of van der Waals interaction 3—42927
- adsorbed on graphite, phase transitions, lattice gas models 3—51951
- adsorption on BN, dielec. and adsorption isotherms 3—23175
- adsorption on ZnO, SnO_2 MgO, CdO, surface homogeneity and surface hydroxyl effects 3—2957
- atmosphere, long-range dispersion expt. using ^{85}Kr tracer 3—39866
- atom, electron impact, characteristic X-ray prod., 4 to 10 keV 3—26687
- atom, electron impact excitation near-threshold 3—21923
- atom, highly ionised, mag. dipole transitions in Texas Exptl. Tokamak 3—55882
- atom, $M_{4,5}$NN Auger spectra, configuration interaction calc. 3—11763
- atom, optogalvanic spectra using *(Japanese)* 3—10925
- atoms, broadband photon yield excited by nonenergetic electron impact 3—46069
- atoms, dynamic dipole polarisabilities, density-functional calc. 3—55828
- atoms, radial transformation problem, physically based regularisation method 3—21720
- crystal, isochoric thermal cond., heat transfer by vacancies *(Russian)* 3—18523
- dense gas, eqns. of state 3—22565
- dense gas, struct., two-body time correls. neutron scatt. study 3—46822
- discontinuous film, atom mean-square displacements, sample size effect 3—8365
- fluid, bulk viscosity near triple point, acoustic attenuation meas. 3—57118
- fluid, free electrons and excitons, photocond. excitation and VUV refl. spectra 3—23437
- gas, inelasticity correction in neutron scatt. meas. 3—56806
- gas, narrowband pulsed dye laser nonreson. sum- and difference-freq. mixing, tunable VUV radiation generation 3—12229
- gas, third harmonic conversion with a focused beam 3—12234
- interactions, intermol. pots. 3—56021
- light production by ^{85}Kr and ^{147}Pm radionuclides, by-products from nuclear waste 3—21391
- liquid, surface tension calc. 3—23135
- liquid-vapour interface, surface tension, density distrib. *(Russian)* 3—2935
- mixtures in glow discharge positive column, spectral and elec. pumps. 3—2328
- monolayer, adsorbed on graphite, behaviour near commensurate-incommensurate transition 3—23163
- monolayer, adsorbed on graphite, weakly incommensurate phase, mol. dynamics simulation 3—28214
- muon Coulomb capture in Ne-Ar-Kr mixtures, conc. depend. 3—32250
- Penning ionisation, energy and ang. distribs. of ejected electrons *(French)* 3—11955
- proton and α-particle stopping power, mean excitation energies and Barkas effect parameters 3—41456
- proton stopping power meas. 3—41455
- solid, vacancy-induced thermal cond. 3—42867
- solid and liquid, hot electron relax. calc. 3—13823
- Ar-Kr gas scintillation proportional counters, emission spectra 3—41432
- He-Kr high-press. laser excited by U fission fragments 3—50645
- He-Kr hollow cathode ion laser investigation *(Chinese)* 3—41862
- Kr crystals, stimulated VUV emission 3—14322
- Kr I lifetimes meas. by Hanle effect method under electron beam excitation 3—1308
- Kr II ion laser, lifetimes for radiative transitions 3—50644
- Kr III energy levels, configuration interaction calc. 3—11763
- Kr ions+Ar, X-ray and Auger transitions *(German)* 3—11761
- Kr microclusters, supersonic expansion form. size distrib. anal. 3—36898
- Kr XXXIII Be-like ions, relativistic intermediate coupling calcs. 3—41527
- Kr^+ beams stopping power meas., time of flight method, in Al, Ti, Ni, Zr, Ag 3—51677
- Kr^+, metastable ion beam fractions measured for different ion sources 3—40717
- Kr^{3+}, electron impact ionisation absolute cross section meas. 3—46076
- Kr: ^{57}Fe, impurity-host to host-host coupling force const. ratio 3—22988
- Kr-H_2 dimers, vibr. predissoc., spectrosc. obs. 3—50486
- Kr-He mixture, DC hollow cathode discharges using Al cathode, glow-to-arc transition, report 3—46804
- Kr-methane, diffusion coeffs. and thermal diffusion factors 3—7682
- Kr-SF_6, scatt. cross sections, intermolecular pots. 3—21850
- Kr-Xe, elastic scatt. cross sections, empirical interatomic pots. 3—21849
- Kr-Xe, vapour-liquid equilib., crit. line, Gibbs energy, phase compositions 3—33397
- Kr+Ar, glory undulations for total cross section 3—26812
- Kr+Ar interactions, intermol. pots., HFD-C type 3—56022
- $Kr+Ar_2$, atom exchange and dissoc. reaction mechanisms calcs. 3—29304
- $Kr+Ar_2(NeAr)$, atom exchange and dissoc. reaction mechanisms calcs. 3—29304
- Kr+Ar(Kr), glory undulations for total cross section 3—26812
- Kr+Ar(Kr)(Xe), total collision cross sections in glory region 3—11941
- Kr+fluoromethane-d_3, IR luminesc. and vibr. relax. at low temps. 3—17367
- $Kr+He^{2+}$, electron capture, cross section binary encounter approx. 3—32194
- $Kr+He^{2+}$, electron capture from gas target atoms, 0.7-4.5 keV 3—46064
- Kr+Kr collisions, X-ray emission in keV range 3—41671
- $Kr+Li^+$, total cross section meas., pot. determ. 3—17355
- Kr+Na, Rydberg d states, collisional ang. momentum mixing meas. using selective field ionisation 3—6757
- $Kr+O_2$, total collision cross section in glory region 3—21858
- Kr^++He, integral elastic scatt. cross-sections 3—26852
- Kr^++Xe, excitation cross sections for ion energies below 100 eV 3—6762
- $Kr^{9+}+H$, charge transfer meas. using effusive H target 3—30961
- Kr^{q+}+atom collisions, multiple electron transfer, statistical model 3—56065
- Kr_2+Kr_2, pair polarisability anisotropies from depolarised interaction induced light scatt. 3—50492
- ^{77}Kr, convenient prod. method for medical use 3—29745
- ^{77}Kr, high-purity, production via $^{77}Se(^3He,3n)$ 3—58815
- ^{85}Kr, β-radiation damage on trichlorofluoromethane in batch and flow system 3—45584

krypton continued
  ^{85}Kr, fixation studies for long-term storage, review *(Japanese)* 3—26316
  ^{85}Kr from LWR reprocessing plants, long term storage in pressurised cylinders *(German)* 3—16881
  ^{85}Kr purge at Three Mile Island in 1980, risks of local and global public health effects 3—29646
  ^{85}Kr, radioactive effluent retention in nuclear facilities, cost-benefit analysis 3—11394
  N_2-He (Ne)(Ar)(Kr)(Xe) binary systems, diffusion coeffs. and thermal diffusion factors 3—12805
  Si:Kr$^+$, ion implantation, radiation damage accumulation kinetics 3—37945
krypton compounds
  H_2S photodissociation in Kr matrix, photoluminescence study 3—26774
  KrF electron beam excited laser performance, F_2 conc. optimisation 3—37008
  KrF excimer laser, electron beam pumped, saturation property meas. 3—56267
  KrF excimer laser gas mixture cryogenic purification and lifetime extension 3—56230
  KrF excimer laser pumped by annular electron beam, beam quality 3—1681
  KrF excimer laser with high spectral brightness working in the regenerative amplifier regime 3—56229
  KrF excimer lasers, electron-beam switched, discharge-pumped, gain and discharge characts. 3—56180
  KrF excimer lasers, wide aperture, self-sustained discharge 3—56268
  KrF, high-power lasers, pulsed electron beam systems, for fusion 3—12183
  KrF laser, electron-beam pumped, constant intensity approximation analysis 3—27010
  KrF laser, wide-aperture, self-sustained discharge 3—6952
  KrF laser pulse compression by stimulated Brillouin scatt. in tapered waveguides 3—32391
  KrF laser pulse harmonic generation using a supersonic gas jet expansion 3—56284
  KrF laser radiation phase conjugation and pulse compression by stimulated Raman scatt. 3—27167
  KrF laser triggered spark gaps using UV optical to transmit beam 3—7851
  KrF, lasing and fluorescence spectra meas. with UV-preionised KrF excimer laser 3—32349
  KrF minilaser, inductively stabilised, long-pulsed operation 3—50647
  KrF Sprite excimer laser, high power, electron-beam-pumped 3—56242
  KrF transversely excited Blumlein laser, fast discharge pulsed current meas. *(Chinese)* 3—37002
  KrF UV laser, plasma channel form. 3—7764
  KrF* amplified ultrashort UV laser pulse generation and pulsewidth meas. 3—37087
  Kr_2F* in electron beam excited mixtures, time resolved fluorescence spectra, kinetics 3—26784
  KrXe, photoionisation and bond dissoc. energies 3—11899
Kuhn-Thomas sum rule *see molecular energy levels*
Kurie plots *see beta-decay theory*
kymography *see radiography*
Kyropoulous method *see crystal growth from melt*
labelled atoms *see radioactive tracers*
labelled compounds *see radioactive tracers*
labelled molecules *see radioactive tracers*
laboratories
  see also acoustical laboratories
  biomechanics cinematography laboratory development, human engineering considerations 3—4699
  Hydrodynamics Research Lab., at Johns Hopkins APL, oceanographic simulation 3—20153
  IAEA nuclear laboratory at Seibersdorf in Austria, twenty years of activity 3—6278
  Ohio State University indoor solar energy laboratory 3—44101
laboratory apparatus and techniques
  see also specific instruments and techniques, e.g. balances, plasma probes, vacuum techniques
  see also instrumentation; instruments; measurement; student laboratory apparatus; test equipment; test facilities; testing
  automated laboratory general physics expt., interactive mode of operation *(Russian)* 3—16341
  balances, microcomputer interfacing 3—5769
  biomechanics cinematography laboratory, light considerations 3—4698
  chromatograph thermostats temp. meas. 3—306
  chromatography, intelligent sample processor laboratory automation system interface 3—39420
  cinematography data systems at the Naval Biodynamics Laboratory 3—4704
  cooling components with chilled tap water 3—16342
  cryomicrotomy appl. to rapid-freeze deep-etch replica method for unfixed tissues and cells 3—15297
  evoked potentials thresholds estimation using a lab. computer 3—58883
  EXAFS meas., curved crystal spectometer 3—49521
  gas gun for mechanical testing, using bursting diaphragm as a fast-acting valve 3—42203
  grinding jig for mechanical thinning of high-pressure cell gaskets 3—277
  heat-treatment device for thermoluminescent dosimeter detectors 3—45707
  high temperature laboratory, measurement apparatus *(Japanese)* 3—40613
  leak detection of cooling water, monitoring and control unit 3—16343
  liquid-filled projectile simulator 3—40577
  microsectioning of diffusion samples by sputtering 3—49341
  motion picture laboratory, TV film servicing 3—54785
  oceanographic instrumentation, Eulerian current meas. devices, laboratory testing framework 3—44565
  oscilloscope, Tektronix 503, power transformer repair 3—49342
  position and orientation, precision movements, design principles *(Japanese)* 3—25862
  quantum yield determ. of photochemical and photophysical processes, batch reactor design 3—50549
  rotating ring-disc electrode with a removable disc 3—49525
  temperature controller circuit *(Korean)* 3—35985
  thermal conductivity instrument, 0.4-5 W m^{-1} K^{-1} range 3—7390
  viscometry using optoelectronics 3—2149
  X-ray spectrometer for EXAFS and XANES meas. 3—40738
  Ge, conductivity and Hall coeff. meas., microcomputer-controlled expt. 3—40331
labryrinth speakers *see loudspeakers*
Lacertids *see BL Lacertae-type objects*
ladder filters *see filters*
lakes
  see also rivers
  acoustic propagation, surface and bottom reverberations 3—39854
  acoustic scatt. from thermocline turbulence caused by moving object 3—54051
  Agassiz, Ontario, Canada, age of moraine and beach 3—25140
  Agassiz, Ontario, Canada, water level fluctuations 3—25140
  Bermuda, heavy metal pollution of lake and marine sediments 3—44464
  Biwa, Japan, crust struct. beneath lake 3—39831
  bubble entrainment after breaking of surface waves, sonar study 3—54064
  China, reservoir induced earthquakes 3—25018
  Chudskoe Lake, Estonia, numerical modelling wind-driven currents 3—9947
  Clear Lake, California, temp. and precipitation during last glacial cycle, pollen anal. 3—48675
  Dardanelle Reservoir, Arkansas, USA, ^{90}Sr and ^{137}Cs in water column 3—48201
  ecosystems, structural compassing of models 3—15501
  Erie, turbidity meas. in Western Basin 3—15495
  Erie, wave action, bottom stress and sediment entrainment 3—44476
  fills in digital terrain models, computerised techniques 3—9919
  free topographic wave damping on sloping beach 3—48567
  Gippsland lakes, in Australia, hydrodynamics 3—9940
  Greak Lakes (Canadian shore zones) water quality 3—44475
  Great Lakes, meteorological conditions assoc. with O_3 episodes in SW Ontario, Canada 3—4421
  heavy metal pollution due to smelters in presence of acid rain 3—4414
  horizontal current kinetics in Langmuir circulational cells *(Russian)* 3—54061
  Huron, current variability and horizontal turbulence 3—15497
  Huron, Late Quaternary sedimentation and remanent magnetisation 3—44478
  Huron, radioactive fission product pollution 3—39552
  Huron, USA, heavy metals in Saginaw Bay 3—58995
  hydrology cycle of Lake Biwa basin, state estimation appl. 3—25145
  Ladoga, Langmuir circulation cell dimensions in absence of thermocline *(Russian)* 3—20040
  Ladoga, USSR, current variability and horizontal turbulence 3—15497
  Ladoga, USSR, currents in Langmuir circulation cells *(Russian)* 3—54061
  Lake Michigan, trace elements distrib. in sediments 3—9502
  Lake St. Martin, Manitoba, geomag. and age of meteorite crater 3—19998
  large lakes of the World, inventory and description 3—44473
  Loch Ness, Scotland, bubble entrainment after breaking of surface waves, sonar study 3—54064
  Lover's Lake, Bermuda, heavy metal pollution 3—44464
  Lunkaransar, Rajasthan, Indian, palaeolake level during Holocene 3—54112
  Michigan, anal. of remotely sensed long period wave motions 3—15494
  Michigan, USA, seasonal changes in limnological conditions 3—44474
  Michigan, USA, snowbands induced by land breezes 3—48593
  Monticello Reservoir, S Carolina, USA, induced seismicity mechanisms 3—19935
  Monticello Reservoir site, S Carolina, USA, geology and seismic risk 3—19962
  Monticello Reservoir site, S Carolina, USA, induced seismicity and tectonic stress 3—19934
  Naliasar, NW India, in sediments calcite concretions growth rate 3—19984
  nonlinear hydrodynamic pressure on an accelerating plate 3—53950
  Nurek Reservoir, Tadjik SSR, tectonics seismicity due to lake filling 3—4799
  Ontario, current variability and horizontal turbulence 3—15497
  Ontario, damping of free topographic waves on beach 3—48567
  Ontario, lake breeze numerical model 3—4914
  Ontario, marsh area loss since 1789 along Canadian shore 3—44477
  Ontario, occurrence of organotin compounds in lakes and rivers 3—19631
  Ontario, uncertainty in modelling environmental fate of Mirex 3—15014
  Oroville Lake, earthquakes caused by reservoir filling 3—4797
  Qinghai Province, China, surface water and precipitation acidity 3—48211
  Quebec, Canada, heavy metal pollution of sediments and acidity effects 3—54084
  solar pond, double-diffusive convection with large variable gradients 3—34722
  Superior, Canada, geology of meteorite impact crater 3—54026
  Superior, radioactive fission product pollution 3—39552
  Teruel-Ademuz Basin, Spain, lacustrine Tertiary continental sediment rel. to tectonics/palaeogeography 3—58998
  thermal pollution of pond in Finland, ice cover, chem. biology 3—34748
  Toktogul reservoir, Tien Shan, USSR, seismic transmission and lake filling 3—4794
  vertical eddy diffusion coeffs. under conditions of nonneutral stability, formula 3—15465
  Washington, USA, acid rain and lake susceptibility 3—24646
  C accumulation in sediments (sink for atmos. CO_2) 3—4953
  N_2O, formation in lake O_2 deficient layer 3—35197
  Pu in seasonally anoxic lake waters, aquatic chemistry 3—19632
  Se pollution in lakes near smelters at Sudbury, Ontario 3—29473
Lamb shift
  cavity-resonant electrons and muons 3—49619
  nonperturbative QED calc. 3—55864
  two-electron ions, Lamb shifts and relativistic corrections calcs. 3—41509
  two-electron ions, S, P, and D states, Z-depend. perturbation theory calcs. 3—55872
  two-electron systems, 1s2s $^3S_1$-1s2p $^3P_{0,2}$ transitions, comparison between theory and expt. 3—21684
  Cl, inverse Lamb saturation dip obs. in laser mag. reson. spectrum, isotopic shift meas. 3—21680
  DBr, dipole moment, laser Stark and Fourier transform spectroscopy 3—26750
  Fe XXV, 2s ^{3}S-2p ^{3}P transitions of heavy He-like ions *(French)* 3—21875
  Fe^{26+}, Lyman-α lines and 1s Lamb shift 3—55866
  He, isoelectronic series, 2^3S-$2^3P_{0,1,2}$ energies, QED test 3—45873
  He, Lamb shifts, precision wavelength meas. 3—41532
  O^{5+}, H-like, Lamb shift meas. 3—21709
  P^{13+}, He-like, n=2 states lifetimes and fine structure energies 3—21708
  P^{14+}, Lamb shift, laser reson.-quenching method 3—26649

Lamb waves *see surface acoustic waves*

lambda point *see liquid helium-4; superfluidity*

laminar flow
  see also laminar to turbulent transitions
  acoustic wave reflection from boundary layers in flowing medium 3—17656
  air and shear thinning suspensions, cocurrent flow in pipes of large diameter 3—46647
  air flow in two dimensional channel, backward facing step flow, experimental and theoretical investig. 3—46652
  air-liquid horizontal flow, Newtonian and non-Newtonian in smooth pipe, correlation for average liquid hold up 3—12779
  arbitrary Prandtl number effect on forced convection in laminar separation 3—2065
  asymptotic three-dimensional boundary layer with suction 3—56524
  axisymmetric meridional laminar flow, azimuthal rot. due to current source 3—51128
  axisymmetric pipe, slow creeping motions, with free surfaces and gravity 3—17980
  axisymmetric tubes, with fluid flow, temp. distrib. *(French)* 3—56623
  boundary layer eqns., asymptotic solns. 3—12626
  boundary layer flow, when free stream vel. varies as power function, approx. variational soln. 3—42222
  boundary layers, buoyancy force effects on heat transfer charact. 3—37467
  boundary layers, three-dimens., at curvilinear permeable surface, universal eqns. 3—37445
  burner-stabilized premixed laminar flames, boundary value solutions 3—19523
  channel flow with separation, spectral method solns. 3—32708
  circular cylinder, external steady laminar flow, third-order boundary conditions 3—51050
  circular laminar flow of incompressible liq. around a disc and a cylinder 3—12624
  circular sector ducts, laminar flow in entrance region 3—7542
  compressible boundary layer flow at 3-dimens. stagnation pt. with massive blowing 3—12693
  conducting viscous incompressible fluid, MHD laminar flow through porous media in triangular tube 3—12784
  confined jets in two-dimensional laminar flow, boundary layer eqns. 3—17955
  constrained flow, two-dimensional inclined plate, surface press., wind tunnel tests 3—56518
  convective heat exchange, bilateral case soln. *(Russian)* 3—17940
  convective heat transfer in rectangular pipes under Neumann boundary conditions 3—2046
  Curles boundary layer, series soln. *(Chinese)* 3—17919
  curved cross section bounded by hyperbolas, steady laminar incompressible fluid flow 3—12773
  curved duct, vel. meas. of developing laminar and turbulent flow 3—12781
  diffusional deposition from laminar stream in rectangular channel 3—7660
  driven cavity flows, numerical techniques 3—49164
  dusty viscous flow between concentric spheres performing longitudinal oscillations 3—46624
  evacuated tubular solar collector transient performance model and program 3—39523
  ferroliquid flow in inhomogeneous transverse mag. field 3—22537
  filling of liquid carrying pipe criteria 3—51235
  film absorption under laminar flow, simultaneous heat and mass transfer 3—46548
  finite element-shooting analysis of laminar boundary layers 3—22421
  flame front, stability during propag. from closed end of tube 3—53404
  flames, quenching by turbulence 3—32714
  flat smooth plate in open channel flow, laminar and turbulent boundary layers *(Chinese)* 3—51222
  flows with finite region of separation, asymptotic theory appl. *(German)* 3—2023
  fluctuating struct. of turbulent thermal boundary layer is laminarised flow 3—37463
  fluid flow in heated vertical channel, heat transfer in entry region 3—27513
  forced convection laminar flow in inclined channel, vortices, ionic mass transfer stability 3—51125
  forced convection with constant vorticity over an infinite wedge 3—37489
  forced free convection in horizontal tubes of varying cross-section at low Rayleigh numbers 3—2051
  free and forced laminar convection between parallel plates, vortex effect 3—27527
  free convection flow over horizontal and inclined surfaces, vortex instability 3—37442
  free convection from cone with closed end, Navier-Stokes eqns. 3—37485
  free convection heat transfer of heat generating fluids in vertical channels with heavy walls 3—42239
  free oscillating flow of viscous liq. in U-shaped tube 3—17972
  free oscillatory flow across a plate orifice in U-shaped tube and the resistance law 3—37567
  fully developed flow in heated curved tubes, numerical soln. 3—12623
  gas flow in cooled ducts, combined radiative-convective heat transfer 3—51092
  gases, vibrationally relaxing, laminar mixing calc., Navier-Stokes eqns., appl., shock wave effect. 3—2022
  Gortler-type vortices in curved film flow 3—56553
  graphite body in hypersonic gas stream, thermochem. breakdown 3—46660
  heat transfer at bottom surface of cavity submerged in separated flow region of duct 3—7588
  heat transfer from surface of rot. disk 3—12677
  heat transfer in tube preceded by 180° bend 3—51094
  high strain rate free surface boundary layer flows, laser Doppler anemometry study 3—51073
  horizontal cylinder within confining walls, natural and mixed convection heat transfer 3—7583
  horizontal pipe flow of air and Newtonian and non-Newtonian liquids, average press. drop 3—32806
  horizontally rotating cylinder, partially-filled, azimuthal vel. meas. 3—12685
  incompressible fluid, laminar and turbulent boundary layer separation 3—27480
  incompressible fluid in round pipe, Navier-Stokes eqns. self-similar solns. 3—7655

laminar flow continued
  incompressible fluid laminar flow in plane channel with uniform unidirection injection 3—27486
  incompressible isotropic fluid, laminar free shear Hartmann flow, R-functions 3—37441
  incompressible viscous fluid in plane layer, laminar motion, thermal inhomogeneity influence 3—2025
  jet, laminar plane wall, temp. distrib. due to viscous heating 3—2100
  laminar flame propag., finite element anal. 3—58426
  laterally converging duct flow, mean flow 3—46650
  laterally converging duct flow, temporal wall shear stress 3—46651
  liquid film, isothermal multilayer, on inclined planes, model calcs. for flow curves *(German)* 3—27482
  liquid jets in immiscible liquid systems 3—12736
  liquid metal films, stability of laminar flow in mag. field 3—37575
  longitudinal-dispersion calc. by statistical anal. of mol. motions 3—32709
  MHD laminar free convection flow with Hall effects past a porous vertical plate 3—42319
  mixed convection flow over inclined surfaces, thermal instability 3—7584
  mixed convection in isothermal horizontal tube, heat transfer correl. 3—12665
  mixed convection over vertical zircaloy plate with oxidation 3—27514
  multicomponent chemically nonequilib. gas mixture in supersonic nozzle with porous walls, friction, injection effect 3—2138
  natural convection, laminar and turbulent flow in annulus between concentric cylinders 3—37496
  natural convection from horizontal cylinders in interacting flow fields 3—51097
  near wakes, evaluation by Falkner-Skan-type eqns. soln. 3—46571
  Newtonian liq. jets, inertia and surface tension effects 3—12731
  nonlinear viscous liq. jets in air, bending disturbances dynamics 3—32778
  nonNewtonian power law fluid, laminar annular flow, unsteady thermal entrance heat transfer *(Chinese)* 3—2058
  Nusselt number oscillation at straight-helical tube junction, heat transfer enhancement 3—37487
  open channel flow, thermal radiation by semitransparent fluid layer 3—56538
  oscillatory flow past infinite moving vertical isothermal plate, free convection and mass transfer effects 3—2037
  oscillatory flow under gravity waves 3—51150
  Oseen model for internal separated flows 3—17978
  parallel plate channel entrance region 3—17918
  parallelogram prism protruding from rotating disk, press. fluctuations, flow 3—17920
  Petrov-Galerkin finite element method, steady laminar flow over downstream-facing step 3—27475
  pipe and open channel laminar and turbulent flow 3—42314
  pipe flow, convection, viscous dissipation effect anal. 3—51051
  pipe flow, heat convection, complementary variational principles 3—17943
  plane Couette flow for high Reynolds no., stability 3—42244
  polydisperse suspension, sedimentation in laminar channel flow 3—22512
  polymer solns., elongational capillary flow, contraction influence 3—27608
  polymer solutions, dilute, laminar and turbulent flow model 3—27574
  power installation with liquid insolation medium, heat flow anal. for pipeline constructional parameters determ. *(Slovak)* 3—9478
  power law fluids, gap flow, laminar forced convection, pressure drops 3—37529
  power-law fluid flow over two dimens. or axisymmetrical bodies, heat transfer 3—51098
  premixed flames, stability limits, hydrodynamics and diffusion effects 3—22424
  premixed laminar system, flame flashback, numerical anal. 3—32812
  pressure around inclined ogive cylinder with laminar, transitional or turbulent separation 3—12635
  prismatic tube laminar flow, Coriolis factor and max. partial-average velocity ratio *(Russian)* 3—42307
  protein precipitates, disruptions during laminar Couette shear 3—27479
  pulsatile flow, wall heat/mass transfer meas. 3—46646
  pulsatile pipe flow, turbulence transition, reversing flow charact. accompanied by relaminarisation 3—37566
  radial flow compressors, flow in axial sealing gap inlet calcs. 3—46519
  reacting fluid losing fluidity with high degrees of transform., quasistationary flow 3—56626
  reactive particle, convective heat and mass transfer at low Peclet numbers 3—17985
  rectangular cavities in laminar and turbulent flow, separated zone heat transfer 3—42240
  red blood cells, high-gradient mag. separation, transverse particle trajectories 3—34797
  rotating disk sector, laminar incompressible boundary layer flow over surface 3—7545
  rotating straight pipes of circular cross section 3—56621
  separation region, approximate method of determ. vorticity as viscosity tends to zero 3—2069
  slightly compressible fluid, periodically varying flow, numerical anal. 3—12770
  solar-induced turbulent flows in passive air collectors, two-dimens. model 3—44147
  stagnation flow, appl. of Gyarmati's variational principle 3—42221
  stagnation point flows, 3D laminar, with mass transfer, compressible 2nd order boundary layers 3—2026
  Stokes flow, reacting particle convective diffusion 3—7575
  streamwise corner flow with wall suction 3—46521
  supersonic gas flow on blunt bodies, laminar boundary layers study 3—37447
  thermosetting polymer liquid, laminar tube flow 3—51219
  three-dimensional flows driven by resultant force distrib. along boundary layer thickness, separation patterns 3—56552
  three-dimensional supersonic viscous flow over a cone, Navier-Stokes eqns. 3—12710
  transient flows in linear viscoelastic pipes 3—12625
  transient heat transfer between laminar boundary layer and plate containing internal heat source 3—2049
  transient laminar flow in entrance region of porous pipe 3—2120
  transit time flowmeter, for laminar water flow in pipe 3—56635
  transverse flow in a corner, local pressure gradient effect 3—27481
  tube, curved, steady laminar flow, dual solns. 3—27610
  two-dimensional flows, evaluation of upwind, hybrid and quadratic finite difference schemes 3—22418
  two-dimensional laminar flow near stagnation point, stability to massive blowing 3—27483

- **laminar flow** continued
  - two-phase flow, one dimensional, dynamic test *(Hungarian)* 3—17959
  - two-phase flow in constricted capillary tube, inertia, viscosity and capillary forces 3—51209
  - two-phase two component annular flow heat transfer and flow charact. 3—51105
  - unsteady incompressible boundary layers near asymmetric stagnation point 3—51055
  - unsteady MHD flow past porous plate with suction step function change at slip flow regime 3—2130
  - vapour flux laminar flow in condensation region of heat tubes 3—51226
  - viscoelastic liquid, laminar free convection stagnation heat transfer from isothermal cylinder 3—17945
  - viscoelastic liquid flow past infinite porous plate, response to main flow fluctuation 3—7544
  - viscosity and vortices, light scatt. from FeOOH sols 3—2074
  - viscous, over moving wavy surface, calcs. 3—22422
  - viscous flow in an annulus with a sector cavity 3—51237
  - viscous fluid, pulsating laminar flow in a capillary 3—37570
  - viscous fluid between rot. disks, laminar flow, vorticity flow function 3—2021
  - viscous fluid flow, decay inside retarded rotating cylindrical vessel 3—37444
  - viscous fluid in rot. ducts of rectangular cross section, laminar flow 3—2076
  - viscous gas laminar nonisothermic flows in thin pipes, generalised similarity 3—12627
  - VPE horizontal reactors, carrier gas flows and temp. profiles 3—43769
  - wall conductance, effect on laminar flow between two circular discs 3—2077
  - water, evporation into laminar stream of air and superheated steam 3—46629
  - water, laminar boundary layer, natural convection flow adjacent to flat surface, multiple steady-state solns. 3—2027
  - water, transient natural laminar convection flow adjacent to flat surface 3—37497
  - DF, chemical laser, flowfield diagnostic expts. 3—56185

- **laminar to turbulent transitions**
  - aerodynamic levitation of laser-heated solids in gas jets 3—2101
  - air flow around three cylinders in row at low pitch-to-diameter ratios 3—32739
  - air flow in two dimensional channel, backward facing step flow, experimental and theoretical investig. 3—46652
  - amplitude and phase modulations, role during transition to turbulence 3—12628
  - aortic flow, vel. pulses transition *(German)* 3—9645
  - axially rotating pipe, retransition phenomenon *(Japanese)* 3—56613
  - cascading bifurcations 3—56527
  - circular tube flow, transitional boundary layers, flow development 3—37569
  - complex transitional flows in concentric annuli 3—17927
  - compressible boundary layer, laminar to turbulent flow transition, acoustic disturbance effect 3—51078
  - current meters, propeller type, directional response and turbulence effects 3—2155
  - developed turbulent-flow form. in a quadratic channel 3—7547
  - directed diffusion in a percolation network 3—54677
  - driven cavity flows, numerical techniques 3—49164
  - finite parameter approximative structure of actual flows 3—17922
  - fluid layer of slowly increasing depth, Rayleigh-Benard convection onset 3—32738
  - free oscillating flow of viscous liq. in U-shaped tube 3—17972
  - gas flow in helical coil, turbulent to laminar flow transition, heat transfer 3—27484
  - gas with variable physical props., flow is annular channel transitional section *(Russian)* 3—56619
  - growing boundary layer, two-dimens. wavepacket development, linear stability theory 3—27535
  - hydraulic resistance of cylindrical and annular particles under transition conditions of flow 3—22521
  - parallel flows, three-dimensional disturbances for plane Poiseuille flow in channel 3—22426
  - periodically turbulent flow meas. 3—32817
  - pipe and open channel laminar and turbulent flow 3—42314
  - pressure around inclined ogive cylinder with laminar, transitional or turbulent separation 3—12635
  - pulsatile pipe flow, turbulence transition, reversing flow charact. accompanied by relaminarisation 3—37566
  - Rayleigh-Benard convection, direct numerical simulation, spatial resolution needs 3—51107
  - Rayleigh-Benard convection cell, onset of turbulence, simple stochastic model 3—17944
  - rotating cone in axial flow, boundary layer transition 3—51134
  - rotating cone in still fluid, boundary layer transition 3—51135
  - shear flow, Lorenz attractor at high Prandtl number 3—17921
  - supersonic rarefied gas flow over cone in transitional regime 3—37522
  - Taylor Covette flow, Rayleigh-Bernard convection, turbulent transition 3—37448
  - Taylor-Couette flow, time depend. motion transition, laser Doppler velocimetry meas. 3—42245
  - Tollmien-Schlichting waves, evolution near leading edge 3—51074
  - water jet characts., high-speed macrophotography study 3—46614
  - ^{4}He, superfluid, mass flow and crit. velocity meas. in liquid-vapour separating system 3—8282

- **laminates**
  - angle ply laminate, layer thickness effect on strength 3—9128
  - anisotropic plate, residual stress meas. by strain gauge method 3—17903
  - beam, three-ply, under transverse bending, lamination effect on stress-strain state *(Russian)* 3—56450
  - bonded plane composite, elastic plane equilib. *(French)* 3—42196
  - composite laminates, comprehensive theory for planar bending 3—17835
  - composite laminates, free edge stresses, finite element method 3—22331
  - composite plates postbuckling, energy theory 3—22346
  - composites, fatigue fracture damage 3—4107
  - composites, free-edge stress under uniform extension, logarithmic singularity 3—7406
  - corrugated laminates, temp. field and thermal stress anal. 3—50950
  - cracks, moving, in layered composites, stress wave interaction 3—2001
  - cross plied and ±45 angle plied, non-selfsimilar crack propag. *(Chinese)* 3—17869

- **laminates** continued
  - cross-ply laminated plates with elastically restrained angles, postbuckling analysis 3—42161
  - dynamic instability of suddenly heated angle-ply laminated composite cylindrical shells 3—17797
  - elastic constants, in-plane, variation with orientation angle and fabrication process *(Japanese)* 3—58155
  - exciton light absorpt., temp. depend. anomalies 3—3078
  - fibre composites, designing for maximum toughness 3—34425
  - fibre reinforced composite, laminate, boundary layer effects, free-edge stress singularities 3—4074
  - fibre reinforced composite laminates, fracture, unifying strain criterion 3—14696
  - fibre reinforced composite shell, two-layer axisymmetric, optimal study of interface axial shear stresses induced during curing 3—9028
  - fibre reinforced composites, laminate, boundary layer effects, free-edge stress soln. and basic charact. 3—4075
  - fibre reinforced epoxy resin laminates, impact fatigue strength under repeated impact loads *(Japanese)* 3—58225
  - fibre reinforced metal laminate plate, plasticity anal. 3—34416
  - fibre reinforced plastic, laminated, residual strength degradation model *(Japanese)* 3—58226
  - four layer unsymmetric crossply, room temp. shapes 3—12542
  - fracture toughness, double torsion test, transverse cracking eval. 3—24426
  - glass chopped strand mat reinforced unsaturated polyester resin laminate, fracture toughness eval. 3—34439
  - glass fibre fabric reinforced epoxy laminate, fatigue test normalisation scheme, S-N curves 3—48024
  - glass fibre reinforced plastic, sheet molding compound laminates, component quantity effect on mechanical props. *(Japanese)* 3—58168
  - glass fibre reinforced plastic laminates, method for stress-strain state determ. during prod. process 3—14820
  - glass fibre reinforced plastics, diffuse light transmission rel. to fatigue damage 3—29153
  - glass fibre reinforced polyester laminate, substances contributing to generation of osmotic press. 3—34427
  - glass fibre reinforced vinyl ester, diffusion of liq. into thick sections 3—23090
  - glass mat reinforced polyester, fatigue crack growth *(Japanese)* 3—58218
  - glass mat reinforced polyester laminate, fatigue crack growth behaviour *(Japanese)* 3—58220
  - global-local laminate variational model 3—37358
  - graphite fibre reinforced cross-ply epoxy laminates and adhesive joints, optimal cooling 3—33473
  - graphite fibre reinforced epoxy, interlaminar fracture 3—51014
  - graphite fibre reinforced epoxy angle ply laminate, hydroscopic boundary layer stresses 3—9076
  - graphite fibre reinforced epoxy angle ply laminate, layer thickness effect on strength 3—9128
  - graphite fibre reinforced epoxy laminate, damaged, bonded repair anal. with B fibre reinforced epoxy or Ti 3—14834
  - graphite fibre reinforced epoxy laminates, boundary-layer hygroscopic stresses 3—12515
  - graphite fibre reinforced epoxy laminates, with Al embedded particles, moisture detection by X-ray diffr. 3—14806
  - graphite fibre reinforced epoxy tubes, fatigue, static axial and shear props. under completely reversed load controlled loading 3—9126
  - graphite fibre reinforced epoxy unidirectional laminate with Al filler particles, residual stresses 3—53169
  - graphite fibre reinforced polymers, dynamic mech. meas., fibre surface effect 3—19365
  - graphite-epoxy composite laminate, fatigue and impact damage, US characterization 3—58385
  - graphite-epoxy composite laminates, ply orientations, 2D US imaging using polar backscatt. 3—58386
  - jute-glass hybrid fibre reinforced epoxy, compressive strength rel. to vol. fraction 3—53125
  - Kevlar fibre reinforced resin, thermal cond. 3—8279
  - metals, inhomogeneous, bending stress-strain relations, effect of initial residual stress *(Japanese)* 3—58167
  - mica reinforced plastics, mech., thermal and dielectric props. and economics rel. to processing 3—29058
  - multilaminate flexible circular plates with variable stiffness parameters, nonaxisymm. deform. 3—37367
  - multilaminate plates, nonuniform through thickness, bending 3—37368
  - orthotropic, three-dimens. shear waves propag. 3—27430
  - orthotropic, zero coupling effects 3—50926
  - plate, laminated, anisotropic buckling, transverse shear determ. effect 3—12549
  - plates, anisotropic laminated, stress conc. around holes 3—17806
  - plates, laminated, accuracy of interlaminar stress calc. 3—46446
  - plates, layered anisotropic composite material, dynamic transient analysis 3—46448
  - plates, multilayered and thick, finite element formulation 3—27375
  - polymeric large multilayer parts, unit for combined inspection 3—58365
  - resin matrix composites, residual stresses 3—53169
  - sheet laminates under plane strain, pure plastic bending 3—32614
  - shell, cylindrical, of laminar composites, strength under dynamic loading 3—51020
  - shells, circular cylindrical, antisymm. angle-ply laminated, buckling and vibr. 3—37383
  - shells, laminar orthotropic, subjected to discontinuous displacements at interface, stress-strain state 3—27410
  - shells, spherical, three-layer, supporting power under dynamic loading *(Russian)* 3—17790
  - shells of revolution, multilayer, nonlinear theory nonaxisymm. problem numerical soln. 3—50951
  - shells of revolution, multilayer, nonlinearly-elastic, canonical eqns. derivation *(Russian)* 3—17801
  - simple, symmetric, optimal design, first ply failure criterion 3—14705
  - solid-fluid periodic elastoacoustic medium, wave propagation, theory 3—42056
  - steel, soft soldered, fracture toughness in high vacuum 3—53239
  - steel,ultrahigh C/mild and UHC/UHC laminates, impact props. 3—58203
  - structures, dynamic finite element model 3—17814
  - three-component with interphase layer, viscoelastic behaviour 3—32622
  - US attenuation, cut-off freq. 3—51715
  - woven fabric composites, stiffness and strength 3—18362
  - Al-epoxy composite, ultrasonic wave propagation and dispersion, $\omega=0.1$-2.5 MHz *(French)* 3—38000

laminates continued
- Al-thermoplastic polymers, effects of temp. on adhesion properties 3—19506
- C fibre reinforced plastic, cross ply, edge effects in uniaxial compression testing 3—9129
- C-fibre reinforced epoxy resin laminate, natural vibr. modes, holographic study *(Japanese)* 3—37389
- TiC/TiB$_2$ microlaminate coating, vacuum evaporated, struct. and mech. props. meas. 3—24202
- TiC-Ni microlaminate condensate, microstruct., phase anal. and tensile tests 3—14600

laminations
- steel, low C, thin laminations, eddy current losses associated with rotating mag. fields calc. 3—38642
- steel, Si (3 wt%), thin laminations, eddy current losses associated with rotating mag. fields calc. 3—38642
- Fe-Si (3 wt.%), nonoriented, loss calc. from classical viewpoint 3—28590
- Fe-Si (3 wt.%) grain oriented laminations, Bloch wall dynamics during magnetization 3—33922
- Fe-Si (3 wt.%) grain oriented laminations, Bloch walls motion homogenisation effects due to mech. tension 3—52510

lamps
- *see also discharge lamps; filament lamps; light sources*
- UVA fluorescent lamps, UVB content rel. to erythemal effectiveness in human skin 3—58763

Landau levels
- Green's function at T=0 for electrons in quantising mag. field, integral representation 3—57250
- Hall conductivity of two-dimensional electrons in a periodic potential 3—57370
- Hall effect, 2-dimens., quantum limit theory 3—52126
- quantised Hall effect at millikelvin temps., single-electron approx. and continuum percolation theory 3—43208
- quantized Hall effect and localization in a strong magnetic field 3—43213
- semiconductor or semimetal, energy gap between magnetic field-induced impurity band and first Landau band 3—13766
- semiconductor spin superlattice with tunable minigap 3—3303
- semiconductors, band-edge and intervalley phonons, magnetoresist., magnetophonon reson. study 3—3230
- semiconductors, diamond-like, Γ_8 band dispersion law anisotropy in mag. fields 3—38308
- semiconductors, joint density of states in interband transitions in mag. field 3—38804
- semiconductors, NQR in quantising mag. fields 3—23825
- semiconductors 3—40707
- semimetals, NQR in quantising mag. fields 3—23825
- semimetals, Shubnikov-de-Haas effect, oscill. amplitudes two-band model 3—38403
- semimetals, US giant quantum attenuation, dynamical effects of electron-hole correl. 3—18751
- surface polaron excitons in strong mag. fields 3—3081
- two-dimensional electron system in strong mag. fields, CDW ground state and electron-hole symmetry 3—28287
- two-dimensional electrons, quantised motion in strong mag. field 3—57297
- two-dimensional magnetotransport in extreme quantum limit, CDW state form. 3—57369
- two-dimensional random electron system, dynamic diffusion coeff., in quantising mag. field 3—18724
- two-dimensional system, Hall effect and electron localisation in strong mag. fields 3—43212
- two-dimensional systems, strong elec. and mag. fields effects, review 3—28440
- Al$_x$Ga$_{1-x}$As-GaAs heterostructure, hopping cond. in Landau level tails between 10 mK and 1K 3—43274
- Cd$_3$As$_2$, diffusivity-mobility ratio in mag. field 3—43200
- GaAs-Al$_x$Ga$_{2-x}$As heterostructure, magneto-quantum transport at low temp. 3—3306
- GaInAs-AlInAs heterojunctions, quantum transport, intersubband scatt. effect 3—3305
- GaInAs-AlInAs heterojunctions, enhanced electron g-factors, tilted field method 3—47416
- ^{3}He, liquid, specific heat and Landau parameters 3—51884
- InAs MBE layers confined between GaSb, hybrid cyclotron intersubband reson. 3—8724
- n-InSb, deep levels, oscillatory magnetophotoconductivity study 3—23424
- InSb, diamagnetic excitons and energy band parameters, magnetoabsorption study 3—33644
- InSb, magnetoresistance, Hall effect and elec. cond. near high press. phase transition 3—13840
- InSe, magneto-optical props. near band gap, wavelength modulation spectroscopy study 3—28847
- PbTe heteroepitaxial films, band. struct., magnetoresistance oscill. study 3—28266
- Si inversion layer, quantised Hall resistance and freq. effect 3—43291
- Si/SiO$_2$ interface, 2-D electron gas, cyclotron resonance, memory function and random pot. 3—23497

Lande g-factor *see g-factor*

Lande splitting factor *see g-factor*

landing fields *see airports*

Langmuir films
- amphiphiles with cyano head groups, Langmuir-Blodgett film form. ability 3—38261
- balance, microprocessor-controlled, for isotherm and isobar meas. 3—35958
- behenic acid Langmuir-Blodgett multilayers, anisotropic, IR dichroism 3—38944
- benzoindinospiropyran Langmuir-Blodgett film, positive and negative photochromism 3—38942
- cadmium arachidate Langmuir-Blodgett film with selectively laser excited perylene, low temp. dynamical processes 3—38945
- cadmium arachidate monolayer assembly, ellipsometry, reflection, luminesc. and Raman spectra 3—38941
- cadmium arachidate-d$_{39}$ Langmuir-Blodgett multilayers on glass, crit. neutron reflection 3—38263
- chlorophyll based monolayer and multilayer arrays, optical props. 3—39591
- chromophores, orientation control in long-chain dye monolayer assemblies 3—38272
- conference, Durham, England (Sept. 1982) 3—35773
- diacetylene Langmuir-Blodgett layers for integrated optics 3—37145

Langmuir films continued
- diacetylene Langmuir-Blodgett monolayer films, polarization effects 3—38938
- diacetylene Langmuir-Blodgett multilayers, solid state polymerization and optical props. 3—39383
- diacetylene long-chain polymerizable mols., stable polar surface prep. 3—39270
- diacetylene multilayers, sensitized photopolymerization 3—39399
- diacetylenes, amphiphilic, multilayer films, polymerization 3—39384
- dipalmitoyl phosphatidylethanolamine Langmuir-Blodgett film, steady state conduction 3—38513
- diynoic acids long chain, multlayers, polymerization and struct. 3—39382
- docosanoic acid-tricosenoic acid, Langmuir-Blodgett multilayers, orientation, IR linear dichroism 3—38931
- electron-beam fine-line writing 3—36131
- history 3—35828
- Langmuir-Blodgett film diodes, dye-sensitised, photoelec. effects 3—47391
- laser light scatt. 3—38943
- magnetism, two-dimensional 3—38657
- membrane, reconstituted, struct. and permeability 3—39602
- merocyanine dye Langmuir films, ESR 3—38678
- MIS structures on narrow band-gap semiconductors 3—38487
- molecular monolayers anisotropic orientation, FT IR spectroscopy 3—38193
- monolayer assembly, functionalized, manipulation 3—38227
- monolayers, cross-linked, hyperfiltration 3—39408
- monolayers, growth by stepwise adsorption 3—42933
- monolayers, multilayer build-up by adsorpt., comparison with Langmuir-Blodgett technique 3—38229
- multilayer deposition, transfer process energy meas., meaning 3—38264
- multilayer photoconductor, merocyanine dye conc. effect 3—38438
- multilayers and adsorbed monolayers, surface pot. studies on n-GaP 3—38514
- N-(4-nitrobenzo)-2-oxa-1,3-diazole phosphatidylethanolamine Langmuir film, chromophore modified, light absorpt. and photovoltage 3—38940
- phospholipid layers, electrical interactions 3—38765
- phthalocyanine Langmuir-Blodgett film, stable, metal-free, prep. and props. 3—38260
- poly(octadecene-1-maleic anhydride) Langmuir-Blodgett monolayer on n-GaP, Schottky barrier height 3—38486
- polycyclic aromatic Langmuir films, monolayer props., chem. struct. influence 3—38228
- polydiacetylene Langmuir-Blodgett films, resonance Raman spectroscopy 3—38939
- polymerization and photoresist appls. 3—39385
- polymerization reactions, mol. arrangement effect 3—39381
- polyvinyl stearate Langmuir-Blodgett films as barrier layers in Josephson tunnel junctions 3—38557
- porphyrin Langmuir-Blodgett films, polarized resonance Raman spectroscopy 3—38937
- porphyrin Langmuir-Blodgett films 3—38271
- porphyrins, esterified, Langmuir-Blodgett films 3—38512
- purple-membrane containing, deposition on lipid and paraffin impregnated filters 3—38262
- three-dimensional molecular electronic memory using Langmuir-Blodgett multilayers 3—57426
- ω-tricosenoic acid Langmuir-Blodgett multilayers, anisotropic, IR dichroism 3—38944
- trough for continuous fabrication of Langmuir-Blodgett films 3—39052
- US transducer action 3—37316
- Al$_2$O$_3$, deposition in monolayers and multilayers 3—38265
- Au colloidal particle deposition in monolayers and multilayers 3—38265
- Au/Langmuir-Blodgett film/n-GaP diode, electrolum. 3—38923
- SiO$_2$ colloidal particle deposition in monolayers and multilayers 3—38265
- ZnS colloidal particle deposition in monolayers and multilayers 3—38265

Langmuir probes
- *see also plasma diagnostics*
- air, discharge current, plasma param. in longitudinal mag. fields 3—37720
- bolometer-Langmuir and ion trapping-Langmuir probe operation, anal. 3—18114
- density gradients and fluxes in DITE boundary layer, Langmuir double probe obs. 3—18032
- edge plasma transport in Caltech Tokamak 3—18031
- electrode current distrib. in flowing plasma 3—56754
- Frascati Tokamak, scrape-off meas. 3—18118
- ion thruster charge-exchange plasma flow 3—42375
- leak width of line and point cusp-like mag. fields 3—12949
- plasma potential measurements using emissive probe 3—37706
- plasma-wall contact, arcing initiation, impurity prod. 3—18080

lanthanides *see rare earth metals*

lanthanons *see rare earth metals*

lanthanum
- *see also nuclei with ......*
- adsorption on Mo (112), struct., work function and stability, LEED study 3—33576
- Atlantic Ocean, rare earth element distrib. 3—35191
- atom, 3d-4f reson. Raman scatt., core-hole effect 3—41516
- atom, coherent neutron scatt. lengths *(German)* 3—11945
- atom, F-level features, Dirac-Fock calcs. 3—31913
- atoms, fast electron bombardment, broad emission band study 3—50339
- coadsorption with Li on W (100), work function and thermal stability 3—28218
- comparison of loss and absorpt. spectra *(Russian)* 3—34184
- diffusion and thermotransport of C *(Russian)* 3—38127
- electronic transitions, s→d and p→d, at high press., systematics 3—13700
- N$_{4,5}$ appearance potential spectra interpretation *(Russian)* 3—34171
- phase transitions and soft phonon mode under high press. 3—23032
- phonon dispersion relations, coherent inelastic neutron scatt. study 3—22998
- superconducting, thermodynamics 3—57471
- superconductivity, electron-phonon interaction *(Chinese)* 3—52289
- X-ray absorpt. and XPS peak energies, selection rules and multiplet effects 3—57999
- CaTiO$_3$:La, defect struct., elec. cond. studies 3—51591
- CdSe:La γ-irrad. films, photoconductivity and dark conductivity 3—38508
- La VI, 5s^{2}5p^4-5s5p^5 transitions 3—50333
- La(Ru$_{1-x}$Os$_x$)$_2$, structural and supercond. data. 3—3349
- La$_{1-x}$Th$_x$Ru$_2$(OS$_2$O), structural and supercond. data. 3—3349
- ^{138}La-^{138}Ce geochronometer, new dating method 3—25244

lanthanum continued

$PbF_2(:La)$, cubic, thermal depolarisation, ionic thermocurrents study 3−3636

$SmB_6:La$, spin dynamics, NMR study 3−52657

$SrTiO_3:La$, quenched and reduced ceramic, elec. cond. 3−52145

ZnS:La(Mn,La) phosphors, trap depths, luminescence studies 3−43608

lanthanum alloys

see also lanthanum compounds

rare earth alloys, $La_{1-x}R_xNi_5$, (R-Ce,Pr,Nd,Sm), H_2 absorption, press.-composition isotherm study 3−33564

Ce-La-Ni-Al(Mn)-Co(Cr)(Cu)(Nb)(Ti)(V)(Zr), absorption and desorption of H_2 3−48090

Ce-La-Ni-H-Al(Fe), hydriding and dehydriding kinetics 3−48048

$Ce_{1-x}La_xAg$, elec. and mag. props. 3−52419

$Ce_{1-x}La_xCu_2Si_2$, elec. cond., transition from Kondo lattice to Kondo impurity 3−43163

$(Ce_{0.55}La_{0.45})Ni_{4.5}Al_{0.5}D_3$, equilibrium and kinetic props. of hydriding and dehydriding 3−48049

Fe, cast, white, mischmetal effect on microstructure and mech. props. 3−24327

$(Fe_yB_{1-y})_{1-2x}R_xLa_x$ alloys, amorphous, low field mag. props. 3−28545

$Fe_{70.5}B_{15.5}Tb_7La_7$, high coercive force crystallized amorphous ribbon, hysteresis loop shape, surface effects 3−33932

$(Fe_xB_{1-x})_{0.9}Tb_{0.05}La_{0.05}$, crystallized, coercive force and microstruct., composition depend. 3−33931

$Gd_xLa_{1-x}Mg_2$, mag. props., spin echo NMR study 3−28738

$Gd_{0.9}La_{0.1}Tl$, structural transform. and mag. props. 3−51780

Ho-La, mag. struct. neutron diffr. study 3−52373

$(La,Dy)B_6$, spin glass behaviour, elec. resist. and thermoelec. power meas. 3−43379

$(La, Gd)B_6$, spin glass behaviour, elec. resist. and thermoelec. power meas. 3−43379

La-Al-Nd(Tb)(Dy)(Ho)(Er), crystal field parameters from neutron spectra 3−13780

La-Co permanent magnets, mag. props., composition depend. 3−8702

La-Co-Cu-Mg permanent magnets, mag. props., composition depend. 3−8702

La-Ga, phase diagram and phase structs., X-ray diffr. and DTA studies *(Chinese)* 3−42750

La-H, self-consistent band struct. calcs. and optical props. 3−38298

LaAg, magnetoacoustic oscills. and Fermi surface 3−18602

$LaAg_{1-x}In_x$, muon Knight shift study 3−52695

$LaAl_2$, thermal expansion coeff., 25 to 500°C 3−13491

$LaAl_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3−8233

$La_{80}Al_{20}$ amorphous supercond. alloy, elec. and mag. props. 3−23350

$La_{1-x}(Al_{0.5}Ga_{0.5})_x$, metallic glasses, partial pair correlation functions 3−18223

$La_{1-x}Au_x(Ga_x)(Al_x)$, metallic glasses, partial pair correlation functions 3−18223

$(La_{1-x}Ce_x)Sn_3(Th)(Be_{13})$, behaviour in mixed valence and Kondo regimes 3−23333

$LaCo_5$ powder, diffusion coeffs. determ. from H absorpt. 3−24464

$LaCo_{5-x}Al_x(Ga_x)$, hydriding property modification by partial substitution, X-ray study 3−2809

$LaCo_2Ni_3$, mag. hardness, coercivity, anisotropy, exchange and magnetisation 3−43399

$La_{70}Cu_{30}$, amorphous, elec. and thermal cond., superconducting T_c 3−18680

$LaCu_2Sn_2$, cryst. struct. and mag. props. *(Russian)* 3−27896

$La_{0.7}Er_{0.3}Al_2$, spin glass freezing dynamics, neutron scatt. study 3−38631

$LaFe_yNi_{5-y}$, H storing materials, X-diffr. and Mossbauer study *(Chinese)* 3−53026

$LaGa_6Ni_{1-x}$, cryst. struct. 3−33190

$LaGd_3$, γ-γ perturbed angular correlation study 3−52687

$La_{1-x}Gd_xAl_2$ spin glass, ESR resonance position shifts, internal field effects 3−57769

$(La_{70}Gd_{30})_{80}Au_{20}$, amorphous spin glass, DC mag. susceptibility, press. depend. 3−52491

LaH_x (x=2.1, 2.9), XPS studies of electronic struct. 3−39008

$LaNi_5$, absorption of H_2, selective 3−47220

$LaNi_5$, absorption of H_2 in presence of other gases 3−48086

$LaNi_5$, α-β two-phase region, H_2 absorpt./desorpt. isotherms, hysteresis 3−48088

$LaNi_5$, electronic struct. and surface oxidation, photoelectron spectra study 3−3912

$LaNi_5$ film, H_2 absorption effects on elec. cond. 3−28456

$LaNi_5$, hydriding cycling response in H_2-O_2 atmosphere 3−47218

$LaNi_5$, hydriding reaction kinetics 3−48046

$LaNi_5$, phase separation, particle size distrib. of Ni, magnetisation meas., H storage appl. 3−14593

$LaNi_5$-H system, hydriding and dehydriding rates 3−48047

$LaNi_5$-$LaCu_5$ system, phase equilib. and H absorpt. *(Chinese)* 3−53025

$LaNi_4Co$, cryst. struct., deuterisation effects, neutron diffr. studies 3−42572

$LaNi_{5-x}Cu_x$ hydrides, bonding, rel. to H storage materials, photoemission and band struct. calc. studies 3−27889

$LaNi_5D_3$, equilibrium and kinetic props. of hydriding and dehydriding 3−48049

$LaNi_4Fe$, absorption of H_2, disintegration, acoustic emission and exoelectron emission 3−47935

$LaNi_{5-x}Fe_x$, Mossbauer study 3−52680

$LaNi_2Ge_2$, and related intermetallics, supercond. obs. 3−3347

$LaNi_5H_6$, H diffusion, quasielastic neutron scatt. study 3−38117

β-$LaNi_5H_x$, Haucke cpd., struct., statistical thermodynamics approach 3−42568

$LaNi_5H_x$ solid soln., H dissolution and partial molar volumes 3−23046

$LaNi_{5-x}Mn_x$, mag. props. and low temp. sp. ht., hydriding effects 3−28633

$LaPb_3$, thermodynamic and mag. props. 3−47512

$La_{1-x}Pr_xAl_2$, γ-γ perturbed angular correlation study 3−52687

LaPt, resist. and mag. resist. meas. 3−47482

$LaSn_3$, Fermi surface props. 3−52010

$LaSn_3$, high temp. heat capacity 3−33467

$La_{0.99}Tb_{0.01}Ag$, magnetostriction meas., single-ion model anal. 3−14103

Mg-Al-La, phase equilib., X-ray diffr. exam. 3−39097

$Pr(La, Y)Al_3$, cryst. elec. field effects, inelastic neutron scatt. 3−23340

β-Ti-Mo-Cr-Fe-Sn-La, behaviour, C effect 3−29091

$Zr_{1-x}La_xV_2$, C-15 cpds., struct. transition and supercond. transition, resistivity and X-ray study 3−8183

lanthanum compounds

see also lanthanum alloys

Nd^{3+} $^4I_{11/2}$ level population relax. probability determ. from luminesc. dumping in external sample 3−38903

PLZT, effects of impurities on phys. props. *(Korean)* 3−3631

PLZT ceramic, hysteresis loops 3−28803

PLZT electro-optic filters for fusion reactor material testing appls. 3−7143

thiogallates, Er doped, photolum. and cathodolum. props. 3−3780

Al_2O_3-Na_2O-La_2O_3, cryst. struct., ESR and visible spectra 3−46914

$Ba_{1-x}La_xF_{2+x}$ crystals, low temp. ionic cond. and dielec. relax. 3−18506

$Ba_{1-x}La_xFe_{18}O_{27}$ ferrites, mag. props. and Mossbauer spectra 3−57604

BaO-B_2O_3-La_2O_3 glass, vacuum UV reflection spectra 3−14321

CaF_2-LaF_3, defect phases, anion mobility, NMR study 3−13525

$Ca_{1-x}La_xFeO_3$, preparation, crystallographic and mag. characterization 3−13775

$CaLa_2S_4$, opt. window material for 8 to 14 μm region, development 3−7092

$CaLa_2S_4$ starting powder eval. for 8-14 μm region domes and windows fabrication 3−7090

$Ce_{1-x}La_xB_6$, elec. resist. meas., scatt. mechanisms 3−52122

$Ce_xLa_{1-x}Sb$, reverse magnetostriction effects in [001] shape magnetostriction 3−8708

$Ce_{1-x}La_xSb(Bi)$, anomalous mag. and transport props. 3−52591

$Ce_yLa_{1-y}Si_{2.00}$, mag. and nonmagnetic behaviour 3−52482

CeO_2-ZrO_2-Y_2O_3-ThO_2-HfO_2-La_2O_3-Na_2O-B_2O_3, heat resistant nonsilicate porous glasslike material, prep., leaching 3−58110

$(EuLaCa)_3(FeGeAl)_5O_{12}$, garnet films, LPE grown, mag. props., growth atm. effects 3−23753

HfF_4-BaF_2-LaF_3-AlF_3 glass laser elements, hot pressing 3−7103

$In_6La_{10}O_6S_{17}$, cryst. struct., X-ray diffr. study, Fourier anal. *(French)* 3−2481

$(La,Ce)B_6$, dil., Kondo system, Hall coeff., mag. field depend. 3−57335

La-Si-O-N oxynitride glass, microhardness and transparency 3−58209

$LaAlO_3$, recomb. centres, ODMR study 3−23840

$LaAlO_3$-$LaFe_3O_3$, solid solutions, crystal prep. by zone refining 3−14476

$LaAlO_3$-$SrTiO_3$ solid solution, phase diagram, X-ray diffr. and DSC study 3−53037

LaB_6 (001) plane, APFIM anal. 3−51904

LaB_6, compressibility by high pressure X-ray powder diffraction anal. 3−28031

LaB_6, de Haas-van Alphen study 3−8401

LaB_6, dipole effects and work function 3−23461

LaB_6 emitters, crystal growth from melt 3−24111

LaB_6, oxidation scale phase comp. polarized light microscopy 3−47982

LaB_6, thermal conductivity at low temps. 3−42862

LaB_6, thermoelec. power, 2 to 20K 3−57337

LaB_6, thermoemissive plasma coatings, formation conditions 3−14508

LaB_6, X-ray diffr. approach to fine crystallographic features determ. 3−56864

LaB_6-$MoB_2(MoB)(ZrB_2)(GdB_6)(NdB_6)$, thermionic emission and vaporisation meas. 3−52891

$La_5B_2C_6$, preparation and superconductivity 3−43310

$La_xBa_{1-x}Fe_{12-x}Zn_xO_{19}$ ferrites, mag. props. and high temp. composition 3−57698

$La_xBa_{1-x}Zn_xFe_{12-x}O_{19}$ ferrite, high temp. comp. and mag. props. study *(Chinese)* 3−18887

$LaBr_3:Sm$ quantum counter for 10.6 μm radiation 3−49454

$(La_{1-x}Ca_x)CoO_3$, semiconductive and metallic elec. cond., composition depend. 3−8487

$La_{0.95}Ca_{0.05}CrO_3$, sintering in an oxidising atm. 3−3991

$(La_{1-x}Ca_x)CrO_3$ ceramics, hot isostatic pressing and props. *(Japanese)* 3−3997

$(La_{0.8}Ca_{0.2})MnO_3$, cryst. growth by travelling-solvent floating-zone method 3−14477

$La_{0.8}Ca_{0.2}MnO_3$, prep. by co-precipitation method, mag. behaviour *(French)* 3−38651

$(La_{0.8}Ca_{0.2})MnO_{3+y}$, ferromag.-antiferromag. transition temp., press effects 3−57605

$La_xCe_{1-x}F_3:Gd^{3+}$, EPR linewidth study 3−43431

$LaCl_3$, X-ray emission and absorption spectra, rel. to bond ionicity 3−58006

$LaCl_3:Nd^{3+}$, cryst., Zeeman splittings obs. 3−13786

$LaCo_5H_x$, hydride phase transitions, magnetisation studies 3−28093

$LaCoO_3$, spin state equilib. and semicond.-metal transition 3−18620

$LaCr_xN_{1-x}O_3$, solid soln., at. distrib. and exchange interaction parameters 3−38359

$LaCrO_3$, hydrothermal synthesis and sintering 3−14463

$LaCrO_3$, Neel point, press. effect 3−14054

$La_2Cu_{1-x}Ni_xO_4$ solid solns., cryst. symm. study by X-rays 3−37867

La_2CuO_4, metallic, mag. props. study 3−28500

LaD_{2+x}, FCC solid soln., hydrogen ordering and superlattice struct., neutron diffr. study 3−33217

$LaD_x(2.5 \leq x \leq 3)$, heat capacities, 1 to 300K 3−42800

$La_{1.2-x}Eu_xMo_6S_8$, supercond. props., hydrostatic press. effects 3−23524

LaF_3, elastic props., Brillouin scatt. study 3−47021

LaF_3 membrane, solid-state differential potentiometric sensors appl. 3−54723

LaF_3, pure and alkaline earth doped, elec. props. 3−23078

LaF_3, X-ray L_{III} absorpt. spectra, characteristic features 3−11823

$LaF_3:Er^{3+}$, optically excited, high field studies of spin-lattice relax. processes 3−38727

$LaF_3:Gd^{3+}$, point charge and induced dipole model anal. of spin Hamiltonian parameters 3−57321

$LaF_3:Pr^{3+}$, fluorescence-line shape temporal variation 3−3799

$LaF_3:Pr^{3+}$, Raman heterodyne detect. of NMR 3−57818

$LaF_3:Pr^{3+}$, superexchange induced energy transfer, fluorescence study 3−14341

$LaF_3:Pr^{3+}$ $^1D_2$-$^3H_4$ level hyperfine struct. by photon echo modulation spectroscopy 3−3133

$LaFe_xAl_{1-x}O_3$, solid soln., at. distrib. and exchange interaction parameters 3−38359

$La_2Fe_xMn_{2-x}S_5$, mag. props. meas. 3−28543

$LaFeO_3$ crystals, hydrothermal synthesis *(Japanese)* 3−39024

$LaFeO_3$, mag. hyperfine interactions calc. with model covalency parameter 3−43133

$La_3Ga_5SiO_{14}:Nd^{3+}$, stimulated emission and luminescence 3−38848

LaH_2, electronic energy bands and optical props., APW calc. 3−43011

LaH_3, normal and deuterated, phase transitions and polymorphism, sp. ht. study 3−51533

LaH_x (x=2.1, 2.9), XPS studies of electronic struct. 3−39008

lanthanum compounds continued
  LaH_x, self-consistent electronic struct. calcs. 3−23264
  La_2LiFeO_6, Fe oxidation states and electronic configurations, oxide stabilisation 3−33179
  $(LaLuSmGd)_3(FeGa)_5O_{12}$, very thin films, Curie temp. and anisotropy fields 3−57715
  $La_{1-x}Me_xMnO_3$, Me=K, Na, reduction products, car engine exhaust gas control appl. *(Italian)* 3−53443
  $LaMoO_4$ spherulites, growth mechanism and morphology 3−18252
  $LaMo_6S_8$ supercond. thin film, transition temp., critical fields and currents 3−43312
  $La_{0.5}Na_{0.5}Fe_{12}O_{19}$ ferrite, structural props., X-ray and Mossbauer studies *(Russian)* 3−13200
  $La_{1-x}Na_xFeO_{3-\delta}$ defect perovskite system, Mossbauer effect and mag. props. 3−14187
  $LaNbO_4$, positional and temp. parameters, interatomic coords., polymorphic transform. 3−22870
  $LaNb_3O_{14}$:Nd^{3+} crystal, prep. and luminesc. props. 3−57968
  $LaNiAlD_{4.1}$, cryst. struct. determ. 3−18265
  $LaNi_4AlD_{4.1}$, cryst. struct. determ. 3−8017
  $LaNiD_{3.7}$, cryst. struct. determ. 3−18265
  $LaNi_5D_6$, cryst. struct. determ. 3−18265
  $LaNi_5H_x$, H mobility, quasi-elastic and inelastic neutron scatt. studies 3−33492
  β-$LaNi_5H_x$, struct., entropy and enthalpy calcs., statistical thermodynamical approach 3−2499
  $LaNi_5H_6(D_6)$, cryst. struct. and dynamics, elastic and inelastic neutron scatt. 3−51562
  $LaNi_4MH_x$(M=Al,Mn), H mobility, quasi-elastic and inelastic neutron scatt. studies 3−33492
  $LaNiO_{3-\delta}$, prep. and elec. cond. 3−52139
  La_2O_3, single crysts., microhardness, temp. depend. *(French)* 3−33356
  La_2O_3-NiO system, cpd. prep. and elec. cond. 3−52139
  LaOBr:Tb, luminesc. props. 3−3785
  LaOCl:Tb, luminesc. props. 3−3785
  $La(OH)_3$:Gd^{3+}, host lattice effects, zero field splitting, EPR study 3−18982
  $La_2O_2SO_4$:Eu^{3+}, prep., fluoresc. spectra, and cryst. field anal. 3−43594
  $La(PO_3)_3$, Raman spectra 3−34099
  $LaRh_3B_2$, NMR, mag. and superconducting studies 3−23819
  $LaRhO_3$ photoelectrodes for liq. junction solar cells 3−29389
  La_2S_3, bulk photovoltaic effect and photocond. 3−18746
  La_2S_3, photoconductivity 3−8525
  γ-La_2S_3 single crystals, photoelectric and luminesc. prop. investigation 3−28903
  La_2S_3-Cr_2S_3 alloy synthesis and thermoelectric props. 3−14971
  La_3S_4, cubic to tetragonal phase transition temp., mag. field depend. 3−42773
  $La_2(SO_4)_3.9H_2O$, spatial config. of water of hydration, Raman spectroscopy 3−1371
  LaSb, de Haas-van Alphen effects, band struct. calcs. 3−52011
  LaSb:Dy, ESR and magnetisation, ion-lattice interaction contrib. 3−3524
  LaSb:Dy single cryst., Jahn-Teller stress effects on magnetization and ESR props. 3−3134
  La_3Se_4, cubic to tetragonal phase transition temp., mag. field depend. 3−42773
  $LaSi_2$, resonant photoemission study 3−3916
  La_xSi_y, x=1, 3, 5, y=1-4, electronic struct., X-ray absorpt. and emission spectra studies 3−38959
  $La_{0.8}Sr_{0.2}CoO_3$ porous perovskite as cathode for molten carbonate fuel cell 3−53497
  $La_{1-x}Sr_xCo_{1-y}Ti_yO_3$, electron transport and mag. props. 3−47348
  $LaTaO_4$-$LnTaO_4$, (Ln=Nd, Sm-Dy, Yb), solid solns., formula vol., X-ray study 3−22869
  $LaV_xN_{1-x}O_3$, solid soln., at. distrib. and exchange interaction parameters 3−38359
  $LaWO_4Cl$, orthorhombic, struct., luminescence and Raman spectra, X-ray diffr. study 3−33204
  $LaWO_4Cl$:$Mo^{6+}(Eu^{3+})(Sm^{3+})(Tb^{3+})$, luminescence props. and Stokes shifts 3−47691
  $La_3WO_6Cl_3$, cryst. struct. and optical props., X-ray powder diffr. study 3−7995
  $La_3WO_6Cl_3$:$Mo^{6+}(Bi^{3+})(Eu^{3+})(Sm^{3+})(Ce^{3+})(Tb^{3+})$, luminesc. studies 3−52837
  $La_3WO_6Cl_3$:U, photoluminescence and vibr. spectra 3−8864
  $La_xY_{1-x}TiO_3$, mag. susceptibility, magnetisation and elec. cond. 3−3421
  Lab_6-Ni powder, hot pressing, densification kinetics rel. to Ni additon 3−47812
  $LnVO_4$, nuclear electric quadrupole interaction 3−57813
  Nd^{3+}:$LaMgAl_{11}O_{19}$, lasing transitions, luminesc. and stimulated emission 3−56202
  $Nd_xLa_{1-x}P_5O_{14}$ crystal laser, flash lamp pumped, relationship between laser output and cryst. homogeneity *(Chinese)* 3−41845
  $Nd_xLa_{1-x}P_5O_{14}$, exciton diffusion and fluorescence quenching 3−13740
  PLZT ceramic electrically controlled retardation plate, phase modulation distortion 3−46283
  PLZT ceramic ferroelec., ion implanted, optical imaging and information storage 3−1588
  PLZT ceramic optoelectronic analogue, logic and switch devices 3−50748
  PLZT ceramics, grain boundary phenomena, electron microscopic study 3−18316
  PLZT ceramics, transparent ferroelec., appl. field induced birefr. mechanism 3−28834
  PLZT electro-optic shutter stereoscopic displays, advances 3−7150
  PLZT electro-optic min./const. voltage shutters 3−7151
  PLZT fibre optic reflection coupler for bidirectional transmission 3−7177
  PLZT light gate array, high density, electro-optical, light transmission characts. 3−7152
  PLZT solid soln., piezoelec. props. comparison with PZT materials *(French)* 3−28782
  PLZT wafer electro-optic shutter devices 3−7149
  $Pb_{2-x}La_xLi_{0.5}Nb_{1.5}O_{6+\delta}$, ceramic solid solution, thermoelectric props. 3−52183
  PbTiO-$La(Zn_{2/3}(Mg_{2/3})Nb_{1/3})O_3$, ferroelec. phase transition, X-ray, permittivity and dilatometric studies 3−38777
  $PbTiO_3$-$La(Zn_{2/3}Nb_{1/3})O_3$ ceramics, high-voltage photovoltaic effect, MnO_2 doping influence 3−33755
  $Pb(Zr,Ti)O_3$-MnO-$LaO_{1.5}$, oxide additions effect on band struct., diffuse refl. spectra 3−19155
  $Pr_{0.9}La_{0.1}P_5O_{14}$ crystal growth by high temp. soln. method *(Chinese)* 3−14456

lanthanum compounds continued
  $Pr_xLa_{1-x}P_5O_{14}$, fluoresc. quantum yield, modified Vavilov method 3−38862
  $Sm_{1-x}La_xB_6$, susceptibility, X-ray absorpt., and sp. ht. meas. in mixed valence range 3−52351
  $Sm_xLa_{1-x}Sb$, reverse magnetostriction effects in [001] shape magnetostriction 3−8708
  $Sr_{1-x}La_xFeO_3$, electronic state of Fe^{4+} 3−14185
  $Sr_2La_8Ge_6O_{26}$, IR spectra and stoichiometry 3−3735
  $Sr_{0.5}La_{1.5}Li_{0.5}Co_{0.5}O_4$, synthesis, mag. characts., stabilisation of Cl^{IV} *(French)* 3−23576
  $Sr_{0.5}La_{1.5}Li_{0.5}Fe_{0.5}O_4$, Fe oxidation states and electronic configurations, oxide stabilisation 3−33179
  $Sr_xLa_{2-x}Li_{0.5}Ni_{0.5-x}Fe_xO_4$, coexistence of 6-coordinated high-spin Fe^{IV} and low-spin Nc^{III} *(French)* 3−23336
  TeO_2-PbO-La_2O_3 glass, elastic moduli, temp. and press. depend. 3−58150
  $Tm_{1-x}La_xB_6$, susceptibility, X-ray absorpt., and sp. ht. meas. in mixed valence range 3−52351
  $Tm_{0.05}La_{0.95}Se$, intermediate valence cpd., single ion character, neutron scatt. study 3−52362
  $(Y_{3-x}La_x)(Fe_{5-y}Ga_y)O_{12}$ irradiated garnet film, annealing, mag. props. 3−33946
  ZnO-B_2O_3-La_2O_3 glass, vacuum UV reflection spectra 3−14321
  ZrF_4-BaF_2-AlF_3-LaF_3-LiF optical glass, aqueous corrosion, IR and SEM study 3−1731
  ZrF_4-BaF_2-AlF_3-LaF_3-EuF_3, glass, Eu(III) fluoresc. study 3−52818
  ZrF_4-BaF_2-LaF_3-AlF_3-LiF-BiF_3-PbF_2 glass, viscosity props. for fibre drawing 3−1786
  ZrF_4-BaF_2-LaF_3-AlF_3 glass, low temp. sp. ht., transient pulse technique 3−51823

Laplace transforms
  contact binary stars, appl. of Laplace transform to secular stability problem 3−15958
  cylinder, infinite, with circumferential crack, torsional impact response 3−2007
  elastodynamics, comparison of three boundary element method approaches 3−35846
  hot-wire anemometers with conduction end losses 3−2148
  instantaneous heat sources in an infinite elastic solid with thermal relaxation 3−42127
  inversion, implications on SEM coupling coefficients in time domain 3−46116
  IR transform spectroscopy possibilities 3−5878
  isothermal batch crystalliser pulse response analysis for growth rate and dispersion estimation 3−33166
  pipes, transient flow, prolonged by viscoelastic enclosure *(French)* 3−22528
  semiconductors, luminescence quenching by nonradiative tunnelling 3−52848
  spectral reconstruction, Laplace transform pair model 3−25997
  thermal conductivity, boundary-value problems, Laplace transforms and memory eqns. 3−27355
  thermoelasticity, heat-source problem in non-simple elastic medium 3−42128
  transient one dimens. inverse heat cond. problem 3−12490

Large Magellanic Cloud
  A0538−66, recurrent X-ray transient in LMC, photometric and spectroscopic evidence for new optically inactive state 3−30426
  A 0538−66, X-ray binary, neutron star+Be star config. and outburst nature 3−40187
  gamma-ray burst source in Dorado, new manifestation of activity, (1981 and 1982) *(Russian)* 3−35744
  globular cluster flattening 3−25604
  H 0544−665, LMC Be star candidate, spectra and photometric props. 3−59403
  HDE 269858, Ofpe star in LMC, spectrum and light vars. during new outburst, (1982 December 20) 3−35632
  HV 2379, variable C star, shell ejection, visible/IR obs. 3−40147
  interstellar CO emission search, EHF obs. 3−15993
  interstellar extinction in LMC and Galaxy, analytical expression 3−59441
  interstellar polarisation, wavelength depend. 3−40252
  LMC X-3, photometric obs. of optical counterpart 3−35668
  LMC X-3 optical counterpart, mass, and radial vel., visible obs. 3−20431
  LMC X-4, discovery of 13.5 s. X-ray pulsations, and orbital determ. 3−35655
  N185, SNR radial vel. field and interior stars photoionising props., obs. 3−20455
  N 11, high-resolution narrow bandwidth photography of H II region 3−44815
  NGC 1847, open cluster, mass, CM diagram, age and abundance, visible obs. 3−54461
  NGC 1866, young LMC star cluster, age determ. 3−59416
  NGC 2058 and 2065, open clusters, ages and CM diagrams, visible obs. 3−54458
  P40, IUE UV spectra of central star of planetary nebula 3−20362
  photoelectric UBV photometry in LMC, catalogue *(German)* 3−5274
  PN 279−38°1, discovery, position and spectral obs. 3−25605
  R136, in 30 Doradus nebula, near IR spectrum rel. to WN or O-type spectral characts. 3−10320
  R136a, central object of 30 Doradus nebula cluster, single star nature from spectral obs. 3−25437
  RICHFLD photographic photometry of faint stars 3−54452
  star complexes, ages and dimensions *(Russian)* 3−35680
  supergiant OBA stars, with/without P Cygni characts., photometric differences 3−40126
  supergiant stars, late type, in LMC, detect. and BVR photometry 3−44677
  supernova remnants, props. from X-ray survey 3−30507
  supernovae remnants, Balmer dominated, optical identification and spectra obs./anal. 3−5407
  UBVRI sequence for NW bar 3−10405
  Wolf-Rayet stars, catalogue and UBV obs. 3−59233
  faint Wolf-Rayet stars in LMC, absolute magnitudes from absolute spectrophotometry 3−30377
  young phenomena within LMC, review 3−16013
  C stars in Magellanic Clouds and other Local Group galaxies, near-IR transmission grating prism survey and spectrophotometry 3−30376

large scale integration
  CMOS LSI, halogen lamp annealing of ion implanted Si *(Japanese)* 3−46986

large scale integration continued
  CRO developments, LSI appls., digital techniques, facilities 3—36035
  ion beam technology, for deposition and epitaxy *(Japanese)* 3—39046
  photolithography, variable magnification in a 1:1 projection lithography system 3—37157
  P$^-$Si/rare earth metal ohmic contacts 3—18782
  silicide thin films in microelectronics, prep. and props. 3—33805
  submicron IC, Pd_2Si formation, As redistribution, elec. study 3—47169
  VHSIC, double level metal interconnect technology using photo-CVD oxide process 3—39040
  VLSI, EHD ion source, data obtained with Au *(Japanese)* 3—39430
  VLSI, implant gettering and ion beam detect. of generation impurities in Si 3—42633
  VLSI, PtSi ohmic contacts for Si shallow junctions 3—33790
  VLSI circuits, hot electron effect suppression by $SiCl_4$ annealing 3—47746
  VLSI MOS IC, gettering effects on leakage currents in shallow junctions 3—52230
  GaAs MESFET A/D converter and memory IC for ultra high speed transient recording 3—50216
  Pd_2Si-AlCuSi system, contact resist. behaviour rel. to VLSI technology 3—18784
  Si:O wafer, Czochralski grown, defect engineering, VLSI substrate development 3—42593
  Si-poly Si interconnections, contact resistance 3—28419
  SiO_2, reactive sputter etching, in doped and undoped fluorocarbon plasmas 3—39271
  Xi films, recrystallised from melt, microelectronics appls. 3—23212

large-scale systems
  see also hierarchical systems
  nuclear power plants, computerised dosimetry monitoring and management system 3—55228

laser accessories
  acousto-optic modulators for CO_2 heterodyne laser systems 3—56249
  acoustooptic deflector for in-resonator laser tuning 3—22137
  aerodynamic windows, axial, continuous and pulsed, effect on beam quality 3—41968
  amplifier, high repetition rate, for synchronously pumped cavity dumped rhodamine 590 dye laser 3—1623
  Antares pulse power system fibre-optic monitoring 3—17534
  atomic-beam step-up for 0.5 MHz absolute frequency stabilisation of CW dye laser 3—12199
  beam expanding telescope for alignment and system integration 3—12280
  birefringent filters, three-plate, for tunable dye lasers, simple alignment procedure 3—46228
  birefringent selector of the emission wavelength for a CW dye laser 3—27219
  chlorophyll d, Q-switched mode selection of giant pulsed TEM_{00} ruby laser *(Chinese)* 3—37082
  chopper system with pulsed YAG laser, for time resolved resonant fluorescence spectroscopy 3—30934
  coatings for laser fusion systems 3—12166
  compact optical isolator 3—1747
  cooling system for repeatedly pulsed Nd:YAG lasers 3—46227
  CW lasers spatially scanning gain meas., using simple arrangement 3—27119
  dichroic beam splitter for separating extreme-UV from high-powered visible and UV laser beams 3—27207
  diffraction coupler for laser characts. meas. 3—7049
  diode laser amplifier, performance of antireflection coating 3—17498
  dispersive modulator, gas based, operation investigation 3—37174
  dye solution (type 1052) passive laser switches, induced dichroism 3—37093
  electron accelerator for excimer laser pumping appl. 3—12168
  electron gun, thermionic cathode, use in CO, CO_2 and excimer laser research *(Chinese)* 3—10944
  electron-guns and depressed collectors for two-stage free electron lasers 3—56234
  ethylene glycol laser coolant, UV photo-oxidation by laser flashlamp 3—27071
  expanding telescope analysis *(Chinese)* 3—41853
  Fizeau interferometer based computer-controlled laser radiation wavelength meter for 500-650 nm range 3—381
  Fizeau wavemeter, wave-front curvature 3—36054
  flashlamp for XUV lasers using anti-Stokes scatt. 3—10921
  fluoride glass laser elements, hot pressing prep. of optical quality articles 3—7103
  focusing elements, cineform, for CO_2 laser, computer synthesised 3—36969
  free electron laser drivers, use of high current high voltage accelerators 3—22103
  Fresnel optical systems used in laser radiation and reception *(Rumanian)* 3—12277
  gas laser mode-locking using an external acoustooptic modulator with pot. appl. to passive ring gyroscopes 3—17547
  graphite erosion charact. in CO gas blown rail-type spark gaps 3—7847
  helical hollow cathode device, water-cooled, Cu II CW IR laser appls. 3—32382
  high energy laser integrated diagnostic system definition and evaluation methodology 3—41856
  high-power high-frequency switching of metal-vapour lasers 3—37059
  high-repetition-rate electron beam for laser pumping, resonant transformer construction and operation 3—17524
  hollow-cathode discharge for XUV lasers and radiation sources 3—12997
  HV laser spark discharger in Pockels cell for ultrashort pulse separation 3—50684
  HV pulser for supplying e-beam controlled CO_2 laser power amplifier 3—27070
  integrated irradiance measurement device, IRIS, for circular symmetric far field distribs. 3—41899
  luminescent dye coolants for solid-state lasers 3—56222
  Mach-Zehnder interferometer, phase-locked, active phase matching of multiline HF laser beams 3—27113
  materials, optical absorpt. meas. using interferometric calorimetry *(Japanese)* 3—1729
  metal vapour lasers, HV hollow cathode discharge tube for excitation source 3—1665
  metal-mesh-dielectric mirrors, capacitative, hybrid output couplers for far IR lasers 3—6994
  methanol laser, optically pumped, far IR 251 μm line selective enhancement using capacitive Al mesh mirror 3—41881

laser accessories continued
  microcomputer-controlled laser beam analyzer 3—1680
  miniature supply for electrooptic Q-switch of laser resonator *(Polish)* 3—1678
  multicomponent wiggler design optimisation for free electron laser oscillator 3—56235
  multifunctional telescope-microscope optical system 3—50670
  multilayer coatings for dielec. enhanced refl. mirrors, radiation effects 3—1743
  multipass laser cell beam motion 3—1674
  multiple-prism-grating beam expanders for pulsed dye lasers, dispersion theory 3—12284
  nanosecond pulse modulator for a transversely excited Cu laser 3—56250
  nonlinear resonant cavity mirrors, multistable laser, semiclassical theory 3—56246
  nozzle design yielding interferometrically flat fluid jets, for dye lasers 3—27082
  opto-acoustic frequency lock system for pulsed lasers 3—27077
  permanent magnetic undulator for FEL study on storage ring 3—45726
  plasma shutter for Nd:YAG sub-transform limited picosecond laser pulse generation 3—27112
  polarisation prisms based on total internal reflection as end reflectors for a Nd laser 3—1748
  polarisers, circular, cholestric liq. cryst. based 3—7138
  power modulators, conf., USA, 1982, June 3—5498
  preioniser, semiconductor, for high repetition rate mini TEA CO_2 laser 3—17480
  pulsed laser supply, change valve transducer with increased frequency stage *(Russian)* 3—41852
  radio-pulse generator for electrooptical mode synchronisation of Nd^{3+}:YAG laser 3—37085
  real-time wavemeter for laser wavelength meas. 3—20891
  reflectors, cooled, optical surface quality, stress concentrator effects in high-power optics 3—12278
  resonant optical cavities, refl. props. and appls. 3—12191
  rhodamine 6G grazing-incidence dye laser with an intracavity lens 3—41822
  segmented coaxial discharge, for pumping of dye laser *(Korean)* 3—37067
  self-setting attenuator for laser pulses energy stabilisation 3—41966
  semiconductor laser wavefront meas. apparatus 3—40680
  singlet aspheric lens for precision multiwavelength focusing of high power laser beams 3—50728
  solid-state laser cavity cooling system, improved laser output efficiency 3—22075
  spark gap, long-life triggered, for CO_2 TEA laser power conditioner 3—7848
  subnanosecond high-voltage 50-Ω calibrated attenuator, for 50-J CO_2 laser system 3—27120
  synchroscan streak-camera read-out system for use with CW mode-locked lasers 3—40710
  testing holder for laser diodes with rectangular studs 3—12164
  thermostabilization block for solid-state laser *(Bulgarian)* 3—41868
  triple bounce illumination system used for laser fusion expts. 3—50692
  tunable dye cell for passive mode locking of lasers 3—12202
  viewer, LV-3M, based on receiving camera with confocal attachment 3—46226
  wave plates, glass, laser control appls. 3—32444
  waveplates, large aperture, nematic liq. cryst. based 3—7138
  window materials, characts., w.r.t. opt., mech. and thermal props. 3—7098
  Ag/ZnS coated, 90° roof-top reflectors and waxicons, complex eigenvalues equalization 3—37166
  Al_2O_3 coated mirror facets for (GaAl)As laser diode, reflectivity 3—37076
  CO_2 TEA lasers with integral semiconductive preionisation 3—27083
  CdTe laser material, laser-induced damage and two-photon absorpt. meas. 3—8091
  GaAlAs laser diode, antireflection-coated, polarisation control by external optical feedback 3—41889
  GaAs photoconducting picosecond switch, appl. to direct gain modulation of semicond. laser 3—27095
  GaInAsP-InP lasers, short cavity, multilayer reflector design 3—32387
  He-Ne laser beam intensity stabiliser 3—46252
  Hg-Xe pulsed lamp emission with short lived discharge for dye laser pumping 3—7105
  I_2 vapour filled absorption cell design for He-Ne laser 3—6996
  InGaAsP-InP injection laser, low threshold, with microleaved mirrors, for monolithic integration 3—7001
  InP surface corrugations fabricated using electron lithography for InGaAsP DFB lasers 3—6968
  InSb, room temp., modulation of D_2O vapour laser 118, 176 μm lines 3—46282
  LiF crystal with F_2^- centres passive laser switches, induced dichroism 3—37093
  LiF crystals with F_2^--centres, efficient passive Q-switches for Nd:YAG laser 3—7042
  LiF, F_2^- colour centres after γ-irrad., laser passive shutter charact. 3—17612
  $LiNbO_3$ laser Q-switching, electrooptical-elastooptical effects *(Slovenian)* 3—7036
  Ni replicated gratings, potential use in high energy lasers and monochromators 3—7156
  Si mirror, actively cooled, performance potential 3—7110
  ThF_4 film as laser mirror coating, surface microanalysis characterisation 3—18535

laser annealing *see laser beam annealing*

laser applications *see laser beam applications*

laser beam annealing
  amorphous surface preparation *(Japanese)* 3—24380
  conference on laser and electron beam interactions with solids, Boston, MA, USA (Nov. 1981) 3—54582
  Corning 7059 glass optical thin film waveguides, low loss by laser annealing 3—17643
  CW laser processing of gallium arsenide *(French)* 3—13271
  modulation doped structs. using multi-step MBE and ion implantation 3—42630
  multilayer structures, CW laser annealing, computer model 3—22935
  neutral particle emission from electron-hole plasma near surface 3—24062
  ohmic contact form. on n-GaAs and Si, MBE, laser and electron beam annealing 3—18781
  optical thin-film waveguides, laser annealing for low loss in Corning 7059 glass, ZnO, Si_3N_4, Nb_2O_5, Ta_2O_5 3—50757

laser beam annealing continued
phosphosilicate glass reflow using tunable CO_2 laser 3—56971
polycrystalline, laser annealed, thermal oxides characterization 3—57435
SDS films, laser annealed, melt dynamics meas. 3—46996
selective annealing technique, overview 3—22940
semiconductor, book 3—10534
semiconductor, ion implanted, laser annealing, computer modelling 3—56946
semiconductor, laser annealing, book contrib. 3—13274
semiconductor, laser annealing, mechanisms and appl. in microelectronics, book contrib. 3—13273
semiconductor, laser processing, review 3—8099
semiconductor, periodic ripple structures under picosec. pulse illumination 3—37960
semiconductor films, amorphous, laser epitaxy, review 3—51989
semiconductor growth, fast scan laser annealing 3—56967
semiconductor-insulator multilayer structures, laser annealing, thermal model 3—56965
semiconductors, CW CO_2 laser annealing and alloying *(Chinese)* 3—27986
semiconductors, defects, conf., Amsterdam, Netherlands (Aug.-Sept. 1982) 3—44894
semiconductors, ion implanted, laser annealing *(Rumanian)* 3—8097
semiconductors, laser annealing, energy deposition, moving boundary eqn. 3—8096
semiconductors, laser beam irradiation 3—22937
semiconductors, nature of pulsed beam annealing, review 3—56937
semiconductors and oxides, laser induced desorption, surface damage and annealing 3—57229
solid state lasers application to annealing *(Korean)* 3—53080
SOS, pulsed laser annealing, melt dynamics, transient conductance study 3—46991
SOS, transient conductance meas. during pulsed laser annealing 3—57352
steel, residual stresses after pulsed laser annealing *(Russian)* 3—39209
Al, laser annealed, containing Ni precipitates, vacancy loops obs. 3—56959
Al ohmic contacts on $BaTiO_3$, laser annealing and stability 3—57423
AlGaAs LPE heterostructures, luminesc. efficiency improvement by CW laser annealing 3—47700
AlSb thin film form. by laser annealing of Al/Sb sandwich structs. 3—56977
AuGe-GaAs ohmic contact, laser beam annealed, surface and subsurface morphology 3—57196
CdS films, chem. bath deposited, elec. resist., Ar^+ laser annealing study 3—38498
CdSe(Te)($Te_{1-x}Se_x$) films, prep. by laser annealing, elec. and optical characts., photovoltaic appls. 3—52931
CdTe:In(Cl), ion implanted, heat treated, defect reactions, cathodolum. and pulse laser annealing studies 3—56932
CdTe/$Hg_{0.8}Cd_{0.2}Te$ (111) system, laser annealing effects, electrolyte electrorefl. study 3—14252
EuYFeGaO bubble films, increased mobility of bubble domains after laser annealing 3—18959
Fe-Ni-Cr, Incoloy 800 heat exchange material, oxide films, SIMS anal. 3—14766
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, CW laser annealing, effects on magnetostriction and Young's modulus 3—37956
GaAs, amorphous, pulsed laser annealing, nonthermal effect, time-resolved refl. study 3—46997
GaAs, annealing, material-process interactions, review 3—58146
GaAs, ion implanted, pulsed laser annealed, photolum. 3—57977
GaAs, ion-implanted and crystalline, laser annealing, surface ripples obs. 3—46990
GaAs, picosecond laser pulse annealing, carrier and lattice temp. calcs. 3—56947
GaAs, pulsed laser annealing in high press. Ar gas ambience 3—33296
GaAs single cryst., damaged surface layer, laser-annealing restoration, 3-cryst. X-ray diffr. 3—42903
GaAs surfaces (100), (110) and (111), laser annealed, LEED, AES and RBS studies 3—57197
GaAs:Si, implanted, high temp. thermal and laser annealing, luminesc. data *(Russian)* 3—38888
GaP amorphous thin film, crystallisation using laser beam annealing 3—37957
GaP semiconductor surface, diffr. grating produced by laser beam annealing 3—12304
α-Ge film, amorphous, low-power multi-pulse laser annealing 3—46992
Ge:B single cryst., CW laser beam annealing and junction formation 3—56974
Ge/GaAs epitaxial heterostructures prep. by scanned CW laser annealing 3—57248
$GeSe_2$ glass and evaporated films, switchable microcrystallisation near threshold in laser annealing 3—56941
Ge(111), surface core level states, photoemission study 3—58039
$Hg_{1-x}Cd_xTe$, pure and ion implanted, laser annealed, Hall, cond. and C-V meas. 3—28347
InP:Se, ion implanted, laser and furnace annealing effects on elec. props. 3—56975
InSb, laser annealing, MOS elec. props. and compositional anal. 3—56976
InSb:S, ion implanted, S diffusion, laser annealing and elec. props. 3—38140
MgO, laser annealed, containing Ni precipitates, vacancy loops obs. 3—56959
Nb_2O_5 optical thin film waveguides, low loss by laser annealing 3—17643
Ni, laser annealed, containing Ni precipitates, vacancy loops obs. 3—56959
Ni ohmic contacts on $BaTiO_3$, laser annealing and stability 3—57423
Ni thin film on Si, laser annealing, electron beam annealing, silicide form. 3—56963
SOS, cryst. growth, laser beam induced, model calcs. 3—56966
Si, amorphised ion implanted single cryst., laser annealing, explosive crystn. obs. 3—42655
Si, amorphized by ion implantation, fast scanned electron and laser beam induced explosive crystn. 3—56821
Si amorphized surface, struct. modifications following picosecond laser irradiation 3—56949
Si, amorphous, crystallization on glass substrate, uniform and directed 3—57247
Si, amorphous, electronic defects, laser and electron beam crystn. obs. 3—56956
Si, amorphous, laser annealing, explosive crystn., implantation effects 3—42654

laser beam annealing continued
Si, amorphous film, CW laser annealing effect on elec. props. *(Korean)* 3—8600
Si amorphous film, CW laser annealing, solid phase epitaxy and random crystallisation 3—56948
Si, amorphous laser quenched from melt, prep. and charact. 3—56944
Si, amorphous thin film, furnace and laser annealed, different crystallisation states, evidence 3—29075
Si, CVD grown, laser beam annealed, optical characts. 3—57879
Si, CVD grown on amorphous substrate, shaped beam laser recrystallised, structural and elec. characts. 3—57244
Si, CW laser annealed, quenched-in E-centres, vacancy diffusion model 3—46995
Si, crystalline to amorphous boundary, laser induced solid phase epitaxy 3—57239
Si, crystallisation and amorphisation from melt at interface rel. approaching 20 m/sec. 3—56943
Si, defect struct. transitions induced by Q-switched laser annealing 3—46994
Si film, explosively crystallized on glass, optical, struct. and elec. characts. 3—57246
Si, films, polycryst., As and P ion implanted, effects of CW and pulsed laser annealing 3—33299
Si, implanted impurity electron states, hyperfine interaction and channelling studies 3—43076
Si, ion implanted, CW CO_2-laser annealing, solid-phase epitaxy model *(Chinese)* 3—37955
Si, ion implanted, characterisation of XeCl excimer laser annealing 3—8092
Si, ion implanted, dopant redistribution by pulsed laser annealing, particle backscatt. and channelling study 3—33289
Si, ion implanted, dynamic behaviour of nanosecond pulsed laser annealing, optical studies 3—56939
Si, ion implanted, laser annealing and damage, electron channelling pattern obs. 3—13052
Si, ion implanted, laser annealed, defect struct., electron microscopy anomalies 3—22939
Si, ion implanted, light absorpt. effects on Nd laser annealing 3—56951
Si, ion implanted, picosecond laser annealed, recrystn., microprobe Raman anal. 3—51656
Si, ion implanted, Raman scatt. calcs. during laser annealing 3—57937
Si, ion implanted laser annealing, charact. and solar cell fabrication 3—13269
Si, ion scattering study of O_2 indiffusion 3—57144
Si, laser and electron beam annealed, doping profile, characterisation by IR spectrophotometry 3—57939
Si, laser annealed, melt dynamics meas. 3—46996
Si, laser annealing, pulsed, coupling of optical absorpt. and thermal cond., theory 3—42653
Si, laser irradiated, charged particle emission 3—58038
Si, melted by laser pulses, non-equilib. dopants incorporation, review 3—51646
Si, melting phenomena and interfacial instability associated with laser irradiation 3—56945
Si, melts during pulsed ruby laser annealing, lattice temp. meas. 3—56935
Si, nonequilibrium crystal growth during pulsed laser annealing 3—56942
Si, optical reflectivity and transmission changes, electronic plasma, pulsed laser beam annealing 3—13270
Si, p^+ implanted, defect annealing, DLTS *(Chinese)* 3—43060
Si, picosecond laser pulse annealing, carrier and lattice temp. calcs. 3—56947
Si, polycryst., recrystn. by laser and electron beam annealing *(French)* 3—24121
Si, polycryst. film deposited on dielectric layers, CW laser annealing 3—33298
Si polycrystalline, ion implanted, laser annealed film, characterisation by Raman microprobe 3—3842
Si, polycrystalline, Schottky diodes, grain size, laser annealing study 3—33777
Si, polycrystalline film, ion implanted laser annealing, struct., resist., carrier mobility *(Chinese)* 3—43299
Si polycrystalline laser-recrystallized Schottky diodes 3—57409
Si polycrystalline solar cells, elec. props., effect of thermal treatment *(French)* 3—24586
Si, pulsed laser annealed, impurity segregation coeffs. determ. method 3—51651
Si, pulsed laser annealing, temp. and temp. gradients, X-ray diffr. study 3—37954
Si, pulsed laser annealing, nonthermal effect, EPR study 3—46997
Si, pulsed laser annealing, synchrotron X-ray study of struct. 3—56934
Si, pulsed laser annealing, pulsed-Raman temp. meas. 3—57936
Si, pulsed laser annealing and damage, electron energy distribs. 3—56940
Si, pulsed laser annealing phase, Raman and optical props. 3—57935
Si, pulsed ruby laser irradiated, time resolved transmission and refl. 3—57957
Si, pulsed-laser annealing, synchrotron X-ray diffr. study, plasma model 3—27988
Si, Raman scatt. with nanosecond resolution during pulsed laser beam annealing 3—8811
Si, seeded epitaxial growth over SiO_2 substrate by laser irrad. 3—57245
Si solar cell, CW laser annealing and ion implantation 3—19586
Si solar cells, EFG polycryst., ion implantation and laser annealing prep., SEM characts. 3—24584
Si, solidification during pulsed laser annealing, elec. cond. and optical reflectivity study 3—42754
Si, sputter-etch-damaged, annealing by Q-switched ruby laser 3—51657
Si thin film, CVD deposited and laser beam annealed, optical characts. 3—28917
Si, transient IR refl. and transmission during pulsed laser annealing 3—57938
Si wafer, epitaxial, laser annealed, defect form., SEM, TEM and X-ray studies 3—56958
Si wafers, virgin and implanted, laser beam annealed, point defects, EPR, cyclotron reson., DLTS meas. 3—56957
Si, zone refining of nonsubstitutional impurities, during pulsed laser annealing 3—58045
Si:^{11}B, divacancy annealing, electron beam and pulsed ruby laser excitation 3—56986
Si:^{75}As(^{31}P), thin film, thermal stability, effects of ion implantation and laser annealing 3—57249

laser beam annealing continued
  Si:As, ion implanted and laser annealed, defect struct., X-ray and TEM studies 3—42650
  Si:As(B), ion-implanted, surface electron props. 3—57408
  Si:As(Sb), impurity activation by laser irrad., Hall effect and Rutherford backscatt. study 3—18339
  Si:Au, transient conductance meas. during pulsed laser annealing 3—57352
  Si:B, As, ion implanted and CW laser annealed, Fe-related defect centres 3—47304
  Si:B, laser annealing, picosecond dynamics 3—56938
  Si:B, single step doping by UV laser, Auger electron analysis, spreading resist. obs. 3—42634
  Si:B,As, CW laser annealing, quenched-in defects 3—57313
  Si:H, As amorphous film, RF sputtered, pulsed laser annealing 3—56970
  Si:H amorphous glow-discharge coating on glass, CW laser crystallisation 3—18581
  Si:In(Sb), ion implanted, solute segregation and solid phase crystallisation dynamics 3—56950
  Si:In(Sb)(Ga)(Bi), ion implanted, morphological instability and cell form. during pulsed laser annealing 3—8093
  Si:P, CW laser induced deep level defects 3—57314
  Si:P, ion implanted, laser annealing dynamics, reflectivity and transmission coeff. study 3—37958
  Si:P, polycrystalline, interlayer oxides optimized by conventional processing and laser annealing 3—57434
  Si:P^+, ion implanted, refl. dynamic interf. effect by CW CO_2 laser annealing *(Chinese)* 3—38789
  Si:Sb supersaturated laser annealed ion-doped layers, decompostion, elec. cond. study 3—42786
  Si:Te, impurity redistribution after pulsed laser annealing, Rutherford backscatt. study 3—42641
  Si/glass struct., laser annealing, thermal model 3—56965
  Si/SiO_2/Si struct., laser annealing, thermal model 3—56965
  Si-Au, laser beam annealing of interface, diffusion 3—42657
  Si-SiO_2, laser recrystallisation of polycrystn. Si film with encapsulating film 3—33297
  Si+N, laser annealed, deep level study 3—28299
  Si_3N_4 optical thin film waveguides, low loss by laser annealing 3—17643
  Si(111), surface core level states, photoemission study 3—58039
  Si;As, pulse laser induced solid-phase annealing 3—8094
  Ta_2O_5 optical thin film waveguides, low loss by laser annealing 3—17643
  Ti thin film on Si, laser annealing, electron beam annealing, silicide form. 3—56963
  Xi films, recrystallised from melt, microelectronics appls. 3—23212
  ZnO optical thin film waveguides, low loss by laser annealing 3—17643

laser beam applications
  see also holography; integrated optics; laser beam annealing; laser beam machining; laser beam welding; laser isotope separation; matrix isolation spectroscopy; measurement by laser beam; modulation spectroscopy; optical communication; optical radar; patient treatment; plasma production and heating by laser beam; Raman spectra; Raman spectroscopy; remote sensing by laser beam; spectroscopy; surgery; two-photon spectroscopy
  accelerators, conf., Los Alamos, NM, USA (Feb. 1982) 3—16064
  acoustic emission methods development for materials processing 3—39345
  aerosol microjets, high speed, optical investig. 3—39414
  alloys, supercond., quenching by ion bombard., laser and electron irrad. 3—57459
  annealing by laser *(Korean)* 3—53080
  ARSS spectrometer based on narrow-band pulsed dye lasers 3—16422
  asymmetric ion-atom collisions in nonreson. laser fields, light scatt. 3—32164
  atmospheric NO concentration monitoring using UV laser differential-absorpt. techniques 3—15030
  atomic beams, monoenergetic, very slow, laser prod. 3—6807
  atomic emission spectroscopy, laser-induced breakdown spectroscopy, technique and applications 3—29340
  atomic physics expts. combining synchrotron radiation and lasers, review 3—41535
  atomic spectroscopy, principles and techniques, high resolution, review *(French)* 3—50551
  bar-code laser scanners, depth of modulation and spot size selection 3—7052
  beam weapons, possibilities 3—11632
  biological and medical appls. 3—58769
  biomedical optical scanner as an aid in simulating treatment with CT data 3—58761
  camera, laser scanning, for viewing inside nuclear reactors 3—40713
  cell populations fractionation, optical methods 3—44352
  chemical applications, U isotope separation, radioactive waste cleanup and trace-impurity removal 3—21441
  chromatography, laser-based detectors, review 3—53455
  coherent sources of IR and mm waves, appls. book 3—40
  coherent sources of IR and mm waves, scientific appls., book contrib. 3—1651
  complex flows in elastic liquids, laser flow-visualisation 3—17979
  conference, laser science, Ankwei, China (May 1982) *(Chinese)* 3—5
  contact lithography, laser-stimulated X-ray source appls. 3—26000
  CVD, laser induced, apparent activation energies, rapid determ. 3—47778
  CVD using CW and pulsed lasers 3—19283
  disc-loaded structure, scaled to 10 μm, beam loading, emittance growth 3—17144
  drift chamber tests using laser induced electron clusters 3—26588
  drilling, pulsed, transient photoacoustic monitoring 3—45220
  electric breakdown in vacuum gap, microparticle induced, investig. using twin beam laser scatt. system 3—18163
  electro-optics/laser conf., Brighton, England (March 1982) 3—40320
  electrophotographic laser scanner/printer using different laser frequencies 3—25967
  electroplating, laser enhanced, mechanisms and appls., review 3—3975
  emerging laser appls., microchemistry, optical disc storage and remote sensing 3—17555
  endoscopic CO_2 laser surgery, fibre optic systems 3—53745
  endoscopic photography using white-light flashlamp-pumped dye laser 3—50675
  energy transmission in space, free-electron laser appls. 3—32400
  eutectic structure, lamellar, regularity, anal. using diffraction of laser beam 3—58357
  excimer lasers, conf., Incline Village, NV, USA (Jan. 1983) 3—54580

laser beam applications continued
  extreme UV radiation generation with excimer lasers 3—12223
  extreme UV spectroscopic laser techniques, conf., Boulder, CA, USA (March 1982) 3—10498
  far field accelerators, working group report 3—17105
  fast ion beam spectroscopy, conf., Quebec, Canada (Aug. 1981) 3—20563
  fibre, propagating laser light spatial coherence 3—12351
  fibre fusion splicing with CO_2 laser 3—32510
  fibre mode partition noise suppression by laser diode light injection 3—7197
  fibre optic communication trends, conf., Arlington, VA, USA (May 1982) 3—49070
  fibrous and nonfibrous airborne particles, discrimination by light scatt. technique 3—19653
  FIR laser emission by optical pumping as molecular spectroscopy technique, use of $^{12}C\ ^{16}O_2$ lasers, book contrib. 3—417
  FIR molecular lasers, optically pumped Stark spectroscopy and freq. tuning, book contrib. 3—418
  flaw charact., quantitative, by means of scanning laser acoustic microscope 3—48036
  fluoroethylenepropylene thin films, spatial charge distrib. meas. 3—25897
  free electron lasers, use in IR and for condensed matter studies 3—12207
  fuel/O_2 mixtures, CO_2 laser induced ignition 3—44061
  gas switches, 2.8 MV, UV laser triggering 3—27126
  geodynamic studies in Australia, NASA laser satellite tracking stations 3—44596
  grating linac, beam stability, grating error depend. 3—17145
  grating linac, transverse stability requirement 3—17108
  grating particle accelerators, struct. obscuration by plasma form. 3—17111
  gyro design progress, lock-in and freq. pulling, mirror settings *(German)* 3—37096
  hologram recording using electron-beam pumped XeF laser with unstable optics 3—6927
  holographic and laser speckle measurements 3—46185
  holographic laser scanners using generalised zone plates, POS scanner appls. 3—32324
  holographic scanner, design trade-offs of laser diode and photoconductor parameters 3—6928
  hot steel, 3-dimensional shape measurement, appl. of Moire topography 3—7307
  immunology, current instrumentation value and limitations 3—53746
  industrial scale chemical synthesis, laser appls. 3—4303
  infrared laser microwave double-resonance spectrometer with a high-precision multipass Stark cell 3—416
  injection laser diode transmitter design 3—7014
  integrated optical circuit fabrication with laser-written masks 3—17646
  integrated optics elements for optical gyros 3—17638
  interferometer with low-freq. phase modulation 3—30924
  IR spectroscopy, use of tunable injection lasers 3—30941
  joint time and length standard 3—254
  laser chemistry *(Japanese)* 3—24519
  laser diodes, applications, review *(Polish)* 3—1686
  laser Doppler anemometer for particle vel. and size distrib. meas., review 3—12799
  laser focus accelerator 3—17142
  laser range finder for dimensional control of radio telescope antennas *(Russian)* 3—44669
  latent image form. by pulsed laser radiation, light scatt. 3—49487
  light control and detection technology, review *(Japanese)* 3—22134
  light-in-flight recording, high-speed holographic motion pictures of ultrafast phenomena 3—36956
  media accelerators, ultimate capability, prototypic expts. 3—17101
  medical and surgical use, conf., San Diego, CA, USA (Aug. 1982) 3—49071
  medical and surgical uses 3—53744
  medical diagnosis and high energy treatment *(Japanese)* 3—24838
  medical optical instrument advances in Japan *(Japanese)* 3—15181
  medical users *(French)* 3—15186
  medicine and surgery, future appls. of lasers 3—53749
  metal, surface hardening with CO_2 laser, thickness and irradiation angle effects *(Japanese)* 3—39300
  metals, pulse melted, metallurgy and microstructure 3—58116
  molecules, multiphoton excitation in a strong laser field 3—26805
  multichannel spark gap, laser fibre optics triggered, space charge effects 3—27768
  MV gas switches, triggering by UV laser 3—7845
  near-field accelerators working group report 3—17107
  nuclear particles detector system, optical adjustment using laser beam and hologram 3—11626
  ocean wave measurement, laser gauge calibration of thin-wire gauges dynamic response 3—15636
  oceanic particulates, in situ holographic meas. of sizes and settling rates 3—15454
  operating principles and appls. of lasers *(French)* 3—1648
  optical coatings, homogeneous, obtained by pulsed laser evaporation method 3—27281
  optical waveguides, IR, for high power CO_2 laser appls. research and development *(Japanese)* 3—27234
  organ metabolism in-situ investigation, laser fluoresc.-absorpt. meas. device 3—53751
  particle acceleration, longit. dynamics, plasma/laser interaction, qualitative design 3—17104
  particle acceleration using plasma waves 3—17103
  photocoagulation system, multispot, using fibre bundle scanner, port wine stain treatment 3—4611
  photographic recording of laser light, rel. to diffraction 3—49127
  photothermal recording, spatial-frequency transfer 3—32323
  piston engine, CW laser driven, indicator efficiency 3—27127
  plasma beat wave particle accelerator, expts. 3—17102
  plasma sprayed coatings, pulsed laser treatment 3—4166
  polyfluoroethylenepropylene, laser induced acoustic pulse probing of charge distrib. 3—47606
  population trapping in the laser excitation of a realistic autoionising level 3—1320
  possibilities of laser applications in engineering *(Hungarian)* 3—37097
  principles, introductory, book 3—45
  printing, integrated total internal refl. spatial light modulator 3—7162
  printing, layered organic electrophotographic photoconductors using squarylium pigments 3—25981
  printing, linear total internal refl. spatial light modulator 3—7161
  printing, sensors, function and utilisation 3—27123

laser beam applications continued
propyne, high-resolution ν_1 spectrum using microcomputer-controlled IR-acoustic colour centre laser spectrometer 3—415
pulsed laser data acquisition system 3—30844
radioactive isotopes, rare, highly selective laser detect. method through multistep photoionisation of accelerated atoms 3—21934
radiotherapy patients positioning using laser and interference transmission grating 3—53770
rail gap switches, triggered by UV radiation from excimer laser 3—7852
Raman spectroscopy, picosecond techniques 3—36095
ranging across Los Angeles basin, relative lateration 3—44377
rare gas-halogen UV excimer lasers for at., mol., and condensed matter studies 3—12206
real-time wavemeter for laser wavelength meas. 3—20891
refractory oxide optical coatings produced by continuous laser radiation 3—1744
resonance optoacoustic atmospheric spectrometer, oil/gas prospecting appls. *(Russian)* 3—35291
review *(Rumanian)* 3—12167
rotary piston laser engine 3—27128
scanner and recorder systems, optical evaluation of a high speed polygon mirror 3—7127
scanner error compensation *(Russian)* 3—27125
scanner manufacture, air-bearing machines and tools 3—7247
scanning acoustic laser microscope, acoustic rel. meas. 3—46415
scanning laser ophthalmoscope, image control 3—15190
scanning projection system *(Russian)* 3—41902
scanning systems, laser diode performance 3—7053
scanning technology advances, conf., San Diego, CA, USA (Aug. 1981) 3—5481
schlieren microphone for optoacoustic spectroscopy 3—17603
SiO_2 film, laser deposited, conformal step coverage 3—2998
Solid laser processing system, energy density distrib. equalisation over beam cross section 3—7050
solid state physics appl. *(Japanese)* 3—20902
spacecraft solar cell-to-interconnector weld eval. 3—48023
spark gap switches triggered by KrF laser through UV optical fibres 3—7851
spectroscopy, suitability for high precision studies 3—37098
spin-polarised electron source using $NaF(F_2^+)^*$ laser induced optical pumping 3—50105
splicing of two-dimens. arrayed optical fibres with CO_2 laser 3—1813
star coupler, diode laser array excited, for Fibernet II 3—22243
steel, Cr, microstructure, microhardness, austenite form., laser treatment, SEM and TEM studies 3—24342
steel target, cylindrical, struck by projectile, mech. shock anal. using laser Doppler interferometry *(French)* 3—2013
stimulated Cherenkov interaction at optical wavelengths 3—32287
stress wave probe, 0.2 Å sensitivity, 20 MHz bandwidth 3—50693
subsurface-structure determination using photothermal laser-beam deflection 3—13049
supersonic air flow visualization using coherent laser light sheets 3—2156
surface electric charge distrib., pulsed laser determ. 3—3294
surface hardening, review 3—43984
surface melting, practical implications 3—34536
surgery, variable section optical-fibre delivery system of high power laser radiation 3—39700
surgical systems, new generations 3—53752
template accelerator, optical element irrad. damage minimisation 3—17112
template laser accelerator 3—17110
therapeutic equipment using fibre optic endoscope for Ar laser photocoagulation *(Chinese)* 3—15178
thin layer, dielectric, near-field laser linac 3—17109
time of flight laser spectrometer for unstable nuclei props. 3—36607
TLD, laser heating technique, beta dosimetry, selective readout 3—55708
tunable coherent laser sources for VUV and XUV spectroscopy, review 3—10920
tunable diode laser spectrometer, single-scan, current-modulated, improved calibration and throughput performance 3—16416
tyres, laser holographic NDT using photoplastic holograms *(Chinese)* 3—41790
UV lasers development and appl. 3—41814
veterinary medicine and surgery, laser use 3—53748
video tape-to-film transfer, method and equipment *(Russian)* 3—30952
visual entertainment, laser-effects projector 3—56295
Au-Si trilayer struct. films for optical recording 3—1726
Ba II, radiative lifetime meas. of 6p $^2P_{3/2}$ level, collinear laser ion beam technique 3—21712
CO_2 guided plasma channel for light ion beam transport 3—7758
CO_2 laser, appls. in inorganic chemistry 3—24524
CO_2 laser interferometer, 10.6 μm operation, slow movement meas. appls. 3—25939
CO_2 laser scalpel, CC TlBr-TlI optical fibre for laser beam *(Japanese)* 3—46309
Cr film deposition by $Cr(CO)_6$ multiphoton dissociation 3—39041
Cr, films, photodeposited, elec. resist., reflectivity, stress and step coverage meas. 3—29017
Cs beam freq. standard based on Raman induced Ramsey reson., light shift evaluation 3—56277
Fe films, selected area deposition by laser CVD 3—52969
Fe-B glasses formed by picosecond pulsed laser quenching 3—9027
n-GaAs, etching under laser illum., cryst. defects study 3—42612
GaAs wafers, laser chemical etching of vias 3—47972
H_2 absorbed in metals, local meas. using laser technique 3—34571
He-Ne laser, reprographics, optical storage, gauge and medical appls. 3—56271
He-Ne laser, Zeeman multiplet, nonlinear laser spectroscopy 3—21701
I_2 laser, Iskra IY, 2 Tw, fusion ignition appls. 3—31827
$^{127}I_2$ HFS signal symmetry investigation method using laser freq. locking techniques 3—21822
InP/InGaAsP epitaxial layers, laser diagnostic probes for CVD 3—3966
$LiNbO_3$ crystal defects, optical imaging using polarizing filters and laser source 3—42596
$LiNbO_3$ on SAW device, high resolution photoacoustic microscopy study 3—27328
MgF_2 cavity frequency shift appl. for optical recording 3—17588
Mo films, photodeposited, elec. resist., reflectivity, stress and step coverage meas. 3—29017
N_2 laser, drift chambers, observation of space charge effects 3—45776
Nb superconducting film, optically controlled supercond. switch 3—18815

laser beam applications continued
Nd:YAG appl. in ultrashort-time spectrometer *(German)* 3—25953
Pb-Sn, eutectic, periodic lamellar substructure, investigation by laser beam diffr. 3—24441
RhB-Si bilayer struct. films for optical recording 3—1726
SbSi ferroelec. thin films, laser pulse prep., struct. and composition 3—3968
Si, p-n junction formation, laser induced liq. zone migration of metal-Si alloys 3—56964
$Sn_2P_2S_6$ ferroelec. thin films, laser pulse prep., struct. and composition 3—3968
Te and Te alloy films, ablative hole form. process 3—12256
TeO_x amorphous optical memory media *(Japanese)* 3—12257
U enrichment by lasers *(German)* 3—36489
W, films, photodeposited, elec. resist., reflectivity, stress and step coverage meas. 3—29017
W films, selected area deposition by laser CVD 3—52969
Xe II, hyperfine structure and isotope shift meas. by collinear fast-beam laser spectroscopy 3—21667
Xe II, radiative lifetime meas. of 6p $^4P^0{}_{5/2}$ level, collinear laser ion beam technique 3—21712
Yb isotopes, stable and neutron deficient, fast-beam laser spectroscopy for isotope shifts and hyperfine structure meas. 3—22145

laser beam effects
see also laser beam annealing; plasma-beam interactions; plasma production and heating by laser beam
acoustic optical waveguide and channel at axis of hollow laser beam 3—22211
acoustic transition radiation from thermooptical source created by scanning laser beam 3—27348
acupuncture mechanism using He-Ne laser *(Chinese)* 3—24793
aerodynamic levitation of laser-heated solids in gas jets 3—2101
aerosol clearing under conditions of thermal self-defocusing, efficiency estimation 3—12255
aerosol medium, selective interaction of laser pulse train 3—1567
air, breakdown by 9 55 μm laser radiation 3—32845
air, laser spark formed by train of picosecond laser pulses, shadowgraph graph 3—22742
Al alloys 2024 and 7075, steady state ablation by CO_2 laser 3—4192
alkali halides, F-H pair production by UV laser irrad., absorption spectra studies 3—56895
amorphous film, explosive crystn., kinetic parameters 3—38258
annealing by laser *(Korean)* 3—53080
antireflecting surface, gradient index, damage threshold increase by pulsed laser irrad. 3—7045
Araldite B, thermal shock effects rel. to laser beam heating *(Polish)* 3—19350
aromatic amino acids, photochem. stability on PS laser UV irrad. 3—29630
atmosphere remote optical breakdown by CO_2 laser pulses, transmission cutoff 3—30054
atomic beam deflection by resonant light press. 3—21950
atomic electron impact ionisation, Coulomb effects in low-freq. laser field 3—56083
atomic fluorescence, momentum cumulation effects *(Russian)* 3—11738
biological tissue primary and secondary damage induced by laser radiation 3—53719
blood cells, red, 1.06 μm pulsed laser damage, safety problems *(Chinese)* 3—44281
brass, laser-induced periodic surface struct. 3—42897
cadmium arachidate Langmuir-Blodgett film with selectively laser excited perylene, low temp. dynamical processes 3—38945
cascade excitation of levels, light-induced drift 3—36731
cavity resonators, density perturbations induced by discharge, linearised hydrodynamic anal. 3—22126
cell culture, human, mutagenic effect of visible range laser radiation *(Russian)* 3—19756
chalcogenide glasses, photostructural changes due to interband correlation of pot. fluctuations, theory 3—19088
chemical reactions, molecules in degenerate electronic state, vibrs. anharmonism effect 3—45883
combustion wave, slow laser-supported, acceleration 3—34627
Coulomb scattering in presence of low-freq. laser field 3—22017
cyclobutenes-butadienes, substituted, laser-induced IR multiphoton isomerisation, dynamics 3—4274
damage, small scale, morphology and correlation with defects 3—18338
diatomic mols. in two near reson. fields, intensity induced quenching of absorpt. 3—6716
dichlorotetrafluoroethane, laser induced decomposition, freq. depend. kinetics 3—39393
dielectric half-space, evaporation by laser, stabilised crater shape 3—43665
1,1 difluoroethane, IR laser selective excitation, pressure and laser fluence effects 3—1432
drops in standing wave field, light-induced instability 3—27646
electric current excitation by laser irrad., methods of increasing efficiency 3—38437
electroplating, laser enhanced, mechanisms and appls., review 3—3975
energy-gap distortion in solids under intense laser fields 3—47250
erythrocyte crenation by low power He-Ne laser radiation, ABO system depend. 3—53720
ethyl acetate, laser induced decomposition, freq. depend. kinetics 3—39393
eye, vibrs. induced, acoustic wave generation 3—19758
eye damage due to laser radiation, safety standards 3—19757
eye protection against He-Ne lasers, interf. filter based protective glasses *(Czech)* 3—4656
fibres, SiO_2 core, ^{60}Co irradiated, laser diode-induced photobleaching at low temp. 3—41935
gas mixture thermal diffusion separation using laser radiation 3—56641
gas-surface interactions, laser enhanced, basic processes and appls. 3—4316
gaseous disperse systems, acoustic emission during laser breakdown 3—37605
gases, low-density, in capillaries, mass transport induced by laser radiation 3—32766
gases, velocity-selective laser photodissoc., longit. particle density gradient form. 3—19529
glass, laser irradiated, damage thresholds calc. 3—22139
glass, thermal shock effects rel. to laser beam heating *(Polish)* 3—19350

laser beam effects continued
grating visual evoked cortical pots. in laser bioeffects evaluation, instrumentation 3−35032
heartbeat phenomenon (HB2) and concept of 2-D optical turbulence 3−41891
HeLa cells, biological action of low-intensity 633 nm light as function of coherence, dose, wavelength and irrad. regime 3−58727
heterogeneous two component system, temp. distrib. after CW laser irrad. 3−27364
insulator, transparent, optical strength, thermal fluctuation origin 3−2602
isotopic species adsorbed on solid surface, laser excitation, quantum model 3−19229
isotropic solid, laser radiation, nonlocal effects, response tensor 3−34176
Langmuir film, laser light scatt. 3−38943
laser-generated electron emission, pulse shape effects, theory 3−43664
leucocyte in blood, phagocytic ability strengthening by laser irrad. of horse perineal region skin *(Chinese)* 3−39694
liquid, optical breakdown, excited bubble dynamics 3−12725
liquid, sound propagation from pulsed thermooptical source, nonlinear acoustical effects 3−13343
liquid, thermocapillary convection under high-power laser irrad. 3−7585
liquid films, viscous, heated by Gaussian laser beam, competition between capillary and gravity forces 3−2052
liquids, laser breakdown, spatial struct., stimulated scatt. and self-focusing effects obs. 3−18342
magnetic semiconductor, magnon instability by radiation field and strong DC mag. field 3−3433
magnetic semiconductor, spin wave amplification by radiation field due to free carrier scatt. 3−23615
MBBA, nematic liq. cryst., light diffr. by laser beam created channels 3−46267
melting, local, of cryst. near dislocations, effect on anomalous sp. ht. *(Russian)* 3−38036
metal, elastic pulse generation by laser irrad. 3−13334
metal, optical phonon damping under laser irrad. 3−2716
metal disk, pulsed laser excitation of normal modes 3−58368
metals, ion implanted or laser irrad., corrosion and electrochemical behaviour 3−29215
metals, laser irrad., heat cond. effect on oxidation kinetics 3−34551
metals, laser irradiation, electron emission through diode, shape distortion by induced currents 3−34175
metals, Soret diffusion vs. impurity diffusion during laser or electron beam induced heat flow transients 3−56961
metastable surface alloys produced by ion implantation, laser and electron beam treatment, review 3−27961
mica, porous cryst., penetrability of toluene mols., IR laser control 3−2888
Morse oscillator, laser excitation, classical theory 3−50474
multiphonon relax. of vibr. excited adatom, general formulation 3−57202
nematic liq. cryst., light diffraction by laser beam created channels 3−7907
nematic liquid cryst., reorientation induced by superposed 3−13093
nematic liquid crystals reorientation by superposed optical and quasistatic elec. fields 3−7908
nonabsorbing targets, laser vaporisation 3−51771
nonlinear index effects due to pump laser bandwidth in Raman conversion 3−27151
nonstationary absorption wave in a solid transparent dielectric 3−32306
nucleic acid synthesis in HeLa cells, biostimulation by low-intensity visible light 3−39695
octylcyanobiphenyl, nematic liq. cryst., light diffr. by laser beam created channels 3−46267
optical element accurate positioning by radiation field 3−17550
optical glass, integral antireflective surface production 3−7251
particle-atom ionising collisions, laser effects 3−11981
photon antibunching, reson. fluoresc., laser line width effects 3−22018
photoradiation therapy, tissue as medium for laser light transport 3−53722
physiopathological effects on skin and eyes of UV, visible and IR radiation *(Italian)* 3−44282
piezoelectric semiconductor, magnetoactive, filamentation and modulational instabilities of laser radiation 3−23416
poly(ethylene terephthalate) films, self-developing photoetching by laser radiation 3−4155
polyatomic molecules, coherent pumping, weakly coupled quasicontinuum model 3−41627
polymers, thermal stability at high heating rates 3−13129
polymers, transparent, optical strength, influence of plasticiser and matrix viscoelastic props. 3−32429
powder coatings on metal surfaces for laser treatment, absorptivity meas. *(Chinese)* 3−39280
quartz, ion and laser beam effects, SAW study 3−51674
quartz, piezoelectric surface generation of high freq. phonons 3−42728
radiative atomic trap theory 3−1685
reflectors, cooled, optical surface quality, stress concentrator effects in high-power optics 3−12278
Rochelle salt, ferroelec., step-polarisation switching processes under laser irrad. 3−23861
semiconductor, heavily doped n-type, longitudinally magnetized, laser beam parametric decay to US-helicon waves 3−28374
semiconductor, strongly doped, optical phonon damping under laser irrad. 3−2716
semiconductor surface, laser-stimulated adspecies interaction 3−47742
semiconductors, highly excited, relaxation processes, equilib. state and dispersion mechanisms *(Spanish)* 3−13693
semiconductors, isotropic, photostimulated longitudinal magnetoresistance 3−8514
semiconductors, mag., magnon damping, intense laser field effect 3−28540
semiconductors and metals, ion implantation and laser treatment, conf., Bombay, India (Feb. 1981) 3−25686
semiconductors and oxides, laser induced desorption, surface damage and annealing 3−57229
skeletal muscle damaged by ionising radiation, regeneration stimulation by He-Ne laser *(Russian)* 3−58723
solids, scanning laser beam, transient temp. profiles calc. 3−51658
spontaneous periodic surface struct. growth on solids during laser irrad. 3−23145
sputtering and interaction of erosion laser flare, modelling of nonstationary processes 3−52871
steel, laser surface hardening, for increasing design strength 3−53281

laser beam effects continued
steel, Si, grain oriented, laser irradiated, characts. 3−34174
steel ball, model rough surfaces in elastohydrodynamic lubrication 3−14745
steel plates, laser surface hardening expts. 3−43997
structural vibration, laser induced 3−32646
sublimation wave, 2D slightly supercrit. structs. 3−23027
surface, laser induced periodic struct., Fourier component anal. 3−42896
surface heat treatment, laser and electron beam hardening, review 3−58270
surface oscillation self-excitation 3−26940
surface structure on solids, periodic, effect of polarisation state 3−28937
synchronous amplification of 70 fsec. pulses using a freq.-doubled Nd:YAG pumping source 3−37747
template accelerator, optical element irrad. damage minimisation 3−17112
tetraalkylammonium haldies, laser desorption, time resolved mass spectra 3−38191
tetrahedral light pressure trap for atoms 3−1312
TGS cryst., ferroelec., step-polarisation switching processes under laser irrad. 3−23861
thermal diffusion of gases, laser action 3−2167
three level atom excited by two laser fields, linear const. of motion 3−21730
three level system, conditions for population trapping, spontaneous emission 3−6593
three level system driven by two coherent fields on two-photon reson., population trapping 3−11769
three-level system in an asymptotically strong field 3−32395
three-level system subjected to laser radiation field with smoothly varying freq., nonadiabatic transitions 3−36975
thymine in aqueous soln., direct and indirect photolysis by laser UV radiation 3−24673
tools and components, increasing reliability and maintainability using laser hardening technology 3−34554
transparent dielectrics, optical breakdown, absorbing impurities effect 3−8856
transparent media, impurity distrib. from optical breakdown thresholds 3−2603
trimethylaluminium thin film, decomposition induced by electron, ion and photon beams 3−4285
tumor cells, proliferating and resting, response to repetitive pulsed UV laser radiation 3−34888
ultracold molecules in collisionless supersonic beams, UV laser excitation, vibr. randomisation meas. 3−6777
UV doubling crystal damage thresholds, used with flashlamp pumped dye lasers 3−22142
water, laser-generated high-freq. sound waves 3−37282
water drop with insoluble core, heating under 10.6 μm radiation, explosive boiling 3−51659
water droplet surface oscillation self-excitation in CO_2 laser field 3−26940
wheat seed early accelerated root growth by He-Ne laser 3−58726
Ag, electrodeposited on Cu, diamond-turned, laser-induced damage at 492 nm 3−18337
Ag, electrodes, adsorpt. of H_2O and pyridine, surface morphology, voltammetry and SERS, laser beam effects 3−14873
Ag island film, adsorbed pyridine, resonantly excited desorpt. by IR laser absorpt., SERS detection 3−8329
Ag-Cu alloys, phase stability of overlapping melt trails produced by continuous laser melt quenching 3−24211
(Al,Ga)As, luminesc. centre form. during pulsed laser irrad. 3−47699
Al alloy, diamond-turned, high-purity, laser-induced damage at 492 nm 3−18337
Al alloy D16, disk, pulsed laser excitation of normal modes 3−58368
Al, electron beam induced heat flow transients, heat diffusion eqn. calc. 3−42670
Al, ion implanted and pure, laser irrad., impurity profiles and heat flow 3−27990
Al, laser bombardment, dynamic response, surface roughness effect 3−13272
Al laser irradiated foils, plastic deform. study *(Russian)* 3−37983
Al, laser-induced periodic surface struct. 3−42897
Al, pure and Sb implanted, laser irrad., AlSb precip. nucleation, lattice defects, TEM, ion beam anal. 3−56960
Al-Cr-Mo, ion implanted metastable phase form by pulsed laser treatment 3−2604
Al-Sb ion implanted alloy, nonequilibrium segregation during pulsed laser treatment 3−28110
$Al_{0.22}Ga_{0.78}As$, laser induced recombination centers, photoluminesc. measurements 3−38857
AlSb film, laser irrad., self-epitaxial growth, TEM and electron diffr. study 3−47236
$Ar-N_2$ mixtures, laser irrad., breakdown threshold 3−56769
As-S films, vitreous chalcogenide semicond., photostimulated dissolution 3−8379
As_2S_3:Ag amorphous film, Ag photodoping sensitivity, optical and elec. resist. study 3−46851
Au, electrodeposited on Cu, diamond-turned, laser-induced damage at 492 nm 3−18337
Au/Ag epitaxial struct., metastable phase form. by pulsed beams and ion beam mixing 3−2627
BCl_3-Xe mixtures, sublimation, laser-induced suppression effect 3−42762
CO highly excited states, laser induced processes 3−11764
Cd thin film, laser induced oxidation 3−42658
CdS, 1.06 μm Nd:YAG laser-induced damage meas. 3−18336
CdS, laser irrad., structural defects, recombination radiation spectra 3−52844
CdS, laser irradiated, subthreshold defect formation, photoluminesc. and reflectivity study 3−18341
CdSe, self-diffraction of picosecond light pulses 3−34177
CdTe, 1.06 μm Nd:YAG laser-induced damage meas. 3−18336
CdTe laser material, laser-induced damage and two-photon absorpt. meas. 3−8091
Co-Si, laser melting, phase segregation, SEM study 3−56962
Cr thin film, sputter deposited on Cu, laser and ion beam mixing 3−57242
Cr-B-Ni powder for wear resist. hard facing using laser, choice of paste binder *(Russian)* 3−58280
$Cr(CO)_6$ thin film, decomposition induced by electron, ion and photon beams 3−4285

laser beam effects continued

- CsH particles, laser-produced from Cs-H_2 vapour, size distrib., light scatt. study 3−22804
- Cu, diamond-turned, laser-induced damage at 492 nm 3−18337
- Cu, laser bombardment, dynamic response, surface roughness effect 3−13272
- Cu laser irradiated foils, plastic deform. study *(Russian)* 3−37983
- Cu thin film, laser induced oxidation 3−42658
- Cu thin film on Zr, laser-pulse alloying, RBS, channelling, TEM, X-ray diffr. studies 3−57243
- Cu_2O giant cryst., laser assisted growth in oxidizing atmosphere 3−19265
- $ErCrO_3$, spin reorientation, laser induced, time resolved spectra 3−52777
- F_2+H_2 explosion initiation due to pulsed laser radiation on reaction vessel surface 3−53405
- Fe (110), laser induced thermal desorption of CO 3−13642
- Fe, laser bombardment, dynamic response, surface roughness effect 3−13272
- Fe-Al(Cr)(Ni), laser induced surface melting, mass transfer 3−22938
- $Ga_{1-x}Al_xAs$ lasers, visible and IR, catastrophic degradation level meas. 3−27114
- GaAs epitaxial films, laser irrad., photoluminesc. meas. 3−34147
- GaAs, evaporation and ripple formation under laser irrad. 3−38968
- GaAs, laser generated heat pulse propagation 3−23112
- GaAs, laser irrad., O incorporation, effect of O_2 pressure 3−22936
- GaAs, pulsed laser breakdown thresholds using two laser beams 3−37959
- GaAs sputtered films, cryst. struct. and comp., effect of laser irrad. *(French)* 3−23211
- GaAs, surface dissociation by pulsed laser irrad., AES study 3−8095
- GaAs, surface transitions, gradual, induced by multiple picosec. laser pulses 3−28936
- GaAs:Cr wafer, Si diffusion from thin film by pulsed laser irrad. 3−57145
- GaP, nonlinear photoinduced desorption of P 3−38204
- GaSb laser, heavily doped, high power and optical damage resist. attainment 3−12182
- $Gd_2(MoO_4)_3$, ferroelec., step-polarisation switching processes under laser irrad. 3−23861
- Ge, amorphous, crystallisation processes in multipulse low power laser irradiation 3−57088
- Ge amorphous film, short pulsed laser irrad., crystn. mechanism 3−13688
- Ge, electron-hole drop luminesc. damping by high power CO_2 laser radiation 3−43601
- Ge, laser generated heat pulse propagation 3−23112
- Ge, laser-induced defects, H_2 passivation, DLTS study 3−46993
- Ge, laser-induced periodic surface struct. 3−42897
- Ge, laser-induced periodic surface struct., time-resolved evolution 3−42899
- Ge, periodic surface damage, 1.06 μm YAG laser pulses, spectrum in $\vec{K}$ space 3−56952
- Ge, time-resolved images of electron-hole droplets 3−43036
- Ge:As; laser processed, ^{73}Ge Mossbauer effect 3−57839
- H, two-frequency excitation 3−11751
- H_2S, photofragmentation in first continuum, time of flight and ang. distrib. meas. 3−46034
- InP-InGaAsP-InP DH, misfit dislocations, optically induced glide motion, photoluminesc. study 3−51608
- InSb, laser-induced melting using picosecond CO_2 laser pulses 3−27985
- InSb, nonlinear interactions under picosec. laser irrad., plasma form. and nonlinear melting 3−37961
- KH_2PO_4, laser induced damage 3−27989
- KI, laser irrad. defect form., V_k and H-centres 3−56892
- KrF laser radiation phase conjugation and pulse compression by stimulated Raman scatt. 3−27167
- LiF, colour centre transformation by laser radiation 3−8098
- LiF, laser generated heat pulse propagation 3−23112
- $LiNbO_3$ antireflection-coated surface selective and uniform laser-induced failure 3−56930
- $LiNbO_3$ diffused waveguides, optical damage resistance 3−17613
- $LiNbO_3$ diffused waveguides, optical damage resist. 3−27233
- $LiNbO_3$, ion and laser beam effects, SAW study 3−51674
- $LiNbO_3$:Fe, exoelectron emission and radiation strength, impurity and temp. depend. 3−39019
- Mo, polished, laser-induced damage at 492 nm 3−18337
- N_2 highly excited states, laser induced processes, VUV radiation generation through direct multiphoton excitation 3−11764
- Na vapour, laser induced ionisation 3−11756
- NaCl, single cryst., opt. strength improvement using temp. cycling technique 3−8090
- NaCl:Ca,OH, optical strength change, impurity distrib. effects 3−42651
- Nb superconducting film, optically controlled supercond. switch 3−18815
- Ni, self ion implanted, pulsed laser irrad., defect-impurity interactions 3−2599
- Ni/Si struct., metastable phase form. by pulsed beams and ion beam mixing 3−2627
- Ni-Cr thin film, sputter deposited on Cu, laser and ion beam mixing 3−57242
- Ni-Eu, ion implanted, pulsed laser irrad., defect-impurity interactions 3−2599
- Ni-Si, laser melting, phase segregation, SEM study 3−56962
- $Ni_xCu_{100-x}(Nb_{100-x})(Ti_{100-x})$, laser irrad., positron annihilation *(Russian)* 3−24049
- Pb film on Al, pulsed laser treatment, chemical interdiffusion, Rutherford backscatt. study 3−27991
- PbTe epitaxial films, carrier density and mobility 3−47439
- Rb-dimethoxyethane solutions, electron spin polarisation 3−14117
- SF_2-H_2O(NO), free radical prod. by laser photolysis, LMR study 3−45984
- SF_6+cyclopropane, vibrational-translational energy transfer after laser pulse absorption, thermal lens effect meas. 3−26826
- Sb-Pt/Si p-n junction form. by laser processing 3−57421
- Sc_2O_3 laser coating damage threshold at 248 nm KrF laser wavelength 3−7043
- Si (111)-(1×1) surface laser irrad., struct. 3−18538
- Si, amorphous, evidence against reduced melting temp., CW laser heating 3−57071
- Si, amorphous, laser irrad., melting temp. meas. for recrystn. process 3−33402
- Si, amorphous film, reactive laser-sputtering 3−58053
- Si, CVD film, in situ laser recrystallisation 3−57240
- Si, CVD grown, laser irrad., grain enlargement, optical microscopy, SEM studies 3−56968

laser beam effects continued

- Si, CVD grown on fused SiO_2, laser crystn. 3−56969
- Si, damage, induced by picosecond laser pulse irradiation 3−56955
- Si, diffusion of ^{73}As, laser pulse processing 3−56921
- Si, doping profile shaping by multiple-pulse laser processing 3−56925
- Si film, laser irrad., radiative melting, lamellae obs. 3−46989
- Si film, lateral seeding epitaxy by CW Ar laser irrad. and high temp. CVD 3−2996
- Si films, single cryst. lateral nucleated epitaxy on amorphous $SiO_2(Si_3N_4)$ using scanning laser and electron beams 3−34224
- Si, ion implanted, laser annealing and damage, electron channelling pattern obs. 3−13052
- Si, ion implanted, short time annealing methods, review 3−51638
- Si, laser heated, picosec. time-resolved detection of plasma form. and phase transition 3−38834
- Si, laser induced backside damage, characterization for gettering 3−56973
- Si, laser induced CVD single cryst. growth 3−47758
- Si, laser induced phase transitions, space-time resolved reflectivity meas. 3−56936
- Si, laser irrad., O incorporation, effect of O_2 pressure 3−22936
- Si, laser irradiation, picosecond, fundamentals of energy transfer 3−56933
- Si, laser-induced periodic surface struct. 3−42897
- Si, MBE, laser processing 3−58052
- Si, melt-in, regrowth, and amorphisation vels. under pulsed laser irrad. 3−56931
- Si, oxidation, oxygen trapping, induced by laser irradiation 3−56953
- Si, polycrystalline, laser recrystallisation effect on substrate minority carrier lifetime 3−27987
- Si polycrystalline islands, laser recrystallised, grain boundaries and diffusion paths, MOSFET and ring oscillator appl. 3−33295
- Si, porous, laser processing 3−56972
- Si seeded lateral epitaxial layer on SiO_2, RHEED characterisation 3−23194
- Si, selective lifetime doping by laser scanning, meas. on p-n junctions and MOS capacitors 3−33736
- Si, self-diffraction of picosecond light pulses 3−34177
- Si surface, laser pulse irrad., electron and ion emission mechanisms 3−38967
- Si, surface, laser-stimulated adspecies interaction 3−47742
- Si, surface defect form. under laser irrad., DLTS study 3−18340
- Si, surface temperature using large diameter scanning CW laser and electron beam sources 3−56978
- Si, surface transitions, gradual, induced by multiple picosec. laser pulses 3−28936
- Si thin films, explosive liquid-phase crystn. during laser pulse heating 3−33601
- Si wafer, minority carrier lifetime, extent of LID gettering effect, nondestructive SAW technique 3−48025
- Si wafers, backside laser irrad., microcracks, thermal annealing 3−27984
- Si:As, doping by laser diffusion from spin-on arsenic glass 3−42848
- Si:As, Ge, laser processed, ^{73}Ge Mossbauer effect 3−57839
- Si:As(Bi), influence of laser beam homogeneity on regrowth 3−56954
- Si:B, single step doping by UV laser, Auger electron analysis, spreading resist. obs. 3−42634
- a-Si:H glow-discharge doped films, laser radiation effects on cond. and Schottky diode operation 3−8579
- Si:O (100) surface, O saturated, CO_2 photodesorption 3−51923
- Si:P, CW laser induced deep level defects 3−57314
- $SiO_2:P^+$, laser irrad. effect on film struct., IR transmission spectroscopy 3−18575
- SiO_2-Ta_2O_5 AR coatings, laser-damage threshold at 1064 nm, deposition parameter influence 3−8089
- Sn-SnO_x-Sn supercond. tunnel junction, laser induced signals 3−3377
- SnO_2 films, laser-induced damage, electro-optic modulator electrodes appl. 3−41901
- Ti, exothermic oxidation by laser light pulse 3−43993
- Ti, heating by intense laser beam, oxide optical consts. changes effect 3−19230
- Ti, ignition and combustion in oxidising medium under CO_2 laser irrad. 3−9324
- Ti, laser heating, stochastic regime 3−42656
- Ti-Al-Y (8, 4 at.%), dispersion strengthened, laser surface melting, microstruct. EM obs. 3−43852
- V oxidation by CW CO_2 laser radiation, thermoelectric phenomena 3−58311
- Y_2O_3-ZrO_2, plasma sprayed layers, vertical cracking, surface oxidation, densification under laser treatment 3−53247
- ZnSe, 1.06 μm Nd:YAG laser-induced damage meas. 3−18336
- ZnTe, 1.06 μm Nd:YAG laser-induced damage meas. 3−18336
- ZnTe, optical inhomogeneity form. by single picosec. pulse 3−57878
- ZnTe:Al(Cl)(In), laser-induced donor diffusion, photoluminesc. study 3−47158
- Zr thin films on metal substrates, laser-pulse alloying, RBS, channelling, TEM, X-ray diffr. studies 3−57243
- ZrO_2 thermal barrier coating, plasma sprayed, laser glazed, cyclic oxidation and corrosion 3−4173
- ZrO_2/SiO_2 thin film damage induced by high intensity laser beams *(Chinese)* 3−42652

laser beam machining

- applications to drilling, cutting-off, scribing, trimming, marking *(Japanese)* 3−24380
- drilling with Nd:YAG, Nd:YAP and Nd:glass lasers 3−50691
- laser cutting, review 3−43984
- materials processing using high power CO_2 laser 3−22100
- photoacoustic monitoring of pulsed laser drilling in epoxy-glass composite 3−27327
- X-ray pinhole camera, laser forming of microholes 3−10974
- Al plate, aperture form. by mod. energy density radiation, dispersion of ejected products 3−53091

laser beam modulation *see optical modulation*

laser beam properties *see laser beams*

laser beam welding

- CW and pulsed laser appl. *(Japanese)* 3−24380
- review 3−43984
- solid-state laser energy stability, laser welder development *(Chinese)* 3−12153

laser beams
see also holography; laser frequency stability; Schwarz-Hora effect
acousto-optic laser beam deflector, reprographic quality high speed solid-state 3−7148
aerodynamic window effect on beam quality 3−41968
angular fluctuations meas. using optoelectronic device 3−16397
area theorem for a model of classical anharmonic oscillators 3−27141
atmospheric path propag., thermal distortions 3−20118
autoboresighting laser beam on specular point target, boresight error in conical scan method 3−1684
bimodal atmospheric guided energy laser scheme, radial thermal gradients 3−4958
Bragg angle measurement of laser beam diffracted by acousto-optic modulator, crystal props. 3−50683
coherence, temporal-spatial degree determ. *(French)* 3−25938
coherence time determ. of single picosecond light pulses, dynamic holography method 3−56163
correlation properties of light produced by quasi-thermal sources 3−36935
CW, spatially scanning gain meas. using simple arrangement 3−27119
diagnostics, conf., Arlington, VA, USA (May 1982) 3−40311
diffraction coupler for laser characts. meas. 3−7049
divergence of higher order laser beams *(Chinese)* 3−22138
dye CW laser, passively and synchronously mode-locked, pulse substructure 3−27096
dye DFB laser, pulse duration under single pulse conditions 3−27038
dye DFB laser tunable in broad spectral range, picosecond pulse prod. 3−27039
dye laser subpicosecond pulse synthesis and holographic visualisation *(French)* 3−50669
dye lasers, CW mode locked linear or ring, femtosecond pulses, tunability at GW level 3−27103
emission pulse modulation with a magnetooptic modulator 3−32392
energy density distrib. equalisation over beam cross section in Solid laser processing system 3−7050
energy measurement instrument for use in prescribed time interval 3−10903
energy measurement of pulsed laser radiation 3−50689
femtosecond continuum generation 3−27104
free electron laser, angular spread effect, small signal gain calc. 3−46223
free electron laser, Stanford 3 μm, optical pulse shape, expt. results 3−17511
fundamentals and appl. *(German)* 3−6997
Gaussian beams, generalized, propag. in a square-law medium with longit. variations of refr. index 3−1551
HELEN laser system beam diagnostics 3−41900
Hermite-Gaussian mode laser beam scatt. and optical pot. well for homogeneous sphere 3−50686
heterodyne detection of laser beams 3−7048
high-power systems, radiation parameters in the focus, apodisation effect 3−50688
homogeniser, regrowth of Si:As(Bi), influence of laser beam homogeneity 3−56954
injection laser coherence, effect on acoustooptical device resolution 3−17605
integrated irradiance measurement device, IRIS, for circular symmetric far field distribs. 3−41899
intense laser radiation second harmonic generation theory 3−17572
Laguerre Gaussian beams of any spot size and divergence 3−46247
laser phase correction using supersonic gas jets 3−12195
light combustion waves, fast and slow, existence and characts. 3−53401
microenergy laser calorimeter, highly sensitive, principle, struct. and performance *(Chinese)* 3−20854
modulated laser field and power spectrum anal. for current modulated single-mode laser 3−27098
modulation effect influence on laser freq. fluctuation meas. 3−56264
molecular laser spectroscopy application 3−5865
multipass laser cell beam motion 3−1674
non-Gaussian intensity profile form. in laser with inhomogeneous mirrors 3−37092
nonlinear laser spectroscopy, introduction, book 3−30569
optical heterodyne saturation spectroscopy, modulation transfer processes 3−10909
phase shift effect in polarised light interaction with scatt. layer 3−50687
picosecond optical pulse duration determ. from autocorrelation function, fluctuation influence 3−27121
picosecond phenomena, conf., Garmisch-Partenkirchen, Germany (June 1982) 3−25697
picosecond pulse width meas. by single-shot second harmonic beam technique 3−22160
picosecond sources and techniques, mode locking techniques 3−27105
picosecond tunable pulse generation in XUV 3−27165
piezoelectrically-driven beam deflectors, axial mode 3−7147
power meters, review 3−40687
pulse compression at an abrupt dispersive interface 3−17549
pulse compression by stimulated Brillouin scatt. in tapered waveguides 3−32391
pulse deformation in laser amplifiers, amplifier optimisation with spatial filtering 3−17525
pulse generation, ultrashort, using Fabry-Perot interferometer, numerical anal. 3−50668
pulse generation from piceosecond to femtosecond time regime 3−27102
pulse propagation, multilevel, multifreq. 3−6998
pulse propagation in particulate media, split-step Fourier transform analysis 3−6883
pulse time-space structure deform. due to two-photon absorption 3−6999
pulse train generation by partially switching off the resonator losses 3−32393
pulsed laser beams registration, using CCD matrix 3−16414
pulsed laser emission energy density spatial distrib. monitoring by foil method 3−50685
pulsed laser production oriented testing using a fully automated optical test system 3−56354
radiation divergence in high-power laser amplifiers 3−17552
random small-scale inhomogeneity active medium laser radiation, ang. characts. field rot. influence 3−22026
ring lasers, natural frequency fluctuations meas. for radiation at $\lambda=3.39$ μm 3−12203
ruby laser radiation scattering by nonrelativistic electron beam 3−22144
scanned laser beam intensity, analogue compensation for surface reflected intensity data 3−7051
scanning system, polygon-type, designs for beam shaping optics 3−7128

laser beams continued
semiconductor injection laser electronic beam steering via index of refr. modification 3−41893
semiconductor laser array, phase-locked, near-field and far-field patterns obs. 3−50671
semiconductor laser wavefront meas. apparatus 3−40680
semiconductor laser wavelength shift during pulse modulation, consequence for optical fibre dispersion and interf. noise meas. 3−32394
solitons, plasma waves and laser pulses, book contrib. 3−54633
spark gap breakdown mechanism in nonuniform field with laser beam irradiation under negative polarity 3−51407
spherical Gaussian beam focusing through train of lenses or mirrors 3−46248
spherical target illumination uniformity using a six beam laser 3−17551
stable-resonator laser systems photometric features *(Russian)* 3−45189
stimulated bremsstrahlung effect in multimode laser radiation field 3−37126
subnanosecond high-voltage 50-Ω calibrated attenuator 3−27120
thermal defocusing compensation by means of phase conjugate adaptive systems 3−22143
transient energy exchange between opposite waves, laser spectrum narrowing to resonant medium absorpt. line 3−7029
transverse mode anal. using computer synthesised spatial filters 3−56301
triple bounce illumination system used for laser fusion expts. 3−50692
two-level atoms, optical pulse propag. in degenerate laser amplifiers 3−46250
ultrafast pulse formation with predetermined temporal shape, grating spectrograph appl. 3−27117
ultrashort laser pulse generation, appls. to electron trapping in amorphous media 3−7033
UV laser beam, picosecond pulsewidths meas. using electrical autocorrelator 3−41894
UV picosecond high power laser pulse generation for laser-prod. plasma diagnosis *(Chinese)* 3−37060
vector polynomials orthogonal to the gradient of Zernike polynomials 3−12091
wavelength ratio, interferometric meas., accuracy limit 3−12201
white-light continuum femtosec. pulses 3−27100
Ag_3AsS_3, proustite, parametric generation of tunable picosecond pulses, 1.2-8 μm 3−37118
AlGaAs lasers, coherence props. of picosecond pulses 3−41839
$Al_xGa_{1-x}As$-GaAs injection laser, laser beam relax. obs. 3−12204
CO_2 laser, regenerative amplification of nanosecond pulses, numerical simulation 3−6948
CO_2 laser beam, acousto-optic deflection by optically active Te 3−47620
CO_2 laser radiation absorption meas., high-temp. 10 μm absorption cell 3−32397
CO_2 powerful laser beams, self-focusing in collisional plasmas 3−7085
DF-CO_2 chemical laser, shortening of emitted pulses 3−7041
GaAlAs diode laser pulse obs. using picosecond streak camera system 3−40712
GaAlAs/GaAs high power phase-locked laser array beam focusing 3−46240
HF parallel-amplified multiline laser beams, active phase matching by Mach-Zehnder interferometer 3−27113
He-Ne intra-cavity laser beam polarisation effect on refl. beam intensity *(Chinese)* 3−41895
He-Ne laser beam intensity stabiliser 3−46252
InGaAsP-InP single freq. injection lasers, index-guided and gain-guided, beam parameters meas. 3−6973
KrF* amplified ultrashort UV laser pulse generation and pulsewidth meas. 3−37087
Nd:glass passively mode-locked laser, temporal analysis by four-wave mixing 3−27060
Nd:YAG laser, 10 Hz positive branch confocal unstable resonator, performance characts. *(Korean)* 3−12178
Nd:YAG laser pulse compression by stimulated Brillouin scattering in tapered glass fibre 3−41914
Nd:YAG non-mode-locked picosecond laser, regenerative compression technique 3−27111
Nd:YAG sub-transform limited picosecond laser pulse generation using plasma shutter 3−27112
Nd^{3+}:LiNdLa phosphate glass laser using LiF(F_2^-) cryst. Q switch, spectral composition 3−56261
Nd^{3+}:YAG CW laser, self-interaction of radiation field 3−6990
Nd^{3+}:YAG mode locked laser, fluctuating picosecond optical pulse duration determ. 3−27121
Pb salt tunable diode lasers, linewidth meas. using heterodyne and etalon techniques 3−12141

laser cavity resonators
active volume role in resonator design 3−46243
adjustment of laser cavity using optogalvanic effect *(Chinese)* 3−12187
bistable laser resonator containing two semicond. elements in an external cavity, rate-eqn. anal. 3−56196
chemical CW lasers with radial gas flow mixture using unstable resonators 3−56247
coherent light net power loss in laser cavity rel. to laser linewidth *(Chinese)* 3−37078
cone-mirror resonator Q-switched operation 3−22125
constricted DH large-optical-cavity diode laser, high-power, single-mode, mode discrimination and control, theory 3−27086
continuous-flow amplifier and resonator theory 3−22129
CW laser oscillators, dispersion-induced instability 3−12108
CW solid-state lasers, open resonators with thin amplifying layer, oscills. 3−7026
density perturbations induced by discharge, linearised hydrodynamic anal. 3−22126
diode lasers, single-mode, relationship between carrier-induced index change and feedback noise 3−6976
distributed feedback, travelling, produced by sound pulse in active medium 3−17475
double Fabry-Perot interferometer inside laser resonator, Cherenkov parametric optical oscill. generation 3−37123
dye CW laser, passively and synchronously mode-locked, pulse substructure 3−27096
dye laser, pulsed, compound cavity tuning with grazing-incidence grating *(Chinese)* 3−41897
dye laser meas. using 400 kHz triggered streak camera 3−50690
dye laser tuning range extension using internal interferometers 3−41886
dye lasers, CW, synchronously pumped, theory 3−50655

laser cavity resonators continued
- dye lasers with distributed negative feedback and reflection based on cholesteric liquid crystals *(Russian)* 3−37079
- dye pulsed laser, passive cavity line width and selected frequency *(Chinese)* 3−6962
- equivalent resonator concept usage, pitfalls 3−17535
- excimer lasers, inductively stabilised, long-pulsed 3−56228
- external cavity laser transmitters, spectral control technique 3−27088
- external ring cavity, dye laser freq. doubling for CW single mode UV radiation generation *(German)* 3−1703
- Fabry-Perot intracavity freq. selectors, improved performance using quarter-wave plates 3−37080
- Fabry-Perot resonators, nonsymmetric perturbations 3−46241
- fibre resonator, ultralong, CW laser oscill. obs. 3−7025
- first-order optical systems with loss or gain, generalised mode propag. 3−6873
- first-order optics, operator representation for systems with loss or gain 3−6872
- free electron laser microtron operating with single pass machine 3−22094
- free electron laser resonator mode structure 3−22089
- free electron laser resonator modes, electron dynamics 3−12158
- free electron laser with Fabry-Perot resonators, linear theory 3−17502
- free electron lasers, self-focusing effects 3−6992
- free electron lasers, two-stage, using electron-guns and depressed collectors 3−56234
- free-electron laser, optical mode control 3−22088
- frequency stabilisation using mode interf. from reflecting reference interferometer 3−1682
- gain spatial structure influence on dynamic props. 3−26994
- gas laser, two-mode with phase-anisotropic resonator, power reson. parameter improvement 3−32390
- gas laser cavity alignments method, appl. to Brewster angle He-Ne laser 3−27089
- gas lasers, elec. field distrib. in cavities *(Chinese)* 3−22038
- grating resonator with spherical mirror, theoretical analysis *(Chinese)* 3−12186
- injection laser with external resonator, emission freq. stabilisation 3−7027
- intracavity absorption spectroscopy, sensitivity, anal. using semiclassical laser mode coupling theory 3−25952
- intracavity adaptive optics, half-symm. unstable resonator with intracavity axicon performance 3−12185
- intracavity pulse compression with glass for generating pulses shorter than 60 fsec. 3−27101
- intracavity SHG, synchronisation of solid-state lasers 3−27156
- intracavity sum freq. mixing as tunable CW UV source 3−1698
- ion lasing in a radially inhomogeneous discharge 3−17488
- IR laser ring cavity, branch-selected, for ultra-high resolution spectroscopy *(Chinese)* 3−41882
- linear resonator with an asymmetric dispersive component, selective props. 3−37081
- methanol laser, optically pumped, far IR 251 μm line selective enhancement using capacitive Al mesh mirror 3−41881
- methanol submm. laser, intracavity double reson. 3−56174
- miniature supply for electrooptic Q-switch of laser resonator *(Polish)* 3−1678
- multipass laser cell beam motion 3−1674
- non-Gaussian intensity profile form. in laser with inhomogeneous mirrors 3−37092
- nonlinear resonant cavity mirrors, multistable laser, semiclassical theory 3−56246
- optical parametric oscillators with hemispherical resonator, singly reson., elliptical focusing optimum conditions 3−12220
- optical tristability model comprising two ring-cavity modes, periodic doubling and chaos 3−32403
- optically pumped lasers, stimulated emission due to Doppler-free transitions 3−1606
- Passive mode locking of lasers with a tunable dye cell 3−12202
- phase aberrations, intracavity adaptive optic compensation, passive and active cavity for large N_{eq} resonator 3−50680
- phase conjugate resonator, axially symm., Huygens integral 3−7078
- phase conjugate resonators, degenerate, four-wave mixing, large signal numerical calcs. 3−27166
- phase conjugate resonators for laser performance enhancement 3−41884
- phase-conjugate resonator, stimulated scatt., transverse modes 3−7076
- photolytically pumped cylindrical laser cavity, optical distortion due to gas-dynamic motion 3−56256
- picosecond sources and techniques, mode locking in ring cavity and phase conjugate resonator 3−27105
- planar stripe geometry laser diodes, axial mode spectra 3−12146
- principles, introductory, book 3−45
- pulse train generation by partially switching off the resonator losses 3−32393
- Q-switching of optical resonator by stimulated Brillouin scatt. mirror 3−17541
- refractive index freq. shifts in lasers stabilised by saturated absorpt. 3−22171
- resonant optical cavities, refl. props. and appls. 3−12191
- rhodamine 590 dye laser, synchronously pumped, cavity dumped, using a high repetition rate amplifier 3−1623
- rhodamine 6G dye laser, injection locked, four-mirror ring config. injected by pulsed Xe-ion laser 3−32376
- rhodamine 6G laser using Nd^{3+}:YAG CW laser pumping with intracavity SHG in $LiIO_3$ cryst. 3−37017
- ring lasers, optimal, with coupled resonators and homogeneously broadened active medium, monochromatic emission characts. 3−22130
- ring prismatic resonator, output radiation characts. 3−17540
- ring resonator with mirror misalignment, axial loop var. 3−22127
- ring resonator with wavefront-reversing mirrors, oscill. modes determ. 3−7028
- rooftop resonator theory, resonant freqs. and eigenpolarisations 3−46242
- ruby laser, refr. Q-switching by moving plasma 3−7044
- semiconductor diode gain element in series with an optical fibre, external cavity controlled operation 3−56258
- semiconductor diode laser, Q-switched, with intracavity electroabsorpt. modulator 3−37084
- semiconductor injection lasers with compound cavities, light output self-modulation obs. 3−7035
- semiconductor integrated etalon interference laser with curved resonator 3−56245
- semiconductor laser, acoustical control, deform. mech. 3−12205

laser cavity resonators continued
- semiconductor lasers, longitudinal mode spectrum, lateral waveguiding props. effect 3−27087
- semiconductor lasers, optical feedback influence on freq. spectrum and threshold conditions 3−56197
- semicondutor lasers, mode-locked external-cavity, time-wavelength multiplexing 3−12198
- single-mode diode lasers, operational characts. 3−32381
- solid laser, temporal beam profile, stimulated Brillouin scatt. mirror effect 3−17545
- solid-state laser cavity cooling system, improved laser output efficiency 3−22075
- solid-state lasers, self-focusing 3−37090
- stable-resonator laser systems photometric features *(Russian)* 3−45189
- stimulated Brillouin all-fibre ring laser, submilliwatt pump threshold 3−1672
- transient energy exchange between opposite waves, laser spectrum narrowing to resonant medium absorpt. line 3−7029
- travelling-wave laser, stationary pulsed generation, mode locking, periodic modulation of losses 3−17544
- tunnel mode locking mechanism 3−32343
- two-pass laser amplifier with quarter-wave decoupling and stimulated Mandelshtam-Brillouin scatt. mirror 3−50681
- ultrashort laser pulse intracavity freq. conversion, phase mismatching influence 3−32412
- unstable cavity, adaptive intracavity compensation of quadratic phase aberrations 3−12272
- unstable resonator, diffractive effect of scraper mirror 3−7023
- unstable resonator misalignment in ring and linear toroidal resonators 3−41879
- unstable resonator with cancelling edge waves, asymptotic anal. 3−32388
- unstable resonator with multiple outputs 3−56244
- unstable resonators, simple coupling method for injection locking 3−27085
- unstable telescopic resonator calc. by approximate method 3−27091
- waveguide cavities, loss matching, two-dimens. problem 3−32389
- waveguide laser with curved grating 3−1673
- waveguide-type resonators for lasers 3−17538
- YAG CW ring laser emitting single-mode linearly polarised radiation, intracavity SHG in $LiIO_3$ 3−17501
- Ag/ZnS coated, 90° roof-top reflectors and waxicons, complex eigenvalues equalization 3−37166
- AlGaAs CW high power single-mode laser diodes, review and comparison 3−22055
- AlGaAs, high-power single-mode laser diodes, constricted DH large optical cavity 3−27080
- AlGaAs laser facets, contamination reduction by reactive outdiffusion 3−41880
- Ar ion detachable pulsed laser *(Chinese)* 3−41866
- Ar ion laser, SHG of 257 nm radiation in external ring cavity 3−22157
- Br_2 intracavity gain detect. 3−41805
- CO electric discharge laser with selective and nonselective resonators 3−27020
- CO pulsed electron beam controlled laser with selective resonators, emission spectra 3−6957
- CO pulsed electron beam controlled laser with selective resonator, emission spectrum 3−6958
- CO_2 10.6 μm lasers, damage in optical materials 3−41801
- CO_2 CW gasdynamic laser 3−17530
- CO_2 CW laser, grating tuned, spectral power output, rotational temp. and population ratio determ. *(Korean)* 3−12200
- CO_2 cascade lasing due to 00^01-02^00-01^10 transitions, pulsed gas discharge pumping 3−36989
- CO_2 fast-flow closed-cycle industrial laser, active medium investigation 3−37072
- CO_2 gasdynamic laser, unstable telescopic resonator calc. by approximate method 3−27091
- CO_2 intracavity-waveguide lasers, gain, saturation intensity and internal losses *(Chinese)* 3−36984
- CO_2 large volume testbeds with unstable resonators, analytical and numerical laser mode prediction comparison with expt. data 3−41883
- CO_2 laser, intracavity SF_6 saturable absorber, optical bistability 3−36986
- CO_2 laser resonator, Fabry-Perot type, beat freq. meas. between transverse modes *(Korean)* 3−12190
- CO_2 lasers, pulsed, transverse mode formation time 3−41887
- CO_2 quasi-CW electric-discharge laser having an unstable resonator, radiation divergence 3−36987
- CO_2 single-mode laser, output-beam parameters, active-medium inhomogeneity and aperture stop influence 3−17553
- CO_2 TEA lasers with plane-plane resonators, transverse mode struct. meas. 3−17537
- CO_2 tunable laser, mode locking by intracavity saturable absorber synchronous modulation 3−27110
- CO_2 tunable lasers with Fabry-Perot resonators *(Chinese)* 3−37077
- CO_2 unstable-resonator TEA laser mode selection by injection from waveguide laser 3−12188
- CO_2 waveguide laser employing RF electrodeless discharge, amplification 3−36990
- CO_2-N_2-H_2O gas mixture for gasdynamic laser, active medium and optical resonators 3−12189
- CdS, CdSe, CdSSe, optically pumped semiconductor platelet lasers in external cavities 3−27067
- D_2O oscillator emitting at 385 μm, unstable versus hemispherical resonator performance 3−37007
- Er^{3+}:YAG crystal laser, active mode locking, 2.94 microns 3−17500
- GaAlAs CW lasers, cavity length effects on 20 μm stripe laser waveguiding 3−22067
- GaAs laser coupled to external resonator transient and stationary props. in bistable operation 3−37039
- GaAs/$Al_xGa_{1-x}As$ multilayer reflector for surface emitting laser diode 3−50679
- GaAs/AlGaAs/BeO constricted DH large optical cavity laser, LPE grown, multichannel optical recording appl. 3−27074
- GaAs/GaAlAs GRIN-SCH very low threshold laser structs. grown by MOCVD 3−56238
- GaInAsP-InP lasers, short cavity, multilayer reflector design 3−32387
- $Ga_{1-x}In_xAs_{1-y}P_y$ monolithic coupled-cavity laser, single mode operation 3−27043
- GaInPAs/InP heterolaser with external dispersive resonator tunable CW emission in 1.3 μ range 3−27058
- HF(DF) CW chemical lasers, choking anal. 3−12132

laser cavity resonators continued

H_2O vapour laser, CW, 28 μm, high power operation 3−41872
He-Ne 1.15 μm laser, CW oscillation with ultralong optical fibre resonator 3−7025
He-Ne internal mirror laser, correl. change during warm-up period 3−5538
He-Ne intra-cavity laser beam polarisation effect on refl. beam intensity *(Chinese)* 3−41895
He-Ne laser, internal mirror, amplitude and freq. stabilisation by cooling fan method 3−7034
He-Ne laser line generation in hollow Cu cathode, 1.15 to 1.20 microns range 3−22031
He-Ne laser with internal-mirror plasma tube, freq. stabilization system 3−46229
He-Ne ring laser, emission amplitude characts. 3−12114
He-Ne three-mode laser in self-locking operation, beat-freq., fluctuation suppression 3−22034
He-Ne two-freq. laser in a transverse mag. field 3−27005
He-Xe laser radiation bistability and polarisation due to $5d[3/2]_1{}^0$-$6p[3/2]_1$ transition in ^{136}Xe in weak mag. field 3−22036
I photodissociation laser, photolytically pumped, optical distortion due to gas-dynamic motion 3−56256
I_2 intracavity gain detect. 3−41805
InGaAsP 10 kHz linewidth 1.5 μm external cavity laser with 55 nm tuning range 3−37030
InP ultrashort-cavity single-mode laser, optical pumping by AlGaAs injection laser 3−32359
$KB_5O_8.4H_2O$ crystal, CW 194-nm radiation generation by sum-freq. mixing in external ring cavity 3−37120
KrF excimer laser pumped by annular electron beam, beam quality 3−1681
$LiF:F_2{}^-$ crystal lasers, efficient tunable 3−37052
$^{15}NH_3$ CW far IR laser, $^{13}CO_2$ laser pumped, dispersion, laser pulling effects 3−12123
Nd laser with selective resonator, effective stimulated emission cross section determ. 3−56204
Nd lasers, hole burning, influence of quadratic pump power distrib. 3−17577
Nd:phosphate glass laser with diffr.-limited, divergence and Q-switching by stimulated Brillouin scatt. 3−56236
Nd:YAG, b-axis high-power CW laser, resonator design and thermal effects *(Chinese)* 3−17536
Nd:YAG CW laser, intracavity freq. doubling with $Ba_2NaNb_5O_{15}$ crystal *(Chinese)* 3−12235
Nd:YAG CW ring laser, relaxational oscill. freq. spectrum, influence of emission freq. shift and resonator nonreciprocity 3−1643
Nd:YAG high power freq. doubled lasers, structure design *(Chinese)* 3−37062
Nd:YAG laser, 10 Hz positive branch confocal unstable resonator, performance characts. *(Korean)* 3−12178
Nd:YAG laser, intracavity freq. doubled, active mode locking, transient pulse evolution 3−17566
Nd:YAG laser, Q-switched, stable single mode operation by resonator length control 3−22135
Nd:YAG mode-locked pulsed laser, acousto-optic stabilisation 3−27106
Nd:YAG non-mode-locked picosecond laser, regenerative compression technique 3−27111
Nd^{3+}:YAG optically regenerative electro-optically Q-switched laser with unstable resonator *(Chinese)* 3−37064
$Pb_{1-x}Sn_xTe$ laser diodes, prod., appls. 3−32365
Tl photodissociation laser, emission spectrum characts. 3−56189
Xe ion detachable pulsed laser *(Chinese)* 3−41866
XeF excimer laser, electron-beam pumped, temporal coherence length meas. using holographic procedure 3−6927
XeF excimer laser, electron beam-pumped, tuning, output power characts., depend. on optical resonator config. *(Chinese)* 3−22105
XeF excimer laser, transform-limited-bandwidth injection locking 3−12120

laser damage *see laser beam effects*

laser effects *see laser beam effects*

laser frequency stability

certification and freq. reproduction at 0.633 μm standard apparatus 3−41857
CW laser oscillators, dispersion-induced instability 3−12108
diode lasers, single-mode, relationship between carrier-induced index change and feedback noise 3−6976
dye laser, CW, atomic-beam set-up for 0.5 MHz absolute frequency stabilisation 3−12199
dye lasers, review 3−17492
dye lasers, synchronously pumped, active mode stabilisation 3−27107
dye ring laser, tunable, freq. locking to absorpt. lines by wave competition 3−12184
fluoromethane laser, optically pumped, 496 μm, relax. oscills. and stability 3−27012
gas ring lasers, monomode, stability, influence of Doppler broadening 3−41885
injection laser with external resonator, emission freq. stabilisation 3−7027
laser/optical-bistability instabilities, quantum theory 3−36981
mode interference from reflecting reference interferometer, freq. stabilisation appls. 3−1682
modulation effect influence on laser freq. fluctuation meas. 3−56264
opto-acoustic frequency lock system for pulsed lasers 3−27077
polymethine IR dye stability under excimer-laser pumping 3−50654
refractive index freq. shifts in lasers stabilised by saturated absorpt. 3−22171
ring lasers, natural frequency fluctuations meas. for radiation at $\lambda=3.39$ μm 3−12203
semiconductor and He-Ne laser stabilization *(Japanese)* 3−22102
semiconductor injection lasers, saturable absorber, self pulsations conditions, Routh-Hurwitz criteria 3−37089
semiconductor injection lasers, single-mode, FM noise theory, optical communication appl. 3−46244
AlGaAs laser, freq. stabilisation based on ^{85}Rb-D_2 line 3−1676
AlGaAs single mode lasers for fibre-optic appls. 3−22060
$Al_{1-x}Ga_xAs$ diode laser, freq. stabilisation using optogalvanic effect in Ar I 3−1675
Ar, ion laser with narrow emission line, actively stabilised with external Fabry-Perot interferometer 3−7019
Ar laser, active synchronisation mode stabilisation 3−46245
Ar^+ tunable frequency stabilised laser 3−12175

laser frequency stability continued

CO_2 fast-flow closed-cycle industrial laser, active medium investigation 3−37072
CO_2 laser, pulsed, passive frequency stability 3−22140
CO_2 laser output stabilization for use in subMM wave laser *(Japanese)* 3−1669
CO_2 quasi-CW electric-discharge laser having an unstable resonator, radiation divergence 3−36987
GaAlAs laser electronic difference freq. control 3−41877
GaAlAs laser freq. stabilisation using Doppler-free spectrum of Cs D_2-line 3−37037
GaAlAs laser frequency stability, effect of intensity noise reduction by electronic feedback 3−41892
GaAlAs lasers, correl. of low-freq. intensity and freq. fluctuations 3−12197
GaAlAs/GaAs double heterostructure junction lasers, fine struct. of freq. spectrum *(Japanese)* 3−56253
GaAlAs-GaAs oxide-stripe lasers, 880 nm, pulse-power perform. and stability 3−22061
He-Ne 473-THz (633-nm) laser I_2-stabilised, direct freq. meas. 3−46196
He-Ne laser, 3.39 μm, freq. stability improvement using mag. field 3−17481
He-Ne laser, internal mirror, amplitude and freq. stabilisation by cooling fan method 3−7034
He-Ne laser, mode effects in SHG, use for laser stabilisation 3−46194
He-Ne laser with internal-mirror plasma tube, freq. stabilization system 3−46229
He-Ne methane stabilised laser with mode spacing/spatial shift independent variation, mode competition 3−27004
He-Ne stabilised laser, type LG-149-1, active medium perturbation effect on emission-freq. instability 3−32347
He-Ne/methane two-mode lasers, freq. shifts, axial mag. field influence 3−22037
I photodissociative single-pulse laser, two-freq. lasing 3−1617
InGaAsP laser, freq. locking to first overtone vibr.-rot. lines of HF 3−27092
InGaAsP single mode lasers for fibre-optic appls. 3−22060
InGaAsP-InP 1.3 μm planoconvex waveguide lasers, characts. and optimum designs 3−22115
Ne 260 THz (1.15 μm) Lamb-dip-stabilised laser freq. meas. 3−46195

laser hardening *see laser beam effects; radiation hardening; surface hardening*

laser induced breakdown *see laser beam effects*

laser induced damage *see laser beam effects*

laser isotope separation

atomic vapor laser isotope separation, history of development 3−46087
atomic vapour laser isotope separation, status and prospects 3−1500
bromotrifluoromethane, isotope separation by multiphoton dissociation using CO_2 laser, scaling for C isotopes 3−6800
bromotrifluoromethane, multiphoton dissociation yield under CO_2 laser pulse, rot. relax. effect 3−11903
chloroform-d(-t) mixture, T isotope laser separation by multi-photon dissoc. 3−21935
chlorotrifluoromethane, multiphoton dissociation yield under CO_2 laser pulse, rot. relax. effect 3−11903
filtration diffusion of gases 3−1499
fluoroform-d, multiphoton absorpt. and decomp., laser isotope separation of deuterium 3−4280
formaldehyde, D separation by UV laser dissoc. 3−11997
industrial scale chemical synthesis, laser appls. 3−4303
iodotrifluoromethane, isotope separation by multiphoton dissociation using CO_2 laser, scaling for C isotopes 3−6800
methods, review 3−46086
mol. gas dissociation kinetics, laser excitation of oscillations 3−6736
molecule collisions with cooled solid surface 3−1498
trifluoromethane-t_1, multiphoton dissoc. for T isotope separation 3−11998
vibrational relaxation in heterogeneous laser isotope separation 3−1497
^{13}C, laser isotope separation by an elimination method 3−56095
^{13}C, multi-stage laser separation by elimination method, energy efficiency 3−50536
Li isotope separation by laser deflection of the at. beams *(Chinese)* 3−41696
Nd high power lasers, vulcan and Helen, isotope separation and nuclei melting *(German)* 3−45612
OCS, ^{33}S enrichment by isotopically selective two step laser photodissoc. 3−1439
SF_6, multiphoton dissociation by pulsed CO_2 laser, relative yields of SOF_4, SOF_2 and SO_2F_2 3−6737
U isotope separation, laser appls. in chemistry 3−21441
U isotopes, Cu vapour pumped dye laser system design 3−1500
UF_6 isotope separation using lasers, physics and practicability 3−41196
UO_2 complex, multiphoton dissoc., freq. and isotope effects 3−17346
^{235}U from enrichment plant tailings *(Japanese)* 3−21530

laser magnetic resonance

free electron laser with waveguide cavity, magnetic resonant three-dimens. kinetic theory 3−37057
methylene, LMR determ. of ^{13}C hyperfine interactions and v_2 isotope shift 3−55971
methylene radical, $^3B_1$ state, ν_2 band, laser mag. reson. obs. 3−21791
methylene radical, rot., hyperfine struct., far-IR laser mag. reson. study 3−21790
semiconductor, optical phonon damping, laser-cyclotron resonance effect 3−18991
Cl, inverse Lamb saturation dip obs. in laser mag. reson. spectrum, isotopic shift meas. 3−21680
DO_2, LMR spectra tuned by Coriolis-induced avoidance of Zeeman level crossings 3−1394
Na vapour oriented by broad-line laser excitation, optical relax. effects on mag. resons. 3−1284
O_3, rot.-vibr., Zeeman effect, Doppler free laser spectroscopy 3−45987
SF_2-$H_2O(NO)$, free radical prod. by laser photolysis, LMR study 3−45984

laser mirrors *see laser accessories; mirrors*

laser mode locking

conference, laser science, Ankwei, China (May 1982) *(Chinese)* 3−5
coumarin 110 dye laser, flashlamp pumped, passive mode-locking using the saturable absorber DASBT 3−27116
coumarin 153 dye laser, flashlamp pumped, passive mode-locking using the saturable absorber DASBT 3−27116

laser mode locking continued
coumarin 522 dye laser, flashlamp pumped, passive mode-locking 3—27099
coumarin 6 passively mode-locked dye laser, tunable picosec. pulse generation 3—22049
Coumarin laser passive mode-locking from 505-520 nm using DOCI saturable absorber 3—41821
diode lasers, FM sideband injection locking 3—17542
double passive modulated mode-locked laser design 3—46235
dye CW laser, passively and synchronously mode-locked, pulse substructure 3—27096
dye laser, active-passively mode locked, for laser produced plasma diagnosis *(Chinese)* 3—12170
dye laser, passively mode locked, for accurate range gating technique 3—7220
dye laser, passively mode locked, subpicosec. pulse shape meas. and modelling, saturation and spatial hole burning 3—37095
dye laser, subpicosecond synchronously mode-locked, appls. to electron trapping in amorphous media 3—7033
dye laser, UV picosecond high power laser pulse generation for laser-prod. plasma diagnosis *(Chinese)* 3—37060
dye laser colliding pulse mode locking in thin saturable absorber 3—27109
dye laser meas. using 400 kHz triggered streak camera 3—50690
dye laser output, modified Hansch-type, XeCl-and N_2-laser pumped, streak-camera anal. 3—27118
dye lasers, CW mode locked linear or ring, femtosecond pulses, tunability at GW level 3—27103
dye lasers, review 3—17492
dye lasers, synchronously pumped, active mode stabilisation 3—27107
dye ring laser, CW, colliding pulse mode locking, transient absorber gratings influence, theory 3—41888
dye ring laser in colliding pulse mode-locking regime with down-chirp 3—22051
dye ring lasers, single and double mode-locked 3—27108
excimer lasers, inductively stabilised, long-pulsed 3—56228
femtosecond continuum generation 3—27104
free electron laser microtron expt., mode locked far IR, tunable 100 to 400 μm 3—22093
gain spatial structure influence on dynamic props. 3—26994
gas laser mode-locking using an external acoustooptic modulator with pot. appl. to passive ring gyroscopes 3—17547
homogeneous gain lasers, mode-locked pulses 3—41799
injection locked laser, theory of line narrowing and freq. selection 3—36982
integrated lasers, Gbit optical pulse generation 3—7032
laser/optical-bistability instabilities, quantum theory 3—36981
oxazine 1 CW mode-locked laser pulses, real time monitoring using rapid-scanning autocorrelator 3—54764
oxazine 750 perchlorate tunable picosec. ring dye laser, near IR, synchronously pumped 3—41820
Passive mode locking of lasers with a tunable dye cell 3—12202
picosecond phenomena, conf., Garmisch-Partenkirchen, Germany (June 1982) 3—25697
picosecond sources and techniques, mode locking techniques 3—27105
picosecond tunable pulse generation in XUV 3—27165
pulse generation from piceosecond to femtosecond time regime 3—27102
ruby laser, mode self-locking using LiF $F_2(F_3)$ centres as saturable filters 3—17546
semicondutor lasers, mode-locked external-cavity, time-wavelength multiplexing 3—12198
solid laser, temporal beam profile, stimulated Brillouin scatt. mirror effect 3—17545
solid-state lasers, mode locking by double passive modulation 3—12193
spectroscopic appl. of mode-locked semiconductor lasers 3—10912
time resolved spectroscopy, picosecond and femtosecond pulse generation by passive mode-locking 3—5866
travelling-wave laser, stationary pulsed generation, mode locking, periodic modulation of losses 3—17544
tunnel mode locking mechanism 3—32343
unstable resonators, simple coupling method for injection locking 3—27085
AlGaAs laser, picosecond single-mode pulse generation by injection locking 3—41890
AlGaAs semiconductor laser, injection locked, optical phase modulation 3—7038
Ar laser, active synchronisation mode stabilisation 3—46245
Ar^+ laser, passive mode locked, to pump double mode locked rhodamine 6G laser 3—22136
CO_2 TEA lasers, injection-locking by orthogonally-polarised injection source 3—7016
CO_2 TEA lasers, injection-locking, polarisation coupling effects and single axial mode operation 3—27094
CO_2 TEA wide-aperture lasers, injection locking 3—37088
CO_2 tunable laser, mode locking by intracavity saturable absorber synchronous modulation 3—27110
Cr^{3+}:$BeAl_2O_4$ (Alexandrite) laser, passive mode locking, 0.7-0.8 μm picosec. pulse generation 3—1641
Er^{3+}:YAG crystal laser, active mode locking, 2.94 microns 3—17500
GaAlAs diode laser, actively mode-locked, 7 Gbit/s coherent pulse generation 3—1677
GaAlAs injection locked lasers, locking bandwidth asymmetry 3—17496
GaAlAs laser, phase locked arrays, optical output power 3—27042
GaAs DH laser, group velocity refr. index dispersion 3—37036
He-Ne laser, mode effects in SHG, use for laser stabilisation 3—46194
He-Ne three-mode laser in self-locking operation, beat-freq., fluctuation suppression 3—22034
InGaAsP laser, freq. locking to first overtone vibr.-rot. lines of HF 3—27092
NH_3-N_2 high-power laser, characts. with passive longit. mode locking 3—7040
Nd laser, mode locking, spatial coherence of optical harmonics 3—7075
Nd laser, time sweep calibration in Agat photochronograph 3—16338
Nd: phosphate glass laser, 3-psec pulse generation 3—56224
Nd:glass mode locked laser, spectral hole burning in saturation region 3—27066
Nd:glass passively mode-locked laser, temporal analysis by four-wave mixing 3—27060
Nd:phosphate glass laser, repetitively pulsed mode-locked, for psec. photofragmentation expts. 3—9334
Nd:YAG laser, intracavity freq. doubled, active mode locking, transient pulse evolution 3—17566

laser mode locking continued
Nd:YAG laser, mode self-locking using LiF $F_2(F_3)$ centres as saturable filters 3—17546
Nd:YAG mode-locked pulsed laser, acousto-optic stabilisation 3—27106
Nd^{3+}:YAG, laser, electrooptical mode synchronisation using radio-pulse generator 3—37085
Nd^{3+}:YAG laser, 1.318 μm picosec. pulse using passive mode locking 3—37054
Nd^{3+}:YAG mode locked laser, fluctuating picosecond optical pulse duration determ. 3—27121
XeF excimer laser, electron-beam pumped, injection locking at ambient and elevated temps. 3—56252
XeF excimer laser, transform-limited-bandwidth injection locking 3—12120

laser modes
see also laser mode locking
BH angled-stripe lasers, multilongitudinal mode operation 3—41833
bimodal atmospheric guided energy laser scheme, radial thermal gradients 3—4958
buried-waveguide lasers with lateral diffused junctions, mode stabilisation mechanism 3—56257
constricted DH large-optical-cavity diode laser, high-power, single-mode, mode discrimination and control, theory 3—27086
CW solid-state lasers, open resonators with thin amplifying layer, oscills. 3—7026
cylindrical resonators, vector field props. of modes 3—7024
DFB diode laser with gain-induced waveguiding mode coupling anal. using coupled-wave formalism 3—32342
diode laser property anal. 3—12150
distributed-feedback dye laser, single-mode generation with 0.01 cm^{-1} output line width 3—37018
distributed-feedback gas lasers, struct., waveguiding book contrib. 3—1652
dye laser, CW, mode struct. anal., appls. to CW intracavity spectroscopy 3—1624
dye laser, tunable CW, single mode operation, velocity selective optical pumping appl. 3—7021
equivalent resonator concept usage, pitfalls 3—17535
external cavity laser transmitters, spectral control technique 3—27088
Fabry-Perot intracavity freq. selectors, improved performance using quarter-wave plates 3—37080
fibre coupled multimode laser, encapsulated, short coherence length, mode selection, reflection suppression 3—37074
free electron laser amplifier, dense-beam, finite-temp. effects 3—56215
free electron laser oscillators, quantum/classical mode evolution 3—56208
free electron laser resonator mode structure 3—22089
free electron laser resonator modes, electron dynamics 3—12158
free electron lasers with axial guide fields, three-dimens. theory 3—56212
free-electron laser, Hamiltonian picture, multimode, super mode 3—22087
free-electron laser, optical mode control 3—22088
free-electron laser side-band instability saturation 3—32373
free-electron lasers, nonlinear saturation mechanisms and improvement 3—32371
frequency stabilisation using mode interf. from reflecting reference interferometer 3—1682
gas laser, multimode, Lamb's equations of motion 3—22024
gas laser, two-mode with phase-anisotropic resonator, power reson. parameter improvement 3—32390
gas lasers with uniformly broadened line, different Q-factor mode competition 3—17484
gas ring lasers, monomode, stability, influence of Doppler broadening 3—41885
Hermite-Gaussian mode laser beam scatt. and optical pot. well for homogeneous sphere 3—50686
high speed flow lasers, mode struct., power output, stable oscillation condition 3—41800
injection laser, quantum mechanical explanation of spontaneous emission K-factor 3—1629
injection laser single-longitudinal mode operation under direct modulation, conditions 3—37041
injection lasers, nonlinear loss effects on automodulation pulsation zones 3—6986
intracavity absorption spectroscopy, sensitivity, anal. using semiclassical laser mode coupling theory 3—25952
laser/optical-bistability instabilities, quantum theory 3—36981
methanol submm. laser, intracavity double reson. 3—56174
mode-splitting self-pulsing meas. in single mode Fabry-Perot laser 3—22025
multiple stripe injection lasers, single longitudinal mode operation 3—37023
nonwiggler collective free electron laser in uniform mag. field, theory 3—56213
optical tristability model comprising two ring-cavity modes, periodic doubling and chaos 3—32403
phase-conjugate resonator, stimulated scatt., transverse modes 3—7076
planar dielectric heterostructures, waveguide characts. 3—22073
planar stripe diode lasers with smooth lateral profile, loss and TM mode gain suppression, theory 3—37025
planar stripe lasers with deep Zn-diffusion, stability of horizontal transverse modes 3—27046
radiation principles, interpretation of expt. on refl. from amplifying media 3—1604
Raman, free-electron laser, electron cyclotron resonance effects *(Japanese)* 3—50667
rhodamine 6G ring dye laser, single-mode, rapid extended range tuning 3—46246
ring laser with Gaussian stop, weak diffr. approx. 3—27090
ring lasers, bistability and self-sustained intensity oscill. with optical backscatt. far from thermal equilib. 3—6961
ring resonator with wavefront-reversing mirrors, oscill. modes determ. 3—7028
rooftop resonator theory, resonant freqs. and eigenpolarisations 3—46242
ruby single-mode laser operation, effect of ruby-element quality 3—1683
semiconductor integrated etalon interference laser with curved resonator, longitudinal and lateral mode control 3—56245
semiconductor laser amplifiers, asymmetric freq. response 3—22056
semiconductor laser spectra, 1.55 μm, computer-simulated transient evolution 3—41837
semiconductor laser spectral instability effect on monomode fibre systems 3—46219

laser modes continued
- semiconductor lasers, crystal growth, emission spectra *(Japanese)* 3—22070
- semiconductor lasers, frequency deviation under direct modulation, meas. technique 3—41830
- semiconductor lasers, longitudinal mode competition, multimode rate eqns. 3—22063
- semiconductor lasers, longitudinal mode spectrum, lateral waveguiding props. effect 3—27087
- semiconductor multimoded laser for digital communication appl., functional life testing 3—1662
- single mode coherent light appl. *(Japanese)* 3—22146
- single mode laser based on two level atoms, atomic correlations 3—12109
- single-mode laser, adiabatic expansion, master eqn. 3—46190
- solid-state laser, multimode, emission spectrum natural noise and jaggedness 3—1637
- spontaneous emission into guided modes with curved wavefronts 3—12107
- stripe-contact injection lasers, modal props., dielec. waveguide model 3—37032
- transmission directionality of laser modes *(Chinese)* 3—41896
- transverse mode anal. using computer synthesised spatial filters 3—56301
- twin-stripe-geometry lasers, optical limiter action 3—22066
- two-mode laser with coupled transitions, quantum theory 3—1605
- v-channelled substrate inner stripe lasers, index guiding, multimode oscillating behaviour depending on struct. factor 3—12148
- waveguide, inhomogenous, with adjacent rhodamine 6G active medium, mode amplification 3—27036
- YAG CW ring laser emitting single-mode linearly polarised radiation, intracavity SHG in $LiIO_3$ 3—17501
- AlGaAs CW DH lasers, longit. mode partition noise in gain spectrum shift and gain suppression 3—22068
- AlGaAs CW high power single-mode laser diodes, review and comparison 3—22055
- AlGaAs DH injection lasers, nonwaveguide mode operation 3—22116
- AlGaAs DH laser, room temp. CW operation, 680-700 nm 3—6966
- AlGaAs Gaussian channel substrate planar laser diodes, high performance, single mode 3—32379
- AlGaAs high power multiple-stripe injection lasers with channel guides 3—12149
- AlGaAs laser diodes, high-power CW single-mode operation 3—27080
- AlGaAs narrow stripe lasers using double current confinement, operation and appl. 3—12142
- AlGaAs single mode lasers for fibre-optic appls. 3—22060
- AlGaAs TJS single mode diode lasers, anomalous tuning 3—27115
- AlGaAs window V-channelled substrate inner shape laser, high power visible CW operation at fundamental transverse mode 3—46207
- AlGaAs-GaAs single mode DH laser with channel-guide struct., theoretical anal. 3—27055
- $Al_xGa_{1-x}As$ lasers, optically integrated coherently coupled laser pair; single longitudinal mode operation 3—41860
- $Al_xGa_{1-x}As$ planar stripe lasers with deep Zn diffusion, active layer injection carrier spatial distrib. anal. *(Chinese)* 3—41828
- AlGaAsGaAs multiple quantum well stripe lasers, CW longit. mode spectra 3—6972
- CO_2 large volume testbeds with unstable resonators, analytical and numerical laser mode prediction comparison with expt. data 3—41883
- CO_2 laser operating at difference freqs. with optical pumping under saturation conditions, output parameter theory 3—46192
- CO_2 laser resonator, Fabry-Perot type, beat freq. meas. between transverse modes *(Korean)* 3—12190
- CO_2 lasers, pulsed, transverse mode formation time 3—41887
- CO_2 lasers, simple TEA, scaling laws for mode purity 3—1608
- CO_2 single-mode laser, output-beam parameters, active-medium inhomogeneity and aperture stop influence 3—17553
- CO_2 TEA lasers, injection-locking, polarisation coupling effects and single axial mode operation 3—27094
- CO_2 TEA lasers with plane-plane resonators, transverse mode struct. meas. 3—17537
- CO_2 unstable-resonator TEA laser mode selection by injection from waveguide laser 3—12188
- CO_2-N_2-H_2O gasdynamic lasers, operating mode selection and organisation 3—6946
- $Cr^{3+}:BeAl_2O_4$, alexandrite-laser performance at high temperature 3—32367
- CuCl pulsed high-gain laser oscillator and amplifier, high-resolution lineshape anal. 3—56173
- D_2O oscillator emitting at 385 μm, single-mode pulse generation 3—37007
- Er^{3+}:YAG crystal laser, active mode locking, 2.94 microns 3—17500
- GaAS CC laser diode, mode shifting, temp. depend. rate 3—1636
- GaAlAs diode laser, pulse-current pumped, ps light pulse obs. 3—12192
- GaAlAs laser diode, antireflection-coated, polarisation control by external optical feedback 3—41889
- GaAlAs multiple quantum-well heterostruct. laser development and characterisation for optical communication appls. 3—56239
- GaAlAs single mode injection laser diode performance, under conditions of fluid immersion and hydrostatic press. 3—22099
- GaAlAs single-mode lasers, phase noise and spectral line shape 3—56195
- (GaAl)As TS lasers with reduced facet reflectivities, noise and longit. mode characts. 3—56260
- GaAs laser coupled to external resonator transient and stationary props. in bistable operation 3—37039
- GaAs v-channel substrate inner stripe laser, highly reliable and mode-stabilised operation, visible wavelength emission 3—27056
- GaAs/AlAs DH narrow diffused stripe lasers for high speed integrated optical transmitters 3—22109
- GaAs-AlGaAs DH laser, transverse mode selection, ambipolar excess carrier diffusion 3—46215
- GaAs-GaAlAs laser, dielectric guiding due to inverted gain profile 3—1630
- GaAs-GaAlAs stripe geometry multiple quantum well lasers, CW high-power single-mode operation 3—37029
- GaInAsP/InP lens-like strip waveguide lasers, single transverse mode condition 3—6977
- GaInAsP-InP 1.5 μm DFB BH laser fabrication, single-longit. mode operation 3—17528
- GaInAsP-InP lasers, lens-like strip waveguide, single transverse mode condition, theory 3—32356
- $Ga_{1-x}In_xAs_{1-y}P_y$ monolithic coupled-cavity laser, single mode operation 3—27043
- GaInPAs-InP DH injection lasers, nonwaveguide mode operation 3—22116

laser modes continued
- GaInPAs-InP mesa-stripe heterostruct., injection laser, leaky mode emission 3—12152
- GaInPAs-InP quaternary buried heterostruct. injection laser, high-power leaky mode operation 3—7012
- He-Cd II laser, upper level decay rate meas., axial mode competition at 533.7, 537.8 nm 3—37006
- He-Cd lasers, oscill. and striation effects on emission charact. 3—6955
- He-Ne continuous laser, oscill. period doubling chaos 3—22032
- He-Ne internal mirror laser, correl. change during warm-up period 3—5538
- He-Ne methane stabilised laser with mode spacing/spatial shift independent variation, mode competition 3—27004
- He-Ne multitransverse mode intermol. mirror laser, polarisation phenomenon *(Chinese)* 3—41803
- He-Ne three-mode laser in self-locking operation, beat-freq., fluctuation suppression 3—22034
- He-Ne/methane two-mode lasers, freq. shifts, axial mag. field influence 3—22037
- He-Zn II laser, upper level decay rate meas., axial mode competition at 492.4 nm 3—37006
- InGaAsP injection laser, transient spectra and mode partition noise obs. 3—6974
- InGaAsP mode stabilised terrace lasers on semi-insulating InP 3—27054
- InGaAsP single mode lasers for fibre-optic appls. 3—22060
- InGaAsP/InP 1.3 μm BH lasers, linearity and noise characts. 3—41842
- InGaAsP/InP DH laser diodes, high-speed modulated, mode partition noise characts. 3—27051
- InGaAsP/InP groove transverse junction laser, mode stabilisation mechanism 3—56257
- InGaAsP/InP mode-stabilised terrace-large optical cavity laser fabricated on InP substrate 3—1664
- InGaAsP/InP V-grooved substrated buried heterostruct. laser emitting at 1.3 μm 3—7011
- InGaAsP-InP 1.3 μm planoconvex waveguide lasers, characts. and optimum designs 3—22115
- InGaAsP-InP DH buried rib waveguide laser, 1.5 μm operation 3—41832
- InGaAsP-InP quaternary 1.5 micron buried crescent lasers with separate optical confinement 3—37031
- InGaAsP-InP undercut mesa laser, LPE fabrication and planar polyimide passivation, fundamental transverse mode operation 3—46206
- InP ultrashort-cavity single-mode laser, optical pumping by AlGaAs injection laser 3—32359
- $LiNdP_4O_{12}$ laser transmitter, pure single-mode, for 1.3 μm fibre optic communications 3—1653
- Nd lasers, hole burning, influence of quadratic pump power distrib. 3—17577
- Nd:phosphate glass laser with diffr.-limited, divergence and Q-switching by stimulated Brillouin scatt. 3—56236
- Nd:YAG CW high power single-freq. laser at 1.32 μm 3—7015
- Nd:YAG laser, 10 Hz positive branch confocal unstable resonator, performance characts. *(Korean)* 3—12178
- Nd:YAG pulsed laser, free-running dynamics 3—22076
- $Pb_{1-x}Sn_xSe$ epitaxial films, refr. index meas. rel. to injection laser appls. 3—47617
- $Pb_{1-x}Sn_xTe$ laser diodes, prod., appls. 3—32365

laser Q-switching *see Q-switching*

laser radar *see optical radar*

laser theory
- *see also laser transitions; population inversion; stimulated emission*
- BH lasers, optically pumped, picosecond carrier dynamics and laser action 3—27059
- coherent emission, nonlinearity requirement, Bloch vector *(Japanese)* 3—22014
- coherent field interaction with Doppler broadened serial four-level systems, four-level far-IR laser appls. 3—26992
- coherent light net power loss in laser cavity rel. to laser linewidth *(Chinese)* 3—37078
- collisional laser parameters based on self-limited transitions with optical pumping 3—1603
- CW laser oscillators, dispersion-induced instability 3—12108
- DFB, higher-order, and light generation 3—27035
- diode laser, threshold current density and lasing wavelength, active region thickness dependence 3—46205
- diode lasers with optical feedback, LF instabilities rel. to refr. index shifts 3—41840
- double contact injection laser, single-parameter bistability characterisation 3—46217
- dye laser, flash lamp pumped, energy transfer characts. in PTM operation *(Chinese)* 3—37015
- dye laser, pulsed, generation with laser pumping 3—46203
- dye laser stability, lifetime and degradation eqns. 3—12138
- dye lasers, CW, synchronously pumped 3—50655
- Einstein coefficients, cross sections, f values and dipole moments 3—5546
- excimer lasers, physical principles, construction and appls., review *(Polish)* 3—1613
- Fokker-Planck equation for intensity and inversion soln. 3—17474
- free electron laser, axial magnetic guide field effect 3—22098
- free electron laser, Madey gain-spread theorem 3—17520
- free electron laser, nonlinear saturation around gyroresonance 3—41850
- free electron laser, nonlinear theory in three dimens. 3—17508
- free electron laser, single-pass Compton-regime variable-parameter, MM wave generation 3—22092
- free electron laser amplifier, 3D nonlinear theory 3—22091
- free electron laser instability for relativistic solid electron beam in helical wiggler field 3—41745
- free electron laser physics rel. to accelerator physics 3—17510
- free electron laser resonator mode structure 3—22089
- free electron laser with Fabry-Perot resonators, linear theory 3—17502
- free electron laser with gain expansion 3—17519
- free electron laser with waveguide cavity, magnetic resonant three-dimens. kinetic theory 3—37057
- free electron lasers, 3D radiation fields using Lienard-Wiechert fields 3—22090
- free electron lasers, nonlinear processes in diffr.-radiation generators 3—12162
- free electron lasers with axial guide field, collective effects on operation 3—1646
- free-electron laser, quantised many-particle theory 3—46225
- free-electron laser with axial mag. field, nonlinear theory 3—12161

laser theory continued
- free-electron lasers, oscillator evolution 3—56220
- gain saturation by feedback of amplified spontaneous emission in laser amplifiers 3—46189
- gain spatial structure influence on dynamic props. 3—26994
- gas laser, multimode, Lamb's equations of motion 3—22024
- gas lasers with inhomogeneous active med., lasing zone shape 3—6947
- gas ring lasers, monomode, stability, influence of Doppler broadening 3—41885
- gaseous active medium gain saturation, influence of diffusion 3—36983
- harmonic oscillator, quantum theory, open laser system simulation *(Chinese)* 3—40386
- high speed flow lasers, mode struct., power output, stable oscillation condition 3—41800
- inert gas halide discharge lasers, analysis, design and construction 3—41858
- injection laser, quantum mechanical explanation of spontaneous emission K-factor 3—1629
- injection laser single-longitudinal mode operation under direct modulation, conditions 3—37041
- injection lasers, nonlinear loss effects on automodulation pulsation zones 3—6986
- injection locked laser, theory of line narrowing and freq. selection 3—36982
- interacting first and second optical harmonic propag. in nonlinear active medium 3—37124
- klystron spontaneous emission and gain 3—17513
- laser/optical-bistability instabilities, quantum theory 3—36981
- light fluctuations; freq. depend. 3—32344
- master eqn., microscopic theory up to 4th order 3—12102
- microscopic theory, basic formulation 3—56168
- mode-splitting self-pulsing meas. in single mode Fabry-Perot laser 3—22025
- nonlinear resonant cavity mirrors, multistable laser, semiclassical theory 3—56246
- nonLorentzian laser bandshapes in atomic processes, theory 3—21718
- optical bistability, laser frequency fluctuations effects 3—32405
- principles, introductory, book 3—45
- quantum and quasiclassical lasing regimes 3—56169
- quantum laser theory, modified perturbation method for damped harmonic oscillator 3—50643
- radiation divergence in high-power laser amplifiers 3—17552
- radiation principles, interpretation of expt. on refl. from amplifying media 3—1604
- random small-scale inhomogeneity active medium laser radiation, ang. characts., field rot. influence 3—22026
- rate equations cct. analogy *(Polish)* 3—6944
- ring laser with Gaussian stop, weak diffr. approx. 3—27090
- scalar wave equation with focused Gaussian gain, exact soln. 3—26993
- semi-self-maintained volumetric discharge in own mag. field 3—56171
- semiconductor injection lasers, single-mode, FM noise theory, optical communication appl. 3—46244
- semiconductor laser, linewidth enhancement factor, theory and meas. 3—41825
- semiconductor laser, phase delay between intensity and freq. modulation 3—41841
- semiconductor laser spectra, 1.55 μm, computer-simulated transient evolution 3—41837
- semiconductor lasers, longitudinal mode competition, multimode rate eqns. 3—22063
- semiconductor lasers, nonuniform, transmission characteristics, theoretical anal. *(Chinese)* 3—37024
- single mode laser based on two level atoms, atomic correlations 3—12109
- single-mode laser, adiabatic expansion, master eqn. 3—46190
- solid state laser, thermal processes and emission effect with natural cooling, analytic method 3—12156
- solid-state lasers, mode locking by double passive modulation 3—12193
- spontaneous emission into guided modes with curved wavefronts 3—12107
- steady state pulses in nonlinear swept-gain amplifier 3—32369
- superconducting exciton laser possibility 3—37055
- superfluorescence, mean field theory, possible X-ray and gamma-ray lasers *(Chinese)* 3—36972
- three-level resonant systems, ultrashort light pulse amplification 3—26995
- three-level system in an asymptotically strong field 3—32395
- three-photon processes at high photon densities, excitation spectra 3—27142
- transient and stationary behaviour 3—26991
- transverse field structure in laser with saturable absorpt. 3—12106
- transverse optical klystron amplifier, small signal gain 3—22077
- tunnel mode locking mechanism 3—32343
- twin-stripe-geometry lasers, optical limiter action 3—22066
- two-dimensional theory and simulation of free electron lasers 3—17504
- two-mode laser with coupled transitions, quantum theory 3—1605
- two-photon laser photon statistics and quantum statistics of light after saturated two-photon emission processes 3—6940
- Z-pinch plasmas, X-ray lasing 3—10978
- CO_2, flowing-gas CW laser, small signal gain meas. 3—26997
- CO_2 lasers, simple TEA, scaling laws for mode purity 3—1608
- CO_2 Q-switched laser, subharmonic bifurcations, multistability and turbulence 3—12112
- CO_2-N_2-He laser, operating efficiency, kinetics model 3—26996
- CO_2-N_2-He TEA laser, circuit modelling and discharge modelling 3—1609
- GaInAsP-InP lasers, lens-like strip waveguide, single transverse mode condition, theory 3—32356
- He-Cd^+ positive column laser, 441.6 nm emission, excitation mechanism anal. 3—22042
- He-Ne laser, $^{127}I_2$ stabilized, I_2 saturation dispersion effects 3—46193
- I-O_2, chemical laser, gain, output energy, numerical modelling 3—56190
- InGaAsP quantum well lasers, Auger recombination rates calc. 3—50662
- KrF electron beam excited laser performance, F_2 conc. optimisation 3—37008
- KrF laser, electron-beam pumped, constant intensity approximation analysis 3—27010
- Nd^{3+}:YAG Q-switched laser, time characts. of pulses due to $^4F_{3/2} \rightarrow {}^4I_{13/2}$ transition 3—6991
- O_2-I CW chemical laser emitting at 1.315 μm, energetics analysis 3—27028

laser transitions
- *see also laser theory*
- collisional laser parameters based on self-limited transitions with optical pumping 3—1603
- coumarin 6 vapour laser with 12% efficiency, lasing obs. in 520 nm range 3—27034
- dimethyl ether submillimeter lasing, CO_2 laser pumped, passive Q switching, laser spectroscopy 3—1615
- ethyl chloride, CW far IR laser action at 447, 698, 1306, 1669 μm 3—6953
- fluoromethane laser, optically pumped, 496 μm, relax. oscills. and stability 3—27012
- formic acid far IR laser, growth of emission 3—37004
- formyl fluoride deuterated, optically pumped, FIR laser lines 3—27009
- hydrazine FIR laser, optically pumped, assignments and new laser lines 3—27032
- methanol, deuterated, CH_3OD and CD_3OH, optically pumped lasers, CW subMM lines 3—12124
- methanol laser, optically pumped, line assignments rel. to competitive and cascade couplings 3—27011
- methanol submm. laser, intracavity double reson. 3—56174
- methanol-d_3 laser, high power pulsed far-IR lines 3—41813
- optically pumped lasers, stimulated emission due to Doppler-free transitions 3—1606
- ruby, excitations in $^2T_1$ and $^4T_2$ bands, pumping 3—36974
- semiconductor laser spectra, 1.55 μm, computer-simulated transient evolution 3—41837
- single mode laser based on two level atoms, atomic correlations 3—12109
- styryl-10 CW dye laser, Ar ion laser pumped, emission obs. up to 9500 Å 3—22052
- Al I, II, III segmented plasma recomb. lasers employing foil electrodes 3—12125
- Ar ion laser, operation at 3181 Å in UV region *(Chinese)* 3—22039
- Ar^+ laser, loss, gain and saturation parameters meas. at 4880, 5145 Å *(Chinese)* 3—36994
- Ar-Xe powerful electroionisation laser on Xe IR atomic transitions 3—36997
- ArF excimer laser at 193 nm, UV preionisation effect *(Chinese)* 3—37063
- ArF excimer laser with high spectral brightness working in the regenerative amplifier regime 3—56229
- Ba CW laser oscillation, superlong pulses on the 6^1P_1-5^1D_2 transition 3—17486
- $BaYb_2F_8:Er^{3+}$ cryst., laser transitions, excitation schemes 3—27063
- Bi hollow cathode ion laser, 680.9, 660.0, 571.9 nm Bi II lines, 1.1711 μm Bi I line 3—27008
- Bi vapour laser, decay of Bi atom $6p^3\ ^2D^0_{3/2}$ metastable levels in interpulse period 3—6956
- Br, laser action obs. in hollow cathode discharge 3—12122
- Br_2 intracavity gain detect. 3—41805
- C, laser action obs. in hollow cathode discharge 3—12122
- CO electric discharge laser with selective and nonselective resonators 3—27020
- CO pulsed electron beam controlled laser with selective resonators, emission spectra 3—6957
- CO pulsed electron beam controlled high press. laser, emission spectrum characts. 3—6958
- CO_2 CW laser, grating tuned, spectral power output, rotational temp. and population ratio determ. *(Korean)* 3—12200
- CO_2 cascade lasing due to 00^01-02^00-01^10 transitions, pulsed gas discharge pumping 3—36989
- CO_2 fast-flow closed-cycle industrial laser, active medium investigation 3—37072
- CO_2 high-power electric-discharge lasers, dynamic saturation of optical transitions 3—22030
- CO_2 laser amplifier, vibr.-rot. transition line shape parameter anal. 3—56170
- CO_2 laser operating at difference freqs. with optical pumping under saturation conditions, output parameter theory 3—46192
- CO_2 TEA helical laser, improved performance and rot. spectral characts. 3—36985
- CO_2 TEA laser with UV preionisation, active medium composition influence on 00^02-$[10^01, 02^01]_I$ band gain 3—27001
- CO_2 TEA rapidly tunable laser 3—17548
- CO_2 waveguide laser employing RF electrodeless discharge, amplification 3—36990
- CS_2 gasdynamic laser with an aim of increased efficiency and expanded spectral range 3—17485
- Ca I, II segmented plasma recomb. lasers employing foil electrodes 3—12125
- CdS epitaxial film, lasing obs. at 492, 497/nm 3—8853
- Cl, laser action obs. in hollow cathode discharge 3—12122
- Cl, UV laser transitions *(Chinese)* 3—1611
- $Cr^{3+}:BeAl_2O_4$ (Alexandrite) laser, passive mode locking, 0.7-0.8 μm picosec. pulse generation 3—1641
- Cr^{3+}:GdScGa CW tunable room-temp. laser 3—50664
- Cu I, II segmented plasma recomb. lasers employing foil electrodes 3—12125
- CuCl pulsed high-gain laser oscillator and amplifier, high-resolution lineshape anal. 3—56173
- D_2O 385 μm laser linewidth meas. to —60 dB 3—32350
- D_2O oscillator emitting at 385 μm, single-mode pulse generation 3—37007
- $Er:Lu_3Al_5O_{12}$ laser with self-saturating transition, excitation energy absorpt. influence 3—27065
- $Er:Lu_3Al_5O_{12}$ millisecond laser 3—1640
- $Er^{3+}:BaYb_2F_8$, multistage sensitisation of $^4F_{9/2} \rightarrow {}^4I_{112}$ and $^4F_{9/2} \rightarrow {}^4I_{13/2}$ lasing transitions 3—38904
- F, laser action obs. in hollow cathode discharge 3—12122
- F RF preionised laser without auxiliary electrodes 3—56225
- FeI_2 photodissociation laser 3—12134
- Ga II hollow cathode discharge, CW laser action obs. at 6335, 7199 Å 3—27007
- HCl, DCl, thermal gasdynamic laser using rot. transitions, energy transfer from H_2 3—27021
- HF CW R-branch laser demonstration 3—46202
- HF, DF, thermal gasdynamic laser using rot. transitions, energy transfer from H_2 3—27021
- HF gas interline anomalous dispersion effects 3—42356
- HF high-power CW and pulsed chem. lasers, dynamic saturation of optical transitions 3—22030
- H_2O CW laser, operating conditions at 28, 47, 78, 79 and 119 μm 3—46200

laser transitions continued
He-Cd II laser, upper level decay rate meas., axial mode competition at 533.7, 537.8 nm 3—37006
He-Cd$^+$ laser, electron impact excitation of Cd$^+$, laser transitions 3—32219
He-Cd$^+$ positive column laser, 441.6 nm emission, excitation mechanism anal. 3—22042
He-Ne 473-THz (633-nm) laser I_2-stabilised, direct freq. meas. 3—46196
He-Ne laser, energy transfer collisions, 6328 Å line pumping process 3—6772
He-Ne laser line generation in hollow Cu cathode, 1.15 to 1.20 microns range 3—22031
He-Xe laser radiation bistability and polarisation due to $5d[3/2]_1{}^0$-$6p[3/2]_1$ transition in ^{136}Xe in weak mag. field 3—22036
He-Xe pulsed plasma jet recombination laser, stimulated emission at 2.026 μm 3—6949
He-Zn II laser, upper level decay rate meas., axial mode competition at 492.4 nm 3—37006
Hg Cc CW optically pumped laser, output power charact. at 546.1 nm *(Japanese)* 3—50649
HgBr, B-X, C-X and D-X transitions, spectroscopic anal. 3—55953
HgBr, bound-free emission 3—6691
HgBr laser spectrum study *(Chinese)* 3—41815
HgCl, B-X, C-X and D-X transitions, spectroscopic anal. 3—55953
HgCl, B→X transitions 3—6950
HgI, B-X, C-X and D-X transitions, spectroscopic anal. 3—55953
HgI, B→X transitions 3—6950
$^{200}HgBr^{81}$ photodissoc. lasers, spectroscopy and efficiency 3—56187
I_2 intracavity gain detect. 3—41805
IF, $B^3\Pi(0^+) \rightarrow X^1\Sigma^+$ lasing from collisionally pumped states 3—37010
^{127}I, lasing in Zeeman inhomogeneous gain profile, spectral selection in $^2P_{1/2}$-$^2P_{3/2}$ transition region 3—27027
Kr II ion laser, lifetimes for radiative transitions 3—50644
KrF excimer laser with high spectral brightness working in the regenerative amplifier regime 3—56229
Li I segmented plasma recomb. laser employing foil electrodes 3—12125
N, laser action obs. in hollow cathode discharge 3—12122
N_2 high pressure laser, rot. relaxations 3—50646
NH_3 12-μm laser, Raman gain 3—12130
N_2O laser with saturable NH_3 absorber, optical bistabilities, phase transitions and Q-switch characts. 3—37091
$^{14}NH_3$ CW two-photon pumped laser lines 3—50651
$^{15}NH_3$ CW two-photon pumped and Raman FIR laser lines 3—50651
Na_2 UV excited laser emission 3—22041
Nd^{3+}:YAG CW laser at 1.3188 μm and 1.3382 μm *(Chinese)* 3—41843
Nd^{3+}:YAG Q-switched laser, time characts. of pulses due to $^4F_{3/2} \rightarrow {}^4I_{13/2}$ transition 3—6991
Ne 260 THz (1.15 μm) Lamb-dip-stabilised laser freq. meas. 3—46195
O II 397.3 nm and 398.3 nm UV laser transition 3—50650
O, laser action obs. in hollow cathode discharge 3—12122
O_2-I CW chemical laser emitting at 1.315 μm, energetics analysis 3—27028
S III 363.2 nm UV laser transition 3—50650
Tl photodissociation laser, emission spectrum characts. 3—56189
Xe II ion laser, lifetimes for radiative transitions 3—50644
XeCl excimer fluorescence and laser emissions 3—1610
XeCl excimer laser picosecond amplification and kinetic studies 3—12127
XeCl excimer laser with high spectral brightness working in the regenerative amplifier regime 3—56229
XeCl laser, laser oscills. on 11 vibr. bands at about 308 nm *(Chinese)* 3—41808
XeF excimer laser, transform-limited-bandwidth injection locking 3—12120
XeF, photodissociation laser, molecular vibrational struct., transition spectra 3—41811
Zn II CW laser oscillation of 758.8 nm line in HF discharge *(Russian)* 3—46198
^{64}ZnI photodissoc. lasers, spectroscopy and efficiency 3—56187

laser trimming *see laser beam machining*

laser tuning
acoustooptic deflector for in-resonator laser tuning 3—22137
birefringent selector of the emission wavelength for a CW dye laser 3—27219
certification and freq. reproduction at 0.633 μm standard apparatus 3—41857
diode laser spectrometer, tunable, harmonic detect., two-tone modulation 3—25964
diphenylfuran 2-(1-naphthyl)-5-phenyloxazole energy transfer dye laser in near UV region 3—1663
dye CW tunable laser appl. to spectroscopic study 3—16427
dye DFB laser tunable in broad spectral range, picosecond pulse prod. 3—27039
dye laser, pulsed, compound cavity tuning with grazing-incidence grating *(Chinese)* 3—41897
dye laser, tunable, simple alignment procedure for three-plate birefr. filter assembly 3—46228
dye laser, tunable CW, single mode operation, velocity selective optical pumping appl. 3—7021
dye laser, two frequency self-injected flashlamp pumped, for a nonlinear optics expts. 3—37065
dye laser tuning range extension using internal interferometers 3—41886
dye lasers, CW mode locked linear or ring, femtosecond pulses, tunability at GW level 3—27103
dye lasers, pulsed, tunable ultrashort pulses by synchronous pumping by Nd glass laser 3—32353
dye lasers, review 3—17492
dye ring laser, backreflection-induced oscills., crit. refl. coeff. meas., modulated light appl. 3—22131
dye ring laser, tunable, freq. locking to absorpt. lines by wave competition 3—12184
energy transfer dye lasers in spectral range near UV to violet 3—37019
free electron laser microtron expt., mode locked far IR, tunable 100 to 400 μm 3—22093
high resolution linear laser absorpt. spectroscopy 3—30935
injection laser, tunable, with external resonator, emission freq. stabilisation 3—7027
injection lasers, tunable, use in IR spectroscopy 3—30941
methanol laser, optically pumped, line assignments rel. to competitive and cascade couplings 3—27011

laser tuning continued
optical parametric oscillators with hemispherical resonator, singly reson., elliptical focusing optimum conditions 3—12220
oxazine 750 perchlorate tunable picosec. ring dye laser, near IR, synchronously pumped 3—41820
picosecond tunable pulse generation in XUV 3—27165
polymethine cyanine IR dyes for synchronously pumped picosecond lasers 3—27037
refractive index freq. shifts in lasers stabilised by saturated absorpt. 3—22171
rhodamine 6G dye laser, SRJ-II flashlamp pumped *(Chinese)* 3—41865
rhodamine 6G ring dye laser, single-mode, rapid extended range tuning 3—46246
semiconductor laser amplifier, resonant type, optical bistability and nonlinear resonance 3—56194
styryl-10 CW dye laser, Ar ion laser pumped, emission obs. up to 9500 Å 3—22052
AlGaAs TJS single mode diode lasers, anomalous tuning 3—27115
Ar^+ tunable frequency stabilised laser 3—12175
$Be_3Al_2(SiO_3)^6$:Cr^{3+} (emerald) tunable laser 3—12154
CO sealed waveguide CW laser, line freq. continuously tuned cover 300 MHz range 3—7020
CO_2 TEA rapidly tunable laser 3—17548
CO_2 tunable laser, mode locking by intracavity saturable absorber synchronous modulation 3—27110
CO_2 tunable lasers with Fabry-Perot resonators *(Chinese)* 3—37077
CO_2 waveguide laser employing RF electrodeless discharge, amplification 3—36990
CdS, CdSe, CdSSe, optically pumped semiconductor platelet lasers in external cavities 3—27067
GaInPAs/InP heterolaser with external dispersive resonator tunable CW emission in 1.3 μ range 3—27058
o-H_2, rotational stimulated Raman scatt. of CO_2 laser beam, intense mid-IR source appl. 3—22165
HF chemical laser utilising a high-press. H_2-SF_6 mixture and relativistic electron beam excitation 3—1619
He-Ne two-freq. laser in a transverse mag. field 3—27005
InGaAsP 10 kHz linewidth 1.5 μm external cavity laser with 55 nm tuning range 3—37030
InGaAsP laser, freq. locking to first overtone vibr.-rot. lines of HF 3—27092
KCl, Na(Li)-$(F_2{}^+)_A$ laser, continuously tunable from 1.67 to 2.46 μm 3—27061
LiF:$F_2{}^-$ crystal lasers, efficient tunable 3—37052
Nd:YAG pulsed laser, free-running dynamics 3—22076
Pb salt tunable diode lasers, linewidth meas. using heterodyne and etalon techniques 3—12141
Pb salt tunable diode lasers and laser systems for 3 to 30 μm IR spectral system 3—46208
Tl* anti-Stokes Raman laser, threshold and dispersion effects 3—12129
Tl* anti-Stokes Raman laser, tuning and saturation behaviour 3—27018
Tl* anti-Stokes Raman laser, tuning and saturation behaviour 3—56184
Xe laser, high gain 3.5 μm operation, asymmetrical Lamb dip obs. 3—36995
Xe laser, high gain 3.5 μm operation, asymmetrical Lamb dip, theory 3—36996
XeCl laser pulse temporal tuning using saturable absorber dyes 3—7031
XeF excimer laser, electron beam-pumped, tuning, output power characts., depend. on optical resonator config. *(Chinese)* 3—22105

laser velocimeters
air flow in two dimensional channel, backward facing step flow, experimental and theoretical investig. 3—46652
atomic fluorescence transit-time velocimeter 3—7674
bias errors meas. in turbulent flow 3—32816
bubble evolution in stirred liquid-gas solution closed to mass transport, laser Doppler anemometry study 3—42883
curved duct, vel. meas. of developing laminar and turbulent flow 3—12781
differential laser Doppler velocimeter with fibre-optic channels 3—32827
Doppler, eventoscope (transient recorder) appl. *(German)* 3—37592
Doppler, miniature solid-state directional system 3—10812
Doppler anemometer, simultaneous backward-forward scatter meas. 3—51249
Doppler anemometer for flows with velocity grad., spectral anal. 3—7677
Doppler anemometer for surface texture assessment from signal visibility 3—40563
Doppler anemometry appl. to boundary layer flows in cryogenic fluids 3—37596
Doppler anemometry appl. to cryogenic fluid heat and mass transfer 3—40617
Doppler meas. method, for particle size/velocity determ. 3—42331
Doppler velocimeter, two-grating method for beam splitting and frequency shifting 3—27624
Doppler velocimeter for expt. study of convection boundary layer in air along vertical plate 3—51086
Doppler velocimeter with optical fibre, appl. to blood flow velocity meas. 3—19873
Doppler velocimetry device for cell electrophoretic mobility determ. 3—9796
Doppler velocity meter, optical signal processing optimisation 3—295
duct with highly turbulent recirculating flow, freq. shift LDV system meas. *(Chinese)* 3—17987
fibre optic laser Doppler anemometer with Bragg frequency shift 3—12790
flow-velocity field visualisation, real-time 3—32821
free surface vel. meas. for steel target impacted by projectile, laser Doppler velocimetry meas. *(Korean)* 3—7521
frequency shift LDV system using acousto-optical modulator, turbulent flow meas. *(Chinese)* 3—37589
gas-solid two-phase flow, laser diagnostic study 3—46667
gaseous supersonic flowfield simultaneous multiple-point vel. meas. using laser induced I_2 fluoresc. 3—32822
high strain rate free surface boundary layer flows, laser Doppler anemometry study 3—51073
hydrodynamic fluctuation due to the discontinuity of flow impedance 3—46669
individual realisation laser velocimeter biases, influence of turbulence scale and struct. 3—2147
long-range anemometry for atmospheric wind velocity meas., review 3—35293

laser velocimeters continued
movement measurement with LDV system using pulse counting freq. demodulator 3—20833
optical-heterodyne method for rot. vel. meas. 3—5772
particle motion prediction, fluid mechanics turbulence model 3—2146
pulsatile entrance flow in curved pipe 3—51231
re-entry Shuttle vehicle active flight control system with laser anemometry 3—35402
ring laser for linear vel. determ. 3—56248
secondary flow component meas. by photon correl. velocimetry 3—46675
speckle contrast variations enhancement, optical filtering 3—46274
speckle velocimeter utilising optical fibres 3—7673
supersonic two-phase flow over bodies, meas. and visualisation 3—46671
transit anemometer, oscillatory correlograms of turbine blade wakes 3—12797.
transonic shock wave-boundary layer interactions, turbulence meas. 3—56531
turbulent flow, velocity measurement by laser beam intensity fluctuations 3—17988
turbulent flow meas., using automatic data acquisition as educational tool 3—25860
turbulent flow meas. in heated pipe, using laser Doppler and hot-wire anemometers 3—51250
twin-beam laser velocimeter for the investigation of spermatozoon motility 3—35037
unsteady gas flow instantaneous vel. field meas. by speckle velocimetry 3—46664
velocity gradient determination with scatt. light cross-correl. meas. 3—42328
wind, velocity measurement by laser beam intensity fluctuations 3—17988
wind-speed laser meas. system, coincidence tracker appl. 3—15632
laser windows *see laser accessories; optical elements*
lasers
see also chemical lasers; distributed Bragg reflector lasers; distributed feedback lasers; dye lasers; excimer lasers; free electron lasers; gas lasers; laser beams; laser frequency stability; laser tuning; liquid lasers; nuclear pumped lasers; Raman lasers; ring lasers; solid lasers; X-ray lasers
amplifier optimisation with spatial filtering, pulse deform. 3—17525
coherent sources of IR and mm waves, appls. book 3—40
diagnostics, conf., Arlington, VA, USA (May 1982) 3—40311
literature survey in Soviet Union 3—38880
optical gain, tie dependent, freq. modulation spectroscopy meas. 3—26989
pulse generation, ultra-short 3—1649
pulse propagation under two-photon reson. absorpt. conditions 3—1650
review *(Rumanian)* 3—12167
symposium on basic problems of lasers, Shanghai, China (Oct. 1982) *(Chinese)* 3—35768
working principles and application *(Italian)* 3—17521
latent heat
see also heat of fusion; heat of sublimation; heat of vaporisation
energy storage using latent heat of fusion of paraffin adsorbed on activated C 3—19620
heat transfer in cubic heat storage container with helical tube heat exchanger and $CaCl_2.6H_2O$ latent heat storage material *(Japanese)* 3—34736
long slender heat pipe performance for latent-heat thermal energy storage 3—39534
low temperature latent heat thermal energy storage: heat storage materials 3—58560
octylcyanobiphenyl, liq. cryst., enthalpy, heat capacity, phase transitions 3—13449
phospholipid bilayers, high press. meas. using adiabatic compression 3—24690
q-state Potts model on the checkerboard lattice 3—49282
solar and process heat, storage using latent heat *(German)* 3—39535
storage for solar power systems, refrigerant storage digital simulation study 3—9493
β-Cu-Zn-Al single crystal, stress dependency of latent heat of transform. 3—58120
$LiNO_3$ and $NaNO_2$ heat storage materials, thermodynamic props. *(Japanese)* 3—34732
latent heat of adsorption *see heat of adsorption*
latent heat of combustion *see heat of combustion*
latent heat of crystallisation *see heat of crystallisation*
latent heat of dissociation *see heat of dissociation*
latent heat of formation *see heat of formation*
latent heat of fusion *see heat of fusion*
latent heat of mixing *see heat of mixing*
latent heat of reaction *see heat of reaction*
latent heat of solution *see heat of solution*
latent heat of sublimation *see heat of sublimation*
latent heat of transformation *see heat of transformation*
latent heat of vaporisation *see heat of vaporisation*
latent image *see photographic process*
lattice constants
see also crystal atomic structure
A15 supercond., irrad., transition temp. and lattice const. correl. 3—28471
actinide compounds, magnetic excitation behaviour, neutron scatt. studies 3—52435
actinide nitrides, electronic struct., lattice parameters 3—18613
alloy hydrides, AB_5-type, cryst. struct., rel to press.-composition isotherm plateau length 3—33199
alloys, binary σ-phases, atomic distribs., rel. to unit cell dimensions 3—22824
alloys, two-phase, quantitative analysis based on lattice parameters meas. of solid solns. *(Czech)* 3—58096
alloys with B2(CsCl) struct., thermodynamics and defect struct. 3—23060
ammonium bis-[2,2′-butylamino-bis-8-quinolinolato (2-)-N^2, O^8, $N^{1'}$, $O^{8'}$]-yttriate (1—)hydrate, cryst. and mol. structures, X-ray anal. 3—33234
α-benzoyl-2-furanmethanol, cryst. struct., X-ray powder diffr. study 3—37892
bis(4′-p-nonyloxybenzylidene)-1,4-phenylenediamine, liq. cryst., cryst. struct., X-ray anal. 3—33236
bis(monomethylammonium) tetrabromomercurate, cryst. struct., low temp. phase transition, X-ray powder diffr. study *(French)* 3—37893

lattice constants continued
bis(n-propylammonium)tetrachloromanganate, low temp. incommensurately modulated phases, elastic neutron scatt. study 3—13438
bis(n-propylanmonium) tetrachloromanganate(II), modulation vector, X-ray study 3—56873
bis-(3-nitro-1,2,4-triazoyl-5) dihydrate, mol. and cryst. structures, thermal, deform. and optical props. 3—33233
butyl-bis-(8-hydroxy-2-quinolyl)amine, mol. and cryst. structures, X-ray anal. 3—33235
calcium-strontium tartrate tetrahydrate, mixed crystals, gel growth, lattice parameter, density, Fe content 3—39023
4-chloroanilinium copper chloride (bromide), phase transitions, ^{35}Cl NQR and mag. susceptibility study 3—47571
4-chloroanilinium manganese chloride, phase transitions, ^{35}Cl NQR and mag. susceptibility study 3—47571
confocal parabola lattice form. under shear *(French)* 3—27841
2,2′-diamino-1,1′-dinaphthyl, cryst. struct., X-ray anal. 3—33232
trans-dichlorobis (L-ethylphenyl-alanate) platinum, cryst. struct. anal. *(Chinese)* 3—42589
2,2′-dihydroxy-1,1′-dinaphthyl, cryst. struct., X-ray anal. 3—33232
erlar *(Russian)* 3—23716
ferrite-garnet film, with submicron cylindrical mag. domains, phase boundaries and growth kinetics 3—14512
graphite, structural and elastic props., density-functional approach 3—51537
graphite intercalation compounds, effects on lattice constants 3—22849
graphite intercalation cpds., stage 2, orientational in-plane ordering and phonon dispersion 3—56862
graphite-H_2SO_4, cryst. expansion during galvanostatic intercalation, dilatometer study 3—25875
heteroepitaxial coherent off-axis layers, X-ray multiple diffr. patterns 3—13665
high pressure X-ray cell for single crystal lattice const. meas. 3—2336
high temperature attachment for precise meas. by Bond's method 3—2337
III-V quaternary alloys, miscibility gaps, delta lattice parameter model 3—43791
III-V quaternary alloys, miscibility gaps, delta lattice parameter model 3—43792
Kossel diffraction SEM for precision crystallogrphic studies in metallurgy, mineralogy and semiconductor materials 3—10967
larusan, cryst. struct., X-ray anal. 3—33231
lead phthalocyanine, unit cell parameters, X-ray diffr. 3—37891
magnesium phthalocyanine, unit cell parameters, X-ray diffr. 3—37891
methane-N_2 solid mixtures, phase diagram, X-ray study *(Russian)* 3—47085
misch metal prep., lattice consts., melting point and hardness 3—14524
polyethylene crystals, lattice parameters, elastic consts., computer simulation 3—51588
quartz, lattice constants from powder patterns, appl. of determ. method 3—2341
quartz, neutron irrad., lattice const. changes, amorphous and X-ray scatt. studies. 3—33308
rare earth niobates, $LnNbO_4$, (Ln=La, Sm, Gd, Ho, Yb), struct. changes along series 3—22870
reciprocal lattice and Ewald construction as an expt. for lecture use 3—37741
steel, Cr-Ni, creep strength, effect of Co and Mo *(Japanese)* 3—53129
sulpholane, mesomeric plastic phase, X-ray diffr. study 3—46875
TCNQ salt, $(HMTSF)_2$ TCNQ, cryst. struct. 3—27928
TGS crystal heteroepitaxial growth from soln. on muscovite 3—14513
S_5-thiogalactopyranoside 6-azauracil, cryst. and mol. struct. 3—24670
$(TMTSF)_2ReO_4$, thermal expansion through metal-insulator transition 3—42815
transition metal nitrides, lattice consts. temp. depend. and thermal expansion 3—37888
trigonal and tetragonal crystals, lattice parameters determ. method, from powder patterns 3—2341
TTF-TCNQF4, solvated charge transfer salt, cryst. struct. 3—27927
$TTT_2I_{3+\delta}$, I sublattice struct., temp. depend., X-ray and neutron diffr. *(French)* 3—8024
wurtzite type crystals, ratio of c/a 3—37868
X-ray double-crystal method for lattice parameter meas. using Cu $K\alpha$ doublet 3—13028
X-ray powder diffr. data, unit cell parameters calc., FORTRAN IV program *(Bulgarian)* 3—7855
X-ray powder diffraction pattern indexing, criterion method 3—7857
Ag-NaCl interphase boundaries, structure rel. to atomic matching 3—33585
$AgInS_2$, lattice thermal expansion, X-ray diffr. study 3—42819
$AgNbO_3$, phase transitions, dielec. props., domain struct., X-ray, DTA studies 3—57086
Al-Pb vapour deposited film, struct. and precipitation, electron diffr. and microscopy study 3—8368
Al-Rh thin films, vapour deposited, solid soln. decomp., annealing, TEM and electron diffr. studies 3—28244
Al-Ti(Fe)(Co)(Ni)(V)(Cr)(Mn), solid soln. extended by rapid quenching from melt, lattice parameter vs. conc. prediction 3—53094
$Al_{0.5}Ga_{0.5}As$-$In_xGa_{1-x}As$ heterostructs. lattice mismatch effects on radiative recombination 3—38926
$Al_xGa_{1-x}N$ MBE films, struct., elec. and optical props. 3—8355
$Al_xGa_{1-x}P$ epitaxial layers, lattice consts., X-ray diffr. study 3—18588
Au-Cd (75 at.%) phase transform. 3—9059
α-Al_2O_3, struct. characts. and ionic mobility, neutron diffr. study 3—7985
$Ba_{11}Cr_4F_{34}$, anion-excess fluorite related superstructures *(French)* 3—27905
$Ba_{11}Ga_4F_{34}$, anion-excess fluorite related superstructures *(French)* 3—27905
$Ba_4Nb_2S_9$, cryst. struct., X-ray diffr. anal. 3—51570
$Bi_{1-x}Sb_x$, lattice parameters, X-ray study 3—13163
CS_2, solid intermolecular modes using 150K lattice parameters 3—18413
$Ca_{10-2x}Bi_xNa_x(PO_4)_6F_2$, struct., charge balanced substitution study, X-ray powder diffr. anal. 3—51569
CaO-MgO-V_2O_5, crystalline solns. and cryst. chem. 3—9043
CaO-Ta_2O_5 system, phase equilibria and structures, X-ray diffr. study 3—8167
$Ca_{3-x}R_xSi_xP_{2-x}O_8$, (R=rare earth), sintered, phase composition and props. 3—8210
$Ca_{10-x}Sr_x(PO_4)_6(OH)_2$, mol. vibr. and lattice consts., IR and X-ray study 3—3702
$CdCr_2S_4$ (Se_4), lattice parameters and thermal expansion, 28 to 685°C 3—2501

lattice constants continued
$(Cd_{1-x}Mn_x)_3As_2$, semimagnetic semicond., prep. cryst. struct., X-ray powder diffr. study 3−46891
$Cd_4Na(VO_4)_3$, dielec., thermal expansion and plastic deformation props. 3−38772
$CdSnP_2$, lattice consts. and thermal expansion, high temp. X-ray study 3−18483
Ce, Kondo volume collapse in dilute and concentrated cases, γ-α transition 3−52364
$CeAl_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3−8233
$Ce(In_{1-y}Sn_y)_3$, behaviour in mixed valence and Kondo regimes 3−23333
$Ce(Pd_{1-y}Ag_y)_3$, behaviour in mixed valence and Kondo regimes 3−23333
$CePt_{2-x}Rh_x$, lattice parameter, X-ray diffr., ^{195}Pt NMR Knight shift studies 3−51543
$CoMnAlO_4$, spinel, structural, mag., elec. props., ionic config. 3−13180
Cr-Co, pulse plating prep., struct. phase 3−24164
$CrS_{1.17}$:Mn(Te), ferrimagnetic-ferromagnetic transition 3−52475
Cr_2S_3-In_2S_3-CdS(COS)(HgS), phase relationships, X-ray diffr., thermal anal., and IR spectra 3−43795
Cs, electronic transitions under high press., X-ray diffr. study 3−27891
$Cs_5Bi(MoO_4)_4$, cryst. struct., X-ray anal. 3−33218
$Cs_2FeF_5.H_2O$, hydrothermal synthesis, cryst. struct., mag. props. 3−33220
CsH, struct. transition and phase diagram, vol. press. depend. study 3−38051
Cu complex, dichloroacrylonitrile copper (II), cryst. struct., X-ray anal. 3−33219
Cu-Ni-Zn system, FCC+tetragonal two phase region, X-ray diffr. study 3−37853
Cu-Sn, very dil., displacement around disordered Sn impurity, EXAFS study 3−13168
$Cu_{1-x}Ag_xGaSe_2$, energy gap, lattice consts., and transmission spectra *(Korean)* 3−13721
$CuAu_{14-y}Pd_y$ quasibinary alloy, $L1_0$-type, lattice parameters, axial ratio change 3−13164
$Cu_2Ge_{1.55}Se_3$, superlattice struct., X-ray powder diffr. study 3−7979
$CuInSe_2$-ZnSe-In_2Se_3 system, phase diagram and phase structs. *(French)* 3−28079
$Cu_{1-x}Li_{x/2}Al_{2+x/2}O_4$, solid soln. form., X-ray and elec. cond. studies 3−47116
Cu_2MnSn, Heusler alloy, struct. and mag. props., effect of rapid quenching 3−34022
$CuZr_2(PO_4)_3$, prep., ionic cond., and lattice parameters 3−42841
D_2O-VII ice, isothermal eqn. of state and lattice const., X-ray study 3−2732
Dy_6Mn_{23} and $Dy_6Mn_{23}H_x$, magnetisation and Mossbauer study 3−28528
Er_2O_3-HfO_2 system, phase relations and ordering, X-ray diffr., thermal expansion 3−53036
Eu_2As_2, lattice const. and bulk modulus, high press. X-ray study 3−22854
EuB_6, compressibility by high pressure X-ray powder diffraction anal., band struct. determ. 3−28031
$(EuLaCa)_3(FeGeAl)_{5O12}$, garnet films, LPE grown, mag. props., growth atm. effects 3−23753
$EuPd_3B_x$, valence state, lattice const., mag. susceptibility 3−23331
$EuPd_3Si_x$, valence instability, Mossbauer and susceptibility meas. 3−52682
EuS-Sb_2S_3 system, phase diagrams, and struct. props., X-ray and DTA study 3−8166
$EuSe_{1-x}S_x$, $x \leq 0.03$, mag. phases, AC susceptibility, ^{153}Eu NMR studies 3−52483
Fe, ferromagnetic, pseudopotential calcs. of ground state props. 3−57510
Fe-Cr-Co permanent mag. alloy, high temp. X-ray diffr. study, effect of ageing *(Chinese)* 3−27892
Fe-Ni Invar sputtered films, anomalous mag. behaviour, Mossbauer study 3−52559
Fe-Pt Invar alloys, disordered, lattice parameter meas., rel. to magnetovol. effect 3−51540
Fe-Ti solid soln., lattice parameters 3−7962
Fe_3Al, neutron irrad., order-disorder transitions, X-ray diffr. study 3−2459
Fe_3O_4-Fe_2O_3 film, prep. by reactive condensation, oxidation and coercivity 3−18954
$FeRh_2Se_4$, cryst. struct., mag. susceptibility and Mossbauer spectra 3−8008
FeS, cryst. struct. and ferrimag.-antiferromag. transition 3−51559
$Fe_{75}Sn_{25}$-$Co_{75}Sn_{25}$ alloys, metastable phases, X-ray and electron diffr. studies 3−37855
FeTi (100) and (111) surfaces, LEED and AES studies 3−18541
GaAs, absolute hydrostatic deform. pot., LMTO-ASA calcs. 3−13717
$Ga_{0.5}Mo_2S_4$, sp. ht. meas., cryst. struct. and mag. props., low temp. study 3−8655
GaP, ground state struct. props., local density functional formalism 3−57300
GaP:N VPE layers, (111) oriented, N doping conc., lattice parameter meas. 3−8366
GaSb, excess Ga and Sb, nature of solid solns., lattice parameters study *(German)* 3−22855
Gd, martensitic transition to cubic phase, electron diffr. study 3−37846
$GdAl_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3−8233
$GdFe_2H_x$, prep. and decomp., Debye-Scherrer X-ray study 3−2807
$(Gd_{1-x}R_x)Tl$, R=Y, La, structural transform. and mag. props. 3−51780
$Gd(Tl_{1-y}My)$, M=In, Ag, structural transform. and mag. props. 3−51780
Ge, absolute hydrostatic deform. pot., LMTO-ASA calcs. 3−13717
Ge average electron density using MeV δ-rays from channelled projectiles 3−8113
Ge-GaAs system, metastable continuous solid solns., prep. and props. 3−8369
$Ge_{38}As_8I_8$, clathrate semicond., prep., struct. and elec. props. 3−13814
p-H_2, thermal expansion, 2K to melting point, X-ray diffr. study *(Russian)* 3−38157
H_2O-VII ice, isothermal eqn. of state and lattice const., X-ray study 3−2732
β-$In_{2.47}Al_{22}O_{34}$, cryst. struct. and thermal stability, X-ray study 3−2504
$In_{1-x}Ga_xAs_yP_{1-y}$, material parameters derivation from linear interpolation scheme 3−33632
InP:Fe, semi-insulating, eutectic precipitates 3−8207
InSb, valence electron density under high press., X-ray diffr. study 3−13160

lattice constants continued
InSb:Bi, doping during LPE, cryst. struct., thermodynamic anal. of dissoc., elec. props. 3−33603
InSe:Te, diffusion intercalated, elec. and struct. props. 3−3185
$(K_{1.3},Li_{0.1})Mg_{0.7}Ti_{7.3}O_{16}$, high freq. ionic AC cond., freq. and temp. depend. 3−42839
$K_{1.6}Al_{1.6}Ti_{6.4}O_{16}$, high freq. ionic AC cond., freq. and temp. depend. 3−42839
$K_{0.5}Bi_{0.5}TiO_3$-$Na_{0.5}Bi_{0.5}TiO_3$ ferroelec. ceramics, lattice parameters and phase transition, X-ray study *(Chinese)* 3−28785
KBr, electrolytically coloured, lattice parameter, F-F′ conversion effects 3−22890
KCl, electrolytically coloured, lattice parameter, F-F′ conversion effects 3−22890
KH_2PO_4 crystal heteroepitaxial growth from soln. on muscovite 3−14513
KH_2PO_4, lattice parameter determ., birefr., dislocation density and impurity conc., X-ray study 3−46892
KI, electrolytically coloured, lattice parameter, F-F′ conversion effects 3−22890
$(K_{1.3}Li_{0.2})Al_{1.5}Ti_{6.5}O_{16}$, high freq. ionic AC cond., freq. and temp. depend. 3−42839
$KLiMS_2$, M=Mn, Fe, Zn, cryst. struct., X-ray powder diffr. study 3−37869
$K_2Mg(CO_3)_2$, cryst. struct., X-ray powder diffr. study 3−37871
$K_{1.33}Mg_{3.11}Sb_{4.89}O_{16}$, hollandite-type struct., supercell ordering, X-ray, electron diffr., and HREM studies 3−51571
$K_{1.6}Mg_{0.8}Ti_{7.2}O_{16}$, high freq. ionic AC cond., freq. and temp. depend. 3−42839
La-Ga, phase diagram and phase structs., X-ray diffr. and DTA studies *(Chinese)* 3−42750
$LaAl_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3−8233
$(La_{1-x}Ce_x)Sn_3(Th)(Be_{13})$, behaviour in mixed valence and Kondo regimes 3−23333
$La(Ru_{1-x}OS_x)_2$, structural and supercond. data. 3−3349
$La_{1-x}Sr_xCo_{1-y}Ti_yO_3$, electron transport and mag. props. 3−47348
$La_{1-x}Th_xRu_2(OS_2)$, structural and supercond. data. 3−3349
β-LiAl, fast ion cond., defects and disorder, neutron diffr. study 3−22823
LiH, thermal expansion and zero-point displacement, effect of isotopic substitution 3−42820
LiH, thermophysical props., anharmonic lattice calc., H isotope effects 3−8227
γ-$LiIO_3$, cryst. struct. phase transitions, X-ray diffr. study 3−7983
$Li_{2+x-y-z}(NH)_{1-x-y-z}N_xCl_yH_z$, solid electrolyte, ionic cond. and ^{7}Li NMR 3−42838
$LiNa_2AlH_6$, prep., struct. and thermal stability, X-ray diffr. study 3−37880
Li_xNbS_2, cryst. chemistry and superconductivity 3−23528
$LiReO_3$ and Li_2ReO_3, cryst. struct., neutron powder diffr., use of Pearson type VII distrib. 3−7974
Li_xZrS_2 intercalation cpd., structural and semicond.-metal transition obs. 3−52036
Mg-Ni-H system, phase transitions and thermal expansion, X-ray powder diffr. study 3−33428
MgO, solubility of Al_2O_3 *(Japanese)* 3−38081
MnF_2, cryst. struct., reliability of intensity variances by χ^2 distrib. 3−51575
$Mn_{1.09}Sb$, interstitial site occupancy and electronic struct., neutron diffr. study 3−51590
Mo, high energy He^{2+} irrad., lattice parameter change 3−33320
N_2, solid, high press. phase, lattice energy calc. 3−23036
$NaFeP_2O_7$, cage cryst. struct., X-ray study 3−37874
$Na_{1-x}K_xCl$, lattice dynamics calcs. 3−13365
$Na_6Mo_{10}O_{33}$, cryst. struct., X-ray diffr. anal. 3−51564
$NaYF_4$, cryst. growth, lattice parameters, X-ray powder diffr. 3−37864
Nb, partial motor vol. of H and D 3−33454
Nb_3Al sputtered thin films on sapphire substrates, struct. and supercond. transition temp. meas. 3−8608
$Nb_x(CO)$, cryst. struct. and lattice constants, high temp. X-ray diffr. study *(French)* 3−13187
NbO_x, cryst. struct. and lattice constants, high temp. X-ray diffr. study *(French)* 3−13187
$Nd_2Sr_3(BO_3)_4$, cryst. struct. refinement, photographic and X-ray studies 3−37887
Ni-base superalloy, meas. of precip./matrix lattice mismatoh 3−9070
Ni-based solid soln., alloys, H_2 absorption, X-ray diffr. lattice const. study 3−33565
Ni-Zn ferrite, mol. field approx. 3-sublattice 3−13987
$Np(OH)_2SO_4$, synthesis, struct. and optical spectra 3−27910
Pa, bulk modulus, press. studies 3−18364
ϵ-Pb-Bi films for Josephson junction counterelectrodes, film comp. and thermal stability 3−47237
$Pb_5(PO_4)_3F$, cryst. struct., X-ray study 3−37886
$Pb_{1-x}Sn_x$ $Te/PbTe_{1-y}Se_y$ multilayer struct. thermal expansion and lattice matching 3−2989
PbTiO-$Bi(Zn_{2/3}(Mg_{2/3})Nb_{1/3})O_3$, ferroelec. phase transition, X-ray, permittivity and dilatometric studies 3−38777
PbTiO-$La(Zn_{2/3}(Mg_{2/3})Nb_{1/3})O_3$, ferroelec. phase transition, X-ray, permittivity and dilatometric studies 3−38777
Pd-based solid soln. alloys, H_2 absorption, X-ray diffr. lattice const. study 3−33565
Pd-T system, solubility, phose diagram, and struct. props. *(German)* 3−18473
$PrAl_3$, anomalous thermal expansion, valence mixing, cryst. field effects 3−8233
$Pr_{1-x}Ca_xMnO_3$, struct. and mag. props. 3−33202
PuN, lattice parameter, O and C impurities effect 3−33196
ReN film, ion implantation prep., struct., supercond. and elec. props. 3−28467
RhOOH, paramagnetic species, EPR and X-ray diffr. studies 3−47547
RuO_2, cryst. growth by vapour transport technique, struct. and elec. props. 3−19259
Sb_2MoO_6, cryst. struct., X-ray powder and neutron diffr. studies 3−37870
Si, absolute hydrostatic deform. pot., LMTO-ASA calcs. 3−13717
Si average electron density using MeV δ-rays from channelled projectiles 3−8113
Si, average stress tensor, ab initio pseudopot. calc. 3−47020
Si, ground state struct. props., local density functional formalism 3−57300
Si, polycrystalline, Bridgman growth, crystallographic anal., photovoltaic appls. 3−22807

lattice constants continued

- Si, polycrystalline ingot, crystallographic orientation study after directional solidification *(French)* 3—13148
- Si, pulsed-laser annealing, synchrotron X-ray diffr. study, plasma model 3—27988
- Si, valence electron density under high press., X-ray diffr. study 3—13160
- Si:B, lattice constants meas. using X-ray double crystal method 3—13028
- SiC polytypes, natural superstructs., cryst. chem. prop. changes 3—22867
- SmB_6, valence state in metal-deficient phases, lattice periods 3—13217
- $Sm_{1-x}R_xB_6$ (R=La,Yb), susceptibility, X-ray absorpt., and sp. ht. meas. in mixed valence range 3—52351
- SmS, valence transition, CPA calcs. 3—13773
- α-Sn, electronic struct. and ground state props., self-consistent nonlocal pseudopot. calc. 3—57266
- $Sr_{10-2x}Bi_xNa_x(PO_4)_6F_2$, struct., charge balanced substitution study, X-ray powder diffr. anal. 3—51569
- $SrBr_2$-$SrCl_2$, phase diagram. and lattice consts., X-ray diffr. study 3—2744
- $SrBr_xI_{2-x}$, prep., cryst. struct., X-ray powder diffr. anal. 3—51566
- $Sr_2V_2O_7$, cryst. struct. 3—22868
- Ta, partial motor vol. of H and D 3—33454
- Ta_3Ge, phase transformation., high to low temp. struct., X-ray and metallography studies 3—2773
- TaS_2 (2H)-K^+/H_2O, cryst. expansion during galvanostatic intercalation, dilatometer study 3—25875
- Ti alloys, martensites, lattice correspondence and crystallography 3—37854
- $TiBe_{2-x}Ga_x$, Laves phase, expansion by Ga addition 3—33189
- TiC_x single crystals, floating zone prep., C content control 3—43724
- TiN film, reactively DC sputtered, composition, struct. and elec. props., substrate bias influence 3—13678
- $Ti_{50}Ni_{47}Fe_3$, premartensitic transform. behaviour, elec. resist. meas., TEM and electron diffr. studies 3—38053
- $TiO_{0.5}$ evaporated films, δ-phase and phase transitions, electron microscopy study 3—38247
- TiO_{1+x} evaporated films on NaCl, transition structures, electron microscopy study 3—38246
- Ti_xO_{2x-1}, Magneli phase, cryst. struct., body centred triclinic cell model 3—2507
- $TiVO_4$, prep., lattice consts., mag. susceptibility and EPR spectra 3—28499
- $TmCo_3H_x$, press.-comp. isotherms, Debye-Scherrer X-ray study 3—2808
- TmH_x, phase struct. and deuteride lattice parameter 3—13191
- Tm_6Mn_{23} and $Tm_6Mn_{23}H_x$, magnetisation and Mossbauer study 3—28528
- Tm_6Mn_{23}, Mossbauer effect, mag. props., and lattice consts., effect of H_2 absorpt. 3—52679
- $Tm_{1-x}R_xB_6$ (R=La,Yb), Z 3—52351
- TmTe, intermediate valence and mag. ordering, susceptibility and lattice parameter meas. 3—43362
- U_2F_9, crystallographic parameters, multiphase refinement of neutron powder data 3—37875
- α-UH_5, crystallographic parameters, multiphase refinement of neutron powder data 3—37875
- UN, neutron fission damage, mag. disorder and mag. transition temp. 3—52480
- US, neutron fission damage, mag. disorder and mag. transition temp. 3—52480
- US, neutron irrad. effects 3—16853
- V, partial motor vol. of H and D 3—33454
- V-I, solubility, phase diagram, struct. props. and diffusion *(German)* 3—18473
- V_3Ge, supercond., X-ray diffr. study of lattice parameters 3—37856
- V_2H, normal and deuterated, press. effects on phase transitions, X-ray and resistometry studies 3—33426
- VPO_4, prep., lattice consts., mag. susceptibility and EPR spectra 3—28499
- VSe_2, electron irrad. induced defects, elec., mag., and lattice parameter meas. 3—18347
- V_3Si, supercond., X-ray diffr. study of lattice parameters 3—37856
- $V_{1-x}Ti_xS_{1.57}$, phase relations, site distrib. of Ti and V, and metal-metal interaction 3—42583
- WO_3 films, struct. changes during electrochromic and photochromic processes 3—19111
- Y, BCC phase prep. by rapid solidification of Y-Fe 3—2468
- $Y_{1-x}Ca_xMnO_3$, struct. and mag. props. 3—33202
- $Y_{6-x}Er_xFe_{23}$, hydrides, mag. props., structural props., X-ray diffr. anal. 3—52524
- $(YEuLuCa)_3(FeGe)_5O_{12}$ garnet films, LPE grown, mag. props., growth atm. effects 3—23753
- YFe_2H_x, prep. and decomp., Debye-Scherrer X-ray study 3—2807
- $Y_{3-x}Nd_xFe_5O_{12}$ system, mag. anisotropy and lattice consts. 3—28549
- $Zn_{1+x}Fe_{2-2x}Ge_xO_4$ spinel solid solns., lattice consts. 3—19328
- $Zn_{1-x}Mn_xTe$, lattice parameter and density depend. on comp. 3—51568
- $ZnSiAs_2$, thermal expansion, temp. depend. of tetragonal distortion, X-ray diffr. study 3—2854
- $ZnSiAs_{2-x}P_x$ (x=0.5, 1.5), X-ray obs. of thermal expansion 3—33471
- α-Zr $(HPO_4)_2.H_2O$, prep., chem. props. and AC ionic conductivity 3—42837
- ZrC-NbC, solid solutions, unit-cell periods 3—7982
- ZrO_2-CeO_2-Y_2O_3(CaO), ionic conductivity, lattice parameter effects 3—8246
- ZrO_2-Nd_2O_3 solid solns., cryst. struct. and elec. cond. 3—2496

lattice defects *see crystal defects*

lattice diffusion *see diffusion in solids*

lattice dynamics

- *see also crystal surface and interface vibrations; displacive transformations; Gruneisen coefficient; lattice dynamics of covalent crystals; lattice dynamics of ferroelectric crystals; lattice dynamics of ionic crystals; lattice dynamics of metallic crystals; lattice dynamics of molecular crystals; lattice localised modes; lattice phonons; soft modes; vibrational states in disordered systems*
- A_3B lattice dynamics model, phonon freqs., augmented system of compatibility eqns. 3—28069
- anharmonic temperature factor, with hexagonal wurtzite structure and least squares refinement for intensity 3—22828
- anisotropic materials, modelling local defects, discrete lattices appl. 3—27449
- bicrystal with line interface, phonon frequencies 3—13374
- colloidal crystals, phonon dispersion curves, lattice dynamics, photon correl. spectroscopy 3—13376

lattice dynamics continued

- crystals, real-space formulation in closed form using cyclic matrices 3—22800
- crystals with correlated defect positions, dynamics 3—33369
- diffusion of nondecaying TA-phonons 3—42721
- disordered diatomic linear chain having diagonal and off-diagonal randomness, CPA 3—57251
- n-i-p-idoping superlattices, acoustic phonon optical excitation 3—28427
- excitations in disordered systems, NATO Advanced Study Institute, East Lansing, MI, USA (Sept. 1981) 3—1
- graphite, lattice dynamical model, Raman spectrum calcs. 3—13362
- graphite intercalation cpd., Raman scatt., lattice dynamics and internal modes, book contrib. 3—3742
- graphite intercalation cpd. with Rb, lattice dynamics, Raman scatt. from low freq. phonons 3—28859
- III-V semiconductors, sphalerite structure, dynamic atomic displacements, X-ray study 3—27919
- incommensurate intergrowth compounds, long-wavelength excitations 3—13368
- incommensurate lattices, phason dynamics 3—28062
- K-graphite intercalate, lattice dynamical model 3—13379
- light interstitials, transition between coherent and stochastic motion 3—33514
- melting, mean-field theory based on Bogolyubov-Born-Green-Kirkwood-Yvon eqn. 3—38037
- minerals thermodynamics and lattice vibration, appl. to phase equilib., isotope fractionations/high press. props. 3—25085
- one-dimensional atomic chain with nonlinear substrate pot., solitonlike excitations 3—2694
- orthosilicates, vitreous and cryst., HF vibr. spectra 3—52779
- P, black, lattice dynamics, force const. model 3—8157
- piezoelectric crystal, exciton motion, lattice vibr. effect, electron-hole interaction 3—23286
- quasi-one-dimensional antiferromagnet, magnetoelastic soliton excitation 3—38670
- radiationless transitions, nonadiabatic, induced by classical lattice vibrs. 3—3803
- rare gas:^{57}Fe solids, impurity-host to host-host coupling force const. ratio 3—22988
- self-consistent Einstein model, continuum approx., eqns. for thermoelasticity and lattice vibr. 3—16295
- semi-infinite isotropic media, Green functions and fluctuation spectra for acoustic-thermal modes 3—33368
- small particle, vibr. eigenfrequencies and mean square vibr. displacement, size depend. 3—57037
- solid state reactions, laser Raman study 3—4264
- square lattice, dynamics, analytical soln. under general boundary conditions 3—13373
- strongly anisotropic crystals, stability, pseudoharmonic approx. of phonons 3—18411
- surface spectral density functions at large wave vector 3—57204
- TCNQ salt, $TEA(TCNQ)_2$, lattice dynamics 3—18409
- transition metal hexacyano compounds, solid and solns., vibr., IR and Raman anal. 3—19116
- vibration representation, crystal constructed by induction from representations *(French)* 3—22812
- zincblende-type semiconductors, lattice statics, interionic pot. model 3—22818
- Al_2O_3-based solid electrolytes, β- and β″-phase, IR, Raman and neutron scatt. studies, static and dynamic struct. anal. 3—43547
- $BaF_{2-x}H_x$, mixed cryst., lattice vibr., IR spectra study 3—2705
- $CaF_{2-x}H_x$, Z 3—2705
- $CdCl_2(Br_2)(I_2)$, thin films, IR spectra 3—47723
- $CdIn_2S_4$, thermal props. and moments of phonon spectra 3—28121
- CdS lattice, characteristic temp. and mean square displacement, X-ray study 3—18421
- $CoCl_2(Br_2)$, thin films, IR spectra 3—47723
- Cs-graphite intercalate, lattice dynamical model 3—13379
- $CsNiF_3$, 1-D ferromag., elastic consts., Brillouin scatt. and US propag. studies 3—57013
- CuX (X=Br, Cl, I), phonon dispersion and density of state, bond-bending force model 3—18412
- $FeCl_2$, thin films, IR spectra 3—47723
- GaAs:Al, local lattice dynamical force const. variations caused by isoelectronic impurities 3—47071
- $Ga_{1-x}In_xAs$, vibrations and optical props., coherent pot. approx. 3—33370
- $Ga_{1-x}In_xSb$, vibrations and optical props., coherent pot. approx. 3—33370
- GeS, layer crystal, phase transition, Raman study 3—18452
- $Hg_{3-\delta}AsF_6$, long-wavelength excitations 3—13368
- $KHCO_3$, OH(D) stretching bands, proton dynamics, IR and Raman band profile calcs. 3—47630
- $LiKSO_4$, low freq. vibr. modes, temp. depend., Raman study 3—23952
- $LiKSO_4$, temp. depend. of Raman active Li modes 3—14303
- $LiNaSO_4$, low freq. vibr. modes, temp. depend., Raman study 3—23952
- $LiNaSO_4$, temp. depend. of Raman active Li modes 3—14303
- $LiTmF_4$, lattice dynamics and electron-phonon interactions 3—42722
- $MgCl_2$, thin films, IR spectra 3—47723
- $MnCl_2$, thin films, IR spectra 3—47723
- Mo ternary chalcogenide superconductors, lattice dynamics, neutron scatt. studies, book contrib. 3—8158
- NbS_2-2H(3R), Raman study 3—43543
- $NiCl_2(Br_2)$, thin films, IR spectra 3—47723
- $Ni_{1-x}Cu_xFe_2O_4$, lattice vibr. freq., Jahn-Teller distortion, IR spectra study 3—28066
- PbF_2, α- and β-phases, interat. pot. and phonon freqs., shell model 3—57040
- PbI intercalated with organic molecules, heat capacity *(Russian)* 3—13474
- $PdD_x(H_x)$, lattice dynamics study 3—22986
- Rb-graphite intercalate, lattice dynamical model 3—13379
- SbSBr, Raman spectra, ferroelectric transitions 3—3716
- $Si_{6-z}Al_zO_zN_{8-z}$, β-sialons, IR absorpt. spectra study 3—8820
- p-$(SnTe)_{0.2}(PbSe)_{0.8}$, epitaxial layer, transfer phenomena 3—8408
- SnU, tetragonal, lattice dynamics and Mossbauer lattice temp. 3—57838
- $SrF_{2-x}H_x$, mixed cryst., lattice vibr., IR spectra study 3—2705
- $TaSe_2$-2H, orthorhombic commensurate CDW phase, lattice vibrs. 3—18415
- $ThBr_4$, neutron scatt. study of incommensurate phase transition 3—33423
- VO_x, heat capacity anomaly due to order-disorder transition 3—47122
- Xe clathrate hydrate, struct. I, dynamical props. 3—51727
- ZnS, anharmonic lattice vibr., powder neutron diffr. study 3—13392
- ZnS, lattice dynamics, deform. dipole model study 3—38017

lattice dynamics continued
ZnS, substitutional transition metal impurities, local force variations, Raman scatt., Green's function calc. 3—47651
$ZrTe_5$, linear chain cpd., lattice modes, Raman scatt. 3—2710
lattice dynamics of covalent crystals
quasimolecular model of covalent crystals with diamond struct., lattice dynamics study 3—42733
Cl_2 crystal struct. and lattice dynamics, electrostatic and anisotropic atom-atom pots. 3—27914
Ge, lattice dynamics, ab initio pseudopot. theory 3—2707
HfC, lattice dynamics, Debye temp. and phonon dispersion relations 3—8154
PbSnTe, phonon dispersion and elastic consts. rigid ion model 3—57041
Si, average stress tensor, ab initio pseudopot. calc. 3—47020
Si, lattice dynamics, ab initio pseudopot. theory 3—2707
Si, microscopic screening and phonon freq. 3—22997
Si, phonon focusing, flux density calc. 3—38012
Si, valence force field 3—2727
Si, vibronic bands, IR spectra 3—42720
lattice dynamics of ferroelectric crystals
see also displacive transformations; soft modes
crystals with correlated defect positions, dynamics 3—33369
displacive type ferroelectrics, electron-ionic vibr. coupling const. in vibronic model 3—52744
IV-VI ferroelec. semiconductors, band gap and energy spectra, temp. depend. 3—18617
lattice stability and soft modes 3—33387
phase transitions, role of quadratic electron-phonon interaction 3—28793
Ag_3AsS_3, cryst. symm., transitions, Raman study 3—43545
$BaTiO_3$, Raman spectra of oblique phonons, soft mode temp. depend. 3—57909
KH_2AsO_4, local pseudo freeze out of impurity dynamics, EPR study 3—3527
KH_2PO_4:Cr, local pseudo freeze out of impurity dynamics, EPR study 3—3527
$(KH_2PO_4)_{1-x}(KD_2PO_4)_x$, low-lying longit. mode, Raman study 3—38813
$K_{1-x}Li_xTaO_3$, elastic const. discontinuity, Brillouin spectra 3—3752
$KNbO_3$, single-domain, IR refl. spectra in tetragonal phase 3—38812
$KNbO_3$, vibr. modes near ferroelec. transition, Raman scatt. study 3—47654
$NH_4H_2AsO_4$, local pseudo freeze out of impurity dynamics, EPR study 3—3527
NH_4IO_3, NQR studies of phase transition *(Russian)* 3—28801
NH_4LiSO_4, Brillouin scatt. intensity near ferroelec. phase transition point, anomalous temp. depend. 3—57942
$NaNO_2$, phonons near order-disorder transform 3—13360
$Sr_{0.45}Ba_{0.55}Nb_2O_6$, ferroelec., phonon dispersion, neutron scatt. study 3—2704
lattice dynamics of ionic crystals
alkali halide mixed crysts., rocksalt struct., elastic consts. 3—22959
alkali halides, self-consistent and quasiharmonic approxs., eqn. of state and high temp. lattice instability 3—42744
alkali halides, thermal expansion and lattice dynamics, variational approach 3—42743
diatomic crystals, lattice props. calc. using short-range Rydberg pot. function 3—22819
harmonic force const. classification 3—13356
localizes optical modes induced by point and extended defects 3—18419
nitrates, cryst. and molten, anharmonicity of nitrate ion vibrs., effect of temp. and phase state 3—52789
octahedral XY_6 system, intra-molecular force fields and ionic constants 3—2697
superionic conductor, review 3—8021
thermal expansion and lattice dynamics, variational approach 3—42743
AgBr(Cl), vibr., optical and thermodynamic props., three body force shell model 3—38007
AgCl(Br), dielec. and anharmonic behaviour 3—42741
BaF_2, dielec. and anharmonic behaviour 3—42741
BaF_2 powder, Debye-Waller factors of Ba^{++} and F^- ions, temp. variation meas. by X-ray diffr. 3—28073
CaF_2, dielec. and anharmonic behaviour 3—42741
CsI, phonon force models, surfaces near degeneracy 3—13363
$KBr_{1-x}I_x$, lattice dynamics calcs. 3—13364
KCl, phonon force models, surfaces near degeneracy 3—13363
KCl-KBr mixed crysts., elastic consts. 3—22959
$KCl_{1-x}Br_x(I_x)$, lattice dynamics calcs. 3—13364
K_2OsCl_6, lattice dynamics and phase transitions, inelastic neutron scatt. study 3—33373
$K_{1-x}Rb_xI(Cl)$, lattice dynamics calcs. 3—13365
MgO, bonding charge density and eqn. of state 3—42565
MgO, cation doped, bulk and {001} surface, calc. defect struct. 3—8045
NaF, phonon force models, surfaces near degeneracy 3—13363
$Na_{1-x}K_xCl$, lattice dynamics calcs. 3—13365
PbF_2, dielec. and anharmonic behaviour 3—42741
PbI_2 layer cryst., exciton-phonon interaction, flexural lattice waves 3—3082
RbBr, phonon force models, surfaces near degeneracy 3—13363
RbCN, rotation translation coupling and lattice dynamics 3—42723
SrF_2, dielec. and anharmonic behaviour 3—42741
TlCl(Br), dielec. and anharmonic behaviour 3—42741
lattice dynamics of metallic crystals
A15 superconducting cpds., band Jahn-Teller effect 3—57319
A-15 compounds, lattice dynamics, dynamical matrix at k=0 *(Rumanian)* 3—8153
alkali metals, mean-square displacement and Lindeman's criterion for melting 3—42742
alkali metals, phonon spectra, local model pseudopotential calc. 3—13377
alkali metals, pseudopotential theory 3—51726
cubic crystals, phonon theory of lattice dynamics 3—51730
cubic metals, Lindemann's melting criterion 3—33406
cubic metals, melting criterion 3—23016
HCP metals, lattice vibrs., anisotropy 3—13384
martensitic nucleation and growth, two dimensions, mol. dynamics 3—34314
martensitic transformation and twinning, stress reduced, lattice relax., nucleation 3—34313
metals, surface props. using inhomogeneous linear electronic response 3—23450
noble metals, electron-fluid shell models 3—42731
noble metals, phenomenological model 3—2702
lattice dynamics of metallic crystals continued
pseudopotential theory 3—51726
static lattice Green functions for FCC and BCC metals 3—28061
transition metals, BCC, cryst. stability and phonon dispersion 3—47064
yield stress, correlation with phonon heat capacity 3—19375
Al, lattice vibrs. and thermophysical props. 3—47063
Al, self-interstitials, energy 3—51737
$AuCu_3$, anharmonicity in ordered phase, neutron diffr. study 3—18407
Cu, phonons, pseudopot. calc. 3—2703
Cu, self-interstitials, energy 3—51737
$Fe_{0.5}Ti_{0.5}$, lattice dynamics study 3—42727
In, body-centred tetragonal, lattice dynamical study 3—57042
In, face-centred tetragonal, lattice dynamics 3—47061
K microbridges, electron-phonon interaction function, pseudopot. calc. *(Russian)* 3—47068
La, phonon dispersion relations, coherent inelastic neutron scatt. study 3—22998
Li, phonon dispersion curves, crossing feature 3—2709
Mg, electron-phonon interactions, inelastic neutron scatt. study 3—28070
Na microbridges, electron-phonon interaction function, pseudopot. calc. *(Russian)* 3—47068
^{149}Sm, isotopically pure, phonon density of states effect in reson. neutron interferometry 3—13361
Sn-Cd single crystals, Mossbauer effect probability, effect of lattice dynamics 3—13369
Ti, ht. capacity, lattice vibrs. and electronic contrib. 3—2833
Yb, FCC, lattice dynamics 3—13378

lattice dynamics of molecular crystals
alkaline earth oxides, lattice dynamics 3—22992
atomic lattice, electronically excited, localisation, soliton propag. and self-trapping model 3—57036
2,2′-bipyridine, normal mode anal., cryst. vibrs. 3—43534
2,2′-bipyridine, normal mode anal., internal modes 3—43533
bis-methyl ammonium cadmium tetrachloride, and deuterated homologues, lattice dynamics and struct. transitions, Raman spectra study 3—47639
bis-methyl ammonium cadmium tetrachloride, lattice dynamics and struct. phase transitions, inelastic neutron scatt. and Raman spectra 3—47638
bis-methyl ammonium manganese tetrachloride, lattice dynamics and struct. phase transitions, inelastic neutron scatt. and Raman spectra 3—47638
diglycine sulphate, dielec. meas. and vibr. spectra, 5 to 400K 3—52704
ethylammonium halides, torsional and lattice modes, IR and Raman spectra 3—14291
MBBA, liquid crystal and molecular crystal, vibrational energy relaxation, Raman scatt. study *(Russian)* 3—47659
mesotartaric acid, and hydrates, vapour press. and lattice energies 3—42763
metal (II) hexafluorosilicate salts, hexa-aquo, IR absorption studies 3—19123
myoinositol, and hydrates, vapour press. and lattice energies 3—42763
naphthalene, cryst., anharmonic shifts, bandwidths and energy decay calcs. 3—47062
naphthalene, molecular crystal, vibrational energy relaxation, Raman scatt. study *(Russian)* 3—47659
naphthalene crystal, lattice dynamics, X-ray thermal diffuse scattering study 3—33037
naphthalene-d_8, cryst., anharmonic props. and mol. orientation, neutron diffr. study 3—13390
naphthalene-d_8, phonon shifts and widths, coherent inelastic neutron scatt. 3—13358
N-nitrodimethylamine, displacive phase transition, neutron inelastic scatt. studies 3—57053
one-dimensional chains, autolocalised collective excitations, cubic anharmonicity effect 3—42716
organic crystals, anisotropic, melting of mol. rot. degrees of freedom, Raman spectra study 3—57922
oxalic acid, and hydrates, vapour press. and lattice energies 3—42763
phloroglucinol, and hydrates, vapour press. and lattice energies 3—42763
physical props., theory, book 3—54596
plastic molecular crystals, orientational disorder, IR and Raman spectroscopy of internal modes 3—38816
polyethylene crystallites, lattice longit. vibrs. amplitude temp. depend. *(Russian)* 3—51739
pseudoharmonic approx., statistical-mechanical formulations 3—57052
quaternion formulation 3—13371
rare earth perrhenates, vibr. interaction, low temp. investig. 3—52790
self-consistent field theory of dynamics of mol. cryst. structural instabilities 3—42745
soliton collective excitations 3—38004
stilbene, molecular crystal, vibrational energy relaxation, Raman scatt. study *(Russian)* 3—47659
TCNQ crysts., Raman active phonons, temp. depend. 3—14283
tetrabromomethane, solid, orientationally disordered, neutron scatt. study 3—13036
tetracyanoethylene, phonon dispersion of external and low freq. internal vibrs. 3—42724
tribromofluoromethane, Raman spectra in solid and liq. states 3—47643
CS_2, solid intermolecular modes using 150K lattice parameters 3—18413
$CaCO_3$, calcite, molecular crystal, vibrational energy relaxation, Raman scatt. study *(Russian)* 3—47659
n-D_2, solid acoustic velocity angular dependence, Brillouin scatt. study using diamond anvil cell 3—38838
HF, cryst., lattice dynamics calcs. 3—13353
$(KCN)_x(KBr)_{1-x}$, static disorder and its rel. to dynamical props. studied by mol. dynamics calcs. 3—8151
N_2, crystal, lattice dynamics, ab initio intermol. pot. and hindered rotator model 3—13354
α-N_2, solid, lattice dynamics, ab initio intermol. pot., anharmonic librations 3—42719
β-N_2, solid, orientationally disordered, neutron scatt. study 3—13036
$(N_2)_2$ van der Waals mol., monomer mobility, rel. to N_2 crysts. 3—50476
SF_6, solid, orientationally disordered, neutron scatt. study 3—13036
$SrBr_2.6H_2O$, force consts. for lattice vibrs., Raman spectra study 3—28064
$SrCl_2.6H_2O(6D_2O)$, force consts. for lattice vibrs., Raman spectra study 3—28064

lattice energy
see also binding energy
alkali cyanides, density functional theory 3—2497

lattice energy continued
alkali metal halides, repulsive energy and Gruneisen coeff., ab initio and Thomas Fermi calc. 3−38018
alkali metals, band struct., role of electron-electron interactions 3−28262
alkaline earth oxides, struct. stability rel. to interionic pots. 3−2466
BCC lattice, ordered structures of interstitial solutes 3−56849
clustering, empirical approach based on atomic energies 3−33456
composition automodulated complex epitaxial films, struct. stability, thermodynamic anal. 3−13669
FCC dilute alloys, free enthalpy of binding of impurity-vacancy pairs 3−42562
ferrous porphyrin complexes, mol. packaging anal. 3−33180
fluorite compounds, thermophysical and anharmonic props. calc. 3−51536
halogen crystals, interat. pot. model 3−2462
ionic crystal, elec. field gradient calc. for triclinic crystal lattice *(Ukrainian)* 3−7955
ionic crystals, Madelung's const. calcs. using Yukawa type pot. 3−2461
lattice sums, direct calcs., rel. to cryst. field effects 3−18259
mesotartaric acid, and hydrates, vapour press. and lattice energies 3−42763
metals and alloy phases, elastic consts., lattice energy function, model anal. 3−51687
myoinositol, and hydrates, vapour press. and lattice energies 3−42763
oxalic acid, and hydrates, vapour press. and lattice energies 3−42763
phloroglucinol, and hydrates, vapour press. and lattice energies 3−42763
rare earth trichlorides, RCl_3 (R=Gd, Tb, Dy, Ho), polymorphism, phase equilib. and cryst. growth meas. 3−18274
sodium TCNQ, enthalpy of form. and lattice energy 3−58447
spinels, crystallographic parameters, cation radii end distrib., lattice energies 3−46888
transition metals, binding energy, Hubbard Hamiltonian *(Russian)* 3−46884
two-dimensional electron system in strong mag. fields, CDW ground state and electron-hole symmetry 3−28287
Yukawa-Wigner solid, electrostatic structural transitions 3−33430
AgBr. defect energy calc., dielec. and elastic props. 3−51593
Al, self-interstitials, energy 3−51737
Bi, BCC struct. stability at high press., X-ray diffr. meas., pseudopot. calc. 3−28092
Co-Ti, energy of alloy formation calc. using model electron-density functional 3−51810
Cu, pseudopotential calc. 3−2703
Cu, self-interstitials, energy 3−51737
Fe-Ti, energy of alloy formation calc. using model electron-density functional 3−51810
H_2, metallic, absence of crystn., electron screening of proton-proton interaction 3−2922
Mg-rare earth alloys, lattice elastic energy rel. to solubility 3−2465
Mg_xCa_{1-x} disordered alloy, heat of form., cellular density functional theory 3−33184
N_2, solid, high press. phase, lattice energy calc. 3−23036
N_2, solid, struct., nonadditive three-body interactions 3−51534
NH_3 crystal, metallic, total energy, pseudopot. calc. 3−18640
Ni, lattice stability and theoretical strength calc. for perfect crystal 3−33343
Ni-Ti, energy of alloy formation calc. using model electron-density functional 3−51810
TiO_{2-x}, defect energetics, point and extended defects, computer simulation 3−8040
UO_2, cohesive energy and charge density, self consistent band struct. calc. 3−46882

lattice gas *see lattice theory and statistics*

lattice gauge theory *see axiomatic field theory; gauge field theory*

lattice localised modes
see also phonon-defect interactions; phonon-impurity interactions
alkali halides, $VO_4^{3-}.Sb^{3+}$, $VO_4^{3-}.Al^{3+}$ and $SiO_4.Th^{4+}$ mol. impurity complexes, IR absorpt. study 3−23985
atomic lattice, electronically excited, localisation, soliton propag. and self-trapping model 3−57036
crystalline solids, phonon interactions, neutron spectrometry studies 3−51732
electron-phonon states in crystals with Jahn-Teller impurities 3−18659
electron-phonon systems, locally coupled, numerical renormalisation group approach 3−23002
harmonic chains, Green functions and impurities 3−44927
HCP metals, lattice vibrs., anisotropy 3−13384
ice crystals, vibr. of dislocations, US attenuation meas. *(Japanese)* 3−2721
insulator crystals with impurities, optical absorption spectra study 3−23977
ionic crystals, localized optical modes induced by point and extended defects 3−18419
martensite nucleation, localized soft mode 3−34302
metal surface impurities, reflectivity modulation, Raman scatt. calcs. 3−3717
metals, BCC, H diffusion and protonic pot. around interstitital sites 3−42737
metals, BCC, surface (100), adsorbed H, pot. surface and diffusion 3−42910
molecular impurities in crystals, librational and relaxational motion 3−46872
one dimensional thermodynamics, kinetics, eigenstates and universality 3−54705
vibrational characts. of cryst. containing substitutional impurities *(Russian)* 3−2718
$AgGaS_2(Se_2)$, lattice vibr. spectra, Keating model study 3−42732
Al, self-interstitials, energy 3−51737
Al-H, vibr. spectrum of H, recursion method 3−42738
$BaF_{2-x}H_x$, mixed cryst., lattice vibr., IR spectra study 3−2705
$CaF_{2-x}H_x$, Z 3−2705
$CdGa_2S_4(Se_4)$, lattice vibr. spectra, Keating model study 3−42732
CdTe:Li, localised vibr. modes and defects, IR absorpt. study 3−2720
$CoCl_2$:Fe, localised mag. modes, far IR absorpt. spectra 3−3770
Cu, self-interstitials, energy 3−51737
Cu-Al, dil., low temp. lattice sp.ht., Green's function theory 3−13480
Cu-Au, dilute, low temp. sp. ht., Green function theory 3−28116
$FeCl_2$:Co, localised mag. modes, far IR absorpt. spectra 3−3770
FeF_2:Mn, giant Raman scatt. by local magnon modes 3−3715
GaAs:Al, local lattice dynamical force const. variations caused by isoelectronic impurities 3−47071

lattice localised modes continued
GaAs:C(Si), host isotope fine struct. of local modes 3−18418
KCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3−14330
KH_2AsO_4, local pseudo freeze out of impurity dynamics, EPR study 3−3527
KH_2PO_4:Cr, local pseudo freeze out of impurity dynamics, EPR study 3−3527
MgO:Ni^{2+}, force const. change calcs. around point defects 3−2719
$NH_4H_2AsO_4$, local pseudo freeze out of impurity dynamics, EPR study 3−3527
NaCl, force const. change calcs. around point defects 3−2719
Nb, local H vibrs. in presence of interstitial and substitutional impurities 3−42739
NbH_x, static and thermal displacements around H, X-ray diffr. study 3−57051
Ni:H, ferromagnetic, H props., multiple scatt. cluster-in-condensed-matter calc. 3−33666
$Ni_{1-x}Be_x$, dil. alloy, local vibr. broadening, inelastic neutron scatt. study 3−57048
RbCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3−14330
Si:C, substitutional impurity, local modes and IR absorpt., local effective charge model *(Chinese)* 3−38014
Si:H, crystalline, defect-impurity complexes and IR bands, theory 3−23948
SiO_2, vitreous, excess sp.ht., dislocation model 3−28119
$SrF_{2-x}H_x$, mixed cryst., lattice vibr., IR spectra study 3−2705
ZnSe:Li, localised vibr. modes and defects, IR absorpt. study 3−2720

lattice mechanics *see lattice dynamics*

lattice parameters *see lattice constants*

lattice phonons
see also electron-phonon interactions; lattice dynamics of covalent crystals; lattice dynamics of ferroelectric crystals; lattice dynamics of ionic crystals; lattice dynamics of metallic crystals; lattice dynamics of molecular crystals; lattice localised modes; phonon-defect interactions; phonon dispersion relations; phonon drag; phonon-exciton interactions; phonon-impurity interactions; phonon-magnon interactions; phonon-phonon interactions; phonon-plasmon interactions; polaritons; soft modes; spin-phonon interactions; tunnelling spectra; tunnelling spectroscopy
A15 compounds, heat-capacity anal. 3−38099
alkali halides, adiabatic second-order elastic consts. in high-temp. region, temp. depend. 3−2642
alkali halides, self-consistent and quasiharmonic approxs., eqn. of state and high temp. lattice instability 3−42744
alkali halides, small crystals, IR absorption of surface phonon modes *(Japanese)* 3−3736
alkali iodides, luminescence from free and self trapped excitons 3−57975
anharmonic cryst., isotopically disordered, thermal cond. and sound attenuation 3−51874
anthracene, cryst., monolayer surface lattice phonons, surface Raman spectrosc., lineshape anal. 3−57904
anthracene, deuterated, phonon freq. temp. depend. 3−22994
anthracene crystal, polariton luminesc., temp. depend. 3−47702
atom-surface scatt., effective pot., semiclassical theory 3−45882
bicrystal with line interface, phonon frequencies 3−13374
2,2′-bipyridine, normal mode anal., cryst. vibrs. 3−43534
2,2′-bipyridine, normal mode anal., internal modes 3−43533
Brillouin spectra, phonon linewidths and lineshapes 3−57940
cadmium arachidate Langmuir-Blodgett film with selectively laser excited perylene, low temp. dynamical processes 3−38945
covalent crystals with diamond struct., lattice dynamics, quasimolecular model 3−42733
crystal with inversion centre, EM phonon conversion on relativistic positrons *(Russian)* 3−14379
cubic crystals, phonon theory of lattice dynamics 3−51730
cubic materials, adiabatic second-order elastic consts. in high-temp. region, temp. depend. 3−2642
distortive phase transitions, phonon-assisted electronic excitation transfer 3−52066
n-i-p-idoping superlattices, acoustic phonon optical excitation 3−28427
elastic phase transitions, Landau theory appl. 3−23033
electric current caused by phonon induced hopping between Wannier-Stark states, computing method 3−52103
ethylene oxide cryst., phonon spectra and struct. at 77K 3−28850
ethylene sulphide cryst., phonon spectra and struct. at 77K 3−28850
ferroelectric semiconductor, Curie temperature, impurity effects, vibronic theory 3−14227
ferroelectric to pseudospin dipole glass phase transition, crit. phonon damping induced 3−3655
graphite, structural and elastic props., density-functional approach 3−51537
graphite intercalates, conduction mechanism anisotropy *(French)* 3−23371
graphite intercalation compound with Li, structural and elastic props., in-plane density 3−33213
graphite intercalation cpd., C_8Rb, lattice dynamics, neutron scatt. study 3−2712
HF incoherent neutron scatt., appl. to mol. modes and Debye Waller factor 3−37743
III-V pseudobinary alloys, mixing excess free energy, clustering parameter, phonon spectra anal. 3−13463
incommensurate structure, crit. behaviour at transition by breaking of analyticity, discrete Frenkel-Kontorova model 3−57057
interstitial solid soln., elastic stability, self-consistent harmonic approx. 3−7957
ionic crystals, diatomic, lattice props. calc. using short-range Rydberg pot. function 3−22819
IV-VI semiconductors, photon spectra, review *(Russian)* 3−38009
lattice thermal cond. calc. method 3−23110
layered ultrathin coherent struct., phonon struct. 3−8155
light interstitials, transition between coherent and stochastic motion 3−33514
linear chain, phonon with ang. momentum concept *(Russian)* 3−45090
$LiTaO_3$, thermal diffusivity, relation to phase transition and crystal orientation 3−47174
luminescing activated crysts., reson. electron-phonon interaction 3−38872
MBBA, liquid crystal and molecular crystal, vibrational energy relaxation, Raman scatt. study *(Russian)* 3−47659
metal, optical phonon damping under laser irrad. 3−2716

lattice phonons continued
- metal point contacts, elec. cond. nonlinearity and phonon spectroscopy *(Russian)* 3−38460
- metals, electromigration, thermomigration and thermoelec. transport 3−33521
- metals, gas-surface interactions as a localised dynamic perturbation 3−42921
- molecular cryst., spin-lattice relax. of excited triplet state due to acoustic phonons 3−18975
- molecular cryst. spectra, vibronic struct., hypochromic and hyperchromic effects, dimer model 3−47059
- molecular crystals, dynamical theory, pseudoharmonic approx. 3−57052
- molecular reorientation and tunnelling motions inelastic neutron scatt. studies 3−51521
- molecule-surface scatt., effective pot., semiclassical theory 3−45882
- monochromatic phonon generation by the Josephson effect 3−13359
- mosaic crystals, interf. lines in inelastic neutron scatt. 3−37744
- naphthalene, cryst., anharmonic shifts, bandwidths and energy decay calcs. 3−47062
- naphthalene, molecular crystal, vibrational energy relaxation, Raman scatt. study *(Russian)* 3−47659
- neutron scatt., reson. epithermal, as condensed matter probe 3−7868
- nickel acetate(-d_{14}), Fermi reson. in Raman and IR spectra 3−47640
- nonradiative multiphonon capture of free carriers by deep level of defects 3−52074
- nontransition metals and alloys, phonon spectrum parameters and Hall coeffs. *(Chinese)* 3−28465
- one dimensional thermodynamics, kinetics, eigenstates and universality 3−54705
- one-dimensional disordered systems, diffusion const., density of states and correl. length calcs. 3−2870
- one-dimensional kink-phonon gas, dynamic props., projection operator anal. *(Chinese)* 3−18422
- opaque materials, Brillouin scatt. from phonons and magnons, central modes, book contrib. 3−3756
- organic crystals, anisotropic, melting of mol. rot. degrees of freedom, Raman spectra study 3−57922
- perovskite oxide ferroelec. semicond. electron mobility and TO phonon modes 3−43178
- piezoelectric crystal, exciton motion, lattice vibr. effect, electron-hole interaction 3−23286
- quartz, piezoelectric surface generation of high freq. phonons 3−42728
- quartz, synthetic, US attenuation, strongly temp. depend. 3−57033
- quasi-one-dimens. solids, giant Kohn anomaly 3−42730
- renormalization, force consts., electronic struct. influence 3−2698
- semiconductor, donor-acceptor pair transitions under reson. capture of highly excited electrons 3−14350
- semiconductor, strongly doped, optical phonon damping under laser irrad. 3−2716
- semiconductor point contacts, ballistic injection of phonons 3−28436
- semiconductor small crystals, IR absorption of surface phonon modes *(Japanese)* 3−3736
- semiconductors, band-edge and intervalley phonons, magnetoresist., magnetophonon reson. study 3−3230
- semiconductors, bound states of a heavy hole and a phonon 3−38324
- semiconductors, free-carrier absorpt. in quantising mag. fields 3−14262
- semiconductors, heavily doped, many-valley, phonon attenuation study 3−22993
- semiconductors, longitudinal optical phonon instability in presence of two laser radiation fields 3−28068
- semiconductors, non-polar, hole relax. time and transport coeffs., intervalence band interaction effects 3−43197
- solids, light scattering, Brillouin and Raman spectra, book 3−46
- soliton, double quadratic, stochastic mechanics in phonon gas 3−191
- soliton excitation, of crystal lattice vibrations, anharmonicity 3−47067
- square lattice, dynamics, analytical soln. under general boundary conditions 3−13373
- stilbene, molecular crystal, vibrational energy relaxation, Raman scatt. study *(Russian)* 3−47659
- strongly anisotropic crystals, stability, pseudoharmonic approx. of phonons 3−18411
- superconducting film, microwave stimulation, two population temp. model of energy distrib. of excitations 3−43324
- superconducting tunnel junctions, phonon energy spectra determ. 3−52312
- superconductors, amplitude collective modes, charge density waves 3−13949
- superconductors, proximity electron tunneling spectroscopy, review 3−38551
- TCNQ crysts., Raman active phonons, temp. depend. 3−14283
- TCNQ salt, TEA$(TCNQ)_2$, lattice dynamics 3−18409
- ternary compounds, superconductivity, struct., electronic and lattice props., book 3−5515
- tetrabromomethane, solid, orientationally disordered, neutron scatt. study 3−13036
- thin film optical waveguides, Brillouin scatt. and phonon modes 3−46284
- thin film optical waveguides, Brillouin scatt. theory 3−46285
- thin film phonon injector, temperature 3−2952
- TMMC, neutron study of structural phase transition 3−33421
- transition metal cpds., phonon anomalies, supercond. CDW system, Raman study, book contrib. 3−3745
- tribromofluoromethane, Raman spectra in solid and liq. states 3−47643
- tunnelling, relax. mechanism 3−57038
- vibrational relaxation following electronic transition in centres with quadratic vibronic interaction 3−2711
- X-ray boundary conditions, role and other effects in strong dynamical X-ray-phonon interactions 3−14384
- AGBr, thermal cond. and ht. capacity, high press. study 3−2901
- Ag_3AsS_3, cryst. symm., transitions, Raman study 3−43545
- $AgBr:Ca^{2+}$, Cd^{2+}, resonant exciton trapping at impurity states 3−57290
- $AgGaS_2(Se_2)$, lattice vibr. spectra, Keating model study 3−42732
- Al, nuclear Gruneisen parameter for eqn. of state, vol. variation 3−28074
- $Al/Al_2O_3/ZnO/Pb$ junction, inelastic electron tunnelling spectra 3−38490
- Ar, solid, lattice expansion calcs. 3−47130
- Ar+W(110), effective pot., semiclassical theory 3−45882
- $As_2S_3(Se_3)$, electric-field-modulated spectra 3−3686
- $BaTiO_3$, Raman spectra of oblique phonons, soft mode temp. depend. 3−57909
- Be, nuclear Gruneisen parameter for eqn. of state, vol. variation 3−28074
- $BeSO_4$, Raman and IR spectral studies *(French)* 3−34097
- $BeSO_4.4H_2O(4D_2O)$, Raman and IR spectral studies *(French)* 3−34097

lattice phonons continued
- BiI_3, resonant Raman scatt., zone folding effects on phonons and excitons 3−8836
- $BiVO_4$, Brillouin scatt. at high temps. 3−3749
- $CaCO_3$, calcite, molecular crystal, vibrational energy relaxation, Raman scatt. study *(Russian)* 3−47659
- $CaF_2:Eu^{2+}$, spectral distrib. of HF phonons generated by nonradiative transitions 3−47697
- $CaF_2:Eu^{2+}(Sm^{2+})$, reson. electron-phonon interaction, luminesc. study 3−38872
- $CaWO_4$, translational and librational modes, phonon dispersion study 3−2700
- $CdGa_2S_4(Se)_4$, lattice vibr. spectra, Keating model study 3−42732
- $Cd_{0.2}Hg_{0.8}Te$, free-carrier IR absorpt. spectra 3−43526
- CdS, wavevector-reversed phonon echoes due to acoustoelec. interaction 3−13863
- CdTe:Ge, impurity states and carrier recombination *(Russian)* 3−52078
- CeF_3, elastic props., Brillouin scatt. study 3−47021
- CeO_2, IR optical props., refl. and transmission spectra 3−23947
- $CoCO_3$, antiferromagnet, Mandelstam-Brillouin scatt. from magnons and phonons 3−28870
- $CoCO_3$, synthetic single crysts., optical absorpt. spectra 3−52806
- Cr_3Si, Raman-active phonons 3−14305
- CsCl(Br)(I), thermal cond. and heat capacity 3−2902
- CsI, phonon force models, surfaces near degeneracy 3−13363
- Cu, phonons, pseudopot. calc. 3−2703
- β- Cu-Al-Ni, heat treated Bridgeman grown crystals, thermal diffuse scattering of X-rays 3−51544
- $CuInS_{2x}Se_{2(1-x)}$, solid solns. phonon energies, IR study 3−19127
- Cu_2O type crystalline systems, multiphonon selection rules 3−23001
- Fe thick film, ultrasonic generation and propagation 3−22979
- $FeBO_3$, antiferromagnet, Mandelstam-Brillouin scatt. from magnons and phonons 3−28870
- $(FeZn)F_2$, Raman scattering by magnons and phonons 3−52792
- $Ga_{1-x}Al_xAs$, exciton emission, luminescence study 3−52850
- $Ga_{1-x}Al_xAs/GaAs$ heterojunctions, epilayer and interface, Raman scatt. meas. 3−14266
- GaAs, diffuse X-ray scatt. obs. of optically excited near-zone-edge phonons 3−14385
- GaAs, first-order Raman line intensity ratio, rel. to lattice perfection scale 3−43524
- GaAs, laser generated heat pulse propagation 3−23112
- n-GaAs, light-scatt. spectrum for single-particle excitations 3−38841
- GaAs, two-phonon Raman spectroscopy as probe of nonequilibrium HF acoustic phonons 3−14304
- $GaAs:Fe^{2+}$, photons and phonons stimulated emission study 3−52809
- $(GaSb)_{1-x}Ge_x$ films, Raman scatt. study 3−47725
- GaSe, luminescence study of screening of optical phonon-hole interaction 3−14349
- GaSe thin films, guided wave polaritons, near forward Raman scatt. study 3−43040
- Ge, allo- and 4H- modifications, Raman spectra 3−47653
- Ge, anomalous muonium hyperfine parameters, temp. depend. 3−38741
- Ge, electron-hole drop luminesc. damping by high power CO_2 laser radiation 3−43601
- n-Ge, heavily doped, many-valley, phonon attenuation study 3−22993
- Ge, laser generated heat pulse propagation 3−23112
- Ge, phonon anisotropic scatt. by holes 3−52127
- Ge, spectral dependence of energy deposited in hole plasma by optical radiation 3−38417
- Ge, time-resolved images of electron-hole droplets 3−43036
- $Ge_{0.9}Si_{0.1}$, energy band parameter study 3−52030
- H_2, solid, hexagonal-phase, IR spectroscopy of phonons 3−14297
- He, solid, transverse acoustic phonon propag., supercond. tunnel junction study 3−51892
- ^3He, solid paramag., thermal props., role of spin and phonon excitations 3−38158
- $HfS_{3-x}Se_x$, Raman scatt. study 3−23950
- $HfTe_5$, quasi-one-dimensional, phonon modes, Raman scatt. study 3−43542
- $Hg_{1-x}Cd_xTe$, IR reflection spectra, coupled subband-phonon resonances 3−28861
- $Hg_5Ga_2Te_8$, vacancy compound, elastic behaviour under press. 3−22981
- $HgIn_2Te_4$, vacancy compound, elastic behaviour under press. 3−22981
- $Hg_3In_2Te_6$, vacancy compound, elastic behaviour under press. 3−22981
- In, face-centred tetragonal, lattice dynamics 3−47061
- In, US rotation of polarisation and ellipticity under helicon-phonon reson. conditions 3−3260
- InAs, elec. transport and band struct. 3−3233
- n-InSb, X-ray-diffraction studies of acoustoelectrically amplified phonons 3−51735
- K, phason ht. capacity and low temp. sp. ht. 3−2837
- $K_{1.6}Al_{1.6}Ti_{6.4}O_{16}$, one-dimens. superionic cond., Raman spectra study 3−23959
- $KBr:Pb^{2+}$, optical absorpt. and mag. circular dichroism moment anal. 3−34128
- KBr(I), microwave absorption coeff., two phonon difference processes 3−34173
- $KBr_{1-x}I_x$, lattice dynamics calcs. 3−13364
- KCN, elastic and phonon softening, ferroelastic transition 3−2706
- KCl, phonon force models, surfaces near degeneracy 3−13363
- $KCl:CN^-$, Brillouin spectra, phonon linewidths and lineshapes 3−57940
- $KCl_{1-x}Br_x(I_x)$, lattice dynamics calcs. 3−13364
- $K_{1-x}Cs_xSc(MoO_4)_2$-$K_{1-x}Cs_xSc(WO_4)_2$, phonon spectra and displacive phase transitions, permittivity meas. 3−28075
- $KDy(WO_4)_2$, phase transition study by Raman scatt. method *(Russian)* 3−19118
- $(KH_2PO_4)_{1-x}(KD_2PO_4)_x$, low-lying longit. mode, Raman study 3−38813
- $K_{1-x}Li_xTaO_3$, elastic const. discontinuity, Brillouin spectra 3−3752
- $K_{1.6}Mg_{0.8}Ti_{7.2}O_{16}$, one-dimens. superionic cond., Raman spectra study 3−23959
- $KNbO_3$, single-domain, IR refl. spectra in tetragonal phase 3−38812
- $KNbO_3$, vibr. modes near ferroelec. transition, Raman scatt. study 3−47654
- $K_{1-x}Rb_xI(Cl)$, lattice dynamics calcs. 3−13365
- LaF_3, elastic props., Brillouin scatt. study 3−47021
- LaH_3, normal and deuterated, phase transitions and polymorphism, sp. ht. study 3−51533
- LiC_6 intercalation cpd., phonon modes, inelastic neutron scatt. study 3−57043
- LiF (001), inelastic scatt. of ^{20}Ne 3−3897

lattice phonons continued
LiF, laser generated heat pulse propagation 3—23112
LiF, microwave absorption coeff., two phonon difference processes 3—34173
LiF(001), inelastic scatt. of He from bulk longitudinal acoustic phonons 3—52878
$LiIO_3$ crystal in resonator, spectral struct. of stimulated Raman scatt. by optical phonons and polaritons, aperture effects 3—37125
$Mg_xCd_{1-x}Se$ mixed crysts., reson. Raman scatt. 3—8829
MgO, bonding charge density and eqn. of state 3—42565
MgO, press. depend. to 100 kbar of phonons, vibronic spectra 3—33367
Mg_2SiO_4, Brillouin zone, Raman study 3—19125
$Mn_xCd_{1-x}Te$, one-phonon and two-phonon states interf. caused by anharmonicity, Raman study 3—28866
γ-MnCu, elastic anomalies near Neel temp. 3—51830
$(MnFe)F_2$, Raman scattering by magnons and phonons 3—52792
$MoS_2(Se_2)(Te_2)$, 2H modification, high-press. Raman spectra 3—34106
Mo_3Si, neutron irrad., sp. ht., supercond. and phonon softening *(Russian)* 3—51819
β-N_2, solid, orientationally disordered, neutron scatt. study 3—13036
N_4^-, dissoc. rate in ionic lattice phonon relax., a priori calc. 3—21749
NaCN, elastic and phonon softening, ferroelastic transition 3—2706
NaCl, microwave absorption coeff., two phonon difference processes 3—34173
NaF, phonon force models, surfaces near degeneracy 3—13363
$NaNO_2$, phonons near order-disorder transform 3—13360
$Nb_3Sb(Sn)$, Raman-active phonons 3—14305
$NbSe_2$ (2H), layer cpd., Raman spectra polarisation study, shear force consts. calcs. 3—3699
$NbSe_2$, amplitude collective modes, charge density waves 3—13949
Nb_3Sn, gap mode, supercond. gap, and phonon mode, Raman scatt. study 3—57475
$Nb_3Sn(Sb)$, E_g optical phonon damping by interband electronic excitations, Raman scatt. study 3—57926
Nd, magnetic excitation and acoustic phonon spectra 3—23612
NdF_3, elastic props., Brillouin scatt. study 3—47021
Ni (111) , ordered overlayer 3—57215
α-$NiSO_4.6H_2O$, multiphonon processes, Raman scatt. study 3—43522
PbI_2, Raman spectra, phonon state Davydov splitting 3—3733
$Pb_xSn_{1-x}Te$, ^{125}Te Mossbauer parameters and phonon spectrum 3—38737
PrF_3, elastic props., Brillouin scatt. study 3—47021
RbBr, phonon force models, surfaces near degeneracy 3—13363
RbCN, elastic and phonon softening, ferroelastic transition 3—2706
$RbCl:Pb^{2+}$, optical absorpt. and mag. circular dichroism moment anal. 3—34128
Rb_2ZnCl_4 incommensurate ferroelectric single cryst., anomalous temp. behaviour of phonon frequencies 3—42725
ReO_3, charge density determ., X-ray struct. anal. and DV-Xα cluster calc. 3—42578
RuO_2, rutile, Raman study 3—3726
S, vibr. props., second order Raman scatt. 3—43530
SF_6, solid, orientationally disordered, neutron scatt. study 3—13036
Se, trigonal, phonon density of states and related thermodynamic props. calc. 3—38008
Se, vibr. props., second order Raman scatt. 3—43530
Si, average stress tensor, ab initio pseudopot. calc. 3—47020
Si, electronically excited, phonon instabilities 3—38316
Si, free surface, diffusive scatt. of HF phonons 3—28207
Si, Γ-point optical phonon, Raman study 3—28848
Si, heavily doped, phonon self-energies 3—22989
Si, lattice deformation relax. under const. load, Raman scatt. study 3—47027
Si, phonon focusing, flux density calc. 3—38012
Si, Raman scatt. during pulsed laser beam annealing, phonon temp. time depend. 3—8811
Si, tetrahedral bonding effect on vibr. props. 3—38006
Si:P, phonon scatt. study using heat pulse technique 3—18417
SnS_2, Raman spectra, phonon state Davydov splitting 3—3733
$TaSe_2$(2H), Raman scatt. from orthorhombic CDW state 3—52793
$Tb_2(MoO_4)_3$, Raman and Brillouin studies of acoustic anomalies 3—34104
Te, vibr. props., second order Raman scatt. 3—43530
tetramethylammonium tetrachlorocuprate, long-wavelength phonons 3—47057
TiS_3, IR reflectivity, Raman scattering, IR active phonons 3—28851
$Ti_{1-x}V_xS_2$, far-IR studies of electronic and vibr. props. 3—57911
Tl_3AsS_4, Raman study of small symm. distortions 3—3732
$TlGa_xIn_{1-x}Se_{2x}S_{2(1-x)}$ solid soln., optical phonons, IR spectra study 3—47066
Tl_3PS_4, Raman study of small symm. distortions 3—3732
V_2O_3:Cr, doped and undoped, high temp. electronic transition, Raman scatt. study 3—43523
V_3Si, gap mode, supercond. gap, and phonon mode, Raman scatt. study 3—57475
V_3Si, proton irrad., phonon density of states, Raman scatt. study 3—57925
$V_3Si(Ge)$, E_g optical phonon damping by interband electronic excitations, Raman scatt. study 3—57926
W, chemisorbed H, D, Li, NA atom vibrations 3—28209
W, EM and sound waves mutual transform. under doppleron-phonon reson. *(Russian)* 3—3036
YPO_4, IR and Raman vibr. spectra and dynamic parameters 3—19141
YVO_4, IR and Raman vibr. spectra and dynamic parameters 3—19141
Zn/ZnO/Pb junction, inelastic electron tunnelling spectra 3—38490
$Zn_xCd_{1-x}Se$, phonon mode anharmonic coupling, Raman scatt. study 3—14298
ZnP_2, monoclinic, IR lattice vibr. spectra 3—43528
ZnS, M centres, vacancy local vibrations 3—51597
$ZnTe_xSe_{1-x}$, Raman spectra, vibr. states *(Russian)* 3—43550
ZrO_2-Y_2O_3 solid soln., stabilised, hydrostatic press. depend. of elastic behaviour and stability against shear 3—14633
$ZrS_{3-x}Sd_x$, optical phonons, Raman study 3—47655
$ZrS_{3-x}Se_x$, Raman spectra, one-mode and two-mode phonon behaviour 3—34107

lattice structure, crystals *see crystal atomic structure*

lattice theory and statistics
see also Ising lattices; percolation; renormalisation; X-Y model
ϕ_4^4 Euclidean field theory in ultraviolet limit 3—49286
ϕ^3 field theories, crit. behaviour in three dimens. 3—5743
ϕ^4 model, phase transformation study *(Russian)* 3—20817

lattice theory and statistics continued
ϕ^4 theories in dimens ≥4 and dipole gas hierarchical model approx. 3—35929
active representations of space groups based on the simple cubic lattice 3—206
adsorbed monolayers, lattice gas models with competing interactions, phase diagrams 3—51943
Anderson tight binding model for large disorder or low energy 3—49272
anharmonic oscillator system with quenched random interactions, freeze-in transition 3—18424
anisotropic vertex models, eigenvalues and eigenvectors 3—5736
antiferromagnetic Potts model, ground-state props. 3—43343
antipercolation and site-bond Potts model in $q=1$ limit 3—30794
antipercolation on Bethe and triangular lattices 3—45078
approximate renormalisation group differential equation for phase transitions, ϕ^4 model 3—16326
Ashkin-Teller, Z(4), model on triangular lattice, Monte Carlo study 3—49288
Ashkin-Teller model, phase transitions from coupling constants 3—10762
Ashkin-Teller model, self-triality 3—54688
asymmetric six-vertex model, commuting transfer matrix soln. 3—195
asymptotics of certain random fields on a circle for mean field type ferromag. systems 3—16302
athermal multichain systems, 2-dimens., scaling relations, computer simulation 3—40506
atomistic lattice modularity 3—40520
axial next nearest neighbour model, analytical soln. 3—10768
axial next-nearest-neighbour Ising model, perturbation expansions, phase transitions 3—43384
BCC Bravais lattice, full holosymmetric double space groups 3—2453
Bethe-ansatz massive-Thirring-model thermodynamics: the weak-coupling limit 3—221
bifurations of lattice structures 3—45075
bifurcations of multidimens. maps, universality 3—45076
bond percolation on square lattice subsets, critical probability 3—40513
Bravais lattice, bond percolation theory, connection with lattice Green function and Polya random walk 3—30798
centred hypercubic lattices, frustration in Ising systems with multi-spin interactions 3—5734
chiral Potts model, mean-field theory 3—20791
classical continuous spin systems, stat. mechanics 3—16241
classical lattice systems, equilib. states, energy-entropy inequalities 3—40516
classical planar models, high temp. behaviour of susceptibility and correlation length 3—33849
cluster enumeration, FORTRAN program 3—25825
cluster expansion in 0_2^4 model 3—45071
colour groups and phase transitions 3—207
colour symmetry polemics 3—208
commensurate-incommensurate phase transitions of one dimens. chains, $T \to 0$ limit of Gibbs state 3—42746
computational group theory in crystal physics: a review 3—7946
concidence site lattice base computation from rotation matrix 3—40519
continuous models with continuous symmetries in two dimensions 3—16308
continuum percolation system with excluded-vol. interactions, Monte Carlo renormalisation group 3—49281
correlated percolation, real space renormalisation group study 3—213
correlated percolation and sublattice-dilute Potts model at $T \to 0$ 3—20796
correlated site-bond percolation of droplets in three dimensions 3—205
Coulomb lattice-gas, self-diffusion 3—16310
CP^{N-1} model, conformal transformation to crystal-like structures 3—49551
critical exponents for conduction in a honeycomb random site lattice 3—20790
critical indices calc. by rational approx. method 3—201
crystallography and the Penrose pattern 3—211
cubic Bravais lattices, classical particle hopping, occupancy correlation function, small conc. limit 3—204
cubic lattice, simple, phase diagram in large N limit 3—45086
d-dimensional walks on finite and infinite, lattices with traps, exact algorithm appl. to diffusion controlled reactions 3—10759
decimation method of real-space renormalization for electron systems with application to random systems 3—5735
derivations commuting with abelian gauge actions on lattice systems 3—30977
diamond type lattices, native defects 3—51595
diatomic chain, nonlinear excitations 3—5746
dilute Ising ferromagnet, correlated effective field approx. 3—23563
dimensional crossover in selective site percolation 3—16290
direct site animal problem, two dimens., equivalence to Baxter's hard square lattice-gas model 3—217
directed lattice animals and the Lee-Yang edge singularity 3—5726
directed lattice animals in two dimensions numerical and exact results 3—10761
directed percolation on diamond and honeycomb lattice, pair connectedness 3—5727
directed self-avoiding wave on square lattice, critical behaviour 3—45073
disordered anharmonic chain, soliton dynamics in long-wavelength approx. 3—10765
disordered media, one-dimensional wave eqns. 3—33682
disordered medium, transport, anal. and Monte Carlo simulation 3—49294
double groups, relationships to single or point groups 3—7943
double sine-Gordon chain, thermodynamic props., effect of kinks 3—30811
drumhead model for interface separating two coexisting phases 3—25830
duality in three dimensions 3—20792
duality transformation, Poincare duality in differential geometry 3—16306
dynamic bootstrap percolation, crit. slowing down 3—16291
dynamics of models with tensor order parameter near isolated point on phase transition curve 3—45089
electric quadrupole-quadrupole interaction in two-dimens., fluctuation effects with zero substrate pot. 3—5745
energy transfer as a continuous time random walk 3—16289
ergodic theorem for the stochastic dynamics of quasi-harmonic crystals 3—16280
exactly solvable two-component lattice models classification 3—16298
fermion lattice gas, phase transition with infinite ranged interactions 3—30806
fermion lattice gas with infinite-ranged interaction, phase transition, ground state props. 3—16250
finite lattices, systematic approx. schemes 3—45080

lattice theory and statistics continued
finite-size scaling and phenomenological renormalization 3−25822
Flodmark-Blokker scheme for irreducible representations of finite groups 3−7945
fluid criticality near walls and between plates 3−37611
free energy for Ising model on closed Cayley tree 3−49303
frustration models, spin-spin correlation 3−54685
frustration models in two dimensions 3−54684
fuzzy topological spaces, imbedding theorem 3−49290
$g|\phi|^4$ theory in four dimensions and polymers 3−36143
gas model, critical phenomena, iterative perturbative approach 3−20795
general theory of lattice systems 3−192
generalised Langevin eqn. soln. 3−222
generalised six-vertex model 3−196
generalised Toda lattice, Heisenberg operators 3−219
generic properties of classical n-body systems, in one dimension, and crystal theory 3−40500
geometrical statistical d-dimens. model, majority rule, finite size scaling 3−54687
Gibbs ensembles, equivalence for classical lattice systems 3−54668
Glauber's stochastic spin model with broken bond disorder 3−52327
harmonic oscillator on lattice and water waves, Hermite-Pade approximants appl. 3−20786
Heisenberg chain, dilute, scaling treatment of critical and 'chaotic' dynamics of the dilute Heisenberg chain 3−33916
Heisenberg ferromagnetic chain, mag. soliton motion about lattice soliton 3−5741
Heisenberg model, classical, high temp. susceptibility 3−23688
Heisenberg model in three dimensions, classical, extended high temp. series 3−23687
hexagonal lattice, bifurcation and planar Benard problem 3−49285
hierarchical model, collective variables method for scalar ferromagnet 3−30813
hierarchical q-state Potts models with periodic and aperiodic renormalization group trajectories 3−35934
implementation of lattice calculations on the DAP 3−5724
independent random walks in 4-dimens., probability of intersection 3−10760
indistinguishable trimers on 3×N lattice space, occupational statistics 3−20794
infinite-range bond percolation 3−20776
integrity bases for corepresentations of magnetic crystal point groups 3−7948
interacting hard squares on lattice, tricritical points 3−5737
interfacial adsorption in planar Potts models 3−51919
invariants and covariants of corepresentations of magnetic point groups 3−7950
inverse high-density percolation on a Bethe lattice 3−40515
IRF model, order and disorder lines in systems with competing interactions 3−28494
Ising ferromagnet, correl. inequalities for truncated two-point function 3−28492
Ising ferromagnet, Griffiths-Hurst-Sherman inequality improvement 3−33848
Ising model, d-dimensional, partition function 3−16293
Ising model, hypercubic lattices with noninteger dimensionality, using low lacunarity fractal lattices 3−30808
Ising model, medium range 3-D, percolation and droplets, Monte Carlo calc. 3−35940
Ising model, partition function on periodic 4×4×4 lattice 3−20799
Ising model, two-dimensional, analytic continuation at first-order phase transitions 3−28584
Ising spin glass models, mag. partition function and ground state study 3−3466
Ising type model, 2-D, critical indices determ., symmetry and size effects 3−14066
isoscalar factors for anti-unitary point groups 3−7949
kinetic gelation, Monte Carlo study on triangular lattice 3−45074
kinetic Ising model, finite-size scaling approach 3−16297
kinetics of coverage of one-dimensional lattice, nucleation-growth-collision model 3−42546
kink dynamics in one-dimensional nonlinear systems 3−20797
lattice $\phi_{D+1}{}^4$, perturbative scattering theory formulation 3−49287
lattice animals and percolation clusters, directed and isotropic, size-shape relation 3−5725
lattice fourth order coupling parameter relations, elastic consts. 3−223
lattice gas, adsorption isotherm, viral coeffs. 3−30793
lattice gases, formal diagrams, asymmetric T-shaped prototype of eight points 3−40523
lattice gases, formal diagrams, flat and moderate T-shaped prototypes of eight points 3−40524
lattice gases, formal diagrams, long T-shaped prototype of eight points 3−40522
lattice gases, orientable mols., phase transitions 3−25829
lattice gauge model, analogue of spin system on Cayley tree, phase transition 3−49541
Leech roots and Vinberg groups 3−26006
light, hydrodynamic scatt., anisotropy 3−2028
linear chain, phonon with ang. momentum concept *(Russian)* 3−45090
linear Ising magnet in strong time depend. field 3−52328
low-dimensional systems, computation of structure factors by finite-size scaling and transfer matrix methods 3−47515
macroscopic convergence of Markov chains on infinite product spaces 3−16279
magnetic crystals, anti-identity operations and props. tensors 3−16292
magnetic symmetry and the electrical conductivity tensor 3−8467
magnetic systems, Monte Carlo simulation 3−23559
massive Thirring model and sine-Gordon model, finite temp. props. 3−30802
massive-Thirring model thermodynamics, classical sine-Gordon limit 3−220
mean field critical point, perturbation 3−193
mean field Ising model, transition probability and stochastic eqns. 3−25826
Mermin-Wagner phenomenon and cluster props. of one and two dimensional systems 3−25824
metals, cubic, melting criterion 3−23016
Migdal-Kadanoff approx., Ising model in external fields 3−49280
Migdal-Kadanoff approx. preserving free energy q-state Potts model 3−30809
molecular phases in a lattice-gas model 3−5738

lattice theory and statistics continued
Monte Carlo renormalisation group anal. of d=3 planar model 3−30810
multidimensional lattice, transfer matrices commutativity conditions 3−45088
multiple phase coexistence from scaling transform. of critical phenomena, Potts models appl. 3−49279
nearest-neighbour random walk on Bethe lattice 3−35933
nematic liquid crystals, lattice model with full rot. invariance 3−7904
new field theoretical method for spin 1/2 Heisenberg model 3−212
nonBravais lattice, effects of boundary shape on molecular freedom in dimer problem 3−49283
nontranslation-invariant states in two dimensions 3−30792
O(N) model in two dimens., crit. point and crit. indices 3−49289
O(n) models in 2-dimens., exact critical point and critical exponents 3−218
one-dimens. lattice, bounds on chemical potential 3−35952
one-dimensional lattice, chaos, periodic chaos and random-walk problem 3−25827
one-dimensional lattice gas and the universality of the Devil's staircase 3−45084
one-dimensional lattice with random asymmetric transition rates, diffusion 3−20784
one-dimensional molecular crystal, solitary collective excitation dynamics 3−5747
one-dimensional nonlinear chains, pulse propag. 3−16288
one-dimensional percolation with further neighbour bonds, transfer matrix method 3−30796
one-dimensional sine-Gordon system, stat. mechanics, transfer integral anal. in intermediate temp. region 3−10781
order-disorder problems, generalisation of Kikuchi-Hijmans-de Boer method 3−33381
p-state asymmetric clock model, low-temp. anal. 3−20793
Pearson random walk with unequal step sizes, near-maximal extensions 3−40511
percolation, asymmetric directed, on square lattices 3−40512
percolation, directed, mean field theory and series expansion for two-dimens. lattices 3−30800
percolation, site-bond correlated, Bethe cluster approx. in ferromag. and antiferromag. lattice gas 3−30801
phase transitions in systems with multispin interactions, Ising-type model 3−20814
physics in few dimensions 3−16300
polymer chain expansion factor perturbation series, logarithm cancellation 3−5731
polymers, branched, universality on d-dimensional hypercubic lattices 3−199
polymers, linear, self avoiding walk on dilute lattice, renormalisation study 3−214
polymers, real chain simulation method 3−20785
polymers, self-avoiding walks on dilute lattice, computer simulation 3−40518
polymers, site and bond directed branched, Lee-Yang edge singularity problem 3−198
Potts ϕ^3 field theory, symm. breaking 3−8690
Potts model, 3-state, phase equilibria, scaling transformation 3−5730
Potts model, 3-state antiferromagnetic, phase equilibrium 3−8685
Potts model, analytical results for inverse relation 3−30799
Potts model, antiferromag., phase transitions study 3−43387
Potts model, arbitrary q-state, Monte Carlo simulation 3−20777
Potts model, ferromag. and antiferromag., on Bethe lattices 3−45079
Potts model, first order transition from finite lattice extrapolation 3−5748
Potts model, one-dimens. dynamical, Monte Carlo study 3−35941
Potts model, Q-state, kinetics in two dimensions 3−35935
Potts model, q-state, n-layered, duality relations, self-duality conditions 3−30804
Potts model, q-state, thermodynamics, cluster approx. study 3−35936
Potts model, two-dimens. three-state, phase transition with infinite-range coupling 3−49275
Potts model and gauge theories, continuous and discontinuous transitions 3−45087
Potts model on hierarchical lattices, first-order transitions in defect structs. at second-order crit. point 3−10767
Potts models, first and second order phase transitions 3−25821
Potts models, q-state, low dimensional, droplet theory 3−5729
Potts models an hierarchical lattices, defect free energies calc. 3−40509
Potts models universality with two- and three-site interactions 3−20800
q-state Potts model on the checkerboard lattice 3−49282
quantum chemistry, condensed matter theory, and propagator methods, conf., Flagler Beach, FL, USA (March 1982) 3−30542
quantum mech. n-vector model, finite lattice calc. 3−20663
quantum model for commensurate-incommensurate transitions 3−35948
quantum spin systems, Gel'fand Levitan method 3−16299
quantum Toda field theory in classical limit, Toda lattice mechanics 3−20974
quasi Potts model and bond dilution on non-alternate lattices 3−20782
quasichem. approx. with nonadditive lateral interactions 3−49274
quasiclassical equation of motion for spins 3−30812
random directed-diode network, cond. near percolation threshold 3−13794
random Ising ferromagnets, weak singularity and absence of metastability 3−23674
random lattice, renormalisation group study of self-avoiding walks 3−45083
random one-dimensional lattice system, existence and uniqueness 3−30791
random packing and covering, two dimens. case 3−16307
random percolation, high- and low-density series anal. 3−45077
random triangular cactus, frustration and percolation 3−38634
random walk in random medium, generalised master eqn. 3−16287
random walks, asymptotic results on mean occupancy times 3−35932
random walks in lattices with points of two colours, trapping problem appl. 3−30785
random walks on ordered mixed binary lattices 3−40498
randomly branched aggregates, form. kinetics, renormalisation group approach 3−45068
renormalisation group, critical lattice model 3−40504
renormalisation group transformations with periodic and aperiodic orbits 3−49278
river network modelling, directed lattice animal theory appl. 3−9943
Ruelle's zetafunction for one-sided subshift 3−16305
SCF statistical theory 3−5732
selective site percolation by real-space renormalization group 3−54686
self-avoiding random walk, asymptotic behaviour 3−35939

lattice theory and statistics continued

- self-avoiding random walks, crit. props., Monte Carlo approach 3—49261
- self-avoiding walk, renormalisation, fixed points and asymptotic behaviour 3—49263
- self-avoiding walks on random lattices 3—40487
- self-consistent Einstein model, continuum approx., eqns. for thermoelasticity and lattice vibr. 3—16295
- short-range random systems, thermodynamic limit and replica method 3—23675
- single chain lattice model, free energy, upper bound calcs. 3—40507
- site lattice animals in two and three dimens., cluster renormalisation study 3—40510
- SO(N) invariant statistical models with long range interactions 3—35931
- solitons in one-dimensional Lennard-Jones lattice 3—16296
- spectral density from method of moments for 2d and 3d simple cubic lattices 3—8388
- spin glasses, infinitely long-ranged bond-random anisotropic classical planar model 3—52506
- spin systems, renormalisation group and free energy calcs. 3—3465
- spin systems and global symmetry groups 3—5733
- spin systems on hierarchical lattices, thermodynamic limit 3—10766
- Spitzer's one-dimensional lattice model, local stability and hydrodynamical limit 3—194
- spontaneous magnetisation calc. by finite-size scaling method 3—23561
- square lattice, ten-vertex model in two dimens., exact soln. 3—30795
- stationary Markov chains 3—16281
- statistical mechanical problems on lattice, exact partition function 3—11044
- sterically interacting lines, mean-field theory of statistical assemblies 3—25823
- superradiant phase transitions of Fermi and Bose operators with trilinear interaction 3—36976
- superspace groups, conceptual ideas 3—2454
- surface fluctuations, crit. exponent, field-theoretic model 3—35937
- symmetry and fermion degeneracy 3—49284
- symmmetry adaptation of crystal spin-orbitals 3—7944
- tensor fields in crystals and colour groups 3—209
- tetrahedron equations, proof of Zamolodchikov's soln. 3—49273
- thermodynamic models with exact solutions, review 3—49306
- thermodynamic observables and Anderson model 3—23325
- three state square lattice Potts antiferromagnet, interface method 3—8681
- three-dimensional Ising model, hyperscaling violation 3—20783
- three-dimensional Ising model, Monte Carlo expt. for nucleation rate 3—10763
- time reversal and magnetic reversal in crystal physics 3—7947
- Toda lattice, 2-D, using Lie superalgebras, calc. of reduction group 3—40503
- Toda lattice, Darboux transformation and canonical transformations *(Russian)* 3—44953
- Toda lattice eqn., 2D, exact Bessel type soln. 3—45072
- Toeplitz representation for repulsive systems 3—30828
- triangular model, surface tension, real-space renormalisation group calc. 3—13992
- two-dimensional axial next-nearest neighbour Ising model, Hamiltonian studies 3—200
- two-dimensional crystal lattice, long-range at. order and criticality 3—23666
- two-dimensional lattice, Lagrangian mechanics, group representation 3—210
- two-dimensional lattice, periodic structures 3—20789
- two-dimensional lattice of plane rotators, star-triangle relations and partition function 3—215
- two-dimensional Potts model, magnetisation discontinuity 3—203
- two-dimensional self-avoiding random walks, crit. behaviour anal. 3—5713
- two-dimensional systems, phase boundaries and crit. props., Monte Carlo renormalisation group studies 3—51945
- two-dimensional triangular lattice of quenched-correlated system, percolation problem *(Chinese)* 3—40501
- two-dimensional triangular site network, cond., Monte Carlo simulation 3—13791
- two-point functions and bubbles 3—43385
- U(N) and SU(N) lattice gauge theories, mean field approx. 3—30999
- universality, irrelevant surface operators, and corrections to scaling in systems with free surfaces and defect planes 3—49304
- vertex model solutions on two-dimens. lattice using factorisable S matrices 3—35928
- von Neumann lattices, phase space, determination of zeros in harmonic oscillator 3—40480
- Weierstrassian Levy flights and self-avoiding random walks 3—30779
- X-Y frustrated model, two-dimens., phase transitions, Monte Carlo simulation 3—35938
- Yang-Lee edge singularity dynamics and directed branched polymer crit. behaviour 3—18198
- Yukawa-Wigner solid, electrostatic structural transitions 3—33430
- Z_2-gauge-plus-matter model on a fractal lattice 3—40517
- Z_N models, star-triangle relations, self-dual solns. and partition funct. 3—216
- Z_N symmetric quartet FCC model, phase props. 3—33914
- Z_p model on Union Jack lattice, massless phases 3—20787
- Z_q invariant spin system, scaling-limit symm. 3—5742
- H_2O, extended lattice model, phase diagram 3—2362

lattice vibrations *see lattice dynamics*

Laves phases *see alloys*

lawrencium

- No entries

lawrencium compounds

- No entries

LCAO calculations

- acetylenes, monosubstituted, acidity of anions and neutral mols., ab initio calcs. 3—55791
- approximate MO LCAO calcs., Politzer's relationship appl. 3—11671
- carbonyl groups, substituted, electron density anal., ab initio LCAO-SCF-MO calc. 3—6540
- chain polymers, electronic and geometric struct., $X\alpha$ calcs. 3—32256
- diatomic interactions in momentum space, polarisation and floating functions effect 3—45836
- dithiocarbazic acid, S-methyl ester, conformational behavior, HF-LCAO-MO-SCF calcs. 3—11648
- 5-ethyl-5, 10-dihydro-10, 10-dimethyl-phenazasiline intramol. interactions, quantum chem. investig. 3—17216

LCAO calculations continued

- ethylene, prereson. and reson. Raman spectra, line intensity calc. 3—17292
- formaldehyde, electron density anal., ab initio LCAO-SCF-MO calc. 3—6540
- Frenske-Hall LCAO-MO-SCF calcs., isolobal principle validity 3—26640
- graphite intercalation cpd., third and fourth stage, band struct., LCAO calc. 3—23267
- graphite intercalation cpds., higher stage, band struct. and c-axis charge distribs. 3—38282
- Hartree-Fock function approximation, by linear combination of Slater and Gaussian orbitals 3—26638
- heat of chemisorption, perturbation LCAO MO calc. 3—8330
- hydrazinecarbothioamide, basic and N-protonated, MO calcs. and NMR investig. 3—21782
- hydroxypyridines, tautomers, interaction of H_2O, SCF-MO-LCAO-ab initio calcs. 3—31937
- lattice sums, direct calcs., rel. to cryst. field effects 3—18259
- LCAO-MO-ab initio calcs., direct SCF method 3—21628
- linear combination of Gaussian-type orbitals, ab initio LCAO SCF MO program calcs. *(Chinese)* 3—41490
- localised Born-Oppenheimer states, medium stabilisation 3—1209
- molecular complex formation, electron density redistrib. anal. 3—14855
- molecular struct., electron coincidence spectroscopy, LCAO-MO wavefunctions 3—26857
- nonorthogonal orbitals, second quantisation, LCAO Hamiltonian anal. 3—50289
- nucleotide base stacks, energy band struct., hydration effect 3—13720
- poly-(p-phenylene) chains, electronic struct., ab initio HF study 3—23239
- polymethines, Mo LCAO calcs., rel. to spectral props. of $[N+1]\pi$ streptopolymethine radicals 3—55788
- pyridazine N-oxides, electronic struct. and spectra, LCAO MO calcs. 3—36683
- pyridine N-oxides, electronic struct. and spectra, LCAO MO calcs. 3—36683
- pyridones, tautomers 3—31937
- rhodamine solutions, electronic absorpt. spectrum and polarisation spectrum interpretation 3—1247
- semiconductors, elemental, deep levels due to isolated single and pair vacancies 3—13761
- small molecules, conformational anal. with PCILO methods 3—31946
- STO-KG basis set improvement for LCAO-MO-SCF calcs. 3—45843
- three-dimensional solids, LCAO SCF method calcs. 3—8398
- three-dimensional solids, LCAO SCF method calcs. 3—8399
- transition metal alloys, electronic struct., d-band LCAO interpolation and recursion methods 3—33628
- transition metal films, heat of chemisorption, LCAO calc. 3—23168
- urea crystal with H-bonded mol. units, nonlinear optical props. 3—1689
- vacancy deep levels, pseudo-atomic orbitals cluster model *(Chinese)* 3—38338
- B_5H_9, Frenske-Hall LCAO-MO-SCF calcs., isolobal principle validity 3—26640
- Be slabs, electronic struct., ab initio LCAO HF calc. 3—23259
- CO, ESCA peak intensities in DA and GSA calcs., using Fourier transformed GTOs 3—50292
- $CdCl_2(Br_2)(I_2)$, high-resolution HeI and HeII PES valence bands 3—55992
- Co complex, diacetylmonoxime methyldithiocarbohydrazone Co(III), quantum chem. calcs. 3—21623
- Cu (001) film, self-consistent electronic struct. calcs. 3—43250
- $Fe(CO)_3B_4H_8$, Frenske-Hall LCAO-MO-SCF calcs., isolobal principle validity 3—26640
- $FePd_3$, electronic struct. and magnetism, LCAO calc. 3—28258
- $Ge_{2x}(GaAs)_{1-x}$ solid soln., band struct., LCAO calc. 3—8413
- $Ge_{2x}(GaAs)_{1-x}$ solid solns., band struct., LCAO calc. 3—8415
- $GeO_2:Nb^{4+}(Mo^{5+})(W^{5+})$, nd^1 ions, superhyperfine interactions, EPR study 3—13789
- H_2, chemical bond formation and orbital contraction 3—11677
- H_2^+, bonding process in ground state, LCAO calc. 3—45836
- H_2^+, chemical bond formation and orbital contraction 3—11677
- H_2^+, Schrodinger eqn., two dimens. fully numerical numerical soln. 3—36668
- HCN dipole-quadrupole polarisabilities, quantum mech. calc. 3—45844
- HeH^{2+}, Schrodinger eqn., two dimens. fully numerical numerical soln. 3—36668
- $LiOH.H_2O$, theoretical electron density 3—7968
- NH_3 adsorbed on Fe and Ni, binding and valence photoemission *(German)* 3—38231
- N_2O dipole-quadrupole polarisabilities, quantum mech. calc. 3—45844
- $Nb_3S_4(Se_4)(Te_4)$, quasi-one-dimensional, electronic struct. calc. 3—47249
- $NbSe_3$, electronic band struct. calc. 3—47248
- Ni:H, electronic struct. of H impurity, LCAO and cluster calc. 3—8446
- $NiSi_2$, self-consistent energy bands and bonding 3—33629
- $PbMo_6S_8$, electronic struct., role of cluster twisting angle, LCAO EHT tight-binding calc. 3—57280
- RU surface, clean and C-covered, electronic struct., self consistent LCAO calc. 3—23256
- Rh surface, clean and C-covered, electronic struct., self consistent LCAO calc. 3—23256
- ScN, energy band structs., LCAO interpolation scheme calcs. 3—3058
- ScP, energy band structs., LCAO interpolation scheme calcs. 3—3058
- Si, vacancy deep levels, pseudo-atomic orbitals cluster model *(Chinese)* 3—38338
- p-Si:Al, negatively charged vacancy, hyperfine interactions and ENDOR meas. 3—43459
- $SnO_2:Nb^{4+}(Mo^{5+})(W^{5+})$, nd^1 ions, superhyperfine interactions, EPR study 3—13789
- TiC (100) and (111) surfaces, electronic props., LCAO calc. 3—8551
- TiN, energy band structs., LCAO interpolation scheme calcs. 3—3058
- $TiO_2:Nb^{4+}(Mo^{5+})(W^{5+})$, nd^1 ions, superhyperfine interactions, EPR study 3—13789
- Tl adsorbed chains on Cu (100), one-dimens. band struct., photoelectron spectra and LCAO calc. 3—39006
- VPd_3, electronic struct. and magnetism, LCAO calc. 3—28258
- Zn, Hartree-Fock function approximation, by linear combination of Slater and Gaussian orbitals 3—26638
- $ZnCl_2(Br_2)(I_2)$, high-resolution HeI and HeII PES valence bands 3—55992
- ZnO, comparative study of HF and HF-Slater method 3—36667
- ZrN, energy band structs., LCAO interpolation scheme calcs. 3—3058

LCD *see liquid crystal displays*

lead
  see also nuclei with ......
  adhesion kinetics, between clean surfaces, 77 to 300K *(Russian)* 3—58390
  air pollution, detection with radioisotope excited X-ray fluorescence unit 3—58458
  air pollution, Pb, Cb, Zn concs. in urban NW England 3—19634
  air pollution from traffic, Rio de Janeiro, Brazil 3—19636
  alkali halide:Pb^{2+}, impurity excited state struct., polarised luminesc. study 3—38871
  anode coating in magnetically-insulated diode, plasma production, heavy ion accel. *(Russian)* 3—22658
  atom, elastic γ-ray photon scatt. at small momentum transfer, form factor theories 3—32009
  atom, isotope shifts and hyperfine structure, high-resolution meas. 3—50329
  atom, L-shell X-ray relative intensities meas. 3—6569
  atom, muonic, QED electron propagator testing, Higgs boson contrib. and mass 3—36183
  atoms, laser photoionisation mass spectroscopy 3—11759
  atoms, mean square charge radii differences of isotopes, from electronic K X-ray shifts 3—40963
  backscatter of diagnostic X-rays from metals 3—53850
  batteries, Pb/acid, discharged, sulphation 3—24568
  cells, Pb/acid, sulphate passivation as capacity limiting process 3—24569
  chemisorption of HCl on O-covered (110) surface 3—38215
  cleavage fracture investig. 3—2663
  Compton scattering, L-shell integral, cross-section meas. 3—3850
  cosmic ray hadron mean interaction length *(Chinese)* 3—44629
  crystallites, time-depend. melting and superheating 3—2754
  discontinuous films, crystallisation, electron diffr. study 3—23214
  discontinuous thin film, percolation characts., scaling theory 3—13924
  elastic and relaxation properties during melting and solidification 3—39191
  electrowinning from $\mathrm{PbCl_2}$, electrolyte impurity effects 3—58433
  environmental samples, trace levels determ. by electrothermal atomic absorption spectrophotometry 3—48221
  film, $\mathrm{O_2}$ exposed, work function meas., supercond. tunnel junction appl. 3—8620
  film, on Al, pulsed laser treatment, chemical interdiffusion, Rutherford backscatt. study 3—27991
  Galapagos hydrothermal vent water $^{238}\mathrm{U}$, $^{226}\mathrm{Ra}$, $^{210}\mathrm{Pb}$ concs. 3—4848
  Golda Zuelva anorogenic complex (N Cameroons), isotope geochemistry 3—19950
  high purity, grain boundary sliding at high temp. in torsional fatigue 3—29148
  island films, nucleation, small particle crystallisation 3—3006
  isotope ratios in Ni sulphides of Thompson Belt, Manitoba, geochronologic interpretations 3—48510
  Lake Huron, USA, heavy metals in Saginaw Bay 3—58995
  lake sediments, Quebec, Canada, heavy meal pollution 3—54084
  liquid, at. motions from line width studies of scatt. functions 3—57117
  liquid, dynamic scatt. function at 1173K 3—33070
  liquid, energy band struct. and resistivity, pseudopotential calcs. 3—33697
  liquid viscosity meas. using oscillating crucible method 3—57119
  M-shell fluorescence yields, wall-less proportional counter spectrometer study 3—26688
  Mboutou anorogenic complex (N Cameroons), isotope geochemistry 3—19950
  metallic films, resistivity depend. of 1/f noise 3—43243
  microclusters, condensation parameters effect on size distrib. 3—3022
  micropores, deformation healing, effect of size *(Russian)* 3—57183
  micropores, deformation healing, hardness rel. to size effects *(Russian)* 3—57184
  molecule, electron struct. calcs., partition function and dissoc. energy 3—36696
  monolayers on Cu (110), melting transition, X-ray diffr. study 3—8323
  neutron irrad. effects on surface impedance 3—3287
  optical properties in IR and far IR 3—57868
  particles on graphite, cryst. growth, melting and oxidation SEM study 3—27866
  particles prod. by chem. techniques, supercond. props., size depend. 3—3348
  photons multiple backscattering, saturation depth Z-dependence 3—47577
  pollutant elements in wastewater, anal. by DC Ar plasma emission spectroscopy 3—48220
  pollution levels and sources in Baghdad, Iraq 3—39541
  secondary CC Pb-acid cells, negative organic expander action at low temps. 3—24571
  secondary CC Pb-acid cells maintenance-free using catalytic gas recombination device *(German)* 3—24572
  shells, neutron multiplication meas. 3—55648
  solubility in PbO, isothermal dependences 3—13458
  stopping power for nucleon α-particles and C ions, $Z_1{}^3$ deviation 3—57006
  superconducting, cylindrical TE011 mode cavity, surface resistance at 6.5 GHz 3—3391
  superconducting, surface resist., inelastic electron-phonon scatt. influence 3—28477
  superconducting films, polycryst., vapour deposition, grain size reduction using grain growth barriers 3—47780
  superconducting solenoid manufacture, Pb electrodeposition on Cu wire, crit. current 3—9001
  surface, dynamical clean, prep. by continuous evaporation 3—24387
  surface tension measurement, sessile drop method, factors limiting accuracy 3—8301
  Terceira, Azores Islands, Sr and Pb isotopic vars. within single oceanic island 3—4829
  ultradisperse particles, influence of surface composition on melting temp. 3—2756
  vapour, thermal accommodation to mica and SiO surfaces, momentum transfer meas., mol. beam technique 3—28228
  vapour laser at 7229 Å *(Chinese)* 3—41863
  AgCl:Pb^{2+}, photochem. modification by dopant, ESR, microwave photocond., and photodielec. effect 3—53433
  Al/$\mathrm{AlO_x}$/Pb junctions, inelastic electron tunneling, barrier prep. effects 3—23502
  Al-$\mathrm{Al_2O_3}$-benzoic acid-P6 junctions, IETS study, effect of junction roughness 3—38488
  $\mathrm{BaTiO_3}$:Pb,Ca semiconductor ceramics, liquid phase sintered, positive temp. coeff. resist. 3—52130

lead continued
  $\mathrm{BiI_3}$:Pb^{2+} thin films, exciton absorpt. spectrum 3—19162
  Br/Pb ratio in airborne particles, pollutant appl. 3—48218
  $\mathrm{CaCl_2}$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3—43629
  $\mathrm{CsCaCl_3}$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3—43629
  Ga-Pb system, liq.-liq. interfacial tension between monotectic and crit. temps. *(French)* 3—18531
  GaSe-Pb-Li, intercalated semiconductor, optical props. *(Russian)* 3—14247
  Ge:Pb, γ-ray irrad., deep level defects, DLTS study 3—13764
  p-$\mathrm{Hg_{1-x}Cd_xTe}$-$\mathrm{Al_2O_3}$-Pb, tunnel cond. oscills. in mag. field 3—3330
  $^{203}\mathrm{Hg}$ electromigration and thermomigration in Pb *(German)* 3—51872
  InAs-Pb, vapour press. and melting equilib. *(German)* 3—2752
  InP-Pb, vapour press. and melting equilib., activity coeffs. *(German)* 3—2753
  InSe-Li-Pb, intercalated semiconductor, optical props. *(Russian)* 3—14247
  KBr:Pb^{2+}, emission spectra and luminesc. decay times 3—19178
  KBr:Pb^{2+}, obtical absorpt. and mag. circular dichroism 3—34129
  KBr:Pb^{2+}, optical absorpt. and mag. circular dichroism moment anal. 3—34128
  KBr(I):Pb^{2+}, absorption and stress-induced dichroism in Pb^{2+} centre A bands 3—52805
  $\mathrm{KCaCl_3}$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3—43629
  KCl:Na, Pb, γ-irrad., Pb-centres, thermoluminesc. study 3—3830
  KCl:Pb, dopant distrib., SEM and energy dispersive X-ray anal. 3—42639
  KCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3—14330
  KCl:Pb^{2+}, pure and doped, positron annihilation at vacancies 3—34162
  LiH:Pb^{2+}, photoluminescence of S^2 configuration ions 3—47690
  NaCl:Ca(Pb) crystals, microhardness and dislocation mobility, quenching effects 3—13326
  NaCl:Pb^{2+}, F-colouring efficiency, effect of precipitated phases, optical study 3—47680
  Nb/Nb oxide/Pb Josephson tunnel junctions fabricated using tetrafluoromethane plasma cleaning 3—52310
  Nb-$\mathrm{Nb_xO_y}$-Pb Josephson junctions, mag. field penetration, temp. depend. 3—38548
  Nb-$\mathrm{Nb_xO_y}$-Pb tunnel junctions for microwave receiving devices 3—3385
  Nb-$\mathrm{NbO_x}$-Pb Josephson tunnel junctions, current density distrib., ageing dependence 3—33834
  Nb-oxide-Pb, planar superconducting struct., high freq. and reson. props. 3—33835
  NbN-Pb tunnel junctions using DC reactively magnetron sputtered NbN films 3—8621
  O activity coefficient in Pb, effect of Co 3—47128
  Pb I 283.3 nm line growth curve by total absorpt., cross section of collision resonances 3—41531
  Pb I lines, relative oscillator strength determ. by line-absorpt. method 3—11743
  Pb ions+Ar, X-ray and Auger transitions *(German)* 3—11761
  Pb^{82+} photoionisation cross-section, relativistic effects calcs. 3—55905
  Pb:He, diffusion during deform. at low temp. 3—28161
  Pb/acid batteries, improved electrodes, computerised design and evaluation 3—34685
  Pb/acid cell, tubular positive plate formation, factors affecting 3—19575
  Pb/acid traction batteries under simulated electric vehicle service, positive plates crystalline phase composition 3—24570
  Pb/NbN Josephson tunnel junctions with plasma oxidised barriers, fabrication 3—23544
  Pb-acid secondary cells charging using photovoltaic battery charger with state-of-charge estimator and controller 3—34693
  Pb-acid storage batteries, recent developments, historical background 3—48134
  Pb-acid storage batteries, developments in metal and metal oxides 3—48135
  Pb-Ag sandwich struct., current-voltage characts., layer thickness depend. 3—43334
  Pb-CdS-Pb, double Schottky barrier, resonant supercond. tunnelling, WKB calc. 3—3223
  Pb-Zn($\mathrm{Al_2O_3}$)(PbO) particulated composite, prep. by powder metallurgy techniques, high temp. creep 3—34264
  Pb+$^{136}\mathrm{Xe}$, deep inelastic collisions at 1160 MeV, X-ray study 3—50508
  Pb+Cu^{4+}(Nb^{6+}), K- and L-vacancy production in asymmetric 1 MeV/N collisions 3—11954
  Pb+Pb, nucl. sticking, superheavy quasimol. form., MO X-ray spectra 3—50421
  Pb+Sn(S) (Ni), heavy ion collisions, ionisation, ang. distrib. of emitted electrons 3—11962
  Pb+Xe, high energy collisions, Pb K-shell ionisation probability 3—11963
  $^{82}\mathrm{Pb}+{}_1{}^1\mathrm{H}^+({}_2{}^4\mathrm{He}^+)$, M-shell X-ray prod. cross sections meas. 3—6759
  $^{202}\mathrm{Pb}$, radioactive, isotope shift in $6p^2\ {}^3P_0$-$6p7s\ {}^3P_1{}^0$ 283.3-nm line 3—36724
  $^{206}\mathrm{Pb}$, 803 and 2648 keV states, muonic isomer shifts 3—21218
  $^{208}\mathrm{Pb}/^{207}\mathrm{Pb}/^{206}\mathrm{Pb}/^{204}\mathrm{Pb}$ in Ascension Is. rocks 3—44415
  $^{210}\mathrm{Pb}$ contamination, uptake in plants in U mill tailings 3—58846
  $^{210}\mathrm{Pb}$ in sediment samples, direct anal. by γ-ray technique 3—48683
  $^{210}\mathrm{Pb}$, natural radioisotopes near a coal-fired power station, cattle liver obs. 3—34991
  Pb(α,xn)Po, X-ray emission, residual nucleus neutron number depend. 3—50337
  RbBr:Pb^{2+}, emission spectra and luminesc. decay times 3—19178
  RbBr(I):Pb^{2+}, absorption and stress-induced dichroism in Pb^{2+} centre A bands 3—52805
  $\mathrm{RbCaCl_3}$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3—43629
  RbCl:Pb^{2+}, emission spectra and luminesc. decay times 3—19178
  RbCl:Pb^{2+}, optical absorpt. and stress-induced linear dichroism of Pb^{2+} centres 3—14330
  RbCl:Pb^{2+}, optical absorpt. and mag. circular dichroism moment anal. 3—34128
  $\mathrm{Sb_{2-x}Bi_xTe_{3-y}Se_y}$:Pb solid soln., thermoelec. props. 3—57372
  Si:Pb, ion implanted, metastable solid soln. form., backscatt. and channelling study 3—2588
  $\mathrm{Sm_2S_3}$:Pb films, photocond. and photoEMF meas. 3—23521
  V-$\mathrm{V_xOy}$-Pb Josephson junctions, mag. field penetration, temp. depend. 3—38548
  ZnO:Pb, doped and undoped, luminesc. study in UV region 3—38881
  ZnS:Cu, Pb crysts., bulk emission in const. elec. field 3—8867
  ZnS-Cu:Pb, bulk electroluminesc. intensity, temp. depend. 3—19202

lead alloys
- *see also lead compounds*
- film, vapour deposited, grain size reduction by appl. of barrier to grain growth and nucl. agent 3—57234
- Josephson junction technology, state of the art 3—52317
- Josephson junctions, high J_c, fabrication and props. 3—43329
- lCc Pb-Cu-Ag-S, thermodynamic behaviour of dil. solns. of S 3—29063
- melting mechanisms and surface structures in crystals, impurity depend. 3—33409
- solder coating on steel wire, scanning Auger anal. 3—3877
- solid solutions, equilibrium and metastable, supercond. transition temp., alloying additions effect 3—23529
- Al-Mg-Pb, melt, temp. depend. of mixing enthalpy *(German)* 3—58100
- Al-Pb-Sn-(Sb)-(Mg)-Cu, antifriction, produced by compensation of gravit. segregation by electromag. forces 3—34261
- Al-Sn-Pb antifriction alloys, contact zone, structure and adhesion strength meas. *(Russian)* 3—4141
- $Au_{55}Pb_{22.5}Sb_{22.5}$, surface phase separation, SEM study 3—28197
- $CePb_3$, thermodynamic and mag. props. 3—47512
- $Ce(Sn_xPb_{1-x})_3$, elec. cond., mixed valence behaviour 3—28334
- Cr/Pb-Bi layered films, flux pinning strength and upper crit. field 3—13977
- Cu-Pb, two-liquid miscibility gap, calc. using bisection technique 3—33395
- In-Pb, equilibrium surface composition, AES study 3—57195
- In-Pb, surface morphology rel. to phase transformations 3—29079
- In-Pb (12 to 14 wt.%), phase diagram, phase changes during ageing *(Japanese)* 3—9029
- In-Pb (30 to 40 at.%), phase changes during ageing *(Japanese)* 3—47866
- In-Pb alloys, phase transform. and shape memory effects 3—9062
- In-Pb-Sn, struct. phase transform., Landau theory 3—34312
- $LaPb_3$, thermodynamic and mag. props. 3—47512
- Li-Pb alloy, solubility of D, temp. and comp. depend. 3—39094
- Li-Pb liq. blanket designs for fusion Tokamak power reactors 3—55640
- $Li_{17}Pb_{83}$ blanket, materials and design solns. for breeding T 3—55591
- $Li_{17}Pb_{83}$ eutectic alloy, breeding material for fusion reactor, thermodynamic props. 3—57111
- $Li_{17}Pb_{83}$ high temperature blankets, neutronics study 3—21540
- $Li_{17}Pb_{83}$, liq., blanket material, T interaction study 3—55649
- $Li_{17}Pb_{83}$, liq., fusion reactor blanket material, H_2 solubility 3—55646
- Mg-Pb, liquid, enthalpies of mixing at 975K 3—57098
- Mg-Pb-Sn, melt, temp. depend. of mixing enthalpy *(German)* 3—58100
- Na-Pb, liquid, elec. resist., effects of strong chem. interactions 3—3151
- Na-Pb liquid alloys, heat of mixing and specific heat, concentration cell meas. 3—42799
- Pb-Al_2O_3, powder metallurgical composites, consolidation and technical props. 3—52996
- Pb-Bi films, supercond., grain-boundary flux pinning 3—3395
- ϵ-Pb-Bi films for Josephson junction counterelectrodes, film comp. and thermal stability 3—47237
- Pb-Bi-Au Josephson junction counterelectrodes, film microstructure and thermal stability 3—47238
- Pb-Bi-Sb, ternary system with binary eutectic, contact melting 3—39096
- Pb-Cd, flux vortex and dislocation pinning *(Russian)* 3—13976
- Pb-Cd binary alloy battery grids, preliminary studies 3—48133
- Pb-Cu-S, dil. soln. of S, thermodynamics 3—39095
- Pb-In, dislocation internal friction in mixed state, effect of Abrikosov's vortices *(Russian)* 3—27949
- Pb-In alloys, change of flow stress at superconducting transition 3—33818
- Pb-In film, O_2 exposed, work function meas., supercond. tunnel junction appl. 3—8620
- Pb-In-Au/Pb-Bi thin-film diffusion couples, Kirkendall voids ring form. 3—8266
- Pb-In-Au/oxide/Pb-Au Josephson tunnel junction, high precision potentiometer appl. 3—36038
- Pb-Li blankets for fusion reactors, neutronic implications 3—55644
- Pb-Ni solid solution, Ni precip. kinetics 3—43842
- Pb-Sb eutectic, twin roll solidification, rolling charact. *(Japanese)* 3—9050
- Pb-Sb eutectic alloy, twin-roll rapid solidification process, cooling characts. *(Japanese)* 3—24218
- Pb-Sb-As, chill cast, plasticity, monotonic and cyclic loading, hysteresis 3—58171
- Pb-Sn, diffusion and electromigration of Ag and Ni 3—2884
- Pb-Sn, eutectic, high temp. deform., constitutive relations 3—43893
- Pb-Sn, eutectic, periodic lamellar substructure, investigation by laser beam diffr. 3—24441
- Pb-Sn, eutectic, superplastic flow, interpretation in terms of threshold stress 3—39211
- Pb-Sn, primary dendrite spacing 3—9049
- Pb-Sn, semisolid dendritic alloys, deform. behaviour, effect of strain rate 3—14666
- Pb-Sn (62 wt.%), superplastic eutectic, room temperature ductility 3—39199
- Pb-Sn alloy deposition, chloride bath comp. 3—58057
- Pb-Sn molten alloys, dissoln. of solid Cu cylinder under dynamic conditions 3—2810
- Pb-Sn-Sb alloys, fatigue, grain boundary reaction *(Japanese)* 3—29165
- Pb-Sn-Te(As), microstruct. and mech. props., effect of small addition of Te and As *(Japanese)* 3—29166
- Pb-Zn, powder metallurgical composites, consolidation and technical props. 3—52996
- Pb-Zn very dil. composites, proximity-effect induced supercond. 3—38522
- PbBi/Cu proximity effect junctions, resist. transition 3—13969
- $Pb_{96.1}Cd_{3.9}$ alloy, temp. depend. of positron annihilation at dislocations 3—38952
- PbIn-NbO_x-Nb Josephson junction interferometers, static characts. 3—57484
- $Pb_{60}In_{40}$, double-pinning force maxima for single pinning mechanism, crit. current meas. 3—33838
- PbInAu, Josephson tunnel junction, fabrication and basic props. *(Japanese)* 3—38550
- Pd-Pb, electrical props. under high gaseous H_2 press. 3—38365
- $PrPb_3$, mag. and quadrupolar props. 3—28508
- Sn-Pb, acoustic wave emission during superplastic deform. *(Russian)* 3—24295
- Sn-Pb, electrolytic deposition *(German)* 3—52980
- Sn-Pb (2, 38.1 wt.%), superplastic, role of Coble creep and interface control 3—39210
- Sn-Pb alloy coatings, thickness and element conc. meas., simultaneous fluoresc. X-ray method 3—44079

lead alloys continued
- Sn-Pb-Cd ternary eutectic, crystallographic orientation relationship 3—33188
- Te-Sn(Pb)(Ge)(Cu), chalcogenide glasses, obtained by rapid cooling from liq., crystn., morphological aspects 3—7913

lead compounds
- *see also lead alloys*
- acetate trihydrate, cryst. struct. and H bonding 3—51586
- chalcogenide tunable diode lasers and laser systems for 3 to 30 μm IR spectral system 3—46208
- chalcogenides, hot wall epitaxial growth 3—47782
- chemical-state shifts, Auger line XPS study 3—28965
- dicalcium lead propionate, high-temp. paraelec. phase, cryst. struct. and ferroelec. transition, X-ray study 3—18284
- oxides, developments for Pb-acid storage batteries 3—48135
- phthalocyanine, monoclinic modification, quasi-one-dimensional, metal with charact. order of mol. dipoles 3—8028
- phthalocyanine, unit cell parameters, X-ray diffr. 3—37891
- phthalocyanine films, optical and photoelec. props., appl. to photocells 3—38428
- PLZT, effects of impurities on phys. props. *(Korean)* 3—3631
- PLZT ceramic, hysteresis loops 3—28803
- PLZT electro-optic filters for fusion reactor material testing appls. 3—7143
- Ag halide-PbI_2 film layer sensitivity during physical development *(Russian)* 3—54804
- β-Al_2O_3-PbO, electron beam writing on 20 Å scale 3—46998
- β''-Al_2O_3-PbO, solid electrolyte for divalent cations 3—42833
- Au-PbI_2 system sensitometric characts. in case of physical development in negative photographic process *(Russian)* 3—54793
- B_2O_3-SiO_2-PbO glass, crystn., TEM study 3—27854
- $BaPb_{1-x}Bi_xO_3$ ceramic, superconducting props. *(Russian)* 3—18816
- $BaPb_{1-x}Bi_xO_3$ ceramic, Josephson tunnelling 3—23552
- $BaPb_{1-x}Bi_xO_3$, single cryst. growth from PbO_2-Bi_2O_3-$BaPbO_3$ soln., supercond. props. 3—3936
- Bi halide-PbI_2 film layer sensitivity during physical development *(Russian)* 3—54804
- Bi_2S_3-PbS semiconductor electrodes, electrodeposited and pressure sintered, photoelectrochemical behaviour 3—39492
- $Cd_{1-x}Pb_xF_2$ mixed cryst., first order Raman scatt., two mode behaviour 3—8837
- Cu halide-PbI_2 film layer sensitivity during physical development *(Russian)* 3—54804
- Cu-PbI_2 system sensitometric characts. in case of physical development in negative photographic process *(Russian)* 3—54793
- CuO-PbO-TeO_2 glasses, mag. props. and EPR spectra 3—23603
- Cu_2S-PbI_2 system sensitometric characts. in case of physical development in negative photographic process *(Russian)* 3—54793
- (Cu_2S+Au)-PbI_2 system sensitometric characts. in case of physical development in negative photographic process *(Russian)* 3—54793
- Fe_2O_3-B_2O_3-PbO based glasses, susceptibility and Mossbauer effect meas. 3—57514
- Fe_2O_3-PbO-B_2O_3 glasses, ^{11}B and ^{207}Pb NMR lineshape studies 3—52636
- GeO_2-PbO-$Bi_2O_3(Tl_2)$, glass-forming systems, study using X-ray diffr., DTA and thermomech. anal. 3—13108
- InSe-$Pb_{0.82}Sn_{0.18}Te$, heterojunctions, elec. characts. 3—28429
- InSe-PbTe heterojunctions, elec. characts. 3—28429
- In_2Te_3:PbTe thin film, recrystallisation and phase transitions, electron microscopy study 3—2768
- $NaNbO_3$-$PbTiO_3$, ferroelec. solid solns. composition-struct.-props. relationship 3—18280
- Na_2O-SiO_2-MgO(CaO)(SrO)(PbO)(BaO)(ZnO), glasses, chem. durability in water 3—9205
- Ni/lead phthalocyanine/Au photocells, I-V characts. and conversion efficiency 3—38428
- PLZT ceramic electrically controlled retardation plate, phase modulation distortion 3—46283
- PLZT ceramic ferroelec., ion implanted, optical imaging and information storage 3—1588
- PLZT ceramic optoelectronic analogue, logic and switch devices 3—50748
- PLZT ceramics, grain boundary phenomena, electron microscopic study 3—18316
- PLZT ceramics, transparent ferroelec., appl. field induced birefr. mechanism 3—28834
- PLZT ceramics, translucent, prep. *(Japanese)* 3—47808
- PLZT electro-optic shutter stereoscopic displays, advances 3—7150
- PLZT electro-optic min./const. voltage shutters 3—7151
- PLZT ferroelec. ceramic, dielec. props., permanent mag. field effects 3—57866
- PLZT fibre optic reflection coupler for bidirectional transmission 3—7177
- PLZT light gate array, high density, electro-optical, light transmission characts. 3—7152
- PLZT solid soln., piezoelec. props. comparison with PZT materials *(French)* 3—28782
- PLZT thick film, sintering props. and optical transmittance 3—39055
- PLZT wafer electro-optic shutter devices 3—7149
- PVC:$3PbO.PbSO_4.H_2O$, dielec. relax., thermally stimulated depolarisation current 3—28760
- PZT sensitivity and performance in optically-scanned US imaging piezoelec. transducer 3—1923
- $(Pb,Ni)(Zr,Ti,Zn,Nb)O_3$ ceramic, uniaxial compression, piezoelec. props., additives effect 3—14221
- Pb salt tunable diode lasers, linewidth meas. using heterodyne and etalon techniques 3—12141
- Pb-compounds, electronic and rot. energy, finite nuclear size influence 3—6664
- Pb-PbO particulated composite, prep. by powder metallurgy techniques, high temp. creep 3—34264
- Pb-Sn-Te(Se), extruded alloys, carrier conc. and mobility 3—8507
- $Pb_3(AsO_4)_2$, ferroelastic transitions and domain struct. 3—22961
- $Pb_9As_4S_{15}$, polycryst. gratonite, dielec. parameters determ. 3—19031
- $PbBPO_5$, $PbBAsO_5$, synthesis and characterisation *(French)* 3—22845
- $Pb_{0.85}Ba_{0.05}Sr_{0.12}(Zr_{0.565}Ti_{0.435}Sb_{0.02})O_{3.07}$, piezoelec. props., comparison with PLZT solid solns. *(French)* 3—28782
- PbBi, matrix isolated, fluoresc. system investig. 3—41612
- $PbBi_2TiNbO_8F$, synthesis, cryst. struct. and thermal props. 3—8001
- $PbBi_2TiTaO_8F$, synthesis, cryst. struct. and thermal props. 3—8001
- $PbBr_2$, elec. field gradient at Br sites, NQR study 3—3589
- $Pb_{1-x}Cd_x(Sn_x)Se$ diode lasers, p-n junctions, EBIC mode SEM study 3—17529

lead compounds continued

- $\mathrm{Pb_{1.2-x}Ce_xMo_6S_8}$, supercond. and mag. props. 3—57453
- $\mathrm{PbCl_2}$, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3—13743
- $\mathrm{Pb_{1.2-x}Eu_xMo_6S_8}$, supercond. and mag. props. 3—57453
- $\mathrm{PbF_2}$, α- and β-phases, interat. pot. and phonon freqs., shell model 3—57040
- $\mathrm{PbF_2}$, dielec. and anharmonic behaviour 3—42741
- $\mathrm{PbF_2}$, fast ion phase, anion disorder, neutron scatt. study 3—13520
- $\mathrm{PbF_2:Eu^{2+}}$ single cryst., EPR study 3—52620
- $\mathrm{PbF_2:Eu^{2+}}$ single cryst., EPR, superhyperfine struct. 3—52621
- $\mathrm{PbF_2:Mn^{2+}}$, superionic, high temp., EPR studies 3—57763
- $\beta\text{-}\mathrm{PbF_2:Na^+}$ single cryst., double NMR of point defects 3—28732
- $\mathrm{PbF_2\text{-}CdF_2}$, solid solutions, superionic, elec. props. 3—13526
- $\mathrm{PbF_2\text{-}InF_3}$ system, ionic cond. props. *(French)* 3—13539
- $\mathrm{PbF_2+Mn^+(Eu^{3+})}$, mag. tagging of ^{19}F NMR relax. 3—28729
- $\mathrm{PbF_2(:La)}$, cubic, thermal depolarisation, ionic thermocurrents study 3—3636
- PbFCl, NQR study of electric field gradient 3—23830
- $\mathrm{Pb(Fe_{1/2}Nb_{1/2})O_3}$, ferroelec. perovskites form. mechanism and ceramic process 3—14577
- $\mathrm{Pb(Fe_{1/2}Nb_{1/2})O_3\text{-}xPb(Mg_{1/2}W_{1/2})\ O_3}$ solid soln., diffuse antiferroelec.-paraelec. phase transition 3—23886
- $\mathrm{PbFe_{12}O_{19}}$, magneto-optical and optical props. meas. 3—8805
- $\mathrm{PbFe_{12}O_{19}}$, photoelectrochemical studies 3—52195
- $\mathrm{Pb(Fe_{2/3}W_{1/3})O_3\text{-}Pb(Fe_{1/2}Nb_{1/2})O_3\text{-}Pb_5Ge_3O_{11}}$ solid solution, sintering dielec. props. 3—52702
- $\mathrm{Pb_5Ge_3O_{11}}$, domain struct., existence of incommensurate phase *(Russian)* 3—19087
- $\mathrm{Pb_5Ge_3O_{11}}$, serpentine shaped ferroelec. domains due to internal stresses 3—3657
- $\mathrm{PbGeS_3}$, mol. vibr., Raman spectra of mols. and crystals 3—51729
- $\mathrm{Pb_5Ge_{3-x}Si_xO_{11}}$ glass-ceramic prep. with high transparency, permittivity and Curie temp. 3—53001
- $\mathrm{Pb_{1-x}Ge_xTe}$ narrow band-gap ferroelec. semicond., absorption edge near phase transition 3—34061
- $\mathrm{Pb_{1-x}Ge_xTe}$, quantum ferroelec. semicond., low temp. resist. enhancement 3—38406
- $\mathrm{Pb_{1-x}Ge_xTe:In}$, Hall coeff., thermoelec. effect and absorption coeff. 3—38409
- $\mathrm{Pb_{1-x}Ge_xTe:Sb}$ injection lasers, stimulated emission delays, temp. depend. 3—37040
- $\mathrm{Pb_{1-y}Ge_yTe}$, interaction and spontaneous formation of defects near ferroelec. transition 3—13383
- $\mathrm{PbHPO_4}$, ferroelec. transition, ^{17}O NQR study 3—28791
- $\mathrm{PbHPO_4}$, quasi 1-D H-bonded ferroelec., thermodynamic props., tunnelling model 3—2849
- $\mathrm{Pb(H_2PO_4)_2}$, sp. ht. meas., 100 to 373K 3—42806
- $\mathrm{PbH_2SiF_6/PbO_2}$ miniature standby batteries characts. *(Polish)* 3—39453
- PbI intercalated with organic molecules, heat capacity *(Russian)* 3—13474
- $\mathrm{PbI_2}$, ^{127}I and ^{129}I Mossbauer spectra 3—43472
- $\mathrm{PbI_2}$ films, radiation induced dissociation, desorption and aggregation 3—57233
- $\mathrm{PbI_2}$ impurity, effect on KBr single cryst. growth from aqueous soln. 3—51526
- $\mathrm{PbI_2}$ laminar straight band crystal, non-equilibrium carrier condensation kinetics 3—38864
- $\mathrm{PbI_2}$ layer cryst., exciton-phonon interaction, flexural lattice waves 3—3082
- $\mathrm{PbI_2}$, polymorphic phase transition under press., Raman study 3—2788
- $\mathrm{PbI_2}$ polytypes, Raman spectra study 3—14288
- $\mathrm{PbI_2}$, Raman spectra, phonon state Davydov splitting 3—3733
- $\mathrm{PbI_2}$, Stokes and anti-Stokes donor-acceptor pair luminesc. meas. 3—14339
- $\mathrm{PbI_2}$ system sensitometric characts. in case of physical development in negative photographic process *(Russian)* 3—54793
- $\mathrm{PbI_2:Cu(Ag)}$, optical props. of photochemical transform. products *(Russian)* 3—3678
- $\mathrm{PbI_2\text{-}Ag}$ semiconductor-metal system, behaviour during discontinuous light irradiation *(Russian)* 3—20940
- $\mathrm{Pb_{1-x}In_xF_{2+x}}$, solid soln., prep. and cryst. struct., X-ray diffr. study *(French)* 3—13196
- $\mathrm{Pb_2InF_7}$, prep. and cryst. struct., X-ray diffr. study *(French)* 3—13196
- $\mathrm{Pb_7In_5F_{29}}$, prep. and cryst. struct., X-ray diffr. study *(French)* 3—13196
- $\mathrm{Pb_{2-x}La_xLi_{0.5}Nb_{1.5}O_{6+\delta}}$, ceramic solid solution, thermoelectric props. 3—52183
- $\mathrm{PbLaTh(VO_4)_3}$, dimorphism, X-ray diffr. and IR spectra study 3—33208
- $\mathrm{PbMg_{1/3}Nb_{2/3}O_3}$, ceramic, elastic moduli, Debye temp. and specific heat 3—51690
- $\mathrm{PbMg_{1/3}Nb_{2/3}O_3}$, fabrication scheme 3—19308
- $\mathrm{Pb(Mg_{1/3}Nb_{2/3})O_3}$, ferroelec. perovskites, form. mechanism and ceramic process 3—14577
- $\mathrm{PbMoO_4}$, translational and librational modes, phonon dispersion study 3—2700
- $\mathrm{PbMoO_4:Cr}$, ESR study of $\mathrm{[CrO_4Pb_8]}$ centre 3—14122
- $\mathrm{PbMo_6S_8}$, electronic struct., role of cluster twisting angle, LCAO EHT tight-binding calc. 3—57280
- $\mathrm{PbMo_6S_8}$, phase stoichiometry and regions of homogeneity 3—13470
- $\mathrm{PbMo_6S_8}$, sintering and hot pressing prep., high temp. phase 3—14519
- $\mathrm{PbMo_6S_8}$ thin films, supercond., prep. and irradiation induced disorder effects 3—38564
- $\mathrm{PbMo_6X_8}$ (X=chalcogenide), cluster compounds, band struct., book contrib. 3—8418
- $\mathrm{Pb_{1.5}Nb_2O_{6.5}}$, vibr. anal. and chem. bonds, IR and Raman spectra *(French)* 3—19129
- PbO, α and β phases, thermal expansion, Raman and IR vibr. spectra studies *(French)* 3—38817
- PbO binary glasses, $\mathrm{Pb^{2+}}$ coordination determ. by EPR *(Japanese)* 3—38693
- PbO electrophotographic X-ray detector, Monte Carlo modelling 3—488
- PbO, polymorphic transition temp., influence of nonstoichiometry 3—13431
- α,β-PbO smoke particles, struct. and coalescence growth from metal combustion in $\mathrm{Ar\text{-}O_2}$ 3—7934
- PbO, solubility of Pb, isothermal dependences 3—13458
- PbO, tetragonal, self-consistent energy band struct. 3—43013
- PbO, thermodynamic props. of excess Pb and O 3—13486
- $\mathrm{PbO\text{-}B_2O_3}$, liq.-liq. immiscibility *(Japanese)* 3—38080
- $\mathrm{PbO\text{-}B_2O_3}$ glass, thermal cond. 3—13564
- $\mathrm{PbO\text{-}B_2O_3}$ glasses, water corrosion mechanism 3—34512
- $\mathrm{PbO\text{-}B_2O_3}$ immiscible glasses, mech. props. 3—2661

lead compounds continued

- $\mathrm{PbO\text{-}B_2O_3\text{-}Al_2O_3\text{-}Fe_2O_3\text{-}Y_2O_3}$ glass-ceramics, mag. props. 3—57833
- $\mathrm{PbO\text{-}Fe_2O_3(V_2O_5)(TiO_2)}$, amorphous layers, vitrification range, light transmittance *(Japanese)* 3—57989
- $\mathrm{PbO\text{-}SiO_2}$, molten and glassy state, X-ray diffr. obs. *(Japanese)* 3—46860
- $\mathrm{PbO\text{-}SiO_2}$, spherulitic crystal growth from $\mathrm{P_2O_5}$-nucleated lead silicate glasses, morphology rel. to growth temp. 3—33102
- $\mathrm{PbO\text{-}SiO_2}$ glass, effect of added metal oxides on secondary electron emission 3—14407
- $\mathrm{PbO\text{-}SiO_2}$ glass, short range struct., X-ray diffr. study 3—33110
- $\mathrm{PbO\text{-}SiO_2}$ optical glasses melted in Pt crucible, luminesc. due to Pt complexes 3—50723
- $\mathrm{PbO\text{-}SiO_2}$ system, phase diagram calc. 3—53035
- $\mathrm{PbO\text{-}SiO_2\text{-}P_2O_5}$, glass, acid corrosion, surface cryst. form., effect of phosphate doping 3—9206
- $\mathrm{PbO\text{-}V_2O_5}$, equimolar system ESR study 3—18979
- $\mathrm{PbO_2}$, cathodic passivation obs. in Pb-acid cell, semicond. model and expt. study 3—9416
- $\mathrm{PbO_2}$ in concentrated $\mathrm{H_2SO_4}$, behaviour study using linear sweep computer controlled methods 3—9326
- $\mathrm{PbO_2}$ reduction to $\mathrm{PbSO_4}$ in $\mathrm{H_2SO_4}$ electrolyte, effects of antimony doping, application to secondary cells 3—58422
- $\beta\text{-}\mathrm{PbO_2:H}$ battery plate, H content and Pb vacancies, neutron diffr. studies 3—7973
- $\mathrm{PbO-B_2O_3}$ glasses, microcrack-branching and fracture toughness 3—34445
- $\mathrm{PbO.6Fe_2O_3}$, magnetoplumbite, LPE growth from $\mathrm{PbO\text{-}B_2O_3}$ flux and ferromag. reson. study 3—13684
- $\mathrm{Pb_3(PO_4)_2}$, ferroelastic transition, domain wall struct. *(French)* 3—38046
- $\mathrm{Pb_3(PO_4)_2}$ ferroelasticity and ferroelastic transformations, rel. to cryst. structs. 3—2653
- $\mathrm{Pb_5(PO_4)_3F}$, cryst. struct., X-ray study 3—37886
- $\mathrm{Pb^{II}{}_{4-x}Pb^{IV}{}_xO_4I_{2x}}$, ^{127}I and ^{129}I Mossbauer spectra 3—43472
- $\mathrm{Pb_{1-x}R_xTi_{1-y}Mn_yO_3}$ ceramics, R=rare earth, electromech. props. and transducer appl. 3—14217
- $\mathrm{Pb_2Ru_2O_{6.5}}$, ordered O vacancies, neutron diffr. investig. 3—8042
- PbS (Se)(Te), colouring mechanism in glasses, IR, visible and UV transmission spectra 3—34122
- PbS, anal. of effective compressibilities 3—42700
- PbS IR detector nonlinearity meas. method *(Chinese)* 3—36083
- PbS thin films, complex refr. index determ. using photometric meas. 3—45191
- PbS, vaporisation kinetics 3—33416
- PbS-PbSe(Te) solid solutions, electronic density of states effective mass 3—57262
- $\mathrm{Pb_xS}$, integral area AES meas., quantitative comparison with XPS studies 3—14403
- $\mathrm{PbSO_4}$, development of crystals in Plante cells in cycling tests 3—39457
- $\mathrm{PbS_{0.1}Se_{0.9}}$, intrinsic, recombination, depend. on doping conc. and excitation level 3—52174
- $\mathrm{PbS_{1-x}Se_x}$ diode lasers, p-n junctions, EBIC mode SEM study 3—17529
- $\mathrm{PbS_{1-x}Se_x}$ photovoltaic detectors, carrier lifetimes and resist.-area product 3—47381
- $\mathrm{Pb(Sc_{1/2}Ta_{1/2})O_3}$ ceramics, reversible pyroelec. effect under DC bias 3—38771
- PbSe, anal. of effective compressibilities 3—42700
- PbSe, carrier recomb., photocond. decay curves 3—23406
- PbSe, laser photoionisation mass spectroscopy 3—11759
- PbSe:In films, elec. props. dopant effects on scatt. parameters 3—18806
- PbSe-CdS, phase equilibria 3—9040
- PbSe-like semiconductors, second-order Auger recomb. processes 3—43201
- PbSe-SnSe solid soln., phase transition, elec. study 3—8195
- $\mathrm{PbSe_{1-x}Te_x}$, electron effective mass, Shubnikov-de Haas effect study 3—13710
- p-$\mathrm{PbSe_{1-x}Te_x}$, valence band struct., Shubnikov-de Haas effect study 3—18616
- $\mathrm{PbSe(Te)(Se_{1-x}Te_x)}$, narrow gap semicond., bound defect and impurity states, review 3—23309
- $\mathrm{Pb_{1-x}Sn_x\ Te/PbTe_{1-y}Se_y}$ multilayer struct. thermal expansion and lattice matching 3—2989
- $\mathrm{Pb_{1-x}Sn_xS(Se)(Te)}$, donor props. of Sn, Mossbauer study 3—28746
- $\mathrm{Pb_{1-x}Sn_xSe}$, electrolytic polish 3—4161
- $\mathrm{Pb_{1-x}Sn_xSe}$ epitaxial films, refr. index meas. rel. to injection laser appls. 3—47617
- $\mathrm{Pb_{1-x}Sn_xSe}$, nonstoichiometric defect levels, Hall coeff. study 3—18656
- $\mathrm{Pb_{1-x}Sn_xSe_{1-y}Te_y}$ DH laser with two-sided confinement, LPE growth and props. 3—12181
- $\mathrm{Pb_{1-y}Sn_ySe(Te)}$, layer thickness rel. to liquid-phase epitaxy conditions 3—9002
- $\mathrm{Pb_xSn_{1-x}Se(Te)}$, energy gap-refractive index interrelation 3—14238
- PbSnTe, homostructure diode lasers, dielectric constant and optical confinement, refractive index rel. to carrier conc. 3—27050
- PbSnTe, lattice defects X-ray oscillating slit and film techniques 3—42489
- PbSnTe, phonon dispersion and elastic consts. rigid ion model 3—57041
- PbSnTe-PbTeSe long wavelength lattice matched single heterostruct. lasers grown by LPE 3—22113
- $\mathrm{Pb_{0.76}Sn_{0.24}Te:Cd}$, elec. cond. and cond. relax. to equilib. value 3—3201
- $\mathrm{Pb_{0.78}Sn_{0.22}Te}$, intrinsic, recombination, depend. on doping conc. and excitation level 3—52174
- $\mathrm{Pb_{0.78}Sn_{0.22}Te:In}$, photoelectric effect 3—38431
- $\mathrm{Pb_{0.8}Sn_{0.2}Te}$, adsorbed surface states, form. and charging kinetics 3—3274
- n-$\mathrm{Pb_{0.8}Sn_{0.2}Te}$ epitaxial films, $\mathrm{H_2}$ effects in stabilising elec. props. 3—47436
- $\mathrm{Pb_{0.8}Sn_{0.2}Te:Ag}$, solid soln., effect of Ag impurity on elec. and struct. props. 3—8498
- $\mathrm{Pb_{1-x}Sn_xTe}$, anisotropic polar semicond., Hall coeff., anomalous temp. depend. calc. *(Russian)* 3—47370
- $\mathrm{Pb_{1-x}Sn_xTe}$ DH injection lasers, optimal design 3—37033
- $\mathrm{Pb_{1-x}Sn_xTe}$ doped crystals, low temp. cond., thermal radiation influence 3—8496
- $\mathrm{Pb_{1-x}Sn_xTe}$ epitaxial films, elec. transport props., band parameters 3—18801
- $\mathrm{Pb_{1-x}Sn_xTe}$ expitaxial films with growth plane comp. gradient, cathodoluminesc. 3—28913
- p-$\mathrm{Pb_{1-x}Sn_xTe}$, ferroelec. phase transition under electron irrad. 3—3651
- $\mathrm{Pb_{1-x}Sn_xTe}$ homostruct. diode lasers with Ga-doped cladding layer, LPE growth and long wavelength operation 3—41826
- $\mathrm{Pb_{1-x}Sn_xTe}$, intrinsic absorpt. edge investig. 3—19094
- $\mathrm{Pb_{1-x}Sn_xTe}$ large crystal vapour phase growth in sealed tube 3—14451
- $\mathrm{Pb_{1-x}Sn_xTe}$ laser diodes, prod., appls. 3—32365

lead compounds continued
$Pb_{1-x}Sn_xTe$ photosensitive films, phase composition, struct. and O_2 adsorption effects 3-52193
$Pb_{1-x}Sn_xTe$ photosensitive p-n structures, LPE growth 3-52232
$Pb_{1-x}Sn_xTe$ solid soln., electron spin polarisation in field of strong optical waves 3-18940
$Pb_{1-x}Sn_xTe$ solid solns., elec. active point defects formation 3-46929
$Pb_{1-x}Sn_xTe$:Cd single cryst., photosensitivity in far IR 3-18745
$Pb_{1-x}Sn_xTe$:Cd single cryst., band gap, rel. to electrophysical props. 3-28267
$Pb_{1-x}Sn_xTe$:In, band edge motion in quantising mag. field and nonequilib. states 3-57275
$Pb_{1-x}Sn_xTe$:In, energy spectrum in quantizing mag. field 3-18727
$Pb_{1-x}Sn_xTe$:In(Ga), obs. of local modes, absorpt. spectra 3-43566
$Pb_{1-x}Sn_xTe$:Sb, diffused surface morphology in vapour phase growth *(Chinese)* 3-42940
$Pb_{1-x}Sn_xTe$:Sb p-n homojunction lasers, stimulated emission time delay 3-1634
$Pb_{1-y}Sn_yTe$-In, tunnel self-localisation at negative centres, anomalous elec. and mag. props. 3-3121
$Pb_xSn_{1-x}Te$, ^{125}Te Mossbauer parameters and phonon spectrum 3-38737
$Pb_{1-x}Sr_xGe_4O_9$, struct., dielec. optical props. and phase transition 3-8824
$Pb_{1-x}Sr_xS$:Tl(Ag)(Bi) film, semiconducting, optical absorpt. edge 3-24039
n-PbT, fundamental absorption coeff. at high temp. 3-19098
$Pb_{1.5}Ta_2O_{6.5}$, vibr. anal. and chem. bonds, IR and Raman spectra *(French)* 3-19129
PbTe, adsorbed C, Raman scatt., roughness induced 3-57928
PbTe, anal. of effective compressibilities 3-42700
PbTe cluster model, nuclear spin-spin coupling tensors and densities of state, relativistic parametrised EHT calcs. 3-28248
PbTe diode laser fabrication using proton bombardment 3-37070
PbTe, energy band struct. and Fermi surface, tight-binding calc. 3-57281
n-PbTe epitaxial film, (111)-oriented, four coeff. weak-field magnetoresist. at 4.2K 3-13929
PbTe epitaxial films, carrier density and mobility 3-47439
PbTe films, cond., photocond., thermoelectric, Hall and photothermoelectric meas. 3-8596
PbTe heteroepitaxial films, band. struct., magnetoresistance oscill. study 3-28266
PbTe, intervalley optical transitions, transmission and magneto-photo response spectra 3-14263
PbTe large crystal vapour phase growth in sealed tube 3-14451
PbTe laser, two-photon pumping, stimulated recomb. radiation 3-32366
PbTe, laser photoionisation mass spectroscopy 3-11759
PbTe melt, Hall effect 3-23412
PbTe single-crystal film deposition on unoriented surfaces by vacuum phase laser epitaxy 3-52948
PbTe thin film, elec. props., ion bombardment effects 3-52277
PbTe thin film, size quantised, interband Raman scatt. study 3-47728
PbTe, VPE, effect of illumination 3-8372
PbTe:Ag, effect of impurities on elec. props. 3-8497
PbTe:Ag_xTe dopant effects on thermoelectric props. 3-14983
PbTe:Bi, thermoelec. props., elec. cond. and thermal cond. 3-47371
n-PbTe:Cr, thermoelec. props., current carrier conc. 3-47372
PbTe:In, impurity charge state, mag. susceptibility and XPS study 3-28305
PbTe:In, quasilocal level position, Hall effect and absorption spectra study 3-18658
PbTe:Tl, superconducting crit. temp. and sp. ht., dependence on hole density meas. 3-23530
PbTe-Bi_2Te_3, kinetic parameter dependence on impurity level, annealing effects 3-8515
PbTe-CdTe(InSb) heteroepitaxial structs. deposition on unoriented surfaces by vacuum phase laser epitaxy 3-52948
PbTe-FeTe system, phase diagram and elec. props. 3-2739
PbTe-PbSnTe, effusion processes, in MBE 3-28242
PbTe-SnTe, liq., solutal diffusion coeff. 3-47132
PbTe-ZnS IR multilayer filters, meas. down to 4K 3-12291
$(PbTe)_{100-x}(MnTe)_x$, NMR study 3-14152
PbTiO-$Bi(Zn_{2/3}(Mg_{2/3})Nb_{1/3})O_3$, ferroelec. phase transition, X-ray, permittivity and dilatometric studies 3-38777
PbTiO-$La(Zn_{2/3}(Mg_{2/3})Nb_{1/3})O_3$, ferroelec. phase transition, X-ray, permittivity and dilatometric studies 3-38777
$PbTiO_3$, amorphous and cryst., sp. ht. at low temps. 3-38098
$PbTiO_3$ amorphous sputtered thin films, struct. and elec. cond. 3-33811
$PbTiO_3$, ferroelec. thin film, prep. by CVD 3-14501
$PbTiO_3$, piezoelectric, SAW propagation in biasing elec. field 3-33548
$PbTiO_3$ planar transducer for short-pulse US generation 3-46427
$PbTiO_3$ single crystals, planar defects 3-8063
$PbTiO_3$, soft X-ray emission spectra *(Russian)* 3-24059
$PbTiO_3$ US linear array probe, 7.5 MHz 3-50872
$PbTiO_3:Fe^{3+}$ single cryst., paramag. defects, EPR study 3-52601
$PbTiO_3$-Ca-$Pb(CoW)_{1/2}O_3$ US array transducer 3-50896
$PbTiO_3$-$La(Zn_{2/3}Nb_{1/3})O_3$ ceramics, high-voltage photovoltaic effect, MnO_2 doping influence 3-33755
$PbTiO_3$-$PbZrO_3$-$PbNb_{2/3}Zn_{1/3}O_3$-$PbSb_{2/3}Mn_{1/3}O_3$-$PbW_{1/2}Mg_{1/2}O_3$, region of morphotropic transition 3-9041
$Pb_3(VO_4)_2$ single cryst., domain struct. and mag. switching 3-23690
$Pb_3(V_xP_{1-x}O_4)_2$ solid soln., elastic moduli and piezooptic effect 3-18368
$PbWO_4$, translational and librational modes, phonon dispersion study 3-2700
Pb(Zr, Ti $(Mn_{1/3}Sb_{2/3})$)O_3 piezoelec. ceramics, used for thickness shear mode and appls. 3-1891
Pb(Zr, Ti)O_2 piezoelectric ceramics, material property meas. 3-19068
Pb(Zr,Ti)O_3 ceramics, ageing *(French)* 3-52739
Pb(Zr,Ti)O_3 circular ring type transducer, vibrs. 3-42093
Pb(Zr,Ti)O_3 piezoelectric ceramic transducer for HF US power generation, vibr. characts. 3-1917
Pb(Zr,Ti)O_3 piezoelectric disks, transient voltage produced by mech. disturbances 3-47609
Pb(Zr,Ti)O_3-MnO-$LaO_{1.5}$, oxide additions effect on band struct., diffuse refl. spectra 3-19155
Pb(Zr,Ti)O_3-type piezoelec. ceramics, physical props. 3-52733
$PbZrO_3$, antiferroelectric, cryst. struct., X-ray and neutron powder diffr. profile anal. 3-18266
$PbZrO_3$, ceramic, elastic moduli, Debye temp. and specific heat 3-51690
$PbZrO_3$ crystals, ZrO_6^{8-} cluster electronic spectra 3-3034
$PbZrO_3$, dipole interactions in antiferroelec. phase 3-52742
$PbZrO_3$, ferroelectric, space group, electron diffr. study *(Japanese)* 3-46878

lead compounds continued
$PbZrO_3$, permittivity and ferroelec. transitions, defect conc. effect 3-38779
$PbZrO_3$ single crystals, planar defects 3-8063
Pb(Zr.Ti)O_3 ceramic transducers, bevelling effect on thickness vibrs. *(Japanese)* 3-17763
$PbZr_{0.9}Ti_{0.1}O_3$, ferroelec., cryst. struct., X-ray and neutron diffr. study 3-56856
$Pb(Zr_{0.965}Ti_{0.035})O_3$ solid soln., ferroelec. transitions, calorimetric and dilatometric study *(French)* 3-3652
$PbZr_{1-x}Ti_xO_3$ ($x<0.1$), phase diagram 3-53034
$PbZr_{1-x}Ti_xO_3$ ceramics, doped, low field poling, dielec. and piezoelec. props. 3-38750
$PbZr_{1-x}Ti_xO_3$, piezoelement preparation by corona discharge polarisation method, electret state model *(Russian)* 3-8771
$Pb(Zr_{1-x}Ti_x)O_3$:Nb, 95/5 PZT ceramics, cryst. and domain struct., TEM study 3-23894
$Pb(Zr_xTi_{1-x})O_3$, prep. by appl. of elec. field, sluggish transition between tetragonal and rhombohedral phases 3-14535
$PbZr_xTi_{1-x}O_3$ textured ferroelec. piezoceramic, polarisation process 3-52709
Si-PbS n-p heterojunction, photoresponse kinetics 3-38472
p-$(SnTe)_{0.2}(PbSe)_{0.8}$, epitaxial layer, transfer phenomena 3-8408
SrO:Pb^{3+}, impurity centres, light or X-ray irradiation, EPR spectra *(Russian)* 3-57771
$(Sr_{0.5}Pb_{0.25}Ca_{0.25})TiO_3$-$Bi_2O_3.3TiO_2$ ceramics, dielec. props., appl. in HV capacitor 3-28752
TeO_2-PbO-La_2O_3 glass, elastic moduli, temp. and press. depend. 3-58150
TeO_2-PbO-WO_3 glass, elastic moduli, temp. and press. depend. 3-58150
$(TmBiPb)_3(FeGa)_5O_{12}$ epitaxial film, magnetooptic visualization and topographical study of magnetic fields 3-40652
ZrF_4-BaF_2-LaF_3-AlF_3-LiF-BiF_3-PbF_2 glass, viscosity props. for fibre drawing 3-1786

leak detection
acoustic, sensitivity in pneumatic tightness tests 3-45152
catalymetric method of accurate localization of small leaks 3-48021
closed cavity of component pressure tested in liquid, liquid penetration calc. 3-58372
cooling water in laboratory apparatus, monitoring and control unit 3-16343
hermetic testing, He leak detector and radioisotope methods, graphical soln. 3-45153
nondestructive methods, standardisation requirements 3-34560
PWR, microprocessor-based acoustic leak monitoring instrumentation 3-55226
vacuum technology, book 3-35765
welded joints in structures, sensitivity of leak tests 3-25887
He mass spectrometry appl. 3-5911

leakage, electrical *see electrical faults*

leakage, magnetic *see magnetic leakage*

leakage currents
GaAs, polycrystalline, grain boundary passivation by H plasma, surface barrier diode appl. 3-43064

learning systems
see also self-adjusting systems
neural model for category learning 3-15059
neural network with inhibitory interconnections, role in kitten under abnormal visual experiences *(Japanese)* 3-19698
simplified neuron model as principal component analyser 3-53617

least squares approximations
Abel's integral equation, numerical inversion using piece-wise least-squares cubic splines 3-42443
acoustic asymmetric radiator, in infinite baffle, sound radiation calc. 3-7268
acoustic scattering, time-domain problems, least-square iterative technique 3-32521
bidimensional systems potential gradient calc. by charge simulation *(Italian)* 3-50570
chromaticity temp. determ. of light sources, using least squares approximations and splines *(Slovak)* 3-50724
effective variance method proof, least squares method review 3-5533
EPR data anal., parameter errors calc. 3-23785
ESR powder pattern, g and hyperfine tensors, least squares anal. 3-38680
FERRET adjustment code—status/use 3-55121
frequency determination by autoregressive spectral estimator, accuracy 3-54261
FT-IR quantitative spectroscopic analysis of multicomponent samples, new least-squares methods, appl. to xylene isomers and mixtures 3-29337
general solution, equiv. forms 3-20608
geodesy, least squares adjustment in Euclidean spaces, duality relation 3-24942
geodetic networks, least squares prediction of horizontal coord. distortions in Canada 3-24945
Hall measurement in semiconducting materials, numerical data processing method *(Russian)* 3-40635
Hartree-Fock values, analytic approx. 3-31935
interferograms, polynomial fit 3-30922
least squares collocation, generalised method 3-53909
Lorentzian profile width determ., w.r.t. shot noise 3-49462
LSL—a logarithmic least squares adjustment method 3-55120
macromolecule, interpretation of NMR relax. results 3-6812
magnetic anisotropy consts. of arbitrary order for cubic systems 3-52451
Marchenko's integral eqn. for one-dimens. inverse scatt. problem, regularisation by total least squares 3-10645
neutron diffr., profile refinement and integrated intensity refinement 3-7874
neutron powder diffraction, cryst. struct. refinement by profile anal. and least squares anal. 3-13035
one dimensional heat conduction system parameter identification method *(Japanese)* 3-7382
OTF, numerical calc. using least squares curve fitting and Gaussian integration *(Chinese)* 3-41772
plates, polygonal, in-plane stress evaluation due to thermal inclusions 3-42132
protein crystallography, least squares refinement and scaling procedure 3-34772
proteins, stereochemistry, constrained-restrained least-squares macromolecular model building computer program, appl. to lysozyme 3-39585

least squares approximations continued
  pulse signal amplitude estimation using collocation in terms of Krakovian calculus 3—1121
  radiation detector signals, least-squares amplitude estimation using Krakovian calculus 3—1168
  reactor physics, firt order Boltzmann eqn. and initial value problem, least squares derivation 3—41094
  restrained least-squares method with computer graphics for protein struct. refinement 3—53628
  roughness meas. and evaluation using microcomputer-based system 3—45111
  semiconductor, two-donor (majority) levels determ. from Hall effect meas. 3—8442
  spectroscopy computing appl. 3—10816
  stationary plane thermal problems, boundary point least squares soln. 3—1927
  surface topography, normal least-squares and geom. mean lines and log-normal distrib. 3—47204
  X-ray, crystallography, phase incorporation in least-squares approx. 3—32253
  X-ray powder diffr. data, unit cell parameters calc., FORTRAN IV program *(Bulgarian)* 3—7855
  CuI, $E^1\Sigma$ state, mol. consts. calcs. 3—11776
  ^{99}Tc(n,γ), 2.65-2000 keV, average neutron capture cross section meas. 3—772
leather *see materials*
LEC growth *see crystal growth from melt*
LED *see light emitting diodes*
ledeburitic steel *see alloy steel*
Lee model
  boson model, four-point interaction and Yukaway interaction equivalence 3—11163
  extended Lee model and three-particle eqns. 3—5966
  fermion model, four-point interaction and Yukawa interaction equivalence 3—11164
  Yukawa interaction, operator approach to strong coupling transmutation 3—500
LEED *see low energy electron diffraction*
legal research (computing applications) *see social and behavioural sciences computing*
legislation
  deregulation message, audio-visual package appl. 3—54786
  film laboratory in Helsinki, Finnish Broadcasting Co. (YLE), main design aspects 3—5907
  industrial noise pollution control for classified installations, legislation anal. *(French)* 3—7292
  noise, acoustic and RF, European regulations, rel. to computer installations 3—24652
  noise-induced hearing losses in industry, role of audiometric monitoring 3—19645
  radiation protection, ICRP recommendations in Hungary, experience in appl. 3—17097
length measurement
  see also micrometry
  fibrous effluents meas. system *(French)* 3—20885
  interference based precision methods and means of measuring internal dimensions 3—45114
  joint time and length standard 3—254
  microscopes with elevated accuracy micrometers, for small length meas. 3—49323
  optical touching with interference line, two-coordinate measuring instruments, appl. to bore walls *(German)* 3—36075
  photoelectric microscope, errors in setting on engraved lines 3—45113
  photoelectric microscope, in comparator for engraved length measures 3—45112
  sarcomeres of contracted muscle, accuracy of length meas. by laser diffr. 3—44351
  standards and calibration *(Rumanian)* 3—5770
  surface deviations from rectilinearity and planarity, meas., Soviet Standard for unit length 3—49319
  He-Ne lasers wavelength determ., in 633 nm range, length unit establishment appl. *(Slovak)* 3—22141
length standards *see measurement standards*
Lennard-Jones and Devonshire theory *see liquid theory*
Lennard-Jones potential
  amorphous metal, non-crystalline structures in a Lennard-Jones potential 3—2414
  atomic and mol. scatt., JWKB phase shifts for small impact parameters 3—50468
  BCC (211) system, surface self-diffusion, mol. dynamics simulation 3—38178
  benzene, liq., struct. and dynamics, Lennard-Jones pot. 3—37761
  Boyle line and density of fluids 3—33327
  n-butane, C-C and C-O bonds intrinsic torsional barrier, PCILO and ab initio calcs. 3—45855
  n-butane in H_2O, Monte Carlo simulation, conformational evidence for hydrophobic effect 3—21845
  chlorofluoroacetonitrile, liq., chiral discrimination, hard-core model for repulsive forces 3—33064
  dense fluids, triplet distrib. function, computer simulation determ. 3—27809
  dense systems, Tjon effect, mol. dynamics study 3—13064
  density distrib. and solvation forces between two cylinders 3—2359
  dichloromethane, liq., mol. dynamic props., computer simulation 3—18201
  FCC lattice, impurity jump process by means of vacancy mechanism, mol. dynamics calcs. 3—18334
  fluid, (12,6), triplet correl. functions, simulations 3—33056
  fluid, binary, liq.-vapour interface, three-phase region and Cahn wetting transition 3—42889
  fluid, binary, liq.-vapour interface, two-phase region, struct. and surface tension 3—42888
  fluid, critical behaviour in Percus-Yevick eqn. for Lennard-Jones pot. 3—10787
  fluid, damping matrices, mol. dynamics simulation, testing of relax. time models for memory function 3—13060
  fluid, velocity autocorrelation function, computer simulation of low density 3—33052
  fluids, perturbation theory, square-well 3—42500
  glass, Lennard-Jones, longitudinal and transverse excitations 3—13386

Lennard-Jones potential continued
  glass, vibrational spectrum, average dynamical matrix calc. 3—33377
  high pressure gas adsorpt. on solid surface, temp. effect 3—28213
  hydroxypyridines, tautomers, interaction of H_2O, SCF-MO-LCAO-ab initio calcs. 3—31937
  inert gas condensed liquids, mass and size effect 3—27812
  ionic condensed liquids, mass and size effect 3—27812
  Lennard-Jones pot., asymptotic perturbation technique 3—20702
  liquid, crystallisation rates, mol. dynamics method study 3—13147
  liquid thermal cond. calcs. by perturbed molecular dynamics simulation 3—47172
  liquids, Lennard-Jones pot. effect on viscosity, mol. dynamics study 3—37752
  methane, Lennard-Jones 6-12 pots., heat of adsorption calc. 3—22821
  methyl ethyl ether, C-C and C-O bonds intrinsic torsional barrier, PCILO and ab initio calcs. 3—45855
  molecular dynamics of 16000 Lennard-Jones particles 3—20812
  molecular fluid, Rayleigh light scatt., mol. dynamics study 3—57941
  molecular liqs., nonaxial quadrupole forces effect 3—56787
  one dimensional, corrective modes, density fluctuations 3—42499
  Percus-Yevick approx., behaviour near critical point, Lennard Jones pot. 3—18195
  pyridones, tautomers 3—31937
  quantum fluids, interface profiles and surface tension, generalised van der Waals theory 3—2923
  screw dislocation in model HCP lattice, computer simulation 3—13222
  solid-fluid interface, struct. and thermodynamics 3—57205
  solid-gas interface models, wetting transitions 3—57210
  solids, vacancy formation free energy 3—2548
  solitons in one-dimensional Lennard-Jones lattice 3—16296
  spectral line shapes for rot. elastic and inelastic collisions, quantum and semiclassical calcs. 3—55999
  ternary gas mixtures, transport coeffs., Chapman-Enskog method 3—32834
  tetrahydrofuran, liq., pseudorot., Monte Carlo statistical mechanics simulations 3—18202
  transition metal hydrides, diatomic mol. param. calc., electronegativities 3—26878
  two-dimensional fluids, semiclassical statistical mechanics 3—32705
  weakly bound molecules, dissociation energies estimation 3—41640
  Ar clusters, form. in compressed gas, mol. dynamics study 3—6820
  Ar, dense fluid, Lennard-Jones representation, thermal cond. 3—242
  CS_2, liquid, time correlation functions for three centre Lennard-Jones model 3—27814
  H, spin-polarised, collision integrals, transport coeffs. calcs. 3—32833
  H-^{3}He(^{4}He), collision integrals, transport coeffs. calcs. 3—32833
  H_2O, liquid, intermolecular pot. functions, Monte Carlo simulations 3—7892
  $^1H_2$ and $^2H_2$, on graphite (0001) surface, laterally averaged interaction pot. calcs. 3—38987
  $(^3He)_4$ fermionic tetramer, binding energy, var. calc. 3—21944
  ^{4}He, liquid, optimised free surface from hypernetted-chain approx. 3—33067
  Kr, dense gas, eqns. of state 3—22565
  Mo ternary chalcogenide superconductors, lattice dynamics, neutron scatt. studies, book contrib. 3—8158
  Na^+ in water, methanol and tetrahydrofuran, Monte Carlo statistical mechanics simulations 3—18203
  W (110), surface self diffusion, mol. dynamics simulation 3—2943
  Xe, dense gas, eqns. of state 3—22565

lenses
  see also aberrations; aspherical lenses; contact lenses; electron lenses; electrostatic lenses; focusing; magnetic lenses; photographic lenses
  achromat doublet optimisation with TI-59 calculator 3—17593
  achromatic doublet design, double-graph technique evaluation 3—37156
  achromatic object positions in optical systems 3—1741
  achromatic objective lens construction and testing appls. for testing equipment measuring MTF 3—27198
  achromatising lens, modified, for optometry 3—19848
  acoustic holographic lens image field computation methods 3—1875
  acoustic holographic lens image quality and diffraction efficiency, theory and expt. 3—1876
  acoustic microscope lens, planar, development 3—46412
  anastigmatic lenses, areas of occurrence and use in objective design *(Russian)* 3—32433
  aplanatic object glass, $3^1/_4$ inch dia., first by Tulley (c. 1821) 3—25328
  aplanatic telescopic system consisting of two lenses, design parameters *(Czech)* 3—41959
  apochromat, three-lens, three-colour, calc. using graphical method 3—27197
  apochromat chromatic correction, information reliability analysis 3—37164
  apochromat objectives, three-lens cemented, calc. method 3—32438
  astigmatic lenses with planar electrodes, electron-optical props. 3—17430
  astigmatism, unwanted, in lenses with concentric variation in sagittal power, ophthalmic appl. 3—35023
  automated optical component test system 3—7237
  automatic centering lathe, type AtsSM, for optical manufacturing 3—37254
  automatic design methods, recent advances *(Japanese)* 3—12274
  B-scan echography linear array, acoustic field, two dimensional model 3—50870
  beam expanding telescope for alignment and system integration 3—12280
  beam-shaping optics for polygon-type scanners, designs 3—7128
  CAD of complex lens systems 3—12276
  catadioptric magnifier simple system, design and fabrication 3—50729
  catadioptric systems, aberration anal. *(Korean)* 3—1740
  centering error control methods in optical element fabrication and assembly 3—12265
  chromatic aberration dependence on construction elements of optical systems 3—26969
  coherent field complex amplitude distrib., interlens distance effect 3—6903
  conical microlenses, chem. etched, for coupling single-mode lasers into single-mode fibres 3—1771
  connector, low-loss, for single-mode fibres 3—1772
  Cooke triplet design, Petzval curvature selection significance 3—27185
  corrected doublet CAD, Casio FX-602 P program 3—56296
  cost effective design principles 3—41953
  counter-moving, plane of projection stability and correction possibilities *(Hungarian)* 3—27190
  design of optical systems, optical glass for achromatisation 3—12259

lenses continued
- diamond turning, single point process, of IR optics 3−7234
- diamond turning impact in optics industry 3−7235
- distributed index planar microlens applied to 2D lightwave components 3−37244
- distributed-index planar micro-lens, ray tracing 3−1811
- expanded beam fiber optic connectors 3−22231
- fabrication, contemporary methods, conf. San Diego, CA, USA (Aug. 1981) 3−5479
- far-infrared and submillimeter appls. of mirrors and lenses, microcomputer-controlled fabrication 3−1819
- fast aplanatic IR objective design using high refr.-index materials aberration correction 3−41949
- fibre endoscope, objective of simple design *(Russian)* 3−48367
- fibre lens, tapered gradient-index, image properties, ray path eqn. *(Chinese)* 3−41983
- fibre-optic lens, connector development, use of graded-index lenses 3−46331
- finite aperture lens system anal. using VanderLugt's operational notation 3−50727
- focal region field computation 3−41761
- focusing elements, cineform, for CO_2 laser, computer synthesised 3−36969
- focusing of light beams with random phase modulation 3−36936
- Fourier lens, optimal setup of optical Fourier transform 3−21999
- Fresnel, electron beam lithographic fabrication 3−32513
- Fresnel systems, ray tracing 3−46154
- graded index, for optical collimator pigtails 3−22183
- graded-index rod lenses, cylindrically symm. refr. index. profile meas. by nondestructive method 3−36070
- gradient index lens endoscope, chromatic aberration correction 3−39701
- gradient index lens technology survey 3−41952
- gradient index rod lens of CR-39 trifluoroethyl methacrylate copolymer by vapour phase transfer process 3−37153
- gradient index rod lens with high numerical aperture, ion exchange fabrication 3−37150
- gradient lens matching Lambert radiator to multimodal fibres 3−12359
- gradient-index eyepiece design 3−37152
- gradient-index rod lens, algebraic formula for fifth-order distortion 3−37151
- gradient-index rod lenses, spherical aberration 3−36946
- gradient-index rod prepared by photocopolymerisation of ternary monomer system 3−37154
- GRIN rod single lens in fibre optic multifunction device for WDM transmission 3−1806
- history of optical fabrication, grazing incidence optics 3−5583
- holographic aberration-free lens design, in presence of construction/reconstruction wavelength shift 3−6926
- holographic and refractive optical elements, equivalence *(Russian)* 3−41785
- holographic lens image field computation using boundary-diffs.-wave integral 3−6868
- holographic lenses, higher order aberrations 3−32326
- holographic memories, optical element aberration requirements and location accuracy *(Russian)* 3−50629
- holographic optical element properties and appls. *(Japanese)* 3−12096
- interference pattern aberration function computation 3−46175
- IR imaging, air-spaced doublet achromat design, aberration theory 3−41954
- laser beam expanding telescope analysis *(Chinese)* 3−41853
- laser speckle velocimeter utilising optical fibres 3−7673
- luneburg lens, generalised, ray trace improvements, refr. index gradient 3−37155
- micro-optics *(Japanese)* 3−12085
- microlithographic reduction lens image field placement deviation anal. 3−37159
- microscope optical systems from Jena, objectives, eyepieces and projection lenses 3−387
- objective, low-power, for two stage microscopy of 25 mm object field 3−388
- objective lens MTF estimation using tabular method 3−1586
- objectives, defocusing in coherent illumination, sensor output anal. *(Russian)* 3−56298
- objectives, infinitely thin three-lens, fundamental parameters formulas 3−32439
- ocular crystalline lens, split laser technique for optical study 3−9789
- ocular lens turbidity, conc. change effect, random fluctuation theory prediction 3−34831
- OTF and lens evaluation progress in Japan *(Japanese)* 3−12083
- pancratic systems, three-component, mech. compensation of image displacement 3−37165
- periodic lens waveguides, Gaussian beam parameter oscills. 3−1762
- photolithographic for Ultratech wafer stepper, characterisation 3−37158
- planar microlens, distrib. index, stacked planar optics concept 3−1809
- planar microlens, distributed-index, three-dimens. ray optics 3−32430
- planar microlens, distributed-index ray traces 3−1808
- plastics, fabrication techniques, materials and parameters 3−56291
- press forging for IR optical systems 3−7226
- prototype, automatic generation by global minimum technique 3−32437
- radius testing with pneumatic device under prod. conditions 3−37253
- random inhomogeneous media, light reflection, partial wave front reversal *(Russian)* 3−1568
- rhodamine 6G grazing-incidence dye laser with an intracavity lens 3−41822
- schlieren device sensitivity threshold determ. using lenses 3−37163
- SELFOC technology in Japan 3−1780
- sound focusing, lens, quasi-parallel-sided 3−50868
- speckle shear interferometry using split lens, slope data determ. 3−5848
- specular high-speed objective with internal scanning, structural design *(Russian)* 3−46269
- spherical Gaussian beam focusing through train of lenses or mirrors 3−46248
- surface structure, veiling glare and image quality in 3 to 10 μm spectral region 3−12269
- thermal lens, thermo-optical distortion investigation for a given random radial heat source distrib. *(Russian)* 3−46270
- thickness monitor, optical, for simultaneous meas. of thin film refl. and transmittance 3−374
- thin and thick lenses, operator algebra approach to optics 3−1554
- thin lens, reference sphere transformation by aberration free infinitely large optical system 3−12082

lenses continued
- three-lens cemented component calc. algorithm 3−7131
- transformation of spherical nonuniform lenses 3−27188
- two-lens compound objective, chromatic aberrations in visible and ultraviolet *(Russian)* 3−26959
- US axicon for nondestructive testing 3−14832
- wavelength division multiplexing using GRIN lens based techniques 3−50787
- wavelength multiplexer, dual GRIN lens, ray tracing analysis 3−37238
- X-ray diffraction lens, magnifying cylindrical, image transmission 3−27805
- AlGaAs-GaAs DH planar LED using junction current confinement, coupling to large core dia. fibres using lenses 3−12362
- KBr colour corrector lens, press forging for IR optical systems 3−7226
- $LiNbO_3$ planar Bragg-grating lenses, CHF_3 reactive-ion etching fabrication 3−56351
- ZnO film lenses for surface acoustic waves 3−42904

lepton decay
- *see also muon decay*
- neutrino radiative decay and cosmology 3−26032
- particle physics and cosmology, decaying neutrino investig. 3−10547
- spin 3/2 and spin 1/2 neutrinos, role in lepton decays 3−54663
- $\nu \to \pi + \mu$, quantum processes in EM wave field *(Russian)* 3−26058
- $\nu_H \to 3\nu_L(\nu_L\gamma)$, cosmological bound on heavy neutrinos 3−45392
- τ, decay, current expt. situation 3−11174
- τ, MARK II results at PEP 3−36256
- τ, weak decay 3−40901
- τ, weak decays 3−40902
- $\tau \to 3\pi^\pm$, measurement of τ lifetime 3−31210
- $\tau \to (\pi,\rho,A_1)\nu_\tau$, predictions from Bethe-Salpeter $q\bar{q}$ dynamics 3−26094
- τ decay, charged-particle multiplicity distrib. meas. 3−11180
- τ decay in nonstandard electroweak gauge models 3−40903
- τ decay lifetime meas. in MAC detector at PEP 3−31194
- $\tau \to e\bar{\nu}_e\nu_\tau$, lifetime meas. 3−36247
- $\tau \to \nu\pi X$, $X=\rho,\omega,\phi,\eta$, second class currents, weak current form factors 3−31209
- $\tau^+\tau^-$ decay product correl. from e^+e^- annihilation 3−16628
- $e^\pm \to \pi^\pm + \nu$, quantum processes in EM wave field *(Russian)* 3−26058

lepton-deuteron interactions
- *see also lepton-deuteron scattering*
- $de \to e'np$, near break-up threshold at high momentum transfer, exchange effects 3−31219
- ed, nonperturbative effects, deep inelastic scattering, structure functions 3−26119
- $\vec{e}^\pm d$, $SU(2)\times U(1)\times U'(1)$ and SO(10) gauge models, distinguishability from Weinberg-Salam model 3−6041
- νd, hadron production at Fermilab energies 3−21118
- νd, inclusive ρ°, ω°, η°, $K^{*\pm}(890)$ prod. 3−21119
- $\bar{\nu}d$, p and n structure functions from charged current events 3−11183
- $\nu d \to \mu^- \Lambda X$, charmed baryon prod., $\Lambda_c{}^+ \to \Lambda X$ decay, $\Lambda_c{}^+$ total cross section 3−6094
- $\bar{\nu}d \to np\bar{\nu}$, reactor experiments, inverse β decay at 6.5, 8.7, 11.2 m, neutrino oscillations 3−26048

lepton-deuteron scattering
- *see also lepton-deuteron interactions*
- ed, polarisation effects, one-photon exchange approx. 3−11189
- $ed \to ed$, electroweak radiative corrections calc., $\sin^2\theta_w$ value 3−16646
- μ^+d, 280 GeV, deuteron structure function meas., comparison of neutron and proton structure 3−54912
- $\nu d \to \nu d$, electroweak radiative corrections calc., $\sin^2\theta_w$ value 3−16646

lepton-hadron interactions
- *see also lepton-hadron scattering; lepton-nucleon interactions*
- current algebra, invariant on light cone, deep inelastic electron-hadron scatt. appl. 3−54864
- deep inelastic collisions comparison with soft hadronic interactions 3−6123
- deep inelastic scatt., QCD power corrections to parton model 3−11145
- deep inelastic scattering, quark-proton model, scaling violations 3−26118
- deep inelastic scattering, structure functions, review 3−40906
- deep inelastic scattering, two-loop QCD corrections for cross-sections 3−31158
- gauge theory and particle physics, book 3−5511
- heavy quark production 3−40859
- high energy physics conf., Paris, France, (July, 1982) 3−35771
- jet production comp. in Kp, pp, e^+e^-, νN, μp interactions 3−21167
- leptoproduction structure functions, partons and quark operators for higher twist 3−31213
- partons in soft-hadronic processes, conf., Erice, Italy (March 1981) 3−5499
- quark jet structure from deep inelastic lepton scatt. 3−21065
- semi-inclusive deep inelastic scatt., azimuthal asymmetry calc. 3−26121
- unified lepton-hadron field model with composite bosons 3−21106
- weak interactions, new result, summary and assessment 3−36252
- lh, deep inelastic scatt. structure functions, first power corrections 3−40911

lepton-hadron scattering
- *see also lepton-hadron interactions; lepton-nucleon scattering*
- nonsinglet struct. functions, moments, minimum sensitivity principle 3−45343
- QCD, many-parton distrib. and fragmentation functions, appl. to hadron jets 3−36220

lepton interactions *see lepton-deuteron interactions; lepton-lepton interactions; photon-lepton interactions*

lepton-lepton interactions
- *see also electron-electron interactions; electron-positron interactions; lepton-lepton scattering; neutrino-electron interactions; neutrino-neutrino interactions*
- $e\nu$ collisions, Higgs boson creation 3−6093

lepton-lepton scattering
- *see also electron-electron scattering; electron-positron scattering; lepton-lepton interactions; neutrino-electron scattering; neutrino-neutrino scattering*
- No entries

lepton mass
- dilepton production mass spectrum for hot quark matter from ultra-relativistic heavy-ion collisions 3−16798
- double beta-decay, constraints on lepton number nonconservation and Majorana neutrino mass 3−40813
- dynamical mass generation for quarks and leptons 3−45342

- **lepton mass** continued
  - electron-neutrino mass and electron capture in ^{163}Ho 3-49816
  - electroweak interactions, conf., Schladming, Austria (February-March 1982) 3-25675
  - excited lepton effects on e and μ anomalous mag. moments, masses and couplings 3-638
  - fermion mass relations and mass of t-quark *(Russian)* 3-6086
  - heavy leptons, chronon predictions of mass 3-49550
  - Majorana neutrino mass and triplet Higgs bosons 3-16738
  - Majoron, massless boson, universe missing mass, left handed γ mass 3-26035
  - neutrino, right-handed, Majorana mass generation, E_6 grand unified gauge model 3-6032
  - neutrino mass, conference on nucl. structure, Amsterdam, Netherlands (Aug.-Sept. 1982) 3-49078
  - neutrino mass and cosmological aspects *(Japanese)* 3-59202
  - neutrino mass and neutrino mixing, expt. evidence, review 3-31198
  - neutrino mass determ. from $HT \rightarrow HeH^+ + \beta^- + \nu_e$ β-spectrum, theory 3-729
  - neutrino masses, neutrino oscills. and cosmological implications 3-26032
  - neutrino masses and oscillations, review 3-54867
  - neutrinos, nonzero rest mass rel. to perturbations growth in isotropic Universe 3-44883
  - neutrinos, rest mass and possible contrib. to Universe missing mass *(Russian)* 3-30169
  - neutrinos mass and CP eigenvalues in SO(10) models, consequences for neutrinoless double-β decay 3-26046
  - neutrinos masses in parity nonconserving left-right symmetric model 3-16737
  - radiative contrib. in grand unified theories 3-31116
  - SO(10) model, superlight axion and neutrino masses 3-49614
  - standard electroweak model, neutrino counting 3-31112
  - $SU(2)_L \times 5U(2)_R \times U(1)_{B-L}$ left-right symmetry, K_L-K_S mass difference, ν mass formula 3-40835
  - $SU(2)_L \times U(1)$ model, supersymmetry and neutrino masses calc. 3-40832
  - $SU(2) \otimes U(1) \otimes S_4$ model, t-quark mass, ν mass and mixings, CP nonconservation 3-11105
  - SU(3) scheme, nonet case and extension to quarks 3-11073
  - SU(3) scheme, octet case 3-11072
  - supersymmetric GUTs, radiative quark and lepton mass suppression, Higgs supermultiplets 3-11097
  - supersymmetry, low energy, quark and lepton mass from radiative corrections 3-11056
  - $K_{\mu 2} \rightarrow \mu^+ \nu \gamma$, heavy-neutrino search 3-11170
  - ν, mass determ. from T β-decay, valine mol. struct. influence 3-21262
  - ν, new limits from ^{76}Ge neutrinoless double beta decay 3-49815
  - ν, spin properties, spin kinetic energy and intrinsic mass calc. 3-40890
  - ν_e, mass determ. from beta decay 3-40992
  - ν_e mass, calorimetric meas. computation from ^{163}Ho EC decay 3-21257
  - ν_e mass determ. from expts. on electron-capture beta-decay 3-49814
  - ^{76}Ge double β-decay, lepton nonconservation, massive ν and righthanded current limits 3-40829
  - ^{A}Te, A=128, 130, double beta decay, rejection of evidence for nonzero neutrino rest mass 3-45490
  - $^{A}Te \rightarrow {}^{A}Xe$, A=128, 130, double beta decay, neutrino rest mass determ. 3-31353
- **lepton-nucleon interactions**
  - *see also electron-nucleon interactions; lepton-nucleon scattering; muon-nucleon interactions; neutrino-nucleon interactions*
  - deep inelastic scatt. and nucleon structure 3-6102
  - hadron leptoproduction, transverse momentum effects and ang. energy flow 3-11143
  - jet production and fragmentation 3-40861
  - low-p_T particle prod. in nuclei, quark-parton model 3-6085
  - $\bar{l}N$, deep inelastic and elastic scatt., P-odd effects, review 3-45338
  - lN, deep inelastic scatt., hadron ang. distribs., T odd asymmetry in QCD 3-26105
  - lN, deep inelastic scatt. structure functions, slow rescaling variable 3-40912
  - $l^{\pm}N \rightarrow lgX$, gluon bremsstrahlung cross section, neutral current effects 3-16648
- **lepton-nucleon scattering**
  - *see also electron-nucleon scattering; lepton-nucleon interactions; muon-nucleon scattering; neutrino-nucleon scattering*
  - $\bar{l}N$, deep inelastic and elastic scatt., P-odd effects, review 3-45338
- **lepton-nucleus reactions**
  - *see also electron-nucleus reactions; lepton-nucleon interactions; muon-nucleus reactions; neutrino-nucleus reactions*
  - low-p_T particle prod. in nuclei, quark-parton model 3-6085
- **lepton-nucleus scattering**
  - *see also electron-nucleus scattering; lepton-nucleon scattering; muon-nucleus scattering; neutrino-nucleus scattering*
  - No entries
- **lepton production**
  - *see also electron pair production; muon production; neutrino production*
  - Bethe-Heitler process, lepton pair prod. of light pseudoscalar particle 3-45332
  - dilepton production mass spectrum for hot quark matter from ultrarelativistic heavy-ion collisions 3-16798
  - Drell-Yan cross section, high energy behaviour 3-49703
  - Drell-Yan process 3-21160
  - hadronic collisions, dilepton prod., oscillatory scaling violations and QCD Coulomb 3-21080
  - e^+e^-, $\mu^+\mu^-$ and $\tau^+\tau^-$ pair prod. via virtual-photon exchange in uniform mag. field 3-21057
  - $e^+e^- \rightarrow l\bar{l}$, reaction cross-section measurements, comparison with QED predictions 3-40845
  - $e^+e^- \rightarrow \tau^+\tau^-$, CELLO results at PETRA 3-36230
  - $e^+e^- \rightarrow \tau^+\tau^-$, results from JADE at PETRA 3-36257
  - $e^+e^- \rightarrow \Upsilon^+\Upsilon^-$, forward-backward asymmetry meas. in lepton pair prod. 3-31224
  - $eN \rightarrow e\gamma^*(Z^0)X \rightarrow el\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3-40910
  - (γ, l^+l^-), polarisation phenomena, differential cross section, Born approx. 3-36405
  - $hh \rightarrow l^+l^-X$, transverse momentum distributions in massive quark model, QCD comparison 3-26163
  - $h_1h_2 \rightarrow l^+l^-X$, perturbative QCD calc., soft gluon effects, K-factor 3-54883
  - $h_1h_2 \rightarrow l^+l^-x$, lepton pair prod., role of soft gluons 3-16609
- **lepton production** continued
  - $\mu N \rightarrow \mu\gamma^*(Z^0)X \rightarrow \mu l\bar{l}X$, deep inelastic scatt., lepton pair prod. differential cross section calc. in QCD *(Chinese)* 3-40910
  - $\bar{p}p \rightarrow (\gamma^*, 2^0)X \rightarrow l^+l^-X$, soft gluon emission effects from QCD quark form factor 3-26074
  - $pp \rightarrow \gamma X$, QCD subprocess in direct γ and l^+l^- production 3-21086
  - $\bar{p}p \rightarrow l\bar{l}X$, standard and left-right symmetric model predictions 3-49708
  - $\pi p \rightarrow l^+l^-$, polarisation distribution of quarks, perturbative QCD, weak asymmetries 3-21088
  - $\psi \rightarrow \mu^+\mu^-$ following πN collisions, b and c quark roles 3-36194
  - $qh \rightarrow l\bar{l}X$, Drell-Yan process in QCD, two-loop graphs, spectator partons 3-6121
- **lepton scattering** *see lepton-deuteron scattering; lepton-hadron scattering; lepton-lepton scattering; photon-lepton scattering*
- **lepton spin and parity**
  - spin flipping in Penning trap, motional mag. field appl. 3-49679
- **leptonic decays**
  - *see also baryon leptonic decay; meson leptonic decay; muon decay*
  - τ, weak decay 3-40901
  - τ, weak decays 3-40902
  - $\tau \rightarrow e\bar{\nu}_e\nu_\tau$, lifetime meas. 3-36247
  - Z^0 heavy boson decay, leptonic branching ratio 3-570
- **leptons**
  - *see also electrons; heavy leptons; lepton spin and parity; muons; neutrinos; positrons*
  - bag model 3-16622
  - book, leptons and quarks, weak interaction theory 3-54593
  - composite models, W dominance and weak boson mass bounds 3-40877
  - composite models of quarks and leptons, unification of nongravitational interactions constraints 3-40818
  - composite models of quarks and leptons and strong-coupling lattice gauge theories 3-31182
  - composite quarks and leptons, generation labels and mass matrices 3-16621
  - composite quarks and leptons, mass generation mechanism 3-11155
  - composite supersymmetric model of quarks and leptons 3-40876
  - confining model with composite left-handed and unconfined right-handed particles 3-11156
  - early Universe, creation of structure by Lepton Brusselator 3-20539
  - fermion-boson composite model of quarks and leptons, masses, flavour mixing angles 3-31179
  - geometrical rishon model, lepton and quark generations 3-40875
  - intrinsic symmetry props. of quarks and leptons, soliton solns. of EM fields 3-40819
  - metacolour schemes and supermetacolour 3-16602
  - rishon model of composite quarks and leptons 3-11157
  - SO(14) grand unification model with confining model of weak interactions 3-569
  - SO(14) GUT, fractionally charged leptons 3-31109
  - spin $^{3}/_{2}$ leptons, existence theory 3-54860
  - straton composite model symmetry 3-45376
  - $SU(3)_{HC} \times SU(6)_L \times SU(6)_R$ model, composite quarks and leptons for restricted anomaly matching 3-620
  - SU(N) metacolour gauge group, composite models without spectators 3-21105
  - subquark model, quark and lepton form factor structure 3-36221
  - substructure, observable consequences for collider tests 3-54894
  - supergravity grand unified theories, quarks, leptons, gauge mesons superpartners masses 3-36174
  - supernovae, homologous collapse and deleptonisation of evolved stellar core 3-10307
  - supersymmetric subconstituent models 3-616
  - topological compositeness of quarks leptons and electroweak bosons 3-621
  - two flavour preon model, spin 1/2 states, quark and lepton generation stability 3-618
  - weak interactions composite model 3-31128
  - $e^+e^- \rightarrow e^+e^-$, 14-34 GeV, electroweak coupling constants, scalar lepton search 3-11167
  - $e^+e^- \rightarrow \mu^+\mu^-$, electroweak coupling constants, scalar lepton search 3-11167
- **leucocytes** *see blood; cellular biophysics*
- **level control**
  - opencast mine groundwater lowering automation *(German)* 3-39859
- **level crossing (energy)** *see energy level crossing*
- **level measurement**
  - automatic, hydrostatic leveler, based on light reflection 3-4993
  - cryogenic level-measuring calibration system with thermal stabilization of the transducer mounting 3-10850
  - fiber-optic liquid level detector 3-17624
  - liquid surface contactless level sensing by laser beam reflection 3-257
  - LOFT expt., real time analysis and display of reactor system mass inventory 3-21455
  - radar system for fluidised bed level detection, using microwave short-pulse generator 3-35961
  - vibrational level gauge with temperature-error compensation 3-10829
- **level meters**
  - *see also power measurement*
  - capacitive level meter for continuous meas. of liquid nitrogen level 3-45128
- **levels, energy** *see energy states*
- **levitation, magnetic** *see magnetic levitation*
- **LIDAR** *see optical radar*
- **Lie groups**
  - *see also elementary particle symmetry*
  - algebra structure, degenerate Hamiltonian and bi-Hamiltonian systems 3-30773
  - almost free Lie algebras, graded deforms. *(Russian)* 3-5590
  - Backlund transformation groups of non-linear evolution equations and the Painleve property 3-40381
  - Benjamin-Ono eqn., hierarchy of symmetries, Lie algebra 3-93
  - Born-Infeld eqn., nonlinear, exact solns. 3-20647
  - BRS transformations, Lie algebra cohomology and gauge transformation groups 3-30980
  - bundles of geometric objects on differentiable manifold, constructive approach 3-30717
  - Cartan-Gram determinants for simple Lie groups 3-21022
  - Casimir operator, computation of eigenvalues 3-54859
  - collective coordinates on symplectic manifolds 3-45316

Lie groups continued
commutativity of adjoint operator algebras 3-30589
commutativity of products for adjoint operators 3-30588
complex Lie groups and Clebsch-Gordan coeffs., infinitesimal operators for representation 3-105
conformal point transformations, invariance conditions and Lie derivatives 3-20991
conservation laws, group structure and derivation 3-54863
conserved Noether currents and path integrals for dynamical groups 3-26015
contragradient algebras and Lax operators associated with simple Lie algebras 3-31032
diffusion equations and Lie and Lie-Backlund transformation groups 3-227
Dirac supermultiplet, Di and Rac fields, supersymmetric interactions 3-5973
evolution equations, nonlinear, integrability criterion 3-49140
exceptional superalgebras F(4) and G(3), explicit construction 3-11059
Faddeev-Popov formula nonperturbative modification, naive vacuum banishment 3-30981
finite subgroup bases for compact Lie groups 3-6005
finite-component field wave eqn., local conformal invariance 3-11009
finite-component field wave eqn., local conformal-invariance 3-11008
finite-dimensional fermion algebra decomposition into irreducible spaces 3-30764
free relativistic closed string, group-theoretical approach to quantisation 3-21111
Furry theorem for non-Abelian gauge Lagrangians, Lie group representation, C parity, vertex functions 3-11114
gauge theories, higher order, over multiple fibre bundles 3-45271
generalised coherent states and group representations on Hilbert spaces of analytic functions 3-30659
generalised quaternions and space-time symmetries 3-11057
geometrical invariance, covariance in * quantisation 3-40403
graded gauge theories over supersymmetric space 3-45272
Grassmannification, supergroups of graded Lie algebras 3-16220
gravitation and unified covariant formalism of classical gauge fields in equiaffine space 3-5680
hadronic mechanics, Lie admissible Fock space foundations 3-31075
hadrons internal symmetries, description and interpretation as exchange symmetry 3-6076
Hamiltonian actions, normal forms generalising action-angle coords. 3-49582
Hamiltonian relativistic mechanics, Weyl group orbits 3-6021
Hamiltonian systems, linear differential eqns. with quadratic integrals, complete integrability 3-30608
harmonic oscillator, symmetry group of contact transforms. 3-49187
Harry-Dym eqn., Lie-Backlund symmetry generation 3-49594
Hermitian group, nondegenerate, conjugacy of compact subgroups 3-49143
homogeneous Riemannian manifolds, quantum and classical mechanics 3-10620
Inonu-Wigner contraction lifting at level of universal coverings 3-31078
interacting boson model II, energy spectra with SO(6) dynamical symmetry for even-even nuclei 3-16721
interacting boson model II, U(5) limit 3-16720
interacting boson model-II, Lie algebra characterisation, SU(3) limit, rotational limit 3-36338
internal multiplicities in the Cartan classes 3-6006
internal supergauges 3-6011
internal supersymmetry and SU(2/1) quantum asthenodynamics, exterior gauging 3-26024
internal symmetry in theory of multispin particles 3-5978
invariance identities for finite gauge transforms., particle in gauge field motion 3-36149
involutive sets of polynomials on Lie algebras and extension of rings of scalars *(Russian)* 3-40808
Kadomtsev-Petviashvili eqn., infinite sequences of conservation laws 3-49574
Kaluza-Klein theories, study with Riemann geometry with conformal symmetries 3-40447
Kostant complex, spectral props. 3-10616
Kronecker products of representations of exceptional groups 3-6001
Landau-Lifshitz eqn., formulation, infinite-dimensional Lie algebra on solns. 3-33875
Leech roots and Vinberg groups 3-26006
Lie-admissible formulation of differential systems of even order 3-30591
ligand field theory, Lie groups and unitary transformations 3-36666
local classical symmetries of Hamiltonian vector fields 3-49583
locally-operating realizations of groups and superequivalence of factor systems 3-6014
Lorentz algebra on parabolic basis, Clebsch-Gordan coeffs. calc. 3-49192
low rank Lie superalgebras, superfield representation on graded manifolds 3-40800
matrix representation, graded Lie group 3-31083
modular quantisation, Fock representation with U(m) symmetry 3-31161
moving frames and prolongation algebras 3-21024
Nambu dynamics, Lie admissible structure of quantisation 3-40393
Noether and Lie symmetry groups of nonlinear differential eqns. 3-5999
non-Noethar constants of motion using differential geometry 3-30660
noncompact groups with Jordan structure and noncompact groups of supergravity, unitary representation 3-30752
nonlinear σ-model, SO(2,1) invariant, Lie symm. 3-36157
nonlinear actions, linearisation of nonlinear SU(1,1) representations 3-49580
nonlinear diffusion equations, Lie point symmetry groups 3-40526
nonlinear evolution equations with variable coefficient, spectral deformation 3-16564
orthogonal groups, algorithm for computing inner multiplicities 3-548
path-ordered phase factors as generators of gauge fields 3-5951
perfect fluid, hydrodynamical eqn. soln. via Lie groups 3-56520
principal chiral models, hidden symmetry algebra extension 3-31072
quantization, non-locality and Lie-admissible formulations 3-30656
rank dependency of group properties importance in grand-unified theories 3-6008
regular representations of Lie algebras 3-11061
renormalised Lie perturbation theory 3-30606
replication representations, branching rules 3-36167
representations of the superalgebra osp(2,1) 3-6012
restricted simple 3-dimens. Lie algebra, reducible representations *(Russian)* 3-36170

Lie groups continued
rotating waves bifurcation 3-5612
S_n group, irreducible representations, non-recursive expression 3-6009
self-dual SU(N) Yang-Mills fields, hidden-symmetry algebra 3-31041
self-dual Yang-Mills eqn., hidden-symmetry algebra 3-45282
sigma model, 2-D, parallel arguments to gauge theories in 4-D 3-45279
sigma model, nonlinear, surface fluctuation in large N limit 3-45278
SL(3, R), invariant complex structures, classification 3-11060
SO(4) shift operators and representations of SO(5) 3-6002
SO(n) representations, generalised Young tableaux, Kronecker products 3-6010
soliton equations and Euclidean Lie algebra $A_{21}^{(2)}$ fundamental representations 3-30632
space translations matrix representations of Schrodinger eqn. for one dimens. periodic pot. 3-35802
space-time manifolds, kinematic groups and Lie algebras 3-129
spin-kinematics path integrals in terms of Wiener measures 3-10622
star exponentials of the elements of the inhomogeneous symplectic Lie algebra 3-31085
SU(3) in O(3) basis, use of nonscalar shift-operator products 3-6003
SU(3) irreducible representation, closed formula for product 3-21023
subspace decompositions invariant under ad$_e$ for Lie-admissible algebras 3-30590
superalgebra, irreducible representation of SU(m/n) 3-31082
superalgebras, finite-dimens. representation 3-54862
superalgebras type II, irreducible representation 3-31079
superposition principles, Lie group nonlinear action for differential eqns. 3-59
supersymmetry, positive temperature breaking, supercharges 3-11055
symmetry conservation law duality, Runge-Lenz vector 3-44960
tensor products reduction with definite permutation symmetry 3-30997
time-dependent Schrodinger equations: symmetry breaking, separation of variable, and nonlinear effects 3-54639
Toda lattice, 2-D, using Lie superalgebras, calc. of reduction group 3-40503
Toda lattice eqns., Dynkin diagram symmetries 3-49534
topology of Yang-Mills fields and confinement, strings 3-26005
two-dimensional dynamical systems, integrability by quadrature and inverse scattering 3-16565
two-dimensional nonlinear string-type equations and their exact integration 3-31086
U(1) factors in branching rules 3-6007
U(n) basis, Sp(n,R) and Sp(n) groups, infinitesimal operator expressions 3-40342
varieties of Lie algebras with weakly growing sequence of codimensions *(Russian)* 3-5589
Wigner's little groups, Poincare transformations extended by dilatations 3-16562
Yang-Mills theories, SU(2) invariant, Lie symmetries 3-11011

life testing
laser, commercial, reliability 3-17523
semiconductor laser evaluation for space communications, diagnostic testing 3-1661
semiconductor multimoded laser for digital communication appl., functional life testing 3-1662
(Al,Ga)As/GaAs DH lasers, ageing-induced degradation (or lifetime) vars. statistical anal. 3-56259
CO sealed-off branch-selected laser operating at room temp., lifetime results *(Chinese)* 3-37001
γ-Fe_2O_3 semiconducting ceramic gas sensor, life testing, appls. 3-30847
GaAlAs DH lasers, effects of 140 Mbit/s operation on degradation 3-37028
$Ga_{0.47}In_{0.53}As$/InP p-i-n photodiodes, performance characts. and life test data 3-40692
He-Cd lasers, lifetime and reliability 3-1660
He-Cd lasers in commercial systems, life test statistics 3-1659

ligand field theory *see bonds (chemical); crystal field interactions; molecular energy levels*

light
see also airglow; optics; sunlight; zodiacal light
gravitational photon scattering in solar field, parametrised post-Newtonian formalism 3-20234
ray paths in gravitating refractive media, general relativistic eqn. of motion 3-10191

light absorption
see also atmospheric optics; densitometry; light transmission; optical constants; optical films; optical filters; optical saturable absorption; pleochroism; spectra
aerosols, optical properties comparison with models 3-48667
amorphous semiconductors, localised states, two freq. light induced absorpt. and energy density 3-38832
atmosphere, visibility in Detroit metropolitan area rel. to chemical comp. of fine particles 3-35260
atmosphere extinction at Cerro Tololo Inter-American Observatory, meas., (1964 to 1980) 3-10065
ATR zero-reflection conditions for metal and dielectric film optical constant meas. 3-49430
attenuation in coastal water, particle size and chlorophyll content effects 3-15445
attenuation in natural waters, optically discrete layers effect 3-48548
chalcogenide glasses, absorption edge, photoluminescence and photoconductivity, review *(Japanese)* 3-28900
chalcogenide vitreous semicond., photostruct. transformations due to local heating 3-7916
cyanogen bands, absorpt. and emission of light in the violet system at high temps. 3-45960
diamond, coloration by electron irrad., induced absorption bands 3-33302
diffuse thickness as a measure of light scattering 3-25911
disordered solids, optical absorpt. edge tail, exponential shape 3-14242
disordered systems with strong electron-phonon interaction, optical intraband absorpt. 3-19101
double-tuned circuit prism-thin beam coupler and polarisation conversion mechanism 3-56315
droplet surface oscillation self-excitation in EM wave field 3-26940
echelettes, with absorbing faces, wave scatt. theory 3-32453
exciton absorption, integral intensity temp. behaviour, theory 3-52040
exciton scattering by charged impurities, effects on exciton absorption band shift 3-28281
film absorption meas. by laser calorimetry 3-10874

light absorption continued
formaldehyde, monomer and dimer, without and in prescence of Ar, 3.508μ-HeXe-laser line absorpt. 3−26753
gas atom resonant interaction with standing-wave pulses separated in time 3−37608
gas-soot mixtures, gray gas weighting, coeffs. determ. method 3−21994
generalised reflectance scheme to determine optical props. of absorbing materials 3−52755
glass, molten, near IR absorpt. coeff., emissivity spectroscopy 3−3662
homeopolar cryst., optical absorption coeff., multiphonon processes *(Russian)* 3−3679
homogeneously broadened active medium with Kerr and resonant nonlinearities; light beam propag. 3−17584
interstellar extinction in LMC and Galaxy, analytical expression 3−59441
interstellar extinction in Orion molecular cloud, determ. from H_2 IR lines obs. 3−30449
interstellar extinction in SMC, obs. of galactic type UV extinction curve for (Sk 143) 3−10423
interstellar extinction towards galactic central region, results from obs. of M-type giant stars 3−10432
interstellar medium, characts. of peculiar UV extinction from low-resolution IUE obs. 3−54480
laser materials, optical absorpt. meas. using interferometric calorimetry *(Japanese)* 3−1729
laser nonstationary absorption wave in a solid transparent dielectric 3−32306
layer crystals, exciton light absorpt., temp. depend. anomalies 3−3078
lead phthalocyanine films, optical and photoelec. props., appl. to photocells 3−38428
liquid, molecular relaxation, energy dissipation, quantum statistical estimation 3−37750
Mars atmosphere, dust opacity during great dust storms 3−5191
Mars atmosphere, light absorpt. by global dust storms and effects on atmospheric circulation 3−5192
materials with optically smooth surfaces, radiation characts. 3−14233
metal spheres, optical absorpt., role of electron-hole pair excitations 3−57876
metals, optical absorptivity, surface roughness effects meas. 3−14236
metals, polyvalent nontransition, parallel bands and optical absorpt. 3−3044
molecular absorption, just overlapping line approximation 3−5104
molecular cryst., dielec. props., effect of exciton-exciton and exciton phonon interactions 3−47058
molecular cryst. spectra, vibronic struct., hypochromic and hyperchromic effects, dimer model 3−47059
molecular quantities, determ. by means of macroscopic systems 3−32239
molecular quantities, determ. by meas. of macroscopic systems 3−32240
multicomponent glasses, short range order and optical absorption edges 3−33121
n^+-n type struct., exclusion influence on light absorption by free carriers 3−8794
neutral attenuator for optical radiation 3−40663
nitrobenzene boundary layers, liq. cryst. states induced bysurface forces 3−22770
N-(4-nitrobenzo)-2-oxa-1,3-diazole phosphatidylethanolamine Langmuir film, chromophore modified, light absorpt. and photovoltage 3−38940
nonspherical particles, strongly absorbing or strongly reflecting, exctinction cross sections 3−21987
optical fibre absorption loss meas., calorimetric technique 3−46336
optical fibres, optical property measurement methods *(Hungarian)* 3−27250
p^+-p type struct., exclusion influence on light absorption by free carriers 3−8794
photoacoustic pulsed technique for absorpt. coeffs. meas. of optical materials 3−36104
polariton nonconservation as light energy capture mechanism 3−33646
polyacetylene, high press. optical absorption spectra, expt. and tight binding calc. 3−3763
polyacetylene, light scatt. and absorption 3−19143
polyacetylene, photoinduced soliton pair prod., instanton approach 3−3671
powder coatings on metal surfaces for laser treatment, absorptivity meas. *(Chinese)* 3−39280
radiative transfer, Monte Carlo method for multilevel problems with allowance for continuous processes 3−44666
resonance radiation absorption accompanying collisional line broadening 3−32406
Saturn atmosphere, methane absorpt. meas. rel. to cloud height differences between equator and South Equatorial Belt 3−59258
semiconductor, neutral impurity scatt., spin depend., Hall effect, electron drag, and light absorption methods 3−28346
semiconductor, optical absorpt., dislocation exciton spectrum 3−28824
semiconductor size quantized films, exciton absorption 3−3079
semiconductor size-quantised film, inter-subband IR absorption 3−3847
semiconductor solid solutions, optical absorption coeff., optimal fluctuation calc. 3−3675
semiconductor sphere, light interband absorpt. 3−28810
semiconductor superlattice, interband absorption coefficient in quantising mag. and elec. fields 3−57877
semiconductor surface space-charge layer, linear response to EM disturbance 3−43229
semiconductor thin film, inter-subband optical absorption in mag. field, freq. depend. cond. 3−14370
semiconductors, amorphous, optical absorption coeff., configurational-coord. model 3−38795
semiconductors, CW CO_2 laser annealing and alloying *(Chinese)* 3−27986
semiconductors, lightly doped, interimpurity absorpt. of IR radiation 3−38856
semiconductors, nonequilibrium electron-hole distrib., light absorpt. 3−28278
semiconductors, surface sound excitation by light absorpt. modulation 3−43512
skeletal muscle cross-striated fibres, adenine nucleotides localisation, UV absorpt. obs. 3−44195
solar radiation absorption and reflection in solids meas., vacuum technique 3−49457
sphere, absorpt. cross section, simple approx. 3−50601
subnanosecond high-voltage 50-Ω calibrated attenuator, for 50-J CO_2 laser system 3−27120
sunlight, extinction by El Chichon volcanic dust cloud rel. to twilight IR brightening over India 3−30053

light absorption continued
thin films, optical breakdown and heating kinetics with spatially homogeneous absorpt. under intense optical radiation 3−28920
thin films, optical breakdown prod. by intense light having spatially varying absorpt. 3−28921
transition metal oxides, optical absorption in weak mag. field, Green's function calc. 3−14264
Venus atmosphere, height depend. of aerosol extinction coeff. below clouds 3−15864
water vapor absorption at isotopic CO_2 laser wavelengths in 9-12 μm range 3−54113
$AgGaS_2$, mixed mode exciton polaritons, two-photon absorption spectra study 3−38321
$(Ag_{x/2}Ge_{1-x}Sb_{x/2})Te$, ferroelec. phase transition, elec. cond. and optical absorption studies 3−43496
Al film, obliquely evaporated, optical props. 3−14374
Al_2O_3, deposition in monolayers and multilayers 3−38265
Al_2O_3 film, preparation and optical props. 3−14490
As_2S_3, As_2Se_3 fibre characterisation for 10.6 μm transmittance 3−46296
As_2Se_3, glassy, with optical absorpt. of 60 dB/km 3−28826
$(As_{13}Te_{24}Si_{27}Sb_{18})_{1-x}Fe_x$ RF sputtered films, struct., elec., and optical props. 3−13649
Au colloidal particle deposition in monolayers and multilayers 3−38265
B-B, elec. conduction mechanism, elec. and optical props. 3−8495
Ba, 4d photoabsorption, shell collapse and contraction theories 3−41533
Ba^+, 4d photoabsorption, shell collapse and contraction theories 3−41533
Ba^{2+}, 4d photoabsorption, shell collapse and contraction theories 3−41533
Ba_2NaNbO_{15} crystals of different comps., optical and harmonic generation props. 3−28878
$BiVO_4$, absorpt. edge, temp. depend. 3−28814
C particles in gas suspension, optical props., comp. effects 3−19537
a-C:H films, elec. cond., optical absorpt., dopant gas effects on props. 3−18705
$Cd_xHg_{1-x}Te$, surface composition fluctuation effects on optical props. 3−28823
$CdInAlS_4$, fundamental absorption edge shift under hydrostatic press. 3−19100
$CdInGaS_4$, fundamental absorption edge shift under hydrostatic press. 3−19100
$Cd_{1-x}Mn_xSe$, optical absorption edge, temp. and Mn content depend. 3−57874
CdS, high pressure optical absorpt., resistivity and phase transformation 3−57028
CdS:Al films, transport and optical props., dopant conc. effects 3−18804
$CdSe(Te)(Te_{1-x}Se_x)$ films, prep. by laser annealing, elec. and optical characts., photovoltaic appls. 3−52931
CoO selective absorber coatings high temp. degradation 3−53588
Cr_2O_3-Cr, black chrome, electrodeposition on Sn, optical props., solar absorber appls. *(Russian)* 3−9003
Cu_xS film, evaporated, optical absorpt. behaviour 3−14376
GaAs, ion implanted, radiation damage, IR absorption spectra and lattice deformation 3−2619
GaAs, residual double acceptor, IR absorption, photoluminescence and Hall effect meas. 3−38334
$GaAs_{1-x}$-GaAs superlattices, strained, absorpt. meas. at high press. 3−47619
GaP, two-photon absorpt. *(Russian)* 3−23909
Ge, optical grade, procurement specification 3−1725
GeSe amorphous film, far IR absorption, composition depend. 3−8835
InAs-GaAs synthesised superlattices, mag., optical, elec., magneto-optical props. and cyclotron reson. 3−13899
p-InSb, IR absorpt., anisotropic, by free holes under strong elec. field 3−23917
InSb, optically induced avalanche, rate eqn. model 3−57872
InTe(Se) films, optical absorpt. coeff. meas. 3−43652
KBr, long wavelength optical absorption, two phonon difference processes 3−3670
KBr:Li, X-ray irrad., V-bands and thermoluminescence, annealing effects 3−18299
KCl, Frenkel pair annihilation kinetics, optical absorption study 3−46927
KCl, long wavelength optical absorption, two phonon difference processes 3−3670
KCl, volume and impurity absorption coeffs., temp. depend. 3−8795
KI, long wavelength optical absorption, two phonon difference processes 3−3670
$KMgF_3$, electronic struct., photoemission expts. 3−57277
LiF, thermoluminescence sensitisation factors, post-annealing temp. effects 3−19213
$LiNbO_3$:Ti(Fe), growth by Czochralski method, phys. props. *(Korean)* 3−3943
MgO:$Li^+(Na^+)(K^+)(Rb^+)(Fe^+)(In^+)(Au^+)$, ion implanted, precipitation and defects 3−2827
Mo-MoO_2, solar absorptance, surface texture influence 3−4409
NO_2, monomer and dimer, without and in prescence of Ar, 3.508μ-HeXe-laser line absorpt. 3−26753
NaCl, long wavelength optical absorption, two phonon difference processes 3−3670
Na_2O-SiO_2-Fe_2O_3 glass, optical absorption, luminescence and Raman spectra 3−3710
$Pb_{1-x}Ge_xTe$ narrow band-gap ferroelec. semicond., absorption edge near phase transition 3−34061
$Pb_{1-x}Ge_xTe$:In, Hall coeff., thermoelec. effect and absorption coeff. 3−38409
$Pb_{1-x}Sn_xTe$, intrinsic absorpt. edge investig. 3−19094
n-PbT, fundamental absorption coeff. at high temp. 3−19098
PbTe-ZnS IR multilayer filters, meas. down to 4K 3−12291
Pt thin film on Si, IR absorption 3−43644
^{87}Rb vapour-inert gas mixture, resonant light absorpt. 3−12816
Sb_2S_3 thin films, elec., photoelec., and optical props. 3−52286
$Sb_2S_3(SE_3)$, amorphous film, optical absorpt. rel. to condensation conditions 3−8897
Se amorphous films, optical properties in visible range *(Korean)* 3−57986
Se amorphous thick film, optical gap, heat treatment effects 3−52758
a-Se film, photodarkening phenomena 3−3674
Se, permittivity, reflectivity, absorption coeff. and electron energy loss spectra 3−8846
Si, ion implanted, light absorpt. effects on Nd laser annealing 3−56951
Si, laser induced nonlinear absorpt., free carrier absorpt. and thermal effects 3−57875

light absorption continued
Si:F(H)(H,F), amorphous, picosecond photocarrier trapping, photoinduced absorpt. study 3—57376
Si:H, amorphous, optical absorption edge and energy-band tails 3—28821
a-Si:H, B, anomalous optical and struct. props. 3—34127
Si:H amorphous film, dangling bond correlation energy 3—8437
a-Si:H films, disorder characts., optical transmission and photocond. study 3—38932
a-Si:H films for photovoltaic appls., optical props. rel. to deposition conditions 3—57990
Si:H microcrystalline film, optical props., solar cell appls. 3—4387
Si:Mg, diffused, elec. and optical props. 3—18699
Si:Se amorphous films, optical absorption coeff. and optical gap 3—34158
Si:Sn amorphous, dopant effects on elec., optical and Mossbauer spectra props. 3—18708
Si/SiO_2 CCDs optical carrier generation beyond fundamental absorption edge 3—28445
Si-Ge, amorphous, sputtered, XPS study 3—3913
SiO_2 colloidal particle deposition in monolayers and multilayers 3—38265
SiO_2 film, RF sputtered, optical props. 3—14373
SiO_2:B, vitreous, ion implanted, optical props. study 3—3677
SiO_2-Al_2O_3 VAD fibre fabrication, optical props. 3—50781
TlBr-TlI KRS-5 fibre characterisation for 10.6 μm transmittance 3—46296
TlCl, optical spectra, long-range and short-range many-body corrections 3—3673
$TlInSe_2$, fundamental absorption edge and spectra 3—3667
TlSe, absorption spectra and fundamental absorption edge under hydrostatic press. 3—14300
TlSe, fundamental absorption edge, hydrostatic press. depend. 3—19099
W, optically smooth surfaces, radiation characts. 3—14233
WO_3-CaO-TeO_2 glasses, density, optical absorption edges, IR spectra 3—57952
Yb_2S_3 thin film, visible, UV and IR spectra, fundamental absorption edge 3—28919
ZnS amorphous film, photoinduced light absorption 3—34160
ZnS colloidal particle deposition in monolayers and multilayers 3—38265
$ZnS_{0.3}Se_{0.5}$, neutron irrad., F-centres, optical absorption bands 3—3762
ZnSe, neutron irrad., F-centres, optical absorption bands 3—3762
ZnSe-electrolyte interface, photocorrosion study to photothermal deflection spectroscopy 3—9335

light absorption spectra *see spectra*

light amplifiers *see image intensifiers*

light attenuation *see light absorption; light scattering; light transmission; optical dispersion*

light coherence
see also laser beams; lasers
acousto-optical device resolution, effect of injection laser coherence 3—17605
apodised source and ring source coherence, imaging performance of angular and apodised aperture 3—50627
atomic interaction with EM fields, multiphoton ionisation 3—26714
caustic corrections and coherence theory 3—41760
color image subtraction with extended incoherent sources 3—1577
correlation detection, partially coherent, coherence requirement 3—26957
correlation properties of light produced by quasi-thermal sources 3—36935
correlator, effect of injection laser radiation spectral characts. on output signal form *(Russian)* 3—41770
correlator, using injection laser, radiation coherence effect on output signal shape *(Russian)* 3—41769
1,4-dibromonaphthalene, mol. cryst. laser pulse train effect, optical spectra 3—54778
diffraction-limited imaging, resolution, singular value anal. for incoherent illum. 3—22002
edge detection and imaging of thick layers rel. to coherence of illum. 3—6892
fibre, propagating laser light spatial coherence 3—12351
fibre optic gyroscope, intensity depend. nonreciprocal phase shift for low coherent sources 3—32494
fibre optic sensing Fabry-Perot interferometer, optical coherence effects 3—22222
fibres, incoherently excited, spatial coherence 3—7200
Fresnel diffraction, acoustically modified, by slit and periodic object, periodic partial coherence 3—6878
Gaussian Schell-model sources, example and perspectives 3—50603
hologram recorded through turbid medium, diffr. efficiency, spatial coherence 3—36965
holographic aberration compensation with partially coherent light 3—32328
homocentric divergent beam diffraction by straight and parallel edged screen *(French)* 3—26937
image contrast in coherent apodised optical system 3—46165
laser, quantum electronics, nonlinearity requirement *(Japanese)* 3—22014
laser cavity, coherent light net power loss rel. to laser linewidth *(Chinese)* 3—37078
laser interferometer based on multimode fibres 3—54768
laser pulse propagation in particulate media, mutual coherence function 3—6883
laser source temporal-spatial degree of coherence determ. *(French)* 3—25938
light beam periodically modulated, coherence time 3—44925
monomode fibres, pulse sequence transmission, optical coherence theory 3—27242
multiatom coherence in the redistribution of radiation 3—22013
multiple phase-coherent laser pulses in optical spectroscopy, tech. and appls. 3—54777
nondamping resonant medium, step-function pulse propag. self-induced transparency and soliton lattice 3—12252
optical fields, generated by Poisson random emissions, coherence, photon statistics 3—32335
partially coherent light, uncertainty principle 3—50602
partially coherent radiation propag. through atm. turbulence 3—41764
partially coherent sources, effective no. of degrees of freedom 3—12067
particle dense distribution, attenuation const. of coherent field 3—6884
periodic optical coherence function form. using acoustically phase-modulated coherent light, double-slit imaging appls. 3—32303
picosecond single pulse coherence time determ., dynamic holography method 3—56163
polarised light coherence determ. by magneto-optic diffr. 3—46159

light coherence continued
position and spatial extent of coherence region of two light beams determ. 3—46156
processor, coherent, with feedback, transient response and time evolution of 2-D solns. 3—32310
radiation, partially coherent, entropy, generalised canonical statistical operator construction 3—30771
radiometry, coherence effects, radiance, radiant emittance and intensity of planar source 3—12070
Raman light and optical parametric light mixing to produce high-power picosecond continuously tunable coherent UV light 3—50702
scattering by interacting anisotropic mols. with variable dipolar polarizability, theory 3—21768
single mode from lasers, optical communication appl. *(Japanese)* 3—22146
space freq. filter synthesis, partial coherence and misalignment influence *(German)* 3—46275
spatial coherence and spot dancing in random media, nonreciprocity analysis 3—26945
speckled images spectra estimation 3—32311
stable-resonator laser systems photometric features *(Russian)* 3—45189
three-level system, coherent processes, effect of field fluctuations 3—1602
transfer mechanism of structural information of a partially coherent light field through 1-D and 2-D optical systems 3—46171
two-photon polarization correlations in chaotic light 3—21992
ultrashort dephasing time meas. technique using interferometric autocorrelator 3—36882
uncertainty principle for spatially quasi-stationary, partially coherent light 3—6874
AlGaAs lasers, coherence props. of picosecond pulses 3—41839
GaAlAs laser frequency stability, effect of intensity noise reduction by electronic feedback 3—41892
XeF excimer laser, electron-beam pumped, temporal coherence length meas. using holographic procedure 3—6927
Zn vapour, generation of continuous tunable coherent vacuum UV by four-wave freq. mixing 3—32409

light communication *see optical communication*

light cones
see also current algebra
causal functions, self-similar asymptotic behaviour, light cone behaviour 3—5979
current algebra, invariant on light cone, deep inelastic electron-hadron scatt. appl. 3—54864
current products on light cone at short distances, asymptotic expans. 3—54865
Klein-Gordon eqn., localized states and position operator *(Russian)* 3—40794
N=4 supersymmetric Yang-Mills theory, scalar superfield formalism on light cone 3—40753
QCD, product of two gauge-invariant currents, light-cone expansion 3—31135
relativistic charged particle motion in static elec. field *(Russian)* 3—5984
relativistic field theory, light cone pathology of theories with noncausal propag. 3—45293
superspace in light-cone frame, ultraviolet finiteness of N=4 3—45264
two-dimensional QCD, gauge inequivalence in coloured sector 3—16603

light diffraction
see also holography; optical zone plates
acoustooptical light modulations, freq. charact. 3—7164
apodization for maximum central irradiance and specified large Rayleigh limit of resolution 3—50605
atmosphere, probabilistic diffraction limited imaging through turbulence 3—54130
bacteriorhodopsin, optical recording material, light diffraction efficiency meas. 3—12260
black and white image pseudo colouring technique 3—1578
boundary diffraction wave theory appl. to straight and parallel edged screen *(French)* 3—26937
Bragg diffraction in lightguides with material refr. index periodic modulation, resonant refl. and conversion of surface waves 3—17616
cholesteric liq. cryst., blue phase, light scatt. studies, theory *(Russian)* 3—2408
circular aperture, partially space coherent diffr., optimally balanced fifth order spherical aberration 3—6879
circular aperture diffraction, method of linear phase and amplitude approx. 3—6868
coherent optical correlator, light utilisation 3—32445
colloidal crystals, monodispersity, physical props., struct. transitions 3—37539
curvilinear generalised diffraction gratings, image diffr. patterns 3—46277
curvilinear gratings, generalised ray equations and caustics 3—46278
Denisyuk reflection hologram, diffr. efficiency control by gyrotropy switching during recording 3—41792
dielectric hollow circular waveguide, Gaussian beam transmission, optical theory 3—32460
dielectric surface relief gratings, diffr. analysis 3—7157
diffraction, asymptotics and catastrophes 3—17435
diffraction integral evaluation using local phase and amplitude approxs. 3—46160
diffraction lenses in $LiNbO_3$ waveguides, fabrication and performance 3—17592
diffusers, photographic, imaging 3—32302
disc, circular or elliptical, diffr. for point source within near field 3—46161
double-cusp unfolding of $^0X_9$ diffr. catastrophe 3—21989
erythrocyte deformability measurement using Ektacytometer, clinical utility 3—19793
Ewald microscopical theory of light-dielec. interaction, generalised Snell law in far UV 3—12069
Fabry-Perot etalon with spatial Gaussian input profile, bistable behaviour under self-focusing and defocusing conditions 3—17582
ferrite-garnate epitaxial films, light diffr. on cylindrical mag. domain lattices 3—8808
focal region field computation 3—41761
free electron laser, diffraction radiation generator, polarization effects 3—22078
Fresnel diffraction, acoustically modified, by slit and periodic object, periodic partial coherence 3—6878
Fresnel optics, use of converging prolate spheroidal functions 3—50610
Fresnel propagation and diffraction and paraxial wave equation 3—50608
Gaussian disorder model, Monte Carlo methods 3—51436

light diffraction continued
  general diffraction theory, new approach 3−1524
  gratings in the quasi-static limit 3−17437
  guided mode diffraction at a contact between dielec. waveguides 3−1562
  gyrotropic absorbing crystals, light diffr. by ultrasound 3−34068
  hologram, evanescent wave, diffr. efficiencies 3−36960
  hologram recorded through turbid medium, diffr. efficiency, spatial coherence 3−36965
  holographic gratings, large amplitude, Ag coated, diffr. efficiency and electron microscopy 3−50635
  holographic lens design, aberration-free, efficient, in presence of construction/reconstruction wavelength shift 3−6926
  holographic lens image field computation using boundary-diffs.-wave integral 3−6868
  holography, depolarisation effect elimination 3−32325
  ice crystals, hexagonal, polarised light scatt. model 3−1550
  image quality of elliptical objects, influence of primary coma 3−22000
  laser applications to solid state physics *(Japanese)* 3−20902
  laser beam diffraction, method of anal. of regularity in lamellar eutectic structs. 3−58357
  laser source for microscopes, diffraction effects eliminating attachment 3−45199
  Maggi-Rubinowicz field representation appl. of Braunbek method 3−50604
  magnetostatic wave delay line, guided optical wave diffr. 3−50762
  MBBA, nematic liq. cryst., light diffr. by laser beam created channels 3−46267
  metal grating, reflection rel. to surface smoothness 3−46276
  metallic diffraction grating problem, conformal mapping method for a good real conductor 3−17436
  metallic diffraction gratings, surface impedance boundary condition, optical and IR image 3−46279
  metallic meshes, far-IR property reradiation theory 3−26931
  mirror, curved diamond-turned, diffr. patterns rel. to surface characts. 3−12275
  misaligned optical systems, diffr. integral formula *(Chinese)* 3−41950
  modern optics, mathematical appls., conf., San Diego, CA, USA (Aug. 1982) 3−40314
  muscle, striated, laser diffraction intensity calc., numerical method 3−34883
  nematic liq. cryst., light diffraction by laser beam created channels 3−7907
  nonimaging concentrator efficiency in physical optics model 3−12273
  nonlinear Bragg diffraction from US wave and US wave optical generation *(German)* 3−50599
  octylcyanobiphenyl, nematic liq. cryst., light diffr. by laser beam created channels 3−46267
  optical diffraction pattern demonstration 3−5542
  optically generated light diffraction by transient index modulation 3−50697
  particle size distribution meas. using laser diffr. system 3−49312
  periodic optical coherence function form. using acoustically phase-modulated coherent light, double-slit imaging appls. 3−32303
  phase contrast microscopy, simple quantitative anal. not restricted to very low retardation objects 3−16411
  phase diffraction grating, nonsinusoidal, Fresnel diffr. region light intensity distrib. 3−6880
  photographic recording of laser light, rel. to diffraction 3−49127
  poly-γ-ethyl-D-glutamate solution, lyotropic cholesteric liq. cryst., helical pitch, press. effects, laser diffr. study 3−7903
  poly-p-n-hexyloxybenzoyl-p-oxyphenyl-N-methacryloyl-ϵ-aminocaproate, liq. cryst., comb-like polymer, layer struct., X-ray and optical diffr. studies 3−33144
  poly-p-n-hexyloxybenzoyl-p-oxyphenylmethacrylate, liq. cryst., comb-like polymer, layer struct., X-ray and optical diffr. studies 3−33144
  polygonal apertures, Fraunhofer diffr., Abbe transform derivation of algebraic formulae 3−6871
  quasi-spherical wave scalar diffraction, vector analysis 3−1560
  Raman-Nath parameter meas. by acousto-optic diffr. 3−1899
  reflection gratings, pure, rigorous coupled-wave anal. 3−50606
  reflection gratings analyses, comments 3−50607
  ring laser with Gaussian stop, weak diffr. approx. 3−27090
  rough random surface light scatt. anal. using Bragg diffr. concept 3−41765
  sarcomeres of contracted muscle, accuracy of length meas. by laser diffr. 3−44351
  SAW in isotropic medium, diffraction of light 3−50611
  scalar-diffraction line response 3−12068
  semiconductor, light diffraction by inhomogeneous transient gratings 3−17585
  semiconductor, self-diffraction from laser-induced orientational gratings 3−27138
  shadows of floating objects and dissipating vortices 3−26938
  SHG by Gaussian beam in Bragg-diffraction conditions 3−46264
  speckle patterns produced in far-field diffr. region, statistical props. 3−21995
  speckles, dynamic, produced in Fresnel diffr. field, correlation distance 3−26942
  spontaneous periodic surface struct. growth on solids during laser irrad. 3−23145
  square wave gratings, eigenfunctions, appl. to diffr. and surface plasmon calcs. 3−1759
  two-dimensional 1end struct. reconstruction from wave zone diffr. pattern 3−6905
  two-dimensional array, position irregularity estimation by laser light diffr. 3−32399
  uniform asymptotic theory of diffraction by apertures 3−32304
  unstable resonator, diffractive effect of scraper mirror 3−7023
  US, 2 adjacent beams of freq. ratio 1:1, light diffr. expts. 3−1553
  US light diffr., Bragg diffr. angular dependence, fine struct. calc. 3−6875
  US two-beam light diffr. obs. for symmetrically incident beams 3−12064
  US wave diffraction grating, high-order Bragg refl. 3−34069
  waveguide structures, corrugated, propag. and conversion of light waves 3−27236
  wires, super-thin, dia. meas. using laser diffraction waves *(Chinese)* 3−10795
  zone plate, profiled, diffr. image calc. 3−32446
  zone plate, square, diffr. characts. 3−1557
  CdSe, self-diffraction of picosecond light pulses 3−34177
  Cu surface, finely-textured, in quasi-static limit 3−17437

light diffraction continued
  p-Ge, laser induced dynamic grating, subpicosec. hole relaxation time, Bragg diffr. study 3−50696
  Si, self-diffraction of picosecond light pulses 3−34177
  $TlInS_2$ inhomogeneous dynamic gratings, optical self-diffr. 3−36968
  $TlInS_2$, photoconductivity and holography 3−46184
  V (111), surface self-diffusion, laser diffraction study 3−57192

light diffusion *see light scattering*

light dispersion *see optical dispersion*

light emitting devices
  see also light emitting diodes; light sources; luminescent devices
  field effect device using quantum mechanical size effect modulation 3−50658

light emitting diodes
  see also semiconductor junction lasers
  coined precision mount for fiber-optic driver/receiver surface diodes 3−50774
  depolarised broadband source using polarisation fibre 3−46303
  DH active layer, carrier transport 3−28422
  emitters for fiberoptic communications 3−17554
  fibre chromatic dispersion measurement using LEDs, phase shift technique 3−7189
  fibre optic communication trends, conf., Arlington, VA, USA (May 1982) 3−49070
  fibre optic electric current measuring system using a magnetooptic sensor 3−7195
  guided wave optical communication system photodetectors and optical sources 3−50785
  high radiance LED development for optical fibre communication systems 3−50786
  III-V semiconductor, carrier lifetime meas., recomb. rate and doping level determ. 3−8505
  LED, ion implanted, radiative recomb., electrolum. study 3−57978
  optical fibre coupling to LED, electrolum. 3−8884
  optical fibres, chromatic dispersion meas., phase-shift technique using LEDs 3−50763
  optoelectronic devices for optical transmission systems 3−6975
  photoelectroluminescent diodes for fibre optics 3−41993
  proton damage in laser diodes and LEDs 3−1626
  quantum mechanical size effect modulation light sources, field effect semicond. laser or LED 3−41831
  self-aligning edge emitting LEDs optical fibres using coined block 3−50773
  Al-Al_2O_3-Au/MgF_2 tunnel diode on holographic grating, light emission 3−12263
  AlGaAs heterostructures, electroluminescence photon yield study 3−3823
  AlGaAs optical source masterslice, custom metallizations for lasers and LEDs 3−22112
  AlGaAs-GaAs DH planar LED using junction current confinement, coupling to large core dia. fibres using lenses 3−12362
  GaAlAs red ultra-high brightness 500 mcd LED, LPE, optical communication appls. 3−22257
  $Ga_{1-x}Al_xP$/GaP p-n structures, cathodoluminescence from p and n regions 3−8890
  GaAs IR emitting diodes and optocouplers, 14 MeV neutron radiation effects 3−41325
  GaAs, semiinsulating, p-n-i-n^+ struct., IR and visible radiation detector 3−5861
  $GaAs_{0.11}P_{0.89}$(GaP):N, Te, Zn LEDs, yellow and green, current dependent electroluminescence decay and degradation behaviour obs. 3−3822
  GaInAsP DH, LPE growth and props., effect of different active layer thickness 3−43774
  GaP, computer controlled LEC growth, struct. and elec. props., LED appls. 3−14464
  GaP LED's, IR to visible up-conversion 3−38917
  GaP thermally-stable two-color light source 3−37148
  $In_xGa_{1-x}As$ diode simulator of solid-state laser 3−37147
  InGaAsP superluminescent diode, lateral confinement at 1.3 μm 3−37034
  InGaAsP/InP DH LEDs, dark defects, TEM obs. 3−43632
  InGaAsP/InP optoelectronic devices, monolithic integration 3−6995
  InP-InGaAsP heterojunction optoelectronic devices prep. and properties *(Slovak)* 3−47783
  InP-InGaAsP LEDs, luminescence study of dark spot defects 3−3824
  InP-InGaAsP system, Au based ohmic contacts, metallurgical behaviour 3−23481

light filters *see optical filters*

light intensifiers *see image intensifiers*

light interference
  see also light interferometers; light interferometry; Moire fringes
  autoionsing-like states, spin polarization by selective laser-induced interference 3−55903
  black and white image pseudo colouring technique 3−1578
  coherence region of two light beams determ. 3−46156
  coherence separability, temporal and spatial, in interferometric expts. *(French)* 3−1556
  crossed Babinet compensator, theoretical fringe profiles in testing concave aspheric surfaces 3−17433
  diffusing object, three-dimens., depth level contour pseudocolour encoding method 3−25847
  display in highly convergent linearly polarised white light 3−5566
  ferroelectric ceramic, transparent, interf. effect on electro-optical props. using polarisation method 3−38800
  fibre-ring interferometer, light wave distortion, amplitude-phase noise 3−1791
  film interference and reflectance, IR optical consts. determ. 3−28915
  filter, interf.-polarisation, Brewster-type, with min. spectral background 3−1755
  filter, interference type with shaped support *(Russian)* 3−27214
  filter, interferential, very narrowband *(French)* 3−50738
  Fizeau wavemeter, wave-front curvature 3−36054
  hexapentoxytriphenylene, discotic liq. cryst., flexoelec. distortion of developable domains 3−46840
  interference patterns in the vicinity of an exciton line 3−32307
  laser source temporal-spatial degree of coherence determ. *(French)* 3−25938
  lens interference pattern aberration function computation 3−46175
  metal surfaces, light refl., change in polarisation 3−6876
  monomode fibres, pulse sequence transmission, optical interf. effect of overlapping pulses 3−27242

light interference continued
muscovite mica restrahlen region, film interference and reflectance, IR optical consts. determ. 3–28915
phase distribution investigation using moving holographic diffr. grating 3–1596
polynomial fit of interferograms 3–30922
speckle interferogram spectral distribution recorded through N circular holes situated in corners of regular N-polygon 3–26936
speckle metrology *(Japanese)* 3–12076
spontaneous periodic surface struct. growth on solids during laser irrad. 3–23145
submillimetre interference filters, use of metallic mesh, appl. to high-resolution spectrometer 3–37171
synchrotron magnet sections, interference of generated visible radiation 3–1536
thermal window interferometer 3–5555
thin-film filters, spectral characterisation methodology 3–1752
Cu_2O crystals, spatial dispersion of light near the quadrupole absorpt. line 3–23912
^4He solid-superfluid interface, charge-induced instability, light interf. obs. 3–28188
$Si:P^+$, ion implanted, refl. dynamic interf. effect by CW CO_2 laser annealing *(Chinese)* 3–38789

light interferometers
see also light interferometry
acceleration meas. due to Earth gravity, transportable absolute gravimeter design 3–15649
acoustic waves, fibre-optic noncontacting sensors 3–50873
angle meas. interferometers *(Czech)* 3–25937
antiresonant ring, rotating, for pulse meas. 3–25933
balance method of measuring angular rotation rates with a fiber-optic interferometer 3–16339
coherent optical fibre sensors with modulated laser sources 3–32482
common-path interferometer, fringe contrast adjustment by double $^1/_4$-wave plates *(Chinese)* 3–40671
confocal interference microscope, design and operation 3–20893
cryogenic Earth limb-scanning interferometer-radiometer, design for Earth radiation rejection 3–54218
digital heterodyne interferometer with 64 parallel phase recording channels, transient flow field phenomenon meas. appls. 3–40673
division-of-amplitude type, real-time wavemeter for laser wavelength meas. 3–20891
double Fabry-Perot interferometer inside laser resonator, Cherenkov parametric optical oscill. generation 3–37123
double refracting interference system, monochromatic light peak wavelength rel. to interfringe spacing 3–49438
dynamic Hartmann wavefront sensor in applications 3–40674
electronic speckle pattern interferometers, new developments in design and appl. 3–45196
Fabry-Perot etalon, band-pass filter, simultaneous tuning to two wavelengths 3–12292
Fabry-Perot etalon, model 60×100 *(Chinese)* 3–40670
Fabry-Perot interferometer, design and construction of etalon for Dynamics Explorer 3–15804
Fabry-Perot interferometer, external highly stable, stabilisation of Ar ion laser 3–7019
Fabry-Perot interferometer, performance of etalon for Dynamics Explorer 3–15805
Fabry-Perot interferometer and grating spectrometer for balloon-borne far IR astronomy 3–48819
Fabry-Perot intracavity freq. selectors, improved performance using quarter-wave plates 3–37080
ferroelectric Fabry-Perot interferometer-photocond. layer struct., US propag. 3–28392
fiber Mach-Zehnder interferometric sensors, polarisation fading 3–5846
fiber-optic Fabry-Perot interferometer and its sensor applications 3–5844
fibre interferometer utilising a 3×3 fibre coupler 3–7167
fibre interferometric sensors using laser freq. switching, demodulation scheme 3–37197
fibre light guide nonreciprocity obs., using two-channel interferometer 3–17623
fibre optic interferometric sensors, dynamic thermal response of single-mode fibre 3–37193
fibre optic Mach-Zehnder interferometer for elec. field detect. 3–27241
fibre optic sensing Fabry-Perot interferometer, optical coherence effects 3–22222
fibre-ring interferometer, light wave distortion, amplitude-phase noise 3–1791
flow meas., density stratified 3–22505
galactic/extragalactic nebulae, Fabry-Perot interferometric obs. *(Spanish)* 3–40052
gas blown spark gap, flow visualisation using Mach-Zehnder interferometer system 3–7850
gyroscopes, fundamental precision limit 3–25935
high precision scanning interferometer for assessment of infrared systems 3–10892
high resolution interferometer for Canada-France-Hawaii telescope 3–30207
holographic interferometer for optical surface testing 3–1594
injection laser with external resonator, emission freq. stabilisation using high-Q confocal interferometer 3–7027
integrated electro-optic Mach-Zehnder interferometer for A/D conversion 3–27266
internal interferometer for dye laser tuning range extension 3–41886
IR Fourier spectrometer appl., interferometer design *(German)* 3–40705
large-aperture laser interferometer for concave spherical surface shape testing 3–25940
laser, microwave-induced eye lens motion in rat, meas. 3–35049
laser displacement interferometers, comparison of Soviet, US and European models *(Russian)* 3–49433
laser Doppler vel. interferometer, floor vibration meas. appl. *(Korean)* 3–10797
laser high-sensitivity interferometer based on multimode optical waveguide 3–54768
laser interferometer employing a CO_2 laser, 10.6 μm operation, slow movement meas. appls. 3–25939
laser interferometer for gravitational radiation detection, noise investigation and elimination 3–10717
laser interferometer for small amplitude periodic vibration measurement *(Polish)* 3–36079

light interferometers continued
laser interferometer with low-frequency phase modulation 3–30924
laser interferometers, adaptive optics methods appls., wavefront distortion and atm. turbulence influence 3–30925
laser stress wave probe, 0.2 Å sensitivity, 20 MHz bandwidth 3–50693
logic comparison circuit based on an integrated optical interferometer 3–32508
Mach-Zehnder, axisymmetric density fields determ. by superposing spectral interferograms 3–32828
Mach-Zehnder interferometer, for optical fibre copolymer film electric field sensor 3–56324
Mach-Zehnder interferometer, phase-locked, active phase matching of multiline HF laser beams 3–27113
Mach-Zehnder type fibre interferometer, fringe visibility enhancement 3–46315
mesh Fabry-Perot resonant cavity for refr. index determ. in near MM range 3–25928
Michaelson-type interferometer alignment 3–40677
Michelson, Fourier transform spectroscopy expt. in advanced undergraduate laboratory 3–5548
Michelson, vibration of arch dam meas. appl. 3–12608
Michelson interferometer active calibration, for plasma density meas. 3–45193
Michelson scanning interferometer, aberrations effect evaluation 3–377
modular Fabry-Perot interferometry system for H II regions imagery and spectrometry 3–25338
mosaic Michelson interferometer, off-axis effects 3–16408
multi-purpose scanning Fabry-Perot interferometer system 3–25336
multichannel polarization interferometers 3–45195
multimode fibre-optic interferometer, mixing efficiency, theory *(Japanese)* 3–49439
nonlinear dispersive interferometer, laser plasma diagnostics appl. 3–10896
nonlinear Fabry-Perot interferometer, regenerative oscillation 3–37103
nonlinear Fabry-Perot interferometer filled with nematic-liq. cryst. film, optical bistability, self-oscill. 3–32401
optical fibre appl. to wide band differential interferometry 3–46308
optical fibre interferometric sensors, pseudoheterodyne detection scheme 3–25936
optical touching with interference line, two-coordinate measuring instruments, appl. to bore walls *(German)* 3–36075
optical-waveguide micro-displacement sensor 3–5777
passive multiplexing devices for fibre-optic communication systems *(French)* 3–32505
pencil beam interferometer for aspherical optical surface testing 3–40675
plasma diagnostic laser system based on H_2O and D_2O vapour, orthogonal polarisations generation 3–46234
point diffraction interferometer for semicond. laser wavefront meas. 3–40680
precision methods and means of measuring internal dimensions 3–45114
projection moire interferometer for vibration analysis 3–54767
refractive index measurement using Michelson interferometer 3–5578
relative-pressure sensor, using Michelson interferometer *(French)* 3–49350
ring fibre interferometer, parameters optimisation for angular velocity determ. 3–7206
roughness-parameter meas., GOST 9847-79 standard 3–45109
Sagnac, fibre optic gyroscope appl. 3–27254
self-balancing digital photoelectric photometer, piezoelectric transducer testing appl. 3–49428
speckle camera for use with BTA 6 m telescope, description and use 3–30206
straightness measuring system, ZSI-S interferometer design and appl. *(German)* 3–40550
Talbot interferometer with computer generated gratings 3–36077
thermal window interferometer 3–5555
two-pass remote reference interferometer 3–36076
ultrashort dephasing time meas. technique using interferometric autocorrelator 3–36882
variable shearing interferometers, meas. of refractive index change rate and interdiffusion coeff. of liquids *(Korean)* 3–36072
vibration-measuring equipment calibration using interferometer 3–40678
zone plates, high-quality, interferometric recording in spatially incoherent illum. 3–32448
$LiNbO_3$ interferometric modulators for integrated optics four-digit A/D converter prototype 3–27267

light interferometry
see also holographic interferometry; Moire fringes
acoustic field recording by vol. light scattering 3–50864
air group refr. index meas. by two-wavelength interferometry 3–22572
air-acoustic signal detect. using interferometric fibre-optic sensors 3–1787
94 Aquarii A, spectroscopic binary, visual orbit determ. from speckle interferometry 3–20434
astro-optical surface testing with general-purpose instrument 3–27280
atmospheric impulse arcs study using two-wavelength laser interferometry 3–27756
autocorrelator, rapid-scanning, oxazine 1 dye laser pulse rapid time monitoring appls. 3–54764
biasing on quasi-interferometry with coded correlation filtering 3–12078
binary stars, speckle interferometric meas. 3–5347
cavitation bubble collapse, shock generation study 3–51175
cavity phase shift method for high refl. meas. at mid-IR wavelengths 3–27193
coarse aspheric metrology 3–12268
coherence region of two light beams determ. 3–46156
coherence separability, temporal and spatial, in interferometric expts. *(French)* 3–1556
coherent image fringe contrast measurement with sensing arrays 3–5847
coherent optical image delay device using $Bi_{12}SiO_{20}$ phase-conjugate mirror, appls. 3–56141
coherent optical processor with feedback, transient response and time evolution of 2-D solns. 3–32310
composite interferogram appl. in optical testing *(Chinese)* 3–12368
convection, combined forced and natural, interferometric study 3–7577
cylindrical optics, in-process interferometric testing 3–7238
data processing techniques in interferometry of interest to remote sensing 3–5841
diamond machined precision optics, surface figure determ. by interferometry 3–7233
differential microinterferometry in surface roughness examinations *(Polish)* 3–2936

light interferometry continued
- differential phase contrast optical microscope with 1 Å-depth resolution, based on laser interferometer 3—10897
- differential-type velocimeter using a grating spatial filter in a microscopic region *(Japanese)* 3—379
- displaced objects, speckle interferograms, recording and interpretation 3—30923
- dynamic measurements of small displacements by laser interferometry 3—25941
- electrooptic bistable devices with delayed feedback, dynamic behaviour, 3—27135
- ellipsointerferometry for thin film thickness meas., improved lateral resolutions 3—25922
- epoxy powder coating fracture analysis by electronic speckle pattern interferometry 3—19500
- ethyl chloride, CW far IR laser action meas. using metal-mesh Fabry-Perot interferometer 3—6953
- excited particle density meas. in gas discharges, light interferometry *(Dutch)* 3—51424
- eye deformation measurement by laser interferometry 3—15180
- Fabry-Perot interferogram decipherment, special features 3—36078
- Fabry-Perot interferometer, bistability, harmonic generation, obs. and theory 3—25934
- fast Fourier transform technique for distortion effect simulation 3—54775
- fibre field repair splice load determ. using single mode fibre interferometry 3—49440
- fibre index profile determ. from transverse interferograms using Fourier theory 3—37191
- fibres refractive index profile meas. *(Czech)* 3—49432
- films, stress measurement by light interferometric technique 3—22405
- Fizeau interferometer based computer-controlled laser radiation wavelength meter for 500-650 nm range 3—381
- flow cytofluorometry for gynecologic cytology, multibeam interferometer as screening system 3—24835
- Fourier spectroscopy, channelled spectra signatures removal 3—40704
- frequency marker based on moire deflectometry 3—40695
- fringe interactive analysis system, moire contourogram and interferogram appls. 3—10894
- full-field displacement and strain rosettes by moire interferometry 3—5766
- gap measurement between flat transparent surfaces using laser interf. method 3—10895
- gasdynamic object, axisymmetric, gas density, shock waves, shear interferometry 3—42342
- glass fibre diameter meas. 3—265
- glass optical fibre refractive profiles, interferometric meas. using zonal approx. method 3—50776
- grazing incidence optics, surface and figure characterisation 3—7243
- heterodyne speckle interferometry for microvibr. amplitude and phase meas. 3—40559
- holograms, scatt. image plane, interferometric reconstruction *(German)* 3—1595
- holographic and laser speckle measurements 3—46185
- image processing for atm. distortions compensation, cepstral anal. and speckle-interferometry of wideband images 3—35457
- images of objects with arbitrary radiation coherence 3—12089
- inductively coupled plasma, spectral line widths, interferometric meas. 3—2297
- inhomogeneity exam. of materials, in IR range 3—48003
- integrated-optics near 3 dB coupler and Mach-Zehnder interferometric modulator anal. using four-port scatt. matrix 3—12323
- intensity correlation techniques for passive optical device detection 3—6889
- interference contour computer-aided surface reconstruction 3—25846
- iteration parameters for data anal. in laser interferometry *(Chinese)* 3—40672
- laser applications, operating principles *(French)* 3—1648
- laser diagnostics, conf., Arlington, VA, USA (May 1982) 3—40311
- laser frequency stabilisation using mode interf. from reflecting reference interferometer 3—1682
- laser interferometric probing of inhomogeneous dense plasma *(Russian)* 3—32983
- laser materials, optical absorpt. meas. using interferometric calorimetry *(Japanese)* 3—1729
- laser probes of general relativity, cosmology and quantum mech. 3—7054
- laser pulse generation, ultrashort, using Fabry-Perot interferometer, numerical anal. 3—50668
- laser pulse generation techniques, ultra-short 3—1649
- laser rods, optical homogeneity determ. using light interf. 3—27271
- laser source temporal-spatial degree of coherence determ. *(French)* 3—25938
- laser wavelength ratio, interferometric meas., accuracy limit 3—12201
- length unit establishment, He-Ne lasers wavelength determ., in 633 nm range *(Slovak)* 3—22141
- light-in-flight recording, high-speed holographic motion pictures of ultrafast phenomena 3—36956
- liquid, mol. dynamics, time-resolved obs. by femtosec. interferometry 3—33068
- liquid thin film between glass and Hg in aqueous soln., equilib. thickness meas. 3—51898
- liquids, relative optical index meas. by interferometry *(French)* 3—378
- local temp. changes, irradiation-induced, interferometric meas. by laser beam 3—5790
- Mach-Zehnder interferometry, partial polarisation effect *(French)* 3—49436
- material interfaces, crack propag., expt. on mode interaction 3—7519
- Michelson interferometry for meas. of semicond. lasers freq. deviation under direct modulation 3—50682
- minerals, refractive index meas., scaling and corrosion products 3—24461
- moire analysis of strain 3—27456
- moire measurement of phase gradient real-time 3—16410
- multilayer coating testing with 3.8 μm interferometry 3—12373
- multimode optical fibres as sensing devices, interferometric method 3—22214
- optical cement long term stability anal. under moisture sorption conditions using Twyman-Green interferometer 3—37149
- optical component and system evaluation using interferometric techniques 3—12266
- optical scanner angle meas. by interferometry 3—5843
- optical surfaces, high quality, surface characterisation using phase measuring interferometry 3—16332

light interferometry continued
- optical systems engineering II, conf., Los Angeles, CA, USA (Jan. 1982) 3—10501
- optically rough surface speckle contouring in real time 3—25931
- opto-digital interferogram evaluating system 3—46179
- organic liquids, depolarised Rayleigh scatt., direct interferometric and grating meas. 3—14313
- partial polarisation effect in interferometry *(French)* 3—49436
- passive demodulation of optical interferometric sensors 3—5845
- phase measuring interferometry for high quality optics testing appls. 3—12267
- phase screens, turbulent random, K-distributed phase differences 3—50612
- phase-modulated optical signal detection by retardation method 3—37239
- photoacoustic microscopy, thermo- and photo-displacement detection 3—45224
- plasma, laser sustained, electron density estimate using Mach-Zehnder interferometer 3—42449
- plasma/surface reactions, real time study by interferometry and ellipsometry *(French)* 3—29198
- plasmas, high temp., quasi-optical diagnostics *(Japanese)* 3—12970
- plate, cracked, optimization for evaluating complex stress intensity factors from isopachics 3—17908
- plate bending problem, holographic and speckle interferometry comparison 3—51036
- plate curvature determination technique 3—32697
- plates and diaphragms, defect detection using split-lens speckle shearing interferometer 3—24459
- plexiglass plate, cracked, optimization for evaluating complex stress intensity factors from isopachics 3—17908
- polygon mirror, high speed, for laser scanners and recorders, optical evaluation 3—7127
- polynomial fit of interferograms 3—30922
- projection moire with moving gratings for automated 3-D topography 3—54766
- quasi-interferometry, mask functions 3—40679
- radial distrib. in pulsed plasma accelerator by CO_2 laser interferometry 3—12840
- real-time optical interferometric image subtraction by wave polarisation 3—10887
- reflecting prism, simple method for testing 90° angle 3—27196
- residue number conversion into binary representation, interferometric convertor 3—12077
- RIFRAN: interactive fringe pattern analysis and processing system 3—25942
- rotating component, strain analysis using laser specklegram technique 3—22402
- SAW propag. props., meas. using laser beam 3—1889
- scatter plate, meas. of spherical aberration of concave mirror *(Korean)* 3—37161
- semiconductor crystals impurity nonuniformity determ., by interference microscopy 3—46981
- semiconductor laser, phase delay between intensity and freq. modulation, interferometric meas. method 3—41841
- semiconductor laser correlated spectral and intensity noise meas. using short-path-difference interferometers 3—20892
- semiconductor laser wavelength shift during triangular pulse modulation, meas. using Michelson interferometer 3—32394
- shadow effect on multipass interferograms 3—40676
- shell, cylindrical, optical method of dynamic deform. meas. 3—56508
- shock tube flow diagnostics, laser interferometry, appl. 3—56633
- single mode fibre interferometry for fibre load determ. in a field repair splice 3—49440
- single-mode optical-fibre index profiling with improved resolution 3—7180
- speckle interferograms, misfocused, white-light colour encoding 3—49437
- speckle interferometric imaging, shift and add method performance at low light levels 3—48835
- speckle interferometry of deformed surface, surface displacement signs determ. 3—382
- speckle metrology *(Japanese)* 3—16409
- speckle pattern interferometry, computer-aided 3—36074
- speckle photography data processing for circular imaging aperture 3—45192
- speckle photography fringes, digital analysis, processing of expt. data 3—376
- speckle shear interferometry using split lens, slope data determ. 3—5848
- steel target, cylindrical, struck by projectile, mech. shock anal. using laser Doppler interferometry *(French)* 3—2013
- stellar speckle interferometry, cross spectrum anal. appls. *(French)* 3—54251
- stellar speckle interferometry, speckle boiling origin and effects 3—30225
- step-record Fourier spectrometer, ghostline effect reduction 3—54776
- straight achromatic white-light fringe production methods 3—10888
- straightness measuring system, ZSI-S interferometer design and appl. *(German)* 3—40550
- submillimetre laser and interferometric spectroscopy of alkyl alcohols 3—11793
- surface profile measuring system using combined $Bi_{12}SiO_{20}$ phase conjugating mirror and Twyman-Green interferometers 3—25932
- surface topography evaluation using dual-beam interf. microscope and stylus-type profiling 3—27273
- thermal expansion, transient interferometric technique for high temps. 3—45107
- thickness meas. of transparent dielectric films 3—45110
- transparent and semitransparent films, thickness meas. by light interference method 3—49315
- US transducer characterization by light interferometry 3—49441
- US vibrations, optical probing for detecting surface displacement profile 3—261
- vibration amplitude meas. using fringe counting technique 3—25851
- vibration detection of arch dam 3—12608
- viscoelastic liquids, convection currents, interferometry *(German)* 3—56585
- wavefront precision measurement 3—5842
- waxicons, negative branch, design, fabrication and metrology 3—27192
- white light speckle method for curved surface large deformation meas. 3—42205
- X-ray optics, short wavelength interferometric testing 3—17590
- Young's experiment for interference using photon counting *(Japanese)* 3—49435
- Young's fringe measurement, secondary speckle reduction using electro-optical device 3—20890

light interferometry continued
Ag_3AsS_3, proustite, nonlinear optics and homogeneity, Twyman-Green interferometry study 3—37104
CO_2 laser system, large, optical design and assembly, use of Zernike polynomials and interferometry 3—7005
CaF_2 thin films, surface roughness meas. using interferometric and surface plasmon techniques 3—5771
CdS, exciton transitions, two-beam interferometry study 3—43508
N_2 TEA laser oscillator-amplifier system for interferometric plasma diagnostic appls. 3—27084
NH_3, ground state for IR spectrum, pure rotational transitions 3—41572
NiO, tilt boundaries, relative energy 3—51618
Pb salt tunable diode lasers, linewidth meas. using heterodyne and etalon techniques 3—12141
Si, twin boundary struct., TEM and α-fringe contrast studies 3—51621
X-ray optics surface profiling using AC-interferometers 3—17591
light meters *see photometers*
light microscopes *see optical microscopes*
light microscopy *see optical microscopy*
light modulation *see optical modulation*
light polarisation
see also birefringence; optical rotation; photoelasticity; polarimetry
achromatic retardation plates 3—7140
alkali halide:$Ga^+(Ge^{2+})(In^+)(Sn^{2+})(Tl^+)(Pb^{2+})$, impurity excited state struct., polarised luminesc. study 3—38871
λ Andromedae, RS Canum Venaticorum star, discovery of new periodicity from obs. of V-band polarisation vars. 3—48957
V603 Aquilae (Nova Aquilae 1918), obs. of periodic polarisation vars. 3—10352
atoms, optically polarised, nonstationary mag. reson. signals obs. 3—1289
ζ Aurigae, polarisation during 1979 to 1980 eclipse 3—10388
ϵ Aurigae, sudden change in polarisation during eclipse (November to December 1982) 3—30427
beam nonlinear distortion compensation regime stability 3—27171
black and white image pseudo colouring technique 3—1578
bow-tie highly birefringent optical fibres, single-polarisation operation 3—56331
Brewster polarisers, light extinction, shadowlike phenomenon 3—56134
3C 345, highly polarised QSO, wavelength depend. of optical and near IR polarisation 3—59477
cholesteric layer, polarisation light, double cut-off in mag. or elec. field 3—34079
cholesteric liquid crysts., optical eigenmode study using stress plate modulators in tandem 3—30917
cholesteric liquid-crystals cells, optical phenomena 3—3666
circular polariser to improve electroluminescing object visibility 3—27218
cloud composition from lidar return polarization *(Russian)* 3—20086
cloud layer model, OTF for linearly polarised light 3—6893
cylindrical resonators, vector modes with spatially varying directions of polarisation 3—7024
degenerate four-wave mixing, polarisation rot. in external mag. field *(Chinese)* 3—27146
diacetylene Langmuir-Blodgett monolayer films, polarization effects 3—38938
double-beam three-photon absorpt. theory, polarisation ratio anal. 3—56013
double-pass amplifier, spontaneous oscills. of radiation polarisation angle of rot. 3—1697
double-tuned circuit prism-thin beam coupler and polarisation conversion mechanism 3—56315
dye solutions, fluoresc. nonreson. quenching with light pulses of picosecond duration 3—6713
E2003+225, new AM Herculis star, spectroscopic, photometric and polarimetric obs. 3—25414
electro-optical crystals, induced birefr. anisotropy and eigenwave oscill. direction 3—3682
elliptically cored self-locating fibre with accessible guiding region 3—12340
emission of photons with the interaction of electrons with the surface of a solid metal 3—24028
enhanced internal reflection from an exponential amplifying region 3—46256
evaporative thin metal film polarisers 3—7136
ferroelectric ceramic, transparent, interf. effect on electro-optical props. using polarisation method 3—38800
fiber Mach-Zehnder interferometric sensors, polarisation fading 3—5846
fibre, birefringence enhancement using borosilicate region, drawing with thermal anneal 3—46289
fibre couplers, single-mode, polarisation characts. 3—7194
fibre light guide nonreciprocity obs., using two-channel interferometer 3—17623
fibre optics, polarisation backscatter analysis of field distribs. 3—37189
fibre single-mode, polarisation mode dispersion meas. using wavelength shift of semicond. laser 3—32394
fibre spectral self-broadning, polarisation effect 3—32491
fibre waveguide, single mode birefr. optically active, dispersion-free propag. of signal 3—7207
fibre-type polariser, single-mode, fabrication technique, polarisation characts. 3—7191
fibres, elliptical-core birefringent, polarisation holding 3—7190
fibres, linearly birefr. beat length meas. using wavelength-sweeping technique 3—41990
fibres, monomode, polarisation stability in long lengths 3—22242
fibres, polarisation holding, stress and shape birefr. 3—41997
fibres, polarisation maintaining, fabrication using gas-phase etching 3—22266
fibres, single mode, WDM-systems, polarisation noise reduction 3—37234
fibres, single polarisation, stress-applied, mode coupling effects 3—12343
fibres, single polarisation, transmission characts. 3—37233
fibres, single-mode, high-birefr., polarisation mode dispersion meas. 3—46323
fibres, single-mode, kinked, polarisation coupling 3—27253
fibres, single-mode, long-length, twisted polarisation preservation 3—37215
fibres, single-mode, polarisation mode dispersion meas. using superluminesc. diode 3—37232
fibres, single-mode W-type, polarisation effects 3—56338
fibres, single-mode with elliptical cores, birefr. caused by thermal stress 3—12344
fibres, single-mode with TiO_2-doped layer, single polarisation characts. 3—41995

light polarisation continued
fibres, single-polarisation, polarisation props. 3—12354
fibres, step-index, weakly guiding, linearly polarised mode propag. consts. 3—46322
filter, interf.-polarisation, Brewster-type, with min. spectral background 3—1755
fluorescence, degree of polarisation determ. with polarisation filter efficient over wide wavelength range 3—5862
free electron laser, diffraction radiation generator, polarization effects 3—22078
G-type star with circumstellar refl. nebula in Centaurus, polarisation characts. 3—59334
gases, dichroism and birefr. spectra, spatial freq. manifestation *(French)* 3—12815
glass fibre waveguides, few-mode, with noncircular cores, polarisation props. 3—7209
gradient lightguides, M-shaped Δn profiles, excitation features, polarization effects 3—12331
gyroscopes, fibre-optic, source statistics and the Kerr effect 3—12353
gyrotropic absorbing crystals, light diffr. by ultrasound 3—34068
haemoglobin, reson. Raman scatt., polarisation props., effect of solvent environment 3—15043
half-wave retarder, film-substrate, single reflection, incidence angle characts. 3—37167
harmonic generation of laser beam, squeezed states 3—50707
HD 152270, Wolf-Rayet binary system, polarimetric determ. of orbital inclination 3—10368
HD 162679, spectroscopic binary star in NGC 6475, variable linear polarisation obs. 3—10330
holographic gratings, large amplitude, Ag coated, diffr. efficiency and electron microscopy 3—50635
holography, depolarisation effect elimination 3—32325
hydrogenic excited states, formation mechanism for H and He^+ beam collisions with solid surface, elliptic polarisation meas. 3—21669
ice crystals, hexagonal, polarised light scatt. model 3—1550
incoherent imaging system, light polarisation state change 3—17450
integrated optical switches, polarisation-independ., with multiple $\Delta\beta$ reversal sections and Gaussian taper function 3—12367
interferometric image subtraction, real-time system, by wave polarisation 3—10887
L1551 IRS5, detect. of large IR polarisation 3—54483
BL Lacertae objects, wavelength depend. of optical and near IR polarisation 3—59477
laser characteristics meas. with diffr. coupler, polarisation depend. of scatt. field 3—7049
laser fusion targets with small defects, light scatt., depolarised components 3—26437
laser system based on H_2O and D_2O vapour, orthogonal polarisations generation 3—46234
laser-induced periodic surface structure on solids, effect of polarisation state 3—28937
LED depolarised broadband source using polarisation fibre 3—46303
liquid cryst. optical colour filters control 3—41967
long-period variable stars, optical polarisation rel. to IR excess, circumstellar dust shells anal. 3—59343
luminescence polarisation meas., using successive storage of signals 3—16398
magnetoactive degenerate optical waveguide, tunnel prism coupling theory 3—32474
matrix method description 3—21991
MBBA, mesophase, dynamic holographic grating, polarization recording 3—22011
metal grating, reflection rel. to surface smoothness 3—46276
metal surfaces, light refl., change in polarisation 3—6876
molecular crystals, polarised luminesc. study 3—38870
molecular solutions, spectroluminesc. characts., intermol. relax. manifestation in presence of light quenching luminesc. 3—1424
Moon, surface albedo rel. to polarization, digital image processing appl. 3—44680
multichannel polarization interferometers 3—45195
multilayer optical fibre simultaneous two-way video transmission 3—22239
multimode gradient fibres; polarisation effects 3—12358
narrow emission line galaxies, optical linear polarisation meas. 3—54510
nebulae density and luminosity structure from polarization maps, deconvolution 3—15853
nematic-cholesteric boundary, polarised light propagation 3—3660
nonideal polariser system transfer function 3—36949
nonmetallic diffusing surface, refl. charact. meas. using polarisation type goniophotometer *(Japanese)* 3—14241
oceanographic subsurface water temp. remote sensing by Raman polarisation spectroscopy 3—10086
ocular counterrolling measurement using polarised light 3—9691
optical fibre, polarization properties meas. using photoelastic modulator 3—46343
optical fibres, birefr. meas. by polarisation time-domain reflectometry 3—1774
optical fibres, polarisation ellipse self rotation 3—41938
optoelectric polariser having interdigital electrode, anal. 3—27210
organic liquids, depolarised Rayleigh scatt. meas. 3—14313
oriented system, polarized Raman scatt. intensity, excitation beam incidence depend. *(French)* 3—41583
oriented system, polarized Raman scatt. intensity, general angular depend. *(French)* 3—41584
ω Orionis, Be star, obs. of sudden linear polarisation var., (January to February 1983) 3—44763
partial polarisation effect in interferometry *(French)* 3—49436
particulate medium, light propag. and light scatt. 3—41762
passive isotropic surface, change of polarisation with normal-incidence refl. 3—17434
perfectly conducting gratings, generalised reciprocity relations in two polarisation cases 3—12303
photoanisotropic phenomena regularity 3—1561
photoelastic modulator design 3—50746
photomultiplier, multialkali photocathode, photocurrent meas. under conditions of total internal refl. 3—6504
plastic sheet polarisers for liq. crystal device appls. 3—7137
polariser/retarder systems, colour contrast 3—7139
polarisers and applications, conf., San Diego, CA, USA (Aug. 1981) 3—5482
polarising prisms, practical, review 3—7133
polyvinyl alcohol iodine liq. cryst. polarisers, hydrolytic stability 3—7135

light polarisation continued
- prisms, polarisation, quality index 3−5836
- prisms based on total internal reflection as end reflectors for a Nd laser 3−1748
- pulse compression using polarising techniques 3−6869
- pulse intensity discriminator using birefr. fibres 3−1789
- QSOs, simultaneous visual-IR polarimetry 3−49048
- quantum mechanics observer role, Zeno paradox 3−5524
- α-quartz, giant Raman optical activity of 128-cm^{-1} mode 3−41922
- quasars, polarisation distrib. compared with Seyfert galaxies 3−54510
- radiative transfer, diffuse refl. and transmission of radiation for Rayleigh phase function 3−59199
- radiatively excited atoms, polaris.-depend. assoc. ionis. 3−26818
- radio galaxies, optical polarisation position angle versus radio source axis 3−5428
- Raman spectroscopy, polarisation active, control of line profile and S/N ratio 3−5868
- randomly distributed spherical particle slab, transmission, backscatt. and depolarisation 3−6881
- retinal polarisation effects 3−15077
- review of use in optical systems 3−27205
- ring cavity with resonantly driven atoms, polarisation switching 3−27131
- ring gas laser in a mag. field, nonlinear interaction between elliptically polarised waves 3−17489
- rooftop resonator theory, resonant freqs. and eigenpolarisations 3−46242
- rotator, compensator and retardation modulator design using commercial retarders *(Spanish)* 3−1746
- scattering of polarised light, radiation density vector, azimuthally symmetric component 3−36937
- V861 Scorpii (HD 152667), eclipsing binary, UBV polarimetry 3−15942
- semi-regular stars, optical polarisation rel. to IR excess, circumstellar dust shell anal. 3−59343
- semiconductors, coherent light propagation, exciton polarisation waves 3−28808
- semiconductors, exciton luminesc., laser constriction 3−38878
- semiconductors, excitonic polaritons, resonant light scatt., book contrib. 3−3087
- semiconductors, luminesc. in conditions of optical cooling of nucl. spin system 3−38879
- Serpens Nebula, reflection nebula, optical polarisation maps 3−48995
- Seyfert galaxies, optical linear polarisation meas. 3−54510
- single mode and low mode fibres, polarisation props. 3−37209
- single mode elliptical core fibre, polarisation mode dispersion meas. at 1.3 μm 3−7179
- single mode fibre optic components, directional coupler, polariser and polarisation controller 3−22240
- single-mode fibre light guide, losses at excitation centres, light polaris. effects 3−32477
- single-mode fibre light guide, polarisation changes in optical signals 3−32475
- single-mode optical fibre, stress-induced birefringence 3−32496
- single-mode optical fibres, polarisation dispersion meas. using FM optical signal 3−56329
- single-mode optical fibres, symmetrically loaded, polarisation and transmission characts. 3−27238
- single-mode single-polarisation 3−46302
- single-mode single-polarisation fibre couplers fabrication using CVD technique 3−12339
- single-mode-fibre coupler, polarisation preserving 3−32483
- skylight polarisation at dusk, rel. to migratory orientation in birds 3−4508
- speckle field Stokes parameters, first order statistics of polarisation props. 3−12075
- spectroscopic binaries with enhanced Ca II H/K emission, reson. polarisation search 3−54443
- sphere-plane struct. EM response, effects of reson. interactions, appl. to surface enhanced spectroscopy 3−50567
- stratosphere, El Chichon volcanic cloud effects 3−59000
- supernovae, light polarisation as measure of deviation from spherical symmetry 3−30396
- T Tauri, quasi-simultaneous photometric and polarimetric obs. 3−40132
- RY Tauri, T Tauri star, quasi-simultaneous photometric and polarimetric obs. 3−40132
- temperature meas. of hot gaseous flow, generalised line-reversal method 3−16361
- twisted fibres, linearly polarised wave transmission 3−37216
- two-photon polarization correlations in chaotic light 3−21992
- 4U 0900−40 (HD 77581), X-ray binary star, UBV polarimetry 3−15942
- 4U 1700−37 (HD 153919), X-ray binary star, UBV polarimetry 3−15942
- variable density filter through a combination of polarized filter 3−56303
- variable phase shifter of arbitrary shape 3−7141
- wave packets of polarisation, interf. of coherent matter waves in atomic system 3−41796
- wave plates, glass, laser control appls. 3−32444
- waveguides, dielectric, linearly polarised mode propag. consts. 3−46322
- wavelength division multiplexing without polarisation problems 3−42032
- weakly guiding fibres, polarisation corrections to mode propag. 3−32490
- wire grid polarisers, generalised model 3−7134
- Ag thin films, nonlocal EM phenomena near the plasma freq. 3−33803
- $Bi_{12}GeO_{20}$, sillenite, optical waveguide, electro-optic light polarisation modulation *(Russian)* 3−46291
- extreme C star near open cluster NGC 1960, photometric, spectroscopic and polarimetric obs. 3−59359
- CS_2, subpicosec. optical resonances, polarisation and temporal selectivity 3−12254
- CaCl, $X^2\Sigma$ state hyperfine struct., microwave-optical polaris. spectrosc. 3−50392
- CdS, photocond., linearly polarised light depend. 3−18742
- CdSe, photocond., linearly polarised light depend. 3−18742
- ^{133}Cs, optically polarised, nonstationary mag. reson. signals obs. 3−1289
- Cu (100) and (111) surfaces, angle-resolved polarisation depend. photoemission spectra 3−39012
- Cu_2O crystals, spatial dispersion of light near the quadrupole absorpt. line 3−23912
- FeF_2, Raman scatt. from magnon pair excitations 3−57913
- GaAlAs laser diode, antireflection-coated, polarisation control by external optical feedback 3−41889
- GaAs/AlGaAs multi-quantum-well laser diodes, polarisation depend. gain 3−46211

light polarisation continued
- GaSb, photoluminescence lines, stress effects, linear polarisation study 3−28894
- GaSe, bound excitons, light polarisation transformation, mag. field induced, phenomenological theory 3−43518
- He I 3p ^{3}P state, beam foil excited, orientation and polarisation 3−21896
- He-Cd laser, effect of weak axial mag. field 3−7047
- He-Ne intra-cavity laser beam polarisation effect on refl. beam intensity *(Chinese)* 3−41895
- He-Ne multitransverse mode intermol. mirror laser, polarisation phenomenon *(Chinese)* 3−41803
- He-Ne two-freq. laser in a transverse mag. field 3−27005
- He-Xe laser radiation bistability and polarisation due to $5d[3/2]_1{}^0$-$6p[3/2]_1$ transition in ^{136}Xe in weak mag. field 3−22036
- $InPS_4$, Raman light scatt. by polar oscills., anisotropy 3−28865
- KCl:Sn, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3−13743
- KI:In, decay and polarisation of luminescence pulses, impurity centres 3−52829
- $LaNb_3O_{14}$:Nd^{3+} crystal, prep. and luminesc. props. 3−57968
- Li+He, coherent S→D excitation, polarisation anal. 3−50496
- LiF:TiO_2, absorpt., emission, excitation, and polarised luminesc. spectra 3−43602
- $LiNbO_3$, electro-optic element, limitations on ang. aperture 3−32456
- $LiNbO_3$:Ti waveguide electro-optic polarisation modulator, high-speed 3−1760
- MgF_2, X-ray irrad., self-localised excitons, thermoluminescence props. 3−13744
- Na, polarisation spectroscopy within natural width 3−21727
- Na vapour, low threshold optical bistability with optical pumping using circularly polarised light 3−12209
- Na vapour, optical tristability obs. for linearly polarised light 3−27136
- NaF:TiO_2, MgF_2, absorpt., emission, excitation, and polarised luminesc. spectra 3−43602
- OH, form. by H_2O photodissoc., polarised laser-induced fluoresc. obs. 3−41611
- $PbCl_2$, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3−13743
- ^{85,87}Rb, optically polarised, nonstationary mag. reson. signals obs. 3−1289
- SiO_2-Si system, complex reflection coeffs. for parallel and perpendicular polarisations 3−38929
- $SnCl_2$, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3−13743
- Sr-inert gas systems, fluoresc. polarisation, collisional redistrib. 3−55887
- Ta_2O_5 Luneberg lens development 3−17641
- Tb complex, $Na_3[Tb(oxydiacetate)_3].2NaClO_4.6H_2O$, polarised luminesc. spectra of Tb^{3+} 3−3789
- Tb complexes containing 1,2-benzenedicarboxylic acid and chiral carboxylic acids, optical activity, luminesc. study 3−19103
- ThF_4-Ge system, complex reflection coeffs. for parallel and perpendicular polarisations 3−38929
- W halogen lamp, incoherent polarised light use for photostimulated wound healing 3−48322
- WO_3, monoclinic, Raman spectrum, polarisation props. *(Russian)* 3−57921
- YIG, photomagnetisation by circularly polarised light 3−8696
- ZnS:Eu, luminescence polarisation kinetics during afterglow process 3−8880

light propagation
- *see also atmospheric light propagation; guided light propagation*
- absorbing medium, laser pulse propag. 3−14234
- adaptive optical system referencing in the case of resolved targets illuminated through turbulence 3−17439
- aerodisperse bleachable medium, probe, radiation intensity induced fluctuations, spatial changes, smooth perturbation method 3−36940
- beam parameters, reciprocity principle and adaptive control 3−21997
- cholesteric liq. cryst., light propagation and scatt. 3−33085
- cholesteric liquid crystals, optical eigenmodes, numerical calc. using 4×4 matrix method 3−22766
- cholesteric liquid-crystals cells, optical phenomena 3−3666
- dispersive gas based optical component operation investigation 3−37174
- first-order optical systems with loss or gain, generalised mode propag. 3−6873
- first-order optics, operator representation for systems with loss or gain 3−6872
- focusing of light beams with random phase modulation 3−36936
- Fresnel propagation and diffraction and paraxial wave equation 3−50608
- Gaussian beams, generalized, propag. in a square-law medium with longit. variations of refr. index 3−1551
- Gaussian beams in a smooth transition between two square-law media 3−21986
- gyrotropic absorbing crystals, light propag. along elliptic singular directions 3−46157
- homogeneously broadened active medium with Kerr and resonant nonlinearities; light beam propag. 3−17584
- intensity covarariance funct. in spinor wave optics 3−50615
- IR absorption by diesel fuel combustion smoke 3−58568
- laser nonstationary absorption wave in a solid transparent dielectric 3−32306
- Mars atmosphere, optical props. of airborne dust during great dust storms 3−5191
- modern optics, mathematical appls., conf., San Diego, CA, USA (Aug. 1982) 3−40314
- modulation of radiation in nonstationary resonant media 3−27229
- monoaxial optical components, ray tracing formulas 3−41754
- Muller matrices for light transmittance, reflection through dielectric plate 3−41755
- mutual coherence funct. in spinor wave optics 3−50614
- nematic-cholesteric boundary, polarised light propagation 3−3660
- ocean photic zone optical parameters, short-period fluctuations rel. to thermocline fluctuations 3−48571
- partially coherent radiation propag. through atm. turbulence 3−41764
- particle dense distribution, attenuation const. of coherent field 3−6884
- particulate medium, light propag. and light scatt. 3−41762
- phase screens, turbulent random, K-distributed phase differences 3−50612
- photoanisotropic phenomena regularity 3−1561
- random medium, plane wave fourth moment differential eqn. numerical soln. 3−26943
- scatterer distributions, correl., large spaced, bulk coherent propag. coeff determ. 3−50613

light propagation continued
- semiconductors, coherent light propagation, exciton polarisation waves 3—28808
- semiconductors, coherent light propagation, Maxwell-Bloch eqns., interband and exciton transitions 3—28809
- semiconductors, coherent light wave propagation, single electron band theory 3—28807
- simple harmonic motion in harmonic plane waves, appl. to light waves 3—49125
- space-time diffusion eqn. higher-order boundary condition 3—32308
- spatial coherence and spot dancing in random media, nonreciprocity analysis 3—26945
- spatially disperse exciton-polariton medium, light propag. 3—47615
- turbulent media, modern math. models 3—41763

light propagation in plasma
- anomalous absorption and fast particles generation in laser-plasma interaction experiments at wavelength of 0.53 μm and 1.06 μm 3—22674
- beam penetration and absorpt. in nonuniform plasma above its crit. value 3—22590
- collisional plasma, self-focusing of powerful CO_2 laser beams 3—7085
- electron heating in laser-irradiated plasmas, collisionless and collisional bremsstrahlung 3—18091
- harmonic light emission from CO_2 laser produced plasma, link with Brillouin scatter 3—27667
- interaction efficiency with corona 3—22591
- kinetic theory, transport and hydrodynamics of high-Z plasma in intense laser field 3—37621
- laser coherent scattering, struct. factor, correlation dynamics *(Chinese)* 3—7742
- laser light filamentation in flowing plasma 3—37653
- Mandelshtam-Brillouin scattering, induced, struct. fields in plasma 3—46699
- neutron yield and MHD instability of plasma focus, CO_2 laser timing depend. 3—27706
- nonlinear eigenvalue problems, numerical method, appl. to laser-plasma interactions 3—56690
- parametric instabilities, wide bandwidth, high power laser source for plasma interaction studies 3—37651
- particle trapping in stimulated Brillouin and Raman scattering 3—22594
- plasma cavity, freq. shift of self-trapped light 3—51326
- relativistic self-focusing of laser beam, plasma density modification and ion prod. 3—37652
- resonance absorption with profile modification, capacitor model, self-consistent calcs. 3—37655
- self-focusing of elliptically Gaussian laser beam, non-WKB variational theory 3—32426
- stimulated Brillouin backscattering in controlled fusion *(Korean)* 3—7071
- stimulated Brillouin scatt. long-time oscills. in plasmas with supersonic flow 3—22595
- stimulated Raman scatt., angular distrib. and spectrum 3—7748
- Al impurity in spark-discharge plasma, meas. of density of electrode material 3—33021
- CO_2 laser interaction expts. 3—22592
- H plasma, recombining, population inversion, laser-induced fluoresc. meas. 3—32902
- He plasma, collisional-radiative mode and laser induced excitation transfer 3—21696
- Mg impurity in spark-discharge plasma, meas. of density of electrode material 3—33021

light reflection
- *see also mirrors; optical films*
- anisotropic layer, light reflection and transmission spectral operators 3—17438
- annular photoreactor, operation improvement, reflecting boundary role 3—53426
- atmosphere, directional props., space-borne meas., reflection effects 3—54115
- atmosphere, satellite albedo meas. rel. to cloud amounts around globe in belt from 54°N to 45°S 3—10043
- Brewster polarisers, light extinction, shadowlike phenomenon 3—56134
- chiral smectic C liq. cryt., homeotropic cell, helical pitch determ. using F-centre laser 3—13080
- cholesteric liq. cryst., blue phase, light scatt. studies, theory *(Russian)* 3—2408
- cholesteric liquid cryst., nonlinear refl., mirrorless optical bistability 3—7063
- conical element reflection coeff. meas., polariser-surface-analyser ellipsometry 3—25924
- corner reflector with one cylindrical face, fabrication errors effect on refl. props. 3—27199
- dielectric hollow circular waveguide, Gaussian beam transmission, optical theory 3—32460
- dielectric materials study 3—25721
- dielectric slab, Green's function in microscopic theory 3—41743
- dye ring laser, backreflection-induced oscills., crit. refl. coeff. meas., modulated light appl. 3—22131
- Earth surface, IR reflection rel. to mineral identification from orbit by multispectral radiometer 3—30095
- Earth surface, reflected radiances rel. to space shuttle feature identification and location expt. 3—30147
- enhanced internal reflection from an exponential amplifying region 3—46256
- Faraday effect, multiple reflection effects and ellipticity in propagation through three distinct media 3—47625
- foliar injury eval., digital image processing in polarised light 3—4714
- Fresnel equations, vectorial representation 3—32274
- frustrated total internal reflection expt. 3—5568
- geometric optics for illumination 3—27200
- grinding and polishing, state of the art, rel. to UV reflective and refractive scatt. 3—7241
- haemoglobinometry rel. to IR reflectance from whole blood soaked filter paper 3—34943
- half-wave retarder, film-substrate, single reflection, incidence angle characts. 3—37167
- holograms, bleached reflection type, internal reflections 3—26972
- holograms, transmission type, reconstruction by reflection *(Chinese)* 3—36958
- ice crystals, hexagonal, polarised light scatt. model 3—1550
- image-bearing beam self-pumped CW phase conjugation using $BaTiO_3$ single-domain cryst. 3—1719
- laser frequency stabilisation using mode interf. from reflecting reference interferometer 3—1682
- lateral-wave effect utilisation in a meas. instrum. 3—25930
- linearly vibrating objects, reflections, plane mirror at oblique incidence 3—6870
- liquid surface, light reflection, ellipsometric coeff. 3—14243
- liquid surface contactless level sensing by laser beam reflection 3—257
- liquid thin film between glass and Hg in aqueous soln., equilib. thickness meas. 3—51898
- macroscopic multiple light scattering, microscopic theory 3—1566
- metal grating, reflection rel. to surface smoothness 3—46276
- metal surfaces, light refl., change in polarisation 3—6876
- mirage production using a laser 3—49119
- modulation crystal optics, refl. operators 3—14235
- moire-schlieren inexpensive system, large field retrorefl., for flow visualisation 3—42345
- Muller matrices for light transmittance, reflection through dielectric plate 3—41755
- nonlinear interface, switching of refl. of light 3—27134
- nonlinear media, refl. and transmission coeffs. for nonlinear Helmholtz wave eqns. 3—27139
- nonspherical particles, strongly absorbing or strongly reflecting, extinction cross sections 3—21987
- ocean, marine sediment tolerances for remote sensing of atmospheric aerosols over water 3—25203
- optical field enhancement by long-range surface-plasma waves 3—19218
- passive isotropic surface, change of polarisation with normal-incidence refl. 3—17434
- phase shift effect in polarised light interaction with scatt. layer 3—50687
- photo-induced Bragg filter growth in single mode fibre, freq. response *(French)* 3—1775
- photographic systems, veiling glare 3—420
- photometric properties of objects analysis by back reflection 3—25919
- photomultiplier, multialkali photocathode, photocurrent meas. under conditions of total internal refl. 3—6504
- plant tissue remission and transmission spectra measured in glass cuvettes, correction technique 3—39748
- polarisation prisms based on total internal reflection as end reflectors for a Nd laser 3—1748
- polarised radiation transfer, diffuse refl. and transmission of radiation for Rayleigh phase function 3—59199
- polariton solitons, reflection and refraction of wave packets in cryst. 3—23288
- radiance reflected at sea surface rel. to downwelling irradiance 3—39903
- radiation principles, interpretation of expt. on refl. from amplifying media 3—1604
- random inhomogeneous media, partial wave front reversal under refl. *(Russian)* 3—1568
- random rough surface, plane wave refl., radiant intensity 3—41766
- reflected holograms, forward reconstruction 3—26978
- retroreflectance, CIE system of geometrical coordinates 3—36061
- retroreflective material daytime colorimetry, spectrophotometer or colorimeter calibration 3—36060
- retroreflector photometry using computer-controlled four-axis goniometer 3—36063
- Rochelle salt crystal, refr. and refl. of light at ferroelastic domain walls 3—28806
- Saturn rings, refl. of sunlight rel. to photometric obs. of unlit face of rings 3—59259
- scanned laser beam intensity, analogue compensation for surface reflected intensity data 3—7051
- second-order aspherical surfaces, plotting of reflected beams *(Russian)* 3—26932
- semiconductor surface, optical phase 3—12249
- Serpens Nebula, reflection nebula, optical polarisation maps 3—48995
- solar radiation absorption and reflection in solids meas., vacuum technique 3—49457
- solids, optical consts. for small negative permittivity, surface waves, far IR laser spectroscopy 3—23904
- spatial structure control of radiation formed by refl. from a four-wave mirror 3—56138
- spectral coefficient of retroreflection definition and use, spectroradiometric meas. 3—36062
- specular reflection measurement in multilayer structures 3—49431
- stratified structures, derivatives of reflection and transmittance, solution of reverse ellipsometric problem 3—25923
- sunlight reflected from sea surface and surface slope skewness 3—29938
- surface optical spectroscopy, effect of multiple reflections 3—38785
- surface roughness meas. study, optical reflectance method *(Japanese)* 3—54714
- thermal imaging system scan pattern distortion, generated by combining plane mirror and regular polygon scanner 3—50784
- thermal imaging systems, narcissus effect, refls. on retrorefls. 3—392
- total internal reflection electrooptic deflector, deflection angle and beam profile calc. 3—12298
- total internal reflection light conductors, geom. characts. investig., using laser probing 3—7168
- transparent isotopic medium boundary with nonlinear medium, light reflection and transmission 3—17560
- transparent plate, spectral specular reflectance meas., error monitoring 3—45214
- US wave diffraction grating, high-order Bragg refl. 3—34069
- veiling glare reduction with antireflection coatings 3—27176
- wedges, weak, ray deflection 3—27224
- Ag/ZnS coated, 90° roof-top reflectors and waxicons, complex eigenvalues equalization 3—37166
- Cu base alloys, shape memory stability, grain size refinement, optical refl. obs. 3—43836
- Cu_xS film, evaporated, optical absorpt. behaviour 3—14376
- He-Ne intra-cavity laser beam polarisation effect on refl. beam intensity *(Chinese)* 3—41895
- SF_6, degenerate parametric four-wave mixing, IR signal reflection 3—17575

light reflection spectra *see reflectivity; spectra*

light reflectometry *see reflectometry*

light refraction
- *see also birefringence*
- ametropia and peripheral refraction 3—19689

light refraction continued

- atmosphere, importance of differential refr. in astronomical spectrophotometry 3—10225
- atmosphere, refracting spherically symmetric, ray tracing 3—15618
- atmosphere, refraction calcs. for space-borne remote sensing appls. 3—54114
- atmospheric diurnal astronomical refraction, expt. model 3—25207
- atmospheric refraction, three-dimensional problem in astrometry 3—25278
- atmospheric structure and astrometric refraction, 3-dimens. data from lidar probing 3—25254
- atmospheric turbulence effects on telescopic obs. 3—44548
- characteristic functions concatenation in Hamiltonian optics 3—12066
- double-cusp unfolding of $^0X_9$ diffr. catastrophe 3—21989
- eye, refractive error, exam. through computer simulation 3—39624
- gradient light guides, refraction index distrib. 3—17617
- grinding and polishing, state of the art, rel. to UV reflective and refractive scatt. 3—7241
- holographic and refractive optical elements, equivalence *(Russian)* 3—41785
- ice crystals, hexagonal, polarised light scatt. model 3—1550
- macroscopic multiple light scattering, microscopic theory 3—1566
- molecular cryst., dielec. props., effect of exciton-exciton and exciton phonon interactions 3—47058
- ophthalmological setup using microprocessor based METROPHOR system 3—35012
- polariton solitons, reflection and refraction of wave packets in cryst. 3—23288
- polymerised organic films, optical waveguiding, thin film prism fabrication, light refr. *(Korean)* 3—32472
- random screen, one-dimensional refracting, intensity fluctuations in short wavelength limit 3—21988
- ray paths in gravitating refractive media, general relativistic eqn. of motion 3—10191
- Rochelle salt crystal, refr. and refl. of light at ferroelastic domain walls 3—28806
- shadows of floating objects and dissipating vortices 3—26938
- speckle interferometer, channelled spectrum 3—45215
- terrestrial refraction and vertical temp. gradient in Thessaloniki area 3—25209
- vertical refraction angle determ. from light beam angle of arrival fluctuations 3—6886

light scattering

- *see also Brillouin spectra; opalescence; Raman spectra; Rayleigh scattering; stimulated scattering*
- absorbing long cylinders, forward light scatt., approx. method validity domain 3—50609
- acoustic field recording by vol. light scattering 3—50864
- aerosol medium, selective interaction of laser pulse train 3—1567
- aerosols, optical properties comparison with models 3—48667
- anomalous scattered light correlator 3—40703
- antiferromagnet, light scattering, two magnon difference contributions 3—23896
- apparatus for measuring the scattering distribution curve of the lateral surface of active elements 3—32515
- aspherical particle light scattering, calc. of surface area 3—10061
- asymmetric ion-atom collisions in nonreson. laser fields, light scatt. 3—32164
- atmosphere, meas. of direct and scattered UV radiation in lower atmosphere 3—10066
- atmosphere, multiple scatt. rel. to radiation scheme for circulation and climate models 3—10052
- atmosphere, quantitative relationship between twilight brightness and cloud amount *(German)* 3—35236
- atmosphere, visibility in Detroit metropolitan area rel. to chemical comp. of fine particles 3—35260
- atmosphere aerosol, light scatt. props. effect on O_3 conc. meas. by photometers *(Chinese)* 3—48717
- atmospheric aerosols with Junge particle size distrib., normalised scatt. diagram 3—12071
- atmospheric light propagation in precipitation 3—39906
- attenuation in coastal water, particle size and chlorophyll content effects 3—15445
- attenuation in natural waters, optically discrete layers effect 3—48548
- ζ Aurigae, scatt. in supergiant chromosphere rel. to polarisation during 1979-80 eclipse 3—10388
- baffles for laser light scatt. expts. 3—7132
- BMOAB-isooctane liq. mixture, crit. point, light scatt. and extinction study *(Russian)* 3—3755
- bond-orientationally ordered phases, X-ray and light scatt. 3—47736
- bulk opaque material, fibre optic scattering monitor 3—1779
- butyloxybenzylidene heptylaniline smectic A—smectic C transition, mean field nature 3—47110
- cavitation nuclei classifier, dual-detector system 3—51260
- cellulose diacetate in 2-butanone, light scatt. meas., theta temp., solubility, association, virial coeff. 3—3748
- cellulose triacetate solns., cholesteric props. 3—18218
- ceramic, polycryst., for opt. components, light scatt. coeffs. w.r.t. relative density of medium 3—8841
- cholesteric liq. cryst., blue phase, light scatt. studies, theory *(Russian)* 3—2408
- cholesteric liq. cryst., buckling instabilities, light scatt. and optical spectroscopy study 3—33075
- cholesteric liq. cryst., light propagation and scatt. 3—33085
- cholesteric screw sense, technique for determ. 3—2392
- circumstellar dust shells, numerical simulation of radiative transfer with multiple scatt. 3—15907
- coherent scattering by interacting anisotropic mols. with variable dipolar polarizability, theory 3—21768
- colloid, polydisperse solution, light scattering and sedimentation of hard-sphere mixtures 3—39413
- Comet-Arend-Roland (1957 III), dust tail brightness profiles rel. to dust characts. *(Chinese)* 3—40071
- conical optical elements, specifying surface finish and scatt. tolerances 3—27194
- corneal small-angle light-scatt. theory, wavy fibril models 3—15078
- correlated large-spaced scatterer distribs., bulk coherent propag. coeff. determ. 3—50613
- Coulomb scattering in presence of low-freq. laser field 3—22017
- crystalline particles, light scatt., angular characts., weak anisotropy approx. calcs. 3—17442

light scattering continued

- curved surface roughness meas. by light scatter 3—27272
- cylinders, arbitrarily oriented finite size, light scatt., iterative approach 3—50600
- dielectric cylinder, homogeneous, Gaussian beam scatt. 3—26933
- dielectric fluids, refractive index theory and light scatt. 3—19092
- dielectric particles, arbitrarily shaped, sharply focused beam scatt., exact soln. 3—26941
- dielectric waveguide, guided mode scatt. by inhomogeneous part 3—56317
- diffuse coherent radiation field, longit. struct. *(Russian)* 3—21993
- diffuse thickness as a measure of light scattering 3—25911
- dipolar hard ellipsoids fluid, second virial coeffs. 3—13394
- disparate-mass gas mixtures, light scatt. predictions 3—46682
- echelettes, with absorbing faces, wave scatt. theory 3—32453
- eikonal approx. corrections in light scatt. from homogeneous spheres 3—21990
- elastic scatt., absorption, and surface enhanced Raman scatt. by concentric spheres of metal and dielec. regions 3—14302
- electric breakdown in vacuum gap, microparticle induced, investig. using twin beam laser scatt. system 3—18163
- electron beam-plasma system, laser light backscatt. 3—56697
- erythrocytes, undeformable in blood samples, determ. using laser light scatt. 3—24918
- Europe photometric scatt. function rel. to liq. water layer and active resurfacing 3—35518
- ferrofluid agglomerate optical scatt. 3—19149
- ferromagnetic multilayers, magnetostatic spin wave modes 3—52441
- fibre, single-mode, mode spot size, bending loss, backscattering, chromatic dispersion 3—37227
- fibre backscattering measurement, mode distrib. determ. 3—22215
- fibre optics, polarisation backscatter analysis of field distribs. 3—37189
- fibre size distribution determ. using laser based optical instrum. 3—45117
- fibre waveguides, multimode, backscatt. study using fibre Raman convertor 3—1792
- fibres, single-mode, backscatter waveform anal. 3—56337
- fibres, transparent, size measurement using light scatt., approx. calc. 3—16335
- fibrous and nonfibrous airborne particles, discrimination by light scatt. technique 3—19653
- fluid, stationary state, light scatt. caused by temp. gradients, stochastic Boltzmann eqn. 3—19146
- focusing of light beams with random phase modulation 3—36936
- gel microviscosity and channel size, photon scatt. as probe, sickle haemoglobin appl. 3—58889
- glass fibre reinforced plastics, fatigue damage diagnosis using diffuse light transmission 3—53327
- glass-polymer fibres, with loosely fitting cladding, losses in microbends 3—37207
- grinding and polishing, state of the art, rel. to UV reflective and refractive scatt. 3—7241
- HD 152270, Wolf-Rayet binary system, electron scatt. model rel. to polarimetric determ. of orbital inclination 3—10368
- Heisenberg ferromagnetic films, light scatt. and spin wave reson. 3—47530
- n-hexane-nitrobenzene, critical phenomena, viscosity and light scatt. meas. 3—47083
- holograms, scatt. image plane, interferometric reconstruction *(German)* 3—1595
- ice, freezing kinetics light scatt. study *(German)* 3—7938
- ice crystals, hexagonal, polarised light scatt. model 3—1550
- insulating crysts., light scatt. from dislocations, elasto-optic contribs. 3—57944
- intensity fluctuation spectrum, non-Gaussian component recording by cross-correl. method 3—1564
- inverse scattering as a form of computed tomography 3—41756
- inverse scattering theory with stochastic initial potentials 3—6877
- Io Na cloud, reson. scatt. of sunlight in Na I D-lines rel. to east-west asymmetries 3—35502
- ionic solutions, aq., light scatt., linearised hydrodynamic theory 3—52800
- ionosphere Ba ion cloud, sunlight reson. fluoresc. scatt., radiative transfer and lines anal. 3—5031
- isobutyric acid-water binary liq. mixture, coupling of vel. and comp. fluctuations, light scatt. obs. 3—28088
- kaolin and sediment suspension, He and Ne laser scattering charact. *(Japanese)* 3—17441
- L1551 IRS5, dust grain scatt. model for IR polarisation 3—54483
- laminar flow, viscosity and vortices, light scatt. from FeOOH sols 3—2074
- Langmuir film, laser light scatt. 3—38943
- laser applications to solid state physics *(Japanese)* 3—20902
- laser beam scattering and optical pot. well for homogeneous sphere 3—50686
- laser fusion targets with small defects, light scatt., depolarised components 3—26437
- laser long-range anemometry, atmospheric wind velocity meas. 3—35293
- laser pulse propagation in particulate media, broadening induced by multiple scatt. 3—6883
- latent image form. by pulsed laser radiation, light scatt. 3—49487
- light, hydrodynamic scatt., anisotropy 3—2028
- linearly vibrating objects, reflections, plane mirror at oblique incidence 3—6870
- lipid bilayer membranes, photon correlation spectroscopy, viscoelastic props. 3—44204
- liquid crystal, nematic, multichannel analogue-pulse correlator use 3—406
- liquid interface viscoelastic props., surface fluctuation scatt. using grating heterodyne spectroscopy 3—3747
- liquid media radial and orientation correlation functions, light scatt. methods *(Rumanian)* 3—14396
- macroscopic multiple light scattering, microscopic theory 3—1566
- magnetic materials, use of magnetooptics to study mag. props. 3—52772
- Mandelstam-Brillouin scatt. by optically linear media 3—57948
- marine particulate matter, hydrosols, lidar sensing, scatt. matrix element determ. 3—10072
- mathematical models for scatt. predictions 3—41757
- MBBA, nematic liq. cryst., low freq. light scatt. *(Italian)* 3—51475
- MBBA, nematic ordering, transparency and mol. reorientation in laser field 3—33090
- methanol-hexane solution, light scatt. and refractive index near critical lamination temp. *(Russian)* 3—43556
- 3-methylpentane-nitroethane, critical conc. fluctuations, time depend. 3—47082
- Mie scattering, complex Riccati-Bessel functions ratio calc. 3—50616

light scattering continued
Mie scattering resonance structure 3—50617
milk glass used to produce uniform illumination fields 3—37146
mirror surfaces, diamond-turned, spectral analysis of finish, surface topographic scatt. 3—7126
molecular crystals, exciton Bose-Einstein condensate, nonlinear light scatt., theory *(Russian)* 3—47669
molecules in orbitally degenerate states, depolarisation of Rayleigh and nonlinear light scattering 3—26757
multimode fibres, parameter fluctuations determ. by backscatt. technique 3—7185
multiply scattering atmosphere, radiative props. of optically anisotropic spheres 3—10063
natural waters, average irradiance attenuation coeff. determ., math. procedure 3—48547
nematic liq. cryst., nonequilibrium steady state, light scatt. 3—47667
nematic liq. crysts., ordering, transparency and mol. reorientation in laser field 3—33090
nematic liquid cryst., light scatt. spectrum in presence of shear flow 3—28871
nematic liquid crystal, Frank const. determ. by light attenuation meas. 3—2639
nematic liquid crystal slab, direct meas. of the two principal refr. indices 3—16405
4-nitrophenyl-4-octyloxybenzoate, smectic A phase, reversible electrical memory effect, light scatt. 3—51491
nonimaging concentrator efficiency in physical optics model 3—12273
nonspherical particles, strongly absorbing or strongly reflecting, extinction cross sections 3—21987
ocular lens turbidity, conc. change effect, random fluctuation theory prediction 3—34831
oil-H_2O emulsion, light scatt. parameters meas. using a receiver with arbitrary aperture 3—6885
optical fibres, birefr. meas. by polarisation time-domain reflectometry 3—1774
optical fibres, optical property measurement methods *(Hungarian)* 3—27250
optical surface angle resolved light scatt. meas. in 75 to 750 eV range 3—7125
parametric scattering theory and method of absolute light brightness meas. 3—1717
particle dense distribution, attenuation const. of coherent field 3—6884
particle size analysis using Mie scattering, effect of refr. index and collecting solid angle *(Japanese)* 3—36938
particle size measurements, turbidimetric spectral transmission techniques review 3—20825
particles of irregular shape, light scatt., in Rayleigh-Gans approx. 3—1565
particulate medium, light propag. and light scatt. 3—41762
4-n-pentylphenylthiol-4′-heptyloxybenzoate and mixtures with octyloxy analogue, light scattering above the nematic-to-smectic- C transition 3—47108
phase boundary singularities, correlation function second derivatives 3—34168
phase shift effect in polarised light interaction with scatt. layer 3—50687
phospholipid vesicles, anal. of suspension heterogeneity by method of optical mixing 3—24919
photographic daguerreotype, physical model in terms of light scatt. from microstruct. 3—25972
β-picoline-water solution, light scatt. study of fluctuation kinetics 3—43553
planetary atmospheres, strong scatt. formulation including inhomogeneous background rel. to turbulence in planetary occultations 3—10205
plasma diagnostics, using Thompson scattering meas., recording device 3—45123
PMMA colloidal particles in conc. suspension, short-time self-mobility 3—51834
polarised, radiation density vector, azimuthally symmetric component 3—36937
polarised radiation transfer, diffuse refl. and transmission of radiation for Rayleigh phase function 3—59199
poly-1-vinyl-1,2,4-triazole solutions, light scattering and viscosity *(Russian)* 3—13506
poly-N-vinylcarbazole, morphology, small-angle light scatt. obs. 3—19097
polyacetylene, light scatt. and absorption 3—19143
polyacrylamide-water-acetone system, coil globule transition obs. by light scattering method *(Russian)* 3—7894
polydisperse ensemble of arbitrarily shaped anisotropic particles, size determ. using scatt. radiation time autocorrel. functions 3—30838
polydisperse hard spheres, in conc. liq. suspensions, dynamic light scatt. model amplitudes 3—12072
polydisperse medium characteristics reconstruction by optical-mixing spectroscopy methods 3—21996
polyethylene, diffusion investigation by field gradient pulse NMR and light scattering *(German)* 3—38108
polyethylene solution, diffusion investigation by field gradient pulse NMR and light scattering *(German)* 3—38108
polyethylene terephthalate, thermally crystalised, optical props. 3—19151
polymer film, two-dimens. position-sensitive detector for small-angle light scatt. 3—18194
polymer monolayer, colloid, diffusion kinetics of small mols. 3—38133
polymer solns., gel-like modes in 'θ' solvents 3—28131
polymer solutions, dilute, props., real gas model *(Russian)* 3—47670
polymer solutions, microgel containing, scattered light meas. eval. *(German)* 3—39418
polymers with nearest- and next-nearest-neighbour interactions, polydispersity effect on scatt. light spectrum 3—17443
polyoxy-2,2′-dimethylazoxybenzene-4,4′-diyloxydodecanedioyl, phase transitions, DSC, optical microscopy 3—38063
polystyrene in cyclohexane, temp. depend. of hydrodynamic dimensions, quasielastic light scatt. 3—38105
polystyrene in tetrahydrofuran, cooperative and self-diffusion by dynamic light scatt. 3—2858
polystyrene-polyvinyl methyl ether blend, phase separation, cloud point curve, deuteration effect 3—39101
polystyrene/polychlorostyrene blend, light scattering obs. of phase-demixing 3—37809
polystyrenes, mol. wt. determ. using size exclusion chromatography interfaced with light scatt. photometer 3—1515
polytetrahydro-4H-pyranyl-2-methacrylate, dil. soln., chain flexibility, glass transition temp., light scatt. 3—51471
powders, luminescence quantum yields with light scattering 3—19180

light scattering continued
purple membranes in soln., interfacial elec. polarisability, light scatt. obs. 3—9560
quartz synthetic crystal, plate-like defects obs. by light scatt. tomography, X-ray topography 3—13212
radio galaxies, scatt. model for relation between optical polarisation position angle and radio source axis 3—5428
random inhomogeneous layer, light scatt., fluctuating field, ray description 3—17444
randomly distributed particles, optical beam transmission, diffusion theory, particle size effect 3—36939
randomly distributed spherical particle slab, transmission, backscatt. and depolarisation 3—6881
rare earth orthoferrites, $RFeO_3$, one-magnon light scatt., temp. depend. 3—52776
rarefied gas, spectra density of velocity autocorrelation function *(Russian)* 3—42357
rotating diffusely reflecting object, speckle pattern dynamics 3—12074
rough random surface light scatt. anal. using Bragg diffr. concept 3—41765
ruby laser radiation scattering by nonrelativistic electron beam 3—22144
S237, S254-S257, small H II regions, dust distrib. from V-band and $H\alpha$ maps 3—59429
salol, freezing kinetics, light scatt. study *(German)* 3—7938
Saturn atmosphere, multiple scatt. model rel. to cloud height differences between equator and South Equatorial Belt 3—59258
semiconductors, light scatt. on free electrons, electron-relax. processes 3—23965
silica core glass fibre, low freq. light scatt. 3—34121
single mode fibre backscatt., optical time domain reflectometry 3—7188
smectic S_2* liq. cryst., refr. index, Bragg scatt. 3—2402
solar prominences, reson. scatt. theory rel. to partial redistrib. in optically thin subordinate lines 3—59284
solids, light scattering, Brillouin and Raman spectra, book 3—46
speckle field Stokes parameters, first order statistics of polarisation props. 3—12075
speckle statistics of doubly scattered light 3—12073
speckled images spectra estimation 3—32311
speckles, partially developed, contrast in image plane, point scatterer model 3—1563
spectral moments, depolarised interaction induced, mol. dynamics calc., quantum corrections 3—56137
spermatozoa, bull, light scatt. obs., interaction and conc. effects 3—9562
spheroids, large, light scatt. in physical optics approx. 3—26944
stimulated noncoherent radiation generation in light-scatt. media, exhibiting chem. reactions 3—17490
stimulated scattering with a freq. and ang. shift, wavefront reversal accuracy 3—56288
stratosphere, lidar obs. of increase in aerosol scatt. caused by Sierra Negra volcanic eruption 3—4925
stratosphere aerosol layer, twilight IR brightening over India due to eruption of El Chichon, Mexico 3—30053
styrene-meta-divinylbenzene, radical copolymerisation, dynamic light scatt. study 3—34622
supernovae, scattering atmosphere model rel. to use of polarisation as measure of deviation from spherical symmetry 3—30396
supersonic air flow visualization using coherent laser light sheets 3—2156
surfaces, line shapes and threshold resons. for scalar wave scatt. 3—24079
system optical cross talk 3—1575
thin-film waveguides, laser annealing for low loss in Corning 7059 glass, ZnO, Si_3N_4, Nb_2O_5, Ta_2O_5 3—50757
Thomson scattering apparatus, background plasma light subtraction by delay line techniques 3—22720
time-resolved spectroscopy: wavepacket formalism in the coherent-state representation 3—17383
turbine blade wakes in transonic cascade, laser transit anemometer oscillatory correlograms 3—12797
two-dimensional scattered fields, description in terms of zeros of entire functions 3—32315
two-phase flow dispersed composition determ. from small-angle light scatt. 3—51197
unstable resonator, diffractive effect of scraper mirror 3—7023
Uranus atmosphere, reson. scatt. model rel. to H Lyman-alpha emission obs. 3—35527
velocity gradient determination with scatt. light cross-correl. meas. 3—42328
Wolf Rayet stars, multiple scatt. line radiation theory for stellar winds 3—25481
YAG crystals, ground, optical props. 3—19095
zodiacal light dust particles, light scatt. model 3—25380
Ag film, light scatt. and photoacoustic study of surface plasmons 3—34159
Al film, obliquely evaporated, optical props. 3—14374
CsH particles, laser-produced from Cs-H_2 vapour, size distrib., light scatt. study 3—22804
$DyFeO_3$ orthoferrite, spin-reorientation, magnon light scatt. study 3—23924
$ErFeO_3$ orthoferrite, spin-reorientation, magnon light scatt. study 3—23924
GaAs, light scatt. on free electrons, electron-relax. processes 3—23965
n-GaAs, light-scatt. spectrum for single-particle excitations 3—38841
GaAs-Al_xGa_{1-x}As heterojunction, subband struct. and light scatt. spectra 3—28423
Hg_2Cl_2, periodic spatially inhomogeneous state near phase transition, optical study 3—2787
n-InP, reson. inelastic light scatt. by free electrons 3—57946
KCl:Ba^{2+} solid soln., disintegration, heterophasal struct. *(Russian)* 3—8196
Kr_2+Kr_2, pair polarisability anisotropies from depolarised interaction induced light scatt. 3—50492
$LiNbO_3$:Fe, optically induced light scatt. and beam distortion, rel. to phase hologram storage 3—50630
$LiNbO_3$:Fe crystals, photorefraction and anisotropic light scatt., holographic recording 3—36959
$Li_2SO_4.H_2O$, phonon dispersion, dielectric and optical axes 3—33372
$LiTaO_3$, light scatt. intensity increase near phase transition 3—47668
$LiTaO_3$:Fe crystals, photorefraction and anisotropic light scatt., holographic recording 3—36959
Si, ion implanted, picosecond laser annealed, recrystn., microprobe Raman anal. and polarised light scatt. 3—51656

light scattering continued
- Si:O, precipitation kinetics,. solubility, diffusivity and particle size 3 -42787
- SiO_2 particles in dil. solns., contrast var. with temp. in light scatt. 3-23963
- Tl, laser light near reson. scatt., time depend. effects., phenomenological description 3-21728
- Xe fluid, depolarised light scatt. at HF, density depend. 3-23962
- Xe_2+Xe_2, pair polarisability anisotropies from depolarised interaction induced light scatt. 3-50492
- $Zn(NH_4)_2(SO_4)_2.6H_2O$, homogeneity study 3-2829
- ZnSe chemically vapour deposited, bidirectional transmittance distrib. function meas. 3-28811
- $(ZrO_2)_{1-x}(YO_{1.5})_x$, x=0, 0.18, 0.33, quasi-elastic light scatt. and ionic cond. correl. 3-43555

light sensitive materials *see optical materials; photographic material sensitivity; photographic materials*

light sources
- *see also infrared sources; light emitting devices; photometric light sources; spectroscopic light sources*
- air scintillators as reference light source 3-41947
- chromaticity temp. determ., using least squares approximations and splines *(Slovak)* 3-50724
- coherence effects in radiometry, radiance, radiant emittance and intensity of planar source 3-12070
- color trimming filters for filming *(Russian)* 3-32451
- diffuse illumination systems, finite element anal. 3-27179
- discharge light sources, spectral distribution effect on visual performance 3-48292
- fibre communication systems, opto-electronic device performance characts. 3-50785
- fibre waveguide and optical source parameter dispersion charact. optimisation 3-1794
- Gaussian Schell-model sources, example and perspectives 3-50603
- human visual system at threshold, multiplication noise, role of non-Poisson quantum fluctuations 3-15091
- indoor illumination using conc. and piped sunlight 3-53485
- inert gas plasma, gas puff, extreme UV emission, XUV source appl. 3-51294
- inverse source problems, generalised holographic imaging and computational solns. 3-26976
- laser light source for shock tube expts., display and synchronisation apparatus 3-46668
- laser source for microscopes, diffraction effects eliminating attachment 3-45199
- light-energy utilization technology *(Japanese)* 3-12378
- non-stationary radiation spectral props. determ. 3-10907
- partially coherent sources, effective no. of degrees of freedom 3-12067
- point-source image visual alignment with luminous index mark centre 3-29544
- polychromatic planar sources generating same intensity at output plane, characterisation 3-22182
- pulsed light source photon-counting statistics 3-12262
- pulsed radiation source spatial energy characts. meas. in far zone 3-25921
- quantum mechanical size effect modulation light sources, field effect semicond. laser or LED 3-41831
- quasi-thermal, correlation props. 3-36935
- ruby laser, monopulse, for shock tube expts., display and synchronisation apparatus 3-46668
- schlieren instrument illuminator 3-37169
- shadowgraph device using a partially incoherent source for optical flow study appls. 3-22556
- synchrotron radiation grazing incidence mirrors, phase-space performance 3-7118
- synchrotron radiation optical components and systems, storage rings as light sources 3-7114
- synchrotron radiation optics, review 3-7113
- uncertainty principle for spatially quasi-stationary, partially coherent light 3-6874
- uniform illumination fields produced using milk glass 3-37146
- UV light-arc current stabilisation 3-13008
- UV radiation source, high-brightness, based on cumulative plasmadynamic discharge 3-27182
- UV source, tunable, based on stimulated Raman scatt. of excimer-pumped dye laser in compressed H_2 3-1710
- UV sources calibration, arc emission, 124 to 300 nm 3-42478
- UV sources for lidar fluorosensing of oil films 3-29481
- white-light pseudocolour image-difference detect. technique, real-time 3-41781
- zoom system; IR, all-reflective, approaching or receding source simulation appls. 3-7130
- Ar laser, active synchronisation mode stabilisation 3-46245
- D_2 continuous spectrum LD2-D capillary-arc spectral lamp, 170-400 nm wavelength region 3-27181
- GaP thermally-stable two-color light source 3-37148
- Hg-Xe pulsed lamp emission with short lived discharge for dye laser pumping 3-7105
- $In_xGa_{1-x}As$ diode simulator of solid-state laser 3-37147

light transmission
- *see also light absorption; optical filters*
- anisotropic layer, light reflection and transmission spectral operators 3-17438
- astronomical faint-object spectrograph design 3-20247
- atmosphere; meas. of direct and scattered UV radiation in lower atmosphere 3-10066
- atmosphere remote optical breakdown by CO_2 laser pulses, transmission cutoff 3-30054
- attenuation in natural waters, optically discrete layers effect 3-48548
- conical lens, complex amplitude distrib. using transmission function 3-22186
- diacetylene Langmuir-Blodgett monolayer films, polarization effects 3-38938
- DOBAMBC, chiral smectic C liq. cryst., homeotropic cell, helical pitch determ. using F-centre laser 3-13080
- ferroelectric ceramic, transparent, interf. effect on electro-optical props. using polarisation method 3-38800
- fibres, vapour phase axially deposited using multiple burner single source gas nozzle, transmission characts. 3-32487

light transmission continued
- film coating reflectance and transmittance, meas. techniques as function of temp. 3-14367
- films, reflectance and transmittance simultaneous meas. using optical thickness monitor 3-374
- films, very thick and weakly absorbing, simple method for optical anal. 3-38790
- fog, transmission meas. in 0.53 to 10.1 μ wavelength range rel. to drop size distrib. 3-25146
- Fresnel equations, vectorial representation 3-32274
- gas, finite cylindrical vol., reson. at. state decay 3-31978
- gate array, high density, electro-optical, PLZT based, light transmission characts. 3-7152
- glass fibre reinforced plastics, fatigue damage diagnosis using diffuse light transmission 3-53327
- glass fibre reinforced plastics, laminate, fatigue damage depend. 3-29153
- gradient index medium, nonrotation-symm., imaging and transforming transmission 3-36944
- gradient-index medium, paraxial imaging and transforming, transmittance function 3-21998
- GRIN material, pupil effect, effective transmittance function 3-56147
- holograms, transmission type, reconstruction by reflection *(Chinese)* 3-36958
- images transmitted over optical fibres, time depend. recording 3-1783
- inhomogeneous media with revolution symm., paraxial imaging and transforming transmission 3-22003
- lithium formate monohydrate single cryst.; optical transmission spectra, deuteration effect 3-3741
- MBBA, nematic liq. cryst., light diffr. by laser beam created channels 3-46267
- metal oxide film optical filters, pyrolysis prep. and optical props. 3-56304
- metallic hollow waveguide, dielec. coated, IR transmission characts., slab waveguide model 3-37183
- mixed Solc birefringent filter, transmission characts. 3-12294
- Muller matrices for light transmittance, reflection through dielectric plate 3-41755
- multilayer coatings, optical props., effect of oblique incidence of radiation 3-1754
- nondamping resonant medium, step-function pulse propag. self-induced transparency and soliton lattice 3-12252
- nonlinear media, refl. and transmission coeffs. for nonlinear Helmholtz wave eqns. 3-27139
- octylcyanobiphenyl, nematic liq. cryst., light diffr. by laser beam created channels 3-46267
- optical fibre, multimode, splice loss meas., transmission and OTDR meas. 3-46345
- optical fibres, optical property measurement methods *(Hungarian)* 3-27250
- paper, optical and beta radiation method of grammage meas. 3-273
- plant tissue remission and transmission spectra measured in glass cuvettes, correction technique 3-39748
- polarised radiation transfer, diffuse refl. and transmission of radiation for Rayleigh phase function 3-59199
- polarisers, polyvinyl alcohol iodine liq. cryst., hydrolytic stability 3-7135
- randomly distributed spherical particle slab, transmission, backscatt. and depolarisation 3-6881
- rare earth diortho(pyro)silicates, $R_2(Si_2O_7)$, Czochralski grown, struct. and physical props. 3-51560
- rare-earth-metal thin film in situ prod. and investigation, optical cryostat *(Russian)* 3-8983
- reflected holograms, forward reconstruction 3-26978
- reflection coupler, PLZT based, for bidirectional transmission 3-7177
- sea ice, spectral transmission coeff., attenuation of collimated light beams 3-25135
- sealing glass with high absorption in the near infrared region 3-34088
- seawater, natural, laser beam transmission characts., attenuation coeffs. determ. *(French)* 3-4873
- SHG by Gaussian beam in Bragg-diffraction conditions 3-46264
- snow, spectral transmission coeff., attenuation of collimated light beams 3-25135
- solids, optical consts. for small negative permittivity, surface waves, far IR laser spectroscopy 3-23904
- stratified structures, derivatives of reflection and transmittance, solution of reverse ellipsometric problem 3-25923
- surface optical spectroscopy, effect of multiple reflections 3-38785
- telescopic systems, transmittance and veiling glare index meas. 3-1735
- transition metal oxide containing amorphous layers, vitrification range, light transmittance *(Japanese)* 3-57989
- transparent isotopic medium boundary with nonlinear medium, light reflection and transmission 3-17560
- Venus atmosphere, lightning in cloud, emitted light transmission to space 3-35492
- wavefront correction quality in adaptive transmitting systems 3-26946
- YAG crystals, ground, optical props. 3-19095
- Ag aerosol particle deposits, plasma and optical-conduction resons. 3-43648
- Ag-Ge-Se-Ga(In)/SnO_2 sandwich structs., optical transmittance and I-V characts. 3-57428
- Al film, obliquely evaporated, optical props. 3-14374
- As_2S_3, amorphous, injected CdS acoustic domain effects, optical transmission and X-ray diffr. 3-2682
- As_2S_3, As_2Se_3 fibre characterisation for 10.6 μm transmittance 3-46296
- Au evaporated film, absorpt. coeff. determ. from phase change meas. in transmission 3-14368
- BaF_2-GdF_3-ZrF_4, optical fibres, for transmission in mid-IR 3-12356
- CS_2, liq., shock-induced changes in visible and UV spectra 3-47671
- $Cd_{1-x}Mn_xTe$, semimagnetic, cryst. struct. imperfections, X-ray diffr., etching and optical transmission studies 3-33194
- CdS (Se)(Te), colouring mechanism in glasses, IR, visible and UV transmission spectra 3-34122
- CdS, excitonic transmission spectra, memory effect 3-43561
- Cd_2SnO_4 thin films obtained by DC reactive sputtering of Cd-Sn alloys 3-52284
- Cl_2, photolysis, kinetic meas. by Cl reson. fluoresc., optical thickness effects 3-29320
- CuCl, elec. and optical props. at high press. and from 400°C to liq. N_2 temps. 3-13816
- $CuInS_2$ thin film, prod. by spray pyrolysis, structural, optical and elec. props. 3-47244
- Cu_xS film, evaporated, optical absorpt. behaviour 3-14376

light transmission continued
- Fe-C magnetic films, RF reactively sputtered, phys. props. and struct. 3−52563
- $GaAs_{1-x}P_x$, organometallic VPE grown, optical and SEM anal. 3−43753
- Ge, optical grade, procurement specification 3−1725
- GeO film, heat treatment effect on struct. and props. 3−14612
- $Ge_{32}Se_{24+x}Te_{40-x}As$ (x=0, 8, 16, 24, 32) glasses, optical and elec. gaps, cond., glass transition temp., DSC study 3−34056
- HfN film based transparent heat mirror, transmittance and reflectance 3−17599
- In-Sn film filters for EUV instrumentation, long term variability of transmission 3−1751
- In_2O_3:Sn film, deposited by RF sputtering, struct. and props. 3−51983
- $Na_8Al_6Si_6O_{24}Cl_2$, sodalite, polycryst., optical and cathodochromic props. *(Russian)* 3−57870
- Os single crystal, optical property anisotropy in 1.2-5.1-eV energy region 3−23903
- PLZT thick film, sintering props. and optical transmittance 3−39055
- PbS (Se)(Te), colouring mechanism in glasses, IR, visible and UV transmission spectra 3−34122
- $Sc_2(Si_2O_7)$, Czochralski grown, struct. and physical props. 3−51560
- Si, ion implanted, dynamic behaviour of nanosecond pulsed laser annealing, optical studies 3−56939
- Si, optical reflectivity and transmission changes, electronic plasma, pulsed laser beam annealing 3−13270
- Si, pulsed laser annealing phase, Raman and optical props. 3−57935
- Si, pulsed ruby laser irradiated, time resolved transmission and refl. 3−57957
- Si, transient IR refl. and transmission during pulsed laser annealing 3−57938
- Si:B, laser annealing, picosecond dynamics 3−56938
- Si:P, ion implanted, laser annealing dynamics, reflectivity and transmission coeff. study 3−37958
- SiO_2 film, RF sputtered, optical props. 3−14373
- Sn-C film filters for EUV instrumentation, long term variability of transmission 3−1751
- Te evaporated film, absorpt. coeff. determ. from phase change meas. in transmission 3−14368
- Te films, elec. resist. and light transmission, degradation effects 3−52281
- TiN film based transparent heat mirror, transmittance and reflectance 3−17599
- TlBr-TlI KRS-5 fibre characterisation for 10.6 μm transmittance 3−46296
- $Y_2(Si_2O_7)$, Czochralski grown, struct. and physical props. 3−51560
- ZnO film, RF sputtered, elec., optical and structural props. 3−28229
- ZnSe chemically vapour deposited, bidirectional transmittance distrib. function meas. 3−28811
- ZrN film based transparent heat mirror, transmittance and reflectance 3−17599

light velocity
- No entries

light velocity measurement
- anisotropy tests, mirror reflection effects from Earth's West-East motion 3−10571
- electrical measurements on loss-free dielectric, hypothetical expt. 3−1555
- minimal apparatus for first-year course demonstration 3−25729
- one way speed of light, meas. and Earth's absolute velocity 3−10672
- speed of light anisotropy, first-order proposed meas. method 3−10569

light water *see water*

lighting
- automobile night driving, detection potential of normal observers at prevailing visibility conditions 3−19701
- biomechanics cinematography laboratory, light considerations 3−4698
- daylight illuminants, interior and exterior, for colorimetry of fluorescent materials 3−5833
- indoor illumination using conc. and piped sunlight 3−53485
- laser scanning projection system *(Russian)* 3−41902
- light production by ^{85}Kr and ^{147}Pm radionuclides, by-products from nuclear waste 3−21391
- luminous flux measurement, integrating, photometer systematic errors, correction factors *(Polish)* 3−5827
- photography, high speed, light and lighting considerations for data acquisition 3−425
- United States residential sector regional energy demands and economics 3−48113

lightning
- acoustic props. for tortuous lightning, quasilinear model and computer simulation 3−35232
- associated lightning discharges in severe storms 3−29991
- ball lightning, collective electron state model 3−54109
- ball lightning, ion and cluster plasma theory 3−27654
- ball lightning geomag. meas. related to a lightning-assoc. phenomenon 3−30026
- ball lightning model 3−20089
- ball lightning over river, eye witness report 3−20103
- electric fields preceding cloud-to-ground lightning flashes 3−15551
- global EM resonances in terrestrial and planetary atmospheres, theory 3−15862
- ice crystal realignment by lightning, SHF radar study 3−15593
- Jupiter, Voyager 1 obs. of lightning activity 3−59252
- light produced, transport within clouds 3−15532
- natural illumination computation of building from scattered clear-sky light using linear model 3−9948
- positive charge cloud-to-ground lightning in summer storms 3−15538
- radar detection technique, influence of signal polarisation 3−30075
- radio noise source environment 3−44540
- return stroke vels. in Thunderstorm Research International Program 3−15552
- thundercloud elec. field changes due to intracloud lightning 3−15540
- thunderstorm lightning channels obs. by Doppler radar 3−15542
- VLF and LF emissions from lightning, theory 3−4902

lightning conductors *see lightning protection*

lightning protection
- power overhead transmission line space charge model for study of corona during surges 3−33008

lightning rods *see lightning protection*

limited space charge accumulation
- *see also Gunn effect; negative resistance effects; space-charge limited devices*
- No entries

linear accelerators
- *see also collective accelerators; electrostatic accelerators*
- accelerating structure electrodynamic characts. *(Russian)* 3−11558
- accelerators, conf., Los Alamos, NM, USA (Feb. 1982) 3−16064
- beam matching in 150 keV linear accelerator and ion source 3−36582
- biomedical intra-oral cone for an 18 MeV linear accelerator 3−4623
- cascade system of linear and cyclic accelerators 3−11564
- clinical treatment accelerator room photoneutron and photon background meas. using thermolum. dosimeters 3−58825
- colliding γe and $\gamma\gamma$ beams using linear e^+e^- colliders VLEPP and SLC 3−41343
- current viewing resistors for magnetically insulated vacuum transmission lines 3−17158
- disk and washer accelerating structure, EH_{11n} modes of E type 3−36581
- double-resonator accelerating system, compact, construction and expt. characts. 3−11553
- driver accelerator, heavy ion beams for ICF 3−55597
- Dynaray 18 accelerator, dose rate variation obs. 3−9745
- electron, high relativistic energy, C-band superconducting structures 3−36602
- electron, multidetector neutron time-of-flight diffractometer in Fakel accelerator 3−2344
- electron accelerator, current loading in bunching section 3−31855
- electron accelerator, electron beam emittance and brightness study 3−17115
- electron accelerator, optimum use high freq. source study 3−41349
- electron accelerator, standing wave, new accelerating systems 3−11557
- electron applicator assembly on a linear accelerator, radiation leakage 3−9725
- electron beam acceleration in system of radial lines with ferrite *(Russian)* 3−11559
- Electron Linac control data transmission, optical fiber datalinks for Nuclear Instrument Modules 3−6510
- ellipsoid space charge effect in waveguide of electron linac *(Chinese)* 3−51404
- far field accelerators, working group report 3−17105
- free electron laser appl., high-gradient accelerating struct. 3−17106
- free electron laser drivers, use of high current high voltage accelerators 3−22103
- FXR, beam tests on 1.5 MeV injector 3−17129
- GAEL, relativistic beam generator 3−17127
- heavy ion, 1 MeV, design and construction 3−1093
- heavy ion, automated control system, nanosec. pulseform meas. system on-line with computer 3−1170
- heavy ion fusion program development of acceleration demonstration facility at Argonne 3−1068
- heavy-ion acceleration optimal regimes in a linear accelerator with asymmetric variable phase focusing 3−26505
- induction accelerator for ICF 3−17124
- intense electron beam accel., self-consistent anal. 3−17120
- ion accelerator, HF beaming matching at input with spatially uniform focusing 3−41350
- ion accelerators, high voltage, high current, beam optical system computation, transfer matrix method *(Chinese)* 3−50085
- klystrons application 3−21587
- LAMPF radioactive waste management 3−16877
- LAMPF remote handling operations 3−17116
- laser-driven, near IR pulse guides appl. 3−17143
- laser-driven disc-loaded structure, scaled to 10 μm, beam loading, emittance growth 3−17144
- laser-driven grating linac, beam stability, grating error depend. 3−17145
- laser-driven grating linac, transverse stability requirement 3−17108
- laser-driven grating particle accelerators, struct. obscuration by plasma form. 3−17111
- laser-driven media accelerators, ultimate capability, prototypic expts. 3−17101
- LINAC, meas. of RF fields for adjustment *(Chinese)* 3−50064
- martotron, high-power microwave amplifier for linear accelerators 3−36601
- microprocessor controlled phase measurement system for 2856 MHz pulses at Stanford linear accelerator 3−349
- microwave linear accelerator for use in high-energy electron microscopes 3−25989
- MINAC-3 miniaturised, portable linear accelerator, development 3−50071
- multiple induction linacs for heavy ion ICF reactor 3−55593
- multisectional linear electron accelerator, pulsed beam distrib. 3−17114
- Munich heavy ion postaccelerator, improved performance with drift tube 3−1091
- near-field accelerators working group report 3−17107
- NIKE-M, HV pulse electron accelerator for ICF 3−17126
- Particle Beam Fusion Accelerator data handling and recording facility 3−17066
- photonuclear break energies for accelerator energy calibration, radiotherapy appl. 3−21581
- positron source for Kharkov accelerator, beam parameters 3−1110
- proton, beam losses meas. systems, beam perturbation diagnostics problem 3−1108
- pulsed electron beam accelerator, physics aspects 3−17128
- relativistic equation of motion of electron stream, solns. 3−11556
- resonant accelerators, acceleration energy and rate increase *(Russian)* 3−11560
- resonator model and elec. field distrib. on axis in periodic cavity chain *(Chinese)* 3−31854
- RF linac, Tokamak plasma heating with high energy heavy ion beams 3−2256
- SILUND linear induction accelerator, automatic synchronisation of modulators 3−50066
- SLAC linear collider, machine, physics, future 3−41341
- spectral reconstruction for 4 MV accelerators by numerical anal. of transmission data 3−6461
- superconducting linear accelerator at Stanford rel. to free electron laser programme 3−17131
- SuperHILAC injector for Bevalac accelerator 3−6470

linear accelerators continued
- template accelerator, optical element irrad. damage minimisation 3−17112
- template laser accelerator 3−17110
- thin layer, dielectric, near-field laser linac 3−17109
- Thomson CSF extremely high power klystrons for particle accelerators . 3−45724
- TM$_{01}$ modes of cylindrically symmetrical multicell resonant structures, LALAGE program 3−6462
- tolerances in linear ion accel., modified perturbation theory 3−50069
- travelling-wave linear accelerator, passive resonator for electron beam accel. 3−11555

linear algebra
- *see also determinants; eigenvalues and eigenfunctions; matrix algebra; tensors; vectors*
- Helmholtz eqn., finite-difference solns. to boundary-value problems 3−53912

linear-beam tubes *see microwave tubes*

linear combination of atomic orbitals calculations *see LCAO calculations*

linear differential equations
- Benjamin-Ono eqn., constants of motion 3−5613
- Einstein equations, associated linear system, supersymmetry *(French)* 3−20715
- EM field anomalies due to local inhomogeneity, calculation 3−21964
- fourth order diffusion; boundary value problem soln. 3−45092
- fractional approx. for differential eqns. with polynomial coeffs., appl. to E$_1$(X) 3−30760
- Hamiltonian systems, linear differential eqns. with quadratic integrals, complete integrability 3−30608
- hydrogenic Hamiltonian, Coulomb Green's function, generating integral for matrix elements 3−31902
- time-dependent dynamical systems, theorems 3−16167

linear integrated circuits
- bi-FET and bi-MOS IC devices with high input impedance, cct. appls. 3−16374

linear network synthesis
- thermistor-resistor-transistor network for linear temp.-voltage convertor 3−20853

linear programming
- elastic solid, eigenvalue analysis, finite element discretization, optimal design 3−42176
- energy modelling for technology assessment, MARKAL approach 3−4343
- integrated solar and conventional energy system optimisation methodology 3−39449
- solar-hydrogen energy system-model applied to isolated island 3−53593
- Ge-GaAs heterojunctions, plasticity and strength studies *(Russian)* 3−47035

linear rectification *see rectification*

linear systems
- noisy blurred images, const. accel of object, identification of point spread function, recursive restoration 3−22005
- proton synchrotron magnet power supply, high accuracy control 3−6478

linear vibrations *see vibrations*

linearisation techniques
- *see also piecewise-linear techniques*
- calibration improvement of hot-wire anemometers 3−49310
- EPROM linearisation circuit for diode detector, RF electric field probe for biological appl. 3−35976
- resistance thermometer response linearisation, comment and reply 3−30856
- stochastically excited dynamic systems, linearisation 3−50979
- temperature meas. with thermocouples, reference junction temp. influence, characts. linearisation *(German)* 3−311
- thermistor output linearisation, temperature-to-frequency convertors appl. 3−49358
- thermoelectric digital temp. meter, with analogue linearisation 3−49373

linewidths (spectral) *see spectral line breadth*

linguistics
- composite model of speech production 3−9627
- fundamental frequency and vowel perception 3−17734

linguistics, language *see linguistics*

linkages (electric connectors) *see electric connectors*

linking *see joining processes*

links, telecommunication *see telecommunication links*

Liouville equation
- *see also Vlasov equation*
- classical and quantal Liouville field theory 3−31039
- dissipative systems, strongly driven, approach using Robertson's theory 3−30770
- dual string spectrum, Polyakov's quantisation, mode separation 3−26090
- dynamics of singular solutions, matrix description 3−11080
- electrolytes, binary, elec. cond. theory 3−23066
- electron spin echoes, spectral representation anal., stochastic Liouville eqn. 3−23784
- field theory, quantum soln. relevant to string dynamics 3−54845
- Gibbs's and Liouville theorems and the American frontier 3−35814
- guiding center drift theories 3−2200
- Langevin equation for harmonic oscillator in a fluid 3−180
- matrix diagonalisation, classical time correl. functions calc. 3−226
- nonequilibrium statistical mechanics, basic eqns. 3−5703
- nonlinear Langevin eqn. with quadratic noise 3−20768
- plasma flux, parallel to mag. field, moment eqns. *(French)* 3−2204
- Polyakov's string in arbitrary dimensions, canonical quantisation 3−31185
- Polyakov string theory, Liouville eqn. with boundary conditions 3−54896
- quantum relativistic hydrodynamics of broken symmetry systems, nonequilib. state 3−54857
- quantum statistical mechanics, book 3−10539
- relativistic Hamiltonian dynamics of singularities of Liouville eqn. 3−45055
- resonant non-linear spectroscopy in strong fields 3−55924
- stochastic stable dynamic systems, variational majorant method 3−30790
- supersymmetric Liouville theory, string dynamics 3−40879
- synchrotron-cherenkov radiation, nonequilibrium statistical mech. study 3−30637
- two-dimensional SO(1,1)×SO(2) gauge model, classical relativistic string 3−45308
- zero-helicity gravitational waves in relativistic expanding medium, dispersion relations 3−5459

lip microphones *see microphones*

lipid bilayers
- amphotericin B ionic channels, voltage-current charact. 3−48252
- anionic lipid headgroups as proton-conducting pathway along membrane surface 3−48255
- artificial membrane props. obs., conductance meas. instrument 3−58605
- chlorophyll based monolayer and multilayer arrays, optical props. 3−39591
- conformational entropy derived from mol. dynamics simulation 3−41700
- dipalmitoyl phosphatidylcholine, gel phase bilayers, anisotropic rotation, saturation transfer ESR obs. 3−58596
- dipalmitoyl phosphatidylcholine lipid bilayer, US vel. meas., differential US resonator 3−4472
- DPPC phospholipid phase transitions, positron lifetime meas. 3−24691
- erythrocytes, human, cytosol-membrane interface, reson. energy transfer, donor fluoresc. 3−53643
- flavomycin formed channels, selectivity rel. to transported ions conc. 3−29505
- fusion and fission electrostimulated, model expt. 3−34786
- gramicidin C, lateral diffusion in phospholipid multilayers 3−24688
- ion movement through gramicidin A channels, single channel current-voltage characts. 3−44220
- ion movement through gramicidin A channels, single-channel current meas., interfacial polarization 3−44221
- ion movement through gramicidin A channels, single-channel current-voltage characts., diffusion controlled step 3−44222
- Langmuir-Blodgett film, purple-membrane containing, deposition on lipid and paraffin impregnated filters 3−38262
- lecithin bilayers, binding of Mn(II) ions, ESR and NMR study 3−48253
- lecithin liposomes, suspension with cholesterol, small-angle X-ray scatt. 3−34790
- lipid coated Teflon membrane, bacteriorhodopsin-based photoactive membrane, short-circuit photoresponse, proton pumping 3−44214
- lipid-proteolipid membranes, artificial, struct. and phys.-chem. props. 3−48250
- liposome proton-hydroxide permeability 3−48256
- liposomes containing functionally reconstituted chloride channels, isolated-patch recording 3−48254
- liquid crystal behaviour at water-air interface *(Rumanian)* 3−19671
- membrane, lipid, dipole potential, electrostatic modelling of ion pores 3−44224
- membrane, phase transitions, electric field dependence, biological implications 3−53645
- membrane, reconstituted, struct. and permeability 3−39602
- membrane phospholipids, vibrational assignment for chain carbonyl stretching modes 3−34788
- membranes, modified with UO$_2^{2+}$, reversible elec. breakdown mechanism 3−8769
- mesomorphic monolayer and bilayer membranes, phase transitions 3−58606
- micellar solutions and lipid vesicles 3−53623
- myocardial lipids, prelabelled with radioiodinated fatty acids, radiochromatographic microanal. 3−53640
- oil-water curving interface, lipid bilayer curvature elasticity moduli 3−47194
- phosphatidyl glycerol bilayer membrane-Co complex, ^{31}P NMR freq. shift 3−1386
- phospholipid bilayers, charged, effects of monovalent ion binding and screening on measured electrostatic forces 3−34784
- phospholipid bilayers, high press. meas. using adiabatic compression 3−24690
- phospholipid layers, electrical interactions 3−38765
- phospholipid membranes, anomalous surface conductivity obs. 3−29506
- phospholipid vesicles, anal. of suspension heterogeneity by method of optical mixing 3−24919
- phospholipids, symmetric chain, in dispersion, phase transition behaviour, Raman spectrosc. obs. 3−23935
- photon correlation spectroscopy, viscoelastic props. 3−44204
- planar bilayer membranes, ion channels reconstitution, review 3−53642
- polaron mechanism of ion transport across membranes 3−24686
- potential generation rel. to proton-transfer reactions 3−34810
- solventless bilayers, interfacial tension measurement method contact angle at Plateau-Gibbs border 3−53890
- structure, computer expt. and scaling theory *(Russian)* 3−15048
- tetraphenyl boron, transport through bilayer lipid membranes, effect of HF EM field 3−44280
- vesicle form., size control by edge-active agents 3−44205

liquefaction of gases
- cryogenic universal plant for liquefaction and extraction 3−30876
- helium liquifier systems, closed cycle, considerations on burst disk use 3−325
- Stirling cycle cryocooler, thermally activated, performance analysis and appl. 3−36002
- CO, melting pressure, meas. of 81.64K and 90.24K, blocked capillary method 3−33413
- H$_2$ large-scale liquefiers, Japanese (TEISAN) development 3−35997
- He large-scale liquefiers, Japanese (TEISAN) development 3−35997
- He, thermodynamic anal. 3−30869

liquid alloys
- *see also liquid metals*
- activities determ. by mass spectrometry, technique 3−40715
- Al, molten, quality control, US meas. 3−9281
- binary, free energy of mixing 3−57096
- binary, free enthalpy of mixing, association and vol. contraction 3−51807
- binary alloy melts, hydrodynamic stability during solidification 3−57067
- binary alloys of simple metals, Knight shifts calc., charge transfer effects 3−38706
- binary metallic, free energy as function of comp., Gaussian-based formalism 3−33396
- binary metallic, substitutional, thermodynamic behaviour of O 3−33458
- charge transfer, ionisation pot., tight-binding calc. 3−3042
- charge transfer rel. to partial struct. factors 3−27828
- DC transport coeff. calc. by derivatives of time correl. functions 3−28330
- density of states calc. and localisation Monte Carlo method 3−13697
- electrode, sustained high-current arcs during vacuum consumable arc remelting 3−18182
- Fe-Sn melts, density and surface tension 3−8305
- hard-sphere fluid mixtures, partial pair correl. function 3−7900
- ionic transport processes, shear viscosity coeffs. *(Rumanian)* 3−13510
- metal-insulator transition study 3−13730

liquid alloys continued
  metal-nonmetal transition in metal solns. 3—43024
  metal-Te, dil., resist. and thermoelec. power 3—3149
  positron annihilation model, interatomic interactions *(Russian)* 3—3862
  self-diffusion and shear viscosity, review of ionic transport processes *(Rumanian)* 3—13504
  solidification and diffusion kinetics under microgravity environment 3—4025
  thermomigration, space expts. at Grenoble, review 3—4027
  Ag-Ge, molten, positron annihilation *(Japanese)* 3—47734
  Al-Cu melt, X-ray struct. study *(Russian)* 3—46833
  Al-Mg-Pb(Sn), melt, temp. depend. of mixing enthalpy *(German)* 3—58100
  Au alkali liquid alloys, electronic and atomic struct. 3—13729
  Au-Cs melts, short-range ionic correls., neutron diffr. study 3—2381
  Au-Ge, molten, positron annihilation *(Japanese)* 3—47734
  Cd-Zn eutectic melts, undercooled, solidification 3—4028
  Co-Mn liquid alloys, Mn activities meas. by isobaric method *(Japanese)* 3—9030
  Co(-Fe)-O, liq., surface tension, effect of O, wettability of Al_2O_3 *(Japanese)* 3—8303
  Cs-Au(Sb), liq. alloys, showing metal non-metal transition, NMR studies 3—3583
  Cs-Sb liq. alloys, metal-nonmetal transition and bonding changes, NMR study 3—28723
  Cs-Sb liquid alloy, struct., neutron diffr. expt. 3—56809
  Cu-Bi alloys, activity of O 3—9036
  Cu-Ni, phase equilib., thermodynamic anal. 3—39092
  Cu-Ni S, ternary melts, extension of assoc. sol. model 3—4006
  Cu-Pd-Si, liq. alloy system, mixing enthalpies determ. at 1600K 3—34286
  Cu-Si liquid thermodynamic props. 3—13457
  Cu-Ti, thermodynamic mixing functions 3—4015
  Fe alloys, diffusion of N, alloying elements influence 3—8238
  Fe, white cast, solidification kinetics, mech. vibration effect *(French)* 3—58114
  Fe-B, molten, structural transition, phase diagram 3—18435
  Fe-B melts, structure close to eutectic comp., X-ray study *(Russian)* 3—46834
  Fe-C melts in solid and liq. states, density isotherms 3—37980
  Fe-Ge, molten, positron annihilation *(Japanese)* 3—47734
  Fe-Ni(Co), liq., surface tension, wettability of Al_2O_3 *(Japanese)* 3—23136
  Fe-Ti, liq., enthalpies of form. 3—9349
  Fe-Ti-S melts, rhythmic growth of dendritic branches 3—39105
  $Fe_{90}B_{10}$, $Fe_{83}B_{17}$ molten alloys, interatomic distances and coord. nos., X-ray diffr. obs. *(German)* 3—56808
  Ga-In eutectic alloys, solid and liq., sputtering, ion scatt., AES, and Rutherford backscatt. study 3—52885
  Ga-Te liquid alloys, specific heat study 3—33460
  Gd_3Co, zero gravity solidification expts. and mag. props. 3—38033
  Hg-In, liquid, positron annihilation model, interatomic interactions *(Russian)* 3—3862
  In-Ga(Hg) wetted four-point probe for resist. profile meas. of n-type oxide semicond. 3—23480
  In-Te, elec., mag., optical, thermodynamic, and struct. props. 3—56805
  In-Te liquid alloys, specific heat 3—2831
  K_2Cs, critical point at 258K 3—38025
  Li-Sn, elec. resist., effects of strong chem. interactions 3—3151
  $Li_{17}Pb_{83}$, liq., blanket material, T recovery 3—55646
  Mg-Pb, liquid, enthalpies of mixing at 975K 3—57098
  Mg-Pb-Sn, melt, temp. depend. of mixing enthalpy *(German)* 3—58100
  Na-Cs, liquid, thermodynamic props. meas. 3—22762
  Na-Cs, liquid-vapour interface struct., Monte Carlo simulation 3—23024
  Na-K, static struct. factors and interionic pots., neutron scatt., study 3—2382
  Na-K(Hg), charge transfer rel. to partial struct. factors 3—27828
  Na-Pb liquid alloys, heat of mixing and specific heat, concentration cell meas. 3—42799
  Na-Sn(Pb), elec. resist., effects of strong chem. interactions 3—3151
  $Na_{0.85}Cs_{0.15}$, interchange energy, small angle X-ray diffr. study 3—56807
  Nb-W(-Zr), evaporation kinetics, element distrib., activity coeffs. EPMA study *(Chinese)* 3—33536
  Ni, reactions with AlN 3—24383
  Ni-Al, mag. susceptibility and elec. resistivity, 700 to 800°C 3—47473
  Ni-C melts, graphite growth, morphology, effect of doping elements 3—22805
  Ni-Ge(In), molten, positron annihilation *(Japanese)* 3—47734
  Ni-Mn liquid alloys, Mn activities meas. by isobaric method *(Japanese)* 3—9031
  Pb-Sn molten alloys, dissoln. of solid Cu cylinder under dynamic conditions 3—2810
  $Pd_{0.825}Si_{0.175}$, liquid eutectic, X-ray and neutron diffr. study 3—22761
  Se-Te, liq. alloys, showing metal non-metal transition, NMR studies 3—3583
  Se-Te liquid mixture, sound vel., adiabatic compressibility, density-density correl. function 3—33364
  Sn-Te, liq., Seebeck coeff. meas. 3—13804
  Sn-Te liq. alloys, electronic props., compound-forming effect 3—28331
  Sn-Te melt, enthalpy of mixing *(German)* 3—58101
  Ta, enthalpy meas. by levitation calorimetry 3—4014
  Tl-Te liq. alloys, electrotransport study 3—51833
  $Tl_x(AgTlSe_2)_{1-x}$ molten alloys, elec. and mag. props. 3—52206
  Tl_xTe_{1-x} liq. alloys, electronic struct. and bonding 3—38290
  Y-Ni-Si, liq., thermodynamic props. 3—8223
  Zn-Sb, liquid, elec. resist. and thermoelec. power 3—33699

liquid crystal devices
  see also liquid crystal displays
  cholesteric liq. cryst. films for ultrasound visualisation in gases 3—32574
  cholesteric liquid crystal cell, IR radiation excited, used in visualiser, relax. processes 3—37781
  colour optical filters, nematic liq. cryst., electrically controlled, spectral characts. 3—12296
  dye lasers with distributed negative feedback and reflection based on cholesteric liquid crystals *(Russian)* 3—37079
  ferroelectric smectic cell prep. for electro-optical microsec. switches, alignment control using spacer edges 3—51476
  laser addressed light valve with dichroic dye laser absorber 3—50735
  light valve for optical-to-optical image conversion 3—17631
  light valve using bulk monocryst. $Bi_{12}SiO_{20}$ photoconductive material 3—7160
  liquid cryst. optical colour filters control 3—41967

liquid crystal devices continued
  N-p-methoxybenzylidene-p-butylaniline, opto-optical modulation 3—32455
  optical coupler, switchable, coaxial, using electro-optic props. of liq. cryst. mixture 3—41982
  polarisers, circular cholesteric liq. cryst. based, high power laser system appls. 3—7138
  polarisers and applications, conf., San Diego, CA, USA (Aug. 1981) 3—5482
  polyvinyl alcohol iodine liq. cryst. polarisers, hydrolytic stability 3—7135
  pseudo-holographic US imaging with nematic liquid crystal convertor 3—1873
  spatial light modulators, image subtraction method using birefringence 3—12311
  US fields visualisation in air 3—17747
  waveplates, large aperture, nematic liq. cryst. based, high powered laser system appls. 3—7138

liquid crystal displays
  bistable cholesteric twist cell display, switching characteristics meas. 3—33076
  cholesteric-dye guest-host colour LCD, contrast ratio of planar-type phase change, theory 3—52768
  digital LCD luxmeter 3—45185
  flat screen displays, conf., Plestin-les-Greves, France (April 1982) *(French)* 3—44895
  fluorescent cell, contrast ratio enhancement by electrochem. quenching 3—47684
  nematic liquid cryst., high tilt-angle alignment, compatible with glass frit sealing, using SiO oblique evaporation 3—33074
  nematic liquid cryst. mixtures, low freq. dielec. relaxation and dual freq. addressing of field effects 3—14209
  nematic liquid crystal acousto-optic conversion cell 3—1902
  polyvinyl alcohol iodine liq. cryst. polarisers, hydrolytic stability 3—7135

liquid crystal phase transformations
  4-alkoxylbenzylidene-4′-(4″-cyanobenzoyloxy)aniline homologous, smectic phases 3—13446
  4-trans-(4-alkyl)-cyclohexyl-benzonitriles, nematic viscosity-pressure behaviour 3—47143
  4-n-alkyl phenyl esters, laterally cyanated, negative dielec. anisotropy, photochemical instability, phase transition effects 3—18215
  4-alkyl-4′-cyanobiphenyls, orientational order and phase transitions 3—2399
  alkyloxy-p′-pentylphenylthiolbenzoates, octyl-heptyl mixture, nematic-smetic C transition, X-ray scatt. study 3—33436
  amphiphilic systems, phase transitions, EPR study using hydrophilic spin probes 3—14136
  p-anisal-p-phenetidine, nematic liq. cryst., pre-transitional effects, US, density, and compressibility study 3—13451
  bacterial virus fd, lyotropic liq. cryst., isotropic phase, pretransitional phenomena 3—34769
  benzoic acids, 4-substituted, liq. crystalline, mixed dimer form. in binary and ternary mixtures 3—57089
  benzylidene aniline, p-p′-derivatives, liq. cryst. props., dipole moments, ESCA, EHT calc., and chromatography 3—56812
  bilayer membrane, conformational entropy derived from mol. dynamics simulation 3—41700
  binary mixture, liquid to liquid crystal transition, one-dimensional front instabilities 3—23018
  1,10-bis(4-carboxyphenoxy) decane, synthesis, phase transition, IR spectra, NMR studies 3—2793
  1,10-bis(4-p-substituted phenoxycarbonyl)phenoxy-decane, synthesis, phase transition, IR spectra, NMR studies 3—2793
  1,4-bis-(4-n-alkyloxybenzoyloxy)-2-n-alkylbenzenes, thermotropic liq. crystals, transition temps. and clearing points 3—46838
  1,4-bis-(4-n-octyloxybenzoyloxy)-2-n-alkylbenzenes, thermotropic liq. crystals, transition temps. and clearing points 3—46838
  4-butoxybenzylidene-4′-hexylaniline, liq. cryst., electron trapping and recomb., radiothermoluminescence, DSC spectra 3—28906
  butyloxybenzylidene heptylaniline smectic A—smectic C transition, mean field nature 3—47110
  p-butyloxybenzylidene p-d_{17}- octyl 2-6 d_2 aniline+p-butyloxybenzylidene p-ethyl aniline, smectic layers struct., D NMR study *(French)* 3—27833
  cellulose diacetate, hydrothermal transition power *(Russian)* 3—51790
  cholesteric liquid crysts., field-induced cholesteric-nematic transition in case of homeotropic boundary conditions 3—42517
  cholesteric mixed systems, induced blue phases 3—37773
  cholesteric screw sense, technique for determ. 3—2392
  cholesteric-dye guest-host colour LCD, contrast ratio of planar-type phase change, theory 3—52768
  cholesteric-nematic, SAW effects on molecular orientation on compensated liquid crystal cells 3—38067
  cholesteric-nematic transition, field induced, influence of homeotropic and planar boundary conditions 3—2791
  cholesterin esters, smectic liq. cryst. to solid transition, elec. cond., electron emission and luminesc. meas. 3—18488
  cholesteryl caproate, thermodielectric effect, isotropic-liq. cryst. phase transition, current meas. 3—56818
  cholesteryl capronate, isothermal crystallization parameters 3—2800
  cholesteryl caprylate, thermoelectret form. and effect *(Rumanian)* 3—19037
  cholesteryl chloride-cholesteryl laurate, nematic phase, oriented mols. distrib., optical rotation 3—11893
  cholesteryl chloride-cholesteryl nonanoate mixture, optical rot. power meas., nematic state temp. 3—2407
  cholesteryl esters, liq. cryst., Costa Ribeiro effect 3—38752
  cholesteryl nonanoate, isothermal crystallization parameters 3—2800
  4(cinnamoyloxy)benzylidene-4′-n-alkoxyanilines, enantiotropic nematic phases 3—46842
  4-cyano-4′-n-heptylbiphenyl, turbulence at nematic-isotropic phase transition, high elec. field study 3—28103
  4-(β-cyanoethyl)-phenyl 4-n-alkyloxycinnamates with 3-methyl-2,6-bis-(4-n-heptyloxybenzylidene)-cyclohexanone, smectic A to reentrant cholesteric phase transition 3—47105
  4-cyclohexyl phenyl esters, mesomorphic props. 3—18216
  cylinders, right circular, subjected to attractive pot., nematic-isotropic transition, scaled particle theory 3—27836
  4-n-decyloxy benzoic acid-4-n-alkoxy phenyl esters, smectic A to smectic C transition, PMR study 3—46835
  p-n-decyloxybenzoyl-p-cresol, polymesomorphic liq. cryst., pre-transitional effects, US, density, and compressibility study 3—13451

- **liquid crystal phase transformations** continued
  - 4(4-n-decyloxybenzoyloxy)-benzylidene-4′-cyanoaniline, liq. cryst., new multicritical point, high press. study 3—18455
  - 4-n-decylphenyl-3′-methyl-(4″-cyanobenzoyloxy)benzoate, smectic A transition, layer spacing, X-ray study 3—18456
  - di-(4′-n-alkylphenyl)-trans-cyclohexane-1, 4-dicarboxylates, synthesis and mesomorphic props. 3—13087
  - p,p′-di-n-alkoxy-azoxybenzenes, smectic A phase, chain ordering 3—23039
  - 4,4′-di-n-heptyl-azobenzene/4-n-pentyl-4′-cyanobiphenyl, nematogen liq. cryst. binary mixtures, induced smectic phases, expt. studies 3—13077
  - 4-4′-dialkoxy-α-α′-dimethylbenzalazines, synthesis, mesomorphic props., mol. struct. depend., DSC study 3—46846
  - dipalmitoyl phosphatidylcholine lipid bilayer, US vel. meas., differential US resonator 3—4472
  - dodecylcyanobiphenyl liq. cryst., excimer formation and phase transition, luminesc. probe 3—34133
  - EBBA, liq. cryst. phase transitions, detect. using metabolemeter 3—47107
  - EEBAC, anisotropy of X-ray crit. scatt. near smectic A-nematic transition 3—13445
  - p-ethoxyphenyl-azophenyl-undecylanate/tetrabutyl tin mixture, liq. cryst. phases on sudden cooling 3—2395
  - ferroelectric liq. cryst. smectic C* transition, modulated to uniform phase 3—28102
  - 4(furylacyloyloxy)benzylidene-4′-n-alkoxyanilines, enantiotropic nematic phases 3—46842
  - H_pBBA, phase transitions from specific-vol. and ultrasonic vel. meas. 3—33438
  - hard disc fluid, isotropic-nematic transition, Monte Carlo study 3—2796
  - HBAB, nematic liq. cryst., successive excitation of mol. motion, NMR study 3—14156
  - N(p-n-heptyloxy benzylidene)p-n-butyl aniline, phase transitions, ultrasonic vel. studies 3—23041
  - 4-(4-n-heptyloxy-benzylidene-amino)4′-cyano-biphenyl, liq. cryst. phase transitions, X-ray study 3—37771
  - p-n-heptyloxybenzoic acid, smectic C single local monocrystal growth from twisted nematic phase 3—46837
  - N-(4-heptyloxybenzylidene)-4-n-hexylaniline, smectic liq. cryst., positional order in G, F and C phases, X-ray diffr. study 3—27834
  - n-hexyl 4′-n-pentyloxbiphenyl-4-carboxylate smectic A-hexatic-B phase transition, birefringence investig. 3—2798
  - N-(p-n-hexyloxy benzylidene) p-n-butyl aniline, liq. cryst. phase transitions, US vel. meas. 3—38064
  - p-n-hexyloxybenzylidene-p′-toluidene, nematic liq. cryst., sp. ht., thermodynamic props. 3—28113
  - p-hexyloxyphenyl p′-pentyloxybenzoate-5CB nematic mixture, pretransitional effects 3—2794
  - HOBACPC, smectic liq. cryst. phases, DSC and optical microscopy studies 3—46841
  - N(o-hydroxy-p-methoxy)benzylidene-p-butylaniline, nematic liq., mol. motions and glass transitions 3—27842
  - inverted reentrant-nematic-smectic- A-smectic- C multicritical point 3—13450
  - Kosterlitz-Thouless transition and self-duality in three dimens. 3—507
  - MBBA, glass transition, EPR spin probe 3—8198
  - MBBA, liq. cryst. phase transitions, detect. using metabolemeter 3—47107
  - MBBA, liquid crystal and molecular crystal, vibrational energy relaxation, Raman scatt. study *(Russian)* 3—47659
  - MBBA, nematic-isotropic phase transition, classical critical behaviour obs. 3—47109
  - melting process, defect unbinding process of anisotropic layers in solids, smectics and nematics 3—23038
  - membrane lipids of Acholeplasma laidlawii B, gel to liq. cryst. transition 3—48257
  - 2-methylbutyl p-(p-n-alkoxy-benzylideneamino) cinnamates, ferroelec. smectic liq. cryst., reentrant disordered Sm C* under elec. field 3—42512
  - molecular orientational correls. in isotropic phase 3—51789
  - nematic, nonresonant optical hyperpolarisabilities of anisotropic mols. influence on liq. cryst. phase parameters 3—42514
  - nematic binary mixtures, orientational order and refractive indices 3—34047
  - nematic liq. cryst. mixtures, mol. field treatment, effects of intermolecular repulsions on nematic-isotropic transition 3—47106
  - nematic liq. crysts., phase transform., mol. theories 3—33078
  - nematic liquid cryst., mol. statistical theory 3—27837
  - nematic liquid cryst., refractive index, extraordinary wave, temp. depend. for various angles of incidence 3—14246
  - nematic liquid crystals, rotational viscosity, universal law, display appls. 3—13509
  - nematic liquid crysts. Maier-Saupe theory and mol. field approx., computer simulation 3—33073
  - nematic mesophase liq. crysts., light induced thermal grids, thermooptical effect 3—19114
  - nematic polymers, Landau-de Gennes theory 3—37777
  - nematic-isotropic phase transition, classical critical behaviour obs. 3—47109
  - nematic-isotropic transition, external field effect, Monte Carlo simulations 3—51787
  - nematic-smectic A and C transitions, unified Landau theory 3—33435
  - nematic-smectic A transition, interacting dislocations, splay elastic constant 3—56816
  - nematic-smectic-A transition, planar director fluctuations, scaling anal. 3—13448
  - nematogens, Lebwohl-Lasher model, computer simulation studies 3—2388
  - nematogens, pretransitional behaviour, NMR study 3—47565
  - nematogens above nematic-isotropic transition, optical Kerr const. anomalous behaviour 3—23040
  - 4-n-nitrophenyl ether 4-n-hydroxybenzoic acid, smectic A phase, texture transform. electrooptical effect 3—34074
  - nonyloxybenzylidene butylaniline, tilt susceptibility above smectic A-smectic F transition, mag. birefr. determ. 3—51788
  - p-nonylphenolpolyethyleneglycol, broad line NMR spectra 3—3551
  - OCB, light induced phase transition *(Russian)* 3—8199
  - octylcyanobiphenyl, liq. cryst., enthalpy, heat capacity, phase transitions 3—13449
  - N-(p-n-octyloxy benzylidene)-p-n-butyl aniline, smectic liq. cryst., phase transitions, density study 3—38066
  - p-n-octyloxybenzoic acid, phase transition in nematic region 3—51786
  - order parameter and mol. polarisability meas. in liq. crysts. with nematic and smectic phases 3—46844
  - PAA, nematic liq. cryst., mol. statistical theory 3—27837
  - paraffins, rotator and melting transitions, dislocation theory 3—38039
- **liquid crystal phase transformations** continued
  - 4-n-pentyl-4′-cyanobiphenyl nematic liq. cryst., surface pretransition order 3—13095
  - 4-n-pentylbenzenethio-4′-n-tetradecyloxybenzoate liq. cryst. films, melting transition, mech. meas. 3—28081
  - 4-n-pentylbenzenethio-4′-n-tetradecyloxybenzoate liq. cryst. films, melting, X-ray diffr. study 3—28082
  - N-(p-n-pentyloxy benzylidene) p-toluidene, liq. cryst., molar vol., US vel. var., phase transition study 3—38065
  - n-(4-n-pentyloxybenzylidene)-4-n-heptylaniline, modulated hexagonal phase, neutron scatt. study 3—51785
  - 4-n-pentylphenylthiol-4′-heptyloxybenzoate and mixtures with octyloxy analogue, light scattering above the nematic-to-smectic- C transition 3—47108
  - 4-n-pentylphenylthiol-4-n′-octyloxybenzoate, US anomaly near smectic A-smectic C phase transition 3—2795
  - persistent macromolecules, liq. cryst. solns., phase transition in external fields *(Russian)* 3—46112
  - phase diagram universality near nematic/smectic-A/smectic-C multicritical point 3—33437
  - phospholipids, symmetric chain, in dispersion, phase transition behaviour, Raman spectrosc. obs. 3—23935
  - poly-γ-benzyl-L-glutamate, re-entrant isotropic phase, optical and ^{13}CNMR meas. 3—13082
  - polyester, thermotropic, phase transitions and struct. props. 3—57081
  - polyethylene terephthalate-p-acetoxybenzoic acid copolymer, liq. cryst., phase transform. microstruct. change 3—2792
  - polymers, polydisperse, rodlike, conc. solns., isotropic and lyotropic liquid crystalline phases, mol. length distrib. 3—51487
  - polymers mesophasic, homologous series, molar melting enthalpy 3—2748
  - polyoxy-2,2′-dimethylazoxybenzene-4,4′-diyloxydodecanedioyl, phase transitions, DSC, optical microscopy 3—38063
  - polypropylene, mesomorphic state, X-ray diffr. study 3—2398
  - potassium palmitate-potassium laurate-water mixture, lyotropic liq. cryst., ribbon struct., ^{2}H NMR study 3—27840
  - reentrant nematogens, smectic A to reentrant nematic phase transitions, expts. and phase diagrams 3—28101
  - rod-plate liq. cryst. mixture, phase diagram behaviour 3—13447
  - smectic A—nematic transition, lattice model, duality maps 3—47111
  - smectic A—smectic C transitions, mean field nature 3—47110
  - smectic A phases, Lifshitz point associated with polarisation wave 3—38062
  - smectic A-C transition in three dimensions 3—2797
  - smectic C liq. cryst., chiral, kink excitations 3—42513
  - TBBA, ultrasonic attenuation near smectic A-C transition temp. 3—28054
  - TBBA homologous series, smectic A-smectic C transition line, tricrit. line 3—2799
  - TBPA, ultrasonic attenuation near smectic A-C transition temp. 3—28054
  - terminal-nonpolar cpds., reentrant phase, X-ray diffr. study 3—56815
  - Z_N symmetric quartet FCC model, phase props. 3—33914
  - Eu(III) chelate-liq. cryst. mixture, electrochem. fluorescence quenching and field induced cholesteric-nematic transition, display appl. 3—47684
  - N-(p-n-pentyloxybenzylidene) p-n-ethylaniline, nematic-smectic G transition, US vel. and density study 3—57029

- **liquid crystals**
  - *see also cholesteric liquid crystals; liquid crystal phase transformations; nematic liquid crystals; smectic liquid crystals*
  - acoustooptical effects in mag. field 3—14251
  - p-azoxyanisole, viscosity, rel. to surface tension *(Polish)* 3—2866
  - bacterial virus fd, lyotropic liq. cryst., isotropic phase, pretransitional phenomena 3—34769
  - bond-orientationally ordered phases, X-ray and light scatt. 3—47736
  - China, liq. cryst. research, 1970-82 3—46843
  - cholesteryl caprylate, thermoelectret form. and effect *(Rumanian)* 3—19037
  - columnar, X-ray scatt. 3—2384
  - conference on condensed matter techniques and materials, Argonne Nat. Lab., Argonne, IL, USA (Sept. 1981) 3—10514
  - copolyesters, oriented thermotropic, banded struct., optical microscopy 3—56831
  - cyanobiphenyls, elasticity and orientational order 3—13090
  - p-n-decyloxybenzoyl-p-cresol, polymesomorphic liq. cryst., pre-transitional effects, US, density, and compressibility study 3—13451
  - di-(4′-n-alkylphenyl)-trans-cyclohexane-1, 4-dicarboxylates, synthesis and mesomorphic props. 3—13087
  - dielectric props. meas. cell, for 20 to 200°C and 1 Hz to 1 GHz range 3—33079
  - director fields, numerical three-dimensional relaxation, FORTRAN program 3—13094
  - disk-like particle liq. crysts., dynamical props. 3—33091
  - DNA in polyethylene glycol water-salt solns., liq. cryst. state obs. 3—34766
  - dodecylcyanobiphenyl liq. cryst., excimer formation and phase transition, luminesc. probe 3—34133
  - EBBA-butanol, mesomorphic props., alcohol isomerism effects 3—37776
  - films, melting of two-dimensional solids 3—2736
  - glass fibre reinforced plastic, structural integrity assessment using liquid crystal kit 3—58348
  - hard-disk arrays, computer-generated, order and deterministic chaos, hexatic configs. 3—23014
  - hexapentoxytriphenylene, discotic liq. cryst., flexoelec. distortion of developable domains 3—46840
  - hexapentoxytriphenylene, optical retardation and developable domain struct. in tubular discotic liq. crysts. 3—22769
  - laminate mesophase cryst. struct. 3—22768
  - lipid bilayers, liquid crystal behaviour at water-air interface *(Rumanian)* 3—19671
  - MBBA, mesophase, dynamic holographic grating, polarization recording 3—22011
  - MBBA, nematic-isotropic phase transition, classical critical behaviour obs. 3—47109
  - MBBA, stimulated Brillouin-Mandelstam light scattering 3—47663
  - MBBA layers, symmetrically weakly anchored, flexoelec. domain wall struct. 3—13089
  - MBBA-butanol, mesomorphic props., alcohol isomerism effects 3—37776
  - mesophase intermolecular interactions *(Russian)* 3—2405
  - molecular fluids, linear, integral eqns., orientational ordering 3—2358
  - molecular rotational dynamics, angular-dependent rotational friction 3—27832
  - molecular structure, relation to liq. cryst. behaviour 3—42509

liquid crystals continued
- nonlinear optical activity and circular dichroism, phenomenological theory 3—12211
- nonpolar, anisotropic dielec., cavity and reaction fields 3—57853
- n-(4-n-pentyloxybenzylidene)-4-n-heptylaniline, modulated hexagonal phase, neutron scatt. study 3—51785
- persistent macromolecules, liq. cryst. solns., phase transition in external fields *(Russian)* 3—46112
- 1-phenylethylamine derivatives, liq. cryst. mixtures, optically active dopants 3—2393
- photochemically stable liquid cryst. mixtures with large negative dielec. anisotropy, synthesis 3—37779
- poly-γ-benzyl-L-glutamate, re-entrant isotropic phase, optical and ^{13}CNMR meas. 3—13082
- poly-n-alkylisocyanates, soln., dielec. relax., phase behaviour, model simulation 3—52721
- poly-p-n-hexyloxybenzoyl-p-oxyphenyl-N-methacryloyl-ε-aminocaproate, liq. cryst., comb-like polymer, layer struct., X-ray and optical diffr. studies 3—33144
- poly-p-n-hexyloxybenzoyl-p-oxyphenylmethacrylate, liq. cryst., comb-like polymer, layer struct., X-ray and optical diffr. studies 3—33144
- polymer, rodlike, liquid crystalline state, negative normal and tangential stresses 3—2387
- polymer, thermotropic, oriented, drawn fibres and films, banded structures 3—51489
- polymers, oriented thermotropic, banded struct., optical microscopy 3—56831
- polymers, oriented thermotropic, banded struct., TEM 3—56832
- polymers, polydisperse, rodlike, conc. solns., isotropic and lyotropic liquid crystalline phases, mol. length distrib. 3—51487
- polymers mesophasic, homologous series, molar melting enthalpy 3—2748
- polymers with liq. crystalline order, thermal changes 3—2390
- polyoxy-2,2′-dimethylazoxybenzene-4,4′-diyloxydodecanedioyl, phase transitions, DSC, optical microscopy 3—38063
- polysiloxane, viscoelastic props. with liq. cryst. behaviour 3—33330
- potassium palmitate-potassium laurate-water mixture, lyotropic liq. cryst., ribbon struct., ^{2}H NMR study 3—27840
- rod-plate liq. cryst. mixture, phase diagram behaviour 3—13447
- sodium lauryl sulphate, lyotropic liq. cryst., viscosity and viscoelasticity, US reson. spectra study 3—22977
- solvents, mol. oriented, spin-spin coupling const. and chem. shift anisotropies, NMR spectra 3—43447
- 2,2′, 6,6′-tetraaryl-4,4′-bipyrannylidene, synthesis and redox props. of mesomorphic π-donors *(French)* 3—27839
- thermography quantitative geometric charact. of two-dimensional flaws 3—58347
- triphenylene hexa-n-dodecanoate, disk-like mol., cryst. and liq. cryst. struct. 3—22767
- tubular discotic liq. crysts., optical retardation and developable domain struct. 3—22769

liquid drop model (nuclear) *see nuclear liquid drop model*

liquid encapsulated Czochralski method *see crystal growth from melt*

liquid films
- *see also adsorbed layers; helium films; liquid helium; superfluidity; surface tension*
- absorption under laminar flow, simultaneous heat and mass transfer 3—46548
- air-H_2O annular two-phase flow in horizontal tube, film thickness circumferential distrib. 3—37551
- binary fluid films, critical temp. shifts 3—42891
- boiling with subheating, minimum wall superheat 3—28085
- butyloxybenzylidene octylaniline, free-standing liq. cryst. film, mech. shear props., anomalous surface effect 3—13598
- coating flows with interfacial air drag, nonlinear theory 3—2020
- cratering due to surface defects, Gaussian model 3—38169
- dimpled liquid film, thinning, London-van der Waals forces effects 3—51897
- ethanol, liquid film flowing down heated surface, breakdown heat fluxes 3—27509
- falling liq. film flow, interface perturbation, heat and mass transfer 3—37478
- flow over solid surfaces, heat transfer 3—1931
- fluid criticality near walls and between plates 3—37611
- free energy loss during breakdown 3—51894
- free film streaming by solid particles, high speed filming *(Russian)* 3—20930
- Freon 113, rewetting of hot stainless steel tube 3—47186
- Gortler-type vortices in curved film flow 3—56553
- n-heptane, liquid film flowing down heated surface, breakdown heat fluxes 3—27509
- isothermal multilayer film flow on inclined planes, model calcs. for flow curves *(German)* 3—27482
- liquid metal films, stability of laminar flow in mag. field 3—37575
- MBBA nematic films, order parameter studies *(Russian)* 3—22772
- nematic liquid cryst. film, torsion pendulum oscills. caused by dissipative structs. 3—7905
- nematic liquid crystal film, optical bistability obs. in Fabry-Perot cavity 3—22148
- non-evaporating region in a downward flow vertical liquid film type evaporator 3—17939
- non-Newtonian liquid blade coating process 3—51169
- oil, on water surfaces, detection using microwave radiometry 3—53613
- pentyl-cyano-biphenyl, nematic films, highly-reversed tilted, flexoelectric domain orientation in applied elec. field 3—46836
- 4-n-pentylbenzenethio-4′-n-tetradecyloxybenzoate liq. cryst. films, melting transition, mech. meas. 3—28081
- 4-n-pentylbenzenethio-4′-n-tetradecyloxybenzoate liq. cryst. films, melting, X-ray diffr. study 3—28082
- rolling, hydrodynamic moment theory 3—42692
- rupture, nonlinear theory 3—38170
- steady flow, heat and mass transfer on fluted surface 3—37482
- supersaturated partially wetting films, nucleation 3—28193
- thin films between glass and Hg in aqueous soln., equilib. thickness meas. 3—51898
- thinning as small drop or bubble approaches a fluid-fluid interface 3—18533
- two-phase two component annular flow heat transfer and flow charact. 3—51105
- unstable 2-D fluid, phase separation, mol. dynamics simulation 3—8181
- US wave reflection from liq. layers, NDT of adhesive bonds 3—29289

liquid films continued
- viscous, heated by Gaussian laser beam, competition between capillary and gravity forces 3—2052
- viscous, linear hydrodynamics and dispersion relations 3—57178
- viscous film, flow over surface of inviscid fluid 3—46619
- viscous incompressible fluid squeezed layer, interaction dynamics with elastic walls 3—46586
- water, evaporation and thermal struct., in free and forced convection, organic surface film effects 3—12661
- water, liquid film flowing down heated surface, breakdown heat fluxes 3—27509
- wave generation on variable-viscosity liq. film surface flowing under hot gas stream action 3—51142
- wavy film flow with tangential stress at interface *(Rumanian)* 3—18534
- weakly conducting fluid, dispersion in elec. field of plane condenser *(Russian)* 3—2132
- H_2O dryout heat flux or horizontal nonisothermal tube during heat transfer 3—2061
- ^{4}He, adsorbed ^{3}He, phase separation, heat capacity study 3—8292

liquid flow coaxial cables *see coaxial cables*

liquid He *see liquid helium*

liquid helium
- *see also helium films; liquid helium-3; liquid helium-4; liquid helium sound propagation; ripplons; vortices*
- arc extinction voltage between Cu electrodes in liq. He, appl. to supercond. magnet cooling 3—43489
- bath cryostat for multipulse NMR expts. *(German)* 3—45174
- channel flow in horizontal channel, heat transfer to near-critical state 3—51878
- convection-boiling boundary, press. and underheating effects 3—7578
- cryogenic system for fusion technology development 3—31828
- cryogenic transfer lines for toroidal fusion expt. 3—31829
- cryosupply and distribution system for JET neutral injection cryopumps 3—36567
- Dewar for liquid N_2 containment *(Portuguese)* 3—45147
- dielectric strength of large gaps in cryogenic He 3—43488
- double minimum pot. wells, eigenstates motion, Coulomb spectrum in crossed mag. and elect. fields 3—13587
- flow tube, gas shielded, for low-temp. expts. 3—10849
- forced convection heat transfer from submerged surface to liquid helium 3—30875
- interface with real solid, Kapitza cond. enhancement at 0.32 meV phonon energy 3—28175
- liquefiers for large-scale appl., Japanese (TEISAN) development 3—35997
- liquid, breakdown characts. and mechanisms 3—43490
- liquifier systems, closed cycle, considerations on burst disk use 3—325
- piston pump, high-capacity, for 50-150 g/s 3—36001
- rotating cryostats, He thermodynamic state calc. 3—49381
- spaceborne superfluid He containment, motor-operated valve development 3—30880
- supercritical HE cooling system superconducting solenoid, muon production appl. 3—36605
- surface, nonlinear plasmon reson. of charged particle system 3—38164
- surface, two-dimens. lattice, phonon linewidths, weak coupling theory 3—38162
- surface, two-dimens. Wigner lattice mobility, weak coupling theory 3—38161
- surface electron state 3—2925
- transfer system, automated 3—324
- transient fluid behaviour in rotating frames at high tip speeds, thermometer development 3—40609
- two-dimensional systems, strong elec. and mag. fields effects, review 3—28440
- two-phase flow in radial rotating duct 3—51879
- vapour pressure thermometer, using piezoresistive transducer 3—20858
- He I turbulent tube flow, heating and cooling, forced convective heat transfer coeff. 3—22447
- He-p-H_2 mixtures, quantum liquid, US velocity and adiabatic compressibility at high press. *(Russian)* 3—57155

liquid helium-3
- *see also fermion systems; superfluid helium-3*
- adsorbed film, anomalous nucl. spin relax. 3—28186
- adsorbed on ^{4}He liq. film, phase separation heat capacity study 3—8292
- adsorbed two-dimensional degenerate Fermi liq., spin diffraction 3—33534
- boundary with sintered powder, thermal resist., Landau Fermi liq., theory 3—47210
- dense Fermi systems, generalised Jastrow variational method 3—54672
- film adsorbed on rough substrate, spin-rotation effect 3—57163
- integral eqns. for pair distrib. function of quantum fluids, interpolation method 3—18524
- ion mobility and interaction with quasiparticles 3—28179
- Jastrow theory for dense Fermi system 3—20761
- microscopic theory 3—23123
- negative ions, ESR relax. time and g-factor studies 3—51886
- normal Fermi liquids, dispersion and damping 3—33533
- normal phase, viscoelastic behaviour, bulk and shear moduli 3—13573
- sound attenuation and spin echo, induced interaction model 3—38152
- specific heat and Landau parameters 3—51884
- specific heat meas. in normal phase 3—28181
- spin wave-zero sound coupling 3—38154
- surface, recomb. and binding of H, mag. reson. study 3—1290
- surface, sticking probability of H, mag. reson. lineshape study 3—1291
- surface tension meniscus calc. 3—2928
- vibrating wire meas. of viscosity of normal phase He 3—42876
- zero sound, spin fluctuations and effective mass 3—23130
- NaF/liquid ^{3}He, phonon transmission into ^{3}He, freq. depend. 3—42909

liquid helium 3-4 mixtures
- compressional cooling and liq.-solid phase transition 3—13417
- cooling effects in vortex cooler 3—37338
- critical dynamics, eqn. of motion approach with mode coupling 3—28183
- dilute solns., heat transfer between phonons and quasiparticles 3—57168
- film, stratified, collective excitation spectrum *(Russian)* 3—28182
- interface with $CuK_2(SO_4)_2.6H_2O$, mag. coupling at very low temps, thermal boundary resist. 3—57161
- metastability and nucleation of ^{3}He-^{4}He mixtures near the tricritical point 3—13581
- microscopic theory 3—23123
- negative ions, ESR relax. time and g-factor studies 3—51886
- phase separation, tricritical slowing down 3—47179
- phase-separated films, dynamics 3—28184

liquid helium 3-4 mixtures continued
- Rayleigh light scatt. and gravity effects near gas-liq. crit. point 3–2919
- Rayleigh-Benard instability, convective heat transfer 3–2920
- refrigeration, diluting, ultralow temp., using ^{3}He-^{4}He mixture *(Japanese)* 3–45146
- superfluid, dil., ^{3}He quasiparticle energy spectrum, normal fluid density and sp. ht. 3–8291
- superfluid, first sound velocity meas., ^{3}He impurities effect *(Russian)* 3 57167
- superfluid binary solns., film, sound propag. *(Russian)* 3–2918
- superfluid film, fifth sound propagation *(Russian)* 3–13582
- thermal cond. meas. near liquid-vapour crit. point 3–23131
- transition from hydrodynamic to ballistic quasiparticle behaviour vibr. wire resonator response, 0.3 to 10 mK 3–47180
- He II-^{3}He mixtures, flow props., mutual friction implication for dilution refrigerator 3–38156

liquid helium-4
- *see also boson systems; superfluid helium-4*
- boiling in centrifugal force field, crit. heat transfer charact. 3–13424
- dynamics, condensate fraction, neutron scatt. studies 3–51882
- film, adsorbed ^{3}He, phase separation heat capacity study 3–8292
- first sound dispersion near $T_{\lambda}(P)$ 3–8284
- heat flow near λ point, He I-He II interface study 3–42871
- injected phonon beam ang. spreading calc. at low temps. 3–18526
- integral eqns. for pair distrib. function of quantum fluids, interpolation method 3–18524
- Kapitza resistance influence on nucleate boiling at solids 3–37486
- lambda transition, rescaled coherent state theory 3–23118
- microscopic theory 3–23123
- momentum distrib. determ. from dynamic struct. factor 3–2907
- optimised free surface from hypernetted-chain approx. 3–33067
- pool-boiling heat transfer from small monolithic Cu stabilisers 3–30874
- solid-liquid interface, Kapitza resistance 3–18528
- sound waves, background attenuation near λ transition 3–8288
- supercritical, natural convection heat transfer, constant wall heat flux conditions 3–32729
- surface, H atoms collisions, sticking probability 3–57174
- surface, recomb. and binding of H, mag. reson. study 3–1290
- surface, scatt. meas. of ^{4}He atoms grazing the surface 3–58018
- surface, sticking of spin polarised H atoms 3–38146
- surface, sticking probability of H, mag. reson. lineshape study 3–1291
- surface tension at λ-point *(French)* 3–57156
- surface tension meniscus calc. 3–2928
- surface tension near λ point, Van der Walls model 3–38144
- thermally driven flow, chemical potential gradient 3–13571
- third sound velocity and elementary excitation spectrum 3–13567
- three-body correlation calcs. 3–28177
- two-dimensional plasma reson. in positive ions under surface 3–23122
- two-phonon excitations role in inelastic neutron scatt. 3–33528
- Cu-liq. ^{4}He interface, enhanced thermal conductance in presence of acoustic streaming 3–28178
- ^{4}He film, persistent flow obs. 3–57169
- ^{4}He-p-H solution, dielectric const. and molar volume *(Russian)* 3–14190

liquid helium sound propagation
- *see also second sound; zero sound*
- film, two dimensional trapped electrons, electron cond. and third sound vel. 3–28185
- superfluids, sound propag., boundary effects 3–57162
- Cu-liq. ^{4}He interface, enhanced thermal conductance in presence of acoustic streaming 3–28178
- He-p-H_2 mixtures, quantum liquid, US velocity and adiabatic compressibility at high press. *(Russian)* 3–57155
- ^{3}He, normal liq., viscoelastic behaviour, bulk and shear moduli 3–13573
- ^{3}He, sound attenuation and spin echo, induced interaction model 3–38152
- ^{3}He, superfluid, A_1-phase, surface mag. relax. and fourth sound 3–2916
- ^{3}He, superfluid, A-phase, collective mode spectrum, acoustic impedance method 3–38155
- ^{3}He, superfluid, A-phase, linear hydrodynamics in strong mag. field with normal component clamping *(Russian)* 3–47178
- ^{3}He, superfluid, B-phase, order parameter collective modes coupling to spin density 3–13575
- ^{3}He, superfluid, sound propag., boundary effects 3–57162
- ^{3}He, superfluid A, phase, mag. charge analog of Ampere and Faraday effects 3–13579
- ^{3}He-^{4}He films, phase-separated dynamics 3–28184
- ^{3}He-^{4}He mixture, superfluid, film, sound propag. *(Russian)* 3–2918
- ^{3}He-^{4}He stratified soln. film, collective excitation spectrum *(Russian)* 3–28182
- ^{3}He-^{4}He superfluid film, fifth sound propagation *(Russian)* 3–13582
- ^{3}He; superfluid, B-phase, collective mode spectrum, squashing mode 3–23129
- ^{4}He, attenuation determ., meas. superfluid transition 3–33531
- ^{4}He film, on highly oriented pyrolytic graphite, third sound vel. meas. 3–2909
- ^{4}He, first sound dispersion near $T_{\lambda}(P)$ 3–8284
- ^{4}He liq., third sound velocity and elementary excitation spectrum 3–13567
- ^{4}He, liq. films, third sound damping and crit. vel., nonlinear effects 3–8285
- ^{4}He, liq. sound waves, background attenuation near λ transition 3–8288
- ^{4}He, solidification and superfluidity in porous Vycor glass 3–42880
- ^{4}He, superfluid, first sound velocity meas., ^{3}He impurities effect *(Russian)* 3–57167
- ^{4}He, superfluid, porous media with Vycor glass, sound propagation *(French)* 3–17661
- ^{4}He, superfluid film, fifth sound propagation *(Russian)* 3–13582
- ^{4}He, superfluid film, US third sound interaction with substrate surface defects 3–33529
- ^{4}He surface, sticking of spin polarised H atoms 3–38146

liquid lasers
- *see also dye lasers*
- benzoxazole derivative lasing in the UV triplet-triplet absorpt. 3–22053
- hydrazine FIR laser, optically pumped, assignments and new laser lines 3–27032
- intramolecular transition based liquid laser proposal 3–6769
- operating principles and appls. *(French)* 3–1648
- oxazole derivative lasing in the UV triplet-triplet absorpt. 3–22053
- $AlCl_3$-$SOCl_2$ soln., CC Nd^{3+} ions, absorpt. spectra, luminesc., lasing props. 3–22054

liquid lasers continued
- Br_2 core optical fibre Raman-gain medium, broadband IR generation 3–12139
- $GaCl_3$-$SOCl_2$ soln., CC Nd^{3+} ions, absorpt. spectra, luminesc., lasing props. 3–22054
- Nd^{3+}:$POCl_3$-$SnCl_4$ liquid laser amplifier in phase conjugation arrangement 3–17532
- $POCl_3$-$SnCl_4$:Nd^{3+} laser liquid, spectral parameters *(Chinese)* 3–12136
- $POCl_3$-$ZrCl_4$-$Nd(CF_3COO)_3$ laser liquid, spectral parameters *(Chinese)* 3–12136

liquid metal embrittlement
- nickel alloys, liquid metal embrittlement by molten Rb, radwaste container test 3–58196
- steel, austenitic, liquid metal embrittlement by molten Rb, radwaste container test 3–58196
- steel, austenitic stainless, unstressed, erosion or penetration by molten Zn 3–39295
- steel, ferritic, liquid metal embrittlement by molten Rb, radwaste container test 3–58196

liquid metals
- *see also electron energy states of liquid metals; liquid alloys; mercury (metal)*
- alkali liquid metal vaporisation from rectangular channels, startup conditions 3–50906
- alkali metals, ion-ion effect potential at melting point 3–37769
- alkali metals, struct. factor from interatomic pot. 3–27827
- atomic radial distrib. function calc. methods comparison 3–42508
- binary system, with immiscibility region, break-up in crossed elec. and mag. field 3–22544
- conference on condensed matter techniques and materials, Argonne Nat. Lab., Argonne, IL, USA (Sept. 1981) 3–10514
- DC transport coeff. calc. by derivatives of time correl. functions 3–28330
- density and surface tension meas. 3–13590
- divalent, Wilson-type transition lattice model 3–43025
- droplet dispersions, metastable phase synthesis, undercooling behaviour obs. 3–13421
- droplets, potentiostatic study of diffusion layer, natural convection case 3–53423
- electronic transport in short mean-free path liquid metals, review 3–3152
- expanded, metal-nonmetal transition 3–43022
- expanded fluids, metal-nonmetal transition, electronic and thermodynamic props. 3–43021
- field ion emission source, emitter shape effects, theory 3–16443
- films, stability of laminar flow in mag. field 3–37575
- heat transfer in turbulent pipe flow with uniform wall flux 3–46547
- high-temp. free-energy expansion 3–13488
- infiltration of porous medium by liquid metal, effet of elec. current 3–12766
- interface submitted to high frequency magnetic field, effect of finite conductivity in inviscid stability 3–51245
- ion emitters, space charge effect on pot. distrib. 3–45744
- ion source, quasi-point, for microfabrication *(Japanese)* 3–36125
- ion source optics, computer simulation 3–36593
- ion sources, field emission *(Japanese)* 3–20951
- ion sources, space charge effects, theory 3–20950
- ionic transport processes, shear viscosity coeffs. *(Rumanian)* 3–13510
- liquid metal vapour condensation, influence of wall-condensate interface resistance 3–50921
- liquid metal-NH_3 solns., strongly decomposed, current instability, plasma waves 3–47376
- local struct. fluctuations, glass transition 3–2801
- phonon spectrum parameters and Hall coeffs. *(Chinese)* 3–28465
- polyvalent heavy liquid metals, electronic density of states, Fermi surface 3–18598
- refractory-metallic binder composite, sintered, anomalous behaviour of liq. metals in flat capillaries 3–58090
- self-diffusion and shear viscosity, review of ionic transport processes *(Rumanian)* 3–13504
- solidification and diffusion kinetics under microgravity environment 3–4025
- Soret diffusion vs. impurity diffusion during laser or electron beam induced heat flow transients 3–56961
- strong-scattering expanded, elec. cond. as a function of expansion 3–33700
- structure factors, compressibility, and elec. resist. 3–22763
- structure factors, use of one-component-plasma model 3–27829
- supercooled, stability limit 3–57070
- supercooled liquid, struct. determ. by computer modelling 3–7901
- surface, electromagnetic control *(French)* 3–42316
- surface entropy, hard sphere model 3–23059
- surface tension, pseudopot. perturbation theory 3–42885
- thermal convection instability in MHD and crystal growth 3–56535
- thermal press. coeffs., Percus-Yevick phonon description 3–33069
- transition metals, local electronic densities, multiple scatt. Green's function theory 3–8458
- transition metals amorphous and liq., electronic states, hybridisation effects 3–52015
- turbulent heat transfer in a pipe, $\bar{v}\theta$ eqn. soln. with local equilib. assumption 3–2060
- Volta effect, contact method meas. 3–8560
- Al, alloy layers formed by reaction with Fe alloys 3–29060
- Al, liquid, pair pot. calcs. from Born-Green integral eqn. 3–46832
- Al melts, inclusions precip. mechanism on active filter granules 3–7653
- Al molten, dissolution of ferrous alloys 3–29222
- Al, struct. meas. by neutron scatt., Placzek correction 3–56806
- Ba, liquid, density and surface tension up to 1850K 3–51683
- Be, peak in static struct. factor, rel. to electron correl. effects 3–33654
- Bi, at. motions from line width studies of scatt. functions 3–57117
- Bi, dynamic scatt. function, neutron scatt. study 3–42507
- Co, molten, surface tension meas. 3–28196
- Co, thermodynamic props., Percus-Yevick phonon description 3–51474
- Cs, expanded liquid, enhanced paramag. and spin fluctuations, ^{133}Cs NMR meas. 3–47472
- Cs, liquid, struct. anal. 3–33071
- Cs, liquid, struct. param. temp. depend. 3–51473
- Cs, surface tension, ion density profiles, density functional calc. 3–42886
- Cs, thermal cond., elec. cond. and thermoelec. power 3–47329
- Cu, molten, surface tension meas. 3–28196
- Cu, struct. meas. by neutron scatt., Placzek correction 3–56806
- Fe, liquid, surface bismuth after vibration *(French)* 3–42882

liquid metals continued
Fe, molten, surface tension meas. 3–28196
Fe, thermodynamic props., Percus-Yevick phonon description 3–51474
Ga coupling for deep interior plane acoustic microscopy 3–4257
Ga, liq. and solid phases, heat ca;pacity, laser flash calorimetry meas. 3–42802
Ga-Pb system, liq.-liq. interfacial tension between monotectic and crit. temps. *(French)* 3–18531
Hg coupling for deep interior plane acoustic microscopy 3–4257
Hg, liquid-rough solid interface, true area of contact 3–42890
Hg, Volta effect, contact method meas. 3–8560
Hg-In amalgams, Volta effect, contact method meas. 3–8560
In, low energy Ar^+ ion sputtering 3–3895
Li, elec. resist., melting point to 550°C 3–3148
Na, liq., mol. dynamics study at 373K 3–37770
Na, liquid, Cs adsorption at container walls, linear response theory 3–33540
Na, liquid, pair pot. calcs. from Born-Green integral eqn. 3–46832
Na, neutron time of flight spectrum, coherent linewidth 3–7875
Na, surface tension, ion density profiles, density functional calc. 3–42886
Nb solid and liq., specific heat up to 5000K 3–2830
Ni, liquid, pair pot. calcs. from Born-Green integral eqn. 3–46832
Ni, molten, surface tension meas. 3–28196
Ni, positron annihilation spectra 3–52866
Ni, thermodynamic props., Percus-Yevick phonon description 3–51474
Pb, at. motions from line width studies of scatt. functions 3–57117
RB liq., rapid quenching to glassy state, self-diffusion const. calc. 3–13514
Rb, at. motions from line width studies of scatt. functions 3–57117
Rb, BBGKY equation, spatially nonuniform solns. 3–22747
Rb, liq., fourth moment of coherent scattering function 3–2383
Rb, liq., isolated ^{88}Y ions, anomalously small Knight shift and nucl. relax. rate 3–14175
Rb, liq., struct. changes, viscosity and density temp. depend., thermal expansion coeff., neutron diffr. study 3–22764
Rb, liquid, struct. anal. 3–33071
Rb, liquid, structural rearrangement, correlated region dimension calc. *(Russian)* 3–18209
Rb, struct. meas. by neutron scatt., Placzek correction 3–56806
Rb, supercooled liq. states, self-diffusion coeff., mol. dynamics study 3–13502
RbBr-Rb soln., neutron scatt. study of structural order 3–27830

liquid oscillations
see also liquid waves
complex pipe systems of variable section, steady state fluid harmonic oscillations 3–27611
droplet surface oscillation self-excitation in EM wave field 3–26940
free convective flow in vertical gaps 3–27517
inviscid bubbles, nonlinear oscillations investig. using Poincare-Lindstedt expansion technique 3–46633
liquid columns, steady and oscillatory thermocapillary convection 3–51109
Navier-Stokes equation for oscillating stagnation point flow, boundary layer receptivity 3–7602
particle waves, computer simulation 3–7604
swirled flow, regular pulsation onset, vortical core formation 3–42247
thermoacoustic oscillations in liquid at supercritical pressures, amplitude-frequency response 3–56557
viscous incompressible fluid squeezed layer, interaction dynamics with elastic walls 3–46586

liquid permeability *see permeability*

liquid phase epitaxial growth
distributed Bragg reflectors, integration with other lasers, LPE study 3–24159
electroepitaxial growth, layer thickness monitoring by resistance meas. 3–3972
electroplated coatings, deposit structure effects 3–52984
equilibrium electroliquid epitaxy, film growth rate 3–19294
ferrite-garnet films, spectrum of exchange and exchangeless spin-wave excitations 3–52561
$Ga_xIn_{1-x}P$, LPE growth on GaAs(100), lattice mismatch and photoluminescence 3–8356
garnet bubble layers, Fe, Ga, As implanted, annealing mechanism, FMR study 3–33982
garnet thin films growth 3–34246
high-power laser diodes fabrication and characts. 3–46233
III-V semiconductor heterostructures, graphite boat design for use in LPE growth 3–39049
III-V semiconductors, LPE growth, lattice mismatching conditions, expt. study 3–24167
III-V semiconductors 3–24158
III-V ternary and quaternary epitaxial solid solns., instability criteria 3–42954
III-V ternary and quaternary solid solns., equilib. diagrams, influence of chemical disorder and epitaxial substrate, DLP model *(French)* 3–42957
loss stabilised buried optical guide laser, LPE grown, integration with other optical devices 3–24159
metals, pulse melted, metallurgy and microstructure 3–58116
multilayer, apparatus 3–24162
optical modulators, integration with lasers, LPE study 3–24159
optical waveguides, integration with lasers, LPE study 3–24159
polyethylene, high density, epitaxial crystallisation on KCl substrates, growth habit 3–51969
polyoxymethylene, epitaxial morphologies, deposition energetics on alkali halide (001) surfaces 3–18236
polyoxymethylene, epitaxial morphologies, electron microscopy obs. 3–18235
semiconductor growth, LPE techniques, review 3–24157
semiconductor heterostructure laser growth, LPE system, slider induced convection 3–24160
semiconductor materials, current growth techniques, material props., device fabrication, conf., Los Angeles, CA, USA (Jan. 1982) 3–16073
semiconductors, epitaxial growth, colloquium, Perpignon, France (Aug.-Sept. 1982) 3–40317
slider-induced convection simulation in horizontal LPE slider system 3–34249
solutions with evaporating component, diffusion transfer and kinetic phenomena 3–33607
strip buried heterostructure laser, LPE grown, integration with other optical devices 3–24159

liquid phase epitaxial growth continued
TGS crystal heteroepitaxial growth from soln. on muscovite 3–14513
$Y_{3-x}Ca_xGe_yFe_{5-x}Fe_{x-y}O_{12}$ epitaxial films, mag. props. 3–33948
(Al, Ga)As DH lasers, cooling rate effect on short-time LPE growth of active layers 3–9005
(Al,Ga)As:Mg, diffusion across p-n junction during LPE growth 3–23098
AlGaAs DH laser, LPE growth in sapphire boat 3–37066
AlGaAs graded-index waveguide separate-confinement heterostruct., lasers with proton-delineated stripe, LPE and MBE grown 3–56193
AlGaAs:Ge, effect of Ge on liquidus and solidus in LPE domain 3–42956
p-$Al_{0.7}Ga_{0.3}As$-p-GaAs-n-GaAs, thick window concentrator solar cell 3–9429
$Al_xGa_{1-x}As$, LPE grown, composition and minority carrier diffusion length meas. *(Chinese)* 3–38242
$Al_xGa_{1-x}As$, luminescence and minority carrier transport 3–28889
$Al_xGa_{1-x}As$, organometallic VPE growth, review of method, comparison with other growth techniques 3–19280
$Al_xGa_{1-x}As$-GaAs heterojunctions, plasticity and strength studies *(Russian)* 3–47035
AlGaAsSb, on GaSb, low temp. LPE growth conditions and props. 3–42955
AlGaSb, on GaSb, low temp. LPE growth conditions and props. 3–42955
$Al_xGa_{1-x}Sb$ solid solns., production of heterostructures by LPE *(Russian)* 3–13662
$Bi_xTm_{3-x}Fe_yGa_{5-y}O_{12}$ films, mag. props. 3–33949
p-CdSb:In p-n junctions, LPE grown, props. *(Russian)* 3–13898
CdSe(Te), crystal growth from soln. and photoluminesc. *(Japanese)* 3–39020
$CoFe_2O_4$, LPE grown, mag. and magneto-optical props. 3–14095
$(EuLaCa)_3(FeGeAl)_{5O12}$, garnet films, LPE grown, mag. props., growth atm. effects 3–23753
Ga-Al-P ternary system, low temp. phase diagram rel. to growth 3–14578
(GaAl)As heterostructure laser, slider-induced convection simulation in horizontal LPE slider system 3–34249
p-GaAlAs, LPE growth on GaAs, Be and Zn diffusion obs. 3–52982
GaAlAs red ultra-high brightness 500 mcd LED, LPE, optical communication appls. 3–22257
(GaAl)As/GaAs channelled substrate injection laser prep. and props. 3–46232
p-$Ga_{0.2}Al_{0.8}As$/p-$Ga_{1-y}Al_yAs$/n-$Ga_{1-y}Al_yAs$ solar cells, conversion efficiency 3–53517
$Ga_{1-x}Al_xAs$ film, capillary liq. epitaxy 3–43776
$Ga_{1-x}Al_xAs$ variable-gap structs., isothermal liq. epitaxy 3–28234
$Ga_{1-x}Al_xP$, homogeneous, temp. difference LPE growth and photo- and electro-luminesc. meas. 3–39051
$Ga_{1-x}Al_xSb$, solid soln., LPE, liq. and solid phase comp. 3–39099
$Ga_{1-x}Al_xSb$-GaSb heterostructure, epitaxial layers, growth characts. 3–38244
$Ga_{1-x}Al_xSb_{1-y}As_y$/GaSb, LPE growth and phase diagram 3–3970
$Ga_{1-x}Al_xSb_{1-y}As_y$-GaSb, LPE, liquid phase composition stabilisation obs. 3–33610
GaAs atomically flat LPE-grown facets seen by scanning tunneling microscopy 3–13666
GaAs, electroliquid epitaxy, mass transfer effects 3–33604
GaAs homojunctions, plasticity and strength studies *(Russian)* 3–47035
GaAs, LPE growth from solns. with evaporating solvent 3–52981
GaAs solar cells for concentrator and flat plate arrays, fabrication and characts. 3–58530
GaAs, VPE and LPE grown, electron traps, DLTS and C-V meas. 3–43069
GaAs:Mg, anomalous diffusion behaviour 3–23089
GaAs:Si, LPE growth, cond. inversion 3–8603
GaAs/AlGaAs/BeO constricted DH large optical cavity laser, LPE grown, multichannel optical recording appl. 3–27074
$Ga_{1-x-y}In_xAl_yAs$, LPE growth on GaAs and near IR optical props. 3–3973
GaInAsP DH, LPE growth and props., effect of different active layer thickness 3–43774
GaInAsP long wavelength buried-crescent laser struct. on channelled substrates, formation by LPE 3–22114
GaInAsP, shallow proton stripe laser diodes, life tests rel. to LPE and MOVPE prep. techniques 3–37075
GaInAsP-InP 1.3 μm DFB lasers, InP surface corrugations preserved from thermal deformation during LPE 3–50673
$Ga_xIn_{1-x}As_YP_{1-y}$ high purity layers lattice matched to InP, LPE growth 3–42958
GaP, LPE, current controlled, mass-transfer parameters 3–14511
GaP:Si, N, LPE growth with N doping from NH_3, Si incorporation kinetics 3–34250
$(Gd,Y)_3(Fe,Mn,Ga)_5O_{12}$ garnet bubble films, LPE growth and mag. props. 3–52569
Ge films, graphoepitaxy on SiO_2 by zone melting recrystallisation 3–13659
HgCdTe, LPE growth using Hg pressure differential 3–43764
n-$Hg_{0.8}Cd_{0.2}Te$, LPE growth for photoconductivity-type IR detector 3–52979
n-$Hg_{0.8}Cd_{0.2}Te$ layers, LPE growth, IR detector appls. 3–34245
$Hg_{1-x}Cd_xTe$ film, LPE growth modes 3–29020
$Hg_{1-x}Cd_xTe$, LPE growth and elec. props. 3–18577
In-Ga-As-P batch prep. melts, prep. and props. rel. to LPE 3–9006
In-Ga-As-P system, phase equilibria, thermodynamic analysis 3–34287
InAs-$Al_xGa_{1-x}Sb$ heterostructure, LPE growth 3–38243
$InAs_ySb_{1-y}$-GaSb, LPE heterostructure, charact. study 3–19293
$InAs_ySb_{1-y}$-InAs, LPE heterostructure, charact. study 3–19293
InGaAs, LPE on InP, self-supersaturation, simplified LPE technique 3–43766
InGaAs-InP, LPE growth rate, substrate orientation dependence 3–23203
$In_{0.53}Ga_{0.47}As$, epilayers, anisotropic growth effects on structured InP substrates 3–42947
$In_{0.53}Ga_{0.47}As$, high purity LPE growth and characterisation 3–43777
$In_{1-x}Ga_xAs$, LPE growth on (100), (111)B faces, impurity and carrier concs. 3–8360
$In_xGa_{1-x}As$, current controlled LPE on InP (100) 3–19292
$In_xGa_{1-x}As$ LPE growth on InP near solid instability 3–42951
InGaAsP DH laser, LPE growth, enhanced InP substrate protection 3–47784
InGaAsP distributed feedback lasers, hybrid LPE/MOCVD growth 3–32380
InGaAsP LPE growth on InP, appl. to DH lasers 3–29021
InGaAsP, LPE growth and charact., doping conditions 3–42959

liquid phase epitaxial growth continued
InGaAsP lasers, high power single mode, single step LPE fabrication 3—37021
InGaAsP mode stabilised terrace lasers on semi-insulating InP 3—27054
InGaAsP/InP DH laser, LPE grown, proton-defined stripe geometry 3—32357
InGaAsP/InP mode-stabilised terrace-large optical cavity laser fabricated on InP substrate 3—1664
InGaAsP/InP:Cd(Zn) lasers, LPE grown, high quantum efficiency 3—27072
InGaAsP-InP buried heterostruct. stripe CW laser, fabrication by hybrid liq./gas phase epitaxy 3—41875
InGaAsP-InP undercut mesa laser, LPE fabrication and planar polyimide passivation 3—46206
InGaAsP-InP:Zn, Mg p^+-n abrupt heterojunction, LPE growth techniques 3—3971
$In_{0.75}Ga_{0.25}As_{0.55}P_{0.45}$, epilayers, anisotropic growth effects on structured InP substrates 3—42947
$In_{1-x}Ga_xAs_{1-y}P_y$ with narrow photolum. spectrum, LPE growth 3—23196
$In_{1-x}Ga_xAs_{1-y}P_y$-InP heterojunction laser, low threshold, for 1.5-1.6 μm interval, LPE growth 3—22121
$In_{1-x}Ga_xAs_{1-y}P_y$-InP low threshold terrace mass transport laser, LPE growth 3—27075
$In_{1-x}Ga_xAs_yP_{1-y}$ buried stripe lasers, LPE fabrication *(French)* 3—43773
$In_{1-x}Ga_xAs_yP_{1-y}$, near-equilibrium LPE growth on ⟨100⟩ InP 3—34248
$In_{1-x}Ga_xAs_yP_{1-y}$/InP DH lasers with low threshold current density, LPE growth *(French)* 3—43772
$In_xGa_{1-x}As_yP_{1-y}$ (λ=1.5 μm), LPE growth, luminesc. and photoelec. props. 3—47243
$In_xGa_{1-x}As_yP_{1-y}$ lattice matched to InP, LPE grown, interface spinodal decomposition 3—42952
$In_{1-x}Ga_xP_{1-z}As_z$ solid solution, intrinsic exciton luminescence 3—47720
InP, epilayers, anisotropic growth effects on structured InP substrates 3—42947
InP, LPE growth and charact., doping conditions 3—42959
InP, LPE growth on (100), (111)B faces, impurity and carrier concs. 3—8360
InP substrate for LPE growth, double meltback procedure 3—34244
InP:S, ⟨100⟩ substrates, LPE atmos. effect on thermal decomposition 3—9008
InP:Si, ion implanted, and semi-insulating transport props. and defects 3—28383
InP:Si, LPE grown, impurity transport processes, thermodynamic calcs. 3—42967
InP/InGaAsP/InGaAs/InP structure, LPE growth for avalanche photodiodes, circumferential meltback prevention 3—43765
InP-InGaAsP heterojunction optoelectronic devices prep. and properties *(Slovak)* 3—47783
InSb growth by controlled solidification, liq. state diffusion processes influence *(Russian)* 3—19287
KH_2PO_4 crystal heteroepitaxial growth from soln. on muscovite 3—14513
$LiFe_5O_8$, LPE growth from $PbO-B_2O_3$ flux 3—13684
Mn-Zn ferrite film, on $MnGa_2O_4$ substrate, LPE growth and props. lattice match influence 3—14517
$PbO.6Fe_2O_3$, magnetoplumbite, LPE growth from $PbO-B_2O_3$ flux and ferromag. reson. study 3—13684
$Pb_{1-x}Sn_xSe_{1-y}Te_y$ DH laser with two-sided confinement, LPE growth and props. 3—12181
$Pb_{1-y}Sn_ySe(Te)$, layer thickness rel. to liquid-phase epitaxy conditions 3—9002
PbSnTe-PbTeSe long wavelength lattice matched single heterostruct. lasers grown by LPE 3—22113
$Pb_{1-x}Sn_xTe$ homostruct. diode lasers with Ga-doped cladding layer, LPE growth and long wavelength operation 3—41826
$Pb_{1-x}Sn_xTe$ photosensitive p-n structures, LPE growth 3—52232
Si, crystallisation and amorphisation from melt at interface rel. approaching 20 m/sec. 3—56943
Si epitaxial layer growth using moving solvent enriched with rare earth metals 3—24166
Si, etched grooves, planar refilling by LPE 3—34247
Si solar cells, EFG polycryst., ion implantation and laser annealing prep., SEM characts. 3—24584
Si solar cells made by liquid phase epitaxy, cell performance 3—53522
Si thin films, explosive liquid-phase crystn. during laser pulse heating 3—33601
Si:Mg(Ca), solubility of dopant during LPE 3—33444
$(SmLu)_3(FeSc)_5O_{12}$, submicron bubble garnets, LPE grown 3—23758
$SrFe_8Al_4O_{19}$ film, hexagonal, LPE-grown, mag. props. 3—14099
$Y_3Al_5(Fe_5)O_{12}$ garnets, segregation in LPE 3—9007
$(YEuLuCa)_3(FeGe)_5O_{12}$ garnet films, LPE grown, mag. props., growth atm. effects 3—23753
YIG:Co epitaxial films, domain structure and magnetisation 3—28668
YIG:Gd film optical isolator, low-cost compact design, LPE growth technology 3—7199
YIG-Ga.YIG layered films, LPE growth, appls. 3—19299
$(YSm)_3(FeGa)_5O_{12}$ {211} LPE films, anisotropic motion of steps 3—18569
$Y_{2.6}Sm_{0.4}Fe_{3.9}Ga_{1.1}O_{12}$ garnet epitaxial film, Jackson factor and growth kinetics 3—29023
(YSmTmGd)(FeGaAl) epitaxial garnets, mag. props. 3—33944
$Zn_xCd_{1-x}SnP_2$, LPE growth on InP and elec. props. meas. 3—19291
ZnSe grown by LPE, segregation coeffs. of selected impurities 3—8362
ZnSe:N, binding energy of shallow acceptor 3—52076
ZnSe(Te), crystal growth from soln. and photoluminesc. *(Japanese)* 3—39020

liquid semiconductors
see also electron energy states of liquid semiconductors
IIIb-Te, liq., struct. inhomogeneity and valence fluctuations 3—13070
metal-VeO_5(melt)-metal structure, current-voltage characteristics 3—28452
photosemiconductor-liquid cryst. struct., optical nonlinearity study 3—17564
substrate confined, in situ crystn. 3—13420
$AgTlSe_2$, dielec. relax. in solid and liq. states 3—3642
$AgTlSe_2$, liq. semicond., elec. props. 3—43216
Bi-Se melt, crystn. 3—57063
Cd-In-Te, liquidus surface building, mathematical experiment planning *(Russian)* 3—57066
Cd-Te binary system, regular associated soln. model 3—7896
Ga_2Te_3, liq., struct. inhomogeneity and valence fluctuations 3—13070

liquid semiconductors continued
Ge liquid, radioactive/non-radioactive, evaporation by effusion method 3—51764
GeTe melt, Hall effect 3—23412
Hg-Te binary system, regular associated soln. model 3—7896
PbTe melt, Hall effect 3—23412
S-Ge-As-Te glass, elec. cond., 20°-1150°C 3—47347
Se-Ge-As-Te glass, elec. cond., 20°-1150°C 3—47347
SnTe melt, Hall effect 3—23412
Te, semicond.-metal transition, cond. and thermoelec. power meas. 3—13867
$Tl_x(AgTlSe_2)_{1-x}$ molten alloys, elec. and mag. props. 3—52206

liquid-solid transformations *see solid-liquid transformations*

liquid structure
see also classical theories of fluid structure; long-range order; neutron diffraction examination of liquids; quantum theories of fluid structure; short-range order; X-ray diffraction examination of liquids
acetic acid, liq. struct., neutron diffr. study 3—27817
acetone, liq., spectral props., computer simulation and IR meas. 3—46827
acetone aq. solns., Raman spectral study 3—11808
acetonitrile, liq. and soln., mol. motion and interactions, microwave and far-IR spectra 3—47647
acetonitrile aq. solns., Raman spectral study 3—11808
alkali chlorides, molten, co-ordination of heterovalent and cation impurities 3—2375
alkali halides, ion pair pots., appls. to liq. struct. and point defect props. 3—33181
alkali metals, struct. factor from interatomic pot. 3—27827
alloys, charge transfer rel. to partial struct. factors 3—27828
aqueous solutions, Voronoi polyhedra and solvent struct. 3—27818
atomic radial distrib. function calc. methods comparison 3—42508
benzene, liq., struct. and dynamics, Lennard-Jones pot. 3—37761
benzene, liq. struct., neutron diffr. study 3—7893
benzene, liq. struct., rot. Zeeman effect 3—52771
benzene, soln., vibronic interactions and struct. investig. using spectral shifts 3—1337
binary fluid mixture under shear, struct., non-Newtonian effects, computer simulation 3—42265
binary mixtures, nonequilib. fluctuations relax. above consolute point 3—2812
binary systems with H bonding and electron donor-acceptor interaction 3—27831
bromoform, liquid to rotator phase transition, far IR spectra and computer simulation anal. 3—46874
carbocyanine dye, picosec. fluoresc. spectroscopy obs. of viscosity-depend. internal rot. 3—34151
charge distribution in structurally disordered systems 3—37791
charged macromolecules, scatt., static struct. factor 3—13069
chromophore solute in mixed solvents, rot. diffusion obs. by picosec. fluoresc. anisotropy 3—34152
m-cresol binary liq. mixtures, excess free vol. and thermodynamic props., US meas. 3—2843
dense fluids, neutron scatt. studies 3—51459
DMSO aq. solns., Raman spectral study 3—11808
DMSO-water mixture, ultrasonic meas. and liq. struct. 3—51713
dodecylbenzene sulphonate aq. soln., micellar shape, NMR study 3—2374
electrical double layers, in size asymmetric electrolytes, struct., interaction 3—53413
ethyl alcohol-d_6 liq., struct. studies by neutron diffr. 3—27821
formamide, liq., mol. struct., H-bonds, electron neutron and X-ray diffr. study 3—46831
free volume in significant structure theory 3—37751
hard-sphere fluid alloy mixtures; partial pair correl. function 3—7900
heavy water, X-ray struct. factor, isochoric temp. differential 3—56803
high temp. solvent for garnet growth; O ion concentration and melt struct. 3—43719
hydration forces, polarisation layers effects 3—52750
ionic solution, struct. and dynamics 3—51472
island model, rel. to quasicryst. model 3—37760
linear homo- and copolymers, molar volumes meas. as function of temp., liq. crystal behaviour 3—2385
liq. struct., rot. Zeeman effect 3—52771
liquid crystal behaviour relation to mol. struct. 3—42509
liquids, time correlations for lattice variables in spin relax. *(Russian)* 3—8739
metal, local struct. fluctuations, glass transition 3—2801
metals, struct. factors, compressibility, and elec. resist. 3—22763
metals, structure factors, use of one-component-plasma model 3—27829
metals, thermal press. coeffs., Percus-Yevick phonon description 3—33069
methanol, hydration in infinitely dil. aq. soln., Monte Carlo calcs. 3—33065
micro emulsions, Rayleigh ratios, hard-sphere model, mean spherical approx. 3—13058
molecular dynamics, time-resolved obs. by femtosec. interferometry 3—33068
molecular dynamics and pulse diagnostics, subpicosec. laser spectroscopy 3—32422
molecular liqs., nonaxial quadrupole forces effect 3—56787
molecular liquids, electrostatic solvation energies, Monte Carlo study 3—22745
molecular properties, environmental effects in liq. phase 3—55874
neutron diffraction study *(Dutch)* 3—56781
neutron scatt., reson. epithermal, as condensed matter probe 3—7868
neutron time-of-flight diffractometer for liq., amorphous and powder diffr. 3—7860
nitrobenzene, liq. struct., rot. Zeeman effect 3—52771
2,4-pentanediol, liq., near glass point, photon correlation spectroscopy 3—7898
Percus-Yevick equation and structure functions, review 3—42498
polyamic acid solutions, differing mol. structs., ultrasonic vels. and Rao formalism 3—33365
polyelectrolyte strong soln., dynamics, quasi-elastic neutron scatt. study 3—27819
polyisobutylene melt, relax. processes, after uniform tension 3—42505
polyisobutylene solutions, struct. changes induced by orifice flow 3—27572
polymer, short chain, melting 3—38035
polymer fluids, relax. processes, after uniform tension 3—42505
polymer melt, linear flexible macromolecules, conformation and chain end distrib. near surface 3—37764
polymer solns., gel-like modes in 'θ' solvents 3—28131

liquid structure continued
- polymers, flexible chain, in conc. solns. and in bulk, orientational effects and ordering 3—2376
- polystyrene, soln., solvent mol. state and NMR relax. *(Russian)* 3—47569
- Poschl-Teller molecule pot. partition function 3—33049
- pseudo-Gruneisen param., modified expression 3—38015
- PVC, soln., solvent mol. state and NMR relax. *(Russian)* 3—47569
- quantum fluids, integral equations for pair distrib. function, interpolation method 3—18524
- quantum liquids, momentum distrib. determ. from dynamic struct. factor 3—2907
- RISM eqns. for site-site 12-6 pot., numerical soln. 3—2361
- short-chain molecules, equilibr. conformational struct. 3—2368
- simple liquids, coordination numbers radii of first coordination sphere 3—37758
- sodium polystyrene sulphonate, polyelectrolyte strong soln., dynamics, quasi-elastic neutron scatt. study 3—27819
- solutions of medically important substances in water, stacking, US study 3—13065
- square-well fluid with variable range, optimised cluster theory, optimised RPA and mean spherical model 3—33059
- supercooled liquids and metallic glasses in spaces of incommensurate curvature 3—56828
- surface structure and surface tension, superliquid theory 3—38166
- toluene, liq. struct., rot. Zeeman effect 3—52771
- water, H-bond network, low-density patches, mol. dynamics simulation 3—27824
- water, intermolecular nature, hydration of mols. and ions 3—37768
- water, liquid, surface structure and surface tension, superliquid theory 3—38166
- water, liquid struct. by computer simulations, 3D model static props. 3—22756
- water, near solid interfaces, statistical thermodynamic model 3—57175
- water, orientational struct. and dielec. props. comparison of ST2 and MCY potentials 3—56798
- water, structure factor, isochoric temp. derivative, neutron diffraction study 3—56804
- water, supercooled, diffusion coeff., quasielastic neutron scatt. 3—27825
- water, supercooled, X-ray anal. 3—27823
- water, vibr. spectra of solns. at elevated temps. and press., Raman obs. 3—47632
- water (heavy and light), atom pair distrib. function obs. 3—7899
- water and saturated aq. solns., struct. effects 3—27826
- Al, liquid, pair pot. calcs. from Born-Green integral eqn. 3—46832
- Al, struct. meas. by neutron scatt., Placzek correction 3—56806
- Al-Cu melt, X-ray struct. study *(Russian)* 3—46833
- Ar, at. motions from line width studies of scatt. functions 3—57117
- Ar, liq., short-wavelength sound modes, dynamic struct. factor from Rayleigh, Brillouin lines 3—57049
- Au alkali liquid alloys, electronic and atomic struct. 3—13729
- Au-Cs melts, short-range ionic correls., neutron diffr. study 3—2381
- Be, peak in static struct. factor, rel. to electron correl. effects 3—33654
- Bi, at. motions from line width studies of scatt. functions 3—57117
- Bi, dynamic scatt. function, neutron scatt. study 3—42507
- Bi-BiI_3, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3—43241
- Bi-I, liquid, cluster formation and chem. short range order, neutron scatt. study 3—13066
- CS_2, diluted, picosec. mol. dynamics, phase conjugation obs. 3—32422
- $(Ca,K)NO_3$, short time struct. relax. process, glass transitions, expt. and computer simulation 3—38068
- $Cd_3(PO_4)_2$ and PO_4-H_2O interactions 3—22755
- Co, thermodynamic props., Percus-Yevick phonon description 3—51474
- Cs, liquid, struct. anal. 3—33071
- Cs, liquid, struct. param. temp. depend. 3—51473
- Cs-Sb liquid alloy, struct., neutron diffr. expt. 3—56809
- CsF, aq. soln., struct., mol. dynamics simulation 3—46824
- Cu, struct. meas. by neutron scatt., Placzek correction 3—56806
- $CuBr_2$ aq. solns., vibr. dynamics, inelastic light scatt. study 3—3709
- $CuBr_2$-$SrBr_2$ mixed electrolytic aqueous solns., local order and vibr. dynamics 3—47631
- D_2O, liquid 3—7897
- D_2O, liquid struct., time-of-flight neutron diffr. study *(Japanese)* 3—42506
- Fe, thermodynamic props., Percus-Yevick phonon description 3—51474
- Fe-B melts, structure close to eutectic comp., X-ray study *(Russian)* 3—46834
- $Fe_{90}B_{10}$, $Fe_{83}B_{17}$ molten alloys, interatomic distances and coord. nos., X-ray diffr. obs. *(German)* 3—56808
- Ga_2Te_3, liq., struct. inhomogeneity and valence fluctuations 3—13070
- H_2, liquid metal, ground-state struct. as two-component Fermi fluid at $T=0$ 3—51885
- HCl, liq., vibr. dephasing, Raman linewidth 3—47648
- H_2O, cluster expansion theory of H-bonded fluids 3—51470
- H_2O, extended lattice model, phase diagram 3—2362
- H_2O, molecular collective motion model 3—18197
- H_3PO_4-H_2O eutectic mixture, liq., separation effect near crystn. point 3—2811
- ^4He, liquid, optimised free surface from hypernetted-chain approx. 3—33067
- ^4He, momentum distrib. determ. from dynamic struct. factor 3—2907
- In-InI_3, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3—43241
- In-Te, elec., mag., optical, thermodynamic, and struct. props. 3—56805
- Kr dense gas, struct., two-body time correls. neutron scatt. study 3—46822
- $MgCl_2$ aq. soln., X-ray meas. and mol. dynamics simulation, hydration shell struct. 3—2380
- $MgCl_2$ soln., H_2O orientation in hydration shell, dynamic simulation 3—18199
- $MgCl_2$ soln., struct., mol. dynamics simulation, dielectric const. 3—2379
- $Mg(NO_3)_2$ aq. solns., polarised Raman spectra, Fourier transform. and band component anal. 3—14286
- $NH_3(ND_2H)$ liquid struct., IR and Raman spectroscopic inference 3—34089
- Na, liq., mol. dynamics study at 373K 3—37770
- Na, liquid, pair pot. calcs. from Born-Green integral eqn. 3—46832
- Na, neutron time of flight spectrum, coherent linewidth 3—7875
- Na^+ in water, methanol and tetrahydrofuran, Monte Carlo statistical mechanics simulations 3—18203
- Na-K, static struct. factors and interionic pots., neutron scatt., study 3—2382

liquid structure continued
- $Na_{0.85}Cs_{0.15}$, interchange energy, small angle X-ray diffr. study 3—56807
- Na_2O-B_2O_3 glass melt struct. rel. to glass struct. 3—2378
- Ni, liquid, pair pot. calcs. from Born-Green integral eqn. 3—46832
- Ni, thermodynamic props., Percus-Yevick phonon description 3—51474
- Ni-Ge liquid alloy, struct. and elec. cond. *(Russian)* 3—7902
- $Ni_3(PO_4)_2$ and PO_4-H_2O interactions in aq. solns., cation-anion complex formation 3—22755
- Pb, at. motions from line width studies of scatt. functions 3—57117
- $Pd_{0.825}Si_{0.175}$, liquid eutectic, X-ray and neutron diffr. study 3—22761
- Rb, at. motions from line width studies of scatt. functions 3—57117
- Rb, liq., fourth moment of coherent scattering function 3—2383
- Rb, liq., struct. changes, viscosity and density temp. depend., thermal expansion coeff., neutron diffr. study 3—22764
- Rb, liquid, struct. anal. 3—33071
- Rb, liquid, structural rearrangement, correlated region dimension calc. *(Russian)* 3—18209
- Rb, struct. meas. by neutron scatt., Placzek correction 3—56806
- RbCl, freezing theory based on partial liq. struct. factors 3—33407
- Se-Te liquid mixture, sound vel., adiabatic compressibility, density-density correl. function 3—33364
- $Sn(ClO_4)_2$ aq. soln., EXAFS and X-ray diffr. studies of hydration struct. of active Sn(II) ions 3—33063
- $SrCl_2$, molten, partial pair distrib. functions, thermal neutron scatt. 3—2366
- UO_2, molten, charge transfer, reaction free energy 3—2377
- VCl_4, liq. struct., neutron diffr. obs. 3—13074
- Xe fluid, depolarised light scatt. at HF, density depend. 3—23962
- $ZnBr_2$, aq. soln., complex form., electron and X-ray diffr., Raman study 3—46830
- $ZnSO_4$ aq. soln., X-ray diffr. study on hydration and ion-pairing 3—22760
- $ZnSO_4$, aq. solns., struct., X-ray diffr. 3—13076
- $ZnSO_4$ aqueous solution, SO_4^{2-} ion, X-ray diffr. study 3—18205
- $ZrBr_2$-MBr_2 mixed electrolytic aqueous solns., (M=Cu, Sr), local order and vibr. dynamics 3—47631

liquid surface waves *see surface waves (fluid)*

liquid theory
- *see also classical theories of fluid structure; equations of state of liquids; quantum theories of fluid structure*
- alkali halides, ion pair pots., appls. to liq. struct. and point defect props. 3—33181
- alkali halides electrolytic aq. soln., McMillan-Mayer ion-ion pot., Coulombic contrib. correction 3—22753
- alkanes, rot.-translational coupling and conformation transitions, computer simulation 3—13055
- alloys, charge transfer rel. to partial struct. factors 3—27828
- anisotropy, nonlinear mol. dynamics at high field strengths 3—37757
- BBGKY equation, spatially nonuniform solns. 3—22747
- binary liquid mixtures, 2-fluid theory and thermodynamic props., appl. to hard-sphere mixtures 3—2363
- chain polymer solns., interpenetration study 3—7895
- charged hard spheres, mean spherical approx. and generalised mean spherical approx. calcs. 3—33055
- charged liquid, linear response to self motion 3—42503
- charged particle liquids, single-particle motion 3—33061
- 1,1-chlorofluorethane, mol. rot. and translation interaction in liq. state, computer simulation 3—37767
- chlorofluoroacetonitrile, liq., chiral discrimination, hard-core model for repulsive forces 3—33064
- classical fluid, freq. depend. critical viscosity 3—56797
- correlation functions by information theory 3—22746
- critical correl. and square gradient theory 3—40537
- decoupling effects in computer simulation 3—56788
- dense fluids, Brillouin scatt., Rayleigh line intensity *(German)* 3—57949
- dense fluids, triplet distrib. function, computer simulation determ. 3—27809
- dense liq., memory function for autoregressed vel. autocorrelation function 3—42502
- dense systems, Tjon effect, mol. dynamics study 3—13064
- density distrib. and solvation forces between two cylinders 3—2359
- dichloromethane, liq., equilib. thermodynamic props., mol. dynamics computer simulation 3—18479
- dichloromethane, liq., mol. dynamic props., computer simulation 3—18201
- dielectric friction and molecular reorientation in polar medium 3—27810
- dipolar fluid, Ornstein-Zernike eqn., non-linear truncation scheme 3—13062
- dipolar fluids, sum rules and contact value theorem appl. 3—56793
- dipolar hard ellipsoids fluid, second virial coeffs. 3—13394
- dipolar hard sphere fluid, dielec. const., perturbation theory calc. 3—57852
- dipolar hard spheres, perturbation theory 3—33053
- electrical double layer with asymmetric ions, modified Gouy-Chapman theory appl. 3—33057
- electrical double layers, in size asymmetric electrolytes, struct., interaction 3—53413
- electrode-electrolyte interfaces, GMSA for mixture of hard ions and hard dipoles against charged hard wall 3—22749
- electrolyte soln., long range interactions, zero separation theorem 3—13063
- electrolyte soln. occupying half-space, continuum model, equilibrium statistical theory 3—46823
- electrolyte solutions, density gradient and correl. function, surface contrib. 3—56792
- electron autolocalization near a neutral impurity in liquid *(Russian)* 3—3126
- finite size particles, nearest neighbour separation 3—2360
- finite wave vector double and triple mol. correl. functions 3—37756
- fluids, mol. and at., rattling motions detection 3—2354
- fluids at various density of states, velocity autocorrelation function anal. 3—18196
- fluids dynamic Monte Carlo method 3—51465
- free energy, Perram-White perturbation term evaluation by Monte Carlo method and Kirkwood superposition approx. 3—27816
- hard core fluid Helmholtz free energy with Yukawa tail, generalised mean spherical approx. 3—7891
- hard disc fluid, isotropic-nematic transition, Monte Carlo study 3—2796
- hard fused spheres, eqn. of state, generalised Boublik eqn. 3—57054
- hard sphere binary mixtures in constrained vols., selectivity effects *(Ukrainian)* 3—13059
- hard sphere fluid, direct simulation of the chemical potential 3—56794

liquid theory continued
hard sphere fluid, radial distrib. function, effective Monte Carlo calcs. 3−46820
hard spheres dense fluid, viscosity and self-diffusion coeffs., significant structs. theory 3−33060
hard triatomic mol. fluid, nonlinear model, Monte Carlo simulation 3−27813
hard triatomic mol. systems, Monte Carlo simulation 3−46819
hard-core particles, Stirling numbers 3−37755
hard-sphere nonadditive mix., equilib. props. in semiclassical limit 3−56791
inert gas condensed liquids, mass and size effect 3−27812
inhomogeneous fluids, Noether's theorem appl. 3−51469
ionic and dipolar fluid, thermodynamics, statistical mech., complementary variational principles 3−13061
ionic condensed liquids, mass and size effect 3−27812
ionic fuid, interfacial electric double layer, long-range correlations 3−43263
Lennard-Jones fluid, damping matrices, mol. dynamics simulation, testing of relax. time models for memory function 3−13060
Lennard-Jones liquid, crystallisation rates, mol. dynamics method study 3−13147
Lennard-Jones pot. effect on viscosity, mol. dynamics study 3−37752
liquid crystals, dielec. friction and ionic mobility 3−52715
liquids, time correlations for lattice variables in spin relax. *(Russian)* 3−8739
mean electrostatic pot. treatment of ion-dipole mixture or dipolar system 3−46821
melting, mean-field theory based on Bogolyubov-Born-Green-Kirkwood-Yvon eqn. 3−38037
metals, high-temp. free-energy expansion 3−13488
metastable liquids, dynamical stability 3−51468
methane aq. soln., hydrophobic hydration, Monte Carlo simulation using Metropolis algorithm 3−33066
methane aq. soln., Monte Carlo computer simulation, convergence accel. 3−56801
methane-tetrafluoromethane system, two-fluid theory and thermodynamic props. 3−22752
micellar system, Monte Carlo study of electrostatic interaction, cell model test 3−56790
micro emulsions, Rayleigh ratios, hard-sphere model, mean spherical approx. 3−13058
mixture, partial molar volume from hard-sphere model 3−53440
mixtures, decay of conc. fluctuations 3−33062
mixtures, liq., regular soln. theory, comparison with thermodynamic perturbation theory, mol. approach 3−38075
mixtures, two-fluid theory and thermodynamic props., appl. to simple nonelectrolyte mixtures 3−22752
molecular diffusion, ang. momentum and orientational autocorrelation functions, operator theory 3−7890
molecular fluid, Rayleigh light scatt., mol. dynamics study 3−57941
molecular fluids, linear, integral eqns., general formulation 3−2356
molecular fluids, linear, integral eqns., hard dumbbell solns. 3−2357
molecular fluids, linear, integral eqns., orientational ordering 3−2358
molecular fluids, refractive index theory 3−57873
molecular liqs., nonaxial quadrupole forces effect 3−56787
molecular liquids, electrostatic solvation energies, Monte Carlo study 3−22745
molecular liquids, far-IR absorpt. bands and correl. functions connection, first order perturbation treatment 3−2367
molecular liquids 3−7055
molecular properties, environmental effects in liq. phase 3−55874
molecular relaxation, energy dissipation, quantum statistical estimation 3−37750
molten salt, simple, vel. and charge current autocorrel. functions 3−18206
molten salts, self-consistent calc. of excitation spectra 3−2365
molten salts, uni-univalent, perturbation theory calcs. 3−46825
multipolar hard spheres, second dielectric virial coeff. 3−8754
non-Gaussian velocity correlations in fluids 3−27808
nonuniform fluid, pair and direct correlation functions, Percus-Yevick approx. 3−56786
one-dimensional fluids, cavities, theory 3−2355
organic liq. bulk properties, hard-sphere model, ultrasonic studies 3−37754
orientational freezing in 3-D, mean field theory 3−37759
Ornstein Zernike differential eqn., derivation from Bogoliubov-Born-Green-Kirkwood-Yvon hierarchy 3−2364
pair correlations near a hard wall: an analytical theory 3−51467
Percus-Yevick equation and structure functions, review 3−42498
polar fluids, shape factors, statistical mech., conformal-solution theory 3−37753
polar hard dumb-bell fluid, dielectric const. depend. on mol. shape 3−14192
polar liquids, dielec. friction and ionic mobility 3−52715
polar liquids, mol. dipole moment ordering effect close to surface 3−33054
polar molecular fluids, site-site Ornstein-Zernike solns. and renormalisation 3−27815
polarisable hard sphere fluid, with dipoles and tetrahedral quadrupoles, integral eqn. results 3−22750
polyatomic rigid systems, mol. dynamics in cartesian coordinates 3−27811
polymeric liquids, constitutive eqns., transient network concept 3−27464
Poschl-Teller molecule pot. partition function 3−33049
potential distrib. theorem, mech. stability and Kirkwood's integral eqn. 3−56796
primitive model electrolyte, modified Poisson-Boltzman eqn. 3−22759
pseudo-Gruneisen param., modified expression 3−38015
quantum chemistry, condensed matter theory, and propagator methods, conf., Flagler Beach, FL, USA (March 1982) 3−30542
reduced model theory, computer simulation of relax. after strong excitation 3−56789
RISM eqns. for site-site 12-6 pot., numerical soln. 3−2361
rolling, hydrodynamic moment theory 3−42692
semirigid macromolecules, state of soln. diagram *(Russian)* 3−13075
simple fluid, hydrodynamic fluctuations, spatially nonlocal fluctuation theories 3−12632
simple fluid, nonlinear irreversible fluxes in case of large shear rate 3−33051
simple fluids, consistency problem 3−22751
simple liquids, coordination numbers radii of first coordination sphere 3−37758

liquid theory continued
simple liquids, eqn. of state and thermodynamic props. at high press. 3−13393
solubility of simple gases, in water, cavity formation or hard-sphere term theory 3−28106
square-well fluid with variable range, optimised cluster theory, optimised RPA and mean spherical model 3−33059
supercooled liquids and metallic glasses in spaces of incommensurate curvature 3−56828
symmetric fluid, linear hypervertex approx. 3−2353
tetrahydrofuran, liq., pseudorot., Monte Carlo statistical mechanics simulations 3−18202
velocity autocorrelation function, computer simulation of low density 3−33052
water, liquid, dielectric props., integral eqn. 3−22750
water, liquid, thermal and thermodynamic props., Monte Carlo simulation convergence 3−18200
water, liquid struct. by computer simulations, 3D model static props. 3−22756
water, Monte Carlo computer simulation, convergence accel. 3−56801
water liquid, H bond network, gelation and mol. dynamics model simulation 3−42504
water surface monolayers, cooperative phenomena, monomer-dimer lattice gas model 3−2934
Yukawa fluid crit. behaviour in mean spherical approx. 3−51466
Yvon-Born-Green and similar integral eqns., criticality 3−56795
CS$_2$, liquid, time correlation functions for three centre Lennard-Jones model 3−27814
Cd-Te binary system, regular associated soln. model 3−7896
H$_2$O, liquid, intermolecular pot. functions, Monte Carlo simulations 3−7892
H$_2$O, molecular collective motion model 3−18197
^{4}He, liquid, optimised free surface from hypernetted-chain approx. 3−33067
Hg-Te binary system, regular associated soln. model 3−7896
Na$^+$ in water, methanol and tetrahydrofuran, Monte Carlo statistical mechanics simulations 3−18203
Na-Cs, liquid-vapour interface struct., Monte Carlo simulation 3−23024
Pb, liq., dynamic scatt. function at 1173K 3−33070
Rb, supercooled liq. states, self-diffusion coeff., mol. dynamics study 3−13502

liquid-vapour transformations
see also boiling; condensation; evaporation; liquefaction of gases
associated systems, vapour-liq. equilib. calc. by eqn. of state 3−18429
binary mixtures, vapour-liq. equilib., salt effect 3−2759
bubble evolution in stirred liquid-gas solution closed to mass transport 3−42883
chloroform-d$_0$(d$_1$), vapour press. isotope effects, anharmonicity const. 3−45928
critical binary liq. mixture, suppression of fluctuations at boundaries 3−2763
critical interface, intrinsic density profile 3−13426
critical parameters of fluids determ. 3−33414
equilibria expt. methods, dew-and bubble-point method 3−18430
fermion lattice gas, phase transition with infinite ranged interactions 3−30806
fluids thermophysical props. calc., interactive FORTRAN program, report 3−46679
hard-core-with-two-Kukawa-tails fluid, liq.-gas transition 3−42760
hydrocarbon mixtures, binary, bubble press. and vapour-liq. equilibria 3−2761
interface, capillary waves, percolation props. 3−33537
lattice gas model, critical phenomena, iterative perturbative approach 3−20795
Lennard-Jones fluid, binary, liq.-vapour interface, three-phase region and Cahn wetting transition 3−42889
Lennard-Jones fluid, binary, liq.-vapour interface, two-phase region, struct. and surface tension 3−42888
LMFBR, liquid metal coolant, critical temp. determ., appl. to Na 3−36463
measuring apparatus, static method using variable volume cell without sampling *(French)* 3−20851
metallic fluids, expanded, metal-nonmetal transition, electronic and thermodynamic props. 3−43021
metals, divalent, Wilson-type transition lattice model 3−43025
methane-CO$_2$ mixture, contaminated natural gas, liquid-vapour equilibrium meas., expt. apparatus 3−38096
methane-CO$_2$ mixture, liquid-vapour equilibrium, BWR equation of state 3−37598
molecular fluids liq. vap. interface, surface anisotropy, optical determ. 3−2933
nonelectrolyte binary liq. mixtures, vap. liq. equilib., heat of mixing and vol. change of mixing data 3−25705
nonideal fluid mixtures, eqn. of state, local comp. model, density depend. mixing rules 3−2730
phase equilib. of binary and ternary systems, UNIQUAC assoc. soln. theory 3−38041
polymer melts, heterochain, elementary thermodynamic unit *(Russian)* 3−47125
pure substances, liq. vapour phase change geometry 3−13403
rarefaction shock wave near the critical liquid-vapour point 3−46602
simple fluids, spectral line broadening near liquid-gas crit. point 3−47095
structure and thermodynamic props. 3−37826
thermodynamic model, parameter estimation, successive reduction of data sets 3−2844
water, phase change in porous medium, phenomenological coeff. 3−13422
wetting transition, continuous and first-order, from van der Waals theory of fluids 3−2926
CO$_2$-N$_2$(CF$_2$Cl$_2$) and CO$_2$-N$_2$-CF$_2$Cl$_2$, vapour-liquid equilibria, high press. low temp. data 3−33412
Cs liquid-vapour interface, density profile, X-ray reflectivity 3−47094
H$_2$, normal and para, surface tension, 15 to 32K *(Russian)* 3−47185
^{3}He-^{4}He mixture, thermal cond. meas. near liquid-vapour crit. point 3−23131
^{3}He-^{4}He mixtures, Rayleigh light scatt. and gravity effects near gas-liq. crit. point 3−2919
Hg, fluid, Knight shift and dielec. anomaly 3−23820
Hg, liq., photoemission spectroscopy and surface cond. profile 3−52900
Hg, liquid, expanded, metal-nonmetal transition, electronic and thermodynamic props. 3−43023

liquid-vapour transformations continued
methane-CO_2 mixture, contaminated natural gas, liquid-vapour equilibrium meas, expt. apparatus 3−38097
Na-Cs, liquid-vapour interface struct., Monte Carlo simulation 3−23024

liquid waves
see also capillary waves; ocean waves; surface waves (fluid)
breaking internal bulges 3−7605
bubbling vapour-liquid medium, propag. of finite-amplitude press. perturbations 3−56605
central focusing of surface waves in shallow heavy liquid 3−37510
deep-water capillary waves, reson. three-wave interaction, subharmonic generation 3−22481
deep-water waves, 3-dimens., skew and symmetric wave patterns meas. 3−22477
deep-water waves, 3-dimens., steady, calcs. 3−22478
duct of arbitrary cross section, numerical analysis of transient wave processes 3−51234
effervescing liquid from high press. vessels, nonsteady wave emission 3−2080
film, variable viscosity liq., flowing under hot gas stream action, wave generation on surface 3−51142
fluid, semi-infinite layer, dilatational and gravitational wave propagation, numerical analysis 3−37509
half-immersed circular cylinder oscillating on infinite depth water, short surface waves 3−27536
incompressible liq. in rotating sectored cylinder, inertial wave, freq. spectrum 3−22472
nonlinear moderate-strength waves in liquids containing gas bubbles 3−56555
nonlinear shallow water theory and appl. to cnoidal wave solns. and mass transport 3−32750
oil film effect on surface ripple 3−4890
oscillatory velocity meas. of water particles, in breaking waves 3−32818
parametric resonance in a stratified fluid 3−2105
pressure waves in a liquid containing gas bubbles 3−56556
resonantly interacting waves 3−56562
Rossby waves modified by basic shear, and barotropic instability 3−22480
Stokes wave, free boundary problem in two dimens. 3−17951
two-liquid layers, vertical periodic motion, interfacial waves 3−51141
water wave breakdown when interacting with strong blast waves 3−42260
water waves, Hamiltonian struct., symmetries and conservation laws 3−32752
water waves, regular, radiation and diffr. about a body, pot. theory, integral indentities 3−56559
water waves with amplitudes modulated in horizontal directions 3−12690
wind-induced growth of water waves 3−12688

liquids
for generalities only; for specific aspects see appropriate headings
see also liquid structure; liquid theory; solutions
acoustic field near flat surface of bar in which transverse US pulse is propagating 3−12412
acoustoelectric transducers 3−12485
boiling, acoustic probing by active location method 3−12472
bubble containing, acoustic wave propag., model nonlinear eqns. 3−12403
bubble sheet, nonlinear sound scatt. 3−12400
bubble-containing, nonlinear acoustic waves 3−12404
bubble-containing, shock wave struct. 3−12419
bubble-containing, wave processes induced by explosions and shocks 3−13304
bubbling, large-amplitude pulse resonant interaction 3−13344
gas bubbles, nonlinear acoustical spectroscopy 3−12473
gas cavity in liquid, linear and nonlinear acoustical excitation 3−12391
NMR, two-dimensional, book 3−25706
optical breakdown, excited bubble dynamics 3−12725
sound propagation from pulsed thermooptical source, nonlinear acoustical effects 3−13343

literature reviews *see reviews*

lithium
see also nuclei with ......
abundance in old disc and unevolved halo dwarf stars 3−25426
adsorbed on W(011), surface defects and collective diffusion *(Russian)* 3−8325
adsorbed on W (011), surface diffusion 3−2968
alkaline earth oxides, Li^+ 3−2584
atom, 2 $^2P_{1/2}$ lifetime meas. using fast beam laser interaction 3−21710
atom, avoided crossings and autoionisation widths in mag. fields 3−26702
atom, charged particle scatt., Glauber amplitude calc. 3−46062
atom, core exchange effects, SCF spin density calcs. 3−55833
atom, correl. electron density, density functionals and semi-empirical pseudopots. 3−11704
atom, electron impact excitation, anal. central pot. calcs. 3−46070
atom, electron impact excitation studied using distorted wave approx. 3−11983
atom, excited state, electronegativity, spin-polarised $X\alpha$ calcs. 3−55836
atom, optogalvanic spectra from hollow cathode lamps, wavelength calibration *(Chinese)* 3−36710
atom, Waller-Hartree CI calculations 3−36687
atom, X^2S state, generalised antisymmetric geminal power wavefunctions 3−36700
atomic beam, spin flipper for reversal of polarisation 3−26886
atomic beam props. 3−50552
atomic beams, fine and hyperfine struct., isotope shift, laser induced fluoresc. study *(Chinese)* 3−21692
atomic two-electron transition autoionisation state width computation using model-pot. method 3−1317
atoms, ^2S autoionising states, energy positions and wavefunctions 3−11754
atoms, collisional excitation transfer, time resolved laser induced fluorescence spectroscopy *(French)* 3−41658
atoms, core-excited spectroscopy overview 3−11647
atoms, isotope separation by laser deflection of the at. beams *(Chinese)* 3−41696
atoms, self-broadened first reson. line wing asymm. 3−50353
band struct., variational cellular method 3−28261
battery, energy package with nine lives *(Swedish)* 3−58494
chemisorbed on W, atom vibrations 3−28209
cluster surface (100), H adsorption, adiabatic approx. breakdown 3−2979
coadsorption with La on W (100), work function and thermal stability 3−28218

lithium continued
Culham Conceptual Tokamak Reactor, Mk IIA, liquid lithium as coolant 3−55580
data, identification of the 8508 Å line 3−17243
dimer, electronic struct., oscillator strengths, photoionisation cross sections 3−46031
fusion reactor material, neutron leakage spectra meas. 3−55648
HD 174104, Li-rich supergiant, Li abundance determ. rel. to evolutionary status 3−20366
HD 36705, post T Tauri star, Li abundance from spectroscopic obs. 3−5294
HR 7008, Li-rich supergiant, Li abundance determ. rel. to evolutionary status 3−20366
intense ion beam source development expts. 3−6484
interatomic forces, rigid muffin-tin model 3−52051
ion, low energy focused scattering from Mo (001), expt. and computer simulation 3−58023
ion conducting solid electrolytes for ambient appls. 3−8243
isoelectronic sequence ions, elec. polarisabilities, bounds obs. 3−31919
isoelectronic series, 1s2s2p $^4P^0$ and 1s2p^2 ^4P terms, fine struct., transition wavelengths 3−55881
isoelectronic series, deexcitation in 1s2s2p state 3−32024
isoelectronic series, Li I to C IV, doubly excited $^2P^e$ states, SCC calc. 3−55870
isotopic composition and at. wt. of natural sample 3−56096
liquid, elec. resist., melting point to 550°C 3−3148
liquid, ion-ion effect potential at melting point 3−37769
lowest $^2P_{1/2}$ state lifetime meas. 3−21725
matrix isolated, stable trapping site, optical absorption spectrum 3−17241
metallic, total energy calcs. 3−43057
metastable atomic beams prod. by electron capture in ion-surface impact, X-ray laser implementation 3−32340
molecule, fixed-node quantum Monte Carlo calcs. 3−21657
molecule, ground state, dissoc. energy, extended geminal model calc. 3−17203
molecule, potential energy curves in bonding region, importance of ionic dissoc. energies 3−1278
molecule, Rydberg states, ionisation pot. optical double reson. 3−6683
organic electrolyte cyclable batteries with rocking chair configurations 3−24574
phonon dispersion curves, crossing feature 3−2709
phonon electrical resistivity, pseudopotential calcs. *(Russian)* 3−38364
plasma, fluctuating elec. fields meas. by forbidden transitions obs. 3−18113
quartz:Li, short-lived optical absorption, influence of pulsed electron irradiation 3−14324
solid state Li/MnO_2 cells 3−9413
spectra, identification of charged excited ion states *(French)* 3−21882
suparsonic mol. beam isotope separation using RF spectroscopy 3−41194
surface, atomic collisions, electron excitation and emission 3−43695
targets fabrication and transportation to accelerator vacuum chamber 3−36597
vaporisation, thermodynamic characts. 3−8179
vapour, inner shell photoemission obs. 3−21737
vapour, ultrashort dephasing time meas. 3−36882
$AgBi(CrO_4)_2$ and $Bi_2O(CrO_4)_2$ cathodic materials, electrochemical behaviour in Li batteries *(French)* 3−24512
BeO:Li, Al, near-UV luminescence excitation spectra, 3 to 7.5 eV *(Russian)* 3−57966
CaF_2:Li, disturbed colour centres after X-ray irrad., optical studies 3−27937
CdTe:Li, impurity distrib., spectrally resolved cathodoluminesc. in SEM 3−43636
CdTe:Li, localised vibr. modes and defects, IR absorpt. study 3−2720
FeOCl-Li intercalate, struct., NMR and Mossbauer study 3−22860
GaSe-Pb-Li, intercalated semiconductor, optical props. *(Russian)* 3−14247
Ge:Li, impurity ion-dislocation dangling bond complex in EPR spectra 3−18989
InSe-Li-Pb, intercalated semiconductor, optical props. *(Russian)* 3−14247
KBr: Li, paraelectric pair tunnelling, far IR spectra study 3−19135
KBr:Li, X-irrad., trapping parameters, monochromatic thermoluminesc. glow curve studies 3−24030
KBr:Li, X-irradiated, optical absorption and thermolum. studies of F_A-centres 3−34157
KBr:Li, X-ray irrad., V-bands and thermoluminescence, annealing effects 3−18299
KBr:Li^+, activated crystals, cation semivacancies, positron annihilation and elec. cond. studies 3−24048
KBr:Li^+, paraelectric resonance absorption, tunnelling models and isotope shifts 3−3659
$KTaO_3$:Li, collective effects in random-site elec. dipole system 3−38716
$KTaO_3$:Li, response of dielec. susceptibility to external elec. field around phase transition temp. 3−43503
K_2ZnF_4:Cr^{3+}, Li^+, EPR of Cr^{3+} centres, spin Hamiltonian parameters 3−43424
Li + ions, ion excitation by electron capture, plasma impurity ion transport study appl. 3−12922
Li cells and energy storage state-of-art, applications in interplanetary probes *(French)* 3−48141
Li I, core-excited doublets, autoionisation rate determ. 3−21732
Li I, doubly excited states study 3−21874
Li I excited states, radiative lifetimes meas. 3−55895
Li I isoelectronic sequence, var. wavefunctions 3−50317
Li I segmented plasma recomb. laser employing foil electrodes 3−12125
Li II, spectral line excitation in atom-electron collisions *(Russian)* 3−11990
Li III, spectral line excitation in atom-electron collisions *(Russian)* 3−11990
Li ions+H_2, nondissociative ionisation and dissoc. ionisation 3−6756
Li ions+He, absolute partial ionisation cross sections determ. for inelastic interactions 3−6765
Li ions+He, ionisation, deviations from q^2 scaling 3−6764
Li ions+He(N)(H_2), excitation and ionisation cross sections Born approx. 3−11959
Li^-, doubly-excited states, electron correl. study in hyperspherical coords. 3−50320
Li^-, electronic structure, even-tempered basis functions, universal systematic sequences 3−11665
Li^0, multi-MeV beam for confined α particle diagnostics 3−46782
Li^+, amplification factors of a particle multiplier for singly charged alkali ions 3−40727

lithium continued
Li^+ complexes with first and second-row bases ab initio MO calcs. 3−9316
Li^+, fine struct., HFS, laser, MM and RF spectroscopy 3−21682
Li^+, ion mobility in Kr, Xe, mass spectrosc. meas. 3−56642
Li^+, ionic solution, struct. and dynamics 3−51472
Li^+ metastable levels, soft. X-ray pumping from laser plasma source 3−26705
Li^+, Z 3−18207
Li/Al electrode in molten LiCl-KCl, kinetics study using linear sweep voltammetry 3−34631
Li/metal/sulphide cells, pelletised, research review 3−19570
Li/SO_2 cells, Faradic impedance, kinetic interpretation 3−9412
Li/SO_2 cells, investigation and production control by galvanostatic pulse method 3−19576
$Li/SOCl_2$ batteries, hazards during anode-limited cell reversal, spectroscopic study 3−24564
$Li/SOCl_2$ batteries, sources of press. 3−24563
$Li/SOCl_2$ cells, Li electrode kinetics 3−44103
Li/TiS_2 rechargeable cells, characterisation of ether electrolytes 3−24562
Li-LiH(D)(T), solid and melt, thermodynamic props. 3−8220
Li-like ions, electron impact excitation, reson. effect, collision strengths calc. 3−6793
Li-like ions, electron impact excitation, linear algebraic approach 3−32218
Li-like ions, Ne VIII, $2^4P_{5/2}{}^0$ state fluoresc. yield 3−21876
$Li-MnO_2$ nonaqueous cells, MnO_2 cathode, expt. study 3−9411
$Li-SO_2$ cell, discharge and forced overdischarge products, X-ray, IR and ESCA study 3−9410
$Li-WV_2O_{7.5}(W_{0.2}V_{2.8}O_7)$ secondary cells, Li insertion reactions study 3−44115
$Li+FH \rightarrow LiF+H$ reaction, ab initio pot. energy surface, initial orientation effect 3−29295
$Li+F \rightarrow Li^+ + F^-$; chemi-ionisation collisions 3−36848
$Li+H^+$, adiabatic switching factors in slow collisions 3−41648
$Li+H^+$, charge exchange, mol. pot. model 3−41677
$Li+H^+$, excitation-autoionisation 3−1464
Li+HF, pot. energy surface, quasiclassical trajectory calcs. 3−29305
Li+He; coherent $S \rightarrow D$ excitation, polarisation anal. 3−50496
$Li+He^{2+}$; electron capture processes in energy range 15-150 keV 3−1457
$Li+He^{2+}$, excitation between 15 and 600 keV, emission cross sections meas. 3−1458
Li+He+He(Ne) van der Waals interaction and contrib. to hyperfine shifts, many-body study 3−26820
Li+He(Ne)(Li), van der Waals interaction and contrib. to hyperfine shifts, many-body study 3−26820
Li+inert gas, at. reson. lines impact shift 3−21717
Li+Li+Li(He)(Ne) van der Waals interaction and contrib. to hyperfine shifts, many-body study 3−26820
$Li+N(He)(H_2)$, excitation and ionisation cross sections Born approx. 3−11959
$Li+Ne^{q+}$, state-selective and total one-electron capture, VUV line emission 3−6758
Li+Ne+Ne van der Waals interaction and contrib. to hyperfine shifts, many-body study 3−26820
$Li^+ + CH_4(CF_4)(SF_6)$, vibr. excitation, semiclassical model 3−17364
$Li^+ + CO$ collisions, rot. energy transfer distrib. and classical differential cross sections in CPST limit 3−32171
$Li^+ + CO_2$, vibr.-rot. decoupling, semiclassical time-correl. function calcs. 3−56027
$Li^+ + F^- \rightarrow Li+F$, mutual neutralisation collisions 3−36848
$Li^+ + H^+$, electron capture cross sections calc. 3−11942
$Li^+ + He(Ne)(Ar)(Kr)(Xe)$, total cross section meas., pot. determ. 3−17355
$Li^+ + Li^+$, ionisation and charge exchange cross sections 3−1467
$Li^+ + N_2$, rot.-vibr. excitation, IOS approx. appl. 3−56047
$Li^+ + Na$, elastic differential cross sections 3−11921
$Li^+ + Na$, elastic differential cross sections 3−11922
$Li^+ + p$, ionisation and charge transfer, coupled 3−1473
$Li^{2+} + H^+(\bar{p})$, excitation, ionisation and charge transfer 3−41661
$Li^{2+} + H(1s)$, ionisation and charge transfer, coupled 3−1473
$Li^{2+} + He(N_2)(Ar)$, electron loss from fast one-electron ions 3−1471
$Li^{2+} + p$, ionisation and charge transfer, coupled 3−1473
$Li^{3+} + H$, electron capture capture cross section calc. in continuum distorted wave approx. 3−11971
$Li^{3+} + H$, partial cross section for charge transfer, report 3−21894
$Li^{3+} + H$, rot. induced transitions studied within one-electron united-atom approx., three state problem 3−11937
$Li^{3+} + H(1s)$, ionisation and charge transfer, coupled 3−1473
Li_2, continuum and metastable states, thermodynamic props. 3−32832
Li_2 self-broadened reson. line, triplet satellite band 3−21772
$Li_2{}^+$ $(X^2\Sigma_g{}^+)$, mol. consts., optical double reson. 3−6683
Li_3 cluster, binding energies, ionisation pot., ab initio SCF and MRD CI calcs. 3−26890
Li_3, force consts., semi-empirical valence bond pot. energy surface 3−21645
LiI recombination laser in the VUV 3−12117
^6Li-glass scintillators, gamma-ray sensitivity 3−41430
$^7Li_2$, coupled laser-induced fluoresc. series 3−6715
$^{6,7}Li^+$, hyperfine splitting anomaly, shift calcs. 3−50303
$MgF_2:Li^+$, Mn^{2+}, enhancement of Mn^{2+} diffusion, ESR study 3−2885
MgO:Li, H, X-ray irrad., Li-H complex, ESR study 3−43432
MgO:Li; pure and doped, mechanical impact damage, optical absorption study 3−43565
$2H-MoS_2$, Li intercalation, struct. destabilisation 3−46880
$NaCl:Li^+$, γ-ray irrad., luminescence from M and N centres 3−24005
NaF:Li, additively coloured, F′-centre formation 3−14327
Si:Li, diffusion of implanted Li ions, proton and deuteron bombardment effects 3−8265
Si(Li) detector, calibration by radioisotope X-ray fluorescence 3−17167
Si(Li) detectors for charged-particle spectrometry over wide energy range 3−41438
ZnSe:Li, localised vibr. modes and defects, IR absorpt. study 3−2720

lithium alloys
Al-Cu-Li-Mn-Cd, alloy 2020, ductility, influence of grain struct. 3−34397
Al-Li, fusion reactor first wall material, sputtering props., surface comp. and segregation 3−21521
Al-Li, yield charact. after solution treatment and ageing 3−9102
Al-Li (2.5 at.%), phys. props., effect of Li loss 3−53108

lithium alloys continued
Al-Li-Cu (2.7, 2.3 wt.%), fracture behaviour and tensile props., effect of grain struct. 3−29182
Cu-Li, dil., spin-orbit scatt. of cond. electrons 3−52096
K-Na-Li, saturated vapour press. determination by static method 3−8178
Li-Al electrode in fused salt electrolytes, morphological studies 3−48130
Li-Al/FeS battery cell, simulated negative electrodes, thermomech. behaviour meas. 3−9420
Li-Al/FeS cell, effective conductivities of positive electrode at different states of charge 3−48131
Li-Al/FeS cells, engineering-scale, self-discharge behaviour 3−48132
Li-Al/FeS compact cell, reference electrodes for long-term testing 3−44114
$Li-Al/FeS_x$ battery, ceramic separators 3−9418
Li-Cd system, phase diagram, resist. and DSC meas. 3−24209
Li-Pb alloy, solubility of D, temp. and comp. depend. 3−39094
Li-Pb liq. blanket designs for fusion Tokamak power reactors 3−55640
Li-Sn, liquid, elec. resist., effects of strong chem. interactions 3−3151
β-LiAl, fast ion cond., defects and disorder, neutron diffr. study 3−22823
β-LiAl, mech. behaviour, effect of defect struct., hardness and dislocation damping study 3−33266
LiAl, ordering of vacancies, neutron diffr. meas. 3−46926
LiAl/FeS cells, performance reproducibility, capacity retention and cycle life 3−44112
Li_3Ga_4, cryst. struct., X-ray diffr. study 3−27893
LiMg, cellular theory, heat and volume of formation 3−18471
$Li_{17}Pb_{83}$ blanket, materials and design solns. for breeding T 3−55591
$Li_{17}Pb_{83}$ eutectic alloy, breeding material for fusion reactor, thermodynamic props. 3−57111
$Li_{17}Pb_{83}$ high temperature blankets, neutronics study 3−21540
$Li_{17}Pb_{83}$, liq., blanket material, T interaction study 3−55649
$Li_{17}Pb_{83}$, liq., fusion reactor blanket material, H_2 solubility 3−55646
Mg-Li, band struct., exciton-like behaviour 3−13714
Mg-Li (12.5 at.%), hot-rolled, texture and grain boundary strengthening 3−29106
Mg-Li and Mg-Li-Al, anode constitution and fabrication for use in primary batteries 3−29029
Na-Li, dil., spin-orbit scatt. of cond. electrons 3−52096
Pb-Li blankets for fusion reactors, neutronic implications 3−55644
Pd-Li, electrical props. under high gaseous H_2 press. 3−38365

lithium compounds
see also lithium alloys
$\beta''-Al_2O_3-Na_2O-Li_2O-ZrO_2$, transform. toughening by ZrO_2 addition 3−34438
dodecyl sulphate anionic micelles in aqueous soln., small-angle neutron scatt. obs. of struct. 3−53449
ferrites, magnetoelectric effects, thermodynamic approach 3−57729
ferrites, substituted, hyperfine fields relaxation, temp. effect, Mossbauer study 3−13784
formate crystals, growth kinetics in normal and heavy water solns. 3−13140
formate monohydrate single cryst., optical transmission spectra, deuteration effect 3−3741
fusion solid breeder materials, irradiation in fast neutron fission reactor 3−55703
halides, eqn. of state anal. 3−51743
halides, polar negative ions excited states 3−1268
intercalation compound with graphite, structural and elastic props., in-plane density 3−33213
LiF cryst., colour centres prod. by H^+ bombardment, lasing action 3−32368
$LiTaO_3$, thermal diffusivity, relation to phase transition and crystal orientation 3−47174
lithium thallium tartrate, pyroelectric and dielectric props. meas. 3−19071
quartz hydrothermal single crystal growth rate, effects of $LiNO_2$ and $LiNO_3$ dopants and conventional baffle 3−52913
two-component, binding two-correlations model 3−46885
$[LiBH(NH_2)_2]^+$, bonds, struct., ab initio investig. 3−45809
$\beta-A-{}_2O_3-Li_2O.nH_2O$, cryst. struct., neutron diffr., IR absorpt. and Raman scatt. 3−14282
$\beta-Al_2O-Li_2O$, electron beam writing on 20 Å scale 3−46998
$\beta-Al_2O_3-LiO_2$, hydration reaction, IR meas. 3−14858
$Al_2O_3-SiO_2-Li_2O-TiO_2-ZrO_2$ glasses, phase decomp. 3−2819
$Al_2O_3-SiO_2-Li_2O-ZnO$ glasses, β-eucryptite solid soln. form. during crystn. 3−2432
$B_2S_3-Li_2S-LiI$ glass, prep. and ionic cond. props. 3−51845
C_6Li, intercalation cpd., cond. bands, low energy photoelectron spectroscopy study 3−28968
$CsLiSO_4$, ferroelastic phase transition, piezo-optical study 3−19107
CuCl-KCl-LiCl, molten, excess free energy and activity coeffs., EMF meas. 3−42814
$(K_{1.3},Li_{0.1})Mg_{0.7}Ti_{7.3}O_{16}$, high freq. ionic AC cond., freq. and temp. depend. 3−42839
$(K_{1.3}Li_{0.2})Al_{1.5}Ti_{6.5}O_{16}$, high freq. ionic AC cond., freq. and temp. depend. 3−42839
$K_{1-x}Li_xTaO_3$, dipole glass, elastic and dielec. dispersion 3−18360
$K_{1-x}Li_xTaO_3$, elastic const. discontinuity, Brillouin spectra 3−3752
La_2LiFeO_6, Fe oxidation states and electronic configurations, oxide stabilisation 3−33179
Li ferrite, mag. props., Bi_2O_3 and Nb_2O_3 additives effects 3−43396
Li halides-Ag halides, demixing in liq. state 3−2823
Li halides-Tl halides, demixing in liq. state 3−2824
Li/Al electrode in molten LiCl-KCl, kinetics study using linear sweep voltammetry 3−34631
Li-Al-N ceramics in liq. Li, thermodynamic stability 3−55645
Li-Al-O ceramics in liq. Li, thermodynamic stability 3−55645
Li-Co(-Mn) ferrite, mag. anisotropy, order-disorder effects 3−33886
Li-LiH(D)(T), solid and melt, thermodynamic props. 3−8220
Li-Ni mixed ferrites, dielec. behaviour at low freqs. 3−3629
Li-Zn ferrites, mag. anisotropy 3−14043
Li-Zn-Ni-Co-Mn ferrites, microstruct. and memory core characts., effect of composite fluxes 3−14549
Li^+-CO, ^7Li, ^{13}C, ^{17}O NMR shielding tensors and ab initio calc. of equilib. geom. 3−55800
LiAl-FeS cells, pelletised, operating characteristics 3−19571
$LiAlH_4$, elec. resistance under high press. 3−28353
$\beta-LiAlO_2$ solid-state ion sources, pulsed operation 3−10942
$LiAlSiO_4$, modulated structures, of phase transitions 3−47100
$\beta-LiAlSiO_4$ solid-state ion sources, pulsed operation 3−10942

lithium compounds continued
$LiAlSiO_4$, thermal expansion, Gruneisen parameter anal. 3−8228
$LiAlSi_4O_{10}$, petalite, cryst. struct. and antiphase domains, neutron diffr. and SEM studies *(German)* 3−51574
LiB_2, Auger spectrum 3−52874
$Li_2B_{10}Cl_{10}(Cl_{12})$ nonaqueous electrolytes, prep. and resistivity, Li cell appl. 3−8236
$LiBH_4$, Auger spectrum 3−14405
$LiBH_4$, elec. resistance under high press., evidence for phase transition 3−28353
$Li_2B_4O_7$, Auger spectrum 3−14405
$Li_2B_4O_7$, SAW device appls. assessment 3−42103
$Li_2B_4O_7$:Cu, composite thin-element TLD, construction using an optical-heating method 3−6451
LiBr, Auger spectrum 3−52874
LiBr liquid, thermal cond. meas. using transient hot wire instrument 3−46437
$LiBr.H_2O-Al_2O_3$ system, cond. enhancement by Al_2O_3 particles 3−13535
$LiBr.xH_2O-Al_2O_3$ system, composite pellet, fast Li ion transport 3−13536
LiC_6, graphite intercalation cpd., first-order phase transition, elastic neutron scatt. and DSC study 3−23037
LiC_6 intercalation cpd., phonon modes, inelastic neutron scatt. study 3−57043
Li_2C_2, Auger spectrum 3−52874
LiCN, density functional theory 3−2497
Li_2CO_3 addition to container glass, melting behaviour, viscosity 3−51750
Li_2CO_3, aqueous soln., density and US vel., temp. dependence meas. 3−18393
Li_2CO_3, Auger spectrum 3−14405
Li_2CO_3, single crystal growth, zone melting technique 3−8967
LiCl aqueous solns., dispersive Fourier transform obs. of opt. consts. 3−8819
LiCl, Auger spectrum 3−52874
LiCl containing dispersed second-phase particles, ^7Li NMR investigations, rel. to ionic cond. enhancement 3−28724
LiCl, γ-irrad., vacuum UV absorpt. spectra 3−43571
LiCl:Tl^+ solutions, induced optical absorpt. 3−3758
LiCl-KCl, isotope distrib., countercurrent electromigration 3−47135
LiCl+propan-1-ol, mol. interaction, IR and NMR investig. 3−1450
$LiClO_4$ aqueous solns., dispersive Fourier transform obs. of opt. consts. 3−8819
$LiClO_4$, interactions in amide solns., IR and Raman obs. 3−50402
$LiCl.H_2O$, Auger spectrum 3−14405
$Li_{0.5-x/2}Co_xFe_{2.5-x/2}O_4$, magnetisation and mag. switching, thermomag. treatment effects 3−23707
Li_xCoO_2 ($0< x\leq 1$): a new cathode material for batteries of high energy density 3−14937
$Li_2Cr_{3-x}M_xSbO_8$, (M=Al, Fe, Ga), hexagonal to spinel transition and cryst. struct., X-ray and IR spectra study 3−8187
Li_nCrO_x cathodes in Li^+/organic electrolyte batteries, transport props. 3−44116
LiD, adiabatic elastic consts., 4.2 to 300K 3−18361
^7LiD, $A^1\Sigma^+$ excited state dipole moment, rel. to Born-Oppenheimer approx. 3−50325
$LiErF_4$ crystal, self-activated, stimulated emission of Er^{3+} ions 3−52808
LiF (001), inelastic scatt. of ^{20}Ne 3−3897
LiF, (100) surfaces, desorption fluxes, molecular beam impingement 3−42548
LiF, Auger spectrum 3−52874
LiF, autocovariance functions for polished optical surfaces 3−37143
LiF, band struct., parametrisation of semi-empirical methods 3−23260
LiF, colour centre transformation by laser radiation 3−8098
LiF crystal with F_2^- centres passive laser switches, induced dichroism 3−37093
LiF crystals with F_2^--centres, efficient passive Q-switches for Nd:YAG laser 3−7042
LiF crysts., dynamic loading, strain-rate history affects and microstruct. aspects 3−33345
LiF, diffraction and scatt. of He, semiclassical perturbation approx. calcs. 3−58015
LiF, dislocation struct. and fracture under cyclic loading 3−18314
LiF, ductile, predeformation and fracture, high temp. study 3−37981
LiF, edge dislocation mobility for electron beam loaded crystals meas. 3−18315
LiF, Einstein spectral coeffs. for F_2^- colour centres 3−38906
LiF, electron trap spectroscopy, exoelectron emission and luminescence meas. by fractional glow technique 3−34204
LiF, electrostriction, stabilised Michelson interferometer study 3−28784
LiF, electrostrictive strains interferometric meas. 3−34036
LiF, excitons and interband processes, configuration interaction method 3−57288
LiF; F_2^- colour centres after γ-irrad., laser passive shutter charact. 3−17612
LiF F_2^+ laser active colour centre prod. by neutron-induced fission 3−28000
LiF, F_2-centre form. mechanism, synchrotron radiation luminescence method 3−27938
LiF, $F_2(F_3)$ centres, use as saturable filters for Nd:YAG or ruby lasers mode self-locking 3−17546
LiF, ferrimagnets, magnetoelectric effects 3−23774
LiF, fracture rel. to slip geometry 3−42708
LiF, gamma-ray sensitised, thermoluminesc. glow curves and supralinearity 3−3831
LiF, heavy ion irrad., defect struct. and mech. props. 3−8108
LiF, IR window material, multiwavelength laser rate calorimetry 3−7096
LiF, laser generated heat pulse propagation 3−23112
LiF, Li_2F_2, Li_3F_3, condensation and evaporation kinetics using mol. beam methods 3−42549
LiF, low-temp. creep, 1.6-300K, temp. depend., Peierls barrier contrib. 3−37990
LiF, microwave absorption coeff., two phonon difference processes 3−34173
LiF molecular beam interaction with (100)LiF surface, molecular relaxation times 3−42547
LiF photocathodes characterisation for microchannel plate X-ray detectors 3−45763
LiF, potential energy curves in bonding region, importance of ionic dissoc. energies 3−1278
LiF, Rayleigh surface phonon dispersion curves, He beam TOF spectra 3−57203
LiF, ref. index meas. 105 to 200 nm 3−14239

lithium compounds continued
LiF, sensitised TLD for personnel dosimetry system 3−34979
LiF single crystals, impact erosion by sharp projectiles 3−18384
LiF, single crystals, impact erosion by blunt particles, damage struct., microscopy 3−47043
LiF, strain rate continuity meas. 3−51697
LiF surface, scatt. of vibrationally excited NO 3−28950
LiF TLD-100, supralinearity, sensitisation and phototransferred thermoluminesc., theory 3−19210
LiF, TLD-100, thermoluminesc. general order kinetics 3−52858
LiF, thermolum. response to ions, gamma-rays and X-rays 3−38927
LiF, thermoluminesc., general-order kinetics 3−19211
LiF, thermoluminescence sensitisation factors, post-annealing temp. effects 3−19213
LiF, thermoluminescence kinetics 3−43639
LiF thin films, electron bombarded in electron microscope, void growth obs. 3−2612
LiF, vaporisation study by mass spectrometry 3−889
LiF, X-ray irrad., Z-centre thermoluminescence emission 3−43640
LiF X-ray spectrometer using concave curved crystals, plasma diagnostics appl. 3−51378
LiF:F_2 colour centre lasers, bleaching of F_2 centres and absorption spectra 3−56203
LiF:F_2^- crystal lasers, efficient tunable 3−37052
LiF:He, diffusion during deform. at low temp. 3−28161
LiF:K, ion implanted, metastable percolation phase form., metal-insulator transition 3−3071
LiF:Li_2O, luminesc. centres, excitation and emission spectra 3−43605
LiF:Mg, γ-irrad., OH^- ions effect on thermolum., ESR obs. 3−28905
LiF:Mg, OH, F_2-centre room temp. visible lasing action, optical bleaching 3−12157
LiF:Mg, X-ray irrad., absorption spectra and red luminescence 3−8872
LiF:OH F_2, ultrafast nonradiative relaxation, optical gain 3−50666
LiF:TiO_2, absorpt., emission, excitation, and polarised luminesc. spectra 3−43602
LiF:U^{6+} crystal, impurity electrooptical effect in 5185-Å absorpt. line region 3−23913
LiF/$CaWO_4$ system, blue luminesc., intrinsic nature 3−19174
LiF-BeF_2 binary melt, surface tension, max. bubble press. method 3−28195
LiF-ErF_3 system, cryst. growth, phase constitution, microstructure, DTA 3−56841
LiF-K_2SO_4/KF-Li_2SO_4 charge-asymmetric reciprocal molten salt mixtures, excess enthalpies 3−4313
LiF-LuF_3 system, cryst. growth, phase constitution, microstructure, DTA 3−56841
LiF-YF_3 system, cryst. growth, phase constitution, microstructure, DTA 3−56841
LiF(Mg, Cu, P), TLD phosphor, annealing and reusability characts. 3−31836
LiF(TLD-100) crystals, thermolum., rapid readout rate studies 3−3833
LiF(TLD-100), photon energy depend. of thermoluminescent peaks 3−58829
LiF(001), inelastic scatt. of He from bulk longitudinal acoustic phonons 3−52878
LiF(001) surface, quasi-elastic scatt. of Ne 3−58021
LiF(001) with adsorbed He, resonant energy transfer between and adsorbed atom and surface Rayleigh phonons 3−13632
$LiFe_5O_8$, ferrite, cryst. struct. and cation ordering 3−13203
$LiFe_5O_8$, LPE growth from $PbO-B_2O_3$ flux 3−13684
$LiFe_5O_8$, magnetoelectric effects, mag. domains and magnetisation 3−28675
$Li_xFe_{3-x}O_4$, Verwey transition, Mossbauer effect 3−57601
$LiGaO_2$, dielec. props., relation to crystallographic polarity, ion surface scatt. and chem. etching studies 3−38766
$LiGeO_3$, dielec. props., relation to crystallographic polarity, ion surface scatt. and chem. etching studies 3−38766
$Li_2Ge_7O_{15}$, ferroelec. phase transition study 3−38775
LiH, $^2\Pi$ state, SCF energy direct minimisation 3−11676
LiH, adiabatic elastic consts., 4.2 to 300K 3−18361
LiH, Auger spectrum 3−52874
LiH, CI MO calcs. 3−45869
LiH, charge density approxs., MS Xα calcs. 3−26637
LiH, diagrammatic perturbation theory using a universal even tempered basis set 3−1217
LiH, fixed-node quantum Monte Carlo calcs. 3−21657
LiH, photodissociation, Stieltjes-imaging calcs. 3−36828
LiH, polar negative ions excited states 3−1268
LiH, potential energy curves in bonding region, importance of ionic dissoc. energies 3−1278
LiH, short wave luminesc., excitation by nanosecond electron beam probe *(Russian)* 3−57979
LiH, thermal expansion and zero-point displacement, effect of isotopic substitution 3−42820
LiH, thermophysical props., anharmonic lattice calc., H isotope effects 3−8227
LiH, $X^1\Sigma^+$ state, pot. curve, CI wave function calcs. 3−41505
^7LiH, $A^1\Sigma^+$ excited state dipole moment, rel. to Born-Oppenheimer approx. 3−50325
LiH:$Ge^{2+}(Sn^{2+})(Sb^{3+})(Pb^{2+})(Bi^{2+})$, photoluminescence of S^2 configuration ions 3−47690
LiH+He, rot. energy transfer process, individual trajectory study 3−26822
$LiH_3(SeO_2)_2$:Cu^{2+}, EPR spectra in X-band 3−3521
$LiH_3(SeO_3)_2$, ferroelec., soln. crystal growth using cylindrical seeds 3−34212
$LiHoF_4$, far-IR paramagnetic resonances 3−57920
LiI, fluctuation studies with one-atom detection techniques 3−26799
LiI/$LiOH.H_2O/Al_2O_3$ solid electrolyte system ionic conductivity transitions, application in solid-state batteries 3−57131
β-$LiIO_3$, $\beta \rightarrow \alpha$ transition, effect of H^+ after high press. treatment 3−38058
$LiIO_3$ cryst., UV absorpt. and circular dichroism spectra near fundamental absorpt. edge 3−52765
γ-$LiIO_3$, cryst. struct. phase transitions, X-ray diffr. study 3−7983
$LiIO_3$ crystal in resonator, spectral struct. of stimulated Raman scatt. by optical phonons and polaritons, aperture effects 3−37125
$LiIO_3$ crystal layer, multistage stimulated Raman scatt. by polaritons, tuning characts. 3−56282
$LiIO_3$, electrooptic coeffs., Raman scatt. study *(Russian)* 3−47623
$LiIO_3$, intracavity SHG using CW YAG ring laser 3−17501

lithium compounds continued
α-$LiIO_3$, nonreciprocal linear mag. birefringence study 3–19113
$LiIO_3$, parametric generation of picosecond light pulses *(Russian)* 3–50705
$LiIO_3$, Raman and IR spectra, Darling-Dennisson resonance *(Russian)* 3–3738
β-$LiIO_3$, Raman spectra 3–43538
$LiIO_3$, SHG, electro-optical control of phase synchronism *(Russian)* 3–37116
$LiIO_3$:Fe, γ radiation defects and impurity defects, positron annihilation study 3–33248
$LiIO_4$, thermal expansion coeff., 77 to 300K, dilatometry 3–13493
$LiKSO_4$, elastic consts. and phase transition, Brillouin scatt. study 3–57947
$LiKSO_4$, low freq. vibr. modes, temp. depend., Raman study 3–23952
$LiKSO_4$, NMR study of low-temp. phase transition *(Chinese)* 3–43443
$LiKSO_4$, pyroelec., cryst. struct. study 3–46905
$LiKSO_4$, temp. depend. of Raman active Li modes 3–14303
$Li_2M^{4+}Fe_6O_{12}$ (M=Ti, Sn, Ge, Si) spinel ferrites, cryst. chem. 3–13204
$LiMgCl_3$, Li^+ ion mobility, NMR study 3–3543
Li_2MgCl_4, Li^+ ion mobility, NMR study 3–3543
$LiMnFeF_6$, diamorphism, cationic ordering and $\alpha \rightarrow \beta$ transition 3–33207
Li_nMoO_3 cathodes in Li^+/organic electrolyte batteries, transport props. 3–44116
LiN, low-lying states, nonempirical calcs. 3–36673
Li_3N, Auger spectrum 3–52874
Li_3N based all solid state cells, self discharge 3–44105
Li_3N, diffusion processes, NMR study 3–13532
$Li(NH_3)_4$, expanded-metal cpds., electron-electron interactions and metal-nonmetal transition 3–33637
$Li_{2+x-y-z}(NH)_{1-x-y-z}N_xCl_yH_z$, solid electrolyte, ionic cond. and ^7Li NMR 3–42838
$LiNH_4SO_4$ and $LiND_4SO_4$, domain struct. revealed by liq. cryst. decoration 3–28802
$LiNH_4SO_4$, ionic thermocurrent studies 3–23869
$LiNH_4SO_4$:Co^{2+}, optical absorpt. spectrum 3–43570
$LiNO_3$ heat storage materials, thermodynamic props. *(Japanese)* 3–34732
$LiNO_3$-KNO_3, isotope distrib., countercurrent electromigration 3–47135
$LiNa_2AlH_6$, prep., struct. and thermal stability, X-ray diffr. study 3–37880
$Li_{0.02}Na_{0.98}NbO_3$, ferroelec.-ferroelastic coupling, transitions and optical props. *(French)* 3–47613
$Li_{0.2}Na_{0.98}NbO_3$, ceramic and single cryst., ferroelectric phase transitions *(French)* 3–8782
$LiNaSO_4$, low freq. vibr. modes, temp. depend., Raman study 3–23952
$LiNaSO_4$, temp. depend. of Raman active Li modes 3–14303
$LiNbO_3$, acoustoelectric injection due to surface waves *(Russian)* 3–47394
$LiNbO_3$ antireflection-coated surface selective and uniform laser-induced failure 3–56930
$LiNbO_3$, collinear acousto-optical interaction parameters calc. *(Dutch)* 3–52766
$LiNbO_3$ coupled channel diffused waveguide based electrooptic modulator, coupling coeff. determ. by SHF meas. 3–56308
$LiNbO_3$, cryst. surface, internal scatt. of acoustic surface waves 3–8315
$LiNbO_3$ crystal, freq. doubled Nd^{3+}:YAG laser light at 6690 Å and 6590 Å *(Chinese)* 3–41843
$LiNbO_3$ crystal, Raman freq.-ang. spectra selection rules 3–14293
$LiNbO_3$ crystal defects, optical imaging using polarizing filters and laser source 3–42596
$LiNbO_3$ crystal for sensitive electro-optical system measuring elec. fields 3–35968
$LiNbO_3$ crystal picosec. light pulse parametric amplification, optical inhomogeneity influence 3–27164
$LiNbO_3$ crystals, Raman scatt. indicatrix asymm. 3–38823
$LiNbO_3$ crystals defects characterisation using X-ray diffraction topography 3–8061
$LiNbO_3$ crysts., damage by electron beams 3–8104
$LiNbO_3$, D^+ diffusion coeff. meas., waveguide fabrication appl. 3–8253
$LiNbO_3$, diffraction of light by SAW 3–34070
$LiNbO_3$ diffused optical waveguide, corrugated grating for exciting surface waves 3–1765
$LiNbO_3$ diffused waveguides, optical damage resistance 3–17613
$LiNbO_3$ diffused waveguides, optical damage resist. 3–27233
$LiNbO_3$ directional coupler delineation using laser-written masks 3–17646
$LiNbO_3$, effective polarisation, thermally stimulated polarisation study 3–14198
$LiNbO_3$ electro-optic-waveguide freq. translator fabricated by proton exchange 3–12309
$LiNbO_3$ electro-optical modulator *(Czech)* 3–22133
$LiNbO_3$, electro-optic element, limitations on ang. aperture 3–32456
$LiNbO_3$, F^+-centre energy levels, point-ion-lattice calc. 3–23318
$LiNbO_3$, F^+-centre wave functions, transition energies in absorpt. spectra 3–43071
$LiNbO_3$, frequency multiplication of Nd:YAG laser 3–50665
$LiNbO_3$, integrated optics channel switch formed from elec. field induced waveguides 3–56350
$LiNbO_3$ interferometric modulators for integrated optics four-digit A/D converter prototype 3–27267
$LiNbO_3$, ion and laser beam effects, SAW study 3–51674
$LiNbO_3$ laser Q-switching, electrooptical-elastooptical effects *(Slovenian)* 3–7036
$LiNbO_3$ on SAW device, high resolution photoacoustic microscopy study 3–27328
$LiNbO_3$, optical phase conjugation of picosecond pulses in four-wave mixing, expt. study 3–12248
$LiNbO_3$ optical waveguide, crossed channel, acoustooptic diffr., integrated optic module 3–41981
$LiNbO_3$, opto-optical light deflection 3–50716
$LiNbO_3$ parametric phase-conjugation acoustic amplifier 3–32581
$LiNbO_3$, permittivity, dispersion anal. using Raman spectra 3–14194
$LiNbO_3$, piezoelectric, SAW propagation in biasing elec. field 3–33548
$LiNbO_3$ piezoelectric crystals meas., by resonance-antiresonance method 3–36036
$LiNbO_3$ planar Bragg-grating lenses, CHF_3 reactive-ion etching fabrication 3–56351
$LiNbO_3$, quasimatched parametric interaction of optical waves with equal group velocities 3–37122
$LiNbO_3$, refractive index longitudinal inhomogeneity, influence on parametric gain 3–27160
$LiNbO_3$, SAW beamwidth compression, focusing transducer 3–56412
$LiNbO_3$, SHG, electro-optical control of phase synchronism *(Russian)* 3–37116
$LiNbO_3$ sensitivity and performance in optically-scanned US imaging piezoelec. transducer 3–1923
$LiNbO_3$, spatial phase shift during hologram writing 3–50631
$LiNbO_3$ strip waveguide phase modulators, electrical and acoustical cross-talk obs. 3–12366
$LiNbO_3$ synchronously pumped optical parametric oscillators with pumping depletion *(Chinese)* 3–41913
$LiNbO_3$ thin film Fresnel light modulators 3–22200
$LiNbO_3$ thin film waveguide on sapphire, optical freq. doubling obs. 3–41916
$LiNbO_3$ Ti diffused optical rectangular waveguide with optical axis in transverse plane 3–12325
$LiNbO_3$ Ti diffused single-mode waveguides, parameter meas. *(Chinese)* 3–12312
$LiNbO_3$ Ti diffused waveguide, linear electro-optic effect, Raman spectra of polar oscills. *(Russian)* 3–38821
$LiNbO_3$, transversely limited SAW beams, nonlinear propagation, second-harmonic diff. field, theory and expt. 3–37283
$LiNbO_3$, US harmonic generation 3–50827
$LiNbO_3$ waveguide fabrication by immersion in $AgNO_3$ and $TlNO_3$ 3–1816
$LiNbO_3$ waveguide modulator with 1.2 μm thick electrodes fabricated by lift-off technique 3–12307
$LiNbO_3$ waveguide modulators, bandwidth, field distrib., and optimal electrode design 3–12308
$LiNbO_3$ waveguides, proton-exchanged, independent index and profile control 3–41976
$LiNbO_3$ with Al guide, piezoelectric waveguide convolver, linear and nonlinear anal. 3–56402
$LiNbO_3$, X-ray emission spectra, electronic struct. *(Russian)* 3–24060
$LiNbO_3$, Y-cut, proton-exchanged monomode optical waveguides fabrication 3–50754
$LiNbO_3$:Cr^{3+}(Ni^{2+}), absorption spectra, crystal field and Racah B parameters 3–14326
$LiNbO_3$:Eu^{3+}, energy transfer between ions, obs. and calcs. 3–14336
$LiNbO_3$:Fe, electrooptic crysts., photogalvanic and photorefractive effects 3–33762
$LiNbO_3$:Fe, exoelectron emission and radiation strength, impurity and temp. depend. 3–39019
$LiNbO_3$:Fe, γ radiation defects and impurity defects, positron annihilation study 3–33248
$LiNbO_3$:Fe, optically induced light scatt. and beam distortion, rel. to phase hologram storage 3–50630
$LiNbO_3$:Fe, photorefractive effect and surface elec. breakdown, space charges obs. 3–23898
$LiNbO_3$:Fe, Raman scatt., effect of induced photorefr. 3–14294
$LiNbO_3$:Fe crystals, photorefraction and anisotropic light scatt., holographic recording 3–36959
$LiNbO_3$:Fe photorefractive grating, electroacoustic and acoustooptic interactions 3–38797
$LiNbO_3$:Fe(Cr)(Ni), mag. susceptibility, 100-400K, effects of annealing *(Korean)* 3–38602
$LiNbO_3$:Fe(Cu), photovoltaic tensor meas. 3–3242
$LiNbO_3$:Ti channel waveguide, lateral diffusion coeff. meas. *(Chinese)* 3–37176
$LiNbO_3$:Ti diffused channel waveguides, coupling of single mode fibres 3–17619
$LiNbO_3$:Ti diffused channel waveguides with bends, losses, integrated optical device design 3–17637
$LiNbO_3$:Ti electrooptic grating deflector/modulator investigation 3–22196
$LiNbO_3$:Ti long wavelength waveguide electro-optic TE$\rightleftharpoons$TM convertor 3–32462
$LiNbO_3$:Ti low-loss waveguide bends at λ=1.3 μm 3–12321
$LiNbO_3$:Ti optical waveguide fabrication using $(Ti_{0.65}Nb_{0.35})O_2$ as Ti diffusion source 3–41973
$LiNbO_3$:Ti proton-exchanged guides, second-harmonic phase-matching range extension 3–41977
$LiNbO_3$:Ti single-mode strip waveguides, mode size and method for estimating propag. const. 3–12320
$LiNbO_3$:Ti single-mode channel waveguide bends with coherent coupling, low-loss 3–41975
$LiNbO_3$:Ti thin-film waveguide, optical SHG without film thickness control 3–56276
$LiNbO_3$:Ti waveguide, Ti-diffused, two-coord. acousto-optic integrated optics deflector 3–12300
$LiNbO_3$:Ti waveguide electro-optic polarisation modulator, high-speed 3–1760
$LiNbO_3$:Ti waveguide to single-mode fibre coupling for λ=1.32 μm 3–12322
$LiNbO_3$:Ti waveguide-fibre insertion loss at 1.3 μm, temp. and initial Ti dimens. influence 3–37182
$LiNbO_3$:Ti waveguides, outdiffusion suppression 3–22263
$LiNbO_3$:Ti waveguides, fabrication by Ti photodeposition using $TiCl_4$ photolysis 3–56312
$LiNbO_3$:Ti(Fe), growth by Czochralski method, phys. props. *(Korean)* 3–3943
$LiNbO_3$/CdSe acoustoelectronic memory, convolution signal storage 3–18750
$LiNbO_3$-Ge, acoustoelectric oscillator, SAW single mode generation 3–50882
$LiNbO_3$-MgF_2 film system, electro-acoustic storage of SAW's 3–33555
$LiNbO_3$-Si structure, SAW parametric oscill. 3–2949
$LiNbO_3$-type waveguide, high-power butt coupling obs. and theory 3–12315
$Li(Nb_{0.8}P_{0.2})O_3$ glass, roller quenched, struct. and ionic cond. 3–33126
Li_xNbS_2, cryst. chemistry and superconductivity 3–23528
Li_xNbSe_2, intercalated, struct., phase diagram 3–2519
$LiNdP_4O_{12}$ laser transmitter, pure single-mode, for 1.3 μm fibre optic communications 3–1653
$LiNdP_4O_{12}$, multiple bit FM mode locked miniature laser, Gbit optical pulse generation 3–7032
$Li_2NpW_3O_{12}$, prep. in $Np(WO_4)_2$-Li_2WO_4 system, struct. *(French)* 3–13194
$Li_4NpW_4O_{16}$, prep. in $Np(WO_4)_2$-Li_2WO_4 system, struct. *(French)* 3–13194
Li_2O, Auger spectrum 3–52874

lithium compounds continued
  Li_2O blanket, materials and design solns. for breeding T 3-55591
  Li_2O containing ceramic systems, temp. limit evaluation for subsolidus state *(Ukrainian)* 3-24215
  Li_2O-$2SiO_2$, glass and glass ceramic, aqueous durability 3-34499
  Li_2O-Al_2O_3 system, T diffusivity 3-55630
  Li_2O-Al_2O_3-P_2O_5-SiO_2-TiO_2 system devitrified glasses, melt viscosity and crystn. 3-37798
  Li_2O-Al_2O_3-SiO_2, crack deflection processes, expt. 3-50997
  Li_2O-Al_2O_3-SiO_2 glass ceramics, microstruct. and grain growth 3-4003
  Li_2O-Al_2O_3-SiO_2 glass ceramic, flaw growth, indentation-produced 3-19393
  Li_2O-B_2O_3 glass, phys. props. and struct. 3-29066
  Li_2O-B_2O_3 glass, struct., ^{10}B NMR study 3-7915
  Li_2O-B_2O_3 glass, struct., ESR, optical and Mossbauer study 3-22784
  Li_2O-B_2O_3 glass, thermal expansion, glass transform. 3-57112
  Li_2O-B_2O_3-Fe_2O_3 glasses. mag. props. from ^{57}Fe Mossbauer spectroscopy 3-14169
  Li_2O-BaO-Nb_2O_5, quenched glasses, prep. and props. 3-27851
  Li_2O-CdO-P_2O_5 glass, synthesis and struct. study 3-2422
  Li_2O-$Cs_2O(Rb_2O)$-SiO_2 glass systems, immiscibility isotherms 3-28105
  Li_2O-GeO_2 glasses, electrical conductivity and optical absorption meas. 3-23384
  Li_2O-K_2O-B_2O_3, glass, spectral absorption of Cu^{2+}, mixed alkali effect 3-47676
  Li_2O-MO-Nb_2O_5 system (M=Ba, Ca, Mg), twin-roller quenching, glass formation, IR spectra 3-53012
  Li_2O-MgO-Al_2O_3-SiO_2, Fe_2O_3 doped, transparent glass ceramic, microstruct. and crystallisation 3-2423
  Li_2O-Na_2O-Al_2O_3-SiO_2, mixed alkali glasses doped with Cu^{2+} 3-46864
  Li_2O-Nd_2O_3-P_2O_5-H_2O system, phase formation, hydrothermal synthesis 3-47086
  Li_2O-SiO_2 glass, non-isothermal crystallisation, kinetic study by thermal anal. 3-2421
  Li_2O-SiO_2 glass, X-ray induced hole centres, ESR studies, struct. model 3-3530
  Li_2O-stabilised B''-Al_2O_3-Na_2O ceramic membrane, sintering schedule 3-14538
  Li_2O-WO_3 systems, rapidly quenched glasses prep. and characteris. 3-29054
  LiOH, Auger spectrum 3-14405
  LiOH, vol. change at melting point 3-8172
  $LiOH.H_2O$, deform. electron density, X-ray and neutron diffr. studies 3-7967
  $LiOH.H_2O$, theoretical electron density 3-7968
  $LiO(^2\Pi)$, ground state symmetry, ab initio CI calcs. 3-6541
  $Li_2O.2SiO_2$, kinetic parameters from DTA meas. 3-38023
  $LiReO_3$ and Li_2ReO_3, cryst. struct., neutron powder diffr., use of Pearson type VII distrib. 3-7974
  Li_2S, Auger spectrum 3-52874
  $LiSO_2$ batteries, design and construction, super power appls. 3-9409
  Li_2SO_4, monoclinic, ionic cond., prep. condition effects 3-42836
  Li_2SO_4-NaCl, vol. change at melting point 3-8172
  $Li_2SO_4.H_2O$, phonon dispersion, dielectric and optical axes 3-33372
  Li_2SiO_3 blanket, materials and design solns. for breeding T 3-55591
  Li_4SiO_4, in solid-state thermal cells, electrochem. decomp. 3-4293
  $Li_2Si_2O_5.xLi_2SO_4$, vitreous, ^7Li nuclear mag. spin-lattice relax. times *(French)* 3-28727
  $Li_{3.75}Si_{0.75}P_{0.25}O_4$, cryst. struct. and ionic cond., X-ray diffr. study 3-7990
  Li_2SnO_3, cryst. struct., neutron powder diffr. refinement 3-27908
  $LiT6F_4$, Ising ferromagnet, ordered and disordered phases, magnetostriction meas. 3-3505
  $LiTaO_3$ crystals, Raman scatt. indicatrix asymm. 3-38823
  $LiTaO_3$ crysts., damage by electron beams 3-8104
  $LiTaO_3$, F^+-centre energy levels, point-ion-lattice calc. 3-23318
  $LiTaO_3$, F^+-centre wave functions, transition energies in absorpt. spectra 3-43071
  $LiTaO_3$, ferroelectric phase transition studies *(Chinese)* 3-3650
  $LiTaO_3$, ferroelectric phase transition, Raman-spectra study 3-28786
  $LiTaO_3$, light scatt. intensity increase near phase transition 3-47668
  $LiTaO_3$, piezoelectric, SAW propagation in biasing elec. field 3-33548
  $LiTaO_3$ Pockels cell sampling system for elec. transients with two picosecond resolution 3-25898
  $LiTaO_3$ pyroelectric IR detector 3-49450
  $LiTaO_3:Ag^+$ waveguide, Ag^+ diffused, electrooptic Bragg modulator 3-12310
  $LiTaO_3$:Fe crystals, photorefraction and anisotropic light scatt., holographic recording 3-36959
  $Li_xTa_yTi_{1-y}S_2$, intercalation props., order-disorder phase diagram 3-33384
  $LiTbF_4$, multiresonant two-photon-absorption-induced four wave mixing 3-12208
  $LiTbF_4$, multiresonant four-wave mixing, narrowed intermediate resonance 3-32408
  $LiTb_pT_{1-p}F_4$, mag. eqn. of state 3-28557
  $LiTb_xY_{1-x}F_4$, ferromag., randomly diluted, uniaxial dipolar, crit. behaviour, high temp. susceptibility 3-57556
  $LiTb_xY_{1-x}F_4$, model singlet ground state system, spin dynamics, inelastic neutron scatt. 3-23591
  Li_2TeO_3, cryst. struct., OD interpretation 3-46890
  $Li_{0.5(1+x)}Ti_xFe_{2.5-1.5x-y}Mn_yO_4$, mag. and microwave data, appl. 3-33863
  $LiTi_2O_4$, structure, mag. props., superconductivity 3-22863
  Li_2TiO_3, in solid-state thermal cells, electrochem. decomp. 3-4293
  Li_2TiO_3, vaporisation of solid, mass spectrometric study 3-18433
  $Li_2Ti_3O_7$, fast-ion conductor, IR study 3-34105
  $LiTiS_2$, intercalate, band struct., interlayer interactions 3-13725
  $LiTmF_4$, lattice dynamics and electron-phonon interactions 3-42722
  $LiTmF_4:Ce^{3+}$, Nd^{3+}, Er^{3+}, Yb^{3+}, magnetisation of non-Kramers ions, ESR study 3-14127
  Li_2UCl_6, cryst. struct., multiphase powder neutron diffr. profile refinement 3-56857
  $Li_{2n-5}UO_n$, ESR and mag. susceptibility studies 3-28683
  $LiVO_3$-$NaVO_3$ system, isomorphic miscibility, thermoradiographic investig. 3-51801
  $Li_{1.6}V_{12}O_{29.7}$, diffusion of alkali metal ions 3-13524
  $Li_xV_2O_5$, quasi 1-D conductor, bipolaronic state of V^{4+} ion pair, NMR study 3-57294
  Li_2VSe_2, cryst. struct. and mag. props. 3-22862
  LiX, (X=NO_3, PO_3, PO_2), matrix isolated IR spectra 3-55938

lithium compounds continued
  $LiYF_4$, IR window material, multiwavelength laser rate calorimetry 3-7096
  $LiYF_4$, laser window materials characts. 3-7098
  $LiYF_4:Er^{3+}$, Orbach spin-lattice relax. under phonon bottleneck conditions, effect of secondary reson. scatt. of phonons 3-28698
  $LiYF_4:Gd^{3+}$, zero field splittings, ESR studies 3-57770
  $LiYF_4:Tb^{3+}$, Yb^{3+}, magnetisation of non-Kramers ions, ESR study 3-14127
  $LiYF_4:Yb^{3+}$, Tb^{3+}, dilute paramagnet, dipole-dipole ESR line width 3-14128
  $Li_{0.1}Zn_{0.8}Fe_{2.1}O_4$ ferrite, low temp. reconstructive transition, neutron diffr. study 3-38052
  $Li_{0.5-x/2}Zn_xFe_{2.5-x/2}O_4$, hyperfine field distribs. and spin canting, Mossbauer study 3-34013
  $Li_{14}Zn_x(GeO_4)_4$ LISICON solid electrolyte, NMR studies 3-47562
  $Li_{16-2x}Zn_x(GeO_4)_4$, fast ionic conductor, temp. dependence of ^7Li NMR line width 3-28708
  $Li_{2+2x}Zn_{1-x}GeO_4$, LISICON solid solns., ionic cond., 25 to 300°C 3-18500
  $Li_3Zn_{0.5}GeO_4$, LISICON, thin films, RF sputtering prep. and elec. cond. 3-42842
  Li_2ZrO_3, cryst. struct., neutron powder diffr. refinement 3-27908
  Li_xZrS_2 intercalation cpd., structural and semicond.-metal transition obs. 3-52036
  $Li_6[Al_2(BO_3)_4]$, cryst. struct. determ. 3-2520
  $MgAl_2O_4$-LiF, polycryst. spinel densified with LiF additions, morphological changes in intergranular thin film 3-14613
  NH_4LiSO_4, Brillouin scatt. intensity near ferroelec. phase transition point, anomalous temp. depend. 3-57942
  β''-Na_2O-Al_2O_3-Li_2O, ionic cond., doping effects 3-42834
  Na_2O-SiO_2-Li_2O, glass transition temp., network modifier mixing effects 3-51791
  $Np(WO_4)_2$-Li_2WO_4 system, phase equilibrium and phase structures *(French)* 3-13194
  SiO_2-B_2O_3-Al_2O_3-ZrO_2-Li_2O-Na_2O glasses, uniform refractive index model, obtained by Li^+ for Na^+ ion exchange 3-23905
  SiO_2-Li_2O glass, Cu ion, exchange diffusion layers, ESR and optical study 3-52605
  SiO_2-Li_2O glass, IR transmission and absorption spectra 3-34087
  SiO_2-Li_2O-Al_2O_3-P_2O_5-Sb_2O_3 glass, for ion-exchange strengthening 3-29053
  $Sr_{0.5}La_{1.5}Li_{0.5}Fe_{0.5}O_4$, Fe oxidation states and electronic configurations, oxide stabilisation 3-33179
  $Sr_xLa_{2-x}Li_{0.5}Ni_{0.5-x}Fe_xO_4$, coexistence of 6-coordinated high-spin Fe^{IV} and low-spin Nc^{III} *(French)* 3-23336
  Ti:$LiNbO_3$ optical-waveguide micro-displacement sensor 3-5777
  γ-$(Ti(PO_4)_2)Li_2$, ionic cond., impedance meas. 3-18507
  Zr-K-Li fluorophosphate glasses, crystallisation and glass struct. model 3-2427
  ZrF_4-BaF_2-AlF_3-LaF_3-LiF optical glass, aqueous corrosion, IR and SEM study 3-1731
  ZrF_4-BaF_2-LaF_3-AlF_3-LiF-BiF_3-PbF_2 glass, viscosity props. for fibre drawing 3-1786
lithography
  see also electron beam lithography; ion beam lithography; photolithography
  chalcogenide glass films, spin-coated 3-19289
  contact lithography, laser-stimulated X-ray source appls. 3-26000
lithospace *see Earth crust*
lithosphere *see Earth crust*
liver
  amino acid pool in rat tissues, ionising radiation effect *(Russian)* 3-19765
  cells of γ-irrad. senescent mice, unscheduled DNA synthesis and elimination of DNA damage 3-9674
  children undergoing ^{67}Ga citrate scanning, absorbed dose estimates for liver, spleen and metaphyseal growth complexes 3-58838
  computer automated measurement of electrical tissue impedance spectra 3-39758
  computerised tomography, power spectral density as a texture meas., cirrhosis detect. appl. 3-4621
  current pathways in high-voltage injuries 3-48281
  cytochrome P-450, liver microsomal, absorpt. spectra in non-equilib. conformational states at low temp. 3-39588
  dysfunction, automated classification and identification using shape decriptors 3-34973
  enzymic differentiation in gamma irradiated perinatal rat liver 3-48340
  haemodynamics, effects of pre- and posthepatic blood flow obstruction on arterial and portal drainage in guinea pigs 3-4518
  human hepatic disease detection, computerised image processing method *(Japanese)* 3-9718
  lipid composition bound with supramolecular DNA, γ-irradiation effect, chromatography *(Russian)* 3-34775
  natural radioisotopes near a coal-fired power station, cattle liver obs., ^{210}Pb and ^{210}Po 3-34991
  neoplasms, prod. in Chinese hamster, interaction of ^{144}Ce and partial hepatectomy 3-4565
  nuclei, native chromatin DNA, quaternary and quinternary structs., differential scanning calorimetry obs. 3-48269
  parenchymal hepatocytes, noncycling, repair of X-irrad. damage 3-19770
  phototherapy, haematoporphyrin augmented, dosimetric studies in expt. liver cancer in rat 3-53721
  radioisotope scan artifact due to scatt. photons band 3-58807
  radioisotope uptake curves, comparison between 2 methods of estimating rate constants 3-58584
  RF dielectric properties of animal tissues, in vivo and in vitro obs. 3-39686
  scintigrams, system for automated discrimination into assigned number of classes *(Russian)* 3-29700
  single photon emission computed tomography with attenuation effect, analytical approach 3-44317
  trace element distributions, by neutron activation anal. 3-9736
  US absorption of liver tissue, contrib. of intercellular links 3-29624
  US tissue-mimicking liver phantom including freq. dependence of backscatt. 3-9686
  US velocity in fixed human liver, empirical anova and regression modelling on histologically assessed pathology 3-15146
  ^{56}Fe, in heart, liver, of human, meas. using γ scatt. resonance 3-53821
  ^{99m}Tc IDA hepatobiliary agents, radiation dose calc. 3-24888

livestock *see farming*
living systems
see also biocybernetics; brain models; extraterrestrial life; physiological models
biological action of ultrasound, general problems 3—44279
metabolically active cells, collective dynamics 3—4478
LMC *see Large Magellanic Cloud*
LME *see liquid metal embrittlement*
load (electric)
see also load regulation
heat pumps, electricity supply effects in Austria by 1990 *(German)* 3—29440
United States residential sector regional energy demands and economics 3—48113
load control *see load regulation*
load regulation
50 MW$_{th}$ diagonally-connected MHD generator loading schemes 3—39494
passive solar space heating, load management potential 3—4407
peak lopping electrical power by H_2 storage during low demand periods *(German)* 3—9498
permanent-magnet, wind-driven, steady-state optimum resistive load control 3—19558
photovoltaic battery charger with state-of-charge estimator and controller 3—34693
PWR, optimal control for extending load following capability 3—6393
zinc chloride battery appl., computer simulation 3—39462
lobes (distribution) *see antenna radiation patterns*
local area networks *see communication networks; computer networks*
local moments in dilute systems
metal, local magnetic moments, all-electron local density theory 3—52366
metals, localised spin relax. calc. at low temp. 3—3414
rare earth alloys, RAl$_2$ (R=La, Ce, Pr, Nd, Sm, Gd, Tb, Dy, Ho), thermoelec. power 3—52117
rare earth metals and alloys, localised spins and d-like itinerant electrons, indirect coupling calc. 3—8664
Ag-fe, dil., localised mag. moments, finite cluster approach 3—23582
Ce ions recoil implanted into metallic elements, local mag. moment form. 3—47476
LaSb:Dy, ESR and magnetisation, ion-lattice interaction contrib. 3—3524
Pd-Fe, dil., localised giant magnetisation, hyperfine mag. field *(German)* 3—18851
Pd-Fe, dil., localised mag. moments, finite cluster approach 3—23582
Pd-Fe(Co)(Ni), dil., Curie temp., vol. depend., tight-binding calc. 3—52472
Pd-Ni (1 wt.%), localized spin fluctuations obs. by neutron inelastic scatt. 3—52365
PdFe alloys, dil., model of localised moments 3—14000
Sc-Gd dil. alloy single crystals, ESR study of dynamics of local moments and cond. electrons 3—38690
Tm$_{0.05}$La$_{0.95}$Se, intermediate valence cpd., single ion character, neutron scatt. study 3—52362
Tm$_{0.05}$Y$_{0.95}$Se, intermediate valence cpd., single ion character, neutron scatt. study 3—52362
local networks *see communication networks; computer networks*
localised electron states
see also Anderson model; charge-ordered states; charge transfer states; Wigner crystal
alloys, density of states calc. and localisation Monte Carlo method 3—13697
amorphous semiconductor, time-resolved band tail luminesc. 3—24004
amorphous semiconductors, elec. cond., field depend., rel. to electronic struct. 3—43186
amorphous semiconductors, localised states, two freq. light induced absorpt. and energy density 3—38832
amorphous semiconductors, transient and steady-state photocond. 3—23440
amorphous structures, local analysis 3—22773
Anderson localisation problem, universality clones and magnetoresist. in two dimensions, numerical studies 3—28308
Anderson model with correlated site energies, localisation, Anderson transition 3—47312
4-butoxybenzylidene-4′-hexylaniline, liq. cryst., electron trapping and recomb., radiothermoluminescence, DSC spectra 3—28906
Cayley tree of one-dimens. random scatterers, quantum cond. 3—52104
core levels and valence bands of solids, electron spectroscopy studies 3—33657
dialkylamino aryl complexes, solid state, core-hole XPs and CNDO/S-CI study 3—28963
diamond, muonium location and hyperfine interaction, HF SCF cluster calc. 3—57325
disordered interacting fermions, metal-insulator transition and localisation, scaling theory 3—47265
disordered Kronig-Penny 1-D model, statistical props. in elec. field 3—42989
disordered system, exciton transport and trapping, cluster CPA and random walk calc. 3—57360
disordered systems, electronic correls. and transient effects 3—23328
disordered systems, extended states, crit. behaviour 3—43111
disordered systems, time-of-flight meas. under dispersive transport conditions 3—38362
disordered systems with strong short range order and off-diagonal randomness, cluster theory of electrons 3—3122
disordered two-dimensional systems, localised electron states 3—47315
electron autolocalization near a neutral impurity in liquid *(Russian)* 3—3126
excitations in disordered systems, NATO Advanced Study Institute, East Lansing, MI, USA (Sept. 1981) 3—1
ferrites, hyperfine interactions and electron diffusion 3—13782
grain boundaries, elec. props. in metals, semiconductors and insulators, review 3—46961
graphite intercalation cpd., KC$_8$, electronic struct., XPS and EELS studies 3—19250
impurity interaction, localised state theory near point-symm. centre *(Ukrainian)* 3—23310
infinite systems, eigenstate wave packets, XPS calcs. 3—3918
Kondo effect and localization 3—52124
lanthanides, atom-to-solid core level shifts, nl depend. introduced by valence charges 3—23306
liquid, electronic states, mean spherical approx. 3—3123
localised electron states continued
liquid metals, short mean-free path, electronic transport, review 3—3152
matter, structure and props., book 3—40326
mean field approach to the electron glass 3—13757
metal, disordered, local electron densities, Green's function formalism 3—8459
metal, disordered, local electronic densities, multiple scatt. Green's function theory 3—8458
metal, plasmon satellites accompanying core level lines in XPS, semiclassical model 3—34194
metal coupled chains, disordered, electron localisation and transmission coeff. 3—18662
metal-oxide boundaries, resonant tunnelling via localised interface states 3—18786
metallic compounds, core-level shifts 3—18641
metals, localised magnetic states, Green's function calcs. *(Russian)* 3—8642
nonmetallic solids, core level excitation 3—38333
1,8-octanediol, cryst., γ-irrad., absorpt. spectrum of localised electrons 3—38852
one-dimensional Anderson model, phase randomness 3—43117
one-dimensional disordered systems, eigenstate localisation 3—43114
one-dimensional disordered systems, localisation in presence of elec. field 3—52079
one-dimensional localisation, random T-matrix approach 3—43116
one-dimensional system with incommensurate lattice potentials, electronic state localisation 3—23305
polar media, long-range electron hopping, Condon approx. 3—38380
poly(p-phenylene-1,3,4-oxadiazole) film, electronic and struct. props. 3—57339
polyacetylene, ENDOR study of ^{13}C and ^{1}H hyperfine tensors 3—47573
polyacetylene, localised states 3—3125
polyacetylene, photogenerated gap states, transient optical absorpt. 3—3760
trans-polyacetylene, soliton diffusion, ps photoinduced dichroism 3—23914
cis-polyacetylene, solitons and isomerisation by doping 3—38351
polymer, diatomic, linearly conjugated, polaron solitons 3—57295
polymer, thermal transformation of local to extended electronic states, EELS study 3—47254
quantized Hall effect and localization in a strong magnetic field 3—43213
quantized Hall effect current, ideal conductor behaviour 3—3145
quasi-one-dimensional systems, kink form., continuum approx. 3—13699
quasi-two-dimensional electrons interacting with nonlinear elastic medium, mag. field induced spontaneous symm. disturbance *(Russian)* 3—38354
random walk in random medium, generalised master eqn. 3—16287
rare earth dodecaboride phases, elec. resist. and thermoelec. coeff. *(Russian)* 3—3159
resonance tunnelling and localisation spectroscopy 3—43266
self-trapping and bonding of particles at weak interaction 3—57302
semiconductor, amorphous, localised state density, field effect study 3—8391
semiconductor, amorphous, transit pulse dispersion, localised state effects 3—52177
semiconductor, single crystal-polycrystal phase transition 3—8194
semiconductor, transient injection with weakly ionised impurities 3—43203
semiconductor, two-dimens. disordered, charge carriers power-law localisation 3—13771
semiconductors, amorphous, photoluminescence, trapped exciton model 3—14347
semiconductors, disordered, 2-D, electron localisation, renormalisation group study 3—38291
semiconductors, disordered and semimagnetic, electron localization on defects and optical nuclear polarization 3—43115
semiconductors, dispersive transport, space charge influence 3—57342
semiconductors, narrow band gap, cond. electrons, elec. susceptibility, quadrupole hyperfine interaction in cond. with reson. levels 3—43108
semiconductors, two-dimensional disordered, hopping cond., optical transitions, under weak localisation conditions 3—23382
semimetals, prelocalisation and 1-D residual resistance 3—57301
sulphospinels, magnetic semiconductors, book contrib. 3—57551
TCNQ salts, structurally disordered, electron localisation, dielectric const. 3—43119
thick film resistor, flicker noise, tunnel and thermally activated emissions 3—43244
transition metal, Fermi liquid theory of mag. props. *(Russian)* 3—47469
transition metals, liq., local electronic densities, multiple scatt. Green's function theory 3—8458
two-dimensional disordered systems, localised states, travelling cluster approx. and scaling theories 3—43112
two-dimensional Hall cond. under strong mag. fields, Wigner representation 3—43215
two-dimensional system, Hall effect and electron localisation in strong mag. fields 3—43212
Ag halides, localised centres, comparison with alkali halide colour centres 3—57303
Al film, interaction and localisation effects above supercond. transition temp., cond. and magnetoresist. meas. 3—33804
Al superconducting film, electron inelastic scatt. time in presence of fluctuations, magnetoresist. 3—38538
Al$_x$Ga$_{1-x}$As, core exciton spectra studied with synchrotron radiation 3—18625
As$_2$S$_3$, amorphous, local struct., lowest unoccupied MO approach 3—22794
As$_2$S$_3$ glass, atomic tunnelling spectrum, optically induced gap 3—14445
As$_2$Se$_3$, amorphous, localised states, SCL currents activation energy 3—57354
a-As$_2$Se$_3$ films, time-of-flight and photocond. studies 3—43230
B-B, elec. conduction mechanism, elec. and optical props. 3—8495
Ba(Pt,Ni)(CN)$_4$, delocalised and localised electronic states luminesc. and IR study 3—47694
Ba(Pt,Pd)(CN)$_4$, delocalised and localised electronic states luminesc. and IR study 3—47694
Bi film, elec. cond., electron localization and interaction effects 3—18802
Bi film, magnetoresist. in weak mag. fields, localisation effects *(Russian)* 3—28370
Bi thin film, anti-localisation effect, cond., temp. and mag. field depend. 3—47435
Bi-BiI$_3$, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3—43241
a-C:H films, elec. cond., optical absorpt., dopant gas effects on props. 3—18705

localised electron states continued
  $Cd_{1-x}Mn_xTe$, $x>0.4$, absorpt. edge pinning 3—14329
  Ce compound, photoemission, core and valence spectra in limit of large degeneracy 3—47753
  Ce pnictides, 4f and core level X-ray photoemission satellites 3—58035
  Ce, X-ray absorpt. and XPS peak energies, selection rules and multiplet effects 3—57999
  CeB_6, self-consistent APW band calcs. 3—52022
  CeH_x (x=2.1, 2.9), XPS studies of electronic struct. 3—39008
  $CeIn_3(Sn_3)(Rh_3)$, self-consistent APW band calcs. 3—52022
  $CePd_3$, optical cond., refl. spectra 3—3672
  Cu thin film, localisation phenomena, resistivity and scatt. time study 3—43058
  Cu thin film, localisation and scatt. times, magnetoresist. study 3—43297
  Fe, amorphous, local electronic densities, multiple scatt. Green's function theory 3—8458
  Fe, amorphous, local electron densities, Green's function formalism 3—8459
  GaAs, highly excited, picosec. spectroscopy, free carrier relax. in continuum states 3—38910
  H_{12} ring, one-electron electron interaction energies, projected Hartree-Fock approx. 3—50564
  $In-InI_3$, molten, metal-nonmetal transition, DC cond., neutron scatt., Raman scatt., and NMR meas. 3—43241
  InSb, localised defect states, electron capture and emission 3—8449
  $KMgF_3$, electronic struct., photoemission expts. 3—57277
  La, X-ray absorpt. and XPS peak energies, selection rules and multiplet effects 3—57999
  LaH_x (x=2.1, 2.9), XPS studies of electronic struct. 3—39008
  Nb, impurity induced muon localisation and trap identification, μSR study 3—38745
  Nb_xSi_{1-x}, amorphous, metal-insulator transition, tunnelling and transport meas. 3—52209
  Ni_xPd_{1-x}, core hole satellites 3—8935
  P, black, valence band and core-level photoemission spectra 3—34197
  $Pb_{1-x}Sn_xTe:In$, band edge motion in quantising mag. field and nonequilib. states 3—57275
  Pr based metallic glasses, elec. resistivity 3—28324
  PuSb, X-ray photoelectron study *(French)* 3—39002
  Sb film, magnetoresist. corrections due to electron localisation *(Russian)* 3—38500
  Si, amorphous CVD films, elec. props. and ESR, plasma hydrogenation effects 3—52154
  Si inversion layers, 2D quantised Hall resistance, electron localisation 3—3302
  Si MOSFET, localisation and electron-electron interaction effects 3—23492
  Si narrow inversion layer, 1-D localisation and interaction effects 3—8589
  Si:Gd, electron localisation at mag. phase transition, elec. resist. study 3—3099
  Si:H amorphous, localised states, elec. cond. study 3—8457
  a—Si:H and a—Si: H, N, localised state distrib. profiles, SCL current meas. 3—18711
  a-Si:H/c-Si heterojunctions, space-charge limited currents 3—18769
  $Si_{1-x}Ge_x:H$, amorphous, optical absorpt., photoconductivity meas., alloying effects 3—43510
  SiO_2, amorphous, electron energy states calcs. 3—38292
  SiO_2 film, Ar ion sputtering and Si 2p core level shift 3—43682
  SiO_2, vitreous, defect electron states, tight-binding and recursion method calc. 3—57315
  SmB_6, electron tunnelling spectra 3—3292
  SmS, electron tunnelling spectra 3—3292
  $TaS_2(1T)$, hydrazine intercalation complexes, mag. props. 3—23578
  Tb based metallic glasses, elec. resistivity 3—28324
  Te, strongly localised states, photocond. spectra study 3—18642
  Ti_4O_7, metal-insulator transition, phase diagram, review 3—13735
  $TiTe_2$, metallic layered cpd., log T depend. of resist. and negative magnetoresist. 3—47330
  $(Ti_{1-x}V_x)_4O_7$, metal-insulator transition, phase diagram, review 3—13735
  TmSe, electron tunnelling spectra 3—3292
  UH_3, electronic energy band struct. 3—38301
  VO_2, multiplet splitting of final state configurations, X-ray absorpt. spectra 3—3865
  Zn thin films, superconductivity and Anderson localisation 3—43335
  $Zr_xHF_{1-x}V_2$ superconducting Laves phase, electron spectrum peculiarities 3—3873
localised modes in crystals *see lattice localised modes*
localised states, electron *see localised electron states*
loggers *see data loggers; recorders*
logging (recording) *see recording*
logic, formal *see formal logic*
logic analysers *see display instrumentation*
logic circuit elements *see logic devices*
logic circuits
  see also emitter-coupled logic; flip-flops; formal logic; integrated logic circuits; logic devices; sequential circuits; transistor-transistor logic
  functional electrical stimulation, universal control unit development 3—48446
  multichannel electronic equipment, logic components and adapters 3—11616
logic devices
  see also logic gates
  design, logic and algebraic appl. 3—56353
  integrated optical logic devices 3—17636
  PLZT ceramic optoelectronic analogue, logic and switch devices 3—50748
logic gates
  optical AND gate using InSb bistable device 3—37099
long-range order
  see also order-disorder transformations
  alloys with B19 structure, solubility of interstitial impurities and correl. parameters 3—23048
  antiferromagnetism, type I, statistical theory on FCC lattice, AB alloy superlattice theory 3—28489
  binary alloy, high temp. expansions in statistical theory of at. ordering 3—42749
  binary alloy with long- and short-range order, vacancy-wind effect, Monte Carlo simulation 3—2875
  ferrites, perovskite related, O deficient, order-disorder phenomena 3—13444

long-range order continued
  ferromagnets, magnon-phonon interaction theory 3—47484
  graphite intercalation compound with Li, structural and elastic props., in-plane density 3—33213
  Heisenberg antiferromagnet with nearest-neighbour interactions, dynamics 3—28575
  Ising ferromagnets, surface tension, percolation and roughening 3—28493
  liquid crystals, two-dimens., long-range orientational order, Monte Carlo calcs. 3—46849
  solid solutions, FCC, atom distrib., Monte Carlo simulation 3—22827
  spin glasses, infinitely long-ranged bond-random anisotropic classical planar model 3—52506
  statistical thermodynamics of long-range order 3—45103
  two-dimensional crystal lattice, long-range at. order and criticality 3—23666
  Co-Gd amorphous film, long range order in struct. 3—2415
  Co-Gd-Mo amorphous film, long range order in struct. 3—2415
  Fe-Co, fracture and stress relax., effect of at. ordering *(Russian)* 3—24332
  Fe-Co-Cr(V), magnetisation props. and fine cryst. struct., TEM, Mossbauer and X-ray diffuse scatt. studies *(Russian)* 3—33927
  Fe-Gd(Si) amorphous film, long range order in struct. 3—2415
  Fe-Ni (25 at.%), long-range ordering, TEM study 3—19344
  Fe-Ni alloys, long- and short-range atomic order, neutron diffr. study *(Russian)* 3—51538
  $FeGe_2$, magnetic transition, magnetisation *(Russian)* 3—38612
  Ge-GaAs system, metastable continuous solid solns., prep. and props. 3—8369
  $Mn_xZn_{1-x}F_2$, random field effects, spin waves 3—23609
  $Nb_3Al_{0.75}Ge_{0.25}$, A15 struct., possible ordering struct. from X-ray struct. factors *(Chinese)* 3—33187
  NiAl, bond energy and long-range order, alloying influence 3—37843
  Ni_4Mo, antiphase boundary struct., asymm. contrast characts. *(Russian)* 3—27951
  Pd-Ce (12.5 at.%Ce) solid soln., LRO and superlattices, phase diagram obs. 3—19319

long tailed pair *see differential amplifiers*

loop antennas
  circular loop, small, in dissipative medium, EM near field and parameters *(Russian)* 3—6832
  horizontal circular loop antenna near planar interface, anal. for transmitting and receiving antennas 3—10029
  magnetic field intensity meter calibration, loop antenna appl., effect of infinite-size conductive objects *(Japanese)* 3—16378
  SH-1 equipment, freq. response *(Chinese)* 3—10074

Lorentz transformation
  dyons and photons, quantum field theory 3—30985
  Einstein-Podolsky-Rosen correl., Lorentz and CPT invariances 3—54646
  electrodynamics, diagonal nonlinear realisation of Lorentz group 3—6048
  finite-component field wave eqn., local conformal invariance 3—11009
  generation model based on Kahler fermions 3—26012
  internal symmetry in theory of multispin particles 3—5978
  kinematics of relativistically rigid motion of surface 3—20623
  massless chiral fermions from dimens. reduction of higher dimens. gravity 3—30743
  non-relativistic QED in the Lorentz gauge, potential calculations 3—579
  noninvariance, model characterised by weak interactions in special metric 3—31073
  particle dynamics, active Lorentz transformation representation 3—31080
  phase theory for systems with linear motions 3—44940
  pure intertial transformations, composition law for Lorentz group turns 3—5603
  quark-antiquark systems, power-law pot, model pot. Lorentz structure vs. relativistic consistency 3—16615
  real superluminal transformations, shape of spherical (ellipsoid) body 3—73
  relativistic rotating ring, energy considerations 3—25724
  spectral approach to geophysical inversion by Lorentz, Fourier, and radon transforms 3—10096
  spinor reconstruction via Fierz identities 3—11027
  subluminal, six-dimensional space time inconsistencies in length contraction, time dilation, Doppler effect 3—20627
  supergravity with propagating Lorentz connexion, local tensor calculus 3—16221
  superluminal and subluminal, formal and physical props., tachyon interpretation 3—40362
  superluminal EM fields study 3—11110
  superluminal Lorentz transformations, review 3—30614
  tachyon shape, superluminal Lorentz transformations, possible search expts. 3—20625
  two-dimensional QCD, gauge inequivalence in coloured sector 3—16603
  unified derivation of the Galileo and the Lorentz transformations 3—5574
  unitary transformation to helicity form, transformation of position, spin, parity and time-reversal operators 3—31081
  velocities, relativistic addition 3—5561
  Z(2) gauge theory in four dimens., second order transitions 3—45284
  Zwanziger local quantum field theory of charges and monopoles, infinity subtraction 3—30995

Lorenz number
  Cu, thermal cond. and elec. resist. in intense mag. fields at low temps. 3—3156
  Gd, transport props., spontaneous magnetisation, in crit. temp. region 3—57331

Loschmidt number *see constants*

loss angle
  see also dielectric losses
  No entries

loss angle, dielectric *see dielectric losses*

loss-angle measurement
  UHF heating of dielec. materials, loss angle meas. at 2.45 GHz *(German)* 3—45167

loss measurement
  fibre optic measurements 3—46293
  fibre-optic reflectometry for meas. of radiation power losses, backscatt. method 3—12376
  optical fibre absorption loss meas., calorimetric technique 3—46336
  optical fibre joint loss meas., display format 3—46348

loss measurement continued
  spliced optical fibers, loss increase at low temp. 3−1796
  superconducting magnet losses meas., in pressurised ^{4}He, using calorimetry 3−35999

loss tangent, dielectric *see dielectric losses*

losses
  see also dielectric losses; eddy current losses; heat losses; loss angle; magnetic leakage
  aircraft fuselage, sound transmission loss meas. using acoustic intensity approach 3−56391
  beam L-joint, flexural and torsion waves coupling loss factors calc. 3−7288
  brass instruments, acoustic energy losses 3−7346
  cooling tower natural draft water losses *(Slovak)* 3−19629
  curved channel dielectric waveguide bend, radiation loss 3−17640
  dielectric optical waveguides, sharp bends with low losses 3−56310
  double plates, vibration damping due to air or liquid layers *(German)* 3−7470
  fiber optic connection system based on core alignment 3−42009
  fibre-optic connector, low cost, low insertion loss, ageing tests 3−46330
  fibre-optic connector for optical trunk transmission system 3−32504
  four port coupler and bidirectional coupler for multimode optical fiber 3−22235
  gas-dielectric optical waveguide, asymmetric, loss of light calc., geometrical optics 3−7173
  GeO_2-ZnO-K_2O glass as the cladding material of hollow-core optical waveguides for CO_2 laser light 3−22212
  glass-polymer fibres, with loosely fitting cladding, losses in microbends 3−37207
  graded-index optical fibres, structural parameter spec. rel. to splice loss 3−7210
  gypsum board walls, steel studded, sound transmission variations 3−12434
  integrated-optic waveguide, arbitrarily curved, radiation loss calc., and design 3−37245
  IR hollow waveguides, mode coupling analysis of bending losses 3−46288
  Langmuir-Blodgett film MIS structures on narrow band-gap semiconductors 3−38487
  low loss, prep. by modified ceramic method 3−19311
  magnetostatic volume waves, insertion loss 3−43359
  metallic hollow waveguide, dielec. coated, IR transmission characts., slab waveguide model 3−37183
  metals, ion implantation by O or N cpd., phase form. 3−2581
  multichannel hermaphroditic connector evaluation instrumentation 3−22234
  multifilamentary superconducting wire, coupling loss in normal metal core 3−33843
  mutual energies law, appl. to room acoustic wave theory *(German)* 3−42054
  nonmechanical optical switch for single-mode fibres 3−27264
  optical cable, loss concatenation study 3−42035
  optical doubly clad fibres, curvature influence on losses 3−27240
  optical doubly clad fibres, curvature influence on losses 3−50779
  optical fibre, backscattering attenuation meas., differential mode attenuation influence 3−42025
  optical fibre, multimode, splice loss meas., transmission and OTDR meas. 3−46345
  optical fibre, single mode, bend sensitivity characterization, basket-weave test 3−46340
  optical fibre, single mode, core-cladding concentricity meas. technique 3−46349
  optical fibre, single mode, depressed index, bandwidth optimisation 3−37228
  optical fibre, single mode, loss meas. round robin 3−46339
  optical fibre, single-mode, mode spot size, bending loss, backscattering, chromatic dispersion 3−37227
  optical fibre cable, connection loss, mode filter insertion effects 3−46347
  optical fibre connector design, loss control 3−56327
  optical fibre connector splice loss measurements 3−12334
  optical fibre connectors, losses and design principles *(German)* 3−32502
  optical fibre connectors, measurement aspects 3−46346
  optical fibre multiple junctions in an optic line, losses 3−37205
  optical fibre-$LiNbO_3$:Ti waveguide insertion loss at 1.3 μm, temp. and initial Ti dimens. influence 3−37182
  optical fibres, fluorozirconate glass, transmission loss characts., 3-4 μm 3−37226
  optical fibres, gamma-ray irrad. characts. ^{60}Co source, colour centre form., losses 3−42008
  optical fibres, graded index, multimode, splice evaluation 3−42049
  optical fibres, single mode, depressed inner cladding, losses, dispersion, index profile, fabrication 3−37231
  optical fibres, single mode, quadruple-clad, with dispersion below 2 ps/km nm over 1.28 to 1.65 micron 3−22241
  optical fibres, single polarisation, transmission losses, polarisation characts. 3−37233
  optical fibres drawn from uncollapsed VCVD preforms, optical props. 3−37221
  optical fibres under high-temp. conds., losses at junction 3−50777
  optical hollow core waveguide for VUV light, extremely low-loss 3−27255
  optical loose tube fibre cables, low temp. excess loss 3−22220
  optical mismatched multimode fibres, statistical analysis of intrinsic joint losses 3−46317
  optical multimode fibres, mode power distrib. and losses, joint effects 3−46316
  optical multimode fibres with arbitrary profile exponents, transmission loss caused by angular misalignment 3−56322
  optical no transition switches and variable ratio directional couplers, optical prism appl. proposal 3−22203
  optical single mode fibres, wavelength depend. of geometrical imperfection losses 3−50782
  optical single mode low loss fibres, optogeometrical parameters design 3−50783
  optical single-mode lightguides with depressed-index claddings, radiating leaky-mode losses 3−7183
  optical thin-film waveguides, laser annealing for low loss in Corning 7059 glass, ZnO, Si_3N_4, Nb_2O_5, Ta_2O_5 3−50757
  partitions, sound insulation, statistical energy anal. 3−7294
  planar EM wave, elec. polarized, absorption by comb struct. in stratified dielec. medium 3−12046
  planar stripe diode lasers with smooth lateral profile, loss and TM mode gain suppression, theory 3−37025

losses continued
  PMMA-d5 core optical fibre, low loss 3−7175
  SAW filter, group-type unidirectional, using distance weighting techniques 3−1916
  SAW gratings, normal and oblique incidence, radiation loss 3−47208
  SAW oscillator aging, propag. loss effects 3−50887
  semiconductor directional couplers, insertion loss analysis 3−42037
  shallow bulk acoustic wave oscillator, high Q, single mode S-band 3−50888
  stationary battery operating conditions for rapid-recharge cycle 3−34688
  study of superconductors placed in small-amplitude alternating magnetic fields *(Russian)* 3−13980
  superconducting AC losses, data compilation 3−5507
  superconducting circular wires, single core and multifilament, self field losses 3−33841
  waveguides, dielectric, hollow, loss influence on mode shape 3−27232
  wavelength division multiplexing, loss analysis of laser-fibre coupling and fibre combiner 3−22253
  wavelength division multiplexing couplers 3−22255
  woodwind finger holes, acoustical theory 3−12453
  As_2S_3, As_2Se_3, glassy, estimate of minimum optical losses 3−7104
  $LiNbO_3$:Ti diffused channel waveguides with bends, losses, integrated optical device design 3−17637
  Ni film, SAW delay line interaction, freq. depend. 3−51914
  SiO_2:Ge(P) graded-index optical fibres, γ-ray-induced loss and colour centre conc. 3−32481
  Tl halide single crystals with optical losses below 10 dB/km 3−7100
  YAG:Nd CW ring laser, freq. doubling, single freq. output 3−41929
  YIG, low loss, prep. by modified ceramic method 3−19311
  ZnO film, sputtered, SAW propag. loss 3−51912
  ZnO, RF magnetron sputtering for SAW, mag. field strength and configuration effects 3−52944

loudness
  see also acoustic intensity measurement
  hearing, loudness adaptation induced by an intermittent tone 3−9607
  impact sound, repeated, subjective loudness anal. 3−32543
  musical starting transients, measurement and analysis system 3−22286
  objective calculation of ratings, algorithm appl., telephone speech 3−50857
  sound volume judgements, broadband noise, perceived extensity 3−19723
  variation factors in speech loudness rating for telephone systems 3−50856

loudspeakers
  ambisonic technology modern concepts 3−7299
  dimensioning for idealised radiation conditions 3−46419
  energy sphere transformations 3−42099
  FM distortion, magnitude and audibility investigation 3−12481
  graphite-PVC composite for loudspeaker diaphragm *(Japanese)* 3−37313
  ground-plane acoustic measurement 3−12464
  group radiators, directional characts. 3−17674
  horn, elastic diaphragm, acoustical characteristics, finite element method application 3−32577
  monopole active attenuators with non-ideal loudspeakers 3−1851
  spatial fibre-network structure, sound propagation mechanism *(Hungarian)* 3−27287
  studio monitors, design principles 3−46420
  system design techniques 3−32575
  voice pitch waver perception meas. for headphones and loudspeakers 3−9617

Love waves
  acoustic waveguide, thin film, Rayleigh wave radiation and Love wave propag. 3−12386
  Eurasian continent, anelasticity of crust and mantle 3−19926
  France, attenuation of regional seismic waves 3−39783
  granular medium, Love waves over elastic half-space under gravity 3−18385
  Greenland, L_g wave attenuation and seismicity 3−9859
  microseismic surface wave sources 3−19932
  Mount St. Helens, May 1980 eruption mechanism and seismic waves 3−15399
  piezoelectric substrate with dielec. layer, Love surface waves, dispersion eqn. 3−33552
  Ryukyus-Japan island arc struct. from Rayleigh/Love waves anal. 3−35105
  seismic coal seam waves, absorpt. effects 3−39816
  seismic surface wave dispersion calcs. 3−48490
  seismic waves, theory of Love waves excited by discontinuous propag. of rupture front 3−39818
  Tibet Plateau crust/mantle struct. from Rayleigh/Love waves phase vel. 3−15391
  eastern United States, horizontal and vertical Lg amplitude ratios 3−39796

low energy electron diffraction
  adsorbed overlayer islands with positional correl., ang. distrib. of diffr. intensity 3−23183
  adsorption, desorption and reaction kinetics 3−38223
  apparatus for intensities meas., with Johansson objective lens, 0-50 eV range 3−42495
  clean surfaces, struct., review 3−38180
  conical five-element electron gun for LEED experiments 3−455
  diamond, LEED modulated electron energy loss spectra 3−3883
  ferromagnetic metal surfaces, electron spin polarisation techniques, review 3−28516
  graphite, adsorbed ethane in monolayer range, LEED study 3−51947
  graphite, N_2 adsorption LEED intensity isotherms, fluid to solid transition, multilayer condensation, phase diagram 3−18554
  graphite, physisorbed N_2, struct. and orientational ordering, LEED study 3−51946
  graphite (0001), layer-by-layer intercalation of K, LEED study 3−57190
  Heisenberg antiferromagnet, theory of electron scatt., surface and bulk effects 3−57571
  magnetic surfaces, spin polarised LEED, probing of exchange and spin-orbit interaction 3−28313
  metallurgical surface anal. *(French)* 3−47201
  mirror electron microscopy in surface research, review 3−10963
  modulation doped structs. using multi-step MBE and ion implantation 3−42630
  overlayer disregistry, transform simulations of LEED patterns 3−38210
  photographic technique for angle of incidence meas. 3−2350
  reconstructed crystal surfaces, limitations of LEED struct. determ. 3−13048

low energy electron diffraction continued
  relativistic theory of electron and positron diffraction at high and low energies 3—13045
  Ru (001), clean and O-dosed, adsorption of water, desorption, AES and LEED studies 3—38221
  semiconductor surfaces, elec. props., review 3—47404
  silver acetylides on Ag(110), spectroscopic studies 3—24526
  slow-electron diffraction camera, low temp., sample holder 3—51462
  spherical partial waves, translation matrix props. 3—46818
  surface analysis and surface reactions monitoring 3—29334
  surface structural defects, LEED anal. 3—8311
  surface structure, reliability factors, Zanazzi-Jona and Pendry, extended energy range 3—47198
  threshold effects 3—13047
  Ag (100) and (110), adsorption of Pd, LEED, AES, photoemission, and work function meas. 3—19246
  Ag (111), adsorption of I, adatom-adatom interactions, XPS and LEED study 3—14439
  Ag {111}, adsorbed $\sqrt{3}\times\sqrt{3}$-30° I overlayer, LEED struct. anal. 3—38213
  Ag surface, {110}, adsorbed O, 1×2 struct., LEED intensity anal. 3—51924
  Ag-Si(111) 7×7 interfaces, LEED, AES, and angle-resolved photoemission meas. 3—43711
  Al (111), adsorption of O, low-energy current image diffr. study 3—2963
  Al adsorbed layer on Si (111), stability of LEED fractional-order beam intensities and intralayer multiple scatt. 3—42898
  Al film growth on Si surfaces, LEED and AES study 3—33606
  Al-InP interface, cryst. and electronic struct. 3—23189
  Al(110) surface, multilayer relax., LEED meas. 3—13600
  Au (100) surface, struct. model from LEED diagram, Monte Carlo simulation *(French)* 3—18564
  Au epitaxial growth on Pd (111), transition from pseudomorphic to nonregistered state 3—47242
  Au-Ge (111) interface form., AES, LEED, and electron microscopy study 3—38240
  Bi (0001), interaction with Cl_2, incipient $BiCl_3$ form. and decomp. 3—18563
  Co (11-20), clean surface, structure, LEED study 3—57193
  Cr (100), chemisorbed O, LEED and photoemission obs. 3—23177
  Cu (100) and Cu (111), low energy positron and electron diffr. 3—42895
  Cu (110), adsorbed S monolayer, struct. model from LEED diagram, Monte Carlo simulation *(French)* 3—18564
  Cu (110), clean and O-covered, adsorption of water, UPS, LEED, EELS, and work function meas. 3—2969
  Cu (111), adsorption of I, adatom-adatom interactions, XPS and LEED study 3—14439
  Cu (111), electron self-energy meas. from beam threshold effect in LEED 3—37748
  Cu (111), local exchange-correlation pot. for LEED 3—47197
  Cu {001}*c*(2×2), adsorbed Cl, CC at. struct., overlayer model, LEED anal. and photoemission meas. 3—13638
  Fe (100), adsorbed N, struct. arrangement, LEED study 3—38212
  Fe (110) epitaxial film on W (110) ribbon, spin polarised electron scatt. 3—23751
  Fe, epitaxial growth on GaAs (100) by MOCVD, LEED, Auger and FRM studies 3—13652
  Fe, surface (110) magnetism from polarized electron scatt. 3—18969
  Fe-Cr-Ni surface, superlattice form. by interaction with H_2O, I_2 ans O_2 3—2942
  FeTi (100) and (111) surfaces, LEED and AES studies 3—18541
  Fe(110) surface ferromag., exchange scatt. of spin polarised electrons 3—57711
  GaAs (100) and ($\bar{1}\bar{1}\bar{1}$), chemisorption of H, LEED and photoemission study 3—33574
  GaAs (100) with adsorbed Bi, surface atomic struct. determ. 3—2946
  GaAs surfaces (100), (110) and (111), laser annealed, LEED, AES and RBS studies 3—57197
  GaSb (110), surface atomic geometry, elastic LEED intensity anal. 3—57187
  Ge (001) surface, limitation of LEED struct. determ. 3—13048
  Ge epitaxial layers, initial growth on GaAs (100), LEED and AES study 3—42978
  Ge-GaAs (110) interface, preparation and electronic props. 3—13889
  InP Schottky barrier formation, influence of water adsorption, LEED, AES and photoelectron spectroscopy study 3—3316
  Ir (100), structure determ. by quasidynamical LEED intensity evaluation 3—57194
  KCl (100) electron beam irrad. effect on LEED 3—8103
  MgO (100) surface, LEED study, finite rumpling 3—2938
  Mo (110) adsorbed Cl superstructure, LEED and AES study 3—2945
  Mo (112), adsorption of La, struct., work function and stability, LEED study 3—33576
  Na film, close-packed, LEED and UPS study 3—18574
  Nb {001} surface reconstruction, LEED study 3—42900
  Ni (001) surface, clean and with adsorbed Te, spin polarised LEED study 3—38179
  Ni (100), adsorption of Xe, LEED, UPS, thermal desorption, and work function meas. 3—2967
  Ni (100), chemisorbed O, phase diagrams, LEED and AES study 3—57220
  Ni (111) with C monolayers, reversible step arrangement and segregation 3—8326
  Ni_3Fe, surface composition of (100) and (110) faces, influence of S *(French)* 3—28198
  NiO, antiferromagnetic, one-magnon formalism for inelastic electron scattering 3—33879
  $NiSi_2$ epitaxial films, electronic and atomic struct., LEED, Auger and photoemission studies 3—33630
  $NiSi_2$ films, epitaxial growth on Si substrate, surface and interface stabilisation 3—42972
  O adsorbed layer on Cu (001), stability of LEED fractional-order beam intensities and intralayer multiple scatt. 3—42898
  Pd (111), stepped, adsorption of NO, desorption and reaction kinetics, LEED, TDMS and mol. beam meas. 3—38223
  Pd, adsorbed on Si (111), surface struct., ion scatt. spectroscopy and LEED-AES study 3—33562
  Pt (100), surface phase transform. induced by CO adsorption 3—8331
  Pt (100) and (111), adsorbed layers of solvents and electrolytes, struct. and comp., LEED and AES study 3—13640
  Pt (110), adsorbate-induced phase transitions 3—2970

low energy electron diffraction continued
  Pt (111), adsorbed acetylene (ethylene), absolute coverage, XPS and LEED study 3—57221
  Pt (111), adsorption of CO, LEED, thermal desorption and EELS studies 3—38220
  Pt (111), adsorption of K, effect on O_2 adsorption, LEED, XPS, UPS, and work function meas. 3—18560
  Pt (111), adsorption of SO_2 an interaction of coadsorbed O and S 3—23181
  Pt (111), of O_2, thermal desorption, EELS and LEED study 3—38206
  Pt (111) and vicinal surfaces, adsorption of CO, He scatt. and work function meas. 3—38214
  Pt, adsorption of CO and O, saturation coverages nucl. microanal. and LEED 3—18559
  Pt, chemisorption and growth of Ag and Au monolayers AES, desorption, and LEED study 3—8334
  Rh (111), adsorbed CO, surface struct. at different surface sites, LEED anal. 3—57212
  Rh (111), adsorption of ethylene, (2×2)-C_2H_3 overlayer struct., LEED study 3—8336
  Rh (111) surface, interaction between CO and coadsorbed species, EHT calc. 3—23179
  Si (001) surface, limitation of LEED struct. determ. 3—13048
  Si (001)2×1, adsorption of H, angle-resolved EELS and elastic LEED study 3—38207
  Si (111), adsorption of H, surface struct. and cond. studies 3—51938
  Si (111) 7×7 surface at. arrangement, LEED patterns 3—42902
  Si (111)-(2×1) surface model, LEED calcs. 3—28204
  Si (111)(7×7), oscillatory intensity in He scatt., random distrib. of islands model 3—24081
  Si (111)(7×7) and (1×1) surfaces, comparison study 3—28403
  Si surface, (111), adsorbed Pd, surface superstruct., LEED-AES and ion scatt. spectra 3—51922
  Si(100) with adsorbed Ni, diffusion layer microstructure 3—13634
  Si(111), nitridation by N atoms, LEED, AES, EELS and thermal desorption studies 3—38218
  Sn film growth on Si surfaces, LEED and AES study 3—33606
  Ta (100) surface struct. and H adsorption, LEED and AES study 3—38177
  W (001) high density stepped surface, reconstructed domain struct., LEED study 3—23147
  W (001) surface barrier determ. by LEED 3—3291
  W (001) surface reconstruction, FIM and LEED obs. 3—38175
  W (001) surface reconstruction, FIM and LEED study 3—38176
  W (110), adsorption of S, AES, LEED, work function, and thermal desorption meas. 3—23180
  W(110), adsorption of Se, AES, LEED, work function and thermal desorption meas. 3—38216
  W{100}($\sqrt{2}\times\sqrt{2}$)R45°, surface struct. 3—23148
  ZnO nonpolar, stepped, and polar surfaces, interaction with CO, CO_2, and O_2 3—18561
  Zn(0001) surface, interaction with adsorbing SO_2, RHEED, LEED, AES study 3—47217
low gravity experiments *see zero gravity experiments*
low induction loss *see loss angle*
low-pass filters
  differential transducers of pressure pulsations, acoustic RC low-pass filter design 3—40584
  digital filters design and appl. on core meas. *(German)* 3—49986
  Korean basic spoken digit, automatic recognition, use of energy of vowel bandwidth *(Korean)* 3—22285
low-temperature physics *see cryogenics*
low-temperature production
  see also Joule-Thomson effect; magnetic cooling; refrigeration
  centrifugal He compressors development 3—30877
  cryoelectronic devices, refrigerator design principles 3—5799
  cryogenic systems, thermodynamic anal. 3—30869
  dilution refrigerator superfluid ^{4}He circulation, cooling behaviour rel. to circulation rate 3—36016
  dilution refrigerators, fully portable highly flexible systems for neutron scattering labs. 3—36017
  dilution refrigerators, large, design, construction, test results, appls. 3—36007
  heat pump, exergy anal. 3—49383
  nuclear demagnetisation refrigerator, with temp. control, appl. of microcomputer 3—315
  regenerator, for miniature cryorefrigerators, anal. and design 3—30868
  Stirling cryocoolers, cooling capacity, split cycle and non-ideal gas effects 3—318
  Stirling cryocoolers, design guidelines 3—40615
  Stirling cycle cryocooler, thermally activated, performance analysis and appl. 3—36002
  thermovac chamber, thermal system for 173-373K 3—30865
  ultralow temp. refrigeration, using ^{3}He-^{4}He mixture *(Japanese)* 3—45146
  He II-^{3}He mixtures, flow props., mutual friction implication for dilution refrigerator 3—38156
  He refrigerator system, with low-temp. centrifugal compressors 3—30878
  ^{3}He-^{4}He dilution refrigerator, heat exchanger design 3—49382
low-temperature techniques
  see also cryostats; refrigeration
  automated installations, interfacing TR-1894 printer to 15 VCM-5 and Elektronika DZ-28 computers 3—10814
  biological specimen freezing, SEM and TEM techniques appl. 3—58887
  carbon resistors RS-11-$^1/_4$w, appl. as low temp. thermometers 3—36010
  comminution of Zn, effect on acid dissoln. 3—24183
  critical current densities inductive meas., in thin-film superconductors 3—30894
  cryo-refrigerator, for adiabatic calorimeter, heat capacity meas., 13.8 to 350K 3—30860
  cryogenic Earth limb-scanning interferometer-radiometer, design for Earth radiation rejection 3—54218
  cryogenic enclosures, heat inleak detect., IR thermography technique 3—16363
  cryogenic transfer lines for toroidal fusion expt. 3—31829
  dewar, liq. N_2, superinsulated, separation of conduction and radiation components of heat transfer 3—32586
  digital thermometer, high resolution, using voltage controlled oscillator, for low temp. meas. 3—49360
  dilatometry at low temp., thermal expansion coeff. meas. using SQUID detectors 3—16368

low-temperature techniques continued
- emulsion particle internal structure obs. by cryo-scanning electron microscope 3—48098
- EPR resonator operating at liquid He temp., monaxial pressure generator 3—36048
- fatigue testing machine at liquid He temp., re-condensing type casting system, heat transfer and operational characts. 3—36012
- forced convection heat transfer from submerged surface to liquid helium 3—30875
- Fourier transform IR spectrometers, cryogenically cooled 3—5881
- Ge resistance thermometers, ruggedized, temp. shifts due to induced strain 3—35993
- glass capacitance thermometer for mK temp. range 3—36009
- glue specific heat capacity meas., in 4.2 to 18K range 3—45145
- high-pressure container for use at low temperatures in strong magnetic fields 3—36032
- indirect method, heating/cooling curve interrogation 3—30863
- instrumented Charpy impact test at cryogenic temps., new apparatus 3—36013
- irradiation facility at Kyoto University Reactor 3—35996
- laser Doppler anemometry appl. to cryogenic fluid heat and mass transfer 3—40617
- level-measuring calibration system with thermal stabilisation of transducer mounting 3—10850
- liquid He bath, vacuum pumped, temp. fluctuation influence on Ge bolometer *(French)* 3—10851
- liquid He transfer system, automated 3—324
- liquid-N$_2$ cold trap for vacuum systems, high efficiency 3—16369
- magnetic refrigerator, reciprocating, double acting, thermodynamical analysis 3—30872
- magnetodielectrics, mag. susceptibility meas. using FET transistor based cryogenic generator 3—49410
- metal mirrors in cyrogenic appl., design and fabrication 3—7112
- mK region thermometry using proximity effect in Cu clad Nb wire 3—36008
- multi-channel low temp. monitoring system, microprocessor based 3—16365
- mutual inductance bridge for magnetic relaxation measurements at low temperatures 3—16381
- neutral beam injector, prototype, for JT-60, cryopumps and cryogenic systems 3—36014
- NMR study of ferroelectric phase transitions 3—16376
- optical window with thermal contraction free seal, low temp. appls. 3—328
- pneumatic double diaphragm press, for diamond anvil cells 3—30871
- positron annihilation, on-line, perturbed angular correlation techniques 3—30867
- precision operational-amplifier mutual inductance bridge for cryogenic thermometry and susceptibility measurements 3—309
- pulsating cold generator for cryogenic temp. *(Russian)* 3—16366
- second-sound attenuation determ., meas. superfluid transition in ^{4}He 3—33531
- semiconductor laser element temperature vs. optical freq., transient heating behaviour, cooling method 3—37042
- semiconductor thermal resistance elements, checking by noise thermometry 3—49366
- specific heat meas., review 3—30862
- specific heat meas. in intense magnetic fields, using capacitance thermometry 3—16367
- spectroscopy, closed-cycle refrigerator solution cell 3—20903
- superconducting magnet losses meas., in pressurised ^{4}He, using calorimetry 3—35999
- superconductivity detection, oscillator method using EM penetration depth 3—43309
- superconductors, magnetisation measurements, automatic device 3—40645
- temperature measurement device based on relax. oscillator, unijunction transistor temp.-sensitive element 3—5796
- thermal system for thermovac chamber, design aspects 3—16364
- thermocouple, Chromel-Alumel, use under conditions of rapidly changing thermal processes from −196 to 900°C 3—16362
- thermometer, ultralow temp., appl. to solid ^{3}He *(Japanese)* 3—45141
- thermometers, C glass, cycled at low temps. under high mag. fields, stability resistance 3—5787
- thin films, thermal props. meas. at low temps. by heat pulse method 3—1942
- US meas. at ultralow temps. 3—1887
- Al alloy-ceramic feedthrough 3—36028
- C resistance thermometer with fast response below 10 mK 3—40602
- H$_2$, liquid, cryogenic target in streamer chamber 3—50138
- He Dewar for liquid N$_2$ containment *(Portuguese)* 3—45147
- He, flow tube, gas shielded, efficient design 3—10849
- He pool-boiling heat transfer from small monolithic Cu stabilisers 3—30874
- He vapour pressure thermometer, using piezoresistive transducer 3—20858
- ^{4}He, superfluid, forced-convective heat transfer 3—33532
- N$_2$, liquid, rapid cooldown of metals, thin insulating layer effect obs. 3—32591
- Pt resistance thermometer, two-point calibration method, 4.2 to 273K 3—40601

LPE *see liquid phase epitaxial growth*

LS coupling *see Russell-Saunders coupling*

LSA *see limited space charge accumulation*

LSI *see large scale integration*

lubrication
see also friction
- bronze, pitting limit, influence of lubrication 3—39258
- composite materials, self-lubricating, for extreme environmental appls. 3—24373
- friction and wear test machine, specimen metallographic structure effect 3—29285
- gas lubrication, large-scale simulation of glows 3—2107
- gaseous lubricant, dynamic coeff. determ. 3—43966
- homogeneous random surface roughness, mean Reynolds eqn. 3—2009
- inlet valve, effect on ultimate vacua above integrated pumping groups 3—40628
- journal bearings, turbulent and inertia effects 3—37431
- lung, boundary lubrication imparted by pleural surfactants and their identification 3—29597
- magnetic disc, fluorocarbon lubricant film thickness determ. by ESCA 3—29341

lubrication continued
- microplanar squeeze films between rough rectangular plates 3—23132
- planar stagnation flow, steady planar extension with lubricated dies 3—27463
- plane strain compression test, expt. study of friction test rel. to transfer layers in boundary lubrication 3—34600
- pneumatic linear sliding bearings fabrication technology 3—35971
- point contact elastohydrodynamic lubrication, surface roughness effects 3—46509
- polyethylene-terephthalate monofilaments in liq. media, friction and adhesion determ. 3—29192
- Reynolds equation for hydrodynamic lubrication 3—2127
- rolling, hydrodynamic moment theory 3—42692
- slider bearing anal. with visco-elastic lubricant 3—46500
- sliding contact, concentrated, simple lubricate effect on deform. and wear 3—53243
- steel, pitting limit, influence of lubrication 3—39258
- steel ball, model rough surfaces in elastohydrodynamic lubrication 3—14745
- steel-steel system, wear rel. to physicochem. reactions 3—34496
- viscoelastic liq. lubrication flow, parallel surface approach 3—27554
- Fe-metal contacts, interfacial adhesion energy, segregation effects, rel. to thin film lubrication expts. 3—53355
- Mo-MoS$_2$, hot pressed powder, self-lubricating, friction and wear characts. 3—47967

Luder's bands
- parameter determ., expt., from load-elongation data 3—29237
- steel, dual-phase, initial yielding, role of internal stress 3—47910
- steel, low C, sheet, Luder's strain, effect of solutes 3—34398
- steel, mild, Luder's band fronts 3—43928
- steel, temper rolled strip, discontinuous yielding, Luder's bands nucleation and propagation 3—53164
- Al, pure ultrafine-grained, Luders deform. 3—24305
- Al-Mg-Si, plastic instability, investigation using torsion testing 3—43931
- Al-Mg-Si alloy, loaded in torsion, Portevin-Le Chatelier effect 3—14649
- Cu-Al martensitic alloys, single crystal, deform. behaviour 3—43824
- W wires, K-Al-Si doped, plastic instability in torsion 3—9136

Ludwig-Soret effect *see diffusion in solids*

luminance *see brightness*

luminescence
see also cathodoluminescence; chemiluminescence; electroluminescence; fluorescence; fluorescent screens; ionoluminescence; luminescence of gases; luminescence of liquids and solutions; luminescence of solids; luminescent devices; phosphorescence; phosphors; photoluminescence; sonoluminescence; stimulated emission; superradiance; thermoluminescence; triboluminescence
- conference, Leningrad, USSR (April 1981) 3—35766
- plant leaf, luminesc. of cholorphyll, differences for upper and lower sides 3—34794
- synchronous luminesc. spectroscopy, correl. techniques for scan param. selection 3—49465
- temporal characteristics in nsec. regime, meas. apparatus 3—49467
- O$_2$+anthraquinone, luminesc. generation and quenching 3—11872

luminescence chambers *see scintillation chambers*

luminescence of gases
- 9,10-anthraquinone, gas phase, fine-struct. luminesc. spectrum 3—37607
- free complex mol. vapours, luminesc. with elec. excitation 3—36796
- ketone vapours, aromatic, picosec. interconversion 3—53430
- pyridine, vapour, phosphoresc. 3—36804
- Ar/CH$_4$ scintillating drift chambers, emission process nature 3—11603
- SO$_2$, gas phase luminesc. intensity and lifetime, mag. field effects 3—17325
- SiH$_4$(-SiF$_4$), IR multiphoton decomposition, luminescence detection of SiH$_2$ 3—41630

luminescence of inorganic solids
- alkali halide: In$^+$(Tl$^+$)(Sn^{2+}), at. photoionisation cross section, determ. from intracentre luminesc. quantum efficiency change 3—26718
- alkali halide:Ga$^+$(Ge^{2+})(In$^+$)(Sn^{2+})(Tl$^+$)(Pb^{2+}), impurity excited state struct., polarised luminesc. study 3—38871
- alkali halide, U activated crystallophosphors, synthesis and luminescent props., matrix prop. effects 3—52838
- alkali halide crystals, photoionisation of like ions, excitation in A and C absorpt. bands 3—47705
- alkali halides, AsO$_2^-$ impurity centres, optical study 3—23981
- alkali iodides, luminescence from free and self trapped excitons 3—57975
- alkaline earth atoms+halogen cpds., chemiluminescence and reaction kinetics 3—53411
- alkaline earth oxides, Li$^+$(Na$^+$) ion implantation defects, EPR, luminesc. and optical absorpt. study 3—2584
- alkaline earth sulphides:Bi, luminescence characteristics 3—43581
- amazonite, luminesc. props. 3—8894
- chalcogenide glasses, absorption edge, photoluminescence and photoconductivity, review *(Japanese)* 3—28900
- diamond:Si, cathodoluminescence, annealing temp. depend. 3—8891
- diamond, ion-implanted, point defect production and interaction 3—42635
- diamond, synthetic, luminescence study, impurity states 3—47719
- fluoroberyllate:Nd^{3+}(Eu^{3+}) glass, computer simulated struct., comparison with optical spectra 3—33128
- Ga$_x$In$_{1-x}$P, LPE growth on GaAs(100), lattice mismatch and photoluminescence 3—8356
- GaN highly excited semiconductors, relax. processes 3—14351
- glass:Eu^{3+}, homogeneous spectral line broadening, luminesc. study 3—28899
- glass structure determ., review of recent developments 3—33114
- ice purified, UV and visible emissions, pulse radiolytic studies 3—14359
- III-V semiconductors, photoluminescence spectra and meas. *(French)* 3—28882
- ionic crystals, short wave luminesc., excitation by nanosecond electron beam probe *(Russian)* 3—57979
- literature survey in Soviet Union 3—38880
- phosphate glass:Nd amplifiers, spectral characts. of excitation energy extraction 3—27064
- phosphors, cathode ray luminesc. efficiency improvement using V$_2$O$_3$ additive 3—47717
- photoluminescent crysts., mechanoluminescence spectra 3—19215
- polyacetylene, IR photoluminescence, CIS fraction effects 3—8876
- quartz:GeO$_2$, luminescence parameters 3—38896
- quartz, cathodolum. colours, causes 3—14361
- quartz, synthetic, thermoluminescence, high-temp. study 3—28908

luminescence of inorganic solids continued

- quartz glass, photoluminescence peaks, neutron and gamma radiation effects 3–47704
- quartz thermoluminescence, glow peaks kinetics 3–8892
- quartz thermoluminescence, Z 3–34156
- rare earth cpds., RWO_4Cl, (R=Eu, Tb, Dy, Ho, Er, Tm, Y) cryst. struct., luminescence and Raman spectra 3–37881
- rare earth halo tungstates, RWO_4Cl (R=La to Sm), struct., luminescence and Raman spectra 3–33204
- rare earth ions, luminesc. characts., radiative and nonradiative transitions 3–38867
- recombination induced defect form., conf., Urbana-Champaign, USA (June 1982) 3–54573
- ruby, irrad., thermostimulated luminesc. 3–3834
- ruby, optically excited, phonon trapping and generation, luminescence study 3–28898
- ruby, R-line luminescence shift under press. *(Russian)* 3–8873
- semiconductor, direct-gap, picosec. spectroscopy of excitonic mols. and electron-hole plasma 3–38908
- semiconductor, donor-acceptor pair transitions under reson. capture of highly excited electrons 3–14350
- semiconductor, picosec. relax. processes, photolum. correl. technique 3–38907
- semiconductor staggered-lineup heterojunctions as sources of tunable below-gap radiation 3–38915
- semiconductors, amorphous, photoluminescence, trapped exciton model 3–14347
- semiconductors, cathodoluminescence excitation using EM-5 electron microscope 3–19206
- semiconductors, exciton luminesc., laser constriction 3–38878
- semiconductors, luminesc. in conditions of optical cooling of nucl. spin system 3–38879
- semiconductors, luminescence quenching by nonradiative tunnelling 3–52848
- semiconductors, picosecond and subpicosecond luminesc. techniques 3–8859
- silica glass:Ti(Eu)(Ce), absorption and fluorescence spectra, melting and heat treatment effects 3–34140
- silicate laser glasses, spectral-luminesc. and lasing characts., water effect 3–27062
- solid-state lasers active media efficiency enhancement, luminesc. sensitisation 3–6989
- thiogallates, Er doped, photolum. and cathodolum. props. 3–3780
- triphenyl cpds., crysts., triboluminesc. spectra 3–28911
- tunnel diodes, radiative recomb. allowing for impurity scatt. 3–19198
- zeolites, photoluminescence spectra, Fe impurity effects 3–43582
- ZnS:Mn, La, physical study of phosphors, trap-depth calcs. 3–43608
- Ag spheroids, radiative decay of surface plasmons 3–24027
- Ag-As_2S_3 system, electroluminescence excitation of Ag diffusion 3–28169
- AgBr photoemulsion microcrystals, intrinsic photoluminesc. bands 3–3793
- AgBr photographic-emulsion microcrystals, long-term changes in luminesc. centres 3–3791
- AgBr, recombination radiation, ODMR studies 3–57819
- AgBr:Ca^{2+}, Cd^{2+}, resonant exciton trapping at impurity states 3–57290
- $AgBr_{1-x}Cl_x$, excitons and phonons, reson. Raman scatt. and luminesc. study 3–57912
- AgCl photographic emulsion, photoluminesc. charact. in prescence of AgI and 1-phenyl-5-mercaptotetrazole *(Russian)* 3–20939
- AgCl, recombination radiation, ODMR studies 3–57819
- $AgCl_{1-x}Br_x$ 3–57819
- $AgGaS_2$, single cryst., edge emission, cathodolum. study 3–24026
- $AgGaS_2$, thermostimulated currents, thermoluminescence, 10-270K 3–57984
- $AgInSe_2$, photoluminescence and photoconductivity *(Russian)* 3–43631
- (Al,Ga)As, luminesc. centre form. during pulsed laser irrad. 3–47699
- Al-insulator-Au tunnel sandwich, rear light emission by inelastic tunnelling 3–19197
- Al-SiO_2-Si electron injector structs., surface plasmon polariton mediated luminesc. 3–52854
- AlAs-AlGaAs-GaAs quantum well heterostructures, induced disorder effects on luminescence 3–18519
- AlGaAs heterostructures, electroluminescence photon yield study 3–3823
- AlGaAs LPE heterostructures, luminesc. efficiency improvement by CW laser annealing 3–47700
- (AlGa)As-GaAs DH, MBE grown, minority carrier props. effect of As species 3–41834
- $Al_{0.22}Ga_{0.78}As$, laser induced recombination centers, photoluminesc. measurements 3–38857
- $Al_{0.28}Ga_{0.72}As$, shallow acceptors, photoluminescence study 3–43590
- $Al_{0.5}Ga_{0.5}As$-$In_xGa_{1-x}As$ heterostructs. lattice mismatch effects on radiative recombination 3–38926
- $Al_{1-x}Ga_xAs$, organometallic VPE layers, improved photoluminesc. using AsH_3 source gettering technique 3–34235
- $Al_xGa_{1-x}As$, luminescence and minority carrier transport 3–28889
- $Al_xGa_{1-x}As$: Si, MBE growth, effect of H_2 on elec. and optical props. 3–51973
- $Al_xGa_{1-x}As$:Si, doped and undoped, MBE grown, elec. and optical props., effect of growth conditions and alloy comp. 3–43596
- $Al_xGa_{1-x}As/Al_yGa_{1-y}As$ visible lasers, contaminated, MOCVD grown, elec. and optical characts. 3–41871
- $Al_xGa_{1-x}As/Al_yGa_{1-y}As$ multiquantum wells, pulsed MBE grown, photoluminesc. spectra 3–52823
- $Al_xGa_{1-x}As$/GaAs, weak luminesc. spectra, meas. by photoemission technique 3–3787
- AlGaAsSb, on GaSb, low temp. LPE growth conditions and props. 3–42955
- $(Al_xGa_{1-x})_yIn_{1-y}As$, lattice matched to InP, MBE growth and elec. and optical props. 3–24132
- $Al_xGa_{1-x}N$ epitaxial film, photoluminescence and cathodoluminescence 3–28904
- $Al_xGa_{1-x}N$ MBE films, struct., elec. and optical props 3–8355
- $Al_xGa_{1-x}N$:Zn, photoluminescence and Raman scatt. 3–43625
- AlGaSb, on GaSb, low temp. LPE growth conditions and props. 3–42955
- AlN epitaxial film, cathodoluminescence after irrad. with fast electrons 3–14360
- α-Al_2O_3, recombination luminescence and energy transfer 3–52842
- Al_2O_3, VUV luminescence 3–24001
- Al_2O_3-Cr_2O_3, dynamic Zeeman effect at microwave freq. 3–34077
- Al_2TiO_5, pure and transition metal doped, luminesc. and optical absorption, rel. to solar energy appl. 3–52816

luminescence of inorganic solids continued

- As chalcogenides, amorphous and cryst., photoluminescence total light decay, excitation energy depend. 3–38892
- As_2S_3, amorphous, picosec. radiative and nonradiative recomb. 3–38914
- As_2S_3 glass, photoluminescence and competing nonradiative processes 3–14348
- As_2Se_3, cryst. and glassy, photoluminescence, excitation energy depend. 3–38893
- As_2Se_3 intreous films, chem. modification of elec., photoelec., and optical props. 3–23391
- BaF_2 crystals, exciton form. during interaction of radiation-induced defect 3–3795
- BaFCl:Eu luminescence anal. 3–3794
- $BaMnF_4$, pyroelectric antiferromagnet, exciton and magnon-sideband absorption 3–57970
- $BaMnF_4$, two-dimensional antiferromag., absorption and luminesc. spectra 3–57953
- $Ba(Pt,Ni)(CN)_4$, delocalised and localised electronic states luminesc. and IR study 3–47694
- $Ba(Pt,Pd)(CN)_4$, delocalised and localised electronic states luminesc. and IR study 3–47694
- $Ba(Pt(CN)_4).4H_2O$, low temp. photoluminescence, grinding effects 3–43583
- $BaPt(CN)_4.4H_2O$:Ni, doped and undoped, emission spectra and excited-state lifetimes, 10 to 50K 3–47693
- BaR_2F_6:R'^{3+} (R,R'=Y, Dy, Ho, Er, Tm, Yb, Lu) single cryst., prep., spectroscopy and stimulated emission 3–52919
- BaS phosphors, prep., struct. characts., TL glow curves 3–52817
- BaS:Cu, Bi phosphor, radiolum., radiative recomb. phenomena, thermolum. comparison 3–14356
- $BaYb_2F_8$:Er^{3+} crystals, multistage sensitisation of $^4F_{9/2}\rightarrow{}^4I_{112}$ and $^4F_{9/2}\rightarrow{}^4I_{13/2}$ lasing transitions 3–38904
- BeF_2:Gd^{3+} glass, vibronic fluoresc., polarised Raman, and IR spectra 3–38895
- BeO, pure, Li-Al, B-doped monocrystals and powder samples *(Russian)* 3–57966
- BeO single cryst., ultrasoft X-ray irrad., absorption spectra and luminescence 3–28897
- BeO, thermostimulated luminescence, spontaneous electron emission *(Russian)* 3–3839
- $Bi_4Ge_3O_{12}$, calorimetric and fluorescent props., EM calorimetry appl. 3–52853
- C:H amorphous films, plasma deposition and optical props. 3–38251
- $CaCO_3$:Mn^{2+}, fluorescence, lifetime and quenching 3–52830
- $CaCl_2$:Eu^{2+} single crystals of low symm., luminesc. of Eu^{2+} centres 3–34141
- $CaCl_2$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3–43629
- CaF_2 crystals, exciton form. during interaction of radiation-induced defects 3–3795
- CaF_2, with alkaline impurities, luminesc., thermal stability, and photoconversion of perturbed colour centres 3–38873
- CaF_2:$Ce^{3+}(Eu^{3+})(Dy^{3+})$, vacuum UV excitation spectra of luminescence 3–14320
- CaF_2:Er, transverse Zeeman effect, optical absorpt. and fluoresc. spectra 3–3691
- CaF_2:Eu^{2+},Ho^{3+}, fluorite, interaction and luminesc. of activator ions *(Ukrainian)* 3–23995
- CaF_2:$Eu^{2+}(Sm^{2+})$, reson. electron-phonon interaction, luminesc. study 3–38872
- CaF_2:Mn, X-irrad., thermally stimulated luminesc., glow curve anal. 3–43638
- CaF_2:Nd(Ce), Zeeman IR spectra, optical absorption and fluorescence meas. 3–19124
- CaO:Tb, Ce, phosphor system, sensitised electrolum. 3–8885
- CaS, Ce activated, polycryst., thermolum. due to intrinsic point defects 3–3832
- CaS:Cu,Ce phosphors, photoluminesc. and electroluminesc. 3–47683
- $CaSO_4$:Dy, thermolum. spectra and optical absorption 3–19209
- $CaSO_4$:Dy phosphors, glow curve characts., dosimetry appl. 3–43641
- $Ca_{1-x}Sr_xS$:Ce and CaS:Ce phosphors, preparation and cathodoluminesc. 3–52855
- $Ca_{1-x}Sr_xS$:Eu and CaS:Eu redo phosphors, prep. and cathodluminesc. 3–38925
- $Ca(Tb)_3Ga_2Ge_3O_{12}$ luminescent garnets with Tb on dodecahedral lattices sites 3–28886
- $CaWO_4$:Eu^{3+}, energy transfer between ions, obs. and calcs. 3–14336
- Cd-GaSb solid solutions, retrograde solubility, mechanical and optical study 3–2805
- $CdBr_2$:Eu, optical props. and EPR 3–3526
- $CdCl_2$:Ni^{2+}, optical absorpt. and emission spectra 3–23984
- $CdCr_2Se_4$, mag. semicond., photoluminescence spectra under laser excitation 3–43619
- $CdGa_2S_4$, connection between emission centres and intrinsic defects 3–19194
- $Cd_{1-x}Hg_xCr_2Se_4$ solid soln., cathodolum., temp. depend. 3–3829
- CdI, low temp. luminescence study *(Russian)* 3–47708
- CdI_2:Eu, optical props. and EPR 3–3526
- $Cd_{1-x}Mn_xSe$, mag. polaron contrib. to donor bound exciton, photoluminesc. study 3–57972
- $Cd_{1-x}Mn_xTe$, exciton transfer between Mn ions, photoluminesc. study 3–3796
- $Cd_{1-x}Mn_xTe$, photoluminescence study 3–3800
- $Cd_{1-x}Mn_xTe$, $x>0.4$, absorpt. edge pinning 3–14329
- CdS, biexcitons or drop embryos in luminesc. 3–47269
- CdS, Cd interstitial electron states, luminescence study 3–28306
- CdS ceramic, X-ray luminesc. *(Russian)* 3–3874
- CdS crysts., acoustoinjection luminesc. 3–47716
- CdS, deformed at low temp., luminescence 3–3812
- CdS, dispersion in exciton-transition region 3–8791
- CdS, donor-acceptor luminescence depend. on elec. field *(Russian)* 3–19195
- CdS edge photoluminescence band *(Russian)* 3–24013
- CdS, highly excited, picosec. spectroscopy, free carrier-exciton system dynamics 3–38910
- CdS, laser irrad., structural defects, recombination radiation spectra 3–52844
- CdS, laser irradiated, subthreshold defect formation, photoluminesc. and reflectivity study 3–18341
- CdS, orange luminescence struct. 3–38897

luminescence of inorganic solids continued
CdS, photoluminesc., edge emission depolarization under intense laser excitation 3—38887
CdS, polariton energy transport and green edge luminesc. at low temps. 3—34144
CdS, radiative recomb. anisotropy in cpds. excited with unpolarised light 3—38861
CdS, time resolved luminescence at high excitation 3—34138
CdS, ultrasonic Lamb wave irrad., point defect form., exciton luminescence study 3—14363
CdS:Ag(Cu), orange luminescence struct. 3—38897
CdS:Ag(Ni), impurity diffusion, two-sample luminescence study 3—18513
CdS:Cl, luminescence, recombination flows *(Russian)* 3—24012
CdS:Cu, Cl activated phosphors, luminescent centre form., photoluminescence study 3—43606
CdS:Cu, photoacoustic and photoluminesc. spectra 3—2684
CdS:Cu,Cl, quenched phosphor, isochronal annealing, photochem. meas. 3—52846
CdS:N_2, acoustic luminescence study *(Russian)* 3—24031
CdS:Te, low temp. photoluminescence, grinding effects 3—43583
CdS(Se), luminesc. of high density electron-hole plasma 3—43603
n-CdS(Se) photoelectrode, time resolved photolum., surface state influence 3—38911
CdS(Se), photoluminescence and dielec. losses, vacuum annealing effects 3—52825
CdS(Se), time resolved spatial expansion of electron-hole plasma 3—38912
$CdS_{1-x}Se_x$, recombination emission under high excitation levels 3—43580
$CdS_{1-x}Se_x$ solid solns., localised excitons, luminesc. study 3—14345
CdS_xSe_{1-x} electrodes, photoluminescence and electroluminescence, appl. to photoelectrochem. cells 3—34153
n-CdS_xSe_{1-x} graded electrodes, electron-hole pair separation efficiency mapping, luminescent props. 3—47686
CdSb-GaSb solid solutions, retrograde solubility, mech. and optical props. 3—2805
CdSe, aged electrodeposited photoelectrodes in liq. junction solar cell, hot electron luminesc. obs. 3—29394
CdSe, biexcitons or drop embryos in luminesc. 3—47269
CdSe(Te), crystal growth from soln. and photoluminesc. *(Japanese)* 3—39020
p-$CdSiAs_2$, photoluminescence, carrier density effects 3—8879
CdTe, edge luminesc. under high-power optical excitation 3—38901
CdTe, exciton diffusion, reson. self-absorpt., luminesc. spectrum profiles 3—19189
CdTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3—33441
CdTe single crysts., streamer discharges 3—8868
CdTe:Ag (Cu), excited states, photoluminescence and IR absorption study 3—8450
CdTe:Cu(Li), impurity distrib., spectrally resolved cathodoluminesc. in SEM 3—43636
CdTe:In, solution-grown, cathodoluminesc., effect of Cd-vapour and Te-vapour heat treatments 3—3826
CdTe:In(Cl), ion implanted, heat treated, defect reactions, cathodolum. and pulse laser annealing studies 3—56932
Cs_3Bi_2 $(Sb_2)Cl_9$, luminescence props. and α-β transformation 3—47692
$Cs_3Bi_2Br_9$, optical props., 2 to 10 eV, and photocond. meas. 3—43560
CsBr, anion and cation exciton decay into anion and cation defects 3—3083
CsBr, excitons, luminesc., self-localisation, and decay to defects 3—38875
$CsCaCl_3$:Pb^{2+}, luminescence in cryst. fields of various symm. *(Russian)* 3—43629
$CsCaCl_3$:Sn^{2+} crystals, luminesc. props. 3—19183
CsF, F′-centres, form. and bleaching characts., optical props. 3—2551
CsI:In, Tl, optical gain meas., amplified spontaneous emission study 3—23974
CsI(Na) scintillator, cathodoluminesc. and thermoluminesc. meas. *(Russian)* 3—3828
$CsMgCl_3$:V^{2+}, single cryst. absorpt. and emission spectra 3—19173
$CsMnCl_3$ crystals, antiferromag., exciton migration, luminesc. and excitation spectra *(Russian)* 3—3073
$CsMnCl_3.2D_2O$, isotope effects in multiphonon relax., optical spectra study 3—38826
$Cs_2UO_2Cl_{4-x}Br_x$, migration and trapping, electronic energy transfer 3—3790
$CsUO_2(NO_3)_3$, luminescence quantum yield, 220-250 nm 3—47706
$CsVCl_3$, single cryst. absorpt. and emission spectra 3—19173
Cu, hole generation during dislocation decay, mechanoluminescence *(Russian)* 3—52859
Cu-Ga(In), metal clusters, vaporisation, laser induced fluoresc. study 3—32125
CuCl, biexciton lineshape, at low temp., Bose-Einstein statistics *(French)* 3—43579
CuCl films, excitonic molecules, Bose-Einstein statistical props., optical study 3—52041
CuCl, highly excited, picosec. time-resolved spectroscopy 3—38909
$CuGa_{0.7}In_{0.3}Se_2$-ZnSe heterojunction, electroluminesc. and I-V characteristics meas. 3—3821
$CuGaSe_2$ crystals, bound exciton low-temp. luminesc. 3—14344
Cu_2O, paraexciton, stress depend., luminescence study 3—47271
Cu_xS-CdS solar cells, assessment using cathodoluminesc. 3—58527
Eu complex, $Na_3[Eu(oxydiacetate)_3].2NaClO_4.6H_2O$, chiroptical luminesc. spectra of Eu^{3+} 3—3788
$Eu_xY_{1-x}P_5O_{14}$:Eu^{3+}, energy transfer between ions, obs. and calcs. 3—14336
$Ga_{1-x}Al_xAs$ epitaxial layers, Al conc., Auger spectroscopy, ion microprobe anal., photoluminescence meas. 3—23993
$Ga_{1-x}Al_xAs$, exciton emission, luminescence study 3—52850
$Ga_{1-x}Al_xAs$, MBE grown, comp. anal. by atomic absorpt. spectroscopy and X-ray diffr. and photoluminesc. props. *(French)* 3—52954
$Ga_{1-x}Al_xAs$:N, ion-implanted, x=0.2-0.8, photoluminescence studies *(Chinese)* 3—34132
$Ga_{1-x}Al_xAs$-GaAs quantum well wires, MBE growth and cathodoluminesc. props. 3—3825
$Ga_{1-x}Al_xAs$-GaAs quantum well heterostructs., MOVPE growth 3—3965
$Ga_{1-x}Al_xAs$-GaAs solar cell, role of photoluminesc. in efficiency 3—58539
$Ga_{1-x}Al_xP$, homogeneous, temp. difference LPE growth and photo- and electro-luminesc. meas. 3—39051
$Ga_{1-x}Al_xP$/GaP p-n structures, cathodoluminescence from p and n regions 3—8890

luminescence of inorganic solids continued
GaAs, 0.8 eV luminesc. band, annealing behaviour, As_{Ga} antisite detect. 3—28884
GaAs, annealed, 1.35 eV photoluminesc. emission centre, diffusion coeff. meas. 3—23997
GaAs, antisite defect form. during plastic deform., EPR and photoluminescence study 3—2553
GaAs, collisional broadening of exciton luminesc. and spin-relax. time 3—28277
GaAs, dark line defects from. due to dislocation-point defect interactions 3—42615
GaAs, deep donor band in photoluminesc. spectrum 3—3805
GaAs, dislocation glide, recombination enhanced, cathodoluminesc. microscopy study 3—42609
GaAs doping superlattices, tunable electrolum. 3—14357
GaAs, EL2 emission band, photoluminescence and photoluminescence excitation spectroscopy 3—43589
GaAs, epitaxial, photoluminescence study of exciton-ionised donor complexes 3—3806
GaAs epitaxial films, laser irrad., photoluminesc. meas. 3—34147
GaAs, heavily doped, photoluminescence edge calc. 3—38860
GaAs, highly excited, picosec. spectroscopy, free carrier relax. in continuum states 3—38910
GaAs highly excited semiconductors, relax. processes 3—14351
GaAs, hot-electron photoluminescence, spectrum and polarisation 3—19191
GaAs, impurity incorporation during MBE growth, optical and elec. props. 3—8378
GaAs, ion implanted, pulsed laser annealed, photolum. 3—57977
GaAs LEC crystal, undoped, semi-insulation mech., role of dislocations 3—22898
GaAs, LEC grown, deep levels and dislocations, photoluminescence study 3—43086
GaAs, MBE grown, exciton-like features in low temp. photoluminescence spectra 3—3804
GaAs, MBE growth of undoped semi-insulating layers, elec. and photoluminesc. props. 3—39033
GaAs MBE layer, capless and Si_3N_4 encapsulated annealing, photoluminescence and DLTS study 3—8441
n-GaAs, metallic impurity donor band, elec. cond., Hall effect, luminescence 3—23313
n-GaAs, nonradiative recomb., electron probe investigation 3—18773
GaAs p^+-p^0-n^0-n^+ structs., minority carrier diffusion length, electron-probe-induced-current meas. 3—18722
GaAs, p-conductivity study, intrinsic double acceptor evidence 3—3178
GaAs, photoluminescence spectra and meas. *(French)* 3—28882
GaAs, photoluminescence under intense laser excitation 3—52851
GaAs, picosecond dynamics of optical gain due to electron-hole plasma, under near band gap excitation 3—47688
GaAs, residual double acceptor, IR absorption, photoluminescence and Hall effect meas. 3—38334
GaAs, semi-insulating substrate, spatially resolved cathodolum. study 3—8888
GaAs v-channelled substrate inner stripe lasers, photolum. study on effects of Te doped cladding layer 3—27056
GaAs, VPE grown using novel $AsCl_3$ reactor, photoluminescence, elec., DLTS meas. 3—19276
GaAs VPE layer, elec. props. improvement by cooling HCl liq. source 3—23514
GaAs, Z *(Russian)* 3—38889
GaAs:Al, diffusion through surface layers, X-ray and photoluminescence study 3—8258
GaAs:Be MBE layers, impurity and defect levels 3—3102
GaAs:C, MOVPE grown, photoluminescence study 3—43752
GaAs:C(Zn)(Si)(Ge), shallow acceptors, luminesc. study 3—52828
GaAs:Cr, Cr-related intracentre photolum. 3—23994
GaAs:Cr, impurity trigonal sites, model for luminescence lines 3—42624
GaAs:Cr, no-phonon photoluminescence spectra, energy level scheme 3—8877
GaAs:Cr, photolum., models 3—19171
GaAs:Cr, semi-insulating, nonuniformity and dislocations, photoluminesc. intensity study 3—38858
GaAs:Cr, semi-insulating, thermal conversion, cathodoluminesc., photoluminesc. and SIMS study 3—43635
GaAs:Cr, Zeeman spectroscopy meas. of absorption and luminescence lines 3—8807
GaAs:Cr^{2+}, vibronic coupling in trigonal field, luminesc. spectra 3—33685
GaAs:Cu, deep impurity centres, Jahn-Teller effect suppression under uniaxial press. 3—28307
n-GaAs:Cu, electron irrad., photoluminesc. meas. 3—3798
GaAs:Cu, electron irrad., defect interaction with Cu atoms, photoluminescence study 3—37949
GaAs:Er, ion implanted, luminescence line profile 3—19187
GaAs:Ge, doped and undoped, MBE grown, elec. and optical props., effect of As vapour species 3—43595
GaAs:Ge, homojunction interfaces, carrier compensating centres, luminescence and DLTS study 3—3273
GaAs:O, deep level, photoluminec. study 3—14331
GaAs:S, Te, dislocation-point defect-dopant interaction, effects on recombination processes 3—37951
GaAs:S, VPE grown, doping anisotropy, Hall effect and photoluminescence studies 3—42631
GaAs:Si, 1.4 eV Si-related emission, luminesc. characts. 3—43613
GaAs:Si, MBE grown, cryst. orientation depend. of Si autocompensation, photolum. meas. 3—13650
GaAs:Si p-n structures, radiative recomb. characts., effect of In impurities 3—38920
GaAs:Si^+, ion implanted, TEM damage studies and elec. profile meas. 3—47006
GaAs:Sn, MBE growth, Sn doping using $SnSe_2$, photoluminesc. studies 3—37941
GaAs:Te epilayers, luminescence study of Te donor 3—43621
GaAs:Ti, ion implanted, photoluminescence spectra 3—43626
GaAs-$Al_xGa_{1-x}As$ DH, photolum. spectra, anomalous bands 3—3816
GaAs-$Al_xGa_{1-x}As$ heterostructure, photo-EMF, forward current flow mechanism, electrolum. study 3—18774
GaAs-$Ga_{1-x}Al_xAs$ heterostructures, quantum well and modulation doped, MOVPE growth 3—43271
GaAs-$Ga_{1-x}Al_xAs$ quantum wells, elec. field effect on luminescence 3—34143

luminescence of inorganic solids continued
  $GaAs_{0.6}P_{0.4}$ epilayer photoelectrochemical cells, stabilisation and luminesc. props. 3–14958
  $GaAs_{1-x}P_x$, organometallic VPE grown, optical and SEM anal. 3–43753
  $GaAs_{1-x}P_x$, photoluminescence and Raman scatt. 3–43625
  $GaAs_{1-x}P_x$:N, luminescence decays of bound excitons 3–52849
  $GaAs_{1-x}P_x$:N, thermal quenching of no-phonon emission bands and phonon sidebands 3–19192
  $GaAs_{1-x}P_x$:N, transfer of excitons bound to N traps, time resolved luminesc. study 3–47689
  $GaAs_{1-x}P_x$:N, Zn epitaxial layers, cathodoluminesc. doping level influence 3–8889
  $GaAs_{0.11}P_{0.89}$(GaP):N, Te, Zn LEDs, yellow and green, current dependent electroluminescence decay and degradation behaviour obs. 3–3822
  $GaAs_{1-x}P_x$–$GaAs_{1-y}P_y$ superlattices stimulated emission and photoluminescence 3–43564
  GaAs:Si, implanted, high temp. thermal and laser annealing, luminesc. data *(Russian)* 3–38888
  $Ga_{1-x-y}In_xAl_yAs$, LPE growth on GaAs and near IR optical props. 3–3973
  $Ga_{0.47}In_{0.53}As$ film, MBE grown, optical quality 3–19273
  $Ga_xIn_{1-x}As$, n- and p-type, on InP substrate, optical, crystallographic, and transport props. 3–43597
  GaInAsP DH laser material assessment by photoluminesc. 3–22058
  GaInAsP VPE layer, elec. props. improvement by cooling HCl liq. source 3–23514
  GaInAsP-InP, lattice-matched, dopant conc., photoluminesc. study 3–52827
  $Ga_xIn_{1-x}P$, electron-phonon interaction effects, refl. and photoluminesc. spectra 3–3764
  GaN epitaxial film, cathodoluminescence after irrad. with fast electrons 3–14360
  GaN epitaxial films, VPE growth on sapphire, rel. to nonuniformity of cathodoluminesc. emission 3–57981
  GaN films, reactive MBE growth on AlN-sapphire substrates and elec. and luminescent props. 3–47771
  β-Ga_2O_3:Cr, thermoluminescence study *(Russian)* 3–43642
  GaP, bright dislocation halos, dislocation-point defect interactions 3–42615
  GaP, ion implanted, diagnosis by Raman scatt. and photoluminescence techniques 3–42628
  GaP LED's, IR to visible up-conversion 3–38917
  GaP, ODMR study of antisite related luminescence 3–19185
  GaP thermally-stable two-color light source 3–37148
  GaP, zero-phonon recombination spectra of donor-acceptor pairs 3–28891
  GaP:Er, ion implanted, luminescence line profile 3–19187
  GaP:Fe, photoluminesc. excitation spectroscopy 3–43614
  GaP:N, Te, Zn, impurity related radiative recombination 3–47701
  GaP:N, thermal quenching of no-phonon emission bands and phonon sidebands 3–19192
  GaP:Ti, ion implanted, photoluminescence spectra 3–43626
  GaP-based epitaxial structs., isoelectronic N impurities spectrosc. obs. 3–3820
  GaP-$GaAs_{1-x}P_x$ superlattices, stimulated emission and photoluminescence 3–43564
  GaSb, photoluminescence lines, stress effects, linear polarisation study 3–28894
  GaSb(:Te), shaped melt lowering growth technique, photoluminesc. and Hall meas. 3–34214
  GaSe, bound excitons, light polarisation transformation, mag. field induced, phenomenological theory 3–43518
  GaSe, luminescence study of screening of optical phonon-hole interaction 3–14349
  GaSe, picosec. relax. kinetics of highly photogenerated carriers 3–38913
  GaSe:Sn, γ and neutron irrad. effects on photoluminescence 3–19188
  $GdAlO_3:Cr^{3+}$, magnetic Franck-Condon effect 3–34142
  $Gd_3Ga_5O_{12}$:Cr, Nd crystal, spectral and luminesc. props. 3–1639
  $Gd_3Ga_5O_{12}:Cr^{3+}$ crystals, luminesc. absolute quantum efficiency 3–38905
  $Gd(MoO_4)_3$, luminescence and polarisation reversal 3–8886
  $Gd_2(MoO_4)_3$ single cryst., electroluminescence, correlation with ferroelec. switching 3–24019
  $Gd_2O_2SO_4:Eu^{3+}$, prep., fluoresc. spectra, and cryst. field anal. 3–43594
  $GdScGa:Cr^{3+}$, fluoresc. lifetime and CW tunable room-temp. laser action 3–50664
  $Gd_{3-x}Sc_xGa_5O_{12}:Cr^{3+}$ crystals, luminesc. absolute quantum efficiency 3–38905
  Gd_2SiO_5:Ce single crystal scintillator, luminescence props. meas. 3–28883
  Ge, electron-hole drop luminesc. damping by high power CO_2 laser radiation 3–43601
  Ge, exciton luminesc., mag. field depend. 3–3808
  Ge, exciton mols., luminesc. study, stability in mag. field 3–38868
  Ge, non-equilib. carrier conc. depend. on laser excitation intensity *(Russian)* 3–38426
  Ge, photoexcited, Coulomb gas, Mott and liq.-gas transitions, photoluminescence study 3–23272
  Ge, stressed, containing electron-hole liqs., spectroscopic studies, review 3–13745
  Ge:O(Sb), annealed, photoluminescence at thermal defects 3–3810
  Ge:Zn, double acceptor bound exciton, photoluminesc. study 3–33645
  GeAs:Ge, MBE growth, elec. and photolum. props. 3–33807
  $(Ge_2)_x(GaAs)_{1-x}$ solid soln., luminescence and electrophysical props. 3–14352
  Ge_2S_3:Au chalcogenide glass, impurity effects on EPR and photoluminescence 3–28895
  $GeSe_2$, glassy and single cryst., radiative recombination mechanisms 3–28896
  Ge_xSe_{1-x} glasses, struct. and luminesc. props. 3–8883
  In-Ga-As-P batch prep. melts, prep. and props. rel. to LPE 3–9006
  InGaAs epitaxially grown layers, Sn-doping effects on some properties 3–51634
  InGaAs, hydride VPE growth on (100), (110), (111), (311) and (511) InP, photolum. results 3–8363
  InGaAs/GaAs strained superlattice structs., MBE growth and characts. 3–42964
  $In_{0.53}Ga_{0.47}As$, photoluminesc. spectra, band assignments 3–34145
  p-$In_{0.53}Ga_{0.74}As$:Zn VPE layers, elec. and optical props. 3–18800
  $In_{0.72}Ga_{0.28}As_{0.6}$ $P_{0.4}$, hot carrier multiphonon scatt., 1.3 μm photoluminesc. study 3–38886
  InGaAsP DH laser, LPE growth, enhanced InP substrate protection 3–47784
  InGaAsP, LPE growth and charact., doping conditions 3–42959

luminescence of inorganic solids continued
  InGaAsP, photoexcited carrier lifetime and Auger recombination 3–43192
  p-InGaAsP solid soln., Auger recombination rate and luminescence 3–19186
  InGaAsP-InP DH wafer, nonradiative processes, piezoelec. photoacoustic spectroscopy 3–47709
  InGaAsP-InP:Zn double heterostructures, luminescence study 3–38922
  $In_{0.7}Ga_{0.3}As_{0.63}P_{0.37}$, photoluminesc. spectra, band assignments 3–34145
  $In_{1-x}Ga_xAs_{1-y}P_y$ with narrow photolum. spectrum, LPE growth 3–23196
  $In_xGa_{1-x}As_yP_{1-y}$ (λ=1.5 μm), LPE growth, luminesc. and photoelec. props. 3–47243
  $In_{0.5}Ga_{0.5}P$-InGaAsP double heterostructs., nonequilib. carrier lifetime in active region, effect of emitter recomb. 3–38900
  $In_{0.5}Ga_{0.5}P$-InGaAsP double heterostructs., photoluminesc. characts., effect of emitter recomb. 3–38902
  $In_{1-x}Ga_xP_{1-z}As_z$ solid solution, intrinsic exciton luminescence 3–47720
  InP, donor discrimination and bound exciton spectra 3–43591
  InP epilayers, process-induced defects, photoluminesc. and DLTS study 3–43089
  InP, heavily doped, photoluminescence edge calc. 3–38860
  InP, hydride VPE growth on (100), (110), (111), (311) and (511) InP, photolum. results 3–8363
  InP, LPE growth and charact., doping conditions 3–42959
  InP, MBE growth from cracked PH_3, photoluminesc. and carrier mobility 3–47770
  InP, near gap energy levels, photolum. and photocond. study 3–3240
  InP, photoluminescence from deep levels meas. for bulk and LPE samples 3–23996
  InP, VPE grown, Hall effect, photothermal ionisation, diffusion length, photoluminescence studies 3–19277
  InP:Be MBE layers, elec. and optical props. 3–47365
  $InP:Cr^{2+}$, zero-phonon luminesc. study 3–43615
  n-InP:Sn, radiative recomb., absorpt. and reemission processes 3–38899
  InP:Te(SN), shallow acceptor centres, luminescence study 3–8861
  InP:Zn epitaxial film, MOCVD grown, elec. props., low temp. photoluminescence study 3–23511
  InP-InGaAsP LEDs, luminescence study of dark spot defects 3–3824
  InP-InGaAsP multilayer struct., damage-free grooving method 3–4159
  InP-InGaAsP system, Au based ohmic contacts, metallurgical behaviour 3–23481
  InP-InGaAsP-InP DH, misfit dislocations, optically induced glide motion, photoluminesc. study 3–51608
  K halides, F-centre luminescence quenching by nonradiative processes 3–57974
  $KBr:Eu^{2+}$ single cryst., precipitated phases, optical absorpt. and fluoresc. 3–3807
  KBr:I, localised exciton relax., luminescence and defect form. 3–56877
  KBr:Li, X-irrad., trapping parameters, monochromatic thermoluminesc. glow curve studies 3–24030
  KBr:Li, X-irradiated, optical absorption and thermolum. studies of F_A-centres 3–34157
  KBr:Li, X-ray irrad., V-bands and thermoluminescence, annealing effects 3–18299
  $KBr:Pb^{2+}$, emission spectra and luminesc. decay times 3–19178
  KBr(I), electron irrad., O_2^- ion form., luminesc. study 3–19207
  $KCaCl_3:Pb^{2+}$, luminescence in cryst. fields of various symm. *(Russian)* 3–43629
  $KCaCl_3:Sn^{2+}$ crystals, luminesc. props. 3–19183
  KCl crystal, dislocation exoelectron emission 3–14444
  KCl crystals, X-irradiated, sonolum. and internal friction meas. 3–28912
  KCl, exciton decay into F, H and α-I pairs, luminesc. study 3–23279
  KCl, gamma irrad., plastic deform., effect on thermolum. spectra 3–47721
  KCl, KCl:Ag, Frenkel defect creation, recombinational and excitonic mechanisms, at 4.2K *(Russian)* 3–56879
  KCl, optically induced F-centre aggregation 3–38854
  KCl:Br(I), exciton decay to Frenkel defects, tunnel recharge *(Russian)* 3–57287
  $KCl:CaCl_2(SrCl_2)$, M_A and Z_4 centres, photoluminesc. study 3–3797
  KCl:Eu,F crystals, absorpt. and luminesc. centre form. 3–43599
  KCl:I, electron irrad., impurity exciton prod., optical absorpt. and luminesc. studies 3–43576
  KCl:I, localised exciton relax., luminescence and defect form. 3–56877
  KCl:Na, Pb, γ-irrad., Pb-centres, thermoluminesc. study 3–3830
  KCl:Sn, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3–13743
  KCl:Tl, electron trap spectroscopy, exoelectron emission and luminescence meas. by fractional glow technique 3–34204
  KCl-KBr mixed crystals, γ-irrad., thermoluminescence study 3–34155
  KCl(Br), γ-irrad., thermoluminescence study 3–34155
  $KCl_xBr_{1-x}:Ca^{2+}$, X-irrad., Z_1- and F-centres, thermoluminesc. and optical absorpt. studies 3–19212
  $K_2CuCl_3(Br_3)$, valence bands, optical absorpt., luminesc., and XPS study 3–43557
  KI, dynamical aspects of self-trapping of 1s excitons 3–28276
  KI:Ag crystal, powder, intense narrow emission band from surface 3–14338
  KI:In, decay and polarisation of luminescence pulses, impurity centres 3–52829
  $KMgF_3:Eu^{2+}$, electron irrad., optical absorption and emission 3–52831
  $K_2(Pt(CN)_4).3H_2O$, low temp. photoluminescence, grinding effects 3–43583
  $KUO_2(NO_3)_3$, luminescence quantum yield, 220-250 nm 3–47706
  $LaF_3:Pr^{3+}$, fluorescence-line shape temporal variation 3–3799
  $LaF_3:Pr^{3+}$, superexchange induced energy transfer, fluorescence study 3–14341
  $La_3Ga_5SiO_{14}:Nd^{3+}$, stimulated emission and luminescence 3–38848
  $LaNb_3O_{14}:Nd^{3+}$ crystal, prep. and luminesc. props. 3–57968
  LaOBr:Tb, luminesc. props. 3–3785
  LaOCl:Tb, luminesc. props. 3–3785
  $La_2O_2SO_4:Eu^{3+}$, prep., fluoresc. spectra, and cryst. field anal. 3–43594
  γ-La_2S_3 single crystals, photoelectric and luminesc. prop. investigation 3–28903
  $LaWO_4Cl$, orthorhombic, struct., luminescence and Raman spectra, X-ray diffr. study 3–33204
  $LaWO_4Cl:Mo^{6+}(Eu^{3+})(Sm^{3+})(Tb^{3+})$, luminescence props. and Stokes shifts 3–47691
  $La_3WO_6Cl_3$, cryst. struct. and optical props., X-ray powder diffr. study 3–7995

luminescence of inorganic solids continued
$La_3WO_6Cl_3:Mo^{6+}(Bi^{3+})(Eu^{3+})(Sm^{3+})(Ce^{3+})(Tb^{3+})$, luminesc. studies 3−52837
$La_3WO_6Cl_3:U$, photoluminescence and vibr. spectra 3−8864
LiF, Einstein spectral coeffs. for F_2^- colour centres 3−38906
LiF, electron trap spectroscopy, exoelectron emission and luminescence meas. by fractional glow technique 3−34204
LiF, F_2-centre form. mechanism, synchrotron radiation luminescence method 3−27938
LiF, gamma-ray sensitised, thermoluminesc. glow curves and supralinearity 3−3831
LiF TLD-100, supralinearity, sensitisation and phototransferred thermoluminesc., theory 3−19210
LiF, TLD-100, thermoluminesc. general order kinetics 3−52858
LiF, thermolum. response to ions, gamma-rays and X-rays 3−38927
LiF, thermoluminesc., general-order kinetics 3−19211
LiF, thermoluminescence sensitisation factors, post-annealing temp. effects 3−19213
LiF, thermoluminescence kinetics 3−43639
LiF, X-ray irrad., Z-centre thermoluminescence emission 3−43640
$LiF:Li_2O$, luminesc. centres, excitation and emission spectra 3−43605
LiF:Mg, γ-irrad., OH^- ions effect on thermolum., ESR obs. 3−28905
LiF:Mg, X-ray irrad., absorption spectra and red luminescence 3−8872
$LiF:TiO_2$, absorpt., emission, excitation, and polarised luminesc. spectra 3−43602
$LiF/CaWO_4$ system, blue luminesc., intrinsic nature 3−19174
LiF(TLD-100) crystals, thermolum., rapid readout rate studies 3−3833
LiF(TLD-100), photon energy depend. of thermoluminescent peaks 3−58829
$LiH:Ge^{2+}(Sn^{2+})(Sb^{3+})(Pb^{2+})(Bi^{2+})$, photoluminescence of S^2 configuration ions 3−47690
$LiIO_3$, parametric generation of picosecond light pulses *(Russian)* 3−50705
$LiNbO_3:Eu^{3+}$, energy transfer between ions, obs. and calcs. 3−14336
$Lu_xY_{1-x}SiO_3:Nd$ mixed crysts., spectroscopic props. of Nd ions 3−52839
$MgAl_2O_4:Cr$, optical absorpt. spectra and luminescence *(Russian)* 3−23989
$MgCl_2:Eu^{2+}$ single crystals of low symm., luminesc. of Eu^{2+} centres 3−34141
MgF_2, X-ray irrad., self-localised excitons, thermoluminescence props. 3−13744
$MgF_2:Ni^{2+}$, absorption, emission and excitation spectra, electron beam radiation defects 3−43592
MgO deformed crystals, cathodoluminesc. and optical absorpt. meas. 3−24024
MgO, press. depend. to 100 kbar of phonons, vibronic spectra 3−33367
MgO, recombination luminescence and energy transfer 3−52842
MgO single crystals, cathodoluminescence at frictional damage 3−24025
MgO, thermochemically reduced, luminesc. from O vacancies 3−43620
MgO with chemisorbed O_2, adsorption-luminescence spectrum *(Russian)* 3−19196
MgO: Cr^{3+}, fluoresc. narrowing induced splitting of R line, effect of internal strains *(French)* 3−19182
MgO:Al (Sn), luminescence excitation, reflection spectra, 5-28 eV *(Russian)* 3−57965
MgO:Cr, $^4A_2 \rightarrow {}^2T_1$ zero-phonon transition, homogeneous and inhomogeneous broadening 3−24006
$MgO:H^-$, thermochemically reduced, charge and mass transfer, IR absorpt. and luminesc. study 3−43573
$MgO:H^-$, thermochemically reduced, electron traps and F-centres 3−57312
$Mg_2SnO_4:Mn$, luminescence excitation spectra, caused by synchrotron radiation *(Russian)* 3−57964
$MnF_2:Ni^{2+}$, absorption, emission and excitation spectra, electron beam radiation defects 3−43592
NH_4Br, recomb. luminesc. study by simultaneous excitation 3−24000
$NH_4Br:Tl$, photoluminescence spectra after phase transition 3−14346
Na halides, F-centre luminescence quenching by nonradiative processes 3−57974
$Na_8Al_6Si_6O_{24}Cl_2$, sodalite, polycryst., optical and cathodochromic props. *(Russian)* 3−57870
NaCl crystal, dislocation exoelectron emission 3−14444
NaCl, gamma irrad., plastic deform., effect on thermolum. spectra 3−47721
$NaCl:Ag^+(Cu^+)$, electronic struct. and luminescent props., multiple scatt. Xα calc. 3−3060
NaCl:Ca, Eu, precipitation of Ca, Eu^{2+} fluorescence studies 3−51806
NaCl:Ca, post-irradiation deform., thermolum. studies 3−3835
NaCl:Ca, thermoluminesc., γ-dosimetry appl. 3−57982
$NaCl:Ca^{2+}(Sr^{2+})(Ba^{2+})$ (Li^+), γ-ray irrad., luminescence from M and N centres 3−24005
$NaCl:Eu^{2+}$, hardening, aggregation-precip. state effect 3−4050
$NaCl:Eu^{2+}$, X-ray irrad. effects on precipitated phases, photoluminescence study 3−13466
$NaCl:Eu^{3+}$, X-ray irrad., absorption and luminescence spectra 3−8874
$NaCl:Mn^{2+}$, Suzuki and dipolar phases photostimulated luminesc. study 3−34137
$NaCl:Pb^{2+}(Sr^{2+})$, F-colouring efficiency, effect of precipitated phases, optical study 3−47680
NaCl:Sm, X-ray irrad., Z_2-centres, thermoluminesc. study 3−33249
NaCl:Sr, Eu^{2+}, Sr precipitation, optical absorption and photoluminescence study 3−2814
NaCl:Tl(T) phosphor, thermolum., appl. in UV dosimetry 3−39721
$NaEu(WO_4)_2$, optical holeburning and emission spectra 3−23968
$NaF:Mn^{2+}$, doped and undoped, γ-ray irrad., thermoluminesc. study 3−14362
$NaF:TiO_2$, MgF_2, absorpt., emission, excitation, and polarised luminesc. spectra 3−43602
$Na_2(Fe(CN)_5NO).2H_2O$, ground and metastable states electronic spectra 3−43623
$NaGdGeO_4:Nd^{3+}$, stimulated emission, $^4F_{3/2} \rightarrow {}^4I_{11/2}$ and $^4F_{3/2} \rightarrow {}^4I_{13/2}$ transitions 3−8851
$NaGdGeO_4:Nd^{3+}$, cryst. growth from soln. in melt, IR laser radiation prod. 3−34124
$NaGd(MoO_4)_2:Nd^{3+}$ disordered laser cryst., stimulated emission 3−41847
$NaNO_2$, reson. secondary emission 3−57969
$Na_2O\text{-}SiO_2\text{-}Fe_2O_3$ glass, optical absorption, luminescence and Raman spectra 3−3710
$Na_2O.3SiO_2:Tb^{3+}$, glass, tunnel recombination luminesc. 3−24010
$NaPO_4\text{-}Na_3Eu(PO_4)_2$, phase structures, emission spectra studies 3−51567

luminescence of inorganic solids continued
$NaSrPO_4\text{-}Na_3Eu(PO_4)_2$, phase structures, emission spectra studies 3−51567
$NaY(MoO_4)_2:Nd^{3+}$ disordered laser cryst., stimulated emission 3−41847
Nd^{3+} in disordered matrix, absorpt. and luminesc. band struct. calc. 3−14343
Nd:glass laser, stimulated emission anisotropy, polarized fluorescence line narrowing study 3−37045
Nd:glass laser material, spectral-luminesc. characts., temp. effect 3−8869
$Nd^{3+}:LaMgAl_{11}O_{19}$, lasing transitions, luminesc. and stimulated emission 3−56202
$Nd_xLa_{1-x}P_5O_{14}$, exciton diffusion and fluorescence quenching 3−13740
$NdP_5O_{14}:Nd^{3+}$ crystal, luminesc. absolute quantum efficiency 3−3815
Ne, solid, exciton luminescence study 3−19184
O-containing compounds, synchrotron radiation, 5-25 eV, review *(Russian)* 3−57964
P, amorphous, time resolved luminesc. study of recomb. and defects 3−3782
$PbCl_2$, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3−13743
PbI_2 laminar straight band crystal, non-equilibrium carrier condensation kinetics 3−38864
PbI_2, Stokes and anti-Stokes donor-acceptor pair luminesc. meas. 3−14339
$PbO\text{-}SiO_2$ optical glasses melted in Pt crucible, luminesc. due to Pt complexes 3−50723
$Pb_{1-x}Sn_xTe$ expitaxial films with growth plane comp. gradient, cathodoluminesc. 3−28913
$Pr_xLa_{1-x}P_5O_{14}$, fluoresc. quantum yield, modified Vavilov method 3−38862
$RbAg_4I_5$, superionic conductor, photoluminesc. meas. 3−19190
$RbBr:Pb^{2+}$, emission spectra and luminesc. decay times 3−19178
$RbCaCl_3:Pb^{2+}$, luminescence in cryst. fields of various symm. *(Russian)* 3−43629
RbCl:Ga crystals, triplet excited state ESR, optical detect. 3−38726
$RbCl:Pb^{2+}$, emission spectra and luminesc. decay times 3−19178
$RbGd_3F_{10}:Eu^{2+}$, UV phosphor, $Gd^{3+} \rightarrow Eu^{2+}$ energy transfer, emission spectra meas. *(French)* 3−52840
$RbMgF_3:Eu^{2+}$, absorpt., emission, and excitation spectra, rel. to solid laser development 3−19175
$RbMgF_3:Eu^{2+}$, electron irrad., optical absorption and emission 3−52831
$RbMgF_3:Mn^{2+}$, electron beam irrad. damage, annealing and luminescence studies 3−56984
$RbMnCl_3$ crystals, antiferromag., exciton migration, luminesc. and excitation spectra *(Russian)* 3−3073
$RbUO_2(NO_3)_3$, luminescence quantum yield, 220-250 nm 3−47706
Ru complex, $Ru(bpy)_3Cl_2$ adsorbed on semicond. surfaces, luminesc. dynamics 3−47685
$Ru(C_{15}H_{11}N_3)_2I_2.H_2O$, low temp. photoluminescence, grinding effects 3−43583
$Ru(bipyridyl)_3{}^{2-}$, MCPL and time-resolved luminesc. at 2.0K 3−23991
a-Se film, photodarkening phenomena 3−3674
Si, acceptorlike excited states of isoelectronic A,B,C exciton system, luminesc. study 3−3802
Si, deep defects, photolum. characterization 3−43609
Si, electron beam recrystallised, cathodoluminescence and minority carrier lifetime 3−47718
Si, exciton mols., luminesc. study, stability in mag. field 3−38868
n-Si, heavily doped, band-gap shrinkage, luminesc., IR absorpt. and bipolar transistor data 3−38859
Si, plastically deformed, dislocation study 3−46939
Si, pulsed laser irrad., time resolved reflectivity and transmission 3−28820
Si, stressed, containing electron-hole liqs., spectroscopic studies, review 3−13745
Si wafer, plastically bent, residual stress meas. by photoluminesc. 3−33339
Si:Au, effective mass states, luminesc., photoconductivity meas. 3−52841
Si:Au, zero-phonon photoluminescence study 3−43624
Si:B, bound exciton and multi-exciton complexes, kinetics 3−57285
Si:B, irradiated, photolum. 1.080 eV (I_2) line origin 3−43610
Si:B(P), impurity content meas. by photoluminesc. technique *(Chinese)* 3−38863
Si:Be, luminescence, Zeeman spectroscopy 3−14340
Si:Be,k isoelectronic bound excitons, photoluminesc. lifetime, absorpt. and excitation spectra 3−8878
Si:C, irradiated, luminescence, 0.97 eV line origin 3−43611
Si:Cr,B, charact. by EPR, DLTS, luminesc. and neutron activation anal. 3−47283
Si:Cr,B Cr-B pair photolum. 3−43612
Si:H, amorphous, bulk and interface states, elec. props. 3−28256
Si:H, amorphous, electron-hole recombination lifetime distrib., light induced ESR and luminesc. 3−8510
Si:H, amorphous, nonradiative recombination study 3−38894
Si:H, amorphous, plasma deposited, elec. and optical props. 3−28462
Si:H, amorphous, recombination, spin depend., ODMR study 3−3594
Si:H, amorphous films, efficient visible photoluminesc. obs. 3−47682
a-Si:H, Cl, glow discharge prep., optical and elec. props. 3−23978
a-Si:H, elec. and optical props., effect of prolonged illum. 3−23441
a-Si:H, light-induced metastable effects 3−23392
a-Si:H, low energy excitation of photolum., temp. and intensity effects 3−43622
a-Si:H, luminesc. fatigue and light-induced ESR 3−24011
Si:H, radiative recombination and spin effects *(French)* 3−23999
Si:H amorphous, low temp. distant-pair photoluminescence 3−28890
Si:H amorphous, non-geminate recombination, EPR and photoluminescence study 3−24008
Si:H amorphous film, CVD by direct S_2H_6 photolysis and elec. and optical props. 3−52962
Si:H amorphous films, $0.2<x<0.5$, HOMOCVD prep., broadband visible photoluminesc. 3−8860
Si:In, Al, photoluminesc., IR absorpt., photocond. and Hall effect meas. 3−34135
Si:In,P LPE layers, donor acceptor pair spectra 3−57971
Si:In(Tl), isoelectronic bound excitons, photoluminescence obs. 3−19168
Si:P, excited impurity level widths 3−47284
$n\text{-}Si/n\text{-}Fe_2O_3$, double layer solar cell electrode, interface states effects obs: *(Chinese)* 3−19581
SiC polytypes, prebreakdown electroluminesc. spectra 3−19201
$\alpha\text{-}SiC:Al^+$, LED, ion implanted, radiative recomb., electrolum. study 3−57978

luminescence of inorganic solids continued
- SiC:B, 3C polytype, photoluminescence and radiative recombination centres 3—38898
- SiC:Sc, 4H and 6H polytypes, photoluminescence and photoconductivity 3—28893
- $Si_{0.15}C_{0.85}$:H amorphous films, photoluminesc. decay curves and time-resolved luminesc. spectra 3—47703
- $Si_{1-x}C_x$:H film, glow discharge deposited, photolum. study 3—14333
- Si_xC_{1-x}:H, amorphous, electroluminescence obs. 3—47711
- $Si_6H_3(OH)_3$, disordered layer cpd., luminesc., fatigue effect and temp. depend. 3—47687
- Si_3N_4 amorphous films, photoluminesc. study 3—34146
- SiO_2, recombination luminescence and energy transfer 3—52842
- SiO_2:Al, amorphous, photoluminesc. 3—47707
- SiO_2:Al(Zr), amorphous, photoluminescence studies *(Russian)* 3—14354
- SiO_2-Ce_2O_3-Al_2O_3(Na_2O) glass, luminescence and IR absorption spectra 3—14353
- $SnBr_2$ single crystals, exciton luminesc. 3—24018
- $SnCl_2$, exciton self localisation, Jahn-Teller mechanism, photoluminescence study 3—13743
- SnO_2:Eu powder phosphor, synthesis, physicochemical props., luminesc. characts., low energy electron excitation *(Japanese)* 3—57980
- $SrBr_2$:Eu^{2+} single crystals of low symm., luminesc. of Eu^{2+} centres 3—34141
- $SrCl_2$:K^+, lattice relax., V_k mobility and electron-hole recomb., luminesc. and elec. cond. meas. 3—19208
- SrF_2 crystals, exciton form. during interaction of radiation-induced defects 3—3795
- SrF_2, with alkaline impurities, luminesc., thermal stability, and photoconversion of perturbed colour centres 3—38873
- SrF_2:Nd(Ce), Zeeman IR spectra, optical absorption and fluorescence meas. 3—19124
- SrFCl:Eu luminescence anal. 3—3794
- $Sr_2Nb_2O_7$, ferroelectric, photolum. and photocond. 3—3814
- $SrTiO_3$, X-ray induced luminesc., thermoluminesc. and visible absorpt. meas. 3—34136
- $Sr_3Y(Tb)_2Ge_3O_{12}$ luminescent garnets with Tb on octahedral lattice sites 3—28886
- Tb complex, $Na_3[Tb(oxydiacetate)_3].2NaClO_4.6H_2O$, polarised luminesc. spectra of Tb^{3+} 3—3789
- $ThBr_4$:Pa^{4+} crysts., optical spectrosc. and EPR obs. 3—57959
- $ThCl_4$:Pa^{4+} 3—57959
- ThO_2:Er^{3+}(Eu^{3+}), site selective spectroscopy, fluoresc. and excitation spectra 3—19172
- Xe crystals, polariton luminesc. spectra 3—38924
- (Y,Ce,Gd,Tb)F_3 system, energy transfer phenomena 3—8871
- (Y, Gd)F_3:Ce^{3+}, Eu^{3+}, energy transfer from Ce^{3+} to Eu^{3+}, quantum efficiency 3—43607
- (Y, In)$_2O_3$:Er^{3+}, luminescence, host sensitization mechanism 3—3781
- Y-Ga-Tb garnet phosphor, thermolum. and phosphoresc., V_2O_3 additions effect 3—24029
- YAG:Cr^{3+}, Nd^{3+} solid-state lasers active media efficiency enhancement, luminesc. sensitisation 3—6989
- YAG:Eu^{3+}, high temp. press. sensor using fluorescence spectrum press. dependence 3—20865
- YAG:Fe, coloration on reduction, absorpt. spectra and luminesc. quenching studies 3—47674
- YAG:Nd, absorpt. photolum. and X-ray luminesc. spectra obs., 190 to 900 nm 3—28901
- YAG:Nd^{3+}, multiphonon relax. rate from pumped level to upper laser level 3—28892
- YAG:Nd^{3+} single cryst., thermostimulated luminesc. and thermostimulated cond. 3—8893
- $YAlO_3$:Fe, coloration on oxidation, absorpt. spectra and luminesc. quenching studies 3—47674
- Y_2O_3:(Eu)(Tb), luminescence excitation spectra, caused by synchrotron radiation *(Russian)* 3—57964
- $Y_2O_2SO_4$:Eu^{3+}, prep., fluoresc. spectra, and cryst. field anal. 3—43594
- Y_2SiO_5:Ce, luminescence excitation spectra, caused by synchrotron radiation *(Russian)* 3—57964
- $Y_2W_3O_{12}$:Eu^{3+} red phosphor of high lumen equivalent, cathodoluminesc. meas. 3—8887
- (YYb)F_3:Fm cryst., antiStokes luminesc., temp. depend. 3—3786
- (YYb)F_3:Ho cryst., antiStokes luminesc., temp. depend. 3—3786
- $Zn_xCd_{1-x}S$ epitaxial layer deposition and props. on GaAs 3—43761
- $Zn_xCd_{1-x}S$, mechanoluminescence and high press. photoluminescence 3—57985
- ZnF_2:Mg, phosphors, electro- and photo-luminesc. study 3—38919
- $ZnIn_2S_4$:Ne, ion irrad., photoluminescence, relationship to intrinsic defects 3—3811
- ZnO, exciton peak energy meas., optical spectra, press. depend. 3—8424
- ZnO metal-semicond. diodes, electroluminescence emission 3—23483
- ZnO, radiative recomb. anisotropy in cpds. excited with unpolarised light 3—38861
- ZnO:Cu, IR luminesc. characts., magnetooptical data 3—43616
- ZnO:Ga(Pb), doped and undoped, luminesc. study in UV region 3—38881
- ZnP_2, free excitons, optical study 3—38320
- ZnS, AC powder electroluminescence, brightness and maintenance *(Japanese)* 3—47713
- ZnS crystal, dislocation exoelectron emission 3—14444
- p- ZnS, green photoluminescence band fine struct., wavelength modulation study 3—8882
- ZnS, radiative recomb. anisotropy in cpds. excited with unpolarised light 3—38861
- ZnS:Ag, doped and undoped, luminesc. spectra, effect of intrinsic defect and impurity hole cond. 3—38869
- ZnS:Ag, single cryst., photolum. and cathodolum. studies 3—19193
- ZnS:Cu, AC electrolum. lines, intermittent arrays and segments 3—19199
- ZnS:Cu, electroluminesc. and elec. cond., temp. and field dependence meas. 3—14358
- ZnS:Cu, Sm(Eu)(Pb)(Tm) crysts., bulk emission in const. elec. field 3—8867
- ZnS:Cu,In,Cl phosphors, electroluminesc. 3—47714
- ZnS:Cu(Al), impurity diffusion, two-sample luminescence study 3—18513
- ZnS:Eu, Gd, single cryst., struct., impurities effects 3—2512
- ZnS:Eu, luminescence polarisation kinetics during afterglow process 3—8880
- ZnS:I(O)(Ag), defect creation by impurity doping, luminesc. and ESR study 3—43617
- ZnS:In, ion implanted, struct. transitions, luminescence and electroreflection study 3—2780

luminescence of inorganic solids continued
- ZnS:In,Cl phosphors, electroluminesc. 3—47714
- ZnS:In^+, ion implanted, photoluminescence and photoconductivity 3—8881
- ZnS:La, physical study of phosphors, trap-depth calcs. 3—43608
- ZnS:Mg, phosphors, electro- and photo-luminesc. study 3—38919
- ZnS:Mn sputtered films, Mn conc. effect on photoluminescence 3—43593
- ZnS:Mn thin films, AC electrolum. emission decay and saturation 3—19200
- ZnS:Ni^+, absorpt. and emission spectra 3—43572
- ZnS:Tm^{3+}, energy levels and cryst. field parameters, fluorescence and cathodoluminesc. study 3—43066
- ZnS-Cu:Sm(Eu)(Pb)(Tm), bulk electroluminesc. intensity, temp. depend. 3—19202
- ZnS(Se):Mn^{2+} MISIM structures, electron impact excited luminescence 3—43633
- ZnSe, blue emission spectra *(Korean)* 3—14342
- ZnSe, deep centres, electrolum., barrier capacitance relax. study 3—18654
- ZnSe, dislocation motion during plastic deform., effect on luminesc. spectra 3—43627
- ZnSe, epitaxial films, use in electron-beam pumped lasers 3—56206
- ZnSe, exciton system heating under laser excitation 3—18623
- ZnSe, luminescence spectra *(Russian)* 3—24015
- ZnSe, MO CVD grown, optoelectronic props. of donors 3—43618
- n-ZnSe, single cryst., recomb. radiation with electron excitation 3—3827
- ZnSe, VPE on GaAs, photoluminescence and cond. 3—8863
- ZnSe, zero-phonon recombination spectra of donor-acceptor pairs 3—28891
- ZnSe: Cu(Ga)(Al), impurity diffusion and luminescence centres 3—23096
- ZnSe:Cl, photoluminescence and electron conc., defects effects 3—38885
- ZnSe:Ga (Ni), impurity diffusion, two-sample luminescence study 3—18513
- ZnSe:N, binding energy of shallow acceptor 3—52076
- ZnSe(Te), crystal growth from soln. and photoluminesc. *(Japanese)* 3—39020
- ZnSe(Te), exciton diffusion, reson. self-absorpt., luminesc. spectrum profiles 3—19189
- $ZnSiO_4$:Mn(As) phosphors with improved cathodoluminescence performance, synthesis technique 3—24197
- Zn_2SiO_4, undoped, luminesc. meas. 3—19166
- Zn_2SiO_4:Mn, crystal growth from molten solns., nonstoichiometry, Mn content, and phosphorescence 3—34209
- Zn_2SiO_4:Mn, Zn_2GeO_4:Mn, luminescence excitation spectra, caused by synchrotron radiation *(Russian)* 3—57964
- Zn_2SiO_4:Mn phosphor, thermally stimulated luminesc., tunnelling model 3—34154
- $ZnSiP_2$, photoluminescence lines associated with pseudodirect gap 3—52821
- ZnTe, excitonic surface polaritons, ATR, reflection and luminesc. spectra 3—28283
- ZnTe, impurity segregation and self-compensation effects on cathodoluminesc. and cond. props. 3—33441
- ZnTe, luminescence on intense lase excitation 3—43628
- ZnTe, optical amplification spectra meas. 3—24009
- ZnTe:Al, cryst., luminesc. under laser illumination 3—3784
- ZnTe:Al(Cl)(In), laser-induced donor diffusion, photoluminesc. study 3—47158
- ZnTe:Cl(Br)(Cu)(Ag), ion implanted, donor related edge luminescence 3—52856
- $ZnTe_{1-2x}S_xSe_x$, energy gap variation with composition, photolum. spectra 3—52845
- ZrF_4-BaF_2-AlF_3-LaF_3-EuF_3, glass, Eu(III) fluoresc. study 3—52818

luminescence of liquids and solutions
- 2-2-'hydroxylphenyl-benzoxazole, excited state H^+ transfer, picosec. fluoresc. obs. 3—39377
- acetonitrile-d_3, doped, photodetachment threshold of solvated electrons, luminesc. study 3—23998
- acraflavine, exciton energy transfer to rhodamine B in soln. 3—52833
- alcohol:Ag^+, luminescence props. *(Russian)* 3—14355
- amphiphilic copolymers in aq. solns., fluoresc. quenching, kinetic model for Stern-Volmer-type plot 3—3777
- anthracene, fluorescence, temp. and solvent effects 3—52832
- anthracene derivatives, solutions, fluorescence decay, time-dependent triplet-triplet absorption from reabsorption effect 3—52822
- anthracene-diethylanaline exciplex, fluorescence, temp. and solvent effects 3—52832
- anthracenes, luminesc. in aq. micellar solns. 3—36790
- anthraquinone, soln., triplet lifetimes, phosphoresc. study 3—41603
- biogenic porphyrins, luminescence and absorpt. spectra 3—19669
- 2-tert-butyl-6-vinylnaphthalene polymers, singlet energy migration and excimer form. 3—14880
- carbocyanine dye, picosec. fluoresc. spectroscopy obs. of viscosity-depend. internal rot. 3—34151
- β-apo-14′-carotenal, fluoresc. and triplet yield quenching, H bonding effects 3—53428
- cholesterin esters, smectic liq. cryst. to solid transition, elec. cond., electron emission and luminesc. meas. 3—18488
- chromophore solute in mixed solvents, rot. diffusion obs. by picosec. fluoresc. anisotropy 3—34152
- complex solns., light quenching for spectral characts. of luminesc. 3—19179
- cyanine dyes, solns. and in polymers, visible and fluoresc. spectra 3—19181
- 9,10-dichloroanthracene solns., conc. effect on optical spectra 3—50420
- p-dimethylamino-benzaldehyde soln., excited and ground state conformations, fluorescence study 3—50352
- p-dimethylaminoacetophenone soln., excited and ground state conformations, fluorescence study 3—50352
- 9,10-diphenylanthracene in cyclohexane, actinometric determ. of absolute fluoresc. quantum yields 3—53429
- dodecylcyanobiphenyl liq. cryst., excimer formation and phase transition, luminesc. probe 3—34133
- dye adsorbates on hydrophobic silica gels, phosphoresc. quenching by oxygen dissolved in water 3—53431
- dye luminescent coolants for solid-state lasers 3—56222
- dye resolution, ultrashort superfluoresc., time development 3—38849
- dye solutions, fluoresc. nonreson. quenching with light pulses of picosecond duration 3—6713
- dye solutions, polar, dynamic inhomogeneous orientational broadening of electron levels, luminesc. study 3—36795

luminescence of liquids and solutions continued

- electrolyte solutions, luminesc. study 3—38877
- electronic excitation energy transfer in condensed matter, book 3—40328
- fluorescence standards for sensitivity control of fluorimeters and spectrofluorimeters *(Russian)* 3—48109
- haematoporphyrin derivative and related porphyrins, picosec. fluoresc. spectroscopy 3—39593
- α-halogenanthraquinones, soln., triplet lifetimes, phosphoresc. study 3—41603
- indole, soln., photoionisation threshold, N_2O quenching, fluoresc. study 3—32129
- lipids, in micellar solns., aggregated symmetry, time-resolved luminesc. appl. 3—44070
- liquid crystal-Eu(III) chelate mixture, electrochem. fluorescence quenching, electro-optical display. appl. 3—47684
- liquid scintillators, energy transport from γ-rays 3—52815
- lyoluminescence spectra of typical dosimeter materials 3—48242
- malachite green leucocyanide, unimol. ion pair form., picosec. dynamics 3—39402
- 6-N-methyl-N-phenylamino-2-naphthalenesulfon-N,N-dimethylamides, fluoresc. emission, solvent and substituent effect 3—3783
- molecules in rigid and liq. solns., photolum. band intensity distrib. 3—55990
- organic solutes, photoionisation by far UV light, elect. field quenching of fluoresc. and photocurrent 3—8875
- organic solutions, electrochemical luminescence using charge transfers *(German)* 3—24032
- organic solutions, spectra at −150°C to +150°C temps., spectrophotometer cryostat attachment 3—49426
- organic solvents, fluoresc. lifetime meas., refractive index corr. to radiative rate const. 3—38884
- phenylosazone D-glucose, liq., intersystem crossing, lifetimes, fluoresc. study 3—43586
- 5-phenyltetrazole, and derivatives, luminesc., absorpt. and fluoresc. spectra 3—24016
- photoluminescence energy yield upper limit, thermodynamic considerations 3—8857
- phthalimides, luminesc. in aq. micellar solns. 3—36790
- pinacyanol, excited states, solvent viscosity depend., fluoresc. lifetimes meas. 3—36803
- pleochroic dye, fluoresc. method for surface alignment study of nematic liq. crysts. 3—56810
- poly(2-naphthyl methacrylate) soln., excimer form., fluoresc. study 3—28885
- poly-1-methoxy-4-vinylnaphthalene, fluid soln., normal and second excimers, fluoresc. 3—3779
- polymer blends, miscible, charact. techniques, review 3—38089
- polymer solutions, interfacial depletion layers, direct optical obs. 3—24002
- polystyrene, soln., interfacial depletion layers, direct optical obs. 3—24002
- polystyrene in dilute solution, time-depend. fluoresc. polarisation, end-bond and internal-bond relax, comparison 3—52847
- radiationless transitions, inductive resonant electron vibr. energy transfer 3—38866
- rare earth complexes with porphyrins and phthalocyanine, luminesc. and kinetic absorpt. spectroscopy study 3—36789
- resin, soln., polymerisation effect on fluoresc. lifetime 3—36815
- rhodamine 6G+malachite green, donor fluoresc. decay in presence of energy migration 3—21806
- rhodamine 6G in ethanol, excitation by electric breakdown 3—38921
- rhodamine 6G soln., luminescent props. 3—19167
- rhodamine 6G solns., photolum. energy yield upper limit, thermodynamic considerations 3—8857
- rhodamine 6G-oxazine-4-perchlorate, binary mixtures, energy transfer, fluoresc. study, appl. to lasers 3—26785
- rhodamine B-nile-blue-A-perchlorate, binary mixtures, energy transfer, fluoresc. study, appl. to lasers 3—26785
- rhodamines, luminesc. in aq. micellar solns. 3—36790
- solutions, intermolecular relax. and emission spectra under intense optical excitation 3—36791
- tris(2,2′-bipyridyl)ruthenium(II) in sodium dodecyl sulphate solns. below crit. micelle conc., fluoresc. and cluster model 3—48095
- Ag^+ π-donor complexes, structs., luminesc. behaviour *(German)* 3—34149
- AgCl photographic emulsion, sensitised with Au, photostimulated flash luminesc. study *(Russian)* 3—20946
- $AlCl_3$-$SOCl_2$ soln., CC Nd^{3+} ions, absorpt. spectra, luminesc., lasing props. 3—22054
- Cr complex, $[Cr(CN)_6]^{3-}$ in dimethylformamide soln., ^2E_g state quenching 3—57961
- Cu halide solutions, emission spectra, base cations influence *(Russian)* 3—3817
- Cu(II) complexes, porphyrin aggregates, solutions, ESR, luminesc. and visible spectra 3—43585
- $EuCl_3$, in non-aqueous solvents, intensity anal. and luminesc. spectra 3—41616
- $Eu(ClO_4)_3$, in non-aqueous solvents, intensity anal. and luminesc. spectra 3—41616
- $Eu(NO_3)_3$, in non-aqueous solvents, intensity anal. and luminesc. spectra 3—41616
- $GaCl_3$-$SOCl_2$ soln., CC Nd^{3+} ions, absorpt. spectra, luminesc., lasing props. 3—22054
- HCl-Bi^{3+} solution, luminescence study *(Russian)* 3—43630
- $LiCl:Tl^+$ solutions, induced optical absorpt. 3—3758
- $Pt(CN)_4{}^{2-}$, aq., photophysics 3—6668
- Re(I) metal complexes in series of solvents, radiative and nonradiative rates, press. and freezing effect 3—1415
- Tb complexes containing 1,2-benzenedicarboxylic acid and chiral carboxylic acids, optical activity, luminesc. study 3—19103
- Xe, liquid, high press., fluorescence excitation meas. for electron, α-particle and fission fragment irrad. 3—24023

luminescence of organic solids

- acetonitrile-d_3, doped, photodetachment threshold of solvated electrons, luminesc. study 3—23998
- alkali metal acetylacetonate, anion triplet state perturbation by cations 3—43598
- anthracence crystal, kinetics of metal quenching of luminesc. 3—43600
- anthracene:tetracene, time resolved sensitised fluoresc., singlet exciton energy transfer 3—3818
- anthracene:tetracene glass, non-photochem. holes, temp. depend. 3—57963
- anthracene, charge transfer states, mag. modulation fluoresc. study 3—38882

luminescence of organic solids continued

- anthracene, cryst., photoelectron-photoion coincidences 3—57962
- anthracene crystal, polariton luminesc., temp. depend. 3—47702
- anthracene single crystals, polariton propag. and scatt. processes 3—19140
- anthracene single crysts. on substrates, exciton luminesc. spectra 3—8866
- anthracene-tetracyanobenzene cryst., CT complex, photoconductivity and fluoresc. 3—52194
- aromatic hydrocarbons in solid solns., picosec. time resolved fluoresc. spectra, vibr. relax. phenomena 3—34150
- aromatic mols. in solid solns., fluoresc. quenching by electron transfer 3—52826
- α-aryl-ω-N,N-dialkylaminoalkanes, exciplex form. and props., fluoresc. 3—52820
- benzenes, methyl- and methylene-substituted in condensed media, radiative and radiationless transitions 3—8862
- benzophenazine in glassy ethanol, dual phosphoresc. 3—34134
- benzophenone, crystalline, defect nonequilib. phosphorescence in pulsed mag. field 3—3813
- benzoquinolines in biphenyl single cryst. and polycrysts., delayed fluoresc. 3—38891
- p-benzoquinone(-d_4) in naphthalene and toluquinone crysts., vibronic struct. and phosphoresc. spectra 3—36806
- benzo[f]quinoline+naphthalene in biphenyl host, triplet-triplet energy transfer, phosphoresc. spectra 3—38314
- benzo[h]quinoline, ESR of phosphorescent state 3—38673
- 4-butoxybenzylidene-4′-hexylaniline, liq. cryst., electron trapping and recomb., radiothermoluminescence, DSC spectra 3—28906
- cadmium arachidate monolayer assembly, ellipsometry, reflection, luminesc. and Raman spectra 3—38941
- chrysene cryst., emissive states, absorpt. and fluoresc. spectra 3—28888
- coumarin crystals, mechanoluminesc., temp. effect 3—3840
- dibenzyl:tolan, impurity distrib. macroperiodicity during growth from melt 3—33291
- dibenzyl-naphthacene, luminescence spectra *(Russian)* 3—34148
- 1,4-dibromonaphthalene, inhomogeneous broadened lowest triplet absorpt., delayed fluoresc. and phosphoresc. 3—3778
- 1,4-dibromonaphthalene, lowest triplet exciton state, intraband scatt. 3—47270
- 1,4-dibromonaphthalene, phosphorescence emission, mag. field effects 3—38883
- 1,4-dibromonapthalene, crystal perfection and triplet excitons 3—14332
- 4-dicyano-methylene-2-methyl-6-p-dimethyl amino-styrl-4H-pyran (DCM) doped PMMA optical waveguides, self-absorpt., solar conc. appls. 3—53573
- 4,4′-dimethylbenzophenone, mol. cryst., energy transfer, photochem. control 3—19169
- diphenyl polyenes in stretched polyethylene films, linear dichroism and fluoresc. polarisation 3—57884
- diphenyl-anthracene, luminescence spectra *(Russian)* 3—34148
- DNA, wavelength resolved luminescence lifetime meas. 3—53639
- ethanol glass, conc. depolarisation of phosphoresc. compared with fluoresc. in energy transfer of like mols. 3—38890
- N-isopropylcarbazole, tribo- and photo-luminesc. study 3—43643
- literature survey in Soviet Union 3—38880
- D-mannose, storage and annealing effects on lyoluminescence and ESR 3—38916
- molecular crystals, luminesc. spectra in presence of impurities and defects 3—38874
- molecular crystals, optical spectra of excitons with charge transfer 3—38876
- molecular crystals, organic, structural phase transitions, novel spectroscopic method 3—47695
- molecular crystals, polarised luminesc. study 3—38870
- naphthalene, triplet exciton transport and metal-nonmetal transition 3—47266
- naphthalene, triplet-triplet exciton annihilation, effect of spin relax. 3—43034
- naphthalene alloys, exciton transport, percolation to diffusion transition 3—28274
- naphthalene crysts., substitutionally disordered, singlet exciton transport, percolation and diffusion 3—33642
- naphthalene X-traps, external heavy-atom effect on lowest excited triplet states 3—23992
- organic dyes, glass matrix, radiative and nonradiative energy transfer to inorganic ions 3—52819
- phenanthrene, glassy, monomer and excimer triplet states, phosphoresc. study 3—43588
- phenanthrene+naphthalene in biphenyl host, triplet-triplet energy transfer, phosphoresc. spectra 3—38314
- photoluminescent crysts., mechanoluminescence spectra 3—19215
- phthalazine in polar and non-polar hosts, phosphoresc. state, optical and mag. studies 3—28887
- phthalocyanine, metal free, carrier generation mechanism 3—43196
- PMMA, intermol. interactions of stereoregular sequences, copolymerisation effect *(Russian)* 3—51516
- poly rA, wavelength resolved luminescence lifetime meas. 3—53639
- poly-N-vinylcarbazole film, photocond., carrier photogeneration, exciplex and charge transfer fluoresc. quenchings 3—57384
- trans-polyacetylene, absolute Raman scatt. cross sections 3—52794
- polyacetylene, hot luminescence and Raman scatt. lineshapes 3—24007
- polyacetylene, photolum. in near IR 3—14334
- polyamides, linear, γ-irrad., radioluminescence 3—28910
- polyamides, linear aromatic, $Z\gamma$-irrad., radiothermoluminescence 3—28909
- polyethylene, dielec. breakdown in divergent field, dissolved gases and electroluminesc. effects 3—52729
- polyethylene, high density, luminesc. emission 3—18285
- polyethylene, light emission in highly divergent fields 3—19205
- polyethylene, thermolum., long-term strength, strong elec. field influence 3—3838
- polyethylene, thermoluminesc., UV induced, electron trapping model 3—3837
- polystyrene, thermolum. curves analysis using relax. phenomenology methods 3—19214
- polyvinylcarbazole, amorphous, energy-dependent incoherent singlet exciton motion 3—3072
- porphin free base in organic glasses, optical dephasing, photochemical hole-burning 3—8858
- pyrene evaporated coatings, emission spectra and fluorescence decay times 3—52835
- pyrene in p-terphenyl, delayed excimer fluoresc. study 3—24003

luminescence of organic solids continued
  pyrrol pigments, fluoresc. and absorpt. picosecond spectroscopy, relax. kinetics 3—24679
  rhodamine dyes, fluorescence quantum yields, temp. depend. 3—52836
  p-terphenyl, displacive phase transition, fluoresc. and excitation spectra study 3—19177
  terphenyl, luminescence nature *(Russian)* 3—52852
  p-terphenyl, triplet exciton trapping, delayed fluoresc. and phosphoresc. study 3—43604
  tetracene, on semiconductor surface, mol. fluoresc. quenching 3—43587
  1,4,5,8-tetrachloronaphthalene, phosphoresc. spectrum, environmental effects 3—19176
  TGS:Fe^{3+} crystals, luminesc. and absorpt. investigation 3—8870
  Tb complexes containing 5-sulphosalicyclic acid and chiral hydroxycarboxylic acids, optical activity 3—52764
luminescence of solids
  see also luminescence of inorganic solids; luminescence of organic solids
  activated crysts., reson. electron-phonon interaction 3—38872
  amorphous semiconductor, time-resolved band tail luminesc. 3—24004
  Anderson-localised many-particle excitations, optical props. 3—43584
  composite failure determ. in plane stressed state by mech. luminesc. method 3—53328
  crystals, O_2 mol. beam chemisorptive luminesc. 3—19217
  dielectron spontaneous decay 3—24017
  direct gap polar semiconductor, luminesc. of hot electrons in high excitation density regime 3—47710
  electroluminescence, prebreakdown, occurrence in weak and strong field limits 3—38918
  electronic excitation energy transfer in condensed matter, book 3—40328
  excitation transfer theory, inhomogeneous balance eqn. *(Russian)* 3—23324
  excitation trapping in diffusion limit, finite wave vector response 3—3801
  fluorescent standards for colorimetric and photometric appls. 3—5832
  glassy semiconductors, model of electronic processes, correlation with structural features 3—57265
  heterostructures with thin active region, reemission phenomena 3—46216
  impurity centre, transient spectra, meas. scheme influence *(Russian)* 3—13382
  impurity centres, absorpt. spectra and luminesc. lines, inhomogeneous broadening 3—38851
  powders, luminescence quantum yields with light scattering 3—19180
  radiationless transitions, inductive resonant electron vibr. energy transfer 3—38866
  secondary luminesc. classification, afterglow duration 3—38865
  self-localised excitons 3—38311
  semiconductor, exciton-neutral donor complex, exchange interaction 3—57323
  semiconductor, minority carrier diffusion length meas. in solar cells, techniques review 3—43193
  variband semiconductor, nonequilibrium charge carrier transfer *(Russian)* 3—24014
  weak luminesc. spectra, meas. by photoemission technique 3—3787
  InSe-naphthalene (anthracene) intercalation cpds., exciton refl. and photoluminesc. spectra, 4.2 to 40K 3—38845
luminescent devices
  see also fluorescent screens; phosphors; scintillation counters
  electroluminescent thin film displays mechanism, theory and expts. review 3—24020
  liquid crystal fluorescent cell, contrast ratio enhancement by electrochem. quenching 3—47684
  photoelectroluminescent diodes for fibre optics 3—41993
  solar concentrators, review 3—14930
  GaN epitaxial films, VPE growth on sapphire, rel. to nonuniformity of cathodoluminesc. emission 3—57981
  NO_x chemiluminescent detector, modifications for high sensitivity 3—30092
  SiO/ZnF_2:Mn/SiO electroluminescent display films, separation of hot electron generation and luminescent excitation 3—43634
  ZnO metal-semicond. diodes, electroluminescence emission 3—23483
  ZnS:Mn CVD film electroluminescence, AC and DC coupled devices appl. 3—24021
luminophors *see phosphors*
luminors *see phosphors*
lumped parameter networks
  four-terminal network theory appl. to multimirror resonators 3—41955
lunar atmosphere *see Moon; planetary satellite atmospheres*
lunar geology *see lunar rocks and minerals*
lunar rocks and minerals
  composition and geological history 3—10233
  cosmic ray record 3—48784
  geology, review *(German)* 3—10234
  LUNA 20 soil samples, ferromagnetic reson. g-factor meas. 3—15860
  mare basalt units, stratigraphy and crater statistics rel. to times of beginning and end of mare volcanism 3—54264
  radiowave scattering fragments, size distrib. rel. to subsurface volume scatt. and microwave brightness temperature spectrum 3—59238
  regolith chemistry, mineralogy and petrology 3—25354
  regolith Xe, N overabundance due to primordial solar X-ray emission 3—5173
  soil, colour differences and chemical abundances 3—30251
  soil surface porosity and chem. mineralogical comp. 3—20271
  solar flare noble gases in meteorites and lunar samples, isotopic comp. 3—54210
  surface material dating method use of U neutron induced fission 3—48833
  surface transport processes, model calcs. comp. with radionuclide data 3—20267
  ^{26}Al, cosmogenic, in lunar soil, accelerator mass spectrometry meas. 3—48708
lunar seismology
  travel time inversion technique for case where triplication exists 3—40054
  upper mantle, freq. depend. of Q 3—5177
lunar structure
  see also lunar rocks and minerals; Moon
  activity in past, evidence 3—10235
  core radius constraints 3—30250
  crust origin and evolution: comparison with Earth 3—5178
  deflections of vertical and anomalous masses depth 3—5176
  electrical conductivity and thermal struct. of interior 3—15859
lunar structure continued
  mare basalt units, stratigraphy and crater statistics rel. to times of beginning and end of mare volcanism 3—54264
  metallic core, evidence for existence from P partition coeffs. between metal and silicate phases 3—48514
  reviews 3—10233
  surface structure, sample anal. *(French)* 3—25355
lung
  see also pneumodynamics
  acoustic determinants of respiratory system properties 3—9791
  aerosol deposition and clearance in the human upper airways, review 3—9644
  aerosols, labelled, optimization of diagnostic use in pulmonary pathology *(French)* 3—19824
  albumin microspheres, human labeled with ^{99m}Tc, radiation absorbed dose, lung appl. 3—9751
  alveolar liquid pressure measured by micropipettes in isolated dog lung 3—24753
  asthma diagnosis, breath sounds digital processing techniques 3—15171
  axial distortion of airways 3—58703
  blood flow distrib., radioisotope CT obs. 3—58705
  blood flow monitor, modelling and design 3—15264
  breathing, airways compressibility identification methods 3—9656
  bronchial arterial blood flow and bronchovascular resist. meas. in dogs 3—24764
  bronchial bifurcations of smokers, α-radiation dose from indoor exposure to Rn progeny 3—58832
  bronchial circulation in anesthetised sheep, origin, distrib. and blood flow 3—19746
  bronchomotor responses of isolated sheep airways to electrical field stimulation 3—39668
  capillary transit times meas., direct obs. in dogs 3—24776
  cold air production apparatus for bronchial challenge 3—53879
  collateral ventilation changes with increased vascular press. and edema form., dog expts. 3—19738
  correction factors for 45-MV X-ray therapy 3—9754
  current pathways in high-voltage injuries 3—48281
  deformation problems, elasticity anal. 3—9638
  density and blood vol., meas. with positron emitting isotopes *(French)* 3—58791
  density meas. by CT, implications for radiotherapy 3—9716
  diaphragm action on rib cage inferred from force-balance analysis 3—24755
  diaphragm volume displacement and length changes during breathing 3—24754
  distal lung of mouse, morphologic changes reflecting early and late effects of irrad., review 3—53737
  dose in primary breast irrad. 3—58830
  elastic properties in acute induced asthma 3—58701
  ferrimagnetic particles in the lung, model of magnetisation and relax. 3—19734
  fluorescence bronchoscopy for localisation for carcinoma in situ 3—53766
  function testing with ^{133}Xe, exhaust instrument for leaking gas *(Japanese)* 3—29711
  gas exchange, effect of local blood flow control, control theory analysis 3—39669
  gas transport, physio-mathematical model, identification and space time aggregation *(French)* 3—53718
  hyperinflation of lung rel. to lung solute permeability and alveolar edema 3—19740
  inhalation exposure of Syrian hamsters to $^{239}PuO_2$ aerosols 3—29653
  interstitial compliance, rel. to osmotic constituents of the interstitium 3—29589
  iso-effect tables for tolerance of irradiated normal human tissues 3—58751
  lymph dynamics in dogs, simultaneous comparison of tracheobronchial and right duct 3—58704
  lymph flow, seizure alterations, recreation by left atrial press. elevation 3—29596
  mechanical properties of rat lung during postnatal development 3—19741
  mechanics in air- and liquid-filled rabbit lungs, temp. effects 3—24751
  microcirculation, tubules rather than sheet and post, rat. obs. 3—29599
  miners lungs, magnetopneumography, mag. field study, lung model 3—39665
  mixed arterial concentration of O_2 in a global pulmonary gas exchange model 3—15132
  natural radioactive aerosols, effect of polydispersiveness of tracheobronchial deposition 3—19876
  neutron irradiation of mouse lung and rectum, early and late effects 3—44274
  neutron RBE for early and late normal tissue injury in pig 3—44272
  nodules, pulmonary, CT densitometry, phantom study 3—53773
  nodules, solitary, factors influencing quantitative CT meas. 3—58776
  nodules, solitary, quantification of Ca using single- and dual-energy CT 3—29718
  nonlinear dynamic lung models, appl. of sensitivity anal. and experimental design techniques 3—15125
  parameters estimation algorithm for mechanical respiratory systems 3—39683
  parenchyma, crackle generation, stress-relaxation quadrupole model 3—58699
  parenchyma, sound vel. in excised horse lobes 3—58718
  particle deposition and clearance in the bronchial tree, review 3—9569
  photofluorograms, computer-aided screening, software system, abnormal lesions detection 3—15220
  pneumothorax detection, digital enhancement of chest radiograph 3—24876
  pressure in pulmonary artery, ambulatory monitoring, solid state recorder 3—15249
  RBE for neutron, X-ray and γ-irrad. 3—44275
  regional extravascular density meas. using positron emission and transmission tomography 3—48382
  respiratory load compensation, effective elastance components, maturational changes in human newborns 3—24756
  respiratory system compliance as seen from the cardiac fossa, dog expts. 3—19737
  respiratory tract, human, inhaled particle deposition meas. 3—39678
  simulation as acoustic model, reson. freqs. calc. *(Japanese)* 3—19747
  small airways, settling and diffusion of aerosol particles during breath holding 3—9643

- **lung** continued
  - species transport dynamics for clinical pulmonary evaluation 3−9568
  - transvascular fluid flux measured from intravascular water concentration changes 3−58622
  - tumours, X-ray edge detection, decision function classifiers 3−15221
  - ultrastructure after exposure to ionising radiation, SEM and TEM obs. on mice 3−53736
  - vascular resistance and compliance distrib. in dog lung lobe 3−19743
  - vascular tone rel. to basal lung perfusion in normal seated subjects 3−58706
  - ventilation control, positive feedback role 3−34868
  - ventilation-perfusion ratio distributions by mass spectrometry with membrane catheters 3−24922
  - ventilation/perfusion ratios distrib. estimation 3−9642
  - ventral respiratory group inspiratory neurons, response to mech. loading 3−58691
  - vesicular lung sound amplitude mapping by automated flow-gated phonopneumography 3−24816
  - volume in infants and young children, plethysmographic estimation problems 3−24752
  - water, microwave method for estimating average amount 3−24839
  - CO diffusing capacity, dynamic meas. using discrete samples of alveolar gas 3−58852
  - Pu internal contamination assessment in man 3−48428
  - ^{238}Pu assessment in chest of contaminated subject, use of Ge detector 3−58823
- **lutecium** *see lutetium*
- **lutetium**
  - *see also nuclei with ......*
  - Atlantic Ocean, rare earth element distrib. 3−35191
  - atom, low-lying resons., narrow and anomalously narrow 3−31971
  - atoms, autoionising and high-lying Rydberg states 3−11757
  - electronic struct. calcs. 3−28260
  - Lu^{2+} polarisability, transition and probabilities, ionisation energies, one-electron spectrum 3−6565
  - Lu-Hf isotopic system, importance in studies of planetary chronology and chemical evolution 3−48513
  - ^{176}Lu as cosmic clock and stellar thermometer 3−20340
  - ^{183}Lu, neutron-rich isotope identification by mass separation and decay spectroscopy 3−31628
- **lutetium alloys**
  - $LuFe_2$-Tb, hyperfine struct. anisotropy, ^{57}Fe Mossbauer meas. 3−52684
  - $LuGa_2Ni$ and $LuGa_4Ni$, synthesis and struct. 3−37857
  - Lu_5Ir_3, cryst. struct., X-ray diffr. study 3−2470
  - Lu_5Rh_3, cryst. struct., X-ray diffr. study 3−2470
- **lutetium compounds**
  - *see also lutetium alloys*
  - BaF_2-ZnF_2-ThF_4-$YbF_3(LuF_3)$, prep. and props., effect of compositional modifications 3−14750
  - $Er:Lu_3Al_5O_{12}$ millisecond laser 3−1640
  - $(Ho_xLu_{1-x})Rh_4B_4$, mean field behaviour of reentrant superconducting-ferromagnetic transition 3−43365
  - $(LaLuSmGd)_3(FeGa)_5O_{12}$, very thin films, Curie temp. and anisotropy fields 3−57715
  - LiF-LuF_3 system, cryst. growth, phase constitution, microstructure, DTA 3−56841
  - Lu-H system, phase boundaries and entropy of form., H_2 vapour press. study 3−23029
  - $Lu_3Al_5O_{12}$:Er laser operation, influence of excitation energy absorpt. from $^4I_{13/2}$ level 3−27065
  - LuB_2C, prep. and cryst. struct., X-ray diffr. study 3−13190
  - $LuFe_2O_4$, electron exchange between Fe^{2+} and Fe^{3+} 3−14182
  - $LuFe_2O_4$, high coercivity hysteresis loop below 200K 3−14077
  - $Lu_2Fe_3O_7$, mag. ordering, Mossbauer and neutron study 3−57529
  - $Lu_2Fe_3Si_5$, supercond. heat capacity and sp. ht. 3−52303
  - Lu_2O_3-TiO_2 system, phase equilibria 3−58108
  - $Lu(PO_3)_3$, Raman spectra 3−34099
  - $LuPO_4:R^{3+}$, (R=Ce, Nd, Dy, Er, Yb, U), hyperfine parameters, EPR 3−33975
  - $LuRhO_3$, photoelectrodes for liq. junction solar cells 3−29389
  - Lu_2S_{3-x} thermoelectric power and resistivity obs. at 500°C 3−14972
  - $Lu_xY_{1-x}SiO_3$:Nd mixed crysts., spectroscopic props. of Nd ions 3−52839
  - $(SmLuCa)_3(FeVSi)_5O_{12}$ garnet films, mag. props. 3−33947
  - $(SmLuCa)_3(FeVSi)_5O_{12}$ garnet film for ion implanted bubble devices, prep. and high temp. bubble propagation 3−38659
  - $(SmLu)_3(FeSc)_5O_{12}$, submicron bubble garnets, LPE grown 3−23758
  - $(Y,Sm,Lu,Ca)_3(Fe,Ge)_5O_{12}$ garnet thin film, dynamic props., ferromag. resonance study 3−8727
  - $(Y,Sm,Lu,Ca)_3(Fe,Ge)_5O_{12}$ garnet epitaxial films, uniaxial mag. anisotropy, high press. effects 3−18952
  - $(YEuLuCa)_3(FeGe)_5O_{12}$ garnet films, LPE grown, mag. props., growth atm. effects 3−23753
  - $(Y_{1-x}Lu_x)_3Al_5O_{12}$ solid soln., annealing effects on acoustic wave absorption 3−13349
  - $(YSmLuCa)(FeGe)O_{12}$, surface-spin orientation, Mossbauer spectroscopy determ. 3−52685
  - $(YSmLuCa)_3(FeGe)_5O_{12}$ ion implanted films, Kerr rotation study 3−34076
  - $(YSmLuCa)_3(FeGe)_5O_{12}$ garnet film for 1.5 μm bubble devices, mag. props. 3−38660
  - $(YSmLuCa)_3(FeGe)_5O_{12}$ epitaxial films, elastic stresses effect on mag. props. 3−52575
  - $(YSmLu)_3(FeGa(Al)Sc)_5O_{12}$, submicron bubble garnets, new characterisation methods 3−23758
  - $(YSmLuGd)_3(FeGa)_5O_{12}$ garnet film for 1.5 μm bubble devices, mag. props. 3−38660
- **Luxemburg effect** *see ionospheric electromagnetic wave propagation*
- **Lyapunov methods**
  - autonomous system, carleman embedding and Lyapunov exponents 3−30605
  - charged scalar soliton Q-stability domain, EM correction 3−40771
  - circuit breaking electric arcs mathematical models qualitative anal. using Lyapunov theory 3−7819
  - heavy solid body with single fixed point, Liapunov's periodic motions 3−5595
  - mechanics, equilibrium problems, stability and convergence of solns. using Lyapunov functions 3−20613
  - multiperiodic flows, chaos, Lyapunov exponents, statistical physical theory 3−32712
  - nonlinear dissipative system, propagating pattern selection 3−40359
- **Lyapunov methods** continued
  - phase space chaotic region, Lyapunov charact. number, Monte Carlo methods 3−6743
  - solitons, charged, stability domains on scalar electrodynamics 3−6046
  - stochastic one-dimensional map, Lyapunov number for noisy 2^n cycle 3−25812
- **lymphocytes** *see blood; cellular biophysics*
- **lyotropic liquid crystals** *see liquid crystals*
- **lysozyme** *see proteins*

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